

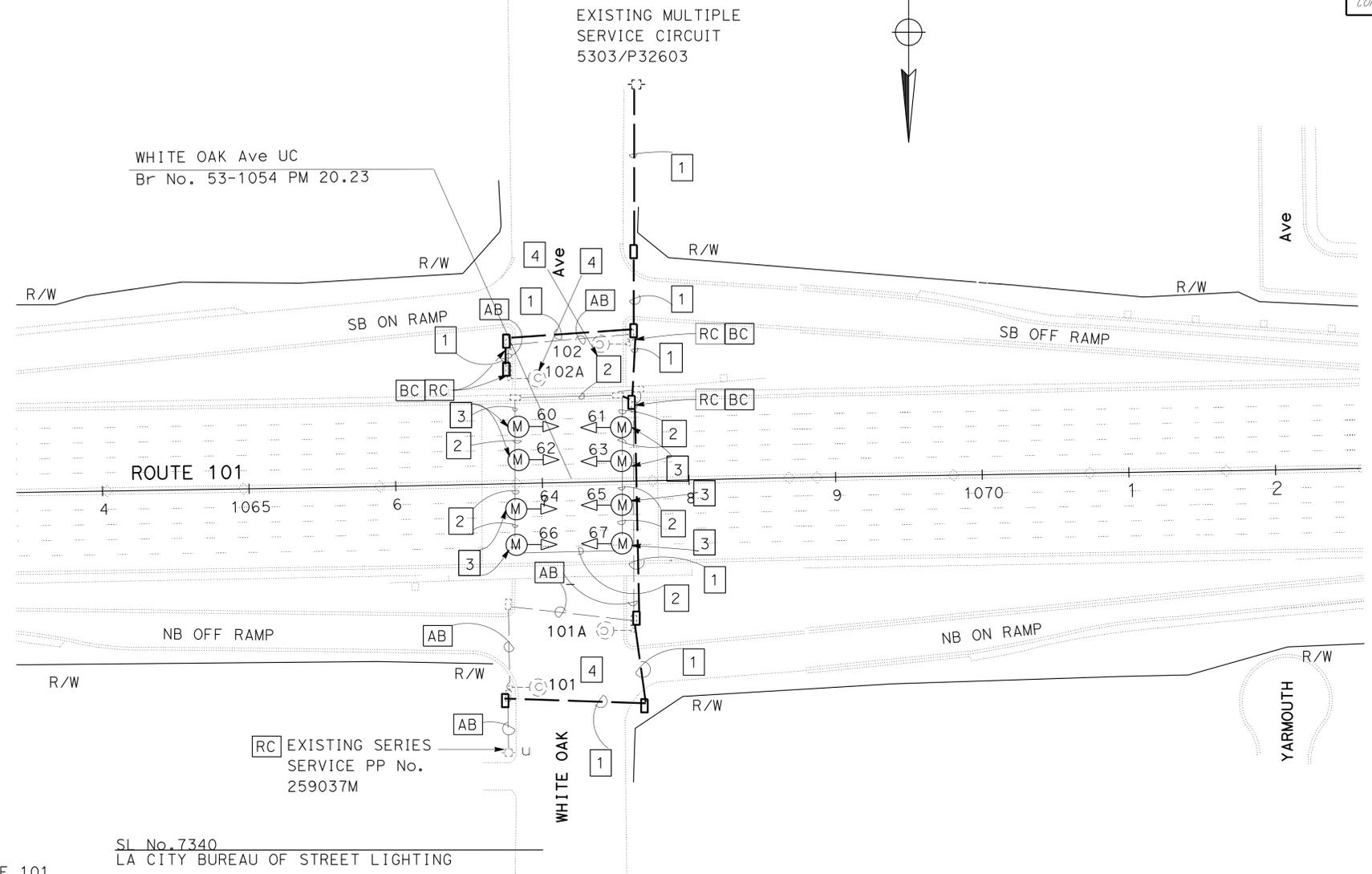
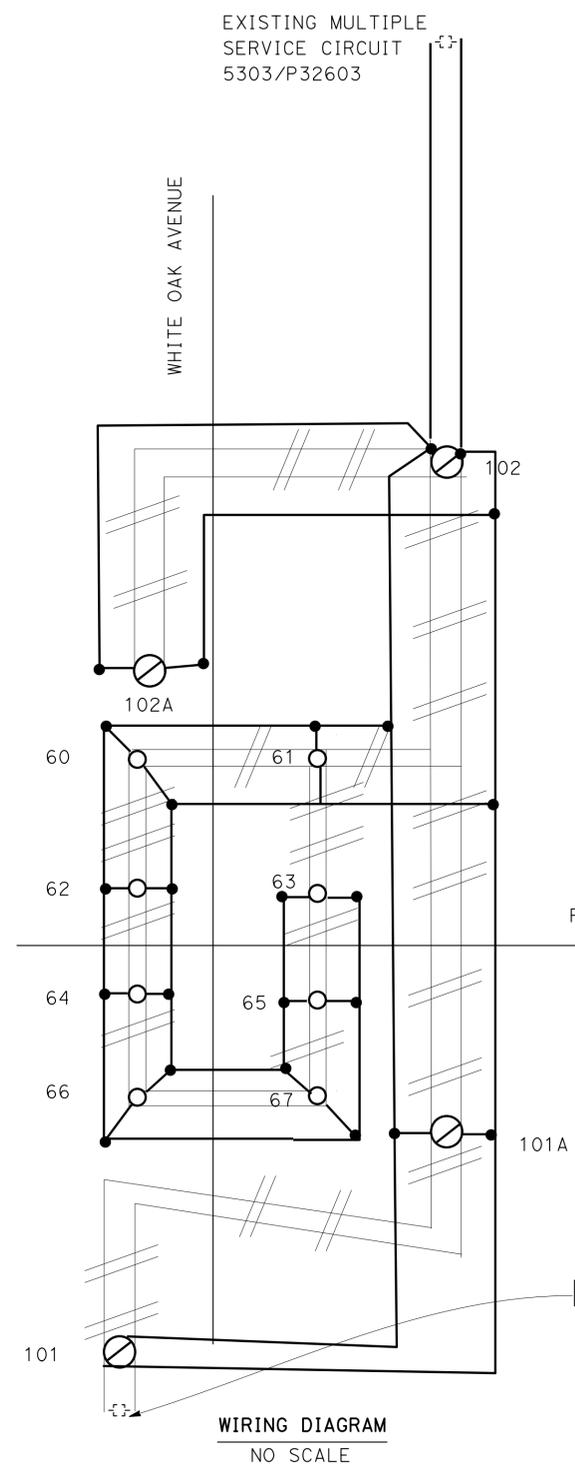
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	101	143
			6/26/14		
REGISTERED ELECTRICAL ENGINEER			DATE		
8-11-14			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



**NOTES: (THIS SHEET ONLY)**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

**WARNING**  
 BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS, AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES.



**LEGEND: (THIS SHEET ONLY)**

- 1 INSTALL 2"C, 2#6, 1#8 (G).
- 2 EXISTING 2"C, 2#8 (5 KV). RC CONDUCTORS. ADD 2#6, 1#8 (G)
- 3 RC LAMP AND REFLECTOR LENSE OF THE EXISTING SOFFIT. INSTALL LAMP AND REFLECTOR LENSE.
- 4 RC CITY LUMINAIRE. INSTALL 165 W LED LUMINAIRE ON EXISTING POLE.

**LIGHTING (CITY STREET)**

SCALE: 1"= 50'

**E-88**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b> TRAFFIC DESIGN	OSWALD ELIZONDO	VUONG HONG	OSWALD ELIZONDO
	CHECKED BY	DESIGNED BY	REVISIONS

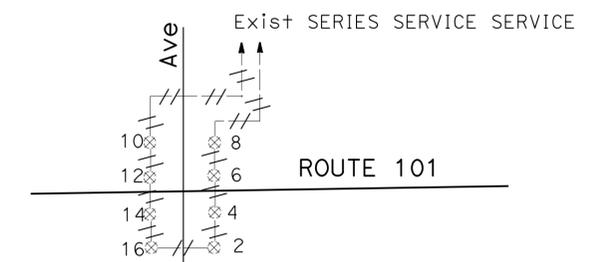
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN

**NOTES: (THIS SHEET ONLY)**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.  
 2. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

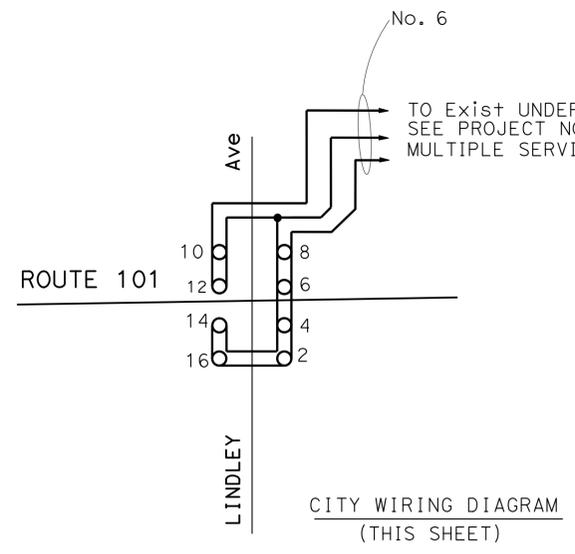
**WARNING**  
 BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS, AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	102	143

8-11-14  
 PLANS APPROVAL DATE  
 REGISTERED ELECTRICAL ENGINEER DATE  
 OHANNES ANSERLIAN  
 No. E16682  
 Exp. 6/30/16  
 ELECT  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**EXISTING WIRING TO BE REMOVED (THIS SHEET)**

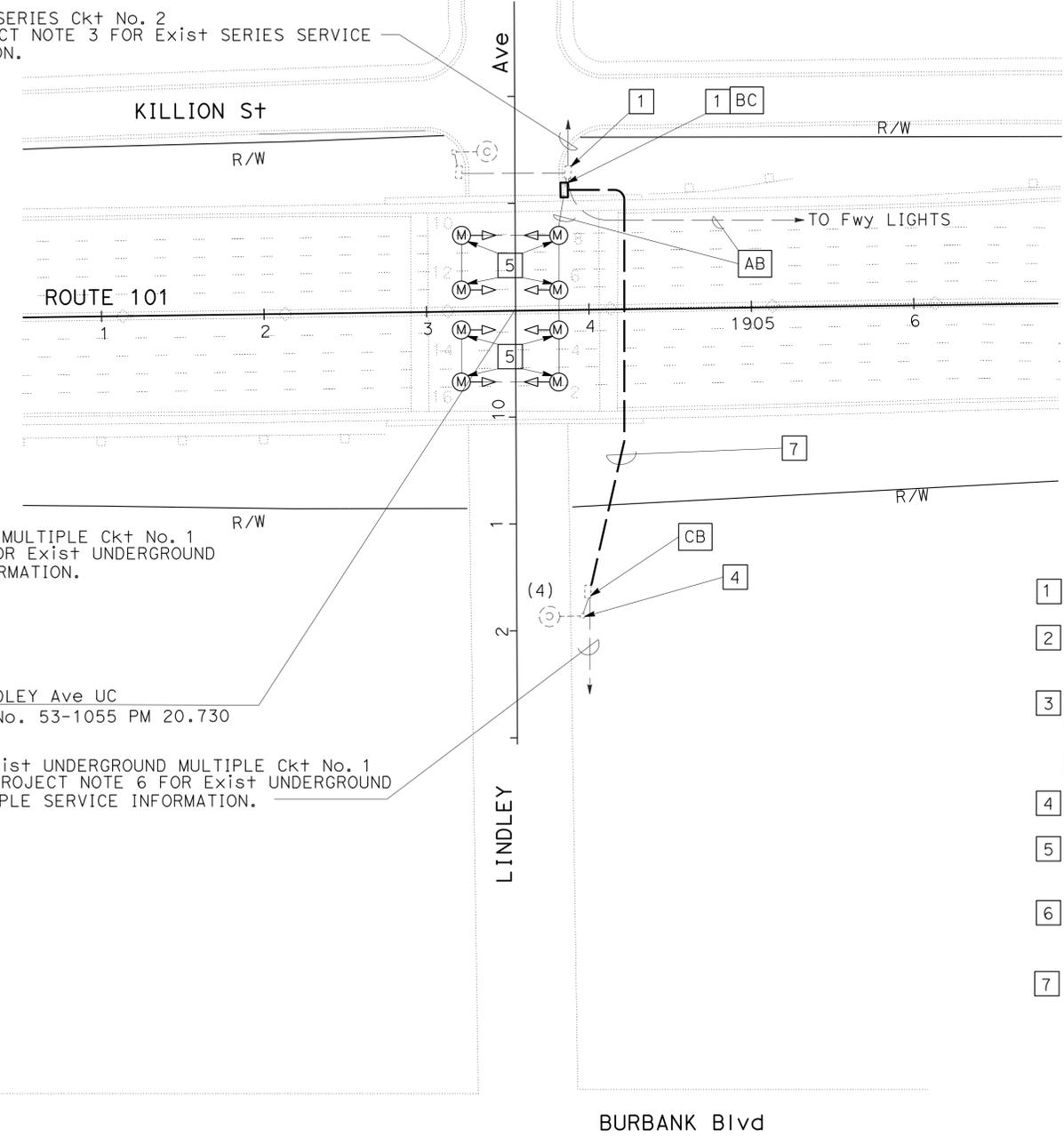


SL No. 5703  
 LA CITY BUREAU OF STREET LIGHTING

TO Exist+ SERIES Ckt No. 2  
 SEE PROJECT NOTE 3 FOR Exist+ SERIES SERVICE INFORMATION.

LINDLEY Ave UC  
 Br No. 53-1055 PM 20.730

TO Exist+ UNDERGROUND MULTIPLE Ckt No. 1  
 SEE PROJECT NOTE 6 FOR Exist+ UNDERGROUND MULTIPLE SERVICE INFORMATION.



**LEGEND: (THIS SHEET ONLY)**

- 1 INSTALL TYPE 2 PULL BOX PER CITY OF LOS ANGELES DETAILS.
- 2 DISCONNECT Exist+ SERIES Ckt WIRES FROM SOFFIT LIGHTS AND FREEWAY LIGHTS.  
 SC Exist+ SERIES CIRCUIT WIRES FOR THE STREET LIGHTS.
- 3 Exist+ SERIES SERVICE  
 8-70 W HPS SOFFIT LAMPS  
 11-100 W HPS LAMPS  
 5-200 W HPS LAMPS  
 Misc: CALTRANS LAMPS
- 4 ELECTROLIER (4) TO CONTROL 8 SOFFITS LIGHT No. 2,4,6,8,10,12,14,16.
- 5 REMOVE 70 W SOFFIT LAMP. INSTALL 30 W LED LIGHT.
- 6 Exist+ UNDERGROUND MULTIPLE SERVICE  
 Exist+ Ckt No. 1: 4-200 W LAMPS  
 INSTALL Ckt No. 1: 8-3 W LED SOFFIT LIGHTS.
- 7 INSTALL 1 1/2" C, 5#6, (1 RED, 1 BLACK, 1 WHITE, 1 YELLOW, 1 GREEN,) 1#8 (G).

**LIGHTING (CITY STREET)**  
 SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

**E-89**

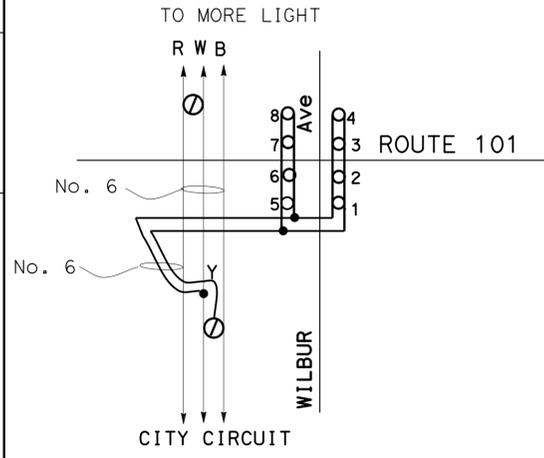
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	103	143
Nooshin Ansari		6/26/14		REGISTERED ELECTRICAL ENGINEER DATE	
8-11-14		PLANS APPROVAL DATE			
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



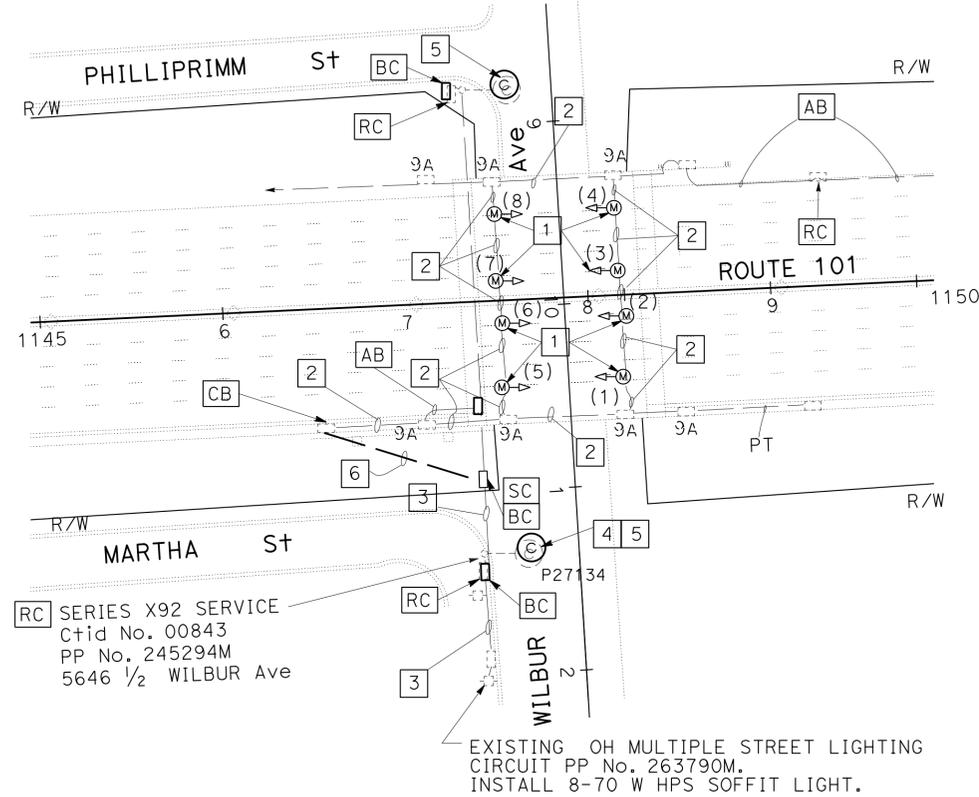
**NOTES: (THIS SHEET ONLY)**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- FOR WIRING LEGEND, SEE SHEET E-3.

**WARNING**  
 BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS, AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES.



EXISTING OH MULTIPLE STREET LIGHTING CIRCUIT PP No. 263790M.  
 INSTALL 8- 70 W HPS LAMP.



[RC] SERIES X92 SERVICE  
 Ctid No. 00843  
 PP No. 245294M  
 5646 1/2 WILBUR Ave

EXISTING OH MULTIPLE STREET LIGHTING CIRCUIT PP No. 263790M.  
 INSTALL 8-70 W HPS SOFFIT LIGHT.

**MATERIAL INSTALLATION LIST**

SYMBOL	ITEM	QUANTITY	DESCRIPTION
Ⓜ→	SOFFIT	8	70 W HPS SOFFIT FIXTURE
Ⓢ	LUMINAIRE	2	165 W LED LUMINAIRE FIXTURE

**MATERIAL REMOVAL LIST**

SYMBOL	ITEM	QUANTITY	DESCRIPTION
Ⓜ→	SOFFIT	8	70 W HPS SOFFIT FIXTURE
Ⓢ	LUMINAIRE	2	200 W HPS LUMINAIRE FIXTURE

**LEGEND: ( FOR THIS SHEET ONLY)**

- [RC] SERIES HPS SOFFIT LIGHT AND INSTALL 70 W HPS LAMPS SOFFIT LIGHTING.
- 1 1/2" C, [RC] CONDUCTORS. ADD 2#6, (1-YELLOW, 1-WHITE SOFFIT LIGHTS), 1#8 (G).
- 2" C, 3#6. ADD 1#6 CONDUCTOR, (1-YELLOW SOFFIT LIGHT), 1#8 (G).
- INSTALL PHOTOELECTRIC CONTROL TYPE 1, FOR SOFFIT LIGHTS 1, 2, 3, 4, 5, 6, 7, 8 ON LIGHT POLE P27134.
- [RC] 200 W HPS LUMINAIRE AND INSTALL 165 W LED LUMINAIRE HEAD.
- 2"C, 2#6 CONDUCTORS, (1-WHITE, 1-YELLOW SOFFIT LIGHTS), 1#8 (G).

SL No.7330  
 LA CITY BUREAU OF STREET LIGHTING

APPROVED FOR ELECTRICAL WORK ONLY

**LIGHTING (CITY STREET)**

SCALE: 1"=50'

**E-90**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans® TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: OSWALD ELIZONDO  
 NOOSHIN ANSARI  
 REVISOR: OSWALD ELIZONDO  
 REVISIONS: (None shown)

LAST REVISION: DATE PLOTTED => 10-SEP-2014  
 00-00-00 TIME PLOTTED => 14:31



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

**NOTES: (THIS SHEET ONLY)**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- FOR WIRING DIAGRAM, SEE SHEET E-51.

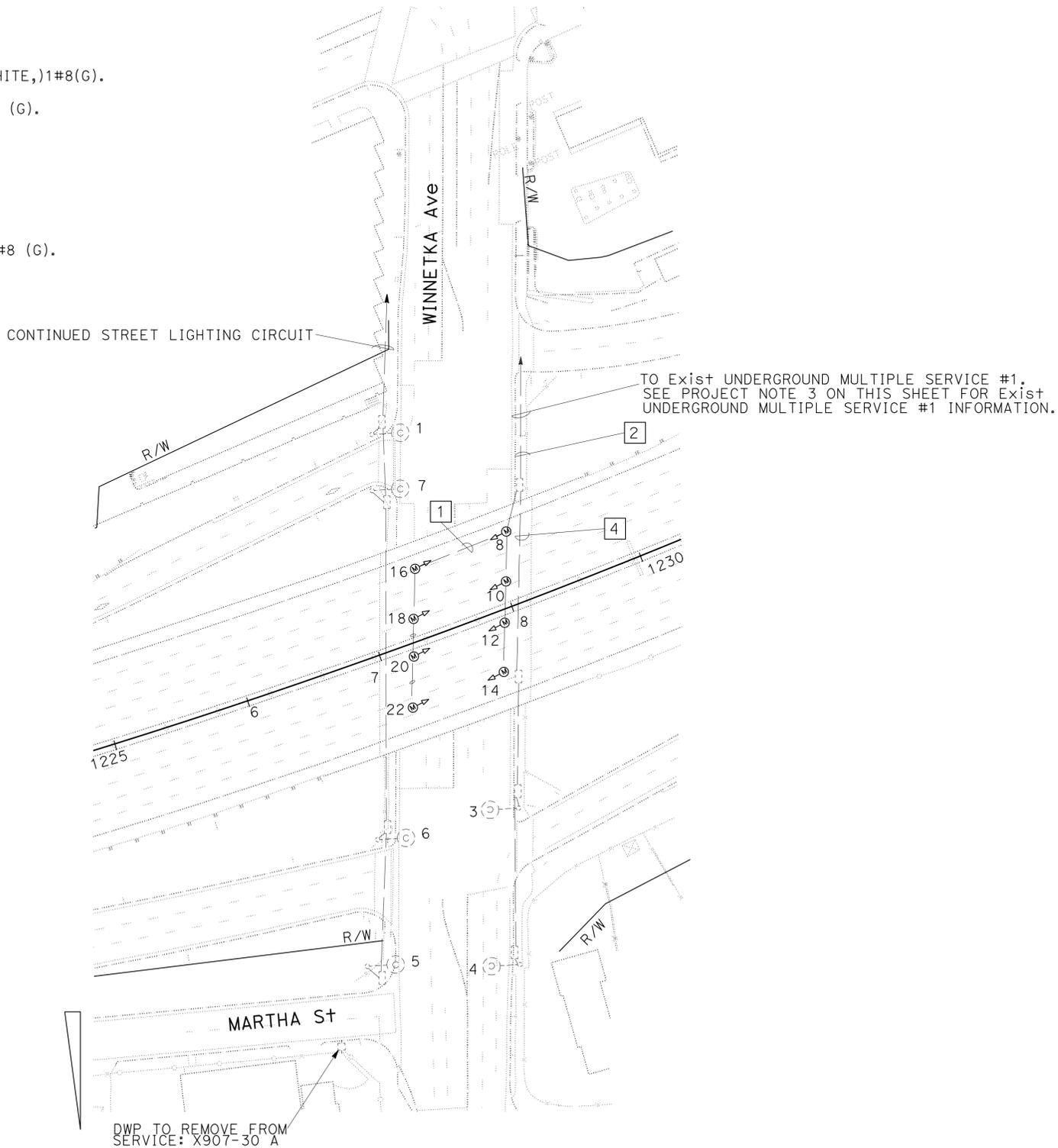
**LEGEND: (THIS SHEET ONLY)**

- RC** Exist WIRES. Exist 1/2"C, INSTALL 2#6 (YELLOW AND WHITE,)1#8(G).
- Exist 1/2"C, 4#6, (1 RED, 1 BLACK, 1 WHITE, 1 YELLOW,)1#8 (G). ADD CONTROL WIRE IN Exist CONDUIT.
- Exist UNDERGROUND MULTIPLE SERVICE #1  
 INSTALL NEW CKT "2D":  
 8-60 W LED SOFFIT LIGHTS Nos. 8,10,12,14,16,18,20,22.  
 4-100 W LED SOFFIT LIGHTS Nos. 2,3,4.
- Exist 1/2"C, 4#6, (1 RED, 1 BLACK, 1 WHITE, 1 YELLOW,) 1#8 (G).

