

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LASSEN COUNTY AT AND NEAR BIEBER FROM
PIT RIVER OVERFLOW BRIDGE 07-0002 TO
0.3 MILE WEST OF BOYD HILL LOOKOUT ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

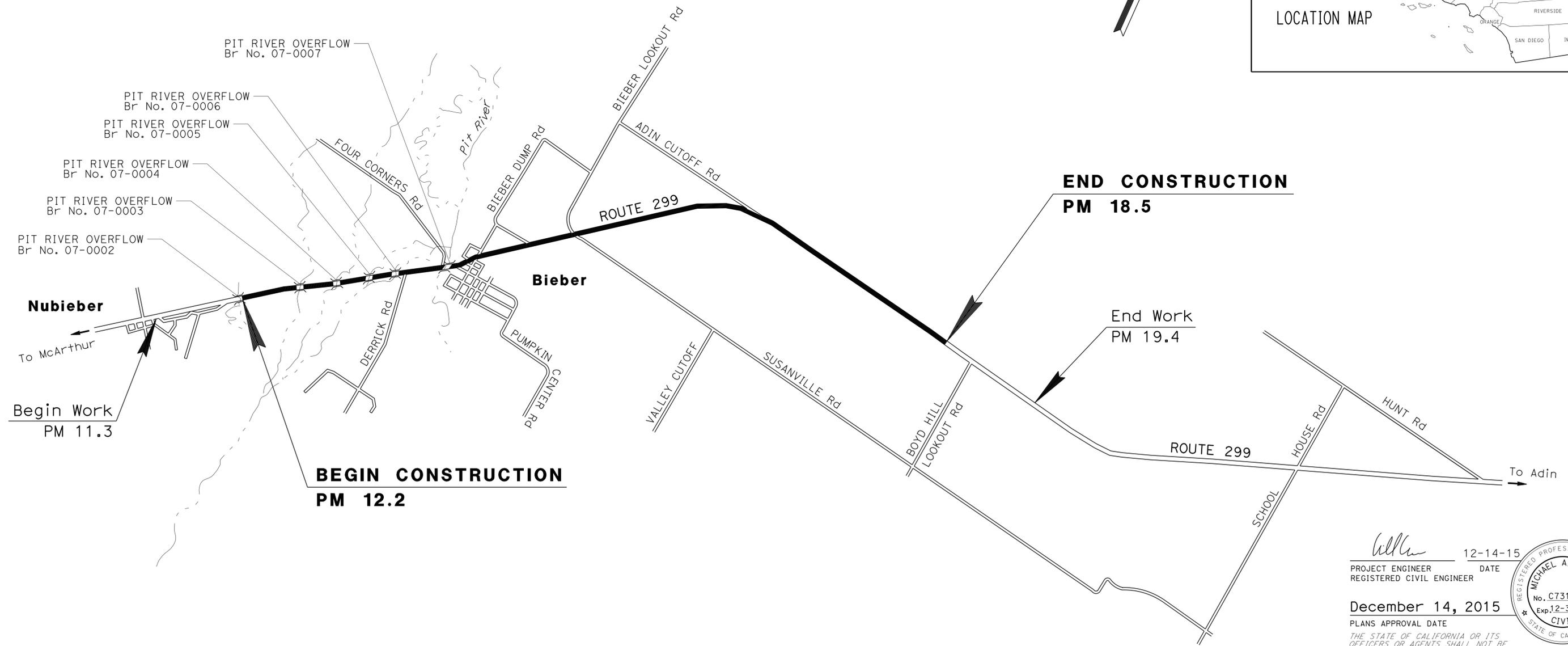
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	1	24

LOCATION MAP



PROJECT MANAGER
MICHAEL CONNER
 DESIGN ENGINEER
MICHAEL CONNER

PROJECT ENGINEER DATE 12-14-15
 REGISTERED CIVIL ENGINEER
December 14, 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.



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

NO SCALE

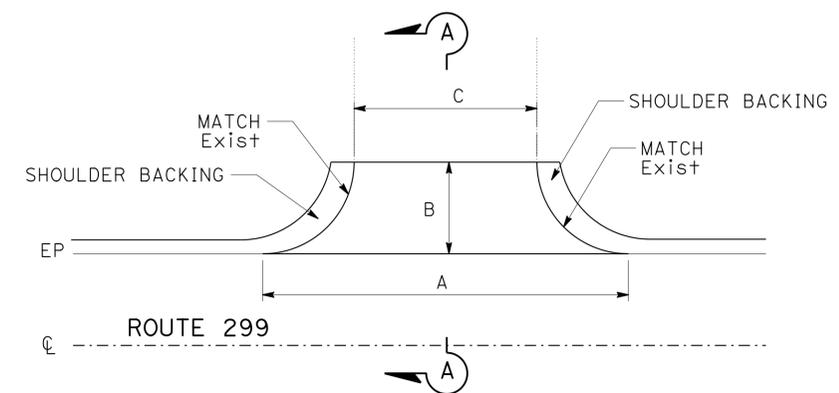
CONTRACT No.	02-1H0404
PROJECT ID	0215000099

NOTES:

- FOR TEMPORARY CONSTRUCTION TAPERS, GRIND EXISTING SURFACES TO ACCOMMODATE A MINIMUM TAPER THICKNESS OF 0.10' WHEN EITHER:
 - HMA MATERIAL SUCH AS RUBBERIZED, POLYMER MODIFIED OR OPEN GRADED IS UNSUITABLE FOR RAKING TO A MAXIMUM 0.02' THICKNESS AT THE CONFORM.
 - TEMPORARY TAPER WILL BE IN PLACE FOR MORE THAN 14 DAYS.
- PERMANENT SURFACE MAY BE EXISTING OR NEW PAVEMENT.
- ROADWAY SURFACE IS THE TOP OF EXISTING SURFACE OR THE TOP OF THE PLANED SURFACE.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- DO NOT PLACE SEAL COAT ON BRIDGE DECKS.

LEGEND:

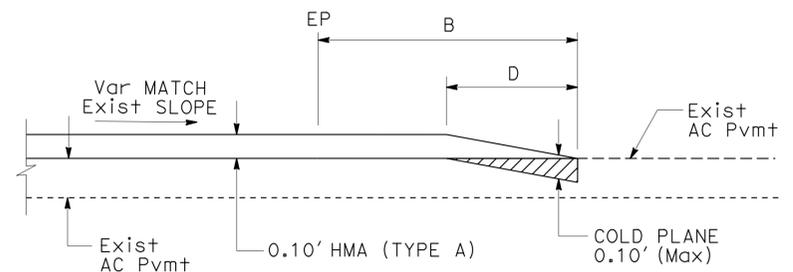
- 0.25' HMA
- 0.25' COLD PLANE AC PAVEMENT
- COLD PLANE AC PAVEMENT (0.00' TO 0.10')
- ASPHALTIC EMULSION (FOG SEAL COAT)
- HMA MATERIAL (TEMPORARY TAPER)
- IF NECESSARY, COLD PLANE ASPHALT CONCRETE PAVEMENT AND PLACE HMA MATERIAL



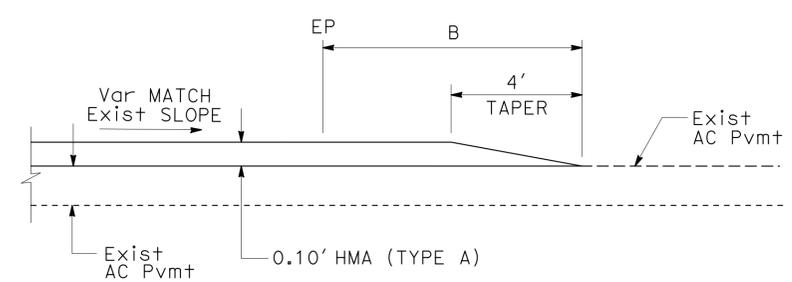
PAVED ROAD CONNECTIONS AND PULLOUTS

PAVED ROAD CONNECTION

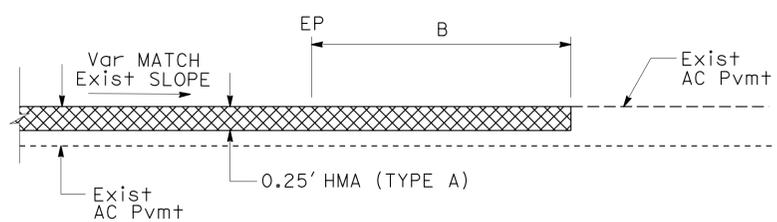
POST MILE	TYPE	SIDE		DIMENSIONS (LF)				CASE
		R+	L+	A	B	C	D	
14.10	BRIDGE S+	X		127	35	59		C
14.14	DRIVEWAY	X		74	25	30	4	A
14.21	WATER S+	X		114	54	32	4	A
14.23	FRONTAGE	X		190	12	150		D
14.23	ROAD CONNECTION/FRONTAGE		X	302	12	302	4	A
14.31	MARKET S+	X		132	77	43	20	A
14.31	MARKET S+		X	150	90	32	20	A
14.33	DRIVEWAY	X		65	15	32	4	A
14.35	DRIVEWAY	X		64	15	34	4	A
14.35	DRIVEWAY		X	55	25	24		D
14.45	DRIVEWAY		X	57	20	17		B
14.46	DRIVEWAY		X	52	20	18		B
14.47	DRIVEWAY	X		70	15	27		D
14.49	DRIVEWAY		X	57	25	14		D
14.51	DRIVEWAY		X	59	25	19		B
14.53	DRIVEWAY		X	54	25	16		B
14.58	DRIVEWAY	X		60	25	13		D
14.58	DRIVEWAY		X	49	23	15		D
14.61	DRIVEWAY		X	50	25	17		D
14.64	DRIVEWAY		X	46	20	14		D
14.67	DRIVEWAY	X		62	20	16		D
14.70	ROAD CONNECTION		X	143	20	96		B
14.88	DRIVEWAY		X	308	20	90	4	A
15.10	Co Rd A2	X		219	101	32	20	A
15.10	Jct LOOKOUT Rd		X	136	64	31	20	A
15.14	DRIVEWAY		X	72	15	27		B
15.15	PULLOUT	X		340	15	300	4	A
15.16	DRIVEWAY		X	72	15	38		B
15.21	DRIVEWAY		X	59	25	15		D
15.26	DRIVEWAY		X	61	20	17		B



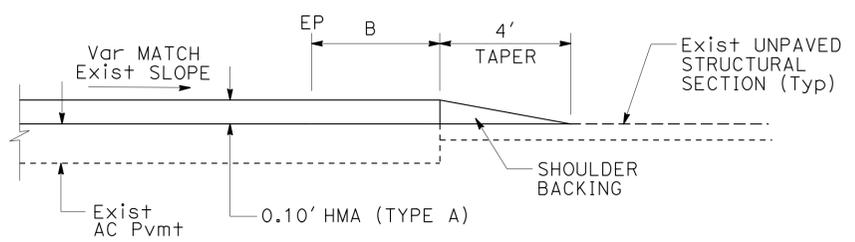
CASE A SECTION A-A



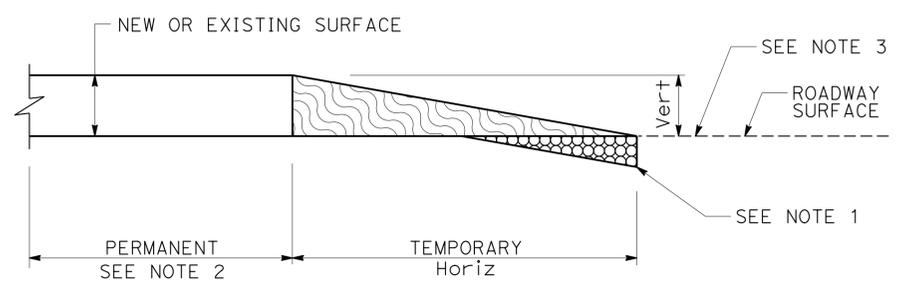
CASE B SECTION A-A



CASE C SECTION A-A

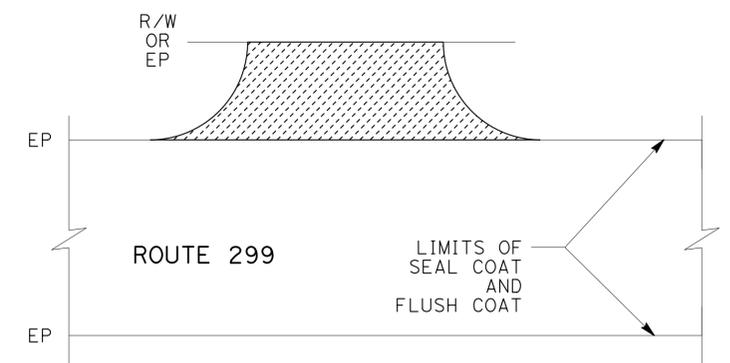


CASE D SECTION A-A



Vert	SLOPE RATIO Horiz/Vert
0-0.10'	70:1
GREATER THAN 0.10'	160:1

TYPICAL PAVING CONFORM FOR TEMPORARY CONSTRUCTION TAPERS



ASPHALTIC EMULSION (FOG SEAL COAT) DETAIL

TYPICAL DRIVEWAYS, PULLOUTS AND ROAD CONNECTIONS
 SEE Q-1 FOR QUANTITIES
 (TYPICAL BOTH DIRECTIONS)

