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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY**

**IN LOS ANGELES COUNTY  
IN LOS ANGELES  
AT TAMPA AVENUE OFF-RAMP**

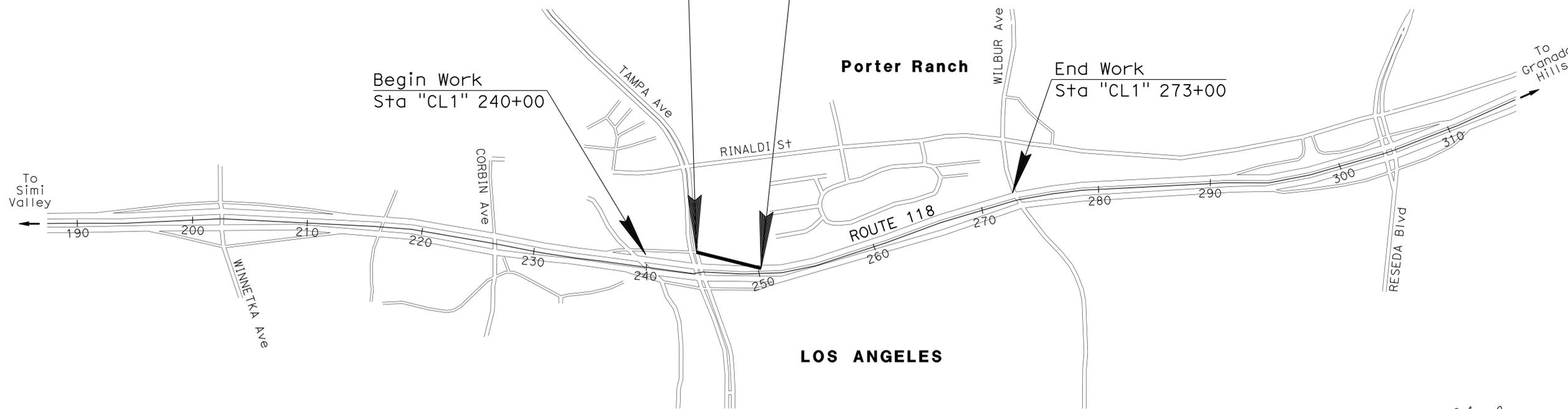
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	1	71

LOCATION MAP

**BEGIN CONSTRUCTION**  
Sta "OFF-RAMP 1" 46+47 PM R4.8

**END CONSTRUCTION**  
Sta "OFF-RAMP 1" 51+51 PM R4.9



PROJECT MANAGER  
**REZA FATEH**

DESIGN MANAGER  
**DEREK HIGA**

*Ricky Lee* 7-1-15  
PROJECT ENGINEER DATE  
REGISTERED CIVIL ENGINEER

**February 22, 2016**  
PLANS APPROVAL DATE

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



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

NO SCALE

CONTRACT No.	<b>07-2849U4</b>
PROJECT ID	<b>0715000267</b>

LAST REVISION: 08-25-15 DATE PLOTTED => 12-FEB-2016 TIME PLOTTED => 11:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	2	71

<i>Ricky Lee</i>		7-1-15
REGISTERED CIVIL ENGINEER	DATE	
2-22-16		
PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER	RICKY LEE
No. CT4591	
Exp. 12/31/17	
CIVIL	

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PAVEMENT CLIMATE REGION

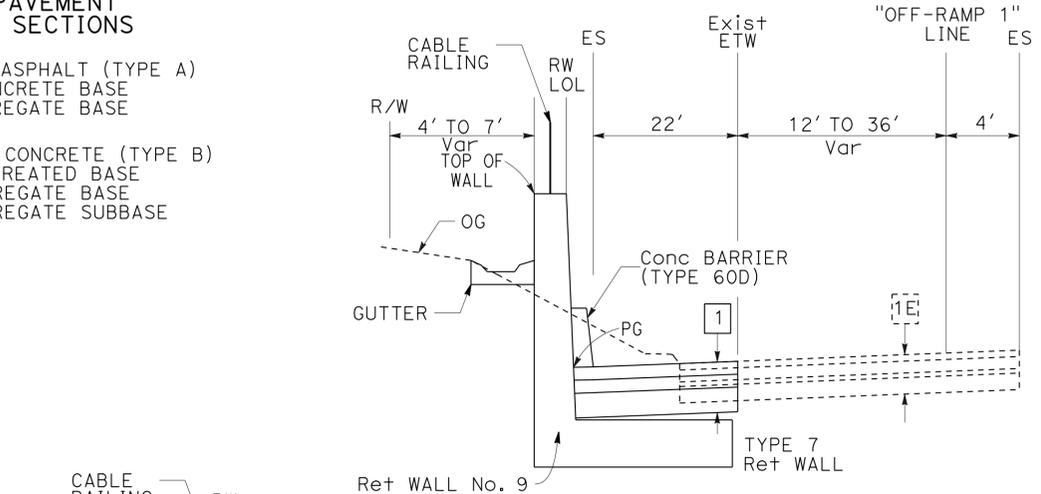
INLAND VALLEY

**NOTE:**

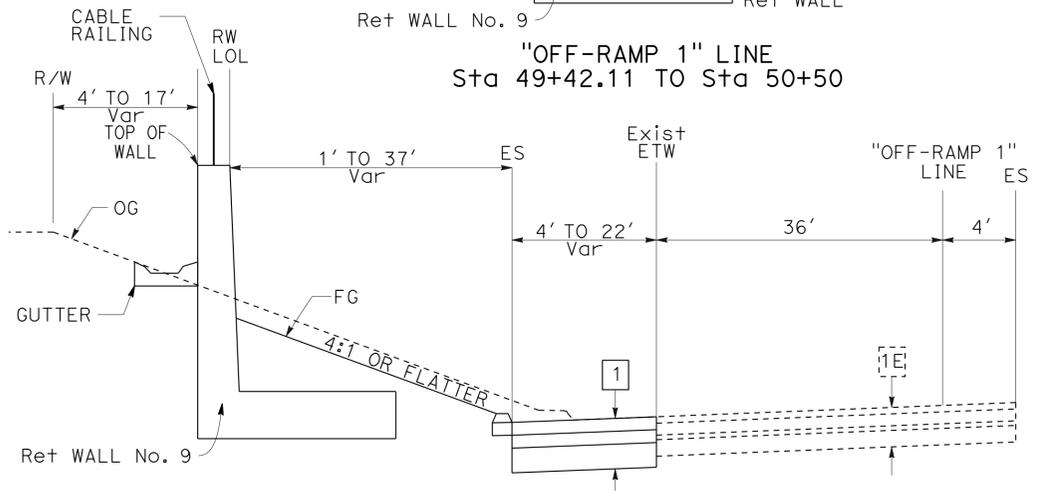
DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.

**TYPICAL PAVEMENT STRUCTURE SECTIONS**

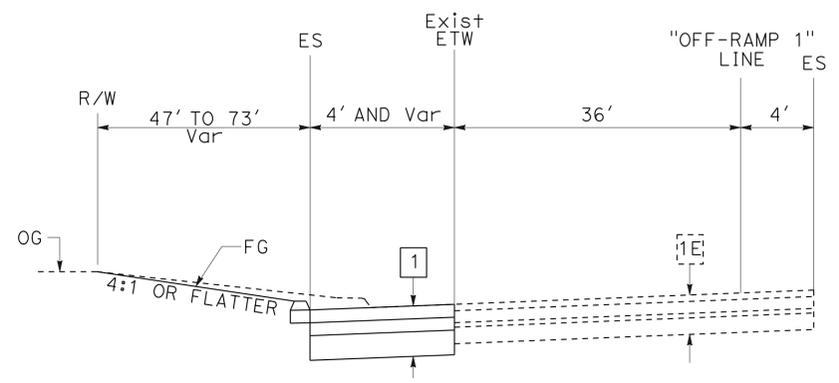
- 1 0.60' HOT MIX ASPHALT (TYPE A)
- 0.60' LEAN CONCRETE BASE
- 1.15' CL3 AGGREGATE BASE
- 0.35' ASPHALT CONCRETE (TYPE B)
- 0.65 CEMENT TREATED BASE
- 0.25' CL3 AGGREGATE BASE
- 0.90' CL4 AGGREGATE SUBBASE



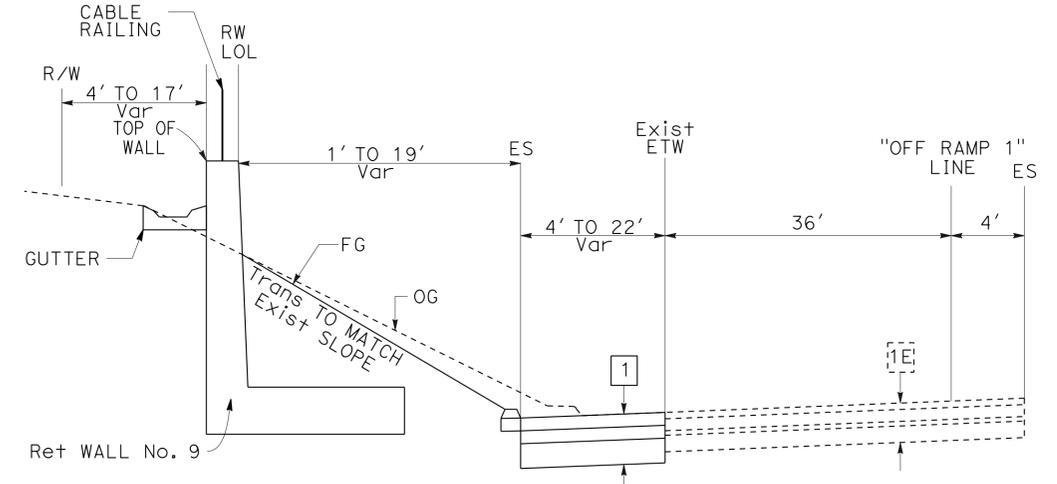
"OFF-RAMP 1" LINE  
Sta 49+42.11 TO Sta 50+50



"OFF-RAMP 1" LINE  
Sta 47+21.59 TO Sta 49+42.11



"OFF-RAMP 1" LINE  
Sta 46+47.10 TO Sta 47+21.59



"OFF-RAMP 1" LINE  
Sta 50+50 TO Sta 51+51.29

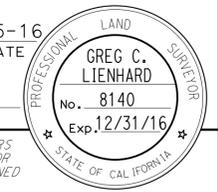
**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: DEREK HIGA  
 CALCULATED/DESIGNED BY: RICKY LEE  
 CHECKED BY: KAZ KAYODA  
 REVISED BY: RICKY LEE  
 DATE REVISED: RICKY LEE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	3	71
<i>Greg Lienhard</i> PROFESSIONAL LAND SURVEYOR			1-5-16	DATE	
2-22-16 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



**NOTES:**

1. FOR COMPLETE PROJECT CONTROL DATA, SEE THE SURVEY RECORDS ON FILE IN THE SURVEYS DEPARTMENT AT THE DISTRICT OFFICE.
2. BEARINGS AND COORDINATES FOR THIS PROJECT ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983, HPNG EPOCH ADJUSTMENT [CSS 83 (1991.35)], ZONE 5, U.S. SURVEY FOOT.
3. ELEVATIONS FOR THIS PROJECT ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. IN THE EVENT GPS MACHINE CONTROL/GUIDANCE IS USED FOR THIS PROJECT, THE CONTRACTOR SHALL CONTACT AND MEET WITH THE SURVEYS DEPARTMENT AT THE DISTRICT OFFICE TO OBTAIN THE CONTROL NECESSARY TO ESTABLISH A PROJECT CALIBRATION COMPATIBLE FOR ALL USERS.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** OFFICE OF SURVEYS

REVISOR BY  
 DATE

RICKY LEE  
 GREG LIENHARD

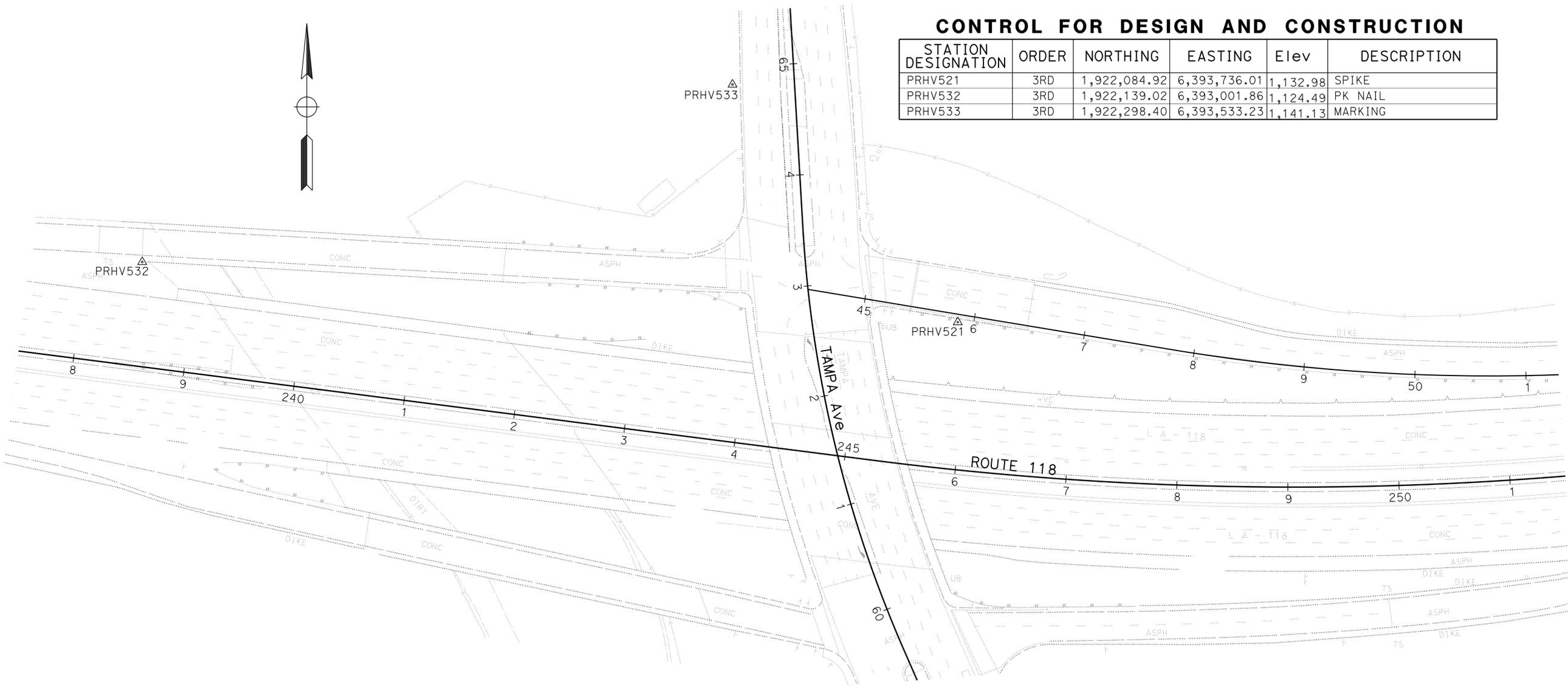
CALCULATED/DESIGNED BY  
 CHECKED BY

FUNCTIONAL SUPERVISOR  
 GRAHAM DAWSON



**CONTROL FOR DESIGN AND CONSTRUCTION**

STATION DESIGNATION	ORDER	NORTHING	EASTING	Elev	DESCRIPTION
PRHV521	3RD	1,922,084.92	6,393,736.01	1,132.98	SPIKE
PRHV532	3RD	1,922,139.02	6,393,001.86	1,124.49	PK NAIL
PRHV533	3RD	1,922,298.40	6,393,533.23	1,141.13	MARKING



**PROJECT CONTROL**  
 SCALE: 1" = 50'

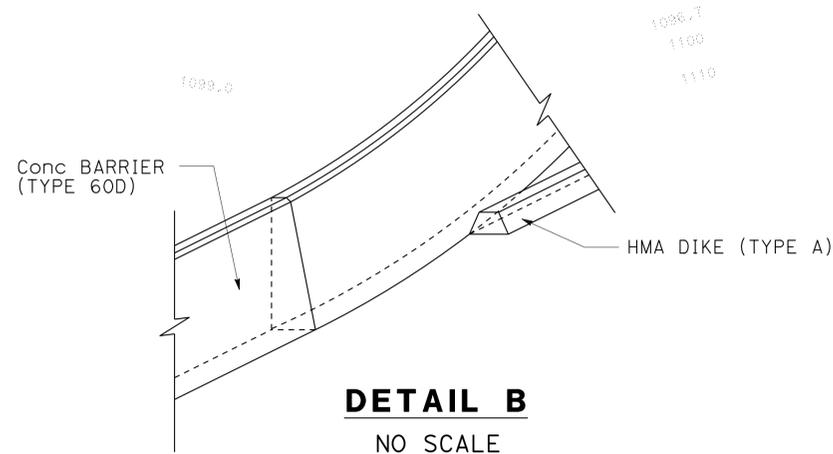
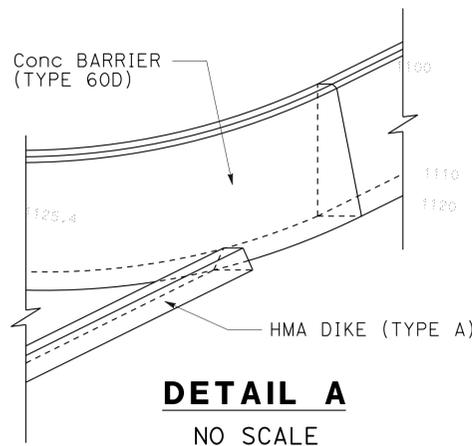
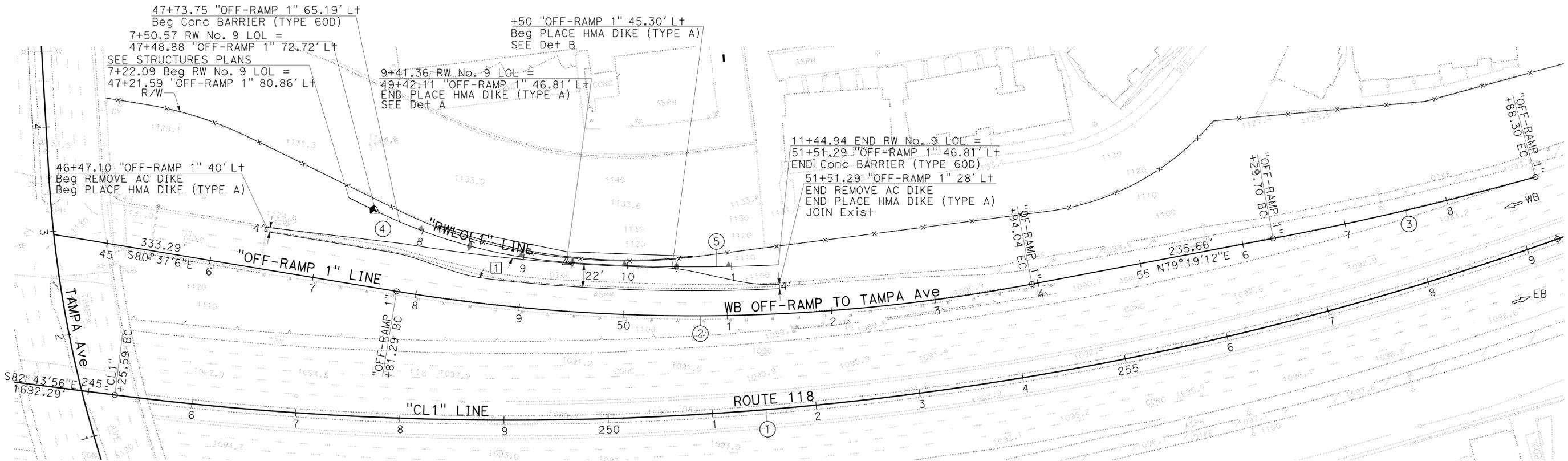
APPROVED FOR PROJECT CONTROL INFORMATION ONLY

**PC-1**

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

**CURVE DATA**

No.	⊕	R	Δ	T	L
1		3000'	26°50'08"	715.69'	1405.11'
2		1750'	20°03'42"	309.54'	612.75'
3		3000'	04°56'20"	129.38'	258.60'
4		500'	21°51'47"	96.57'	190.79'
5		1703'	06°50'55"	101.91'	203.59'



**LAYOUT**

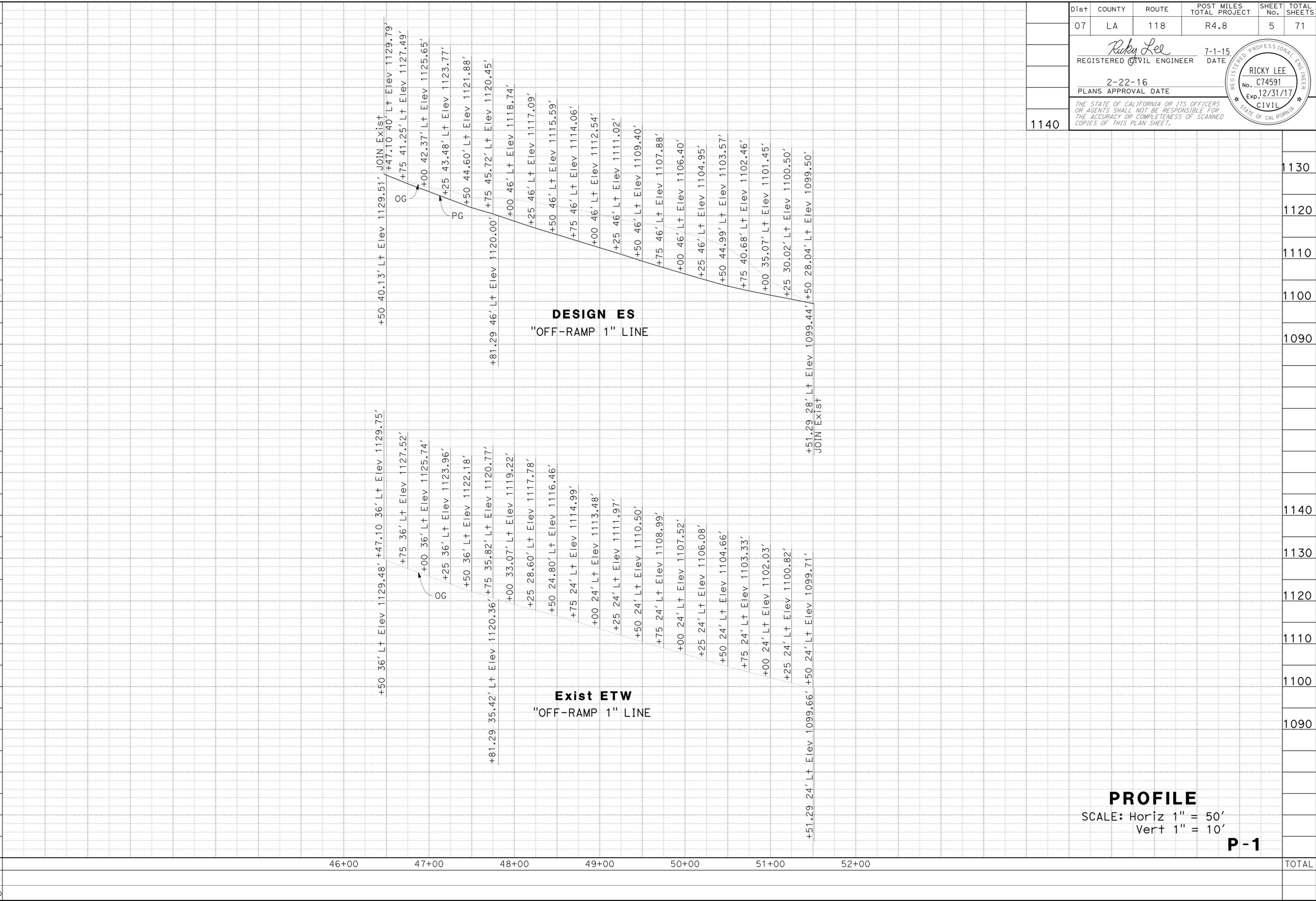
SCALE: 1" = 50'

**L-1**

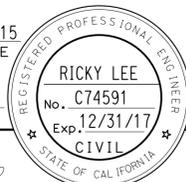
REVISIONS: 07-10-15 TIME PLOTTED => 11:04  
 07-10-15 DATE PLOTTED => 12-FEB-2016  
 LAST REVISION:

REVISED BY: RICKY LEE  
 DATE: 7-1-15  
 DESIGNED BY: RICKY LEE  
 CHECKED BY: KAZ KAYODA  
 FUNCTIONAL SUPERVISOR: DEREK HIGA  
 DESIGN:

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION <b>Caltrans</b>	FUNCTIONAL SUPERVISOR DEREK HIGA		CALCULATED/DESIGNED BY		RICKY LEE		REVISED BY		STATION	
	DESIGN		CHECKED BY		KAZ KAYODA		DATE REVISED			
Exc	1140	1130	1120	1110	1100	1090	1110	1120	1130	1140
Emb										



**PROFILE**  
 SCALE: Horiz 1" = 50'  
 Vert 1" = 10'  
**P-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	5	71
 REGISTERED CIVIL ENGINEER			7-1-15 DATE		
2-22-16 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>					
1140					

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	6	71

<i>Zewdie Burka</i>	7-1-15
REGISTERED CIVIL ENGINEER	DATE
2-22-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
<b>ZEWDIE BURKA</b>
No. C63554
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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**NOTES:**

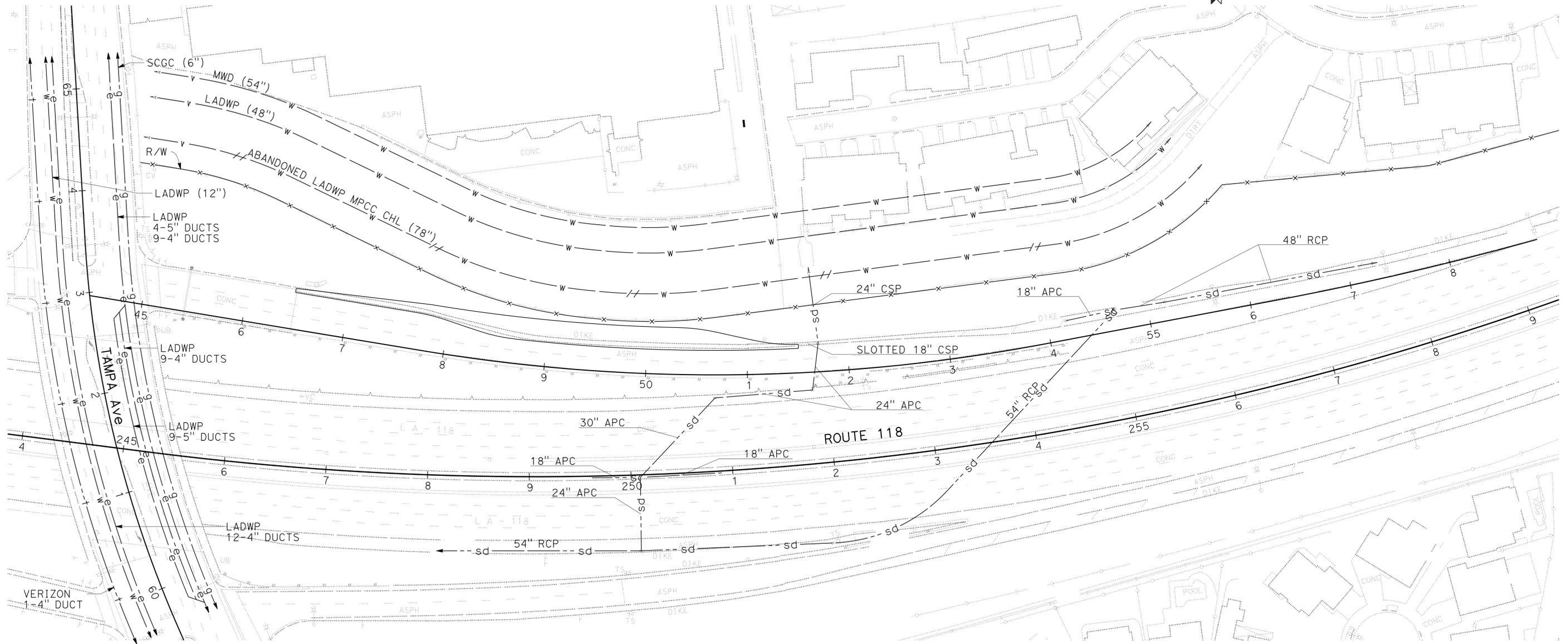
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

2. UTILITY OWNERSHIP

- GAS - SOUTHERN CALIFORNIA GAS COMPANY (SCGC)
- POWER - LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP)
- TELEPHONE - VERIZON COMMUNICATIONS (VERIZON)
- WATER - LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP)
- WATER - METROPOLITAN WATER DISTRICT (MWD)

**ABBREVIATIONS:**

- CHL CHATSWORTH HIGH LINE
- MPCC MAIN PORTLAND CEMENT CONCRETE



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** OFFICE OF DESIGN A  
 FUNCTIONAL SUPERVISOR: CELINA AVILES  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 RICKY LEE ZEWDIE BURKA  
 REVISED BY: DATE REVISED:

**UTILITY PLAN**

SCALE: 1" = 50'

**U-1**

APPROVED FOR UTILITY INFORMATION ONLY



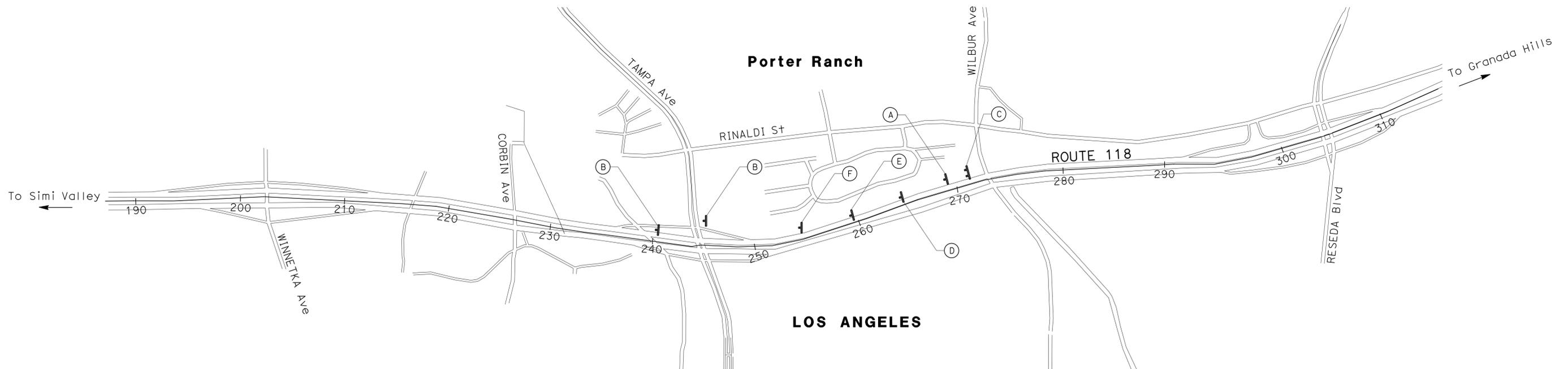
LAST REVISION | DATE PLOTTED => 12-FEB-2016  
 07-10-15 | TIME PLOTTED => 11:04

**NOTES:**

1. EXACT LOCATION AND POSITION OF SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. SIGN POST LENGTH ARE APPROXIMATE, EXACT SIZE AND LENGTH WILL BE DETERMINED BY THE ENGINEER.

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No. (X)	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	1
B	G20-2		48" x 24"	END ROAD WORK	1 - 6" x 6"	2
C		C40	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	1
D	W21-5		48" x 48"	SHOULDER WORK	1 - 6" x 6"	1
E	W21-5b		48" x 48"	RIGHT SHOULDER CLOSED AHEAD	1 - 6" x 6"	1
F		C30A	48" x 48"	SHOULDER CLOSED	1 - 6" x 6"	1



**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR DEREK HIGA  
 CALCULATED/DESIGNED BY CHECKED BY  
 RICKY LEE KAZ KAYODA  
 REVISED BY DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	8	71

<i>Ricky Lee</i>		7-1-15
REGISTERED CIVIL ENGINEER	DATE	
2-22-16		
PLANS APPROVAL DATE		

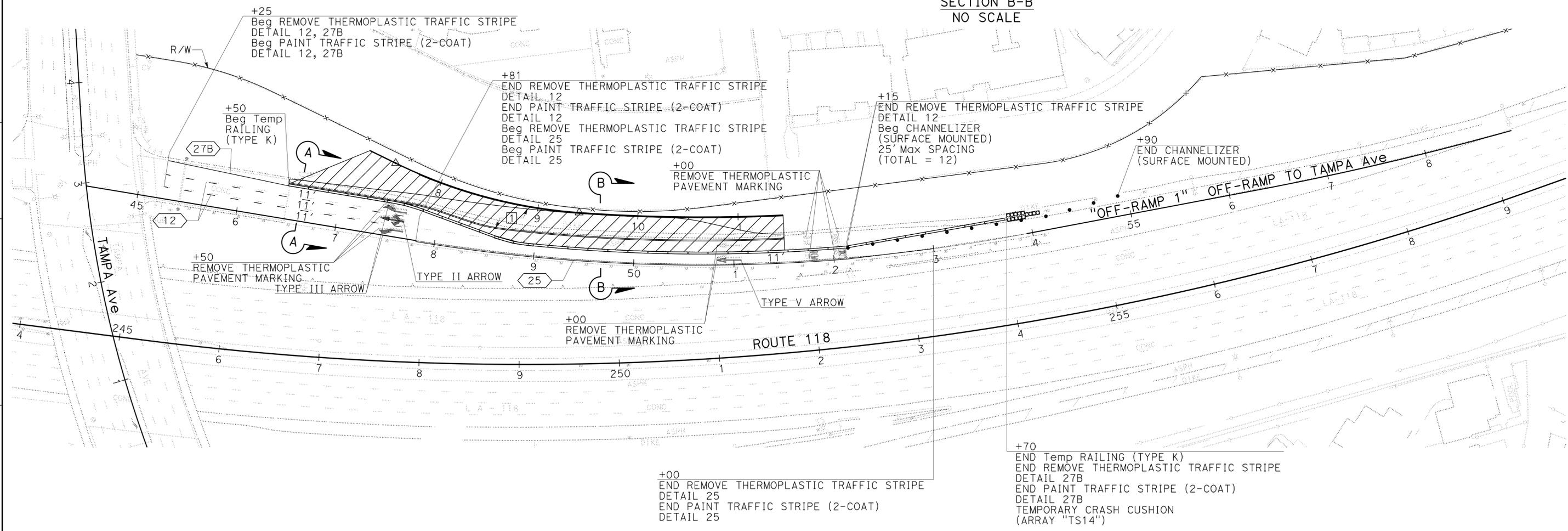
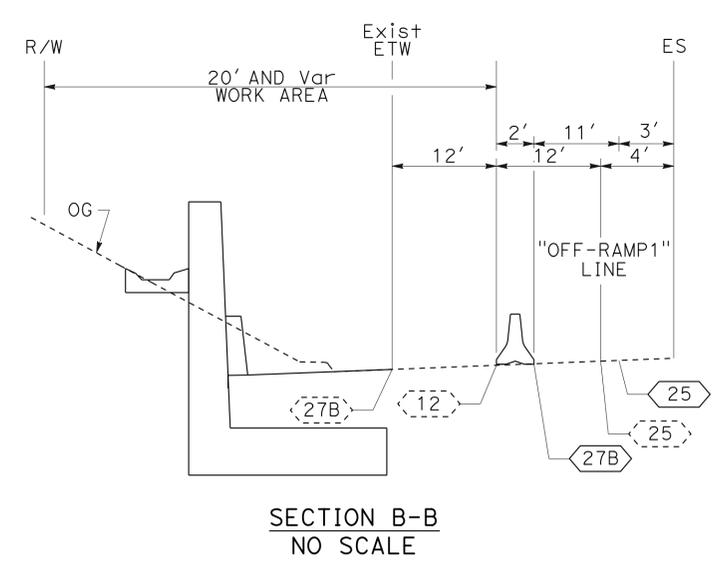
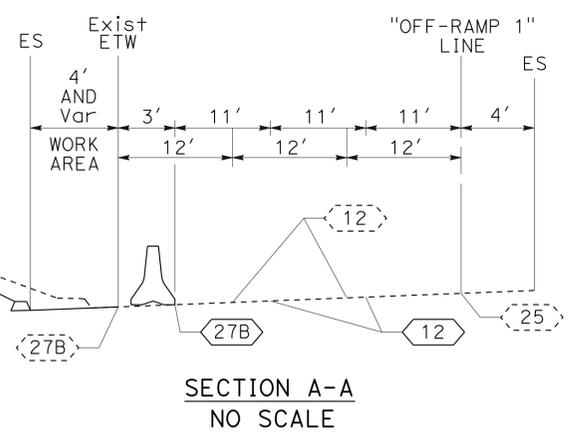
  

REGISTERED PROFESSIONAL ENGINEER
RICKY LEE
No. CT4591
Exp. 12/31/17
CIVIL

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

- LEGEND:**
- WORK AREA
  - CHANNELIZER (SURFACE MOUNTED)
  - Temp RAILING (TYPE K)
  - STRIPING DETAIL No.
  - Exist STRIPING DETAIL No.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: DEREK HIGA  
 CALCULATED/DESIGNED BY: RICKY LEE  
 CHECKED BY: KAZ KAYODA  
 REVISED BY: RICKY LEE  
 DATE REVIS: KAZ KAYODA

APPROVED FOR TRAFFIC HANDLING WORK ONLY

**TRAFFIC HANDLING PLAN**

SCALE: 1" = 50'

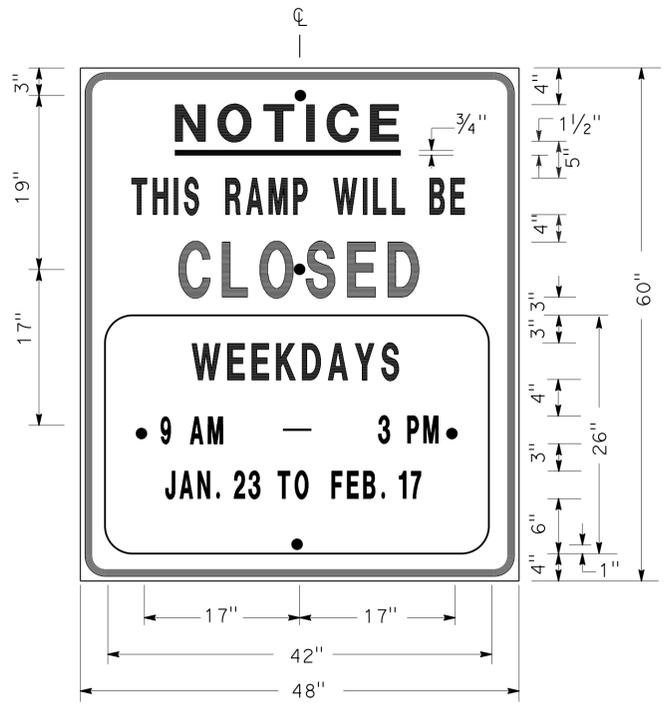
**TH-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	9	71

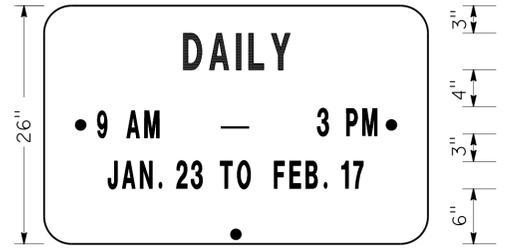
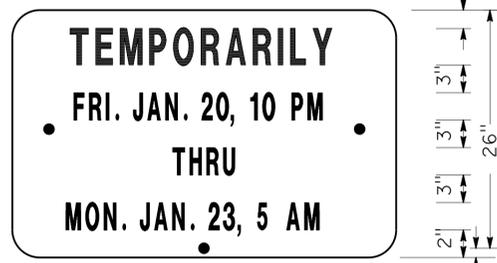
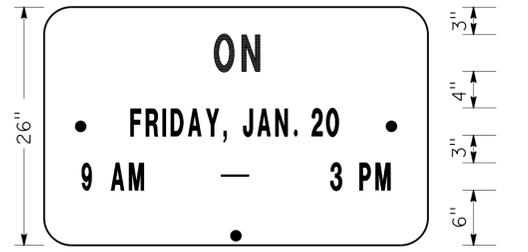
5-27-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-22-16  
 PLANS APPROVAL DATE

JOCELYN C CHIANG  
 No. 62742  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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SIGN SP-1



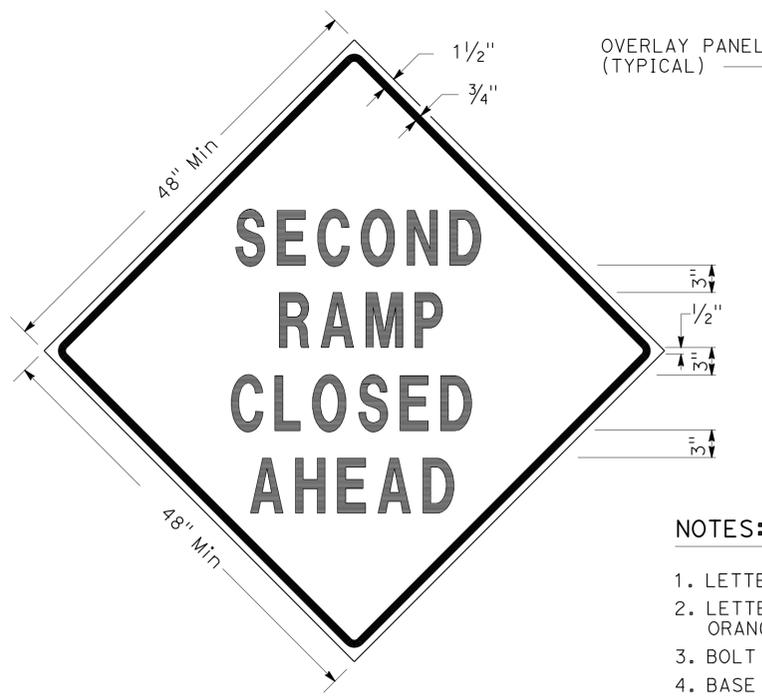
ALTERNATE OVERLAY PANELS (TYPICAL)

- NOTES:** SIGN SP-1
- LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
  - BOLT HOLES MUST BE 3/8" DIAMETER.
  - BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
  - SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.

SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5, 6, & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"

\* CONDENSED SPACING IF NECESSARY

**SPECIAL ADVANCE NOTICE PUBLICITY SIGN**



SIGN SP-3



SIGN SP-5

- NOTES:** SIGNS SP-3 & SP-5
- LETTERS - 6" SERIES D.
  - LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
  - BOLT HOLES MUST BE 3/8" DIAMETER.
  - BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
  - SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.
  - SIGN SP-5 MUST BE USED IF THE OFF-RAMP TO BE CLOSED FOLLOWS A FREEWAY OFF-CONNECTOR.

**SPECIAL SIGNS FOR EXIT RAMP CLOSURES**



SIGN SP-4

- NOTES:** SIGN SP-4
- LETTERS - 6" SERIES C.
  - LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED WHITE BACKGROUND.
  - BOLT HOLES MUST BE 3/8" DIAMETER.
  - BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
  - SIGNS MUST BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH REVISED STANDARD PLAN RSP T14.

**SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES**

**TRAFFIC HANDLING DETAILS  
 TRAFFIC CONTROL SYSTEM  
 FOR RAMP CLOSURES, DETOUR SIGNS,  
 AND MISCELLANEOUS DETAILS**

NO SCALE

THD-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	10	71

*Ricky Lee*  
REGISTERED CIVIL ENGINEER DATE 7-1-15

2-22-16  
PLANS APPROVAL DATE

RICKY LEE  
No. CT4591  
Exp. 12/31/17  
CIVIL

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: DEREK HIGA  
 CALCULATED/DESIGNED BY: RICKY LEE  
 CHECKED BY: KAZ KAYODA  
 REVISED BY: RICKY LEE  
 DATE REVISED: KAZ KAYODA

**TRAFFIC HANDLING QUANTITIES**

SHEET No.	STATION	CHANNELIZER (SURFACE MOUNTED)	TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION	REMOVE THERMOPLASTIC TRAFFIC STRIPE			REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE PAVEMENT MARKER	PAINT TRAFFIC STRIPE (2-COAT)			PAINT PAVEMENT MARKING (2-COAT)					PAVEMENT MARKER		
					4" WHITE		4" YELLOW			4" WHITE		4" YELLOW	TYPE II ARROW	TYPE III ARROW	TYPE V ARROW	"SIGNAL"	"AHEAD"	TYPE G	TYPE H	
					DETAIL 12	DETAIL 27B	DETAIL 25			DETAIL 12	DETAIL 27B	DETAIL 25						SQFT	SQFT	SQFT
TH-1	"OFF-RAMP1" 45+25 TO 47+81				64			7	512										12	
TH-1	"OFF-RAMP1" 45+25 TO 52+15				173			16												
TH-1	"OFF-RAMP1" 45+25 TO 53+75					850				850										
TH-1	"OFF-RAMP1" 46+50 TO 53+70		720																	
TH-1	"OFF-RAMP1" 47+50						143						59	84						
TH-1	"OFF-RAMP1" 47+81 TO 53+00							11				519								12
TH-1	"OFF-RAMP1" 51+00						66								33					
TH-1	"OFF-RAMP1" 52+00						126									32	31			
TH-1	"OFF-RAMP1" 52+15 TO 54+90	12																		
TH-1	"OFF-RAMP1" 53+75			14																
	<b>SUBTOTAL</b>	12	720	14	237	850	519	335	34	512	850	519	59	84	33	32	31	12	12	
	<b>TOTAL</b>	12	720	14	1,087		519	335	34	1,881			239					24		

**TRAFFIC HANDLING QUANTITIES**  
**THQ-1**

LAST REVISION | DATE PLOTTED => 12-FEB-2016  
 07-10-15 TIME PLOTTED => 11:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	11	71

*Ricky Lee*  
 REGISTERED CIVIL ENGINEER DATE 7-1-15  
 2-22-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 RICKY LEE  
 No. CT4591  
 Exp. 12/31/17  
 CIVIL  
 STATE OF CALIFORNIA

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**NOTE:**

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

**LEGEND:**

- STRIPING DETAIL No.
- ROADSIDE SIGN IDENTIFICATION (WITH NUMBER & LETTER)
- REMOVE ROADSIDE SIGN (WOOD POST)
- ROADSIDE SIGN - ONE POST

**SIGN CODE LEGEND:**

XXYY-Y (CA): CALIFORNIA SIGN CODE PER CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

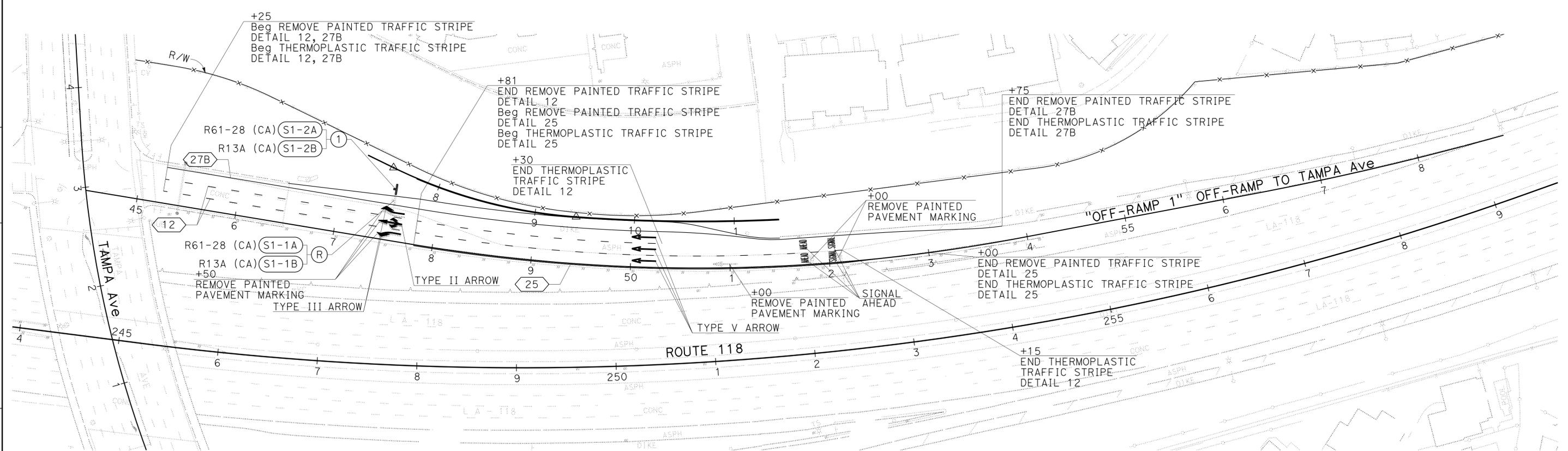
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN

FUNCTIONAL SUPERVISOR  
 DEREK HIGA

CALCULATED/DESIGNED BY  
 CHECKED BY

RICKY LEE  
 KAZ KAYODA

REVISED BY  
 DATE REVISED



**PAVEMENT DELINEATION AND SIGN PLAN**

SCALE: 1" = 50'

**PD-1**

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	12	71

*Ricky Lee*  
 REGISTERED CIVIL ENGINEER DATE 7-1-15  
 2-22-16  
 PLANS APPROVAL DATE

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### ROADWAY QUANTITIES

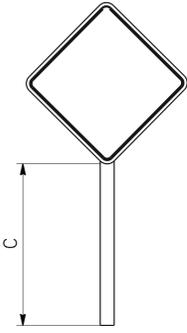
SHEET No.	STATION	REMOVE AC DIKE	ROADWAY EXCAVATION	CLASS 3 AGGREGATE BASE	LEAN CONCRETE BASE	HOT MIX ASPHALT (TYPE A)	PLACE HOT MIX ASPHALT DIKE (TYPE A)	CONCRETE BARRIER (TYPE 60D)
		LF	CY	CY	CY	TON	LF	LF
L-1	"OFF-RAMP1" 46+47.10 TO 51+51.29	505	630	321	168	339		
L-1	"OFF-RAMP1" 46+47.10 TO 49+42.11					8	295	
L-1	"OFF-RAMP1" 50+50 TO 51+51.29					4	102	
L-1	"OFF-RAMP1" 47+73.75 TO 51+51.29							378
<b>TOTAL</b>		505	630	321	168	351	397	378

### TEMPORARY WATER POLLUTION CONTROL QUANTITIES

LOCATION	Temp EROSION CONTROL BLANKET	Temp HYDROSEED	Temp DRAINAGE INLET PROTECTION	Temp FIBER ROLL	Temp GRAVEL BAG BERM	Temp SILT FENCE	Temp CONSTRUCTION ENTRANCE
	SQYD	SQYD	EA	LF	LF	LF	EA
ROUTE 118 WB OFF-RAMP TO TAMPA Ave	600	600	5	400	400	400	1
<b>TOTAL</b>	600	600	5	400	400	400	1

### ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No.	SIGN CODE	SIGN PANEL SIZE	"C" DIM IN FEET	POST SIZE AND LENGTH	ROADSIDE SIGN ONE POST	REMOVE ROADSIDE SIGN
	(SIGN-No.)	CALIFORNIA	INCHES		6"x6"	EA	EA
PD-1	S1-1A	R61-28					1
	S1-1B	R13A					
PD-1	S1-2A	R61-28	24x36	7	17'	1	
	S1-2B	R13A	48x30				
<b>TOTAL</b>						1	1



### PAVEMENT DELINEATION QUANTITIES

SHEET No.	STATION	REMOVE PAINTED TRAFFIC STRIPE			REMOVE PAINTED PAVEMENT MARKING	REMOVE PAVEMENT MARKER	THERMOPLASTIC TRAFFIC STRIPE			THERMOPLASTIC PAVEMENT MARKING					PAVEMENT MARKER		
		4" WHITE		4" YELLOW			4" WHITE		4" YELLOW		TYPE II ARROW	TYPE III ARROW	TYPE V ARROW	"SIGNAL"	"AHEAD"	TYPE G	TYPE H
		DETAIL 12	DETAIL 27B	DETAIL 25			DETAIL 12 (BROKEN 18-12)	DETAIL 27B	DETAIL 25	SQFT							
PD-1	"OFF-RAMP1" 45+25 TO 47+81	128				12											
PD-1	"OFF-RAMP1" 45+25 TO 50+30						505									12	
PD-1	"OFF-RAMP1" 45+25 TO 52+15						690									15	
PD-1	"OFF-RAMP1" 45+25 TO 53+75		850					850									
PD-1	"OFF-RAMP1" 47+50				143					59	84						
PD-1	"OFF-RAMP1" 47+81 TO 53+00			519		12			519								12
PD-1	"OFF-RAMP1" 50+00											99					
PD-1	"OFF-RAMP1" 51+00				33												
PD-1	"OFF-RAMP1" 52+00				63								64	62			
<b>SUBTOTAL</b>		128	850	519	239	24	1,195	850	519	59	84	99	64	62	27	12	
<b>SUBTOTAL SHEET THQ-1</b>						34									12	12	
<b>TOTAL</b>			1,497		239	58	1,195	1,369			368					63	

### SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN  
 Et Caltrans®  
 FUNCTIONAL SUPERVISOR DEREK HIGA  
 CALCULATED/DESIGNED BY CHECKED BY  
 RICKY LEE KAZ KAYODA  
 REVISED BY DATE REVISED  
 USERNAME => s125624  
 DGN FILE => 72849upa001.dgn  
 RELATIVE BORDER SCALE IS IN INCHES  
 0 1 2 3  
 UNIT 1811  
 PROJECT NUMBER & PHASE 07150002671  
 BORDER LAST REVISED 7/2/2010

LAST REVISION | DATE PLOTTED => 12-FEB-2016  
 07-10-15 TIME PLOTTED => 11:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	13	71

*George Olguin*  
 LICENSED LANDSCAPE ARCHITECT

2-22-16  
 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.

### IRRIGATION LEGEND

SYMBOL	DESCRIPTION	SPRINKLER TYPE	SPRAY PATTERN	OPERATING PRESSURE (psi)	PRESSURE COMPENSATING	PLUS/MINUS 5% ②		RADIUS (ft)	WIDTH x LENGTH (ft)	FLOW SHUTOFF DEVICE	SPRINKLER ASSEMBLY							REMARKS	
						DISCHARGE					RISER		POP-UP		TREE WELL				
						GALLONS PER MINUTE (GPM)	GALLONS PER HOUR (GPH)				MATERIAL	SIZE (IPS INCH)	HEIGHT (INCH)	TYPE	INLET CONNECTION (NPT INCH)	SPRINKLER PROTECTOR (TYPE)	HEIGHT (INCH)		
											PLASTIC	GALVANIZED							
O	BUBBLER	C-2	—	30	X	.25	—	5'	—	—	✓	X	—	1/2"	—	—	—	—	

**APPLICABLE WHEN CIRCLED BELOW:**

- 1 - SEE SPECIAL PROVISIONS.
- ② - IF A PRESSURE COMPENSATING DEVICE IS SPECIFIED, THE DISCHARGE AND RADII SHOWN REFLECT ITS USE.
- 3 - VINYL-COATED CAST IRON HOUSING.
- 4 - SWING JOINTS REQUIRED ADJACENT TO SHOULDERS, CURBS, SIDEWALKS, AND DIKES.
- 5 - UNLESS OTHERWISE SHOWN ON PLANS.

**X IN BOX DENOTES REQUIREMENT**

**SPRINKLERS SIZING CHART**

NUMBER OF SPRINKLERS	SIZE OF PIPE
1 - 38	3/4"
39 - 60	1"
61 - 100	1 1/4"
101 - 140	1 1/2"
141 - 220	2"

## IRRIGATION SPRINKLER SCHEDULE

### ISS-1

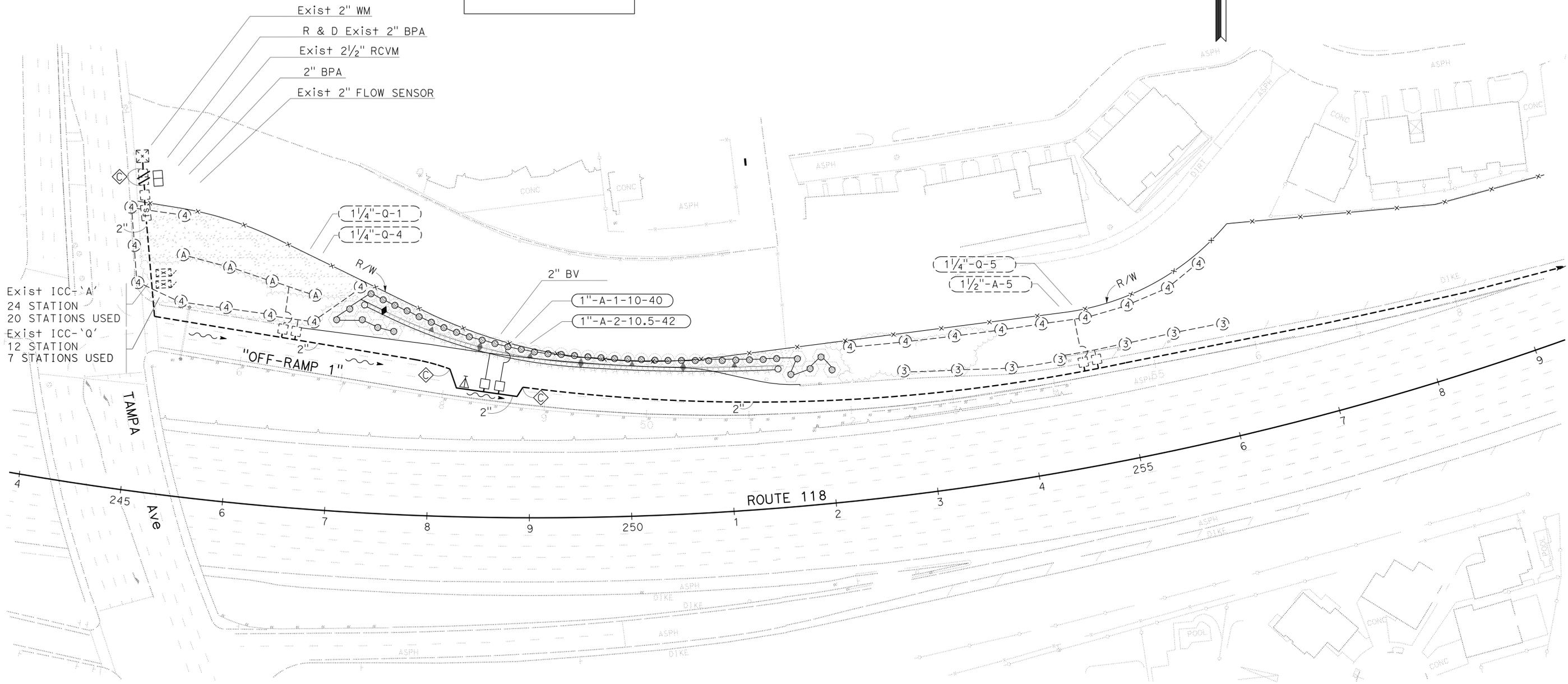
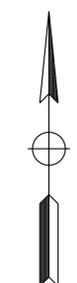
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	14	71

George Olguin  
 LICENSED LANDSCAPE ARCHITECT  
 2-22-16  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- IRRIGATION LINES MUST BE 3/4" NOMINAL UNLESS OTHERWISE NOTED OR SIZED BY CHART.
- CNC MUST TYPICALLY FOLLOW SUPPLY LINE (MAIN) IN DIRECTION OF ARROW, NOT SHOWN CONTINUOUSLY FOR CLARITY.

WATER METER INFORMATION  
 ADDRESS: 1161 TAMPA Ave  
 PSI: 65-80



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 GLEN LEVSTIK  
 REVISOR  
 GLEN LEVSTIK  
 CHECKED BY  
 RICH KESTER  
 DATE REVISOR  
 DATE REVISOR  
 DATE REVISOR

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

**IP-1**

APPROVED FOR IRRIGATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 GLEN LEVSTIK  
 RICH KESTER  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	15	71

*George Olguin*  
 LICENSED LANDSCAPE ARCHITECT

2-22-16  
 PLANS APPROVAL DATE

*George Olguin*  
 LICENSED LANDSCAPE ARCHITECT  
 No. 4533  
 Expiring 08-31-16  
 Renewal Date 04-15-15  
 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.

### IRRIGATION QUANTITIES

CONTROLLER LETTER	VALVE NUMBER	PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)					SPRINKLER ASSEMBLY	
		3/4"	1"	1 1/4"	1 1/2"	2"	RISER GEAR DRIVEN	RISER
		LF	LF	LF	LF	LF	EA	EA
A	1	206	300	-	-	-	-	40
	2	231	335	-	-	-	-	42
SUBTOTALS PER VALVE ON LATERAL SUPPLY SIDE OF CONTROL VALVE								
SUBTOTAL A		437	635					82

## IRRIGATION QUANTITIES

### IQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 GLEN LEVSTIK  
 RICH KESTER  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	16	71

*George Olguin*  
 LICENSED LANDSCAPE ARCHITECT

2-22-16  
 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.

### IRRIGATION QUANTITIES

SHEET NUMBER	IRRIGATION CONTROLLER						COPPER PIPE (SUPPLY LINE)		Galv STEEL PIPE		WM		BPA		PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)											SPRINKLER ASSEMBLY														
	16 STATION	24 STATION	32 STATION	TWO WIRE	CEC		2"	3"	4"	2"	3"	2"	3"	ENCLOSURE	BLANKET	RCV			FS		GV			BV			PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)						RISER GEAR DRIVEN	RISER						
	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA	EA	EA			EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA							
IP-1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	75	-	-	-	82		
<b>SUBTOTAL A</b>																																								
<b>TOTAL</b>	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	437	635	-	-	75	-	-	82

### IRRIGATION QUANTITIES

#### IQ-2

LAST REVISION | DATE PLOTTED => 12-FEB-2016  
 00-00-00 | TIME PLOTTED => 11:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	17	71

George Olguin  
LICENSED LANDSCAPE ARCHITECT

2-22-16  
PLANS APPROVAL DATE

08-31-16  
04-15-15  
RENEWAL 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.

### PLANTING LEGEND

PLANT GROUP	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY EACH	HOLE SIZE (INCH)		BASIN TYPE	SOIL AMENDMENT		IRON SULFATE RATE	COMMERCIAL FERTILIZER ①		BASIN MULCH ②		STAKING	PLANTING LIMITS							REMARKS
							Dia	DEPTH		TYPE	RATE		PLANTING	PLT ESTB	TYPE	CY		MINIMUM DISTANCE (ft) FROM					ON CENTER (ft)		
																		ETW	Pvmt	FENCE	WALL	PAVED DITCH		EARTH DITCH	
A	1		<u>PARTHENOCISSUS TRICUSPIDATA</u>	BOSTON IVY	No. 1	40	③	③	II	---	---	---	4 oz	4 oz	WC	0.05	X	---	---	---	---	4	15	10	VINE
B	2		<u>HETEROMELES ARBUTIFOLIA</u>	TOYON	No. 5	32	③	③	II	---	---	---	8 oz	8 oz	WC	0.08	---	---	15	15	10	10	17	15	SHRUB
	3		<u>ACACIA REDOLENS</u> 'DESERT CARPET'	PROSTRATE ACACIA	No. 5	10	③	③	II	---	---	---	8 oz	8 oz	WC	0.08	---	---	20	20	20	20	22	14-15	SHRUB

**APPLICABLE WHEN CIRCLED:**

- ① - QUANTITIES SHOWN ARE "PER PLANT" UNLESS SHOWN AS SQFT OR SQYD APPLICATION RATES
- ② - BASIN MULCH IS INCLUDED WITH MULCH QUANTITIES SHOWN ON PLANTING PLAN
- ③ - SUFFICIENT TO RECEIVE ROOT BALL AND AMENDMENTS IF REQUIRED
- 4 - SEE DETAIL
- 5 - SEE SPECIAL PROVISIONS
- 6 - SEE STANDARD SPECIFICATIONS
- 7 - AS SHOWN ON PLANS
- 8 - UNLESS OTHERWISE SHOWN ON PLANS
- 9 - FOLIAGE PROTECTOR REQUIRED
- 10 - ROOT PROTECTOR REQUIRED
- 11 - ROOT BARRIER REQUIRED
- 12 - DEPARTMENT-FURNISHED

**ABBREVIATIONS:**

- S - SPHAGNUM PEAT MOSS
- N - NITROLIZED FIR BARK
- V - VERMICULITE
- P - PERLITE
- TB - TREE BARK
- WC - WOOD CHIP
- SB - SHREDDED BARK
- TT - TREE TRIMMING

**NOTE:**

UNDERLINED PORTIONS OF BOTANICAL NAME INDICATE ABBREVIATIONS USED ON PLANTING PLANS.

**LEGEND:**

- MULCH (WOOD CHIP 3" DEPTH)
- ROADSIDE CLEARING

WOOD MULCH (WOOD CHIP)		
SHEET NUMBER	SPREAD	BASIN
	CY	CY
PL-1		6
PP-1	138	
<b>SUBTOTAL</b>	138	6
<b>TOTAL</b>	144	

## PLANT LEGEND PL-1

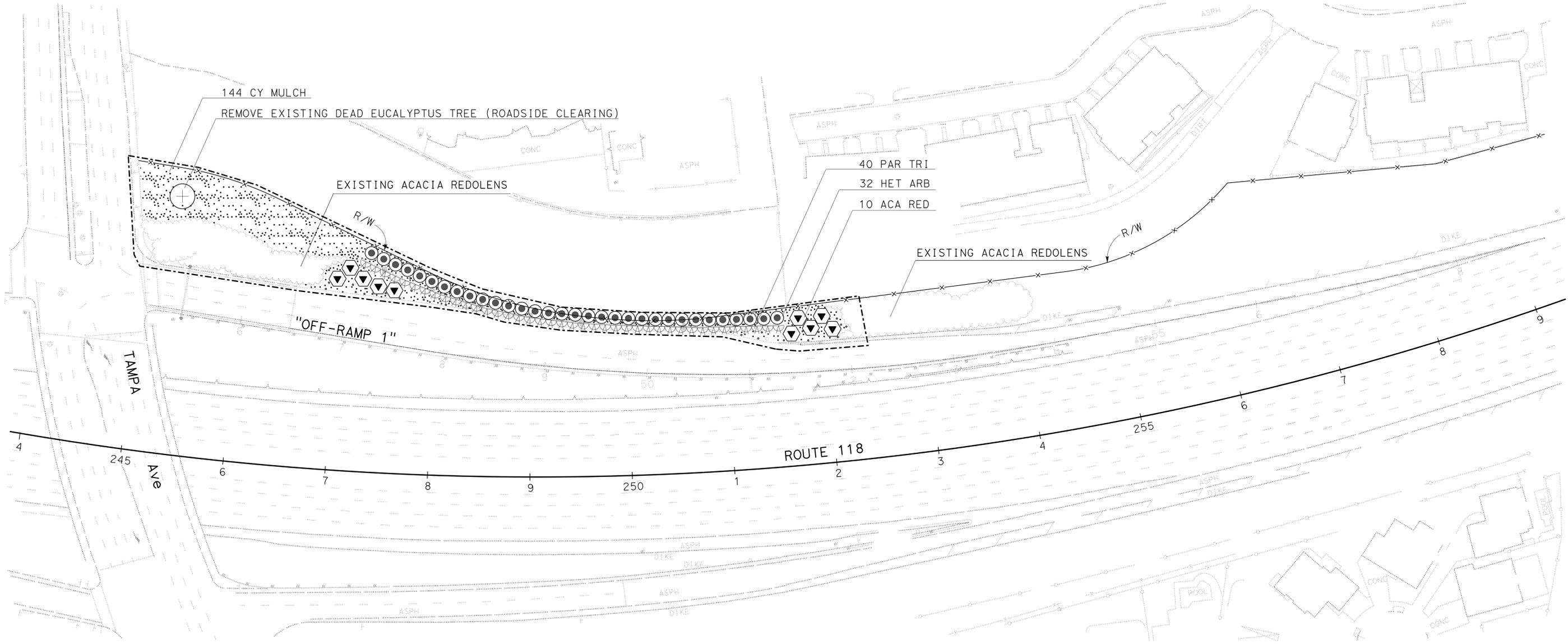
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 GLEN LEVSTIK  
 RICH KESTER  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 SENIOR LANDSCAPE ARCHITECT  
 RON RUSSAK  
 LANDSCAPE ARCHITECTURE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	18	71

*George Olgin*  
 LICENSED LANDSCAPE ARCHITECT  
 2-22-16  
 PLANS APPROVAL DATE  
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**NOTES:**

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- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REVISOR	DATE
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	GLEN LEVSTIK	RICH RESTER
SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	CHECKED BY
RON RUSSAK		

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

**PP-1**

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELTZONDO  
 CALCULATED/DESIGNED BY: NOOSHIN ANSARI  
 CHECKED BY: OSWALD ELTZONDO  
 REVISOR: NOOSHIN ANSARI  
 DATE: 10-19-15

**NOTE: (THIS SHEET ONLY)**

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

**LEGEND: (THIS SHEET ONLY)**

- 1 Exist 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE CABINET WITH 2-100 A, 2P, 240V CB-MAIN: METER 1:  
 30 A, 240 V, 2P, CB SERVICE NODE  
 30 A, 240 V, 2P, CB SIGN CCTV  
 CTID No. 07-53-118-0004.8200  
 ADDRESS 11145 1/2 TAMPA AVENUE
- 2 EXISTING 2" C, 3#4, 3#6. (FOR INSTALLATION OF 1#8 (G), SEE MODIFY LIGHTING AND SIGN ILLUMINATION PLAN).
- 3 1 1/2" C, 3#4, 3#6, 1#8(G).
- 4 INSTALL 40' WOOD POLE AND 1 1/2" CONDUIT RISER, 3#6, 3#4, 1#8 (G). SEE STRUCTURAL PLANS.
- 5 3#4, 3#6, 1#8 (G).
- 6 INSTALL 40' WOOD POLE. SEE STRUCTURAL PLANS.
- 7 EXISTING 2" C, 3#4. (FOR INSTALLATION OF 1#8 (G), SEE MODIFY LIGHTING AND SIGN ILLUMINATION PLAN).
- 8 EXISTING 2" C, 2#4. (FOR INSTALLATION OF 1#8 (G), SEE MODIFY LIGHTING AND SIGN ILLUMINATION PLAN).
- 9 1 1/2" C, 2#4, 1#8(G).
- 10 INSTALL 40' WOOD POLE AND 1 1/2" CONDUIT RISER, 2#4, 1#8 (G). SEE STRUCTURAL PLANS.
- 11 FOR INSTALLATION OF PULL BOX, SEE MODIFY LIGHTING AND SIGN ILLUMINATION PLAN.

METER 2:  
 15 A, 120 V, 1P, CB FOR SIGN  
 15 A, 120 V, 1P, CB FOR SIGN  
 15 A, 120 V, 1P, CB FOR DEMARCATION  
 20 A, 240 V, 2P, LIGHTING  
 20 A, 240 V, 2P, LIGHTING  
 15 A, 120 V, 1P, IRRIGATION  
 20 A, 120 V, 1P, TMS  
 20 A, 240 V, 2P, SIGN LIGHT  
 CTID No. 07-53-118-0004.8100  
 ADDRESS 11145 3/4 TAMPA AVENUE

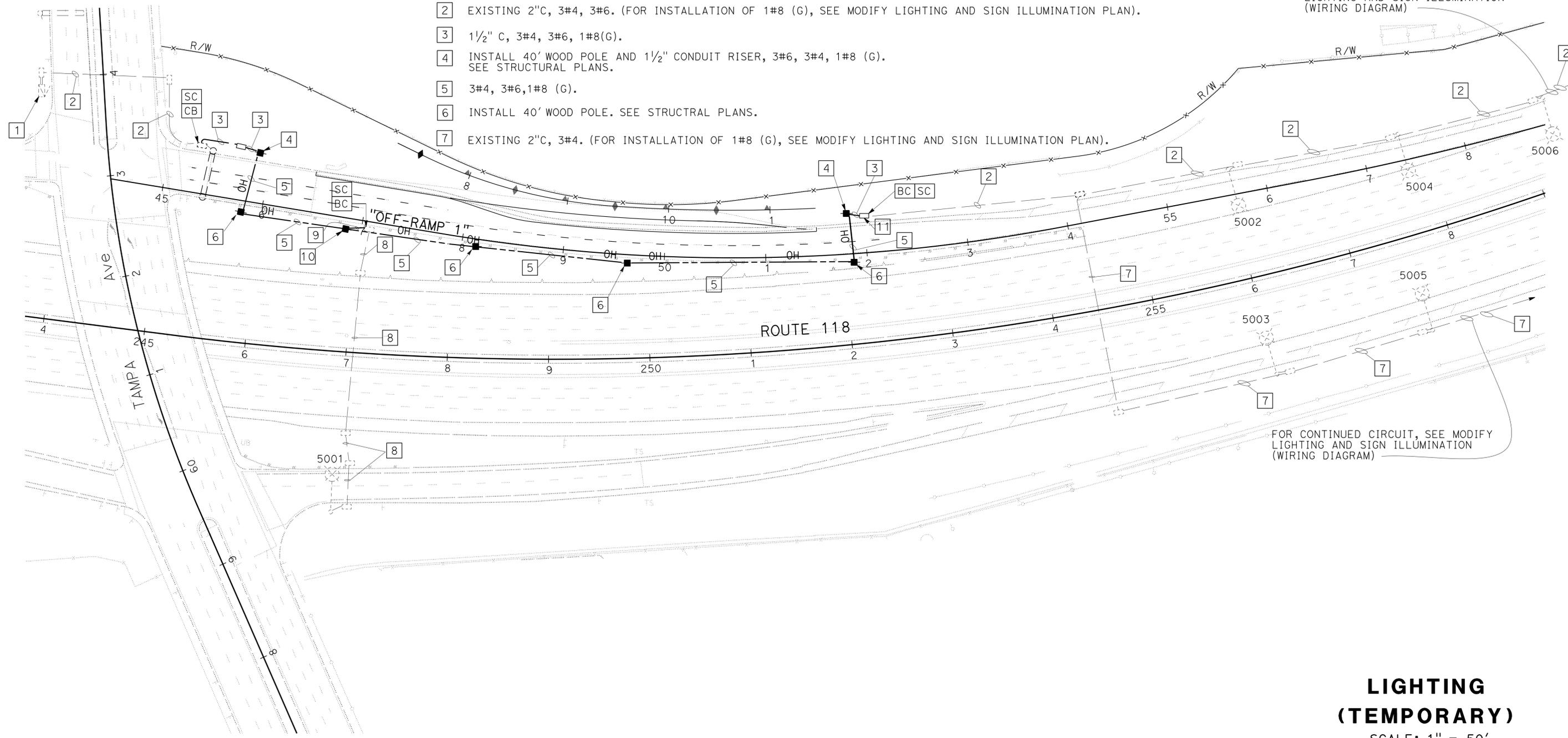
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	19	71

Nooshin Ansari 10-19-15  
 REGISTERED ELECTRICAL ENGINEER DATE

2-22-16  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
 NOOSHIN ANSARI  
 No. E17010  
 Exp. 9/30/17  
 ELECTRICAL  
 STATE OF CALIFORNIA



FOR CONTINUED CIRCUIT, SEE MODIFY LIGHTING AND SIGN ILLUMINATION (WIRING DIAGRAM)

FOR CONTINUED CIRCUIT, SEE MODIFY LIGHTING AND SIGN ILLUMINATION (WIRING DIAGRAM)

**LIGHTING (TEMPORARY)**

SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

E-1

LAST REVISION DATE PLOTTED => 12-FEB-2016 00-00-00 TIME PLOTTED => 11:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	20	71

Nooshin Ansari 10-19-15  
 REGISTERED ELECTRICAL ENGINEER DATE  
 2-22-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 NOOSHIN ANSARI  
 No. E17010  
 Exp. 9/30/17  
 ELECTRICAL  
 STATE OF CALIFORNIA

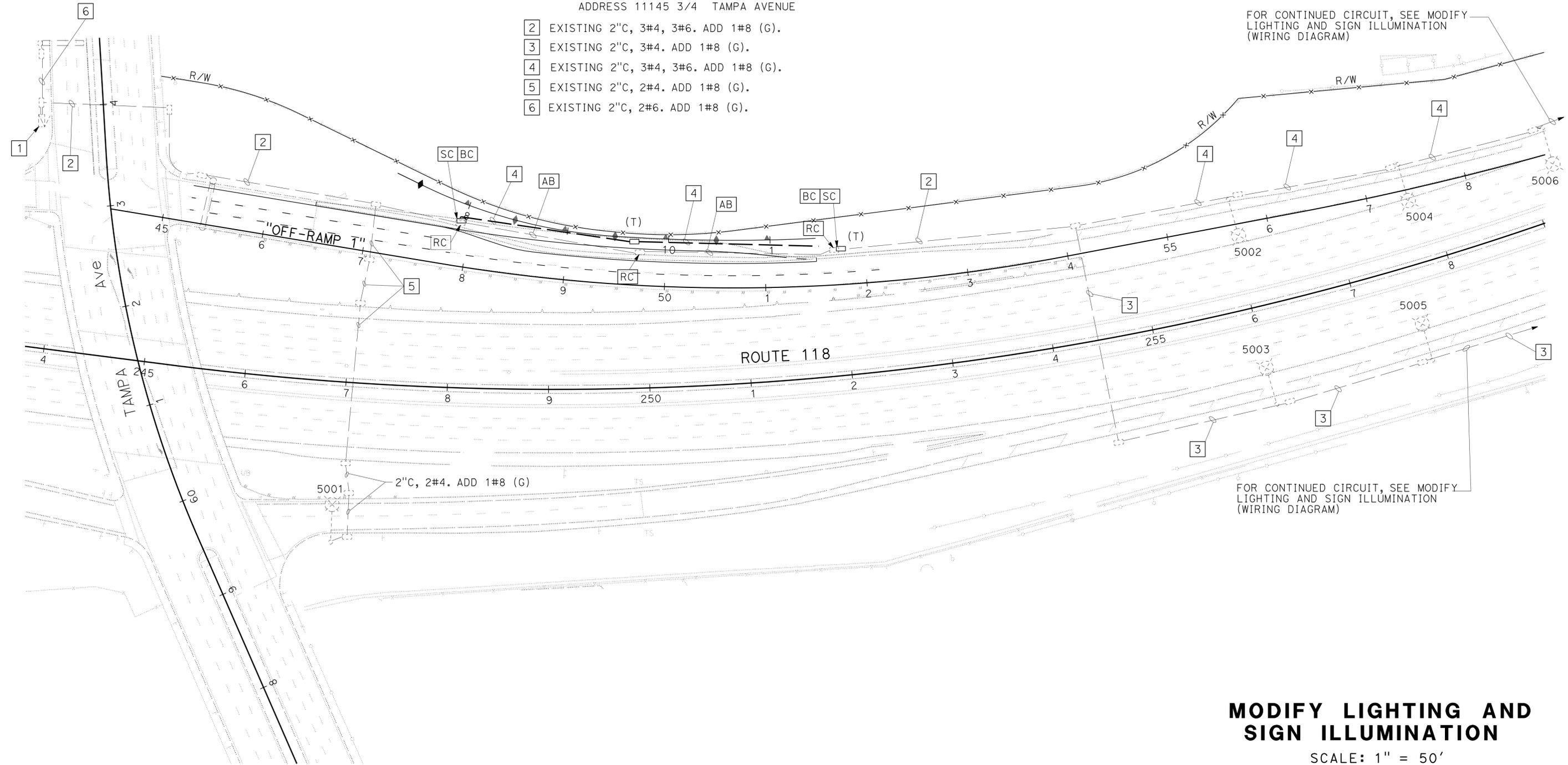
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**NOTES: (THIS SHEET ONLY)**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- ALL NEW PULL BOXES MUST BE TRAFFIC RATED AND WITH TAMPER RESISTANT COVER.

**LEGEND:(THIS SHEET ONLY)**

- Exist 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE CABINET WITH 2-100 A, 2P,240V CB-MAIN: METER 1:  
 30 A, 240 V, 2P, CB SERVICE NODE  
 30 A, 240 V, 2P, CB SIGN CCTV  
 CTID No. 07-53-118-0004.8100  
 ADDRESS 11145 1/2 TAMPA AVENUE  
 METER 2:  
 15 A, 120 V, 1P, CB FOR SIGN  
 15 A, 120 V, 1P, CB FOR SIGN  
 15 A, 120 V, 1P, CB FOR DEMARCATION  
 20 A, 240 V, 2P, LIGHTING  
 20 A, 240 V, 2P, LIGHTING  
 15 A, 120 V, 1P, IRRIGATION  
 20 A, 120 V, 1P, TMS  
 20 A, 240 V, 2P, SIGN LIGHT  
 CTID No. 07-53-118-0004.8200  
 ADDRESS 11145 3/4 TAMPA AVENUE
- EXISTING 2"C, 3#4, 3#6. ADD 1#8 (G).
- EXISTING 2"C, 3#4, 3#6. ADD 1#8 (G).
- EXISTING 2"C, 3#4, 3#6. ADD 1#8 (G).
- EXISTING 2"C, 2#4. ADD 1#8 (G).
- EXISTING 2"C, 2#6. ADD 1#8 (G).



FOR CONTINUED CIRCUIT, SEE MODIFY LIGHTING AND SIGN ILLUMINATION (WIRING DIAGRAM)

FOR CONTINUED CIRCUIT, SEE MODIFY LIGHTING AND SIGN ILLUMINATION (WIRING DIAGRAM)

**MODIFY LIGHTING AND SIGN ILLUMINATION**

SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: NOOSHIN ANSARI  
 CHECKED BY: OSWALD ELIZONDO  
 REVISED BY: [ ] DATE REVISED: [ ]

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: OSWALD ELIZONDO  
 CHECKED BY: OSWALD ELIZONDO  
 REVISIONS: NOOSHIN ANSARI  
 REVISOR: OSWALD ELIZONDO

**NOTES: (THIS SHEET ONLY)**

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**LEGEND: (THIS SHEET ONLY)**

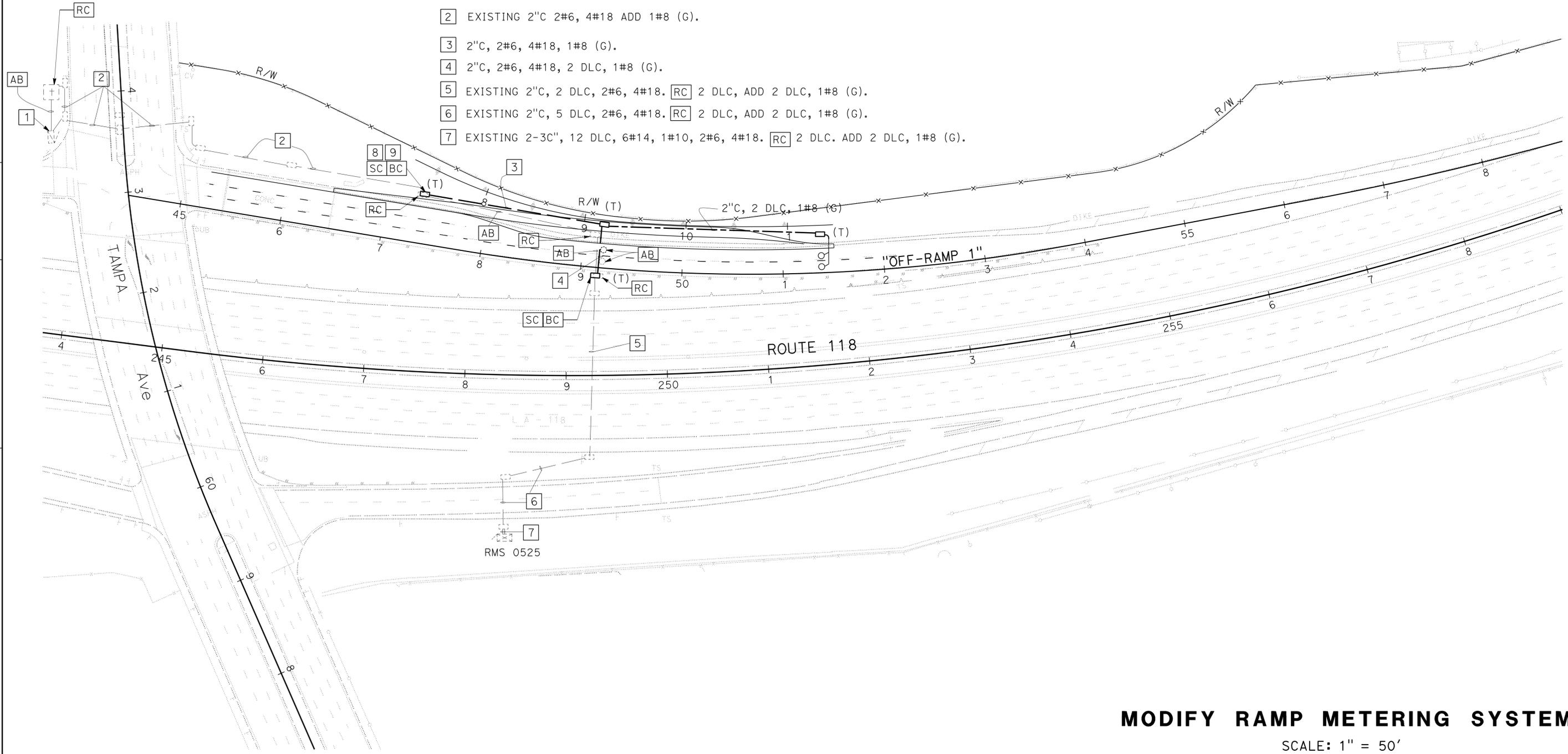
- EXIST 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE CABINET WITH 2-100 A, 2P, CB-MAIN: METER 1:  
 30 A, 240 V, 2P, CB SERVICE NODE  
 30 A, 240 V, 2P, CB SIGN CCTV  
 CTID No. 07-53-118-0004.8200  
 ADDRESS 11145 1/2 TAMPA AVENUE
- METER 2:  
 15 A, 120 V, 1P, CB FOR SIGN  
 15 A, 120 V, 1P, CB FOR SIGN  
 15 A, 120 V, 1P, CB FOR DEMARCATION  
 20 A, 240 V, 2P, LIGHTING  
 20 A, 240 V, 2P, LIGHTING  
 15 A, 120 V, 1P, IRRIGATION  
 20 A, 120 V, 1P, TMS  
 20 A, 240 V, 2P, SIGN LIGHT  
 CTID No. 07-53-118-0004.8200  
 ADDRESS 11145 3/4 TAMPA AVENUE
- EXISTING 2" C 2#6, 4#18 ADD 1#8 (G).
- 2" C, 2#6, 4#18, 1#8 (G).
- 2" C, 2#6, 4#18, 2 DLC, 1#8 (G).
- EXISTING 2" C, 2 DLC, 2#6, 4#18. RC 2 DLC, ADD 2 DLC, 1#8 (G).
- EXISTING 2" C, 5 DLC, 2#6, 4#18. RC 2 DLC, ADD 2 DLC, 1#8 (G).
- EXISTING 2-3" C, 12 DLC, 6#14, 1#10, 2#6, 4#18. RC 2 DLC. ADD 2 DLC, 1#8 (G).
- DISCONNECT 4#18 CABLE AT RAMP METERING CONTROLLER EB RMS 0525 AND COIL IN THIS PULL BOX.
- RE-INSTALL 4#18 CABLE BACK TO RAMP METERING CONTROLLER EB RMS 0525 WHEN ALL NEW CONDUITS AND PULL BOX ARE INSTALLED.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	21	71

Nooshin Ansari 10-19-15  
 REGISTERED ELECTRICAL ENGINEER DATE  
 2-22-16  
 PLANS APPROVAL DATE

NOOSHIN ANSARI  
 No. E17010  
 Exp. 9/30/17  
 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.



**MODIFY RAMP METERING SYSTEM**

SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	22	71

Nooshin Ansari 10-19-15  
 REGISTERED ELECTRICAL ENGINEER DATE  
 2-22-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 NOOSHIN ANSARI  
 No. E17010  
 Exp. 9/30/17  
 ELECTRICAL  
 STATE OF CALIFORNIA

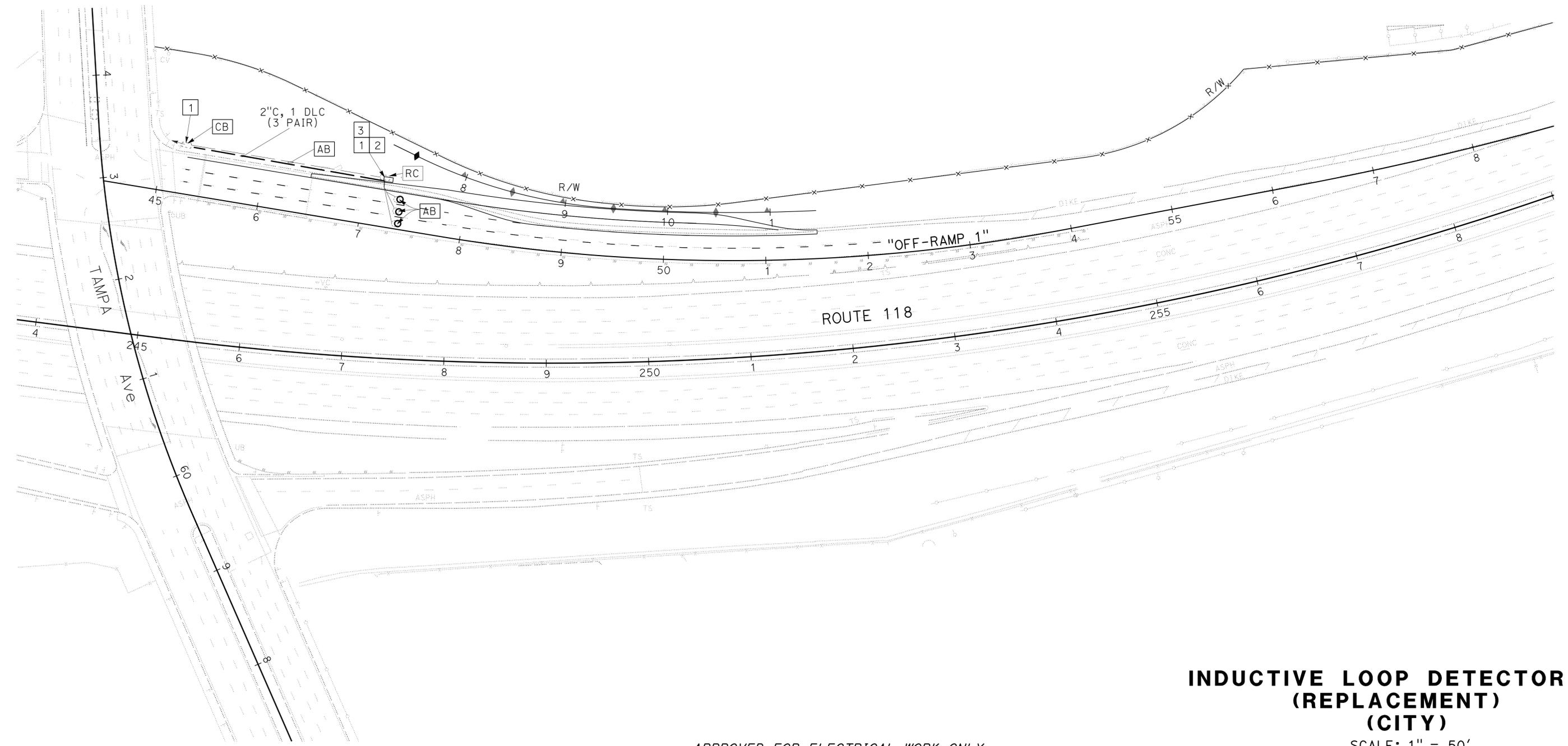
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



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

**LEGEND: (THIS SHEET ONLY)**

- 1 PULL BACK EXISTING DLC (3 PAIR) AND KEEP IN THE PULLBOX. REROUTE EXISTING DLC (3 PAIR) IN NEW CONDUIT.
- 2 CONNECT NEW LOOP WIRES TO DLC IN THE PULL BOX.
- 3 INSTALL CITY PULL BOX TYPE PB-3 . SEE INDUCTIVE LOOP DETECTOR (REPLACEMENT) (CITY) (ELECTRICAL DETAILS).