**WARNING**  
 BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS, AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	105	143

*Ohannes Anserlian* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 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 Exist UNDERGROUND MULTIPLE SERVICE #1. SEE PROJECT NOTE 3 ON THIS SHEET FOR Exist UNDERGROUND MULTIPLE SERVICE #1 INFORMATION.

**LIGHTING (CITY STREET)**

SCALE: 1" = 50'

**E-92**

APPROVED FOR ELECTRICAL WORK ONLY



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

FUNCTIONAL SUPERVISOR  
 JACQUELINE C. TAN

CALCULATED/DESIGNED BY  
 CHECKED BY

TUYEN NGO  
 JACQUELINE C. TAN

REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	106	143

*Jacqueline C. Tan* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 PLANS APPROVAL DATE  
 No. E015611  
 Exp. 12/31/15  
 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.

**ABBREVIATIONS: (SHEETS E-94 TO E-95 ONLY)**

- # NUMBER
- 2P22 TWISTED PAIR CABLE, 2 PAIR 22 AWG CONDUCTORS
- 6P22 TWISTED PAIR CABLE, 6 PAIR 22 AWG CONDUCTORS
- 12P22 TWISTED PAIR CABLE, 12 PAIR 22 AWG CONDUCTORS
- 50P22 TWISTED PAIR CABLE, 50 PAIR 22 AWG CONDUCTORS
- AC ALTERNATING CURRENT
- AWG AMERICAN WIRE GAGE
- C-MIC CABINET MOUNT INTERFACE CENTER
- PDA POWER DISTRIBUTION ASSEMBLY
- CAB CABINET

**ABBREVIATIONS AND NOTES**

**MODIFY CHANGEABLE MESSAGE SIGN  
 E-93**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	107	143

<i>Jacqueline C. Tan</i>	6/26/14
REGISTERED ELECTRICAL ENGINEER	DATE
8-11-14	
PLANS APPROVAL DATE	

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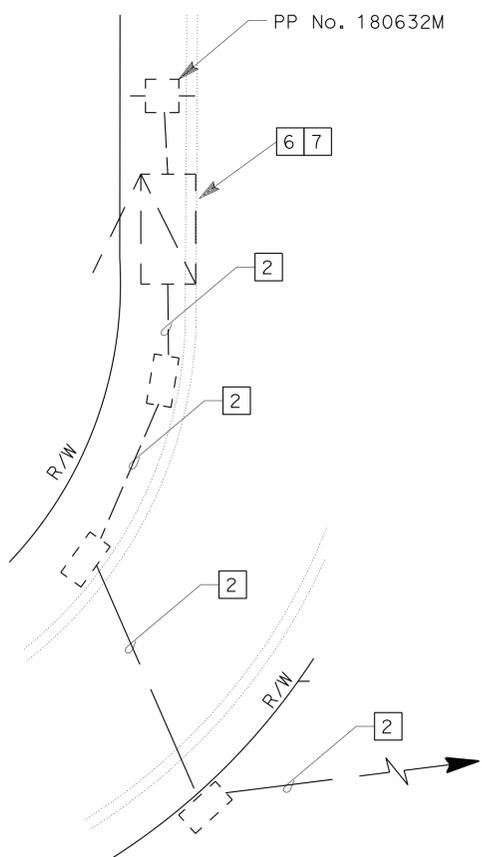
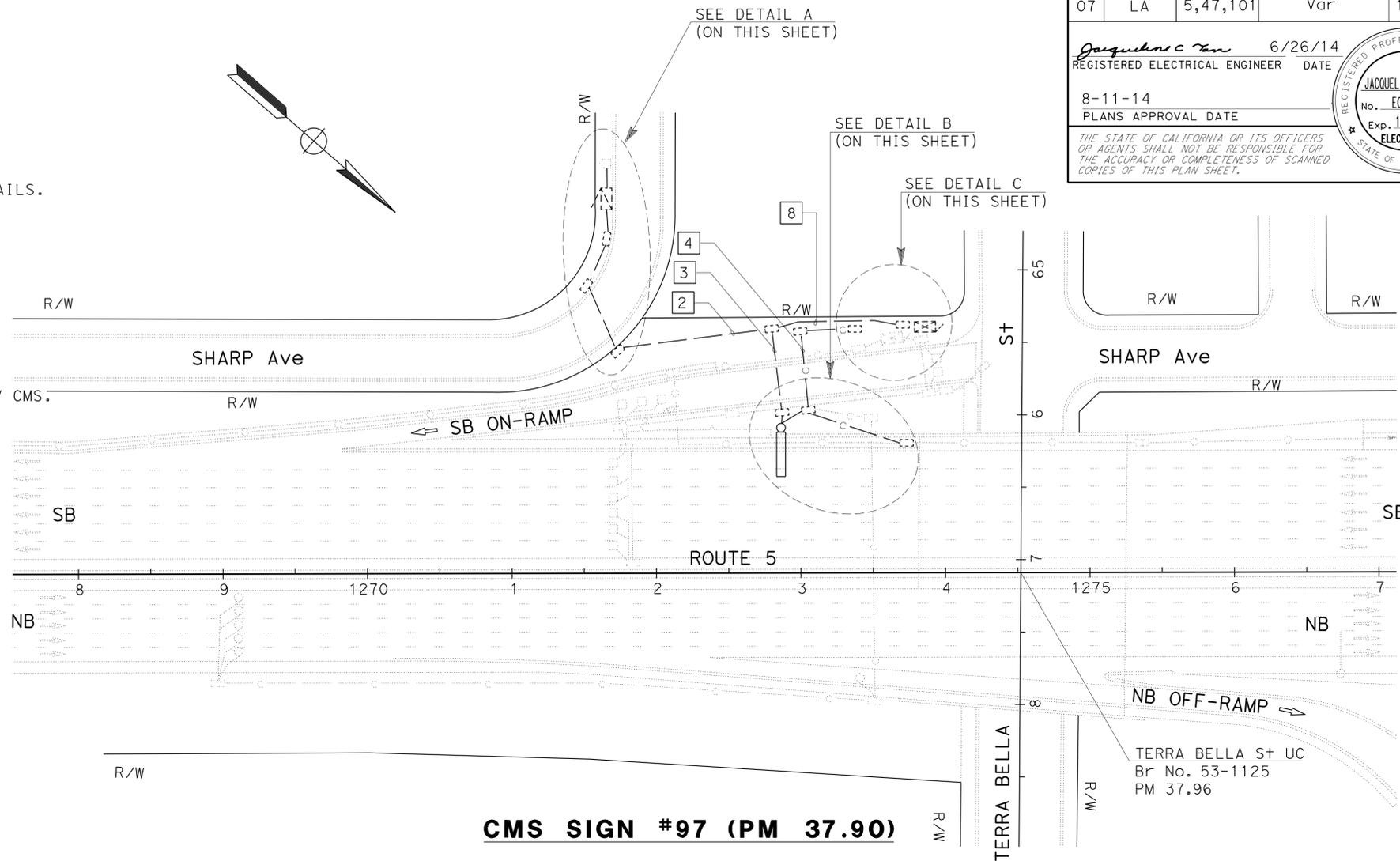


**NOTES: (THIS SHEET ONLY)**

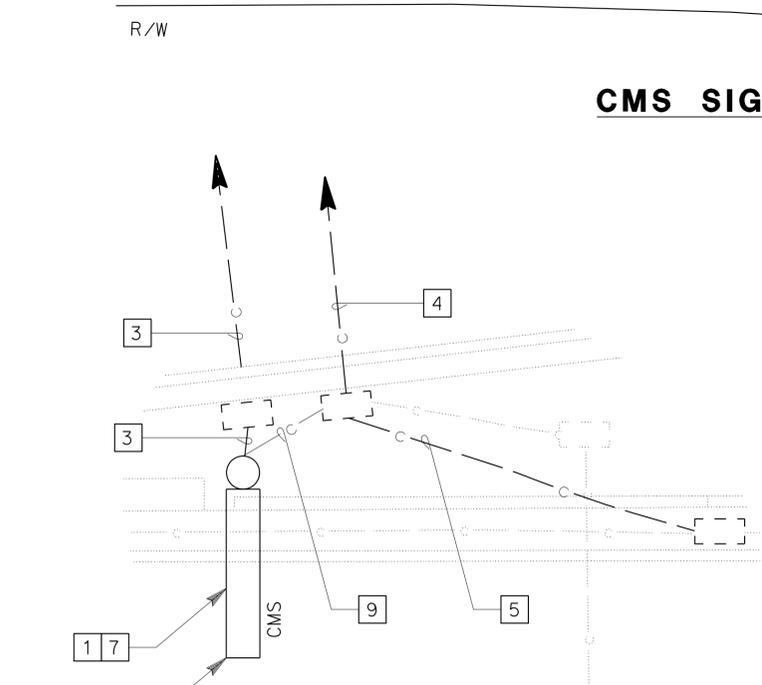
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- FOR ABBREVIATIONS SEE SHEET E-93.

**LEGEND: (THIS SHEET ONLY)**

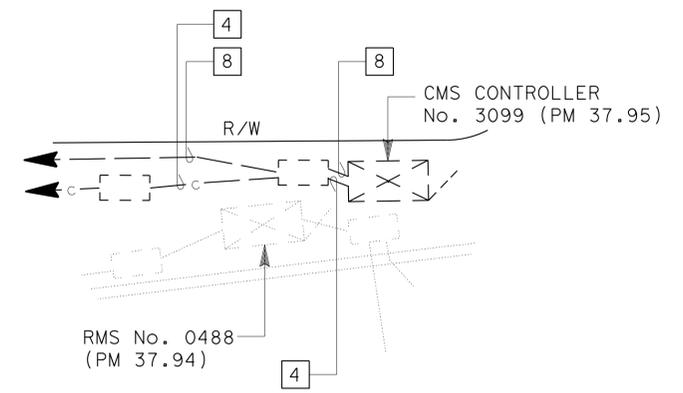
- RC CMS PANEL. INSTALL DEPARTMENT-FURNISHED MODEL 500 LED CMS PANEL ON EXISTING CMS SIGN STRUCTURE. SEE SHEET E-101 FOR ELECTRICAL DETAILS.
- EXISTING 3"C, 6 #1, 2 #8.
- EXISTING 3"C, 6 #1. ADD 1 #8 (G).
- EXISTING 3"C, 6P22, RC CMS CONTROL CABLES. ADD DEPARTMENT-FURNISHED CONTROL CABLES.
- EXISTING 2"C, 2-6P22.
- EXISTING 120/240V, TYPE III-BF METERD. SERVICE EQUIPMENT ENCLOSURE WITH: 1-2P, 240 V 200 A MAIN DISCONNECT (METERED). RC 4-80 A, 120 V, 1P CMS. 1-30 A, 1P 120 V CMS CONTROLLER. ADD 1-30 A, 2P (GANGED) 240 V
- CAP THE ENDS OF THE UNSUED WIRES (#1).
- EXISTING 3"C, 2 #8.
- EXISTING 3"C, RC CMS CONTROL CABLES. ADD DEPARTMENT-FURNISHED CONTROL CABLES.



**DETAIL A**  
NO SCALE



**DETAIL B**  
NO SCALE



**DETAIL C**  
NO SCALE

**MODIFY CHANGEABLE MESSAGE SIGN**  
SCALE: 1" = 50'  
**E-94**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - OFFICE OF ITS  
Caltrans

REVISOR BY DATE

TUYEN NGO  
JACQUELINE C. TAN

CALCULATED-DESIGNED BY  
CHECKED BY

FUNCTIONAL SUPERVISOR  
JACQUELINE C. TAN

OFFICE OF ITS



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	109	143
			6/26/14		
			REGISTERED ELECTRICAL ENGINEER	DATE	
			8-11-14	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>					

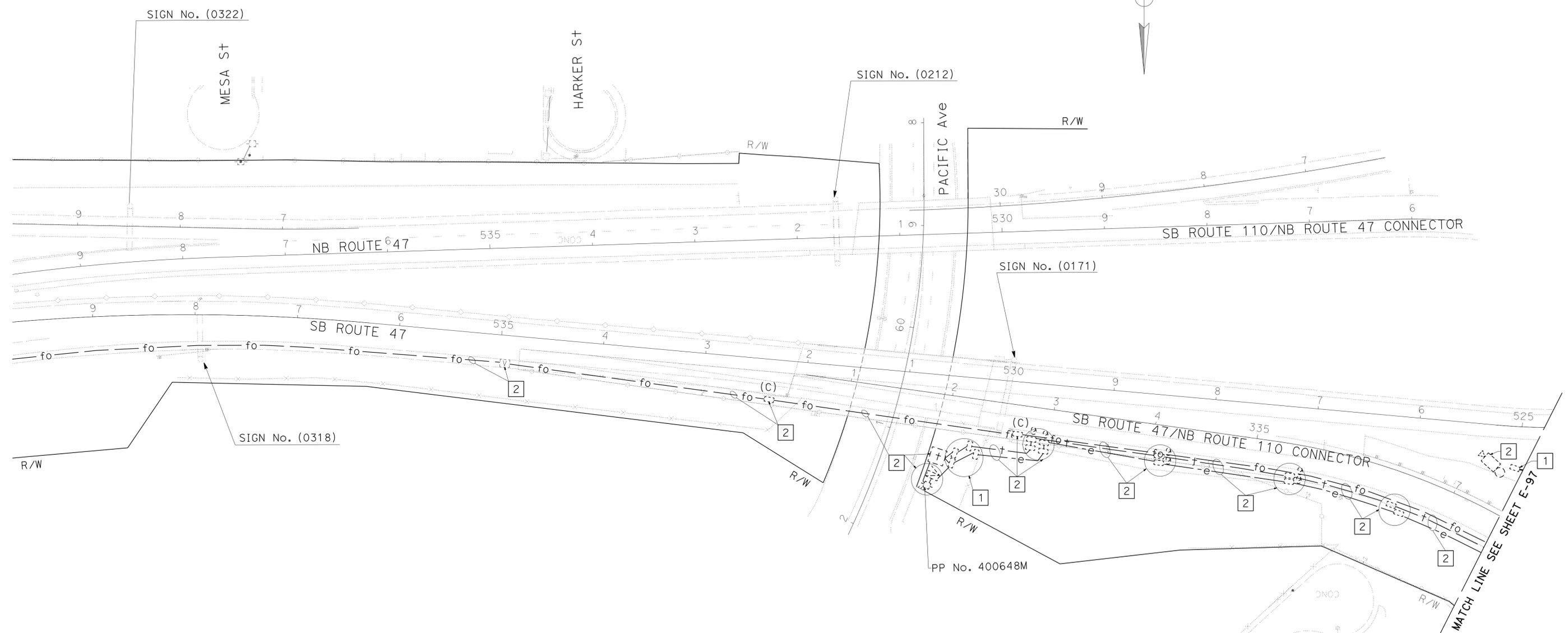


**NOTES: ( THIS SHEET ONLY)**

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**LEGEND: (THIS SHEET ONLY)**

- 1 RC PULL BOX COVER. INSTALL TAMPER RESISTANT COVER.
- 2 FOR INFORMATION ONLY.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** OFFICE OF ITS  
 FUNCTIONAL SUPERVISOR  
 JACQUELINE C. TAN  
 CALCULATED/DESIGNED BY  
 JACQUELINE C. TAN  
 PATRICK P. LUI  
 JACQUELINE C. TAN  
 REVISOR BY  
 JACQUELINE C. TAN  
 DATE REVISOR  
 JACQUELINE C. TAN

**MODIFY PULL BOX COVER**  
 SCALE: 1" = 50'  
**E-96**

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	110	143

<i>Patrick P. Lui</i>	6/26/14
REGISTERED ELECTRICAL ENGINEER	DATE
8-11-14	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER <b>PATRICK P. LUI</b> No. E17534 Exp. 06/30/15 ELECTRICAL STATE OF CALIFORNIA	
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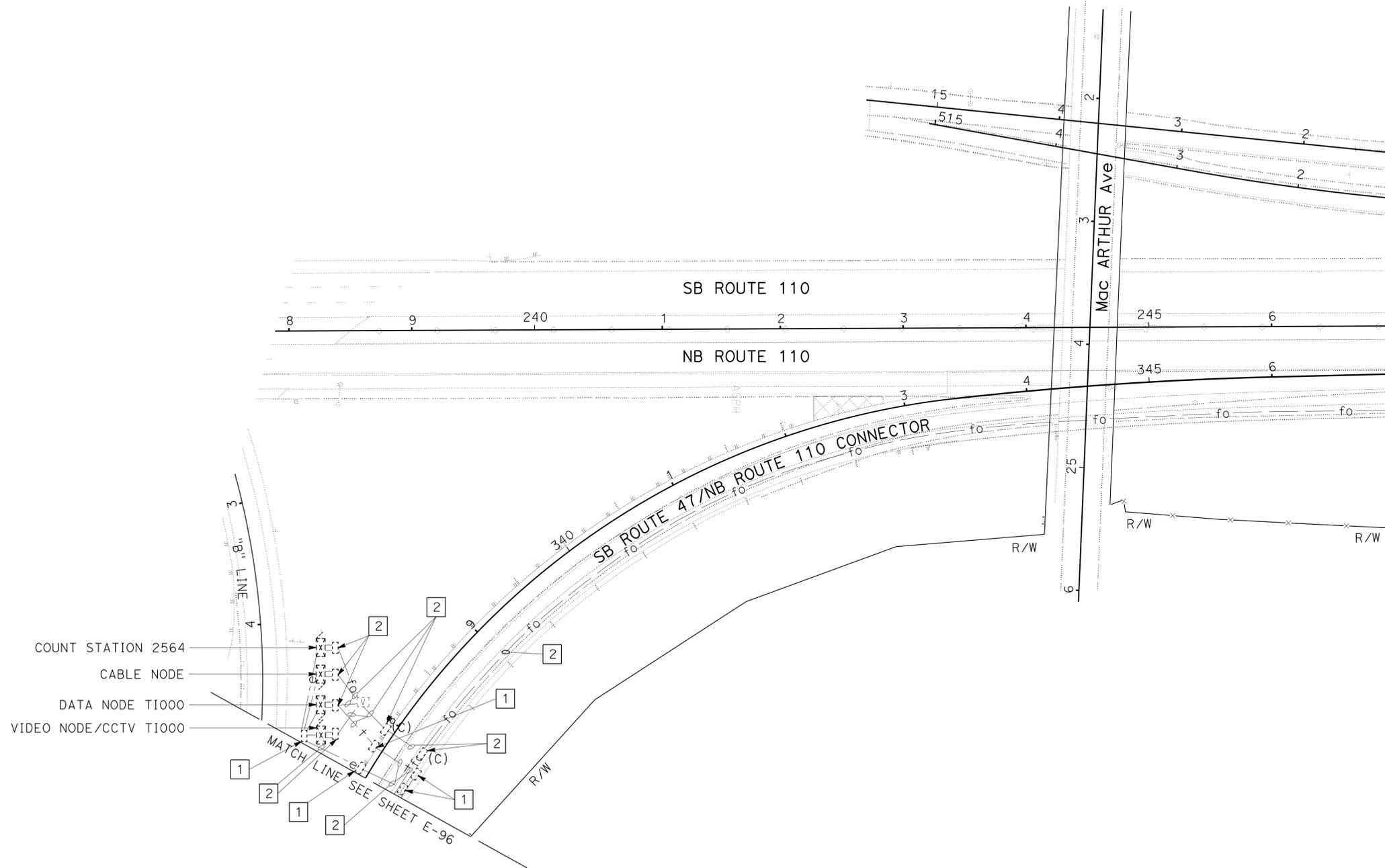
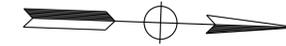
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**LEGEND: (THIS SHEET ONLY)**

- RC** PULL BOX COVER. INSTALL TAMPER RESISTANT COVER.
- FOR INFORMATION ONLY.



COUNT STATION 2564  
 CABLE NODE  
 DATA NODE T1000  
 VIDEO NODE/CCTV T1000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b>	JACQUELINE C. TAN	CHECKED BY	PATRICK P. LUI
<b>OFFICE OF ITS</b>			JACQUELINE C. TAN
			DATE REVISED

**MODIFY PULL BOX COVER**  
 SCALE: 1" = 50'  
**E-97**

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION | DATE PLOTTED => 10-SEP-2014  
 00-00-00 | TIME PLOTTED => 14:31

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	111	143

*Jacqueline C. Tan* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 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: (THIS SHEET ONLY)**

- SEE INFORMATION HANDOUT FOR LOCATIONS OF AFFECTED PULL BOXES.
- DO NOT MODIFY COMMUNICATION PULL BOXES.

**LEGEND: (SHEETS E-98 TO E-102 ONLY)**

1 RC PULL BOX COVER. INSTALL TAMPER RESISTANT COVER AT LISTED LOCATIONS.

**PULL BOX TABLE - ROUTE 101**

DIRECTION	STATION	DESCRIPTION OF LOCATION	1 No. 5/5(T)	1 No. 6/6(T)
SB	276+80 TO 279+80	SB ROUTE 101 TO SB ROUTE 405	5	3
SB	276+80	SB ROUTE 405 TO SB ROUTE 101	2	-
EB	1280+60	HASKELL Ave UC ON/OFF RAMP	2	-
WB	1208+60	HASKELL Ave UC ON/OFF RAMP	2	-
WB	283+00	WESTBOUND ON-RAMP FROM HASKELL Ave	8	2
EB	283+00 TO 284+00	EASTBOUND OFF-RAMP TO HASKELL Ave	3	-
EB	291+00 TO 293+60	MAINLINE	5	3
EB	297+70 TO 298+70	EASTBOUND ON-RAMP FROM HAYVENHURST Ave	3	2
EB/WB	298+30 TO 300+00	MAINLINE	1	3
EB	298+80	EASTBOUND ON-RAMP FROM HAYVENHURST Ave	5	2
EB	307+20 TO 308+90	EASTBOUND ON-RAMP FROM BALBOA Blvd	5	2
WB	307+20 TO 309+60	WESTBOUND OFF-RAMP TO BALBOA Blvd	-	3
WB	310+70	WESTBOUND ON-RAMP FROM BALBOA Blvd	4	1
EB/WB	311+40 TO 311+70	MAINLINE AND ON/OFF RAMP	5	3
WB	313+50 to 318+20	MAINLINE	2	8
WB	322+05	MAINLINE	-	1
EB/WB	323+80 TO 324+50	MAINLINE AND ON/OFF RAMP	3	3
EB/WB	325+30 TO 327+40	MAINLINE AND ON/OFF RAMP FROM WHITE OAK	6	4
WB	325+90	WESTBOUND ON-RAMP FROM WHITE OAK Ave	6	1
EB	337+00	EASTBOUND ON-RAMP FROM BURBANK Blvd	1	2
EB/WB	337+00 TO 339+00	MAINLINE	3	1
WB	342+30	WESTBOUND ON-RAMP FROM RESEDA Blvd	3	3
WB	343+00 TO 344+00	WESTBOUND ON-RAMP FROM RESEDA Blvd	3	1
EB/WB	343+90	MAINLINE	-	2
EB	354+30 TO 354+90	EASTBOUND ON-RAMP FROM VENTURA Blvd	6	-
EB/WB	354+70	MAINLINE	-	2
EB/WB	358+10 to 359+40	MAINLINE AND ON/OFF RAMP FROM TAMPA Ave	4	3
WB	358+90 TO 359+90	WESTBOUND ON-RAMP FROM TAMPA Ave	6	3
WB	364+80	MAINLINE	2	2
EB/WB	372+60 TO 373+80	MAINLINE AND ON/OFF RAMP FROM WINNETKA Ave	3	4
WB	372+70	WESTBOUND OFF-RAMP TO WINNETKA Ave	2	5

**PULL BOX TABLE - ROUTE 101**

DIRECTION	STATION	DESCRIPTION OF LOCATION	1 No. 5/5(T)	1 No. 6/6(T)
EB/WB	374+20 TO 376+00	MAINLINE AND ON/OFF RAMP FROM WINNETKA Ave	5	1
EB/WB	381+20	MAINLINE	1	1
EB/WB	388+70 TO 390+80	MAINLINE AND ON/OFF RAMP FROM DE SOTO Ave	3	4
EB	388+90 TO 390+00	EASTBOUND ON-RAMP FROM DE SOTO Ave	4	6
WB	392+90	WESTBOUND ON-RAMP FROM DE SOTO Ave	8	1
EB/WB	397+30 TO 399+10	MAINLINE AND ON/OFF RAMP FROM CANOGA Ave	3	-
EB	291+00 TO 293+60	MAINLINE	5	3
EB/WB	405+60 TO 406+60	MAINLINE AND ON/OFF RAMP FROM TOPANGA Blvd	4	2
EB/WB	407+60 TO 409+00	MAINLINE AND ON/OFF RAMP FROM TOPANGA Blvd	17	4

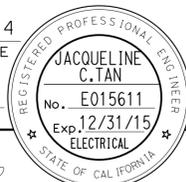
**MODIFY PULL BOX COVER**

**E-98**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	112	143

*Jacqueline C. Tan* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 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: (THIS SHEET ONLY)**

1. SEE INFORMATION HAND OUT FOR LOCATION OF AFFECTED PULL BOXES.
2. DO NOT MODIFY COMMUNICATION PULL BOXES.
3. FOR LEGEND SEE SHEET E-98.

