

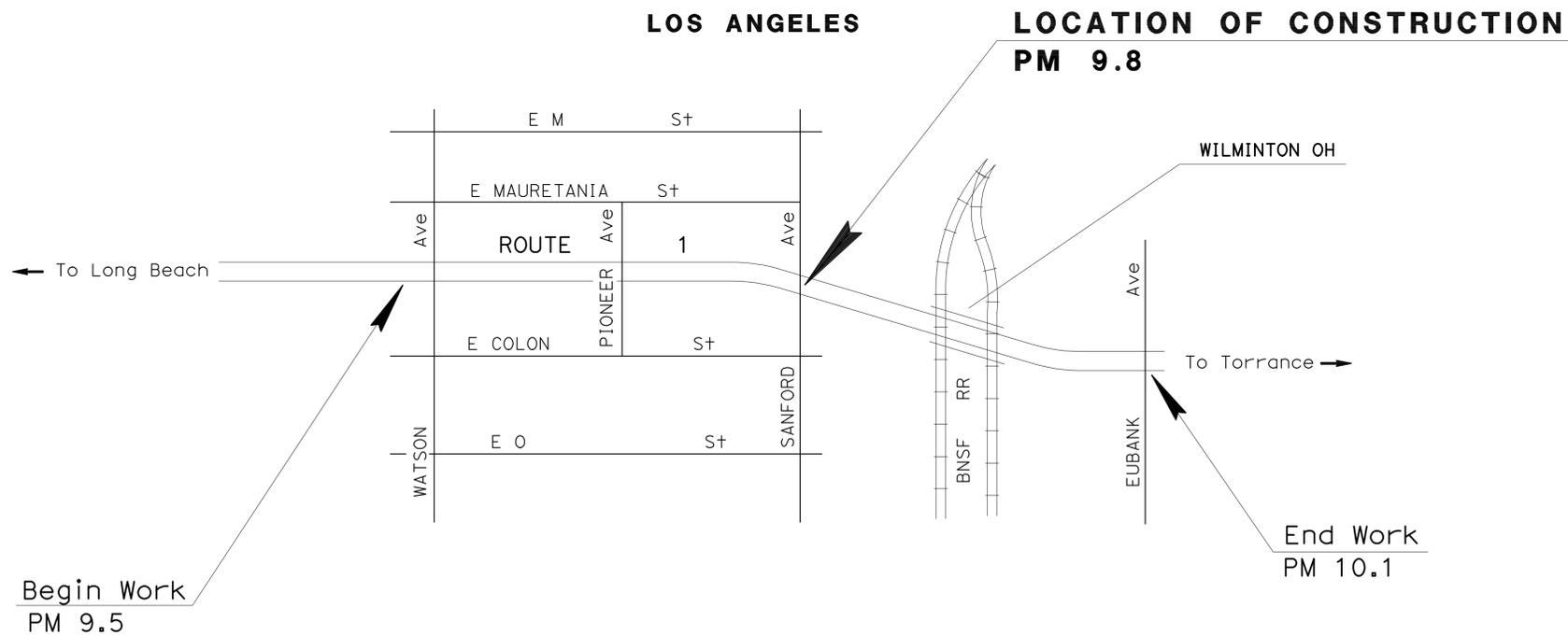
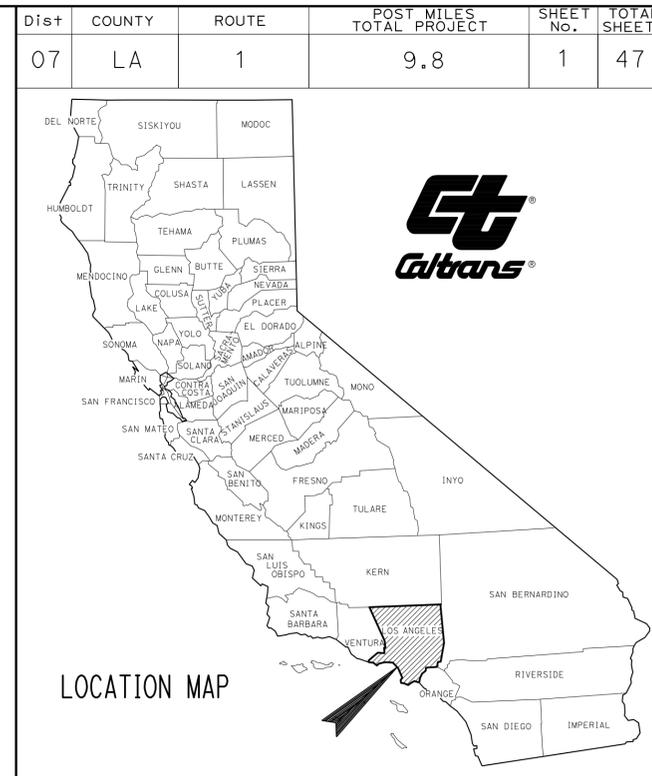
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-4	CONSTRUCTION DETAILS
5	UTILITY PLAN
6	CONSTRUCTION AREA SIGNS
7	TRAFFIC HANDLING PLAN
8	PAVEMENT DELINEATION AND SIGN PLAN
9	SUMMARY OF QUANTITIES
10-28	ELECTRICAL PLANS
29-47	REVISED AND NEW STANDARD PLANS

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
IN LOS ANGELES
AT SANFORD AVENUE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

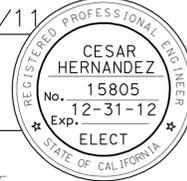


PROJECT MANAGER	ERIC WANG
DESIGN ENGINEER	J. SHADROOZ

1/13/11
 PROJECT ENGINEER DATE
 REGISTERED ELECTRICAL ENGINEER

February 22, 2011
 PLANS APPROVAL DATE

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



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

NO SCALE

DATE PLOTTED => 07-MAR-2011
 TIME PLOTTED => 14:02
 00-00-00

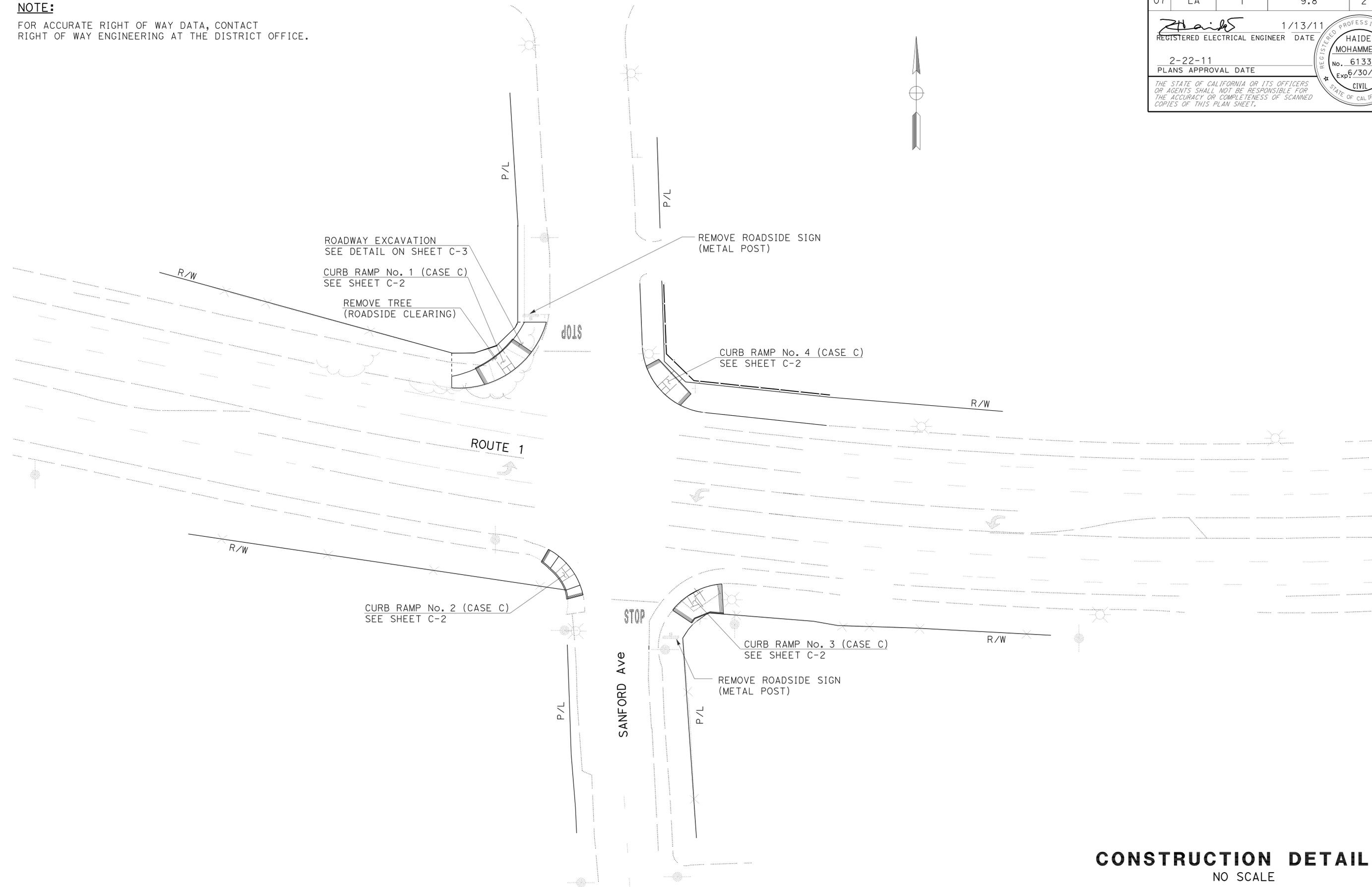
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	2	47

<i>Zhaib</i>	1/13/11
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
HAIDER MOHAMMED
No. 61335
Exp. 6/30/11
CIVIL

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

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR MOHAMMED CHOWDHURY
CALCULATED/DESIGNED BY CHECKED BY
FRANCISCO MARTINEZ MOHAMMED HAIDER
REVISED BY DATE REVISED

CONSTRUCTION DETAILS
NO SCALE

C-1

LAST REVISION | DATE PLOTTED => 07-MAR-2011
00-00-00 | TIME PLOTTED => 14:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	3	47

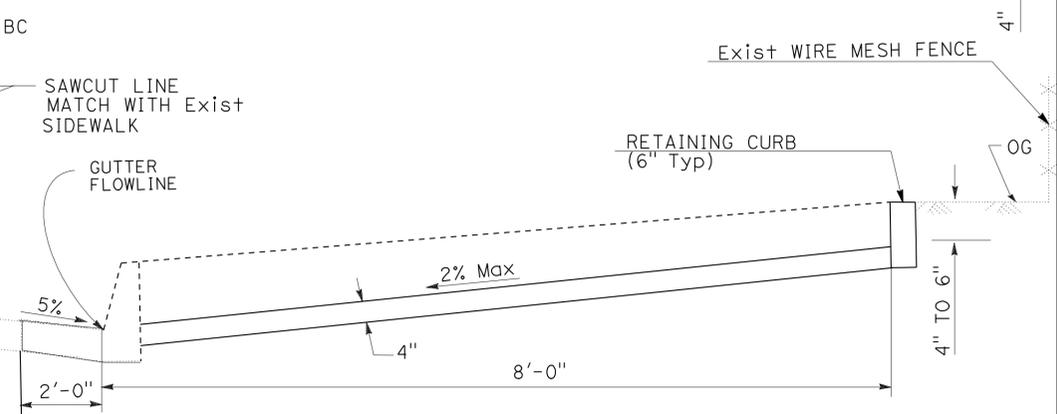
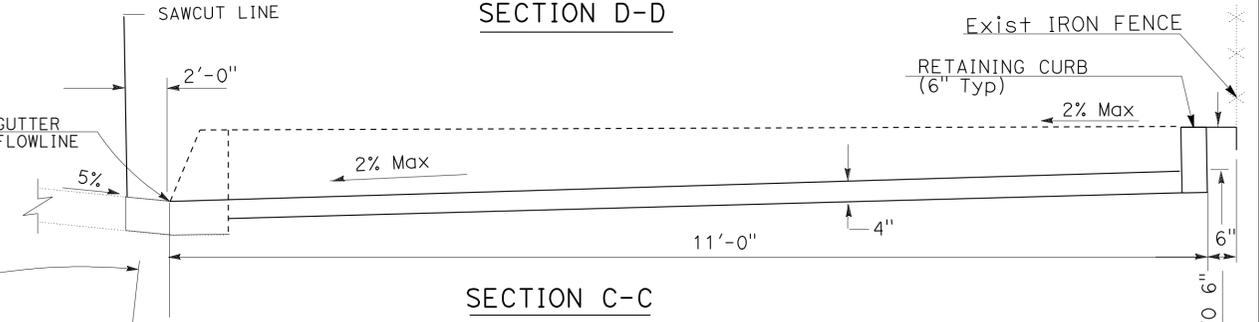
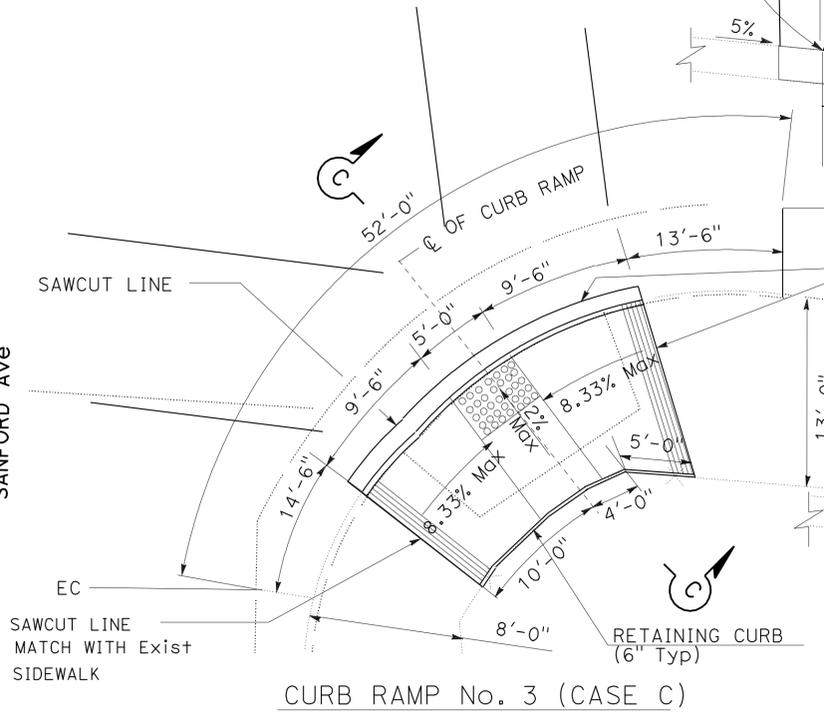
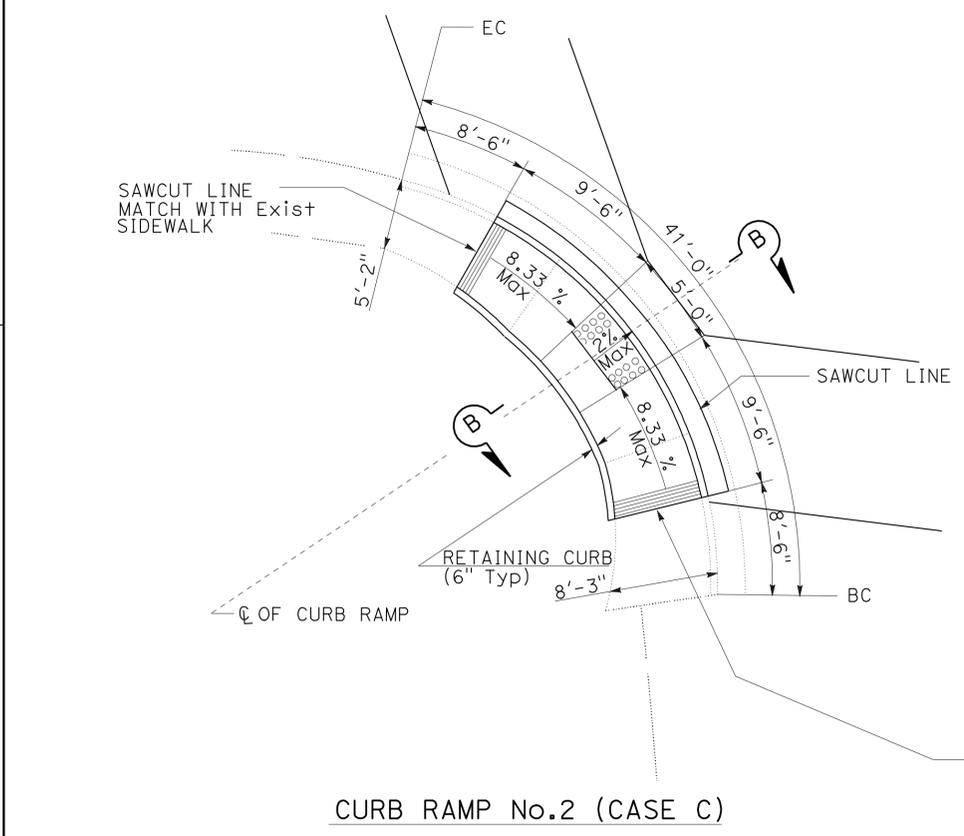
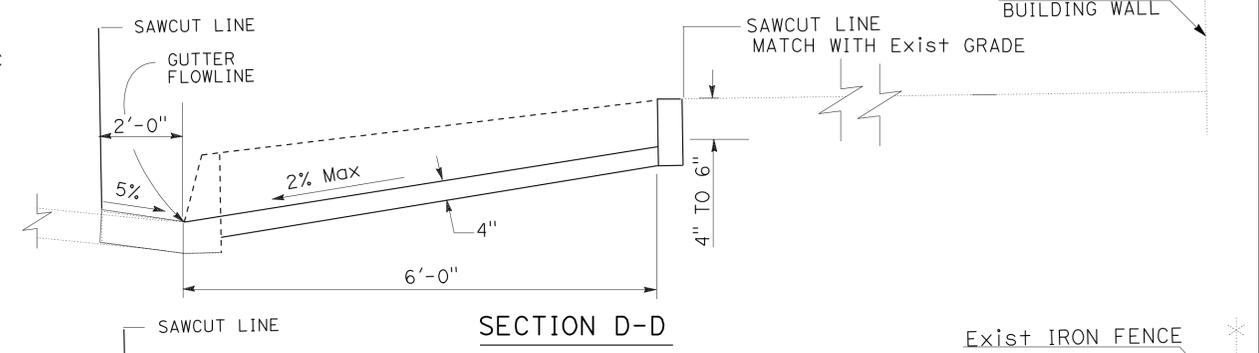
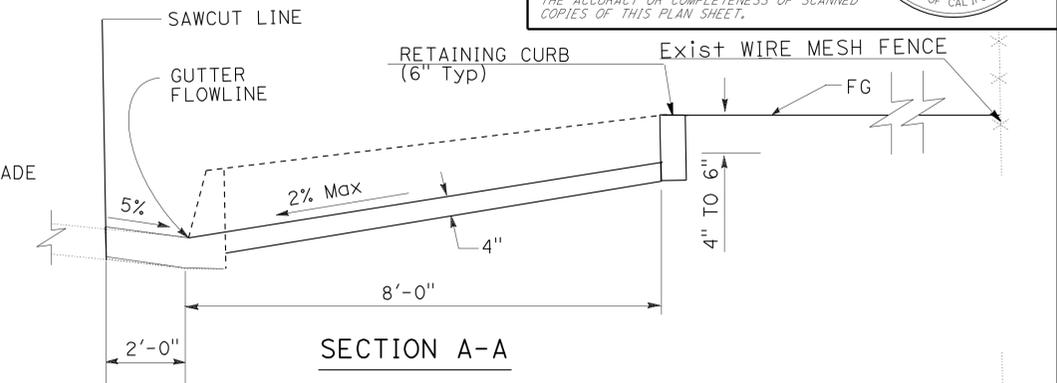
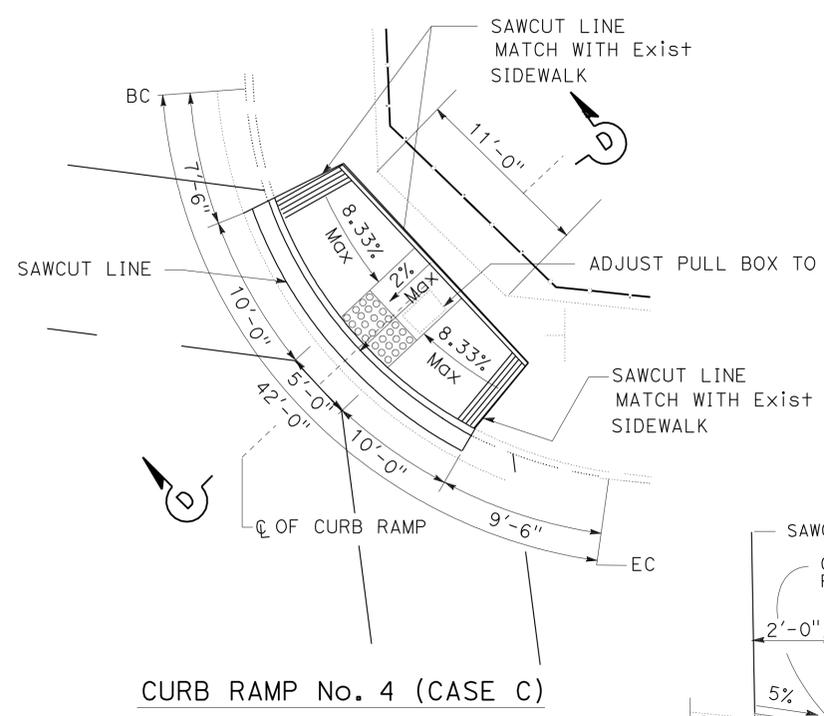
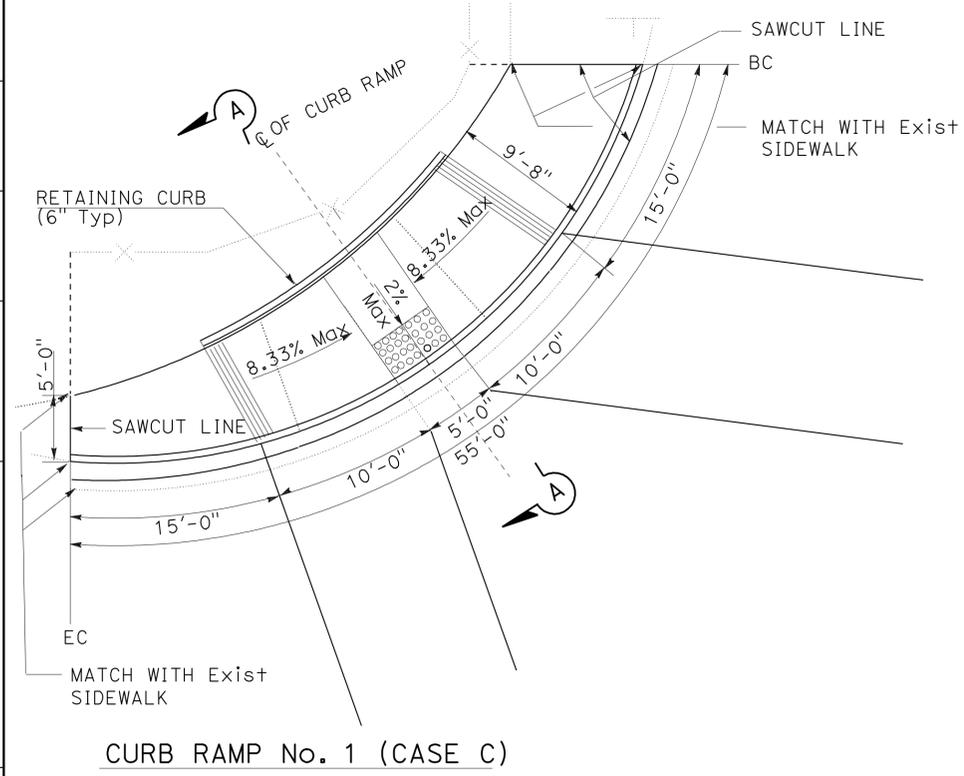
REGISTERED ELECTRICAL ENGINEER		DATE
MOHAMMED HAIDER		1/13/11
No. 61335		
Exp. 6/30/11		
CIVIL		

2-22-11
PLANS APPROVAL DATE

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

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

LEGEND:
 RAISED TRUNCATED DOME



CONSTRUCTION DETAILS
NO SCALE
C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FRANCISCO MARTINEZ
 MOHAMMED HAIDER
 MOHAMMED CHOWDHURY

USERNAME => fmmikes1
DGN FILE => 74t260ga002.dgn

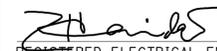
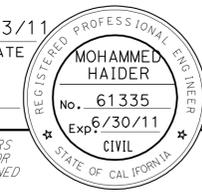
RELATIVE BORDER SCALE
1" = 10' IN INCHES

UNIT 2124

PROJECT NUMBER & PHASE

07000018671

LAST REVISION DATE PLOTTED => 07-MAR-2011
00-00-00 TIME PLOTTED => 14:02

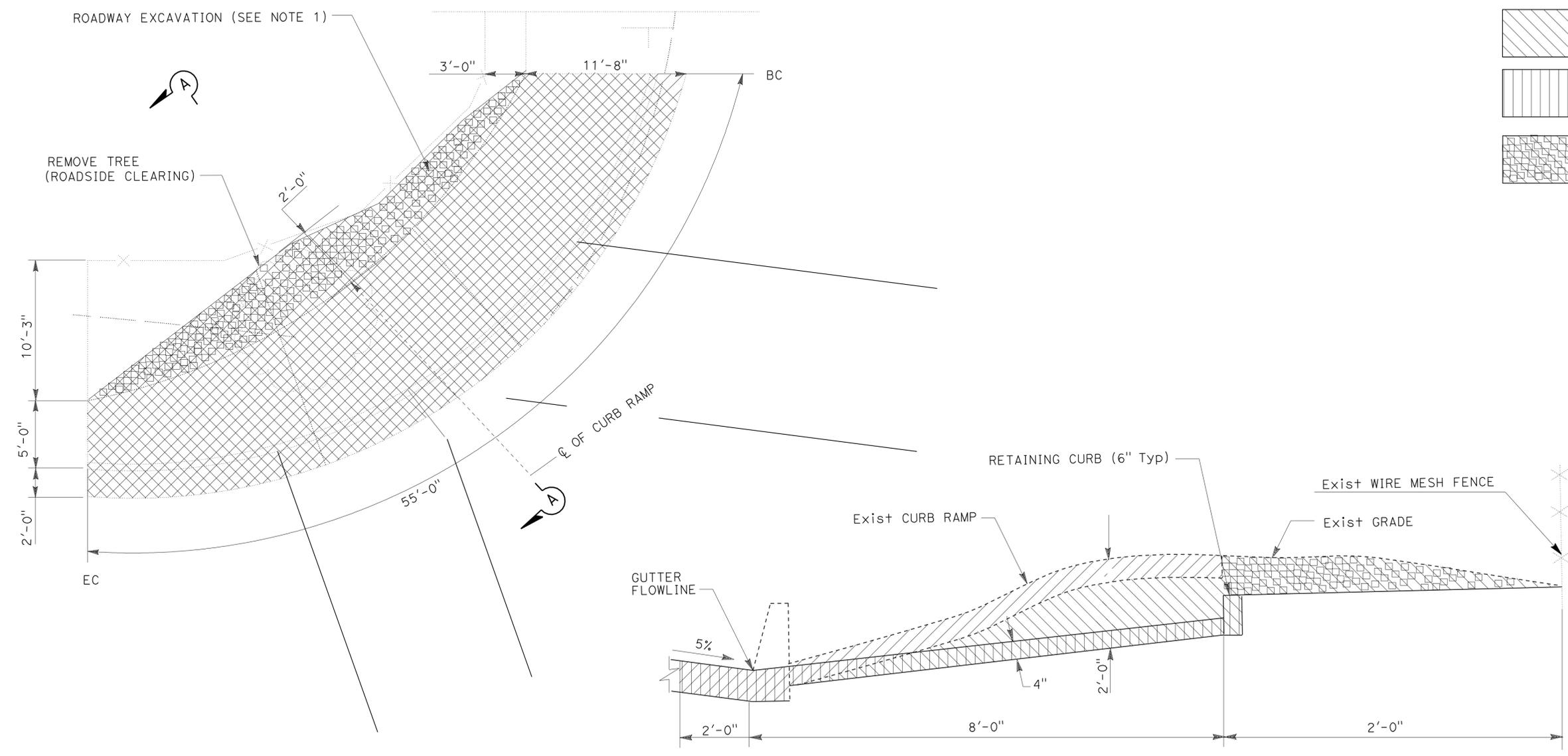
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	4	47
 REGISTERED ELECTRICAL ENGINEER DATE 1/13/11					
2-22-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTE:
THIS PORTION OF ROADWAY EXCAVATION SHALL BE SPREADED ON SITE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
 CALCULATED/DESIGNED BY: MOHAMMED HAIDER
 CHECKED BY: FRANCISCO MARTINEZ
 REVISOR BY: MOHAMMED HAIDER
 DATE REVISOR:

LEGEND:

	REMOVE CONCRETE
	ROADWAY EXCAVATION
	GUTTER & CURB RAMP
	ROADWAY EXCAVATION (SEE NOTE 1)



CURB RAMP No. 1
ROADWAY EXCAVATION

SECTION A-A

CONSTRUCTION DETAILS
NO SCALE

LAST REVISION | DATE PLOTTED => 07-MAR-2011
 00-00-00 | TIME PLOTTED => 14:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	5	47

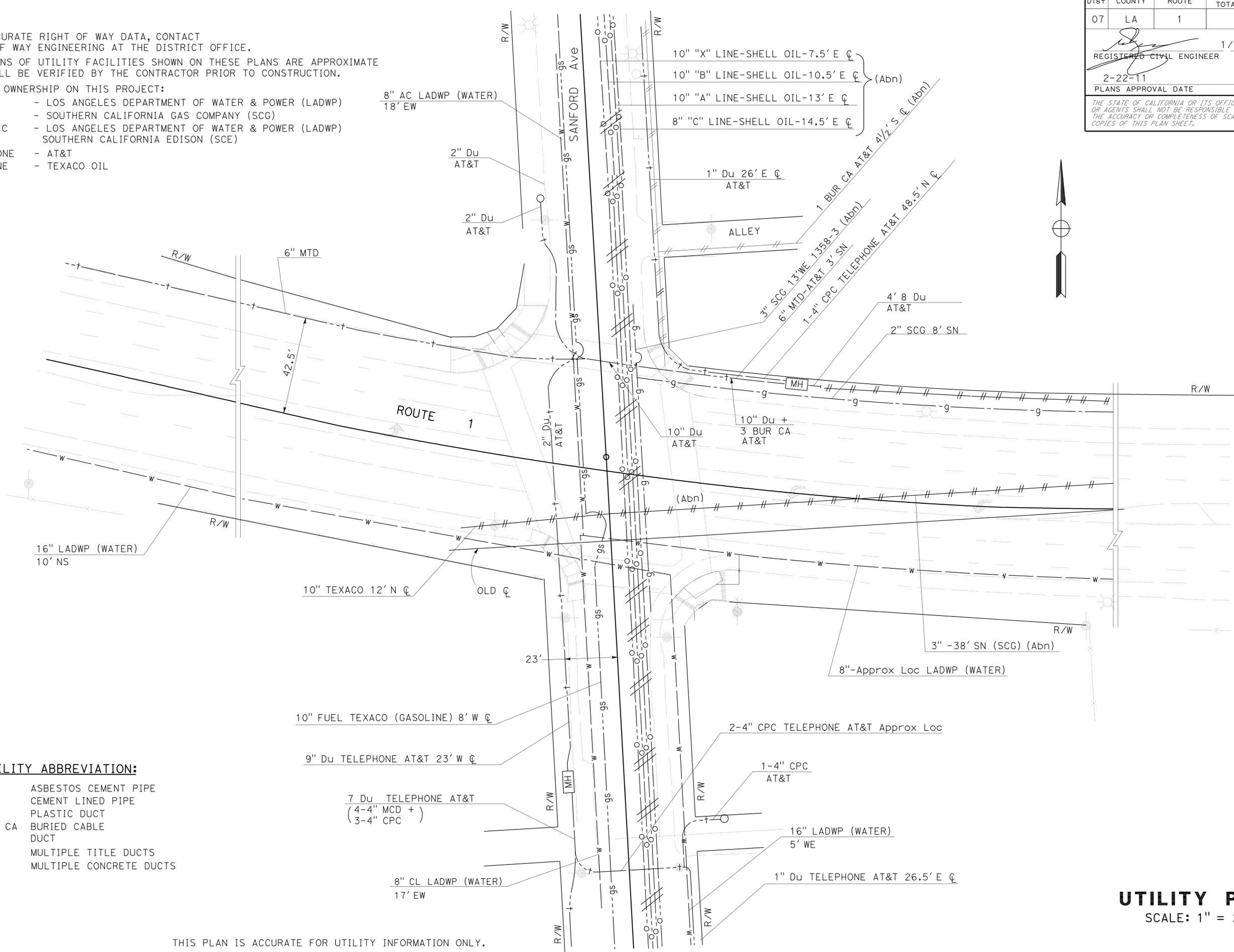
1/13/11
REGISTERED CIVIL ENGINEER DATE
2-22-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PARVIZ YAGANEH
No. C53797
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

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

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- UTILITY OWNERSHIP ON THIS PROJECT:
WATER - LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)
GAS - SOUTHERN CALIFORNIA GAS COMPANY (SCG)
ELECTRIC - LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)
SOUTHERN CALIFORNIA EDISON (SCE)
TELEPHONE - AT&T
GASOLINE - TEXACO OIL



UTILITY ABBREVIATION:

- AC ASBESTOS CEMENT PIPE
- CL CEMENT LINED PIPE
- CPC PLASTIC DUCT
- BUR CA BURIED CABLE
- Du DUCT
- MTD MULTIPLE TITLE DUCTS
- MCD MULTIPLE CONCRETE DUCTS

THIS PLAN IS ACCURATE FOR UTILITY INFORMATION ONLY.

UTILITY PLAN
SCALE: 1" = 20'

U-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans TRAFFIC DESIGN	PARVIZ YAGANEH	CHECKED BY	DATE
	PARVIZ YAGANEH		
	CESAR HERNANDEZ		
	PARVIZ YAGANEH		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	6	47

1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-22-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MOHAMMED HAIDER
 No. 61335
 Exp. 6/30/11
 CIVIL
 STATE OF CALIFORNIA

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

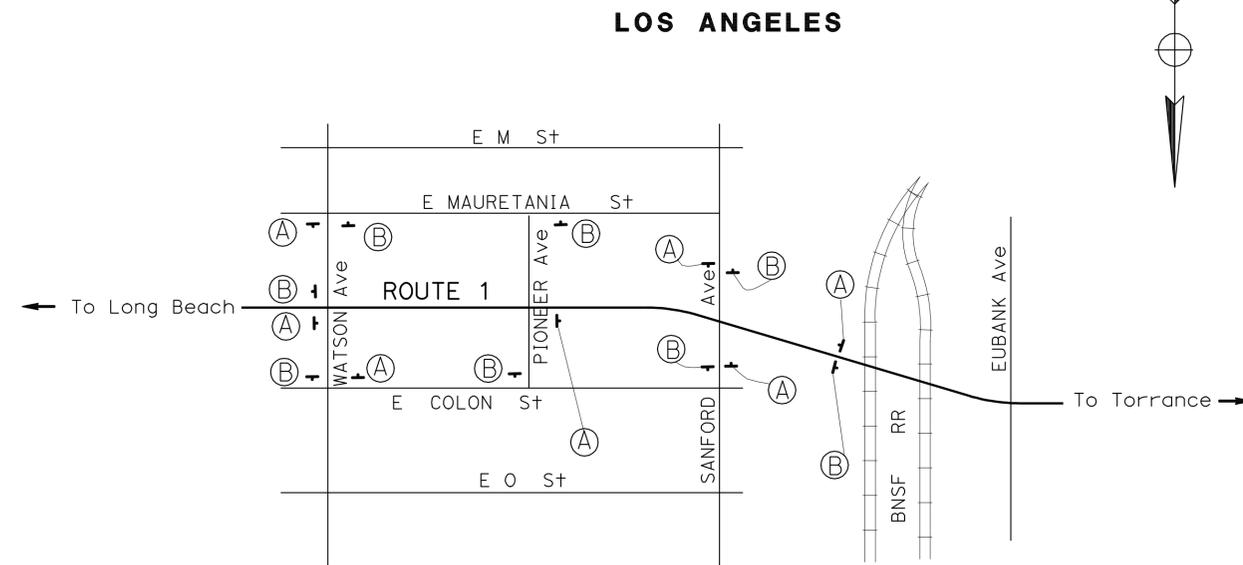
NOTES:

- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THIS PLAN.
- SEE TRAFFIC HANDLING DETAILS FOR ADDITIONAL SIGNS.
- EXACT SIGN LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	No. OF POSTS AND SIZE	SIGN MESSAGE	No. OF SIGNS
Ⓐ	W20-1	36" x 36"	1 - 4" x 6"	ROAD WORK AHEAD	7
Ⓑ	G20-2	36" x 18"	1 - 4" x 6"	END ROAD WORK	8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
 CALCULATED/DESIGNED BY: FRANCISCO MARTINEZ
 CHECKED BY: MOHAMMED HAIDER
 REVISED BY: FRANCISCO MARTINEZ
 DATE REVISED: MOHAMMED HAIDER



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

THIS PLAN IS ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

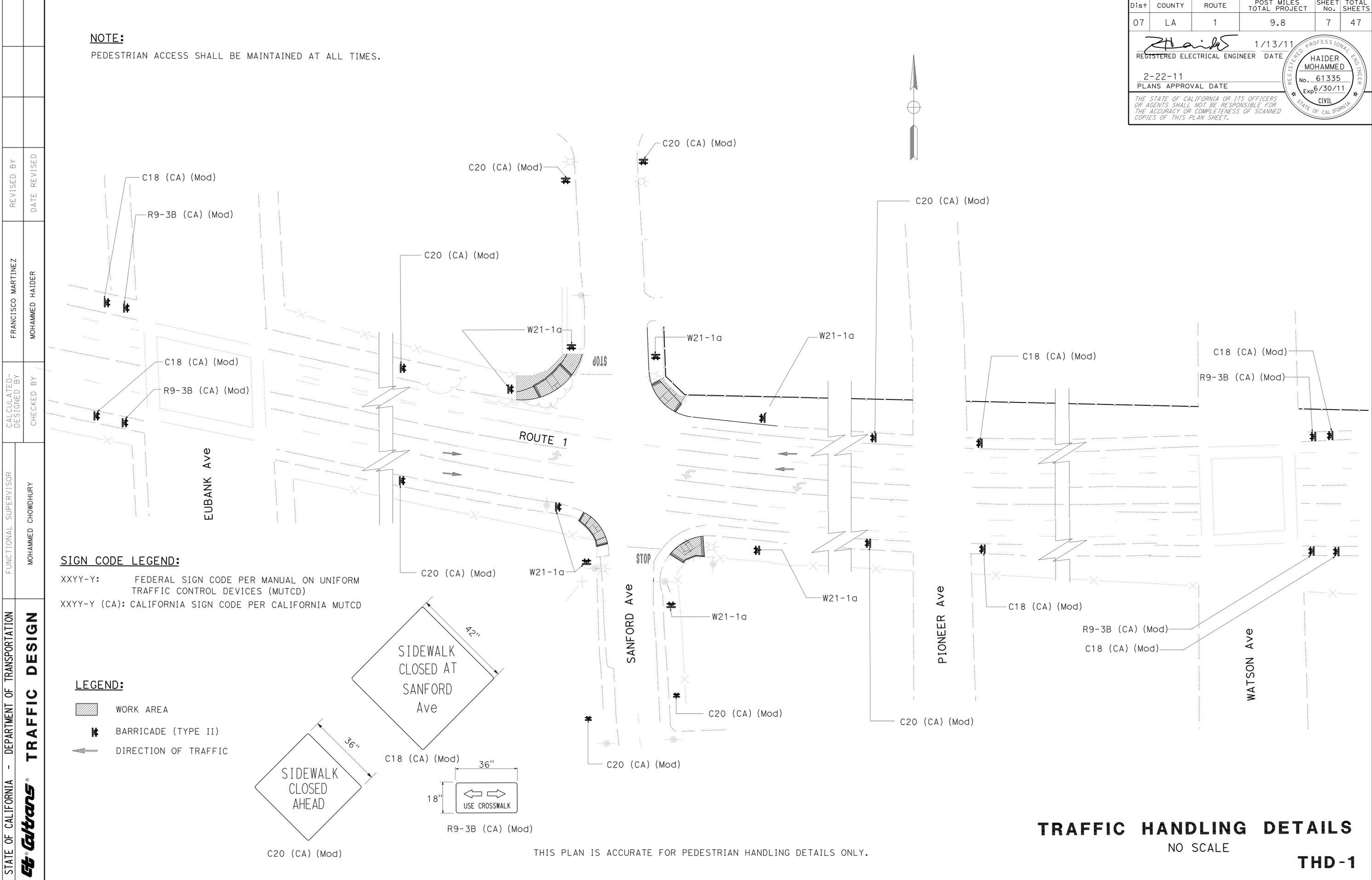
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	7	47

<i>Zhaide</i>	1/13/11
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
HAIDER MOHAMMED
No. 61335
Exp. 6/30/11
CIVIL

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

NOTE:
PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR MOHAMMED CHOWDHURY
CALCULATED/DESIGNED BY FRANCISCO MARTINEZ
CHECKED BY MOHAMMED HAIDER
REVISOR DATE
REVISOR DATE

TRAFFIC HANDLING DETAILS
NO SCALE
THD-1

THIS PLAN IS ACCURATE FOR PEDESTRIAN HANDLING DETAILS ONLY.