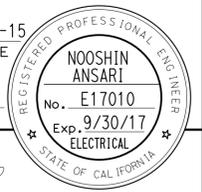
**INDUCTIVE LOOP DETECTOR (REPLACEMENT) (CITY)**

SCALE: 1" = 50'

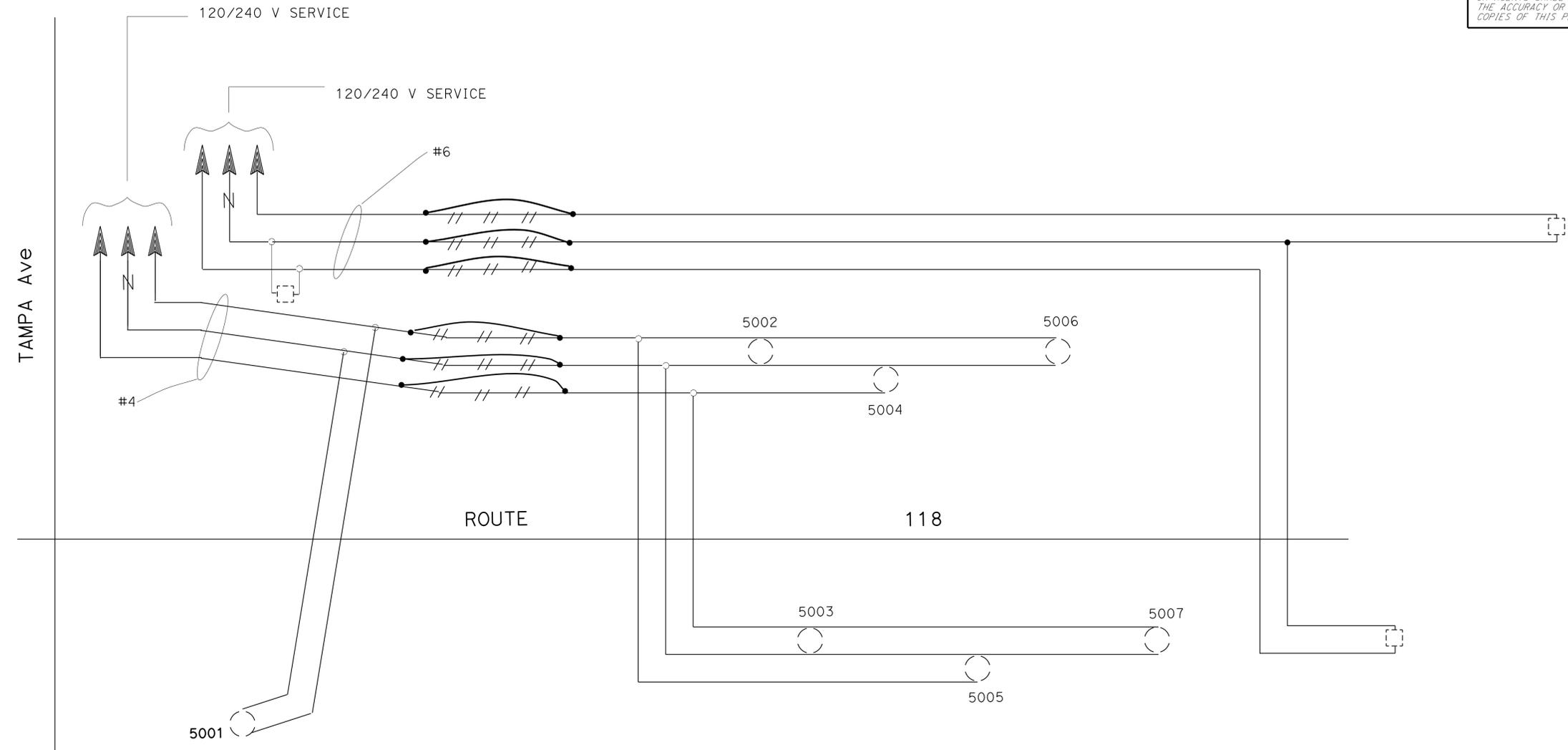
APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	NOOSHIN ANSARI	REVISOR	
<b>Caltrans</b>	OSWALD ELIZONDO	CHECKED BY	OSWALD ELIZONDO	DATE	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	23	71
Nooshin Ansari		10-19-15		REGISTERED ELECTRICAL ENGINEER DATE	
2-22-16		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>					



REVISOR	NOOSHIN ANSARI	REVISION	
DESIGNER	OSWALD ELIZONDO	DATE	
CHECKED BY		DATE	
FUNCTIONAL SUPERVISOR	OSWALD ELIZONDO		
DESIGNED BY			
CALCULATED BY			



- WIRING DIAGRAM LEGEND**
- EXISTING LAMP AND BALLAST
  - EXISTING SIGN FIXTURE AND BALLAST
  - EXISTING CONDUCTOR TO BE REMOVED
  - EXISTING CONDUCTOR
  - NEW CONDUCTOR
  - SPLICE CONDUCTOR
  - EXISTING SPLICE CONDUCTOR

(WIRING DIAGRAM)

**MODIFY LIGHTING AND SIGN ILLUMINATION**  
NO SCALE

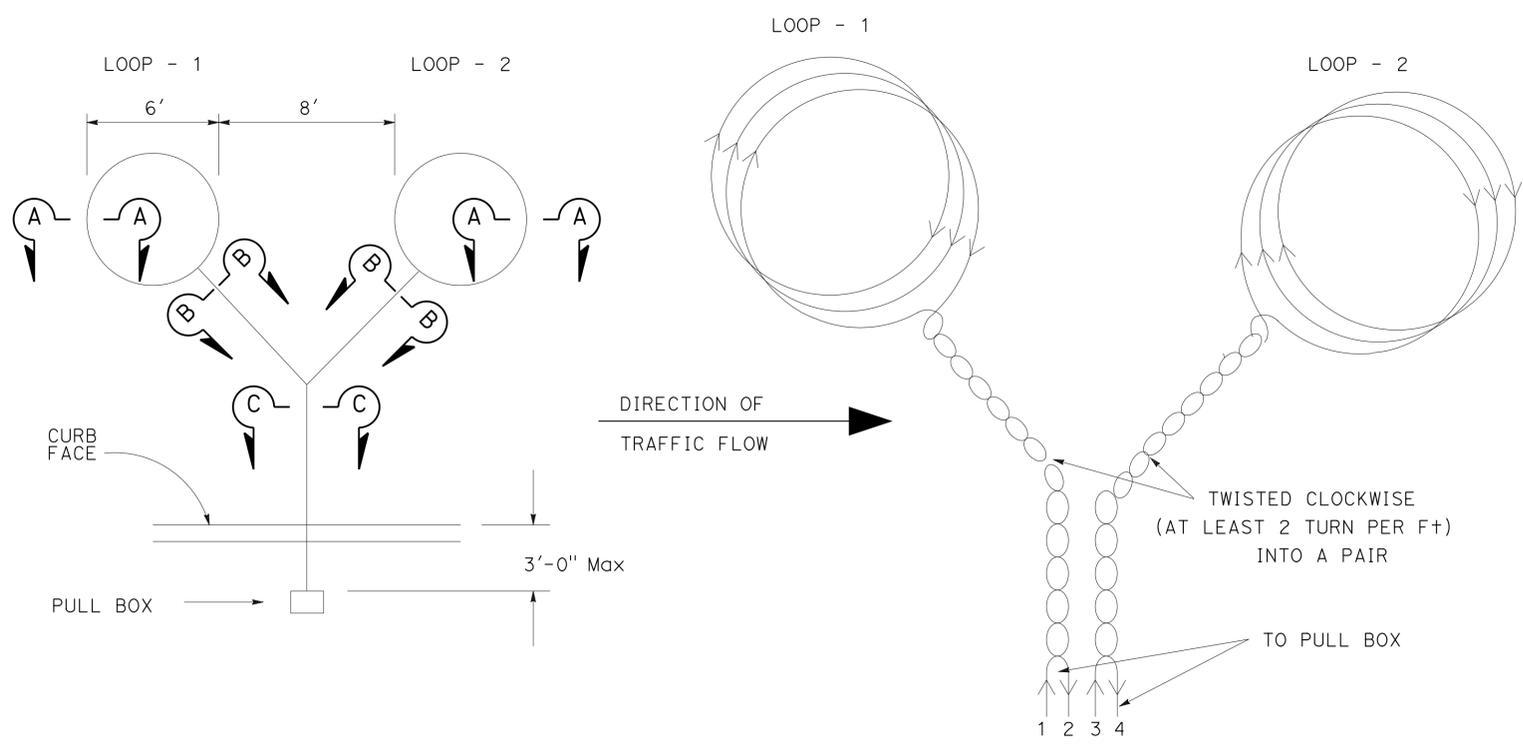
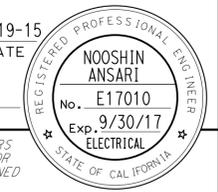
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07	LA	118	R4.8	24	71

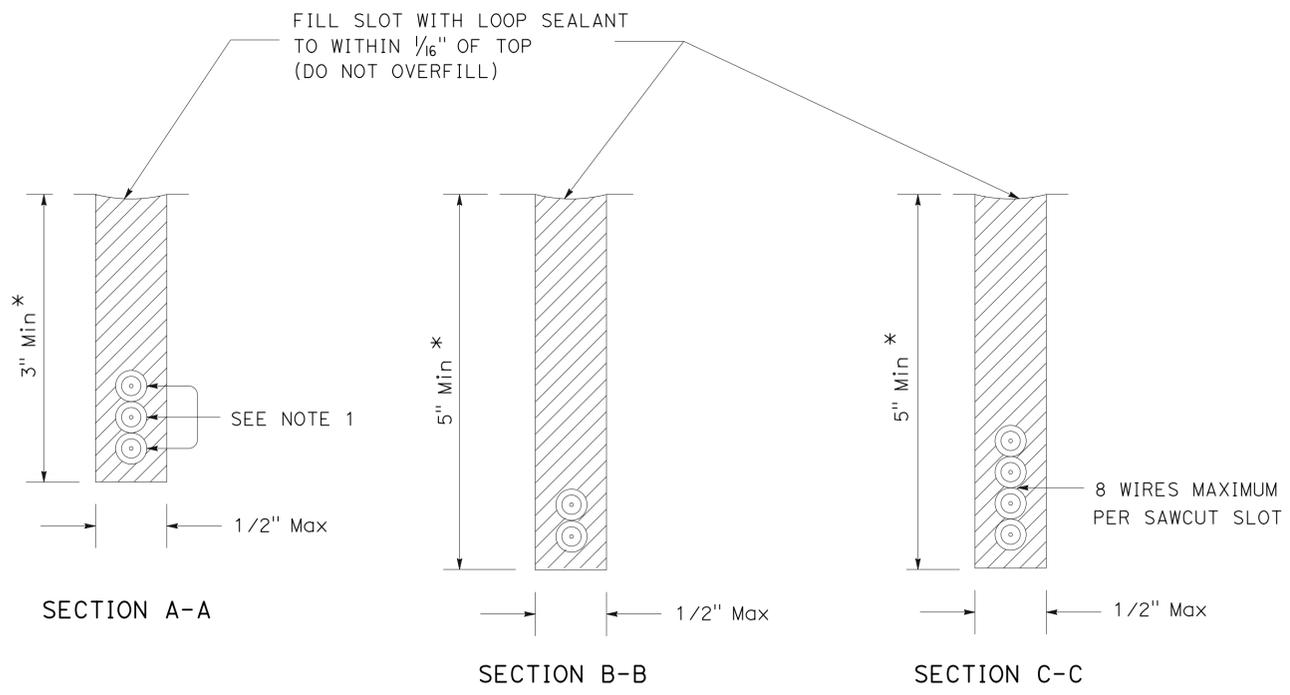
<i>Nooshin Ansari</i>	10-19-15
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-16	
PLANS APPROVAL DATE	

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:**  
 1. INSTALL 3 CLOCKWISE TURNS OF LOOP WIRE FOR EACH DETECTOR, UNLESS OTHERWISE SHOWN ON SIGNAL PLAN.



\* DEPTH OF SLOT NOT TO EXCEED DEPTH OF PAVEMENT, FOR PCC (CONCRETE) SURFACES, THE MINIMUM COVER ABOVE LOOP WIRE MUST BE 2.5" MINIMUM.

(ELECTRICAL DETAIL)

**INDUCTIVE LOOP DETECTOR (REPLACEMENT) (CITY)**

NO SCALE

**E-6**

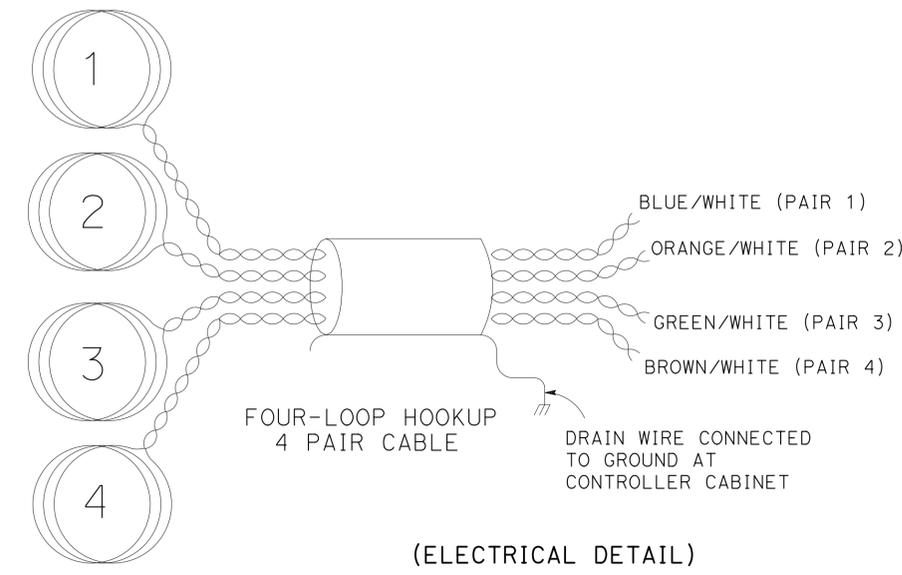
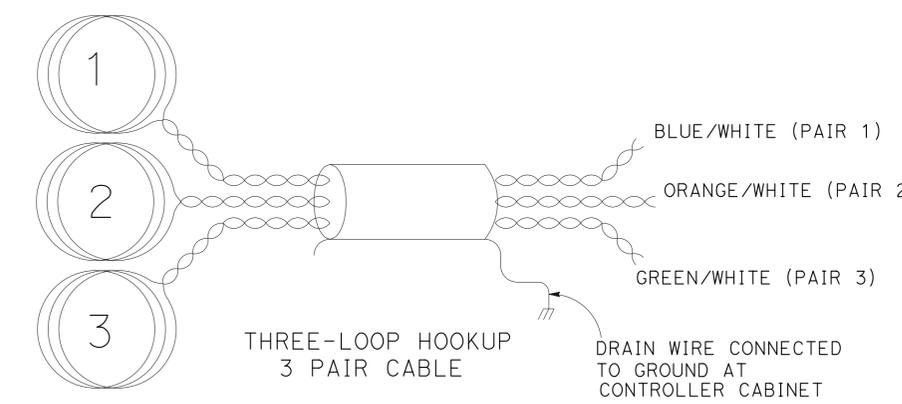
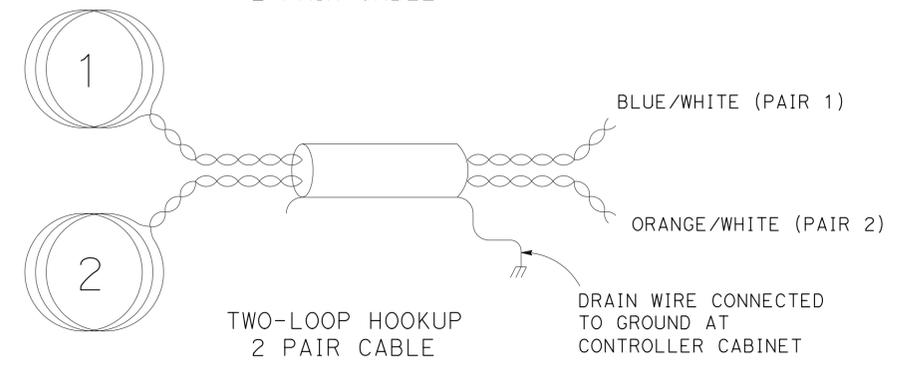
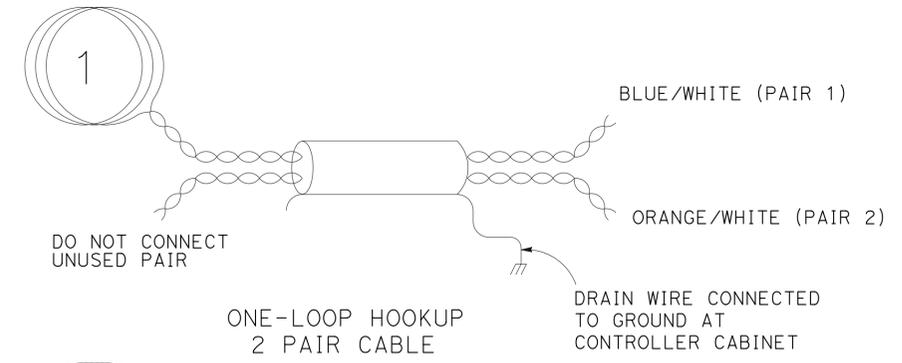
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 NOOSHIN ANSARI  
 OSWALD ELIZONDO  
 REVISIONS: [Blank]



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	26	71
Nooshin Ansari		10-19-15	REGISTERED ELECTRICAL ENGINEER DATE		
2-22-16		PLANS APPROVAL DATE			
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

1. THIS SHEET DESCRIBES A TWO, THREE OR FOUR PAIR LOOP DETECTOR LEAD-IN CABLE, INDIVIDUALLY SHIELDED AND JACKETED AND SUITABLE FOR INSTALLATION IN A PAVEMENT SAWCUT, CONDUIT, OR DIRECT BURIAL.
2. THE DETECTOR LEAD-IN CABLE CAN BE WIRED IN EITHER A SINGLE, DOUBLE, TRIPLE OR QUADRUPLE CHANNEL CONFIGURATION.
3. ELECTRICAL CONNECTIONS SHALL BE CAREFULLY SOLDERED AND WATERPROOFED.
4. LOOP NUMBERS SHOWN ARE TYPICAL.
5. SYSTEM LOOPS USE A SINGLE PAIR FOR EACH LOOP.



(ELECTRICAL DETAIL)

**INDUCTIVE LOOP DETECTOR  
(REPLACEMENT)  
(CITY)  
NO SCALE**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	NOOSHIN ANSARI	REVISOR	DATE
<b>Caltrans</b> TRAFFIC DESIGN	OSWALD ELIZONDO	DESIGNED BY	REVISION
FUNCTIONAL SUPERVISOR	OSWALD ELIZONDO	CHECKED BY	DATE



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	27	71

<i>Nooshin Ansari</i>	10-19-15
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-16	
PLANS APPROVAL DATE	

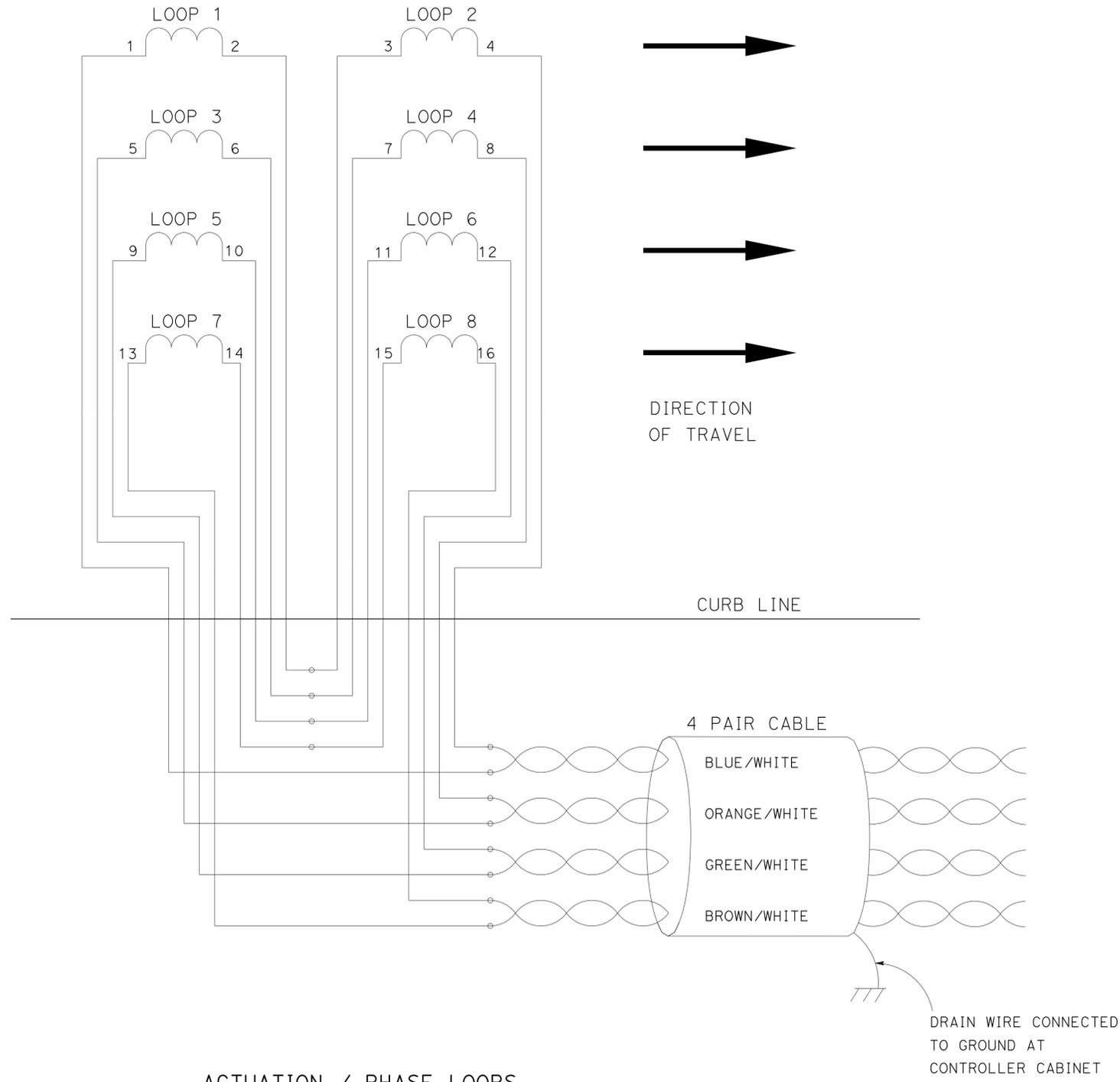
  

REGISTERED PROFESSIONAL ENGINEER
NOOSHIN ANSARI
No. E17010
Exp. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

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.

**NOTES:**

1. CONNECT TWO TO FOUR LOOPS IN SERIES TO EACH PAIR, DO NOT USE PARALLEL CONNECTIONS.
2. DO NOT CONNECT ANY UNUSED CABLE PAIRS.
3. TYPICAL INSTALLATION SHOWN. TWO OR THREE PAIR CABLE MAY BE USED WHEN SHOWN ON SIGNAL PLAN.



ACTUATION / PHASE LOOPS

(ELECTRICAL DETAIL)

**INDUCTIVE LOOP DETECTOR  
(REPLACEMENT)  
(CITY)  
NO SCALE**

**E-9**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
<b>Caltrans</b> TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO
CALCULATED/DESIGNED BY
CHECKED BY
NOOSHIN ANSARI
OSWALD ELIZONDO
REVISOR
DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	28	71

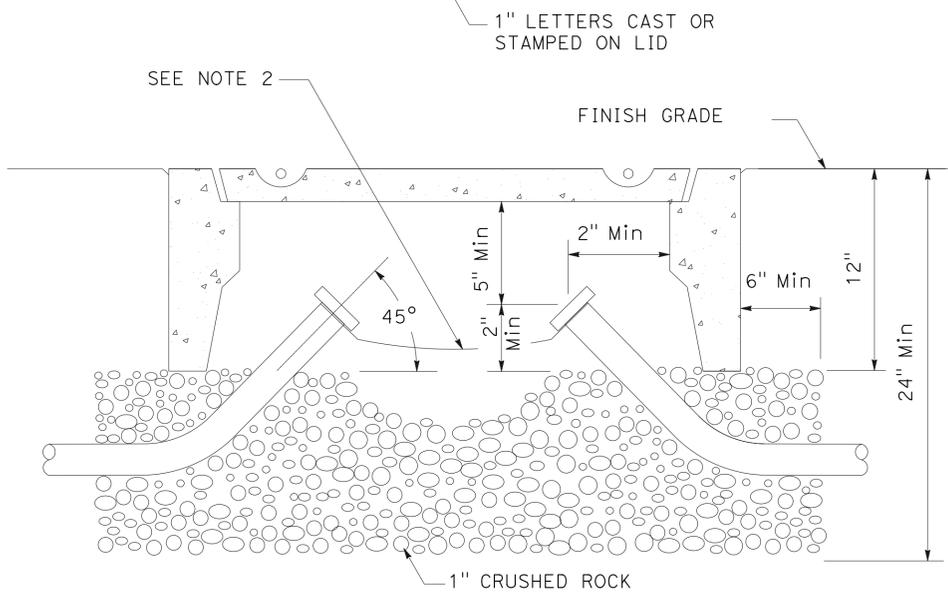
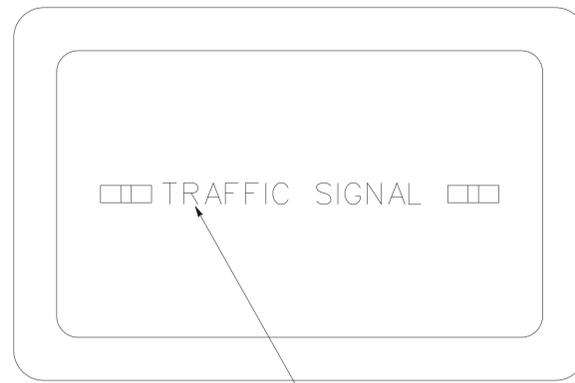
<i>Nooshin Ansari</i>	10-19-15
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-16	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
NOOSHIN ANSARI
No. E17010
Exp. 9/30/17
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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
<b>Caltrans</b>
TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO
CALCULATED/DESIGNED BY
CHECKED BY
NOOSHIN ANSARI
OSWALD ELIZONDO
REVISED BY
DATE REVISED



**NOTES:**

1. OUTSIDE DIMENSION: TYPE PB3 - 22" X 34".
2. TYPE 1 CONDUITS MUST BE BONDED WITH COPPER GROUND STRAP AROUND THE NECK OF EACH CONDUIT. TYPE 3 CONDUITS MUST HAVE THEIR #8 GROUND WIRES SPLICED TOGETHER.

(ELECTRICAL DETAILS)

**INDUCTIVE LOOP DETECTOR  
(REPLACEMENT)**

(CITY)  
NO SCALE

**E-10**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR  
 OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 NOOSHIN ANSARI  
 OSWALD ELIZONDO  
 REVISED BY  
 DATE REVISED

**NOTE:** (THIS SHEET ONLY)

ITEMS SHOWN IN THESE TABLES ARE NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	29	71

Nooshin Ansari 10-19-15  
 REGISTERED ELECTRICAL ENGINEER DATE

2-22-16  
 PLANS APPROVAL DATE

NOOSHIN ANSARI  
 No. E17010  
 Exp. 9/30/17  
 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.

LIGHTING (TEMPORARY)						
SHEET No.	WOOD POLE	#4	1#6	1#8(G)	CONDUIT	PULL BOX
	EA	LF	LF	LF	LF	EA
E-1	7	2,400	2,400	3,500	160	2

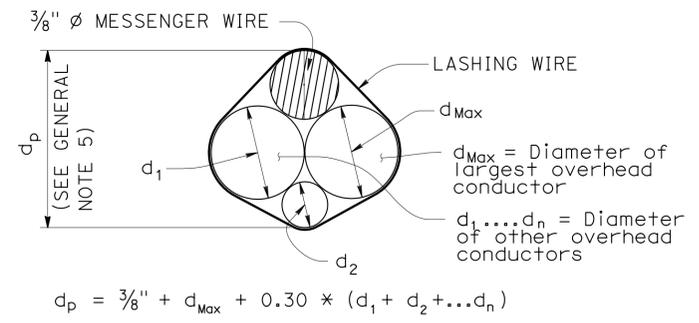
MODIFY LIGHTING AND SIGN ILLUMINATION						
SHEET No.	PULL BOX	CONDUIT	TAMPER RESISTANT COVER	#6	#4	1#8(G)
	EA	LF	EA	LF	LF	LF
E-2	3	400	3	1,200	1,200	3,000

MODIFY RAMP METERING SYSTEM							
SHEET No.	PULL BOX	TAMPER RESISTANT COVER	CONDUIT	1#8(G)	#6	DLC	LOOPS
	EA	EA	LF	LF	LF	LF	EA
E-3	4	4	450	1,600	600	1,200	2

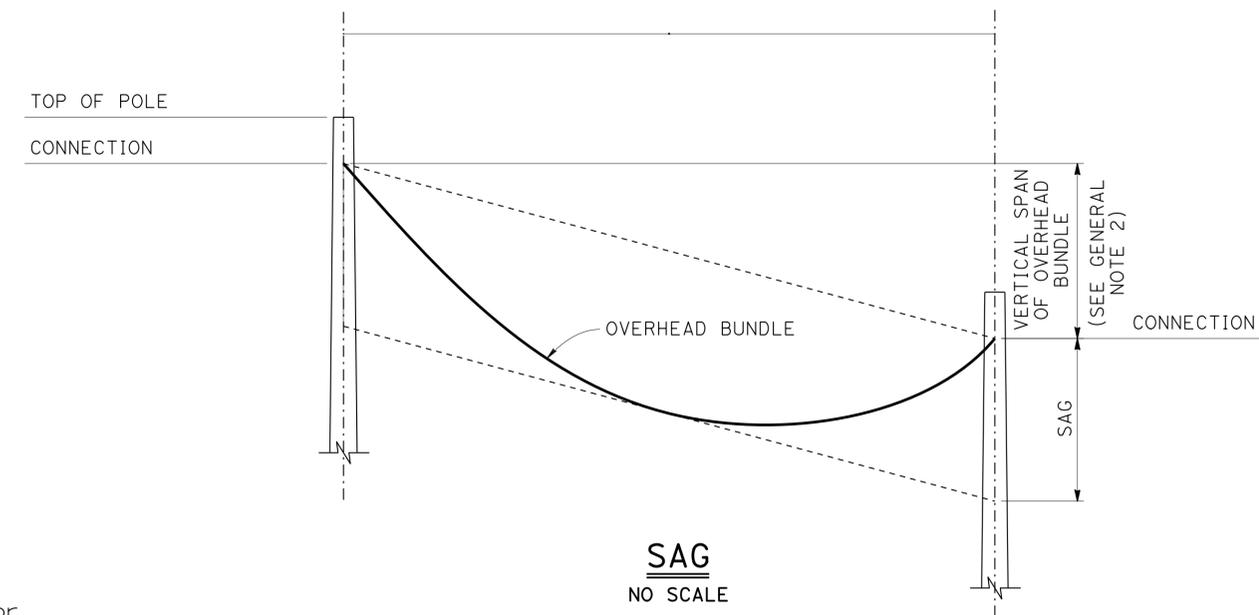
INDUCTIVE LOOP DETECTOR (REPLACEMENT) (CITY)				
SHEET No.	STUB-OUTS	PULL BOX	LOOPS	CONDUIT
	EA	EA	EA	LF
E-4	1	1	3	200

**ELECTRICAL QUANTITIES**





**PROJECTED DEPTH OF OVERHEAD BUNDLE, ( $d_p$ )**



Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Fifth Edition (LTS-5).

**GROUP LOAD COMBINATIONS:**

- I Dead Load
- II Dead Load + Wind Load
- III Dead Load + 0.5 (Wind Load) + Ice Load
- IV Fatigue: Not used

**LOADING:**

Wind Loading: 100 mph (3-second gust)  
Wind Recurrence Interval: 10 years  
Combined height, exposure, and elevated terrain factor = 1.05  
(Exposure C, structure is not located on or over the top half of a ridge, hill, or escarpment)

Ice Loading: 3.0 psf on surfaces, 0.60 in radial thickness of ice at a unit weight of 60 pcf on overhead bundles

**BASIC DESIGN VALUES:**

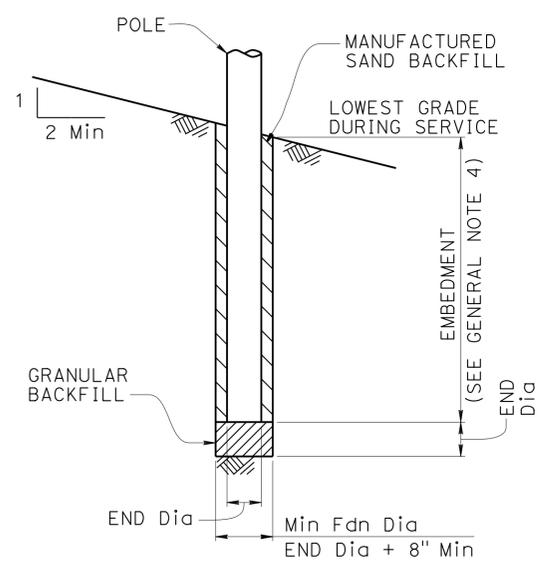
Timber Poles:  $F_b = 1850$  psi  
 $F_v = 110$  psi  
 $F_{cp} = 230$  psi  
 $F_c = 950$  psi  
 $E = 1500 \times 10^3$  psi

**DESIGN WIRE BREAKING STRENGTHS:**

ASTM A475, Utilities Grade, 7 strand modified by termination efficiency factor of 0.8

**FOUNDATION DESIGN NOTES:**

- Pole embedment depth design is based on Broms' approximate procedure as described in Article 13.6 of AASHTO LTS-5.
- Embedment depth is calculated based on following soil parameters,  
Cohesive Soil:  
Shear strength of soil  $c = 1500$  psf.  
Cohesionless Soil:  
 $\phi = 30$  deg,  $\gamma = 120$  pcf.  
Soil assumed to be unsaturated.
- An overload factor of 2.0 and an undercapacity factor of 0.7 were used for safety factor of 2.86.
- Allowable vertical bearing pressure at the end bearing of poles is 3000 psf at 6 feet or more embedment.
- Guy wire anchor minimum allowable tension capacity, "Qa" = 8,900 lbs.



**POLE FOUNDATION**

**GENERAL NOTES:**

- The messenger wire and any combination of overhead conductors must not exceed either a self weight of 3.0 lb/ft or the maximum  $d$  in the pole selection tables.
- The maximum vertical span is 10% of the horizontal span.
- For poles with adjacent unbalanced horizontal spans, the shortest horizontal span must be at least 50% of the largest horizontal span.
- Add 2'-0" for slopes above 1V:4H.
- For a pole supporting multiple spans, calculate  $d_p$  for each span and use the largest value.
- Do not exceed the attachments shown.

**DIAMETERS AND SELF WEIGHT OF OVERHEAD CONDUCTORS**

CONDUCTOR OR CABLE TYPE	DIAMETER $d$ (in)	WEIGHT $w$ (plf)
3 CONDUCTOR SIGNAL CABLE (3CSC)	0.400	0.0980
5 CONDUCTOR SIGNAL CABLE (5CSC)	0.500	0.1560
9 CONDUCTOR SIGNAL CABLE (9CSC)	0.650	0.2760
12 CONDUCTOR SIGNAL CABLE (12CSC)	0.800	0.3970
28 CONDUCTOR SIGNAL CABLE (28CSC)	0.900	0.6490
1-#14	0.166	0.0235
1-#12	0.185	0.0330
1-#10	0.210	0.0476
1-#8	0.271	0.0774
1-#6	0.310	0.1130
1-#4	0.359	0.1690
1-#3	0.388	0.2080
1-#2	0.420	0.2560
1-#1	0.498	0.3340
6-CONDUCTOR SIGNAL INTERCONNECT CABLE (SIC)	0.350	0.0860
12-CONDUCTOR SIGNAL INTERCONNECT CABLE (SIC)	0.500	0.1440
DETECTOR LEAD-IN CABLE (DLC)	0.310	0.0440
12 to 48-STRAND FIBER OPTIC CABLE (48FOC)	0.424	0.0600
72-STRAND FIBER OPTIC CABLE (72FOC)	0.484	0.0770
96-STRAND FIBER OPTIC CABLE (96FOC)	0.535	0.1050
144-STRAND FIBER OPTIC CABLE (144FOC)	0.670	0.1890
$\frac{3}{8}$ " $\phi$ MESSENGER WIRE	0.375	0.2730

NO SCALE

STANDARD DRAWING	
FILE NO. <b>xs18-010</b>	APPROVAL DATE July 2014

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	

DIVISION OF ENGINEERING SERVICES	
BRIDGE NO. NONE	POST MILE R4.8

TEMPORARY WOOD POLES	
GENERAL NOTES	
REVISION DATES	SHEET 1 OF 5

### POLE SELECTION TABLE

### LEGEND

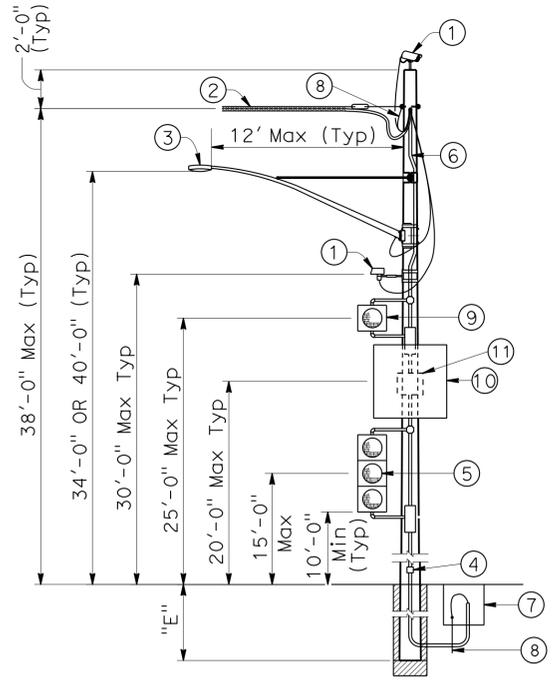
- Wood Pole No Attachments
- Wood Pole with Attachments
- Overhead Bundle

OVERHEAD BUNDLE HORIZONTAL SPAN (Max)	MAXIMUM d <sub>p</sub>	CASE 1N				CASE 2N				CASE 3N				CASE 4N				CASE 5N
		1"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	1.0"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	N/A
50'	MINIMUM POLE CLASS	H-1	H-2	H-2	H-2	4	3	2	1	H-2	H-2	H-3	H-3	H-4	H-4	H-4	H-5	CLASS 1 E = 10'
	POLE EMBEDMENT (E)	11'				10'				11'				12'				
100'	MINIMUM POLE CLASS	H-2	H-3	H-4	H-5	1	H-1	H-2	H-3	H-4	H-5	H-5	H-6	H-5	H-5	H-6		
	POLE EMBEDMENT (E)	12'				11'				12'				12'				
150'	MINIMUM POLE CLASS	H-4	H-5	H-6		H-1	H-2	H-3	H-5	H-6			H-6					
	POLE EMBEDMENT (E)	12'				12'				12'				12'				
200'	MINIMUM POLE CLASS	H-5	H-6			H-2	H-3	H-5										
	POLE EMBEDMENT (E)	12'				12'												

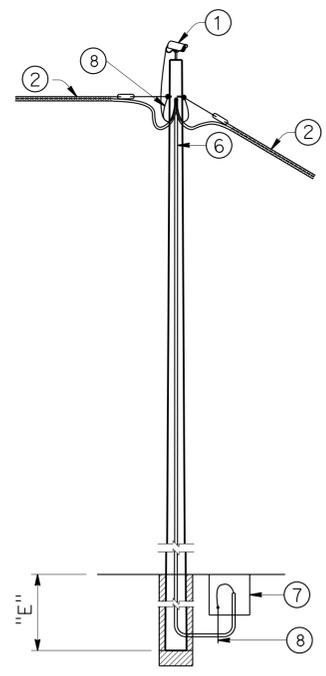
- ① CCTV camera assembly or vehicle detection system
- ② Overhead bundle consisting of a 3/8" ø messenger wire, overhead conductors, and lashing wire
- ③ Luminaire with mast arm
- ④ Pedestrian push button assembly or accessible push button assembly
- ⑤ Signal face with 3 indications or single sheet sign panel (10 SQFT Max)
- ⑥ Riser with weather head as required
- ⑦ Pull box as required
- ⑧ Grounding as required
- ⑨ Single flashing beacon or single sheet sign panel (4 SQFT Max)
- ⑩ Single sheet sign panel (4' x 4' Max) or signal face with 3 indications
- ⑪ Flashing beacon control assembly
- ⑫ NEMA 3R enclosure, 26"(W) x 56"(H) x 12"(D) Max dimensions. Max weight including batteries, 450 lbs
- ⑬ 25' SQFT Max total photovoltaic panels mounted as shown as required
- ⑭ 2-12" flashing beacons

#### NOTES:

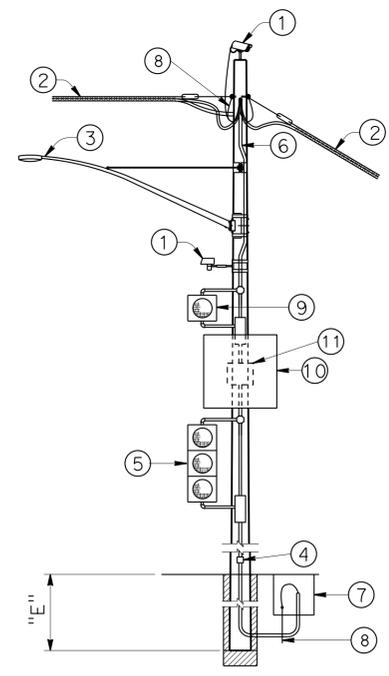
1. In addition to other restrictions on maximum horizontal span, this horizontal span must not exceed 100'.
2. Cases 1N, 3N and 4N may substitute the attachments shown in Case 5N if the photovoltaic panel is not included.
3. For Case 1N without an overhead bundle (item ②) use minimum pole class H-1 with E=11'.



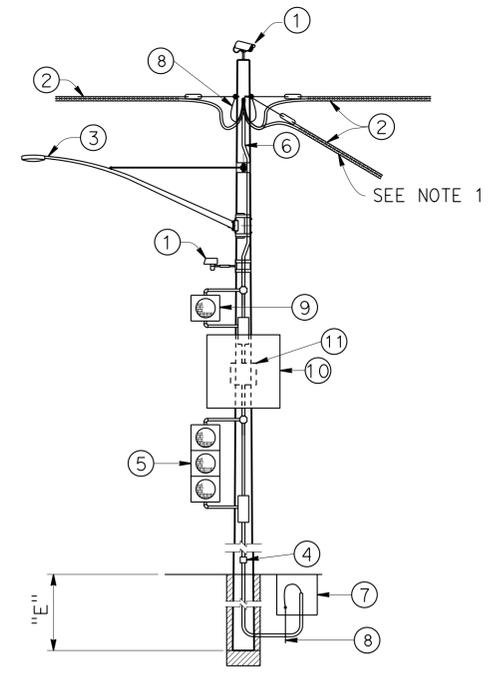
**CASE 1N  
POLE AT DEAD END  
WITH ATTACHMENTS**  
SEE NOTE 2



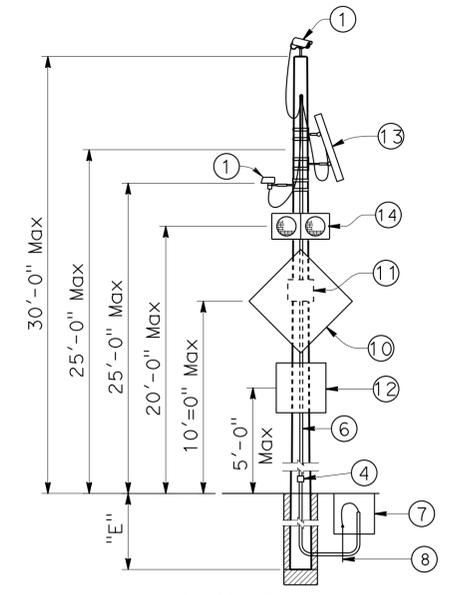
**CASE 2N  
POLE AT TANGENT  
WITHOUT ATTACHMENTS**



**CASE 3N  
POLE AT TANGENT OR CORNER  
WITH ATTACHMENTS**  
SEE NOTE 2



**CASE 4N  
POLE AT JUNCTION  
WITH ATTACHMENTS**  
SEE NOTE 2



**CASE 5N  
POLE WITHOUT OVERHEAD BUNDLE  
WITH ATTACHMENTS**  
NO SCALE

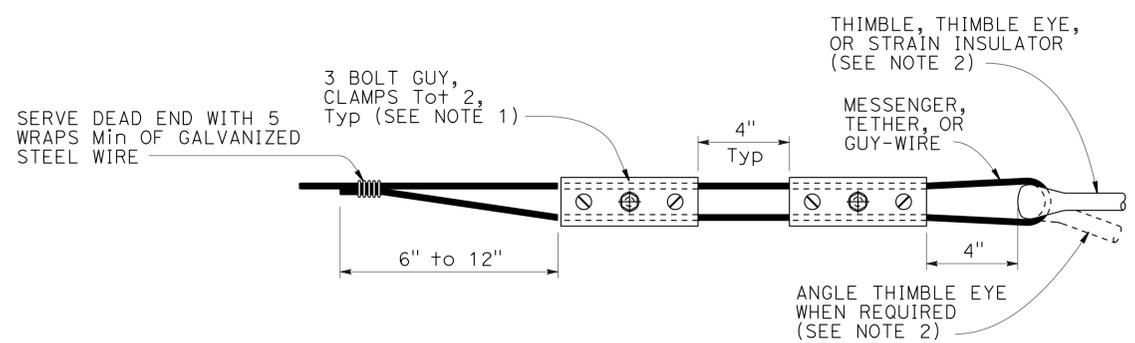
**XS-2**

STANDARD DRAWING	
FILE NO. <b>xs18-020</b>	APPROVAL DATE July 2014

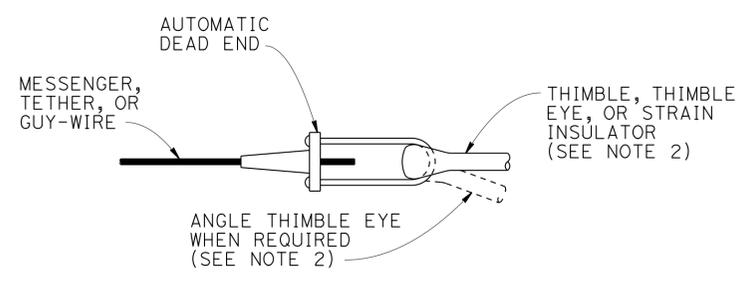
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES
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BRIDGE NO. NONE	TEMPORARY WOOD POLES NON-GUYED - NO SIGNALS ON SPANS
POST MILE R4.8	

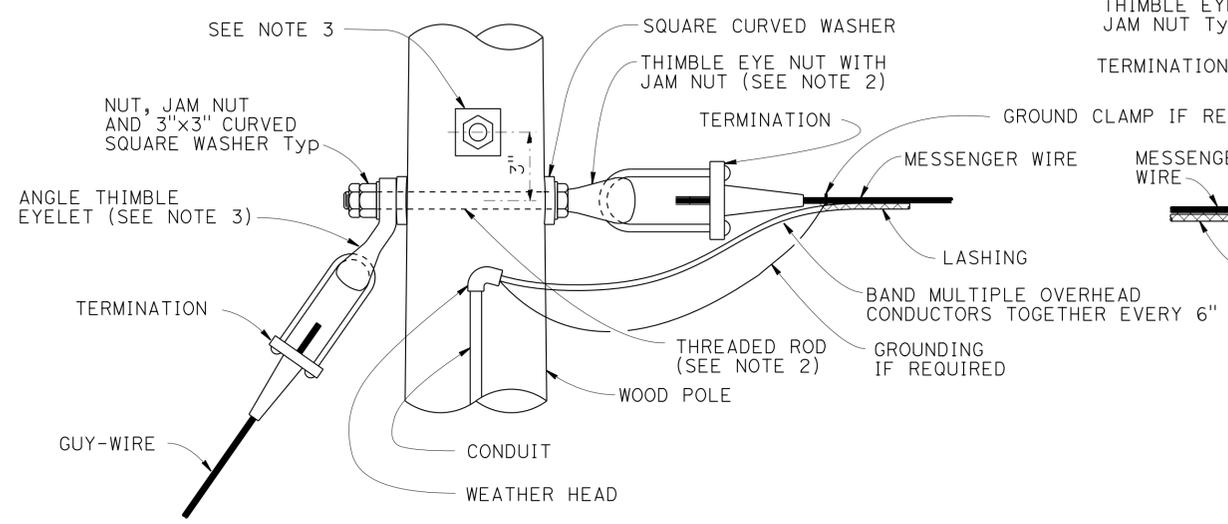
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	32	71
<i>Ricky Lee</i> REGISTERED CIVIL ENGINEER			6/16/15	DATE	
2-22-16 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					
REGISTERED PROFESSIONAL ENGINEER RICKY LEE No. C74591 Exp. 12/31/17 CIVIL STATE OF CALIFORNIA					



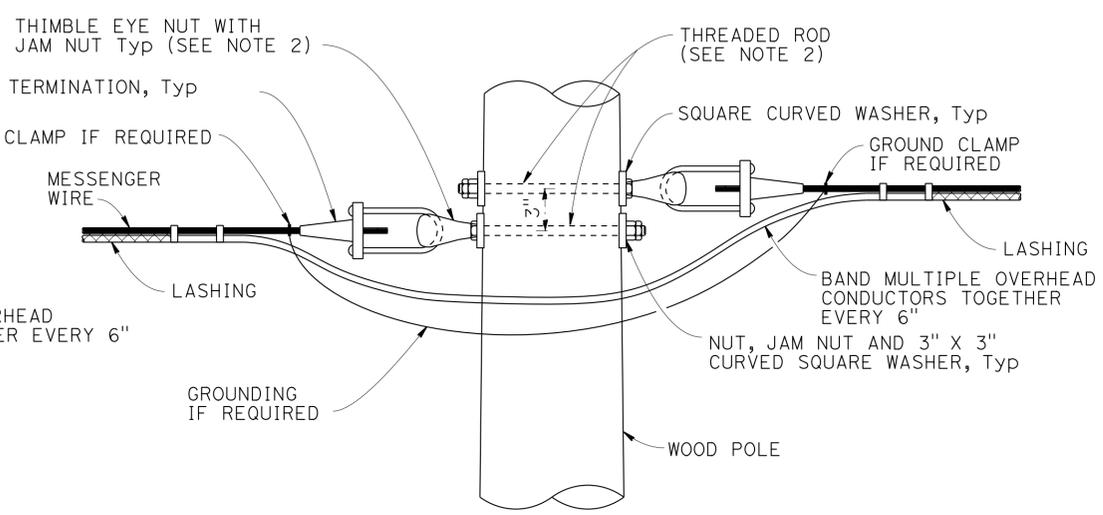
**ALTERNATIVE TERMINATION OF MESSENGER WIRES USING GUY CLAMPS**



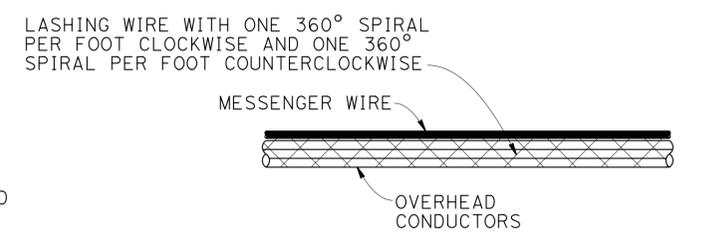
**TERMINATION OF WIRES USING AUTOMATIC DEAD END**



**POLE AT DEAD END WITH GUY-WIRE CONNECTION**

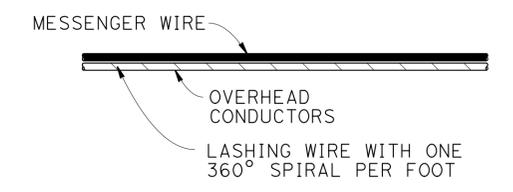


**POLE AT TANGENT OR CORNER CONNECTION**



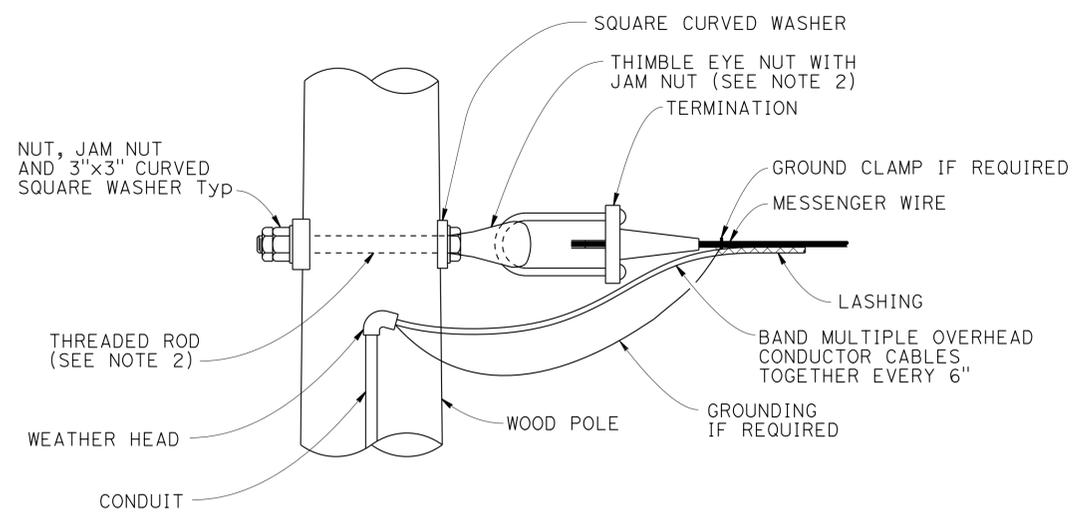
**DOUBLE LASHING DETAIL**

USE IF  $d_p$  IS GREATER THAN  $1/2$ "

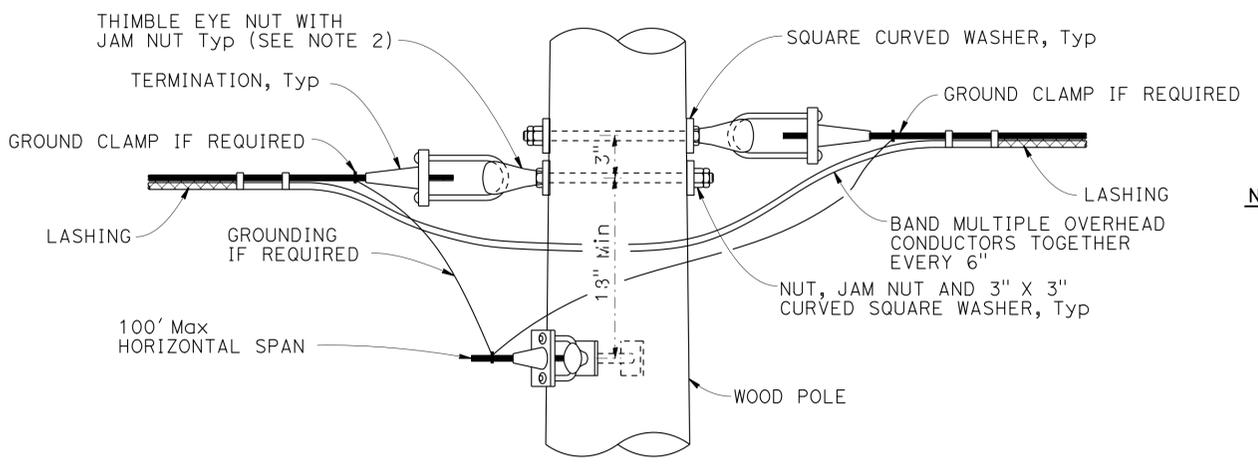


**TYPICAL LASHING DETAIL**

USE IF  $d_p$  IS  $1/2$ " OR LESS



**POLE AT DEAD END CONNECTION**



**POLE AT JUNCTION CONNECTION**

- NOTES:**
- For guy wires use 3 clamps.
  - Use  $5/8$ "  $\phi$  except  $3/4$ "  $\phi$  at guyed wires
  - Install additional angle thimble eyelet at poles with two guy wires.