**PULL BOX TABLE - ROUTE 101**

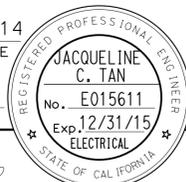
DIRECTION	STATION	DESCRIPTION OF LOCATION	<sup>1</sup> No. 5/5(T)
NB/SB	437+00 TO 442+00	VALLEY CIRCLE Blvd	24
SB	490+00	NORTH OF LAS VIRGENES Rd	1
NB/SB	496+00 TO 501+00	LAS VIRGENES Rd	4
NB	511+40	LOST HILLS Rd	1
NB	524+00 TO 527+00	LIBERTY CANYON Rd	2
NB/SB	540+00 TO 545+00	PALO COMADO CANYON Rd	4
NB/SB	560+00 TO 566+00	KANAN Road	2
NB/SB	581+00 TO 585+00	REYES ADOBE Rd	3
NB/SB	600+00 TO 607+00	LINDERO CANYON Rd	6

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**Caltrans** OFFICE OF ITS  
 FUNCTIONAL SUPERVISOR  
 JACQUELINE C. TAN  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 HIEU LUU  
 JACQUELINE C. TAN  
 REVISED BY  
 DATE REVISED

**MODIFY PULL BOX COVER**  
**E-99**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	113	143

*Jacqueline C. Tan* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 PLANS APPROVAL DATE



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**NOTES:** (THIS SHEET ONLY)

1. SEE INFORMATION HANDOUT FOR LOCATIONS OF AFFECTED PULL BOXES.
2. DO NOT MODIFY COMMUNICATION PULL BOXES.
3. FOR LEGEND, SEE SHEET E-98.

**PULL BOX TABLE - ROUTE 101**

DIRECTION	STATION	DESCRIPTION OF LOCATION	<span style="border: 1px solid black; padding: 0 2px;">1</span> No. 5/5(T)	<span style="border: 1px solid black; padding: 0 2px;">1</span> No. 6/6(T)
SB	72+00 TO 73+00	NORTH OF BENTON Way	3	-
SB	77+00 TO 79+00	SOUTH OF BENTON Way	2	-
NB	79+00	SOUTH OF BENTON Way	1	-
SB	80+00 TO 81+00	NORTH OF CORONADO Blvd	2	-
SB	95+00	NORTH OF ALVARADO St	1	-
NB	97+00	NORTH OF ALVARADO St	1	-
SB	98+00	NORTH OF ALVARADO St	3	-
NB	98+00	NORTH OF ALVARADO St	1	-
SB	107+00	SOUTH OF BONNIE BRAE St	1	-
SB	115+00 TO 117+00	NORTH OF GLENDALE Blvd	3	-
SB	143+00	NORTH OF EDGEWARE Rd	1	-
NB	143+00	NORTH OF EDGEWARE Rd	1	-
SB	156+00	NORTH OF BEAUDRY Ave	1	-
NB	156+00	NORTH OF BEAUDRY Ave	1	-
NB	194+00	NORTH OF BROADWAY St	1	-
SB	194+00 TO 195+00	NORTH OF BROADWAY St	2	1
SB	196+00	SOUTH OF BROADWAY St	2	-
SB	228+00	NORTH OF CENTER St	2	-

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 CHECKED BY  
 HENRY H. TRINH  
 JACQUELINE C. TAN  
 REVISED BY  
 DATE REVISED  
 HT  
 06/14

**MODIFY PULL BOX COVER  
E-100**

LAST REVISION | DATE PLOTTED => 10-SEP-2014  
 06-23-14 | TIME PLOTTED => 14:31

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	114	143

*Jacqueline C. Tan* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE

8-11-14  
 PLANS APPROVAL DATE

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**NOTES:**(THIS SHEET ONLY)

1. SEE INFORMATION HANDOUT FOR LOCATIONS OF AFFECTED PULL BOXES.
2. DO NOT MODIFY COMMUNICATION PULL BOXES.
3. FOR LEGEND, SEE SHEET E-98.

**PULL BOX TABLE - ROUTE 101**

DIRECTION	STATION	DESCRIPTION OF LOCATION	No. <sup>1</sup> 5/5(T)
NB	189+00	NORTH OF VERMONT Ave	1
NB	190+00	NORTH OF VERMONT Ave	1
SB	190+00	NORTH OF VERMONT Ave	2
SB	191+00	NORTH OF VERMONT Ave	2
NB	191+00	NORTH OF VERMONT Ave	3
NB	176+00	SOUTH OF MELROSE Ave	1
SB	176+00	SOUTH OF MELROSE Ave	3
SB	177+00	SOUTH OF MELROSE Ave	1
NB	157+00	NORTH OF NORMANDIE Ave	1
SB	157+00	NORTH OF NORMANDIE Ave	2
NB	138+00	SOUTH OF SANTA MONICA Blvd	1
SB	138+00	SOUTH OF SANTA MONICA Blvd	1
SB	137+00	SOUTH OF SANTA MONICA Blvd	2
SB	135+00	SOUTH OF SANTA MONICA Blvd	1
SB	134+00	SOUTH OF SANTA MONICA Blvd	1
NB	117+00	NORTH OF WESTERN Ave	1
SB	117+00	NORTH OF WESTERN Ave	1
NB	116+00	NORTH OF WESTERN Ave	1
NB	115+00	SOUTH OF FOUNTAIN Ave	3
SB	115+00	SOUTH OF FOUNTAIN Ave	3
SB	104+00	SOUTH OF SUNSET Blvd	1
SB	103+00	SOUTH OF SUNSET Blvd	1
NB	100+00	SOUTH OF SUNSET Blvd	1
SB	100+00	SOUTH OF SUNSET Blvd	2
SB	99+00	SOUTH OF SUNSET Blvd	1
NB	98+00	SOUTH OF SUNSET Blvd	1
SB	98+00	SOUTH OF SUNSET Blvd	1
NB	96+00	NORTH OF SUNSET Blvd	1
NB	90+00	NORTH OF SUNSET Blvd	1
SB	90+00	NORTH OF SUNSET Blvd	3

**PULL BOX TABLE - ROUTE 101**

DIRECTION	STATION	DESCRIPTION OF LOCATION	No. <sup>1</sup> 5/5(T)
SB	91+00	SOUTH OF OXNARD St	2
SB	92+00	SOUTH OF OXNARD St	2
SB	85+00	SOUTH OF HOLLYWOOD Blvd	1
NB	81+00	NORTH OF HOLLYWOOD Blvd	1
NB	80+00	NORTH OF HOLLYWOOD Blvd	1
SB	77+00	SOUTH OF BRONSON Ave	1
SB	58+00	NORTH OF GOWER St	2
SB	57+00	NORTH OF GOWER St	1
NB	50+00	NORTH OF ARGYLE Ave	6
SB	12+00	SOUTH OF IVAR Ave UC	6
NB/SB	16+00	SOUTH OF HIGHLAND Ave	6
NB/SB	232+00	NORTH OF PILGRIMAGE OC	4
NB/SB	232+00	SOUTH OF MULHOLLAND Drive OC	2
NB/SB	191+00	SOUTH OF BARHAM Blvd OC	2
NB/SB	168+00	NORTH OF BARHAM Blvd OC	2
NB/SB	168+00	SOUTH OF UNIVERSAL CENTER Drive	2
NB/SB	159+00	SOUTH OF UNIVERSAL CENTER Drive	5
NB/SB	150+00	SOUTH OF UNIVERSAL CENTER Drive	7
NB/SB	146+00	NORTH OF UNIVERSAL CENTER Drive	6
NB	121+00 TO 130+00	SOUTH OF LANKERSHIM Blvd	4
SB	121+00 TO 130+00	SOUTH OF LANKERSHIM Blvd	8
NB	25+00 TO 30+00	NORTH OF WILLOWCREST Ave	7
SB	25+00 TO 30+00	NORTH OF WILLOWCREST Ave	12
NB	45+00 TO 65+00	SOUTH OF VINELAND Ave	5
SB	45+00 TO 65+00	SOUTH OF VINELAND Ave	14
NB	75+00 TO 85+00	NORTH OF MOORPARK St	9
SB	75+00 TO 85+00	NORTH OF MOORPARK St	11
NB	185+00 TO 193+00	SOUTH OF TUJUNGA Ave	9
SB	185+00 TO 193+00	SOUTH OF TUJUNGA Ave	1
SB	200+00	NORTH OF KRAFT Ave	2

**MODIFY PULL BOX COVER**  
**E-101**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	115	143

*Jacqueline C. Tan* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE

8-11-14  
 PLANS APPROVAL DATE

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**NOTES:** (THIS SHEET ONLY)

1. SEE INFORMATION HANDOUT FOR LOCATIONS OF AFFECTED PULL BOXES.
2. DO NOT MODIFY COMMUNICATION PULL BOXES.
3. FOR LEGEND, SEE SHEET E-98.

**PULL BOX TABLE - ROUTE 101**

DIRECTION	STATION	DESCRIPTION OF LOCATION	<span style="border: 1px solid black; padding: 2px;">1</span> No. 5/5(T)
SOUTHBOUND	200+00	NORTH OF KRAFT Ave	2
NORTHBOUND	199+00	NORTH OF KRAFT Ave	7
NB/SB	220+00	NORTH OF COLFAX Ave	2
NB/SB	220+00	SOUTH OF LAUREL CANYON Blvd	4
NB/SB	249+00	NORTH OF LAUREL CANYON Blvd	5
SOUTHBOUND	251+00	NORTH OF LAUREL CANYON Blvd	3
SOUTHBOUND	273+00	SOUTH OF WHITSETT Ave	5
NB/SB	295+00	SOUTH OF WHITSETT Ave	1
NB/SB	295+00	SOUTH OF COLD WATER CANYON Ave	7
NORTHBOUND	325+10	NORTH OF FULTON Ave	2
SOUTHBOUND	345+70 TO 346+70	SOUTHBOUND ON-RAMP FROM WOODMAN Ave	4
NB/SB	345+15 TO 345+70	EAST OF WOODMAN Ave	9
NB/SB	355+35 TO 355+70	WEST OF WOODMAN Ave	7
NB/SB	375+50 TO 375+70	EAST OF HAZELTINE Ave	3
SOUTHBOUND	393+00	TYRONE Ave	2
NB/SB	405+90 TO 415+10	ON/OFF RAMP FROM VAN NUYS Blvd	11
NB/SB	434+50	KESTER Ave	5
NB/SB	454+90 TO 455+20	ON/OFF RAMP FROM SEPULVEDA Blvd	9
SOUTHBOUND	355+10	SB CONNECTOR TO ROUTE 405	7
NORTHBOUND	17+00	NB ROUTE 101 TO NB ROUTE 405	3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
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 REVISED BY DATE REVISED HT 06/14

**MODIFY PULL BOX COVER  
E-102**

LAST REVISION | DATE PLOTTED => 10-SEP-2014  
 06-23-14 | TIME PLOTTED => 14:31

NOTES: (THIS SHEET ONLY)  
 ITEMS SHOWN IN THIS TABLE ARE NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	116	143

*Jhames O Anserlian* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 PLANS APPROVAL DATE

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

**MODIFY LIGHTING AND SIGN ILLUMINATION**

SHEET No.	TAMPER RESISTANT COVER FOR No. 5(T) PB	No. 5 PB, WITH TAMPER RESISTANT COVER	2" C TYPE 1	TYPE 30 Ltg STANDARD, & FOUNDATION	TYPE 15 Ltg STANDARD, & FOUNDATION	TYPE 21 Ltg STANDARD	235 W LED Lum	165 W LED Lum	ISL FIXTURE	SIGN CONTROL	No. 8 (G) CONDUCTOR	No. 6 CONDUCTOR	No. 8 CONDUCTOR	TYPE III-BF SERVICE EQUIPMENT ENCLOSURE	TYPE A9 SECURITY LID
	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
E-1		10					5	2							
E-2		1					6								7
E-4	26						15		10	3					4
E-5	3						3								
E-6		22					15		13	5					6
E-7		6					17		6	1	2500				18
E-8		23		4		2	27		4	1	5000	400			4
E-9		14	1800	7	2		10		4	2	1800	3600			
E-10		11	1400	7			10		2	1	1400	2800			
E-11		2	300						4	1	300	600			
E-12		8	1150		3		3		6	2	1950	2540	2900		
E-13											400	800	800		
E-14		8	1300	4			4		4	2	1300	2600			
E-15		15	2600				1	1			2600	5200			
E-16		11	1700				2		4	2	1700	3400			
E-17		6	600				2		6	2	600	1200			
E-18		7	800	2			4		4	2	800	1600			
E-19		2	750						2	1	750	1500		1	
E-20		8	1400	4			4		4	2	1400	2800			

**ELECTRICAL QUANTITIES**

**E-103**



**NOTES: (THIS SHEET ONLY)**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	117	143

*Thomas O Anserlian* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 PLANS APPROVAL DATE

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

**MODIFY LIGHTING AND SIGN ILLUMINATION**

SHEET No.	No. 5 PB, WITH TAMPER RESISTANT COVER	2" C TYPE 1	TYPE 30 Ltg STANDARD, & FOUNDATION	TYPE 15 Ltg STANDARD, & FOUNDATION	235 W LED Lum	165 W LED Lum	ISL FIXTURE	SIGN CONTROL	No. 8 (G) CONDUCTOR	No. 6 CONDUCTOR	No. 8 CONDUCTOR	TYPE III-BF SERVICE EQUIPMENT ENCLOSURE	3" C TYPE 1	TYPE 15 STRUCTURE Ltg STANDRAD	ALUMINUM No. 10 CONDUCTOR
	EA	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	LF	EA	EA
E-21	1	100	1		1										
E-22	4	800	1		1										
E-24	6	600	3		3		4	1	600	1200			20		
E-26	5	250	2		2		4	2	450	400	500				
E-27	3	500					4	1	500	1000	1000	1			
E-28	4	500	2		2				500	1000					
E-29	6	1000	1		1		2	1	1000	2000					
E-31	8	800	2		2		6	3	800	1600		1			
E-32	10	1600					4	1	1600	3200					
E-33	6	1200	4		4		4	1	1200	2400					
E-34	19	2700	1		15		7	2	2800	6600					
E-35	10	1200			1		4	2	1850	7000					
E-36	7	960	4		4				960	1920	1920			1	
E-37	11	1700	1	2	4	2	3	1	1900	2600	4600	1			
E-38	5	600		2		2			600	1200		1			
E-39	4	600	2		2		4	1	600	2700					
E-40	5	400	2		2		4	1	400	800		1			
E-41	10	1000	5				3	1							2000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC DESIGN  
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 OSWALD ELIZONDO  
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 CHECKED BY  
 OHANNES ANSERLIAN  
 OSWALD ELIZONDO  
 REVISED BY  
 DATE REVISED

**ELECTRICAL QUANTITIES**

**E-104**



**NOTES: (THIS SHEET ONLY)**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 47, 101	Var	118	143

*Ohannes Anserlian* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 PLANS APPROVAL DATE

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**LIGHTING (TEMPORARY)**

SHEET No.	No. 5 PB	No. 10 CONDUCTOR	CIRCUIT BREAKER	WOOD POLE	Lum	MAST ARM	OH No. 6 CONDUCTOR	OH No. 8 CONDUCTOR	TYPE III-BF SERVICE
	EA	LF	EA	EA	EA	EA	LF	LF	EA
E-57			2	11	8	8	2800	1400	
E-58				6	6	6	2400	1200	
E-59			2	7	3	3	1200	3200	
E-60							800	1200	
E-61	2			8	4	4	3200	1600	
E-62			4	1			4800	2400	
E-63				2	2	2	3000	1500	
E-64			2	3	2	2	1000	500	
E-65			2	5	3	3	2400	1200	
E-66			2	2			1000	500	
E-67				9	4	4	2800	1400	
E-68				1	1	1	200	100	
E-69	1			4	1	1	2000	1000	
E-70				3	3	3	1100	500	
E-71		400		2	2	2		600	
E-72		900						1350	
E-73				2	2	2	800	400	
E-74				7	1	1	2400	1200	1
E-75				8	4	4			
E-76				7	2	2	1600	800	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
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**ELECTRICAL QUANTITIES**  
**E-105**

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

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OHANNES ANSERLIAN  
 OSWALD ELTZONDO

REVISED BY  
 DATE REVISED

**NOTES: (THIS SHEET ONLY)**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 47, 101	Var	119	143

*Ohannes O Anserlian* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 PLANS APPROVAL DATE

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**LIGHTING (TEMPORARY)**

SHEET No.	No. 5 PB	2"C, TYPE 1	WOOD POLE	Lum	MAST ARM	OH No. 6 CONDUCTOR	OH No. 8 CONDUCTOR	No. 6 PULL BOX
	EA	LF	EA	EA	EA	LF	LF	EA
E-77			13			4000	2000	
E-78	1		8	4	4	2400	1200	
E-79	1	180	13	13	13	8200	2800	
E-80						3300	1650	
E-81			7	4	4	1500	2900	
E-82			10	3	3	2800	5100	
E-83			3	2	2	800	400	
E-84	1	160	4	2	2	800	400	
E-85	20	40	2	2	2	1400	700	3
E-86			10	5	5	2400	1200	

**ELECTRICAL QUANTITIES**

**E-106**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	120	143

*Jhames O Anserlian* 6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 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:** (THIS SHEET ONLY)  
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**LIGHTING (CITY STREET)**

SHEET No.	No. 2 CITY'S PB	2" C TYPE 1	165 W LED Lum	SOFFIT AND BALLAST	No. 8 (G) CONDUCTOR	No. 6 CONDUCTOR	No. 8 CONDUCTOR
	EA	LF	EA	EA	LF	LF	LF
E-23	3	300		8	1000	2500	
E-89	7	700	2	8	700	1400	
E-90	1	90		8	100	270	
E-91			2	8	1000		2000
E-92	8	700	4	8	700	2100	
E-93	7	700	4	8	700	1400	
E-94	1	400		8	500	1200	
E-95		100	2	8	800	3200	
E-96	4	700	2	8	700	1400	
E-97				8	1000		2000
E-25			2	8	1800		3600

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
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 OHANNES ANSERLIAN  
 OSWALD ELIZONDO  
 REVISED BY  
 DATE REVISED

**ELECTRICAL QUANTITIES**

**E-107**



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** OFFICE OF ITS  
 FUNCTIONAL SUPERVISOR  
 TUYEN NGO  
 JACQUELINE C. TAN  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISED BY  
 DATE REVISED

**NOTES:(THIS SHEET ONLY)**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	121	143

6/26/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-11-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**MODIFY CHANGEABLE MESSAGE SIGN**

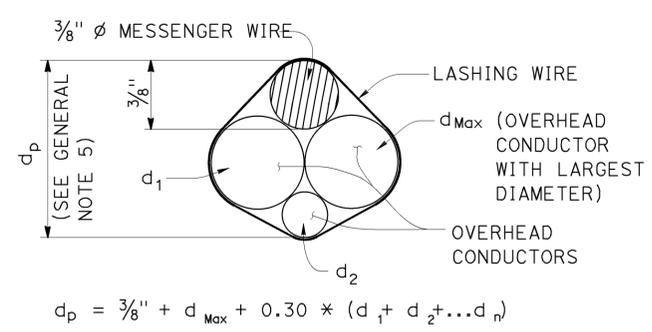
	MODEL 500 CHANGEABLE MESSAGE SIGN PANEL	CMS CONTROL CABLES	30A, 2P CIRCUIT BREAKER	1#8(G)
SHEET No.	EA	LF	EA	LF
E-94	1	70	1	100

**MODIFY PULL BOX COVER**

	No. 5/5T PULL BOX	No. 6/6T PULL BOX
SHEET No.	EA	EA
E-96	6	-
E-97	5	-
E-98	150	91
E-99	47	-
E-100	29	1
E-101	186	-
E-102	98	-

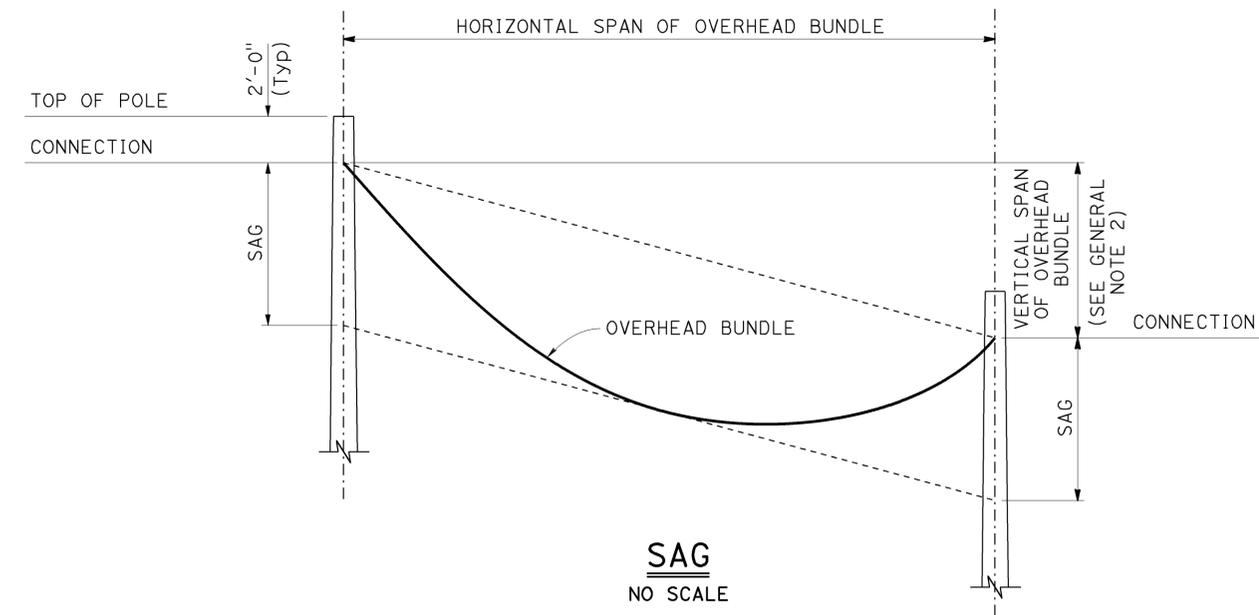
**ELECTRICAL QUANTITIES**  
**E-108**





$$d_p = \frac{3}{8} + d_{Max} + 0.30 * (d_1 + d_2 + \dots + d_n)$$

**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:**

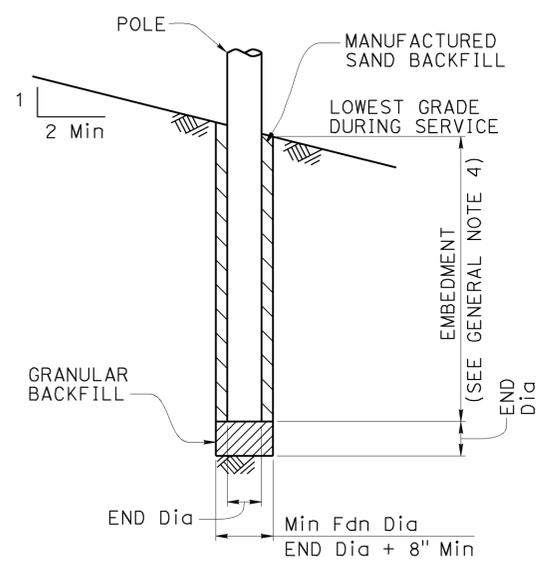
Timber Poles:  $F_b = 1850$  psi  
 $F_v = 110$  psi  
 $F_{cp} = 230$  psi  
 $F_c = 950$  psi  
 $E = 1500 \times 10^3$  psi

**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.



**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  $d_p$ .
- 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

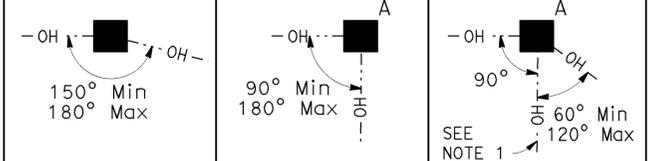
BRANCH CHIEF DAVID NEUMANN	DESIGN BY Victor Lopez	CHECKED Joel Magana	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO. N/A	<b>TEMPORARY WOOD POLES</b> <b>GENERAL NOTES</b>	<b>SES-1</b>
	DETAILS BY Maria Cleverley	CHECKED Victor Lopez			POST MILE Var		
	QUANTITIES BY	CHECKED					

### POLE SELECTION TABLE

### LEGEND

- Wood Pole No Attachments
- <sup>A</sup> Wood Pole with Attachments
- OH- Overhead Bundle

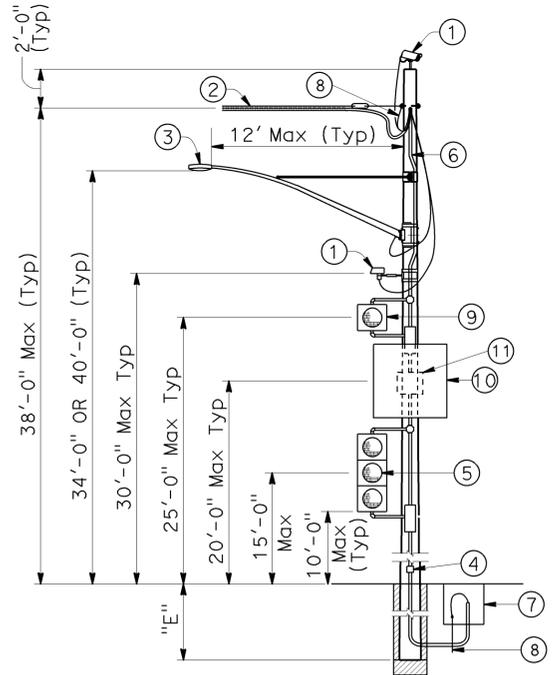
OVERHEAD BUNDLE HORIZONTAL SPAN (Max)	MAXIMUM d <sub>p</sub>	CASE 1N				CASE 2N				CASE 3N				CASE 4N				CASE 5N
		1"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	1.0"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	
50'	MINIMUM POLE CLASS	H-1	H-2	H-2	H-2	4	3	2	1	H-2	H-2	H-3	H-3	H-4	H-4	H-4	H-5	CLASS 1 E = 10'
	POLE EMBEDMENT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



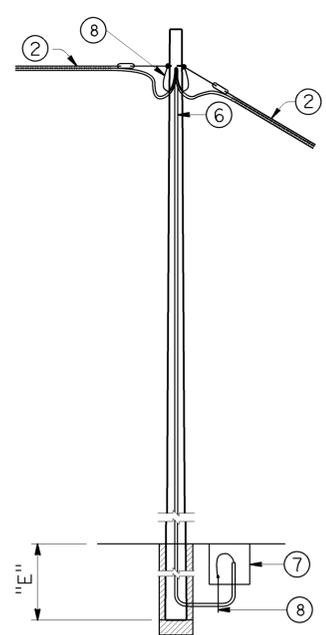
- ① CCTV camera assembly or vehicle detection system
- ② Overhead bundle consisting of a 3/8" ø messenger wire and overhead conductors and lashing wire.
- ③ Luminaire with mast arm
- ④ Pedestrian pushbutton
- ⑤ Signal face with 3 indications or single sheet sign panel (10 SQFT Max)
- ⑥ Riser with weather head as required
- ⑦ Pull box as required
- ⑧ Grounding as required
- ⑨ Single section 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-section 12" flashing beacon

#### NOTES:

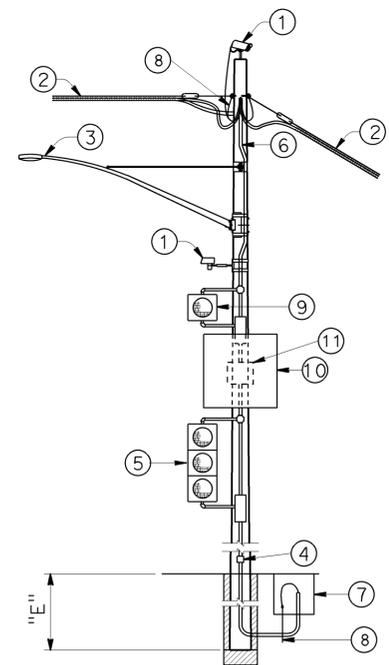
1. In addition to other restrictions on maximum horizontal span, this horizontal span must not exceed 100'.
2. Cases 1N, 3N and 4N may substitute the attachments shown in Case 5N if the photovoltaic panel is not included.