PM 13.70 - R+
 PM 14.00 - R+
 PM 14.05 - L+
 PM 16.73 - R+ & L+

CONSTRUCTION DETAILS

NO SCALE

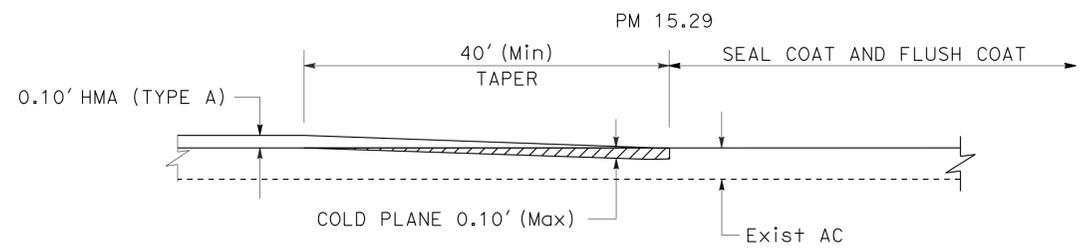
P:\proj\3\02\1\h040\plans\pse\21h040ga001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE
 FUNCTIONAL SUPERVISOR: MICHAEL CONNER
 DESIGNED BY: MICHAEL CONNER
 CHECKED BY: KARLIE SMITH
 REVISIONS: NONE
 DATE PLOTTED: 12-14-15
 TIME PLOTTED: 10:51

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	4	24

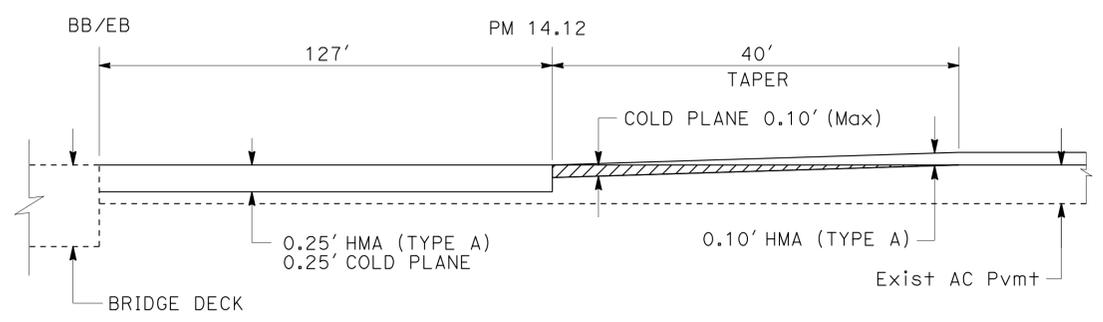
REGISTERED CIVIL ENGINEER	DATE
<i>Michael A. Conner</i>	12-14-15
PLANS APPROVAL DATE	
	12-14-15

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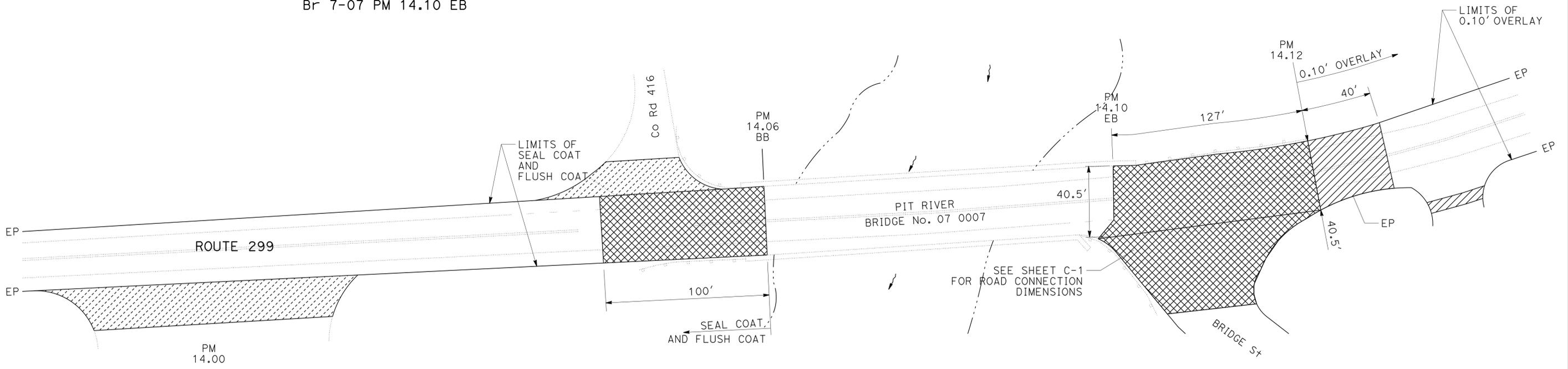
- NOTES:**
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
 - DO NOT PLACE SEAL COAT ON BRIDGE DECKS.



MAINLINE CONFORM TAPER
PM 15.29



MAINLINE CONFORM TAPER
Br 7-07 PM 14.10 EB



DETAIL AT Br No. 07 0007

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE
 FUNCTIONAL SUPERVISOR: MICHAEL CONNER
 DESIGNED BY: MICHAEL CONNER
 CHECKED BY: KARLIE SMITH
 REVISIONS: (None)
 REVISOR: (None)
 DATE: (None)
 REVISION: (None)
 DATE: (None)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	5	24

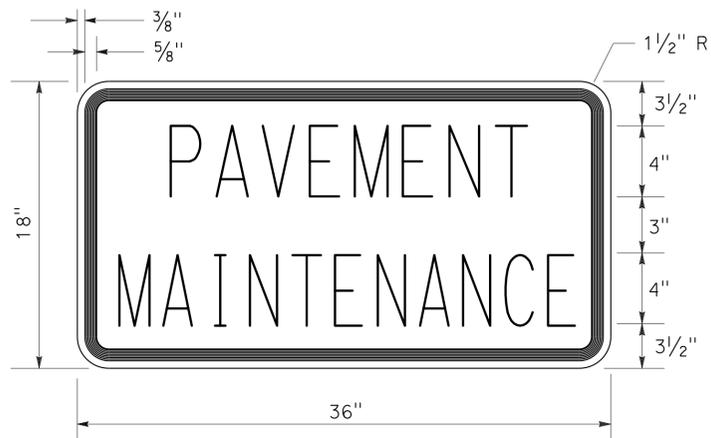
12-14-15
 REGISTERED CIVIL ENGINEER DATE
 12-14-15
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 MICHAEL A. CONNER
 No. C73123
 Exp. 12-31-16
 CIVIL
 STATE OF CALIFORNIA

NOTES:

1. EXACT LOCATION OF ALL SIGNS TO BE DETERMINED BY THE ENGINEER.
2. CALIFORNIA CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL CODES ARE SHOWN.
3. INTERMEDIATE C11(CA) SIGNS SHOULD BE PLACED EVERY 3 TO 5 MILES AS NECESSARY.
4. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



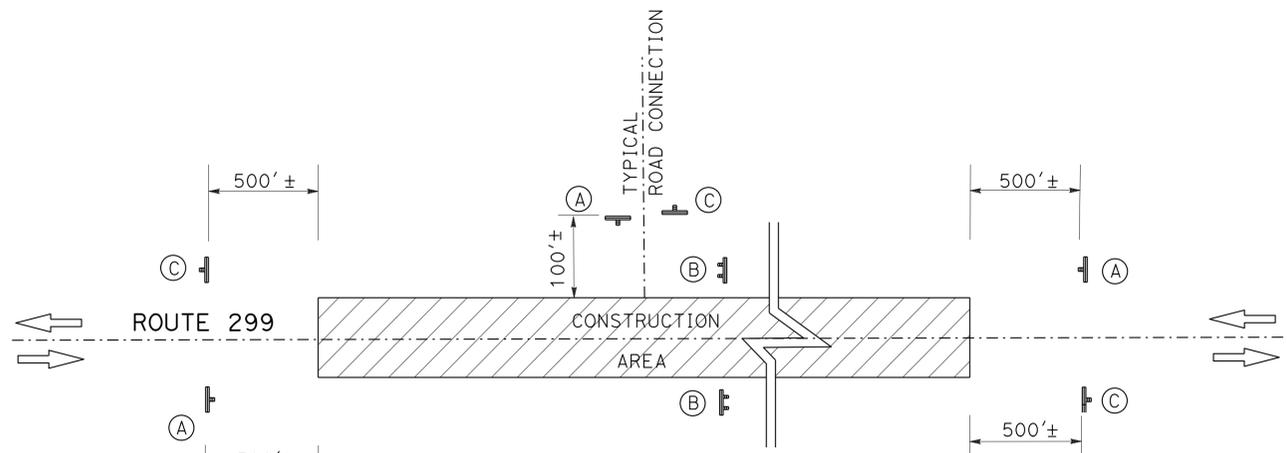
C23B(CA) SIGN PANEL DETAIL

**CONSTRUCTION AREA SIGNS
(STATIONARY MOUNTED)**

TYPE	CODE	PANEL SIZE	SIGN MESSAGE	NUMBER AND SIZE OF POST	No. OF SIGNS
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1-4" x 6"	14
	C23B(CA)	36" x 18"	PAVEMENT MAINTENANCE		
(B)	C11(CA)	60" x 36"	ROAD CONSTRUCTION NEXT XX MILES	2-4" x 6"	2
(C)	G20-2	36" x 18"	END ROAD WORK	1-4" x 4"	14

ROAD CONNECTIONS

POST MILE	DESCRIPTION	(A)	(C)
13.70	DERRICK Rd	R+	R+
14.05	Co Rd 416	L+	L+
14.10	BRIDGE St	R+	R+
14.21	WATER St	R+	R+
14.23	ROAD CONNECTION	L+	L+
14.31	MARKET St	L+/R+	L+/R+
14.70	ROAD CONNECTION	L+	L+
14.88	ROAD CONNECTION	L+	L+
15.10	LOOKOUT Rd/Co Rd A2	L+/R+	L+/R+
16.73	ROAD CONNECTION	L+	L+



**CONSTRUCTION AREA SIGNS
(STATIONARY MOUNTED)**

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Michael Conner
 Functional Supervisor
 Michael Conner
 Revised By
 Karlie Smith
 Date Revised
 Calculated/Designed By
 Checked By
 State of California - Department of Transportation
 Caltrans
 MAINTENANCE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	6	24

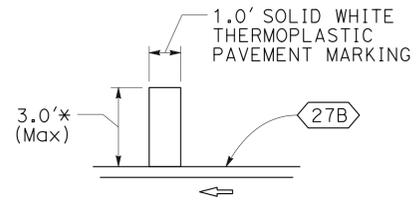
<i>Willie</i>	12-14-15
REGISTERED CIVIL ENGINEER	DATE
12-14-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
MICHAEL A. CONNER
No. C73123
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

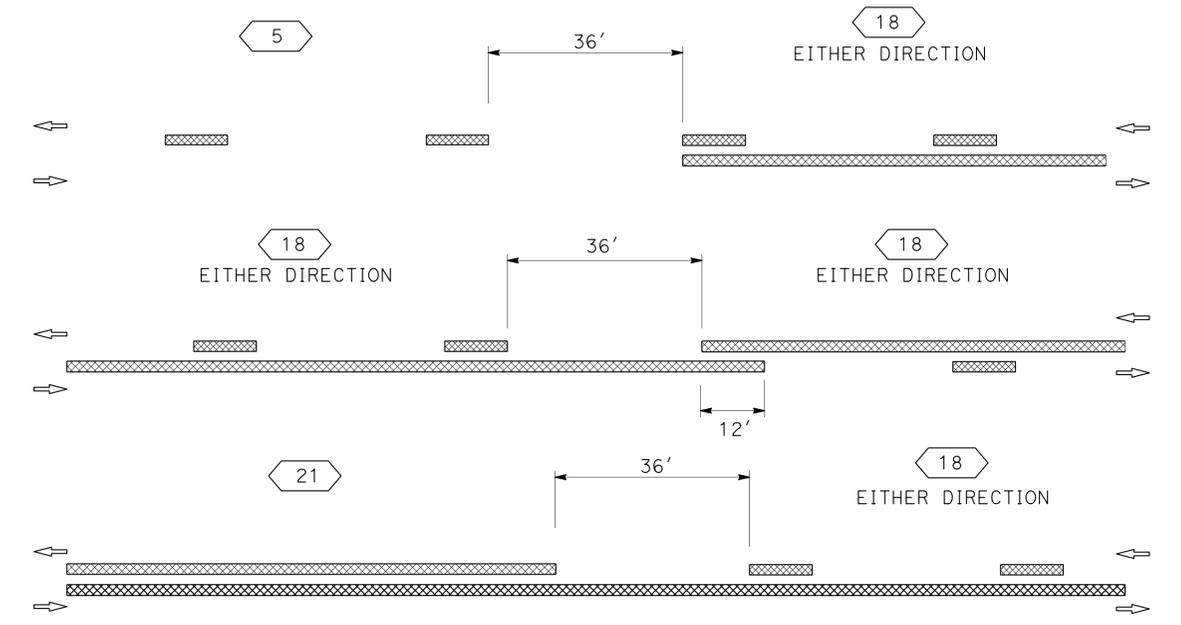
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NOTES:

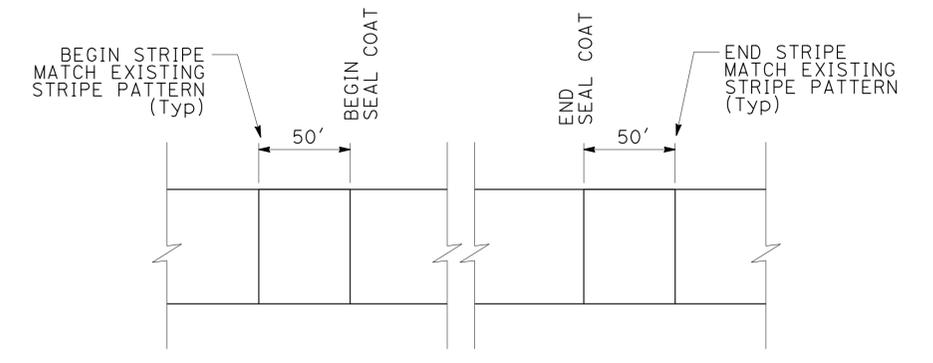
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT R/W ENGINEERING AT THE DISTRICT OFFICE.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



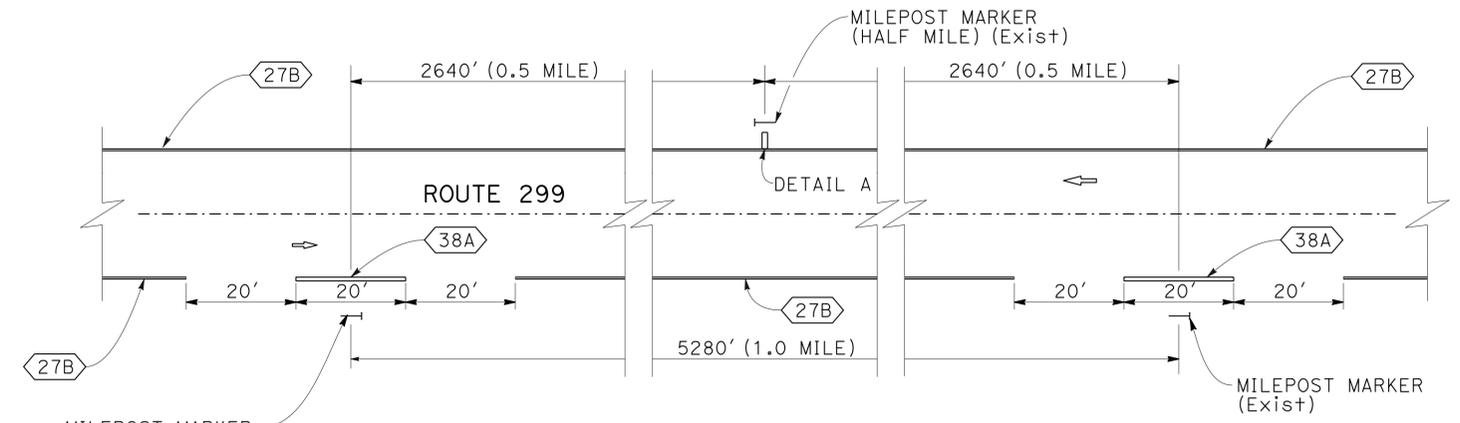
DETAIL A
* ACTUAL LENGTH MAY VARY DUE TO PAVEMENT WIDTH



TRAFFIC STRIPE TRANSITION DETAILS



TRAFFIC STRIPE MATCH DETAIL



TYPICAL MILEPOST STRIPE (CONVENTIONAL ROADWAY)

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Michael Conner
 Functional Supervisor
 Michael Conner
 Calculated/Designed By
 Checked By
 Karlie Smith
 Revised By
 Date Revised
 PROJECT NUMBER & PHASE 02 1500 0099 1
 UNIT 0156
 PROJECT NUMBER & PHASE 02 1500 0099 1
 USERNAME => s115152
 DGN FILE => 21h040nb001.dgn
 BORDER LAST REVISED 7/2/2010
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LAST REVISION | DATE PLOTTED => 23-DEC-2015
 12-14-15 | TIME PLOTTED => 10:51

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	7	24

12-14-15
REGISTERED CIVIL ENGINEER DATE

12-14-15
PLANS APPROVAL DATE

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ABBREVIATIONS:

Mid MIDDLE

THERMOPLASTIC PAVEMENT MARKING

POST MILE	L+	R+	(N) EA	SQFT	REMARKS
12.50	X		1	3.0	DETAIL A
13.50	X		1	3.0	DETAIL A
13.70		X	1	22.0	STOP
13.70		X	1	33.0	ROAD CONNECTION LIMIT LINE
14.05	X		1	22.0	STOP
14.05	X		1	36.0	ROAD CONNECTION LIMIT LINE
14.10		X	1	22.0	STOP
14.10		X	1	53.0	ROAD CONNECTION LIMIT LINE
14.21		X	1	22.0	STOP
14.21		X	1	28.0	ROAD CONNECTION LIMIT LINE
14.23		X	1	22.0	STOP
14.23		X	1	32.0	ROAD CONNECTION LIMIT LINE
14.31	X	X	2	44.0	STOP
14.31	X	X	2	71.0	ROAD CONNECTION LIMIT LINE
14.50	X		1	3.0	DETAIL A
14.70	X		1	22.0	STOP
14.70	X		1	61.0	ROAD CONNECTION LIMIT LINE
14.88	X		1	22.0	STOP
14.88	X		1	54.0	ROAD CONNECTION LIMIT LINE
15.01		X	1	42.0	TYPE III (L) ARROW
15.10	X	X	2	44.0	STOP
15.10	X	X	2	98.0	ROAD CONNECTION LIMIT LINE
15.10	X	X	2	84.0	TYPE III (L) ARROW
15.16	X		1	42.0	TYPE III (L) ARROW
15.50	X		1	3.0	DETAIL A
16.50	X		1	3.0	DETAIL A
16.73	X		1	22.0	STOP
16.73	X		1	39.0	ROAD CONNECTION LIMIT LINE
17.50	X		1	3.0	DETAIL A
18.50	X		1	3.0	DETAIL A
TOTAL				958.0	

100 Mil THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)

POST MILE LIMITS	DETAIL 5	DETAIL 18
	LF	LF
12.28-12.82	2852	
12.86-13.12	1373	
13.14-13.40	1373	
13.43-13.61	951	
13.68-14.06	1109	898
15.29-18.50	12,831	4119
SUBTOTAL	20,489	5017
TOTAL	25,506	

THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)

POST MILE LIMITS	DETAIL 5	DETAIL 18	DETAIL 21	DETAIL 27B	DETAIL 27C	DETAIL 28	DETAIL 38A
	LF	LF	LF	LF	LF	LF	LF
12.28-18.50	1690	1320	3591	63,665	2019	740	1018
TOTAL	74,043						

REMOVE THERMOPLASTIC PAVEMENT MARKING

POST MILE	L+	Mid	R+	(N) EA	SQFT	REMARKS
14.21			X	1	22.0	STOP
14.21			X	1	28.0	ROAD CONNECTION LIMIT LINE
14.23			X	1	22.0	STOP
14.23			X	1	32.0	ROAD CONNECTION LIMIT LINE
14.31	X		X	2	44.0	STOP
14.31	X		X	2	71.0	ROAD CONNECTION LIMIT LINE
14.33		X		1	90.0	CROSSWALK
14.70	X			1	22.0	STOP
14.70	X			1	61.0	ROAD CONNECTION LIMIT LINE
14.88	X			1	22.0	STOP
14.88	X			1	54.0	ROAD CONNECTION LIMIT LINE
15.01			X	1	42.0	TYPE III (L) ARROW
15.10	X		X	2	44.0	STOP
15.10	X			2	98.0	ROAD CONNECTION LIMIT LINE
15.10	X			2	84.0	TYPE III (L) ARROW
15.16	X			1	42.0	TYPE III (L) ARROW
TOTAL					778.0	

(N) REMOVE PAVEMENT MARKER

POST MILE LIMITS	TOTAL
	EA
12.28-18.50	1265

TEMPORARY PAVEMENT MARKING (TAPE)

POST MILE	L+	R+	(N) EA	SQFT	REMARKS
14.21		X	1	28.0	ROAD CONNECTION LIMIT LINE
14.23		X	1	32.0	ROAD CONNECTION LIMIT LINE
14.31	X	X	2	71.0	ROAD CONNECTION LIMIT LINE
14.70	X		1	61.0	ROAD CONNECTION LIMIT LINE
14.88	X		1	54.0	ROAD CONNECTION LIMIT LINE
15.01		X	1	42.0	TYPE III (L) ARROW
15.10	X	X	2	98.0	ROAD CONNECTION LIMIT LINE
15.10	X	X	2	84.0	TYPE III (L) ARROW
15.16	X		1	42.0	TYPE III (L) ARROW
TOTAL				512.0	

PAVEMENT DELINEATION QUANTITIES

PDQ-1

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE

FUNCTIONAL SUPERVISOR: MICHAEL CONNER
CALCULATED/DESIGNED BY: MICHAEL CONNER
CHECKED BY: KARLIE SMITH
REVISED BY: MICHAEL CONNER
DATE REVISED: KARLIE SMITH



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	8	24

12-14-15
REGISTERED CIVIL ENGINEER DATE

12-14-15
PLANS APPROVAL DATE

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- EXACT LOCATIONS OF REPLACE ASPHALT CONCRETE SURFACING TO BE DETERMINED BY ENGINEER.

ASPHALTIC EMULSION (FOG SEAL COAT)

POST MILE LIMITS	SIDE R+ / L+	(N) AREA SQFT	ASPHALTIC EMULSION (FOG SEAL COAT) TON
PM-PM			1
13.70	R+	3173	
14.00	R+	3875	
14.05	L+	3740	
16.73	L+	6750	
16.73	R+	1240	
TOTAL			1

REPLACE ASPHALT CONCRETE SURFACING

POST MILE LIMITS	(N) No. OF DIGOUTS	(N) Avg LENGTH LF	(N) WIDTH LF	(N) DEPTH LF	REPLACE AC SURFACING CY
PM - PM					
12.30-13.00	2	100	4	0.33	10
13.00-14.00	3	100	4	0.33	15
14.00-15.00	3	100	4	0.33	15
15.00-16.00	3	100	4	0.33	15
16.00-17.00	3	100	4	0.33	15
17.00-18.00	3	100	4	0.33	15
18.00-18.50	2	100	4	0.33	10
TOTAL					95

PREPAVING GRINDING DAY

POST MILE LIMITS	EA
14.12-15.29	2
TOTAL	2

ROADWAY QUANTITIES SUMMARY

POST MILE LIMITS	(N) LENGTH LF	(N) WIDTH LF	HMA (TYPE A) TON	SHOULDER BACKING TON	TACK COAT TON	SEAL COAT		FLUSH COAT	
						ASPHALT-RUBBER BINDER TON	PRECOATED SCREENINGS TON	ASPHALTIC EMULSION (FLUSH COAT) TON	SAND COVER (SEAL) TON
						PM - PM	LF	LF	TON
12.28-12.30	100.0	39.5-32.5	60		0.2	85.1	549.6	7.9	62.8
12.30-12.80	2640.0	32.5							
12.80-12.82	100.0	32.5-39.5	120		0.3				
12.86-12.88	100.0	39.5-32.5							
12.88-13.10	1161.6	32.5							
13.10-13.12	100.0	32.5-39.5	120		0.3				
13.14-13.16	100.0	39.5-32.5							
13.16-13.38	1161.6	32.5							
13.38-13.40	100.0	32.5-39.5	120		0.3				
13.43-13.45	100.0	39.5-32.5							
13.45-13.59	739.2	32.5							
13.59-13.61	100.0	32.5-39.5	120		0.3				
13.68-13.70	100.0	39.5-33.0							
13.70-14.04	1795.2	33.0							
14.04-14.06	100.0	33.0-39.5	60		0.1				
14.10-14-12	127	40.5	96		0.2				
14.12-14.14	105.6	40.5	2022	415	8.7				
14.14-14.22	422.4	40.5-42.0							
14.22-14.33	580.8	42.0-41.0							
14.33-14.50	897.6	41.0							
14.50-14.95	2376.0	41.0-43.0							
14.95-15.00	264.0	43.0-51.5							
15.00-15.21	1108.8	51.5							
15.21-15.29	422.4	51.5-32.0							
15.29-15.50	1108.8	32.0-32.5				164.3	1061.5	15.2	121.3
15.50-16.00	2640.0	32.5-31.5							
16.00-16.50	2640.0	31.5-32.5							
16.50-17.00	2640.0	32.5-32.0							
17.00-17.50	2640.0	32.0-32.5							
17.50-18.00	2640.0	32.5							
18.00-18.50	2640.0	32.5-32.0							
ROAD CONNECTIONS/PULLOUTS			583	65	5.0				
TOTAL			3301	480	15.4	249.4	1611.1	23.1	184.1

COLD PLANE ASPHALT CONCRETE PAVEMENT

POST MILE	(N) LENGTH LF	(N) WIDTH LF	AREA SQYD	REMARKS
12.28	100	32.0	356	MAINLINE AT EB 07-0002
12.80	100	32.0	356	MAINLINE AT BB 07-0003
12.86	100	32.0	356	MAINLINE AT EB 07-0003
13.10	100	32.0	356	MAINLINE AT BB 07-0004
13.14	100	32.0	356	MAINLINE AT EB 07-0004
13.38	100	32.0	356	MAINLINE AT BB 07-0005
13.43	100	32.0	356	MAINLINE AT EB 07-0005
13.59	100	32.0	356	MAINLINE AT BB 07-0006
13.68	100	32.0	356	MAINLINE AT EB 07-0006
14.04	100	32.0	356	MAINLINE AT BB 07-0007
14.10	SEE DETAIL ON C-2		572	MAINLINE AT EB 07-0007
14.10	SEE DETAIL ON C-2		362	BRIDGE S+R+
14.12	40	40.5	180	BEGIN OF OVERLAY
14.14	4	30.0	14	DRIVEWAY-R+
14.21	4	32.0	15	WATER S+R+
14.23	4	302.0	135	ROAD CONNECTION/FRONTAGE-L+
14.31	20	43.0	96	MARKET S+R+
14.31	20	32.0	72	MARKET S+L+
14.33	4	32.0	15	DRIVEWAY-R+
14.35	4	34.0	16	DRIVEWAY-R+
14.88	4	90.0	40	DRIVEWAY-L+
15.10	20	32.0	72	Co Rd A2-R+
15.10	20	31.0	69	Jct LOOKOUT Rd-L+
15.15	4	125.0	56	PULLOUT-DRIVEWAY-R+
15.29	40	32.0	143	END OF OVERLAY
TOTAL			5417	

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE
 Michael Conner
 Functional Supervisor
 Calculated/Designed By
 Checked By
 Revised By
 Date Revised
 USERNAME => s115152
 DGN FILE => 21h040pa001.dgn
 RELATIVE BORDER SCALE IS IN INCHES
 UNIT 0156
 PROJECT NUMBER & PHASE 02 1500 0099 1

LAST REVISION DATE PLOTTED => 23-DEC-2015
 12-14-15 TIME PLOTTED => 10:51

P:\proj\3\02\1\h040\plans\pse\21h040u001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - ELECTRICAL DESIGN
 ARTURO P. ROBLES
 KAREN LAW
 ROB STINGER

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
3. **AB** Exist LOOP DETECTORS AND AXLE SENSORS.
4. REUSE SHOULDER TERMINATION.
5. COIL 10' OF CABLES AND CONDUCTORS IN PULL BOX.

