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STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

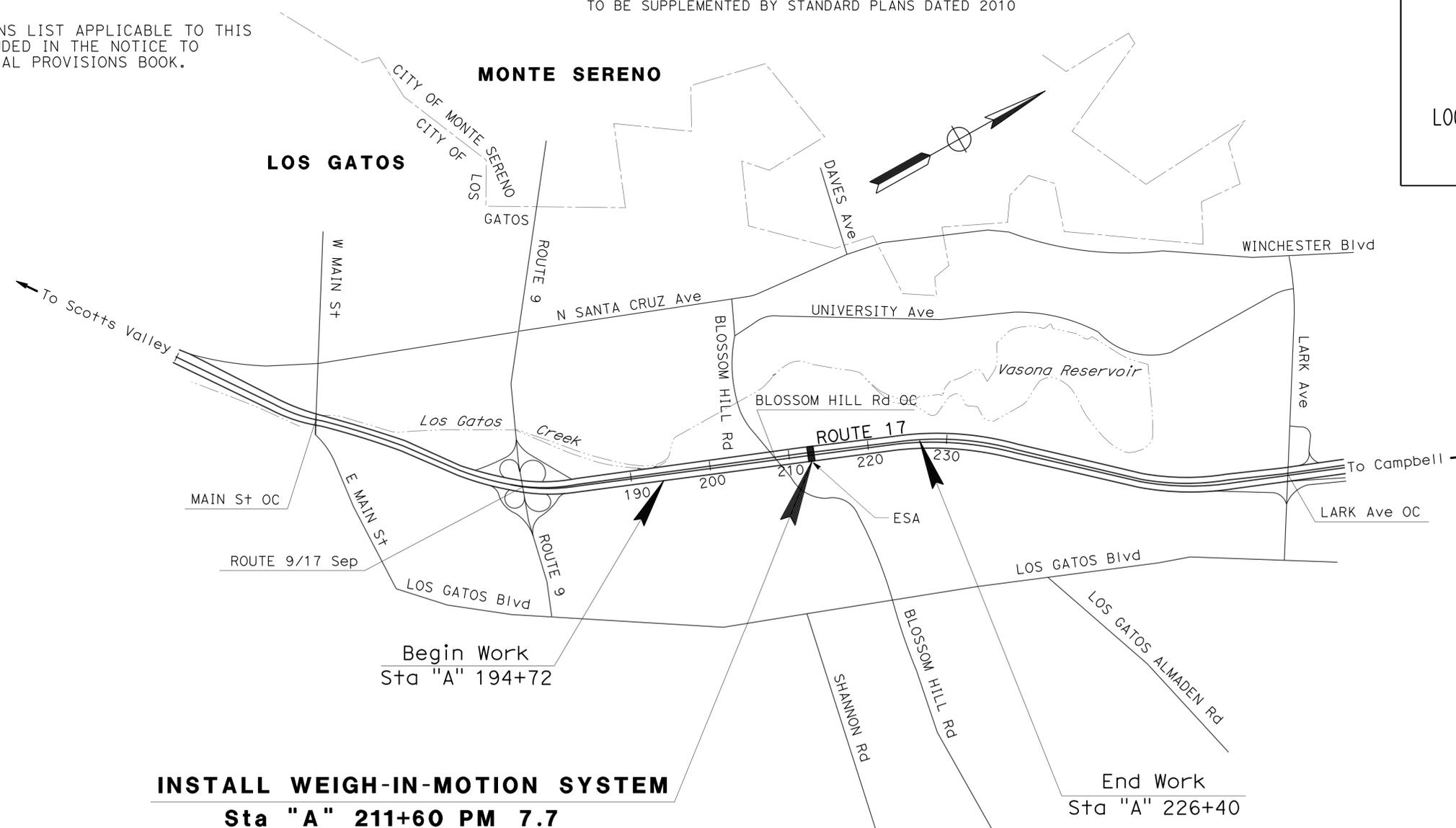
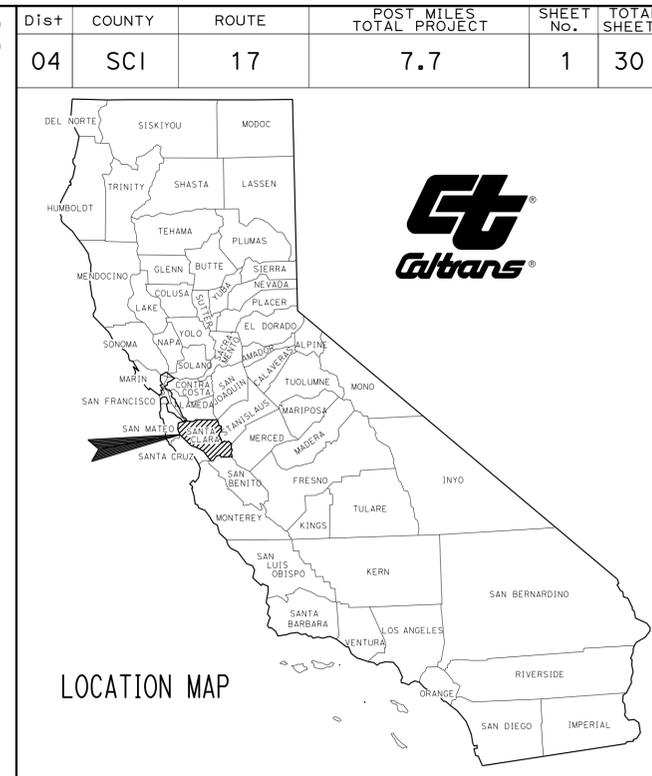
ACNHP-P017(111)E

PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY

IN SANTA CLARA COUNTY  
IN LOS GATOS  
AT 0.1 MILE NORTH OF BLOSSOM HILL ROAD OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

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



**INSTALL WEIGH-IN-MOTION SYSTEM**  
Sta "A" 211+60 PM 7.7

End Work  
Sta "A" 226+40

Begin Work  
Sta "A" 194+72

PROJECT ENGINEER: Md Mustaqur Rahman, REGISTERED CIVIL ENGINEER, No. 75824, Exp. 6-30-16  
DATE: 12-23-15  
PLANS APPROVAL DATE: February 16, 2016  
CIVIL

PROJECT MANAGER:INDERPREET SINGH  
DESIGN MANAGER:HASSAN NIKZAD

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

NO SCALE

DATE PLOTTED => 02-JUN-2016 TIME PLOTTED => 1:37:34

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

FUNCTIONAL SUPERVISOR  
 HASSAN NIKZAD

CALCULATED-DESIGNED BY  
 CHECKED BY

MD MUSTAQUR RAHMAN  
 ABUL BASHAR

REVISIED BY  
 DATE REVISED

MR  
 12-23-15

**NOTES:**

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. DIMENSIONS SHOWN FOR THE EXISTING PAVEMENT STRUCTURE SECTIONS ARE TAKEN FROM AS-BUILTS, ACTUAL THICKNESS MAY VARY.
3. THE SLOPE OF THE HMA GUTTER SHOULD BE 5% OR VARIOUS AND MUST CONFORM TO THE SLOPE OF EXISTING SWALE/GUTTER.

**TYPICAL PAVEMENT STRUCTURE SECTIONS**

- 1 - 1.12' JPCP (RSC)  
 BOND BREAKER  
 0.33' RSCB
- 2 - Exist  
 0.10' HMA (OGFC)  
 0.15' RHMA-G  
 0.10' HMA (TYPE A)  
 PRF  
 0.10' HMA LEVELING  
 0.67' PCC  
 0.33' CTB  
 0.50' CI 1 AS
- 3 - Exist  
 0.10' HMA (OGFC)  
 0.15' RHMA-G  
 0.10' HMA (TYPE A)  
 PRF  
 0.10' HMA LEVELING  
 0.25' AC  
 0.45' CTB  
 0.83' CI 1 AS
- 4 - 0.35' HMA (TYPE A)  
 1.00' CI 2 AB

**ABBREVIATIONS:**

- OGFC - OPEN GRADED FRICTION COVER
- RHMA-G - RUBBERIZED HOT MIX ASPHALT (GAP GRADED)
- RSC - RAPID STRENGTH CONCRETE
- RSCB - RAPID STRENGTH CONCRETE BASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	2	30

12-23-15  
 REGISTERED CIVIL ENGINEER DATE

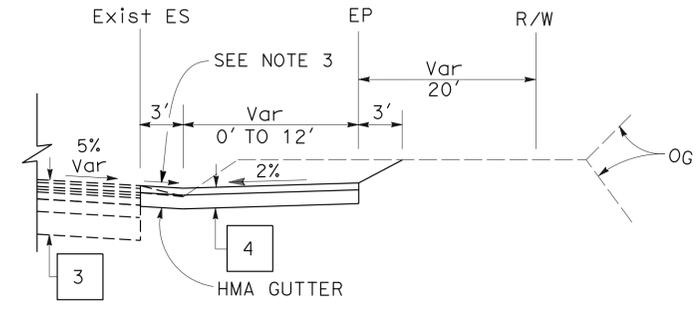
2-16-16  
 PLANS APPROVAL DATE

Md Mustaqur Rahman  
 No. 75824  
 Exp. 6-30-16  
 CIVIL

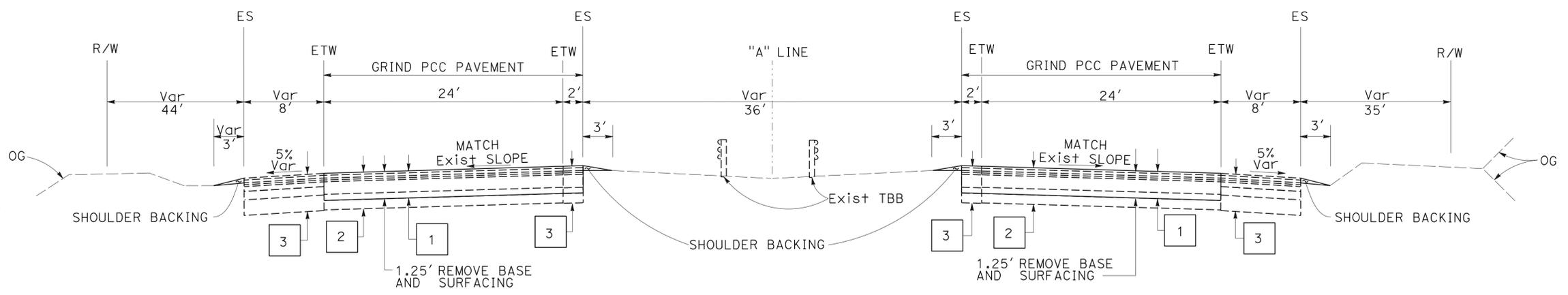
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**LEGEND:**

No. STRUCTURAL SECTION NUMBER



"A" 211+16 TO 212+01  
**MAINTENANCE VEHICLE PULLOUT**



SOUTHBOUND  
 "A" 210+60 TO 213+60

NORTHBOUND  
 "A" 209+60 TO 212+60

**ROUTE 17**

**TYPICAL CROSS SECTIONS**  
 NO SCALE

X-1

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

FUNCTIONAL SUPERVISOR  
 HASSAN NIKZAD

CALCULATED/DESIGNED BY  
 CHECKED BY

MD MUSTAQUR RAHMAN  
 ABUL BASHAR

REVISED BY  
 DATE REVISED

MR  
 12-23-15

**NOTE:**

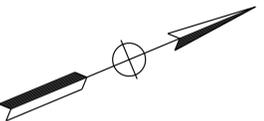
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES NOT HAVE BEEN PLOTTED ON PORTIONS OF THESE PLANS.

**ABBREVIATIONS:**

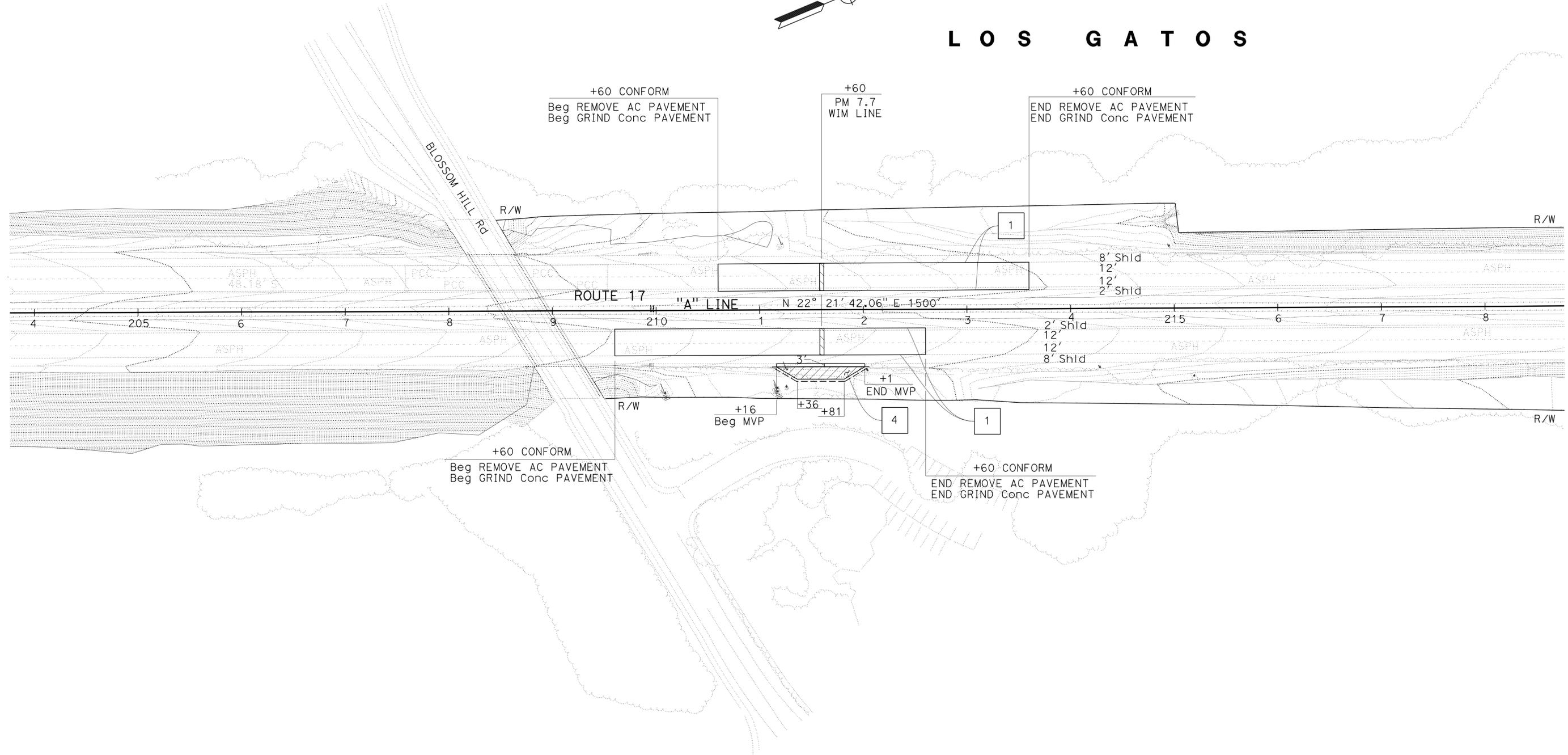
RSC RAPID STRENGTH CONCRETE  
 WIM WEIGH-IN-MOTION

REMOVE AC SURFACE AND PLACE RSC PAVEMENT  
 SAWCUT PCC PAVEMENT 4"

**LEGEND:**



**L O S G A T O S**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	3	30

12-23-15  
 REGISTERED CIVIL ENGINEER DATE  
 Md Mustaqur Rahman  
 No. 75824  
 Exp 6-30-16  
 CIVIL  
 2-16-16  
 PLANS APPROVAL DATE

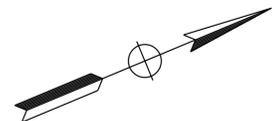
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**LAYOUT**  
 SCALE: 1" = 50'

**L-1**

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

**LEGEND:**



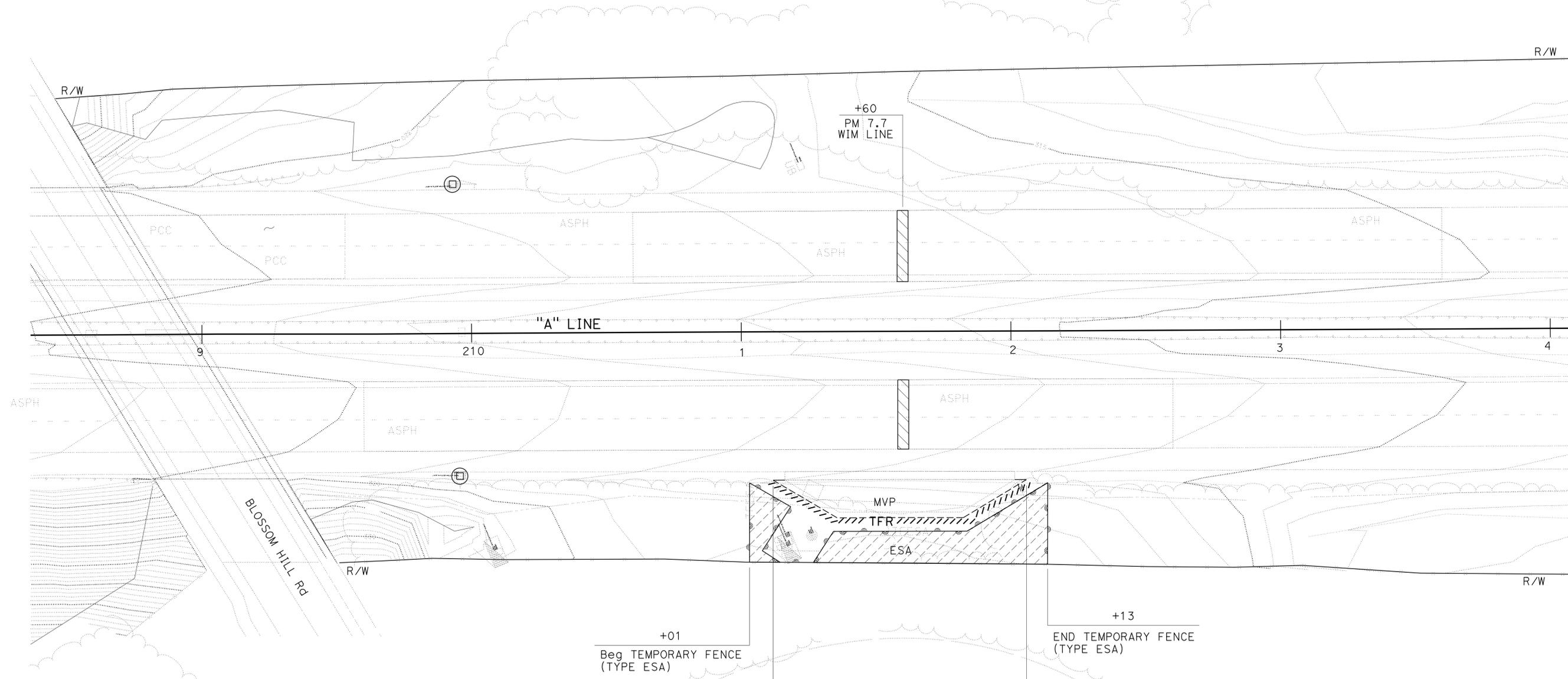
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	4	30