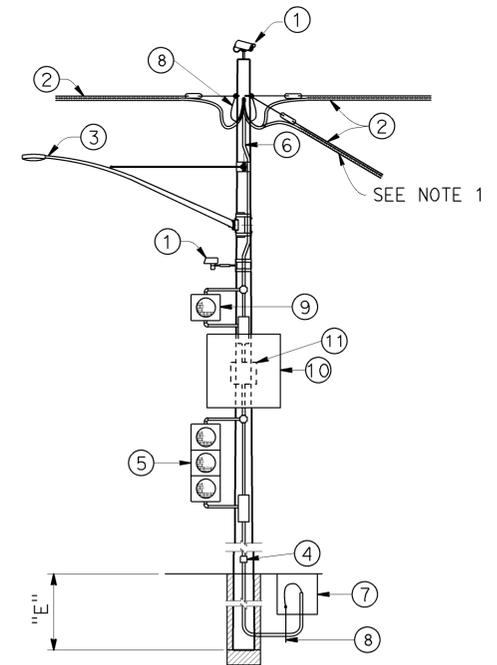
**CASE 1N  
POLE AT DEAD END  
WITH ATTACHMENTS**  
SEE NOTE 2



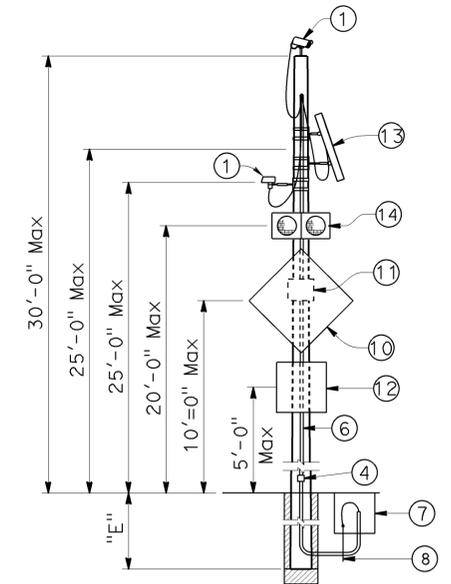
**CASE 2N  
POLE AT TANGENT  
WITHOUT ATTACHMENTS**



**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**

BRANCH CHIEF DAVID NEUMANN

DESIGN	BY Victor Lopez	CHECKED Joel Magana
DETAILS	BY Maria Cleverley	CHECKED Victor Lopez
QUANTITIES	BY	CHECKED

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES  
DESIGN AND TECHNICAL SERVICES**  
SPECIAL DESIGNS BRANCH **B**

BRIDGE NO. N/A  
POST MILE Var

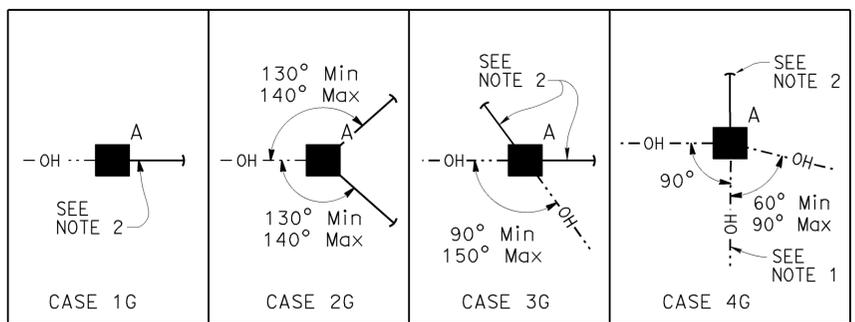
**TEMPORARY WOOD POLES**  
**NON-GUYED - NO SIGNALS ON SPANS**

**SES-2**

### LEGEND

- A Wood Pole with Attachments
- OH--- Overhead Bundle
- Guy Anchor

### POLE SELECTION TABLE

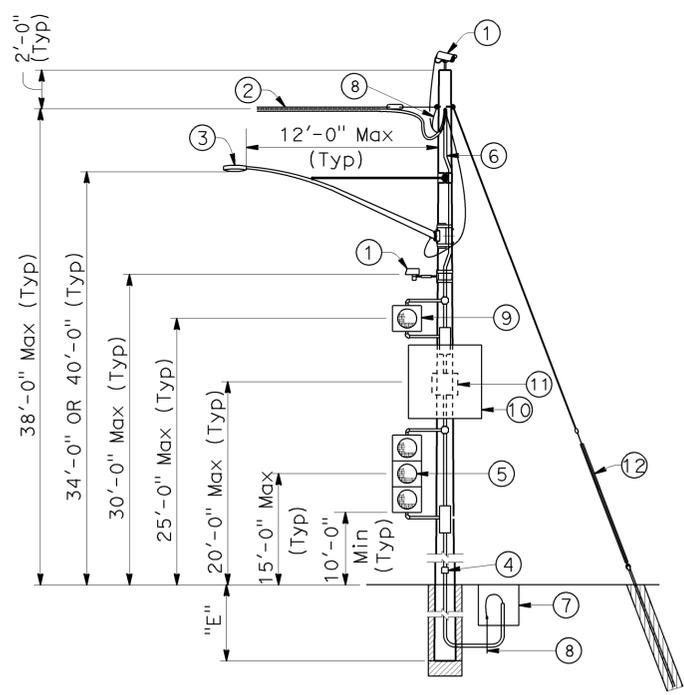


- ① CCTV camera assembly or vehicle detection system
- ② Overhead bundle consisting of a 3/8" Ø messenger wire and overhead conductors and lashing wire.
- ③ Luminaire with mast arm
- ④ Pedestrian pushbutton
- ⑤ Signal face with 3 indications or single sheet sign panel (10 SQFT Max)
- ⑥ Riser with weather head as required
- ⑦ Pull box as required
- ⑧ Grounding as required
- ⑨ Single section 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 1/2" Ø guy wire with white guy marker and strain insulator (for anchorage see "TEMPORARY WOOD POLES-DETAILS No. 2" sheet)

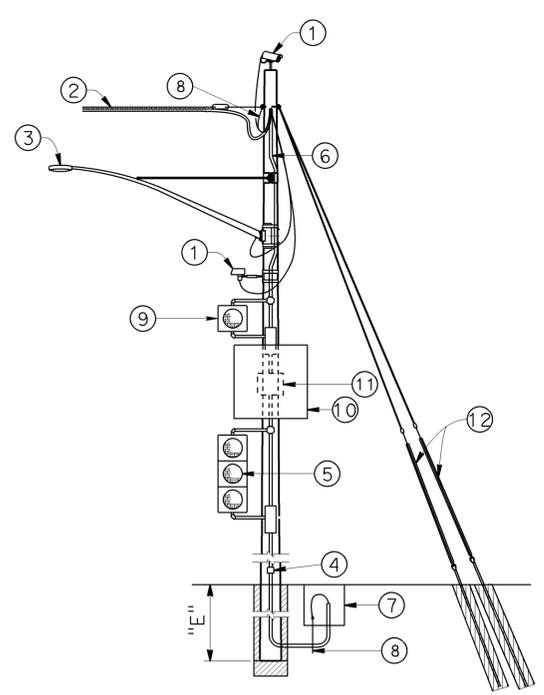
OVERHEAD BUNDLE HORIZONTAL SPAN (Max)	MAXIMUM d <sub>p</sub>	1"				1.5"				2.0"				2.5"			
		1"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"
50'	MINIMUM POLE CLASS	H-1	H-1	H-2	H-2	1	1	1	1	1	1	1	H-1	H-2	H-2	H-3	H-3
	POLE EMBEDMENT (E)	10'				9'				9'				11'			
100'	MINIMUM POLE CLASS	H-2	H-2	H-3	H-4	1	H-1	H-1	H-1	1	H-1	H-2	H-2	H-3	H-3	H-4	H-4
	POLE EMBEDMENT (E)	11'				9'				9'				12'			
150'	MINIMUM POLE CLASS	H-3	H-3	H-4	H-5	H-1	H-1	H-2	H-2	H-2	H-3	H-3	H-3	H-4	H-5	H-5	H-6
	POLE EMBEDMENT (E)	11'				9'				9'				12'			
200'	MINIMUM POLE CLASS	H-4	H-4	H-5	H-6	H-1	H-2	H-3	H-3	H-3	H-3	H-4	H-4	H-5	H-6		
	POLE EMBEDMENT (E)	11'				9'				9'				12'			

#### NOTES:

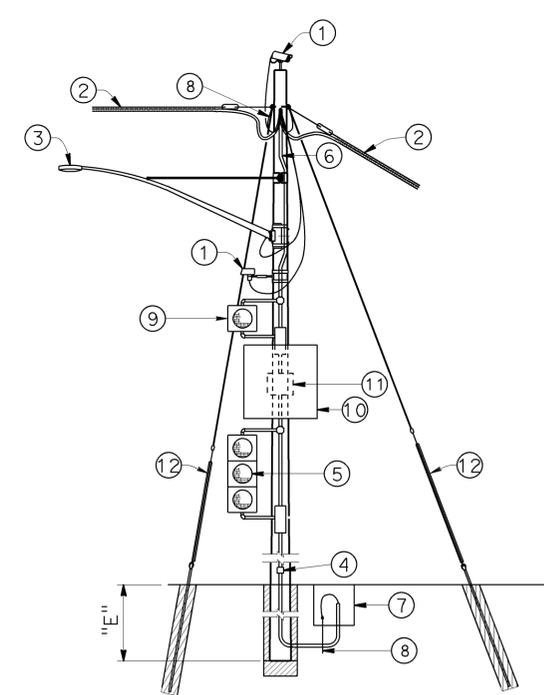
1. In addition to other restrictions on maximum horizontal span, this horizontal span must not exceed 100'.
2. Guy wire in line with opposing span ± 5°.



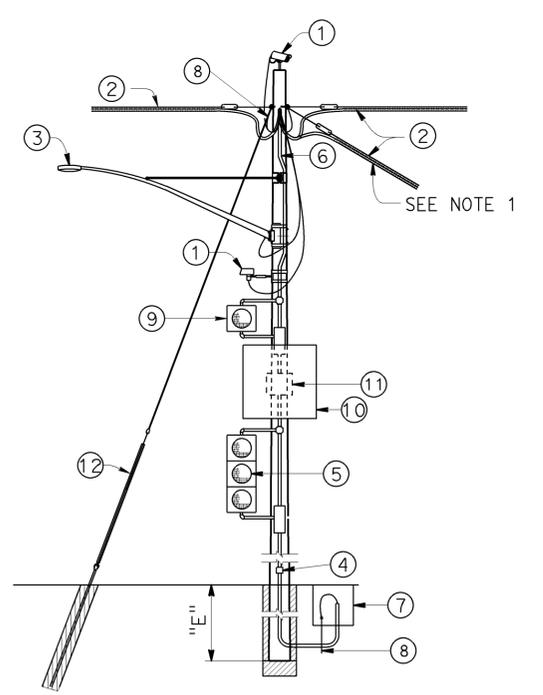
**CASE 1G  
POLE AT DEAD END  
WITH ATTACHMENTS**



**CASE 2G  
POLE AT DEAD END  
WITH ATTACHMENTS**



**CASE 3G  
POLE AT CORNER  
WITH ATTACHMENTS**



**CASE 4G  
POLE AT JUNCTION  
WITH ATTACHMENTS**

NO SCALE

BRANCH CHIEF DAVID NEUMANN

DESIGN	BY Victor Lopez	CHECKED Joel Magana
DETAILS	BY Maria Cleverley	CHECKED Victor Lopez
QUANTITIES	BY	CHECKED

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

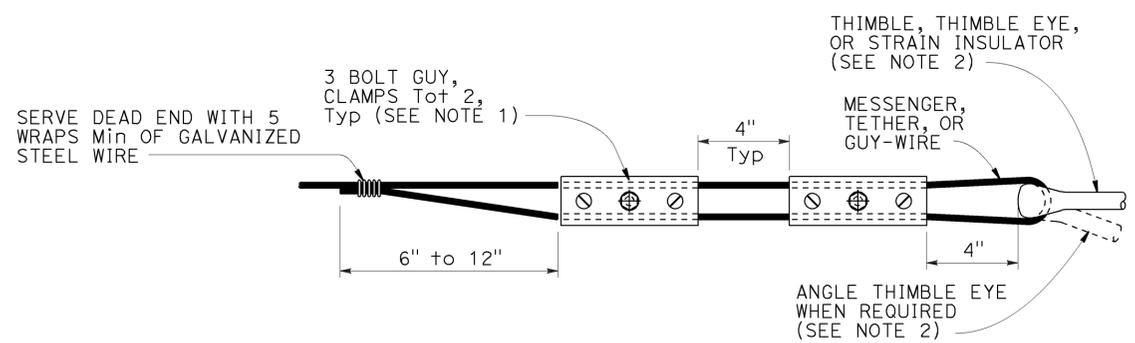
DIVISION OF ENGINEERING SERVICES  
DESIGN AND TECHNICAL SERVICES  
**SPECIAL DESIGNS BRANCH**

BRIDGE NO. N/A  
POST MILE Var

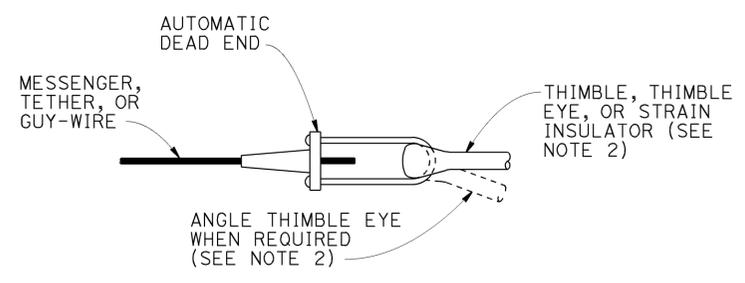
**TEMPORARY WOOD POLES**  
**GUYED - NO SIGNALS ON SPANS**

**SES-3**

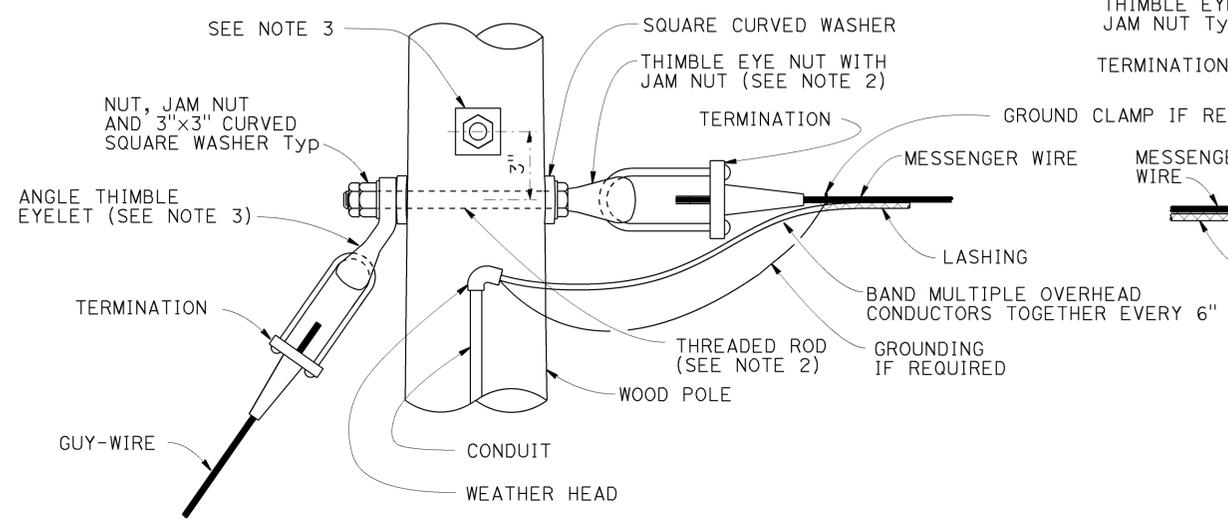
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	125	143
 REGISTERED CIVIL ENGINEER			5-22-14 DATE		
8-11-14 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.</small>					



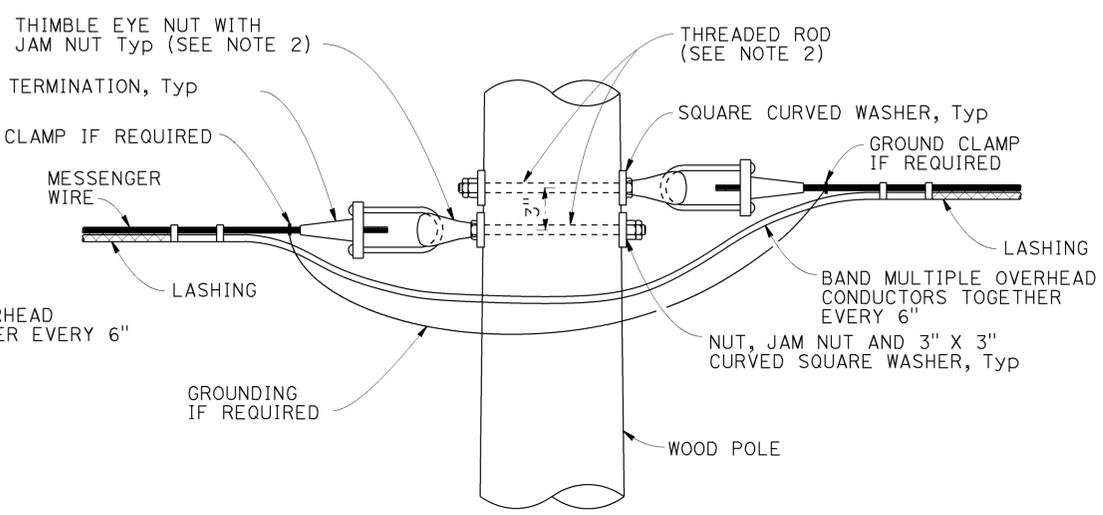
**ALTERNATIVE TERMINATION OF MESSENGER WIRES USING GUY CLAMPS**



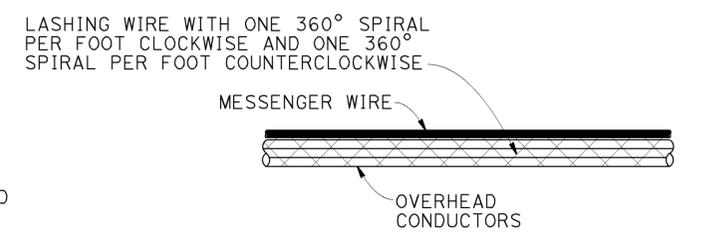
**TERMINATION OF WIRES USING AUTOMATIC DEAD END**



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

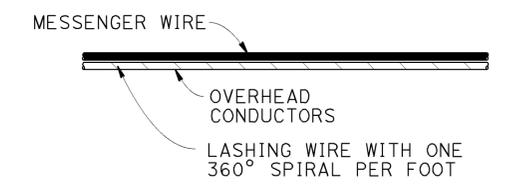


**POLE AT TANGENT OR CORNER CONNECTION**



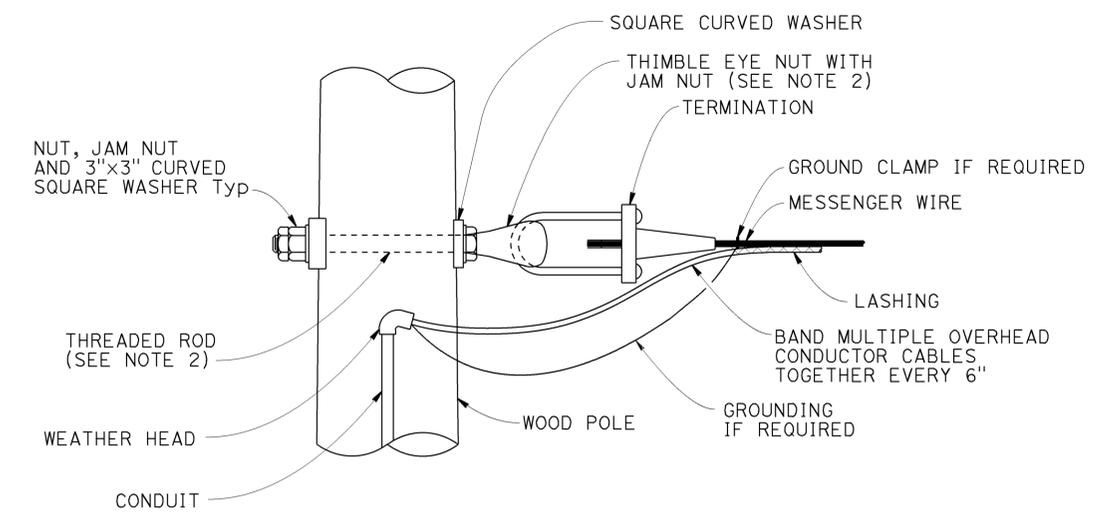
**DOUBLE LASHING DETAIL**

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

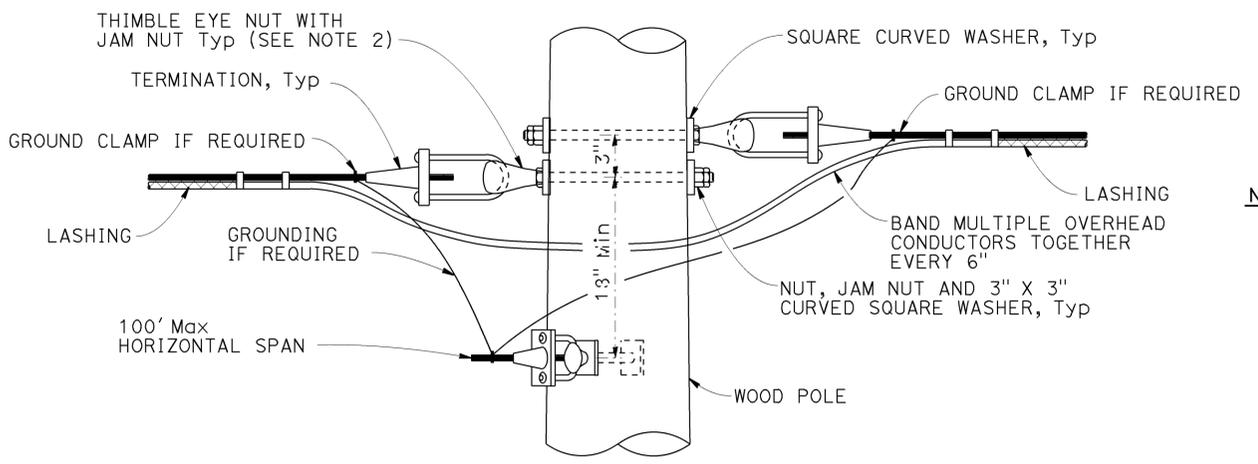


**TYPICAL LASHING DETAIL**

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



**POLE AT DEAD END CONNECTION**



**POLE AT JUNCTION CONNECTION**

**NOTES:**

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

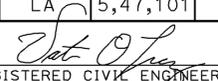
NO SCALE

BRANCH CHIEF <u>DAVID NEUMANN</u>	DESIGN BY <u>Victor Lopez</u>	CHECKED <u>Joel Magana</u>	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES <b>SPECIAL DESIGNS BRANCH</b>	BRIDGE NO. <u>N/A</u>	<b>TEMPORARY WOOD POLES</b> <b>DETAILS No. 1</b>	<b>SES-4</b>
	DETAILS BY <u>Maria Cleverley</u>	CHECKED <u>Victor Lopez</u>			POST MILE <u>Var</u>		
QUANTITIES BY	CHECKED		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 3619 PROJECT NUMBER & PHASE: 07130003271	CONTRACT NO.: 07-3X9204	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES SHEET 4 OF 8

