

INDEX OF PLANS

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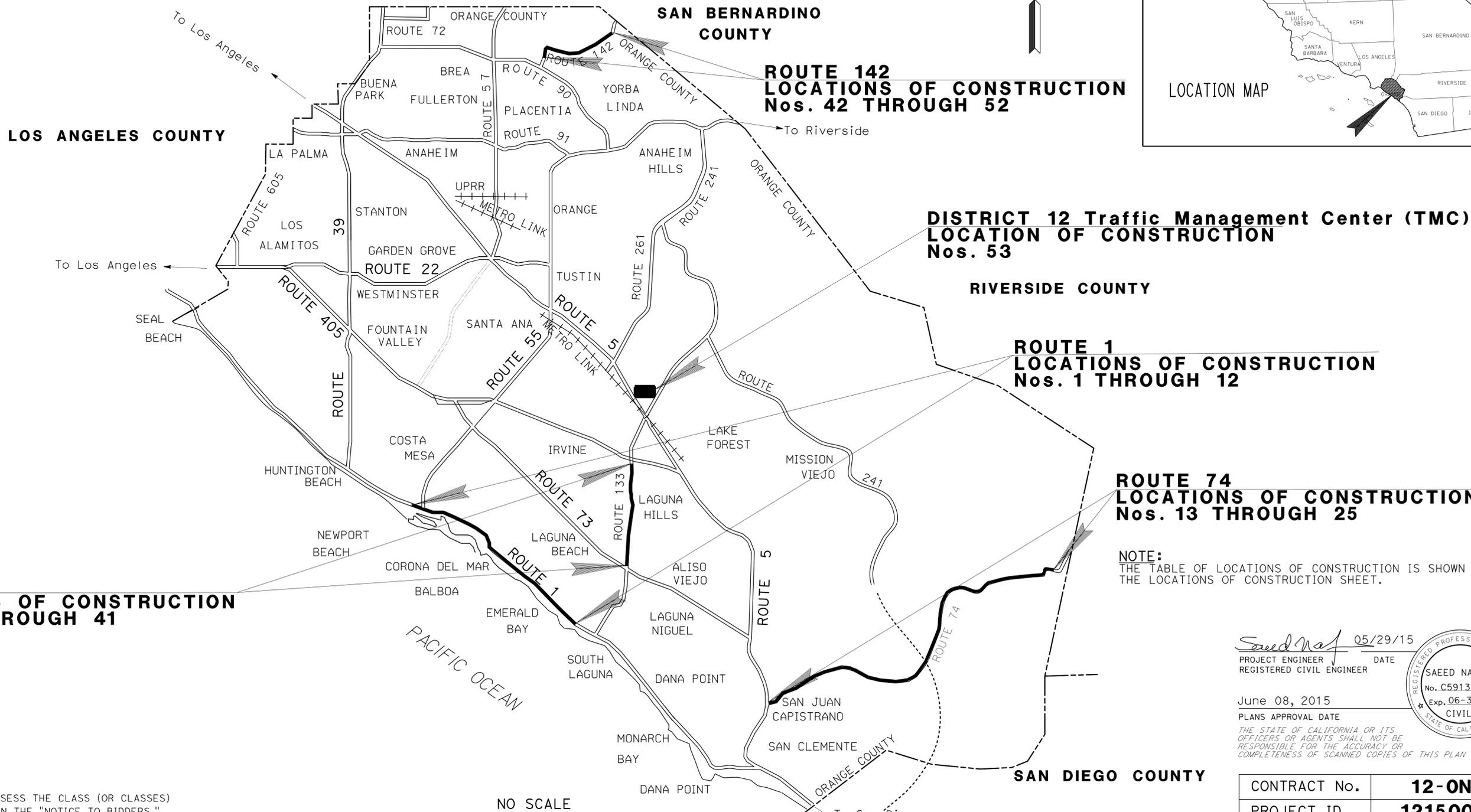
THE STANDARD PLAN LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA ACNHP-X059(065)E
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN ORANGE COUNTY
AT
VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1, 74, 133, 142	Var	1	23

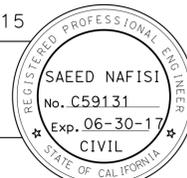
LOCATION MAP



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

PROJECT ENGINEER DATE 05/29/15
 REGISTERED CIVIL ENGINEER

 June 08, 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.



CONTRACT No.	12-0N8214
PROJECT ID	1215000081

PROJECT MANAGER
 TIFINI TRAN

 DESIGN MANAGER
 MORTEZA FAHRTASH

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

NO SCALE

DATE PLOTTED => 22-SEP-2015 14:52
 TIME PLOTTED =>

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR MORTEZA FAHRTASH
 CALCULATED-DESIGNED BY CHECKED BY
 NYCHOLE KHONG RICK NGO
 REVISED BY DATE REVISED

LOCATIONS OF CONSTRUCTION

Loc No.	ROUTE	DIRECTION	Approx POST MILE	STATION	DESCRIPTION
1	1	NB	20.03	725+06.96	AFTER ROUTE 55 CONNECTOR
2	1	SB	19.51	753+40.54	RIVERSIDE Ave
3	1	NB	18.83	788+87.59	
4	1	NB	18.07	170+34.57	BAYSIDE Dr
5	1	NB	17.62	194+25.21	PROMONTORY POINT
6	1	NB	17.01	233+80.40	IRVINE TERRACE
7	1	NB	16.43	257+04.79	AVOCADO Ave
8	1	NB	15.70	294+91.78	MARGUERITE Ave
9	1	SB	14.10	266+02.74	NEWPORT COAST Dr
10	1	SB	13.36	291+26.21	LOS TRANCOS
11	1	SB	12.78	325+82.57	CRYSTAL HEIGHTS Dr
12	1	SB	12.39	349+34.79	REEF POINT Dr
13	74	WB	0.77	62+41.76	SUNDANE Dr
14	74	EB	1.33	95+15.83	STRAWBERRY Ln
15	74	EB	3.39	207+76.65	CALL BOX 34
16	74	EB	3.98	240+65.56	INSTALL BEHIND Exist MBGR
17	74	WB	4.79	275+11.82	CALL BOX 45
18	74	EB	5.95	332+26.61	
19	74	EB	6.35	366+72.95	
20	74	WB	6.98	398+82.59	
21	74	EB	7.33	429+83.22	CASPER RANCH
22	74	EB	8.03	454+93.50	
23	74	WB	8.43	475+60.61	INSTALL BEHIND Exist MBGR
24	74	EB	9.70	499+52.05	
25	74	EB	10.01	518+74.94	BEFORE NICHOLS INSTITUTE
26	133	NB	4.34		AFTER Rte 73 OVERCROSSING
27	133	NB	4.79	8859+34.84	
28	133	NB	5.30	8884+00	AT MVP
29	133	NB	5.81	8912+40.00	
30	133	NB	6.37	8942+13.43	
31	133	NB	6.81	8965+00	
32	133	NB	7.35	8994+33.83	BEFORE LAKE FOREST
33	133	NB	7.76	9016+64.35	BEFORE LAGUNA CANYON
34	133	SB	7.72		BEFORE LAGUNA CANYON
35	133	SB	6.80	8993+48.13	AFTER LAKE FOREST TO END OF MVP
36	133	SB	6.38	8924+47.88	
37	133	SB	5.81	8866+23.48	
38	133	SB	5.26	8893+97.57	
39	133	SB	4.81	383+20.00	AT MVP IN THE BACK
40	133	SB	4.38	360+69.25	MBGR
41	133	SB	4.11		BEFORE Rte 73 AT MVP
42	142	EB	1.43	167+10.37	
43	142	EB	1.76	191+03.51	
44	142	EB	2.11	209+67.39	BEFORE REGIONAL PARK SIGNAL
45	142	EB	2.61	235+39.72	50' BACK (Exist LIGHTING)
46	142	EB	3.60	285+25.00	AT MVP, SP No. 815073H
47	142	EB	3.81	299+75.36	
48	142	EB	4.20	319+66.27	AFTER OLINDA Dr SIGNAL
49	142	EB	4.82	353+16.23	
50	142	EB	5.50	374+13.64	POST MILE MARKER 5.5
51	142	WB	5.49	388+44.62	
52	142	EB	6.00	406+18.68	POST MILE MARKER 6.0
53	TMC				6681 Marine Way, Irvine, CA 92618

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1, 74, 133, 142	Var	2	23

Saeed Nafisi 05/29/15
 REGISTERED CIVIL ENGINEER DATE

06/08/15
 PLANS APPROVAL DATE

SAEED NAFISI
 No. C59131
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

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

LOCATIONS OF CONSTRUCTION LC-1

LAST REVISION DATE PLOTTED => 22-SEP-2015 1-26-15 TIME PLOTTED => 14:52

NOTES:

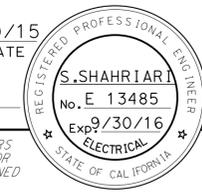
1. ALL LOCATIONS ARE APPROXIMATE. CONTRACTOR MUST ARRANGE FIELD MEETINGS WITH ENGINEER TO DETERMINE EXACT LOCATIONS.
2. SEE SHEET E-5 TO E-7 AND SES-1 FOR DETAILS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	4	23

 05/29/15
 REGISTERED ELECTRICAL ENGINEER DATE

06/08/15
 PLANS APPROVAL DATE

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ROUTE 1

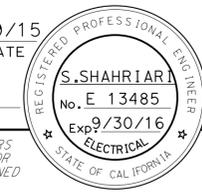
Loc No.	ROUTE	DIRECTION	Approx POST MILE	STATION	DESCRIPTION	POLE TYPE (YEAR)	OFFSET (FT)	CORNER	LOOP DETECTION STATION	BLUETOOTH DETECTION STATION	DETAIL
1	1	NB	20.03	725+06.96	AFTER ROUTE 55 CONNECTOR	Exist TYPE 26-4-70 (1984)		NW	NO	YES	A
2	1	SB	19.51	753+40.54	RIVERSIDE Ave	Exist TYPE 26A-4-100 (2007)		SE	NO	YES	A
3	1	NB	18.83	788+87.59	BALBOA BAY RESORT/CAR SPA	Exist TYPE 26-4-70 (1992)		NW	NO	YES	A
4	1	NB	18.07	170+34.57	BAYSIDE Dr	Exist TYPE 61-5-100 (2012)		NW	NO	YES	A
5	1	NB	17.62	194+25.21	PROMONTORY POINT	Exist TYPE 24-2-70 (1981)		NW	NO	YES	A
6	1	NB	17.01	233+80.40	IRVINE TERRACE	Exist TYPE 19-2-70 (1986)		NW	NO	YES	A
7	1	NB	16.43	257+04.79	AVOCADO Ave	Exist TYPE 26-4-80 (1992)		NW	NO	YES	A
8	1	NB	15.70	294+91.78	MARGUERITE Ave	Exist TYPE 26-4-100 (2013)		NW	NO	YES	A
9	1	SB	14.10	266+02.74	NEWPORT COAST Dr	Exist TYPE 29-5-80 (1989)		SE	NO	YES	A
10	1	SB	13.36	291+26.21	LOS TRANCOS	Exist TYPE 29A-5-70 (1992)		SE	NO	YES	A
11	1	SB	12.78	325+82.57	CRYSTAL HEIGHTS Dr	Exist TYPE 29A-5-70 (1992)		SE	NO	YES	A
12	1	SB	12.39	349+34.79	REEF POINT Dr	Exist TYPE 29A-5-70 (1992)		SE	NO	YES	A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	5	23

 05/29/15
 REGISTERED ELECTRICAL ENGINEER DATE

06/08/15
 PLANS APPROVAL DATE

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2. SEE SHEET E-5 TO E-7 AND SES-1 FOR DETAILS.
3. ALL CALL BOX POLE MUST BE INSTALLED MINIMUM 6' FROM ETW AND OUTSIDE PAVED SHOULDER.
4. SEE SHEET E-5, DETAIL AA FOR TYPICAL PLACEMENT OF CALL BOX POLE BEHIND EXISTING GUARDRAIL.