LAST REVISION DATE PLOTTED => 07-MAR-2011
00-00-00 TIME PLOTTED => 14:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	8	47

<i>Mohammed Haider</i>	1/13/11
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
MOHAMMED HAIDER
No. 61335
Exp. 6/30/11
CIVIL

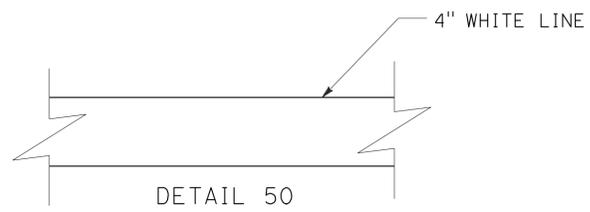
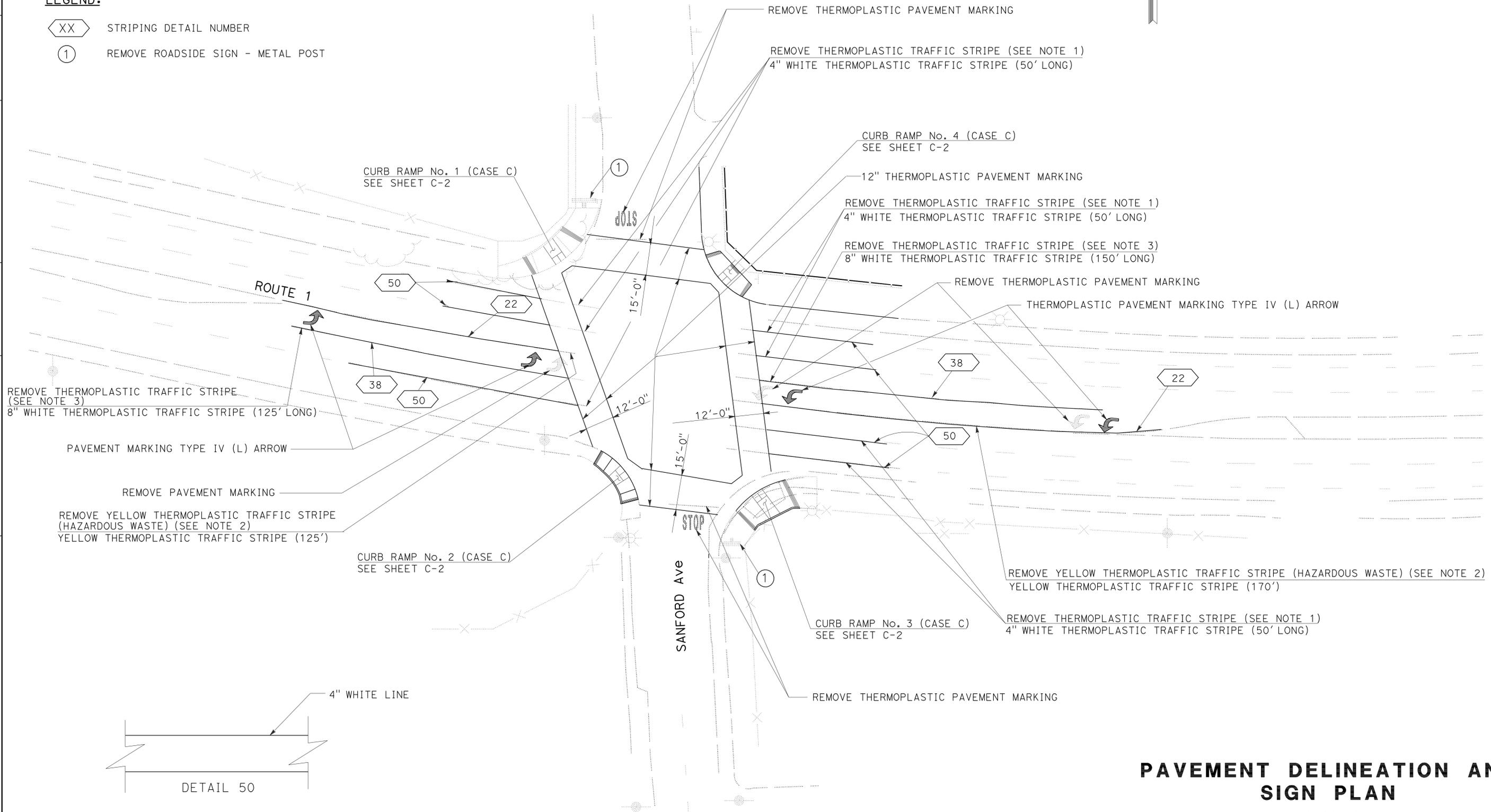
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. REMOVE THERMOPLASTIC TRAFFIC STRIPE INSIDE THE CROSSWALK AND UP TO 50' FROM CROSSWALK.
2. REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE) INSIDE THE CROSSWALK AND UP TO THE LEFT TURN POCKET.
3. REMOVE THERMOPLASTIC TRAFFIC STRIPE INSIDE THE CROSSWALK AND UP TO 150' FROM CROSSWALK.
4. CONFLICTING PAVEMENT DELINEATION SHALL BE REMOVED.

LEGEND:

- XX STRIPING DETAIL NUMBER
- ① REMOVE ROADSIDE SIGN - METAL POST



PAVEMENT DELINEATION AND SIGN PLAN

NO SCALE

THIS PLAN IS ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY.

PD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FRANCISCO MARTINEZ
 MOHAMMED HAIDER
 MOHAMMED CHOWDHURY
 MOHAMMED CHOWDHURY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	9	47

1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-22-11
 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.

ROADWAY QUANTITIES

LOCATION	REMOVE CONCRETE	REMOVE TREE (ROADSIDE CLEARING)	ROADWAY EXCAVATION	MINOR CONCRETE		TEMPORARY DRAINAGE INLET PROTECTION	RAISED TRUNCATED DOME (N)	ADJUST PULL BOX TO GRADE
	(CURB, SIDEWALK & CURB RAMP)			CY	CY			
	CY	EA	CY	CY	CY	EA	SQFT	EA
CURB RAMP No. 1	8.6	1	37.0	7.5	2.0	1	15.0	
CURB RAMP No. 2	4.0		4.0	2.2	1.8	1	15.0	
CURB RAMP No. 3	5.6		6.2	3.6	2.0	1	15.0	
CURB RAMP No. 4	3.8		3.8	2.5	2.0	1	15.0	1
TOTAL	22.0	1	51.0	15.8	7.8	4	60.0	1

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

PAVEMENT DELINEATION QUANTITIES

PLAN SHEET No.	THERMOPLASTIC TRAFFIC STRIPE			THERMOPLASTIC PAVEMENT MARKING		PAVEMENT MARKER		REMOVE			
	4"		8"	ARROW	CROSSWALK	RETROREFLECTIVE		THERMOPLASTIC TRAFFIC STRIPE	YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER
	Det 50	Det 22	Det 38			EA	EA				
	WHITE	YELLOW	WHITE	SQFT	SQFT	TYPE D	TYPE G	LF	LF	SQFT	EA
PD-1	350	590	275	60	408	30	20	1045	650	223	20
TOTAL	940		275		468		50	1045	650	223	20

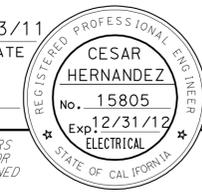
ROADSIDE SIGN QUANTITIES

LOCATION	SIGN CODE	REMOVE
		ROADSIDE SIGN (METAL POST)
		EA
CURB RAMP No. 1	R1-1	1
CURB RAMP No. 3	R1-1	1
TOTAL		2

SUMMARY OF QUANTITIES

Q-1

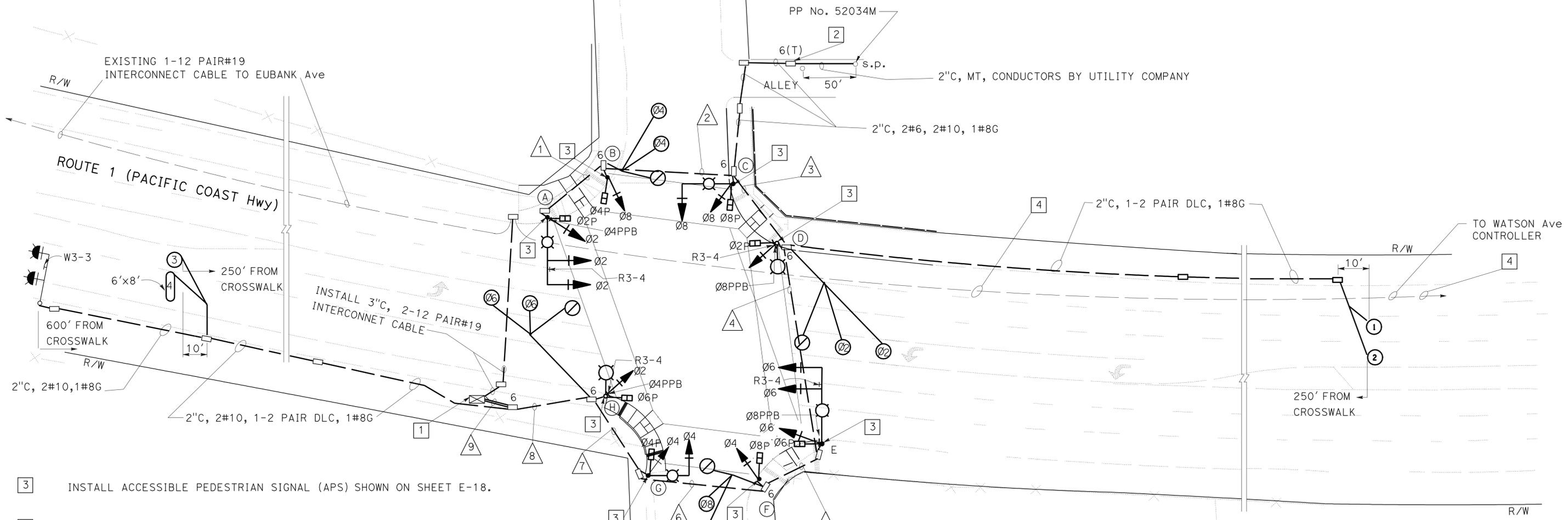
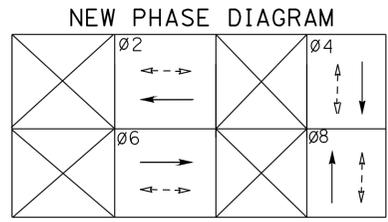


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	10	47
			1/13/11	DATE	
REGISTERED ELECTRICAL ENGINEER					
2-22-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

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

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY, INSTALL BBS EXTERNAL CABINET, BATTERIES AND STATE-FURNISHED BBS COMPONENTS. THE EXACT LOCATION OF CABINET WILL BE DETERMINED BY THE ENGINEER.
2. INSTALL SERVICE EQUIPMENT ENCLOSURE AS SHOWN ON SHEET E-7.



3. INSTALL ACCESSIBLE PEDESTRIAN SIGNAL (APS) SHOWN ON SHEET E-18.
4. DISCONNECT EXISTING 12 PAIR#19 INTERCONNECT CABLE FROM CONTROLLER AT WATSON Ave. PULL BACK THROUGH EXISTING CONDUIT AND CONNECT IT TO NEW CONTROLLER AT SANFORD St. INSTALL NEW 12 PAIR#22 INTERCONNECT CABLE BETWEEN CONTROLLERS AT SANFORD St AND WATSON Ave.

GENERAL NOTES: (THIS SHEET ONLY)

1. ALL PULL BOXES SHALL BE TYPE PB3 PER SHEET E-14, UNLESS OTHERWISE NOTED.
2. INSTALL BICYCLE LOOP DETECTORS AS SHOWN ON SHEET E-17.

ABBREVIATION:

- LADOT CITY OF LOS ANGELES DEPARTMENT OF TRANSPORTATION
- LABSL LOS ANGELES BUREAU OF STREET LIGHTING
- APS ACCESSIBLE PEDESTRIAN SIGNAL

LEDGEND:

-  CITY OF LOS ANGELES BICYCLE DETECTOR

SIGNAL AND LIGHTING (CITY)
(LADOT INTERSECTION NO. 27094)
SCALE: 1" = 20'

FOR GENERAL NOTES, POLE AND EQUIPMENT SCHEDULE, CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-2.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISED BY: [blank]
 DATE REVISED: [blank]

LAST REVISION: [blank]
 DATE PLOTTED => 08-MAR-2011
 00-00-00 TIME PLOTTED => 09:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	11	47

 1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE

2-22-11
 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.



POLE AND EQUIPMENT SCHEDULE

No.	STANDARD			VEH SIG MTG		PED SIGNAL	APS		LED	REFLECTORIZED SNS
	Type	SMA (F+)	LMA (F+)	Mast Arm	Pole	MTG	Ø	ARROW		
(A)	19-4-100	25	12	1 MAS 1 MAT	SV-1-T	SP-1-T	4	←	165 W	SANFORD Ave
(B)	1-B	—	—	—	TV-1-T	SP-1-T	2*	—	—	
(C)	17-2-100	15	8	1 MAS	SV-1-T	SP-1-T	2*	—	165 W	PACIFIC COAST Hwy
(D)	15TS	—	8	—	TV-1-T	SP-1-T	8	→	165 W	
(E)	19-4-100	25	12	1 MAS 1 MAT	SV-1-T	SP-1-T	8	←	165 W	SANFORD Ave
(F)	1-B	—	—	—	TV-1-T	SP-1-T	6*	—	—	PACIFIC COAST Hwy
(G)	17-2-100	15	8	1 MAS	SV-1-T	SP-1-T	6*	—	165 W	
(H)	15TS	—	8	—	TV-1-T	SP-1-T	4	→	165 W	

* NON ACTUATED PEDESTRIAN PHASE (RECALL)

GENERAL NOTES: (FOR SHEETS E-1 AND E-2 ONLY)

- INDUCTIVE LOOPS TO BE CENTERED IN LANES (UNLESS OTHERWISE NOTED) AND INSTALLED PER SHEETS E-9, E-10, AND E-17. INSTALL DETECTOR LEAD-IN CABLE PER SHEETS E-11 AND E-12.
- INSTALL PULL BOXES PER SHEET E-14.
- SYSTEM LOOPS AND INTERCONNECT CABLE WILL BE CONNECTED IN CONTROLLER ONCE INTERSECTION IS CONNECTED TO ATSAC SYSTEM.
- VEHICLE SIGNAL SECTIONS SHALL BE PLASTIC.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT RUN		1	2	3	4	5	6	7	8	9
DLC	Ø2 2-PAIR				1	1	1	1	1	1
	Ø4 2-PAIR		1	1	1	1	1	1	1	1
	Ø6 2-PAIR								1	1
	Ø8 2-PAIR						1	1	1	1
	SYSTEM LOOPS 2-PAIR				1	1	1	1	1	2
TOTAL			1	1	3	3	4	4	5	6
#6 SIGNAL SERVICE				2	2	2	2	2	2	2
#8 GROUND		1	1	1	1	1	1	1	1	1
#10 FLASHING BEACON				2	2	2	2	2	2	
28-CONDUCTOR CABLE		1	1	1	1	1	1	1	1	1
5CSC		2		2		2		2		
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	3"	3"	2-3"

SIGNAL AND LIGHTING
(CITY)
(LADOT INTERSECTION No. 27094)
 NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISED BY: YAGHOUB SHADROOZ
 DATE REVISED: CESAR HERNANDEZ

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	12	47

1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-22-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 ELECTRICAL
 STATE OF CALIFORNIA

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

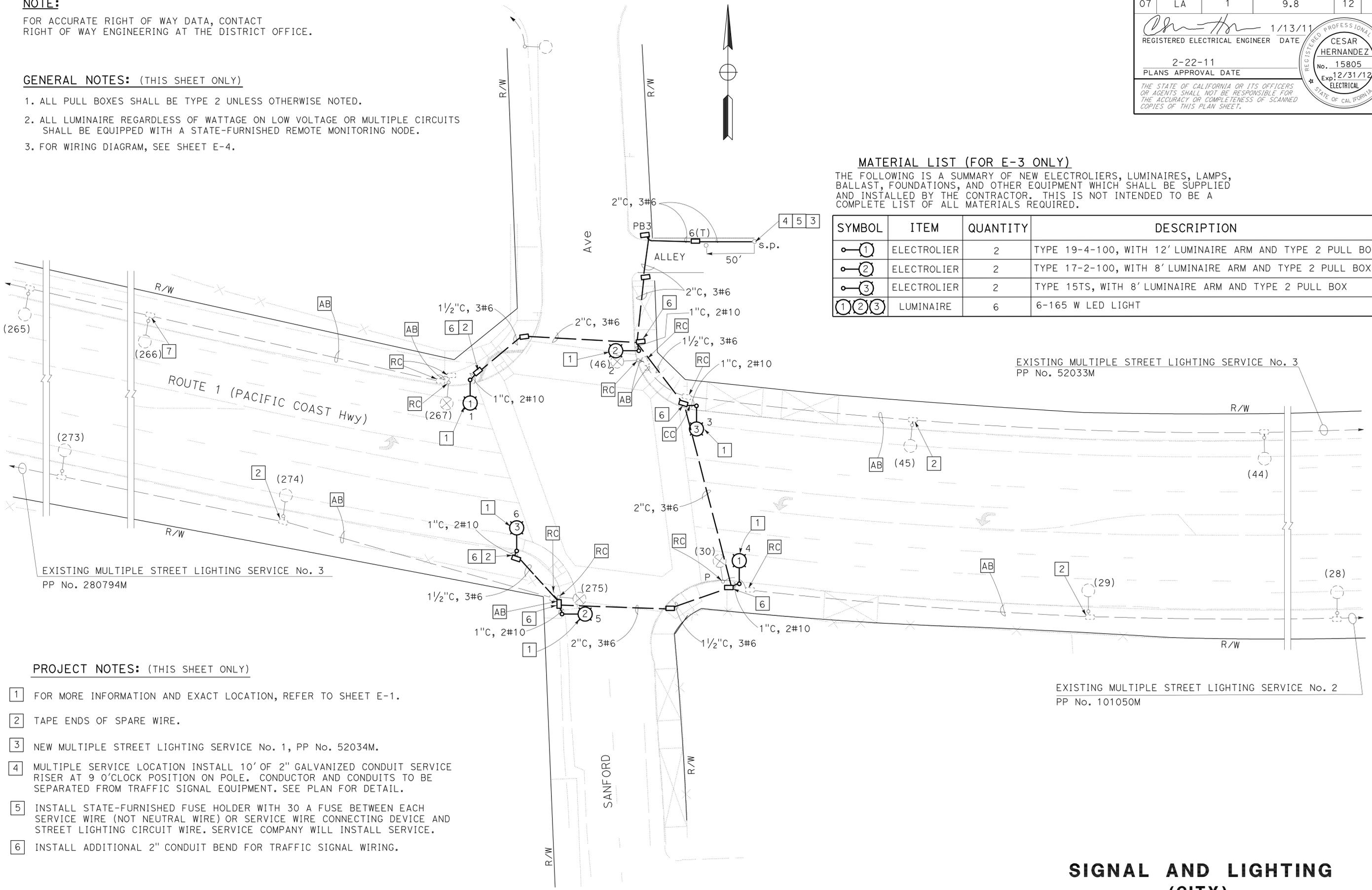
GENERAL NOTES: (THIS SHEET ONLY)

1. ALL PULL BOXES SHALL BE TYPE 2 UNLESS OTHERWISE NOTED.
2. ALL LUMINAIRE REGARDLESS OF WATTAGE ON LOW VOLTAGE OR MULTIPLE CIRCUITS SHALL BE EQUIPPED WITH A STATE-FURNISHED REMOTE MONITORING NODE.
3. FOR WIRING DIAGRAM, SEE SHEET E-4.

MATERIAL LIST (FOR E-3 ONLY)

THE FOLLOWING IS A SUMMARY OF NEW ELECTROLIERS, LUMINAIRES, LAMPS, BALLAST, FOUNDATIONS, AND OTHER EQUIPMENT WHICH SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. THIS IS NOT INTENDED TO BE A COMPLETE LIST OF ALL MATERIALS REQUIRED.

SYMBOL	ITEM	QUANTITY	DESCRIPTION
⊙①	ELECTROLIER	2	TYPE 19-4-100, WITH 12' LUMINAIRE ARM AND TYPE 2 PULL BOX
⊙②	ELECTROLIER	2	TYPE 17-2-100, WITH 8' LUMINAIRE ARM AND TYPE 2 PULL BOX
⊙③	ELECTROLIER	2	TYPE 15TS, WITH 8' LUMINAIRE ARM AND TYPE 2 PULL BOX
①②③	LUMINAIRE	6	6-165 W LED LIGHT



PROJECT NOTES: (THIS SHEET ONLY)

- 1 FOR MORE INFORMATION AND EXACT LOCATION, REFER TO SHEET E-1.
- 2 TAPE ENDS OF SPARE WIRE.
- 3 NEW MULTIPLE STREET LIGHTING SERVICE No. 1, PP No. 52034M.
- 4 MULTIPLE SERVICE LOCATION INSTALL 10' OF 2" GALVANIZED CONDUIT SERVICE RISER AT 9 O'CLOCK POSITION ON POLE. CONDUCTOR AND CONDUITS TO BE SEPARATED FROM TRAFFIC SIGNAL EQUIPMENT. SEE PLAN FOR DETAIL.
- 5 INSTALL STATE-FURNISHED FUSE HOLDER WITH 30 A FUSE BETWEEN EACH SERVICE WIRE (NOT NEUTRAL WIRE) OR SERVICE WIRE CONNECTING DEVICE AND STREET LIGHTING CIRCUIT WIRE. SERVICE COMPANY WILL INSTALL SERVICE.
- 6 INSTALL ADDITIONAL 2" CONDUIT BEND FOR TRAFFIC SIGNAL WIRING.

EXISTING MULTIPLE STREET LIGHTING SERVICE No. 3
 PP No. 52033M

EXISTING MULTIPLE STREET LIGHTING SERVICE No. 3
 PP No. 280794M

EXISTING MULTIPLE STREET LIGHTING SERVICE No. 2
 PP No. 101050M

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

SIGNAL AND LIGHTING (CITY)
 SCALE: 1" = 20'

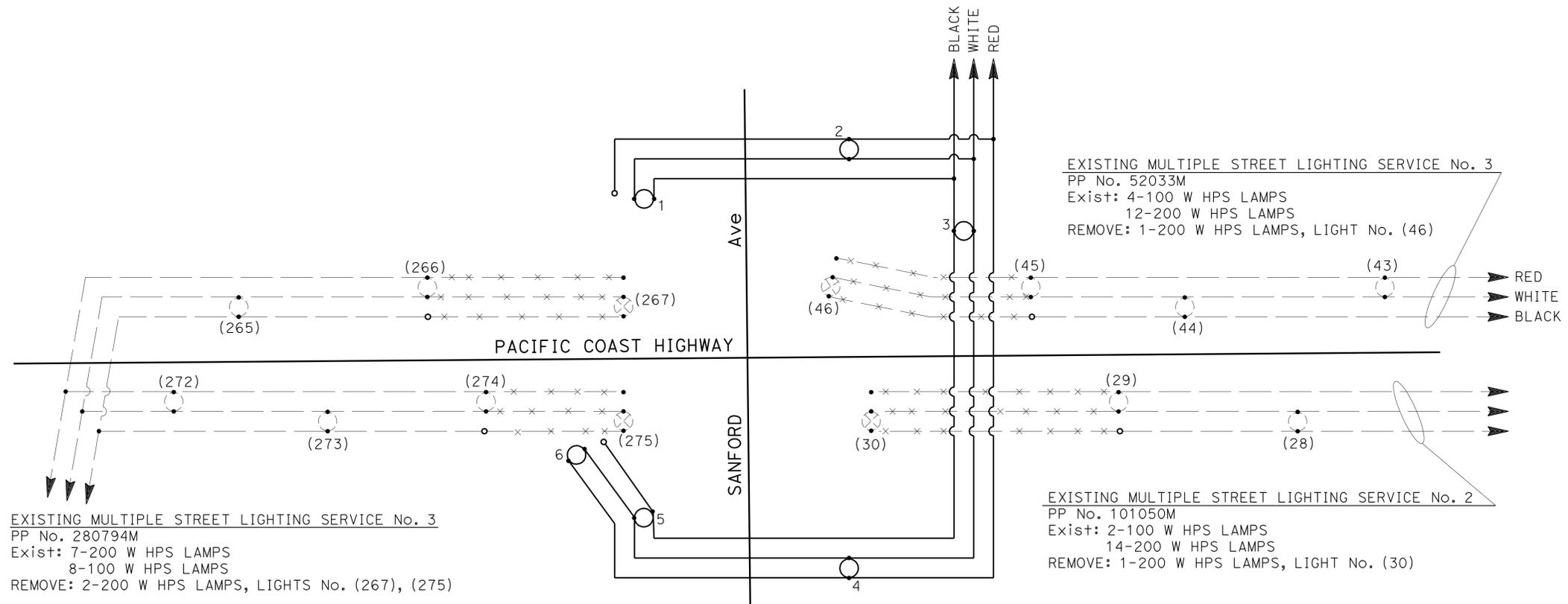
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CHECKED BY: CESAR HERNANDEZ
 DESIGNED BY: YAGHOUB SHADROOZ
 REVISIONS: (DATE, BY, DESCRIPTION)
 00-00-00 TIME PLOTTED => 14:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	13	47
 REGISTERED ELECTRICAL ENGINEER DATE 1/13/11					
2-22-11 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>		

WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)

-  EXISTING LAMP AND BALLAST TO REMAIN
-   EXISTING LAMP AND BALLAST
-   EXISTING CONDUCTOR
-  EXISTING CONDUCTOR TO REMAIN
-  NEW CONDUCTOR
-  TAPE END OF SPLICE WIRE
-  NEW LAMP AND BALLAST

NEW TRAFFIC SIGNAL/ STREET LIGHTING MULTIPLE SERVICE No. 1
 PP No. 52034M
 INSTALL: 6-165 W LED LIGHTING, No. 1-6



WIRING DIAGRAM

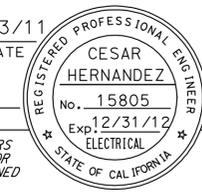
**SIGNAL AND LIGHTING
 (CITY)
 NO SCALE**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR HASSAN MANNA
 CALCULATED/DESIGNED BY Y. SHADROOZ
 CHECKED BY CESAR HERNANDEZ
 REVISED BY DATE REVISIONS

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	14	47

	1/13/11
REGISTERED ELECTRICAL ENGINEER	DATE
	
2-22-11	
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>	

STREET LIGHTING MULTIPLE CIRCUIT NOTES: (FOR E-3 TO E-4 ONLY)

1. WARNING: SAFETY CLEARANCE SHALL BE OBTAINED DAILY FROM THE AFFECTED UTILITY COMPANY BY TELEPHONING (213) 367-9908 BEFORE DOING ANY WORK IN CLOSED PROXIMITY TO ANY OVERHEAD ELECTRIC LINE.
2. MULTIPLE CIRCUIT WIRE SHALL BE No. 6 AWG STRANDED COPPER CONDUCTOR, TYPE THWN/THHN INSULATION, UL APPROVED FOR 600 VOLT OPERATION UNLESS OTHERWISE SPECIFIED HEREON.
3. THREE WIRES (COLOR CODE: 1-RED, 1-BLACK, 1-WHITE) SHALL BE INSTALLED IN ALL MULTIPLE CIRCUIT CONDUIT UNLESS OTHERWISE SPECIFIED HEREON.
4. EVEN NUMBERED ELECTROLIERS SHALL BE CONNECTED TO RED AND WHITE WIRES AND ODD NUMBERED ELECTROLIERS SHALL BE CONNECTED TO BLACK AND WHITE WIRES.
5. ELECTROLIERS SHALL BE WIRED PER TYPICAL MULTIPLE CIRCUIT ELECTROLIER WIRING DETAIL, SHEET E-6, UNLESS SPECIFIED OTHERWISE.
6. MULTIPLE CIRCUITS IN CONDUITS CONTAINING MORE THAN THREE CONDUCTORS SHALL BE APPROPRIATELY IDENTIFIED BY LABELING CONDUCTORS "A", "B", ETC, WITH APPROVED SELF-LAMINATING LETTER TAPE WRAPPED AT LEAST TWICE AROUND THE CONDUCTOR IN EACH PULL BOX. (SPECIAL SELF-LAMINATING WIRE MARKERS OR EQUIVALENT).

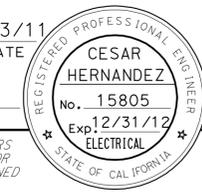
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	YAGHOUB SHADROOZ	REVISED BY	
	HASSAN MANNA	CHECKED BY	CESAR HERNANDEZ	DATE REVISED	
TRAFFIC DESIGN					

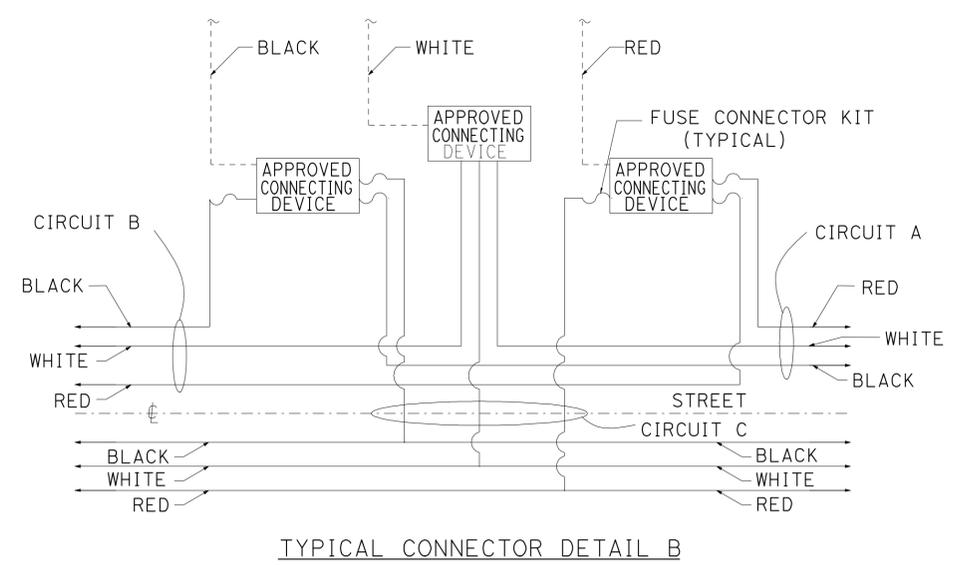
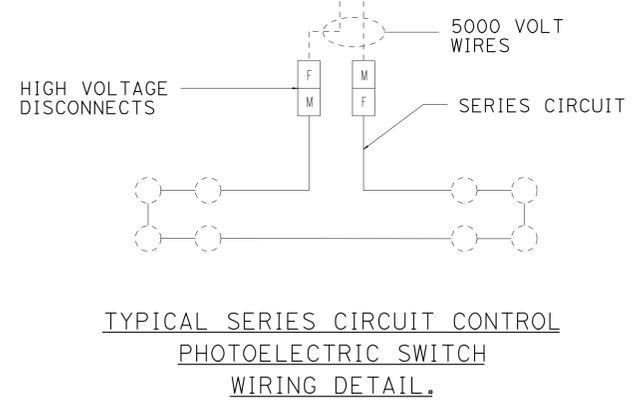
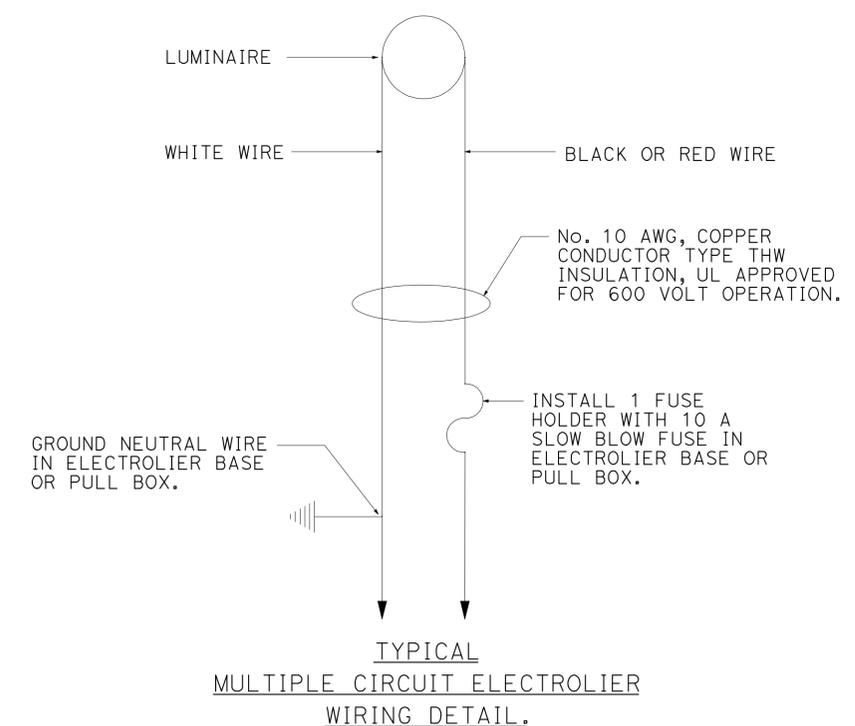
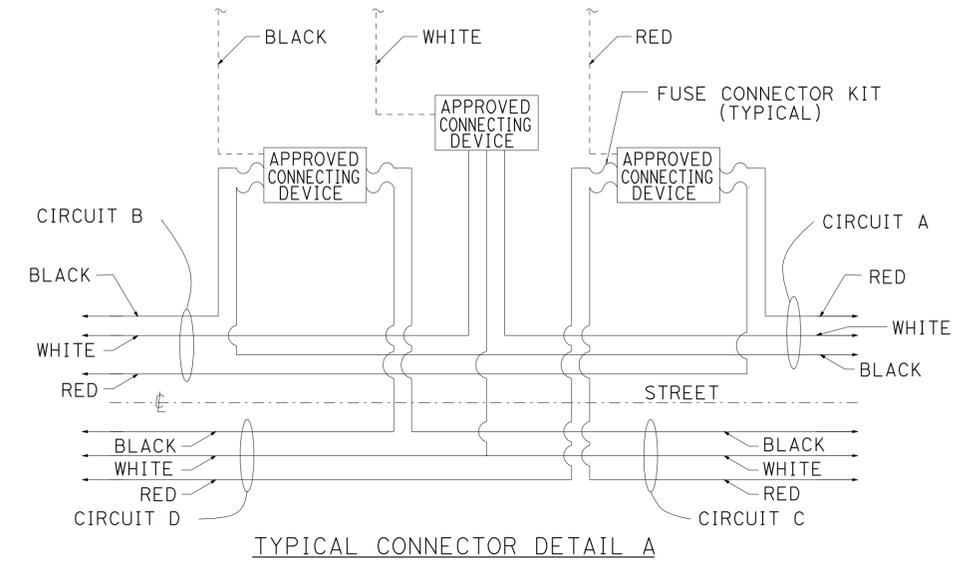
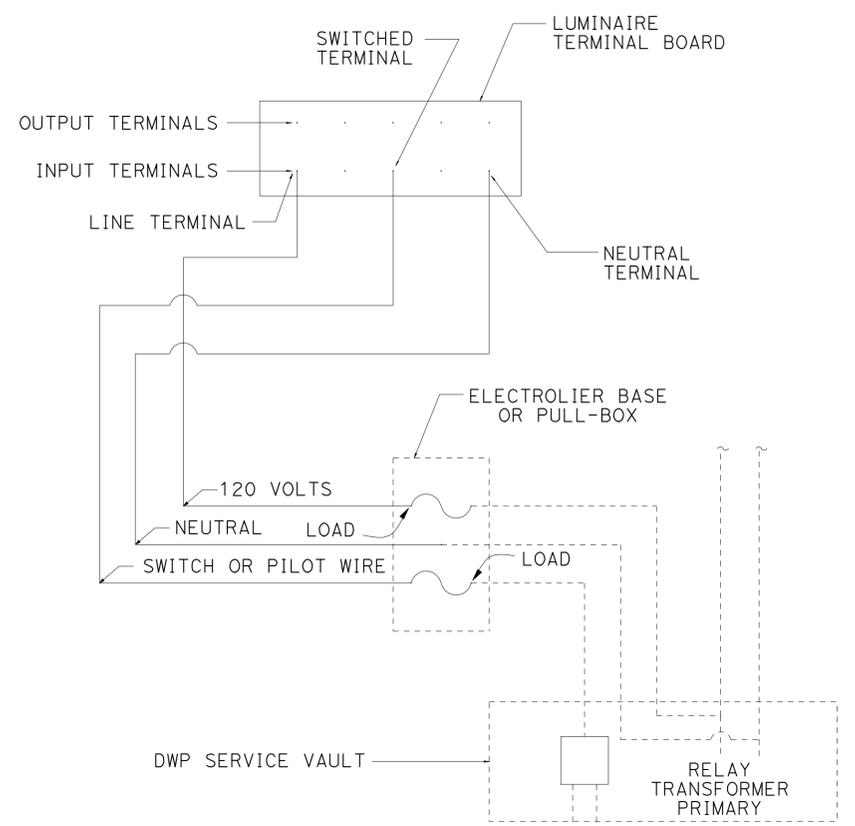
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