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

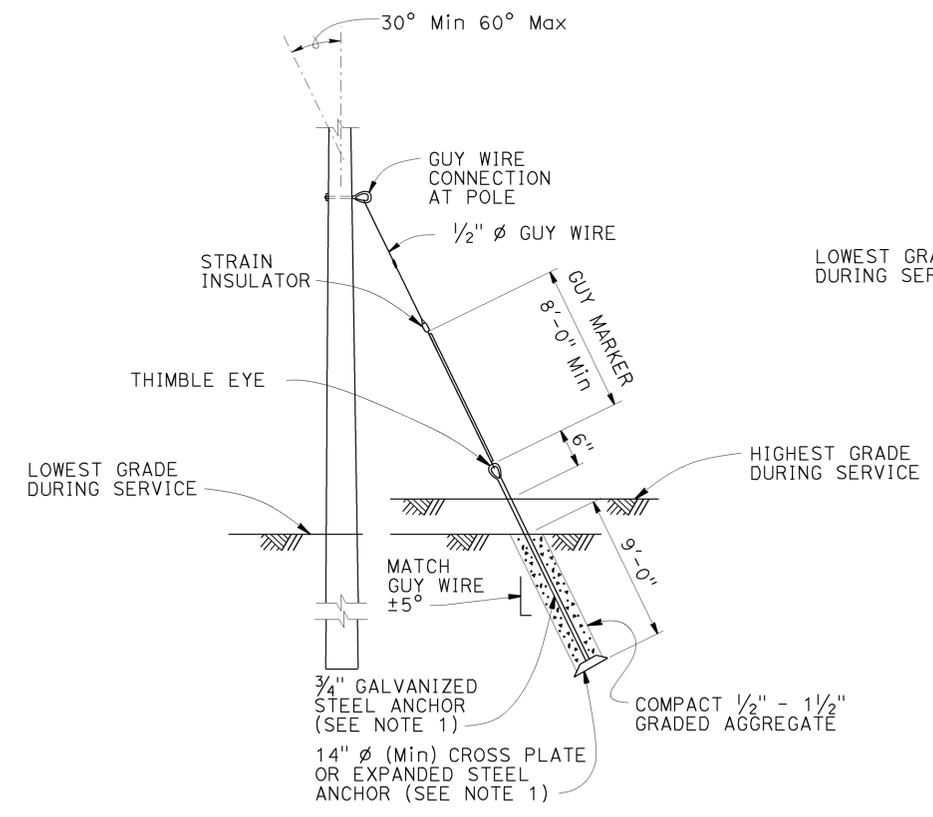
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USERNAME => s114937 DATE PLOTTED => 25-AUG-2014 TIME PLOTTED => 15:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	126	143
 REGISTERED CIVIL ENGINEER			5-22-14 DATE		
8-11-14 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>					

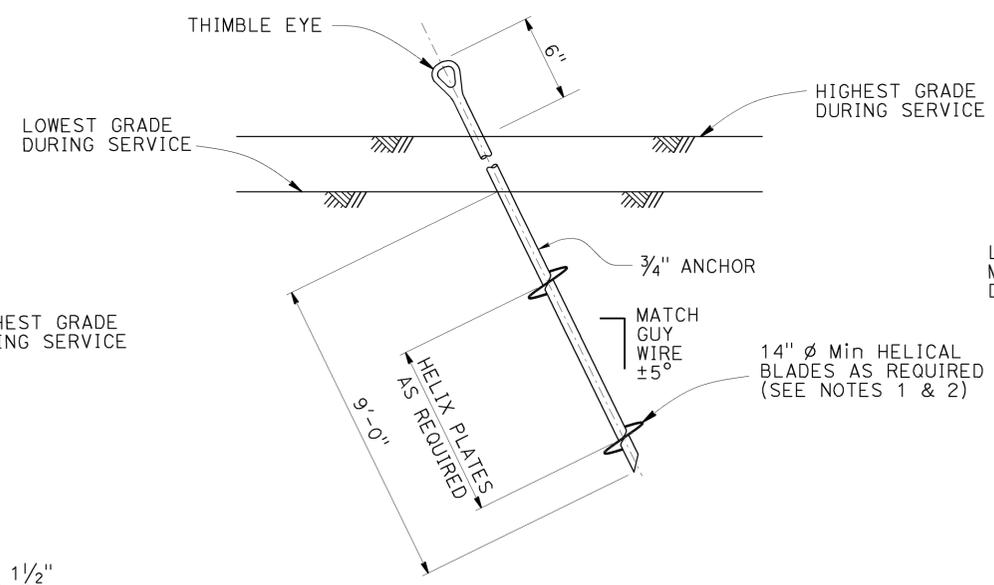
**NOTES:**

1. Minimum allowable tension capacity "0a" = 8,900 lbs.
2. Minimum installation torque "T" = 1780 lbs-ft.
3. Helical anchor detail may be used in place of expanded steel anchors.

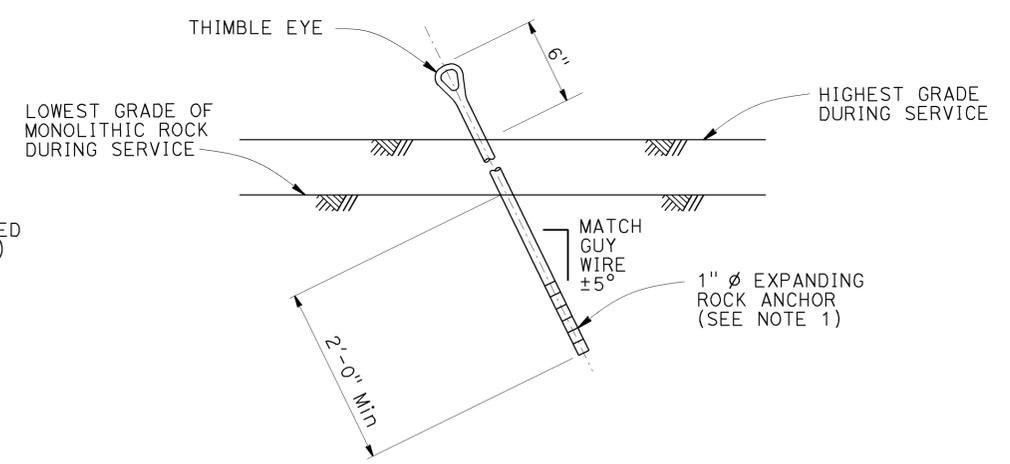


**EXPANDED STEEL ANCHOR DETAIL**

SEE NOTE 3



**HELICAL ANCHOR DETAIL**



**EXPANDING ROCK ANCHOR DETAIL**

NO SCALE

BRANCH CHIEF <u>DAVID NEUMANN</u>	DESIGN BY Victor Lopez	CHECKED Joel Magana	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES <b>SPECIAL DESIGNS BRANCH</b>	BRIDGE NO. N/A	<b>TEMPORARY WOOD POLES</b> DETAILS No. 2	<b>SES-5</b>
	DETAILS BY Maria Cleverley	CHECKED Victor Lopez			POST MILE Var		
QUANTITIES	BY	CHECKED	UNIT: 3619	PROJECT NUMBER & PHASE: 07130003271	CONTRACT NO.: 07-3X9204	REVISION DATES	SHEET 5 OF 8

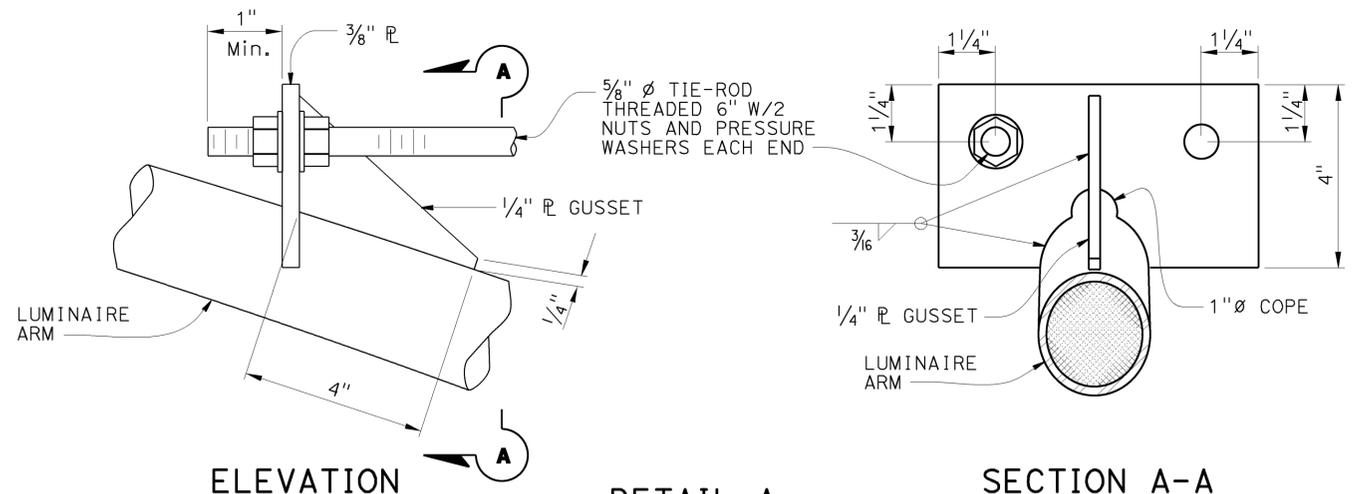
(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

DISREGARD PRINTS BEARING EARLIER REVISION DATES

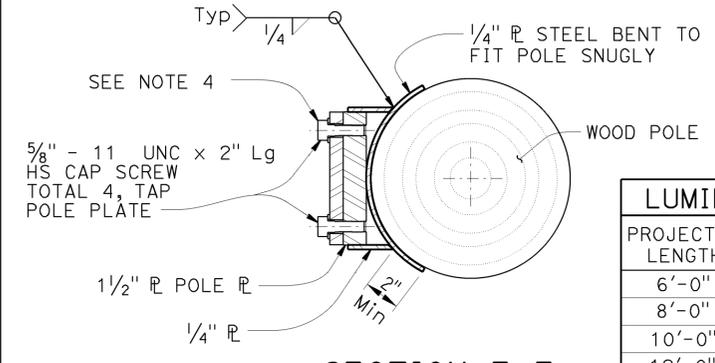
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USERNAME => s114937 DATE PLOTTED => 25-AUG-2014 TIME PLOTTED => 15:45



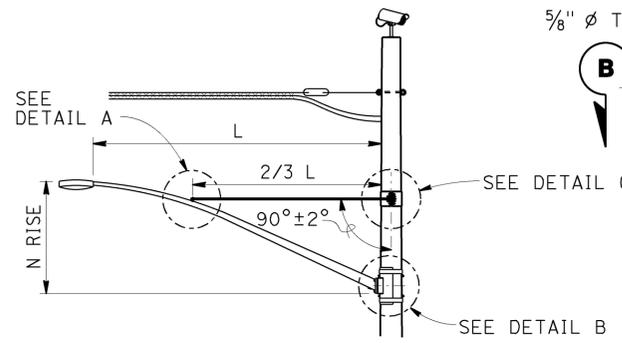
**ELEVATION**  
**DETAIL A**  
**TIE-ROD AT LUMINAIRE ARM**  
 NO SCALE

- NOTES:**
- Luminaire mast arms must be in compliance with Standard Plan ES-6D with noted modifications.
  - Verify pole dimensions at tie-rod attachment height. Fabricate 8" flat bar with "L" dimension to maintain an open gap between flanges in finished installation.
  - Not all screw heads and bolt heads are shown for clarity.
  - Mast arm not shown for clarity.

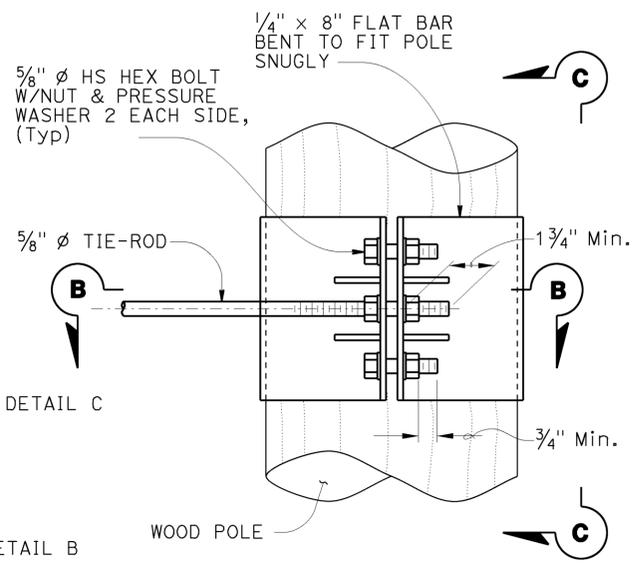


**SECTION E-E**

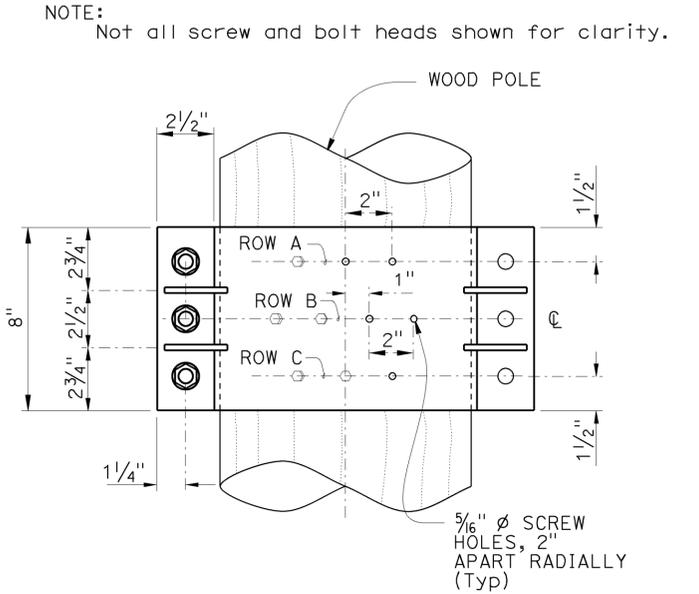
LUMINAIRE MAST ARM DATA			
PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS
6'-0"	2'-0"±	3 1/4"	0.1196"
8'-0"	2'-6"±	3 1/2"	
10'-0"	3'-3"±	3 7/8"	
12'-0"	4'-3"±	3 7/8"	



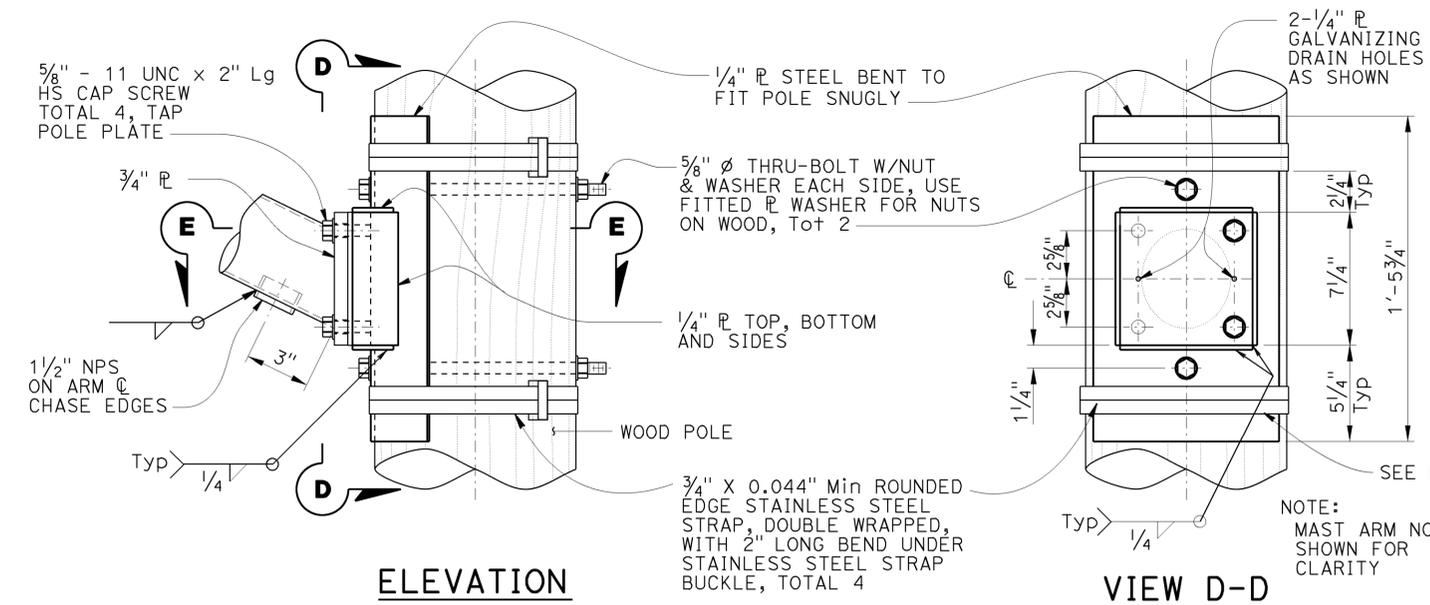
**LUMINAIRE MAST ARM**



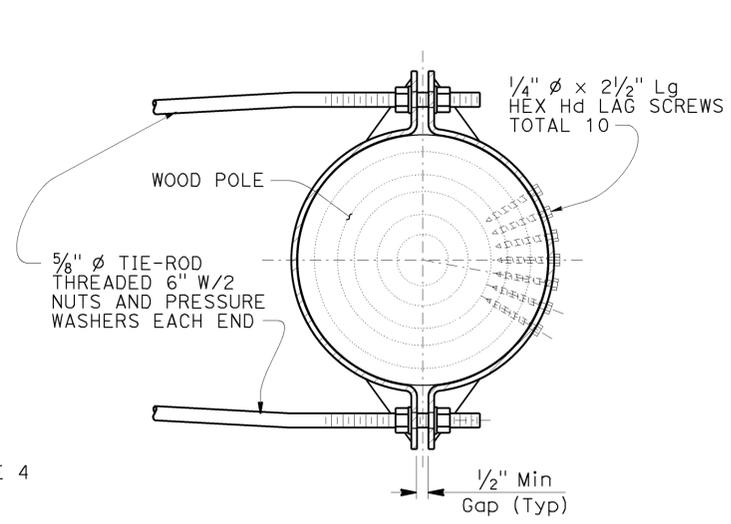
**ELEVATION**



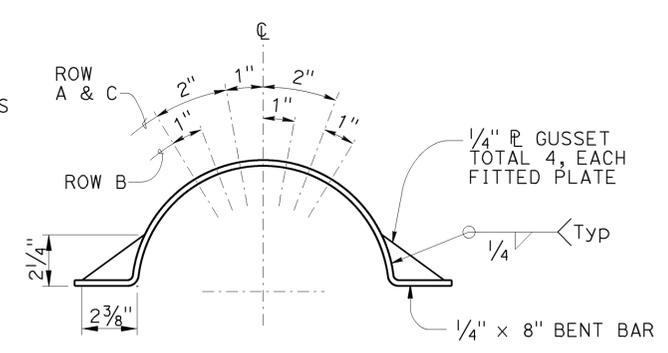
**VIEW C-C**



**ELEVATION**  
**VIEW D-D**  
**DETAIL B**  
**ARM CONNECTION DETAILS**  
 NO SCALE



**SECTION B-B**



**DETAIL C**  
**TIE-ROD AT POLE**  
 NO SCALE

BRANCH CHIEF DAVID NEUMANN

DESIGN	BY Victor Lopez	CHECKED Joel Magana
DETAILS	BY Maria Cleverley	CHECKED Victor Lopez
QUANTITIES	BY	CHECKED

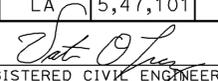
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

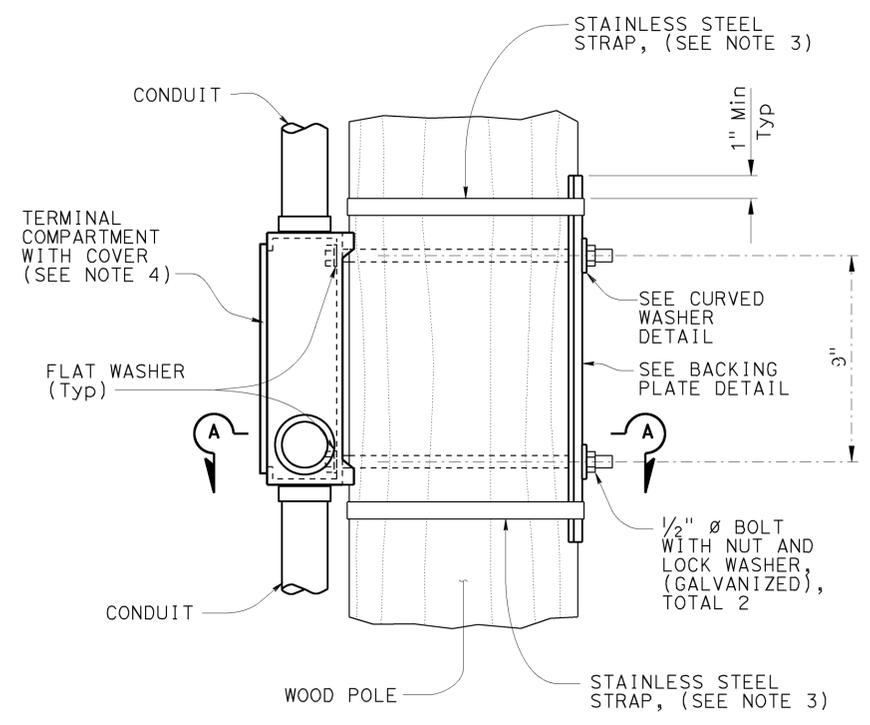
DIVISION OF ENGINEERING SERVICES  
 DESIGN AND TECHNICAL SERVICES  
 SPECIAL DESIGNS BRANCH

BRIDGE No.	N/A
POST MILE	Var

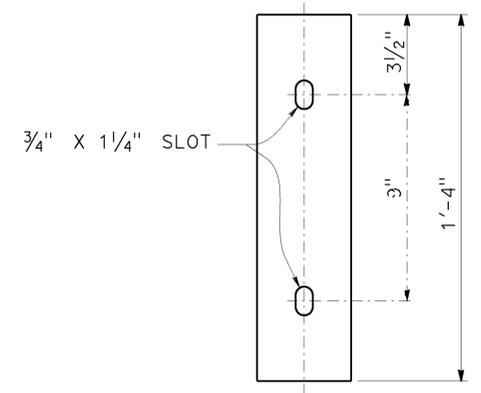
**TEMPORARY WOOD POLES**  
**DETAILS No. 3**

**SES-6**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	128	143
 REGISTERED CIVIL ENGINEER			5-22-14 DATE		
8-11-14 PLANS APPROVAL DATE					
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ELEVATION

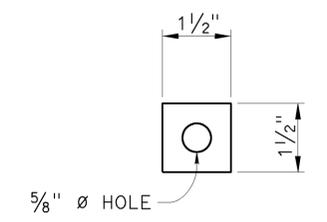


ELEVATION

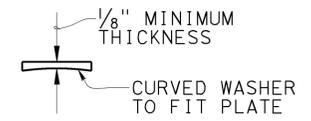


PLAN

BACKING PLATE DETAIL



ELEVATION

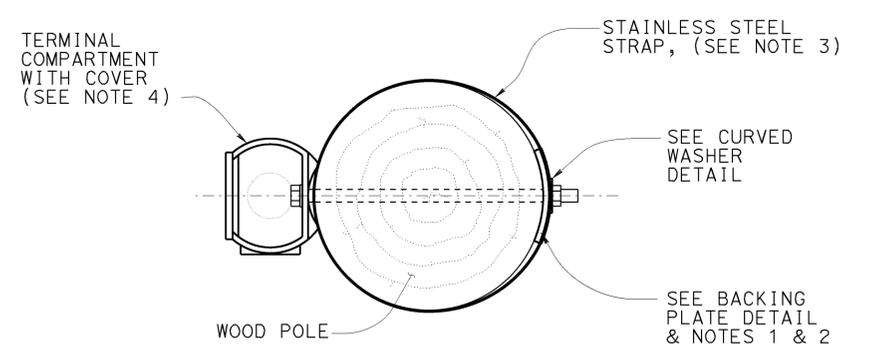


PLAN

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 details not shown see Standard Plan ES-4D.