LEGEND (THIS SHEET):

- 1 SEE AXLE SENSOR INSTALLATION DETAIL, SHEET E-3.
- 2 SPEED LIMIT SIGN (55 MPH).

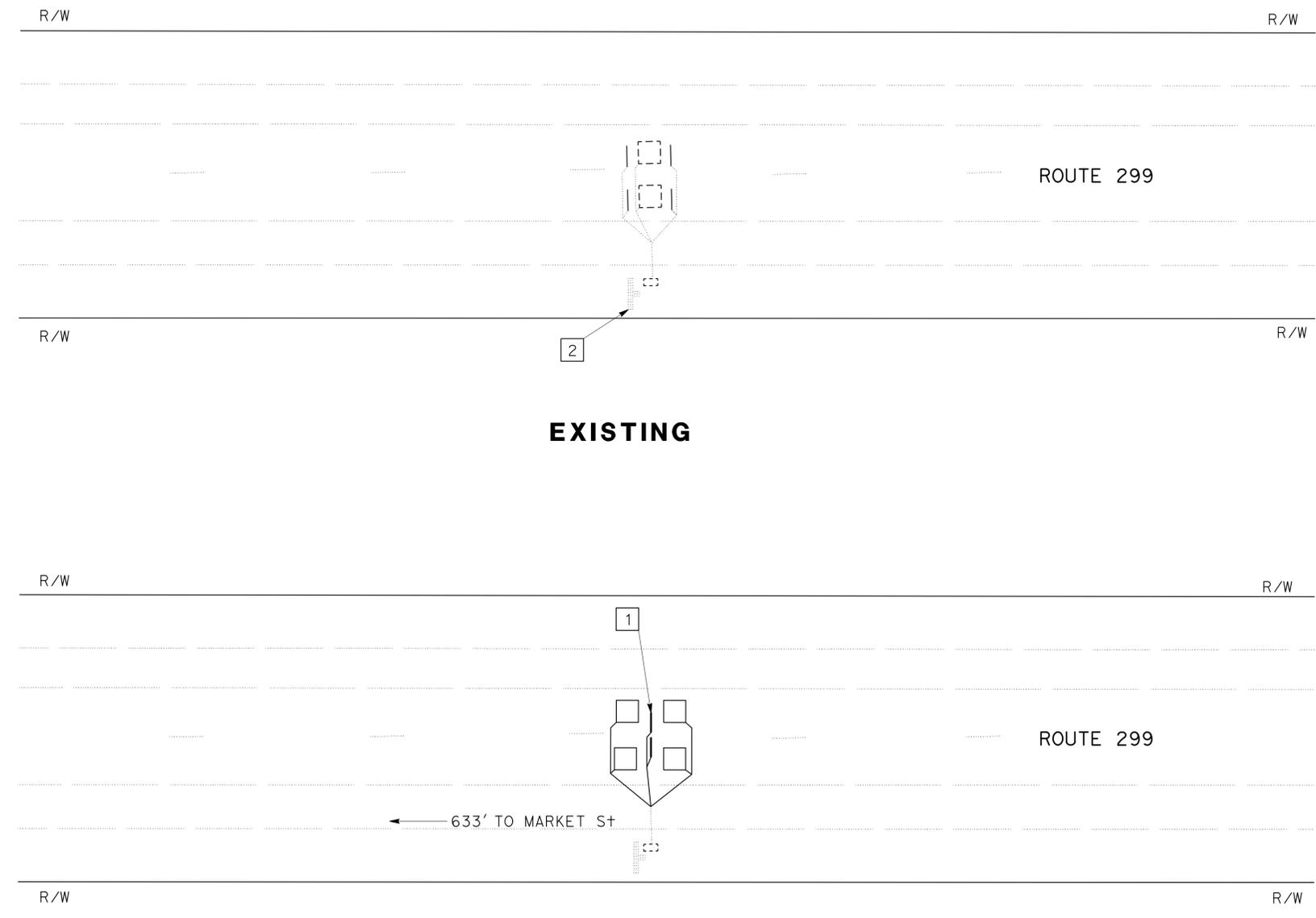
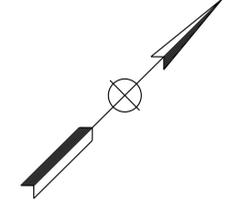
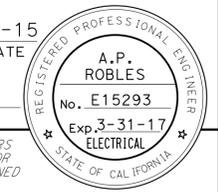
LEGEND:

- | Exist PIEZO-ELECTRIC AXLE SENSOR
- | PIEZO-ELECTRIC AXLE SENSOR

ABBREVIATIONS:

- STC SCREENED TRANSMISSION CABLE
- TCS TRAFFIC COUNT STATION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	9	24
		ART 12-14-15		REGISTERED ELECTRICAL ENGINEER DATE	
		12-14-15		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.					



EXISTING

TCS No. 174
(PM 14.43)

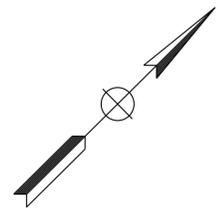
MODIFY TRAFFIC COUNT STATION

NO SCALE

E-1

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	10	24
		ART 12-14-15		REGISTERED ELECTRICAL ENGINEER DATE	
		12-14-15		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>					

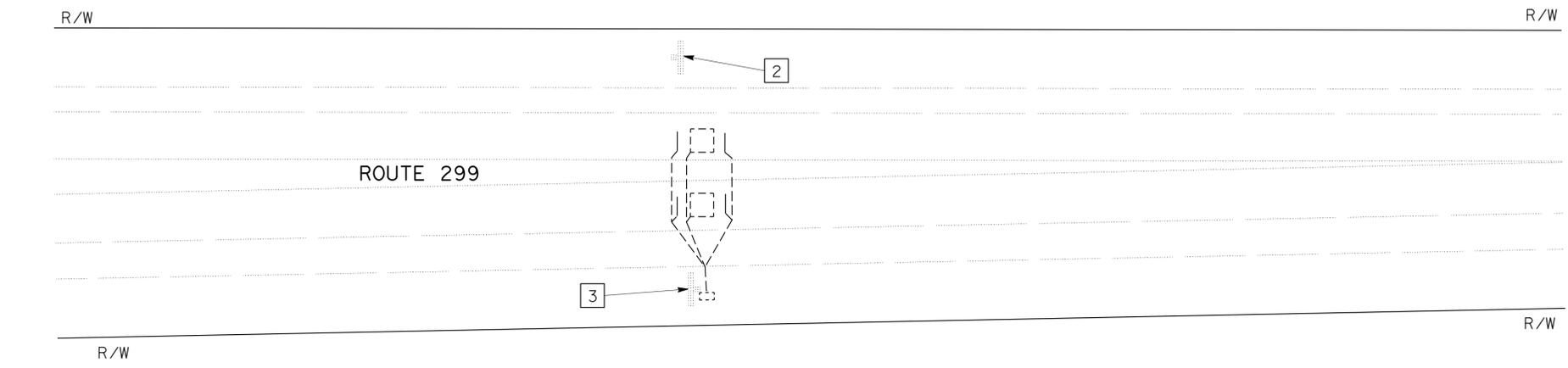


NOTES:

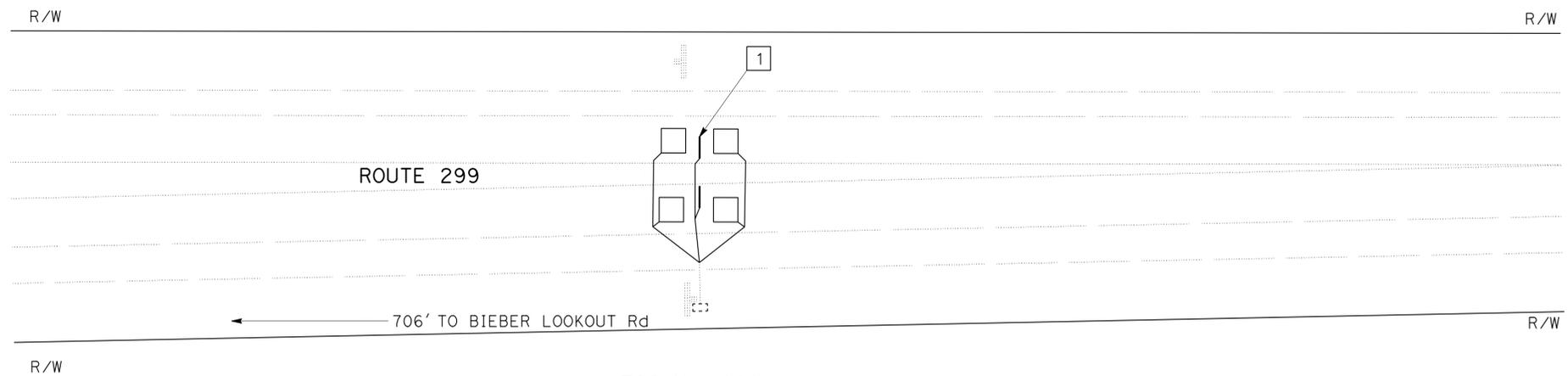
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
3. AB Exist LOOP DETECTORS AND AXLE SENSORS.
4. REUSE SHOULDER TERMINATION.
5. COIL 10' OF CABLES AND CONDUCTORS IN PULL BOX.

LEGEND (THIS SHEET):

- 1 SEE AXLE SENSOR INSTALLATION DETAIL, SHEET E-3.
- 2 SPEED LIMIT SIGN (55 MPH).
- 3 SPEED LIMIT SIGN (65 MPH).



EXISTING



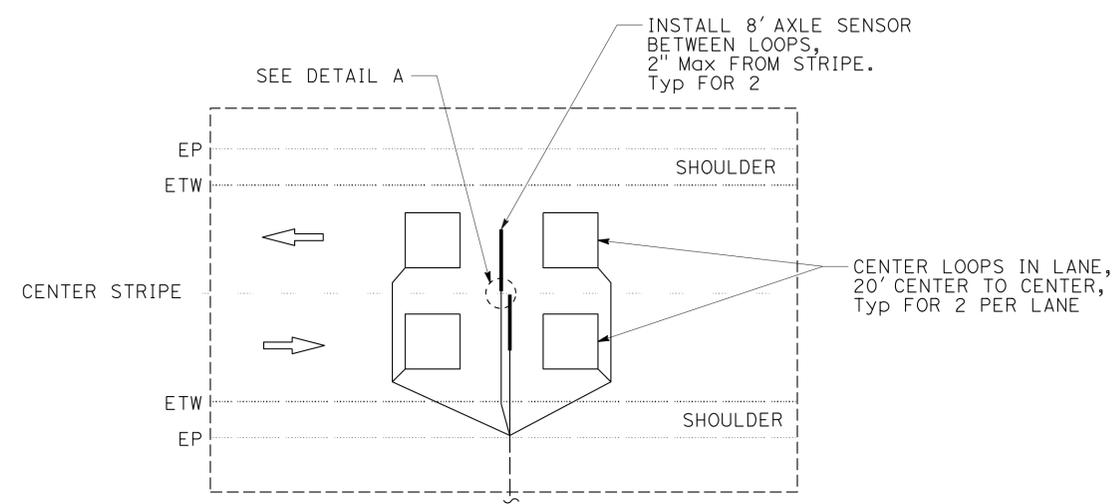
MODIFY TRAFFIC COUNT STATION
NO SCALE
E-2

APPROVED FOR ELECTRICAL WORK ONLY

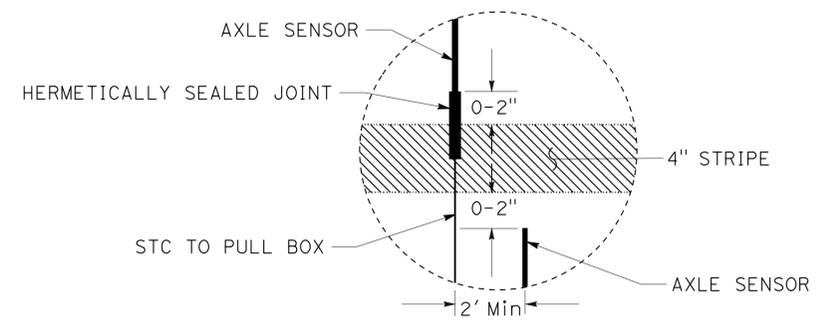
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR: ROB STINGER
 CALCULATED/DESIGNED BY: [blank] CHECKED BY: [blank]
 ARTURO P. ROBLES KAREN LAW
 REVISED BY: [blank] DATE REVISED: [blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	11	24
		ART 12-14-15		REGISTERED ELECTRICAL ENGINEER DATE	
		12-14-15		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:
1. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



TYPICAL PIEZO-ELECTRIC AXLE SENSOR INSTALLATION



DETAIL A

ELECTRICAL DETAILS
NO SCALE **E-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - ELECTRICAL DESIGN
 ARTURO P. ROBLES
 KAREN LAW
 ROB STINGER
 FUNCTIONAL SUPERVISOR
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED
 P:\proj3\02\1\h040\plans\pse\21h040u003.dgn

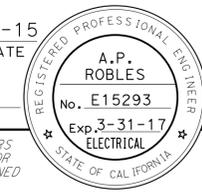
P:\proj3\02\1h040\plans\pse\21h040u004.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR
 ROB STINGER
 CALCULATED/DESIGNED BY
 CHECKED BY
 ARTURO P. ROBLES
 KAREN LAW
 REVISED BY
 DATE REVISED

NOTES:

1. (N) - NOT A SEPARATE BID ITEM. FOR INFORMATION ONLY.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	12	24

ART 12-14-15
 REGISTERED ELECTRICAL ENGINEER DATE
 12-14-15
 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.