**SIGNAL AND LIGHTING
(CITY)**
NO SCALE

E-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	15	47
 REGISTERED ELECTRICAL ENGINEER DATE 1/13/11					
2-22-11 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>					



— INDICATES WIRES INSTALLED BY STREET LIGHTING CONTRACTOR
 - - - - - INDICATES WIRES INSTALLED BY SERVING COMPANY

**SIGNAL AND LIGHTING
 (CITY)
 (ELECTRICAL DETAILS)**
 NO SCALE **E-6**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 YAGHOUB SHADROOZ
 CESAR HERNANDEZ
 REVISIONS: (Grids X, Y, Z)
 REVISION BY: (Grids X, Y, Z)
 DATE REVISION: (Grids X, Y, Z)
 CALCULATED/DESIGNED BY: (Grids X, Y, Z)
 CHECKED BY: (Grids X, Y, Z)

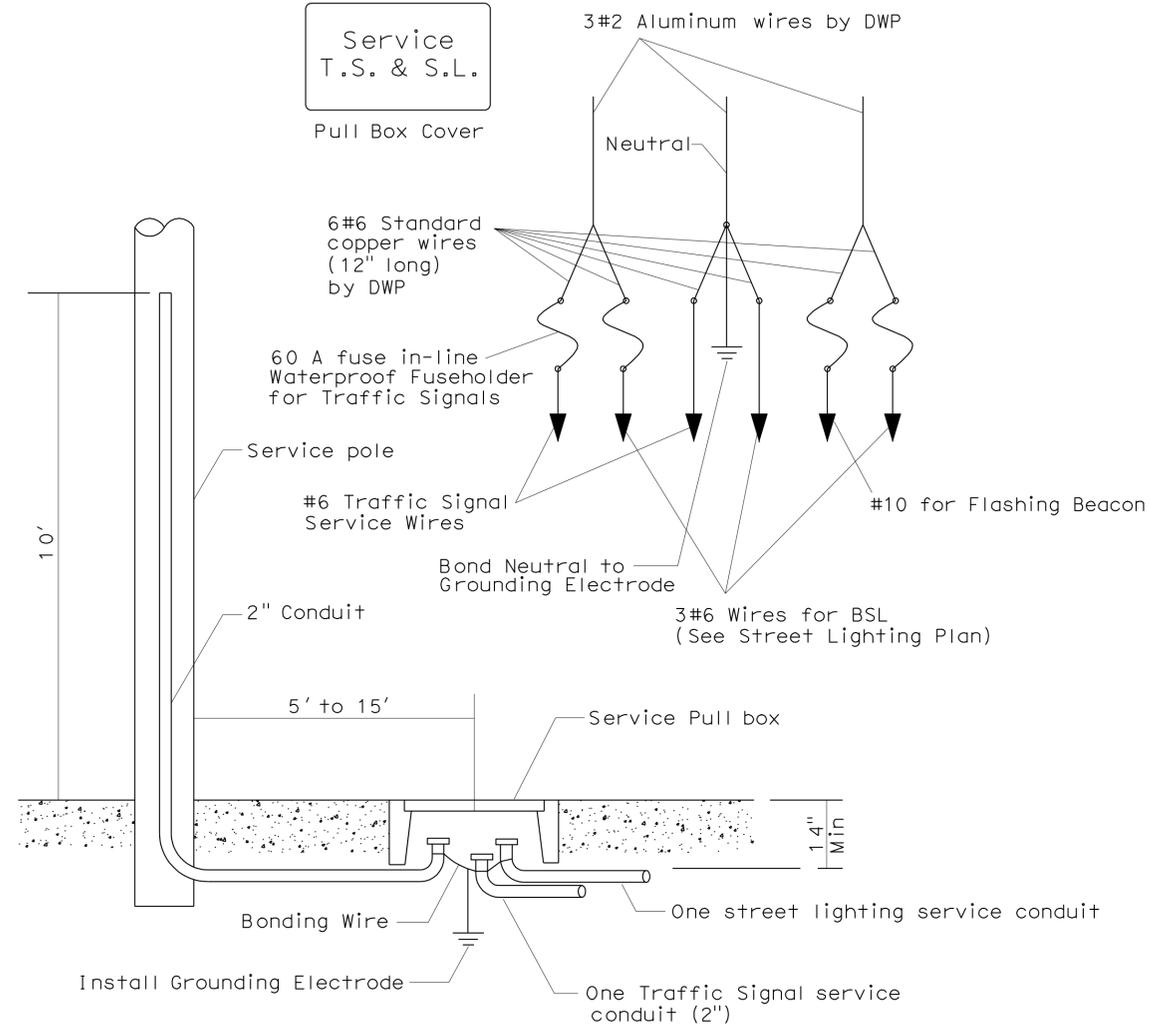
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	16	47

<i>Cesar Hernandez</i>	1/13/11
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
No. 15805
Exp. 12/31/12
ELECTRICAL
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR
HASSAN MANNA
CALCULATED/DESIGNED BY
CHECKED BY
YAGHOUB SHADROOZ
CESAR HERNANDEZ
REVISOR
DATE



NOTE: (THIS SHEET)

1. SEE SHEET E-14 FOR PULL BOX DETAILS.

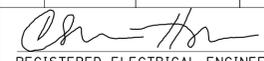
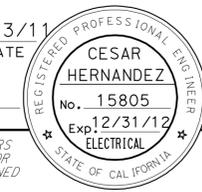
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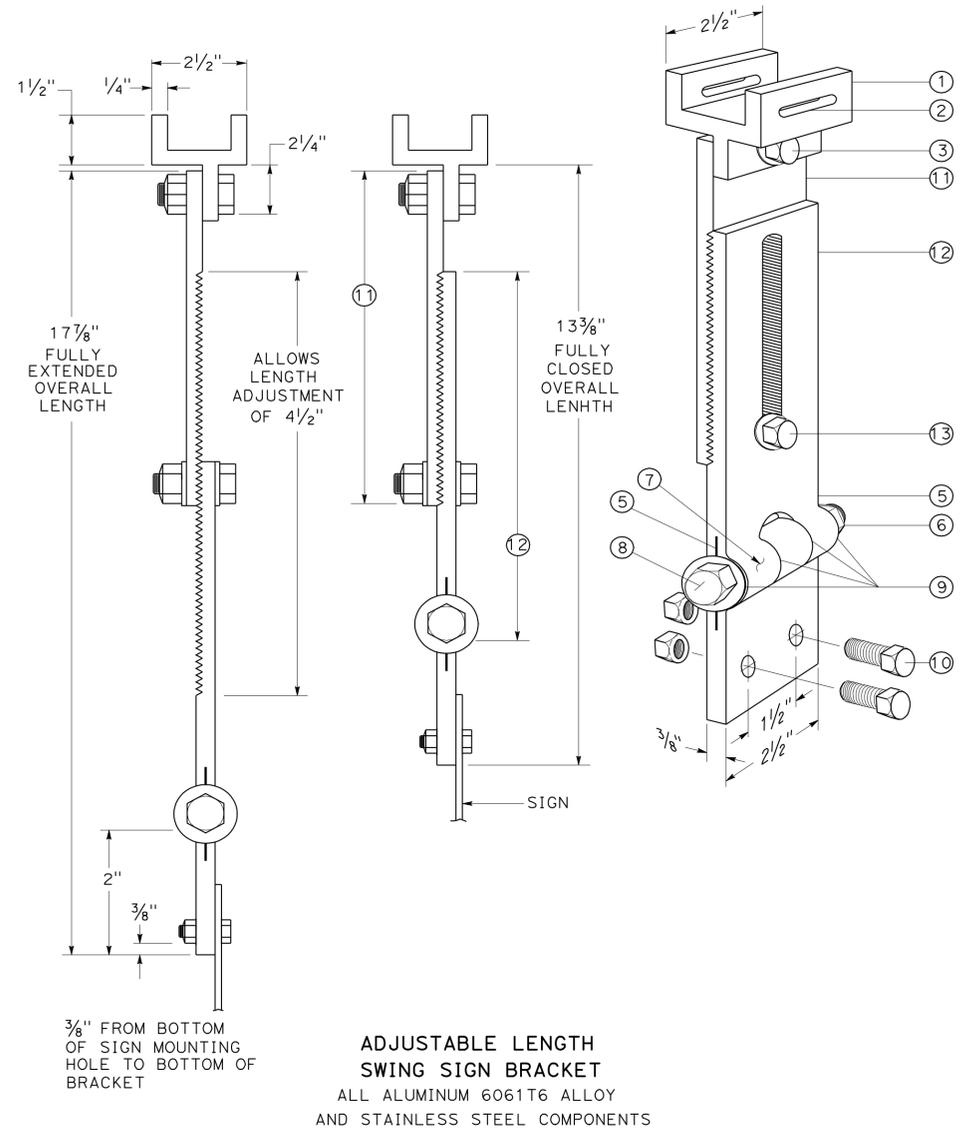
1. Department of Water & Power to install 3#2 stranded aluminum wires from service pole to pull box. At the terminus of each #2 aluminum wire the Dept. of Water & Power to splice 2#6 stranded copper wires, (12"± long) using compression type connectors. The exposed ends of each copper wire shall be taped when not in use.
2. Install continuous #8 green ground conductor to controller cabinet.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

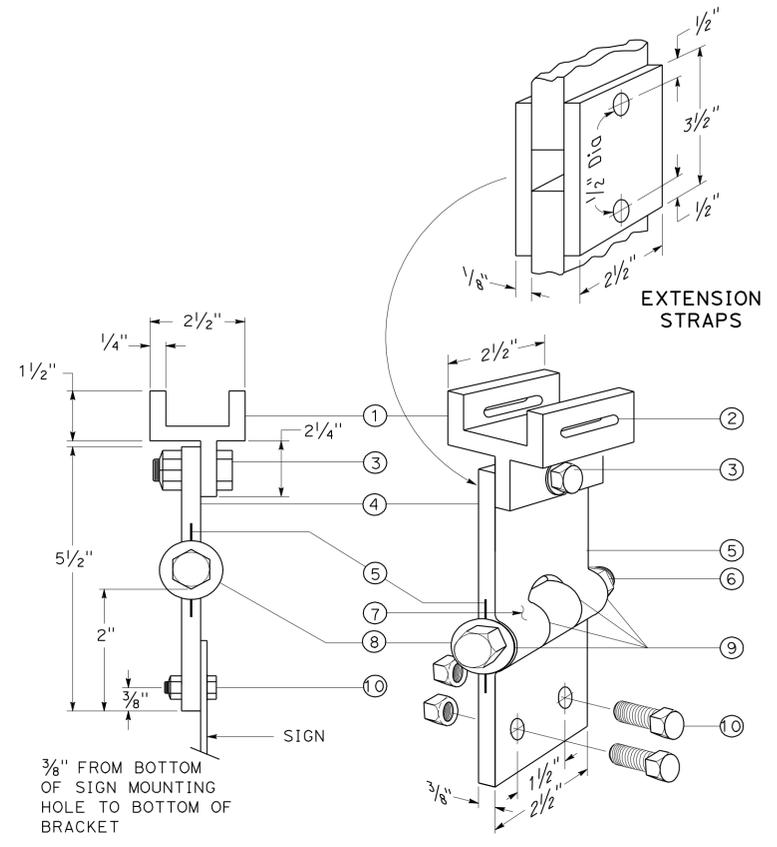
**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

E-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	17	47
 REGISTERED ELECTRICAL ENGINEER DATE 1/13/11					
2-22-11 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>					



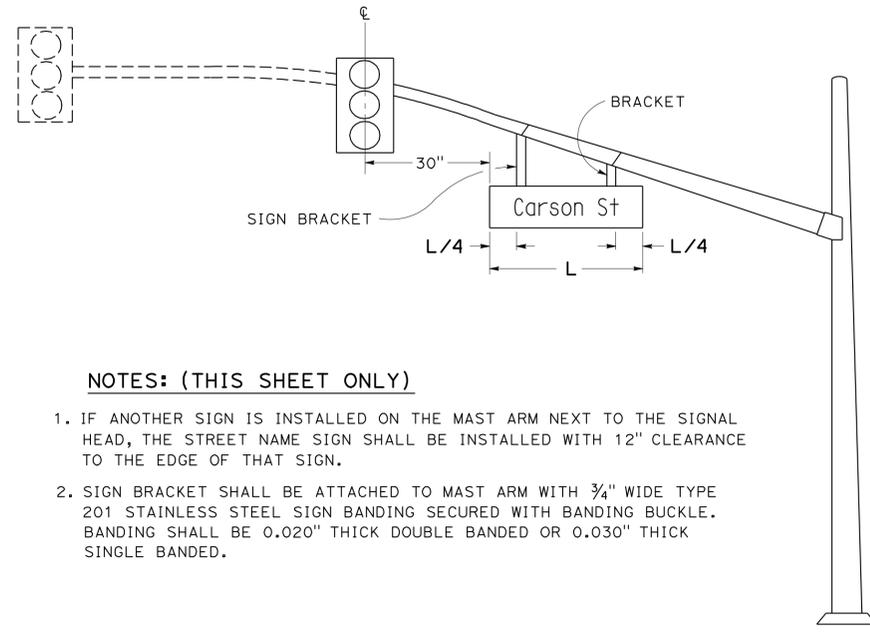
ADJUSTABLE LENGTH SWING SIGN BRACKET
 ALL ALUMINUM 6061T6 ALLOY
 AND STAINLESS STEEL COMPONENTS



FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET
 ALL ALUMINUM 6061T6 ALLOY
 AND STAINLESS STEEL COMPONENTS

NOTES: (THIS SHEET ONLY)

- ① PIVOTAL UPPER BRACKET.
- ② 1" x 1/4" SLOT FOR DOUBLE STRAPPING TO ELECTROLIER MAST ARM. 0.032" x 1/4" HEAVY DUTY STAINLESS STRAP WITH BUCKLE RECOMMENDED.
- ③ 1/2-13UNC x 1/2" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 1/16" STAINLESS STEEL WASHER (BOTH SIDES). ALLOWS UPPER BRACKET TO PIVOT AND ALIGN WITH ELECTROLIER MAST ARM. DO NOT TIGHTEN PAST NUT LOCKING FEATURE FOR PIVOT ACTION TO BE OPERATIONAL.
- ④ 5 1/2" OVERALL LENGTH FIXED LENGTH SIGN BRACKET.
- ⑤ STAINLESS STEEL DAMPENER SPRING (REMOVABLE).
- ⑥ STAINLESS STEEL HEX LOCK NUT WITH 1/16" STAINLESS STEEL WASHER. DO NOT TIGHTEN IT BINDS HINGES.
- ⑦ 1" OD AXLE HOUSING.
- ⑧ 1/2-13UNC x 4" STAINLESS STEEL HEX HEAD BOLT WITH 1/16" STAINLESS STEEL WASHER. DO NOT TIGHTEN LOCK NUT PAST LOCKING FEATURE IF BINDS HINGES.
- ⑨ OILITE BUSHING.
- ⑩ SIGN MOUNTING SETS, CONSISTING OF TWO EACH 5/16-18UNC x 1" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT. TWO HOLES. ON 1/2" CENTERS PROVIDE POSITIVE LOCK SIGN MOUNTING TO BRACKET.
- ⑪ 7 3/4" OVERALL LENGTH UPPER ADJUSTABLE SIGN BRACKET SECTION.
- ⑫ 9" OVERALL LENGTH LOWER ADJUSTABLE SIGN BRACKET SECTION, INCLUDING AXLE HOUSING (8" OVERALL LENGTH TO TOP OF AXLE HOUSING).
- ⑬ 1/2-13 UNC x 1/2" STAINLESS STEEL HEX BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 1/16" STAINLESS STEEL WASHERS (BOTH SIDES) LOOSEN LOCK NUT, ADJUST BRACKET TEETH TO LEVEL SIGN.



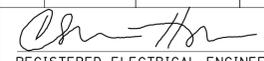
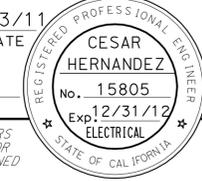
- NOTES: (THIS SHEET ONLY)**
1. IF ANOTHER SIGN IS INSTALLED ON THE MAST ARM NEXT TO THE SIGNAL HEAD, THE STREET NAME SIGN SHALL BE INSTALLED WITH 12" CLEARANCE TO THE EDGE OF THAT SIGN.
 2. SIGN BRACKET SHALL BE ATTACHED TO MAST ARM WITH 3/4" WIDE TYPE 201 STAINLESS STEEL SIGN BANDING SECURED WITH BANDING BUCKLE. BANDING SHALL BE 0.020" THICK DOUBLE BANDED OR 0.030" THICK SINGLE BANDED.

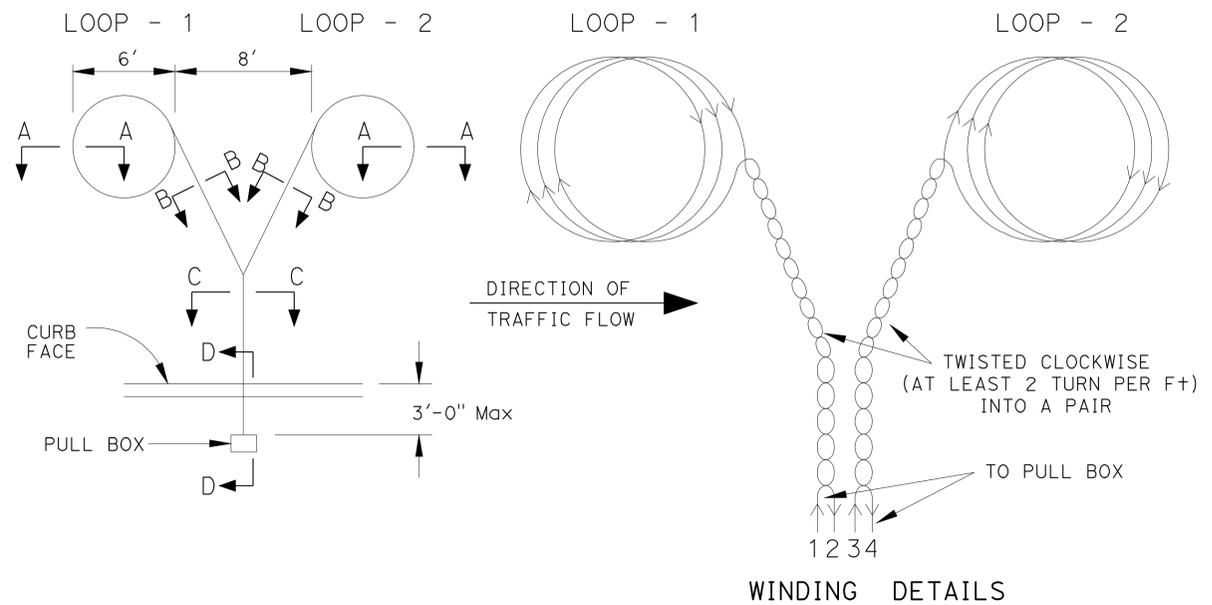
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**SIGNAL AND LIGHTING
 (CITY)
 (ELECTRICAL DETAILS)
 NO SCALE
 E-8**

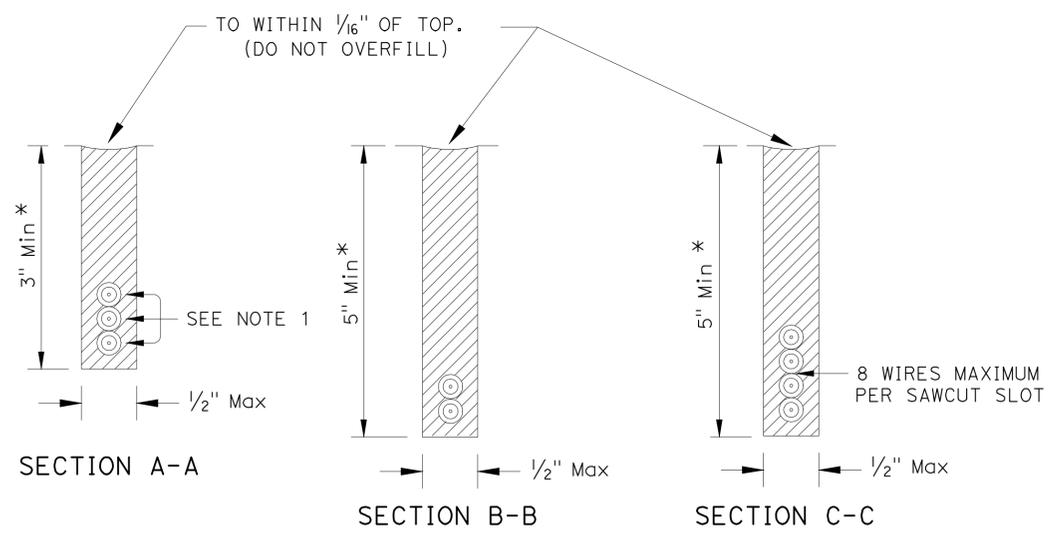
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans® TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR HASSAN MANNA
 CALCULATED/DESIGNED BY CHECKED BY
 YAGHOUB SHADROOZ CESAR HERNANDEZ
 REVISED BY DATE REVISED

x
x
x
x
x
x

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	18	47
 REGISTERED ELECTRICAL ENGINEER DATE 1/13/11					
2-22-11 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. INSTALL 3 CLOCKWISE TURNS OF LOOP WIRE FOR EACH DETECTOR, UNLESS OTHERWISE SHOWN ON SIGNAL PLAN.
 2. ANY NON-ROUND SHAPED LOOPS MUST CONFORM TO ALL OTHER SPECIFICATIONS SHOWN ON THIS SHEET.



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

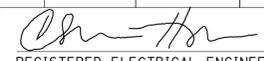
SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
 NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISED BY: YAGHOUB SHADROOZ
 DATE REVISION: CESAR HERNANDEZ

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

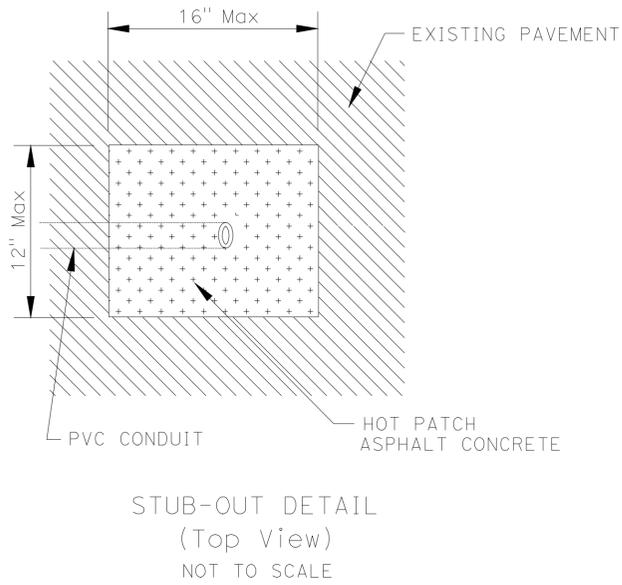
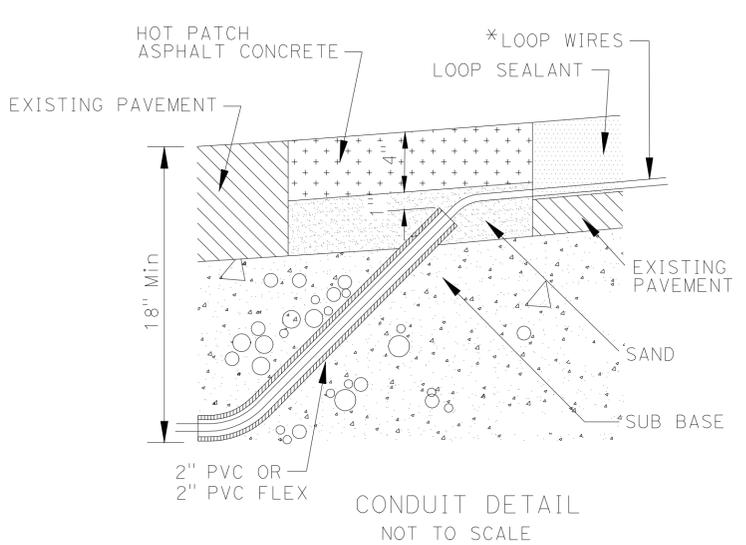
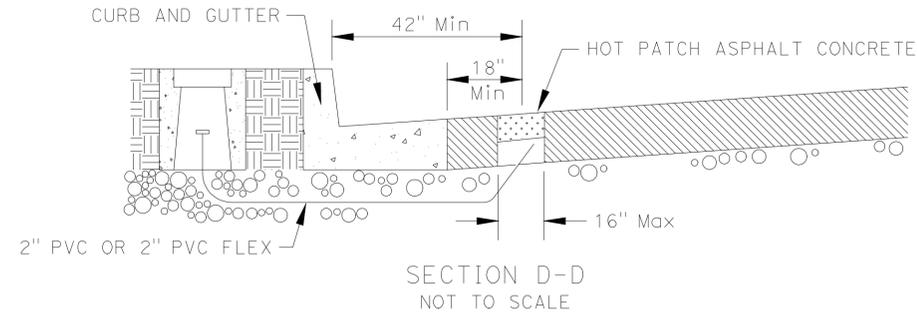


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	19	47

 1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-22-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 ELECTRICAL
 STATE OF CALIFORNIA

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NOTES:

Perform Loop Installation in the Following Order:

1. OPEN THE PAVEMENT AT LEAST 42" FROM CURB FACE AND AT LEAST 18" FROM EDGE OF GUTTER USING A STAR DRILL OR A JACK HAMMER (ASPHALT CONCRETE ONLY). OPEN NO MORE THAN A 12" x 16" AREA. IN CASES WHERE THERE IS A CONCRETE BUS PAD ADJACENT TO THE GUTTER, INSTALL THE STUBOUT BEYOND THE EDGE OF THE BUS PAD.
 2. INSTALL 2" PVC (SCHEDULE 80) OR PVC FLEX (SCHEDULE 40) FROM THE PULL BOX PIT WITH A 45 DEGREE ELBOW AT THE STUB-OUT AS SHOWN. DEPTH OF THE CONDUIT SHALL BE AT LEAST 18" BELOW THE STREET GRADE.
 3. PATCH STREET USING HOT PATCH ASPHALT CONCRETE AND SAND AS SHOWN.
 4. INSTALL DUCT SEAL WHERE WIRES ENTER 2" PVC OR 2" PVC FLEX.
 5. FILL SAWCUT SLOT WITH HOT-MELT RUBBERIZED ASPHALT SEALANT.
- * NO MORE THAN 8 LOOPS OR 16 WIRES PER STUB-OUT.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans TRAFFIC DESIGN	HASSAN MANNA	CHECKED BY	DATE REVISOR
		YAGHOUB SHADROOZ	
		CESAR HERNANDEZ	

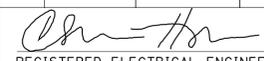
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



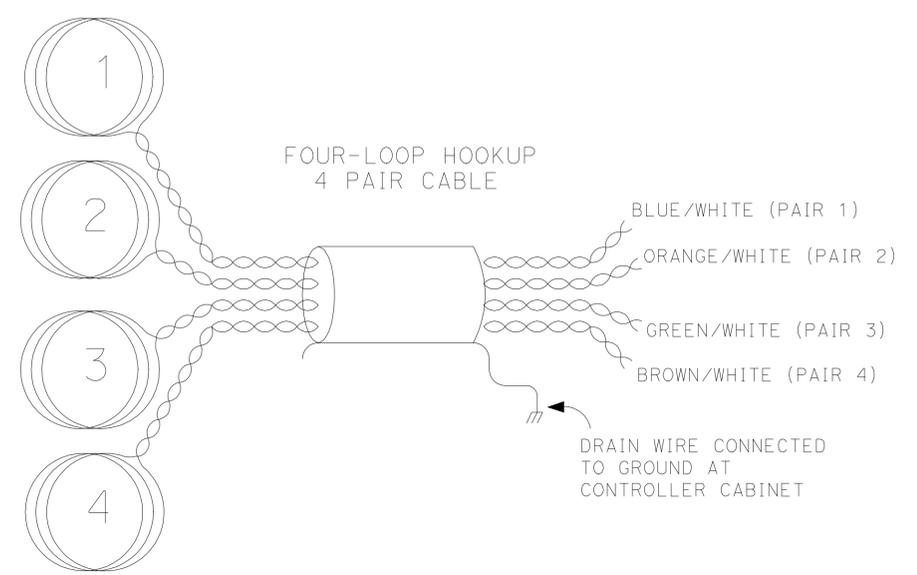
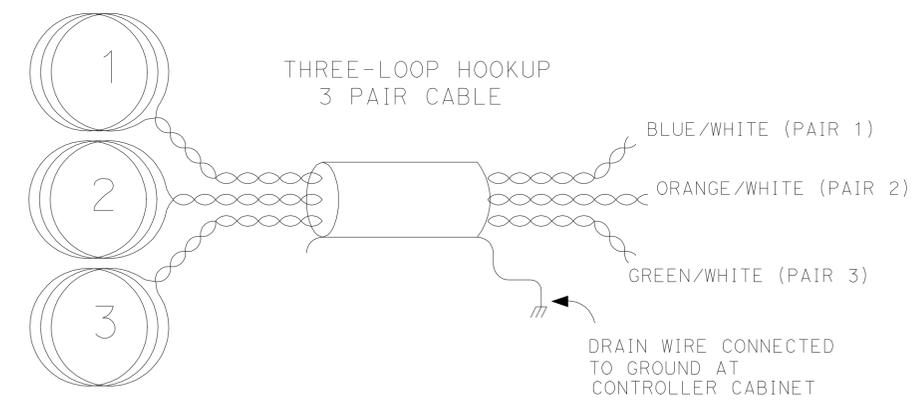
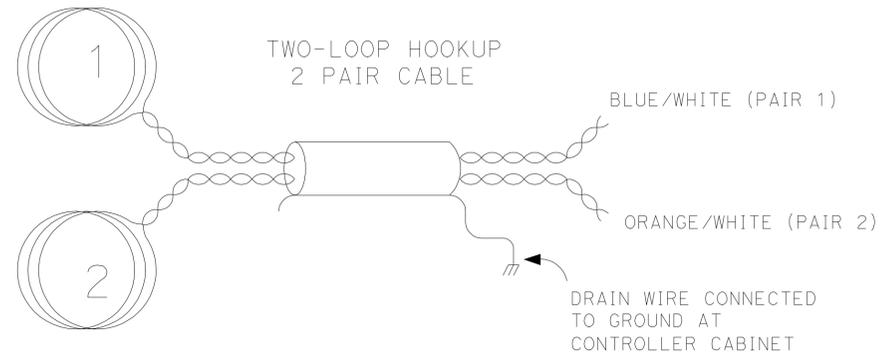
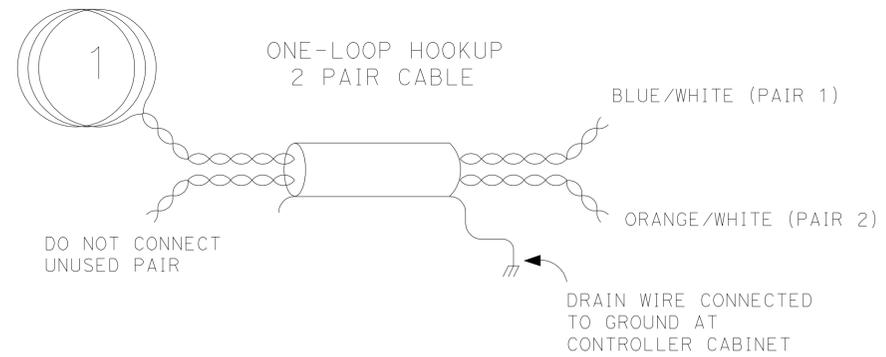
**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

E-10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	20	47


 REGISTERED ELECTRICAL ENGINEER DATE _____
 2-22-11
 PLANS APPROVAL DATE _____
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REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 ELECTRICAL
 STATE OF CALIFORNIA



NOTES:

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

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
 NO SCALE

E-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
Caltrans TRAFFIC DESIGN	HASSAN MANNA	CESAR HERNANDEZ	YAGHOUB SHADROOZ	
		CHECKED BY	DATE	REVISOR

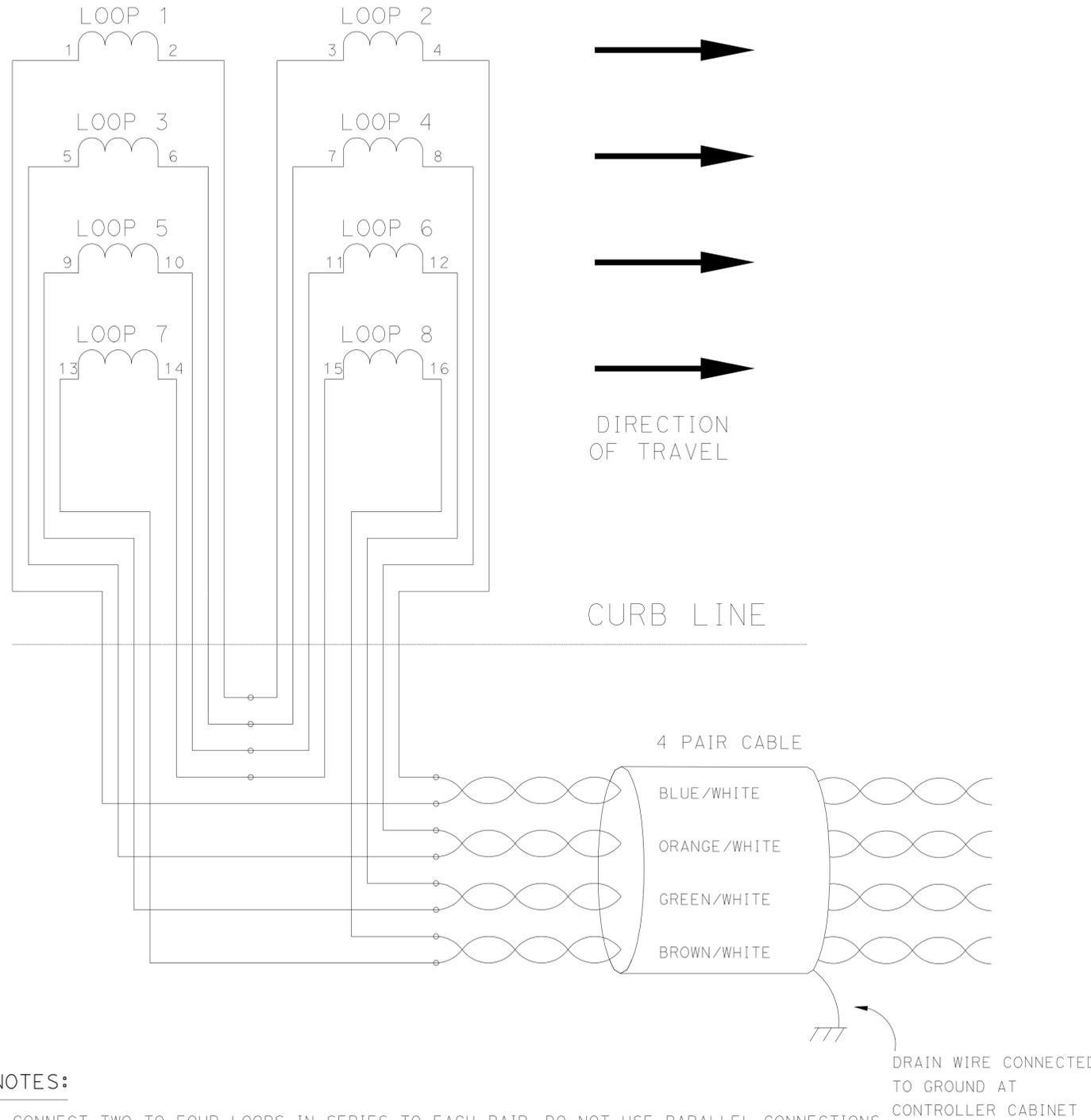
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	21	47

1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE
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REGISTERED PROFESSIONAL ENGINEER
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Actuation/ Phase Loops



NOTES:

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

DRAIN WIRE CONNECTED TO GROUND AT CONTROLLER CABINET

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans TRAFFIC DESIGN	HASSAN MANNA	CHECKED BY	DATE
		YAGHOUB SHADROOZ	YAGHOUB SHADROOZ
		CESAR HERNANDEZ	CESAR HERNANDEZ

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



UNIT 1879

PROJECT NUMBER & PHASE

07000018671

**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

E-12

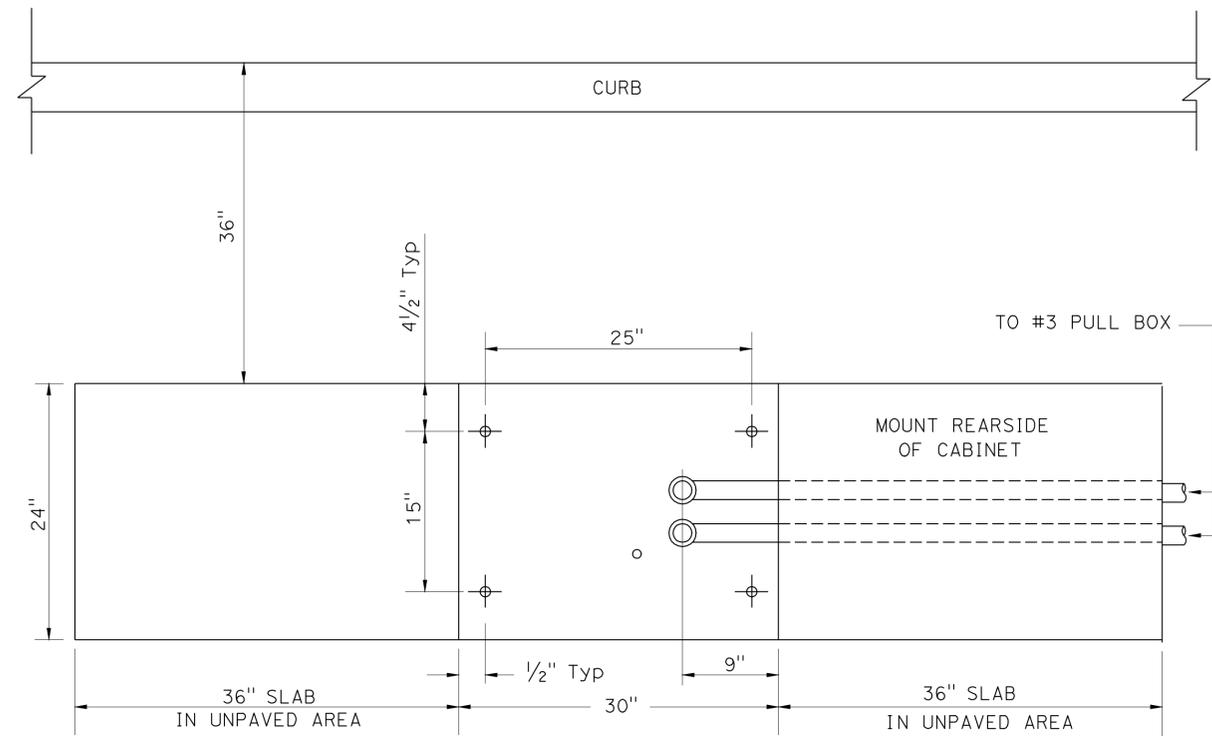
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	22	47

 1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE

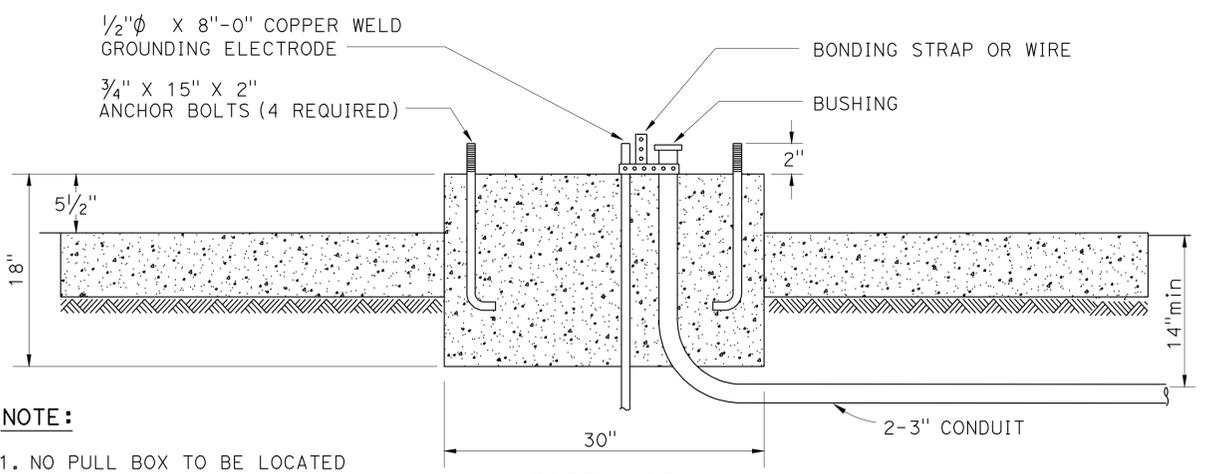
2-22-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 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.