ROUTE 74

Loc No.	ROUTE	DIRECTION	Approx POST MILE	STATION	DESCRIPTION	POLE TYPE	OFFSET (FT)	CORNER	LOOP DETECTION STATION	BLUETOOTH DETECTION STATION	DETAIL
13	74	WB	0.77	62+41.76	SUNDANE Dr	CALL BOX POLE	35.32		YES 4 LANES (DOUBLE)	NO	D, FF
14	74	EB	1.33	95+15.83	STRAWBERRY Ln	CALL BOX POLE	37.07		YES 4 LANES (DOUBLE)	NO	D, FF
15	74	EB	3.39	207+76.65	CALL BOX 34	CALL BOX POLE	17.67		YES 2 LANES (DOUBLE)	NO	F, FF
16	74	EB	3.98	240+65.56	INSTALL BEHIND Exist MBGR	CALL BOX POLE	18.61		YES 2 LANES (DOUBLE)	NO	F, FF
17	74	WB	4.79	275+11.82	CALL BOX 45	CALL BOX POLE	18.32		YES 2 LANES (DOUBLE)	NO	F, FF
18	74	EB	5.95	332+26.61		CALL BOX POLE	15.94		NO	YES	B
19	74	EB	6.35	366+72.95		CALL BOX POLE	19.44		NO	YES	B
20	74	WB	6.98	398+82.59		CALL BOX POLE	16.67		NO	YES	B
21	74	EB	7.33	429+83.22	CASPER RANCH	CALL BOX POLE	20.61		YES 2 LANES (DOUBLE)	NO	F, FF
22	74	EB	8.03	454+93.50		CALL BOX POLE	18.31		YES 2 LANES (DOUBLE)	NO	F, FF
23	74	WB	8.43	475+60.61	INSTALL BEHIND Exist MBGR	CALL BOX POLE	19.91		YES 2 LANES (DOUBLE)	NO	F, FF
24	74	EB	9.70	499+52.05		CALL BOX POLE	22.47		NO	YES	B
25	74	EB	10.01	518+74.94	BEFORE NICHOLS INSTITUTE	CALL BOX POLE	27.94		NO	YES	B

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR TAM NGUYEN
 CALCULATED/DESIGNED BY CHECKED BY
 VANESSA TRUONG SHAHRAM SHAHRIARI
 REVISED BY DATE REVISED

TRAFFIC DETECTION SYSTEM E-2



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	6	23

05/29/15
 REGISTERED ELECTRICAL ENGINEER DATE
 06/08/15
 PLANS APPROVAL DATE

S. SHAHRIARI
 No. E 13485
 Exp. 9/30/16
 ELECTRICAL

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2. SEE SHEET E-5 TO E-7 AND SES-1 FOR DETAILS.
3. ALL CALL BOX POLE MUST BE INSTALLED MINIMUM 6' FROM ETW AND OUTSIDE PAVED SHOULDER.
4. SEE SHEET E-5, DETAIL AA FOR TYPICAL PLACEMENT OF CALL BOX POLE BEHIND EXISTING GUARDRAIL.

ROUTE 133

Loc No.	ROUTE	DIRECTION	Approx POST MILE	STATION	DESCRIPTION	POLE TYPE (YEAR)	OFFSET (FT)	CORNER	LOOP DETECTION STATION	BLUETOOTH DETECTION STATION	DETAIL
26	133	NB	4.34		AFTER Rte 73 OVERCROSSING	CALL BOX POLE			YES 2 LOOPS (DOUBLE)	NO	F, FF
27	133	NB	4.79	8859+34.84		CALL BOX POLE	35.45		YES 2 LOOPS (DOUBLE)	NO	F, FF
28	133	NB	5.30	8884+00	AT MVP	CALL BOX POLE	35.58		YES 3 LOOPS (DOUBLE)	NO	E, FF
29	133	NB	5.81	8912+40.00		CALL BOX POLE	35.81		YES 2 LOOPS (DOUBLE)	NO	F, FF
30	133	NB	6.37	8942+13.43		CALL BOX POLE	37.29		YES 2 LOOPS (DOUBLE)	NO	F, FF
31	133	NB	6.81	8965+00		CALL BOX POLE	35.14		YES 2 LOOPS (DOUBLE)	NO	F, FF
32	133	NB	7.35	8994+33.83	BEFORE LAKE FOREST	CALL BOX POLE	68.00		YES 3 LOOPS (DOUBLE)	NO	E, FF
33	133	NB	7.76	9016+64.35	BEFORE LAGUNA CANYON	CALL BOX POLE	45.42		YES 4 LOOPS (DOUBLE)	NO	D, FF
34	133	SB	7.72		BEFORE LAGUNA CANYON	CALL BOX POLE			YES 2 LOOPS (DOUBLE)	NO	F, FF
35	133	SB	6.80	8993+48.13	AFTER LAKE FOREST TO END OF MVP	CALL BOX POLE	-36.36		YES 2 LOOPS (DOUBLE)	NO	F, FF
36	133	SB	6.38	8924+47.88		CALL BOX POLE	-35.50		YES 2 LOOPS (DOUBLE)	NO	F, FF
37	133	SB	5.81	8866+23.48	MUST BE WITHIN EXISTING GRADED SHOULDER	CALL BOX POLE	-57.13		YES 2 LOOPS (DOUBLE)	NO	F, FF
38	133	SB	5.26	8893+97.57	MUST BE WITHIN EXISTING GRADED SHOULDER	CALL BOX POLE	-47.61		YES 2 LOOPS (DOUBLE)	NO	F, FF
39	133	SB	4.81	383+20.00	AT MVP IN THE BACK	CALL BOX POLE	-55.34		YES 2 LOOPS (DOUBLE)	NO	F, FF
40	133	SB	4.38	360+69.25	MBGR	CALL BOX POLE	-54.99		YES 2 LOOPS (DOUBLE)	NO	F, FF
41	133	SB			BEFORE Rte 73 AT MVP	CALL BOX POLE			YES 2 LOOPS (DOUBLE)	NO	F, FF

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR TAM NGUYEN
 CALCULATED/DESIGNED BY CHECKED BY
 VANESSA TRUONG SHAHRAM SHAHRIARI
 REVISED BY DATE REVISED

TRAFFIC DETECTION SYSTEM

E-3



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	7	23

 05/29/15
 REGISTERED ELECTRICAL ENGINEER DATE

06/08/15
 PLANS APPROVAL DATE

S. SHAHRIAR
 No. E 13485
 Exp. 9/30/16
 ELECTRICAL

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3. ALL CALL BOX POLE MUST BE INSTALLED MINIMUM 6' FROM ETW AND OUTSIDE PAVED SHOULDER.
4. SEE SHEET E-5, DETAIL AA FOR TYPICAL PLACEMENT OF CALL BOX POLE BEHIND EXISTING GUARDRAIL.

ROUTE 142

Loc No.	ROUTE	DIRECTION	Approx POST MILE	STATION	DESCRIPTION	POLE TYPE	OFFSET (FT)	CORNER	LOOP DETECTION STATION	BLUETOOTH DETECTION STATION	DETAIL
42	142	EB	1.43	167+10.37		CALL BOX POLE	43.56		YES 6 LOOPS (DOUBLE)	NO	C, FF
43	142	EB	1.76	191+03.51		CALL BOX POLE	48.59		YES 4 LOOPS (DOUBLE)	NO	D, FF
44	142	EB	2.11	209+67.39	BEFORE REGIONAL PARK SIGNAL	CALL BOX POLE	36.85		YES 4 LOOPS (DOUBLE)	NO	D, FF
45	142	EB	2.61	235+39.72	50' BACK (Exist LIGHTING STANDARD SY 0280)	CALL BOX POLE	42.17		YES 2 LOOPS (DOUBLE)	NO	F, FF
46	142	EB	3.60	285+25.00	AT MVP, SP No. 815073H, PM 3.6	CALL BOX POLE	17.87		YES 2 LOOPS (DOUBLE)	NO	F, FF
47	142	EB	3.81	299+75.36		CALL BOX POLE	33.52		YES 2 LOOPS (DOUBLE)	NO	F, FF
48	142	EB	4.20	319+66.27	AFTER OLINDA Dr SIGNAL	CALL BOX POLE	22.77		YES 2 LOOPS (DOUBLE)	NO	F, FF
49	142	EB	4.82	353+16.23		CALL BOX POLE	22.05		YES 2 LOOPS (DOUBLE)	NO	F, FF
50	142	EB	5.50	374+13.64	POST MILE MARKER 5.5	CALL BOX POLE	21.81		YES 2 LOOPS (DOUBLE)	NO	F, FF
51	142	WB	5.49	388+44.62		CALL BOX POLE	24.73		YES 2 LOOPS (DOUBLE)	NO	F, FF
52	142	EB	6.00	406+18.68	POST MILE MARKER 6.0	CALL BOX POLE	21.86		YES 2 LOOPS (DOUBLE)	NO	F, FF

DISTRICT 12 - TRANSPORTATION MANAGEMENT CENTER (TMC)

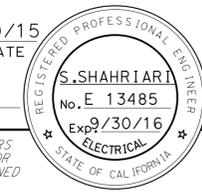
Loc No.	ADDRESS	DESCRIPTION
53	6681 MARINE WAY, IRVINE, CA, 92618	INSTALL, SET UP, AND CONFIGURE SOFTWARE