Jeng G. Tsoi 12-30-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-16-16  
 PLANS APPROVAL DATE

Jeng G. Tsoi  
 No. 62753  
 Exp. 6-30-16  
 CIVIL

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** WATER QUALITY  
 FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI  
 JENG TSAI  
 KAMRAN NAKHJIRI  
 REVISIONS: JT 12-23-15  
 REVISIONS: DATE REVISIONS: DATE REVISIONS:



**TEMPORARY WATER POLLUTION CONTROL QUANTITIES**

LOCATION	DIRECTION	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY FIBER ROLL	TEMPORARY FENCE (TYPE ESA)
		EA	LF	
"A" 211+00 TO 212+15	NB		120	540
"A" 209+93	SB NB	2		
<b>TOTAL</b>		2	120	540

**TEMPORARY WATER POLLUTION CONTROL PLAN**

SCALE: 1" = 20'

**WPC-1**

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

LAST REVISION: DATE PLOTTED => 02-JUN-2016  
 12-23-15 TIME PLOTTED => 1:31:34

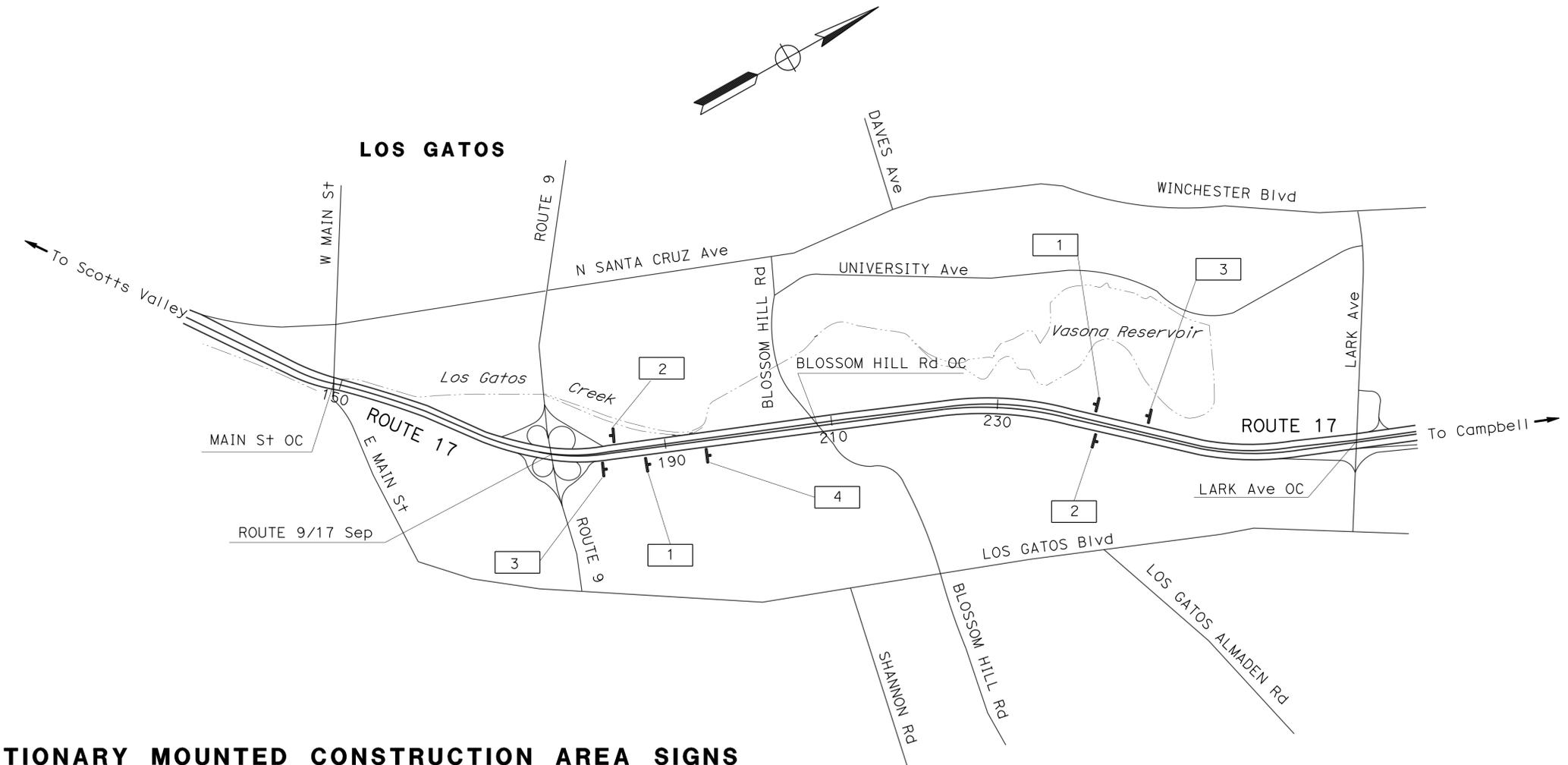
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	5	30
Rajesh Oberoi			12-23-15	REGISTERED CIVIL ENGINEER DATE	
2-16-16			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTE:**

1. EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.

**LEGEND:**

No. CONSTRUCTION AREA SIGN NUMBER



**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No.	MUTCD CODE	MESSAGE	PANEL SIZE	NUMBER OF POST AND SIZE	No. OF SIGNS
1	W20-1	ROAD WORK AHEAD	48" x 48"	1 - 4" x 6"	2
2	G20-2	END ROAD WORK	36" x 18"	1 - 4" x 4"	2
3	C40A(CA)	TRAFFIC FINES DOUBLED IN WORK ZONES	48" x 48"	1 - 4" x 6"	2
4	W21-5a	RIGHT SHOULDER CLOSED	48" x 48"	1 - 4" x 6"	1

**CONSTRUCTION AREA SIGNS**  
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

**CS-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG  
 CHECKED BY: SHARI TALAI, RAJESH OBEROI  
 REVISOR: ST  
 DATE: 12-23-15

LAST REVISION DATE PLOTTED => 02-JUN-2016  
 12-16-15 TIME PLOTTED => 1:3:34

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

FUNCTIONAL SUPERVISOR: HASSAN NIKZAD  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 MR: MD MUSTAQUR RAHMAN  
 REVISOR: ABUL BASHAR  
 DATE: 12-23-15

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

**LEGEND:**

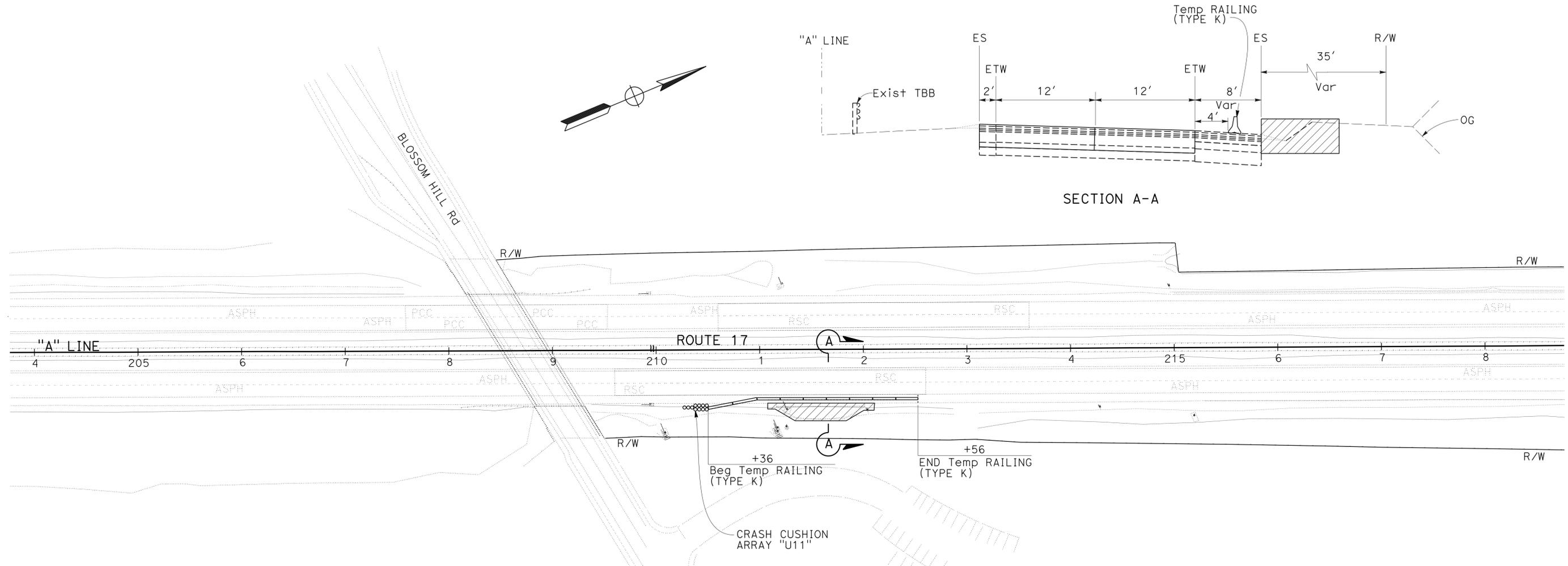


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	6	30

REGISTERED CIVIL ENGINEER: Md Mustaqur Rahman  
 No. 75824  
 Exp. 6-30-16  
 CIVIL

DATE: 12-23-15  
 PLANS APPROVAL DATE: 2-16-16

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SECTION A-A

**STAGE CONSTRUCTION QUANTITIES**

LOCATION	TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION MODULE
	LF	EA
"A" 210+36 TO 212+56	220	
"A" 210+36		11
<b>TOTAL</b>	<b>220</b>	<b>11</b>

**STAGE CONSTRUCTION PLAN**  
 SCALE: 1" = 50'

**SC-1**

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: RAMIEL F GUTIERREZ JR  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 MD MUSTAOUR RAHMAN  
 GERINO CAPINO  
 REVISOR: [Blank]  
 DATE: [Blank]  
 MR: 12-23-15

**NOTE:**

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

**LEGEND:**

4" BLACK PAINT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	7	30

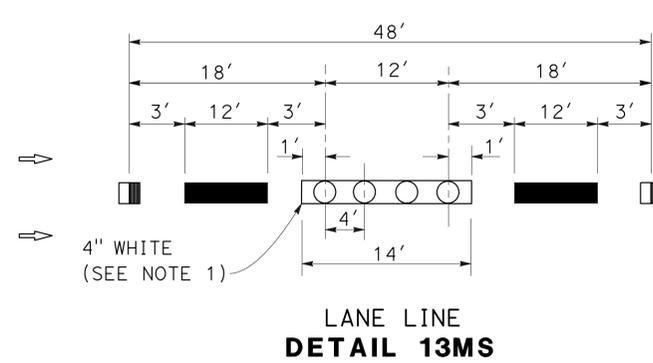
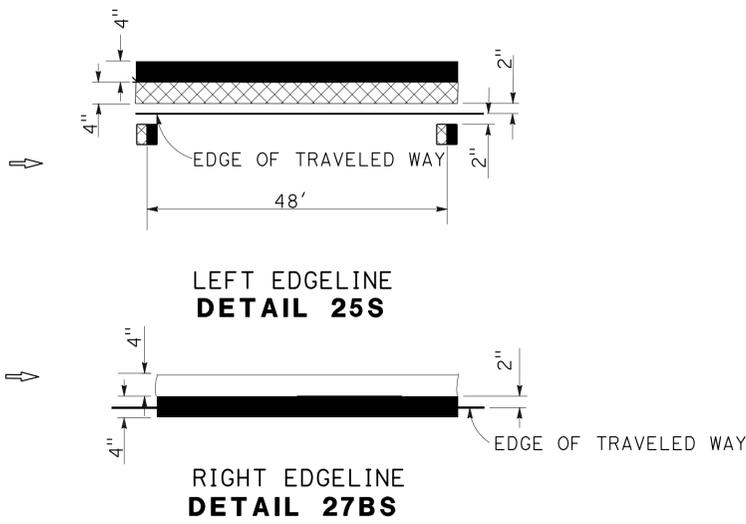
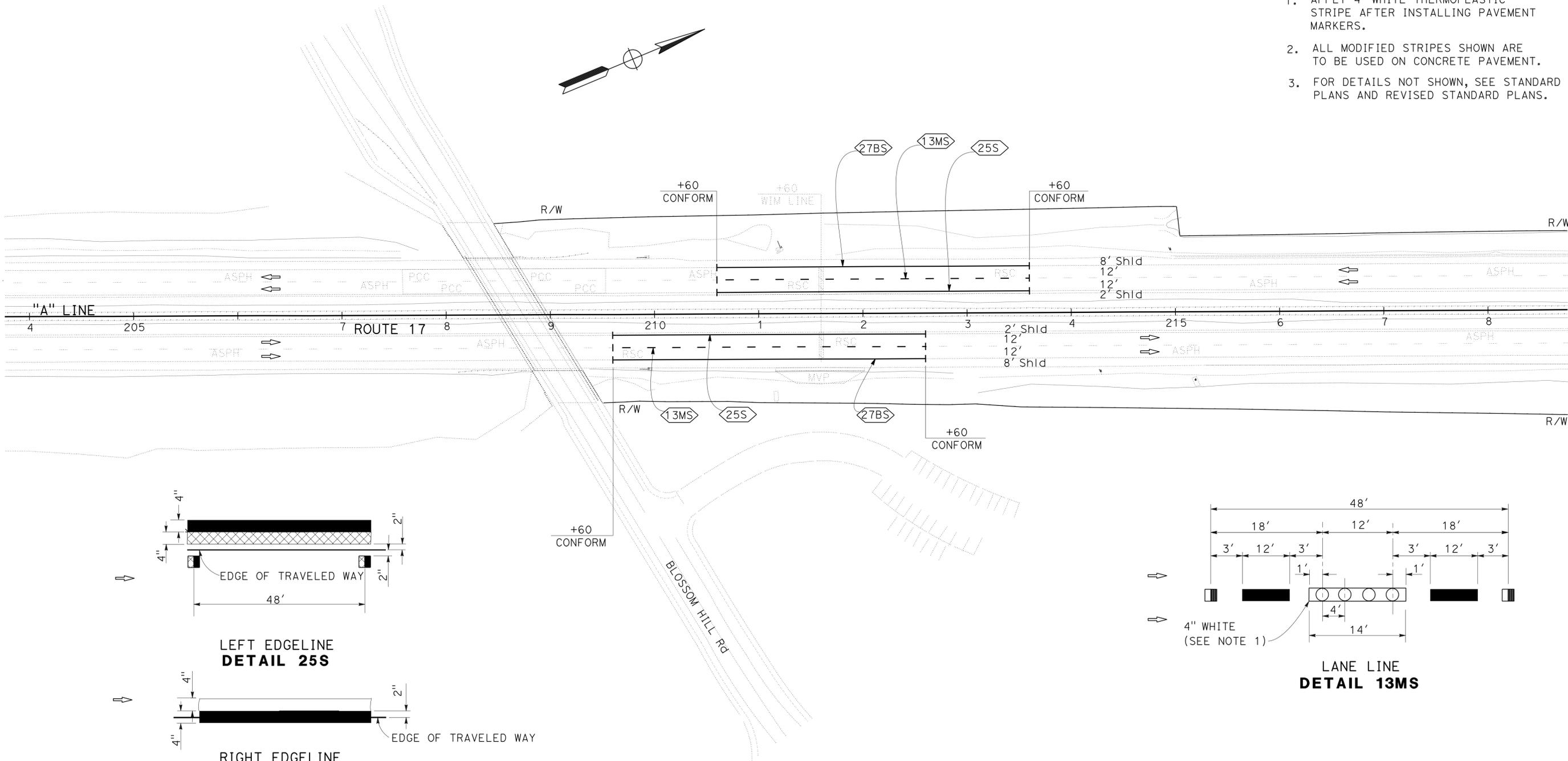
12-30-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-16-16  
 PLANS APPROVAL DATE

Gerino G. Capino  
 No. 47119  
 Exp. 2-31-17  
 CIVIL  
 STATE OF CALIFORNIA

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

**NOTES:**

1. APPLY 4" WHITE THERMOPLASTIC STRIPE AFTER INSTALLING PAVEMENT MARKERS.
2. ALL MODIFIED STRIPES SHOWN ARE TO BE USED ON CONCRETE PAVEMENT.
3. FOR DETAILS NOT SHOWN, SEE STANDARD PLANS AND REVISED STANDARD PLANS.