TOP VIEW



SIDE VIEW

NOTE:
 1. NO PULL BOX TO BE LOCATED WITHIN THE FRONT OR REAR 24" X 36" CONCRETE SLAB.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISED BY: YAGHOUB SHADROOZ
 DATE REVISED: CESAR HERNANDEZ

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



**SIGNAL AND LIGHTING
 (CITY)
 (ELECTRICAL DETAILS)**
 NO SCALE

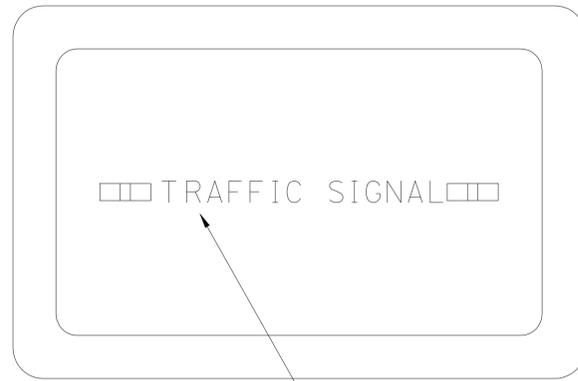
E-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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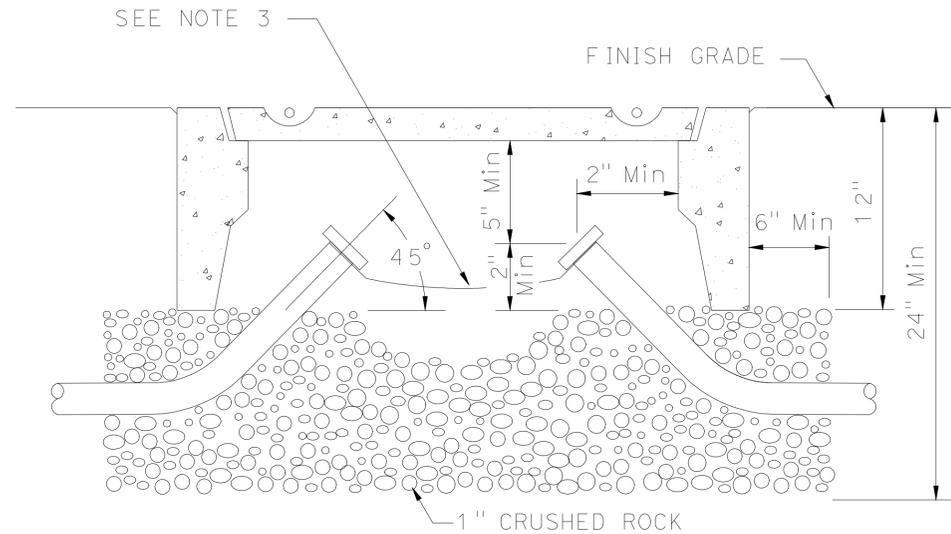
 1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-22-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 ELECTRICAL
 STATE OF CALIFORNIA

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1" LETTERS CAST OR STAMPED IN LID



NOTES:

1. PULL BOX DETAILS NOT SHOWN ON THIS PLAN SHALL CONFORM TO SHEET E-19.
2. OUTSIDE DIMENSION: TYPE PB2 - 15" X 25", TYPE PB3 - 22" X 34"
3. GALVANIZED CONDUITS MUST BE BONDED WITH COPPER GROUND STRAP AROUND THE NECK OF EACH CONDUIT. PVC CONDUITS MUST HAVE THEIR GROUND WIRES SPLICED TOGETHER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED, DESIGNED BY	YAGHOUB SHADROOZ	REVISOR	DATE
Caltrans TRAFFIC DESIGN	HASSAN MANNA	CHECKED BY	CESAR HERNANDEZ	DATE	REVISED

**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-14



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	24	47

 1/13/11
 REGISTERED ELECTRICAL ENGINEER DATE

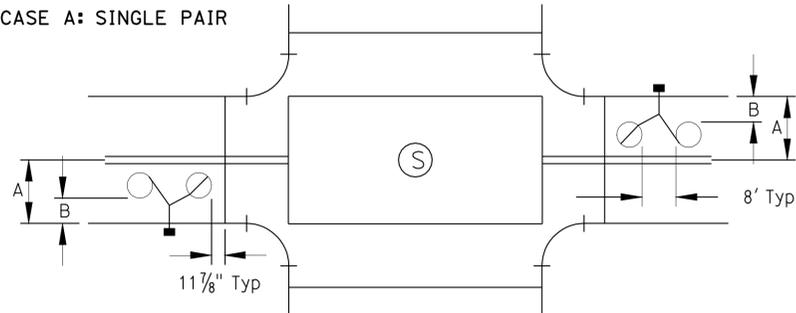
2-22-11
 PLANS APPROVAL DATE

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
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 ELECTRICAL
 STATE OF CALIFORNIA

BASED ON THE DISTANCE BETWEEN THE DOUBLE YELLOW CENTER LINE (DYCL) AND THE CURB FACE, 6'-0" DIAMETER CIRCULAR INDUCTIVE LOOP DETECTORS SHOULD BE INSTALLED AS SPECIFIED IN THE TABLES BELOW FOR SINGLE LANE APPROACHES.

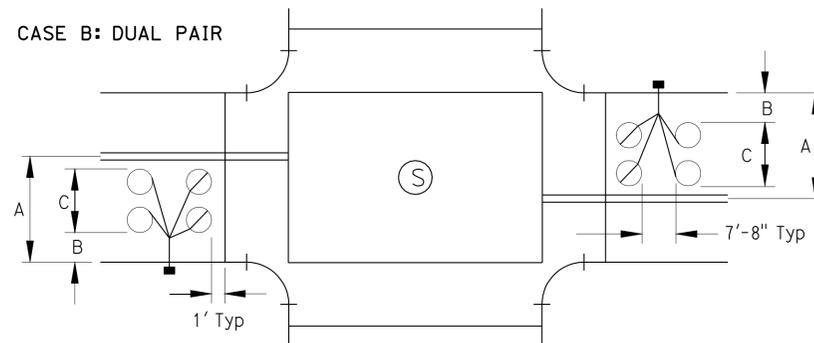
CASE A: SINGLE PAIR



Distance Between DYCL and Curb Face (A)	No. of Pairs of Loops	Distance Between Loop and Curb Face (B)
9'-8"	1	3"
11'	1	3"
12'	1	3"
13'	1	4"
14'	1	5"

Distance Between DYCL and Curb Face (A)	No. of Pairs of Loops	Distance Between Loop and Curb Face (B)
15'	1	6'
16'	1	6'
17'	1	6'-8"
18'	1	7'-8"
19'	1	7'-8"

CASE B: DUAL PAIR



Distance Between DYCL and Curb Face (A)	No. of Pairs of Loops	Distance Between Loop and Curb Face (B)	Distance Between Loops (C)
20'	2	3'	15'
21'	2	3'	15'
22'	2	3'	16'
23'	2	3'	16'
24'	2	4'	16'
25'	2	5'	16'

SINGLE LANE APPROACHES

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

E-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: HASSAN MANNA

YAGHOUB SHADROOZ
CESAR HERNANDEZ

REVISOR BY: YAGHOUB SHADROOZ
DATE: 7/2/2010

DESIGNED BY: YAGHOUB SHADROOZ
CHECKED BY: CESAR HERNANDEZ

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	25	47

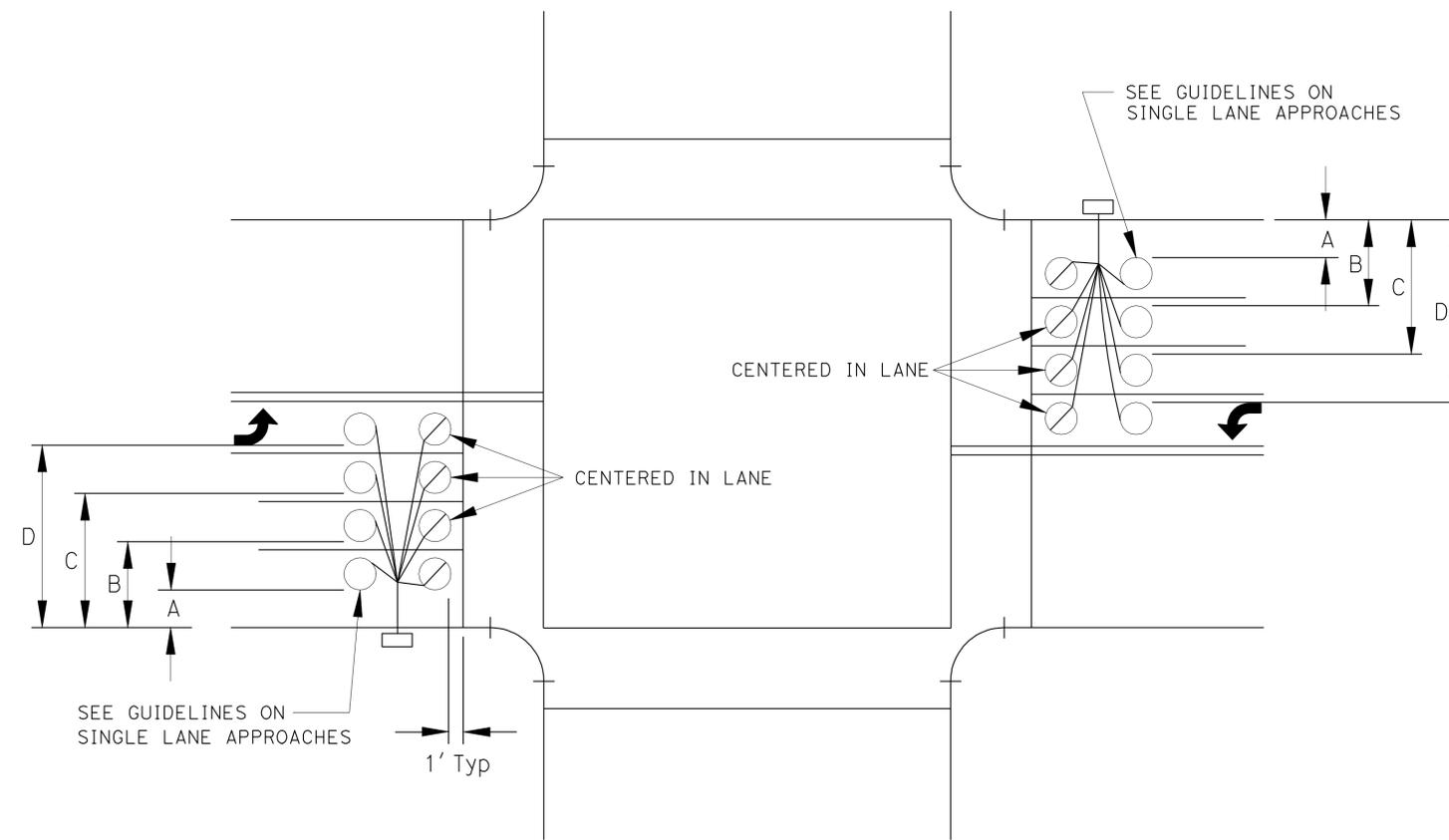
<i>Cesar Hernandez</i>	1/13/11
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
No. 15805
Exp. 12/31/12
ELECTRICAL
STATE OF CALIFORNIA

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

NOTES:

1. ALL LOOPS ARE 6' Dia WITH 7'-8" SEPARATION.
2. THE LOOP DETECTORS ADJACENT TO THE LIMIT LINE SHALL BE BICYCLE DETECTORS.



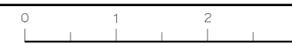
MULTI LANE APPROACHES

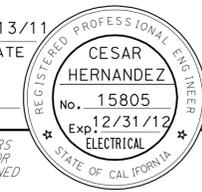
**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

E-16

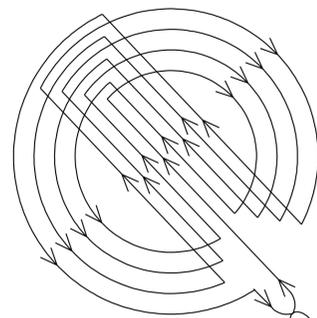
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans TRAFFIC DESIGN	HASSAN MANNA	CESAR HERNANDEZ	DATE
			REVISOR
			DATE

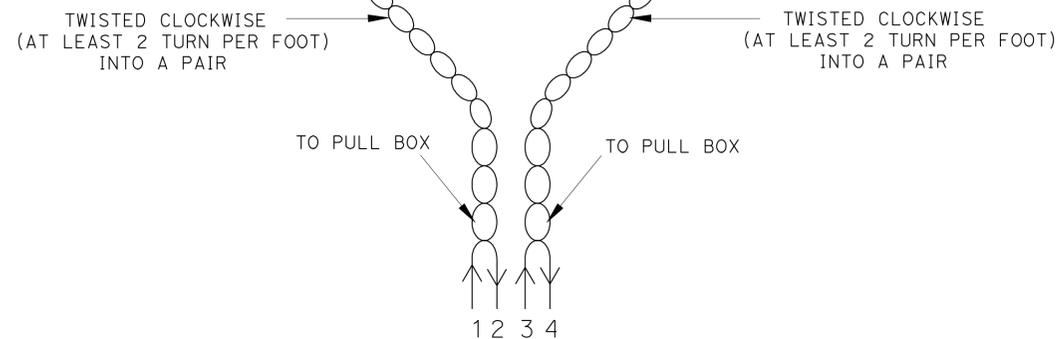
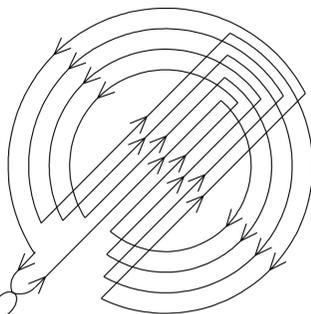


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	26	47
 REGISTERED ELECTRICAL ENGINEER			DATE	1/13/11 2-22-11 PLANS APPROVAL DATE	
			<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

LOOP - 1

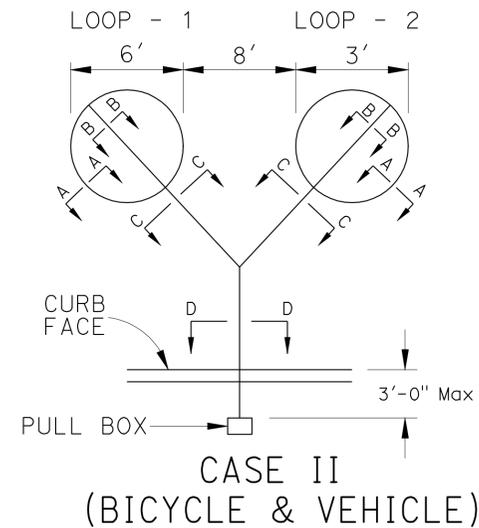


LOOP - 2



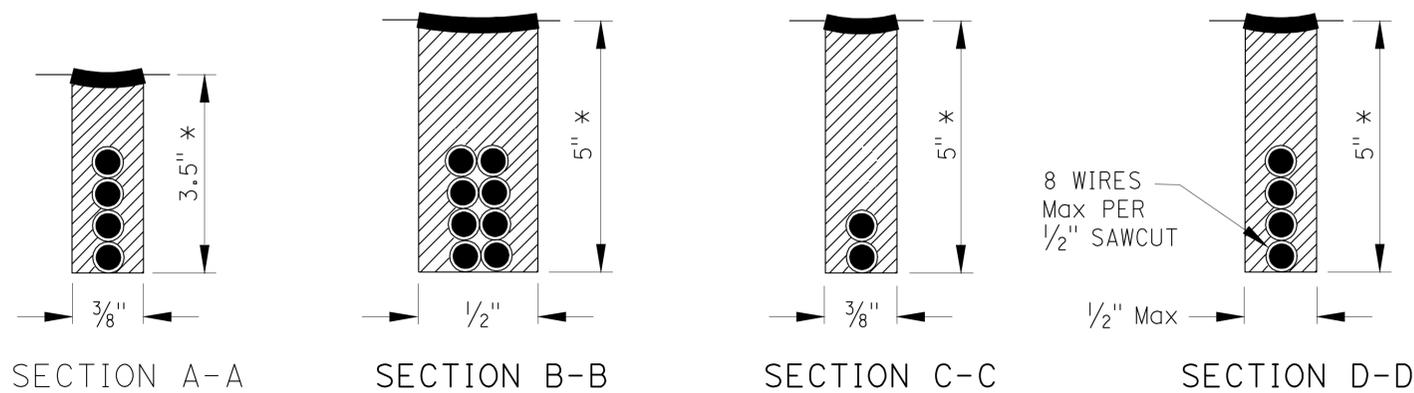
WINDING DETAIL

DIRECTION OF TRAFFIC FLOW →



NOTES:

1. INSTALL FOUR (4) COMPLETE ALTERNATING TURNS OF LOOP CONDUCTORS, UNLESS OTHERWISE SPECIFIED.
2. FOR STUB-OUT AND CONDUIT DETAILS REFER TO SHEET E-10.
3. USE CASE II LOOPS WHEN VEHICULAR LOOPS ARE INTENDED TO DETECT BICYCLES.
4. AN OCTAGONAL SHAPED LOOP OR OTHER NON-ROUND SHAPED LOOP MAY BE USED INSTEAD OF THE ROUND-LOOP.
5. SAME WINDING PATTERN TO BE USED IN BOTH LOOPS WITH (1) PAIR FROM EACH LOOP LEADING TO THE PULL BOX.



* DEPTH OF SLOT NOT TO EXCEED DEPTH OF PAVEMENT

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

E-17

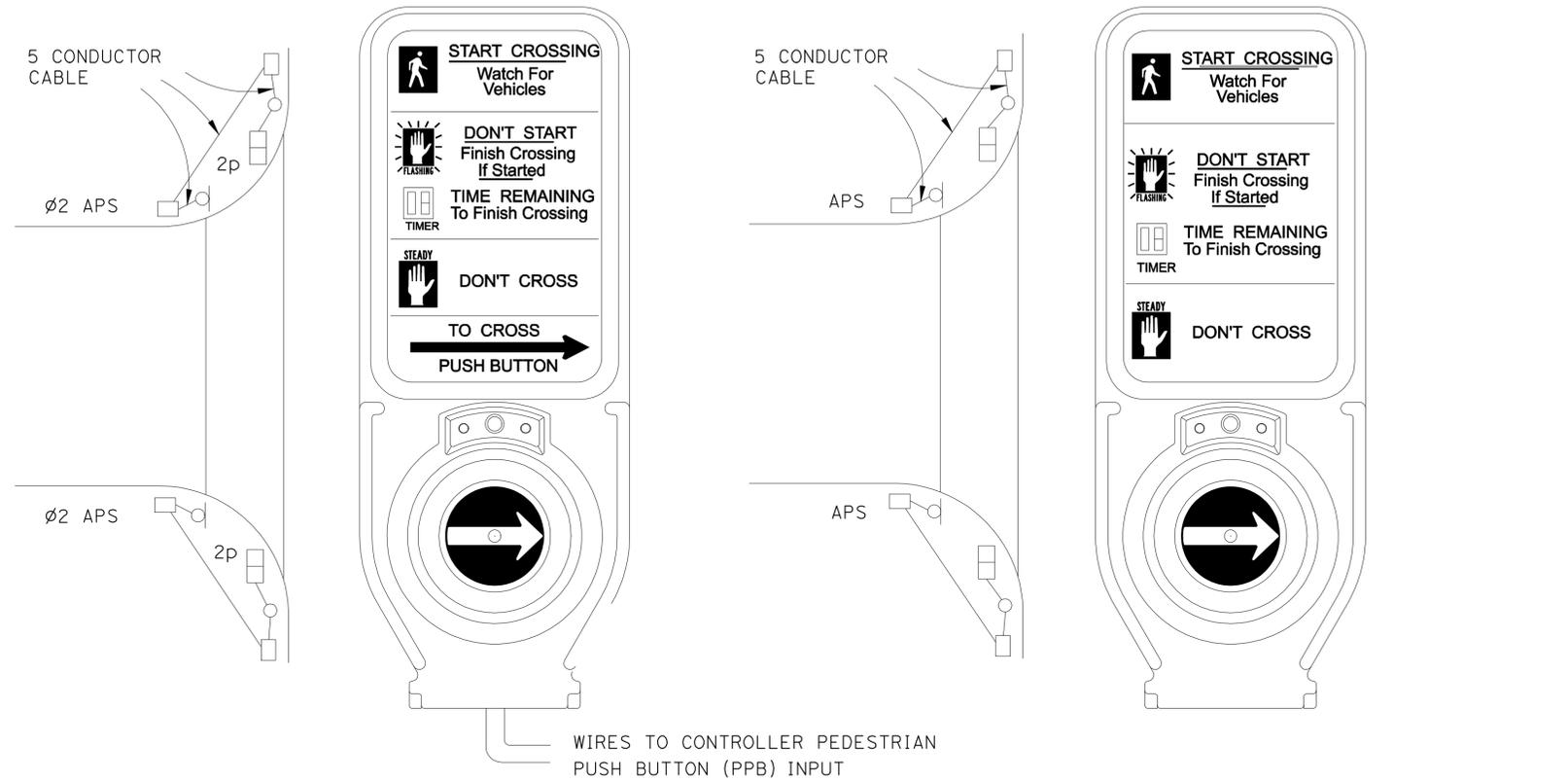
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 YAGHOUB SHADROOZ
 CESAR HERNANDEZ
 REVISIONS: REVISED BY, DATE, REVISION
 CALCULATED, DESIGNED BY, CHECKED BY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	27	47

<i>Cesar Hernandez</i>	1/13/11
REGISTERED ELECTRICAL ENGINEER	DATE
2-22-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
No. 15805
Exp. 12/31/12
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.



PED-ACTUATED PEDESTRIAN CROSSING
(PUSH BUTTON ACTIVATES ACCESSIBLE PEDESTRIAN SIGNALS AND THE WALK INTERVAL.)

PRE-TIMED AND REST-IN-WALK PEDESTRIAN CROSSING
(PUSH BUTTON ACTIVATES ACCESSIBLE PEDESTRIAN SIGNALS ONLY. WALK INTERVAL IS ON RECALL.)

NOTES:

1. APS SHALL BE USED FOR SITUATIONS WHERE NEW PEDESTRIAN PUSH BUTTONS ARE BEING INSTALLED OR WHERE THEY ARE BEING REPLACED, DUE TO MAINTENANCE.
2. COUNTDOWN PEDESTRIAN HEADS SHALL BE INSTALLED AT ALL ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS.
3. A SEPARATE 5 CONDUCTOR CABLE SHALL BE USED TO ISOLATE FROM ANY OTHER WIRES.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: CHECKED BY:
 YAGHOUB SHADROOZ: CESAR HERNANDEZ
 REVISED BY: DATE REVISED:
 X
 X
 X
 X
 X

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

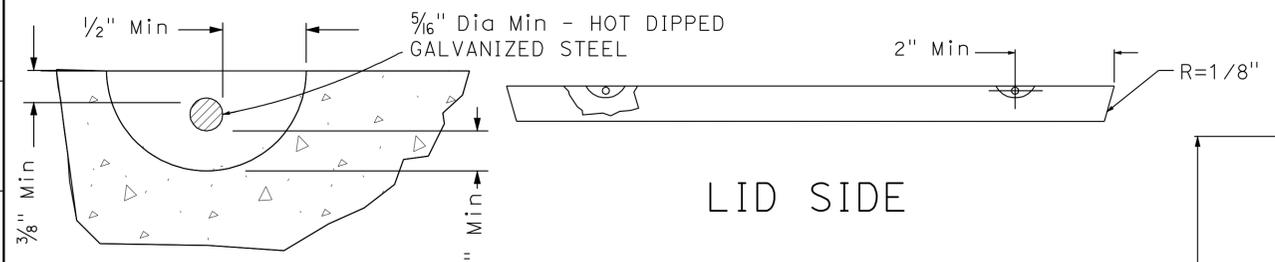
E-18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	9.8	28	47

REGISTERED ELECTRICAL ENGINEER
 No. 15805
 Exp. 12/31/12
 ELECTRICAL

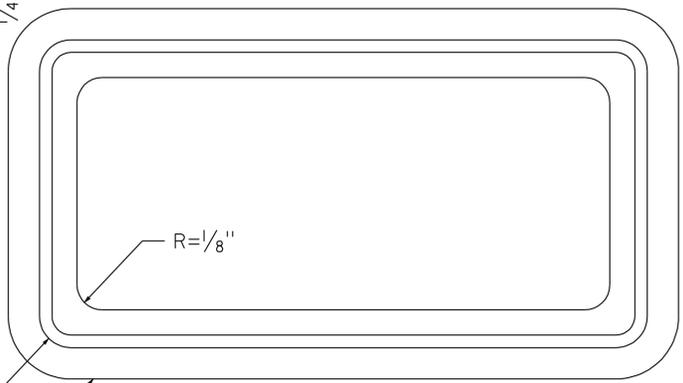
3/2/11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-22-11
 PLANS APPROVAL DATE

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.

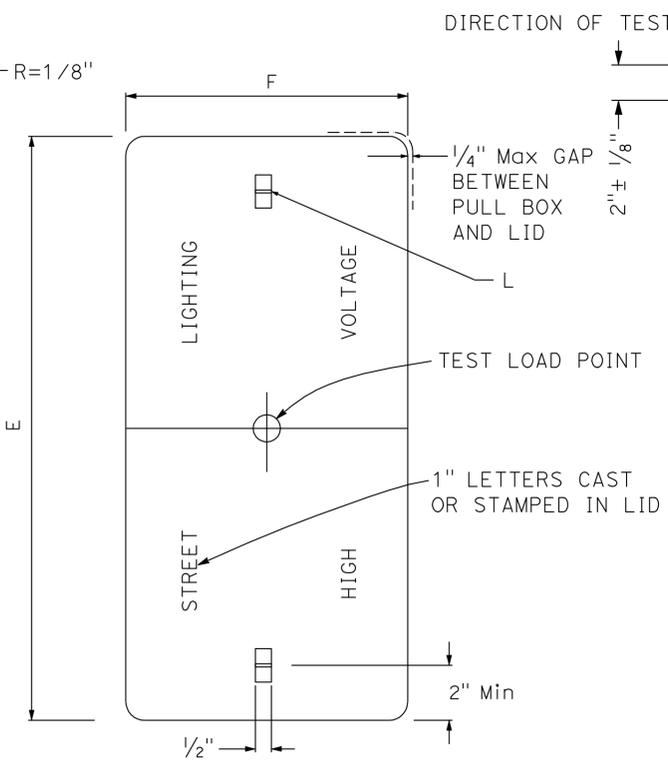


LID SIDE

LIFT BAR DETAIL



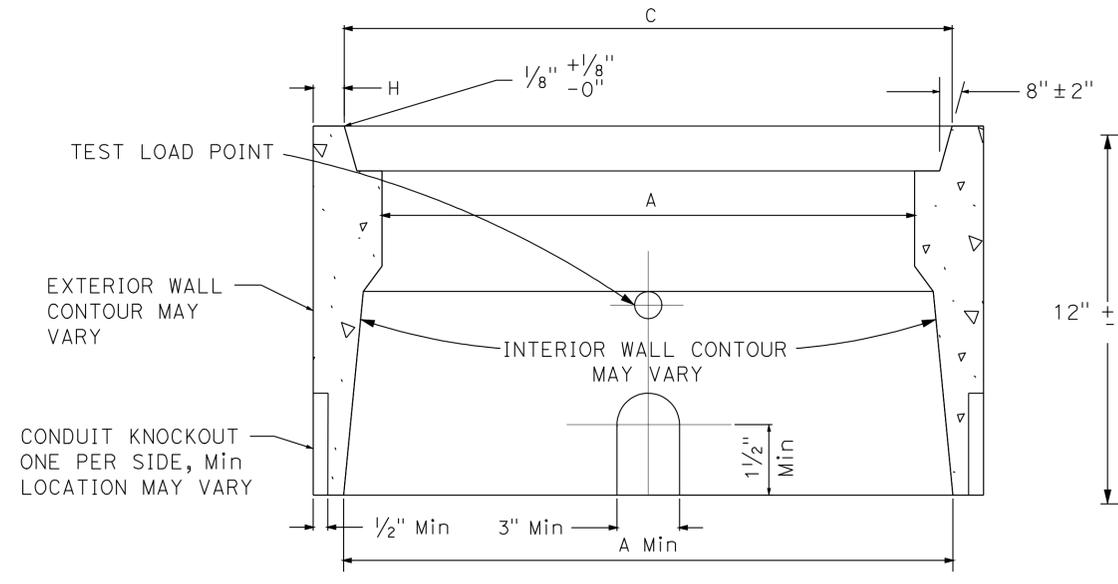
BOX PLAN



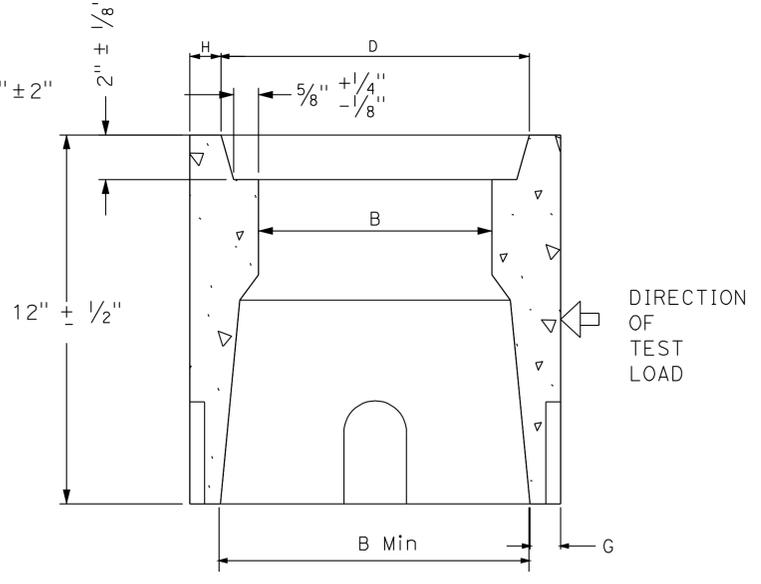
LID PLAN

GENERAL NOTES

- WHERE "PULL BOX" IS SPECIFIED IN THE PLANS, IT SHALL CONSIST OF A PULL BOX AND LID, AND SHALL MEET THE REQUIREMENTS OF THIS PLAN.
- PULL BOXES SHALL BE CONCRETE. OTHER MATERIALS MAY BE USED UPON APPROVAL BY THE ENGINEER.
- ALL CONCRETE USED IN PULL BOX CONSTRUCTION SHALL HAVE 3000 PSI MINIMUM COMPRESSIVE STRENGTH.
- ALL EDGES AND CORNERS SHALL HAVE SMOOTH AND UNIFORM RADII OF 1/4" OR LESS UNLESS OTHERWISE SPECIFIED HEREON.
- VOIDS, BLEMISHES, OR IMPERFECTIONS EXCEEDING 3/8" IN MAXIMUM DIMENSION SHALL NOT EXISTING IN ANY SURFACE.
- ALL SURFACES EXPOSED AFTER INSTALLATION SHALL BE SMOOTHLY FINISHED AND REGULAR. CHIPS AND VOIDS THEREIN ARE NOT PERMITTED.
- MOLD, JOINT, OR SEAM LINES WITHIN 1" OF THE OF THE BOX SHALL BE SMOOTHLY FINISHED.
- CONDUIT KNOCKOUTS SHALL BE REMOVABLE WITHOUT DAMAGE TO THE REMAINDER OF THE BOX.
- PULL BOXES AND LIDS SHALL BE STEEL REINFORCED.
- REINFORCING STEEL SHALL NOT BE EXPOSED.
- WHERE STEEL REINFORCING INTERSECTS, IT SHALL BE SECURELY WELDED.
- THE LIFT BAR IN THE PULL BOX LID SHALL BE SECURELY WELDED TO THE REINFORCING STEEL OR MADE EQUALLY SECURE IN THE LID BY SOME OTHER METHOD.
- LETTERS SHOWN ON LID SHALL BE DIFFERENT FROM OR OF A SIZE LESS THAN THAT INDICATED HEREON.
- LID SHALL SEAT EVENLY ON THE LID FLANGE AND SHALL NOT ROCK MORE THAN 1/8".
- LID BOLTS SHALL BE PROVIDED WHEN SPECIFIED. THEY SHALL CONSIST OF NOT LESS THAN TWO BOLTS, 5/16" DIA MINIMUM WHICH SHALL EACH EXTEND THROUGH PULL BOX AND LID. THEY SHALL SECURE THE LID WITH HEX HEADED NUTS AND WASHERS WHICH SHALL BE RECESSED BELOW THE TOP OF THE LID. BOLTS SHALL BE LOCATED SYMMETRICALLY WITH RESPECT TO THE TOP SURFACE OF THE LID AND SHALL HAVE A NON-CORROSIVE SURFACE.
- PULL BOX LID AND PULL BOX SHALL NOT SHOW ANY EVIDENCE OF FAILURE WHEN SUBJECTED TO A 1000 LBS. VERTICAL LOAD APPLIED DOWNWARD AT THE CENTER OF THE LID WITH THE EDGES SUPPORTED BY THE PULL BOX. TEST LOAD SHALL BE APPLIED BY A SMOOTH SURFACE OF ONE SQUARE INCH CROSS SECTION.
- THE PULL BOX SHALL NOT SHOW ANY EVIDENCE OF FAILURE WHEN SUBJECTED TO A LOAD OF 500 LBS AT THE CENTER OF AND PERPENDICULAR TO ANY SIDE WITH THE OPPOSITE SIDE UNIFORMLY SUPPORTED. TEST LOAD SHALL BE APPLIED AS IN NOTE NO. 16 ABOVE.
- TWO PULL BOXES MAY BE SELECTED FROM EACH LOT OF ONE HUNDRED DELIVERED, AND USED FOR TEST PURPOSES. FAILURE OF ANY TEST PULL BOX MAY BE CAUSE FOR REJECTION OF THE LOT.
- WHERE A PULL BOX WITH EXTENSION IS SPECIFIED IN THE PLANS, IT MAY CONSIST OF A SECOND PULL BOX INSTALLED IMMEDIATELY BENEATH THE FIRST, OR IT MAY BE A DIFFERENT PART WHICH MEETS THE APPLICABLE DIMENSIONS AND SPECIFICATIONS OF THIS PLAN.
- PULL BOXES SHALL BE INSTALLED ON A BED OF 1" CRUSHED ROCK WHICH SHALL BE A MINIMUM OF 12" DEPTH WHICH SHALL EXTEND A MINIMUM OF 6" BEYOND THE PULL BOX SIDES.