NO SCALE **XS-3**

STANDARD DRAWING	
FILE NO. <b>xs18-080-1</b>	APPROVAL DATE July 2014

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
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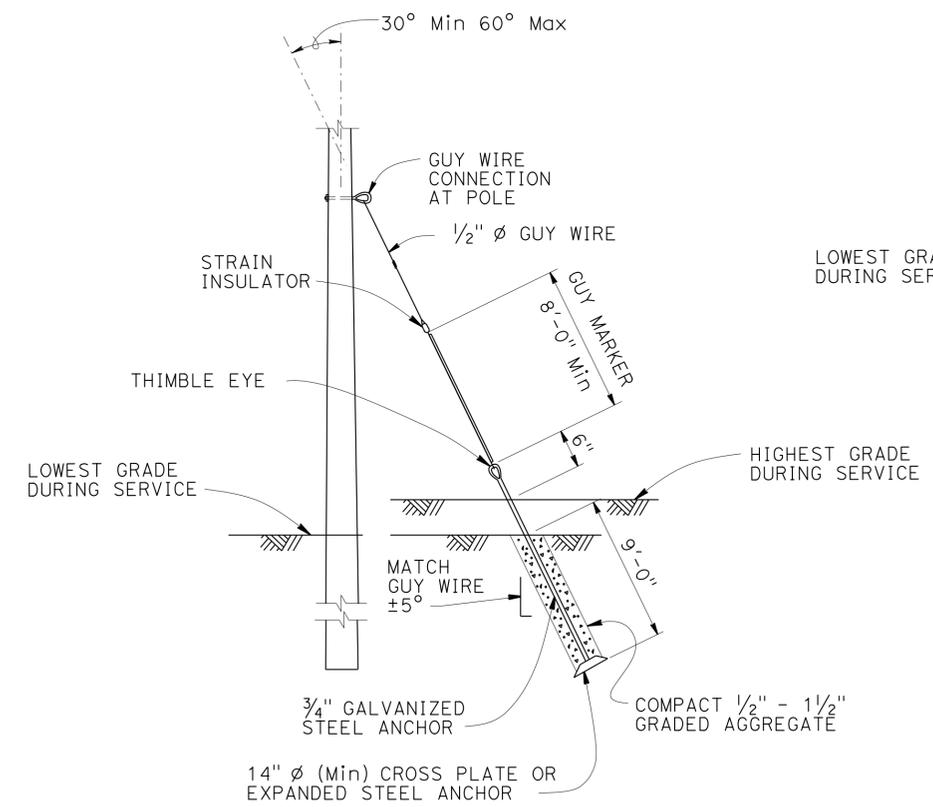
DIVISION OF ENGINEERING SERVICES	
BRIDGE NO. NONE	POST MILE R4.8

TEMPORARY WOOD POLES DETAILS No. 1	
REVISION DATES	SHEET 3 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	33	71
<i>Ricky Lee</i> REGISTERED CIVIL ENGINEER			6/16/15	DATE	
2-22-16 PLANS APPROVAL DATE					
REGISTERED PROFESSIONAL ENGINEER <b>RICKY LEE</b> No. C74591 Exp. 12/31/17 CIVIL STATE OF CALIFORNIA					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

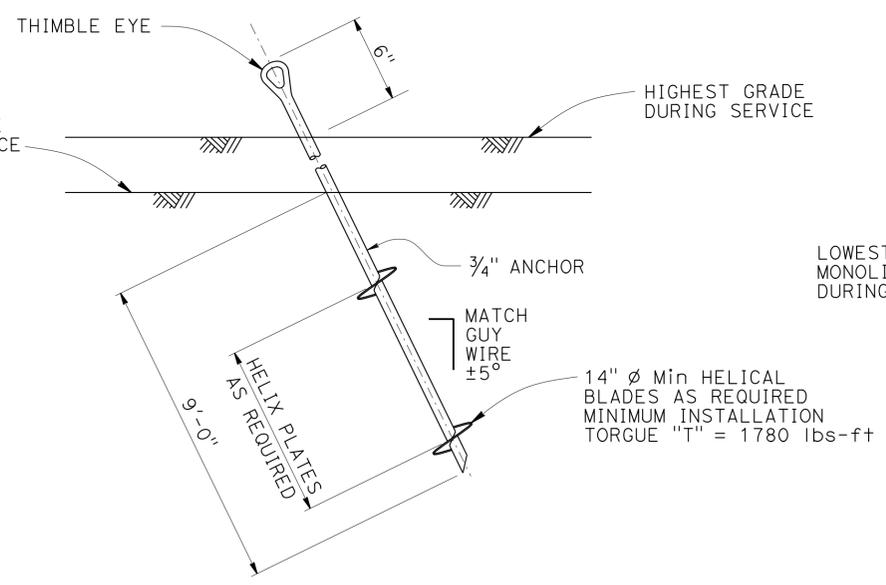
**NOTE:**

1. For minimum allowable tension capacity of anchors see "Temporary Wood Poles - General Notes" sheet.

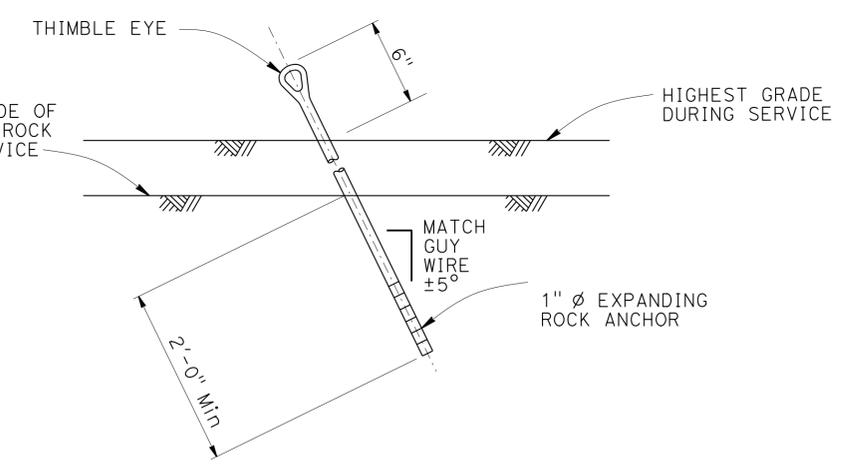


**NOTE:**  
Helical anchor detail may be used in place of expanded steel anchors.

**EXPANDED STEEL ANCHOR DETAIL**



**HELICAL ANCHOR DETAIL**



**EXPANDING ROCK ANCHOR DETAIL**

NO SCALE

**XS-4**

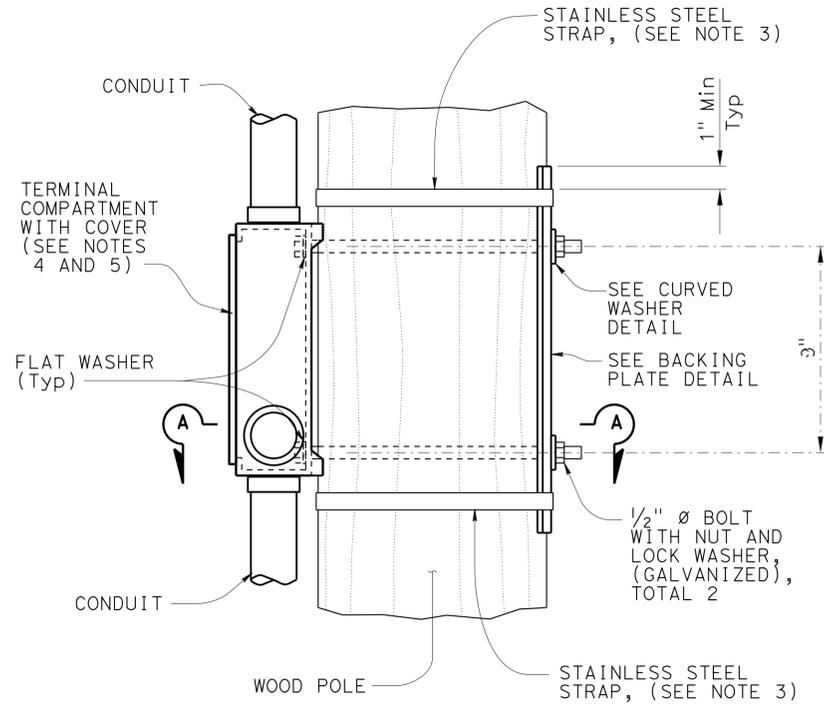
STANDARD DRAWING	
FILE NO. <b>xs18-080-2</b>	APPROVAL DATE <u>July 2014</u>

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
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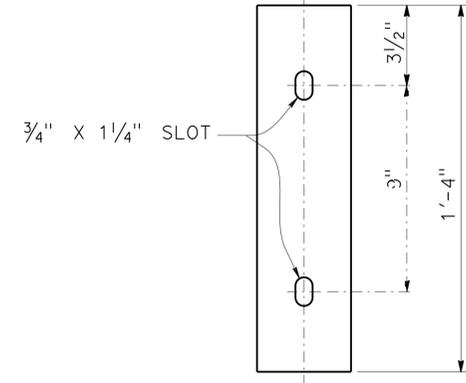
DIVISION OF ENGINEERING SERVICES	
BRIDGE NO. NONE	POST MILE R4.8

TEMPORARY WOOD POLES DETAILS No. 2	
BRIDGE NO. NONE	POST MILE R4.8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	34	71
<i>Ricky Lee</i> REGISTERED CIVIL ENGINEER			6/16/15	DATE	
2-22-16 PLANS APPROVAL DATE					
REGISTERED PROFESSIONAL ENGINEER <b>RICKY LEE</b> No. C74591 Exp. 12/31/17 CIVIL STATE OF CALIFORNIA					
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ELEVATION

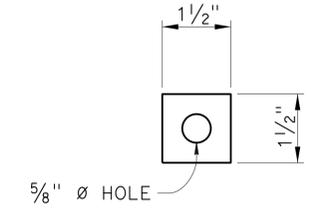


ELEVATION

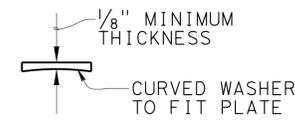


PLAN

BACKING PLATE DETAIL



ELEVATION

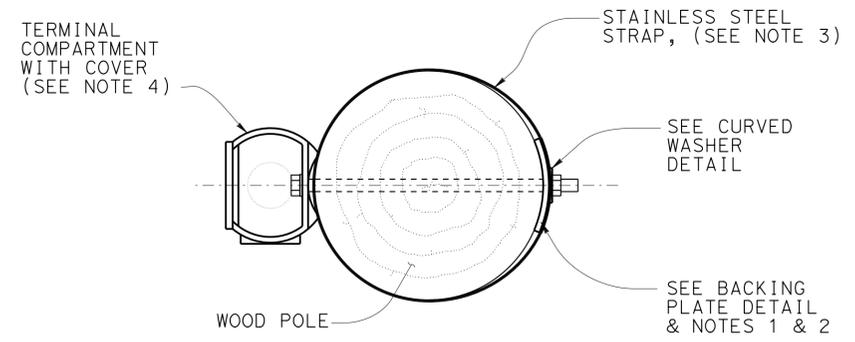


PLAN

CURVED WASHER DETAIL

NOTES:

1. Verify pole dimensions at terminal compartment for fabrication of backing plate and curved washer.
2. Backing plate to be galvanized after fabrication.
3. 3/4" x 0.044" minimum, rounded edge stainless steel straps, double wrapped with 2" long bend under stainless steel strap buckle.
4. For miscellaneous details for signal mounting not shown see Standard Plan ES-4D.
5. If the terminal compartment has a cable entry guide on the rear face, remove the cable entry guide to a level that will not interfere with the wood post. Close any unused cable entry locations with raintight cap.



SECTION A-A

SIDE MOUNTING  
TERMINAL COMPARTMENT

NO SCALE

**XS-5**

STANDARD DRAWING	
FILE NO. <b>xs18-080-4</b>	APPROVAL DATE <u>July 2014</u>

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
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DIVISION OF ENGINEERING SERVICES	
BRIDGE NO.	NONE
POST MILE	R4.8

TEMPORARY WOOD POLES	
DETAILS No. 4	

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	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
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	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

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
Qty	QUANTITY
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	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	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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	35	71
<i>Grace M. Tsushima</i> REGISTERED CIVIL ENGINEER					
July 19, 2013 PLANS APPROVAL DATE					
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TO ACCOMPANY PLANS DATED 2-22-16

**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 <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
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
07	LA	118	R4.8	36	71

  
 CERTIFIED ENGINEERING GEOLOGIST  
 October 30, 2015  
 PLANS APPROVAL DATE  
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REGISTERED GEOLOGIST  
 CHRIS A. RISDEN  
 CERTIFIED ENGINEERING GEOLOGIST  
 No. 2541  
 Exp. 9-30-17  
 STATE OF CALIFORNIA

CEMENTATION	
DESCRIPTION	CRITERIA
WEAK	CRUMBLES OR BREAKS WITH HANDLING OR LITTLE FINGER PRESSURE.
MODERATE	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE.
STRONG	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE.

**ABBREVIATION:**

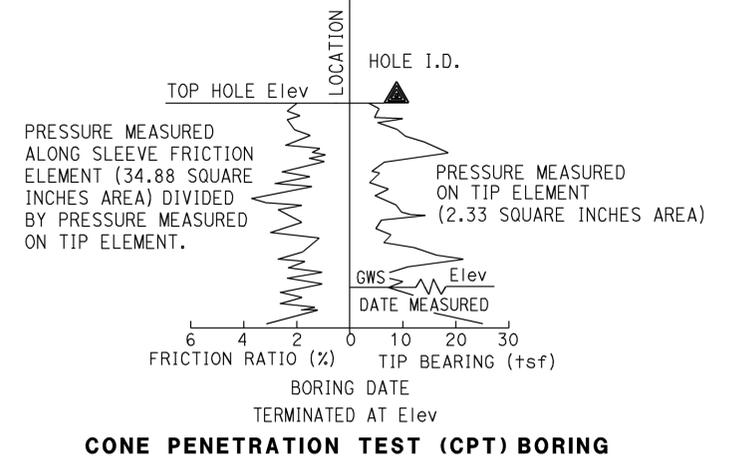
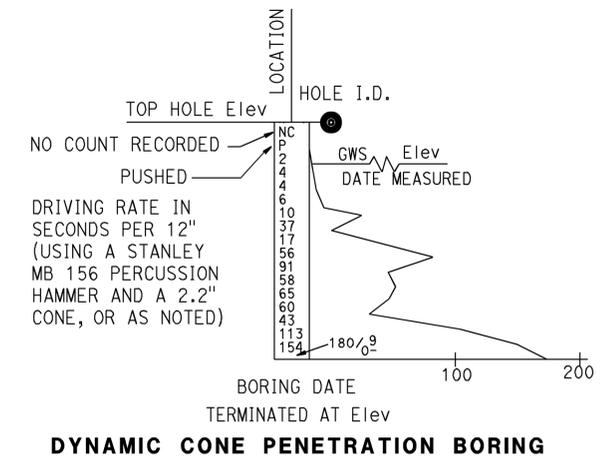
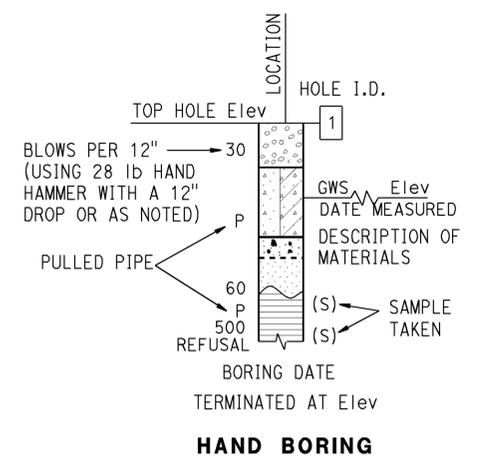
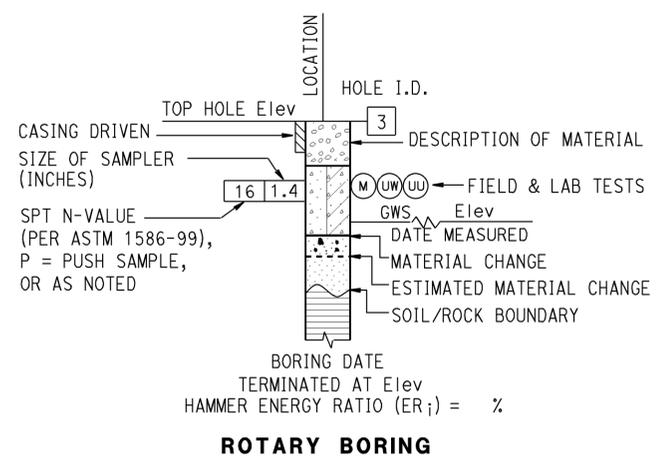
GWS = Ground Water Surface

TO ACCOMPANY PLANS DATED 2-22-16

BOREHOLE IDENTIFICATION		
SYMBOL	HOLE TYPE	DESCRIPTION
	A	AUGER BORING (HOLLOW OR SOLID STEM BUCKET)
	R	ROTARY DRILLED BORING (CONVENTIONAL)
	RW	ROTARY DRILLED WITH SELF-CASING WIRE-LINE
	RC	ROTARY CORE WITH CONTINUOUSLY-SAMPLED, SELF-CASING WIRE-LINE
	P	ROTARY PERCUSSION BORING (AIR)
	R	ROTARY DRILLED DIAMOND CORE
	RC	ROTARY DRILLED DIAMOND CORE, CONTINUOUSLY SAMPLED
	HD	HAND DRIVEN (1-INCH SOIL TUBE)
	HA	HAND AUGER
	D	DYNAMIC CONE PENETRATION BORING
	CPT	CONE PENETRATION TEST (ASTM D 5778)
	O	OTHER (NOTE ON LOTB)

Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS				
DESCRIPTION	SHEAR STRENGTH (tsf)	POCKET PENETROMETER MEASUREMENT, PP, (tsf)	TORVANE MEASUREMENT, TV, (tsf)	VANE SHEAR MEASUREMENT, VS, (tsf)
VERY SOFT	LESS THAN 0.12	LESS THAN 0.25	LESS THAN 0.12	LESS THAN 0.12
SOFT	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
MEDIUM STIFF	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
STIFF	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
VERY STIFF	1 - 2	2 - 4	1 - 2	1 - 2
HARD	GREATER THAN 2	GREATER THAN 4	GREATER THAN 2	GREATER THAN 2



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LEGEND - SOIL (SHEET 1 OF 2)**  
 NO SCALE

RSP A10F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A10F DATED MAY 20, 2011 - PAGE 6 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A10F**

2010 REVISED STANDARD PLAN RSP A10F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	37	71

*Chris A. Risden*  
 CERTIFIED ENGINEERING GEOLOGIST  
 October 30, 2015  
 PLANS APPROVAL DATE

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REGISTERED GEOLOGIST  
 CHRIS A. RISDEN  
 No. 2541  
 Exp. 9-30-17  
 STATE OF CALIFORNIA

GROUP SYMBOLS AND NAMES					
GRAPHIC/SYMBOL	GROUP NAMES	GRAPHIC/SYMBOL	GROUP NAMES	GRAPHIC/SYMBOL	GROUP NAMES
	GW WELL-GRADED GRAVEL WELL-GRADED GRAVEL WITH SAND		CL LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL SANDY LEAN CLAY SANDY LEAN CLAY WITH GRAVEL GRAVELLY LEAN CLAY GRAVELLY LEAN CLAY WITH SAND		GP POORLY-GRADED GRAVEL POORLY-GRADED GRAVEL WITH SAND
	GW-GM WELL-GRADED GRAVEL WITH SILT WELL-GRADED GRAVEL WITH SILT AND SAND		CL-ML SILTY CLAY SILTY CLAY WITH SAND SILTY CLAY WITH GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY WITH GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY WITH SAND		GP-GM POORLY-GRADED GRAVEL WITH SILT POORLY-GRADED GRAVEL WITH SILT AND SAND
	GW-GC WELL-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) WELL-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)		ML SILT SILT WITH SAND SILT WITH GRAVEL SANDY SILT SANDY SILT WITH GRAVEL GRAVELLY SILT GRAVELLY SILT WITH SAND		GP-GC POORLY-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) POORLY-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)
	GM SILTY GRAVEL SILTY GRAVEL WITH SAND		OL ORGANIC LEAN CLAY ORGANIC LEAN CLAY WITH SAND ORGANIC LEAN CLAY WITH GRAVEL SANDY ORGANIC LEAN CLAY SANDY ORGANIC LEAN CLAY WITH GRAVEL GRAVELLY ORGANIC LEAN CLAY GRAVELLY ORGANIC LEAN CLAY WITH SAND		GC CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND
	GC-GM SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL WITH SAND		OL ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT WITH GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT WITH SAND		SW WELL-GRADED SAND WELL-GRADED SAND WITH GRAVEL
	SP POORLY-GRADED SAND POORLY-GRADED SAND WITH GRAVEL		CH FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL SANDY FAT CLAY SANDY FAT CLAY WITH GRAVEL GRAVELLY FAT CLAY GRAVELLY FAT CLAY WITH SAND		SW-SM WELL-GRADED SAND WITH SILT WELL-GRADED SAND WITH SILT AND GRAVEL
	SW-SC WELL-GRADED SAND WITH CLAY (OR SILTY CLAY) WELL-GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)		MH ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL SANDY ELASTIC SILT SANDY ELASTIC SILT WITH GRAVEL GRAVELLY ELASTIC SILT GRAVELLY ELASTIC SILT WITH SAND		SP-SM POORLY-GRADED SAND WITH SILT POORLY-GRADED SAND WITH SILT AND GRAVEL
	SP-SC POORLY-GRADED SAND WITH CLAY (OR SILTY CLAY) POORLY-GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)		OH ORGANIC FAT CLAY ORGANIC FAT CLAY WITH SAND ORGANIC FAT CLAY WITH GRAVEL SANDY ORGANIC FAT CLAY SANDY ORGANIC FAT CLAY WITH GRAVEL GRAVELLY ORGANIC FAT CLAY GRAVELLY ORGANIC FAT CLAY WITH SAND		SM SILTY SAND SILTY SAND WITH GRAVEL
	SC CLAYEY SAND CLAYEY SAND WITH GRAVEL		OH ORGANIC ELASTIC SILT ORGANIC ELASTIC SILT WITH SAND ORGANIC ELASTIC SILT WITH GRAVEL SANDY ORGANIC ELASTIC SILT SANDY ORGANIC ELASTIC SILT WITH GRAVEL GRAVELLY ORGANIC ELASTIC SILT GRAVELLY ORGANIC ELASTIC SILT WITH SAND		SC-SM SILTY, CLAYEY SAND SILTY, CLAYEY SAND WITH GRAVEL
	PT PEAT		OL/OH ORGANIC SOIL ORGANIC SOIL WITH SAND ORGANIC SOIL WITH GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL WITH GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL WITH SAND		COBBLES COBBLES AND BOULDERS BOULDERS

FIELD AND LABORATORY TESTING	
(C)	CONSOLIDATION (ASTM D2435)
(CL)	COLLAPSE POTENTIAL (ASTM D4546)
(CP)	COMPACTION CURVE (CTM 216)
(CR)	CORROSIVITY TESTING (CTM 643, CTM 422, CTM 417)
(CU)	CONSOLIDATED UNDRAINED TRIAXIAL (ASTM D4767)
(DS)	DIRECT SHEAR (ASTM D3080)
(EI)	EXPANSION INDEX (ASTM D4829)
(M)	MOISTURE CONTENT (ASTM D2216)
(OC)	ORGANIC CONTENT-% (ASTM D2974)
(P)	PERMEABILITY (CTM 220)
(PA)	PARTICLE SIZE ANALYSIS (ASTM D422)
(PI)	PLASTICITY INDEX (AASHTO T 90) LIQUID LIMIT (AASHTO T 89)
(PL)	POINT LOAD INDEX (ASTM D5731)
(PM)	PRESSURE METER
(R)	R-VALUE (CTM 301)
(SE)	SAND EQUIVALENT (CTM 217)
(SG)	SPECIFIC GRAVITY (AASHTO T 100)
(SL)	SHRINKAGE LIMIT (ASTM D4943)
(SW)	SWELL POTENTIAL (ASTM D4546)
(UC)	UNCONFINED COMPRESSION-SOIL (ASTM D2166) UNCONFINED COMPRESSION-ROCK (ASTM D7012 - METHOD C)
(UU)	UNCONSOLIDATED UNDRAINED TRIAXIAL (ASTM D2850)
(UW)	UNIT WEIGHT (ASTM D7263 - METHOD B)

TO ACCOMPANY PLANS DATED 2-22-16

APPARENT DENSITY OF COHESIONLESS SOILS	
DESCRIPTION	SPT N <sub>60</sub> (BLOWS / 12 INCHES)
VERY LOOSE	0 - 5
LOOSE	5 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	GREATER THAN 50

MOISTURE	
DESCRIPTION	CRITERIA
DRY	NO DISCERNABLE MOISTURE
MOIST	MOISTURE PRESENT, BUT NO FREE WATER
WET	VISIBLE FREE WATER

PERCENT OR PROPORTION OF SOILS	
DESCRIPTION	CRITERIA
TRACE	PARTICLES ARE PRESENT BUT ESTIMATED TO BE LESS THAN 5%
FEW	5% - 10%
LITTLE	15% - 25%
SOME	30% - 45%
MOSTLY	50% - 100%

PARTICLE SIZE		
DESCRIPTION	SIZE	
BOULDER	GREATER THAN 12"	
COBBLE	3" - 12"	
GRAVEL	COARSE	3/4" - 3"
	FINE	1/5" - 3/4"
SAND	COARSE	1/16" - 1/5"
	MEDIUM	1/64" - 1/16"
	FINE	1/300" - 1/64"
SILT AND CLAY	LESS THAN 1/300"	

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LEGEND - SOIL**  
**(SHEET 2 OF 2)**  
 NO SCALE

RSP A10G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A10G DATED MAY 20, 2011 - PAGE 7 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A10G**

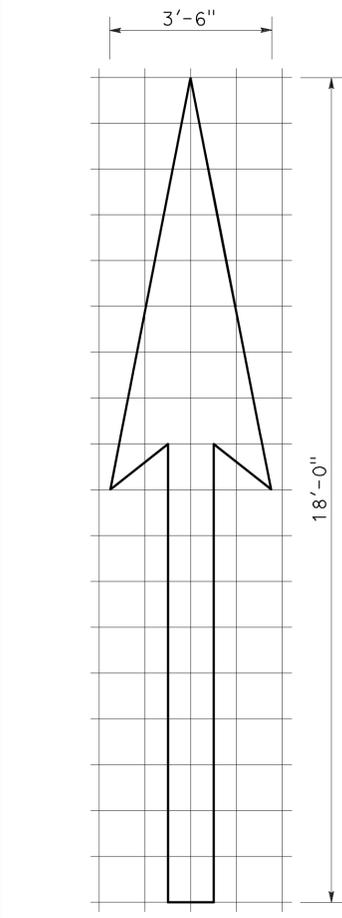
2010 REVISED STANDARD PLAN RSP A10G

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	38	71

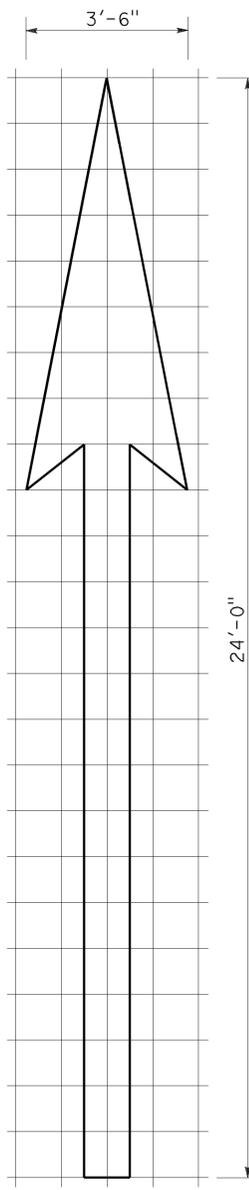
*Roberta L. McLaughlin*  
 REGISTERED CIVIL ENGINEER  
 April 20, 2012  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Roberta L. McLaughlin  
 No. C40375  
 Exp. 3-31-13  
 CIVIL  
 STATE OF CALIFORNIA

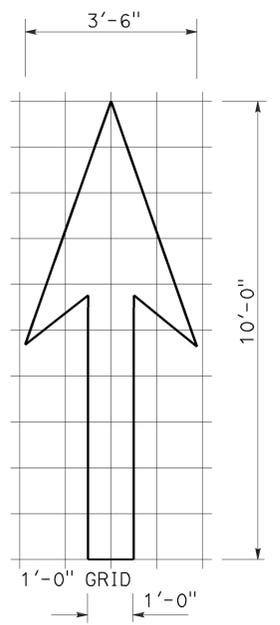
TO ACCOMPANY PLANS DATED 2-22-16



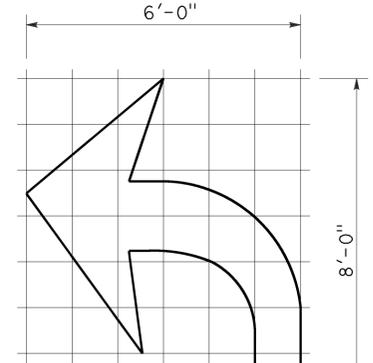
A=25 ft<sup>2</sup>  
**TYPE I 18'-0" ARROW**



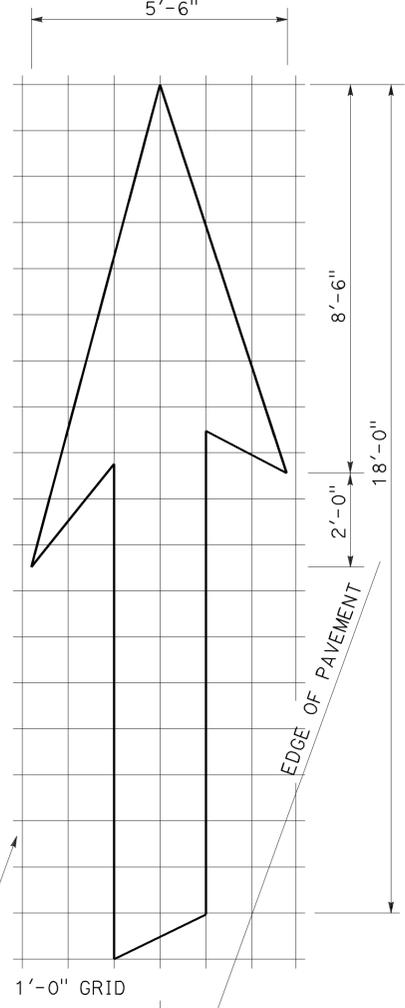
A=31 ft<sup>2</sup>  
**TYPE I 24'-0" ARROW**



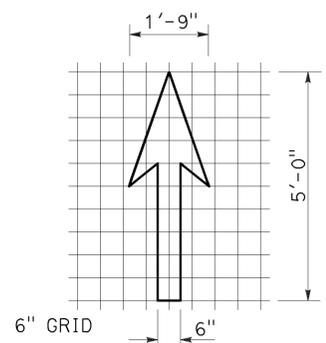
A=14 ft<sup>2</sup>  
**TYPE I 10'-0" ARROW**



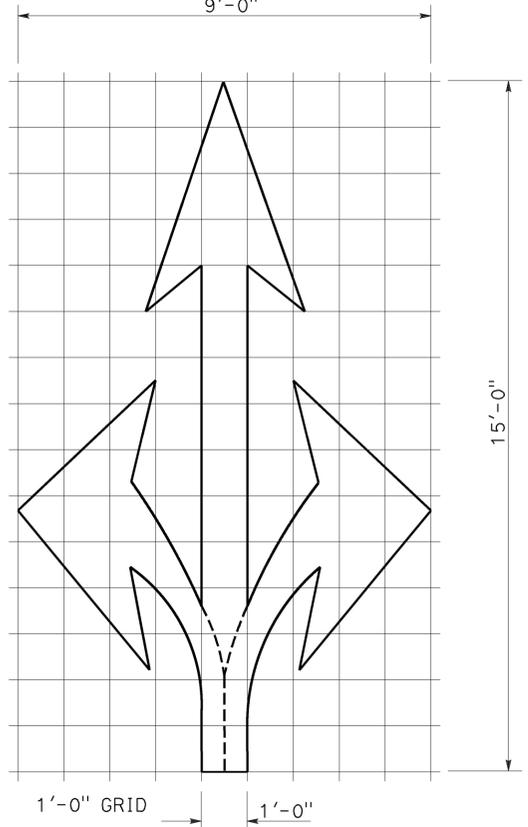
A=15 ft<sup>2</sup>  
**TYPE IV (L) ARROW**  
 (For Type IV (R) arrow, use mirror image)



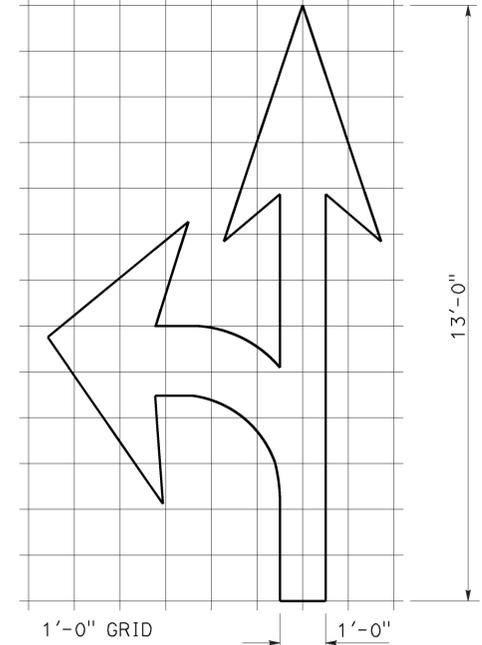
A=42 ft<sup>2</sup>  
**TYPE VI ARROW**  
 Right lane drop arrow  
 (For left lane, use mirror image)



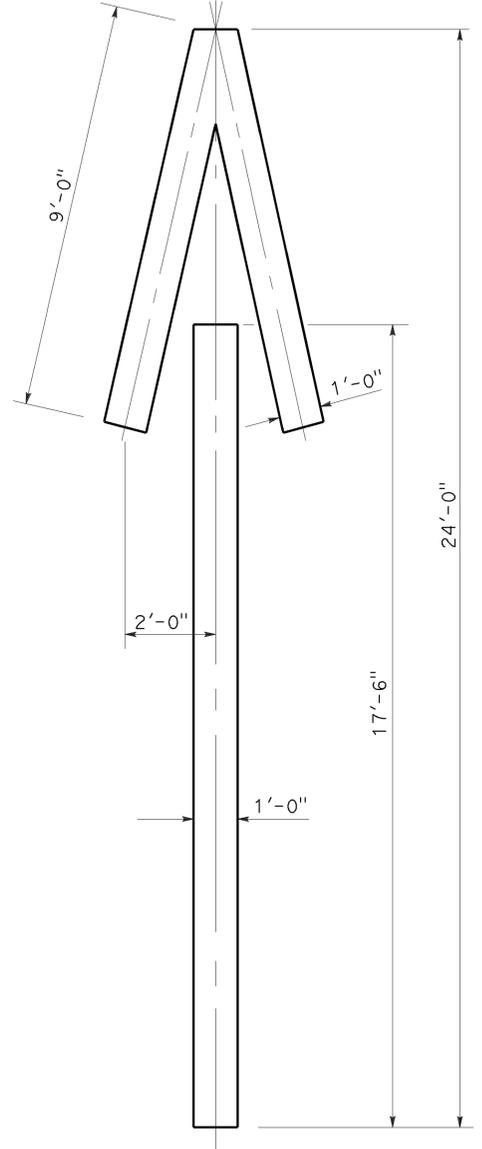
A=3.5 ft<sup>2</sup>  
**BIKE LANE ARROW**



A=36 ft<sup>2</sup>  
**TYPE VIII ARROW**



A=27 ft<sup>2</sup>  
**TYPE VII (L) ARROW**  
 (For Type VII (R) arrow, use mirror image)



A=33 ft<sup>2</sup>  
**TYPE V ARROW**

**NOTE:**  
 Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS  
 ARROWS**  
 NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A24A**

2010 REVISED STANDARD PLAN RSP A24A

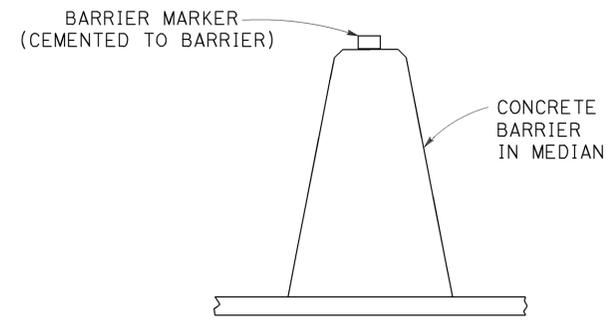
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	39	71

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

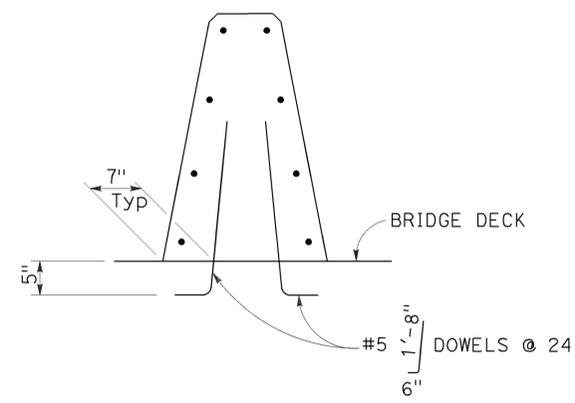
October 30, 2015  
PLANS APPROVAL DATE

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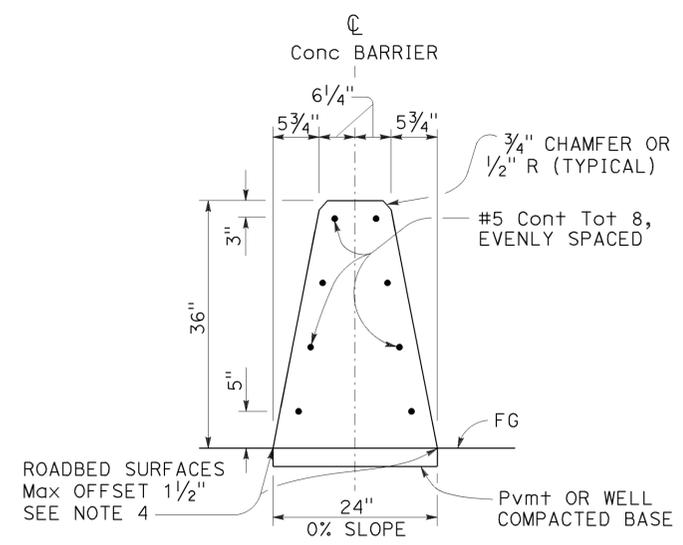
TO ACCOMPANY PLANS DATED 2-22-16



**CONCRETE BARRIER TYPE 60 DELINEATION**  
See Note 5



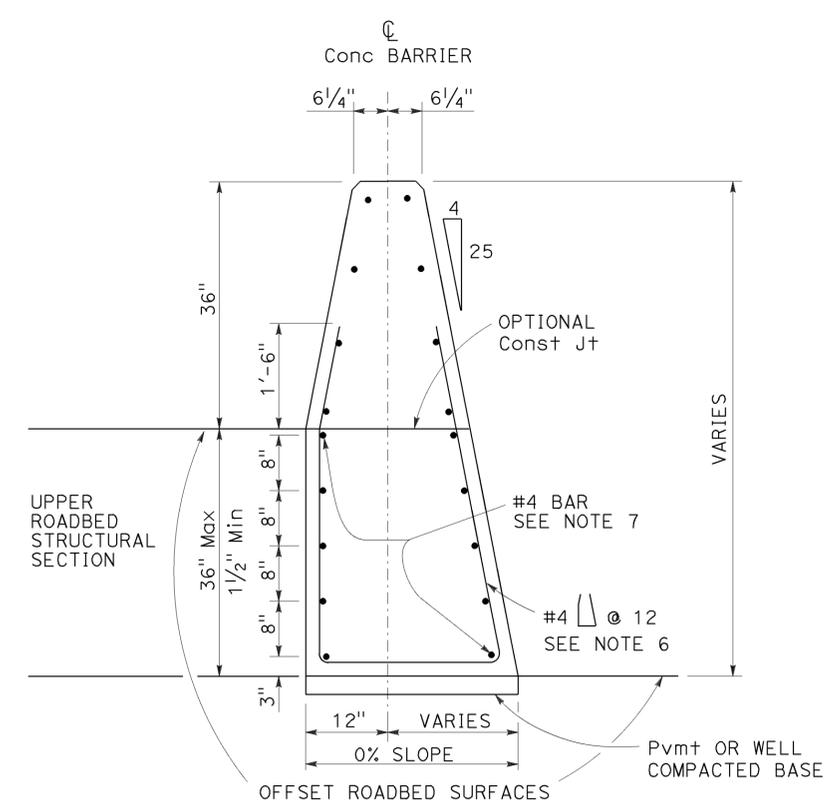
**CONCRETE BARRIER TYPE 60A**  
Details similar to Type 60 except as noted.