SECTION A-A

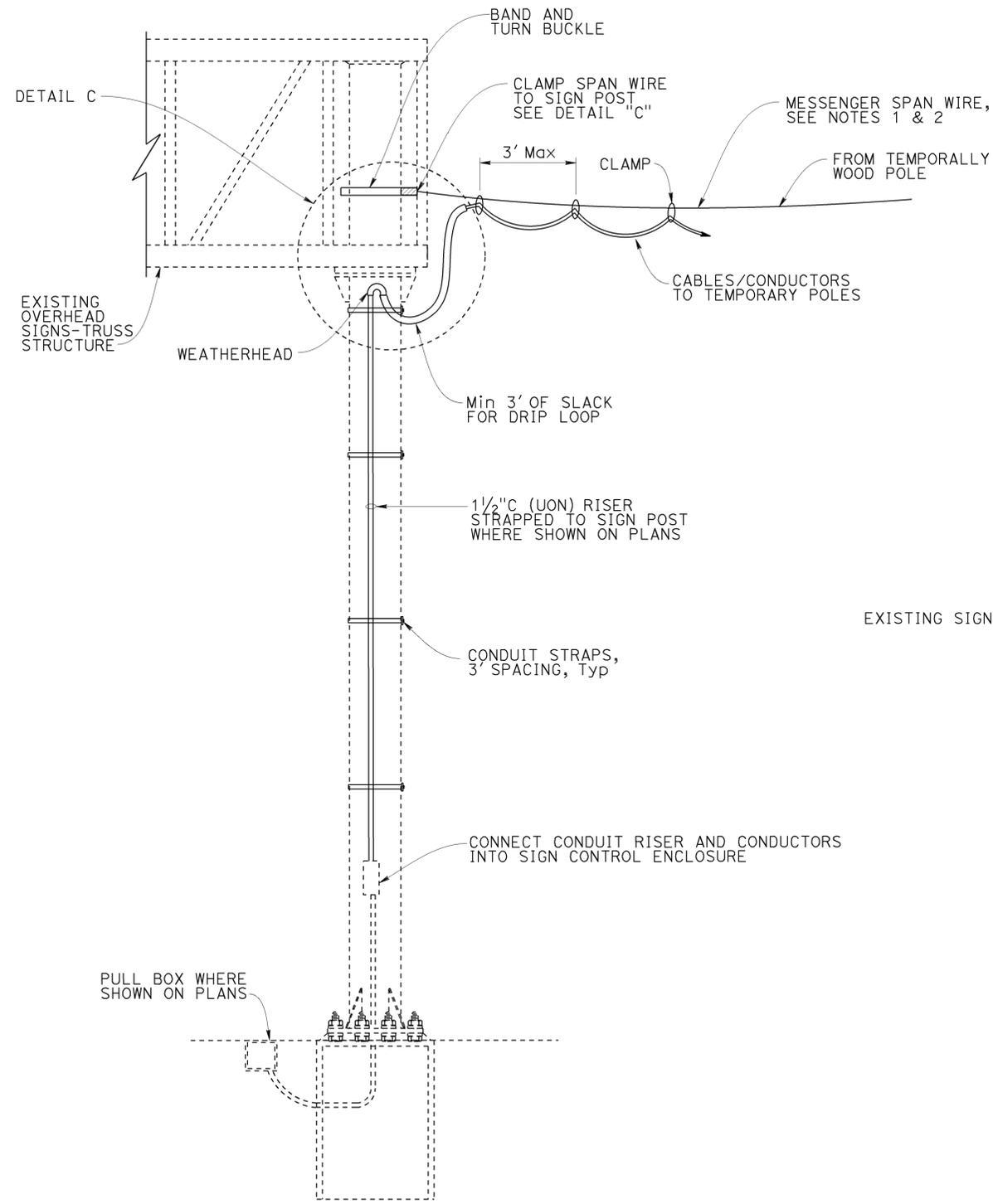
SIDE MOUNTING  
TERMINAL COMPARTMENT

NO SCALE

BRANCH CHIEF DAVID NEUMANN	DESIGN BY Victor Lopez	CHECKED Joel Magana	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH <b>B</b>	BRIDGE NO. N/A	TEMPORARY WOOD POLES DETAILS No. 4	SES-7
	DETAILS BY Maria Cleverley	CHECKED Victor Lopez			POST MILE Var		
QUANTITIES BY			UNIT: 3619 PROJECT NUMBER & PHASE: 07130003271		CONTRACT NO.: 07-3X9204		REVISION DATES
(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 7 OF 8

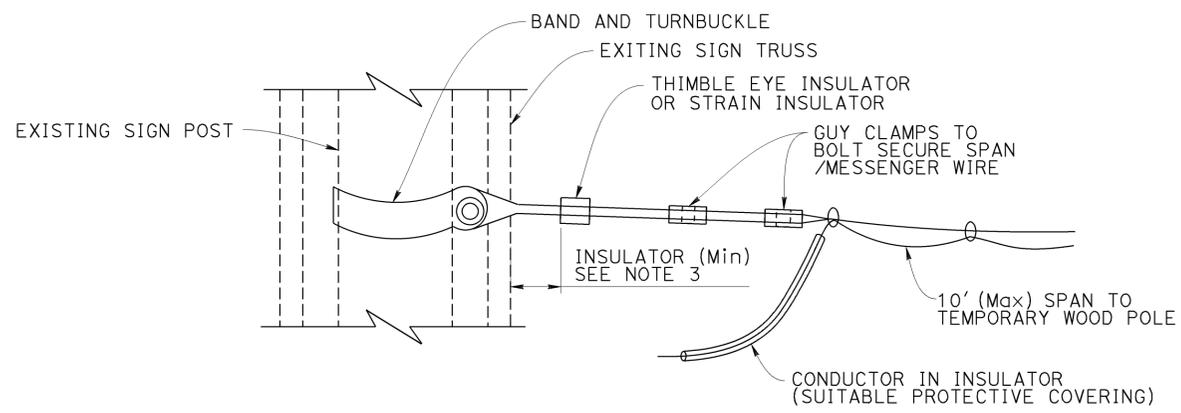
USERNAME => s114937 DATE PLOTTED => 25-AUG-2014 TIME PLOTTED => 15:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	129	143
 REGISTERED CIVIL ENGINEER			5-22-14 DATE		
8-11-14 PLANS APPROVAL DATE					
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**NOTES:**

1. All overhead cables shall be slack spanned with 18'-0" minimum overhead clearance.
2. Span - wire must be slack spanned with 1'-0" minimum sag.
3. Overhead line construction not specifically covered hereon shall conform with the Provisions of General Order no. 95 of Public Utilities Commission.



**DETAIL C**

**MOUNTING TEMPORARY CABLE ON EXISTING OVERHEAD SIGN**

NO SCALE

<b>BRANCH CHIEF</b> _____ <b>DAVID NEUMANN</b>	DESIGN BY <b>Victor Lopez</b>	CHECKED <b>Joel Magana</b>	<b>STATE OF CALIFORNIA</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DIVISION OF ENGINEERING SERVICES</b> <b>DESIGN AND TECHNICAL SERVICES</b> <b>SPECIAL DESIGNS BRANCH</b>	BRIDGE NO. N/A	<b>TEMPORARY WOOD POLES</b> <b>CONNECTING TO EXISTING STRUCTURE DETAIL</b>	<b>SES-8</b>
	DETAILS BY <b>Maria Cleverley</b>	CHECKED <b>Victor Lopez</b>			POST MILE Var		
	QUANTITIES BY _____	CHECKED _____					

USERNAME => s114937 DATE PLOTTED => 25-AUG-2014 TIME PLOTTED => 15:46

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

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

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	130	143

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 8-11-14

**UNIT OF MEASUREMENT SYMBOLS:**

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

**TABLE A**

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

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

**TABLE B**

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

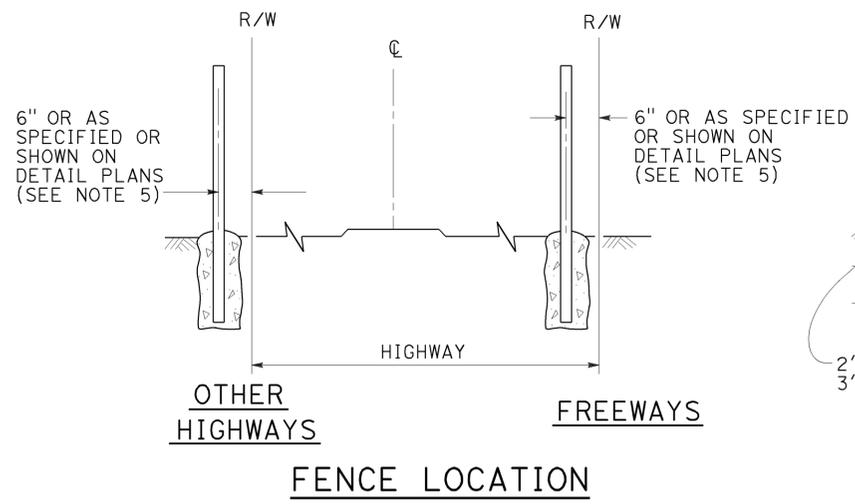
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS  
(SHEET 2 OF 2)**

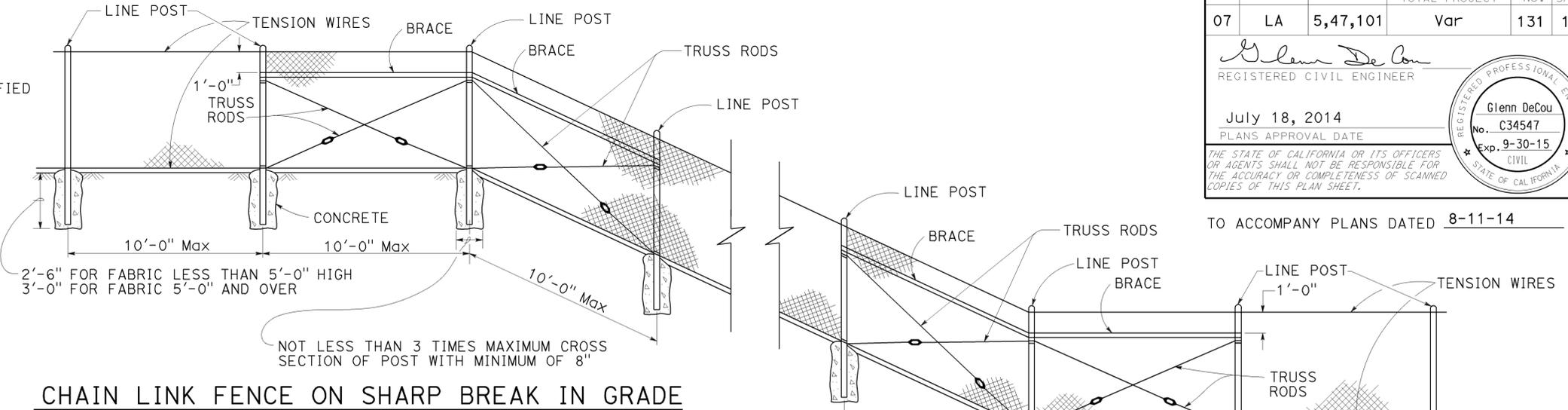
NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

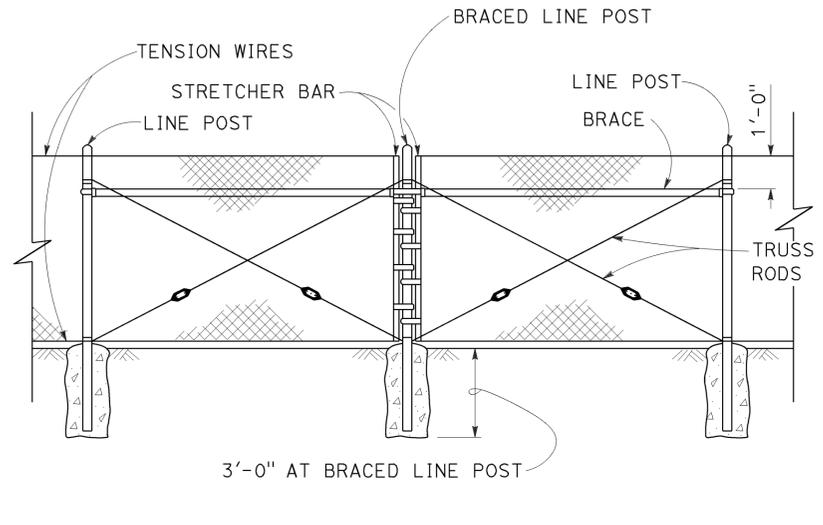
2010 REVISED STANDARD PLAN RSP A10B



**FENCE LOCATION**

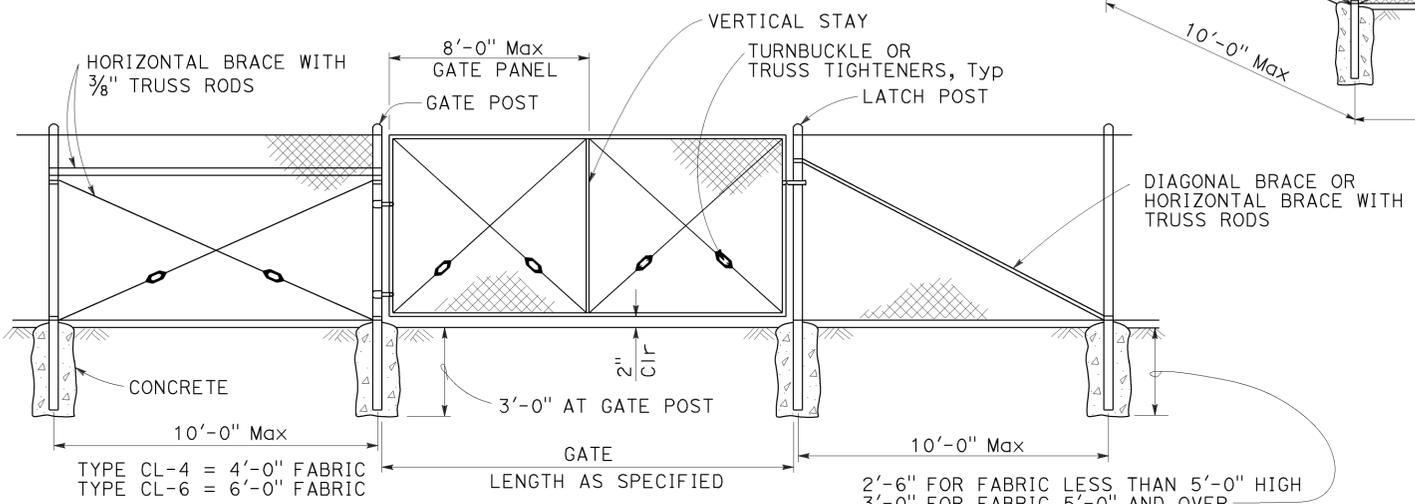


**CHAIN LINK FENCE ON SHARP BREAK IN GRADE**



**BRACED LINE POST INSTALLATION**

Braced line post at intervals not exceeding 1000'



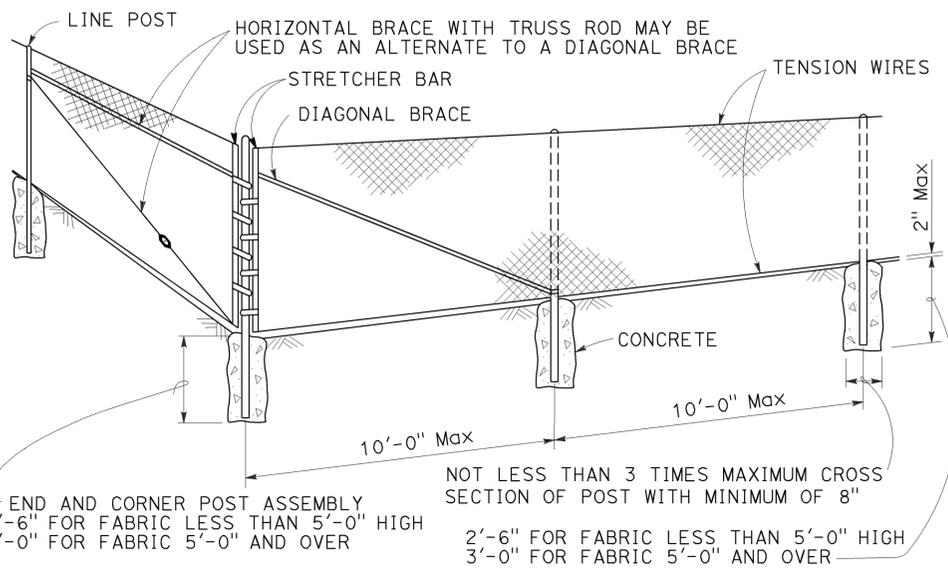
**CHAIN LINK GATE INSTALLATION**

GATE POST			
FENCE HEIGHT	GATE WIDTHS	ROUND OD PIPE	WEIGHT (lb/ft)
6'-0" AND LESS	UP THRU 6'-0"	2.875"	5.80
	OVER 6'-0" THRU 12'-0"	4.500"	10.80
	OVER 12'-0" THRU 18'-0"	5.563"	14.63
OVER 6'-0" TO 8'-0" Max	OVER 18'-0" TO 24'-0" Max	6.625"	18.99
	UP THRU 6'-0"	3.500"	7.58
	OVER 6'-0" THRU 12'-0"	5.563"	14.63
	OVER 12'-0" THRU 18'-0"	6.625"	18.99
	OVER 18'-0" TO 24'-0" Max	8.625"	28.58

Above post dimensions and weights are minimums. Larger sizes may be used upon approval.

**NOTES:**

- The table below shows minimum sized posts and braces complying with the specifications. Larger or heavier post and brace sizes may be used upon approval.
- Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
- Other sections which comply with the strength requirements and other provisions of the Specifications may be used upon approval.
- Options exercised shall be uniform on any one project.
- Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.
- See Revised Standard Plan RSP A85B for Brace, Stretcher Bar, and Truss Tightener Details.



**CORNER POST**

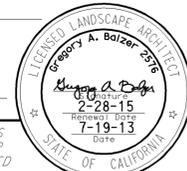
FENCE HEIGHT	TYPICAL MEMBER DIMENSIONS (See Notes)									
	LINE POSTS					END, LATCH AND CORNER POSTS		BRACES		
	ROUND OD PIPE	WEIGHT (lb/ft)	ROLL FORMED		ROUND OD PIPE	WEIGHT (lb/ft)	ROUND OD PIPE	WEIGHT (lb/ft)	ROLL FORMED	
			SECTION	WEIGHT (lb/ft)					SECTION	WEIGHT (lb/ft)
6'-0" AND LESS	1.900"	2.72	1.875" x 1.625"	1.85	2.375"	3.65	1.66"	2.27	1.625" x 1.25"	1.35
OVER 6'-0" TO 8'-0" Max	2.375"	3.65	2.25" x 1.70"	2.78	2.875"	5.80	1.66"	2.27	1.625" x 1.25"	1.35

RSP A85 DATED JULY 18, 2014 SUPERSEDES STANDARD PLAN A85 DATED MAY 20, 2011 - PAGE 112 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A85

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	132	143

  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
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TO ACCOMPANY PLANS DATED 8-11-14

**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

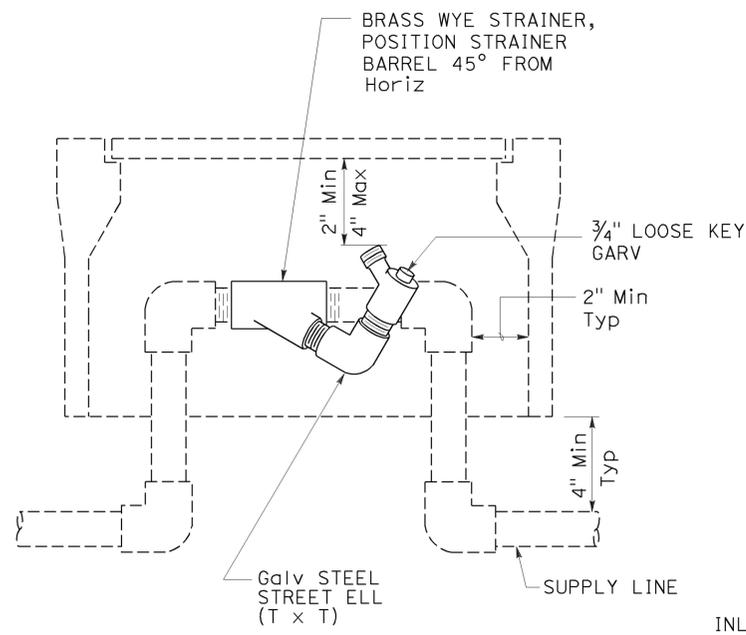
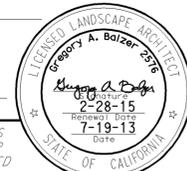
RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H1**

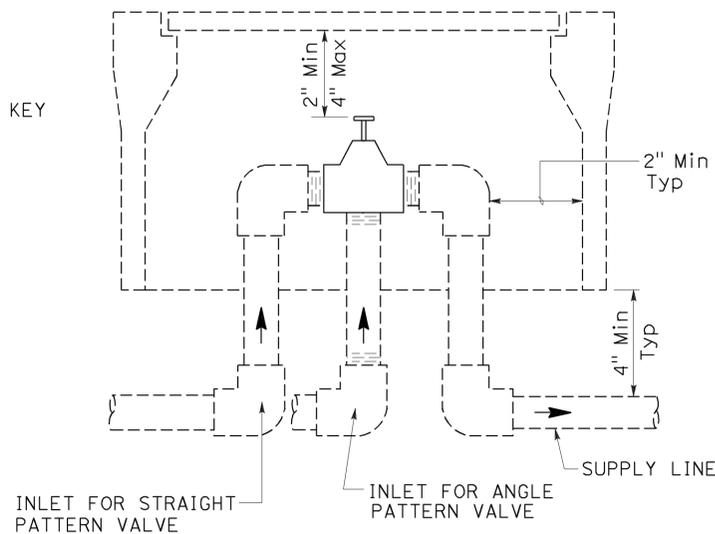
2010 REVISED STANDARD PLAN RSP H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	133	143

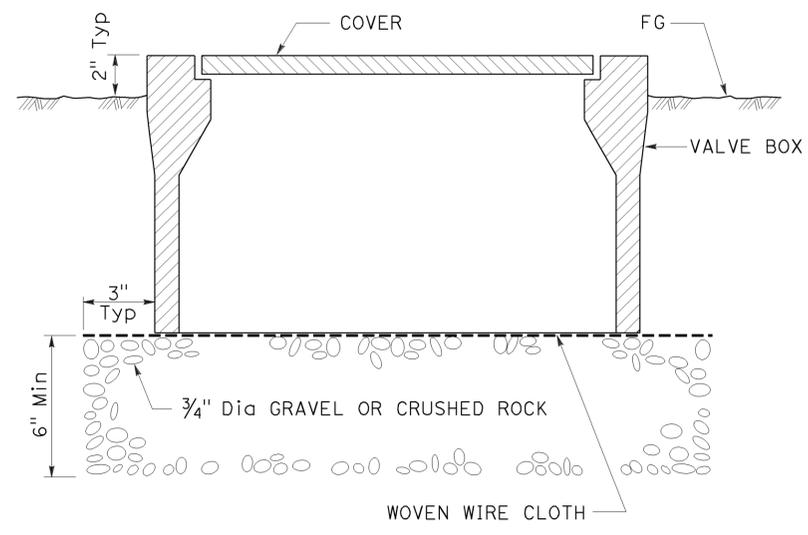
July 19, 2013  
 PLANS APPROVAL DATE  
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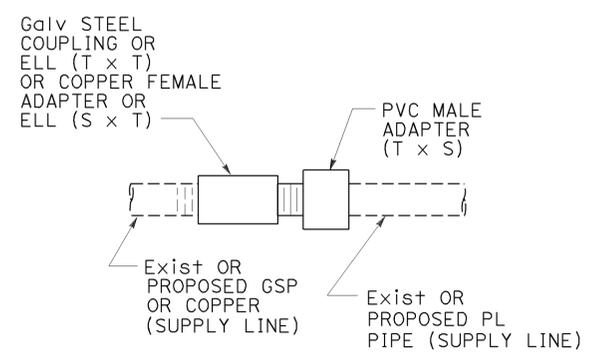
**ELEVATION**  
**WYE STRAINER ASSEMBLY**