BOX SIDE VIEW CROSS SECTION



BOX END VIEW CROSS SECTION

LETTER	DESCRIPTION	TYPE 2		TYPE 3	
		DIMENSION	TOLERANCE	DIMENSION	TOLERANCE
A	BOX LENGTH, INSIDE	20"	+ 0	28"	+ 0
B	BOX WIDTH, INSIDE	10"	+ 0	16"	+ 0
C	LID OPENING LENGTH	22"	1/8" 0	30"	1/8" 0
D	LID OPENING WIDTH	12"	1/8" 0	18"	1/8" 0
E	LID LENGTH	21 7/8"	0 1/8"	29 7/8"	0 1/8"
F	LID WIDTH	11 7/8"	0 1/8"	17 7/8"	0 1/8"
G	BOX THICKNESS	1"	+ 0	1 1/2"	+ 0

LETTER	DESCRIPTION	TYPE 2		TYPE 3	
		DIMENSION	TOLERANCE	DIMENSION	TOLERANCE
H	BOX, LIP THICKNESS	1 1/2"	+ 0	2"	+ 0
I	BOX, LID FLANGE RADIUS	1 1/4"	1/8" 1/8"	1"	1/8" 1/8"
J	BOX, CORNER RADIUS	2 7/8"	1/8" 1/8"	3"	1/2" 1/2"
K	LID, MAJOR CORNER RADIUS	1 1/8"	1/8" 1/8"	7/8"	1/8" 1/8"
L	LIFT BAR	1 REQUIRED		2 REQUIRED	

+ , 0 INDICATES GREATER THAN OR EQUAL TO DIMENSION.

**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CALTRANS - TRAFFIC DESIGN

REVISOR BY: YAGHOUB SHADROOZ
DATE: CESAR HERNANDEZ

CALCULATED BY: HASSAN MANNA
DESIGNED BY: CHECKED BY:

FUNCTIONAL SUPERVISOR: HASSAN MANNA

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



UNIT 1879

PROJECT NUMBER & PHASE

07000018671

BORDER LAST REVISED 7/2/2010

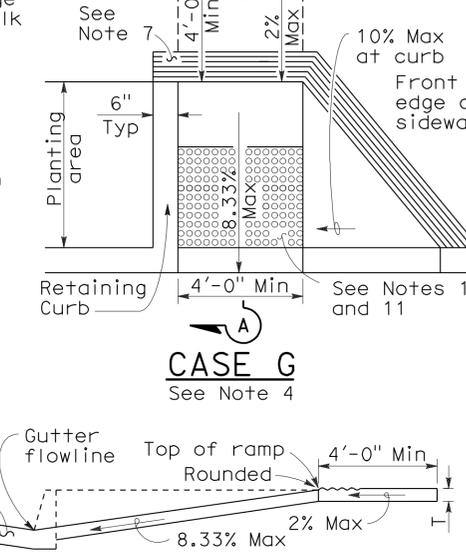
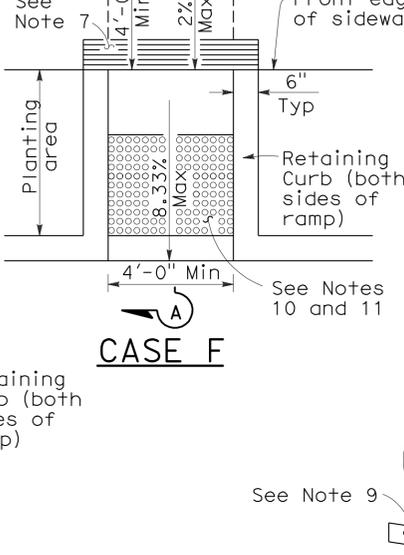
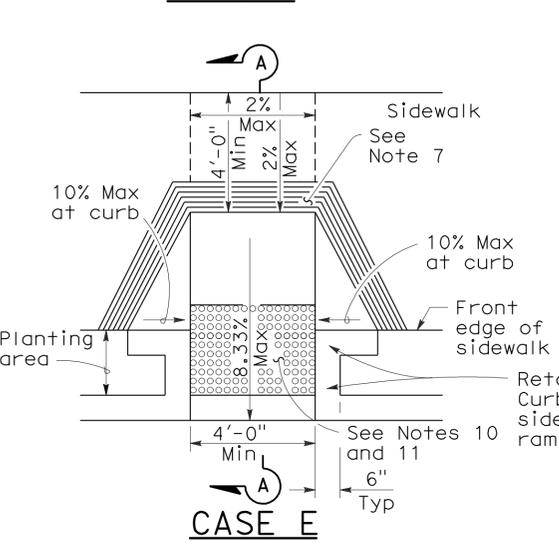
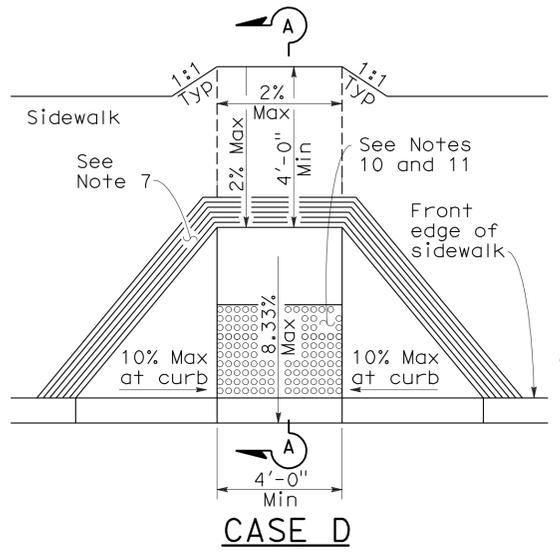
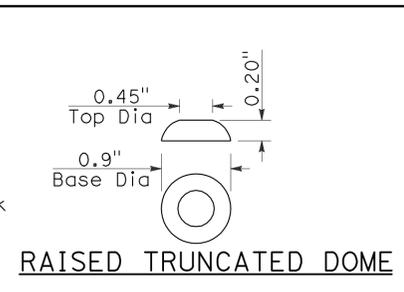
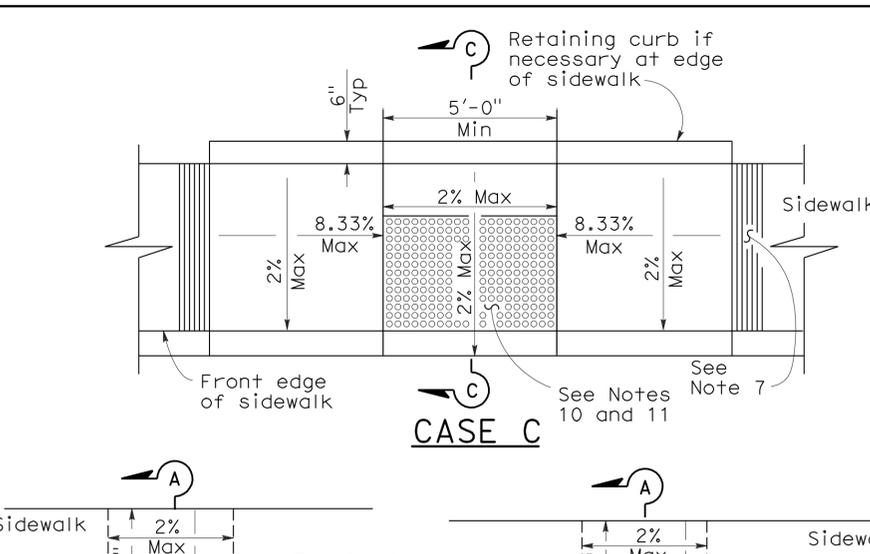
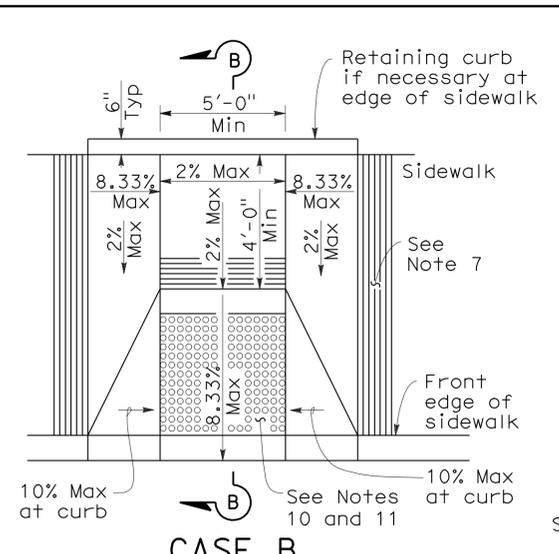
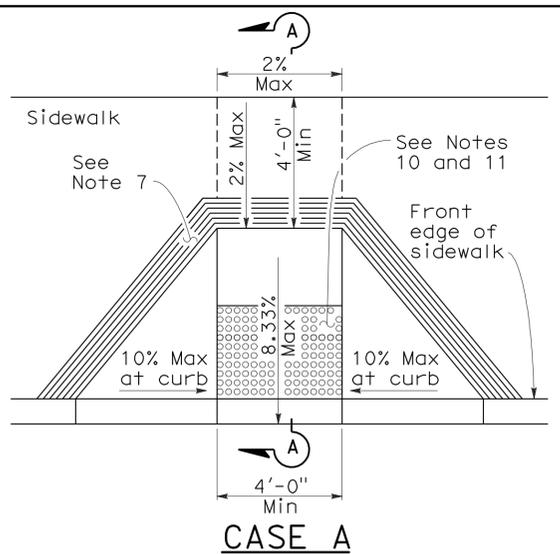
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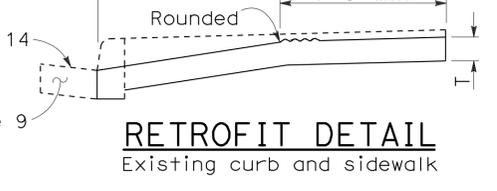
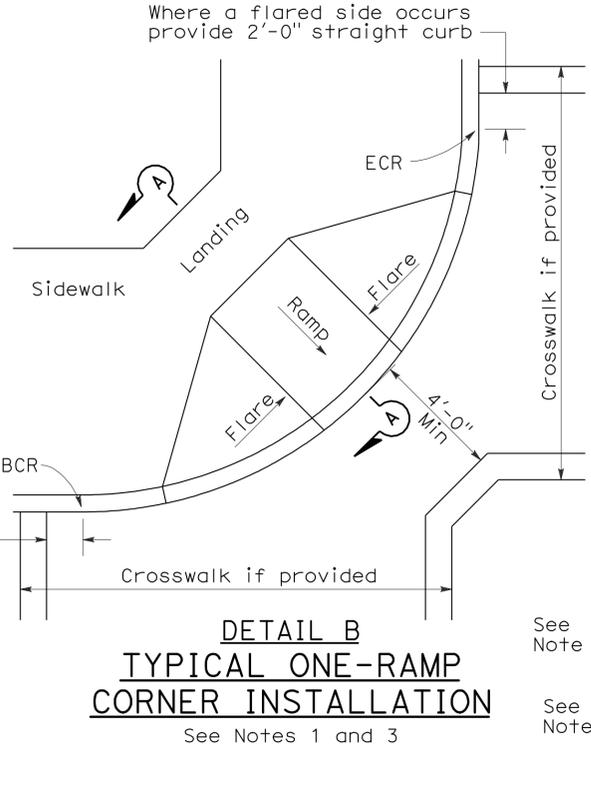
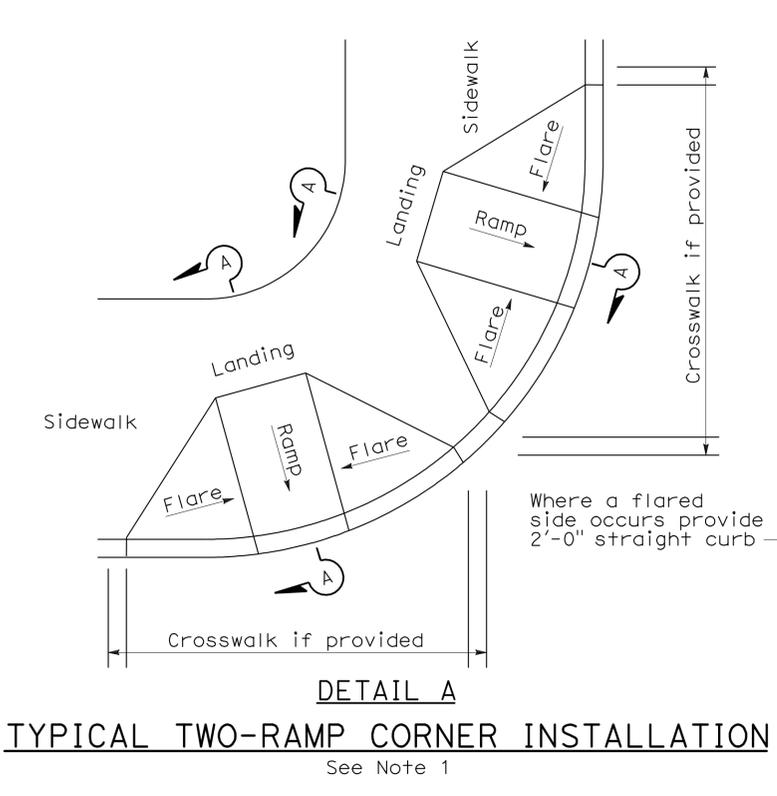
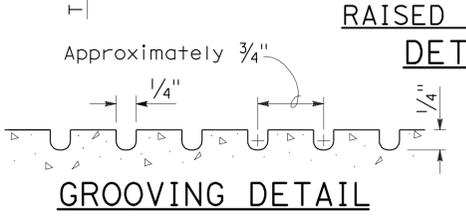
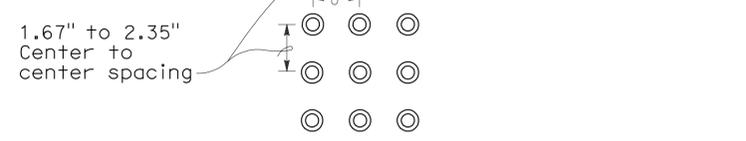
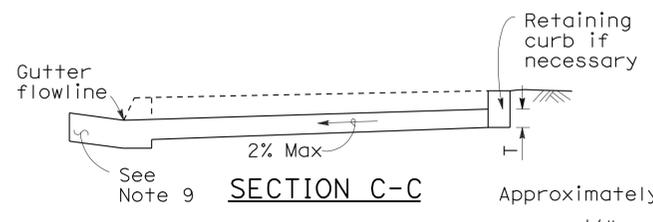
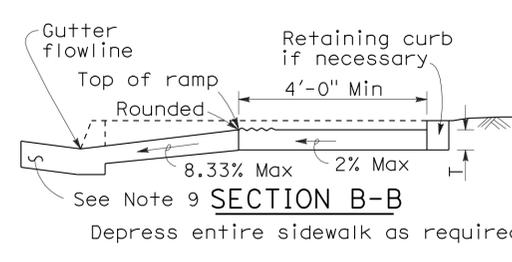
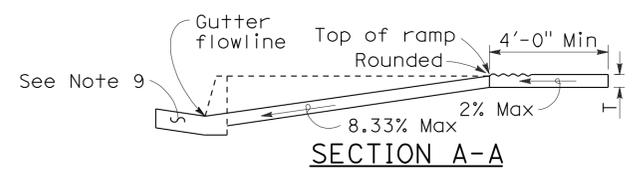
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	29	47

H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 1, 2006
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
Hector David Cordova
No. C41957
Exp. 3-31-08
CIVIL
STATE OF CALIFORNIA



- NOTES:**
- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
 - If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
 - When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
 - As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
 - If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
 - Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
 - The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
 - Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
 - Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
 - Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
 - The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
 - Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
 - Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
 - For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.



See Note 10
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CURB RAMP DETAILS
 NO SCALE
 RSP A88A DATED SEPTEMBER 1, 2006 SUPERSEDES STANDARD PLAN A88A
 DATED MAY 1, 2006 - PAGE 115 OF THE STANDARD PLANS BOOK DATED MAY 2006.
REVISED STANDARD PLAN RSP A88A

2006 REVISED STANDARD PLAN RSP A88A

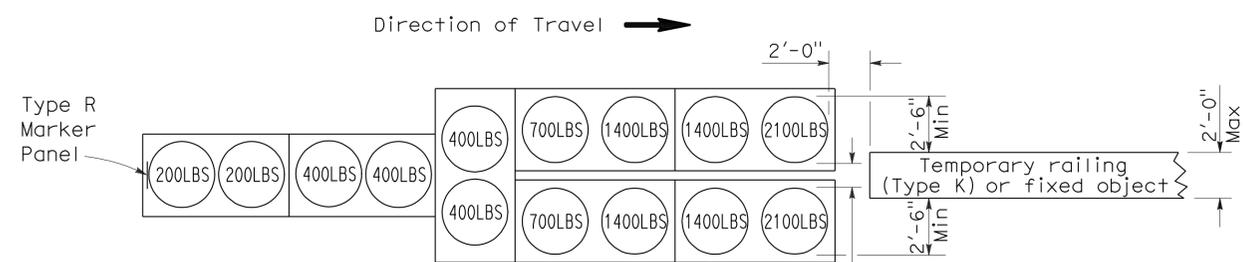
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	30	47

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

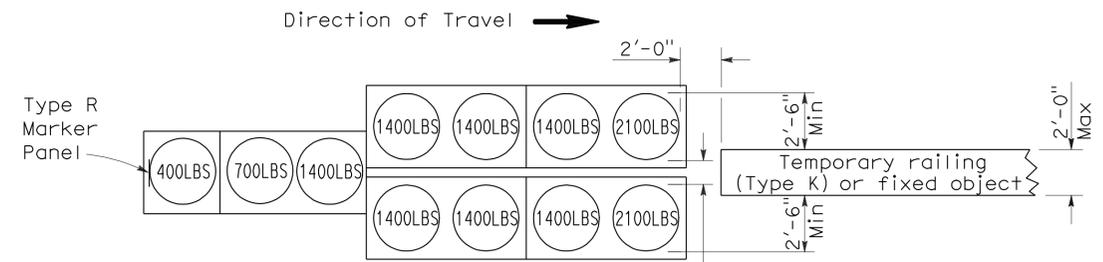
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To accompany plans dated 2-22-11



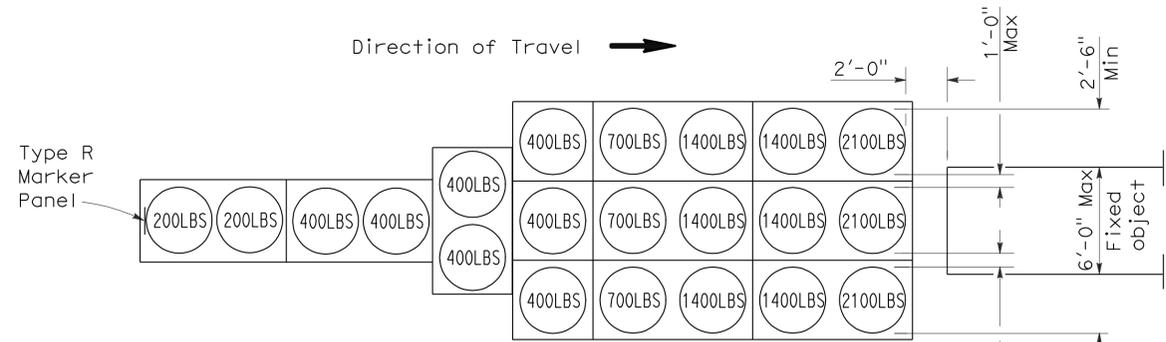
ARRAY 'TU14'

Approach speed 45 mph or more



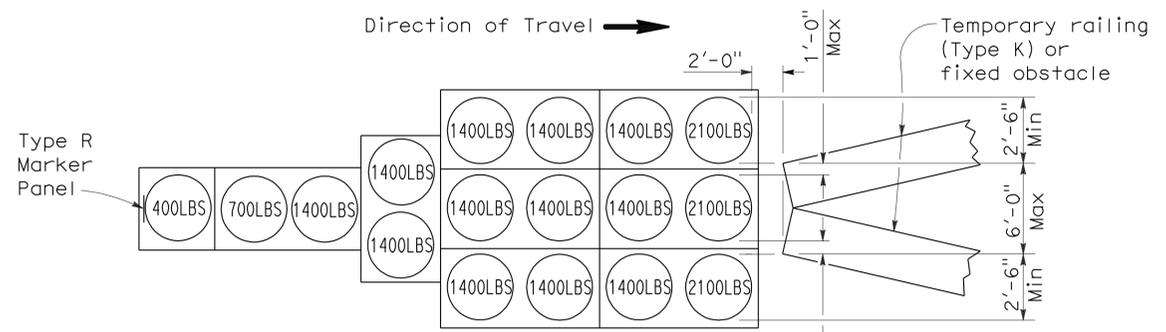
ARRAY 'TU11'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more

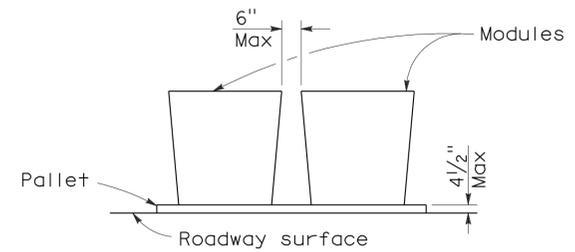
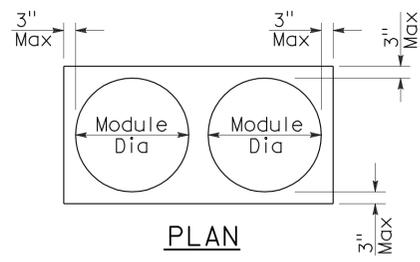


ARRAY 'TU17'

Approach speed less than 45 mph

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

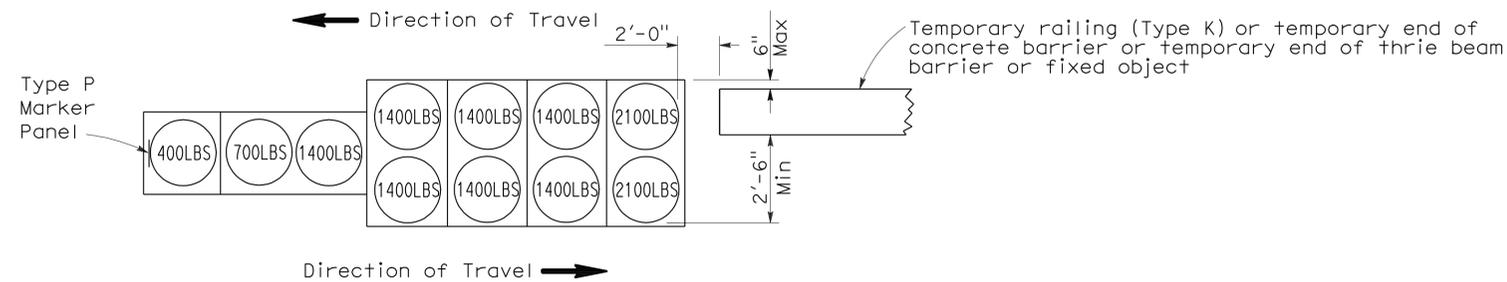
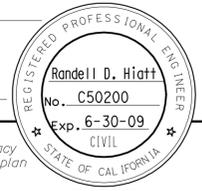
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	31	47

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

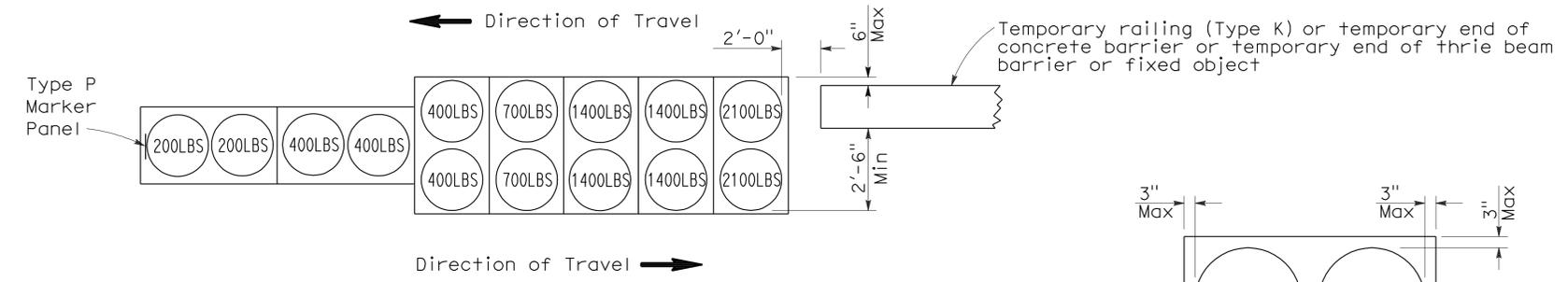
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 2-22-11



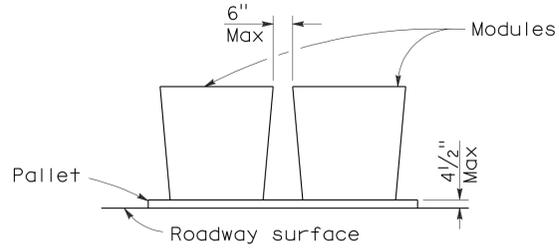
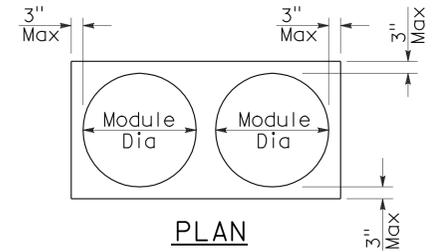
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**
NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	32	47

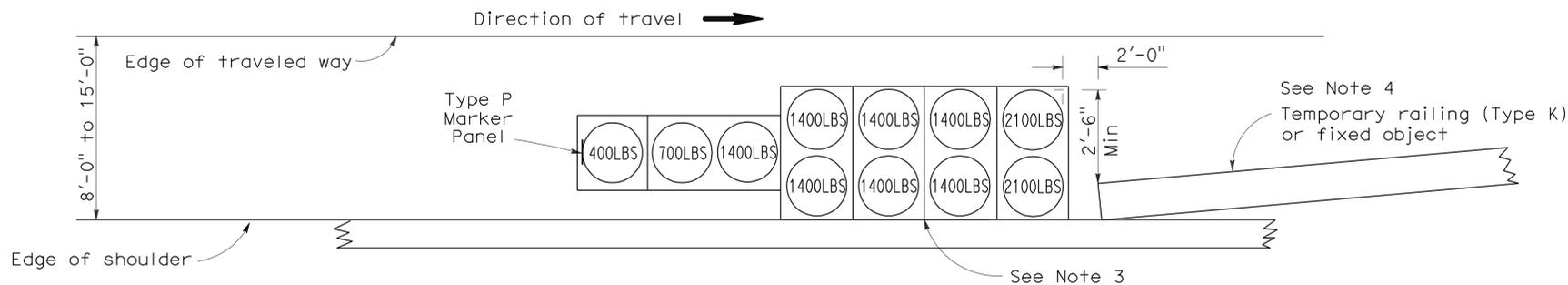
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

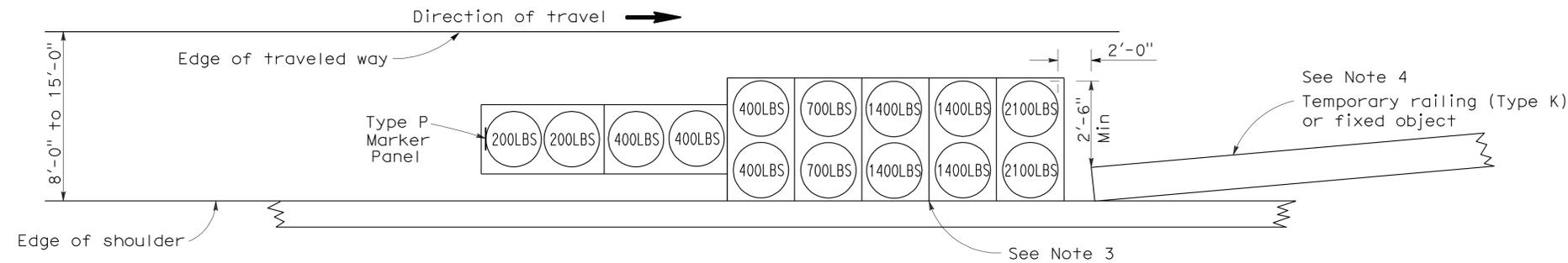
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 2-22-11



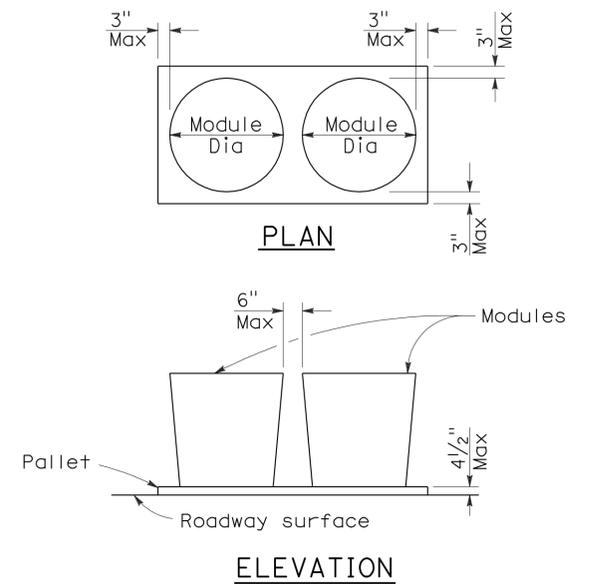
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.



CRASH CUSHION PALLET DETAIL
See Note 11

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	33	47

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

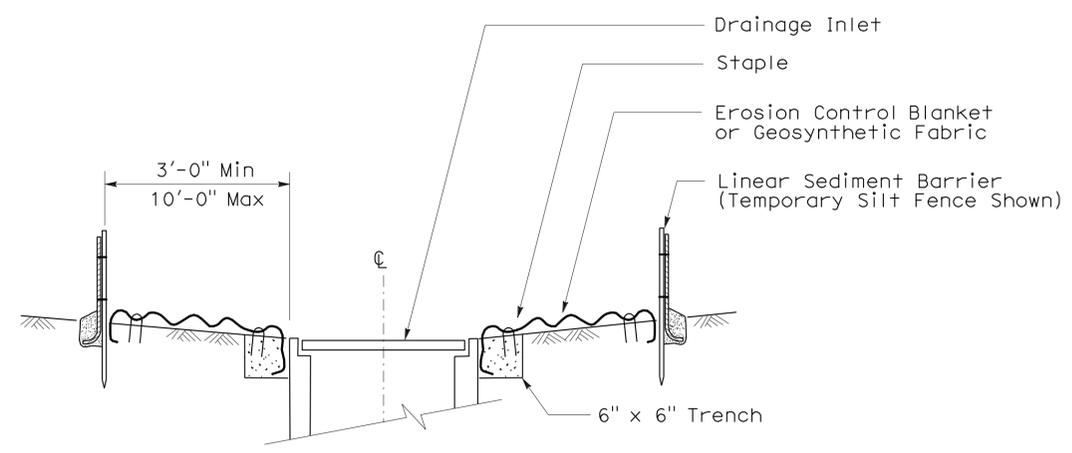
August 15, 2008
 PLANS Approval DATE

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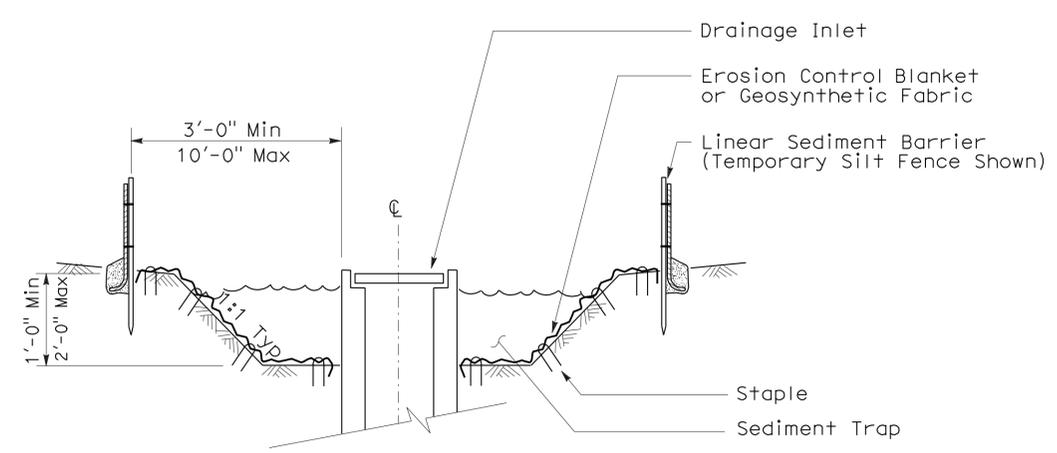
LICENSED LANDSCAPE ARCHITECT
 Robert B. Schott 1999
 Signature: *Robert B. Schott*
 11-04-08
 08-11-08
 Date

To accompany plans dated 2-22-11

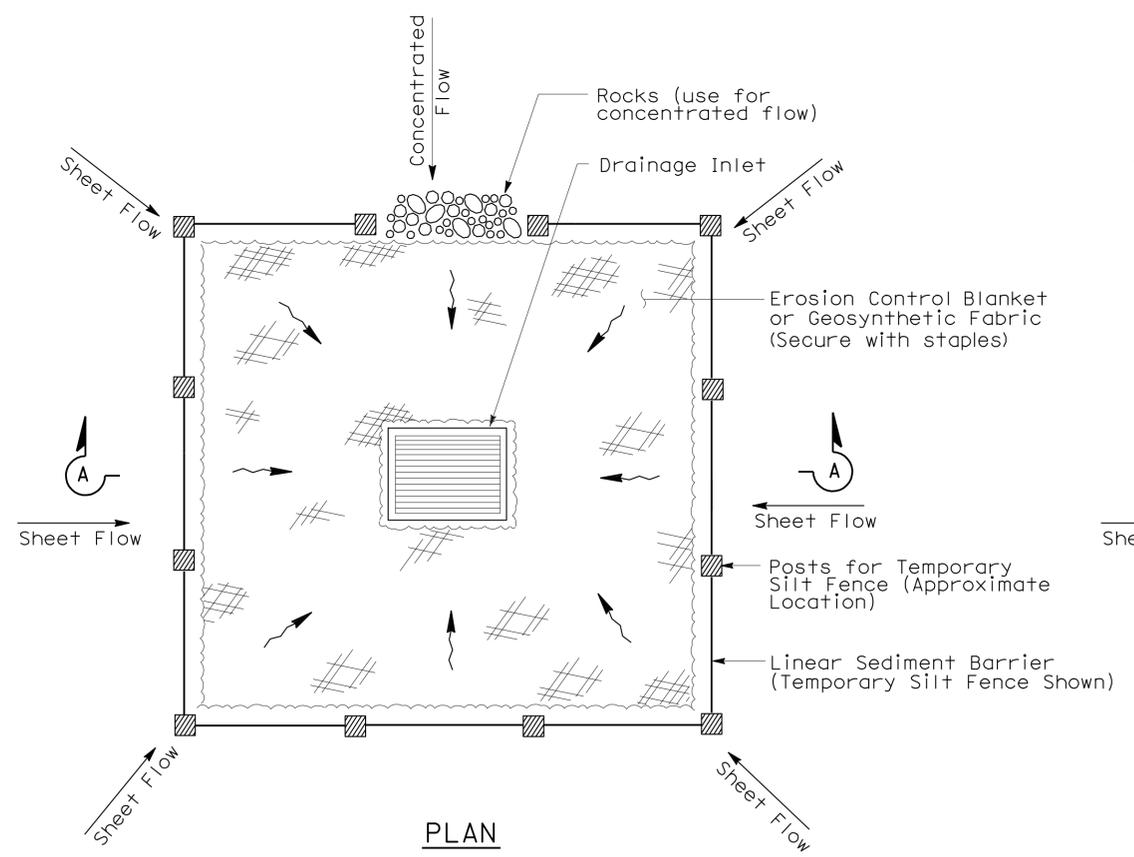
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
 - Dimensions may vary to fit field conditions.