MODIFY COUNT STATION

SHEET No.	TYPE A LOOP DETECTOR	PIEZO-ELECTRIC AXLE SENSOR	REUSE SHOULDER TERMINATION
E-1	4	2	2
E-2	4	2	2

**ELECTRICAL QUANTITIES
E-4**

	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
M+	MOUNTAIN, MOUNT
M+I	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 M+I	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
R+	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
W+	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
02	Las	299	12.2/18.5	13	24
<i>Grace M. Tsushima</i>			REGISTERED CIVIL ENGINEER		
July 19, 2013			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

TO ACCOMPANY PLANS DATED 12-14-15

UNIT OF MEASUREMENT SYMBOLS:

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

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:

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

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.

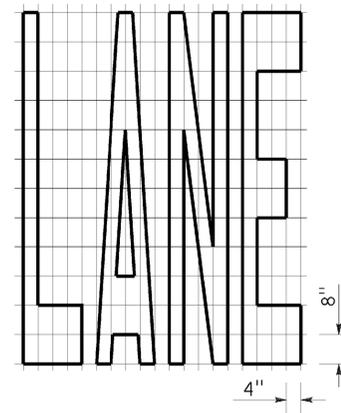
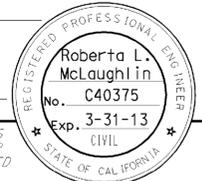
REVISED STANDARD PLAN RSP A10B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	14	24

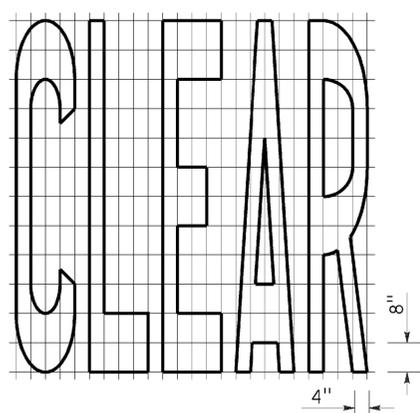
Roberta L. McLaughlin
 REGISTERED CIVIL ENGINEER
 July 20, 2012
 PLANS APPROVAL DATE

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.

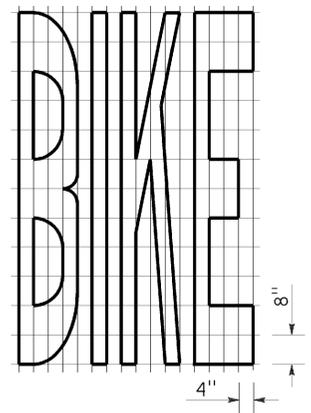
TO ACCOMPANY PLANS DATED 12-14-15



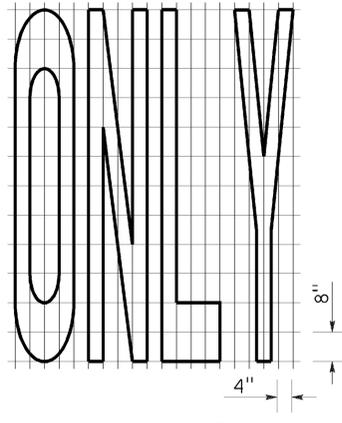
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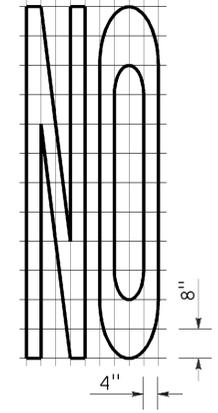
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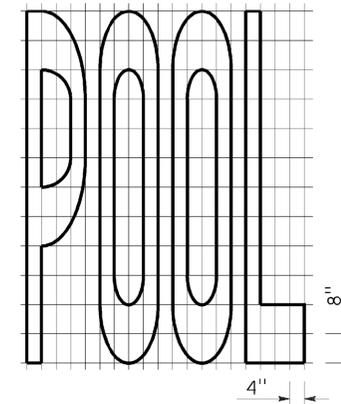
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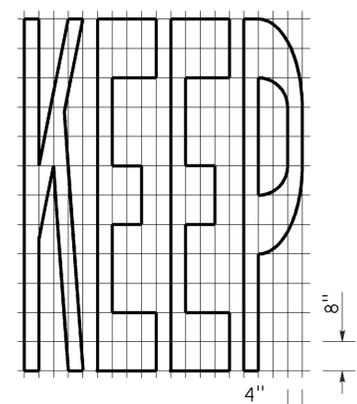
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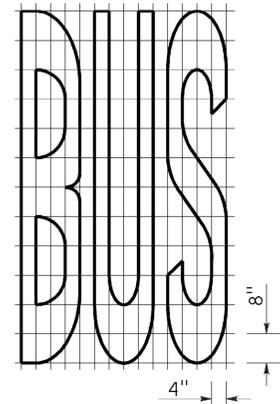
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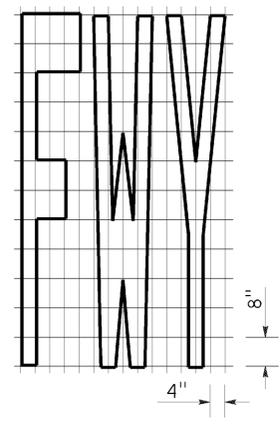
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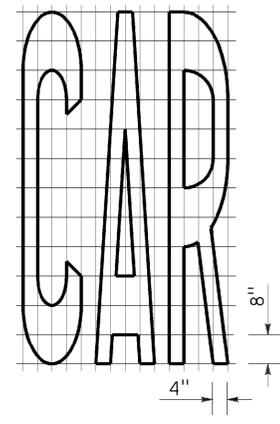
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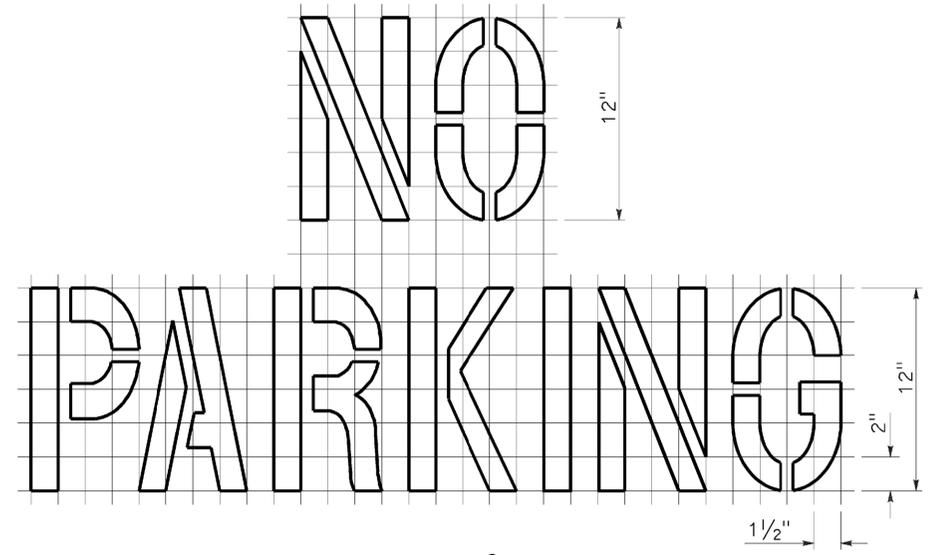


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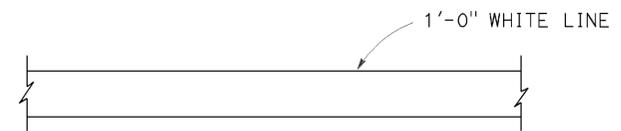


A=17 ft²

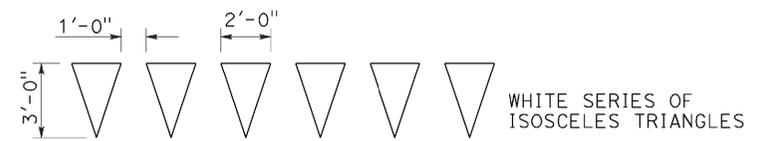
WORD MARKINGS			
ITEM	ft ²	ITEM	ft ²
LANE	24	NO	14
POOL	23	BIKE	21
CLEAR	27	BUS	20
KEEP	24	ONLY	22
		FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

- If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
- The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
- Minor variations in dimensions may be accepted by the Engineer.
- Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
- The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
- The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

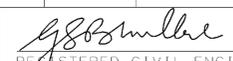
**PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES**

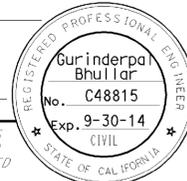
NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	15	24


 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE



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

TO ACCOMPANY PLANS DATED 12-14-15

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
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.

REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	16	24

Devinder Singh
 REGISTERED CIVIL ENGINEER
 No. C50470
 Exp. 6-30-15
 CIVIL
 STATE OF CALIFORNIA

October 17, 2014
 PLANS APPROVAL DATE

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NOTES:

See Revised Standard Plan RSP T9 for tables.

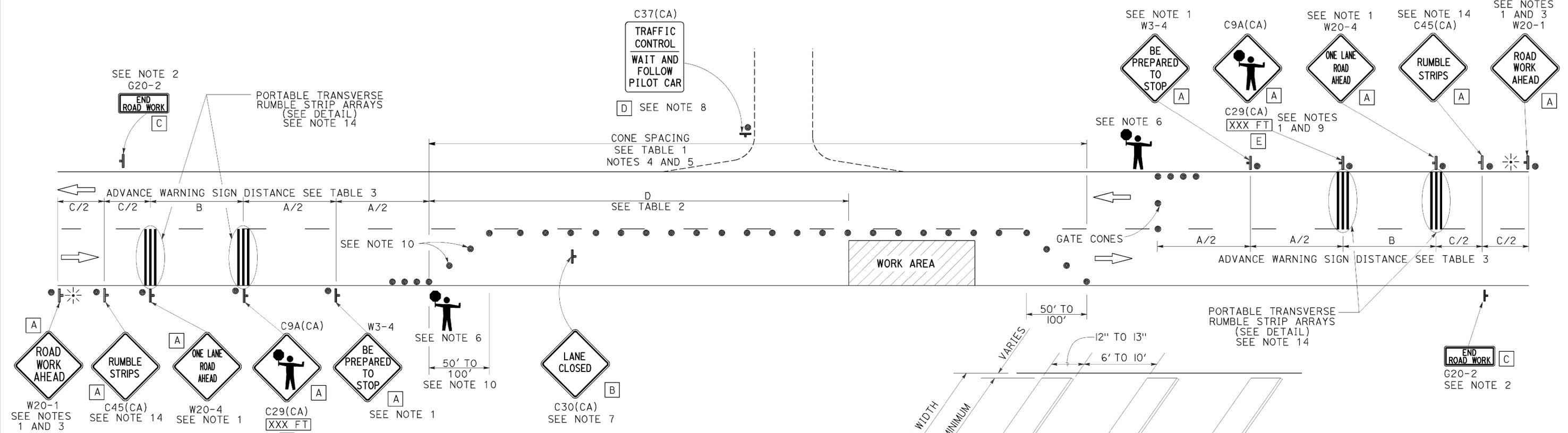
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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.