**PAVEMENT DELINEATION PLAN**  
 SCALE: 1" = 50'

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

**PD-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	8	30

*Rahman* 12-23-15  
 REGISTERED CIVIL ENGINEER DATE

2-16-16  
 PLANS APPROVAL DATE

Md Mustaqur Rahman  
 No. 75824  
 Exp. 6-30-16  
 CIVIL

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 HASSAN NIKZAD  
 FUNCTIONAL SUPERVISOR  
 CHECKED BY  
 MD MUSTAQR RAHMAN  
 ABUL BASHAR  
 REVISOR BY  
 MR  
 12-23-15

### TRAFFIC STRIPES AND PAVEMENT MARKERS

STATION	DIRECTION	DETAIL No.	THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)			PAVEMENT MARKER			PAINT TRAFFIC STRIPE (2-COAT)	
			4" YELLOW	4" WHITE	4" WHITE (BROKEN 34-14)	NON-REFLECTIVE		4" BLACK	4" BLACK (BROKEN)	
						TYPE A	TYPE G			TYPE H
			LF			EA			LF	
"A" 209+60 TO 212+60	NB	13MS			300	28	7		300	300
		25S	300					7	300	
		27BS		300					300	
"A" 210+60 TO 213+60	SB	13MS			300	28	7		300	300
		25S	300					7	300	
		27BS		300					300	
SUBTOTAL			600	600	600	56	14	14	1200	600
GRAND TOTAL			1800			56	28		1800	

## PAVEMENT DELINEATION QUANTITIES

**PDQ-1**

LAST REVISION | DATE PLOTTED => 02-JUN-2016  
 12-16-15 | TIME PLOTTED => 1:3:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	9	30

12-23-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-16-16  
 PLANS APPROVAL DATE

Md Mustaqur Rahman  
 No. 75824  
 Exp. 6-30-16  
 CIVIL

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

**MAINLINE (PAVEMENT STRUCTURE QUANTITIES)**

STATION	DIRECTION	REMOVE BASE AND SURFACING			RAPID STRENGTH CONCRETE BASE	JOINTED PLAIN CONCRETE PAVEMENT(RSC)	BASE BOND BREAKER	GRIND EXISTING CONCRETE PAVEMENT	JOINT SEAL (PREFORMED COMPRESSION)	DRILL AND BOND (TIE BAR)	SHOULDER BACKING		ASPHALTIC EMULSION (CONCRETE BASE)
		(N) LENGTH	(N) WIDTH	VOLUME							INSIDE SHOULDER	OUTSIDE SHOULDER	
		LF	CY								SQYD	LF	
"A" 209+60 TO 212+60	NB	300	26	419	95.33	324	866.67	866.67	1146	128	11.25	8.06	0.92
"A" 210+60 TO 213+60	SB	300	26	419	95.33	324	866.67	866.67	1146	128	11.25	11.25	0.92
SUBTOTAL				838	190.66	648	1733.34	1733.34	2292	256	22.50	19.31	1.84
GRAND TOTAL				838	190.66	648	1733.34	1733.34	2292	256	41.81		1.84

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

**MAINTENANCE VEHICLE PULLOUT (ROADSIDE PAVING)**

STATION	DIRECTION	LOCATION	ROADWAY EXCAVATION	HOT MIX ASPHALT (TYPE A)	CLASS 2 AGGREGATE BASE	PRIME COAT	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREAS)
			CY	TON	CY	TON	SQYD
"A" 211+16 TO 212+01	NB	HMA GUTTER	12.75	6.69	9	0.05	28.33
		MVP	79	20.48	29	0.15	86.67
TOTAL			91.75	27.17	38	0.20	115

**SUMMARY OF QUANTITIES**

**Q-1**

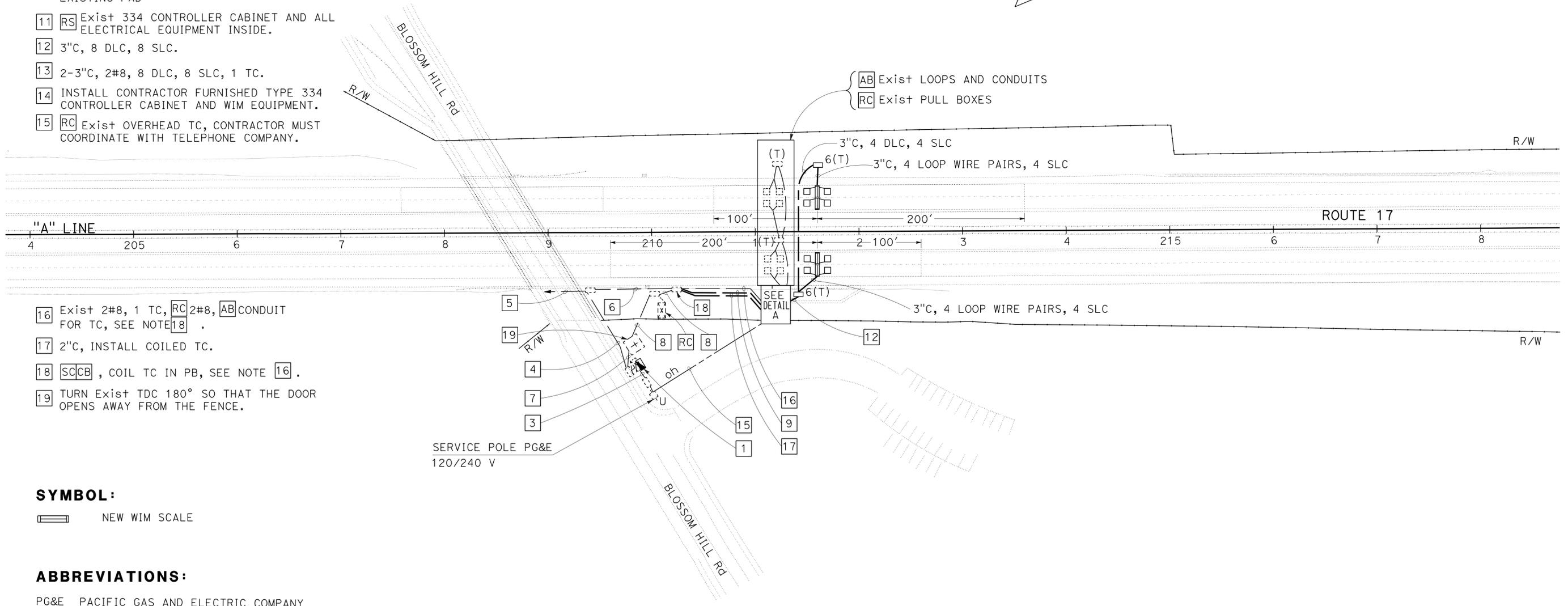
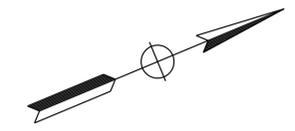
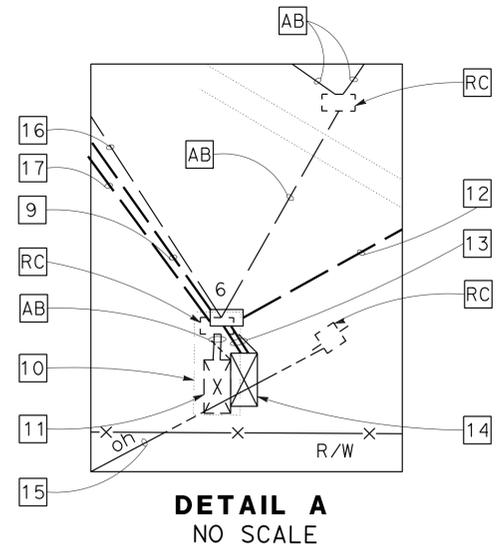
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 HASSAN NIKZAD  
 FUNCTIONAL SUPERVISOR  
 MD MUSTAQUR RAHMAN  
 ABUL BASHAR  
 REVISOR  
 MR  
 12-23-15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	10	30
		H. Golban 12-28-15		REGISTERED ELECTRICAL ENGINEER DATE	
		2-16-16		PLANS APPROVAL DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

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

**LEGEND: (THIS SHEET ONLY)**

- 1 **RS** Exist SERVICE EQUIPMENT ENCLOSURE Ctid No. 00437017007602, INSTALL NEW TYPE III-AF TESCO MODEL 27-100 SERVICE EQUIPMENT ENCLOSURE ON Exist FOUNDATION, TESCO PROJECT No. T-15735X1.
- 2 **AB** Exist LOOPS.
- 3 Exist 2 1/2"C, 3#3/0.
- 4 Exist 3"C, 4#2, 1#2/0, 4#6.
- 5 Exist 3"C, 4#2, 1#2/0, 2#6.
- 6 Exist 1 1/2"C, 2#8.
- 7 Exist 1"C, 2#10.
- 8 Exist 1"C, 1 TC.
- 9 1 1/2"C, 2#8.
- 10 INSTALL NEW 334 CONTROLLER CABINET ON EXISTING PAD
- 11 **RS** Exist 334 CONTROLLER CABINET AND ALL ELECTRICAL EQUIPMENT INSIDE.
- 12 3"C, 8 DLC, 8 SLC.
- 13 2-3"C, 2#8, 8 DLC, 8 SLC, 1 TC.
- 14 INSTALL CONTRACTOR FURNISHED TYPE 334 CONTROLLER CABINET AND WIM EQUIPMENT.
- 15 **RC** Exist OVERHEAD TC, CONTRACTOR MUST COORDINATE WITH TELEPHONE COMPANY.



- 16 Exist 2#8, 1 TC, **RC** 2#8, **AB** CONDUIT FOR TC, SEE NOTE 18.
- 17 2"C, INSTALL COILED TC.
- 18 **SCCB**, COIL TC IN PB, SEE NOTE 16.
- 19 TURN Exist TDC 180° SO THAT THE DOOR OPENS AWAY FROM THE FENCE.

**SYMBOL:**

NEW WIM SCALE

**ABBREVIATIONS:**

PG&E PACIFIC GAS AND ELECTRIC COMPANY  
SLC SCALE LEAD-IN-CABLE  
TC TELEPHONE CABLE

**HIGH SPEED WEIGH-IN-MOTION      MODIFYING EXISTING ELECTRICAL SYSTEM**  
SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

**E-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 ELECTRICAL  
 FUNCTIONAL SUPERVISOR: MARY ANN HUDSPETH  
 REVISIONS: 12-23-15  
 REVISOR: JAMIE KOJAK  
 DESIGNER: HABIB GOLBAN  
 CHECKER: MARY ANN HUDSPETH

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

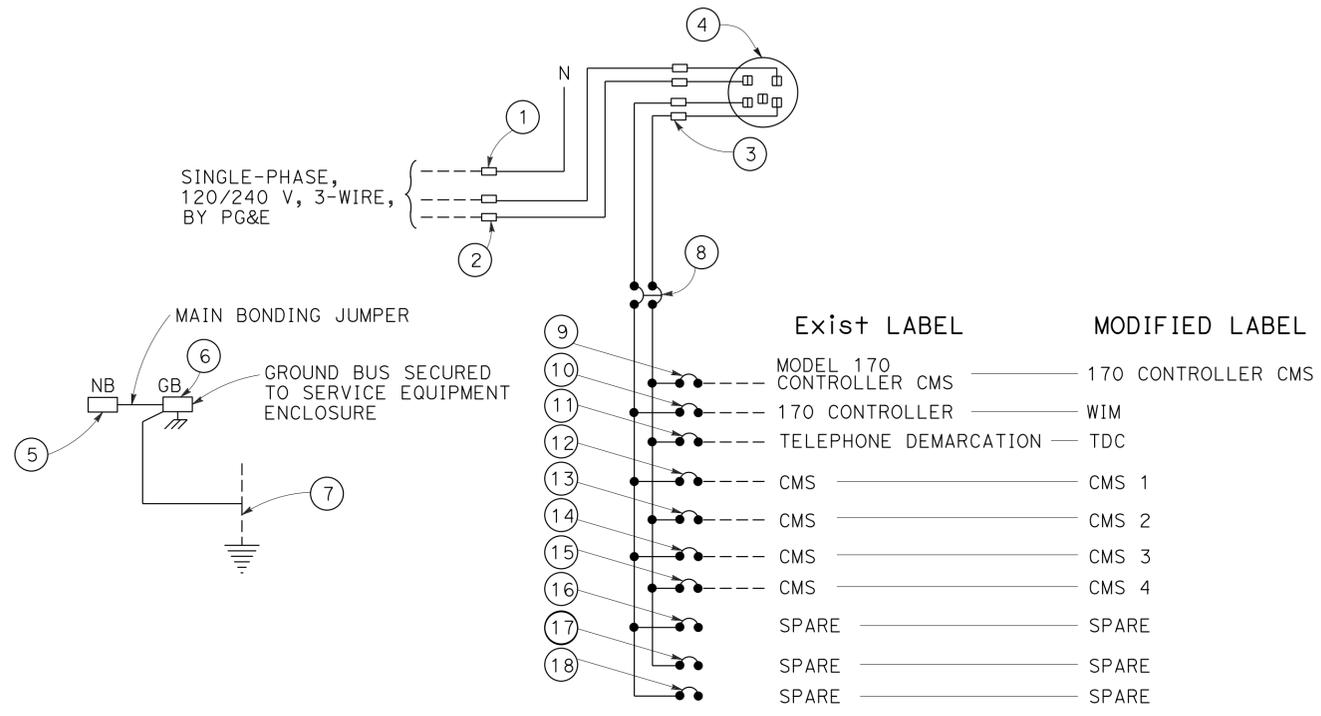
FUNCTIONAL SUPERVISOR  
 MARY ANN HUDSPETH

CALCULATED/DESIGNED BY  
 CHECKED BY

JAMIE KOJAK  
 HABIB GOLBAN

REVISOR BY  
 DATE REVISED

HG  
 12-23-15



**120/ 240 V SERVICE WIRING DIAGRAM**  
 C:\id No. 00437017007602

**NOTES:**

- VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, SERVICE EQUIPMENT ITEMS SHALL BE PROVIDED FOR EACH SERVICE EQUIPMENT ENCLOSURE AS SHOWN.
- CONNECT TO REMOTE TEST SWITCH MOUNTED ON LIGHTING STANDARD, SIGN POST OR STRUCTURE WHEN REQUIRED.
- ITEMS ① AND ⑤ SHALL BE ISOLATED FROM THE SERVICE EQUIPMENT ENCLOSURE.
- METER SOCKETS SHALL BE 5 CLIP TYPE.
- THE LANDING LUG SHALL BE SUITABLE FOR MULTIPLE CONDUCTORS.
- TYPE V PHOTOELECTRIC CONTROL SHALL BE USED.

**TYPE III-A SERVICE EQUIPMENT ENCLOSURE LEGEND (120/240 V)**

ITEM	COMPONENT	NAMEPLATE DESCRIPTION
①	NEUTRAL LUG	
②	LANDING LUG (NOTE 6)	
③	TEST BYPASS FACILITY	
④	METER SOCKET AND SUPPORT	
⑤	NEUTRAL BUS	
⑥	GROUND BUS	
⑦	GROUNDING ELECTRODE	
⑧	200 A, 240 V, 2P, CB	MAIN BREAKER
⑨	30 A, 120 V, 1P, CB	CMS CONTROLLER CABINET
⑩	20 A, 120 V, 1P, CB	WIM CABINET
⑪	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
⑫	80 A, 120 V, 1P, CB	CMS
⑬	80 A, 120 V, 1P, CB	CMS
⑭	80 A, 120 V, 1P, CB	CMS
⑮	80 A, 120 V, 1P, CB	CMS
⑯	30 A, 120 V, 1P, CB	SPARE
⑰	20 A, 120 V, 1P, CB	SPARE
⑱	15 A, 120 V, 1P, CB	SPARE

**ELECTRICAL DETAILS**

NO SCALE

LAST REVISION | DATE PLOTTED => 02-JUN-2016 12-17-15 | TIME PLOTTED => 1:3:34

**NOTES:**

1. INSTALL NON-METALLIC BUSHING AT ROADWAY END OF CONDUIT.
2. INSTALL DUCT SEAL COMPOUND TO EACH END OF ROADWAY CONDUIT BEFORE INSTALLING EPOXY, OR OTHER APPROVED MATERIALS.
3. END OF 3"C AND 2" PP RESTS ON BOTTOM OF PAVEMENT NOTCH; 3"C BOTTOM MUST BE ABOVE 2" PP BOTTOM.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	12	30

H. Golban 12-28-15  
 REGISTERED ELECTRICAL ENGINEER DATE

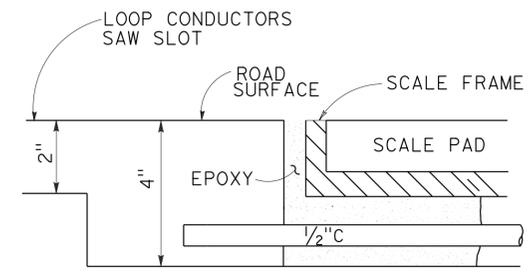
2-16-16  
 PLANS APPROVAL DATE

Habib Golban  
 No. 17928  
 Exp. 9-30-16  
 ELECTRICAL  
 STATE OF CALIFORNIA

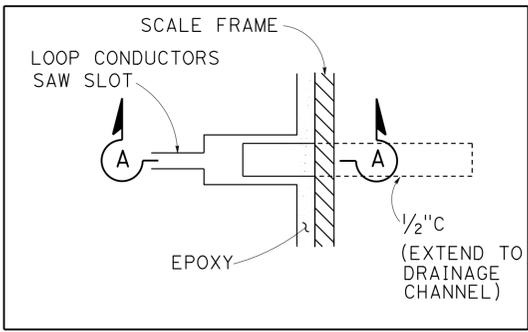
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REVISOR: JAMIE KOJAK  
 DATE: 12-23-15

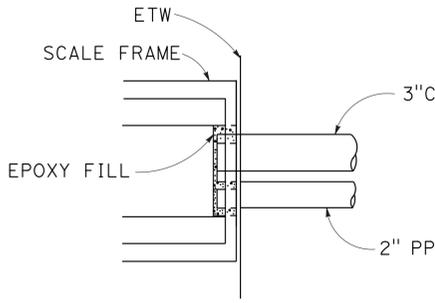
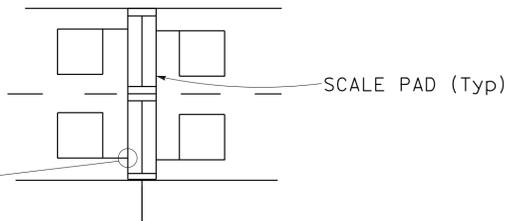
DESIGNER: MARY ANN HUDSPETH



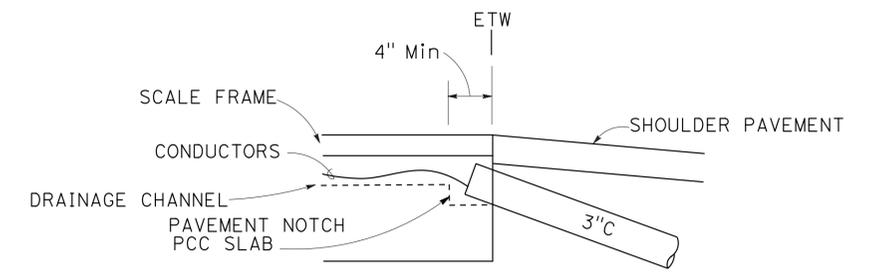
SECTION A-A



PLAN  
 LOOP HOME RUN DETAILS

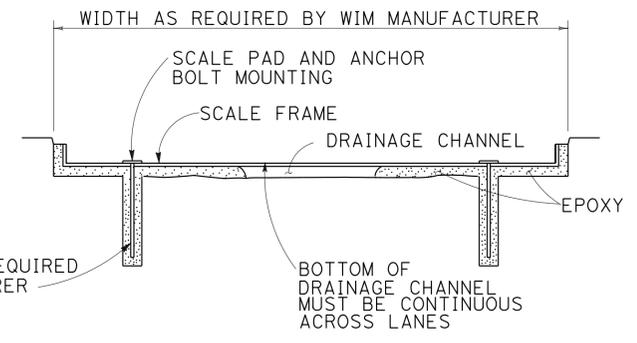


PLAN



CROSS SECTION

**CONDUIT AND 2" PP TERMINATION DETAILS**



SCALE FRAME INSTALLATION DETAIL  
 (Typ)

**HIGH SPEED WEIGH-IN-MOTION SYSTEM**

**ELECTRICAL DETAILS**

NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	13	30

H. Golban 12-28-15	
REGISTERED ELECTRICAL ENGINEER	DATE
2-16-16	
PLANS APPROVAL DATE	

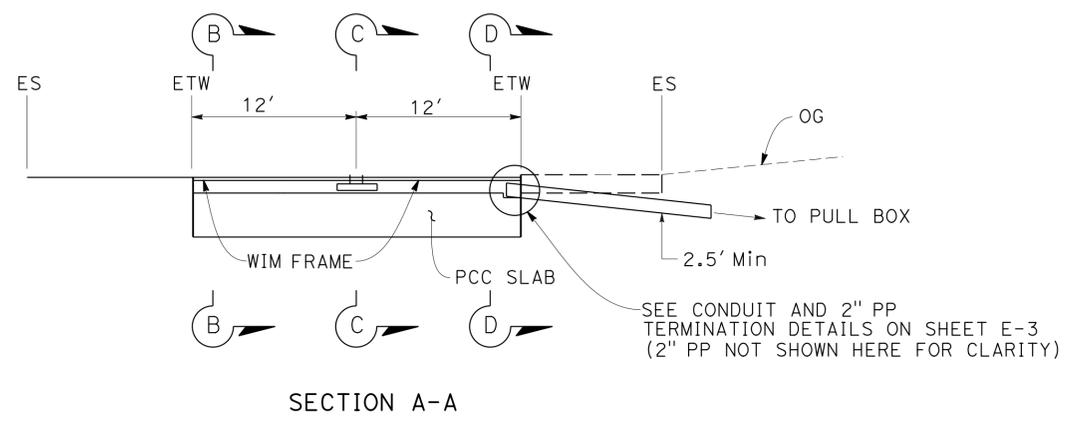
  

Habib Golban	
No. 17928	Exp. 9-30-16
ELECTRICAL	

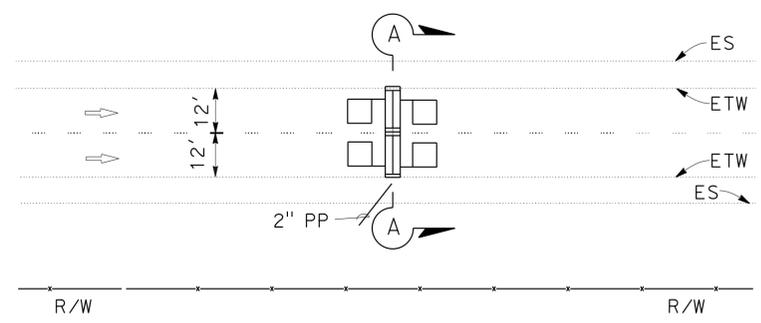
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

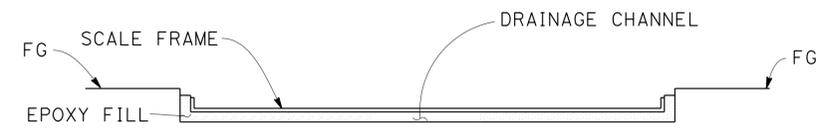
1. THE WIM ENGINEER WILL VERIFY THE FINAL LOCATION OF THE WIM SCALES PRIOR TO ANY WORK IN THE TRAVELED WAY OR SHOULDERS.
2. EDGE DRAIN OUTLET MUST CONFORM TO TYPE C OUTLET WITH OUTLET COVER AS SHOWN ON STANDARD PLAN D99B EXCEPT THAT PIPE SHALL BE 2".
3. WIM SCALE MUST MATCH EXISTING ROADWAY PROFILE AND CROSS-SLOPE.
4. EXACT CONFIGURATION AND INSTALLATION PROCEDURES OF SCALE FRAME AND LOOP DETECTORS MUST CONFORM TO THE REQUIREMENTS OF THE WIM MANUFACTURER.