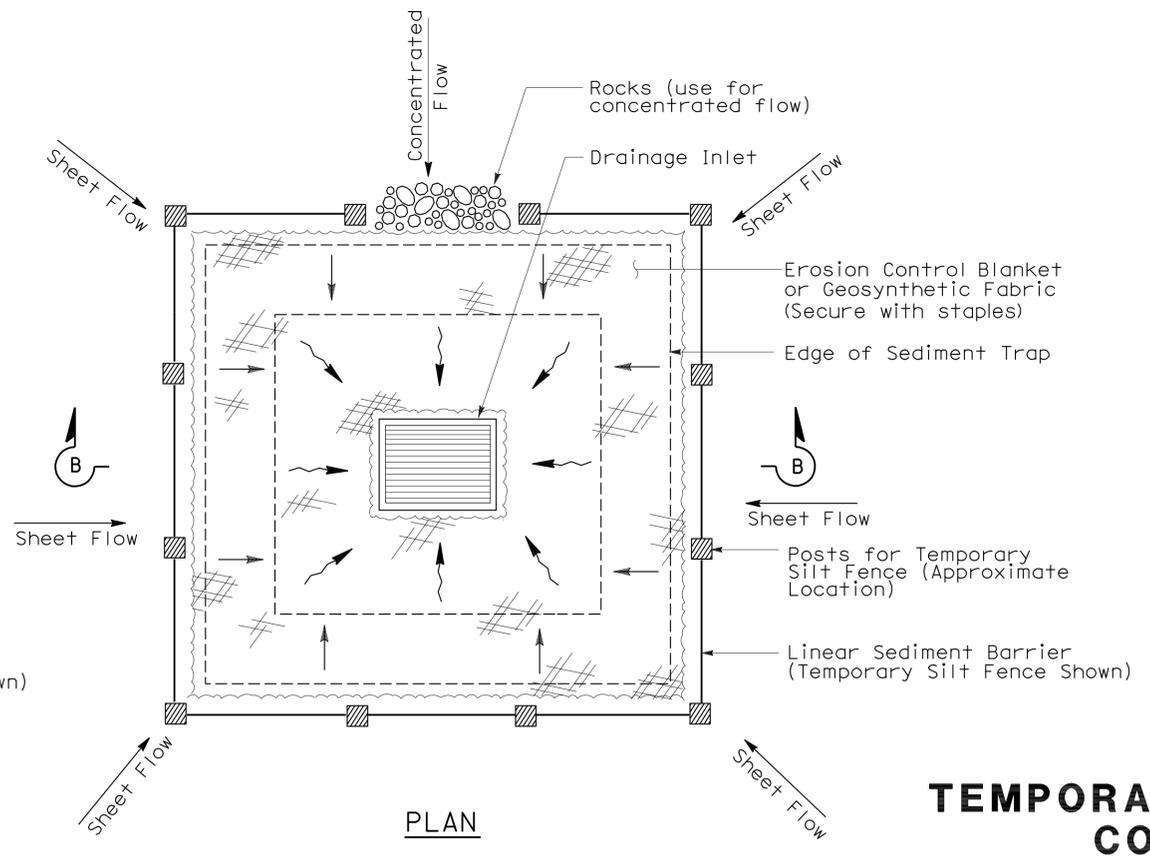
SECTION A-A



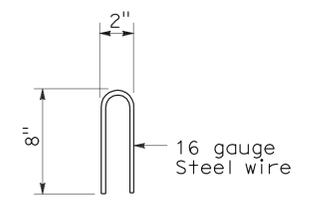
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

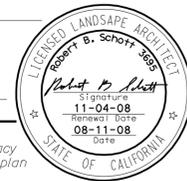
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T61

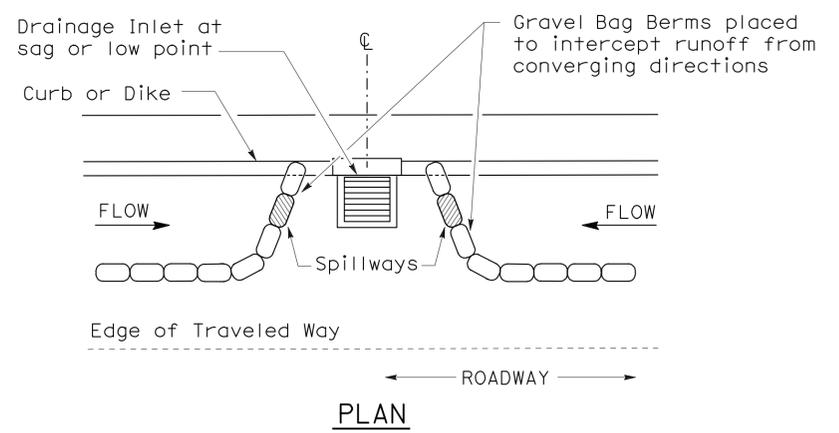


To accompany plans dated 2-22-11

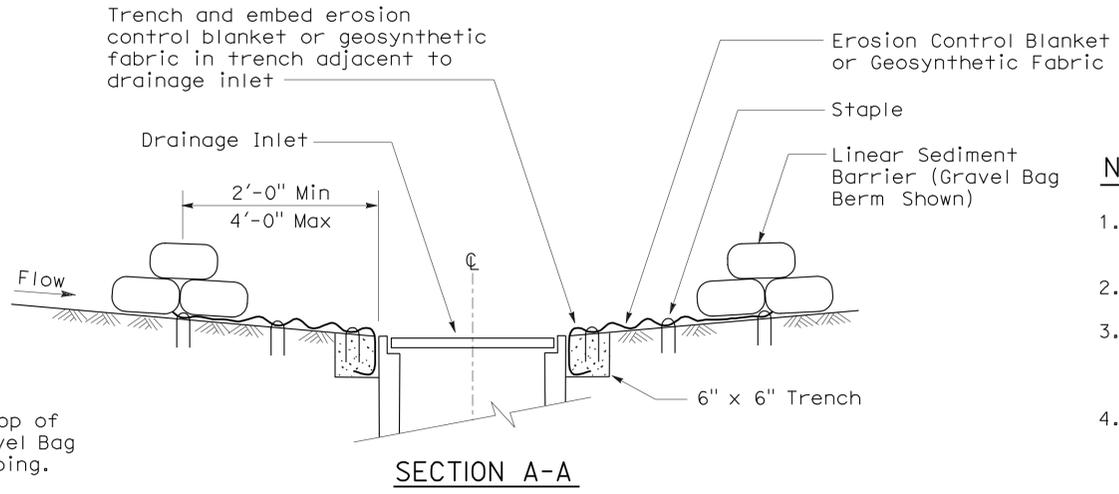
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



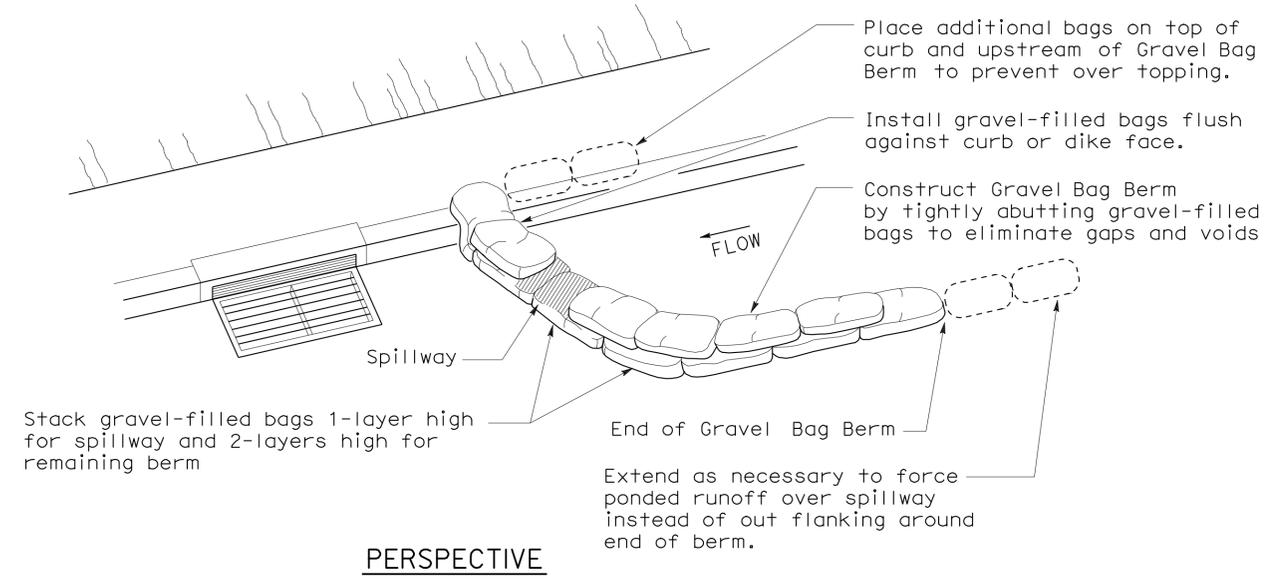
PLAN
CONFIGURATION FOR SAG POINT INLET
(GRAVEL BAG BERM)



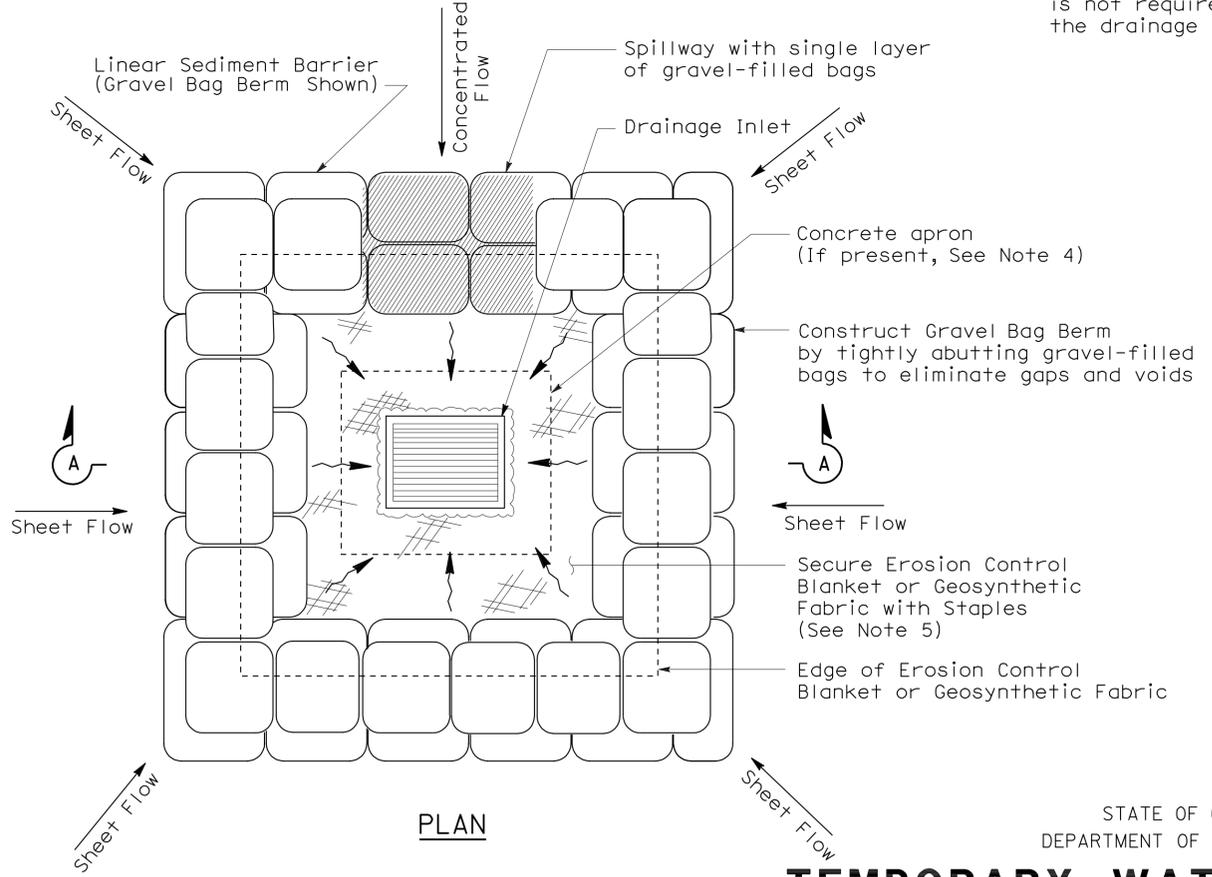
SECTION A-A

NOTES:

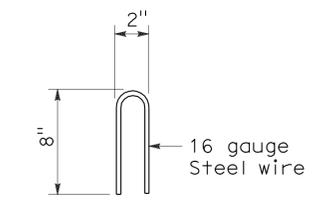
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



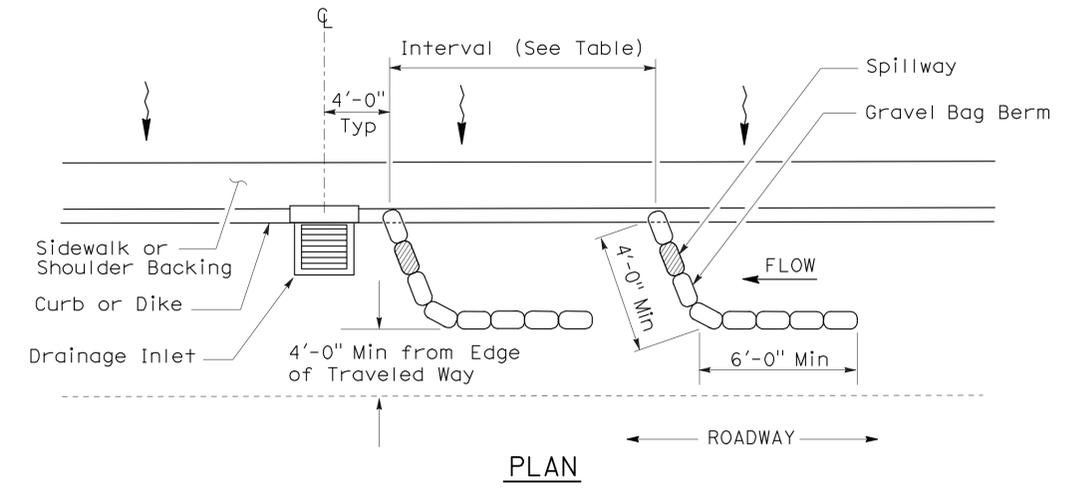
PERSPECTIVE



PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 3A)
(GRAVEL BAG BERM)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE
 NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T62

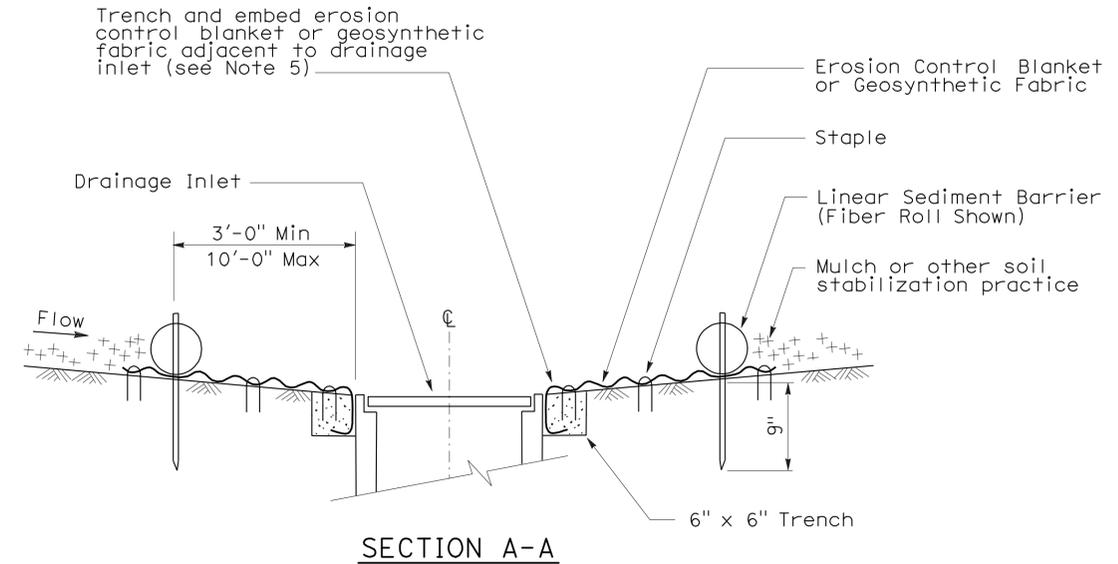
FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'

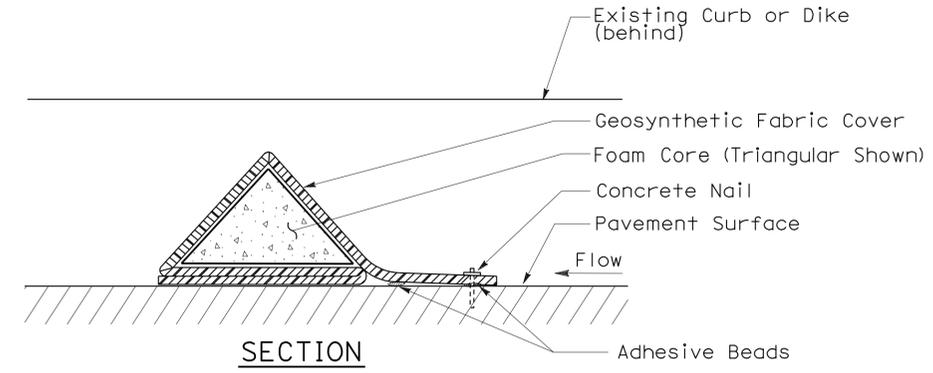
To accompany plans dated 2-22-11

NOTES:

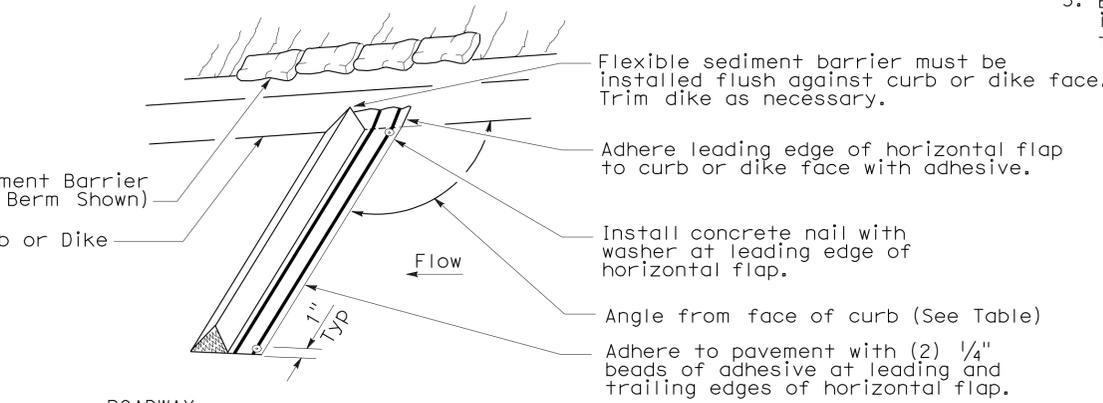
- See Standard Plan T51 for Temporary Silt Fence.
- Dimensions may vary to fit field conditions.
- Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
- Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
- Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.



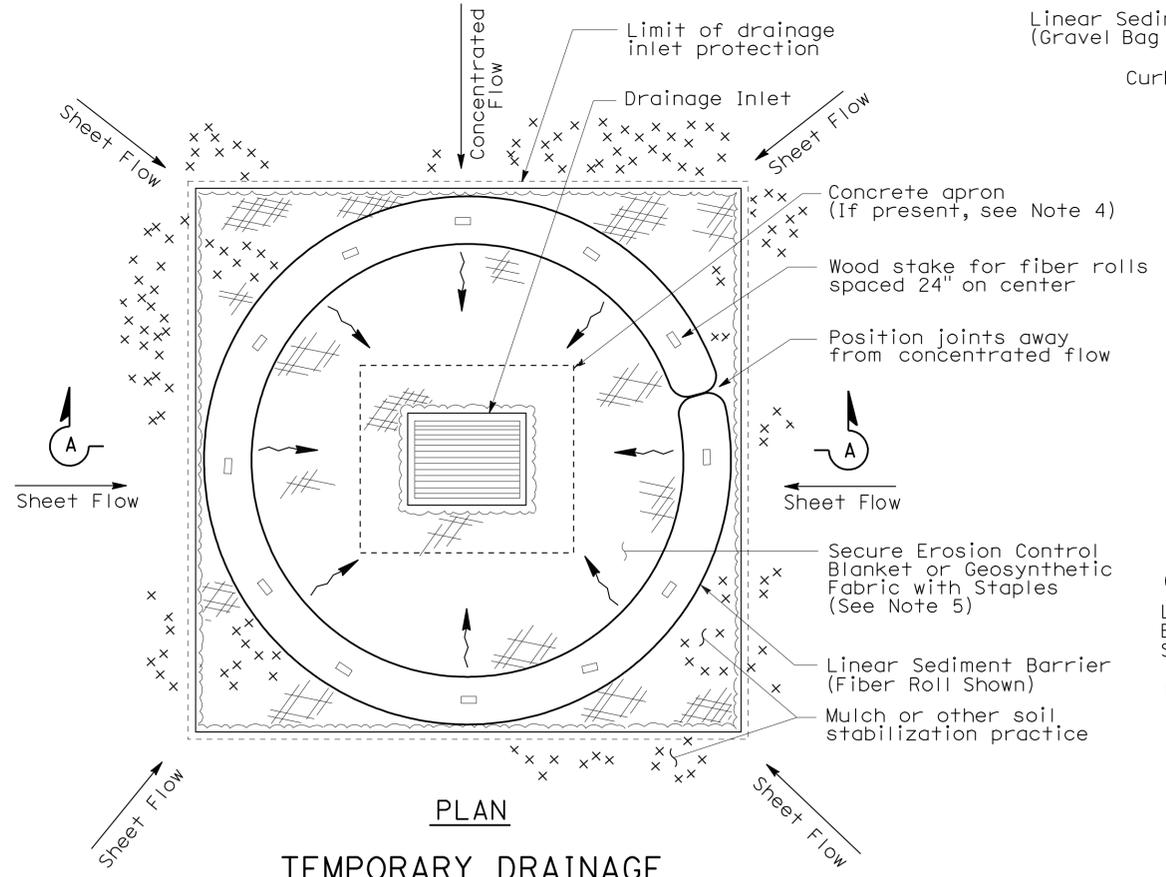
SECTION A-A



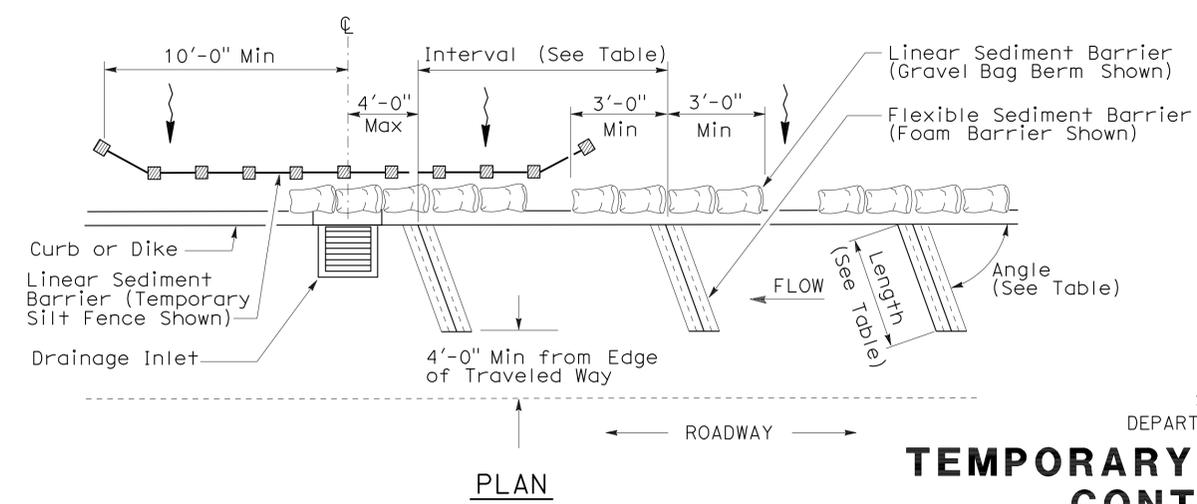
SECTION FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)



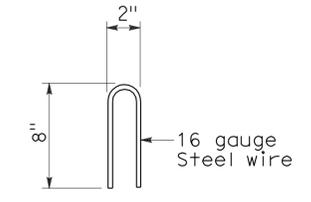
PERSPECTIVE



PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)
 NO SCALE
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T63

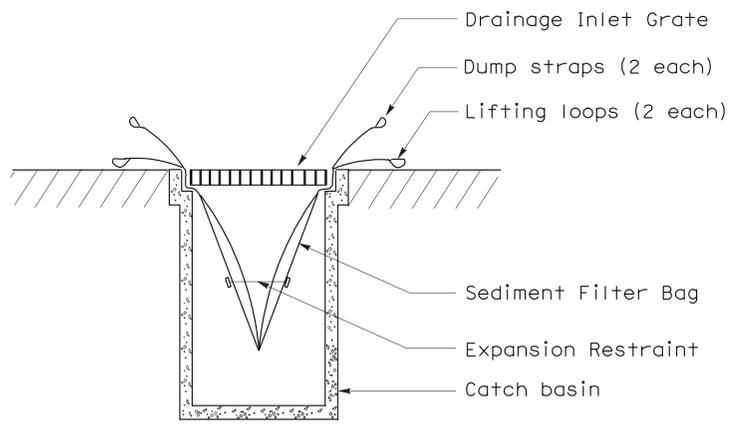
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	36	47

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

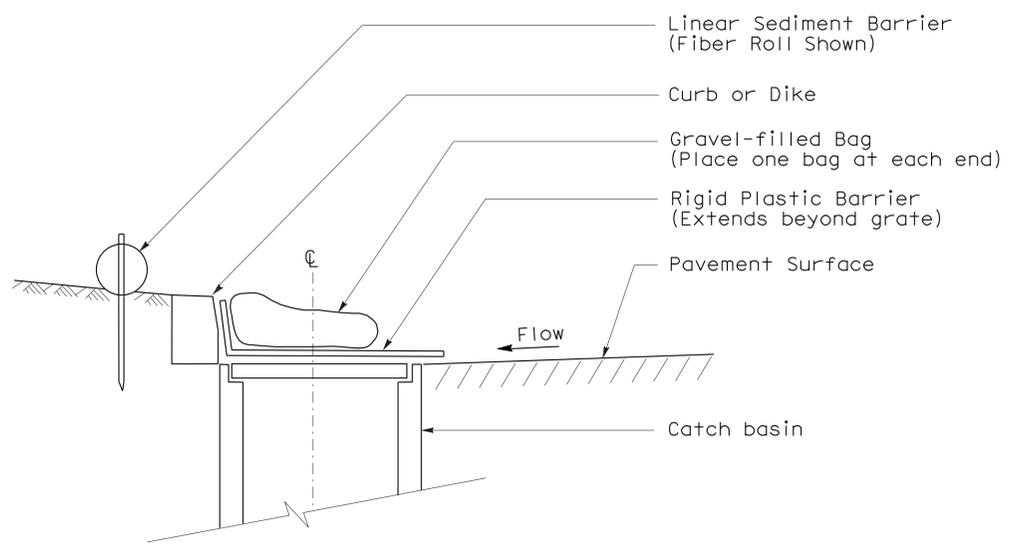
August 15, 2008
 PLANS APPROVAL DATE

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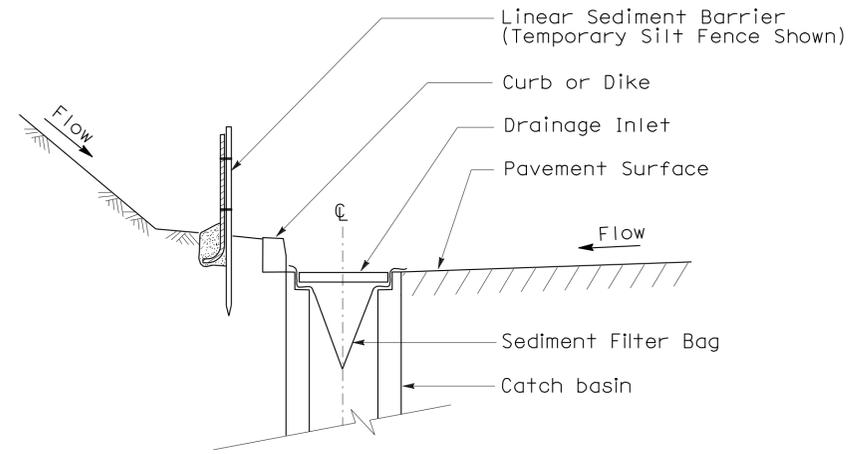
To accompany plans dated 2-22-11



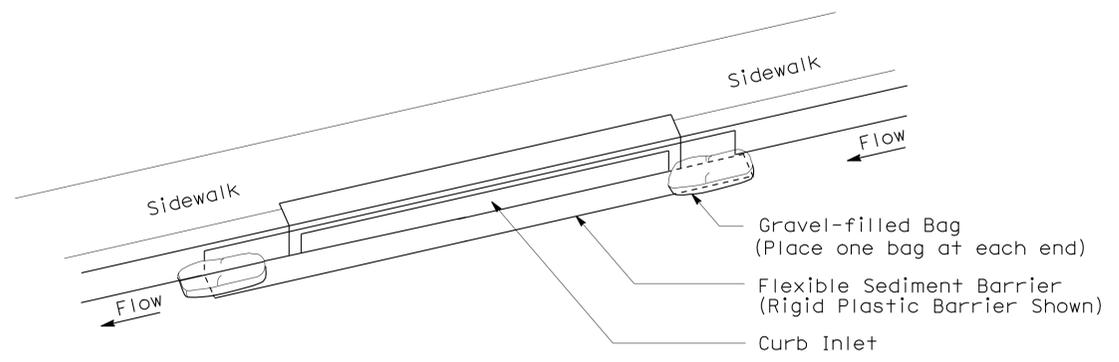
SECTION B-B
SEDIMENT FILTER BAG DETAIL



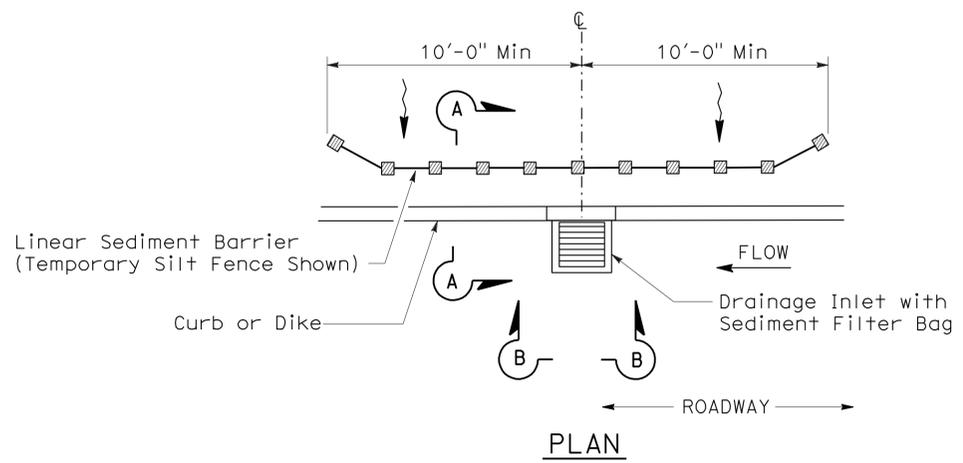
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



SECTION A-A



PERSPECTIVE
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6B)
(CURB INLET WITHOUT GRATE)



PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 5)
(SEDIMENT FILTER BAG)

- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
 2. Dimensions may vary to fit field conditions.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

ELECTROLIERS

STANDARD TYPES		
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		
32		
35		
36-20A		

NOTES:

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS 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.
- Variations noted adjacent to symbol on project plans.

- Electrolier (see project notes or project plans)
- Luminaire on wood pole

STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	37	47

Jeffrey G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

Jeffrey G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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

To accompany plans dated 2-22-11

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.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	38	47

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

CONDUIT

PROPOSED	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 in/on structure or service pole

SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon, Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SERVICE EQUIPMENT

PROPOSED	EXISTING	
---OH	---oh	Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

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

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

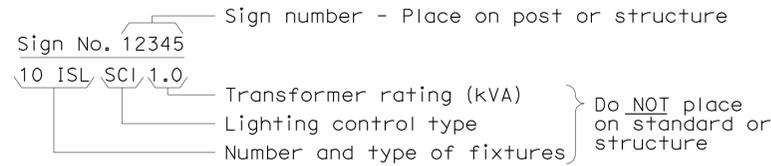
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

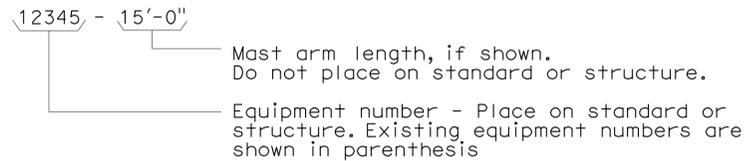
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

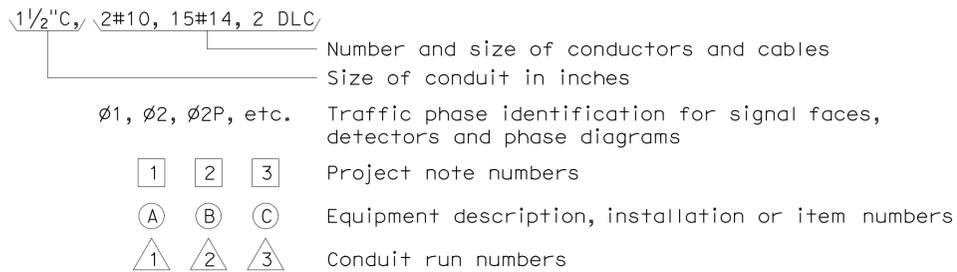
ILLUMINATED SIGN IDENTIFICATION NUMBER:



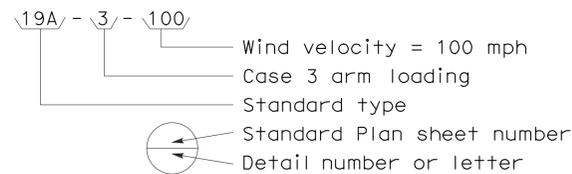
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



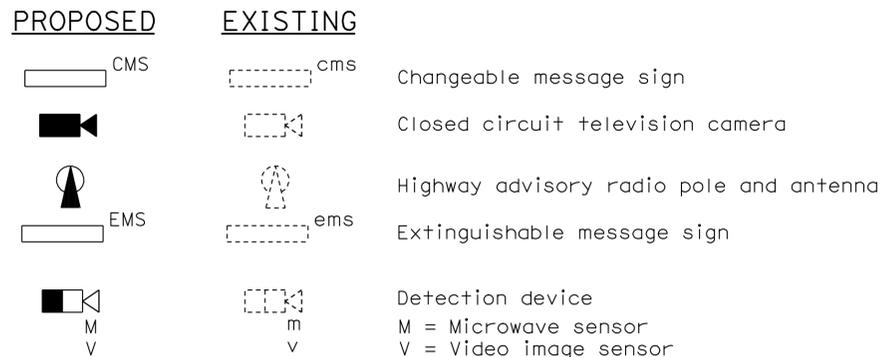
CONDUIT AND CONDUCTOR IDENTIFICATION:



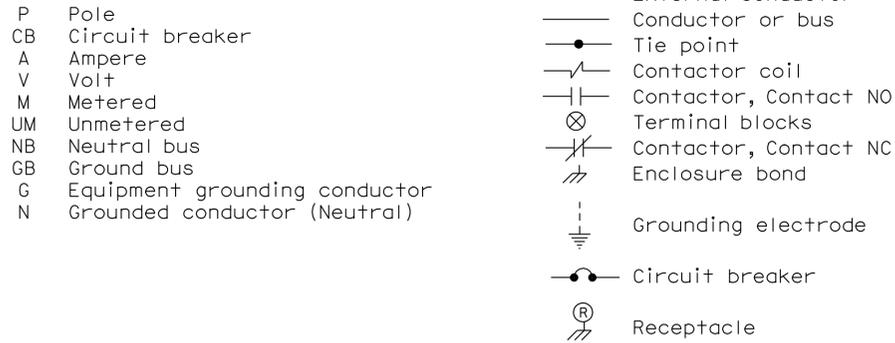
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



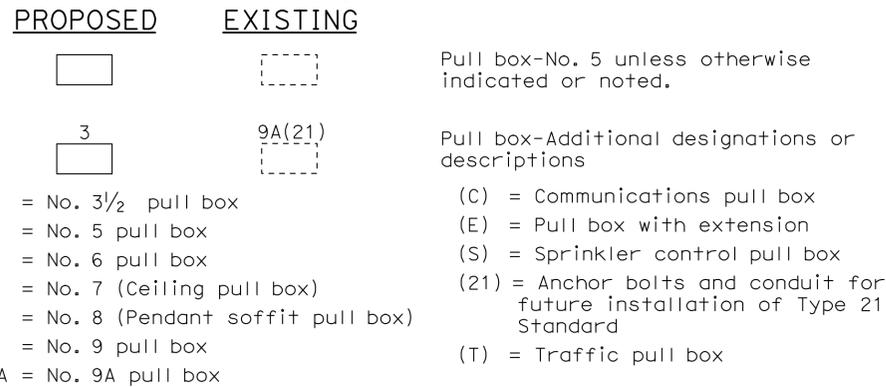
MISCELLANEOUS EQUIPMENT



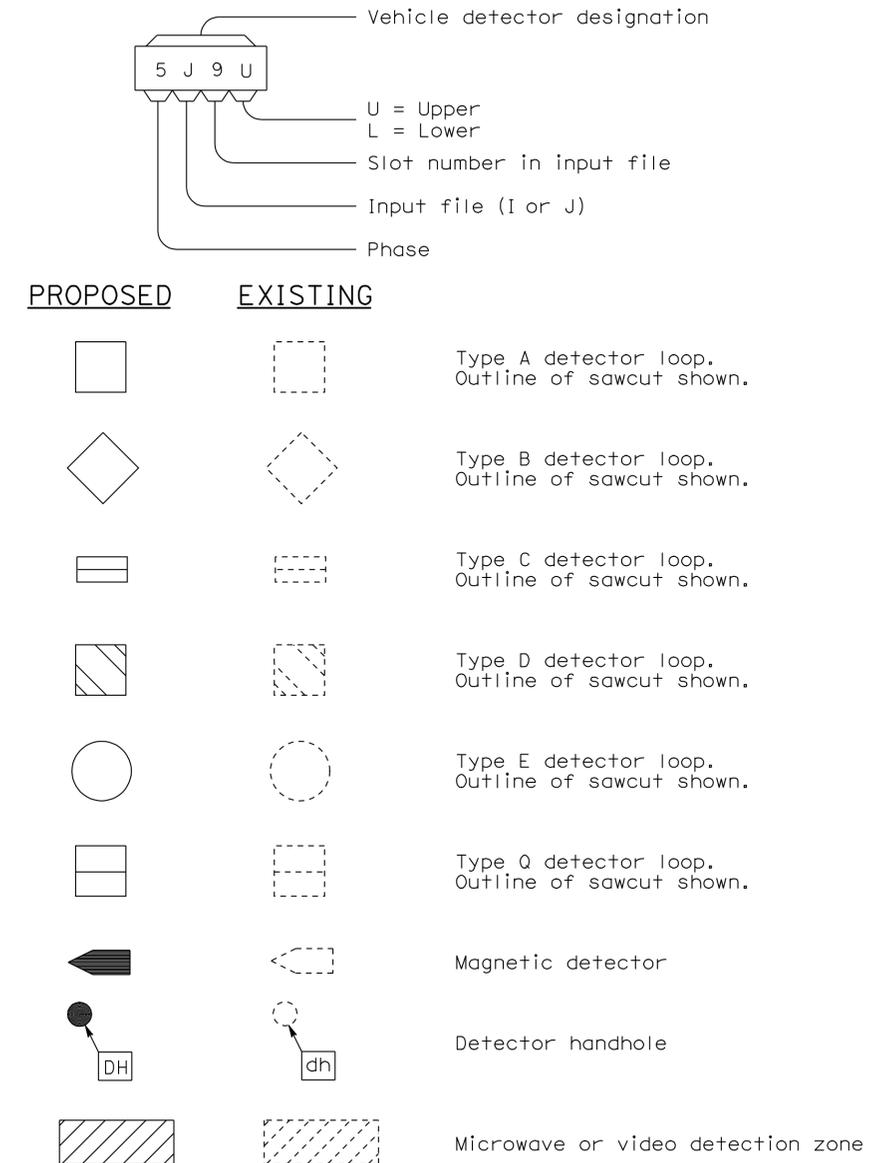
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

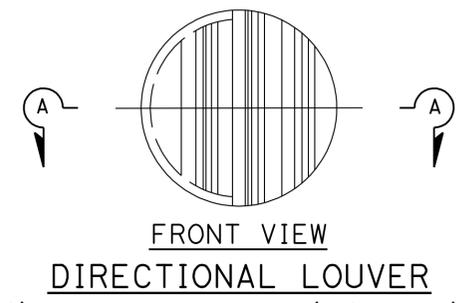
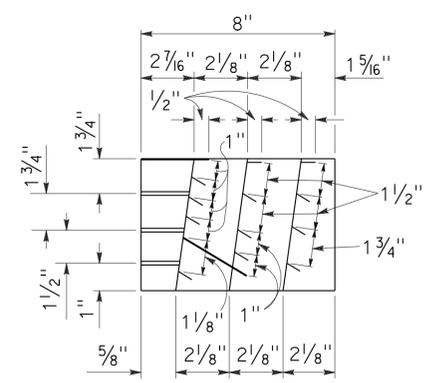
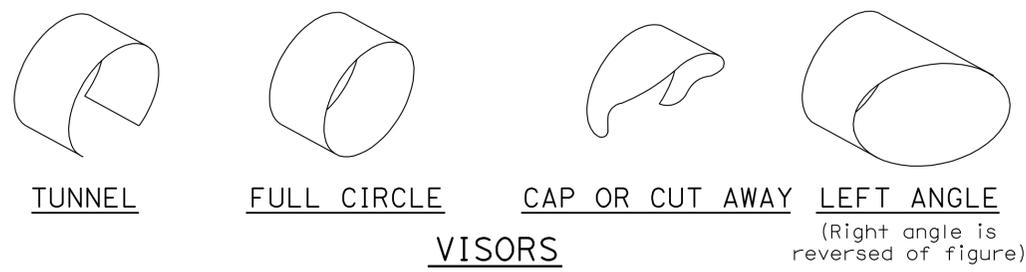
2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	40	47

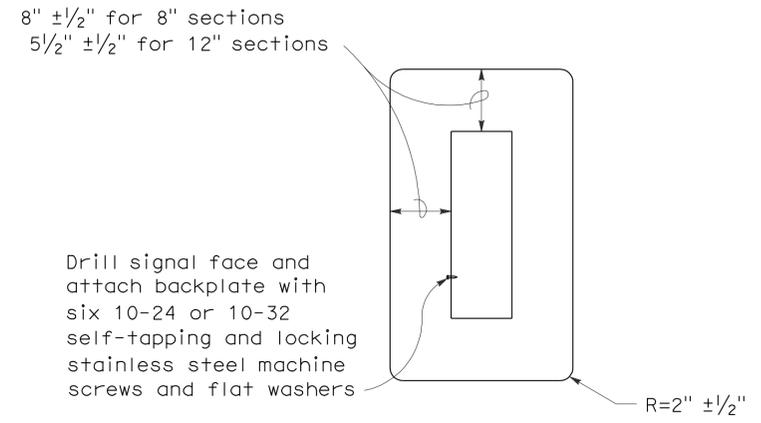
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

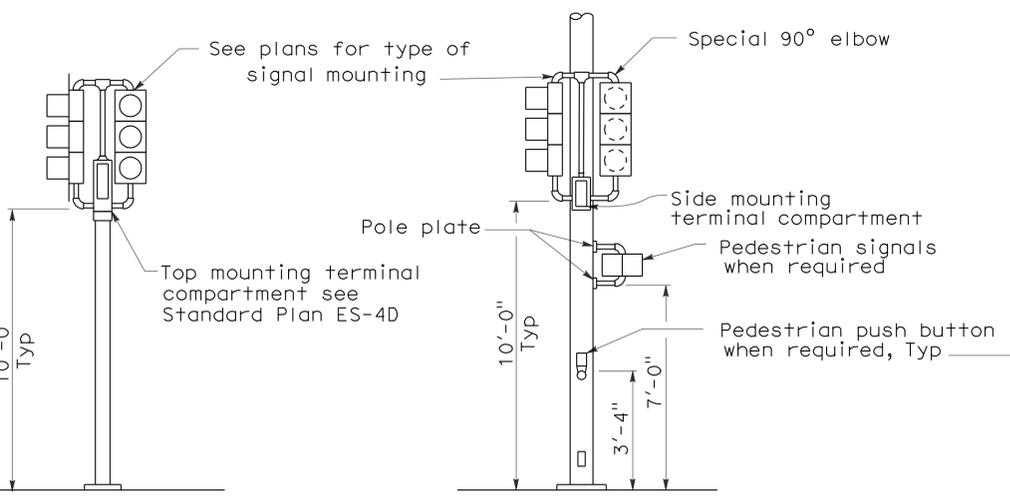
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.