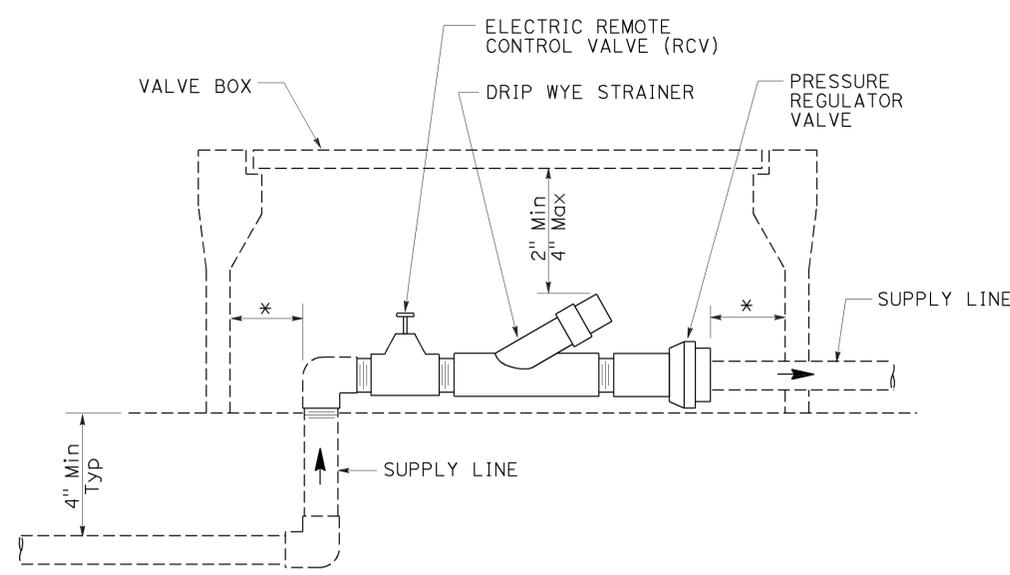
**ELEVATION**  
**VALVE**



**SECTION**  
**VALVE BOX**



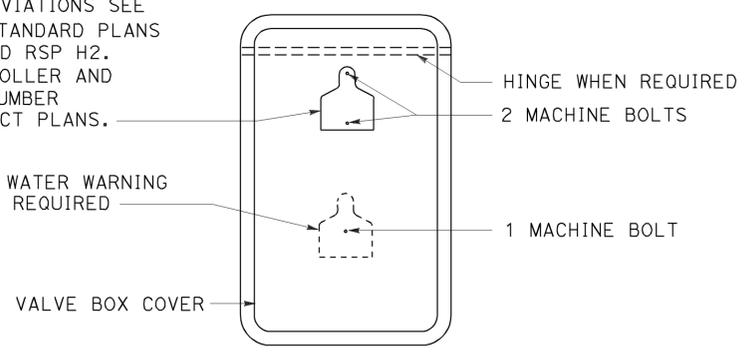
**GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE**



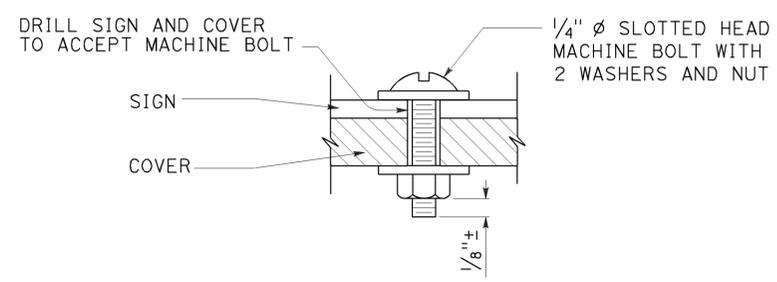
**ELEVATION**  
**DRIP VALVE ASSEMBLY**

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

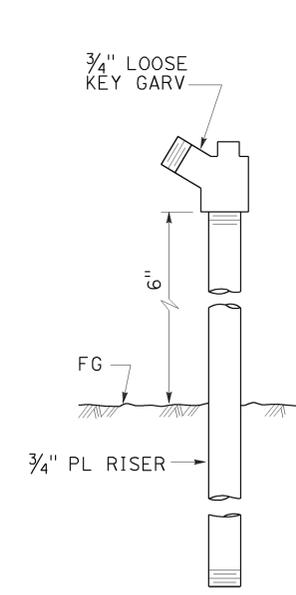
RECYCLED WATER WARNING  
SIGN WHEN REQUIRED



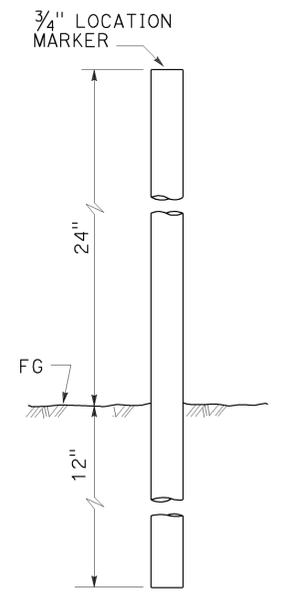
**PLAN**



**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	5,47,101	Var	134	143

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 8-11-14

TABLE 1

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

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

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

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

TABLE 2

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

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph  
 \*\* - Longitudinal buffer space or flagger station spacing  
 \*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

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

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

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

**REVISED STANDARD PLAN RSP T9**

2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	135	143

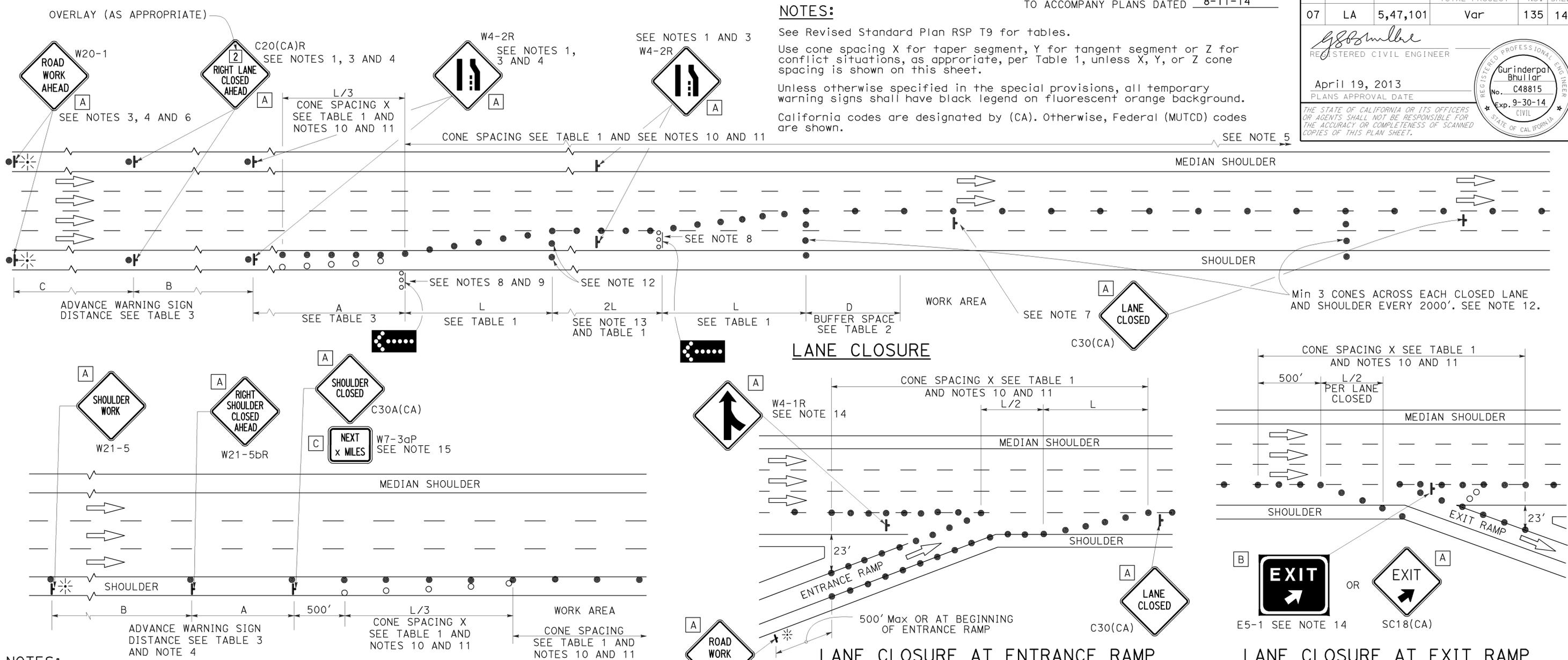
REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

TO ACCOMPANY PLANS DATED 8-11-14

**NOTES:**

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



**NOTES:**

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

**SHOULDER CLOSURE**

6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA)L and W4-2L signs shall be used.
7. Place a C30(CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

**LANE CLOSURE AT ENTRANCE RAMP**

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

**LEGEND**

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

**SIGN PANEL SIZE (Min)**

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

**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

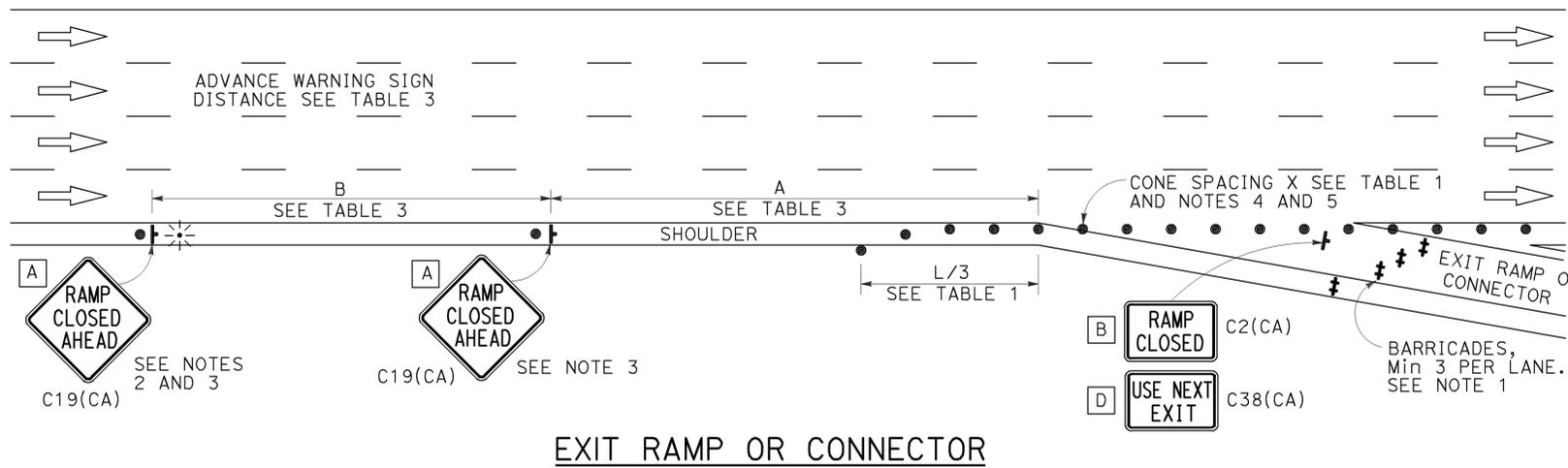
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	136	143

*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

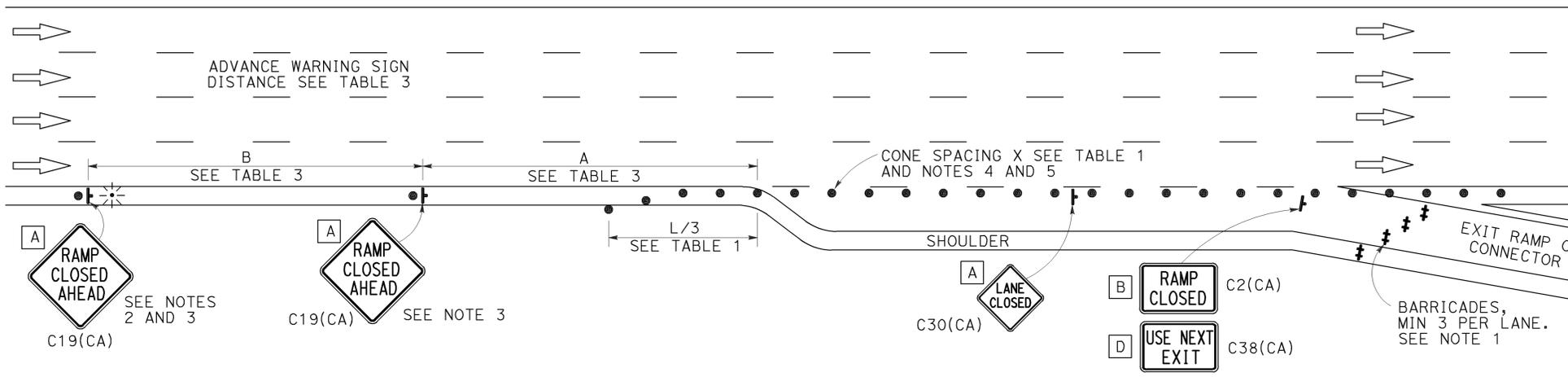
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TO ACCOMPANY PLANS DATED 8-11-14

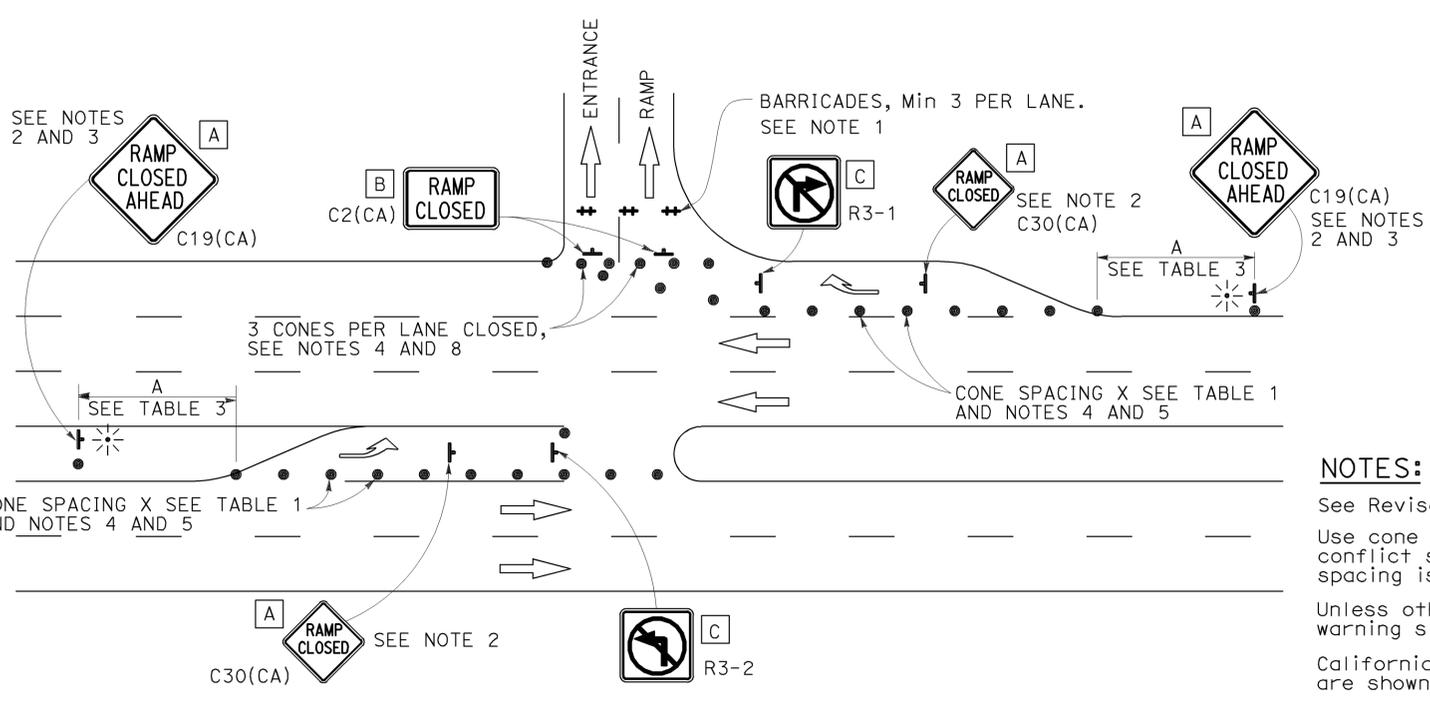
2010 REVISED STANDARD PLAN RSP T14



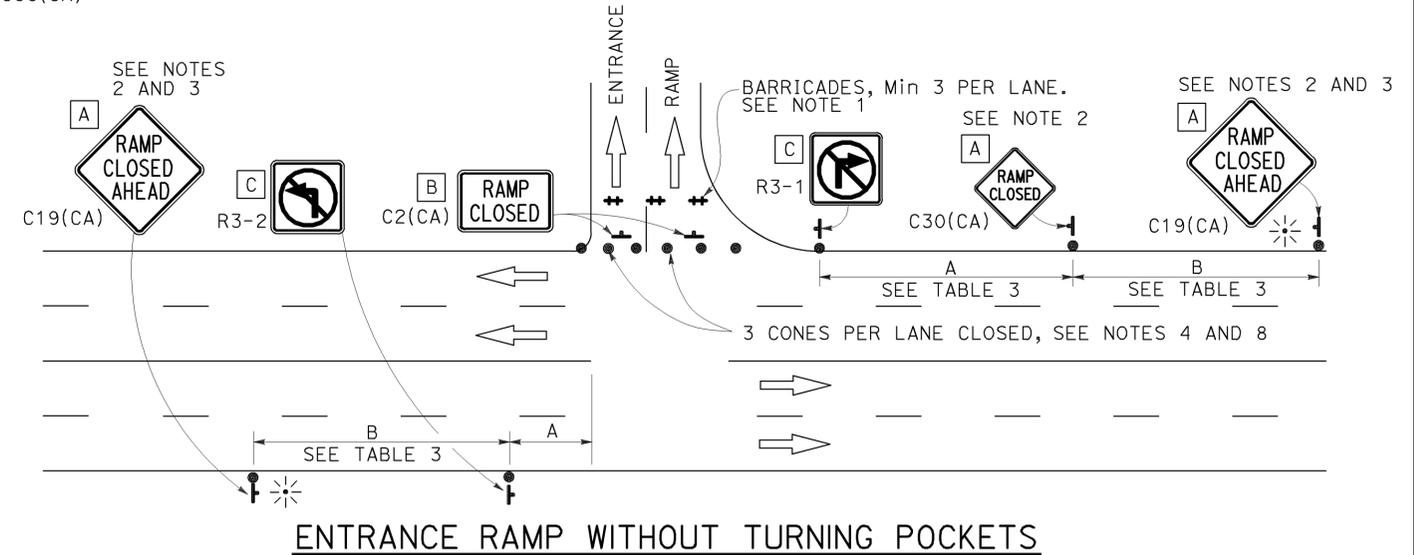
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

1. See Revised Standard Plan RSP T9 for tables.
2. 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.
3. Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
4. California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

## NOTES:

1. 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.
2. 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.
3. 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.
4. All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
6. At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
7. The existing "EXIT" signs shall be covered during ramp closures.
8. A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.

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**

**LEGEND:**

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

**ABBREVIATIONS**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	137	143

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 8-11-14

**SOFFIT AND WALL MOUNTED LUMINAIRES**

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

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

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

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

**MISCELLANEOUS ELECTROLIERS**

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

**NOTES:**

- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

**STANDARD ELECTROLIER**

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)**

NO SCALE

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

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

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	138	143

*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 8-11-14

### CONDUIT

### SIGNAL EQUIPMENT

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

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

### SIGNAL EQUIPMENT Cont

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

### SERVICE EQUIPMENT

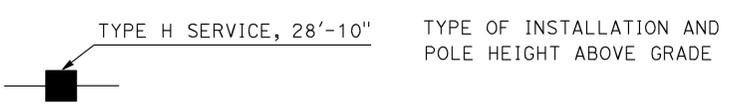
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

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

### NOTES:

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

### POLE-MOUNTED SERVICE DESIGNATION



### FLASHING BEACON

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

### ILLUMINATED OVERHEAD SIGN

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

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

NO SCALE

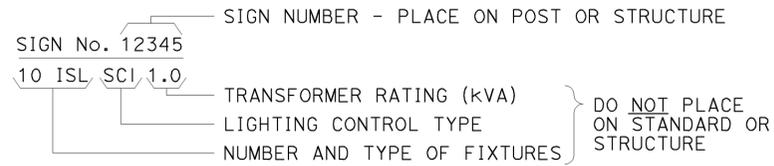
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

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

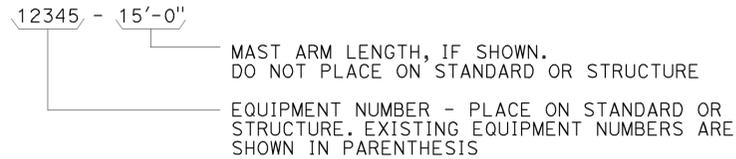
2010 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

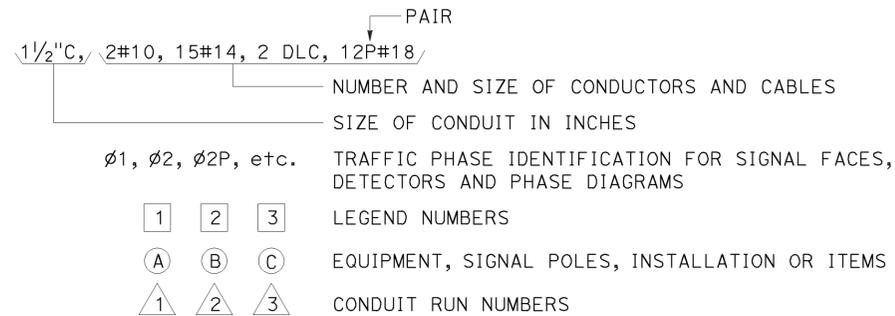
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



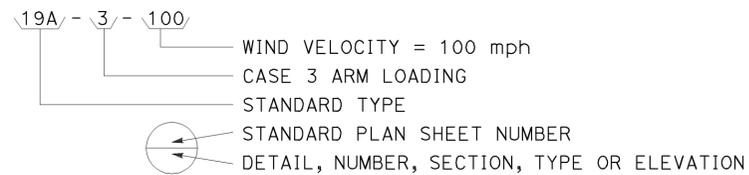
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



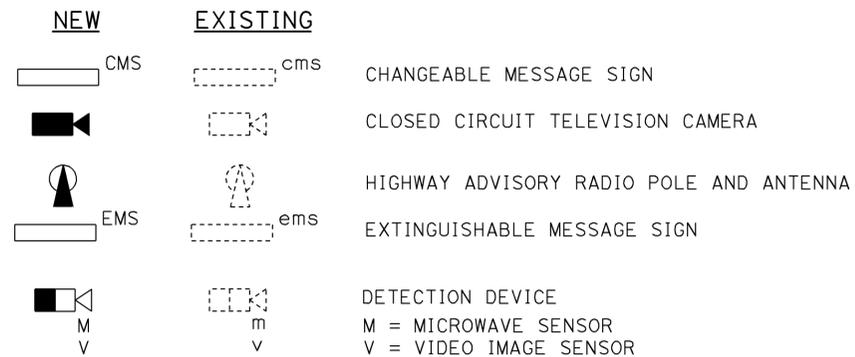
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



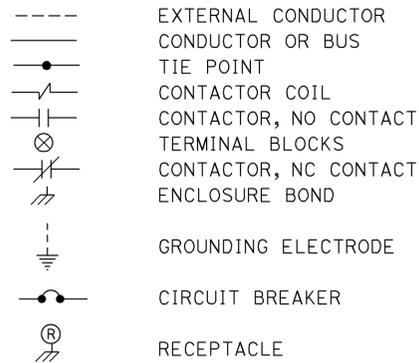
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