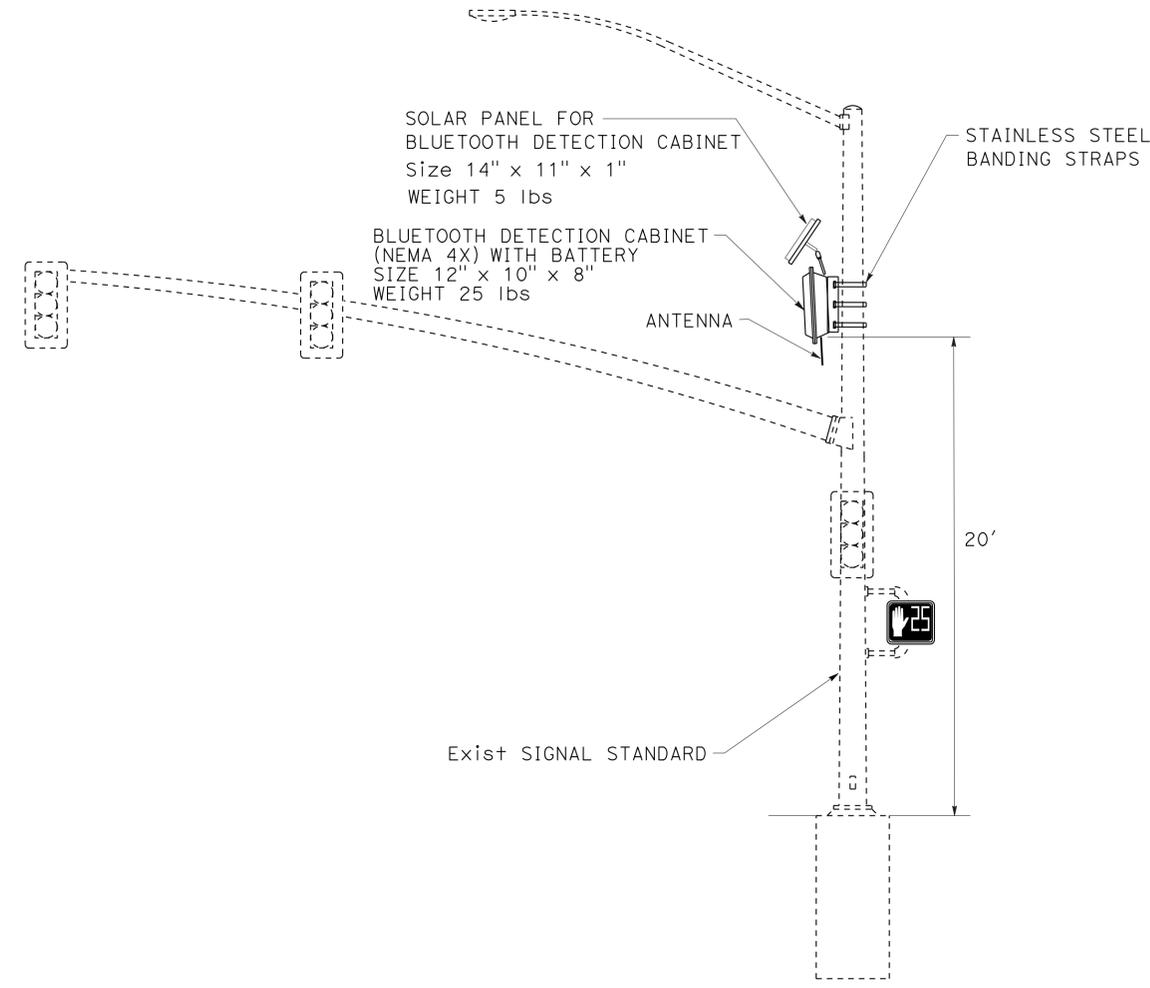
TRAFFIC DETECTION SYSTEM

E-4

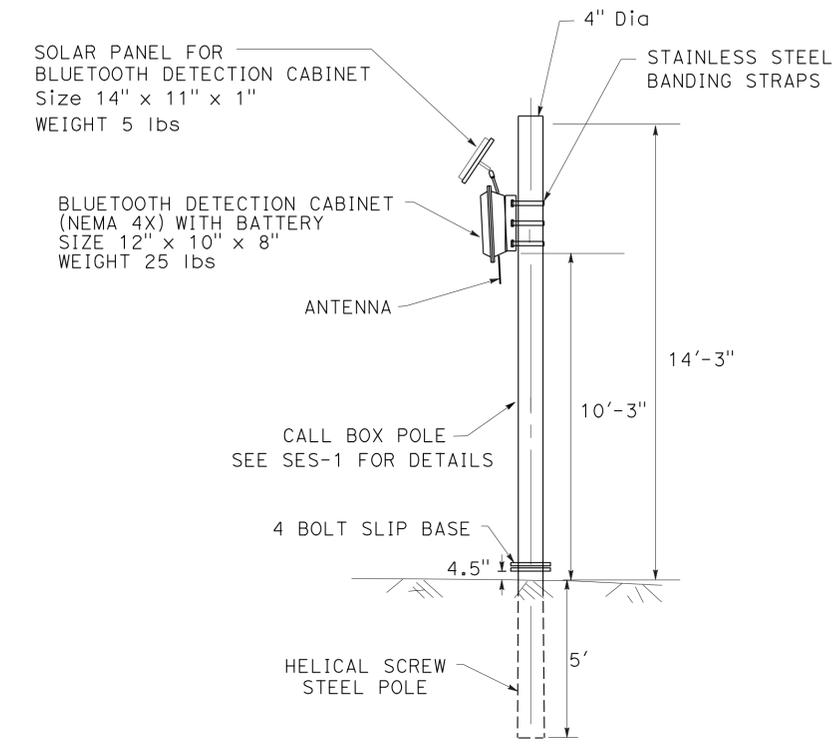
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR TAM NGUYEN
 CALCULATED/DESIGNED BY CHECKED BY
 VANESSA TRUONG SHAHRAM SHAHRIARI
 REVISED BY DATE REVISED



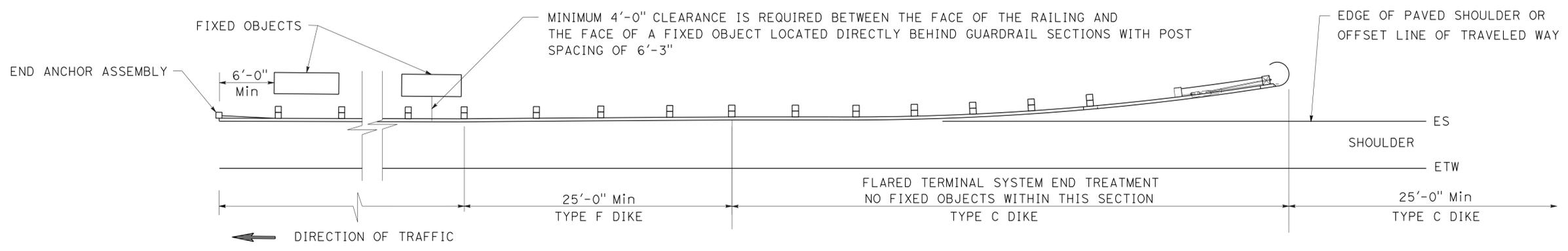
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	8	23
 REGISTERED ELECTRICAL ENGINEER DATE 05/29/15					
06/08/15			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



DETAIL A
BLUETOOTH DETECTION STATION



DETAIL B
BLUETOOTH DETECTION STATION



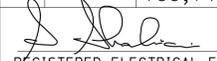
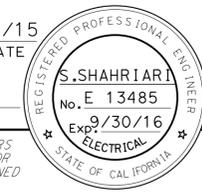
TYPICAL PLACEMENT OF FIXED OBJECT
BEHIND GUARDRAIL
DETAIL AA

TRAFFIC DETECTION SYSTEM
NO SCALE

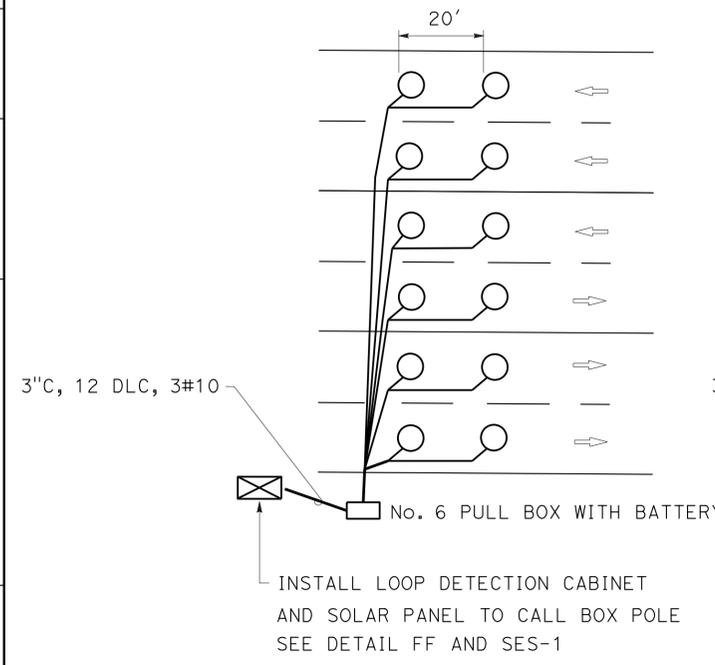
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: TAM NGUYEN
REVISOR: VANESSA TRUONG, SHAHRAM SHAHRIARI
CHECKED BY: [Blank]
DESIGNED BY: [Blank]

APPROVED FOR ELECTRICAL WORK ONLY

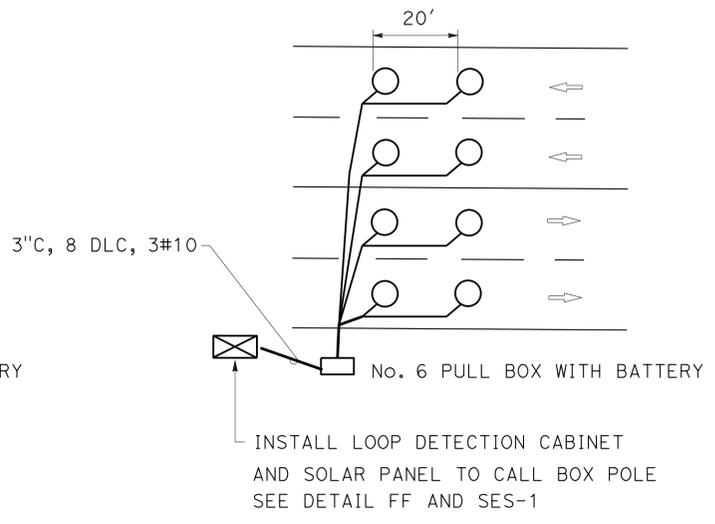
LAST REVISION DATE PLOTTED => 22-SEP-2015
05-19-15 TIME PLOTTED => 14:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	9	23
 REGISTERED ELECTRICAL ENGINEER DATE 05/29/15					
06/08/15 PLANS APPROVAL DATE					
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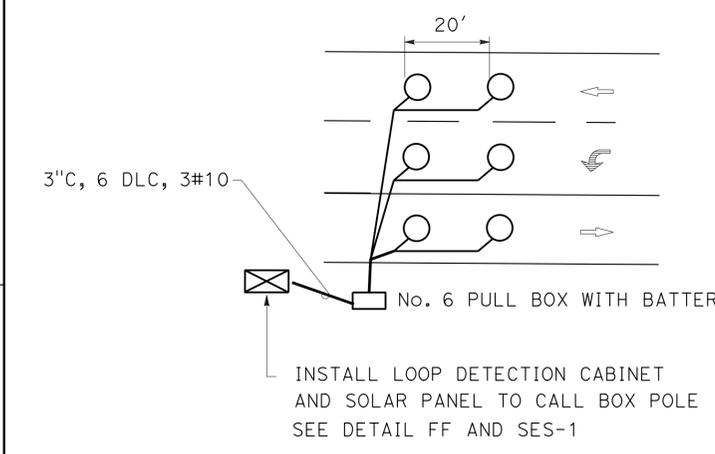
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR TAM NGUYEN
 VANESSA TRUONG
 SHAHRAM SHAHRIARI
 REVISOR BY DATE
 CALCULATED/DESIGNED BY CHECKED BY
 BORDER LAST REVISED 7/2/2010