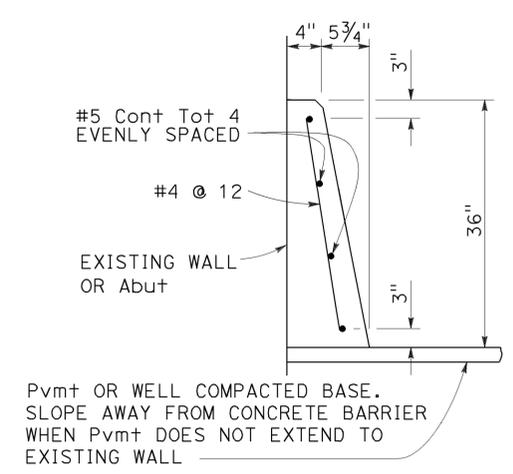
**CONCRETE BARRIER TYPE 60**

**NOTES:**

1. See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
2. See Revised Standard Plan RSP A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
3. Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
4. Where roadbed offset is greater than 1 1/2", see Concrete Barrier Type 60C.
5. See Project Plans for barrier delineation locations.
6. Reinforcing stirrup not required for roadbed offsets less than 1'-0".
7. For roadbed surfaces offset greater than 1 1/2" and less than or equal to 3", no reinforcement required. For roadbed surfaces offset greater than 3" and less than or equal to 8", use two #4 Reinf at 3" above the lower roadbed surface. For roadbed surfaces offset greater than 8" and less than or equal to 12", use two #4 Reinf at 3" above the lower roadbed surface and two #4 Reinf at 8" above the lower roadbed surface. For roadbed surfaces offset greater than 12" and less than or equal to 36", use two #4 Reinf at 3" above the lower roadbed surface and two #4 Reinf at every 8" increment vertical spacing above the first two #4 Reinf.



**CONCRETE BARRIER TYPE 60C**  
Details similar to Type 60 except as noted.  
Use concrete barrier end anchor when necessary.  
36" roadbed surfaces offset shown.



**CONCRETE BARRIER TYPE 60D**

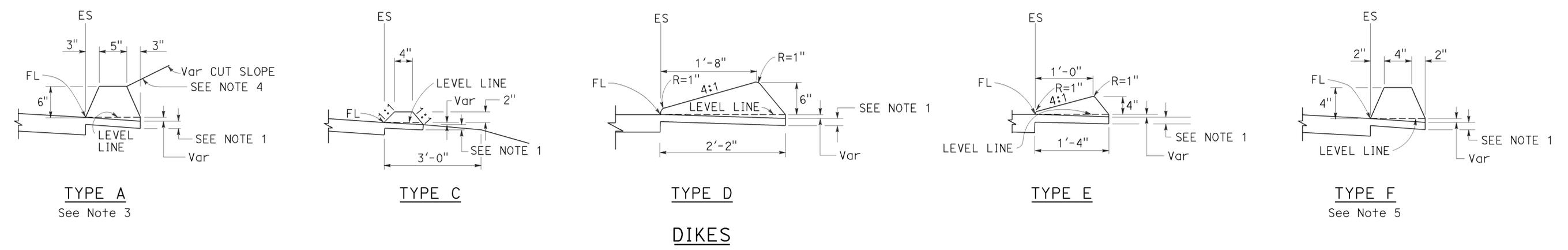
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONCRETE BARRIER TYPE 60**  
NO SCALE

RSP A76A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A76A DATED MAY 20, 2011 - PAGE 34 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A76A**

2010 REVISED STANDARD PLAN RSP A76A

TO ACCOMPANY PLANS DATED 2-22-16



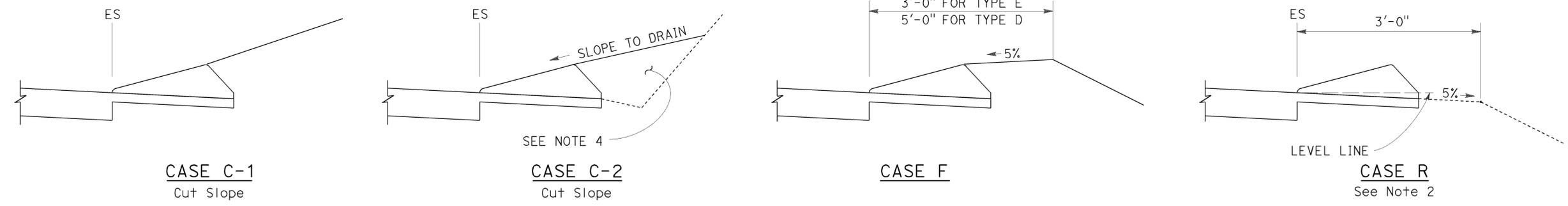
**TYPE A**  
See Note 3

**TYPE C**

**TYPE D**

**TYPE E**

**TYPE F**  
See Note 5



**CASE C-1**  
Cut Slope

**CASE C-2**  
Cut Slope

**CASE F**

**CASE R**  
See Note 2

**TYPE D AND E BACKFILL DETAILS**

**NOTES:**

- For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
- Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
- Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
- Fill and compact with excavated material to top of dike.
- Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

**DIKE QUANTITIES**

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

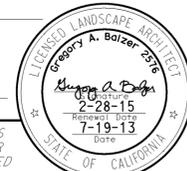
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**HOT MIX ASPHALT DIKES**  
NO SCALE

RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B  
DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A87B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	41	71

  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
  
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TO ACCOMPANY PLANS DATED 2-22-16

**A**

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

**B**

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

**C**

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

**D**

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

**E**

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

**F**

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

**G**

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

**H**

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

**I**

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

**L**

L LENGTH

**M**

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

**N**

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

**O**

O/C ON CENTER  
 OD OUTSIDE DIAMETER  
 OL OVERLAP

**P**

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

**Q**

Q QUARTER CIRCLE  
 QCV QUICK COUPLING VALVE

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

**R**

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

**S**

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

**T**

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

**U**

UG UNDERGROUND

**W**

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

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

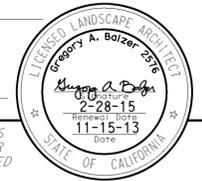
RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H1**

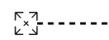
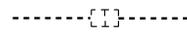
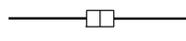
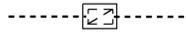
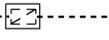
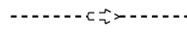
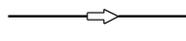
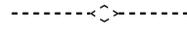
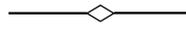
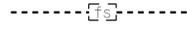
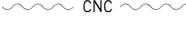
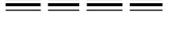
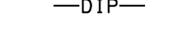
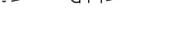
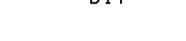
2010 REVISED STANDARD PLAN RSP H1

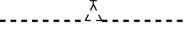
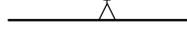
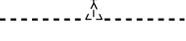
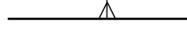
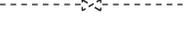
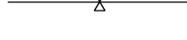
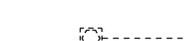
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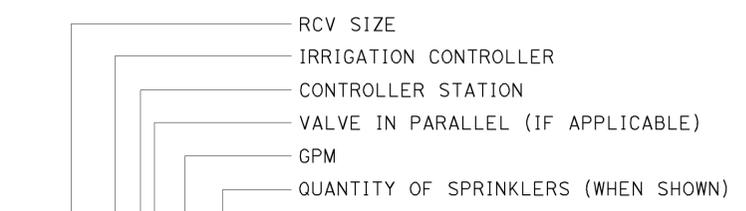
  
 LICENSED LANDSCAPE ARCHITECT  
 November 15, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TO ACCOMPANY PLANS DATED 2-22-16

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

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



\* 2 1/2" - A - 2b - 40 - 60

**VALVE CODE**

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

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

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

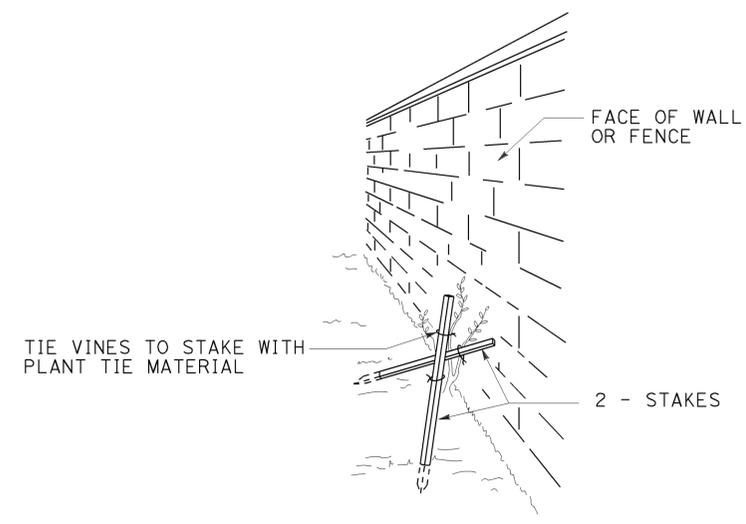
**REVISED STANDARD PLAN RSP H2**

2010 REVISED STANDARD PLAN RSP H2

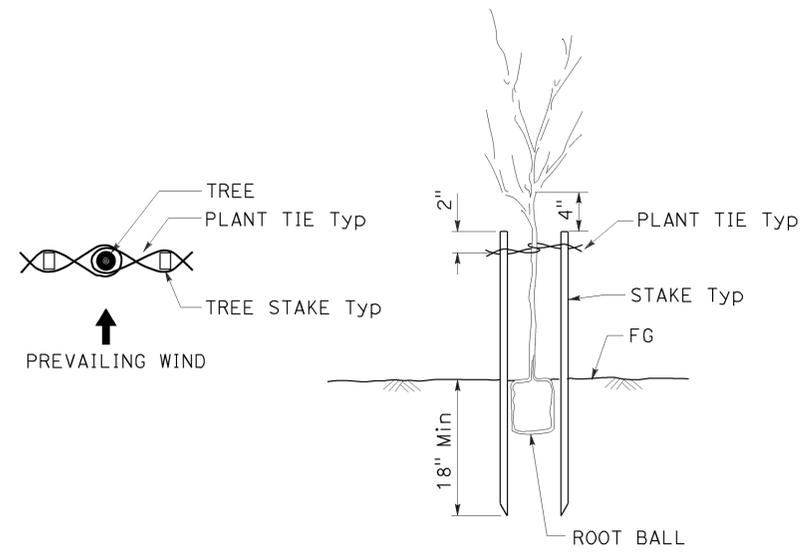
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	43	71

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

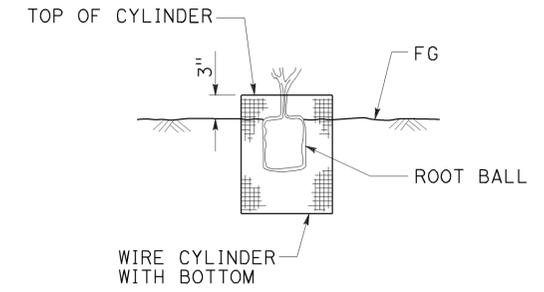
TO ACCOMPANY PLANS DATED 2-22-16



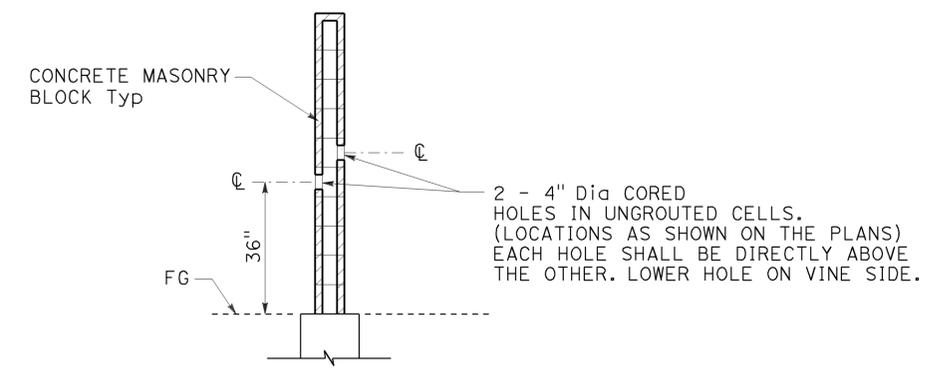
PERSPECTIVE  
VINE STAKING



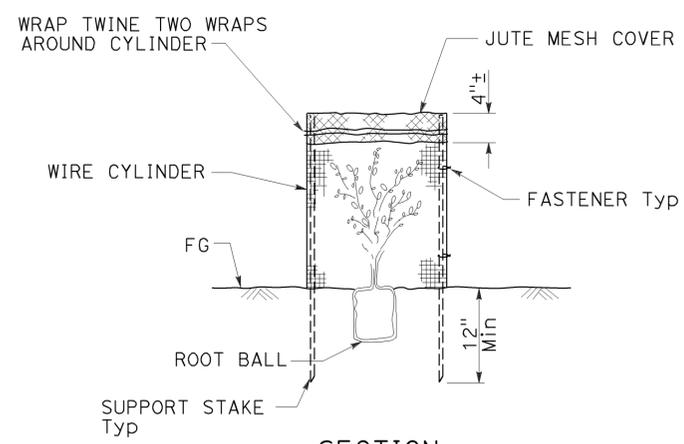
TREE STAKING



SECTION  
ROOT PROTECTOR



SECTION  
CORE HOLE (VINE)



SECTION  
FOLIAGE PROTECTOR

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

RSP H4 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H4  
 DATED MAY 20, 2011 - PAGE 221 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H4**

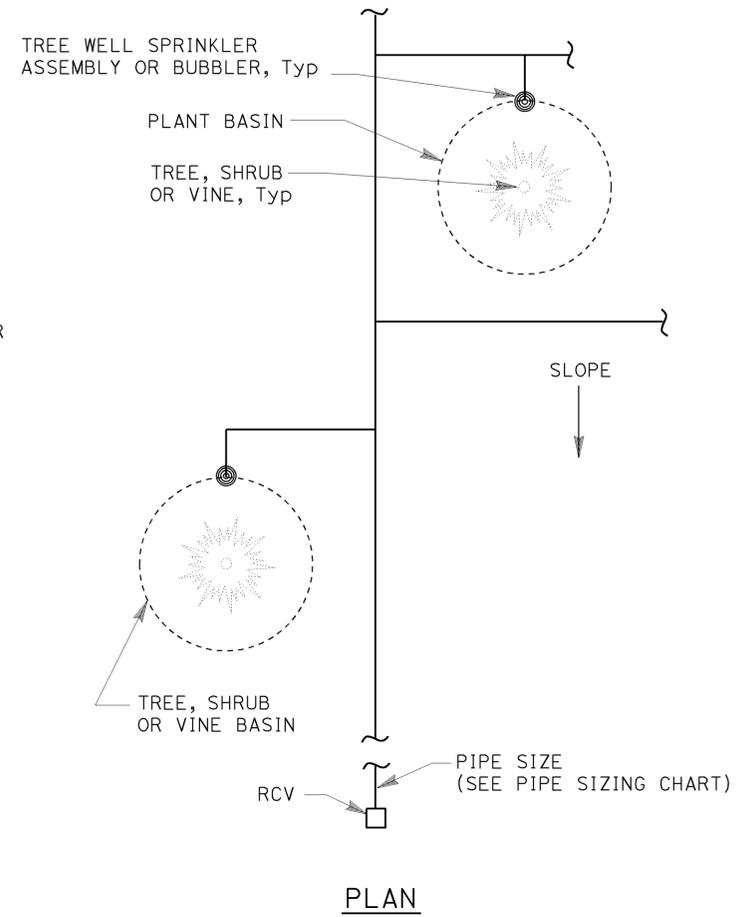
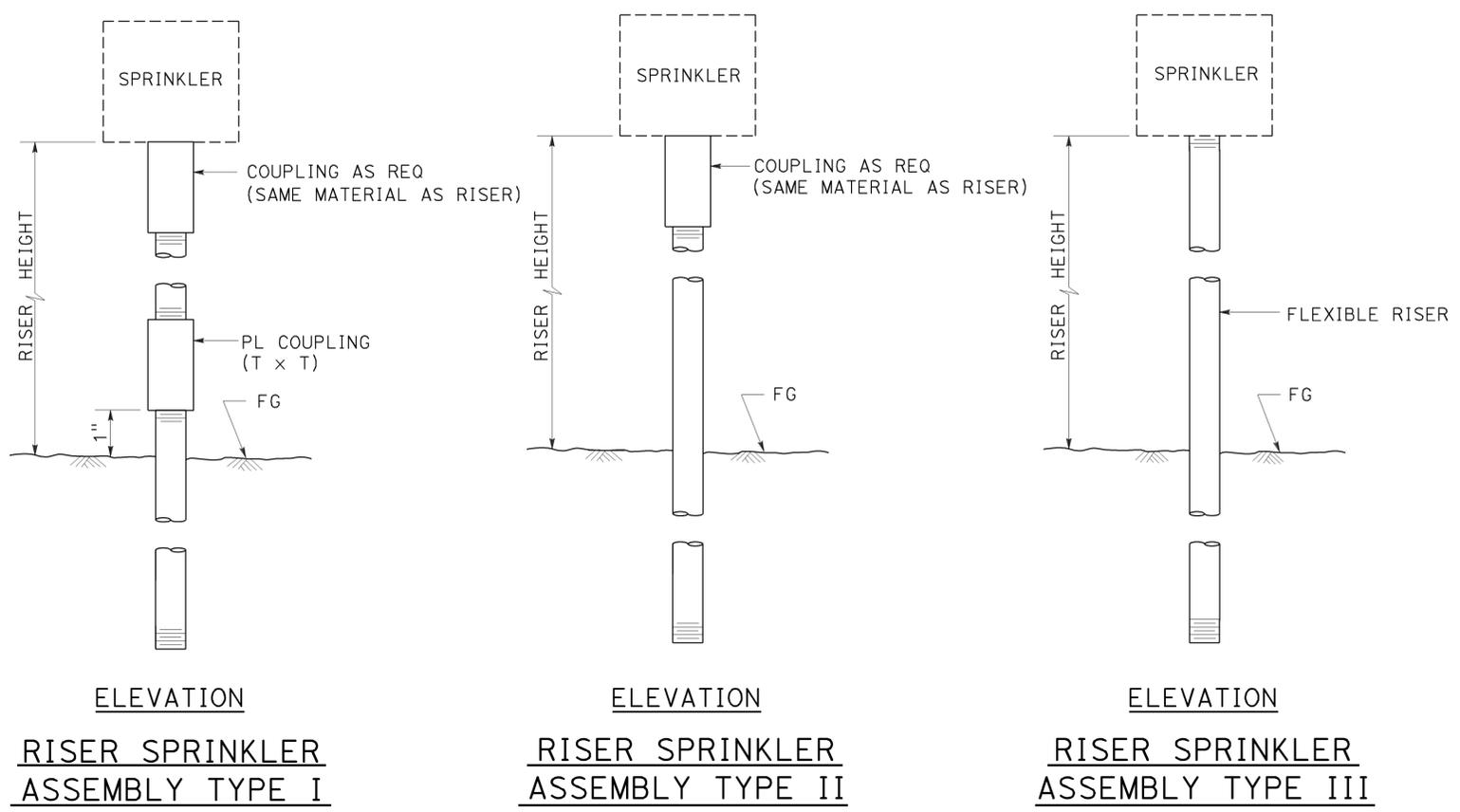
2010 REVISED STANDARD PLAN RSP H4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	44	71

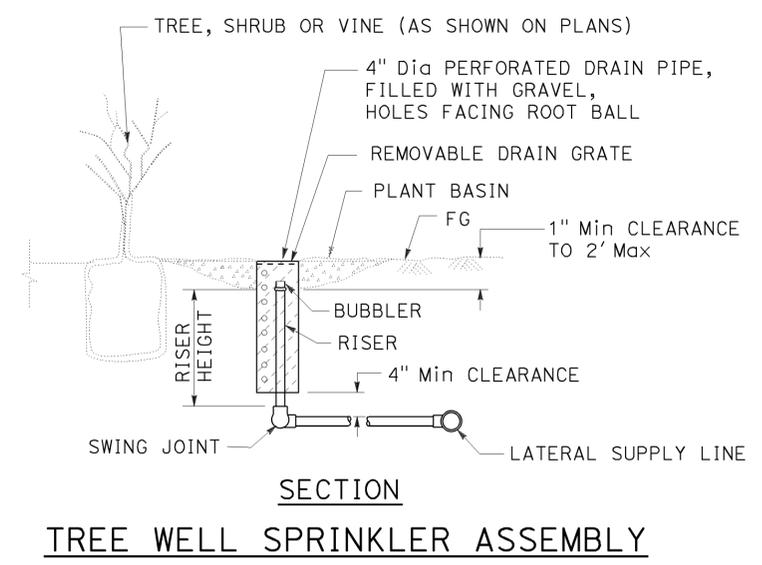
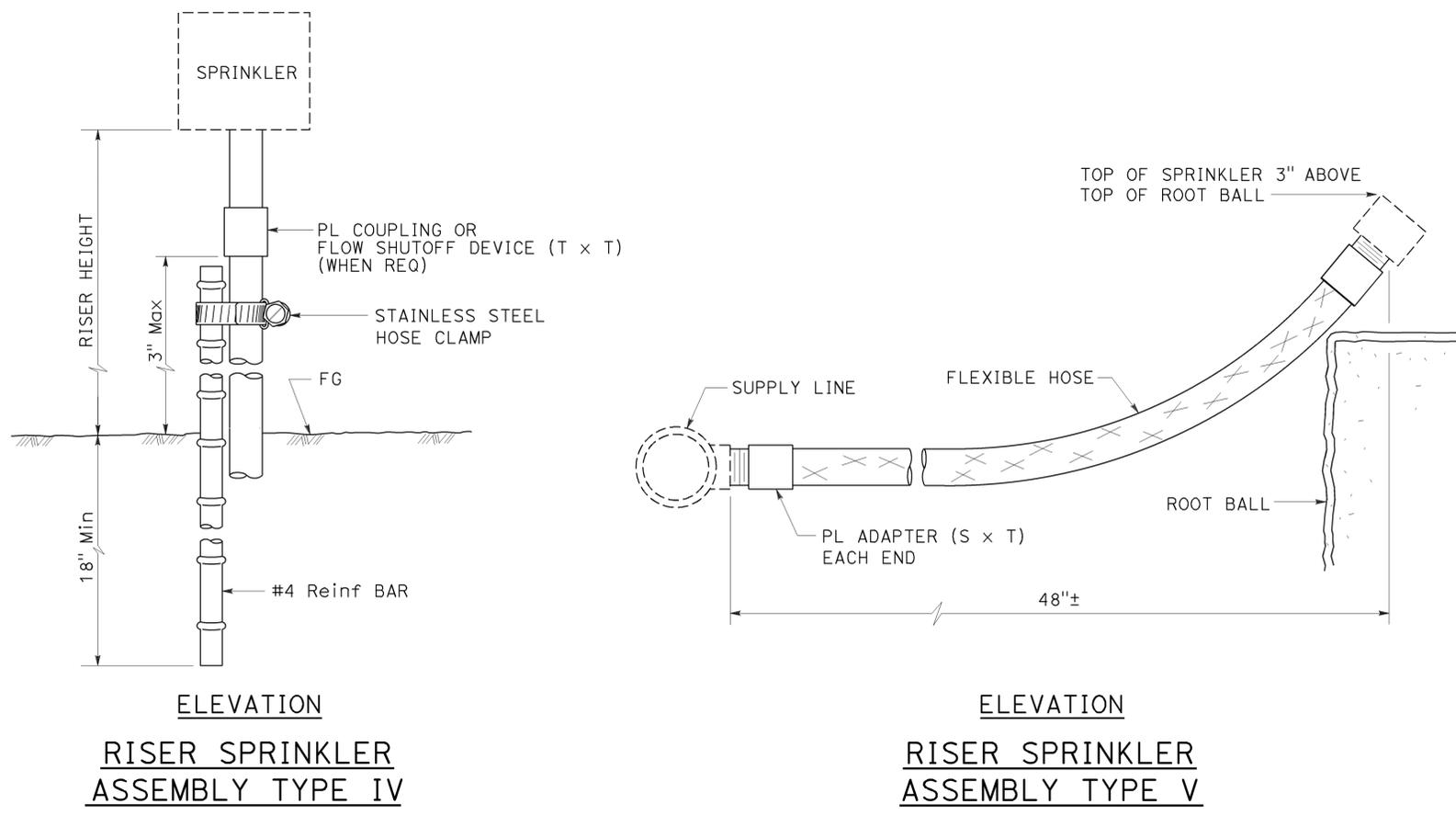
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TO ACCOMPANY PLANS DATED 2-22-16



- NOTES:**
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
  2. Install bubbler within basin.



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

RSP H5 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H5 DATED MAY 20, 2011 - PAGE 222 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H5**

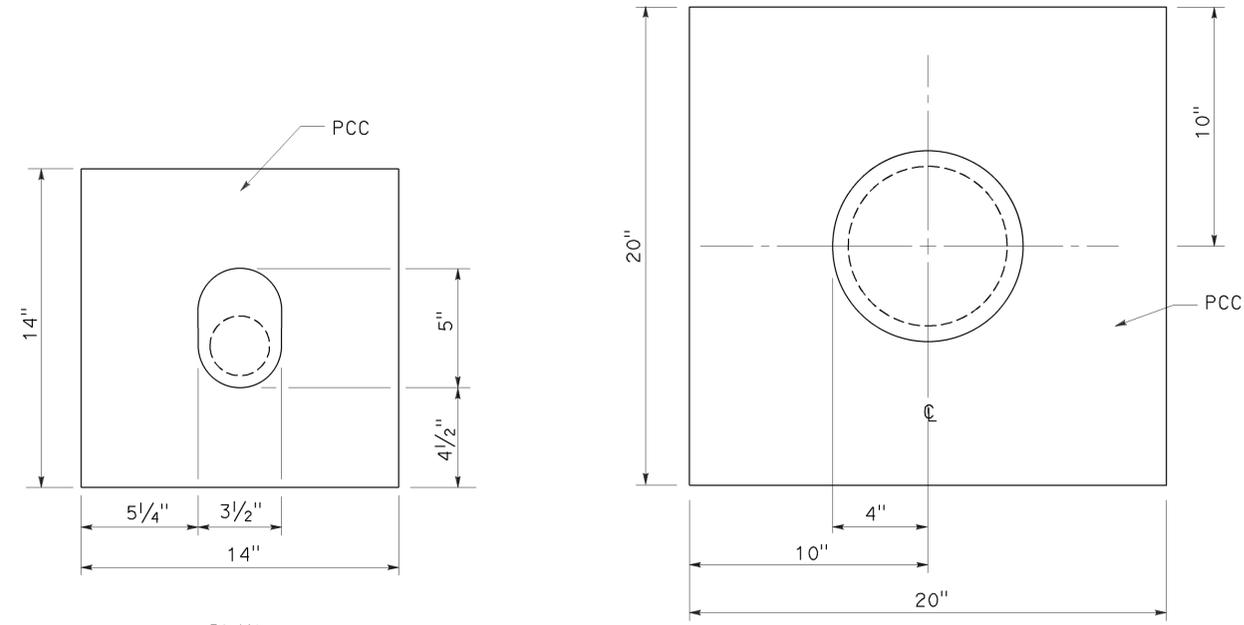
2010 REVISED STANDARD PLAN RSP H5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	45	71

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

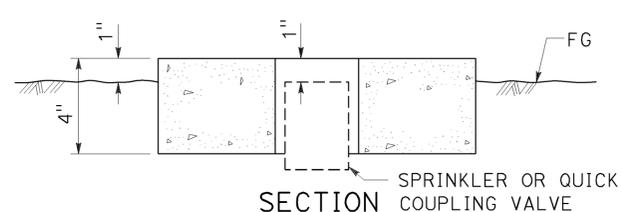
TO ACCOMPANY PLANS DATED 2-22-16

2010 REVISED STANDARD PLAN RSP H6

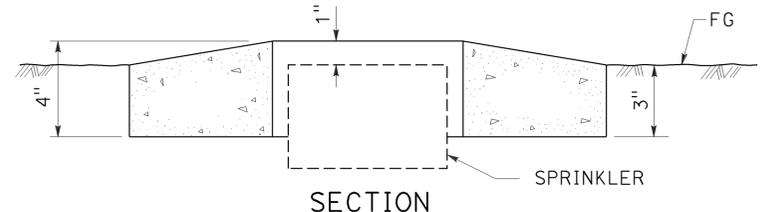


PLAN

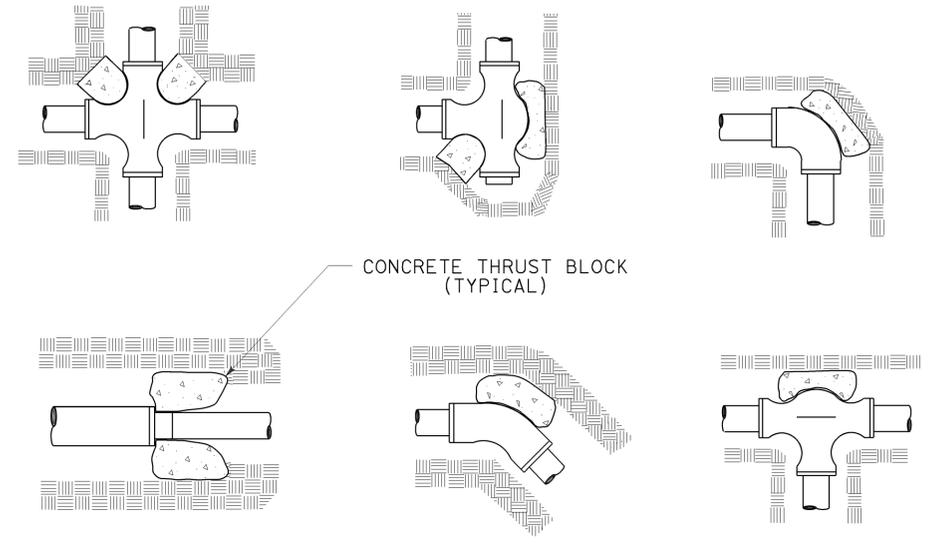
PLAN



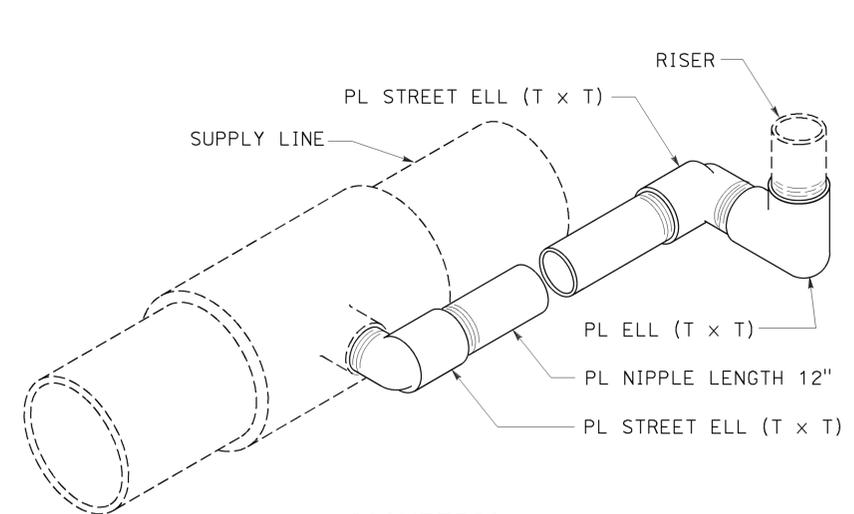
SECTION SPRINKLER OR QUICK COUPLING VALVE  
**SPRINKLER PROTECTOR TYPE I**



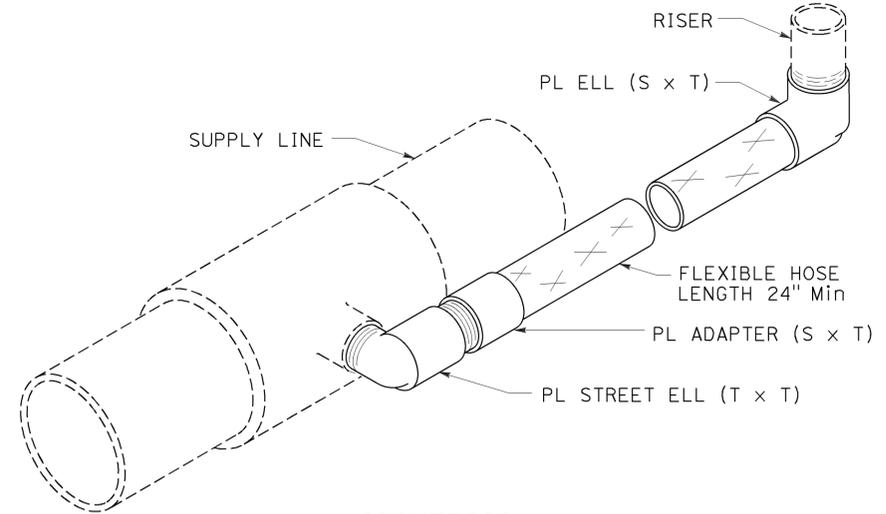
SECTION SPRINKLER  
**SPRINKLER PROTECTOR TYPE II**



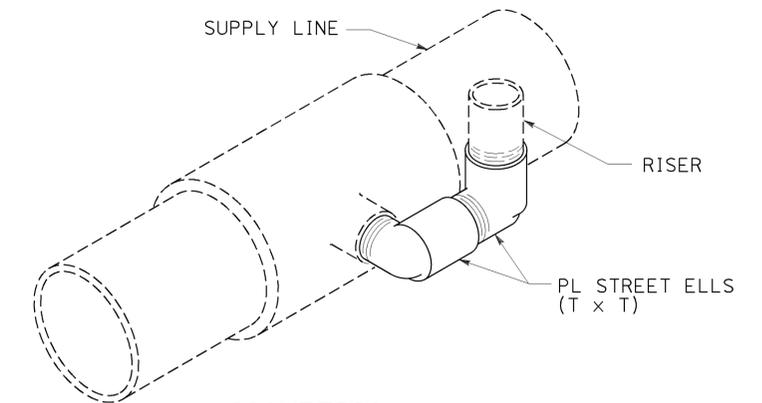
TYPICAL THRUST BLOCKS



ISOMETRIC  
**POP-UP SPRINKLER ASSEMBLY TYPE I**



ISOMETRIC  
**POP-UP SPRINKLER ASSEMBLY TYPE II**



ISOMETRIC  
**POP-UP SPRINKLER ASSEMBLY TYPE III**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**

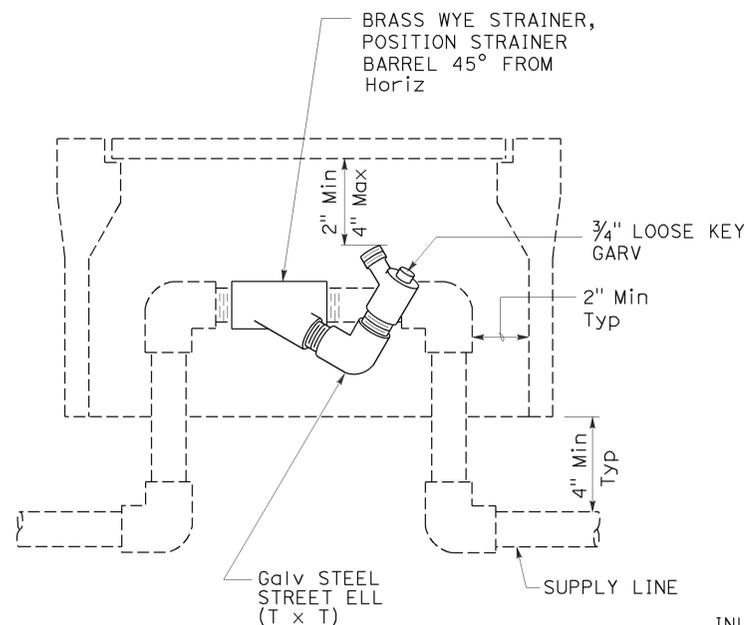
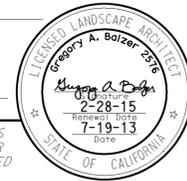
NO SCALE

RSP H6 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H6 DATED MAY 20, 2011 - PAGE 223 OF THE STANDARD PLANS BOOK DATED 2010.

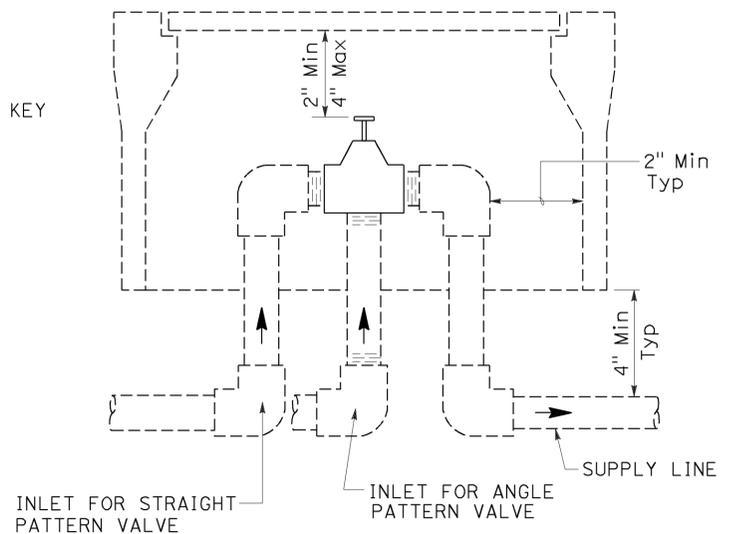
**REVISED STANDARD PLAN RSP H6**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	46	71

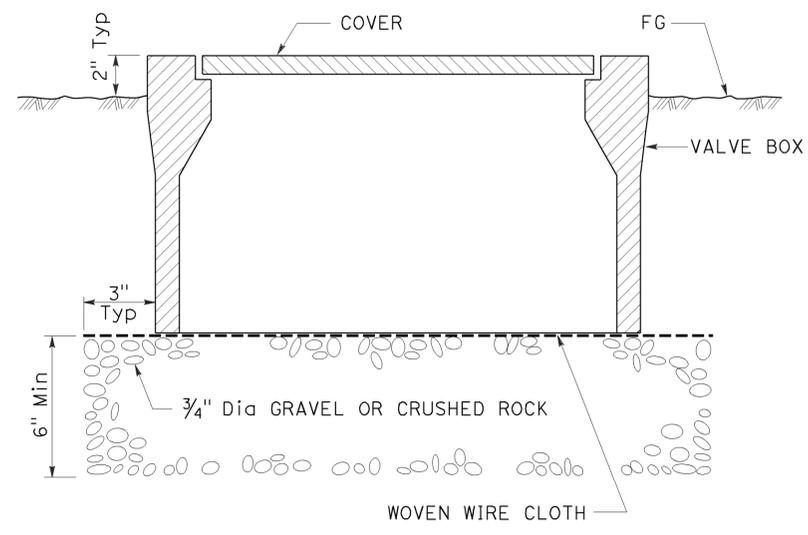
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



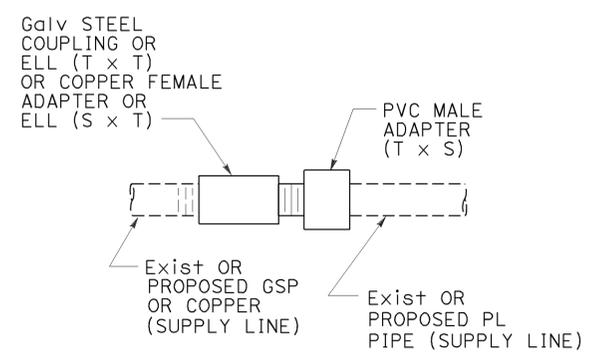
**ELEVATION**  
**WYE STRAINER ASSEMBLY**



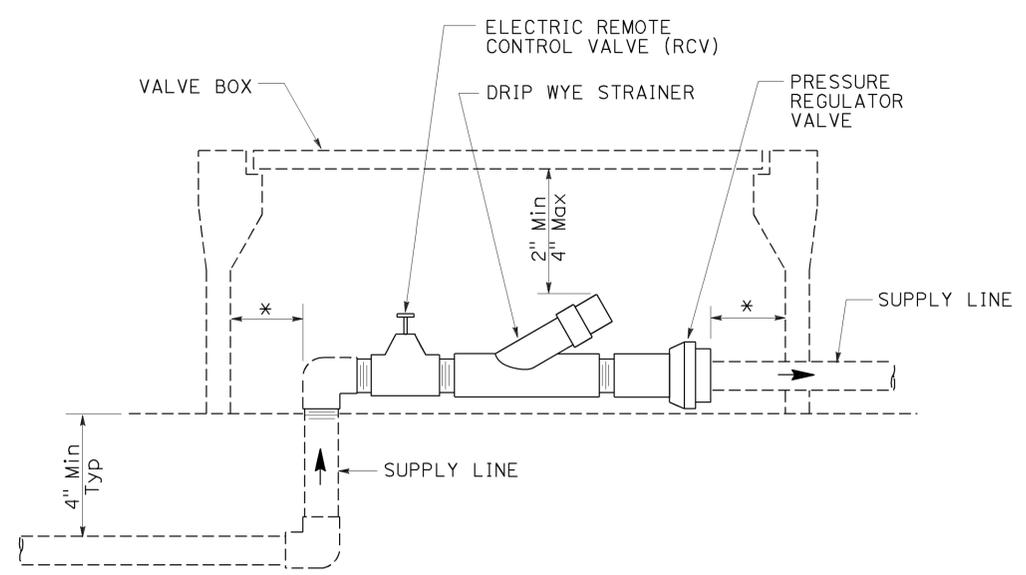
**ELEVATION**  
**VALVE**



**SECTION**  
**VALVE BOX**



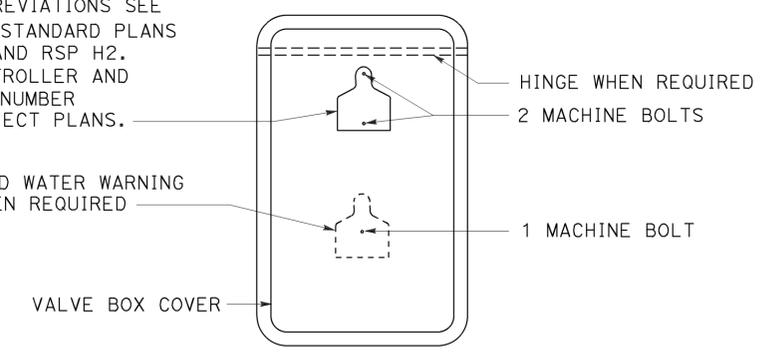
**GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE**



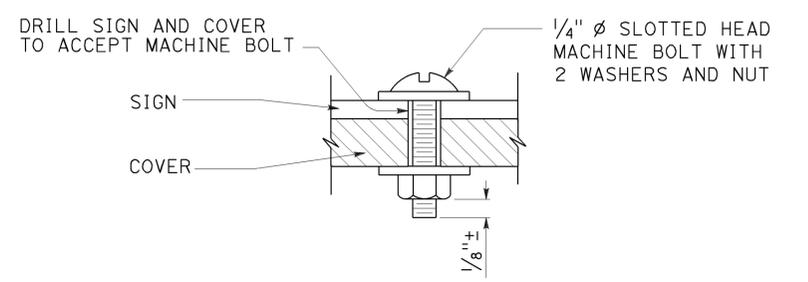
**ELEVATION**  
**DRIP VALVE ASSEMBLY**

IDENTIFICATION LABEL:  
FOR ABBREVIATIONS SEE  
REVISED STANDARD PLANS  
RSP H1 AND RSP H2.  
FOR CONTROLLER AND  
STATION NUMBER  
SEE PROJECT PLANS.

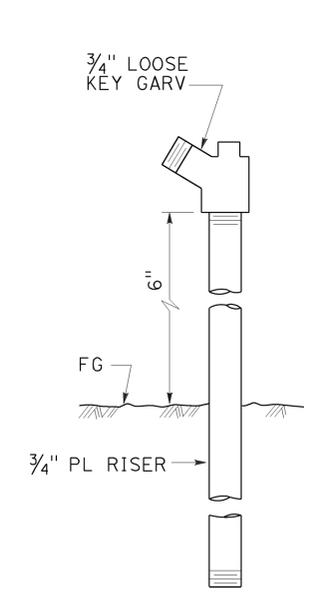
RECYCLED WATER WARNING  
SIGN WHEN REQUIRED



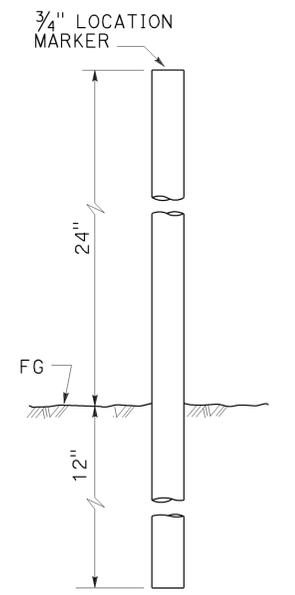
**PLAN**



**SECTION**  
**VALVE BOX IDENTIFICATION**



**ELEVATION**  
**GARDEN VALVE ASSEMBLY**



**ELEVATION**  
**LOCATION MARKER**

**GARDEN VALVE ASSEMBLY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**LANDSCAPE DETAILS**

NO SCALE

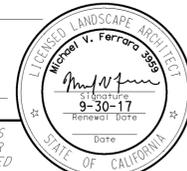
RSP H7 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H7  
DATED MAY 20, 2011 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H7**

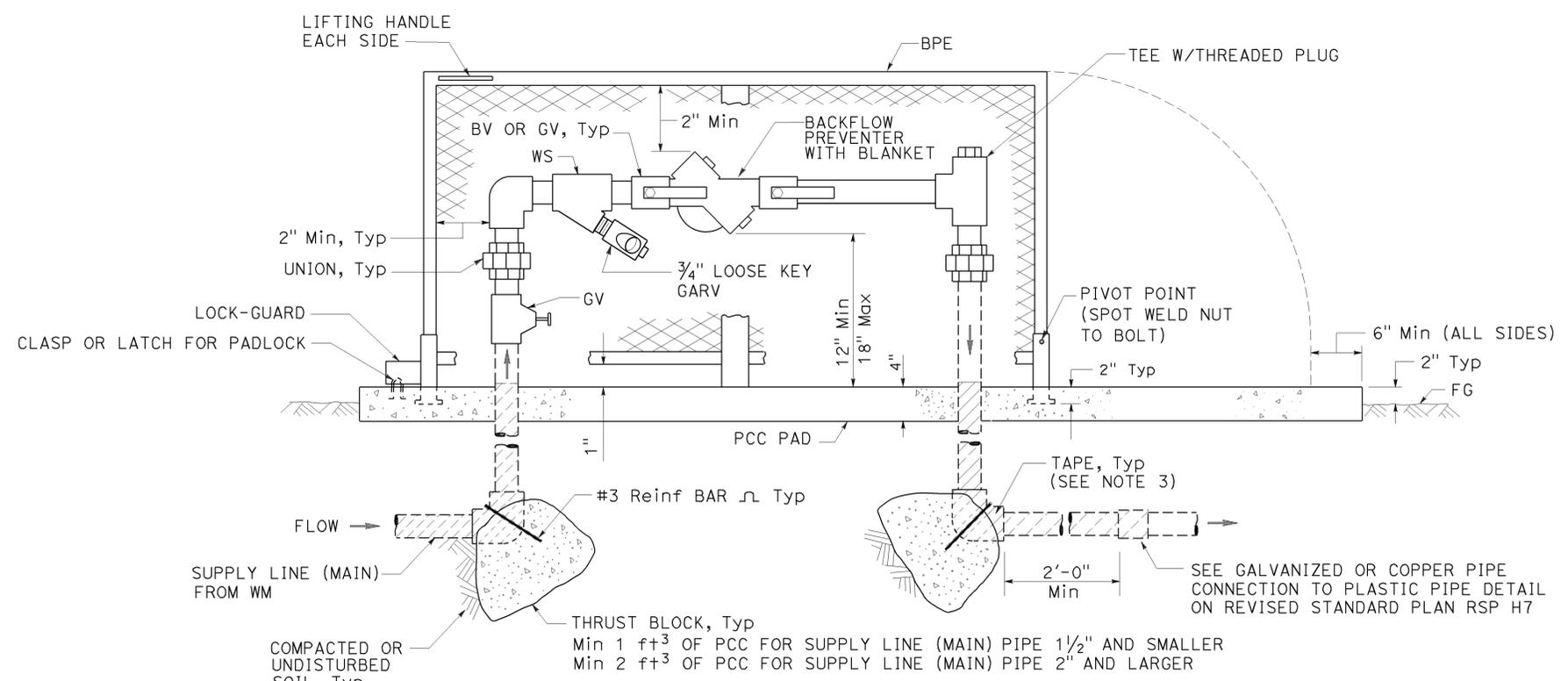
2010 REVISED STANDARD PLAN RSP H7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	47	71

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.