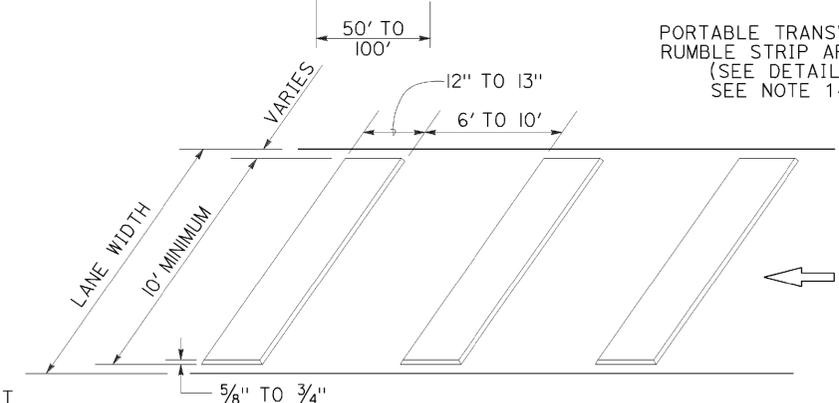
TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL

TO ACCOMPANY PLANS DATED 12-14-15



- NOTES:**
- 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.
 - 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.
 - 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.
 - 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.
 - 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.

- 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.
- 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.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
- The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
- Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
- 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.
- Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
 - Work duration occupies a location for four hours or less
 - Posted speed limit is below 45 MPH
 - Work is of emergency nature
 - Work zone is in snow or icy weather conditions



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"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

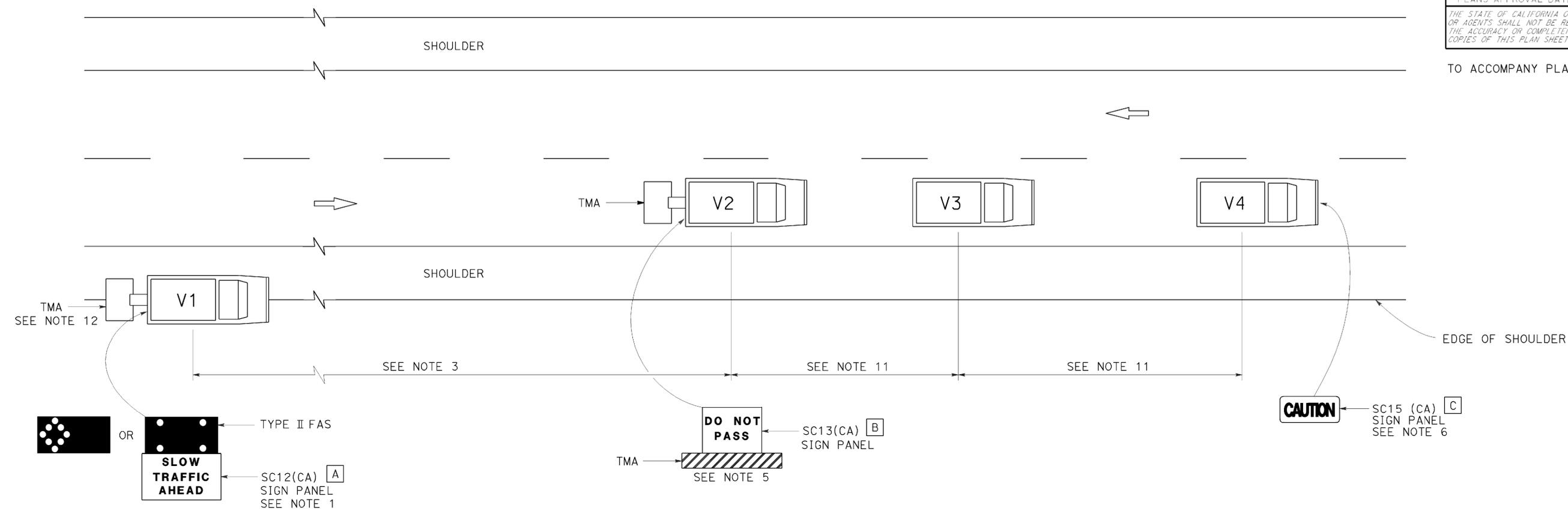
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 TWO LANE CONVENTIONAL
 HIGHWAYS**

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

TO ACCOMPANY PLANS DATED 12-14-15



NOTES:

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.

7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- V4 SIGN VEHICLE
- TMA TRUCK-MOUNTED ATTENUATOR
- FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
- FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

SIGN PANEL SIZE (Min)

- A** 72" x 42"
- B** 54" x 42"
- C** 54" x 24"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR MOVING LANE CLOSURE
 ON TWO LANE HIGHWAYS**
 NO SCALE

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17
 DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T17

2010 REVISED STANDARD PLAN RSP T17

DATE PLOTTED => 23-DEC-2015
 TIME PLOTTED => 10:53

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
Cntl	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
02	Las	299	12.2/18.5	18	24

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 12-14-15

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
		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 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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	19	24

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 12-14-15

CONDUIT

SIGNAL EQUIPMENT

NEW	EXISTING	
		LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
		TRAFFIC SIGNAL CONDUIT
		COMMUNICATION CONDUIT
		TELEPHONE CONDUIT
		FIRE ALARM CONDUIT
		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	
		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

NEW	EXISTING	
		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

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

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

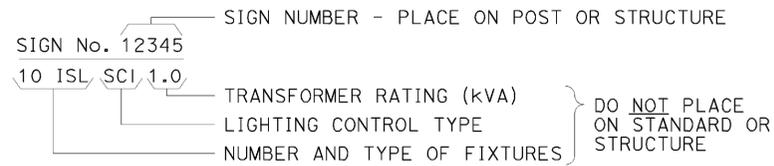
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**
NO SCALE

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.

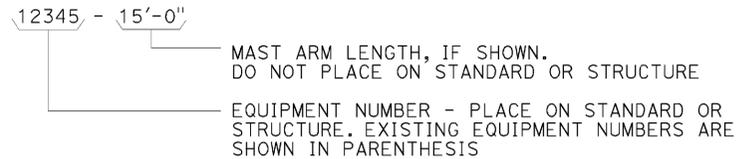
REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

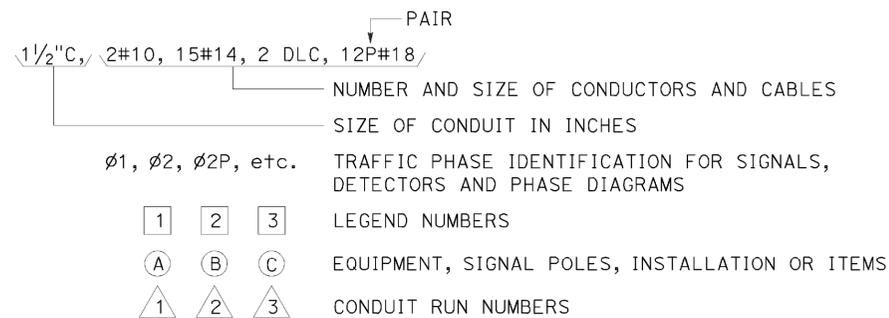
ILLUMINATED SIGN IDENTIFICATION NUMBER:



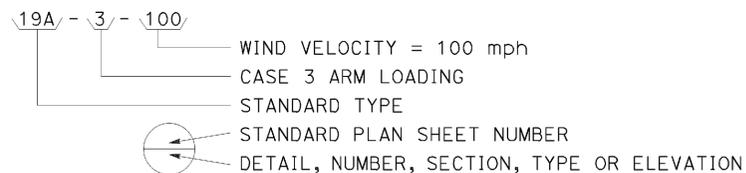
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



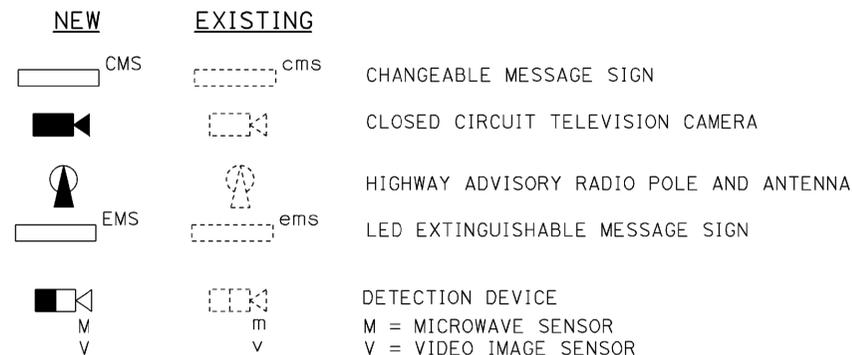
CONDUIT AND CONDUCTOR IDENTIFICATION:



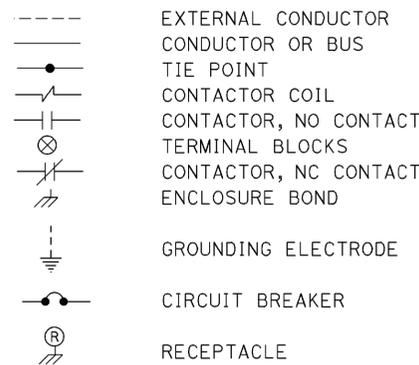
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



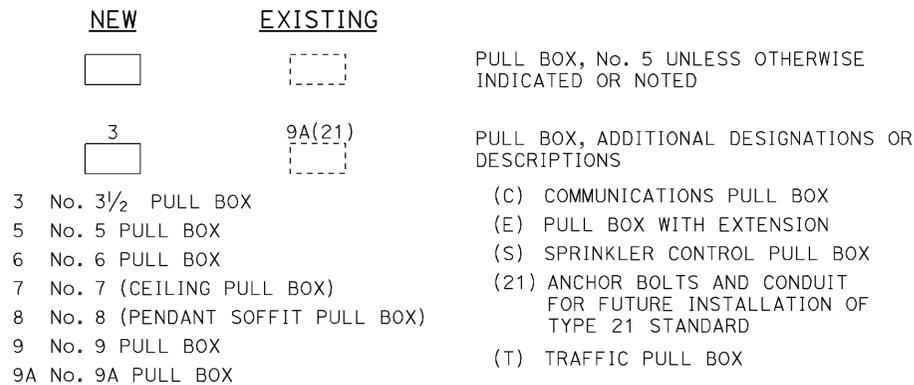
MISCELLANEOUS EQUIPMENT



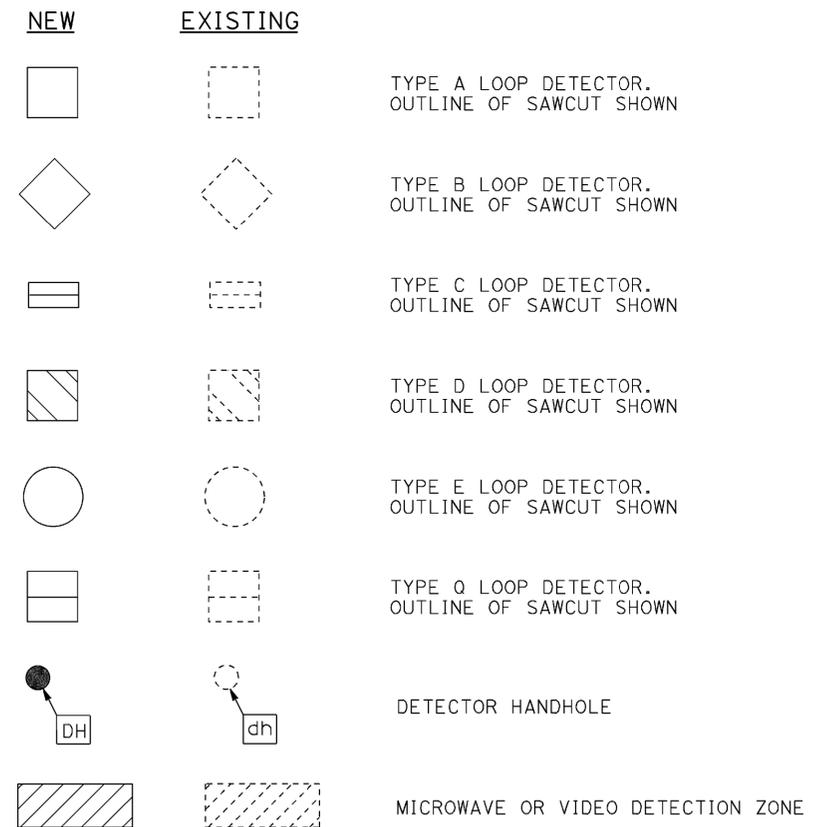
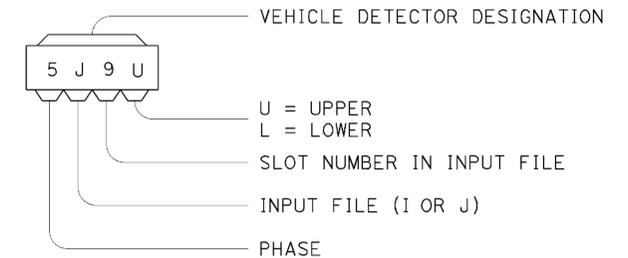
WIRING DIAGRAM LEGEND



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.