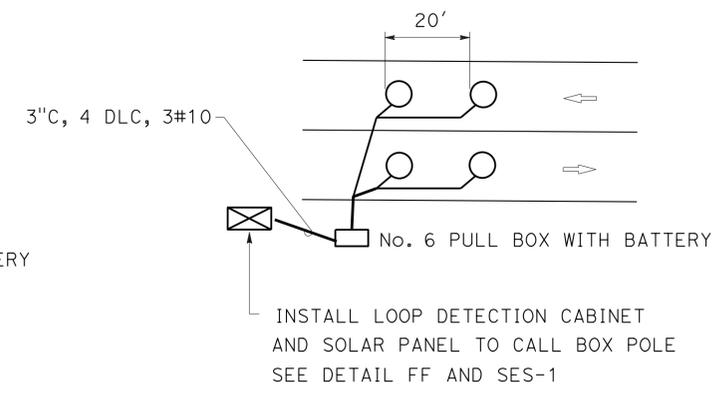
DETAIL C



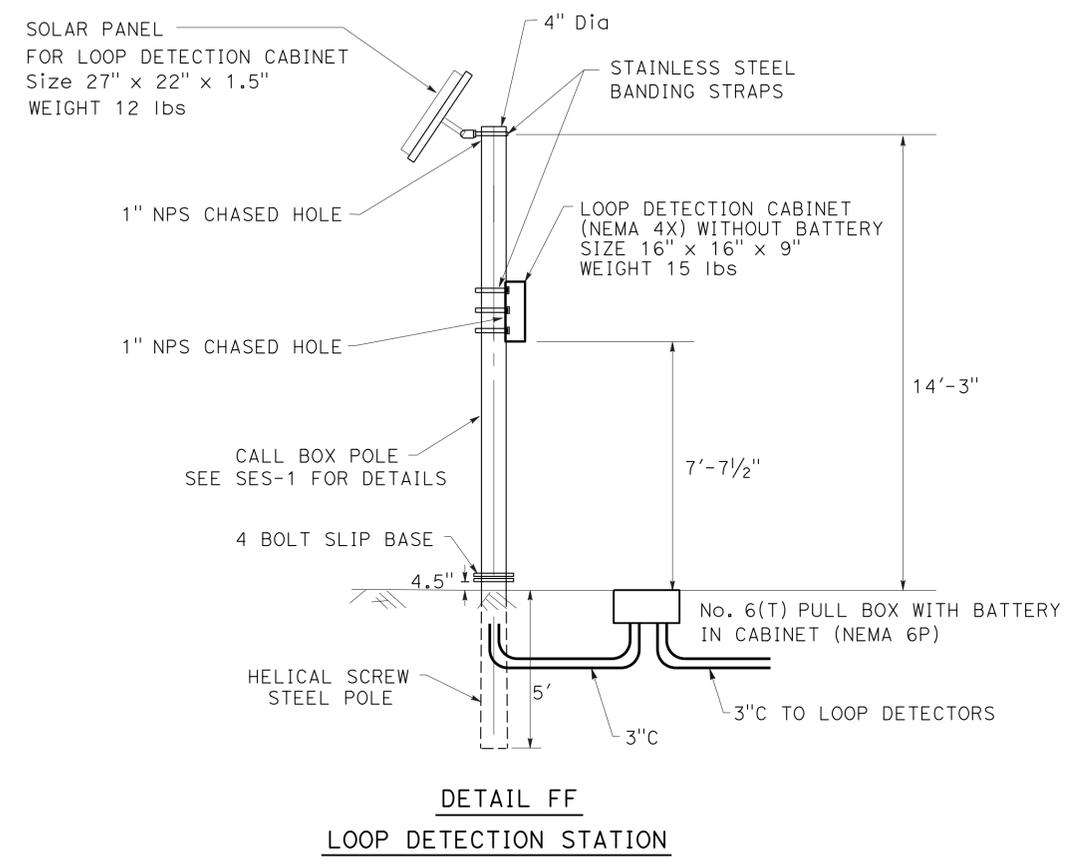
DETAIL D



DETAIL E



DETAIL F



TRAFFIC DETECTION SYSTEM
NO SCALE

LAST REVISION DATE PLOTTED => 22-SEP-2015
 05-19-15 TIME PLOTTED => 14:53

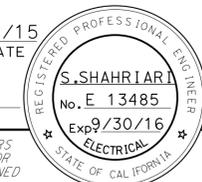
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

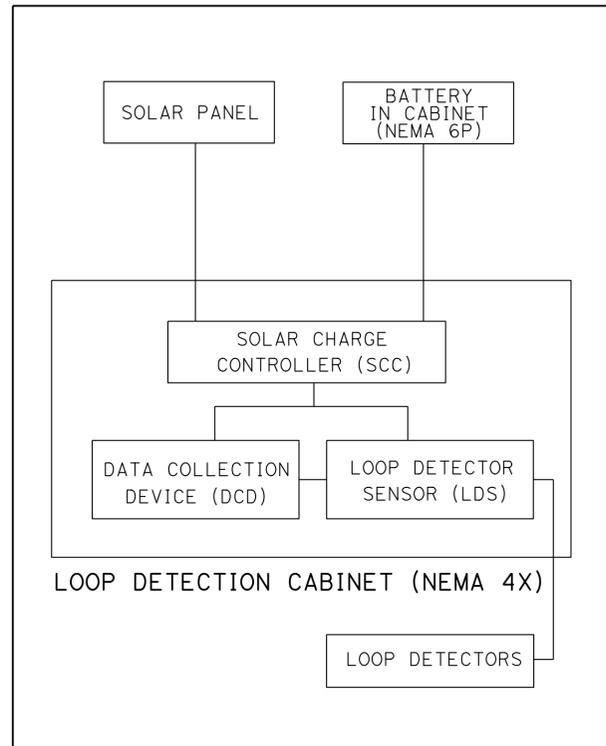
FUNCTIONAL SUPERVISOR
 TAM NGUYEN

CALCULATED/DESIGNED BY
 CHECKED BY

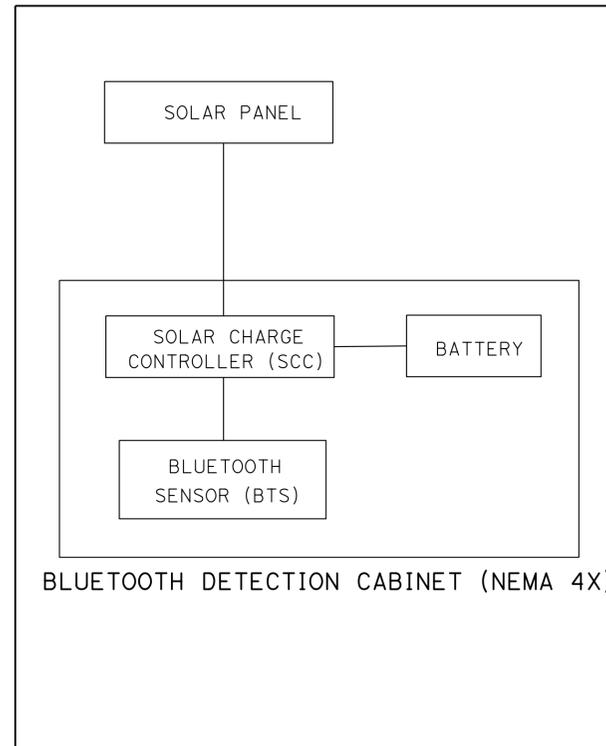
VANESSA TRUONG
 SHAHRAM SHAHRIARI

REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	10	23
			05/29/15		
REGISTERED ELECTRICAL ENGINEER			DATE		
06/08/15			PLANS APPROVAL DATE		
					
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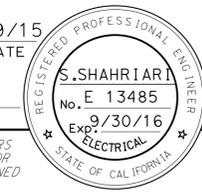
LOOP DETECTION STATION



BLUETOOTH DETECTION STATION

TRAFFIC DETECTION SYSTEM
 NO SCALE

E-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	11	23
 REGISTERED ELECTRICAL ENGINEER DATE			05/29/15		
PLANS APPROVAL DATE			06/08/15		
					
<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>					

NOTE:

1. ELECTRICAL QUANTITY INFORMATION ON THIS SHEET IS FOR DESIGNER USE ONLY. DO NOT USE FOR BIDDING PURPOSES.

TRAFFIC DETECTION SYSTEM

Loc No.	BLUETOOTH DETECTION CABINET (NEMA 4X) (EA)	SOLAR PANEL FOR BLUETOOTH DETECTION CABINET (EA)	CALL BOX POLE (EA)	LOOP DETECTION CABINET (NEMA 4X) (EA)	SOLAR PANEL FOR LOOP DETECTION CABINET (EA)	BATTERY IN CABINET (NEMA 6P) (EA)	No. 6(T) PULL BOX (EA)	LOOP DETECTOR (EA)	3" C (LF)	DLC (LF)	3#10 (LF)
1	1	1									
2	1	1									
3	1	1									
4	1	1									
5	1	1									
6	1	1									
7	1	1									
8	1	1									
9	1	1									
10	1	1									
11	1	1									
12	1	1									
13			1	1	1	1	1	8	10	160	40
14			1	1	1	1	1	8	10	160	40
15			1	1	1	1	1	4	10	80	40
16			1	1	1	1	1	4	10	80	40
17			1	1	1	1	1	4	10	80	40
18	1	1	1								
19	1	1	1								
20	1	1	1								
21			1	1	1	1	1	4	10	80	40
22			1	1	1	1	1	4	10	80	40
23			1	1	1	1	1	4	10	80	40
24	1	1	1								
25	1	1	1								

TRAFFIC DETECTION SYSTEM

Loc No.	BLUETOOTH DETECTION CABINET (NEMA 4X) (EA)	SOLAR PANEL FOR BLUETOOTH DETECTION CABINET (EA)	CALL BOX POLE (EA)	LOOP DETECTION CABINET (NEMA 4X) (EA)	SOLAR PANEL FOR LOOP DETECTION CABINET (EA)	BATTERY IN CABINET (NEMA 6P) (EA)	No. 6(T) PULL BOX (EA)	LOOP DETECTOR (EA)	3" C (LF)	DLC (LF)	3#10 (LF)
26			1	1	1	1	1	4	10	80	40
27			1	1	1	1	1	4	10	80	40
28			1	1	1	1	1	6	10	120	40
29			1	1	1	1	1	4	10	80	40
30			1	1	1	1	1	4	10	80	40
31			1	1	1	1	1	4	10	80	40
32			1	1	1	1	1	6	10	120	40
33			1	1	1	1	1	8	10	160	40
34			1	1	1	1	1	4	10	80	40
35			1	1	1	1	1	4	10	80	40
36			1	1	1	1	1	4	10	80	40
37			1	1	1	1	1	4	10	80	40
38			1	1	1	1	1	4	10	80	40
39			1	1	1	1	1	4	10	80	40
40			1	1	1	1	1	4	10	80	40
41			1	1	1	1	1	4	10	80	40
42			1	1	1	1	1	12	10	240	40
43			1	1	1	1	1	8	10	160	40
44			1	1	1	1	1	8	10	160	40
45			1	1	1	1	1	4	10	80	40
46			1	1	1	1	1	4	10	80	40
47			1	1	1	1	1	4	10	80	40
48			1	1	1	1	1	4	10	80	40
49			1	1	1	1	1	4	10	80	40
50			1	1	1	1	1	4	10	80	40
51			1	1	1	1	1	4	10	80	40
52			1	1	1	1	1	4	10	80	40

TRAFFIC DETECTION SYSTEM

Loc No.	DESCRIPTION
53	INSTALL, SET UP, AND CONFIGURE SOFTWARE AT TRAFFIC MANAGEMENT CENTER (TMC), 6681 MARINE WAY, IRVINE, CA, 92618

ELECTRICAL QUANTITIES

E-8



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	1, 74, 133, 142	Var	12	23

Eliseo Lopez 4/22/15
 REGISTERED CIVIL ENGINEER DATE

06-08-15
 PLANS APPROVAL DATE

ELISEO LOPEZ
 No. C72910
 Exp. 12/31/16
 CIVIL
 STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

TO ACCOMPANY PLANS DATED 06-08-15

TABLE A - Call Box Slip Base Modified Pole								
ATTACHMENT	HEIGHT "H"	MIN OD		WALL THICKNESS	BASE PLATE DIMENSION	THICKNESS	ANCHOR BOLTS	
		BASE	TOP				SIZE	BC = BOLT CIRCLE
Call Box Slip Base Modified Pole	14'-3"	4"	4"	Per Manufacturer's Specifications				

TABLE B - Detail FF Pole			
ATTACHMENT	DIMENSIONS	MOUNTING HEIGHT	WEIGHT LIMITS (lbs)
Loop Detection Cabinet	1'-4" H x 1'-4" W x 9" D	7'-7 1/2" Max Bottom Clr	15
Solar Panel	1'-10" H x 2'-3" W x 1 1/2" D	14'-3" Max Bottom Clr	12

TABLE C - Detail B Pole			
ATTACHMENT	DIMENSIONS	MOUNTING HEIGHT	WEIGHT LIMITS (lbs)
Bluetooth Detection Cabinet	12" H x 10" W x 8" D	10'-3" Max Bottom Clr	25
Solar Panel	1'-2" H x 11" W x 1" D	10'-3" Max Bottom Clr (See Detail B)	5

GENERAL NOTES:

SPECIFICATIONS

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Sixth Edition

LOADING

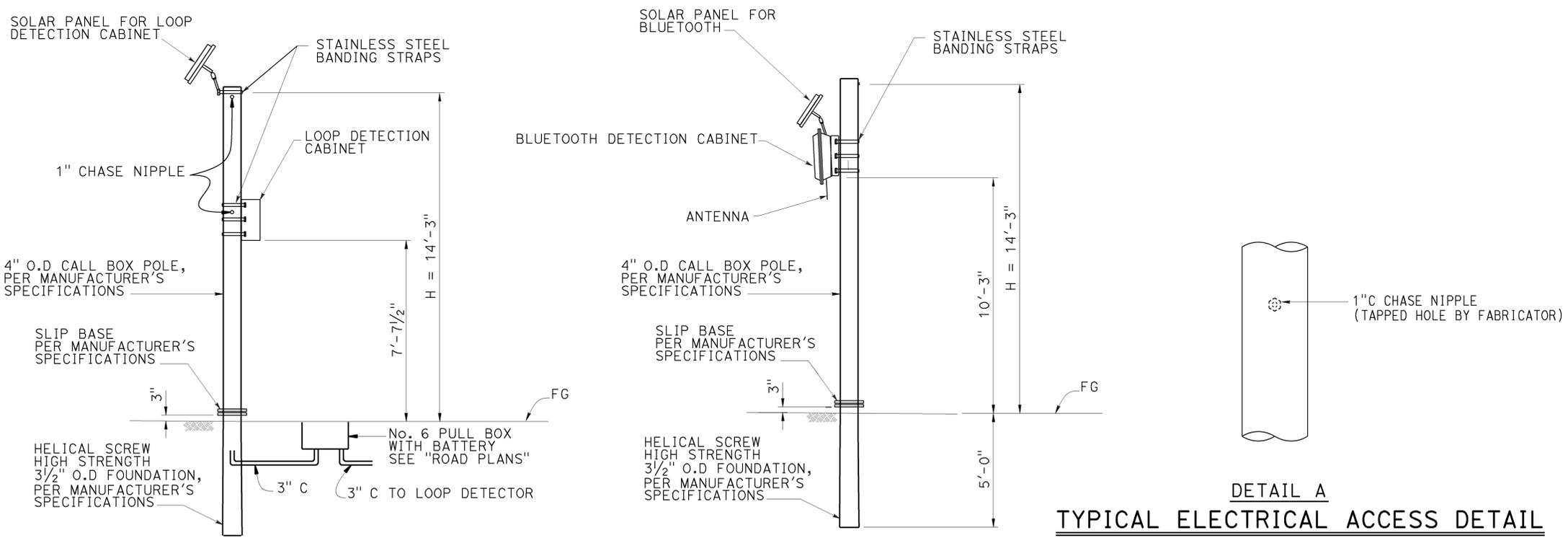
Wind Loading: 100 MPH (3-sec gust)

UNIT STRESSES

Structural Steel: fy = 36,000 psi unless otherwise noted.

NOTES:

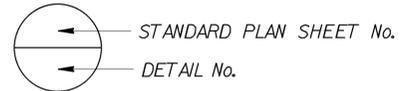
1. For pole locations, see "ROADWAY PLANS".
2. All steel must be galvanized after fabrication.
3. During pole erection the post must be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
4. Foundation must be treated as level ground condition if slope inclination is flatter than 4H:1V
5. The call box slip base modified pole and foundation design is per Manufacturer's specifications.
6. The call box slip base modified pole must be per Manufacturer's specifications and recommendations.
7. The call box slip base modified pole and foundation must meet the "CHP/CALTRANS Call Box and Motorist Aid Guidelines"
8. For details not shown, see "2010 STANDARD PLANS" and "2010 REVISED STANDARD PLANS".



DETAIL FF ELEVATION

DETAIL B ELEVATION

DETAIL A TYPICAL ELECTRICAL ACCESS DETAIL



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

NO SCALE

BRANCH CHIEF JEFFREY B WOODY	DESIGN	BY E. LOPEZ	CHECKED M. LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	CALL BOX SLIP BASE MODIFIED POLE DETAILS	SES-1
	DETAILS	BY T. NGUYEN	CHECKED M. LICHA			POST MILE		
	QUANTITIES	BY	CHECKED			Var		

	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	
P, 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	
£	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	
WWLOL	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
12	Ora	1,74 133,142	Var	13	23

Grace M. Tsushima
REGISTERED CIVIL ENGINEER



July 19, 2013
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 06-08-15

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
∅	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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**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
12	Ora	1,74 133,142	Var	14	23

TO ACCOMPANY PLANS DATED 06-08-15

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

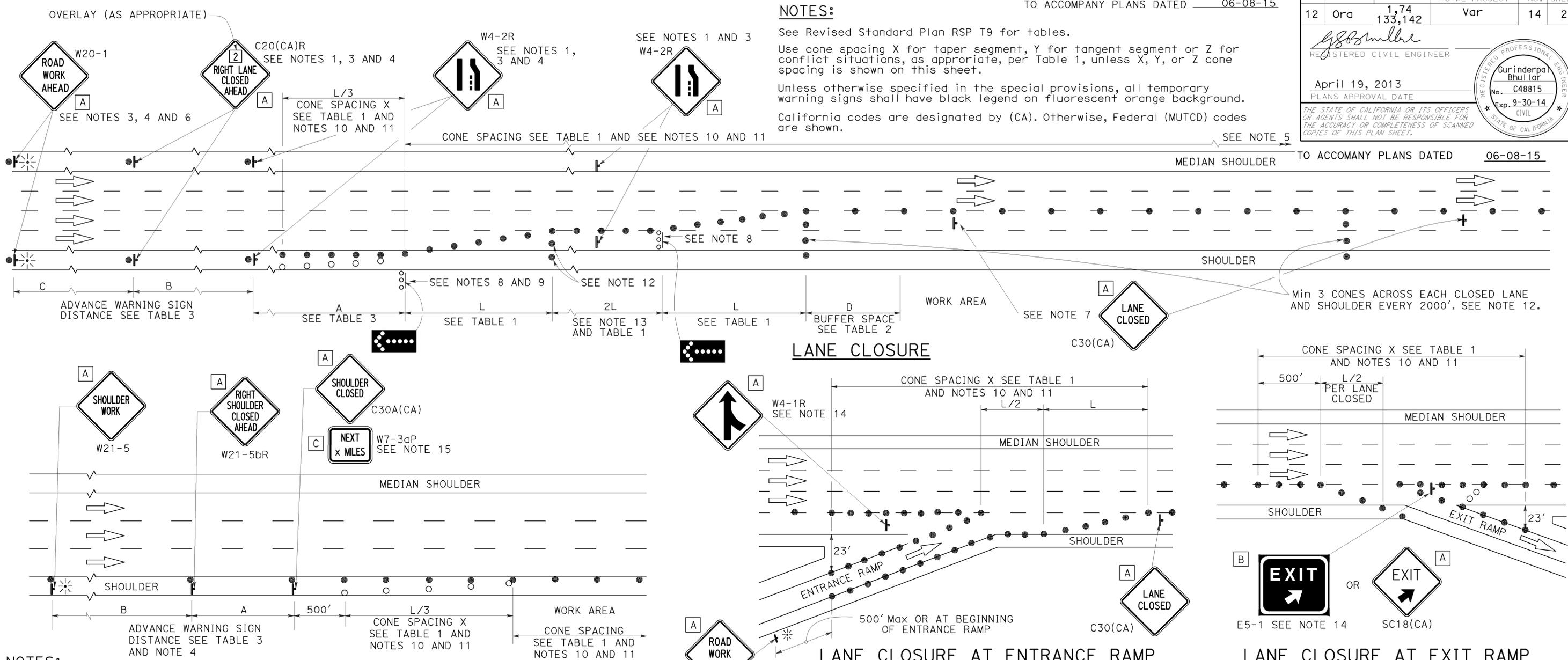
April 19, 2013
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 06-08-15

NOTES:

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



NOTES:

- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- Duplicate sign installations are not required:
 - On opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
- Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA)L and W4-2L signs shall be used.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

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

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"

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

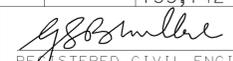
NO SCALE

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

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

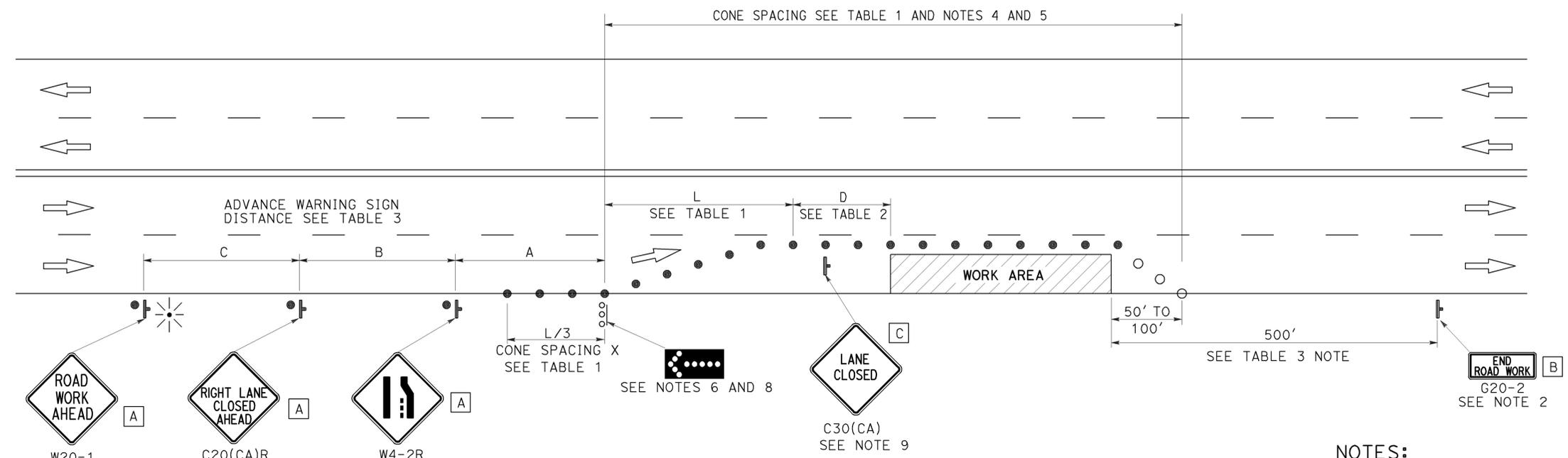
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	15	23


 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.

TO ACCOMPANY PLANS DATED 06-08-15



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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	16	23

Devinder Singh
 REGISTERED CIVIL ENGINEER
 October 17, 2014
 PLANS APPROVAL DATE
 No. C50470
 Exp. 6-30-15
 CIVIL
 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER

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

NOTES:

See Revised Standard Plan RSP T9 for tables.

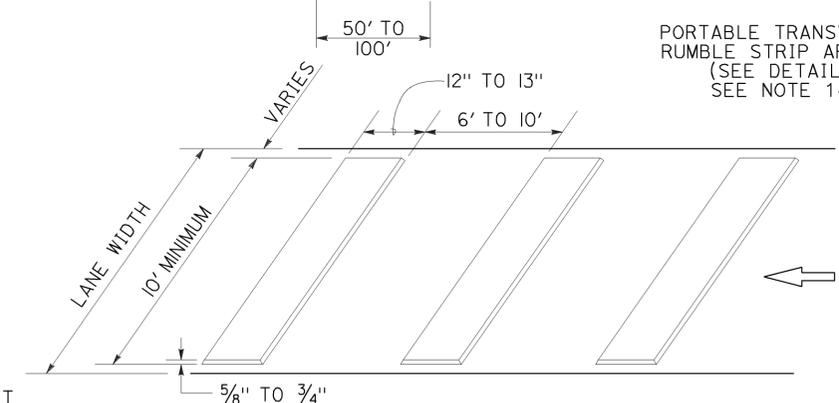
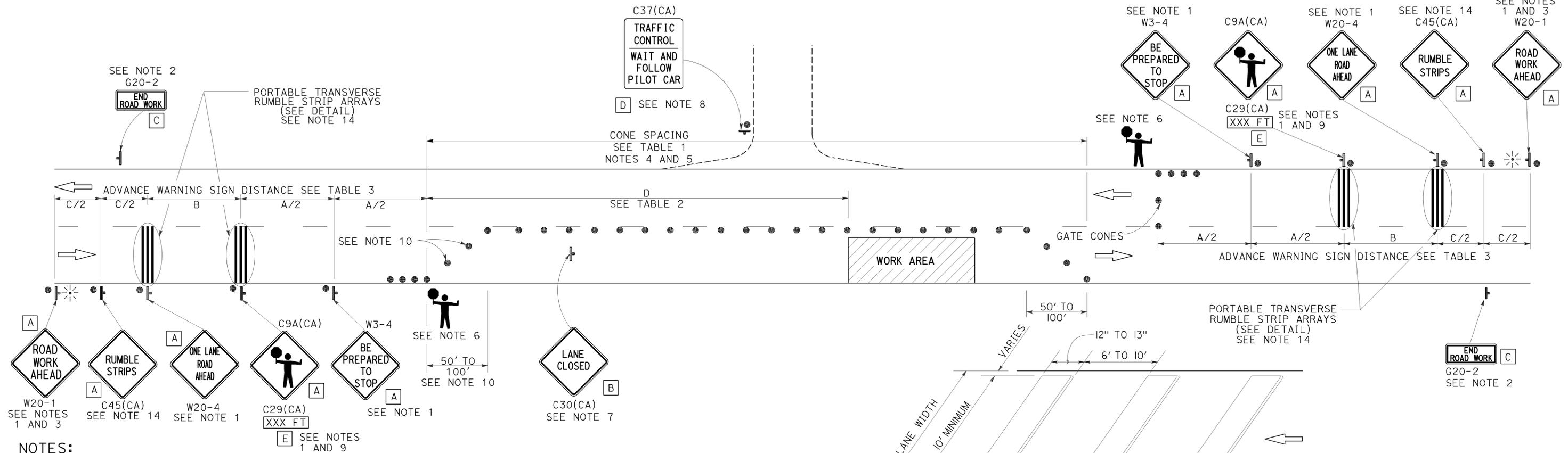
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL

TO ACCOMPANY PLANS DATED 06-08-15



- LEGEND**
- TRAFFIC CONE
 - † TEMPORARY TRAFFIC CONTROL SIGN
 - ⚡ PORTABLE FLASHING BEACON
 - 🚧 FLAGGER

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

RSP T13 DATED OCTOBER 17, 2014 SUPERSEDES RSP T13 DATED JULY 18, 2014 AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

NOTES:

1. Each advance warning sign in each direction of travel 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.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
7. Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
8. When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
9. An optional C29(CA) sign may be placed below the C9A(CA) sign.
10. Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
11. The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
12. Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
13. If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
14. Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
 - A. Work duration occupies a location for four hours or less
 - B. Posted speed limit is below 45 MPH
 - C. Work is of emergency nature
 - D. Work zone is in snow or icy weather conditions

2010 REVISED STANDARD PLAN RSP T13

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	17	23

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa
Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 06-08-15

SOFFIT AND WALL MOUNTED LUMINAIRES

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

NOTE:
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	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 NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

NOTES:

- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
- 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
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES 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
12	Ora	1,74 133,142	Var	18	23

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa Aziz Gabriel
REGISTERED PROFESSIONAL ENGINEER
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 06-08-15

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 "C" INDICATES COUNTDOWN PEDESTRIAN 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 SYSTEM

SERVICE EQUIPMENT

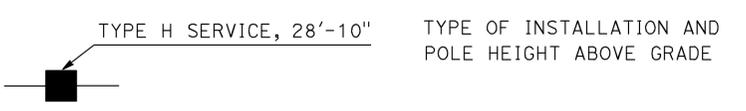
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		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

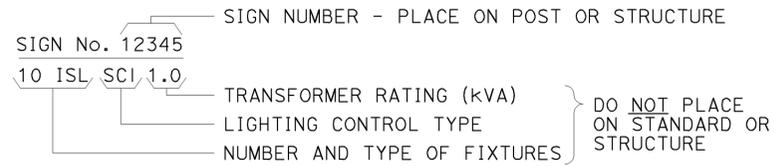
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

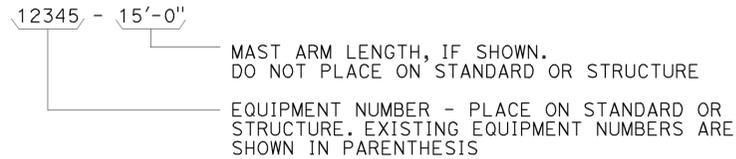
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

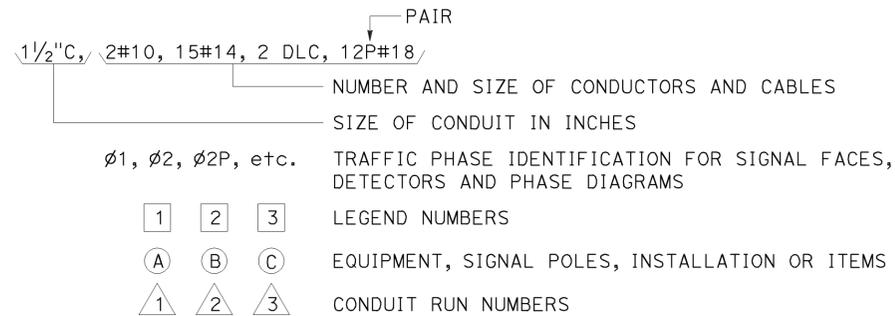
ILLUMINATED SIGN IDENTIFICATION NUMBER:



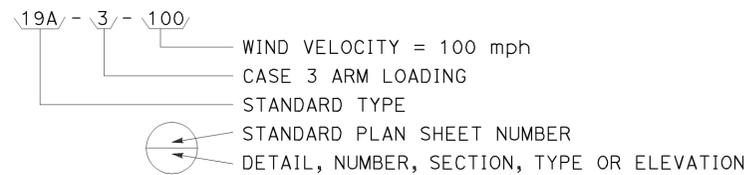
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



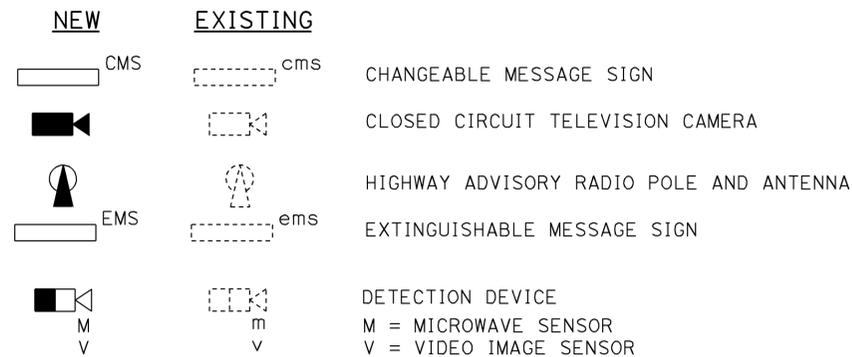
CONDUIT AND CONDUCTOR IDENTIFICATION:



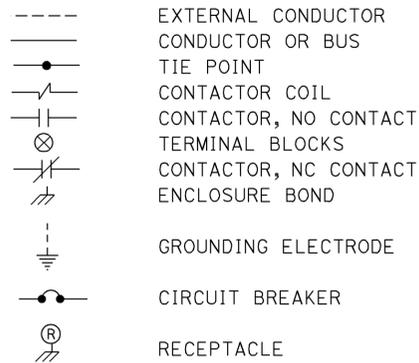
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



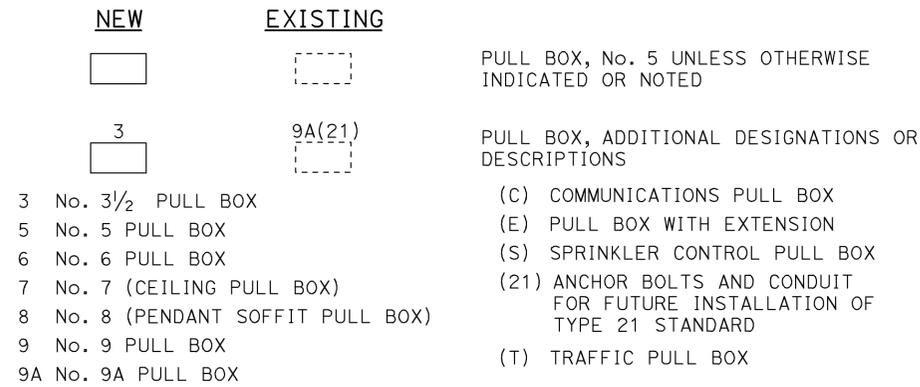
MISCELLANEOUS EQUIPMENT



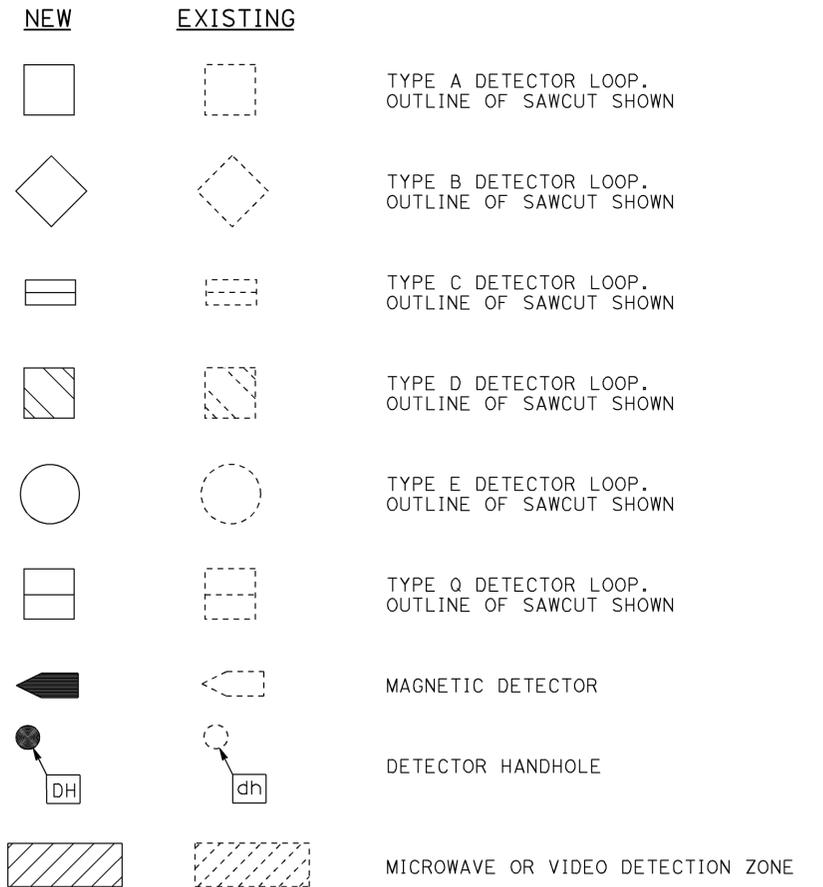
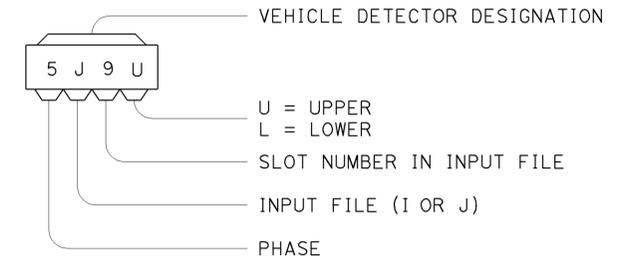
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

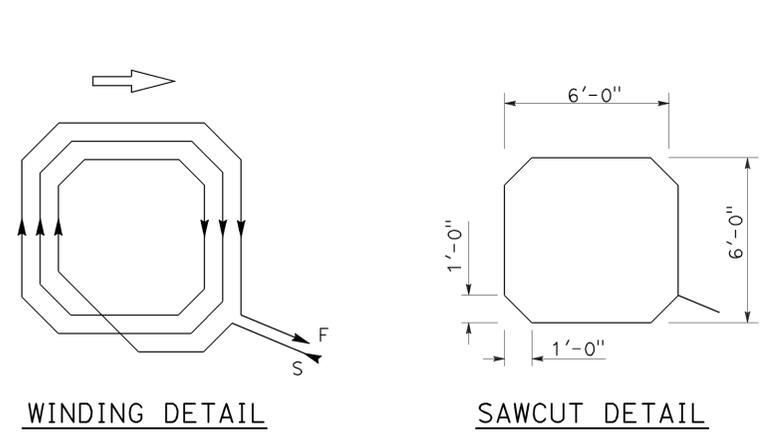
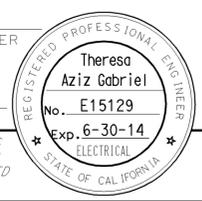
NO SCALE