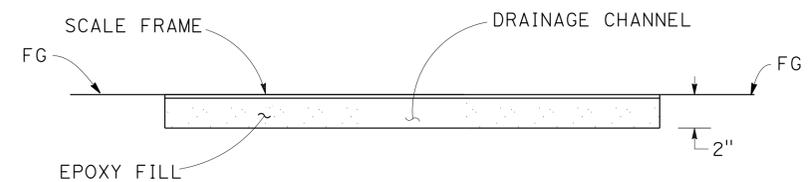
SECTION A-A



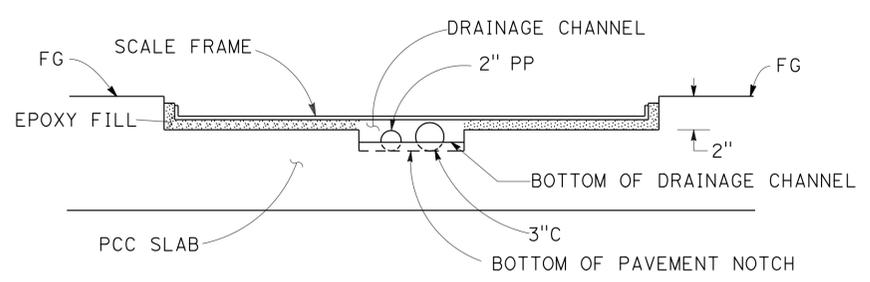
TYPICAL INSTALLATION DETAIL



SECTION B-B



SECTION C-C



SECTION D-D

**HIGH SPEED WEIGH-IN-MOTION SYSTEM**

**ELECTRICAL DETAILS**

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 ELECTRICAL  
 FUNCTIONAL SUPERVISOR: MARY ANN HUDSPETH  
 CALCULATED/DESIGNED BY: JAMIE KOJAK  
 CHECKED BY: HABIB GOLBAN  
 REVISIONS: HG 12-23-15

LAST REVISION DATE PLOTTED => 02-JUN-2016  
 12-17-15 TIME PLOTTED => 1:34

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

FUNCTIONAL SUPERVISOR  
 MARY ANN HUDSPETH

CALCULATED/DESIGNED BY  
 CHECKED BY

JAMIE KOJAK  
 HABIB GOLBAN

REVISED BY  
 DATE REVISED

HG  
 12-23-15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	14	30

H. Golban 12-28-15  
 REGISTERED ELECTRICAL ENGINEER DATE

2-16-16  
 PLANS APPROVAL DATE

Habib Golban  
 No. 17928  
 Exp. 9-30-16  
 ELECTRICAL

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**MODIFYING EXISTING ELECTRICAL SYSTEM**

SHEET No.	PULL BOX No. 6	PULL BOX No. 6(T)	TYPE A LOOP	SCALE PAD	STEEL FRAME	WIM SYSTEM EQUIPMENT	1 1/2" TYPE 3 PVC CONDUIT	2" TYPE 3 PVC CONDUIT	3" TYPE 3 PVC CONDUIT	CONDUCTOR No. 8	DLC	SCALE LEAD IN CABLE	TYPE III-AF TESCO MODEL 27-100
	EA						LF						EA
E-1	1	2	8	8	8	1	100	100	220	300	1000	1150	1

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

**ELECTRICAL QUANTITIES**

**E-5**

LAST REVISION | DATE PLOTTED => 02-JUN-2016 12-17-15 | TIME PLOTTED => 1:3:34

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

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

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	15	30

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 2-16-16

**UNIT OF MEASUREMENT SYMBOLS:**  
Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

**TABLE A**

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

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

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
∅	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
04	SCI	17	7.7	16	30

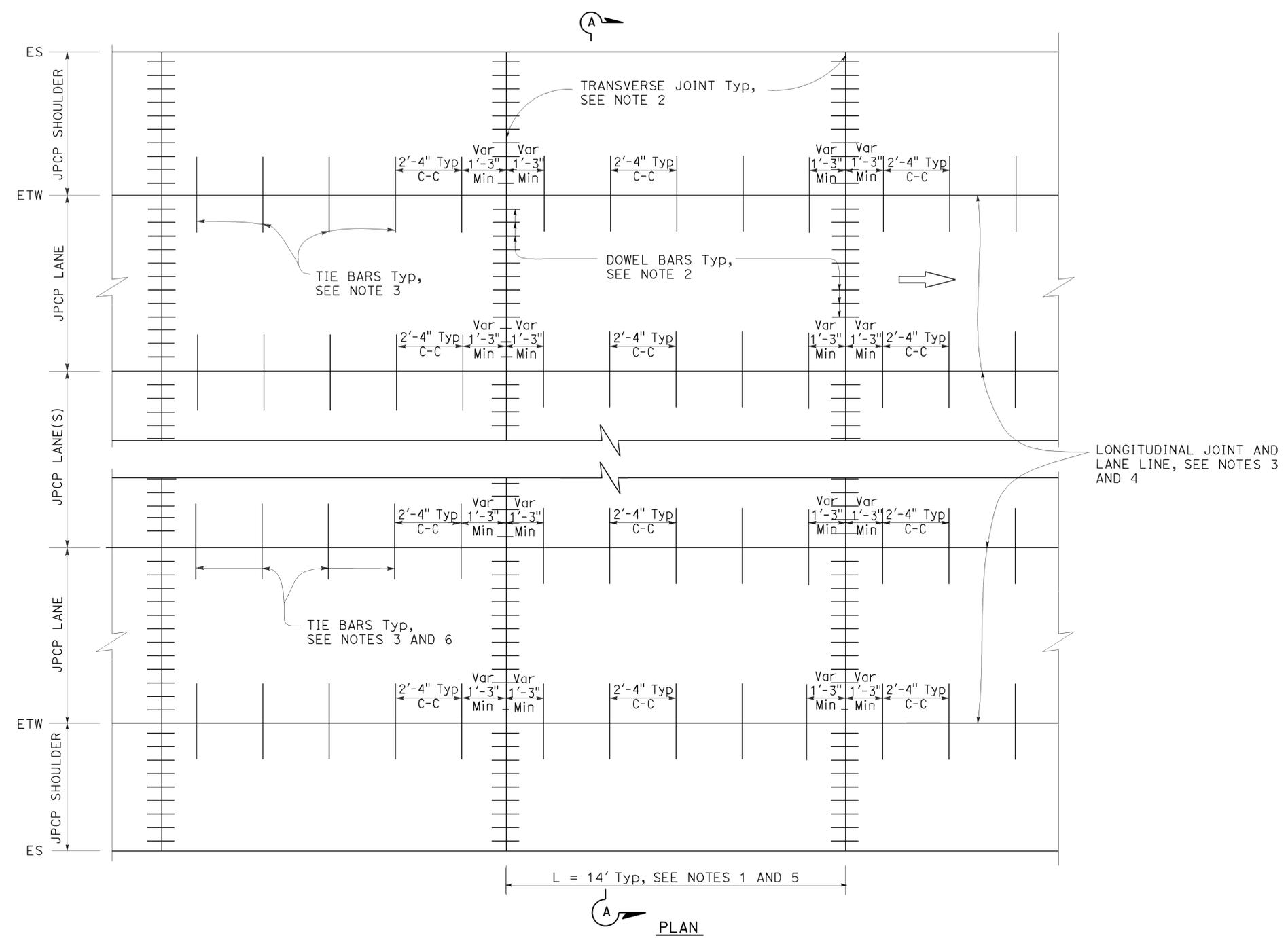
*William K. Farnbach*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

William K. Farnbach  
No. C49042  
Exp. 9-30-14  
CIVIL ENGINEER  
STATE OF CALIFORNIA

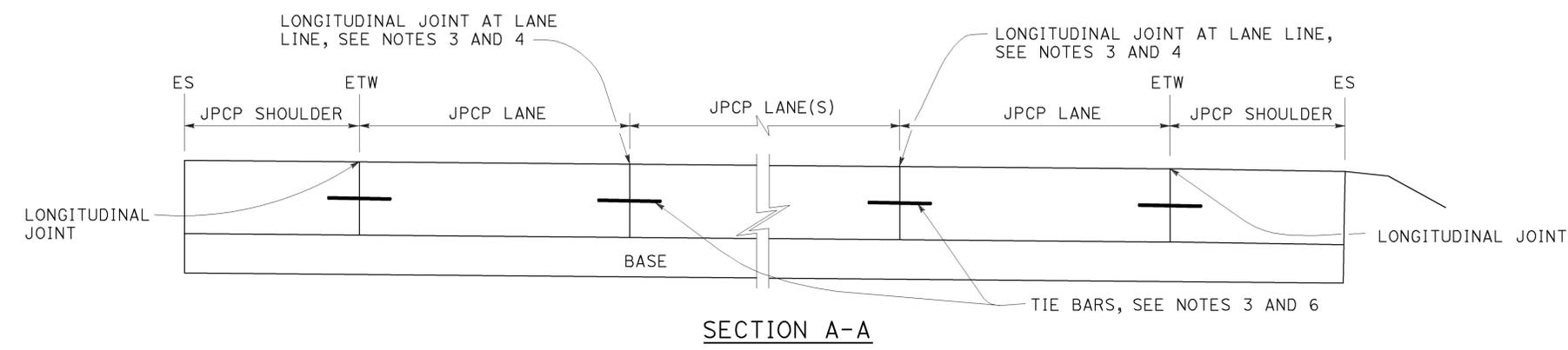
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TO ACCOMPANY PLANS DATED 2-16-16



**NOTES:**

1. Transverse joint spacing may be adjusted to no less than 10' and no more than 14' to conform to bridges, change in pavement type, and hardened concrete pavement.
2. For transverse joint and dowel bar details not shown, see Revised Standard Plan RSP P10.
3. For longitudinal joint and tie bar details not shown, see Revised Standard Plan RSP P15.
4. For additional longitudinal joint layout details, see Revised Standard Plan RSP P18.
5. For joint layout at intersections, see Project Plans.
6. For dowel bars at longitudinal joint. see Revised Standard Plan RSP P18.



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN  
CONCRETE PAVEMENT  
NEW CONSTRUCTION**

NO SCALE

RSP P1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P1  
DATED MAY 20, 2011 - PAGE 125 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P1**

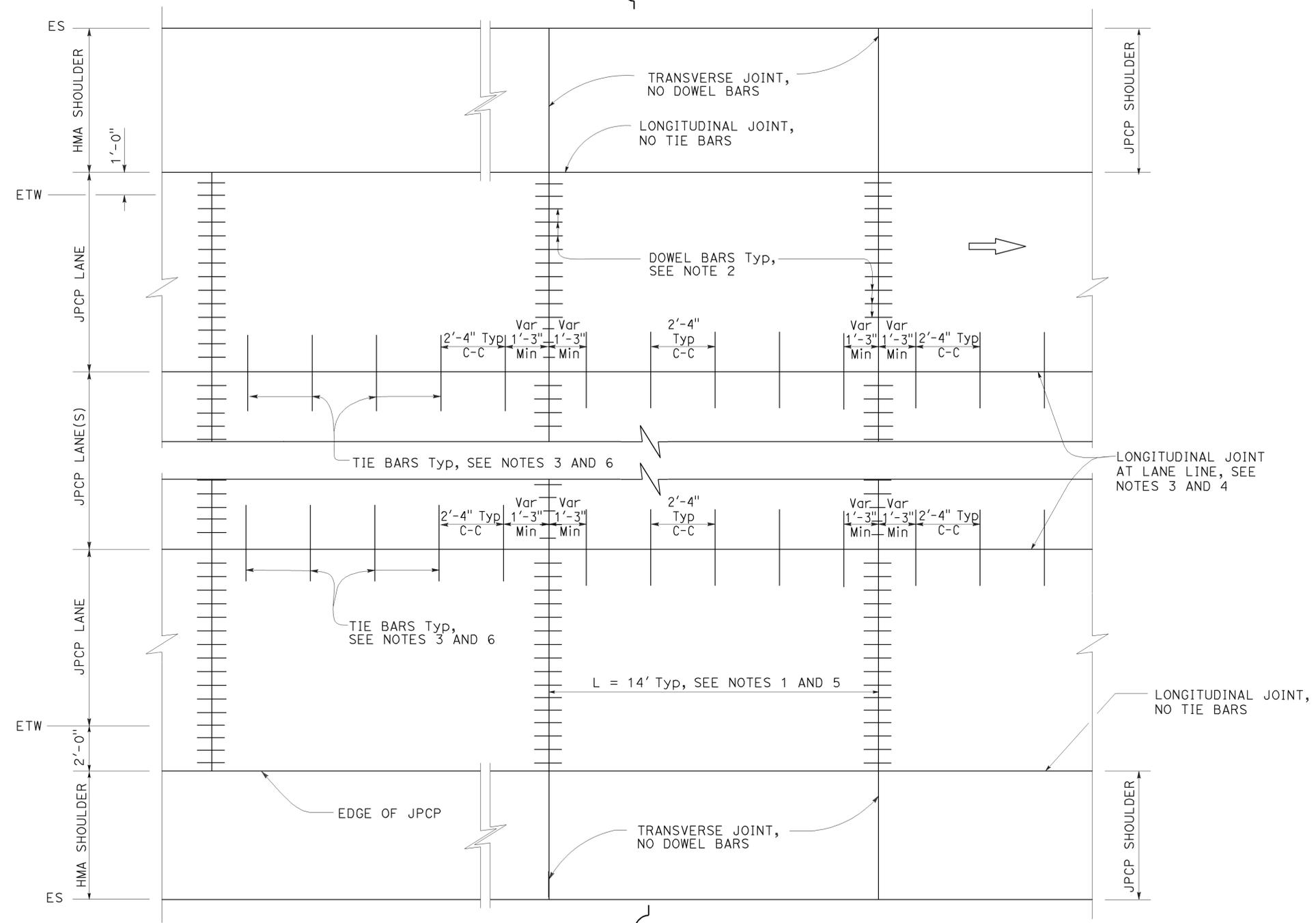
2010 REVISED STANDARD PLAN RSP P1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	17	30

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

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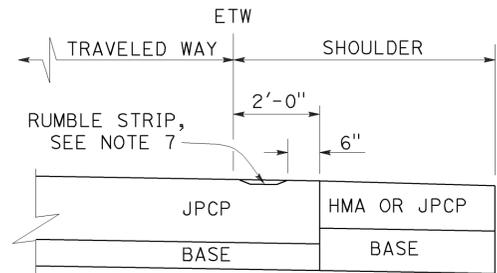
2010 REVISED STANDARD PLAN RSP P2



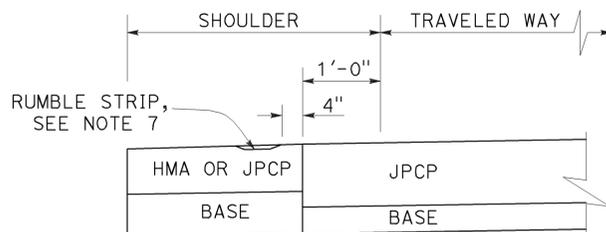
**NOTES:**

1. Transverse joint spacing may be adjusted to no less than 10' and no more than 14' to conform to bridges, change in pavement type, and hardened concrete pavement.
2. For transverse joint and dowel bar details not shown, see Revised Standard Plan RSP P10.
3. For longitudinal joint and tie bar details not shown, see Revised Standard Plan RSP P15.
4. For additional longitudinal joint layout details, see Revised Standard Plan RSP P18.
5. For joint layout at intersections, see Project Plans.
6. For dowel bars at longitudinal joint. see Revised Standard Plan RSP P18.
7. For limits of rumble strips, see Projects Plans.