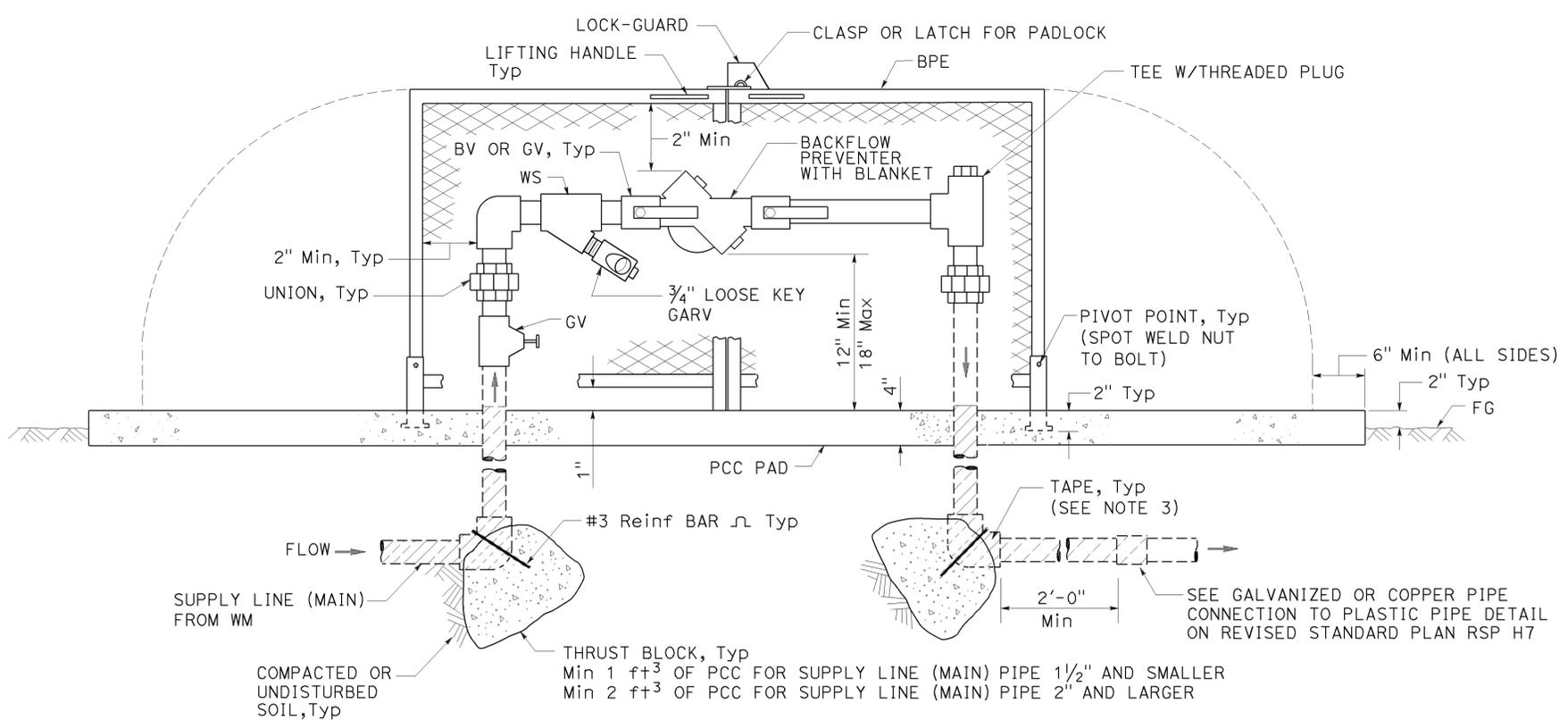
TO ACCOMPANY PLANS DATED 2-22-16



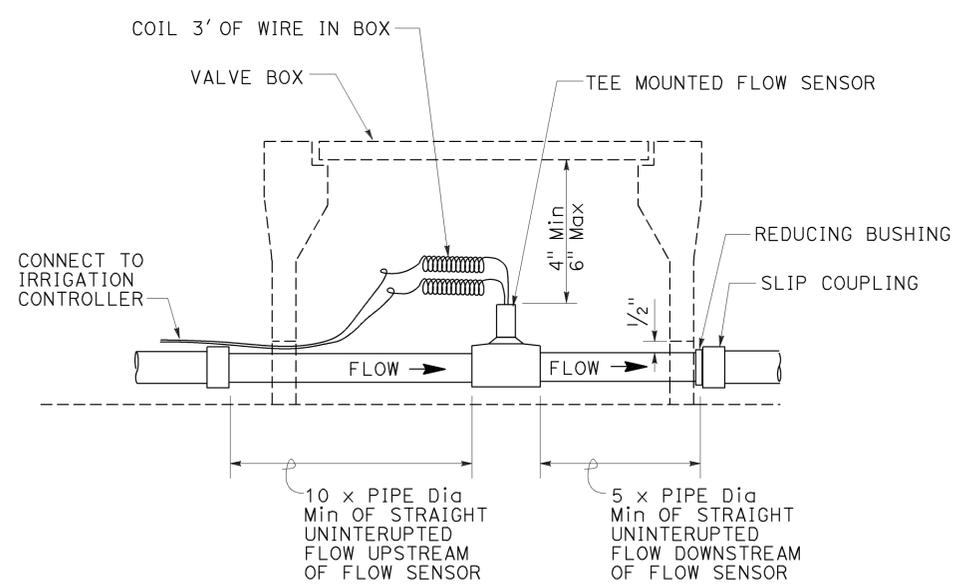
**ELEVATION**  
**BACKFLOW PREVENTER ASSEMBLY**  
 IN ONE PIECE ENCLOSURE

**NOTES:**

1. Wye strainer and fittings must be the same size as the backflow preventer shown on the plans.
2. Backflow preventer assembly manifold pipe must be the same pipe as the supply line (main) pipe to be installed from the water meter to the backflow preventer assembly.
3. All metal in contact with soil and Portland Cement Concrete must be wrapped with 2" wide plastic backed adhesive polyethylene tape 20 mil thick with 1/2" overlap.



**ELEVATION**  
**BACKFLOW PREVENTER ASSEMBLY**  
 IN TWO PIECE ENCLOSURE



**SECTION**  
**FLOW SENSOR**

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

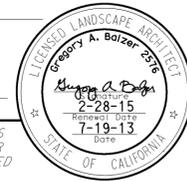
RSP H8 DATED OCTOBER 30, 2015 SUPERSEDES RSP H8 DATED JULY 19, 2013 AND STANDARD PLAN H8 DATED MAY 20, 2011 - PAGE 225 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H8**

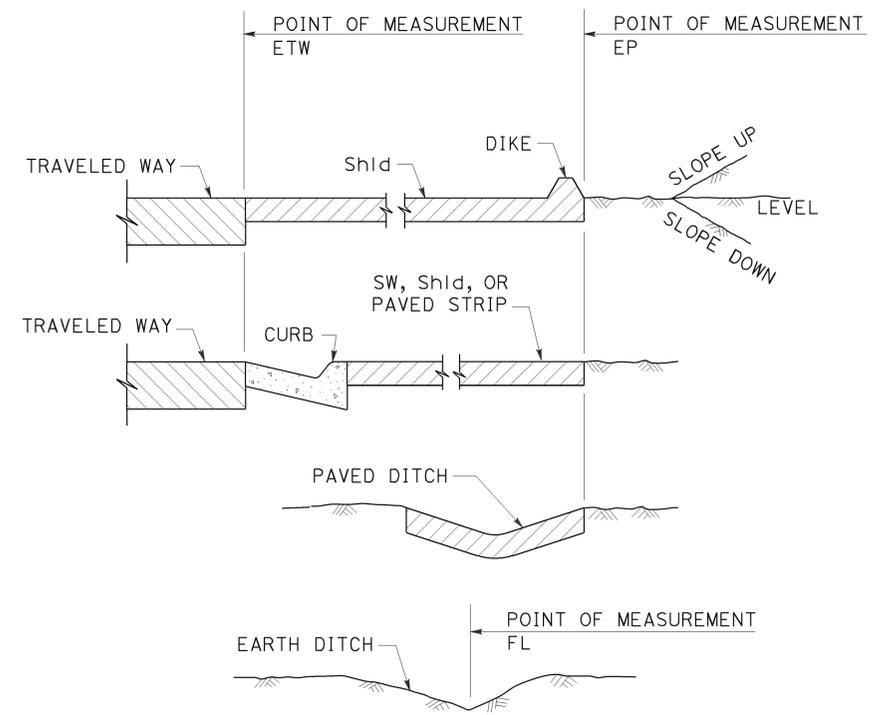
2010 REVISED STANDARD PLAN RSP H8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	48	71

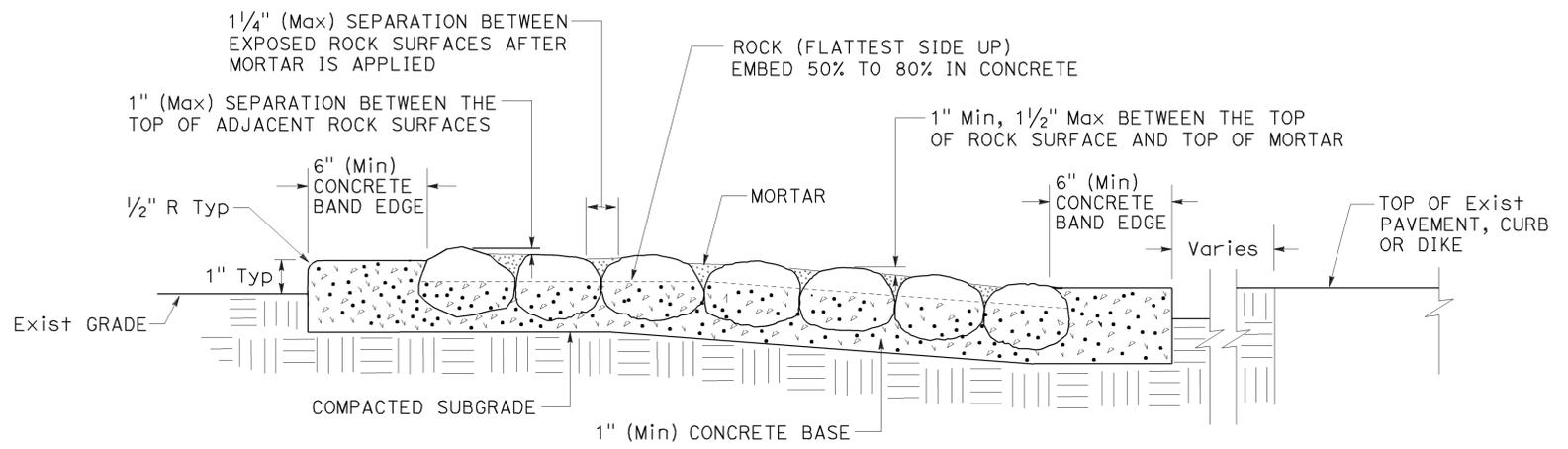
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



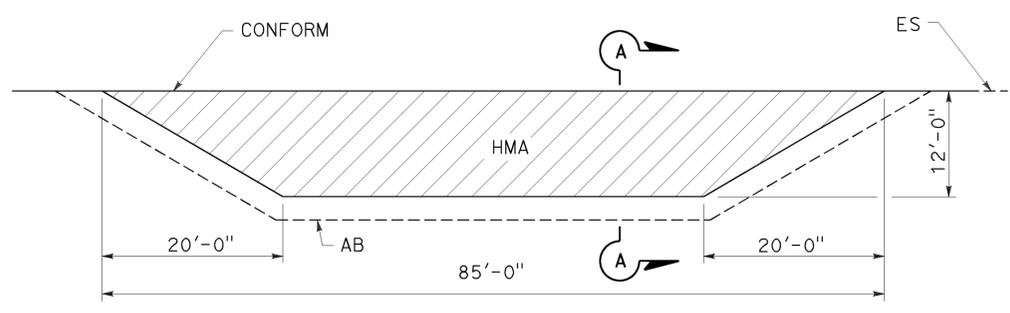
TO ACCOMPANY PLANS DATED 2-22-16



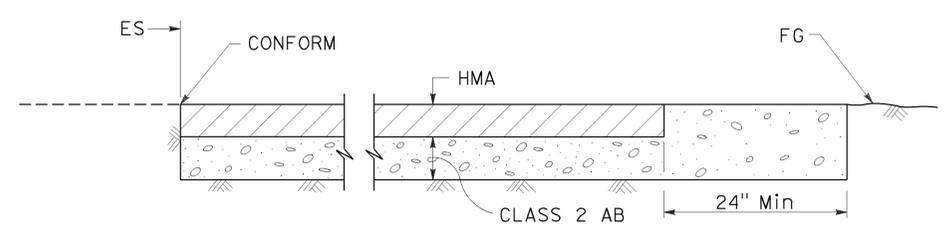
**SECTION  
POINTS OF MEASUREMENT**



**SECTION  
ROCK BLANKET**



**PLAN**



**SECTION A-A  
MAINTENANCE VEHICLE PULLOUT**

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

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

**REVISED STANDARD PLAN RSP H9A**

2010 REVISED STANDARD PLAN RSP H9A

TO ACCOMPANY PLANS DATED 2-22-16

TABLE 1

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

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

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

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

TABLE 2

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

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Longitudinal buffer space or flagger station spacing

\*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

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

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

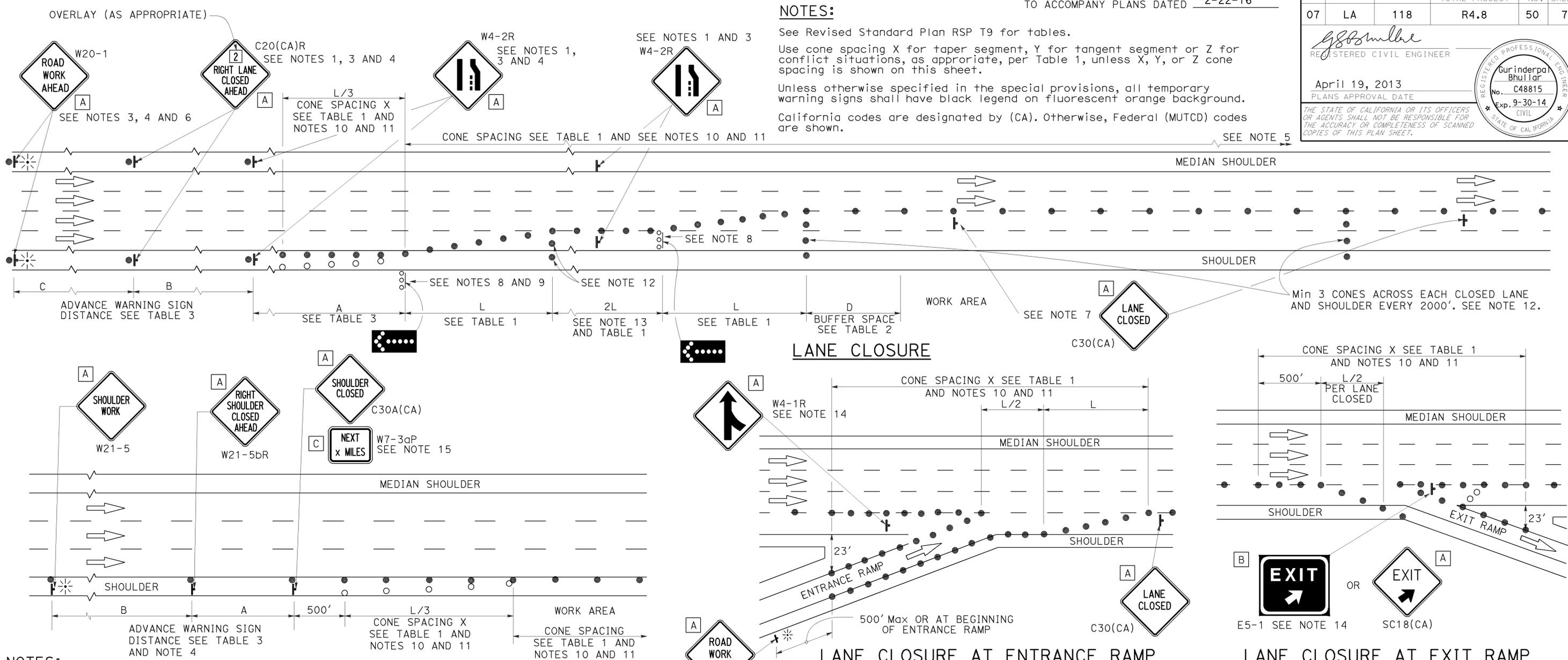
**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	50	71


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



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

- SHOULDER CLOSURE**
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
  - Place a C30(CA) sign every 2000' throughout length of lane closure.
  - One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
  - A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at 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)
- T TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- \* PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

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

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

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

## LEGEND

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

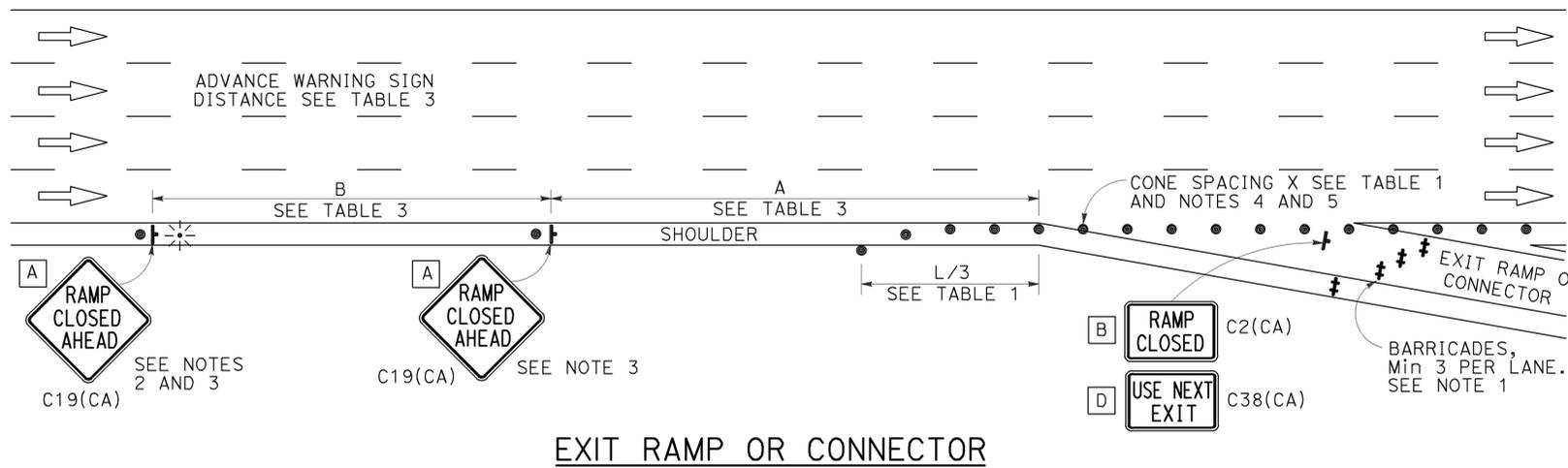
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	51	71

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

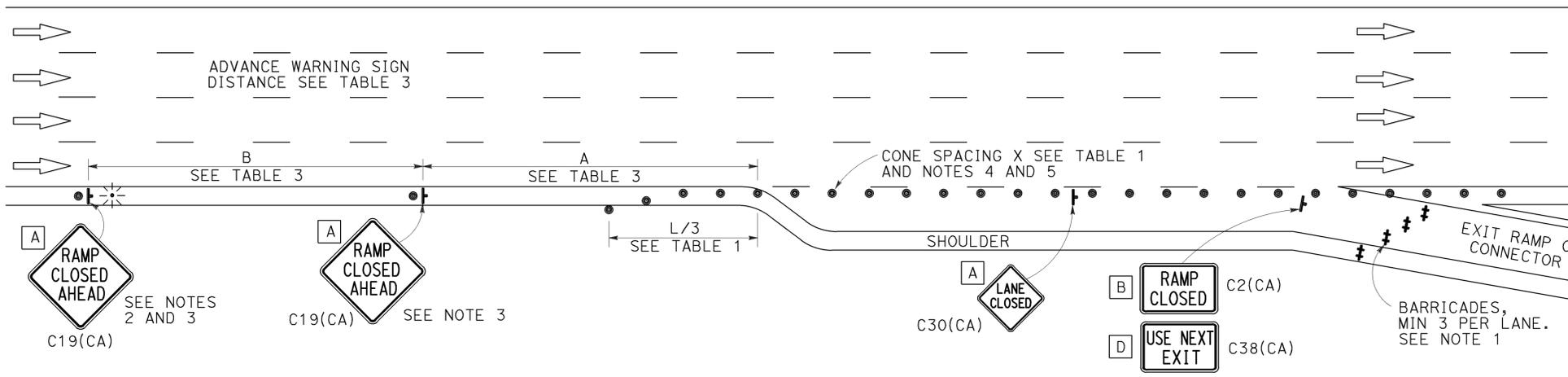
TO ACCOMPANY PLANS DATED 2-22-16

## NOTES:

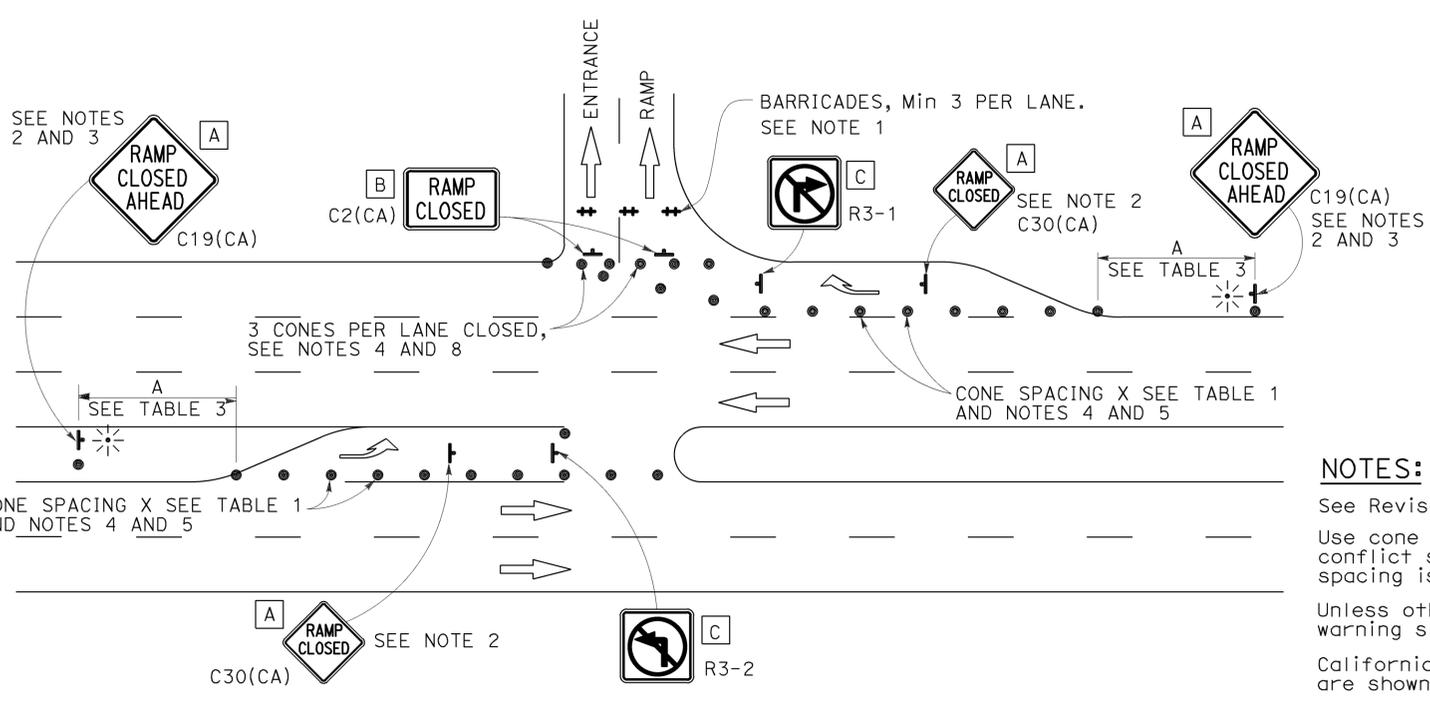
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



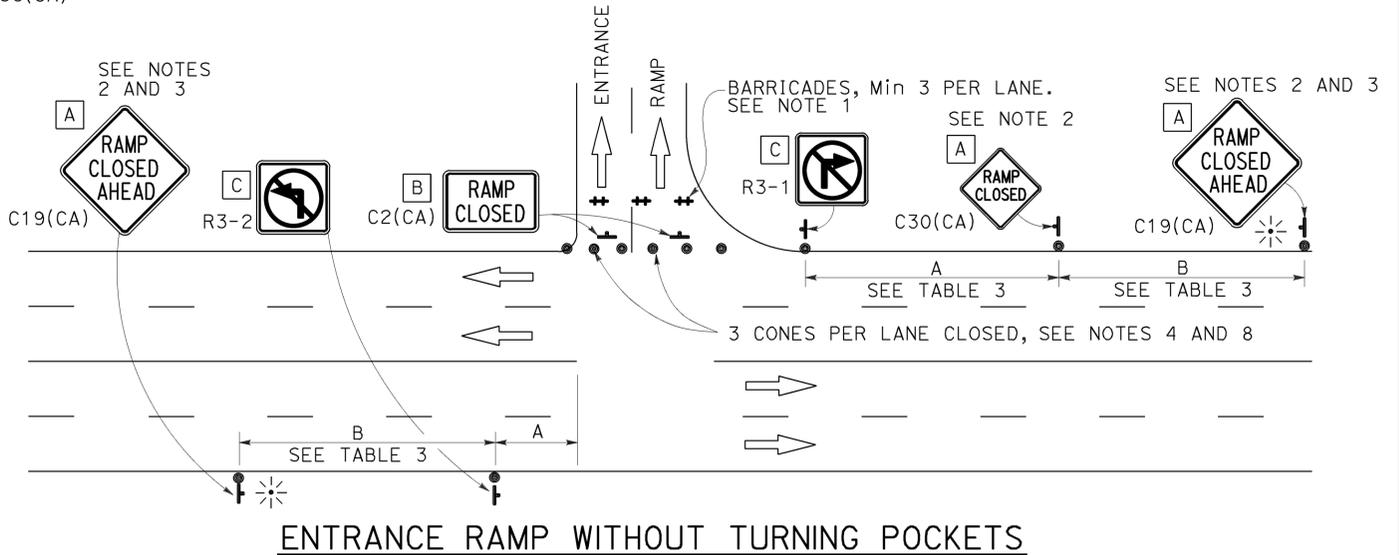
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

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

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

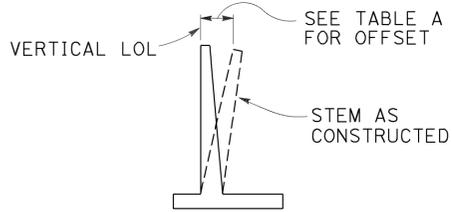
RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T14**

2010 REVISED STANDARD PLAN RSP T14

TO ACCOMPANY PLANS DATED 2-22-16

2010 REVISED STANDARD PLAN RSP B3-5

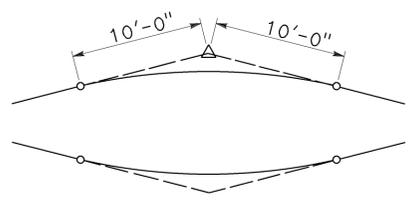


**TABLE A**

H	OFFSET
4'-12'	H/200
14'-16'	H/160
18'-20'	H/140
22'-24'	H/130
26'-36'	2 1/2"

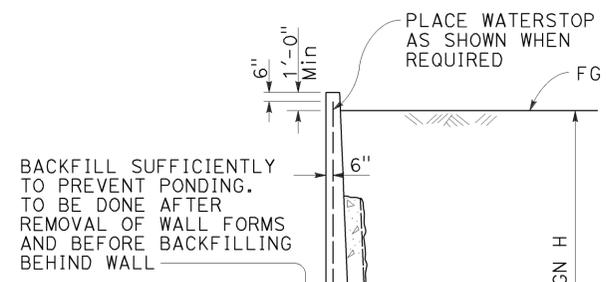
**APPROXIMATE WALL OFFSET VALUES**

Values for offsetting forms to be determined by the Engineer.



**20'-0" VC AT TOP OF WALL SLOPE CHANGE**

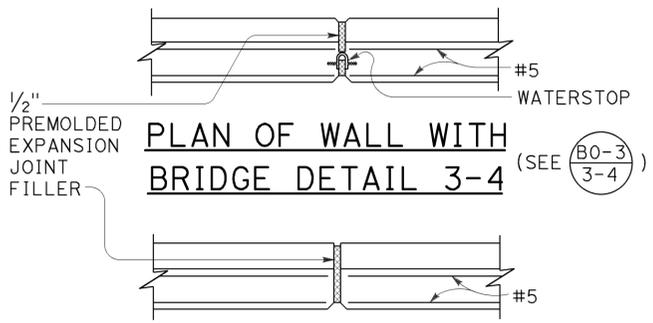
Where shown on the plans



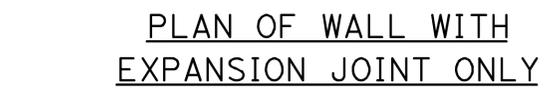
BACKFILL SUFFICIENTLY TO PREVENT PONDING. TO BE DONE AFTER REMOVAL OF WALL FORMS AND BEFORE BACKFILLING BEHIND WALL.

PLACE CONCRETE IN TOE AGAINST UNDISTURBED MATERIAL EXCEPT AS PERMITTED BY THE ENGINEER.

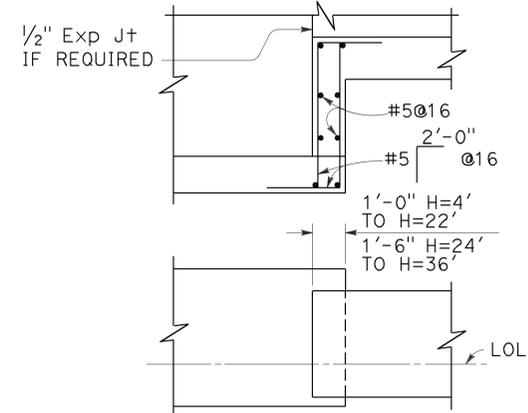
**DESIGN AND DRAINAGE**



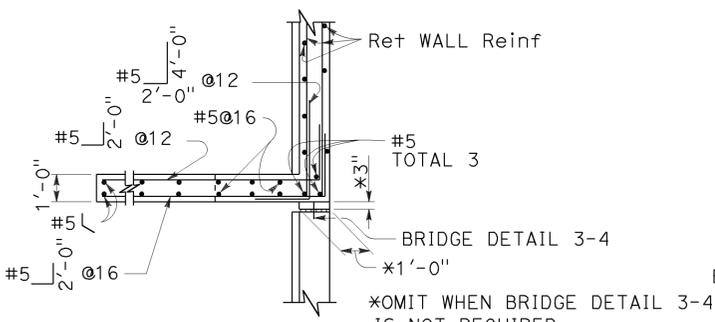
**PLAN OF WALL WITH BRIDGE DETAIL 3-4**



**PLAN OF WALL WITH EXPANSION JOINT ONLY**

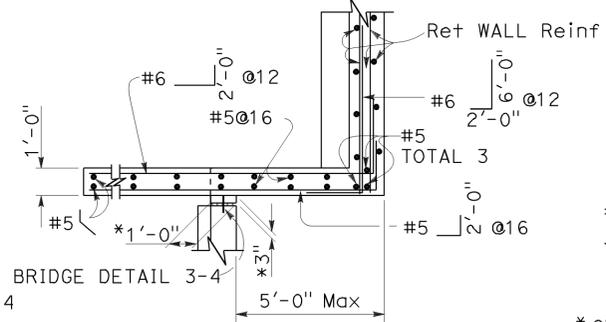


**FOOTING STEP**



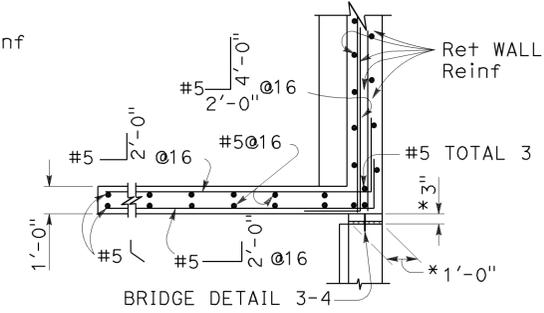
**PLAN**

(For return wall Type "A")



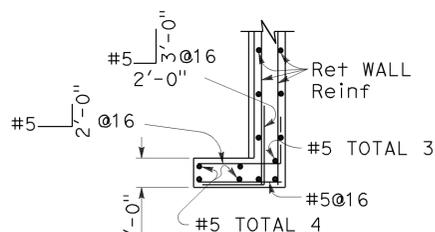
**PLAN**

(For return wall Type "B")



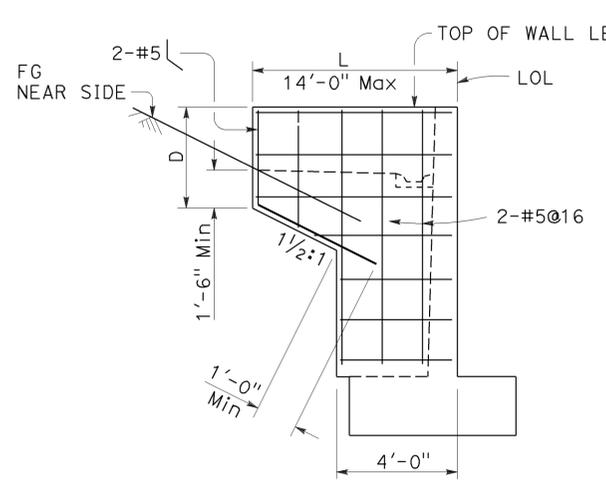
**PLAN**

(For return wall Type "C")



**PLAN**

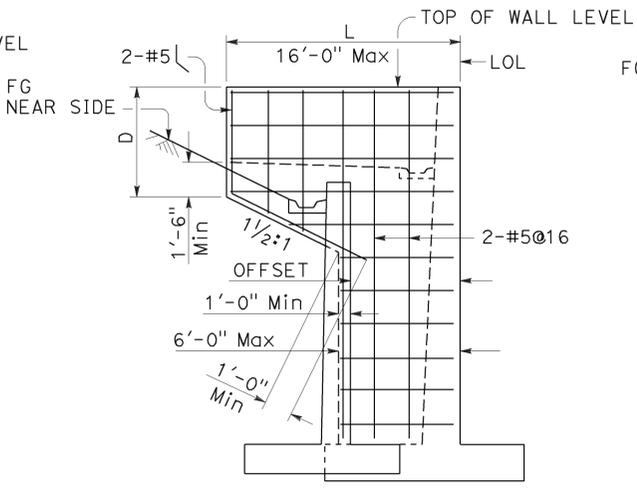
(For return wall Type "D")



**ELEVATION**

**RETURN WALL TYPE "A"**

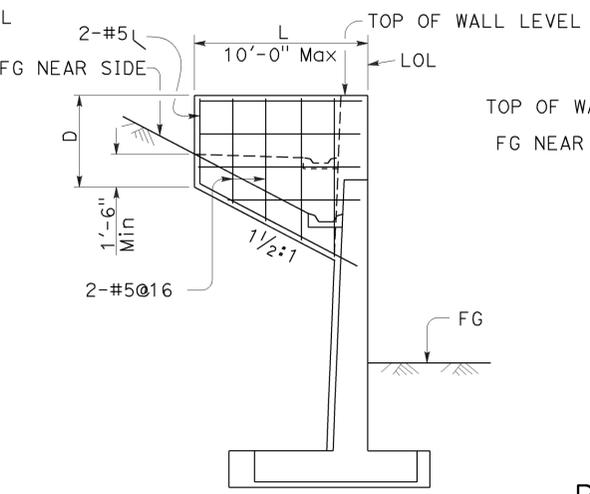
Use where H=8' or less



**ELEVATION**

**RETURN WALL TYPE "B"**

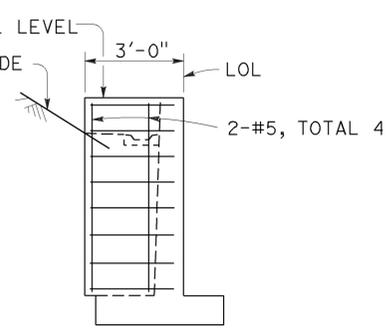
Use where H=10' or more on offset walls



**ELEVATION**

**RETURN WALL TYPE "C"**

Use where H=10' or more on straight walls



**ELEVATION**

**RETURN WALL TYPE "D"**

Use where H=6' or less

**DESIGN CONDITIONS:**

Design "H" may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in table

Return wall not required unless shown elsewhere

**DESIGN NOTES:**

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments

LIVE LOAD: Surcharge on level ground surface

SOIL:  $\phi = 34^\circ$   
 $\gamma = 120$  pcf

REINFORCED CONCRETE:  $f_y = 60,000$  psi  
 $f_c' = 3,600$  psi

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**RETAINING WALL DETAILS No. 1**

NO SCALE

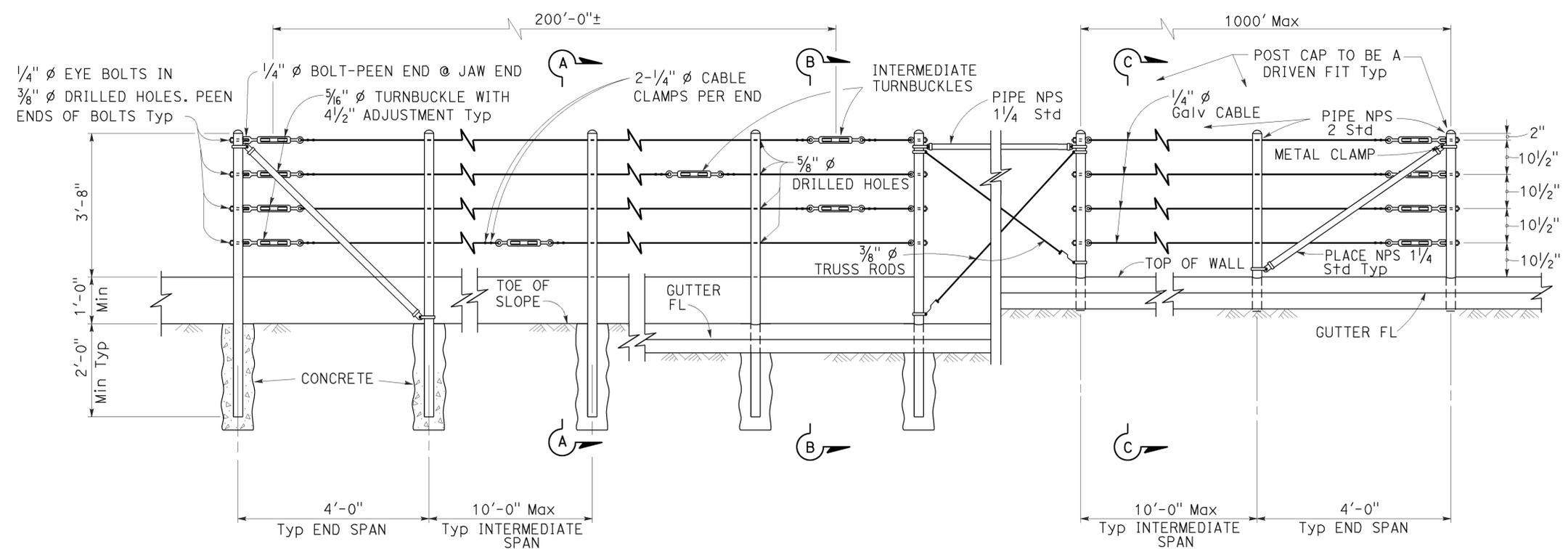
RSP B3-5 DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN B3-5 DATED MAY 20, 2011 - PAGE 277 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP B3-5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	53	71

REGISTERED CIVIL ENGINEER	
October 21, 2011	
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.	

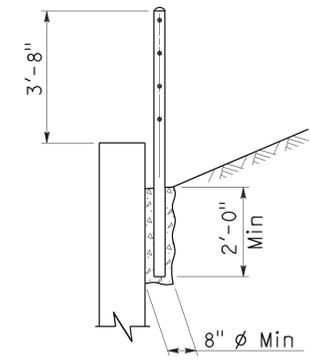


EXISTING WALL (WITHOUT GUTTER) Existing      RETAINING WALL (WITH GUTTER) Existing      RETAINING WALL (WITH GUTTER) New construction

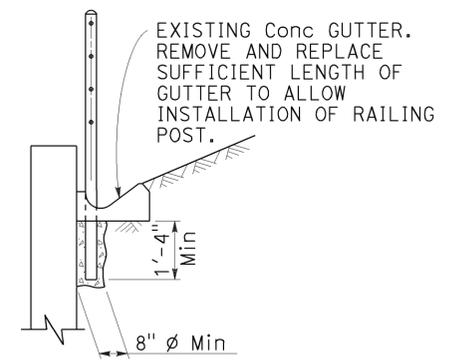
**ELEVATION**

**NOTES:**

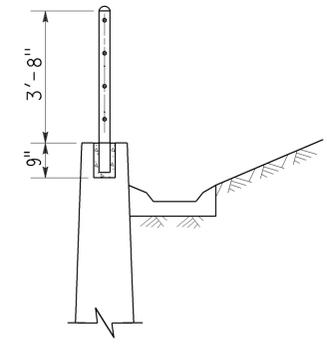
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining wall.
6. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.
7. Line posts shall be braced horizontally and trussed diagonally in both directions at intervals not to exceed 1000'.
8. Post pockets to be centered in top of wall.
9. Typical end spans, braced in both directions, shall be constructed at changes in line where the angle of deflection is 15° or more.
10. Provide thimbles at all cable loops.