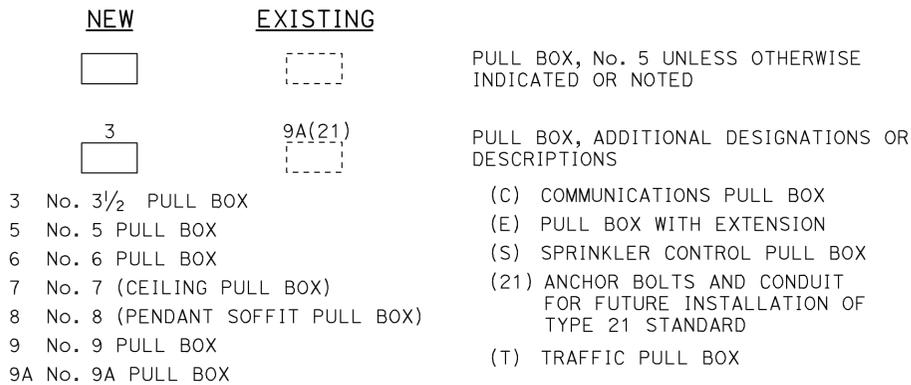
### MISCELLANEOUS EQUIPMENT



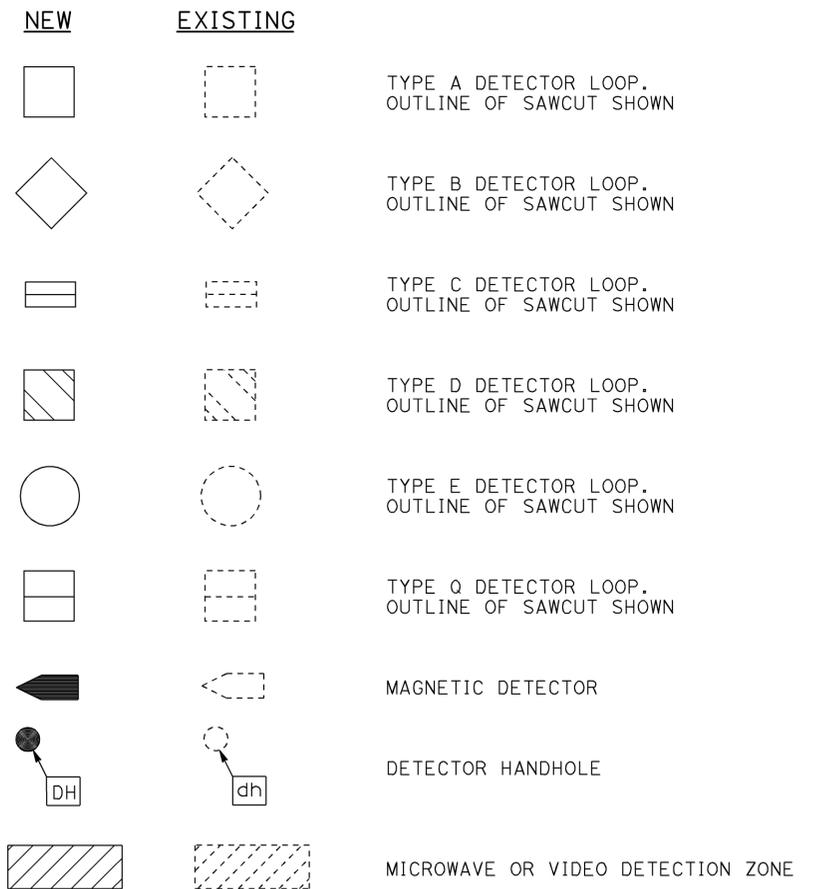
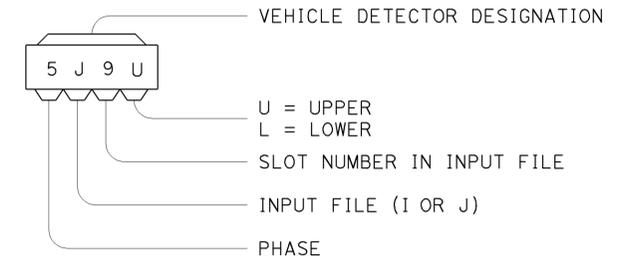
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

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

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

2010 REVISED STANDARD PLAN RSP ES-1C

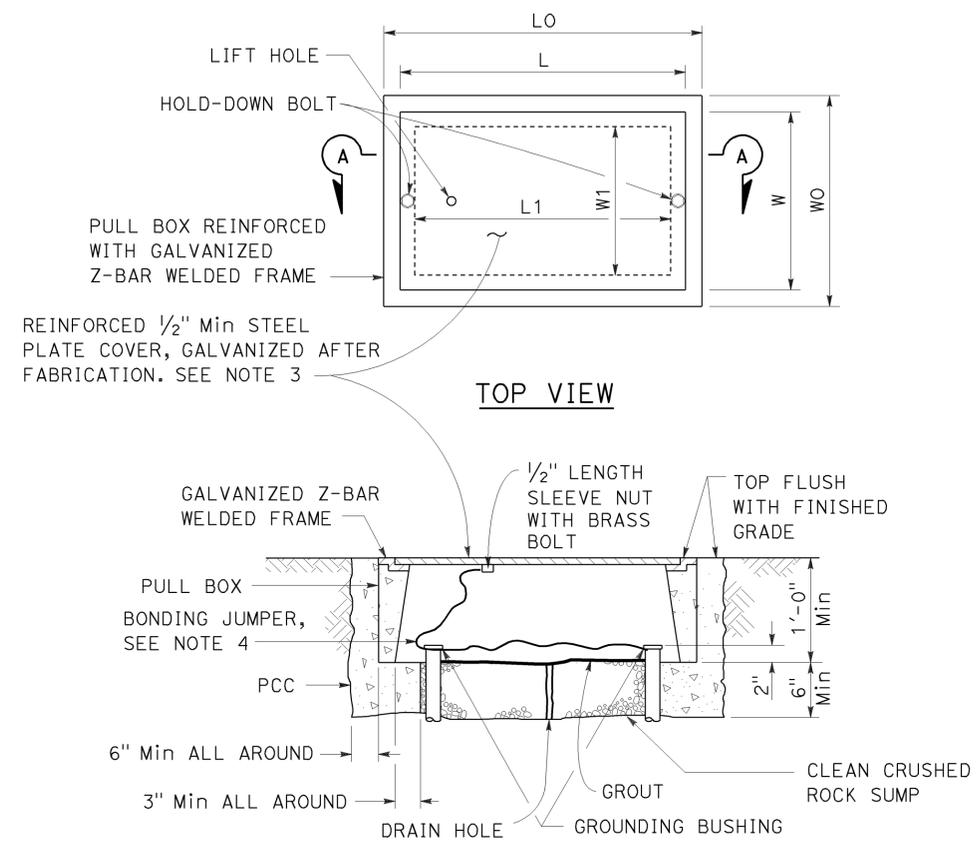
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5,47,101	Var	140	143

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 8-11-14



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

**NOTES:**

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

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

\* EXCLUDING CONDUIT WEB      \*\* TOP DIMENSION

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

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

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

2010 REVISED STANDARD PLAN RSP ES-8B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	141	143

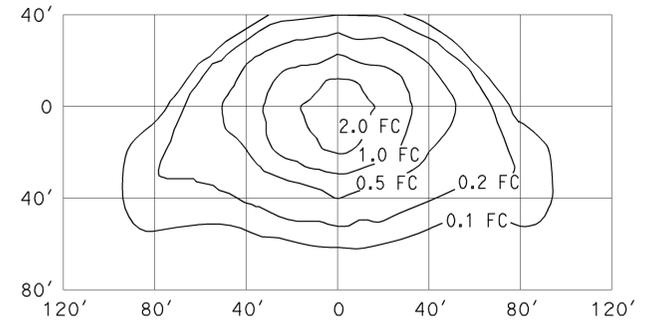
*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

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.

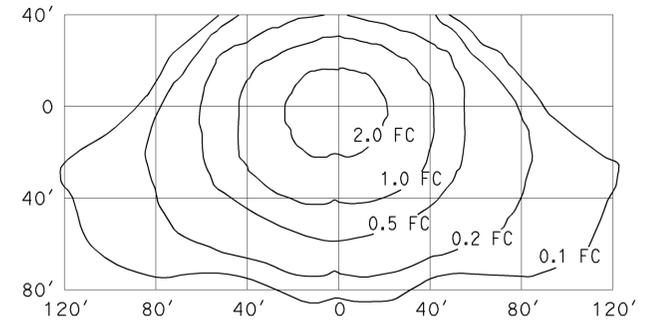
TO ACCOMPANY PLANS DATED 8-11-14

**ISOFOOTCANDLE CURVE - MINIMUM**



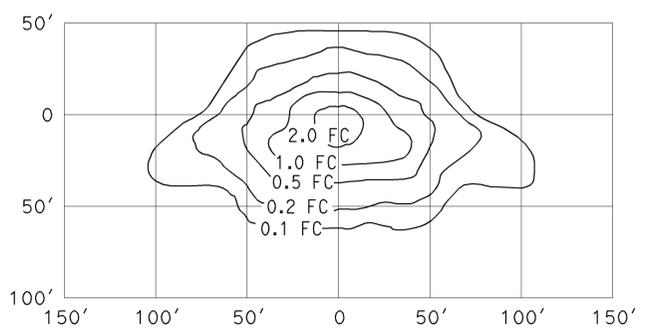
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 34' Mounting Height  
 Lamp operated at 22,000 lm  
 200-W high pressure sodium lamp  
 ANSI Designation S66

**ISOFOOTCANDLE CURVE - MINIMUM**



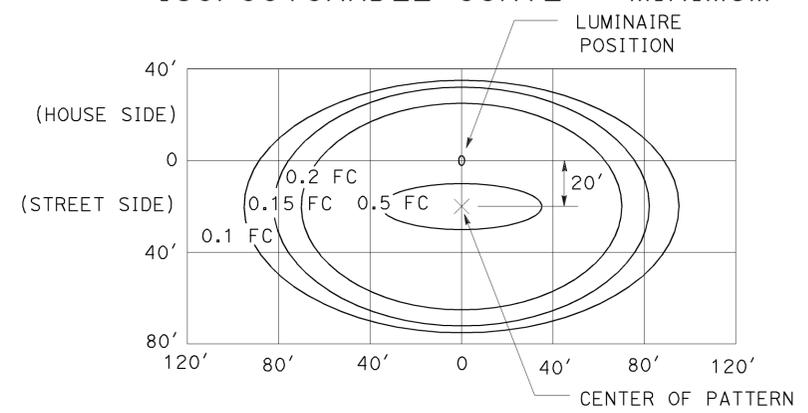
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 40' Mounting Height  
 Lamp operated at 37,000 lm  
 310-W high pressure sodium lamp  
 ANSI Designation S67

**ISOFOOTCANDLE CURVE - MINIMUM**



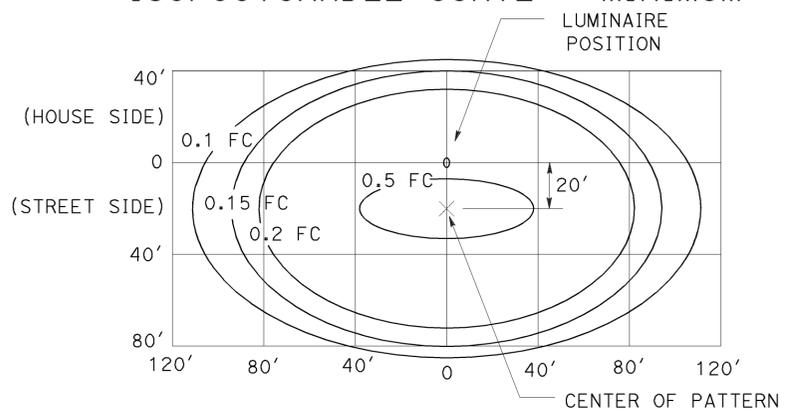
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 30' Mounting Height  
 Lamp operated at 16,000 lm  
 150-W high pressure sodium lamp  
 ANSI Designation S55

**ISOFOOTCANDLE CURVE - MINIMUM**



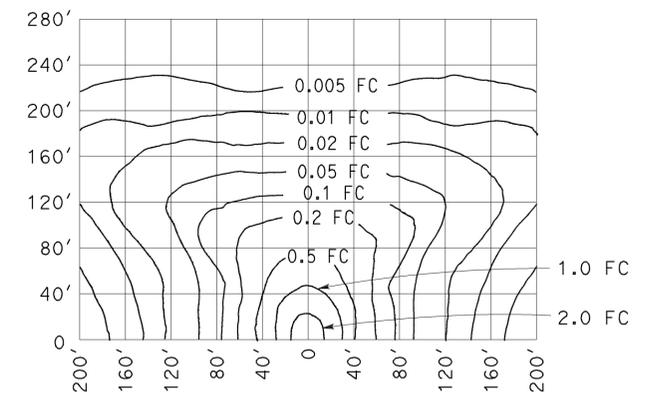
**LED LUMINAIRE ROADWAY 1**  
 165-W at 34' Mounting Height

**ISOFOOTCANDLE CURVE - MINIMUM**



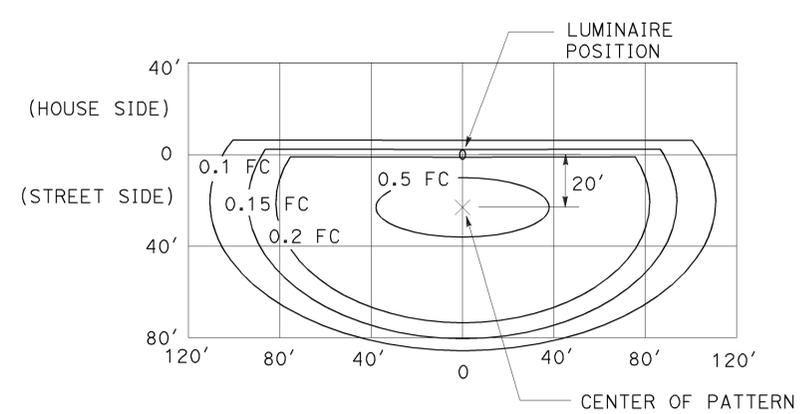
**LED LUMINAIRE ROADWAY 2**  
 235-W at 40' Mounting Height

**ISOFOOTCANDLE CURVE - MINIMUM**



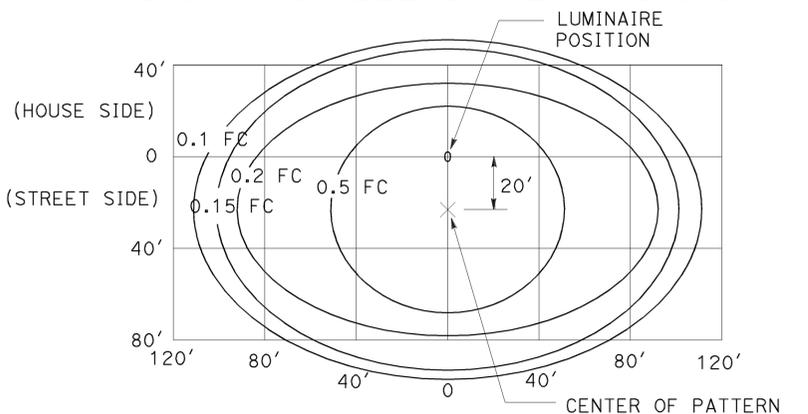
**LOW PRESSURE SODIUM LUMINAIRE**  
 40' Mounting Height  
 Lamp operated at 33,000 lm  
 180-W low pressure sodium lamp

**ISOFOOTCANDLE CURVE - MINIMUM**



**LED LUMINAIRE ROADWAY 3**  
 235-W at 40' Mounting Height  
 with back side control

**ISOFOOTCANDLE CURVE - MINIMUM**



**LED LUMINAIRE ROADWAY 4**  
 300-W at 40' Mounting Height

**ELECTRICAL SYSTEMS  
 (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE

RSP ES-10A DATED JULY 19, 2013 SUPERSEDES RSP ES-10A DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-10A**

2010 REVISED STANDARD PLAN RSP ES-10A

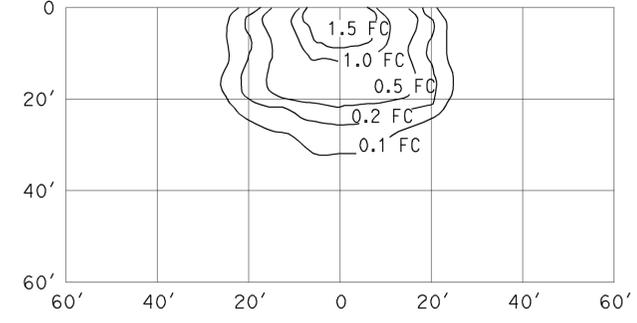
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,47,101	Var	142	143

*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER  
 July 20, 2012  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Jeffery G. McRae  
 No. E14512  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 8-11-14

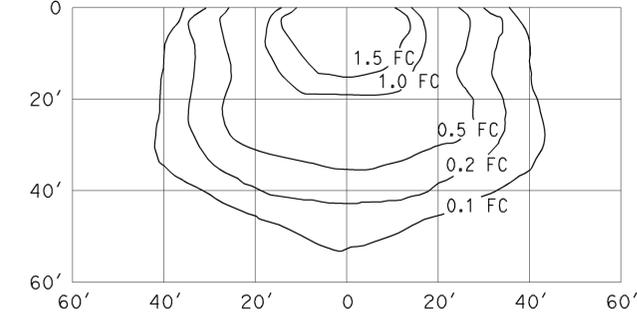
**ISOFOOTCANDLE CURVE - MINIMUM**



**WALL LUMINAIRE**

15' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

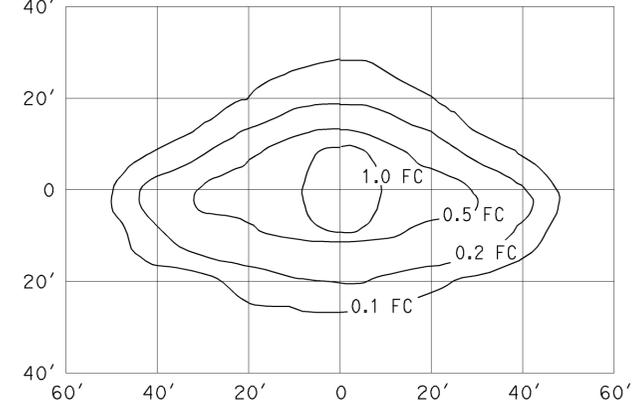
**ISOFOOTCANDLE CURVE - MINIMUM**



**WALL LUMINAIRE**

15' Mounting Height  
 Lamp operated at 9,500 lm  
 100-W high pressure sodium lamp  
 ANSI Designation S54

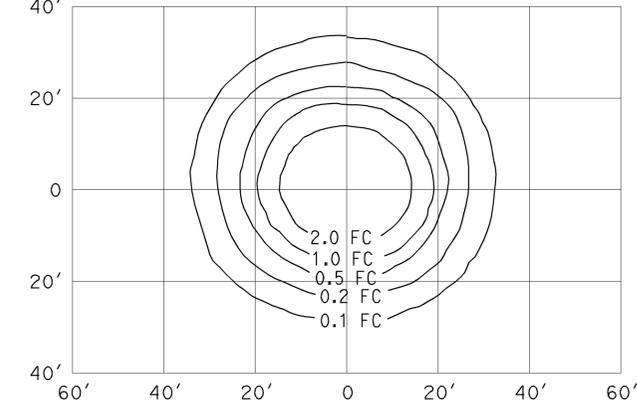
**ISOFOOTCANDLE CURVE - MINIMUM**



**PENDANT SOFFIT LUMINAIRE  
 TYPE III SHORT**

17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

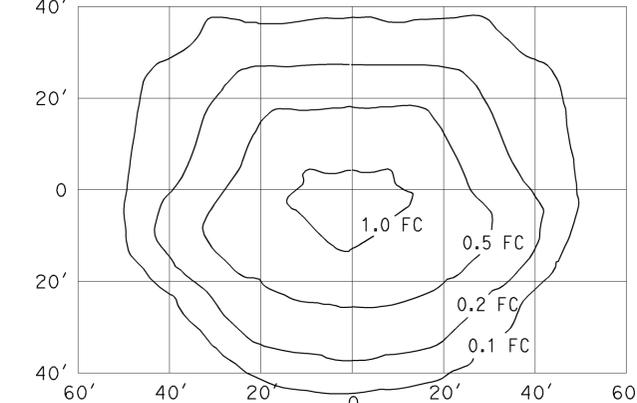
**ISOFOOTCANDLE CURVE - MINIMUM**



**PENDANT SOFFIT LUMINAIRE**

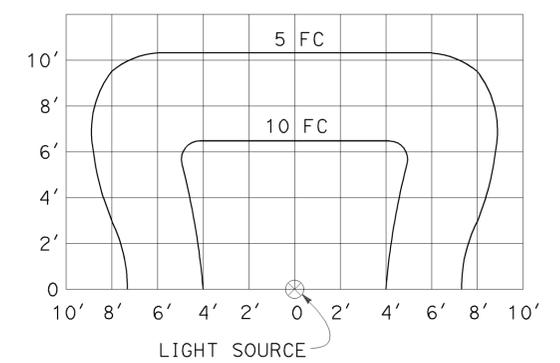
17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

**ISOFOOTCANDLE CURVE - MINIMUM**



**FLUSH SOFFIT LUMINAIRE**

17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62



**SIGN LIGHTING FIXTURE  
 ISOFOOTCANDLE DIAGRAM**

**NOTES:**

- Curves represent the minimum footcandle (FC) of initial illumination on a 10'-0" x 20'-0" panel.
- The FC shown are with the fixture attached to the light fixture mounting channel which places the center of the source 4'-8" in front of panel and 1'-0" below the bottom edge.
- Applicable lamp: 85-W fluorescent phosphor coated induction lamp.

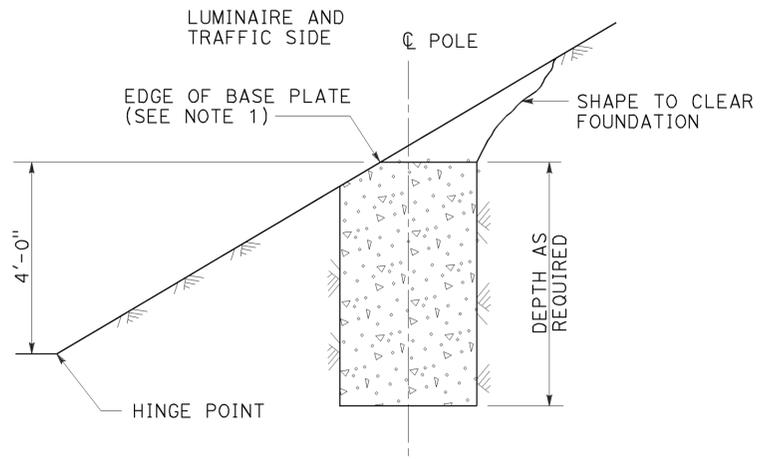
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
 (ISOFOOTCANDLE DIAGRAMS)**

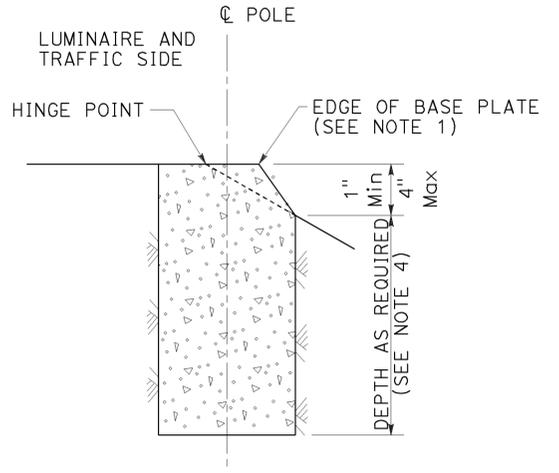
NO SCALE

RSP ES-10B DATED JULY 20, 2012 SUPPLEMENTS THE  
 STANDARD PLANS BOOK DATED 2010.

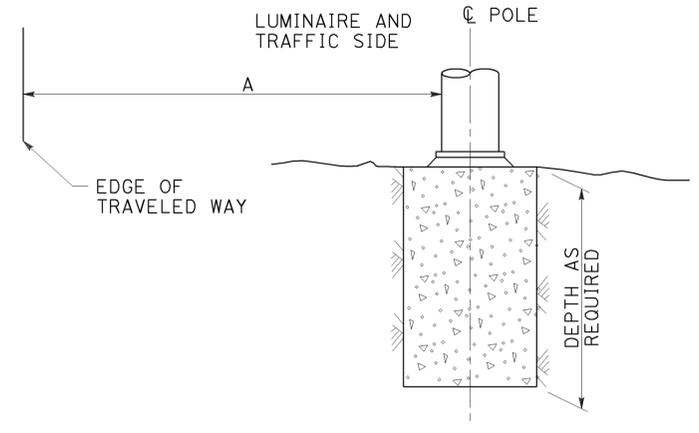
2010 REVISED STANDARD PLAN RSP ES-10B



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



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



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

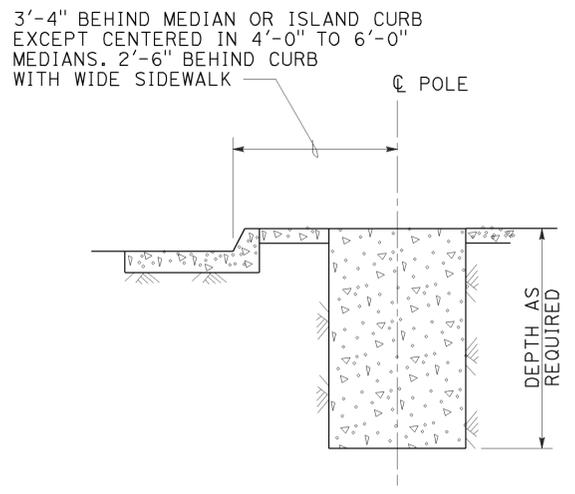
TO ACCOMPANY PLANS DATED 8-11-14

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

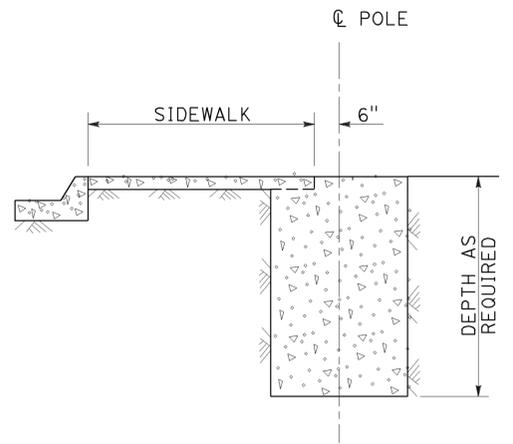
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT  
IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL A

NOTES:

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



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



NARROW SIDEWALK  
DETAIL B-2  
 Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL B

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

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