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

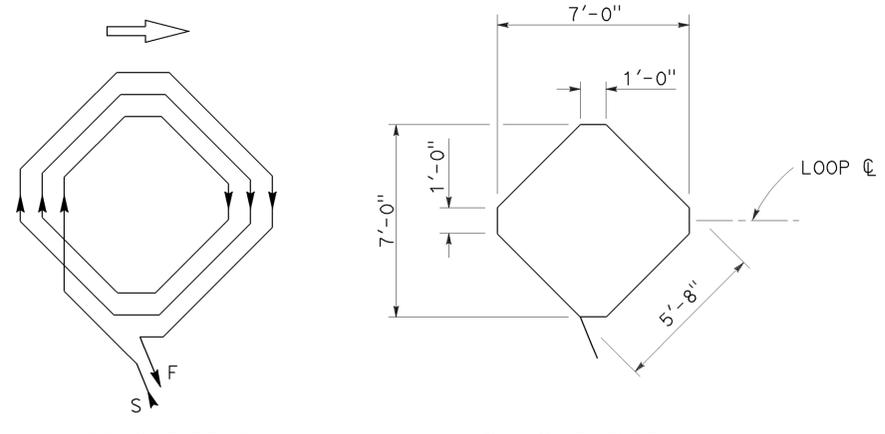
REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

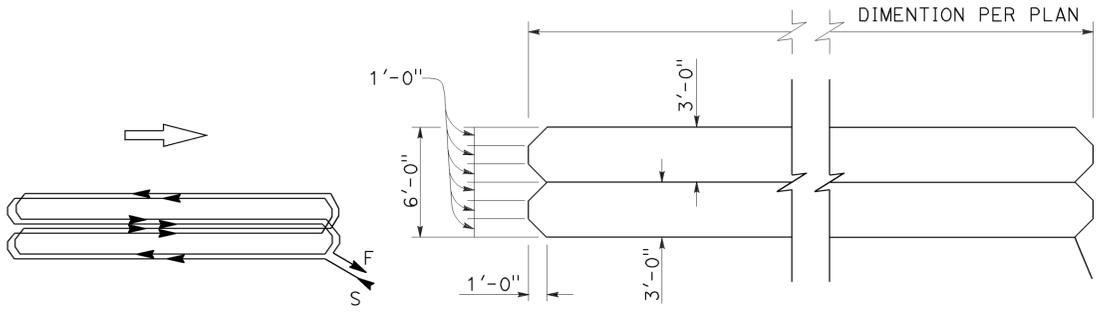
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	20	23
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER July 19, 2013 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
TO ACCOMPANY PLANS DATED <u>06-08-15</u>					



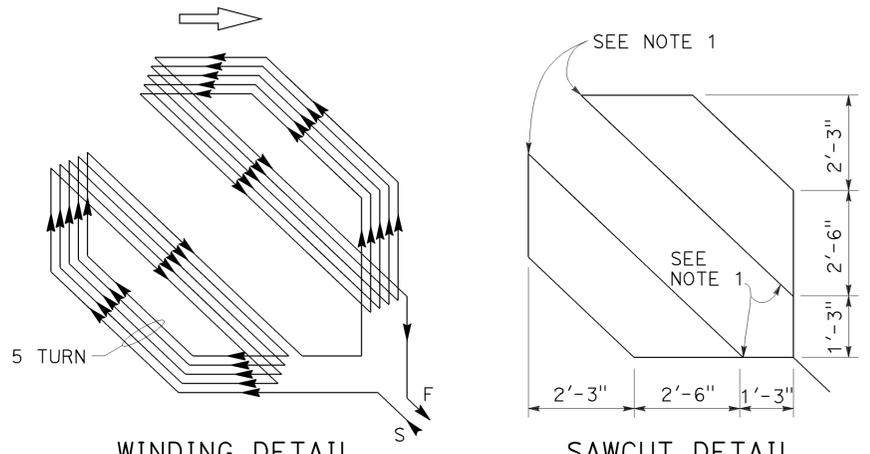
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



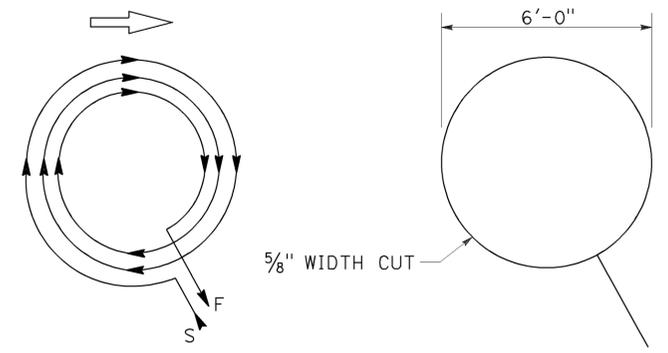
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



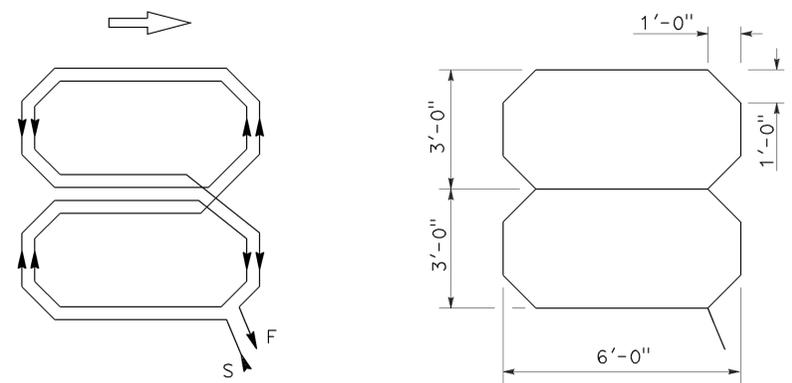
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



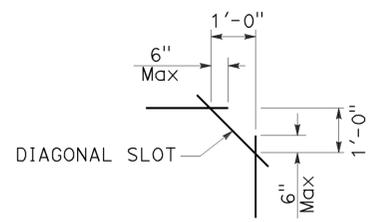
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



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.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

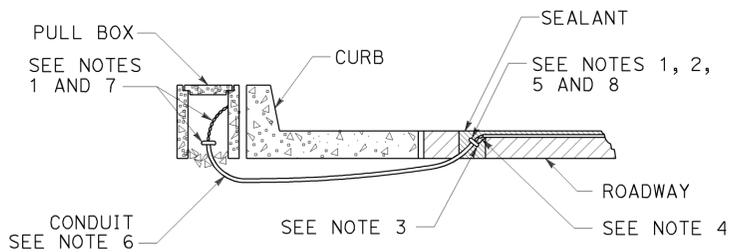
**ELECTRICAL SYSTEMS
(DETECTORS)**

NO SCALE

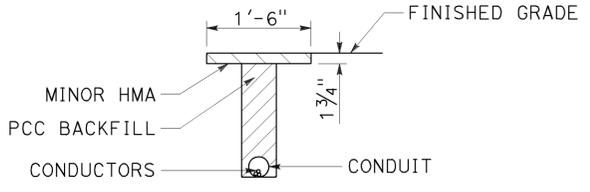
RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B
DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-5B

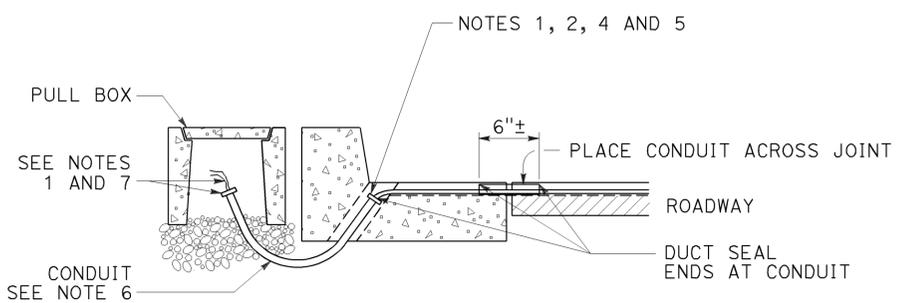
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	21	23
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER July 19, 2013 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
TO ACCOMPANY PLANS DATED <u>06-08-15</u>					