8" AND 12" SECTIONS
BACKPLATE
 1/16" minimum thickness
 3001-14 aluminum, or plastic when specified

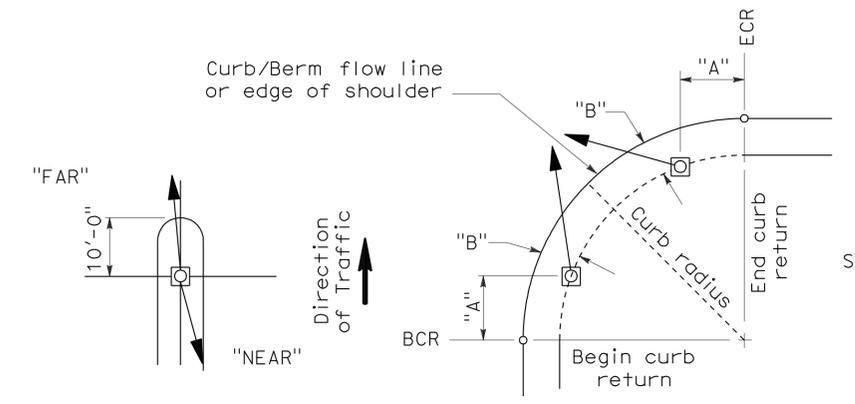


TOP MOUNTED SIGNALS (TV)
 Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

SIDE MOUNTED SIGNALS (SV AND SP)
 Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL
 Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

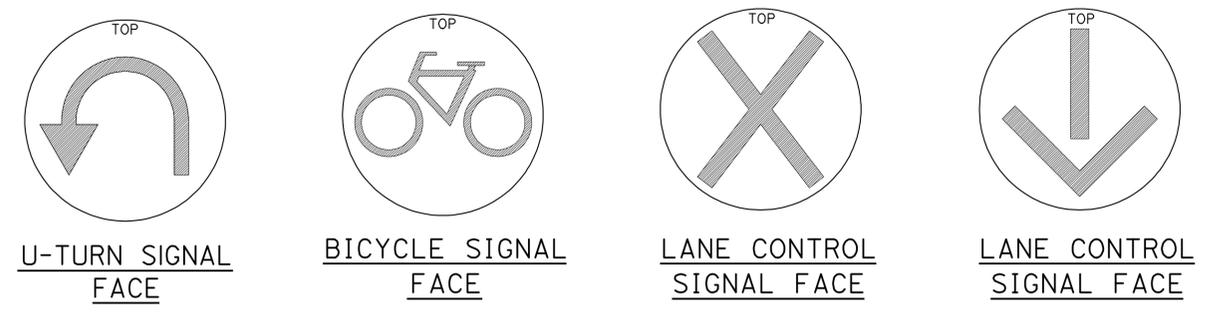
TYPICAL SIGNAL INSTALLATIONS



NOTES:

1. Typical signal pole placement unless dimensioned on plans.
2. For "A" and "B" dimensions, see Pole Schedule, or as directed by the Engineer.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C DATED MAY 1, 2006 - PAGE 420 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-4C

2006 REVISED STANDARD PLAN RSP ES-4C

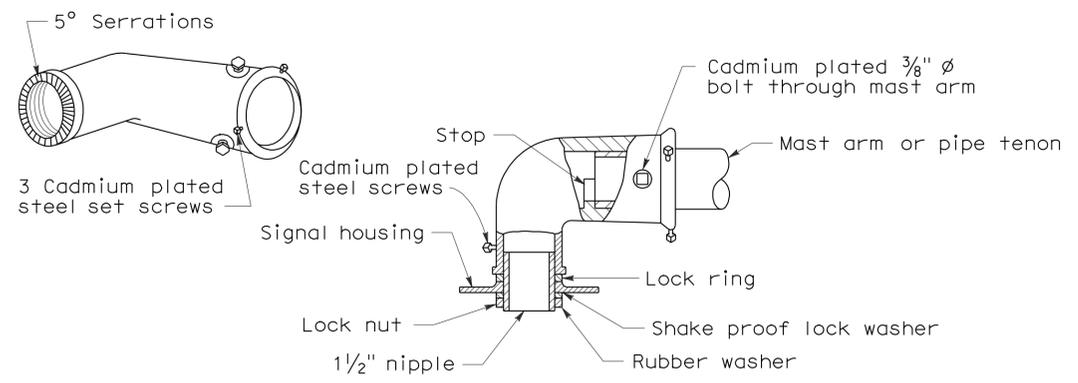
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	41	47

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

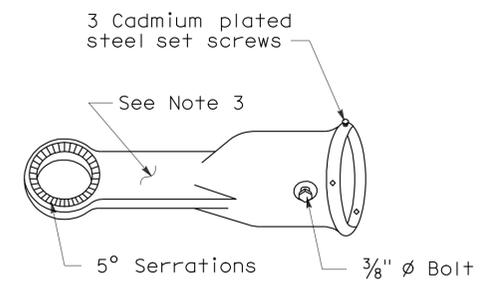
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 2-22-11



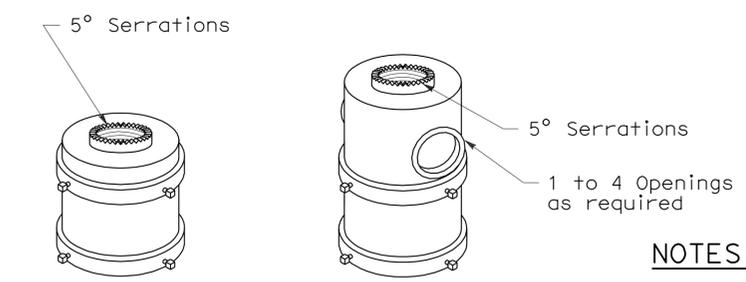
MAST ARM MOUNTING - TYPE "MAT"

For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.

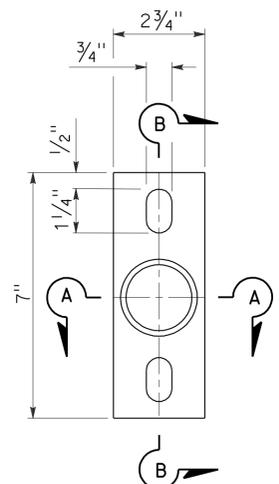


For one mounting For multiple mountings

TOP MOUNTINGS

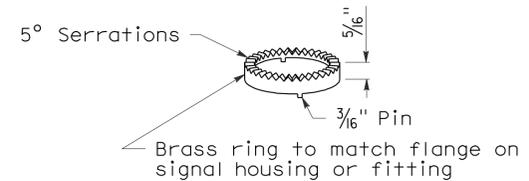
For 4 NPS pipe, see Note 2.

SIGNAL SLIP FITTERS



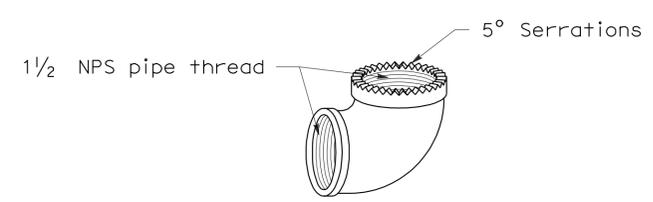
POLE PLATE

For side mountings



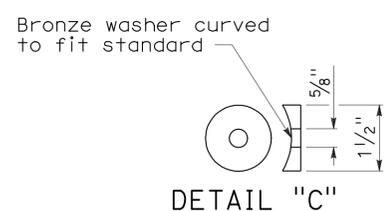
LOCK RING

Use where locking ring is not integral with signal housing or fitting.



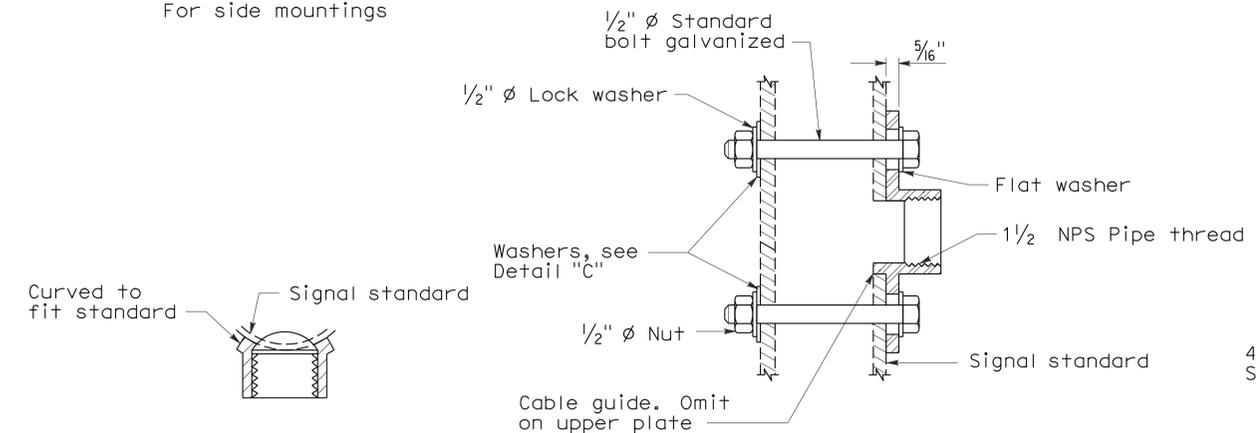
SPECIAL 90° ELBOW

One for each signal head, except those with special slip fitter mounting



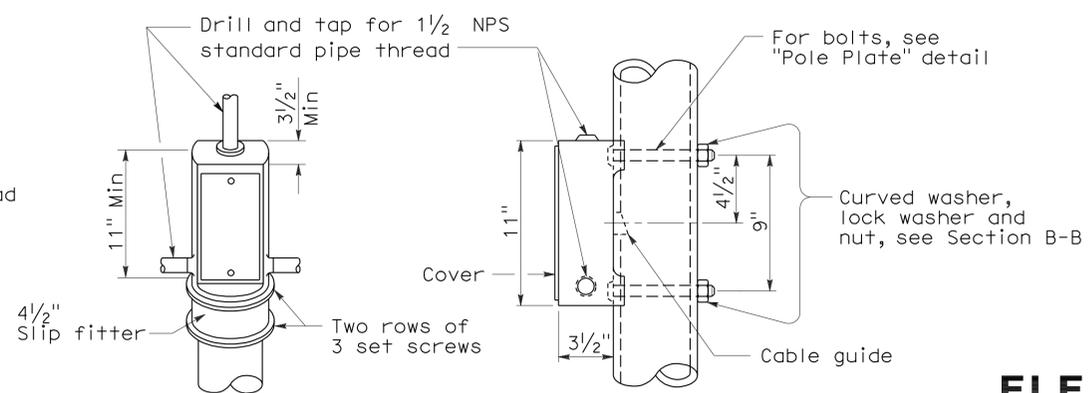
DETAIL "C"

MISCELLANEOUS MOUNTING HARDWARE



SECTION A-A

SECTION B-B



TOP MOUNTING

SIDE MOUNTING

TERMINAL COMPARTMENTS

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP ES-4D DATED June 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 1, 2006 - PAGE 421 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-4D

2006 REVISED STANDARD PLAN RSP ES-4D

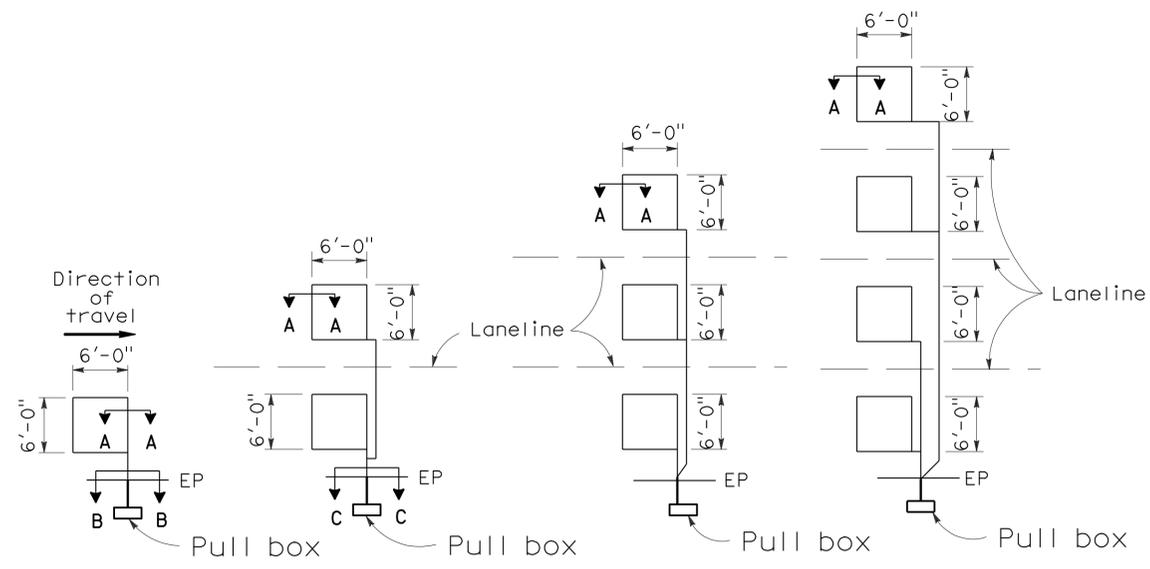
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	42	47

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

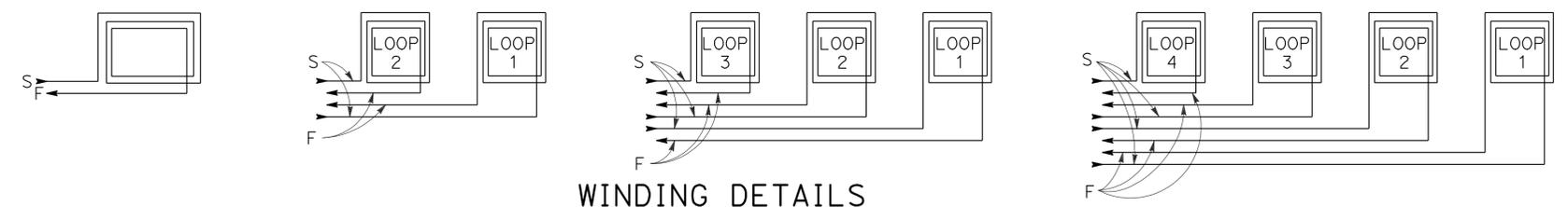
LOOP INSTALLATION PROCEDURE

- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
- Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



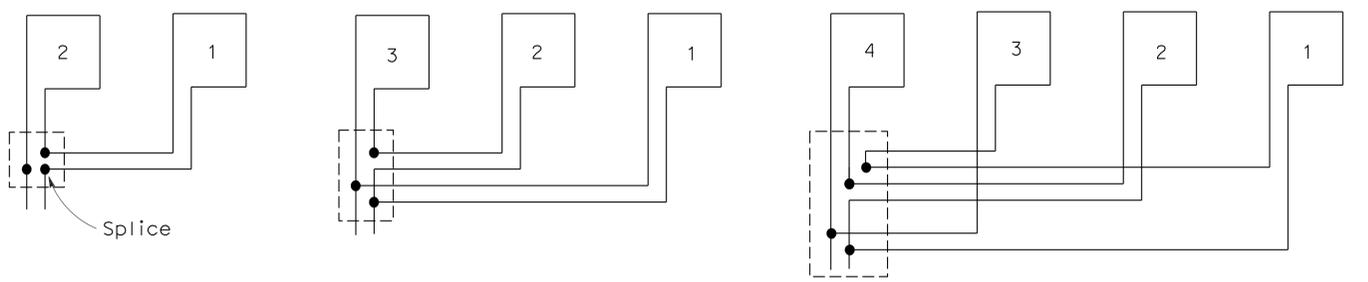
TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION
SAWCUT DETAILS

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



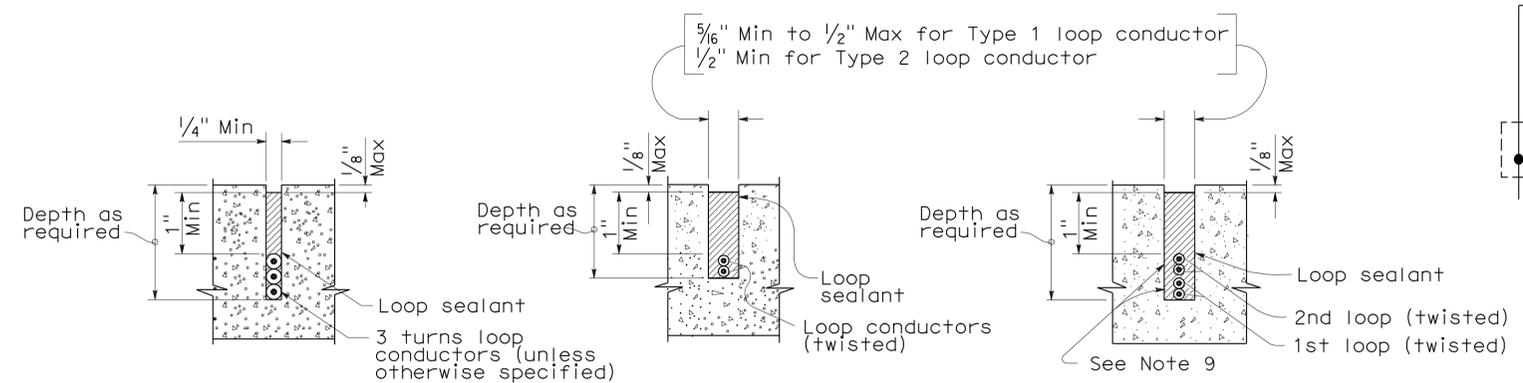
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A SECTION B-B SECTION C-C
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

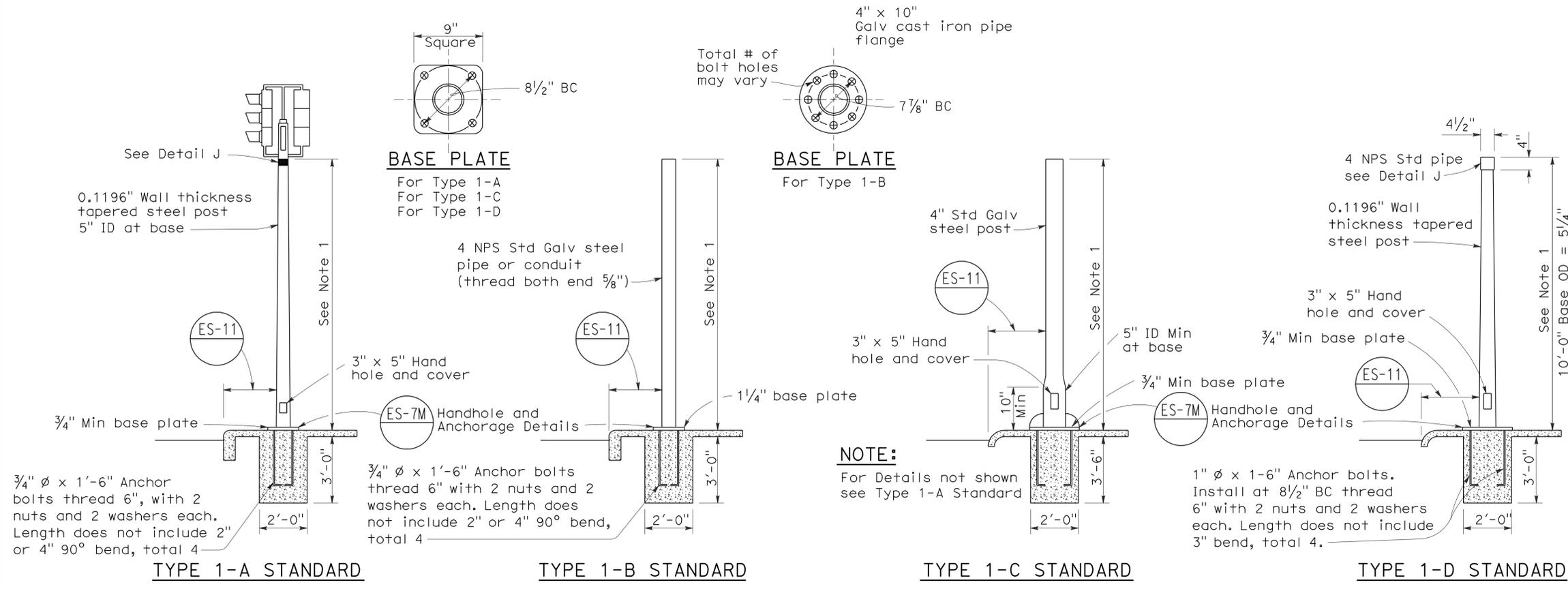
2006 REVISED STANDARD PLAN RSP ES-5A

To accompany plans dated 2-22-11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	43	47

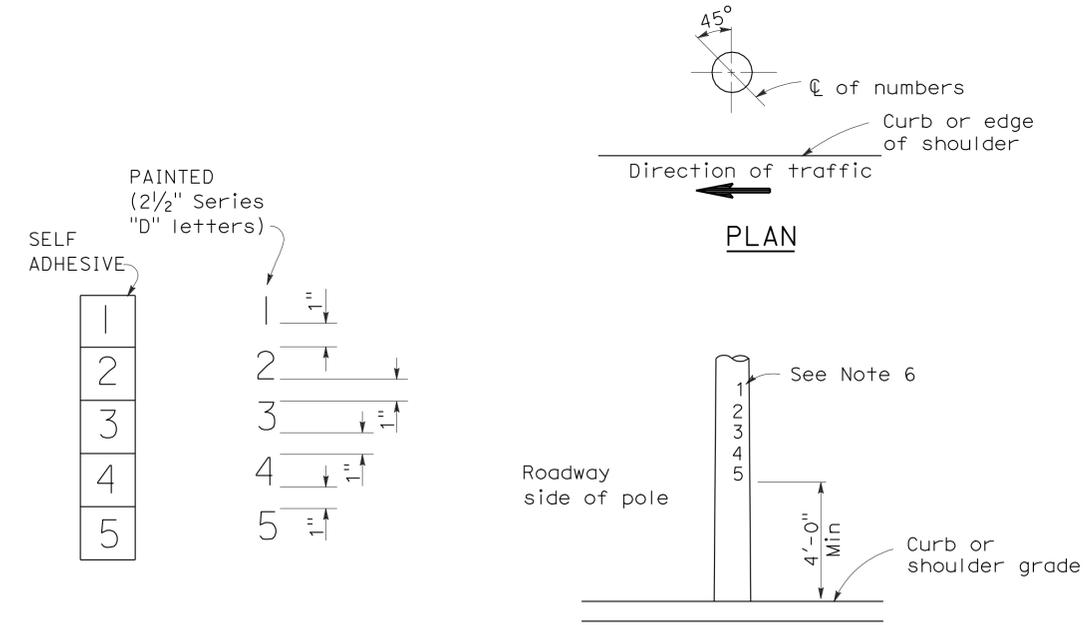
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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2006 REVISED STANDARD PLAN RSP ES-7B

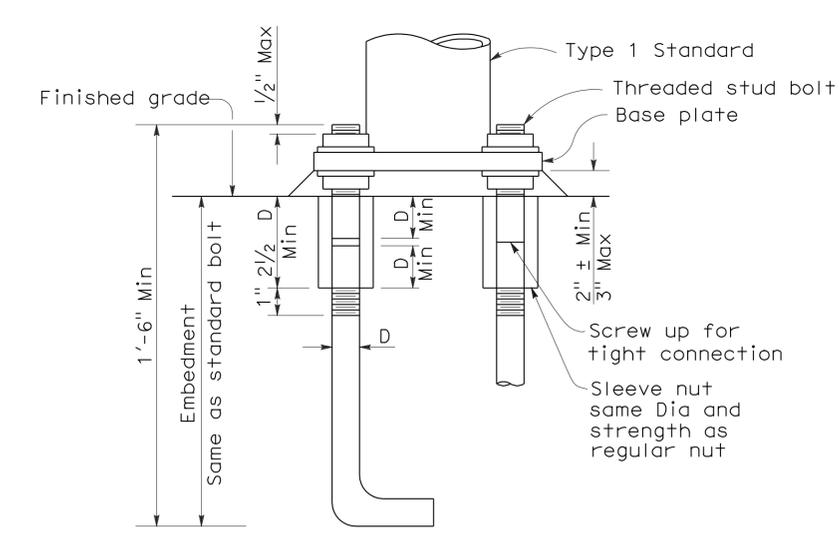


- NOTES:**
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless otherwise noted on plans.
 - Top of standards shall be 4 1/2" OD.
 - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
 - Anchor bolts shall be bonded to conduit or grounding conductor.
 - Conduit between standard and adjacent pull box shall be 2" minimum.
 - Paint numbers on roadway side facing traffic when electrolier or post is left of direction of traffic.

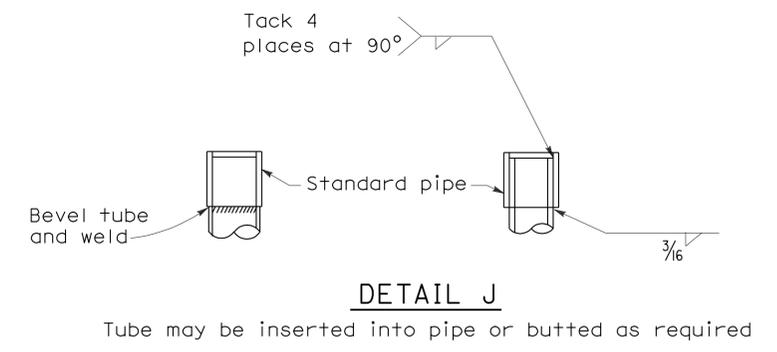
TYPE 1 SIGNAL STANDARDS



LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS

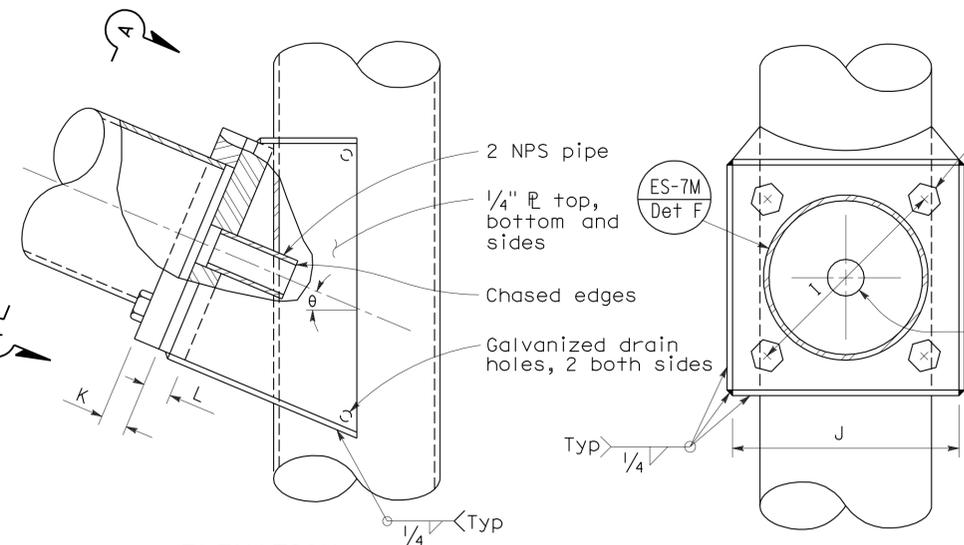
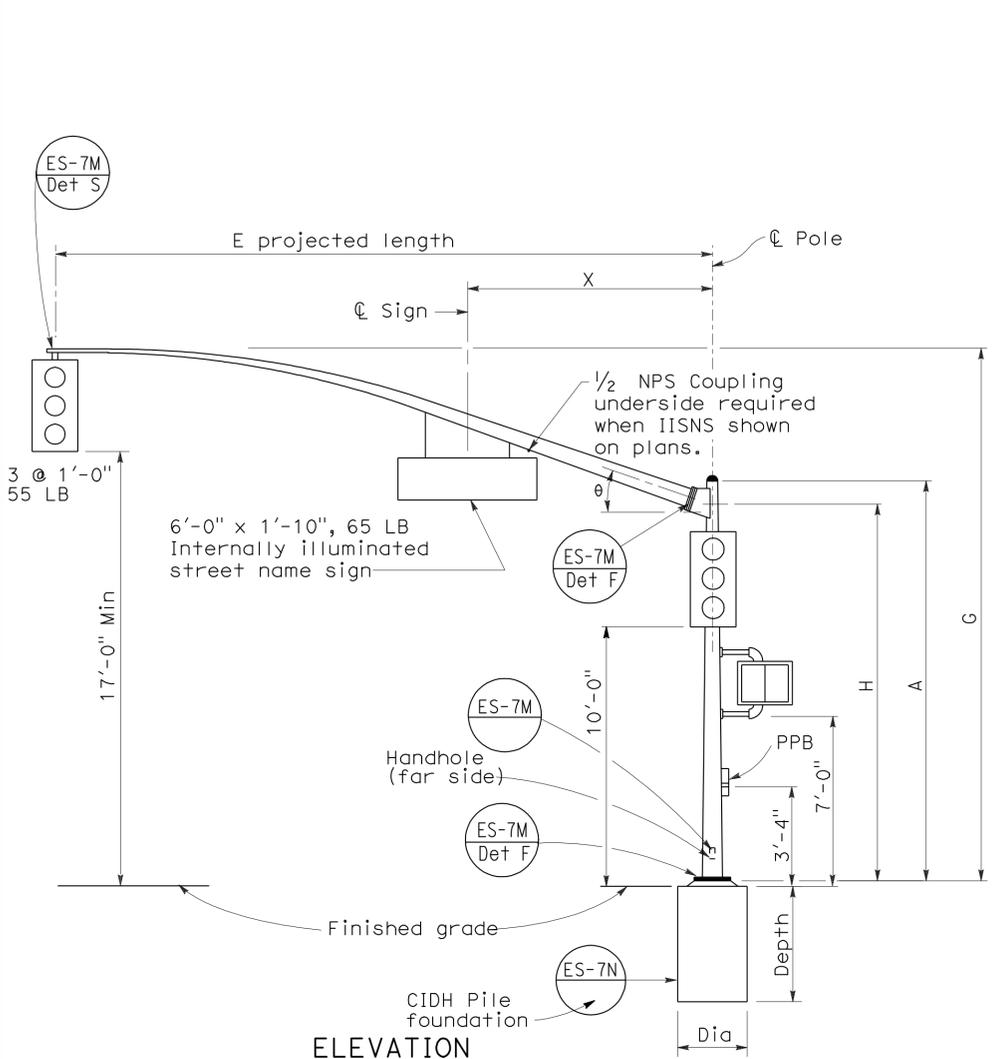


ANCHOR BOLTS WITH SLEEVE NUTS

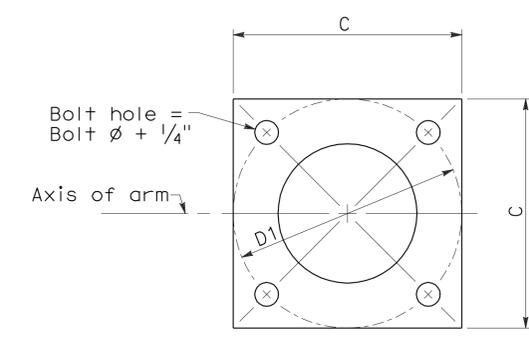


ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARD AND EQUIPMENT NUMBERING)