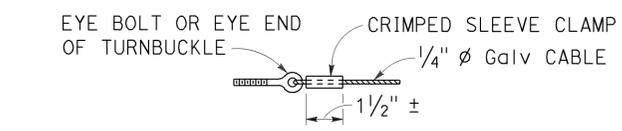
SECTION A-A Existing



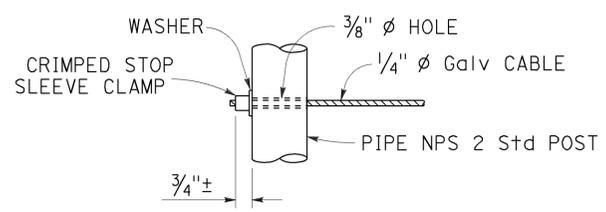
SECTION B-B Existing



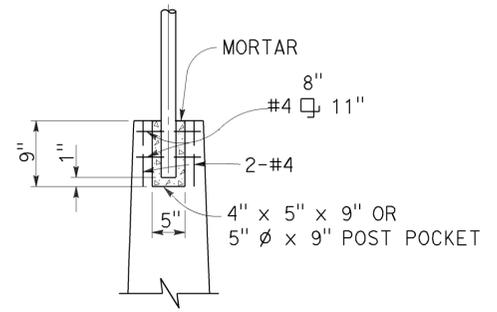
SECTION C-C New construction



ALTERNATIVE CABLE CONNECTION



ALTERNATIVE DEAD END ANCHORAGE



POST POCKET

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CABLE RAILING**

NO SCALE

RSP B11-47 DATED OCTOBER 21, 2011 SUPERSEDES STANDARD PLAN B11-47 DATED MAY 20, 2011 - PAGE 293 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP B11-47**

2010 REVISED STANDARD PLAN RSP B11-47

**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**

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	Wht	WHITE
Lum	LUMINAIRE	WIM	WEIGH-IN-MOTION
M	METERED	Xfmr	TRANSFORMER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	54	71

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

October 30, 2015  
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 2-22-16

**SOFFIT AND WALL-MOUNTED LUMINAIRES**

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

**NOTE:**  
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

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

**MISCELLANEOUS ELECTROLIERS**

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

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

**STANDARD ELECTROLIER**

NEW	EXISTING	STANDARD TYPE
		15
		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**

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	55	71

*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 2-22-16

**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**

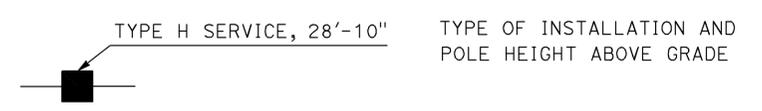
NEW	EXISTING	
		OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

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

**NOTES:**

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

**POLE-MOUNTED SERVICE DESIGNATION**



**FLASHING BEACON**

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

**ILLUMINATED OVERHEAD SIGN**

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

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

NO SCALE

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

**REVISED STANDARD PLAN RSP ES-1B**

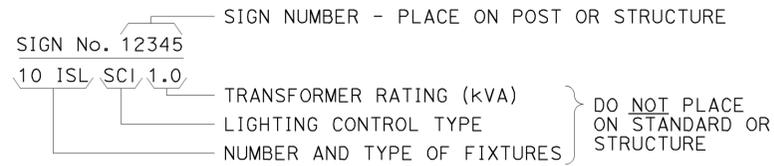
2010 REVISED STANDARD PLAN RSP ES-1B



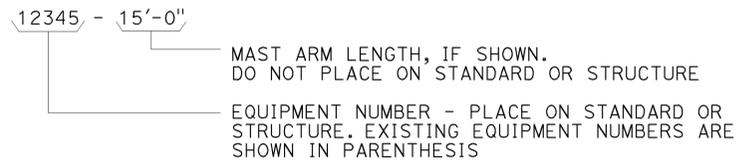
TO ACCOMPANY PLANS DATED 2-22-16

### EQUIPMENT IDENTIFICATION

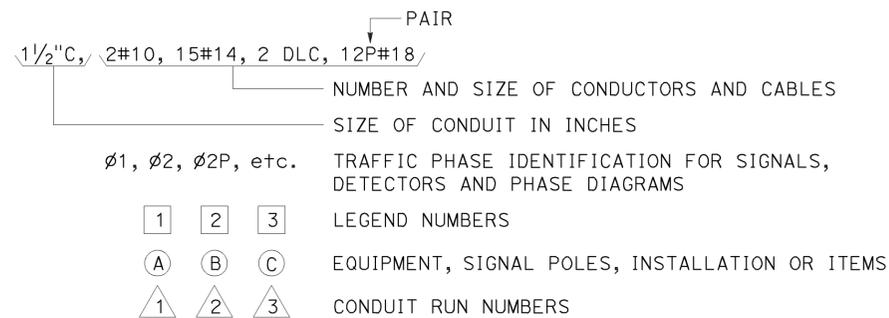
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



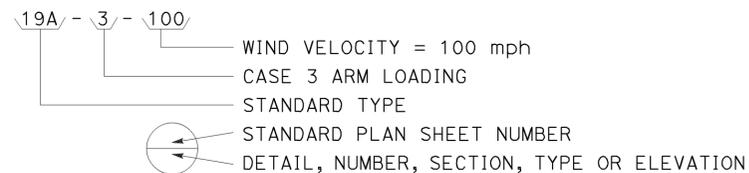
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



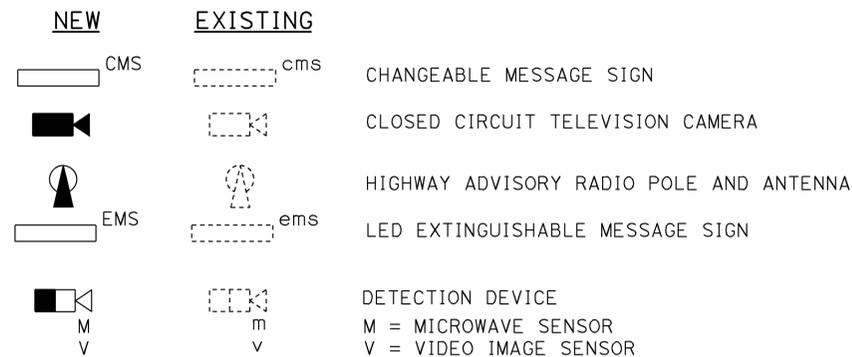
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



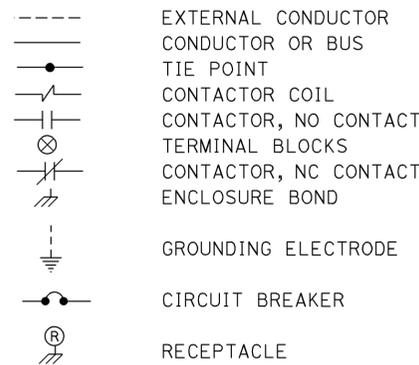
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



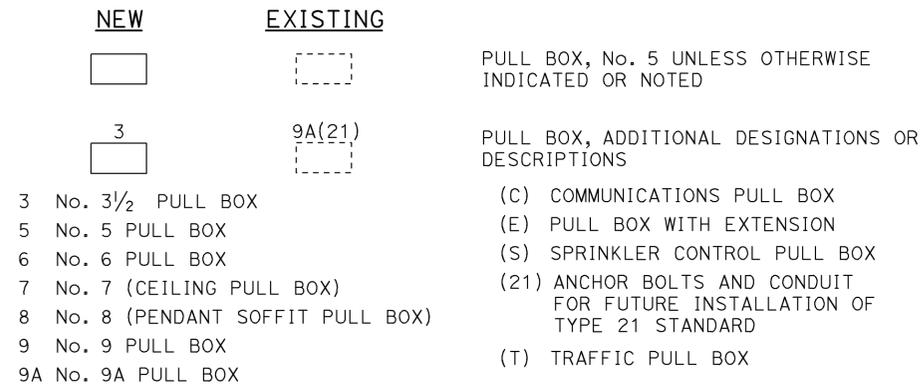
### MISCELLANEOUS EQUIPMENT



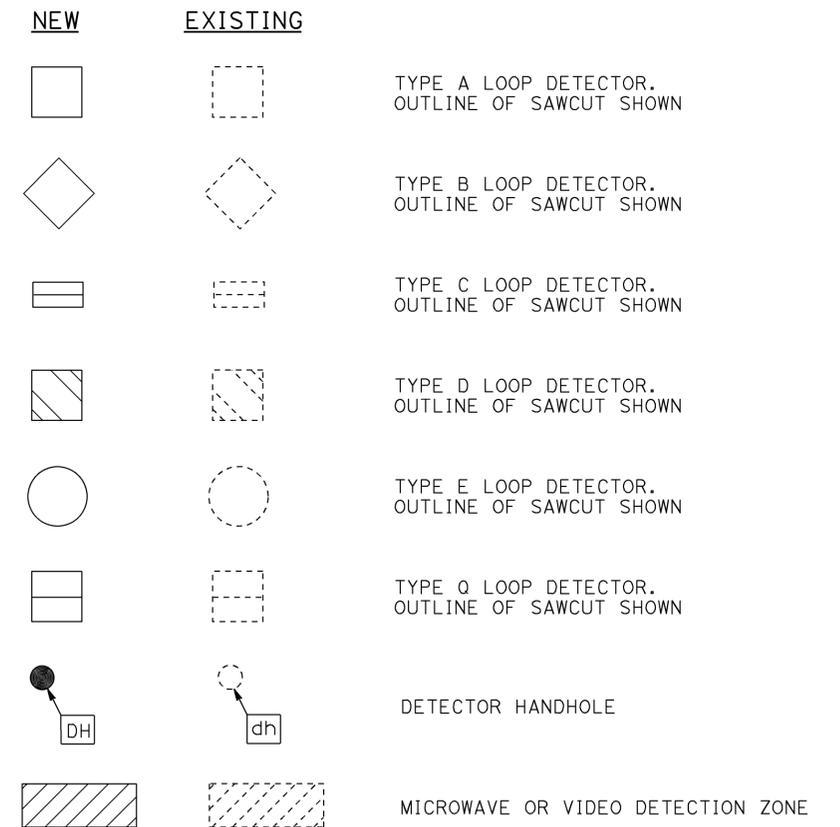
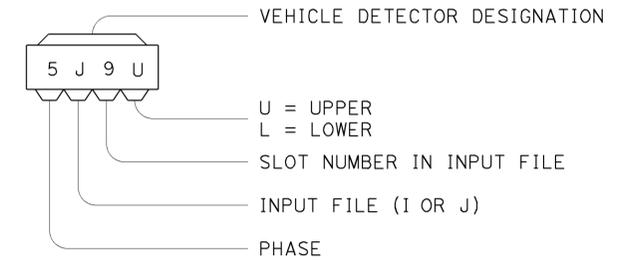
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

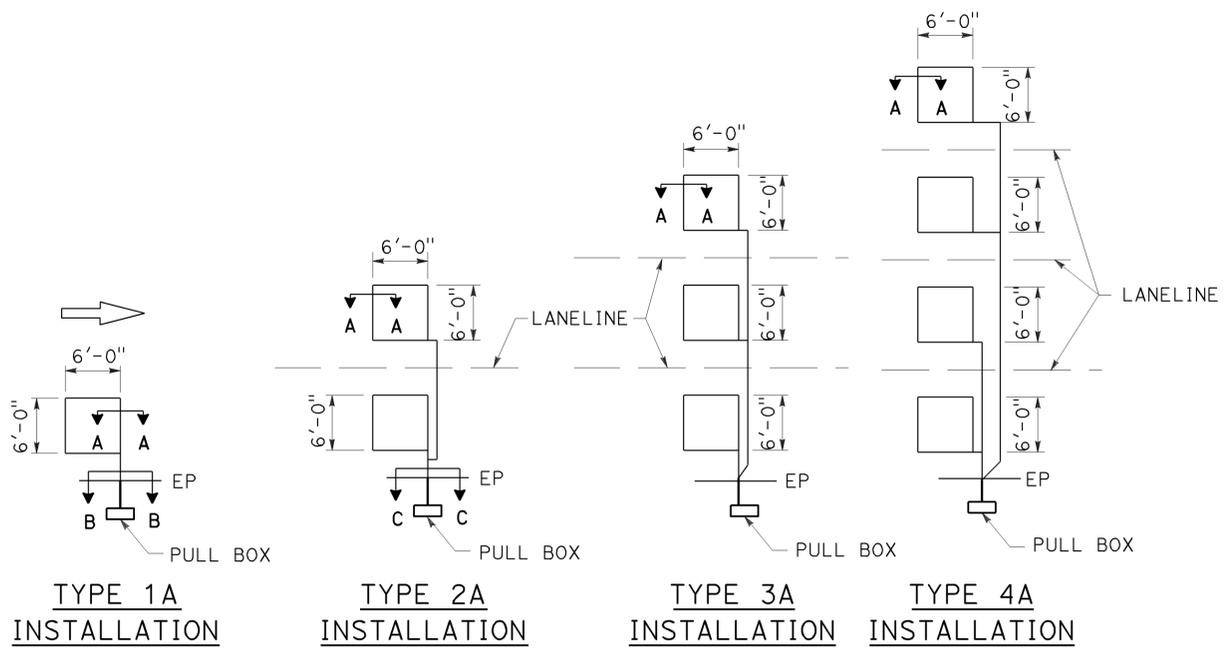
NO SCALE

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

**REVISED STANDARD PLAN RSP ES-1C**

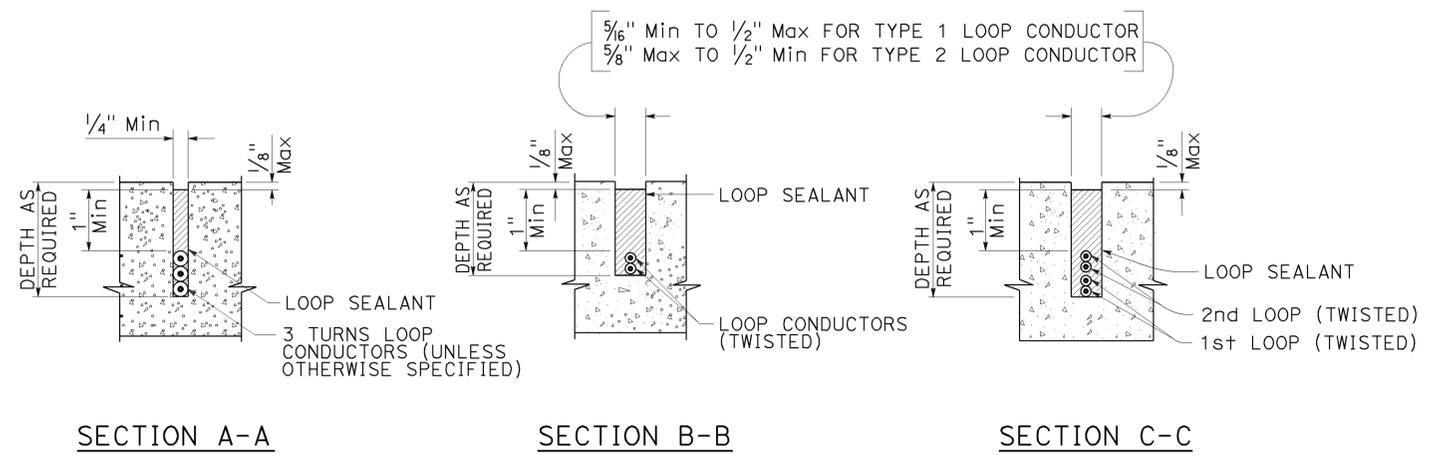
2010 REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	57	71
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER October 30, 2015 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
TO ACCOMPANY PLANS DATED <u>2-22-16</u>					

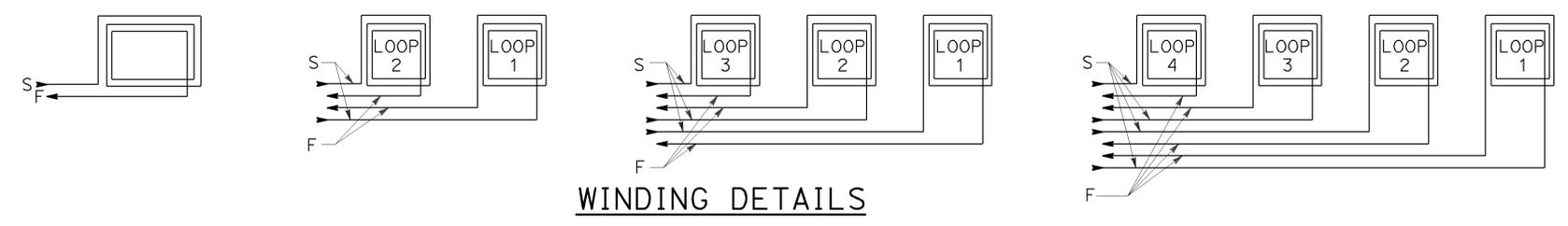


**SAWCUT DETAILS**

- 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.

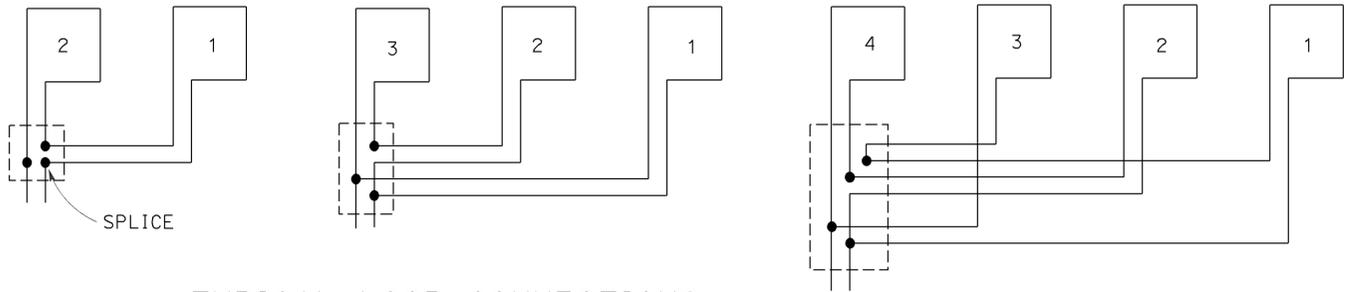


**SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR**



**WINDING DETAILS**

**ABBREVIATIONS:**  
 S - START  
 F - FINISH



**TYPICAL LOOP CONNECTIONS**  
 Dashed lines represent the pull box

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**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.

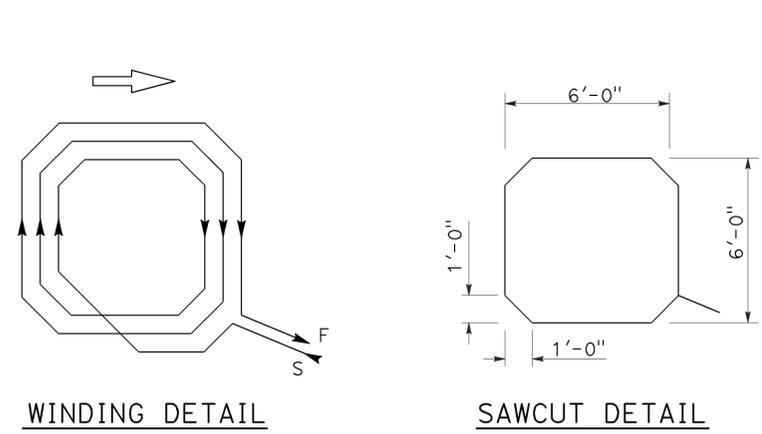
**REVISED STANDARD PLAN RSP ES-5A**

2010 REVISED STANDARD PLAN RSP ES-5A

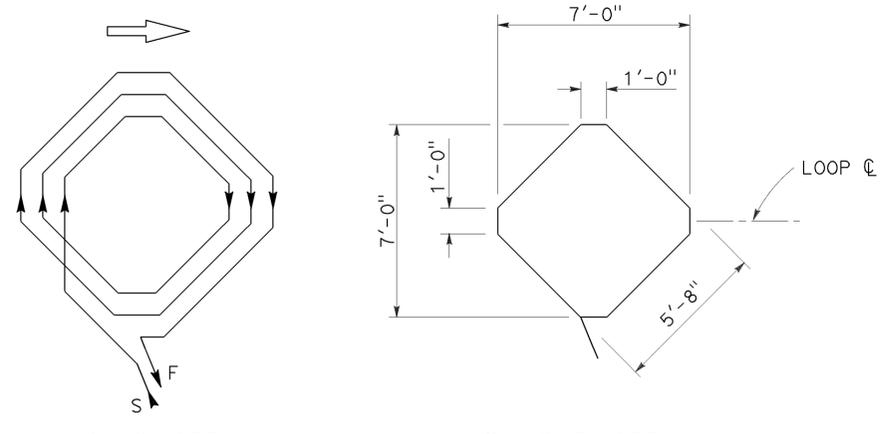
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	58	71
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER Theresa Aziz Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL STATE OF CALIFORNIA					
October 30, 2015 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED 2-22-16

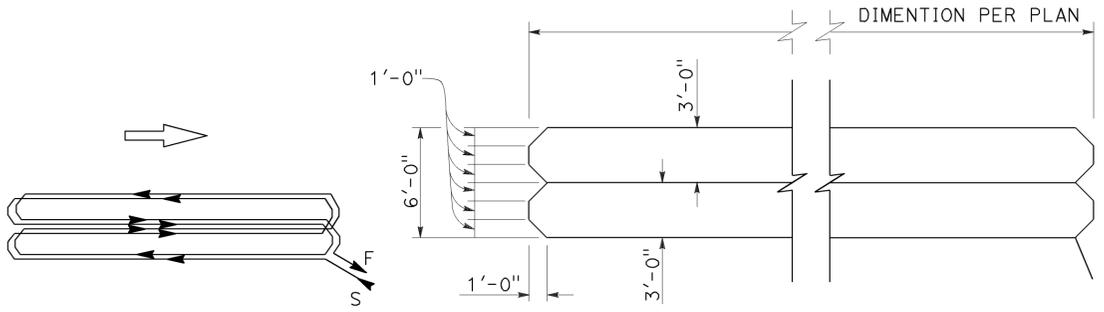
2010 REVISED STANDARD PLAN RSP ES-5B



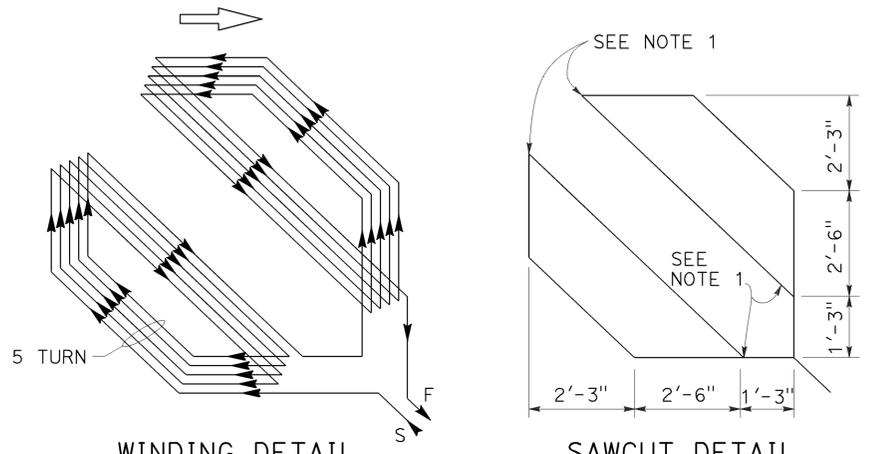
WINDING DETAIL      SAWCUT DETAIL  
TYPE A LOOP DETECTOR CONFIGURATION



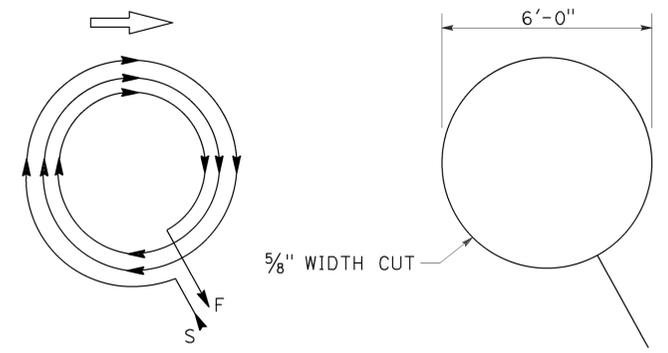
WINDING DETAIL      SAWCUT DETAIL  
TYPE B LOOP DETECTOR CONFIGURATION



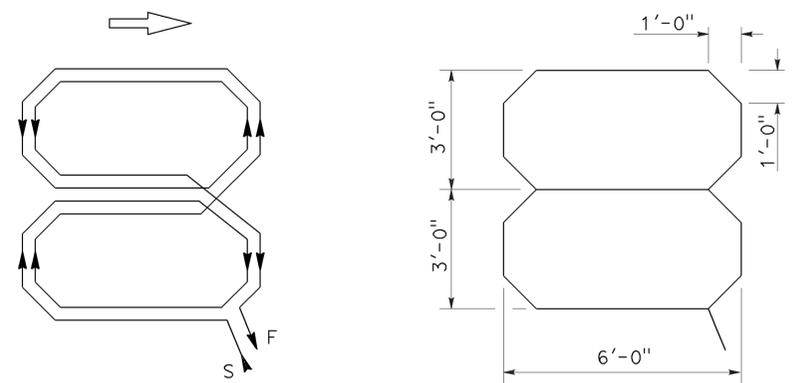
WINDING DETAIL      SAWCUT DETAIL  
TYPE C LOOP DETECTOR CONFIGURATION



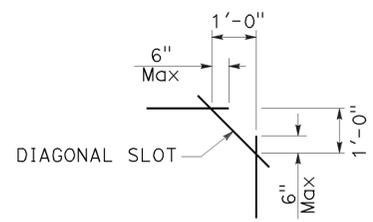
WINDING DETAIL      SAWCUT DETAIL  
TYPE D LOOP DETECTOR CONFIGURATION



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.

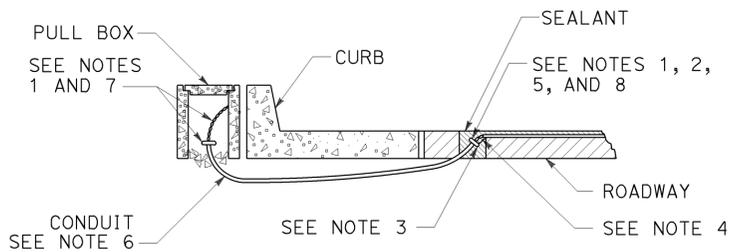
**REVISED STANDARD PLAN RSP ES-5B**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	59	71

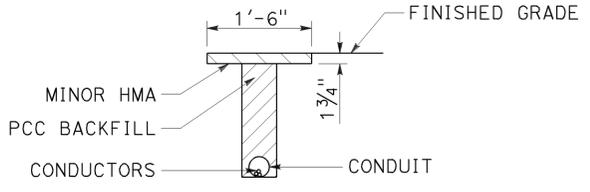
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 October 30, 2015  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



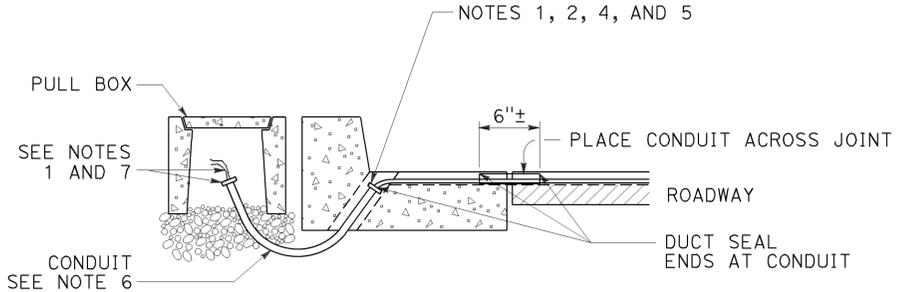
TO ACCOMPANY PLANS DATED 2-22-16



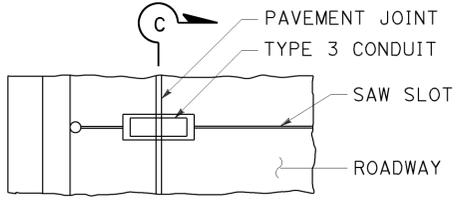
**TYPE A  
CURB TERMINATION DETAIL**



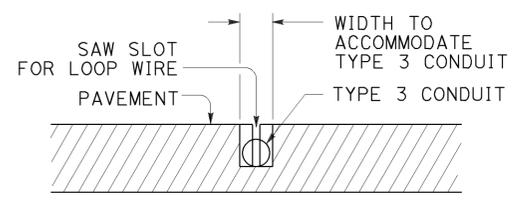
**"T" TRENCH  
DETAIL 1**



**CROSS SECTION**

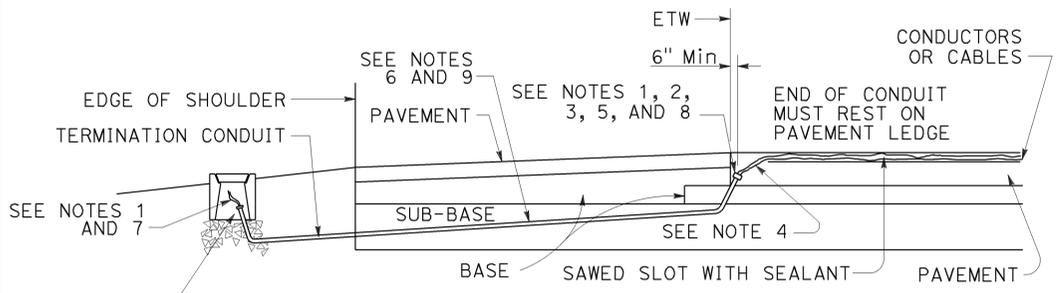


**PLAN VIEW**

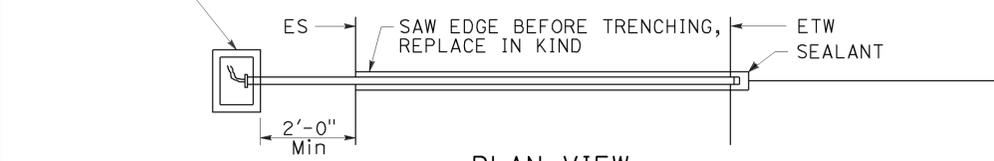


**SECTION C-C**

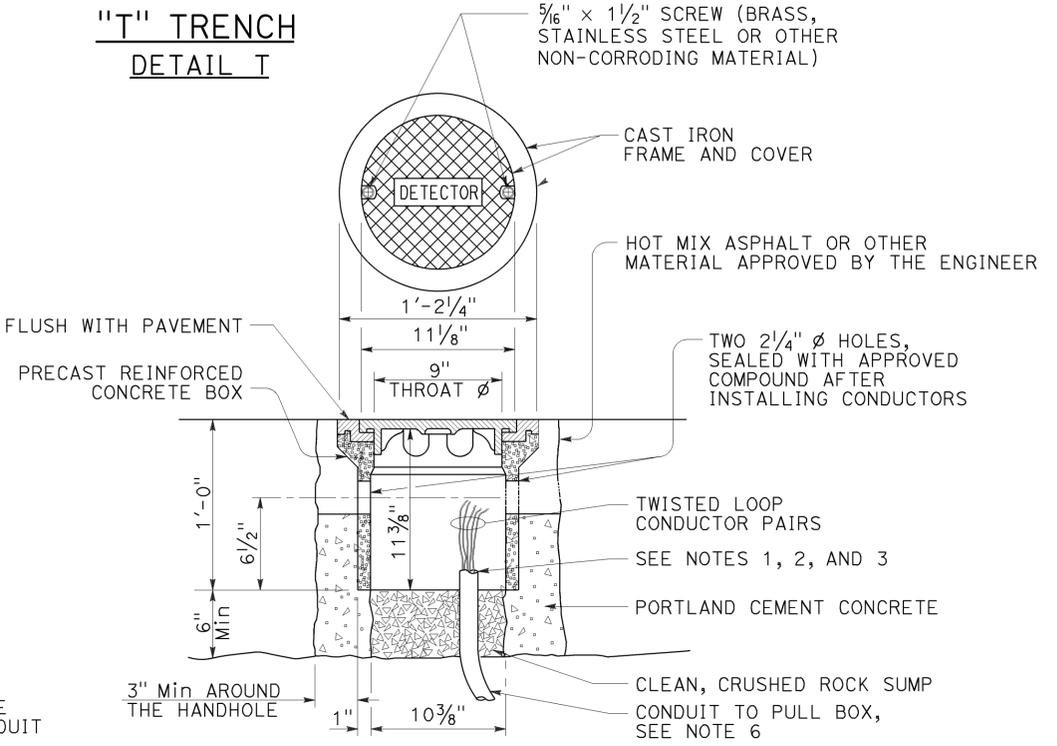
**TYPE B  
CURB TERMINATION DETAIL**



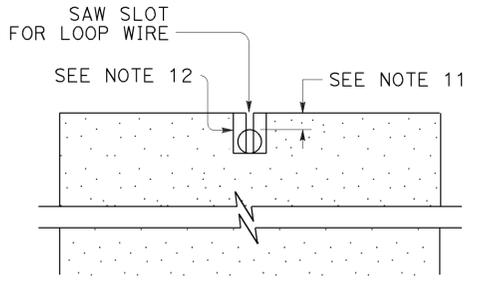
**CROSS SECTION**



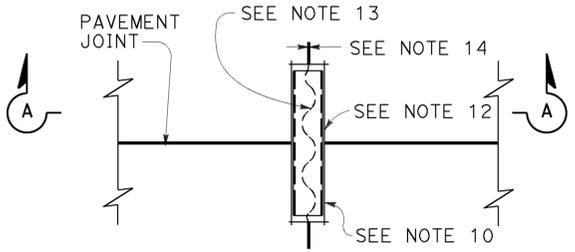
**PLAN VIEW  
SHOULDER TERMINATION DETAILS**



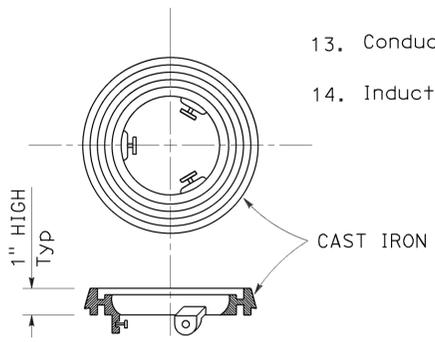
**DETECTOR HANDHOLE DETAIL**



**SECTION A-A**



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



**LOCKING GRADE RING**

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(CURB 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.

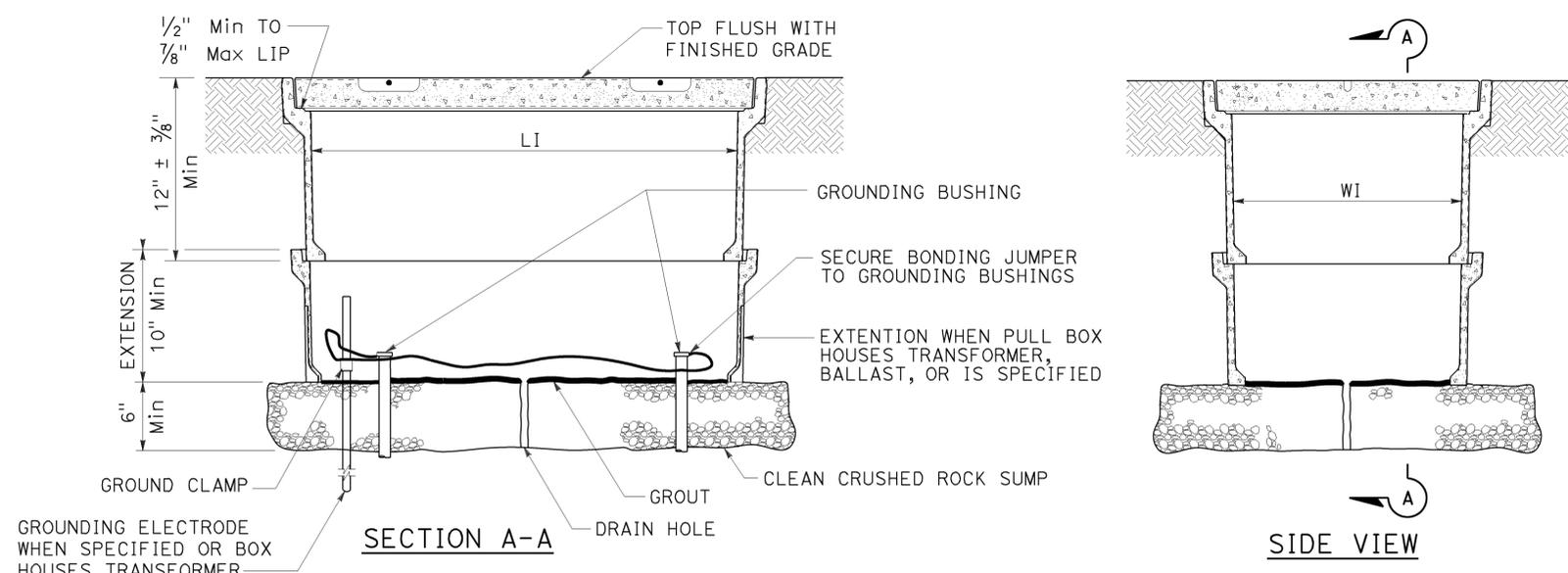
**REVISED STANDARD PLAN RSP ES-5D**

2010 REVISED STANDARD PLAN RSP ES-5D

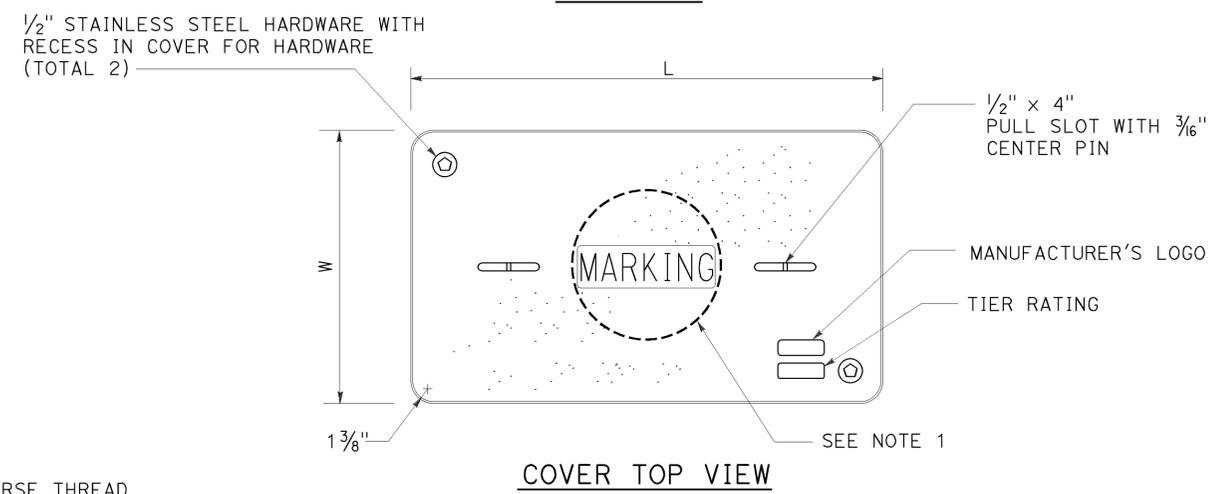
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	118	R4.8	60	71

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.

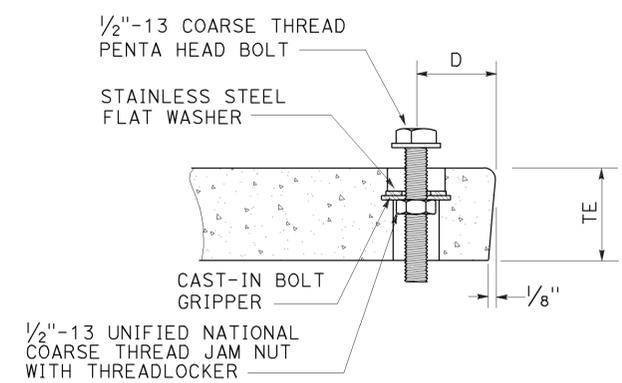
TO ACCOMPANY PLANS DATED 2-22-16



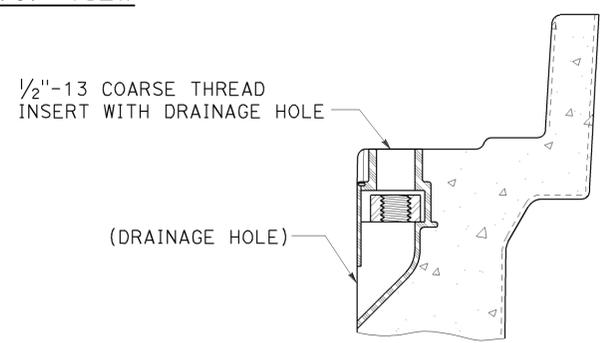
**INSTALLATION DETAILS**  
**DETAIL A**



**COVER TOP VIEW**



**TYPICAL COVER CAPTIVE BOLT**  
**OR SIMILAR**



**TYPICAL THREADED INSERT**  
**OR SIMILAR**

**NOTES:**

- 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 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, 6, 9 or 9A 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.
    - "COMMUNICATIONS" - Communication circuits.
    - "TOS COMMUNICATIONS" - TOS communication 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.
- 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". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- Dimensions for the cover for non-traffic pull box are nominal values.

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MINIMUM WEIGHT	LI Min	WI Min	TE	D	L	W	MINIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3"	9"	1 3/4"	1 3/4"	1'-3 1/4" - 1'-3 3/8"	10" - 10 1/8"	30 lb
No. 5	12"	10"	55 lb	1' - 8"	11"	2"	1 3/4"	1'-11 1/4"	1'-1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 4 1/4"	1' - 3 1/4"	2"	2"	2'-6 1/2"	1'-5 1/2"	85 lb

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

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

**REVISED STANDARD PLAN RSP ES-8A**

2010 REVISED STANDARD PLAN RSP ES-8A

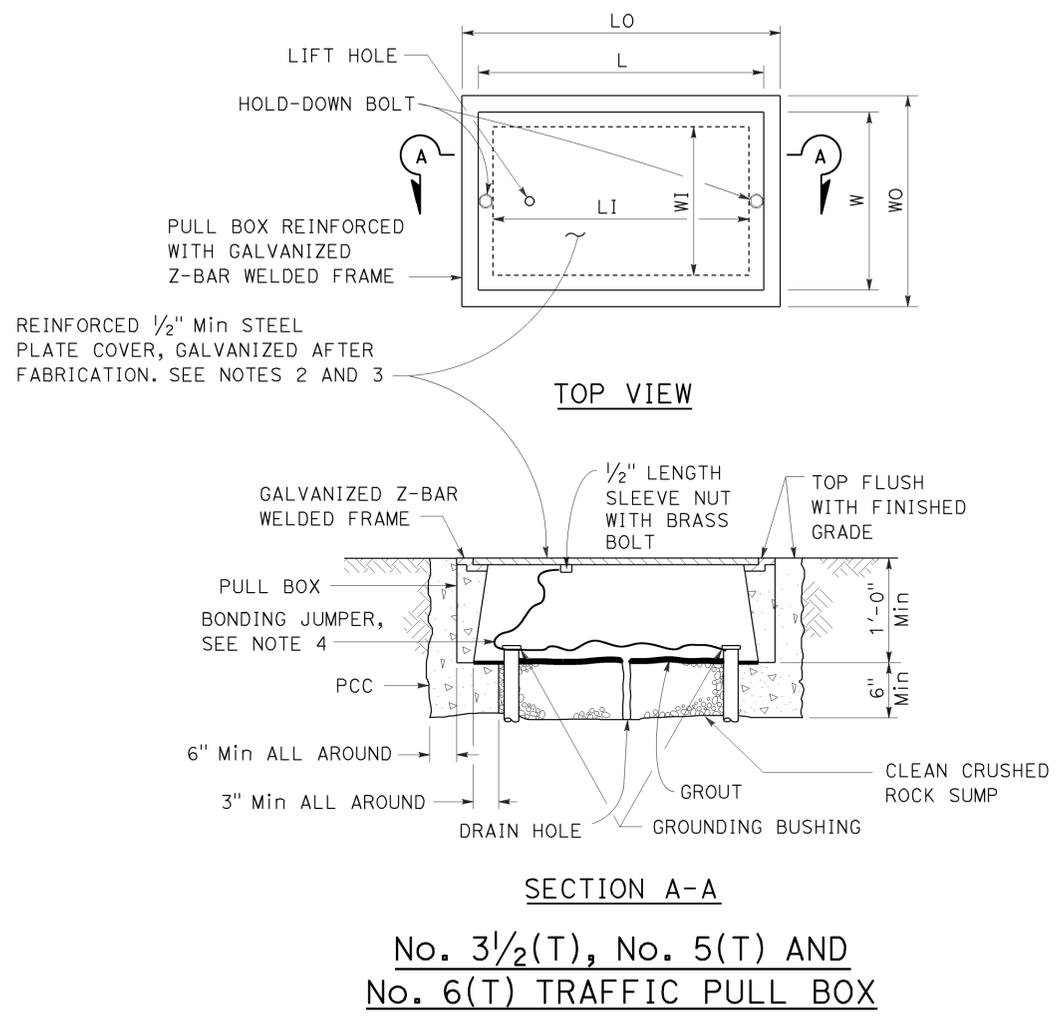
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	118	R4.8	61	71

*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 2-22-16



**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

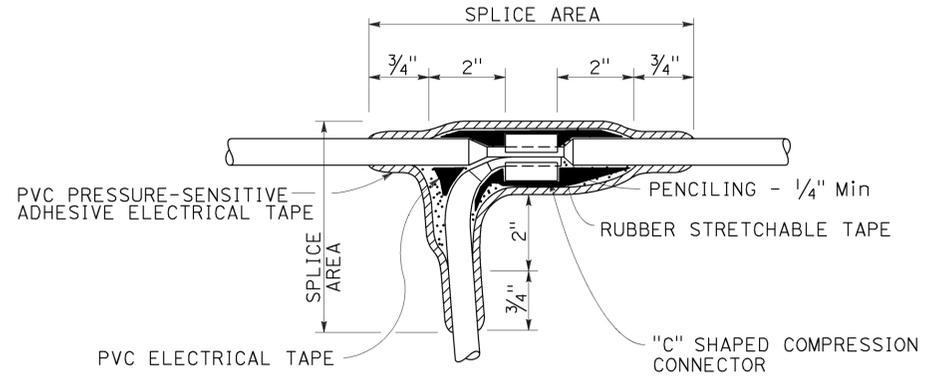
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	62	71

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

October 30, 2015  
 PLANS APPROVAL DATE

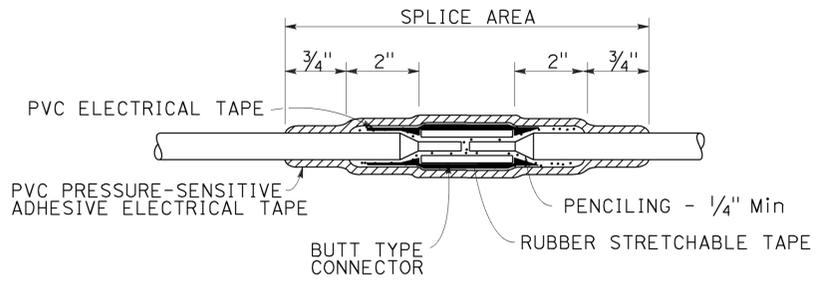
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TO ACCOMPANY PLANS DATED 2-22-16



**TYPE C SPLICE**

See Note 3

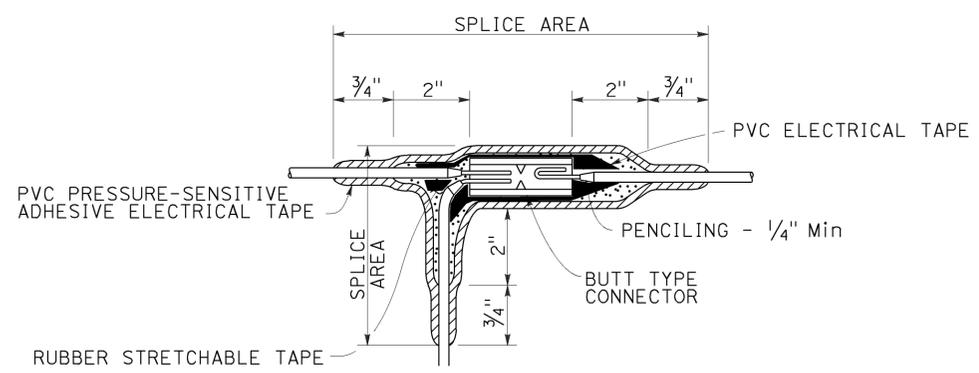


**TYPE S SPLICE**

See Note 4

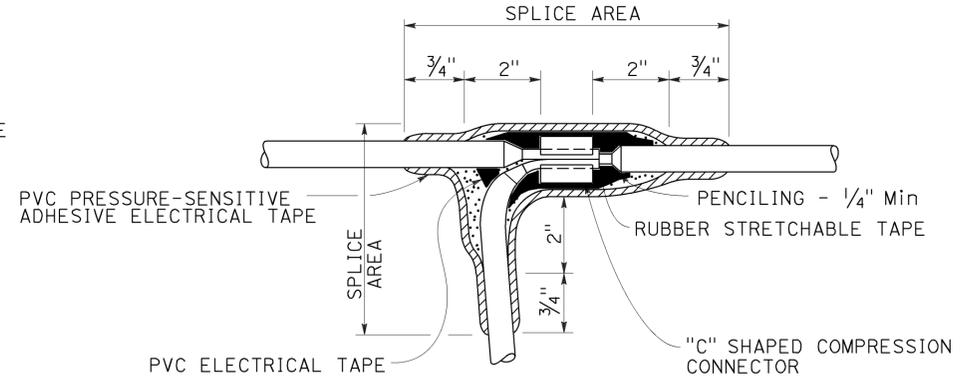
**NOTES:**

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)**

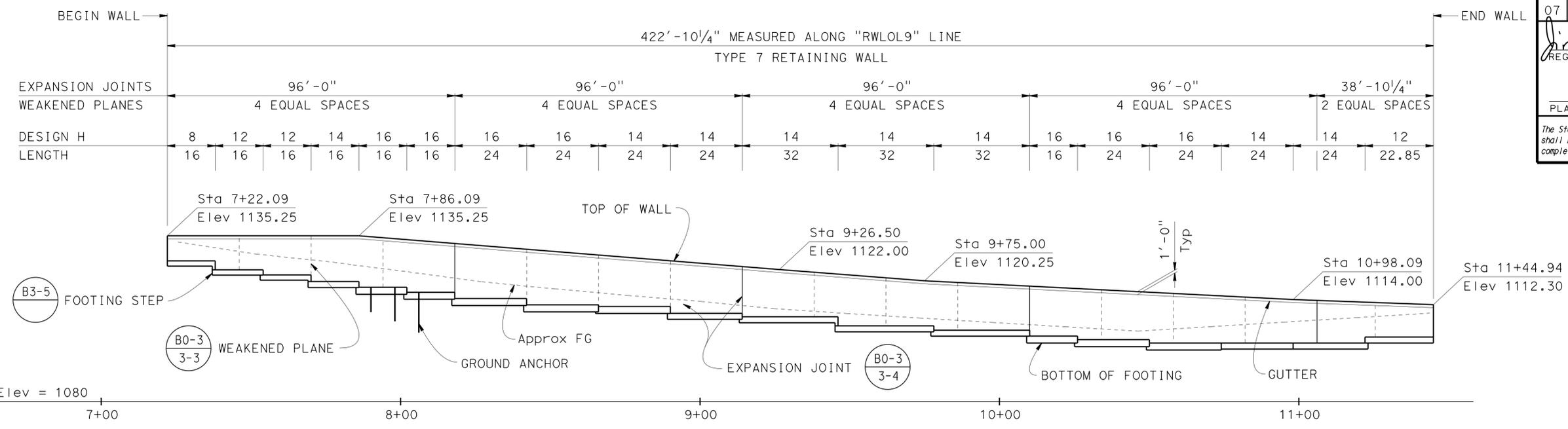
NO SCALE

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	63	71
Jinrong Wang			5-22-15	REGISTERED CIVIL ENGINEER DATE	
2-22-16			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



Note: Not all ground anchors shown.