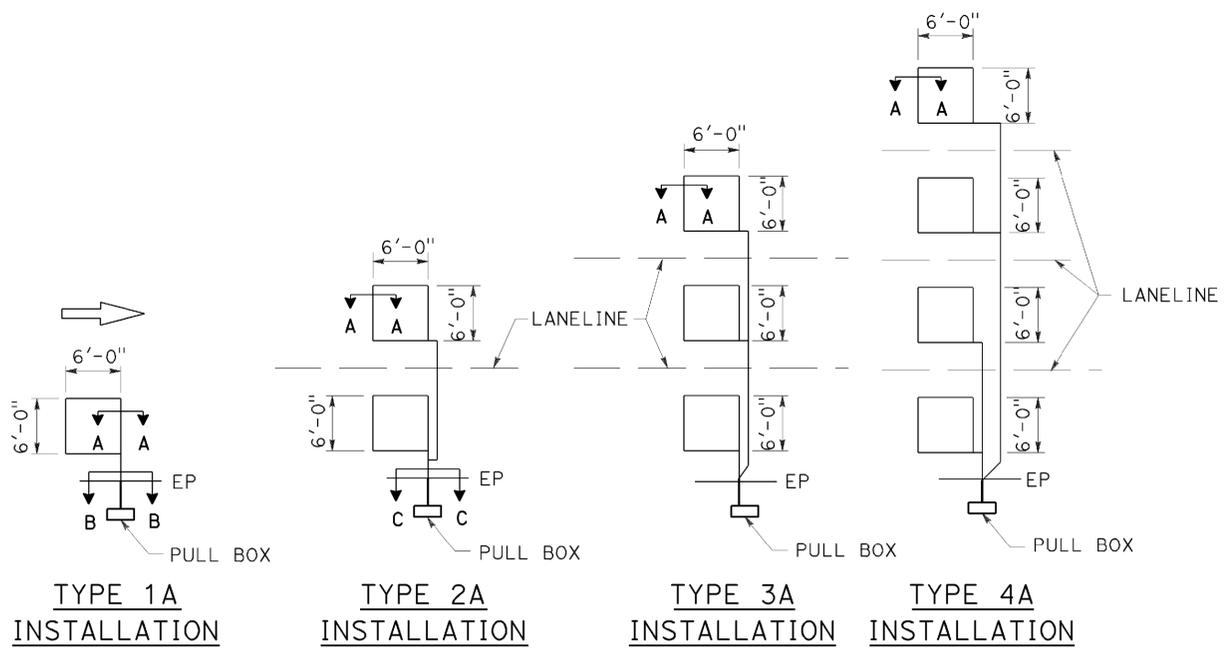
REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	21	24

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.

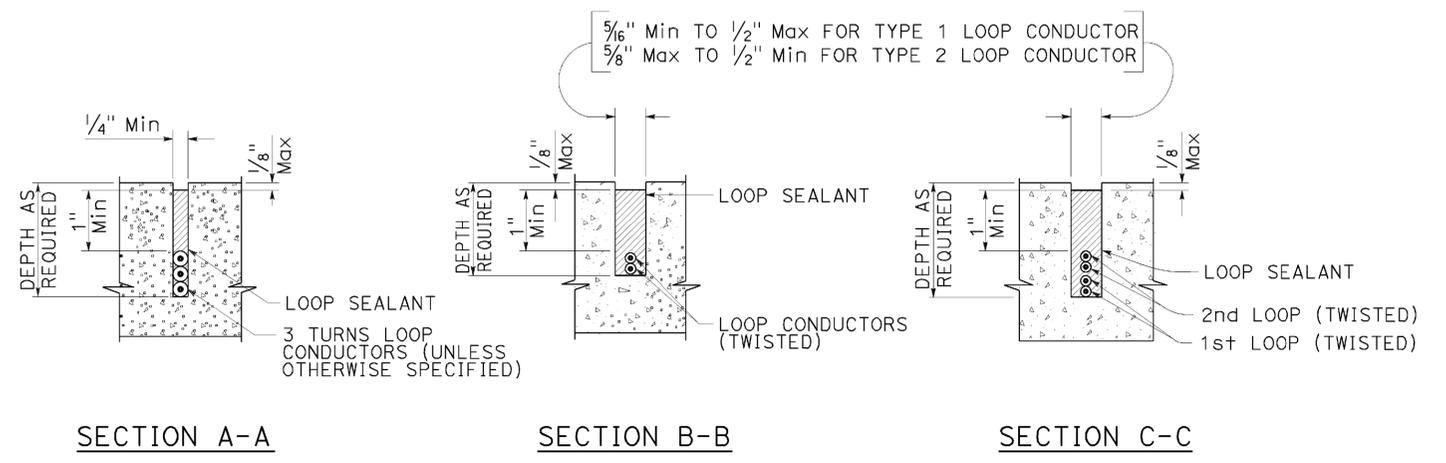


TO ACCOMPANY PLANS DATED 12-14-15

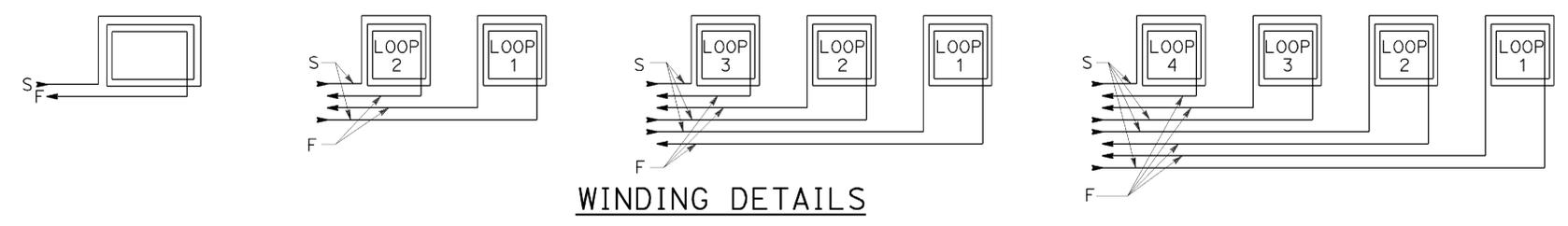


SAWCUT DETAILS

- Type A loop detector configurations illustrated
- 1A thru 4A = 1 Type A loop configuration in each lane.
 - 1B thru 4B = 1 Type B loop configuration in each lane.
 - 1C = 1 Type C loop configuration entering lanes as required.
 - 1D thru 4D = 1 Type D loop configuration in each lane.
 - 1E thru 4E = 1 Type E loop configuration in each lane.
 - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans.

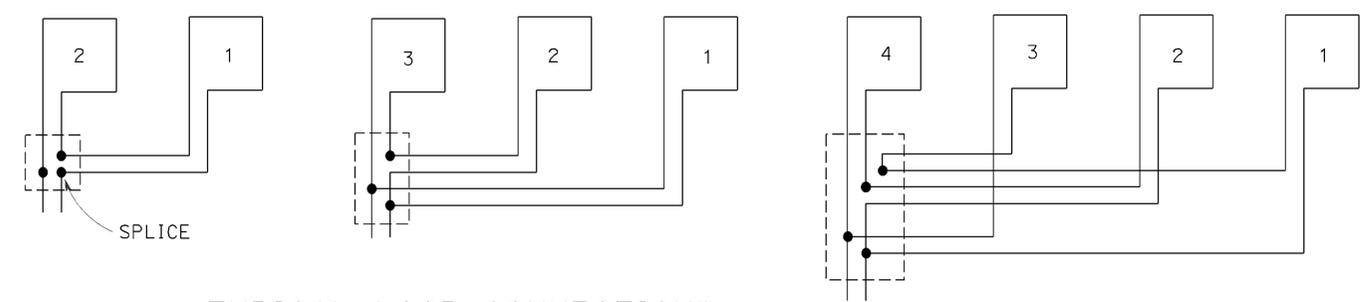


SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



WINDING DETAILS

ABBREVIATIONS:
 S - START
 F - FINISH



TYPICAL LOOP CONNECTIONS

Dashed lines represent the pull box

STATE OF CALIFORNIA
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**ELECTRICAL SYSTEMS
 (LOOP DETECTORS)**
 NO SCALE

RSP ES-5A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-5A DATED MAY 20, 2011 - PAGE 448 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5A

2010 REVISED STANDARD PLAN RSP ES-5A

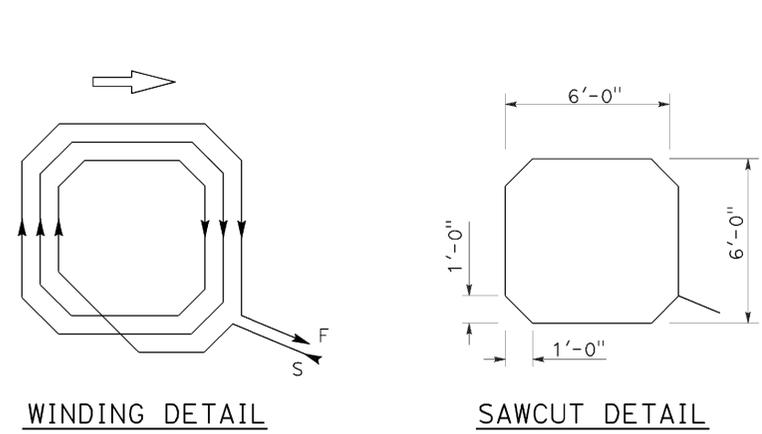
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 TIME PLOTTED => 10:35

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02	Las	299	12.2/18.5	22	24

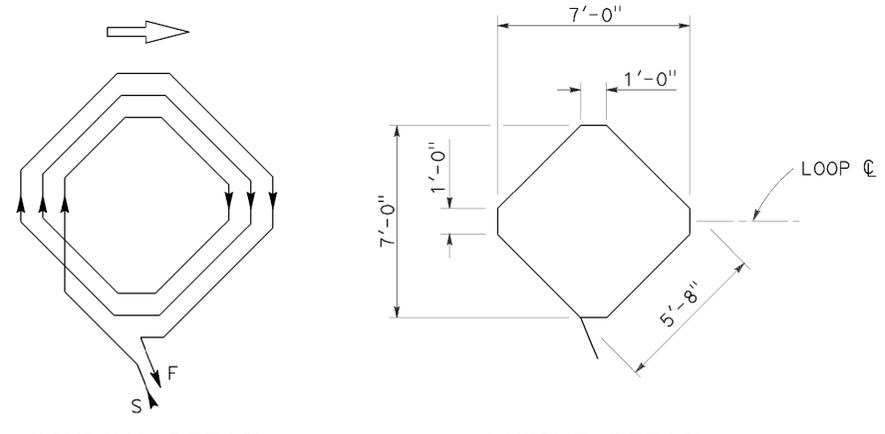
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

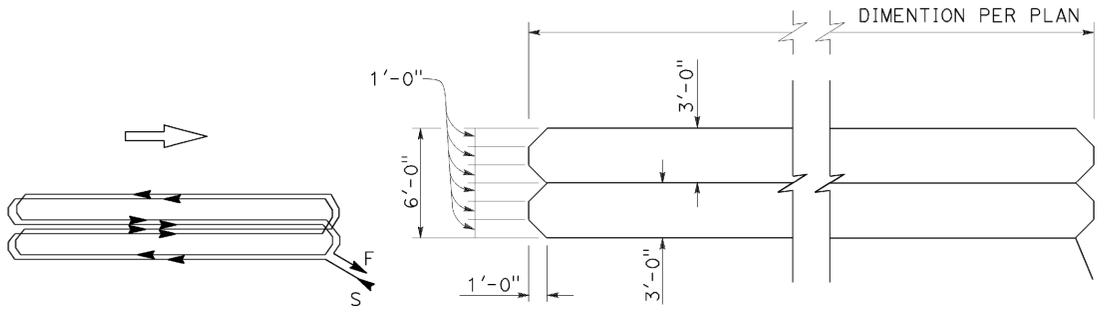
TO ACCOMPANY PLANS DATED 12-14-15



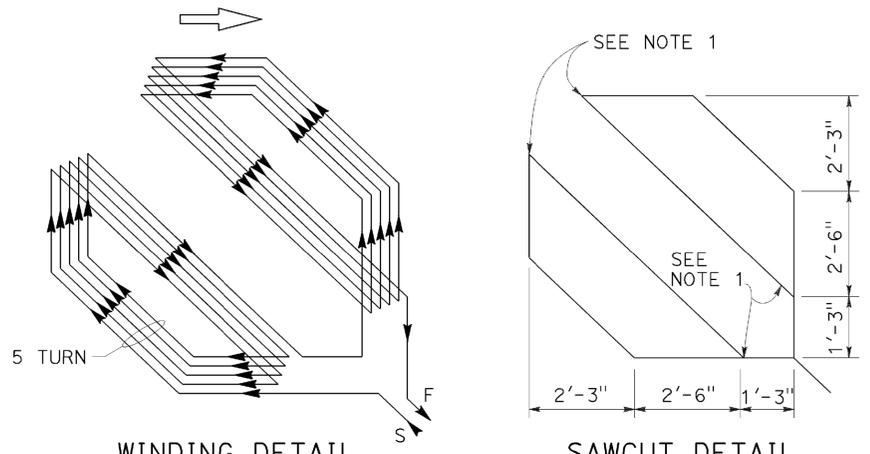
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



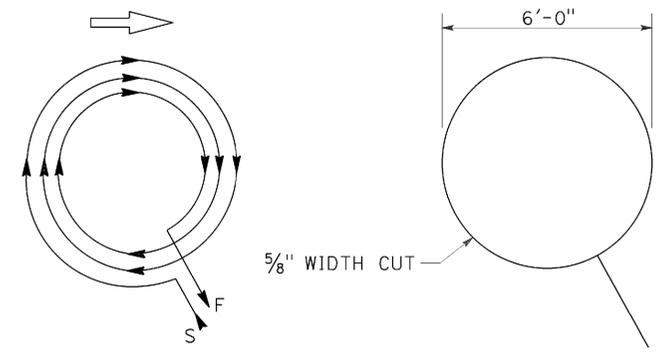
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



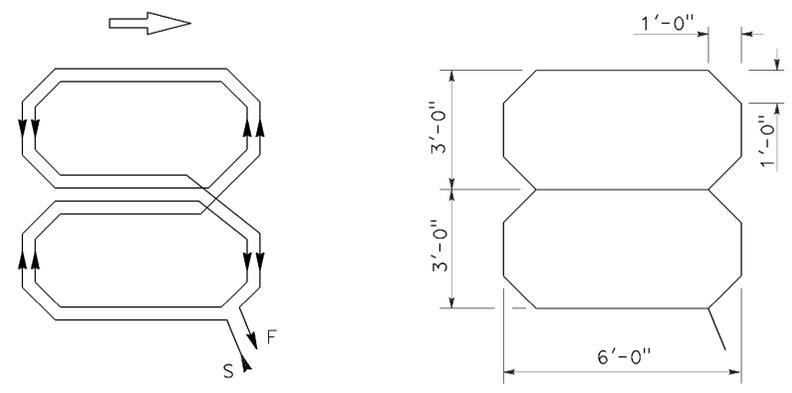
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



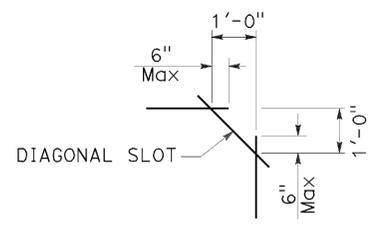
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



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.