TO ACCOMPANY PLANS DATED 2-16-16

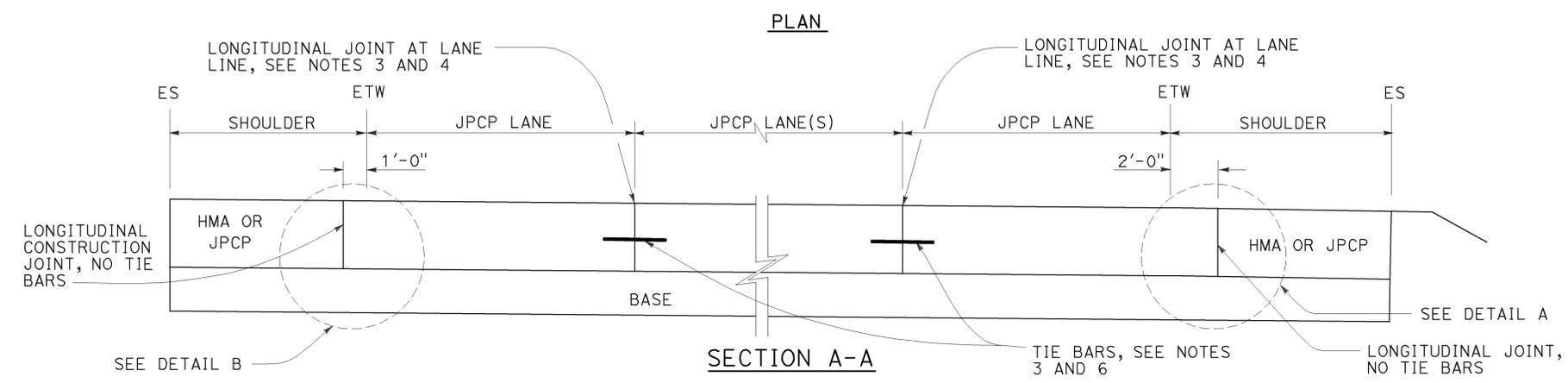


**DETAIL A**



**DETAIL B**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**JOINTED PLAIN  
 CONCRETE PAVEMENT  
 (WIDENED LANE)  
 NEW CONSTRUCTION**  
 NO SCALE

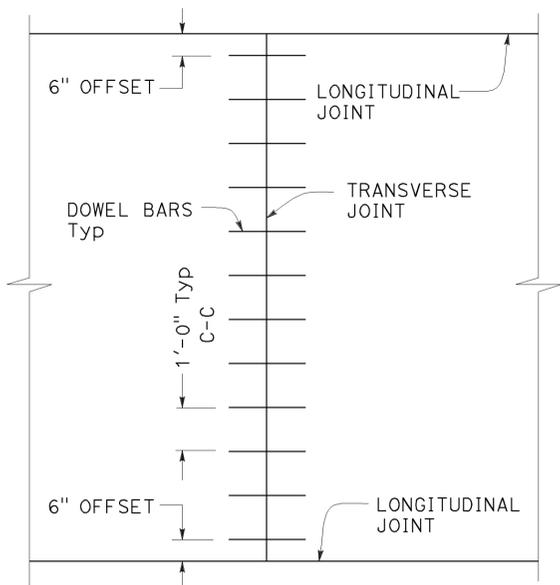


**SECTION A-A**

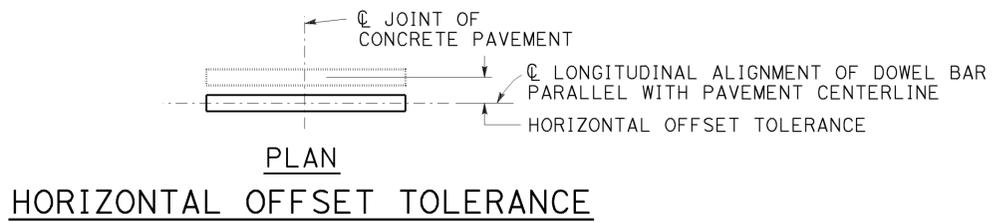
RSP P2 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P2 DATED MAY 20, 2011 - PAGE 126 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P2**

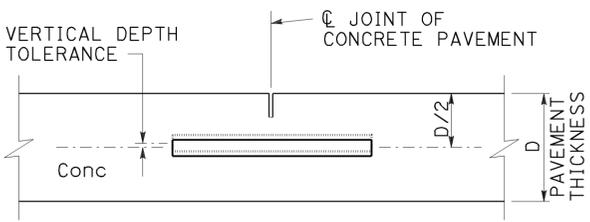
2010 REVISED STANDARD PLAN RSP P10



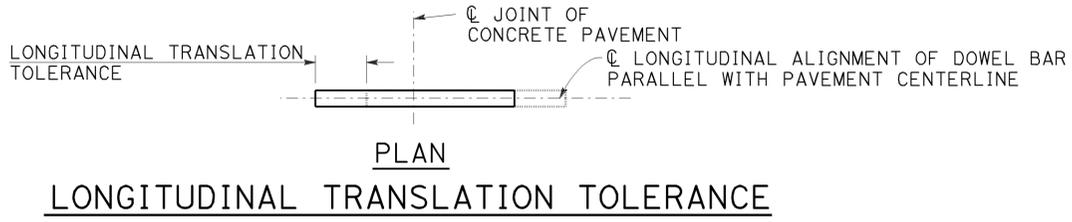
**TRANSVERSE JOINT  
DOWEL BAR LAYOUT**



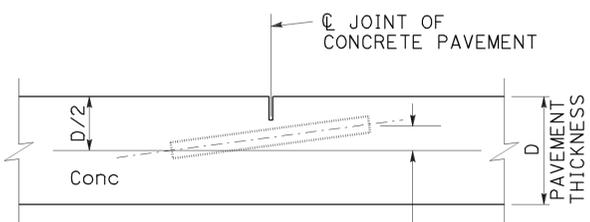
**PLAN  
HORIZONTAL OFFSET TOLERANCE**



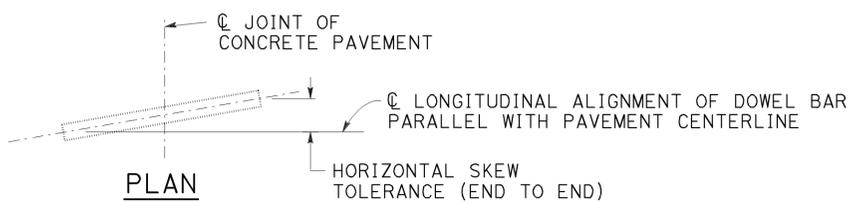
**ELEVATION  
VERTICAL DEPTH TOLERANCE**



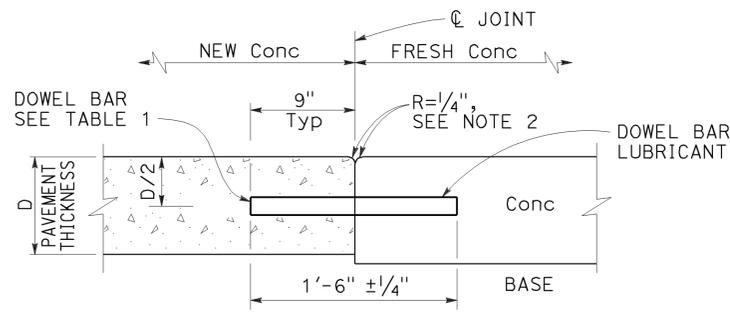
**PLAN  
LONGITUDINAL TRANSLATION TOLERANCE**



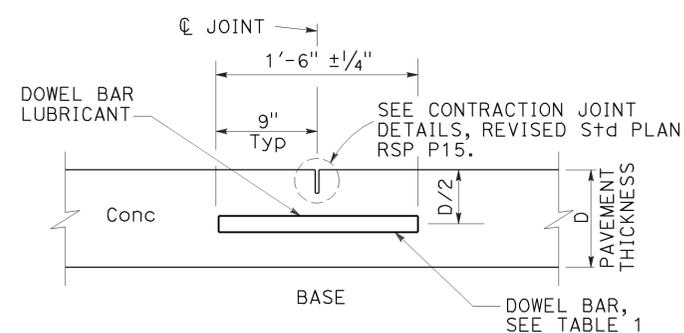
**ELEVATION  
VERTICAL SKEW TOLERANCE**



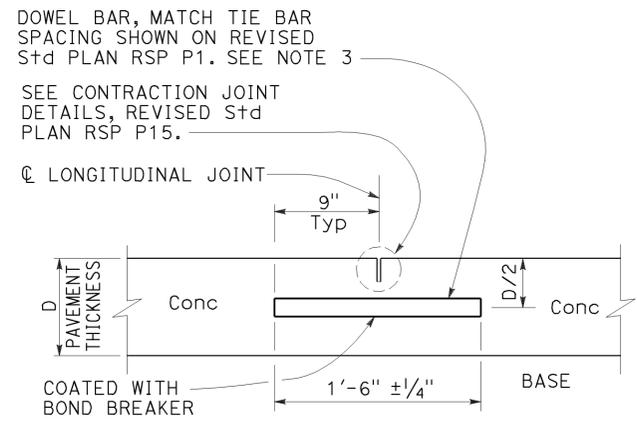
**PLAN  
HORIZONTAL SKEW TOLERANCE**



**TRANSVERSE  
CONSTRUCTION JOINT DETAIL**



**TRANSVERSE CONTRACTION JOINT**

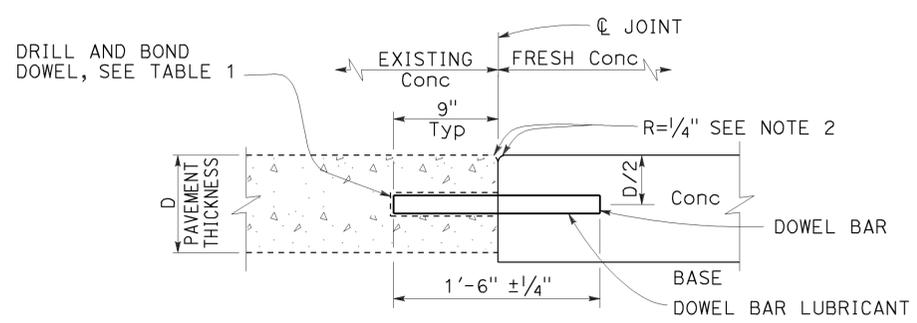


**LONGITUDINAL CONTRACTION  
JOINT WITH DOWEL BARS**  
See Revised Std Plan RSP P18

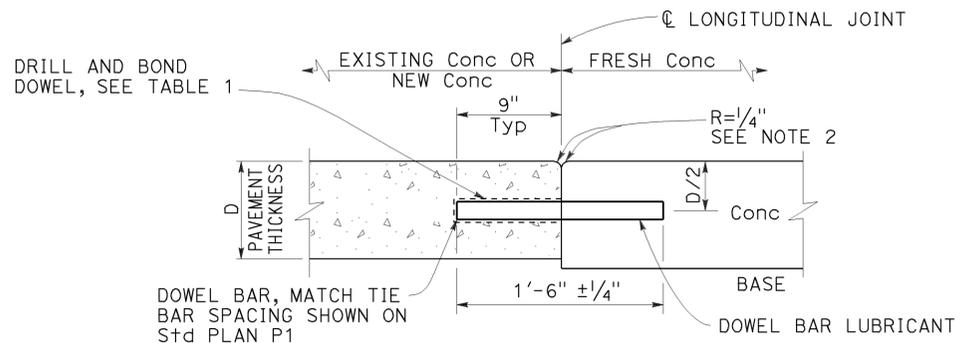
**TABLE 1  
DOWEL BAR DIAMETER TABLE**

PAVEMENT THICKNESS	0.65'	> 0.65' - 0.85'	> 0.85'
MINIMUM DOWEL * BAR DIAMETER	1"	1 1/4"	1 1/2"

\* The drilled hole diameter must be 1/8" to 3/16" larger than the bar diameter.



**TRANSVERSE CONSTRUCTION JOINT  
FOR EXISTING CONCRETE PAVEMENT**



**LONGITUDINAL CONSTRUCTION JOINT  
WITH DOWEL BARS**  
See Revised Std Plan RSP P18

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT  
DOWEL BAR  
DETAILS**  
NO SCALE

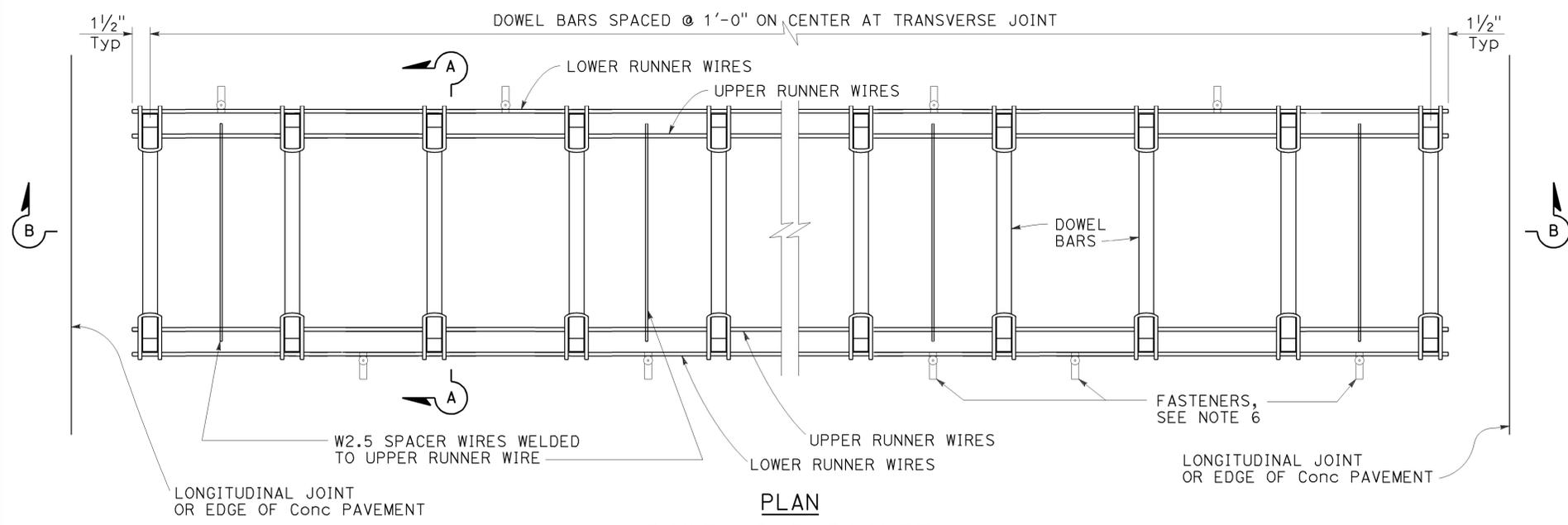
RSP P10 DATED JULY 19, 2013 SUPERSEDES RSP P10 DATED APRIL 20, 2012 AND STANDARD PLAN P10 DATED MAY 20, 2011 - PAGE 131 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	19	30

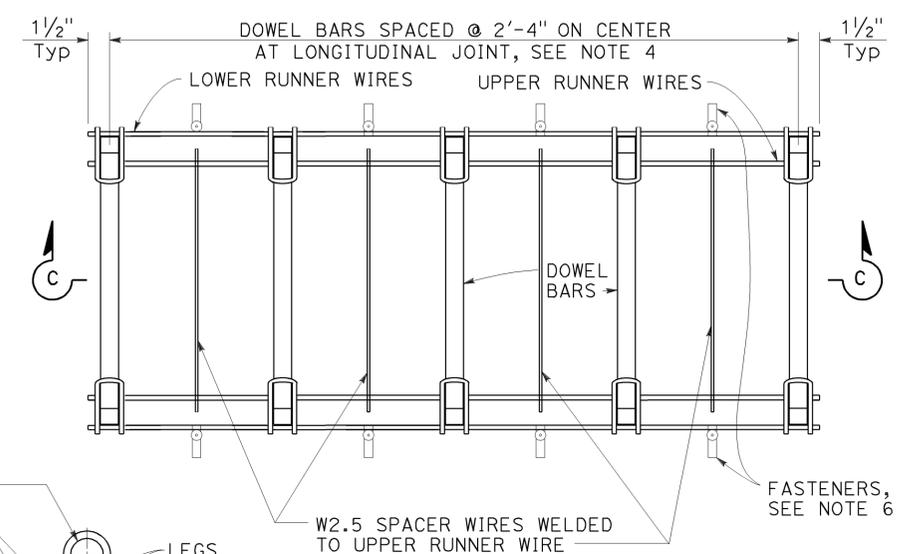
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

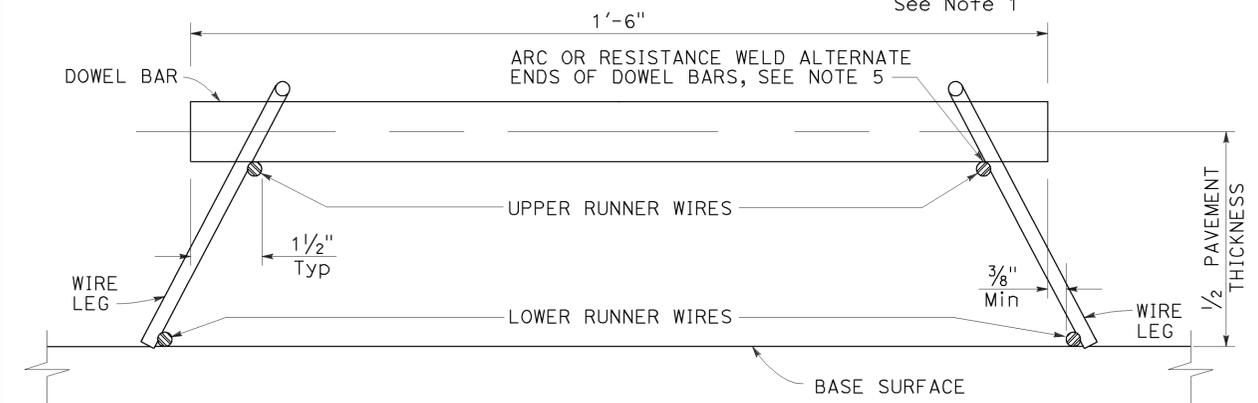
TO ACCOMPANY PLANS DATED 2-16-16



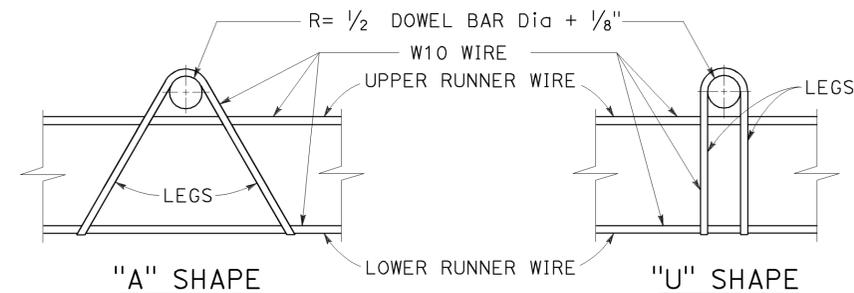
**PLAN  
DOWEL BAR BASKET  
(TRANSVERSE JOINT)**  
See Note 1



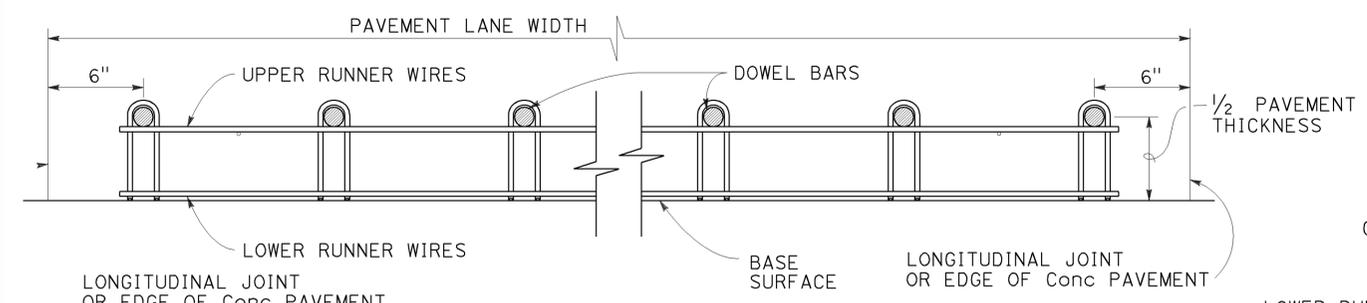
**PLAN  
DOWEL BAR BASKET  
(LONGITUDINAL JOINT)**  
See Note 1