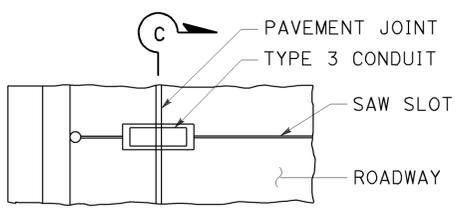
TYPE A
CURB TERMINATION DETAIL



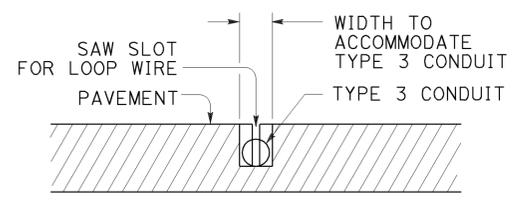
"T" TRENCH
DETAIL T



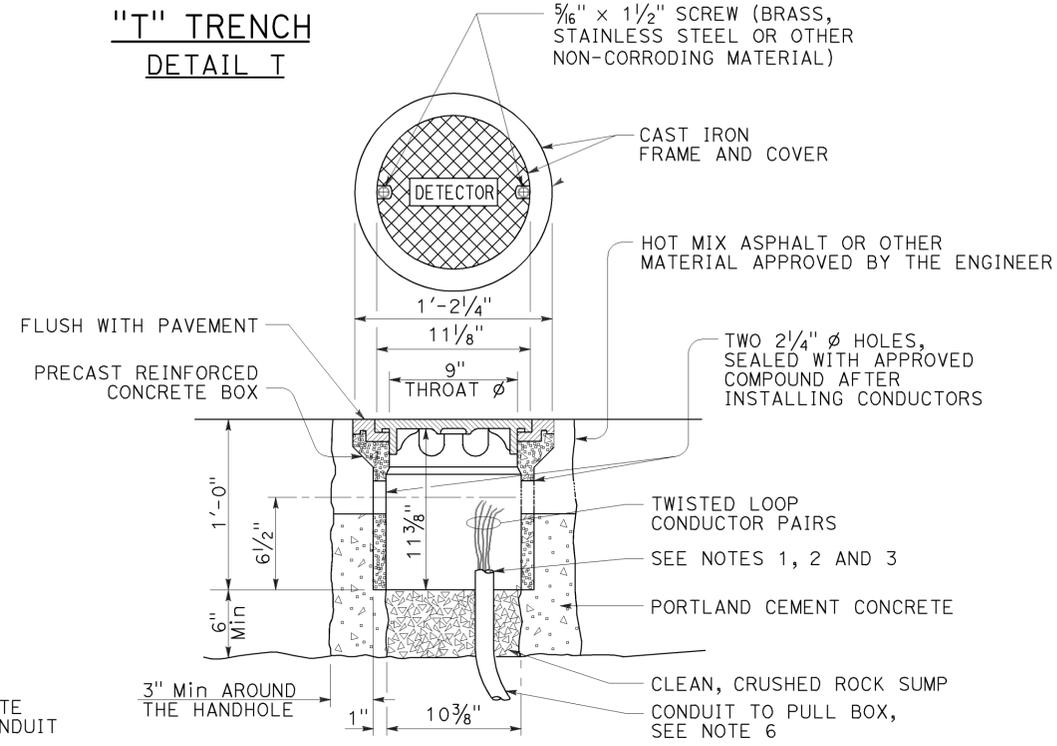
CROSS SECTION



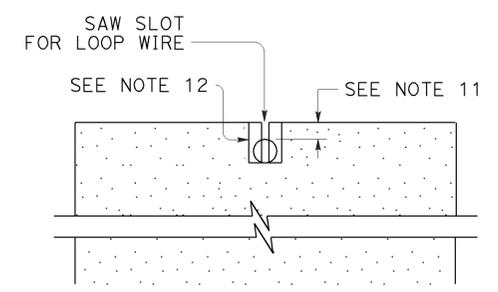
PLAN VIEW



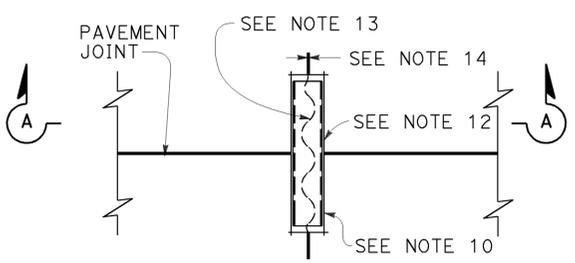
SECTION C-C



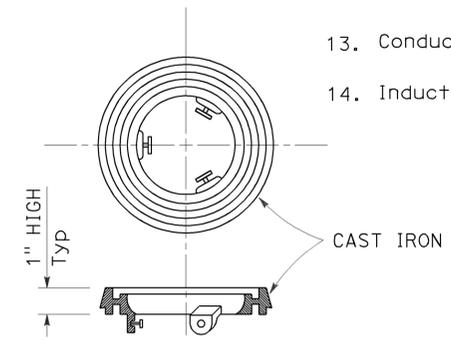
DETECTOR HANDHOLE DETAIL



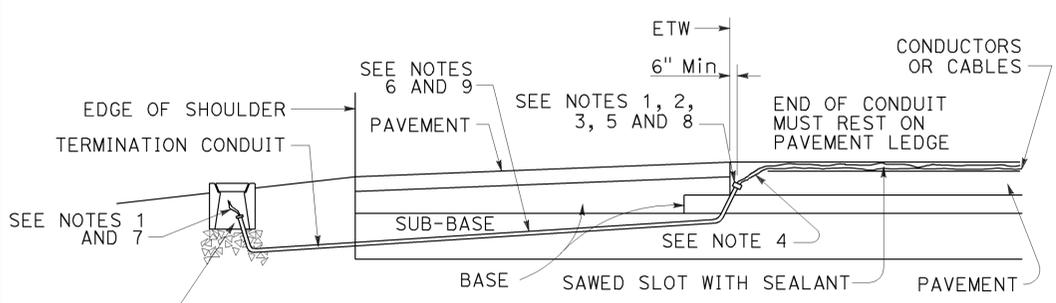
SECTION A-A



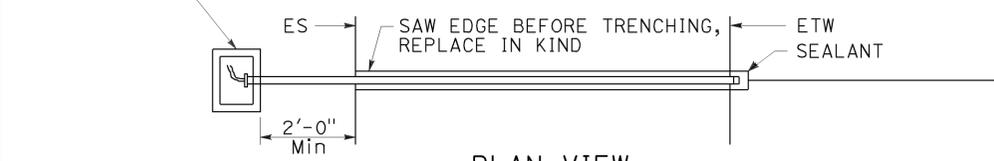
PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT



LOCKING GRADE RING



CROSS SECTION



PLAN VIEW
SHOULDER TERMINATION DETAILS

NOTES:

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size Loop conductors
1"C minimum 1 to 2 pairs
1 1/2"C minimum 3 to 4 pairs
2"C minimum 5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(CURB TERMINATION
AND HANDHOLE)
NO SCALE

RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D
DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5D

2010 REVISED STANDARD PLAN RSP ES-5D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	1,74 133,142	Var	22	23

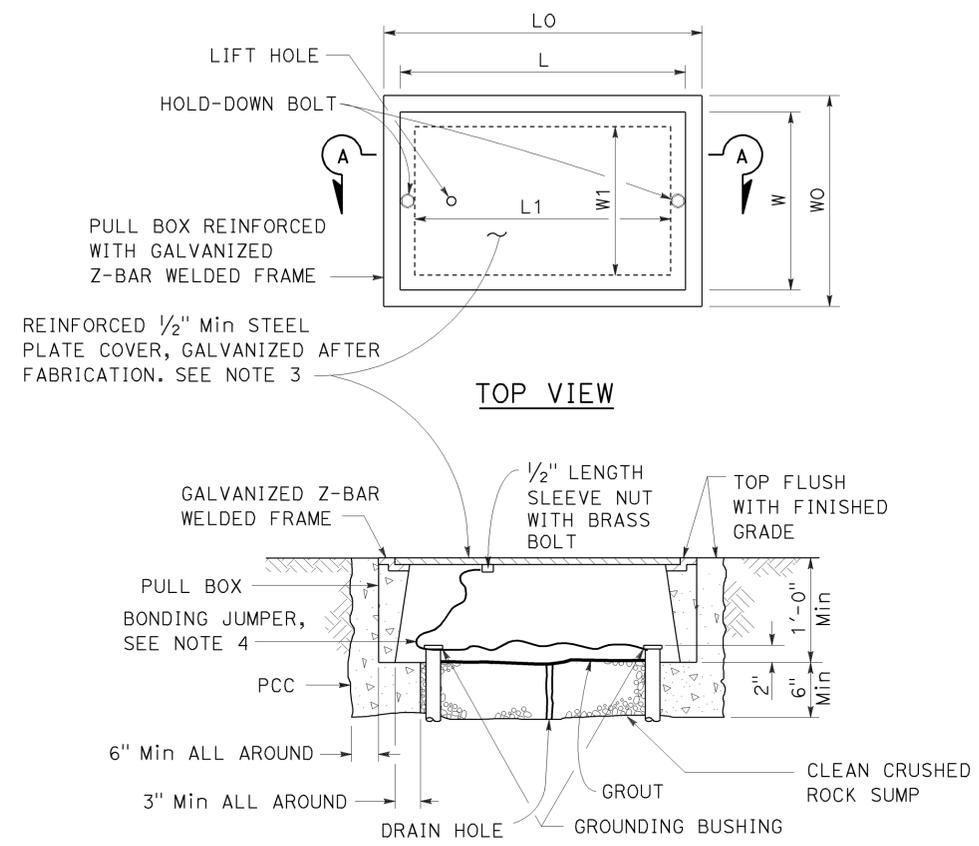
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 06-08-15



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	W0	L0	L1	W1	L **	W **	R	EDGE THICKNESS	EDGE TAPER
No. 3 1/2(T)	1 1/2"	1'-0"	1'-5"± 1"	1'-8 3/8"±	1'-2 1/2"±	10 5/8"± 1"	1'-8"±	1'-1 3/4"±	0"	1/2"	NONE
No. 5(T)	1 3/4"	1'-0"	1'-11 1/2"± 1"	2'-5 1/2"±	1'-7"±	1'-1"± 1"	2'-3"±	1'-4"±	0"	1/2"	NONE
No. 6(T)	2"	1'-0"	2'-6"± 1"	2'-11 1/2"±	1'-11 1/2"±	1'-5"± 1"	2'-9"±	1'-8"±	0"	1/2"	NONE

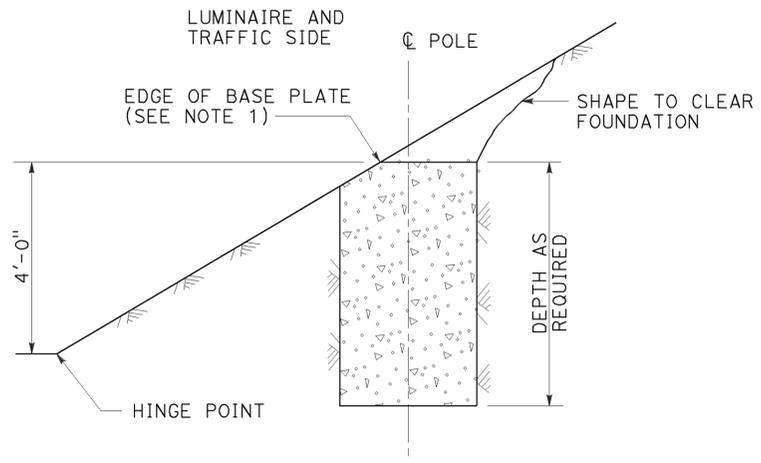
* EXCLUDING CONDUIT WEB ** TOP DIMENSION

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

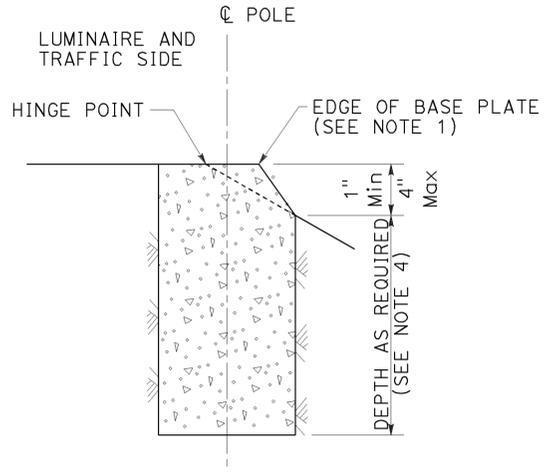
RSP ES-8B DATED JULY 19, 2013 SUPERSEDES RSP ES-8B DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8B

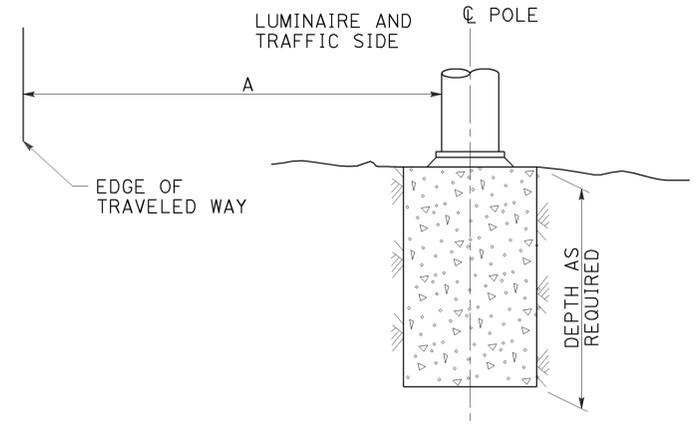
2010 REVISED STANDARD PLAN RSP ES-8B



CUT SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-1
 See Note 2 and 3



FILL SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-2
 See Note 2 and 3



FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3
 See Note 2

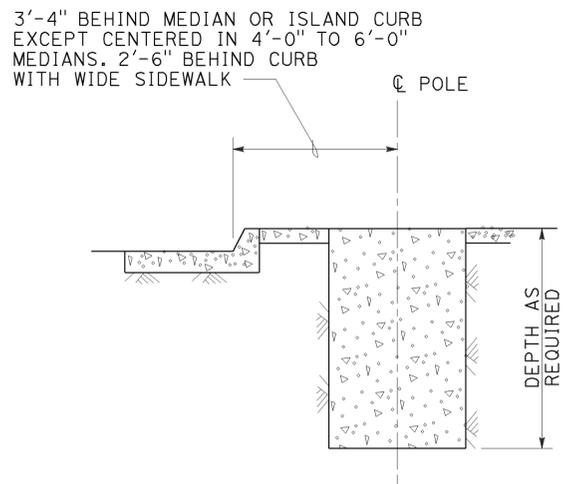
TO ACCOMPANY PLANS DATED 06-08-15

STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)

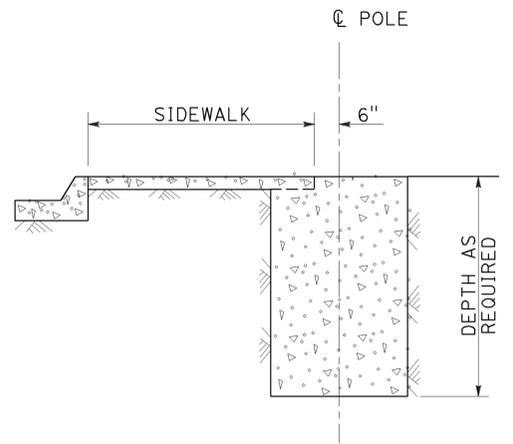
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A

NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
- Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
- Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
- CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



MEDIAN, ISLAND
OR WIDE SIDEWALK
DETAIL B-1
 7' Wide and wider



NARROW SIDEWALK
DETAIL B-2
 Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL B

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(FOUNDATION INSTALLATIONS)
 NO SCALE

RSP ES-11 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-11
 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.