REVISED STANDARD PLAN RSP ES-5B

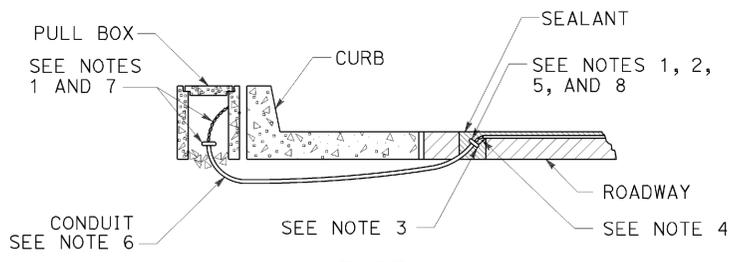
2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	299	12.2/18.5	23	24

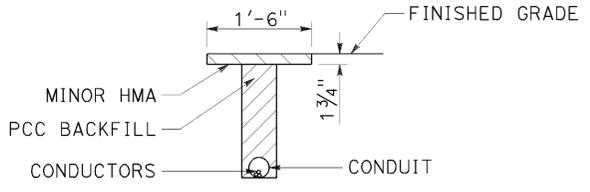
Theresa Gabriel
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 October 30, 2015
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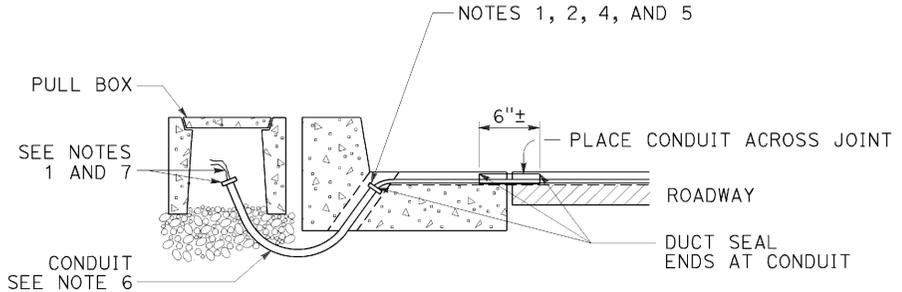
2010 REVISED STANDARD PLAN RSP ES-5D



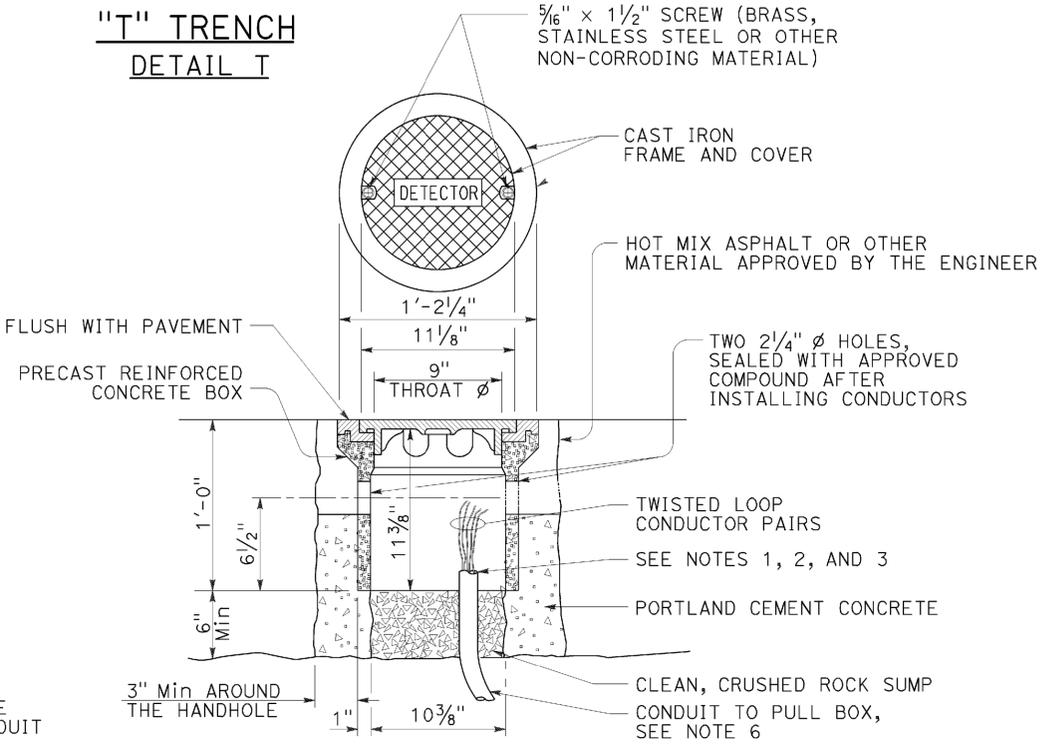
**TYPE A
CURB TERMINATION DETAIL**



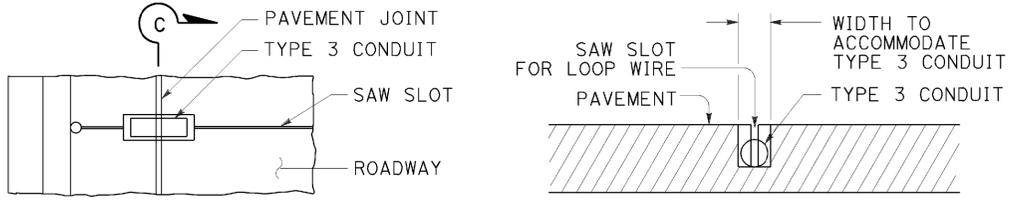
**"T" TRENCH
DETAIL 1**



CROSS SECTION



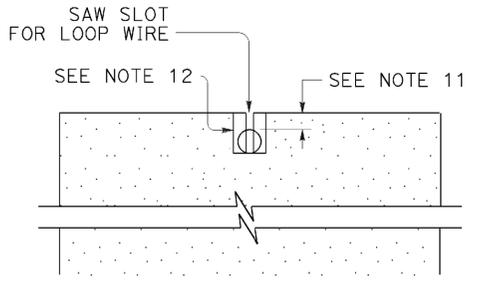
DETECTOR HANDHOLE DETAIL



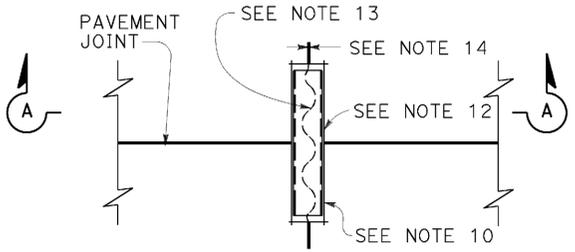
PLAN VIEW

SECTION C-C

**TYPE B
CURB TERMINATION DETAIL**

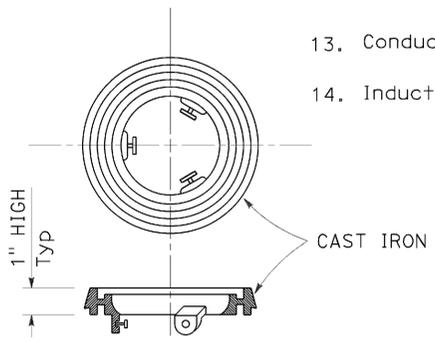


SECTION A-A



PLAN VIEW

**TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT**



LOCKING GRADE RING

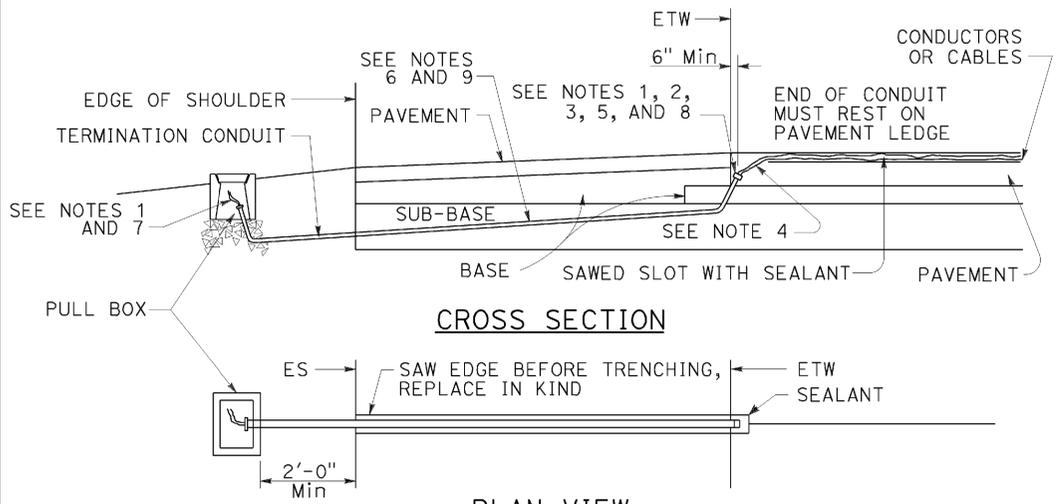
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CURB AND SHOULDER TERMINATION,
TRENCH, AND HANDHOLE DETAILS)**

NO SCALE

RSP ES-5D DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5D DATED JULY 19, 2013 AND STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5D



CROSS SECTION

**PLAN VIEW
SHOULDER TERMINATION DETAILS**

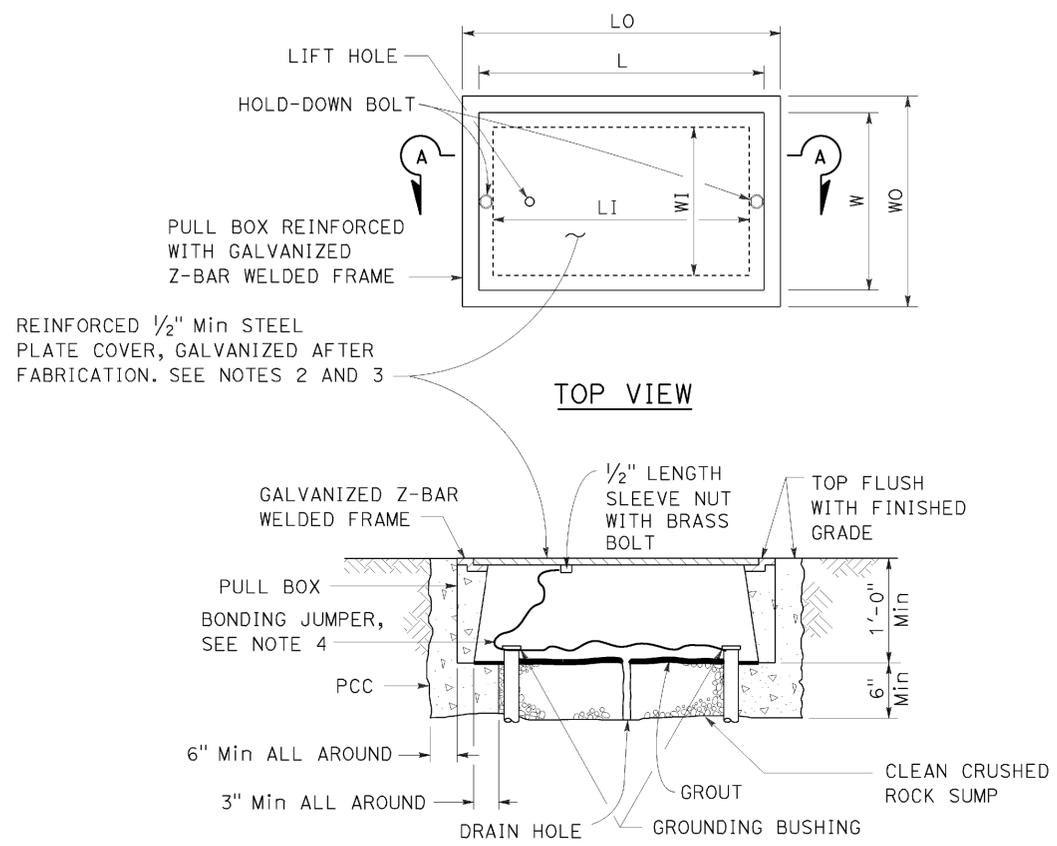
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	299	12.2/18.5	24	24

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 12-14-15



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	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

DATE PLOTTED => 23-DEC-2015
 TIME PLOTTED => 10:56