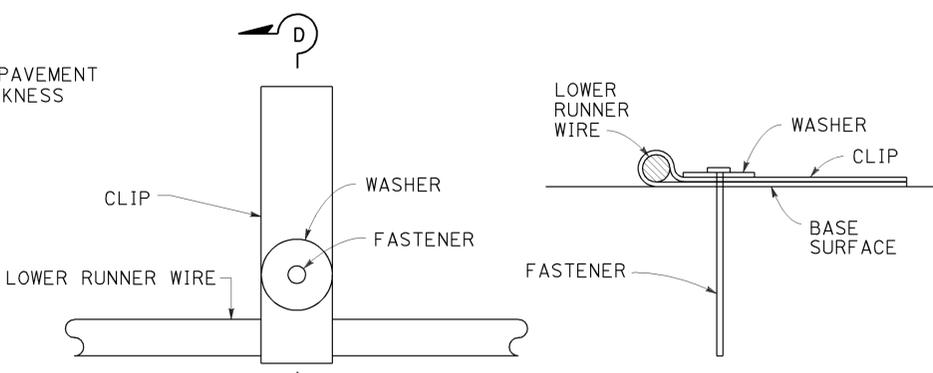
**SECTION A-A**



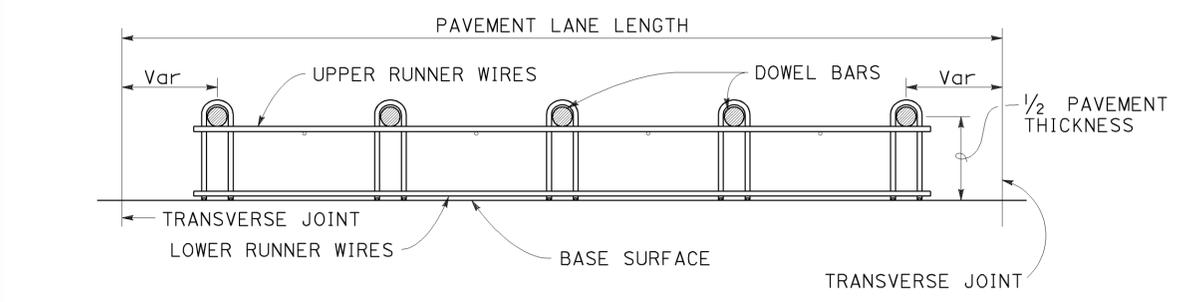
**ASSEMBLY FRAME DETAILS**



**SECTION B-B**  
See Note 1



**FASTENER DETAIL**  
See Note 6



**SECTION C-C**  
See Notes 1 and 4

**NOTES:**

- "U" frame shape assembly shown. Use either "U" frame shape or "A" frame shape.
- Wire sizes shown are the minimum required.
- All wire intersections must be resistance welded.
- Use tie bar spacing for longitudinal dowel bar locations. See Revised Standard Plans RSP P1, RSP P2, RSP P3A, and RSP P3B for tie bar requirements.
- Weld may be at the top or bottom of the dowel bar.
- Use anchor pins where soil or granular base is used. See Revised Standard Plan RSP P17 for Anchor Pin Detail.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT  
DOWEL BAR BASKET  
DETAILS**  
NO SCALE

RSP P12 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P12  
DATED MAY 20, 2011 - PAGE 132 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P12**

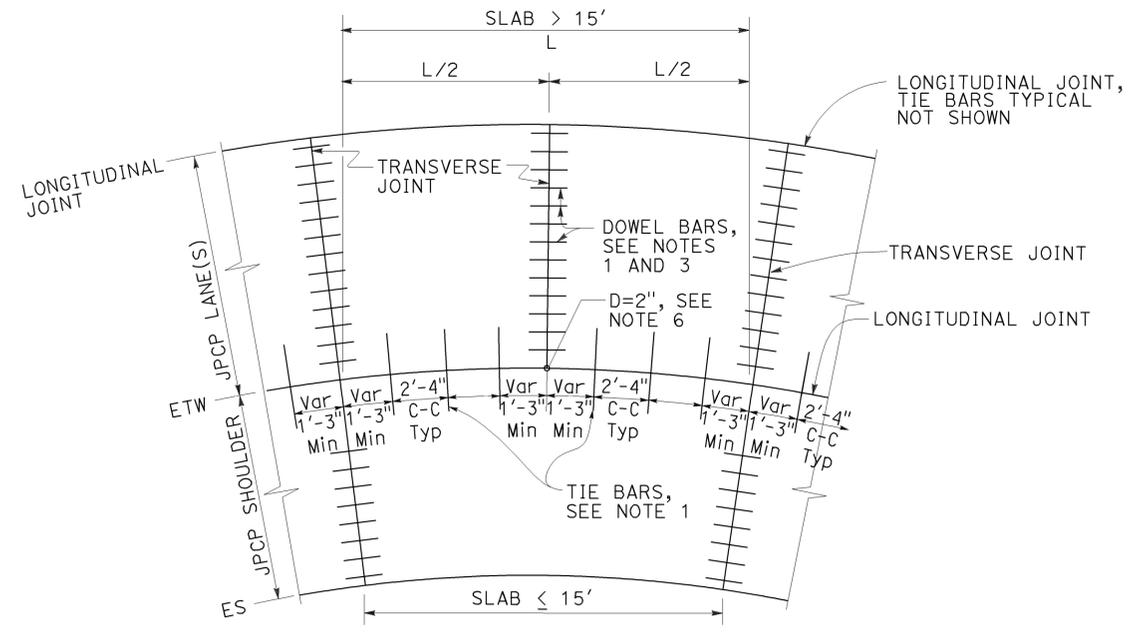
2010 REVISED STANDARD PLAN RSP P12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	20	30

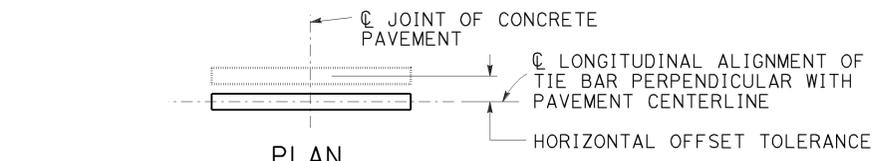
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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 William K. Farnbach  
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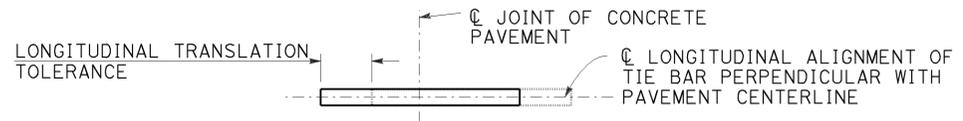
TO ACCOMPANY PLANS DATED 2-16-16



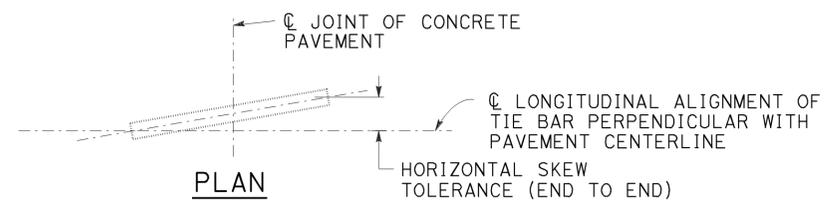
**TIE BAR LAYOUT IN CURVED LANES**



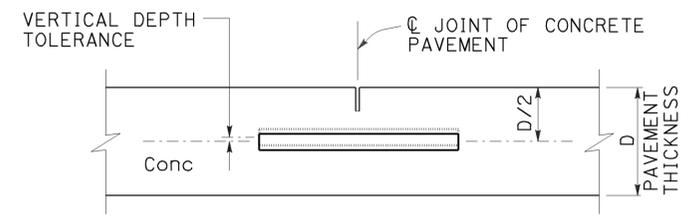
**HORIZONTAL OFFSET TOLERANCE**



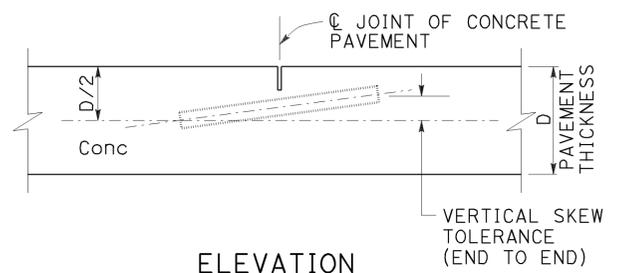
**LONGITUDINAL TRANSLATION TOLERANCE**



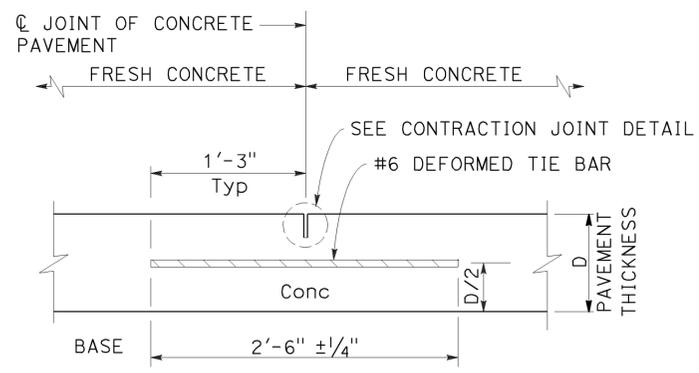
**HORIZONTAL SKEW TOLERANCE**



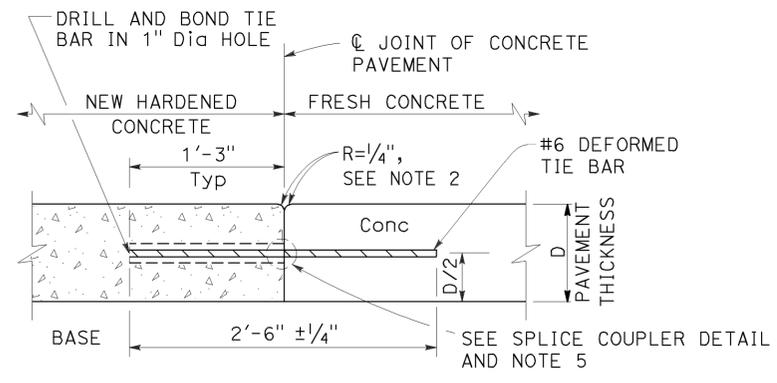
**VERTICAL DEPTH TOLERANCE**



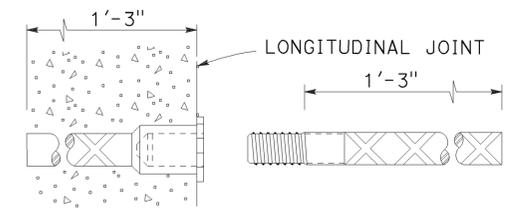
**VERTICAL SKEW TOLERANCE**



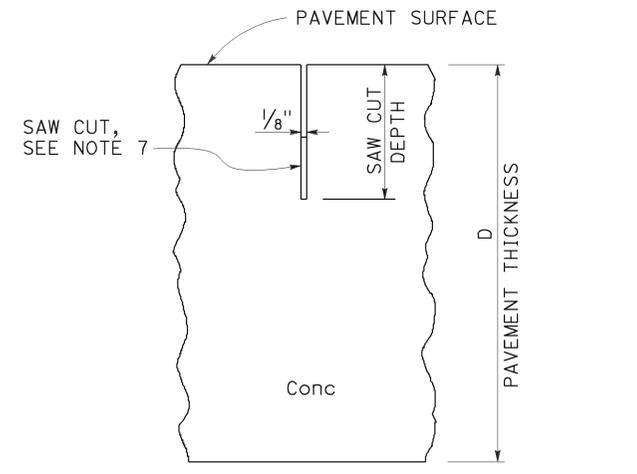
**LONGITUDINAL CONTRACTION JOINT**



**LONGITUDINAL CONSTRUCTION JOINT**



**ALTERNATIVE SPLICE COUPLER**



**CONTRACTION JOINT DETAIL**

- NOTES:**
1. See Revised Standard Plan RSP P1 for typical dowel bar and tie bar placement and locations.
  2. Where new pavement is placed against existing concrete pavement, rounding the corner is not required.
  3. For dowel bar sizes, See Revised Standard Plan RSP P10.
  4. Tie bar details apply to inside widenings.
  5. Use either drill and bond or splice couplers.
  6. Full depth drilled hole. Fill hole with filler material.
  7. The bottom of the saw cut must be at least 0.5" clear of any dowel bar, tie bar and bar reinforcement.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-TIE BAR DETAILS**  
 NO SCALE

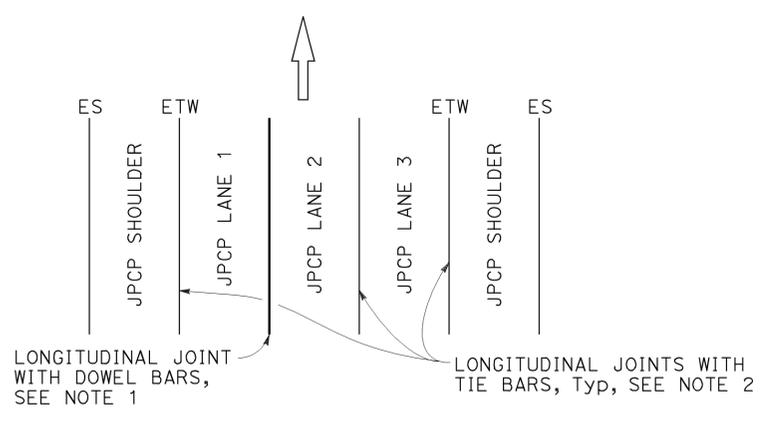
RSP P15 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP P15

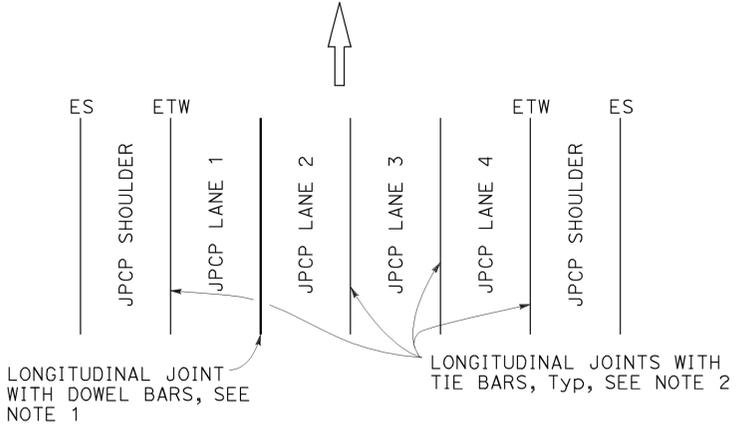
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	21	30

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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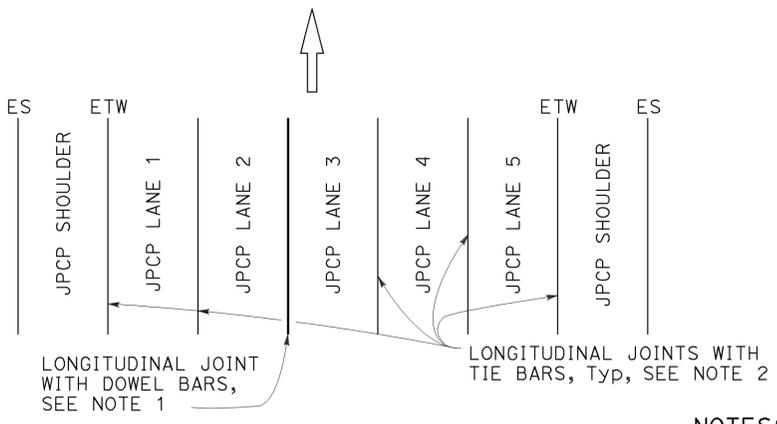
2010 REVISED STANDARD PLAN RSP P18



**3 LANES WITH CONCRETE SHOULDERS**  
PLAN



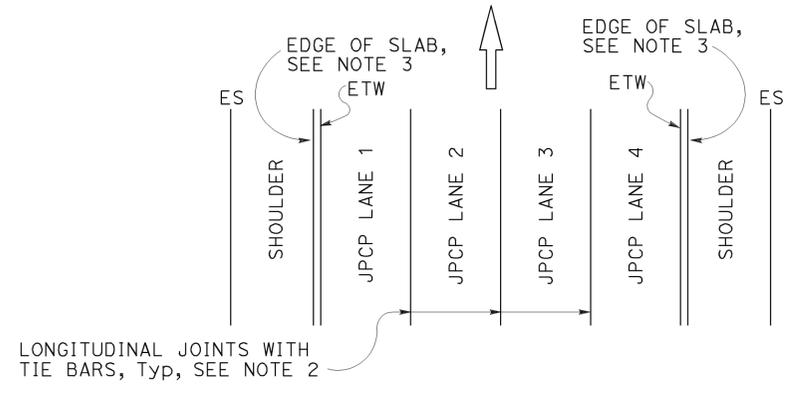
**4 LANES WITH CONCRETE SHOULDERS**  
PLAN



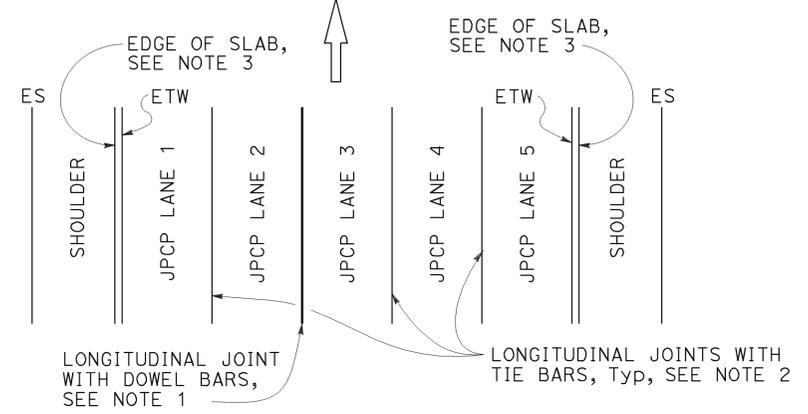
**5 LANES WITH CONCRETE SHOULDERS**  
PLAN

**NOTES:**

- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P15 for longitudinal joint with tie bars.
- S = Reservoir depth.  
 $S = \frac{7}{8}'' \pm \frac{1}{16}''$  for asphalt rubber seals  
 $S = \frac{9}{16}'' \pm \frac{1}{16}''$  for silicone seals  
 Preformed compression seals must be  $\frac{13}{16}''$  wide and  $S = 1\frac{1}{16}'' \pm \frac{1}{16}''$