**DEVELOPED ELEVATION**  
1" = 20'

**INDEX TO PLANS**

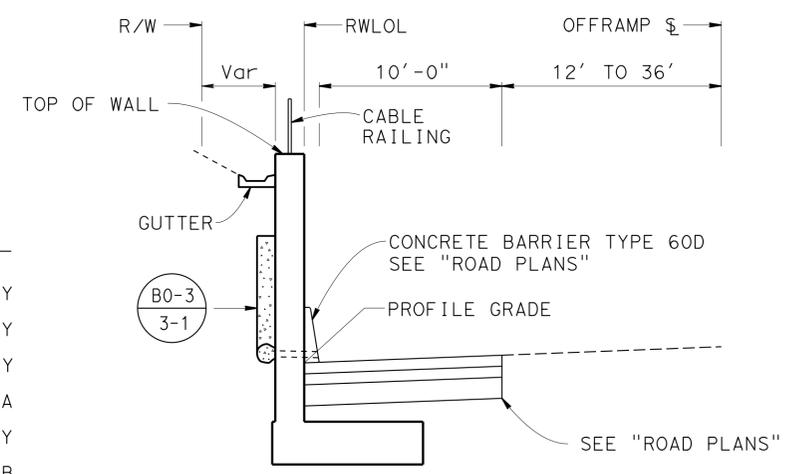
SHEET NO.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN
3	RETAINING WALL TYPE 7 DETAILS
4	MISCELLANEOUS DETAILS
5	VERTICAL GROUND ANCHOR DETAILS NO. 1
6	VERTICAL GROUND ANCHOR DETAILS NO. 2
7	LOG OF TEST BORINGS 1 OF 3
8	LOG OF TEST BORINGS 2 OF 3
9	LOG OF TEST BORINGS 3 OF 3

**STANDARD PLANS DATED 2010**

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
B0-3	BRIDGE DETAILS
RSP B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
RSP B11-47	CABLE RAILING

**QUANTITIES**

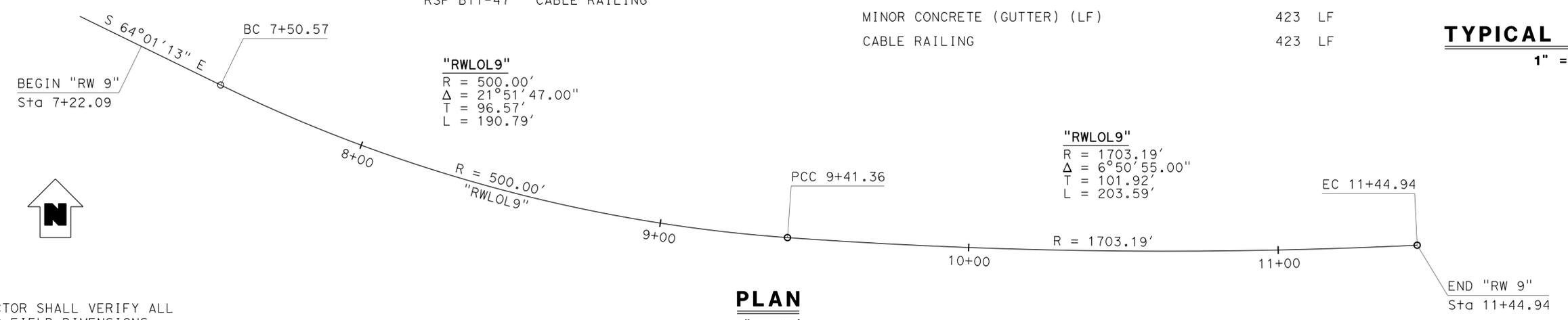
STRUCTURE EXCAVATION (RETAINING WALL)	3,700	CY
STRUCTURE BACKFILL (RETAINING WALL)	1,700	CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	99	CY
GROUND ANCHOR (VERTICAL)	18	EA
STRUCTURAL CONCRETE, RETAINING WALL	672	CY
BAR REINFORCING STEEL (RETAINING WALL)	58,755	LB
MINOR CONCRETE (GUTTER) (LF)	423	LF
CABLE RAILING	423	LF



**TYPICAL SECTION**  
1" = 5'

**LEGEND:**

- Standard Plan Sheet No.
- Detail No.



**PLAN**  
1" = 20'

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

For "GENERAL NOTES" see "RETAINING WALL TYPE 7 DETAILS" sheet.

DESIGN ENGINEER Matt Holm	DESIGN	BY J. Wang	CHECKED L. Valla	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	53E0282	RETAINING WALL 9												
	DETAILS	BY KC	CHECKED L. Valla	LAYOUT	BY J. Wang			CHECKED L. Valla		POST MILE	R 4.82	GENERAL PLAN										
	QUANTITIES	BY J. Wang	CHECKED L. Valla	SPECIFICATIONS	BY T. Nedwick	PLANS AND SPECS COMPARED	T. Nedwick			REVISION DATES		SHEET	OF									
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS										0	1	2	3	UNIT: 3606	PROJECT NUMBER & PHASE: 0715000267	CONTRACT NO.: 07-2849U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	3-1-13	11-8-13	11-15-13	1	9



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	65	71

JINRONG WANG  
 REGISTERED CIVIL ENGINEER  
 DATE: 5-22-15  
 2-22-16  
 PLANS APPROVAL DATE  
 No. C49844  
 Exp. 9-30-16  
 CIVIL  
 STATE OF CALIFORNIA  
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TABLE OF WALL DIMENSIONS, REINFORCING STEEL AND BEARING STRESS DATA				
Design H	8'	12'	14'	16'
W	8'-3"	8'-3"	10'-0"	8'-3"
C	6'-6"	6'-6"	8'-3"	6'-6"
B	1'-9"	1'-9"	1'-9"	1'-9"
F	1'-9"	1'-9"	2'-0"	2'-4"
S	0'-8"	0'-6"	0'-5 2/3"	0'-5"
Ⓒ Bars	#5	#5	#5	#5
hsc	7'-10"	11'-10"	13'-10"	13'-6"
Ⓓ Bars	-	#5	#7	#7
hd	-	3'-3"	5'-6"	6'-0"
Ⓔ Bars	-	-	-	#5 @ 15
Bars bundled with g Bars in footing	-	-	-	Short Ⓒ
Ⓔ Bars	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
Ⓕ Bars	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12
Td (kips)	-	-	-	3
To (kips)	-	-	-	13.2
Tp = larger of 1.33 Td & 1.25 To (kips)	-	-	-	32
Anchor spacing	-	-	-	8'-0"
Ser I: B' (ft), q' (ksf)	8.1, 0.4	7.1, 0.8	8.9, 0.7	5.8, 1.9
Str Ia: B' (ft), q (ksf)	7.6, 1.2	6.2, 1.8	8.0, 1.8	4.7, 3.8
Str Ib: B' (ft), q (ksf)	6.9, 1.0	5.0, 1.8	6.6, 1.7	3.4, 4.4
Ext I: B' (ft), q (ksf)	7.1, 0.9	5.0, 1.7	6.3, 1.8	2.8, 5.2
Ext II: B' (ft), q (ksf)	2.9, 2.3	3.3, 2.7	6.0, 1.7	3.8, 3.6

Legend:

- SER: Service limit state
- STR: Strength limit state
- EXT: Extreme event limit state
- B' : Effective footing width (ft)
- q<sub>o</sub> : Net bearing stress (ksf)
- q<sub>g</sub> : Gross uniform bearing stress (ksf)
- To : Anchor lockoff load
- Tp : Anchored factored test load

**GENERAL NOTES  
LOAD FACTOR DESIGN**

Design: AASHTO LRFD Bridge Design Specifications, 6th edition with California amendments

LS: Varied surcharge on level ground surface

EQE: Mononabe-Okabe Method  
 $K_h = 0.2$   
 $K_v = 0.0$

Soil:  $\phi = 34^\circ$   
 $\gamma = 120$  pcf

Reinforced Concrete:  $f'_c = 3600$  psi  
 $f_y = 60,000$  psi

Load Combinations and Limit States

Service I  $Q = 1.00DC + 1.00EV + 1.00EH + 1.00LS + Td$

Strength I  $Q = aDC + \beta EV + 1.50EH + 1.75LS + Td$

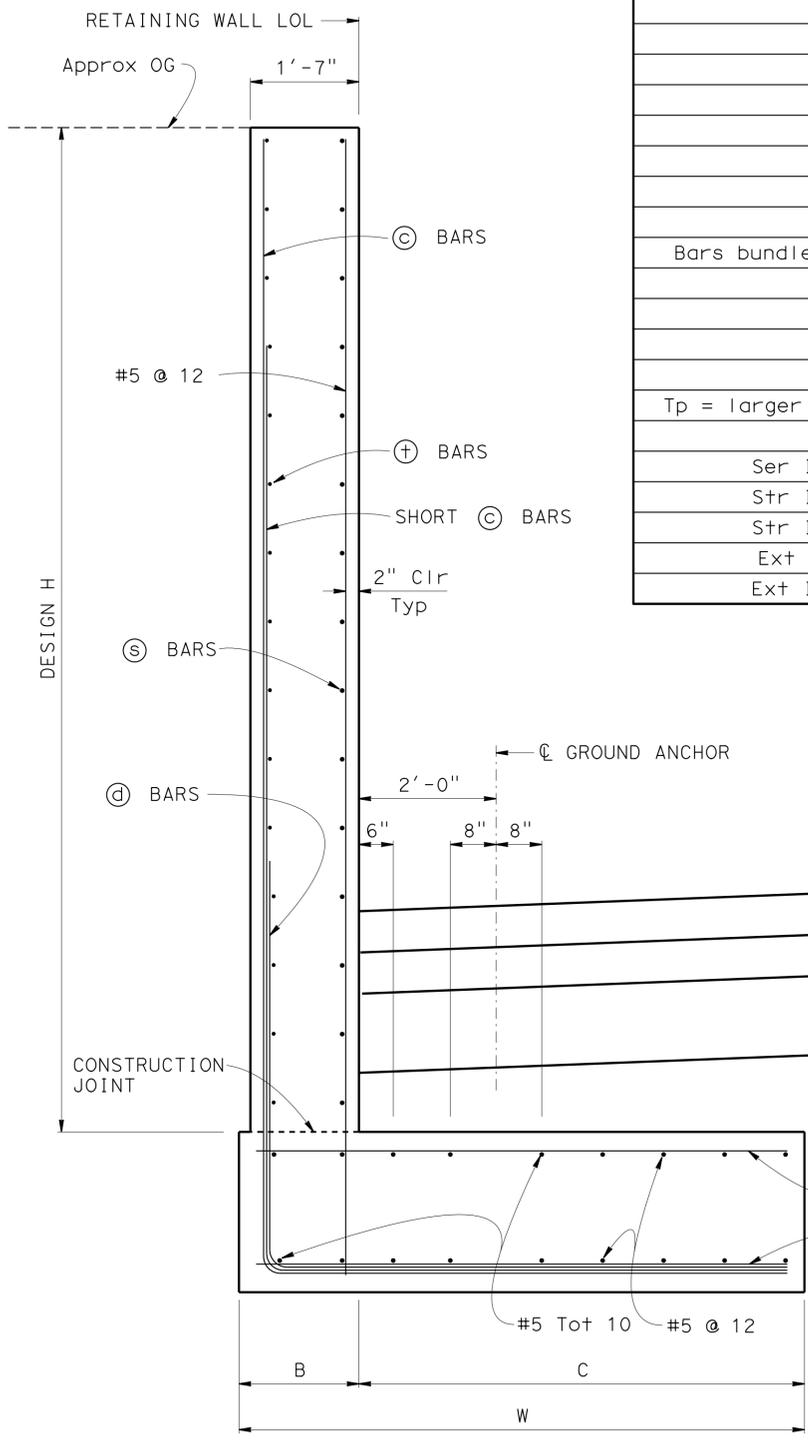
Extreme I  $Q = 1.00DC + 1.00EV + 1.00EH + 1.00EQD + 1.00EQE + Td$

Extreme II  $Q = 1.00DC + 1.00EV + 1.00EH + Td$

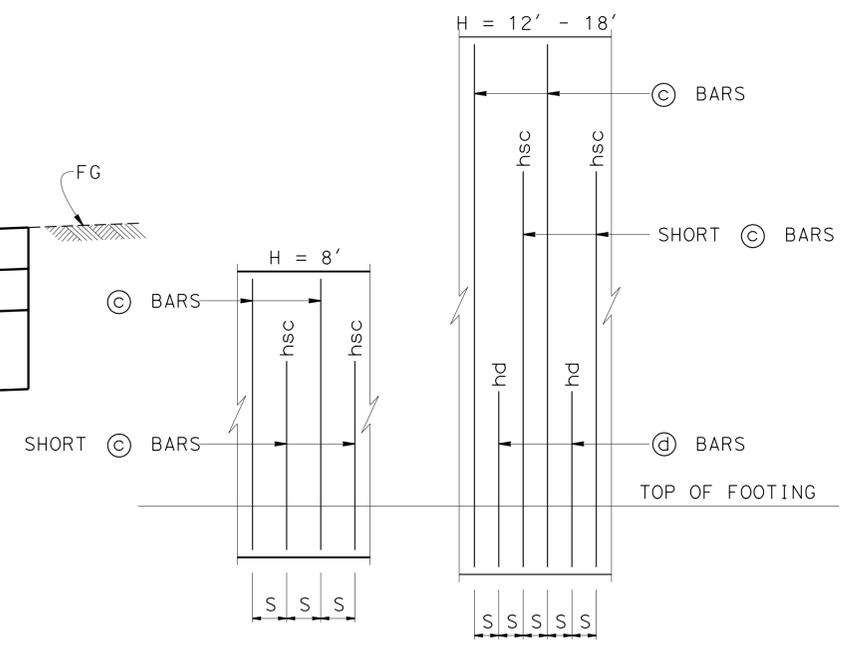
- Where: Q: Force Effects
- a: 1.25 or 0.90, which ever controls design
  - $\beta$ : 1.35 or 1.00, which ever controls design
  - DC: Dead load of structure components
  - EV: Vertical earth fill pressure
  - LS: Live load surcharge
  - EQE: Seismic earth pressure
  - EQD: Soil and structure components inertia. Soil inertia ignored for stem design
  - Td: Anchor design Load

Notes:

1. For details not shown and drainage notes see B3-5.
2. Footing cover, 2'-0" minimum.
3. Shift Ⓒ bars and Ⓔ bars as required to clear formed hole for ground anchor.
4. Footing is designed to resist 1.33 Td assuming the maximum anchor spacing shown in the table.



**SECTION**  
3/4" = 1'-0"



**ELEVATION**  
No Scale

Note:  
"hsc" and "hc" above bars indicate distance from top of footing to upper end of the bars, see "TABLE OF WALL DIMENSIONS, REINFORCING STEEL AND BEARING STRESS DATA"

DESIGN	BY	J. Wang	CHECKED	L. Valla	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	53E0282	RETAINING WALL 9 RETAINING WALL TYPE 7 DETAILS	
	DETAILS	BY	kc	CHECKED			L. Valla	POST MILE		R 4.82
	QUANTITIES	BY	J. Wang	CHECKED			L. Valla	CONTRACT NO.: 07-2849U1		

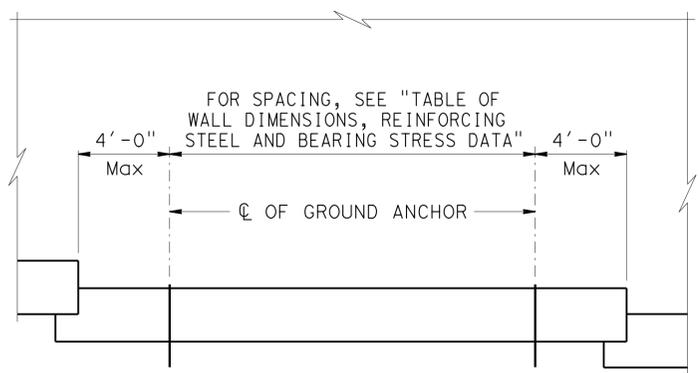
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS  
 UNIT: 3606 PROJECT NUMBER & PHASE: 0715000267 CONTRACT NO.: 07-2849U1  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 5-1-15, 10-22-15, 9-16-15  
 SHEET 3 OF 9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	66	71

Jinrong Wang  
REGISTERED CIVIL ENGINEER  
DATE: 5-22-15  
PLANS APPROVAL DATE: 2-22-16

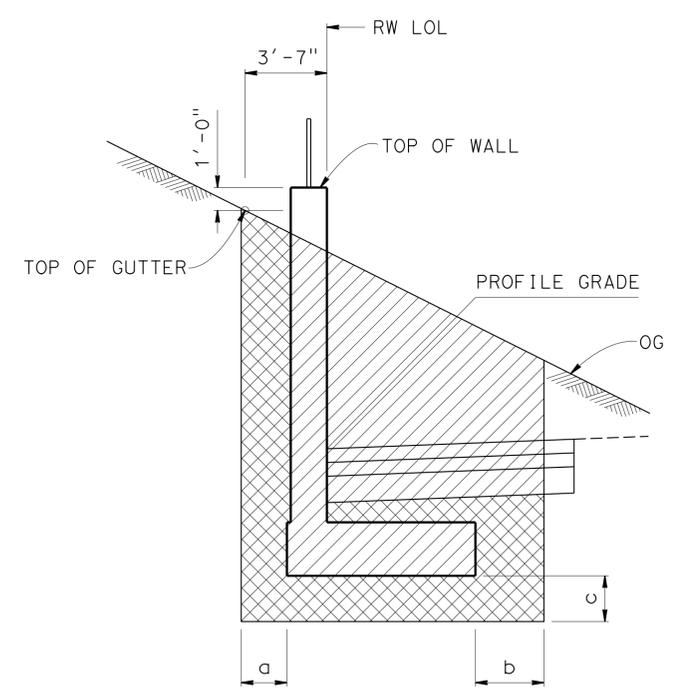
STATE OF CALIFORNIA  
REGISTERED PROFESSIONAL ENGINEER  
JINRONG WANG  
No. C49844  
Exp. 9-30-16  
CIVIL

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**PARTIAL ELEVATION**  
1/4" = 1'-0"

Note:  
For "TABLE OF WALL DIMENSIONS, REINFORCING STEEL AND BEARING STRESS DATA" see "RETAINING WALL TYPE 7 DETAILS" sheet.



**PAY LIMITS FOR STRUCTURE EXCAVATION AND BACKFILL FOR RETAINING WALL TYPE 7**

NO SCALE

- STRUCTURE EXCAVATION (RETAINING WALL)
- STRUCTURE BACKFILL (RETAINING WALL)

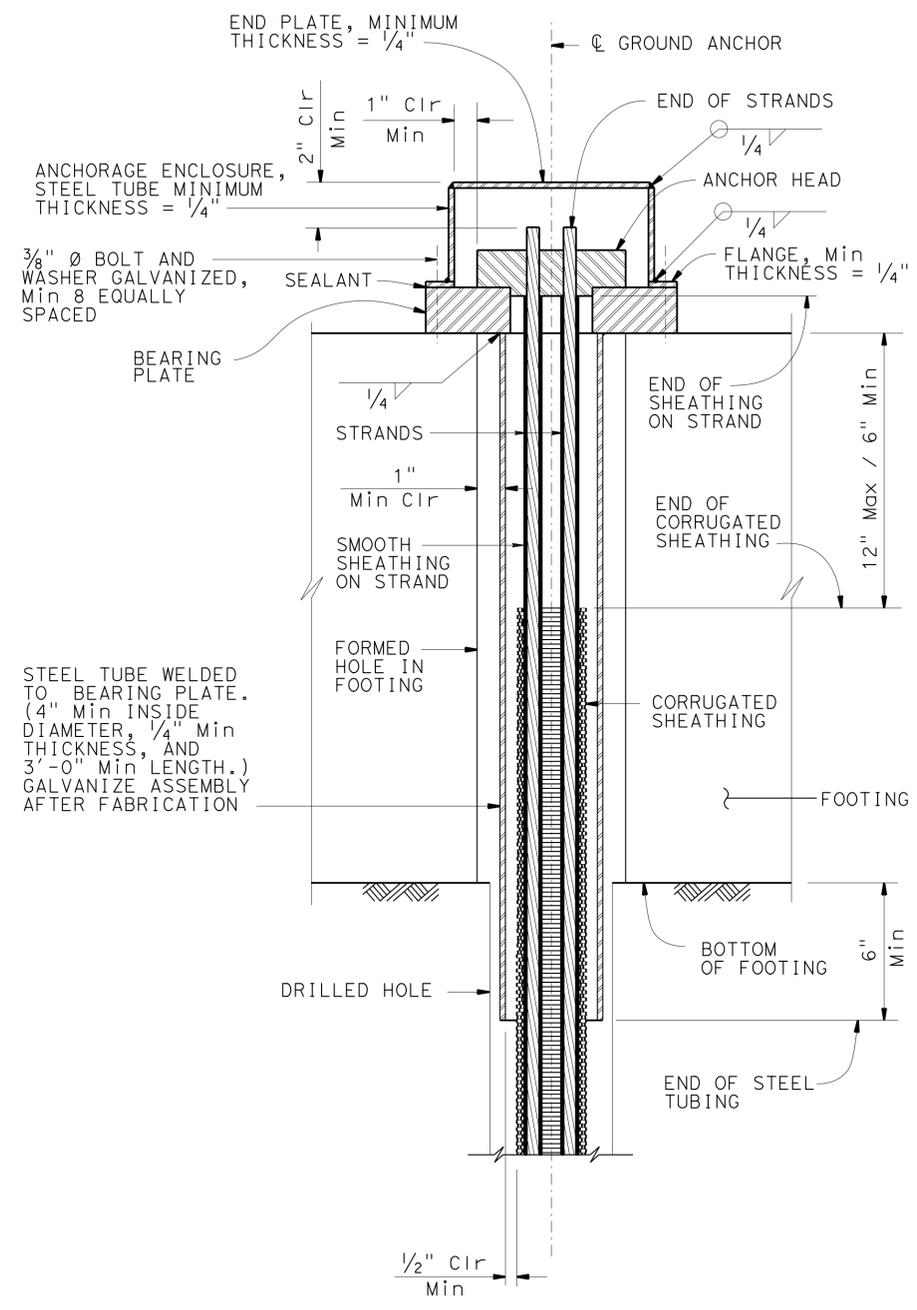
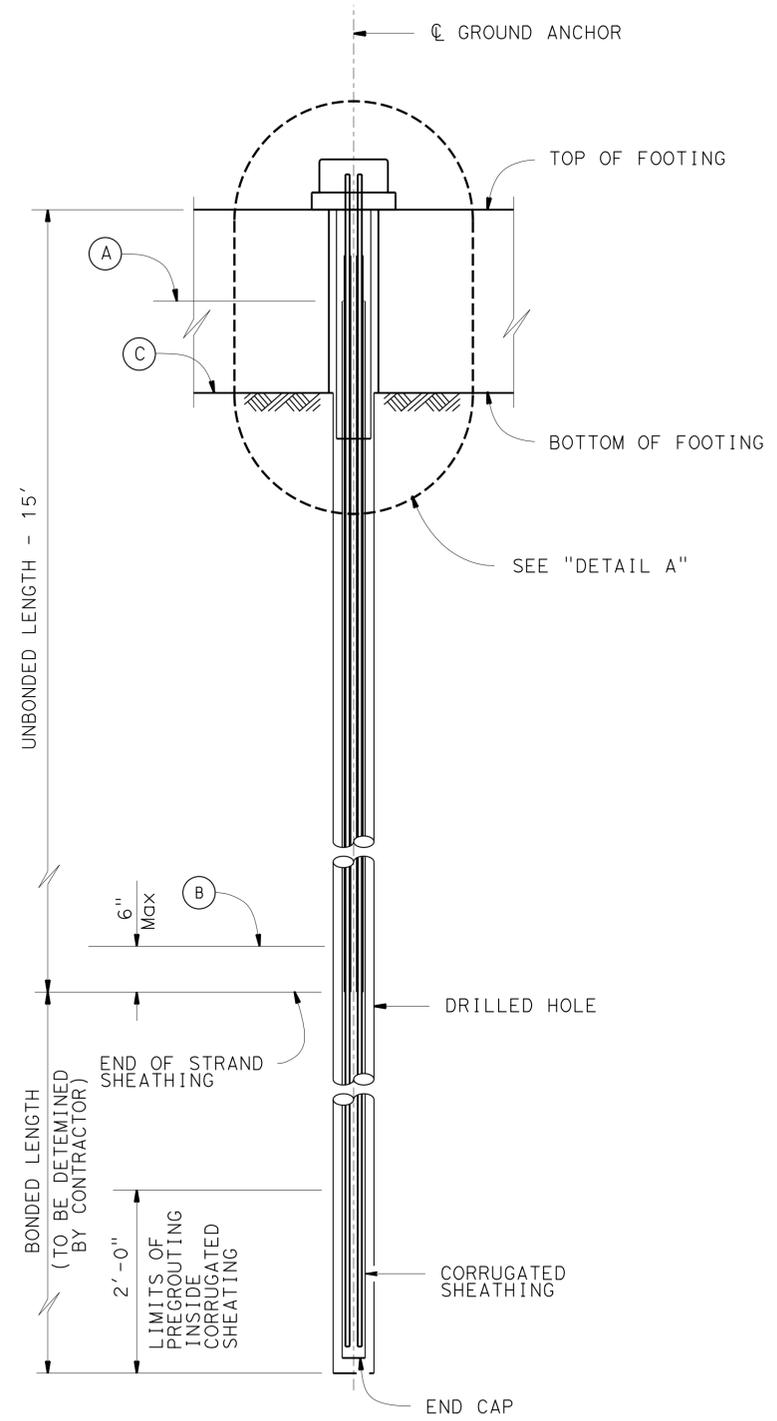
Note: For pervious backfill, see "GENERAL PLAN" sheet.

RW LOL Stationing	a (ft)	b (ft)	c (ft)
7+22.09 to 7+37.00	4	5	4
7+37.00 to 7+85.00	3	4	3
7+85.00 to 8+89.00	2	3	2
8+89.00 to 9+45.00	3	4	3
9+45.00 to 9+77.00	4	5	4
9+77.00 to 10+49.00	3	4	3
10+49.00 to 11+23.00	2	3	2
11+23.00 to 11+44.94	3	4	3

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DESIGN</td> <td style="width: 30%;">BY J. Wang</td> <td style="width: 30%;">CHECKED L. Valla</td> </tr> <tr> <td>DETAILS</td> <td>BY kc</td> <td>CHECKED L. Valla</td> </tr> <tr> <td>QUANTITIES</td> <td>BY J. Wang</td> <td>CHECKED L. Valla</td> </tr> </table>	DESIGN	BY J. Wang	CHECKED L. Valla	DETAILS	BY kc	CHECKED L. Valla	QUANTITIES	BY J. Wang	CHECKED L. Valla	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 12</b>	BRIDGE NO. 53E0282 POST MILE R 4.82	<b>RETAINING WALL 9</b> <b>MISCELLANEOUS DETAILS</b>
DESIGN	BY J. Wang	CHECKED L. Valla											
DETAILS	BY kc	CHECKED L. Valla											
QUANTITIES	BY J. Wang	CHECKED L. Valla											
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3606 PROJECT NUMBER & PHASE: 0715000267	CONTRACT NO.: 07-2849U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 4 OF 9						

USERNAME => s125624 DATE PLOTTED => 12-FEB-2016 TIME PLOTTED => 11:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	67	71
Jinrong Wang				5-22-15	
REGISTERED CIVIL ENGINEER				DATE	
2-22-16				PLANS APPROVAL DATE	
JINRONG WANG				No. C49844	
Exp. 9-30-16				CIVIL	
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**DETAIL A**  
3" = 1'-0"

**GENERAL NOTES**

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments.

PRESTRESSING STEEL (GROUND ANCHORS):

STRANDS - ASTM Designation: A416  
 Tp = Factored test load per tendon (Kips)  
 fpu = Minimum tensile strength of prestressing steel (ksi)

As = Minimum cross sectional area of prestressing steel in tendon (square inches)

$$As (Min) = \frac{1.0 Tp}{0.75 fpu} \text{ (Strand)}$$

**NOTES:**

1. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize enclosure after fabrication.
2. Alternative anchor enclosure shown on sheet "VERTICAL GROUND ANCHOR DETAILS No. 2" sheet

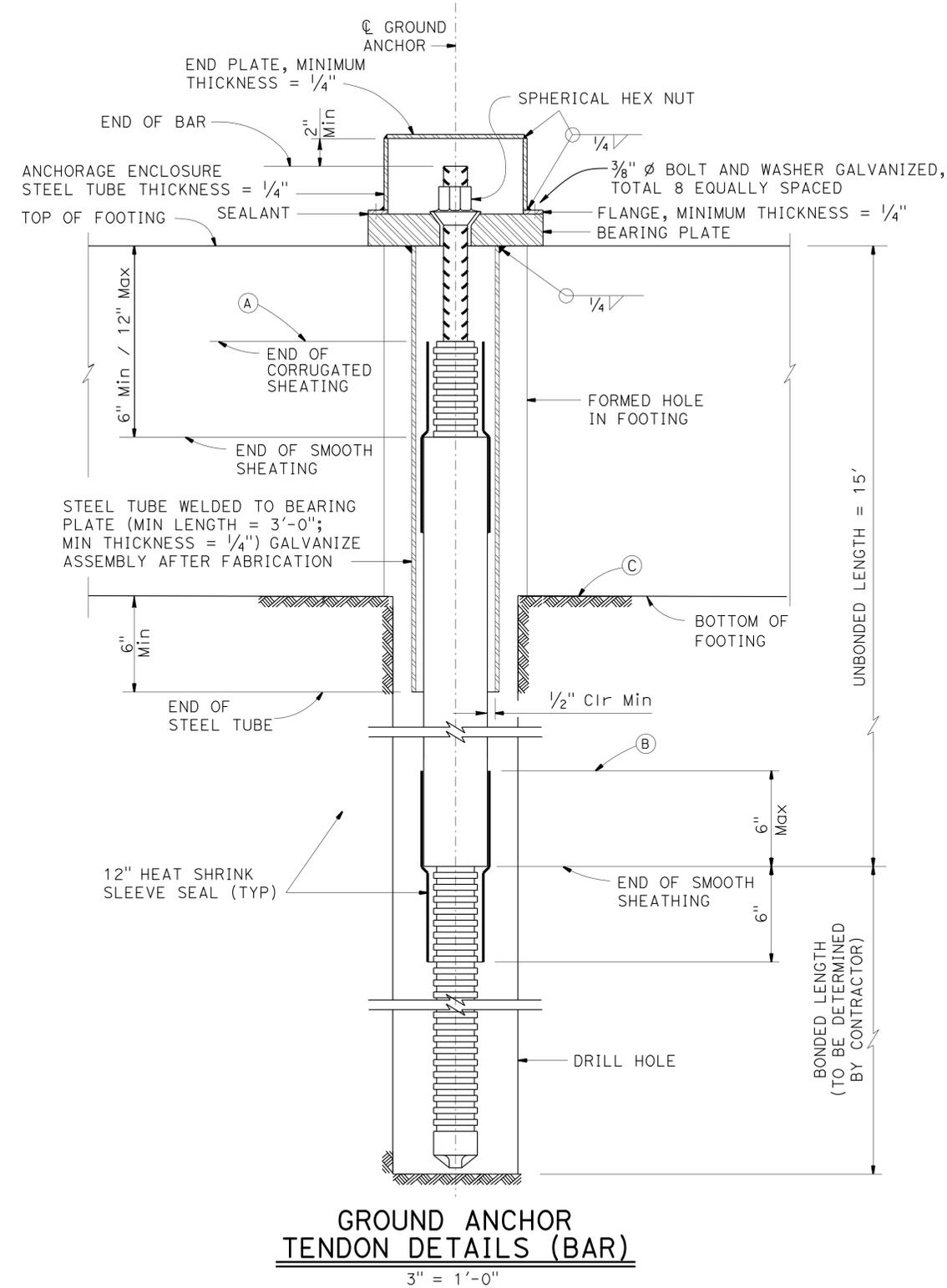
- (A) Level of initial grouting inside corrugated sheathing
- (B) Level of initial grouting in drilled hole
- (C) Level of secondary grouting in drilled hole

**GROUND ANCHOR TENDON DETAILS (STRANDS)**  
1" = 1'-0"

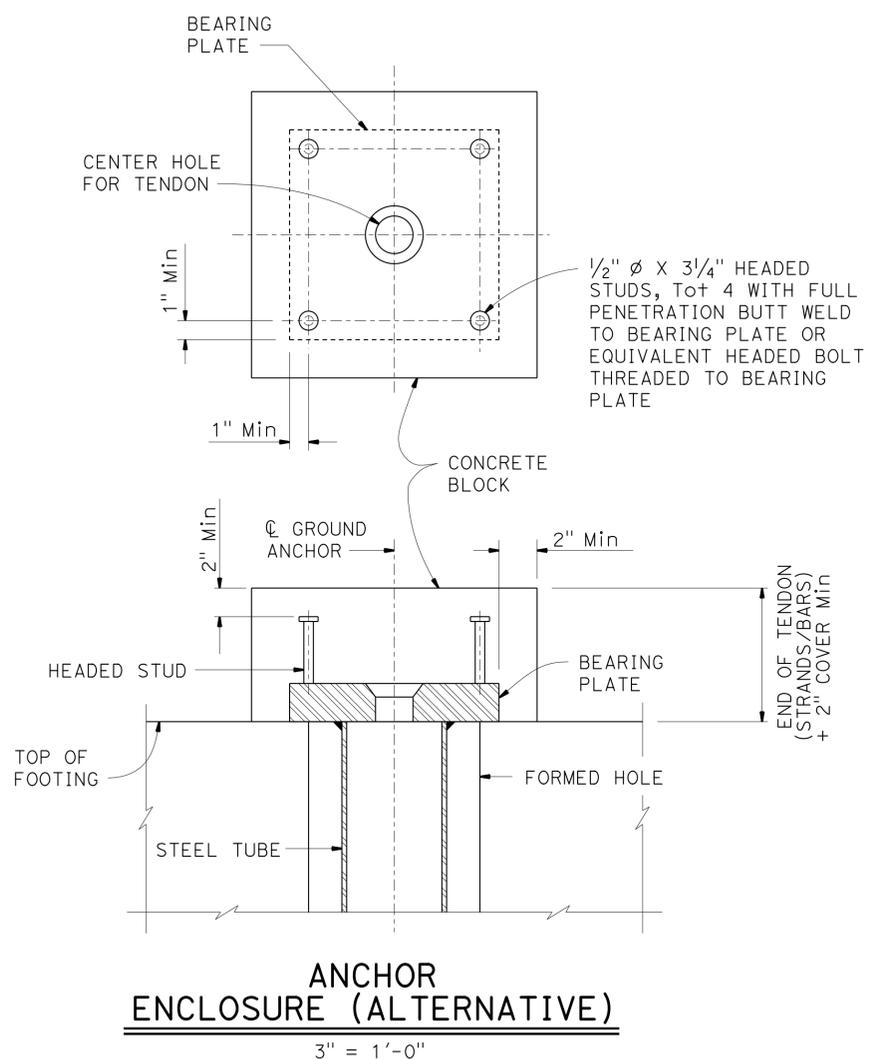
STANDARD DRAWING	
FILE NO. <b>xs12-030-1</b>	APPROVAL DATE <u>July 2011</u>

<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	<b>DIVISION OF ENGINEERING SERVICES</b>	BRIDGE NO.	<b>RETAINING WALL 9</b>
		53E0282	
		POST MILE	
		R 4.82	<b>VERTICAL GROUND ANCHOR DETAILS NO. 1</b>

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	118	R4.8	68	71
Jinrong Wang			5-22-15	REGISTERED CIVIL ENGINEER DATE	
2-22-16			PLANS APPROVAL DATE		
JINRONG WANG			REGISTERED PROFESSIONAL ENGINEER		
No. C49844			Exp. 9-30-16		
CIVIL			STATE OF CALIFORNIA		
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**GROUND ANCHOR TENDON DETAILS (BAR)**  
3" = 1'-0"



**ANCHOR ENCLOSURE (ALTERNATIVE)**  
3" = 1'-0"

**GENERAL NOTES**

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments.

PRESTRESSING STEEL (GROUND ANCHORS):

BARS - ASTM Designation: A722 Type II  
 Tp = Factored test load per tendon (Kips)  
 fpu = Minimum tensile strength of prestressing steel (ksi)

As = Minimum cross sectional area of prestressing steel in tendon (square inches)

$$As \text{ (Min)} = \frac{1.0 T_p}{0.75 f_{pu}} \text{ (Bar)}$$

- NOTES:
- Anchorage enclosure shall have provision to allow injecting grout at low end and venting at high end. Galvanize enclosure after fabrication.
  - (A) Level of initial grouting inside corrugated sheathing
  - (B) Level of initial grouting in drilled hole
  - (C) Level of secondary grouting in drilled hole

STANDARD DRAWING	
FILE NO. <b>xs12-030-2</b>	APPROVAL DATE <u>July 2011</u>

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	

DIVISION OF ENGINEERING SERVICES	
BRIDGE NO.	53E0282
POST MILE	R 4.82

RETAINING WALL 9	
VERTICAL GROUND ANCHOR DETAILS NO. 2	
REVISION DATES	SHEET 6 OF 9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	118	R4.8	69	71

Joseph S. Pratt 8-23-13  
 CERTIFIED ENGINEERING GEOLOGIST

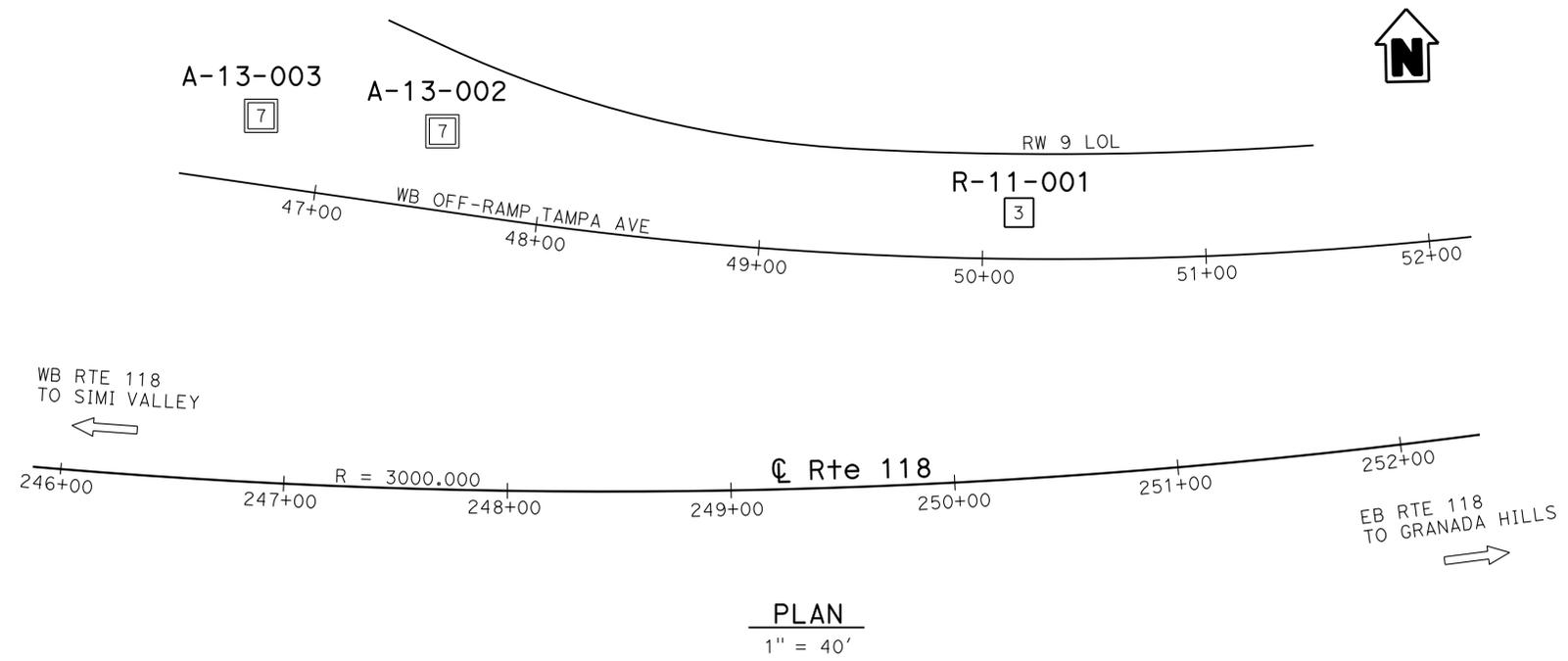
2-22-16  
 PLANS APPROVAL DATE

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

**BENCH MARK**

PRHV521 Elev 1132.98'  
 Fd Bench Mark PRHV 521, 8" spike in dirt shoulder 3.4' south of south curb WB 118/Tampa Ave Off-Ramp, Approx 133' Lt Sta 245+92 C Rte 118 (40'± east of top of ramp).  
 N 1922084.920  
 E 6393736.010  
 NAD83; NAVD88



**NOTE:** Ground water not encountered in Boring A-13-003.



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>RETAINING WALL 9</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: I. G-Remmen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		53E0282		<b>LOG OF TEST BORINGS 1 OF 3</b>	
NAME: S. Karimi		CHECKED BY: A. Mehrazar		FIELD INVESTIGATION BY: J. Pratt		<b>DESIGN BRANCH 12</b>		POST MILE			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 0715000267		CONTRACT NO.: 07-2849U1		REVISION DATES	
				0 1 2 3						SHEET 7 OF 9	

DISREGARD PRINTS BEARING EARLIER REVISION DATES

USERNAME => s125624 DATE PLOTTED => 12-FEB-2016 TIME PLOTTED => 11:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	118	R4.8	70	71

Joseph S. Pratt 8-23-13  
 CERTIFIED ENGINEERING GEOLOGIST  
 2-22-16  
 PLANS APPROVAL DATE

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 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS 1 OF 3"

NOTE: Ground water not encountered in Boring A-13-002.



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>RETAINING WALL 9</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: I. G-Remmen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		53E0282		<b>LOG OF TEST BORINGS 2 OF 3</b>	
NAME: S. Karimi		CHECKED BY: A. Mehrazar		J. Pratt		<b>DESIGN BRANCH 12</b>		POST MILE			
								R 4.82			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3643		PROJECT NUMBER & PHASE: 07150000267		CONTRACT NO.: 07-2849U1	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET OF	
								08-16-13		8 9	

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	118	R4.8	71	71

Joseph S. Pratt 8-23-13  
 CERTIFIED ENGINEERING GEOLOGIST  
 2-22-16  
 PLANS APPROVAL DATE

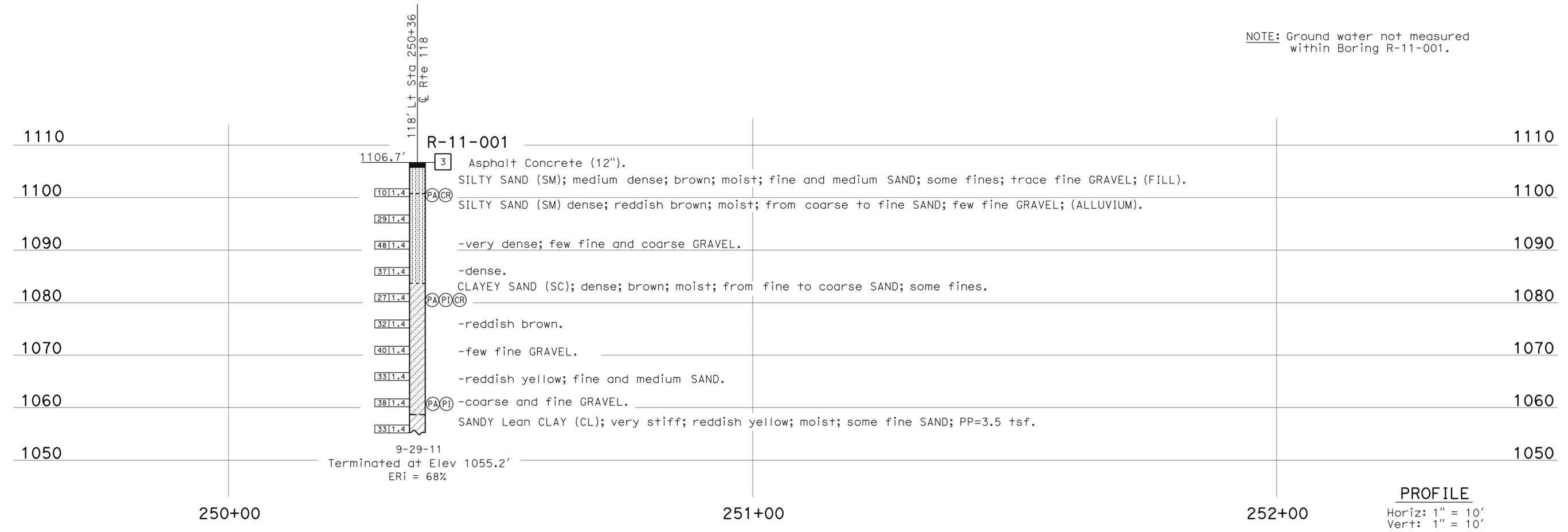
PROFESSIONAL GEOLOGIST  
 Joseph S. Pratt  
 No. 2141  
 Exp. 5-31-17  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

FOR PLAN VIEW, SEE  
 "LOG OF TEST BORINGS 1 OF 3"

NOTE: Ground water not measured within Boring R-11-001.



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>RETAINING WALL 9</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: W. Tang, I. G-Remmen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		53E0282		<b>LOG OF TEST BORINGS 3 OF 3</b>	
NAME: S. Karimi		CHECKED BY: A. Mehrazar		K. Lai		<b>DESIGN BRANCH 12</b>		POST MILE			
								R 4.82			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3643		PROJECT NUMBER & PHASE: 07150000267		CONTRACT NO.: 07-2849U1	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET OF	
								08-16-13		9 9	

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