NO SCALE

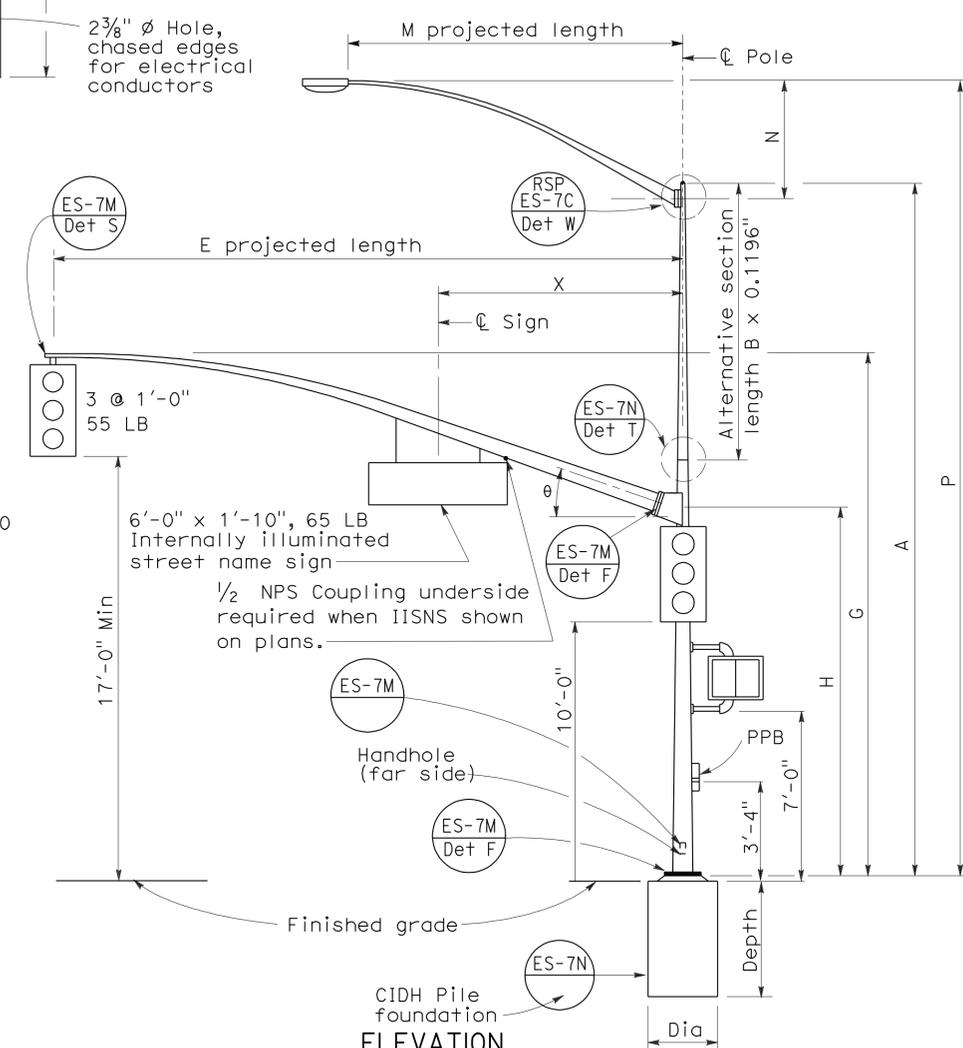


SIGNAL ARM CONNECTION DETAILS



BASE PLATE

TYPE 16-2-100, 18-2-100



TYPE 17-2-100, 17A-2-100, 19-2-100, 19A-2-100

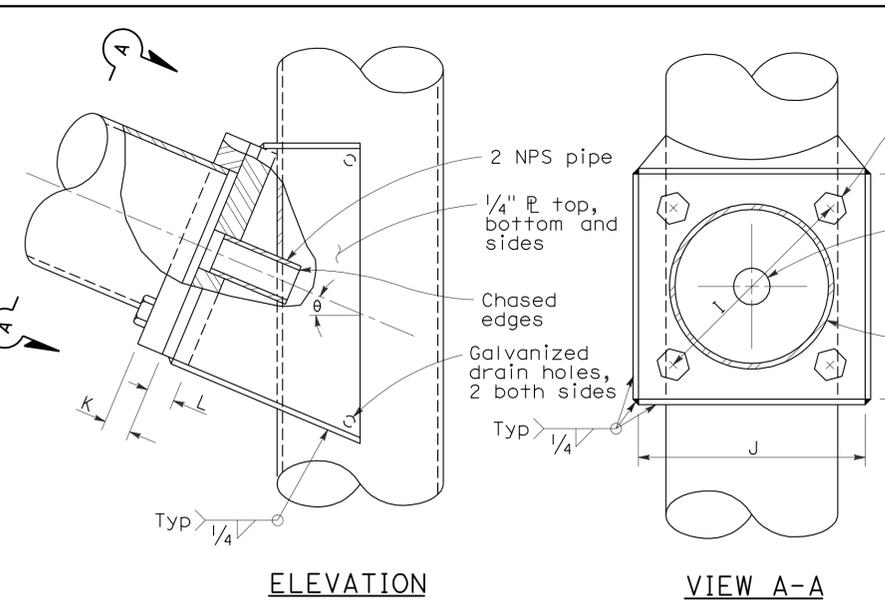
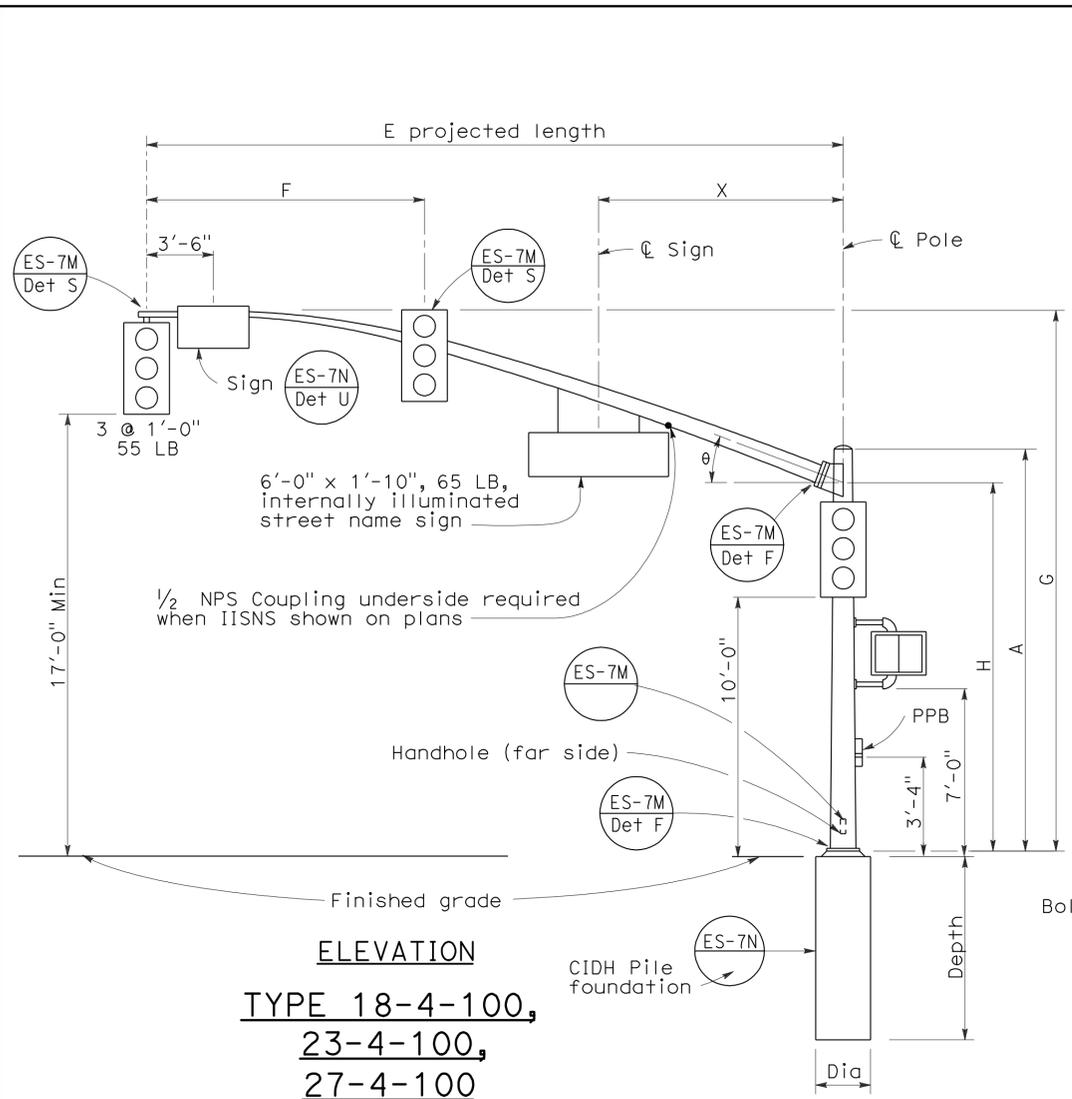
E Projected Length	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm R Thickness	L Pole R Thickness	theta	X Max
15'-0"	21'-8"±	17'-6"	6 5/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
20'-0"	21'-8"±	17'-0"	6 5/8"								
25'-0"	22'-8"±	16'-0"	7 5/16"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
30'-0"	23'-0"±		8"								

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height
6'-0"	2'-0"±	3/4"	0.1196"	30'-0" Pole
8'-0"	2'-6"±	3/2"		35'-0" Pole
10'-0"	3'-3"±	3 7/8"	0.1196"	32'-0"±
12'-0"	4'-3"±	3 7/8"		37'-0"±
15'-0"	4'-9"±	4 1/4"	0.1196"	32'-9"±
				37'-9"±
				33'-9"±
				38'-9"±
				34'-3"±
				39'-3"±

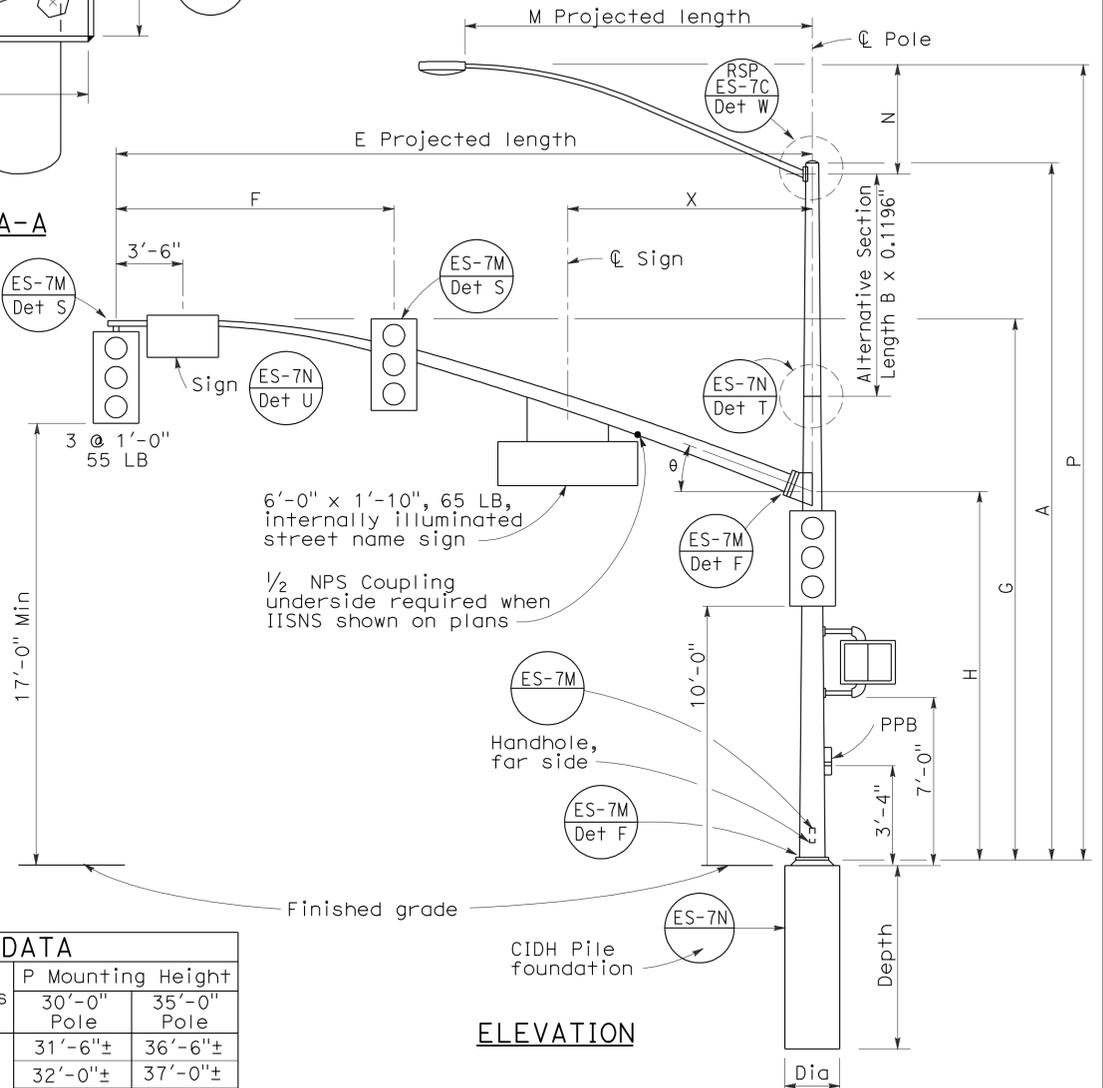
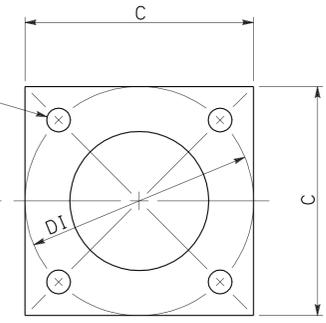
Pole Type	Load Case	Wind Velocity mph	POLE DATA				BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION					
			A Height	Min OD		Thickness	Alternative Section		C	D1 Bolt Circle			Thickness	Anchor Bolts Size	Diameter	Depth	Reinforced	
				Base	Top		B Length	Bottom										Top
16-2-100	2	100	18'-6"	10 3/4"	0.1793"	None	8"	6 5/8"	1'-6"	1'-5 1/2"	1 1/2"	2"ø x 42" x 6"	None	15'-0", 20'-0"	2'-6"	7'-2"	Yes	
17-2-100			30'-0"			10'-0"												6 5/8"
17A-2-100			35'-0"			15'-0"												5 15/16"
18-2-100			17'-0"			None												8 7/16"
19-2-100			30'-0"			10'-0"												6 5/8"
19A-2-100	35'-0"	15'-0"	5 15/16"	0.2391"	8"	5 5/16"	6'-15' [12'-0"]	6'-15' [15'-0"]	6'-15' [12'-0"]	6'-15' [15'-0"]								

□ Indicates arm length to be used unless otherwise noted on plans.

2006 REVISED STANDARD PLAN RSP ES-7D



SIGNAL ARM CONNECTION DETAILS



ELEVATION

SIGNAL ARM DATA												
E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm P Thickness	L Pole P Thickness	θ	X Max
25'-0"	10'-0"	22'-8"±	16'-0"	7 5/16"	0.2391"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
30'-0"	12'-0"	8"										
35'-0"	14'-0"	8 1/16"										
40'-0"	15'-0"	9 3/8"										
45'-0"	15'-0"	10 1/4"										

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				30'-0" Pole	35'-0" Pole
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

Pole Type	Load Case	Wind Velocity mph	POLE DATA						BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION			
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle	Thickness			Anchor Bolts Size	Dia	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
18-4-100	4	100	17'-0"	12"	0.2391"	None	9 3/8"	8"	1'-6"	1'-6"	1 1/2"	2" Ø x 42" x 6"	3'-0"	9'-0"	Yes			
19-4-100			30'-0"			8"										None	8"	
19A-4-100			35'-0"			7 5/16"										15'-0"	7 5/16"	
23-4-100			17'-0"			9"										None		
24-4-100			30'-0"			8"										10'-0"	8"	
24A-4-100			35'-0"	7 5/16"	15'-0"	7 5/16"												
26-4-100			30'-0"	8"	10'-0"	8 3/8"												
26A-4-100			35'-0"	7 5/16"	15'-0"	9 3/4"	7 1/16"											
27-4-100			17'-0"	9 3/4"	None													

**TYPE 19-4-100, 19A-4-100,
 24-4-100, 24A-4-100,
 26-4-100, 26A-4-100**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING STANDARD
 CASE 4 ARM LOADING
 WIND VELOCITY=100 MPH
 ARM LENGTHS 25' TO 45')**
 NO SCALE

RSP ES-7F DATED OCTOBER 5, 2007 SUPERCEDES RSP ES-7F DATED NOVEMBER 17, 2006 AND STANDARD PLAN ES-7F DATED MAY 1, 2006 - PAGE 442 OF THE STANDARD PLANS BOOK DATED MAY 2006.

□ Indicates arm length to be used unless otherwise noted on plans.

REVISED STANDARD PLAN RSP ES-7F

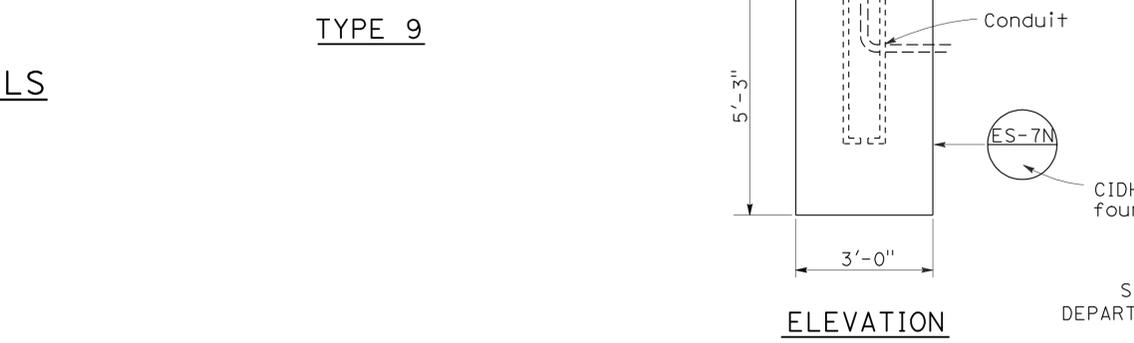
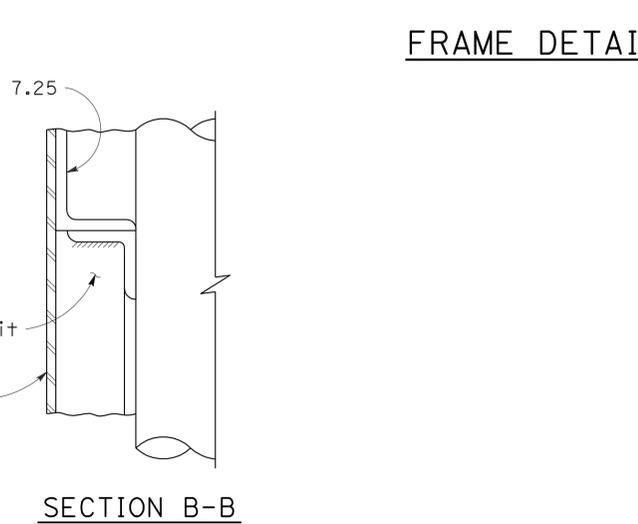
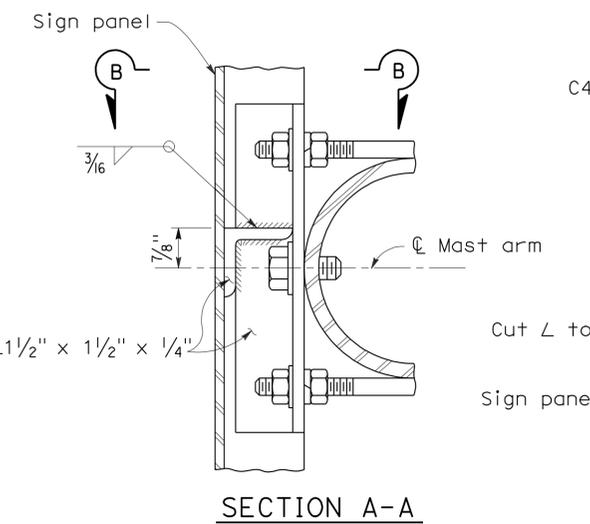
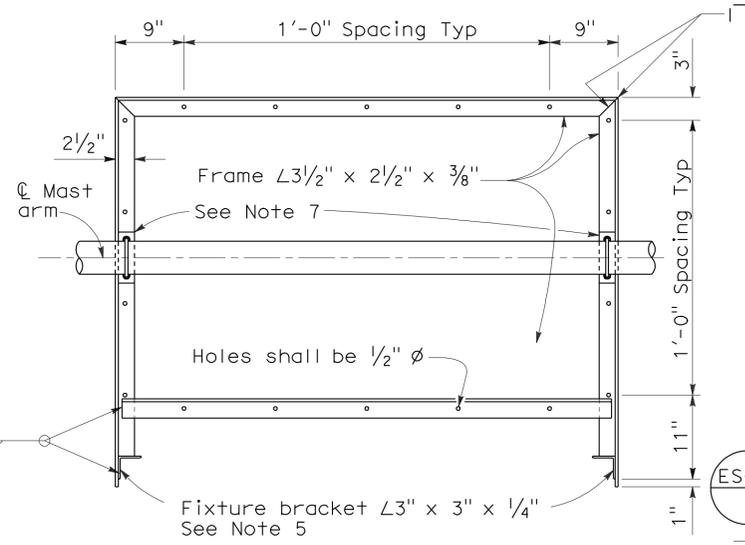
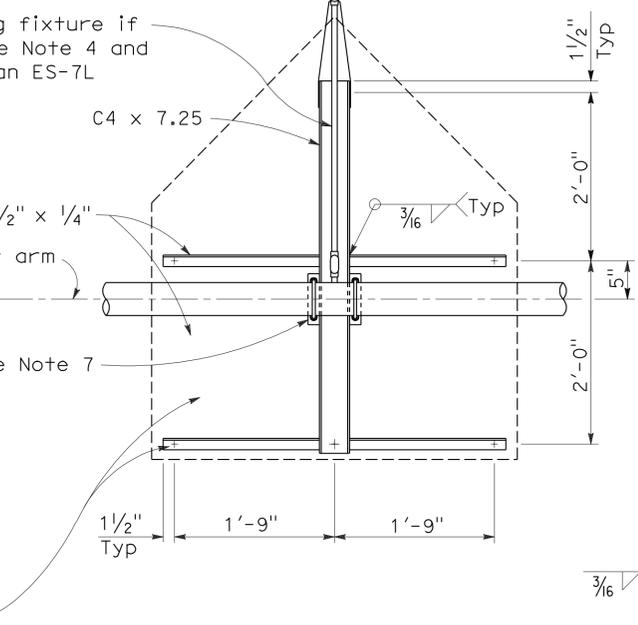
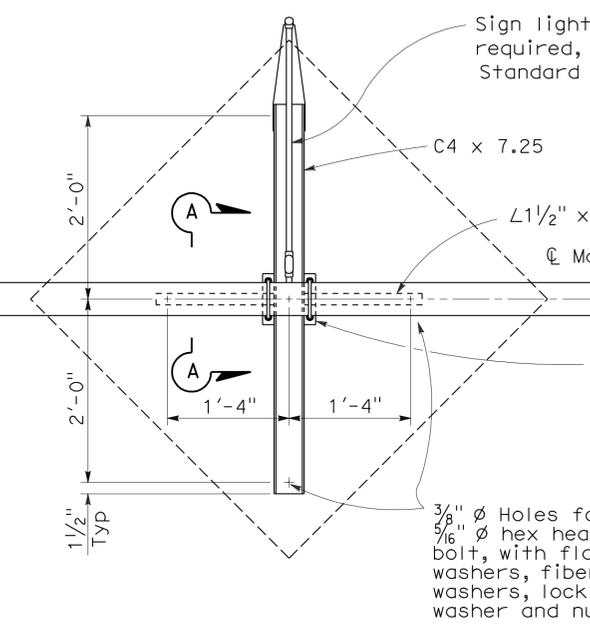
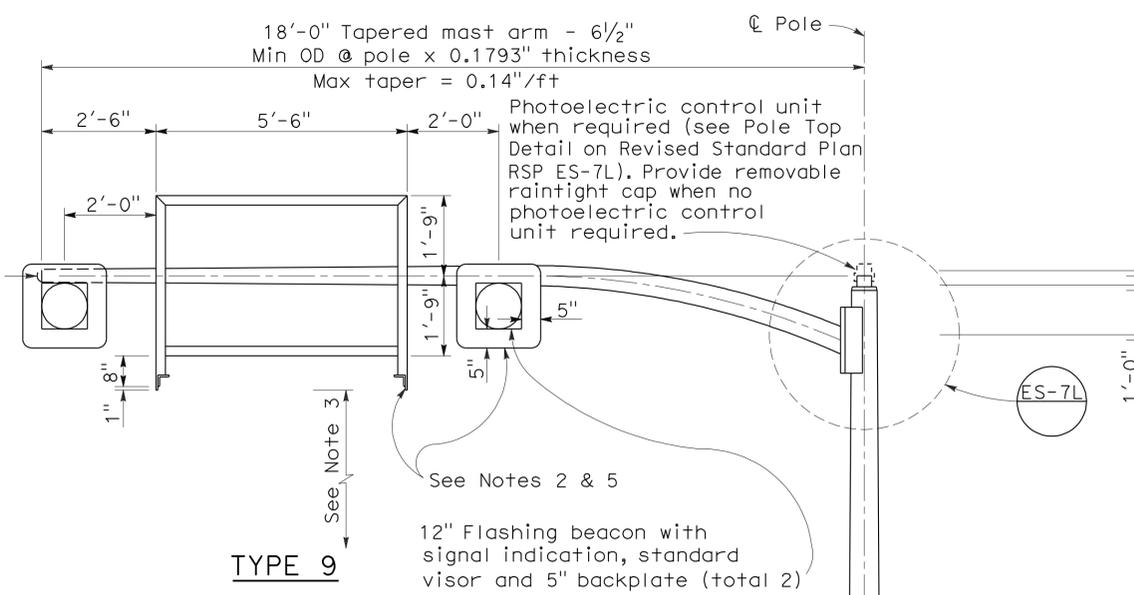
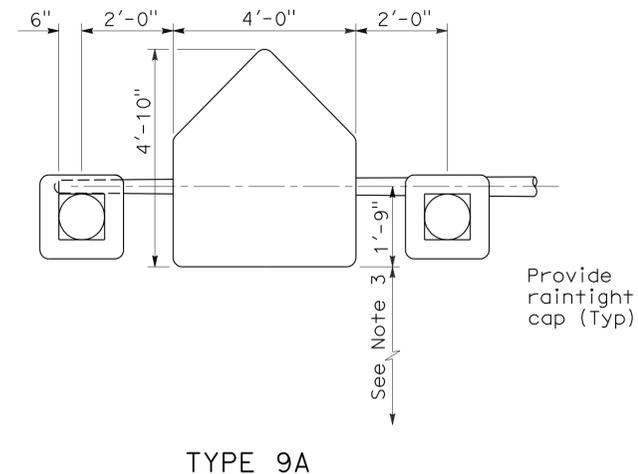
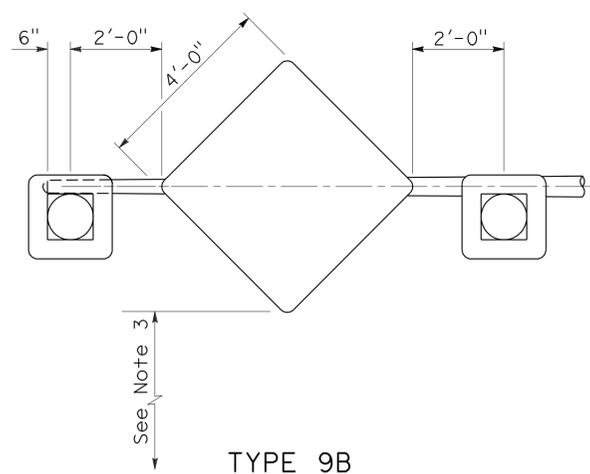
2006 REVISED STANDARD PLAN RSP ES-7F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	46	47

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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



- To accompany plans dated 2-22-11
- NOTES:**
- Splices between fluorescent fixture sockets shall be waterproof.
 - Install flashing beacons and sign frame. Flashing beacons shall be MAT mounted on pipe tenon. (See Standard Plan ES-7M, Detail S).
 - Vertical clearance to be 17'-0" minimum between roadway and bottom of signal panel or lighting fixture bracket.
 - Special provisions or plans will indicate when sign lighting fixture is required on Type 9A or 9B sign frames.
 - Type 9 sign frames shall be provided with a 3'-0" fluorescent fixture. For fluorescent lighting details see Standard Plan ES-15B.
 - Anchor bolts shall be ASTM A-307.
 - See Revised Standard Plan RSP ES-7L for sign frame mounting details.

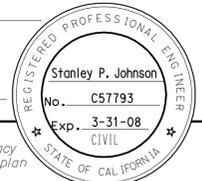
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CANTILEVER FLASHING BEACON
TYPES 9, 9A AND 9B)**

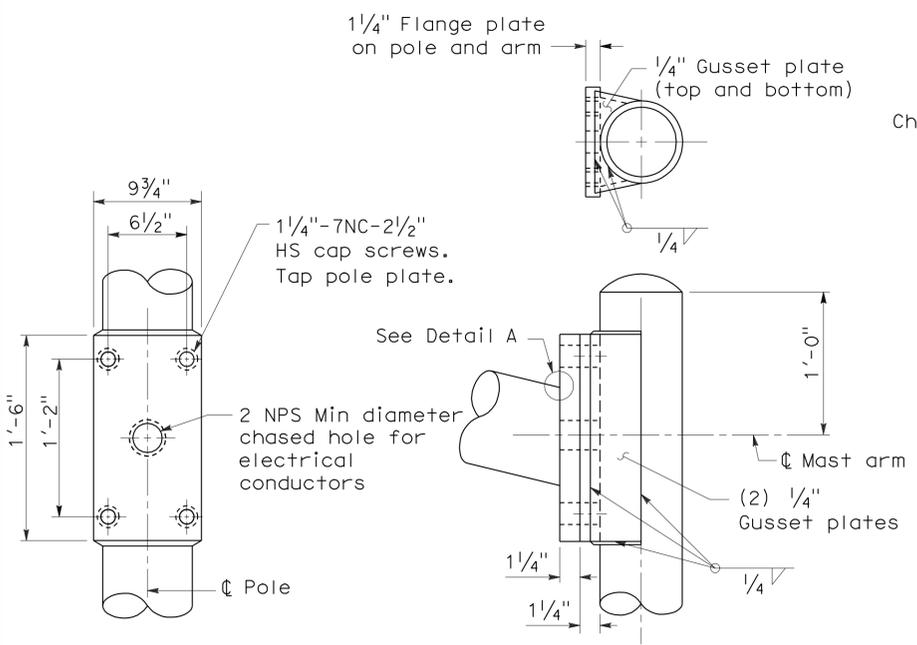
NO SCALE
RSP ES-7K DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7K
DATED MAY 1, 2006 - PAGE 447 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7K

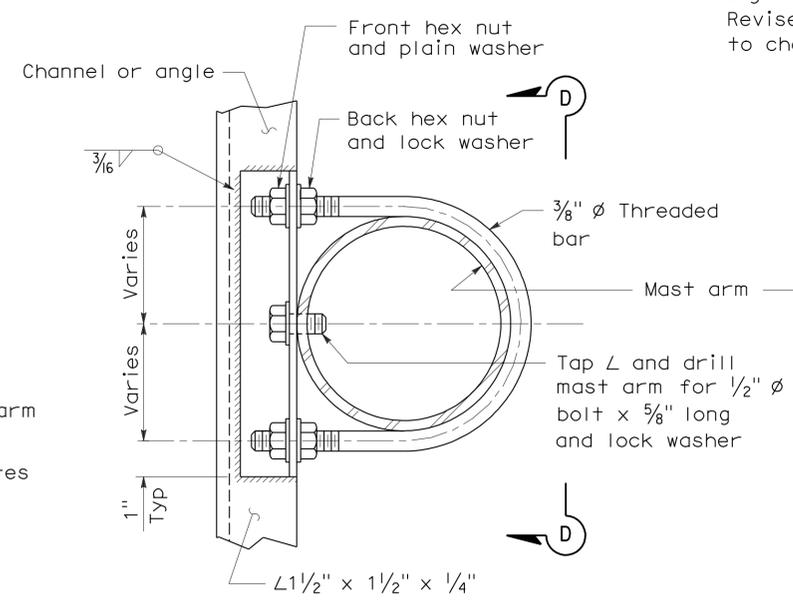
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	9.8	47	47

 REGISTERED CIVIL ENGINEER		
October 5, 2007 PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>		

To accompany plans dated 2-22-11

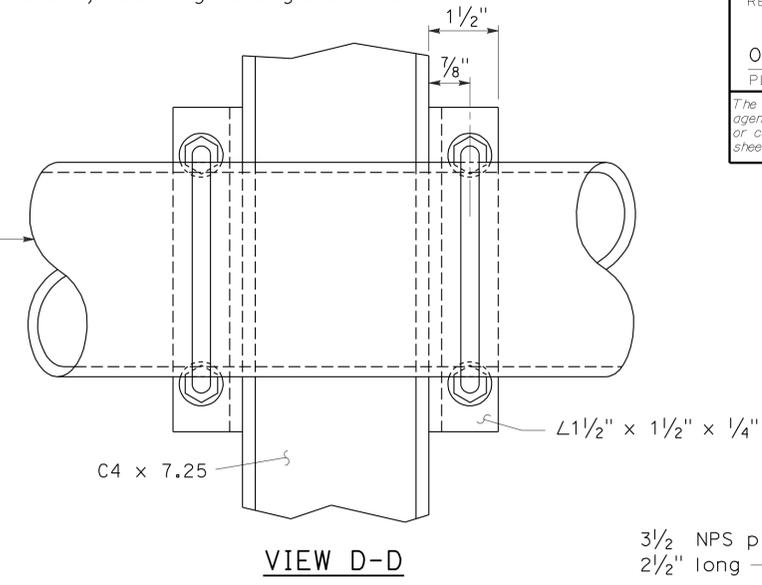


MAST ARM CONNECTION DETAILS

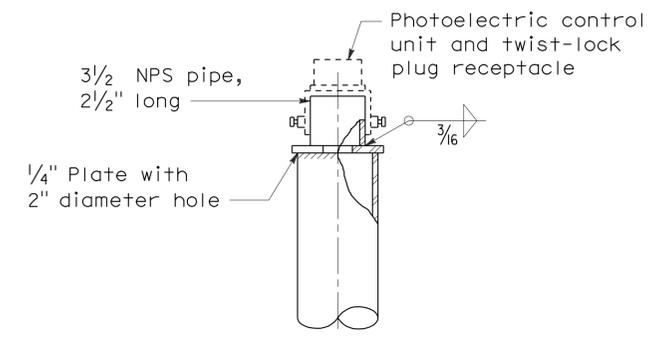


NOTE:
Tighten front hex nuts first, then tighten back hex nuts.

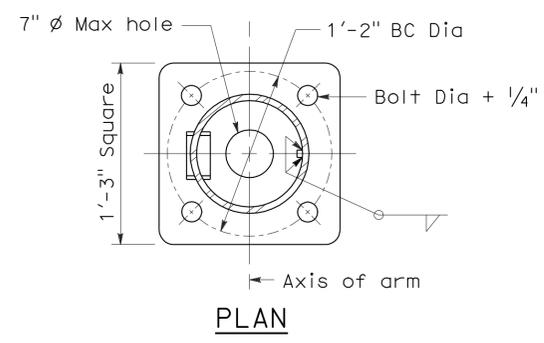
SIGN FRAME MOUNTING DETAILS
All types



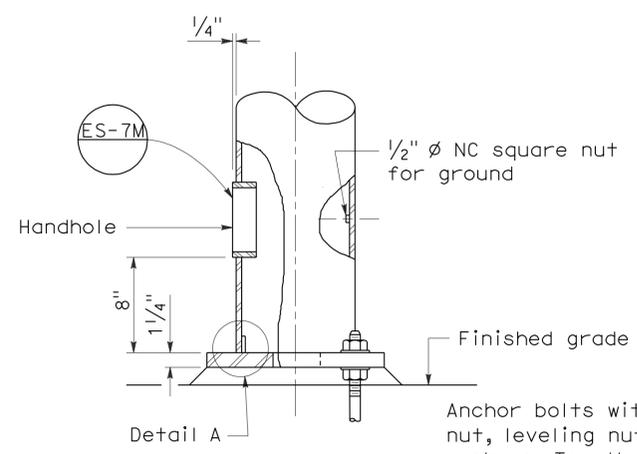
VIEW D-D



POLE TOP DETAIL

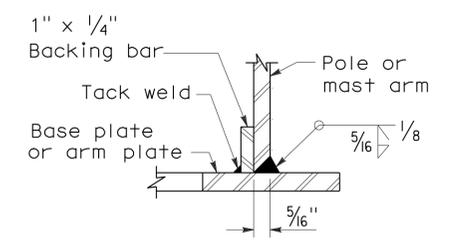


PLAN

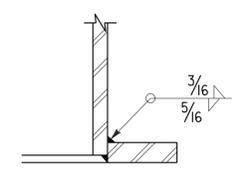


ELEVATION
BASE PLATE AND ANCHORAGE DETAILS

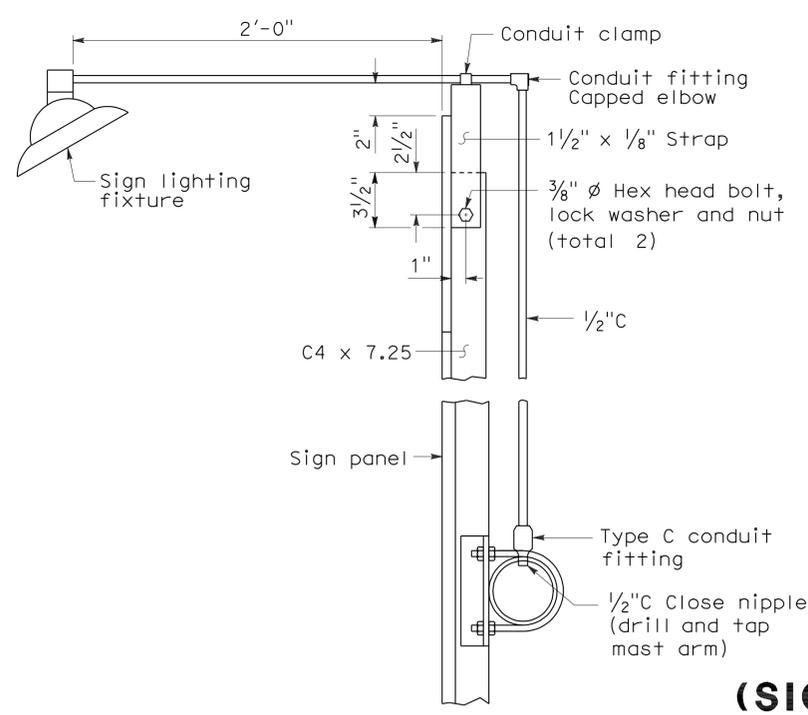
Anchor bolts with hex nut, leveling nut and 2 washers. Top threaded 6".
1 1/4" ϕ x 3'-5" x 4"



DETAIL A

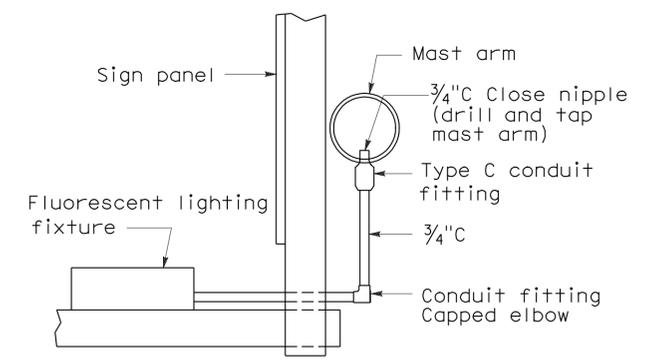


ALTERNATIVE DETAIL A
For pole-base plate only.



SIGN LIGHTING FIXTURE
TYPES 9A AND 9B

See Note 4 on Revised Standard Plan RSP ES-7K.



SIGN LIGHTING FIXTURE
TYPE 9 FRAME

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CANTILEVER FLASHING BEACON
TYPES 9, 9A AND 9B)

NO SCALE

RSP ES-7L DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7L
DATED MAY 1, 2006 - PAGE 448 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7L