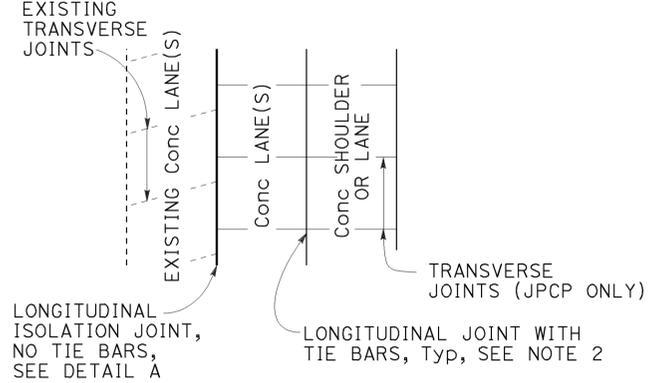


**4 LANES OR LESS WITH AC SHOULDERS**  
PLAN

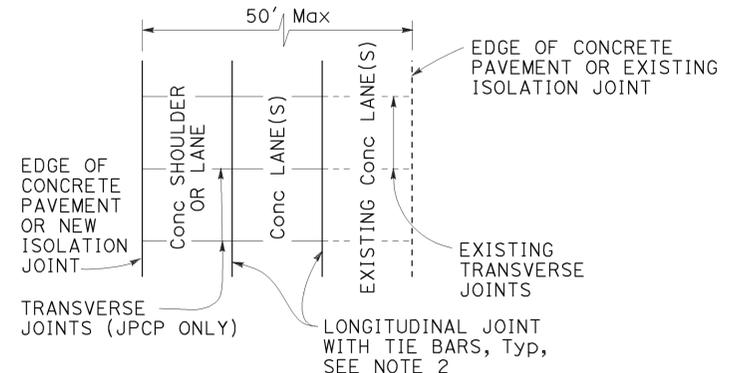


**5 LANES WITH AC SHOULDERS**  
PLAN

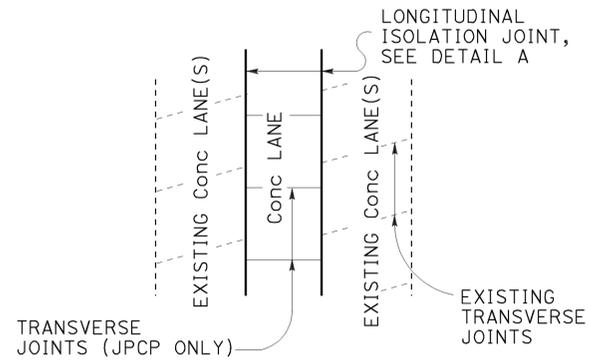
**NEW CONSTRUCTION**  
Location of Longitudinal Joints For JPCP



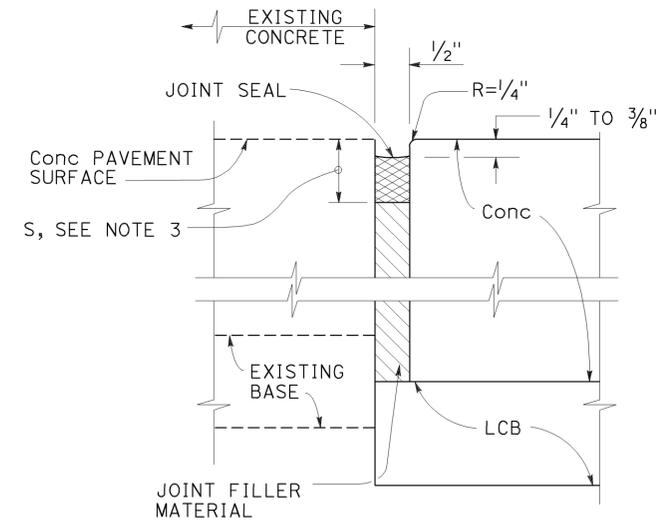
**CASE 1**  
PLAN  
Transverse Joints do not align between new and existing.



**CASE 2**  
PLAN  
Transverse Joints align between new and existing. (For JPCP only)



**CASE 3 (INTERIOR LANE REPLACEMENT)**  
PLAN  
Transverse Joints do not align between new and existing.



**DETAIL "A"**  
**ISOLATION JOINT**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT LANE SCHEMATICS AND ISOLATION JOINT DETAIL**

NO SCALE

**LANE/SHOULDER ADDITION OR RECONSTRUCTION**  
For JPCP and CRCP

RSP P18 DATED JULY 19, 2013 SUPERSEDES RSP P18 DATED APRIL 20, 2012 AND STANDARD PLAN P18 DATED MAY 20, 2011 - PAGE 135 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P18**

*William K. Farnbach*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

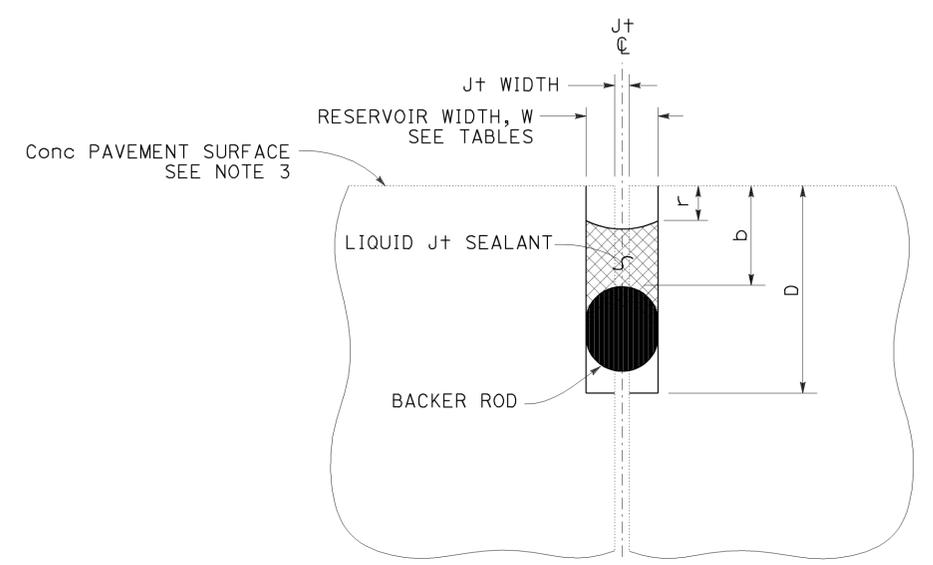
William K. Farnbach  
No. C49042  
Exp. 9-30-14  
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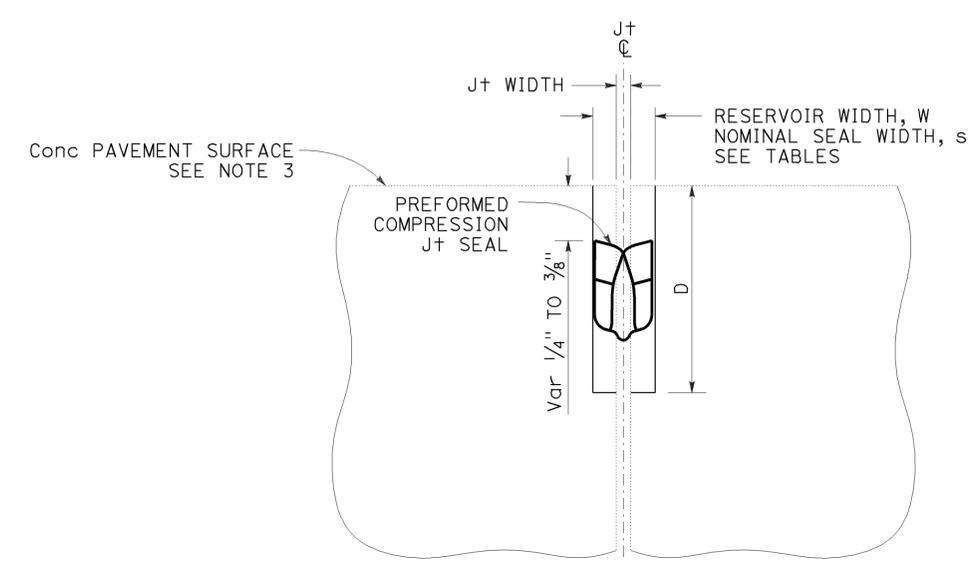
TO ACCOMPANY PLANS DATED 2-16-16

**NOTES:**

1. Details do not apply to isolation joints and longitudinal construction joints.
2. Tie bars, dowel bars, and bar reinforcement are not shown.
3. Depths are measured from the final concrete pavement surface elevation after any grinding.



**LIQUID JOINT SEALANT**



**PREFORMED COMPRESSION JOINT SEAL**

Const SEASON	Min RESERVOIR WIDTH * W ± 1/16"
WINTER	1/4"
SPRING	3/8"
SUMMER	
FALL	

\* Minimum reservoir width for replace joint seal = existing joint width + 1/8"

RESERVOIR WIDTH W ± 1/16"	LIQUID JOINT SEALANT DIMENSIONS					
	BACKER ROD NOMINAL Dia *	DEPTHS (ASPHALT RUBBER) **		DEPTHS (SILICONE)		
		RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RECESS r ± 1/16"
1/4"	3/8"	1 3/4"	7/8"	1 3/8"	1/2"	1/4"
3/8"	1/2"	1 7/8"	7/8"	1 1/2"	1/2"	1/4"
1/2"	3/4"	2"	7/8"	1 3/4"	9/16"	5/16"
5/8"	7/8"	2 1/4"	1"	2"	5/8"	5/16"
3/4"	1"	2 3/4"	1 1/8"	2 1/4"	3/4"	3/8"
7/8"	1 1/4"	3"	1 1/4"	2 1/2"	13/16"	3/8"
1"	1 1/2"	3 1/4"	1 3/8"	2 5/8"	7/8"	3/8"
1 1/8"	1 1/2"	3 1/2"	1 1/2"	2 13/16"	1"	1/2"

\* Larger diameter backer rods may be substituted according to manufacturer recommendations if reservoir depth is increased equivalently.

\*\* Asphalt rubber sealant recess depth "r" varies from 1/4" to 3/8"

RESERVOIR WIDTH W ± 1/16"	PREFORMED COMPRESSION JOINT SEAL DIMENSIONS	
	NOMINAL SEAL WIDTH s	RESERVOIR DEPTH D ± 1/4"
1/4"	7/16"	1 1/4"
3/8"	11/16"	1 1/16"
1/2"	13/16"	1 1/16"
5/8"	1"	1 7/8"
3/4"	1 1/4"	2 1/8"
7/8"	1 5/8"	2 5/8"
1"	1 7/8"	2 7/8"
1 1/8"	2"	2 7/8"

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**JOINT SEALS**

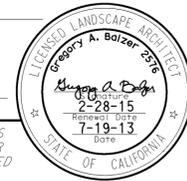
NO SCALE

RSP P20 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P20  
DATED MAY 20, 2011 - PAGE 136 OF THE STANDARD PLANS BOOK DATED 2010.

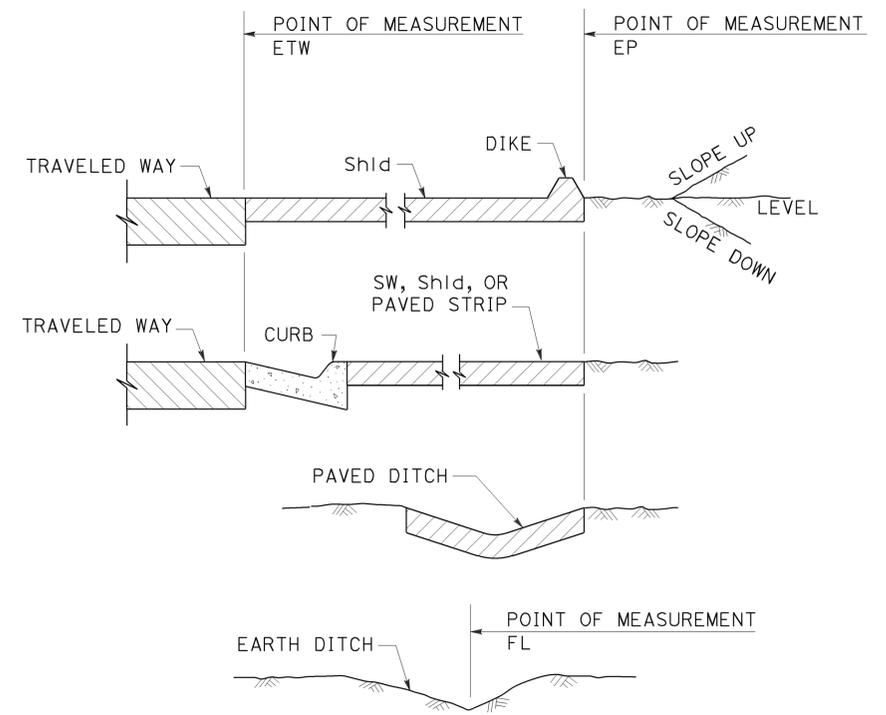
2010 REVISED STANDARD PLAN RSP P20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	23	30

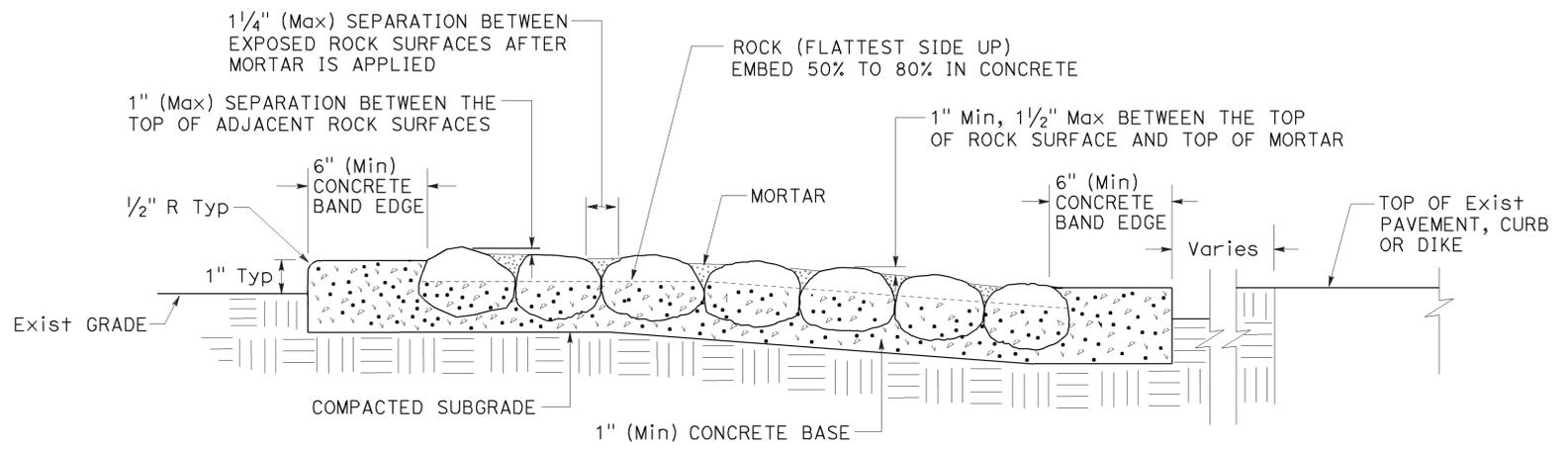
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
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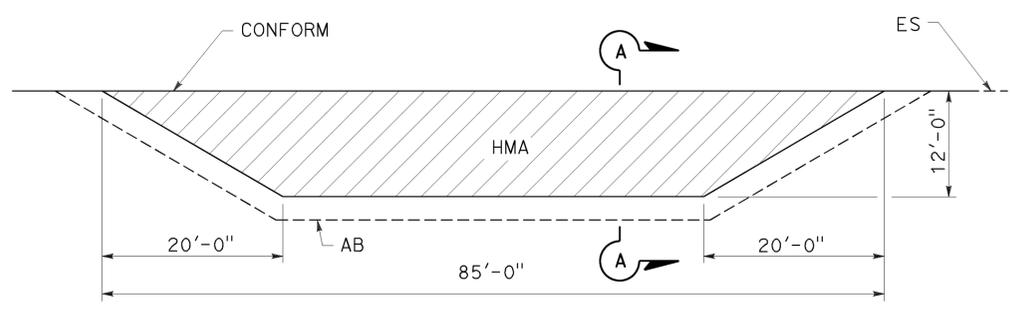
TO ACCOMPANY PLANS DATED 2-16-16



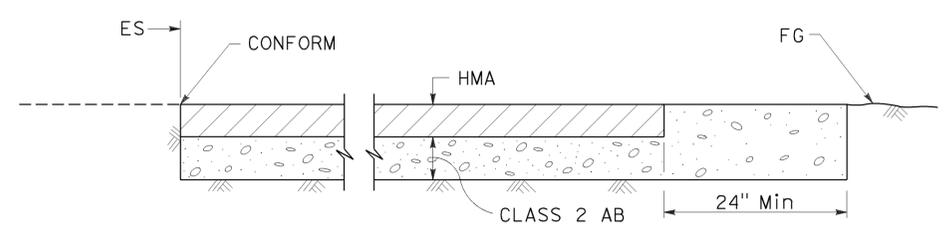
**SECTION  
POINTS OF MEASUREMENT**



**SECTION  
ROCK BLANKET**



**PLAN**



**SECTION A-A  
MAINTENANCE VEHICLE PULLOUT**

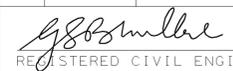
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
 NO SCALE

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

**REVISED STANDARD PLAN RSP H9A**

2010 REVISED STANDARD PLAN RSP H9A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	24	30

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 2-16-16

TABLE 1

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

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

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

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

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
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**

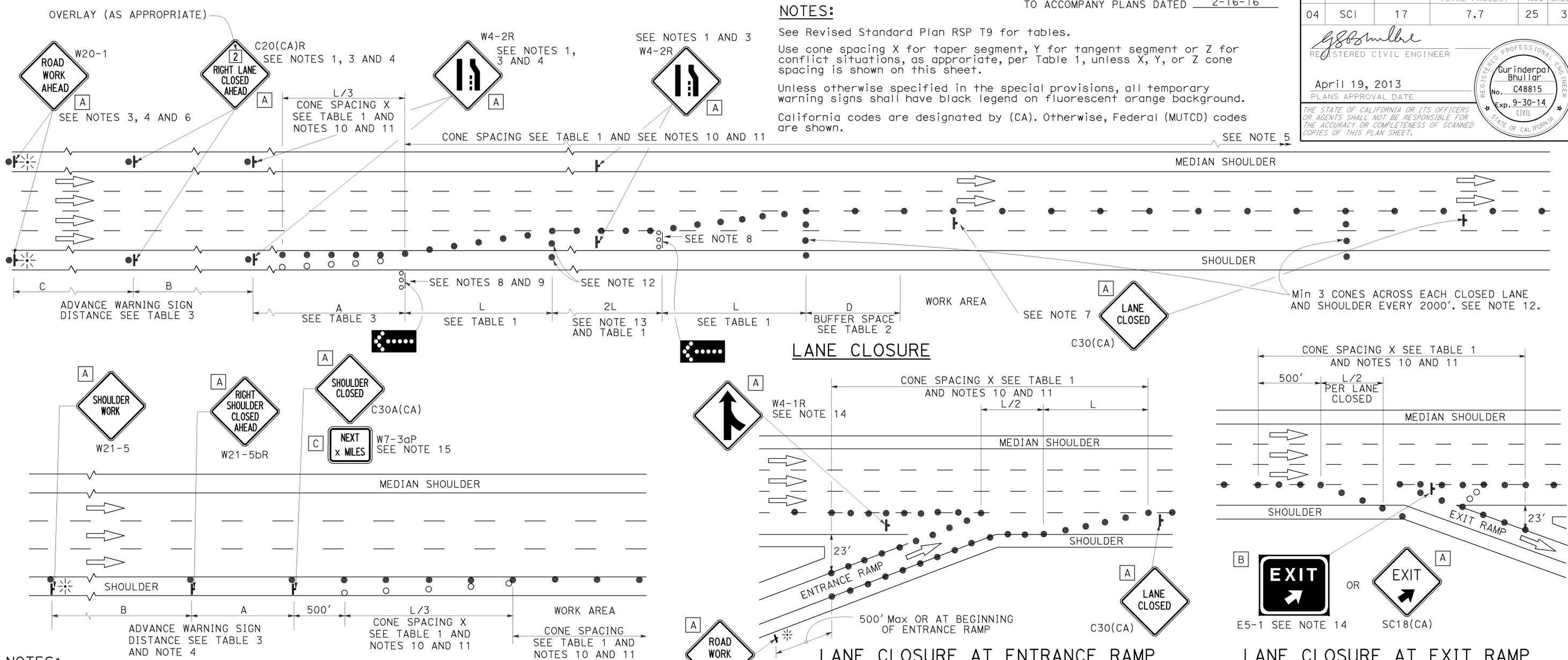
2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	25	30

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

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



- 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.
- 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"

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

**LEGEND:**

<b>AB</b>	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
<b>BC</b>	INSTALL PULL BOX IN EXISTING CONDUIT RUN
<b>BP</b>	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
<b>CB</b>	INSTALL CONDUIT INTO EXISTING PULL BOX
<b>CC</b>	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
<b>CF</b>	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
<b>DH</b>	DETECTOR HANDHOLE
<b>FA</b>	FOUNDATION TO BE ABANDONED
<b>IS</b>	INSTALL SIGN ON SIGNAL MAST ARM
<b>NS</b>	NO SLIP BASE ON STANDARD
<b>PEC</b>	PHOTOELECTRIC CONTROL
<b>PEU</b>	PHOTOELECTRIC UNIT
<b>RC</b>	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
<b>RE</b>	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
<b>RL</b>	RELOCATE EQUIPMENT
<b>RR</b>	REMOVE AND REUSE EQUIPMENT
<b>RS</b>	REMOVE AND SALVAGE EQUIPMENT
<b>SC</b>	SPLICE NEW TO EXISTING CONDUCTORS
<b>SD</b>	SERVICE DISCONNECT
<b>TSP</b>	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
04	SCI	17	7.7	26	30

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 2-16-16

**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
$\Omega$	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
$\mu$	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
04	SCI	17	7.7	27	30

*Theresa Gabriel*  
 REGISTERED ELECTRICAL 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 2-16-16

**CONDUIT**

**SIGNAL EQUIPMENT**

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

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "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**

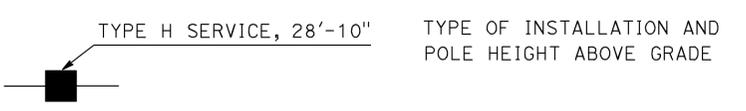
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		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**

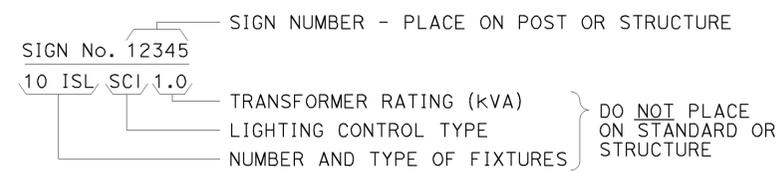
2010 REVISED STANDARD PLAN RSP ES-1B



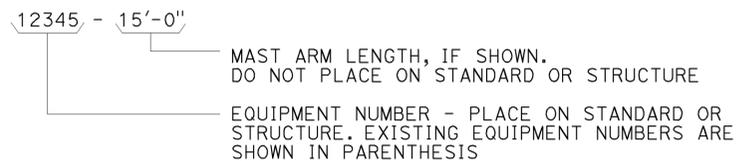
TO ACCOMPANY PLANS DATED 2-16-16

### EQUIPMENT IDENTIFICATION

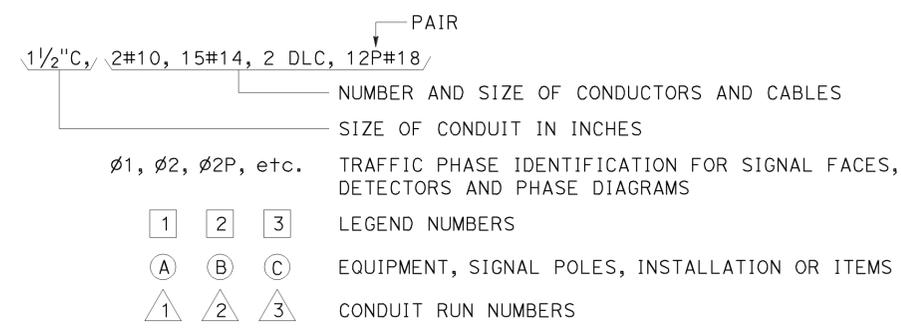
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



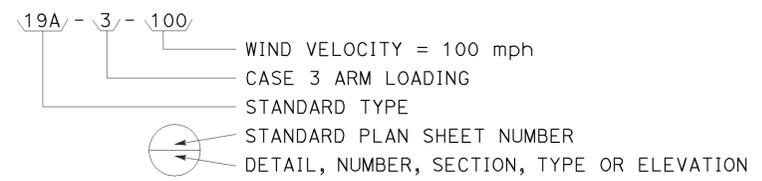
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



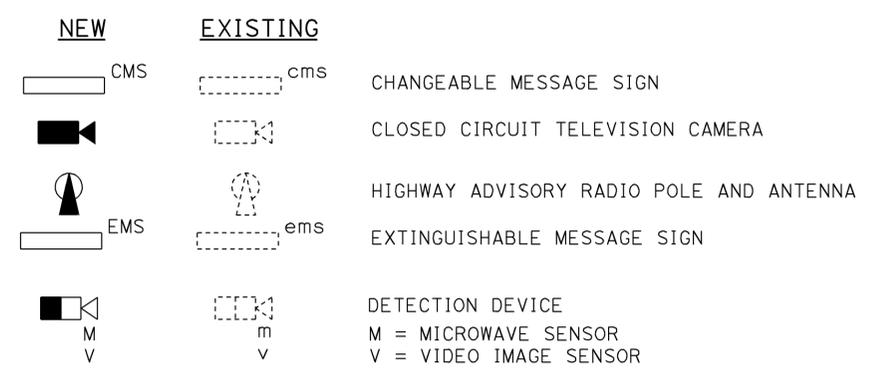
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



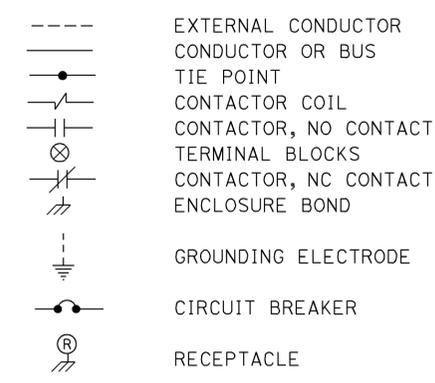
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



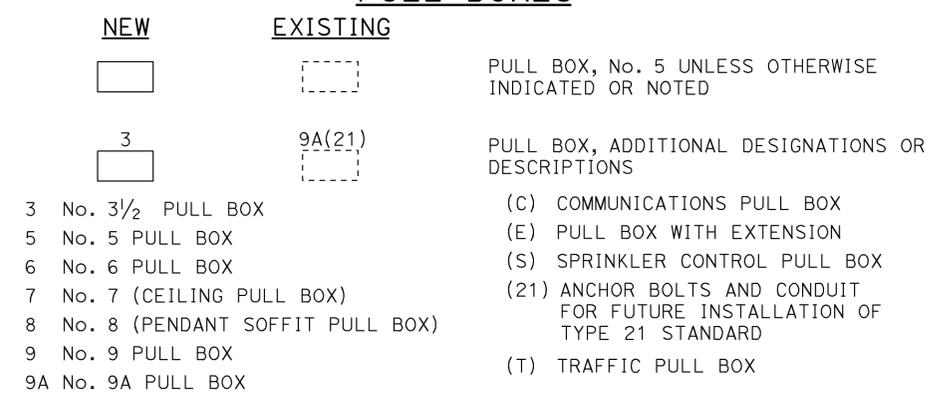
### MISCELLANEOUS EQUIPMENT



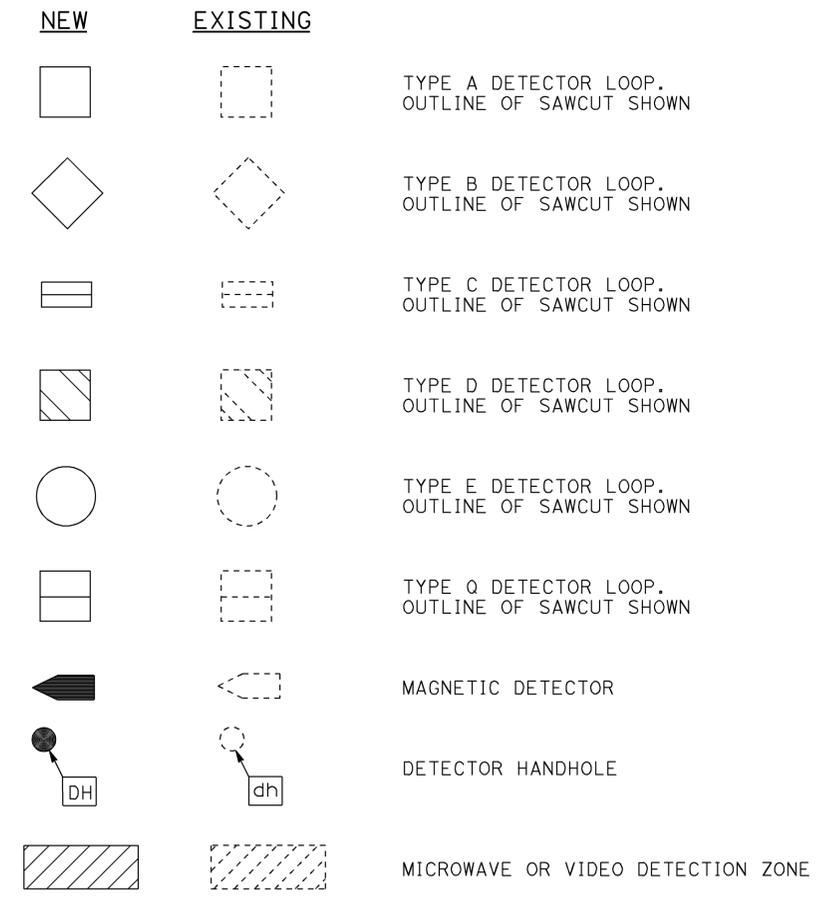
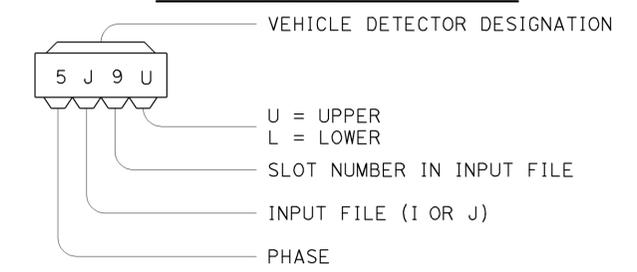
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

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

2010 REVISED STANDARD PLAN RSP ES-1C

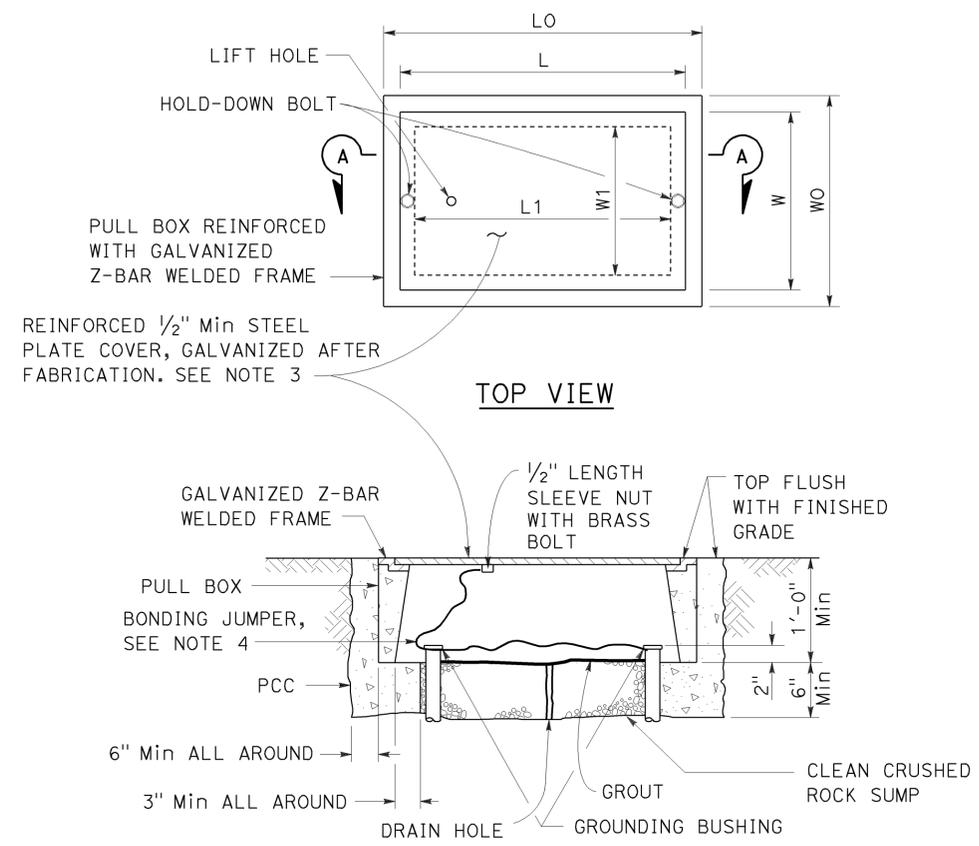
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	17	7.7	29	30

*Theresa Gabriel*  
 REGISTERED ELECTRICAL 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.

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

TO ACCOMPANY PLANS DATED 2-16-16



**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**

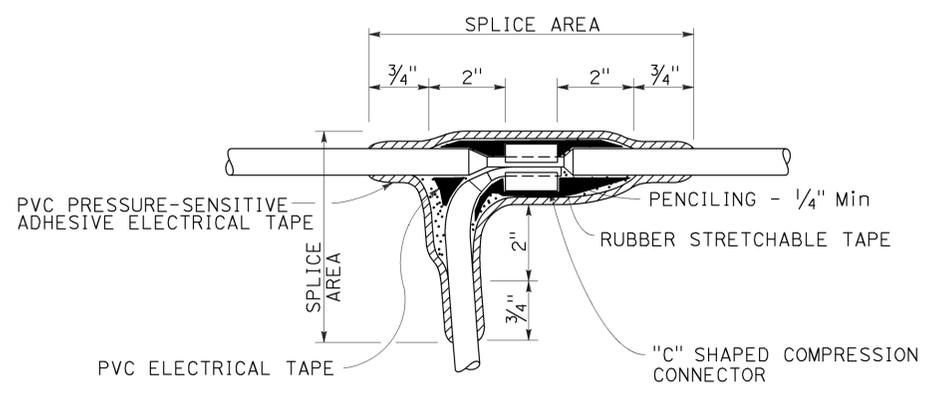
2010 REVISED STANDARD PLAN RSP ES-8B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	17	7.7	30	30

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

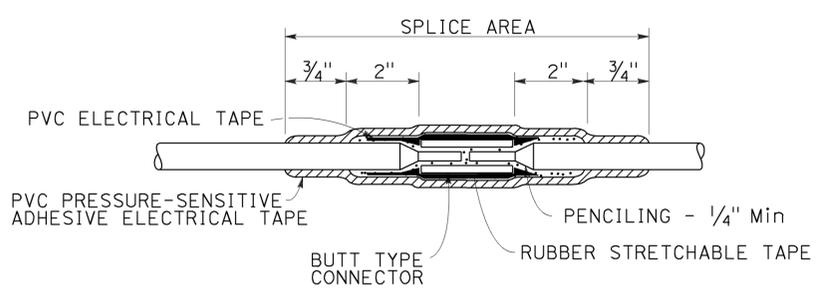
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TO ACCOMPANY PLANS DATED 2-16-16



**TYPE C SPLICE**

See Note 3

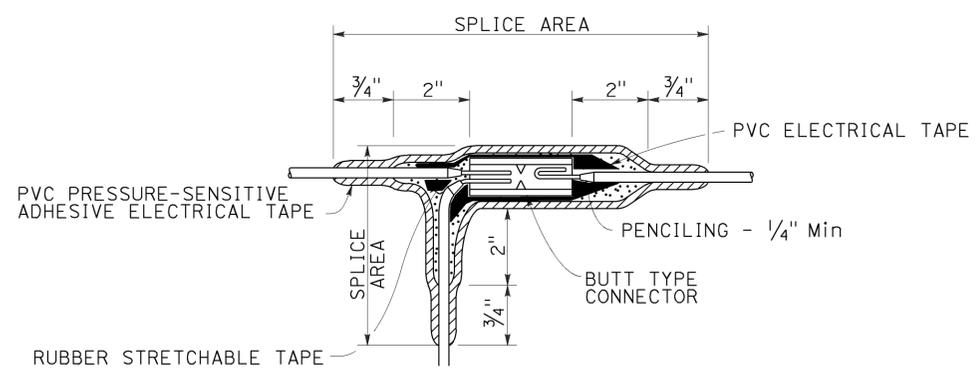


**TYPE S SPLICE**

See Note 4

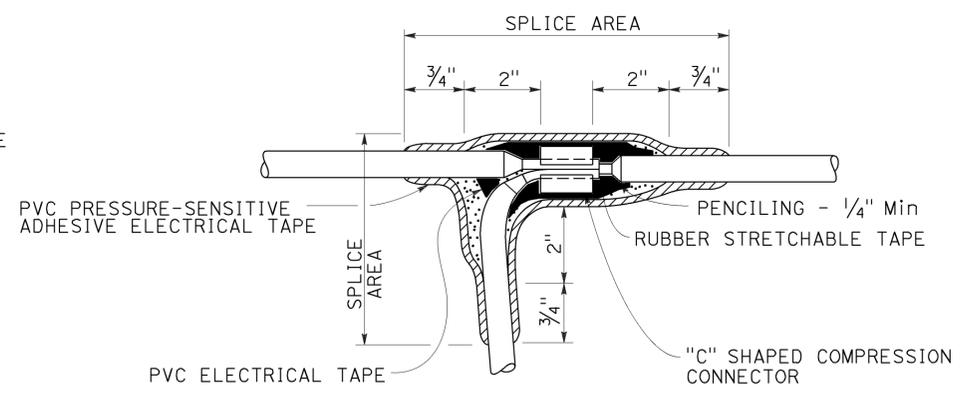
**NOTES:**

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.
3. Between 1 free-end and 1 through conductor.
4. Between 2 free-end conductors.
5. Between 3 free-end conductors.



**TYPE ST SPLICE**

See Note 5



**TYPE T SPLICE**

See Note 5

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SPLICING DETAILS)**

NO SCALE

RSP ES-13A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-13A DATED MAY 20, 2011 - PAGE 491 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-13A**

2010 REVISED STANDARD PLAN RSP ES-13A