

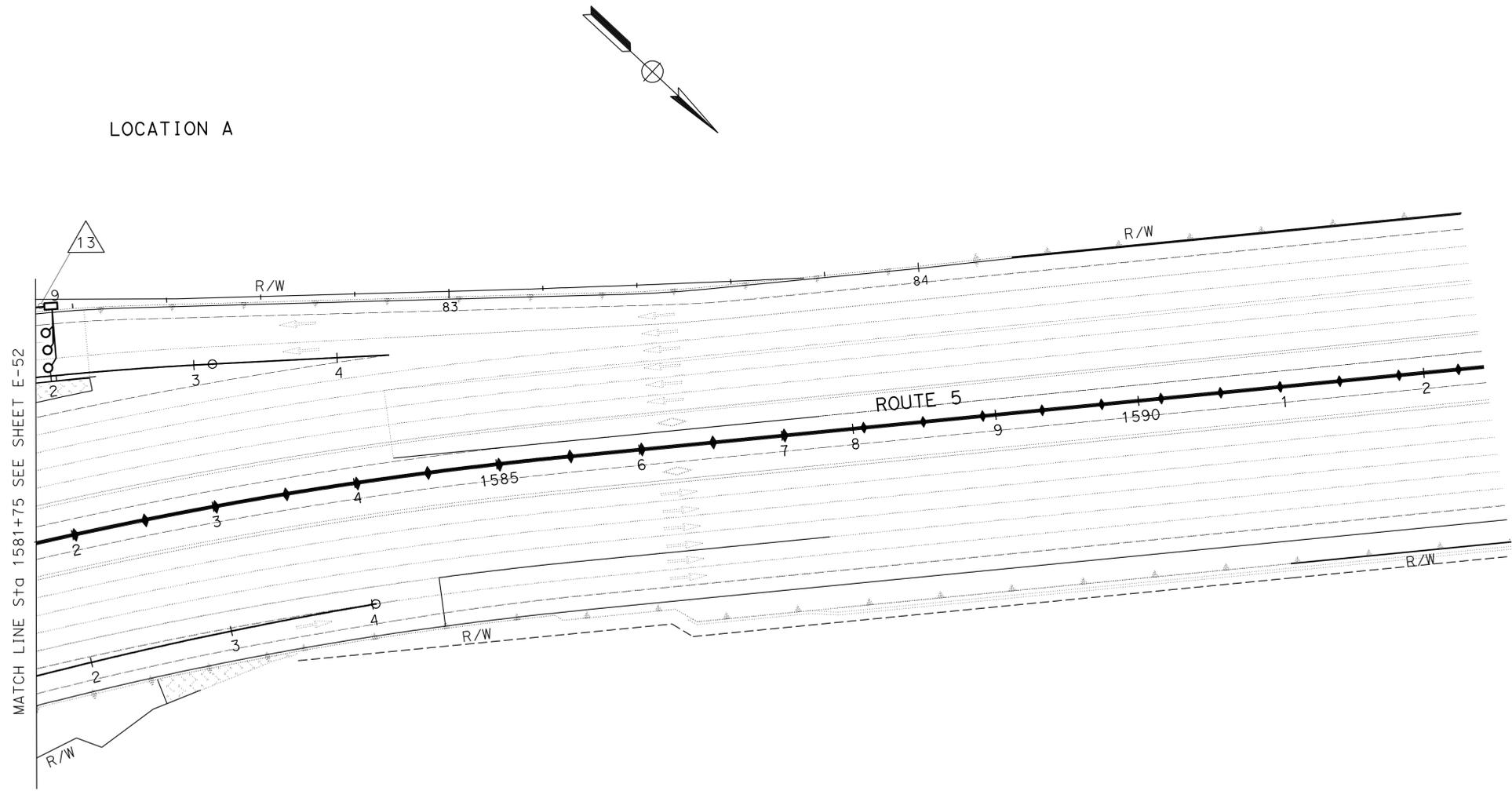
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	601	1931
			2/2/12		
			REGISTERED ELECTRICAL ENGINEER	DATE	
			5-21-12	PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTE:

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans TRAFFIC DESIGN	YI TSAU	CHECKED BY	YI TSAU
			DATE REVISOR

LOCATION A



CONDUCTOR AND CONDUIT SCHEDULE ON SHEET E-51.
APPROVED FOR ELECTRICAL WORK ONLY

**MODIFY RAMP
METERING SYSTEM**

SCALE: 1" = 50'

E-53

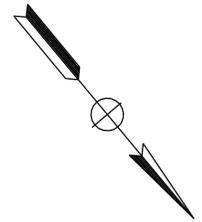
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	602	1931

REGISTERED ELECTRICAL ENGINEER DATE **2/2/12**
Jesse Ruelas
 5-21-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JESSE RUELAS
 No. E015604
 Exp. 12/31/13
 ELECT

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.



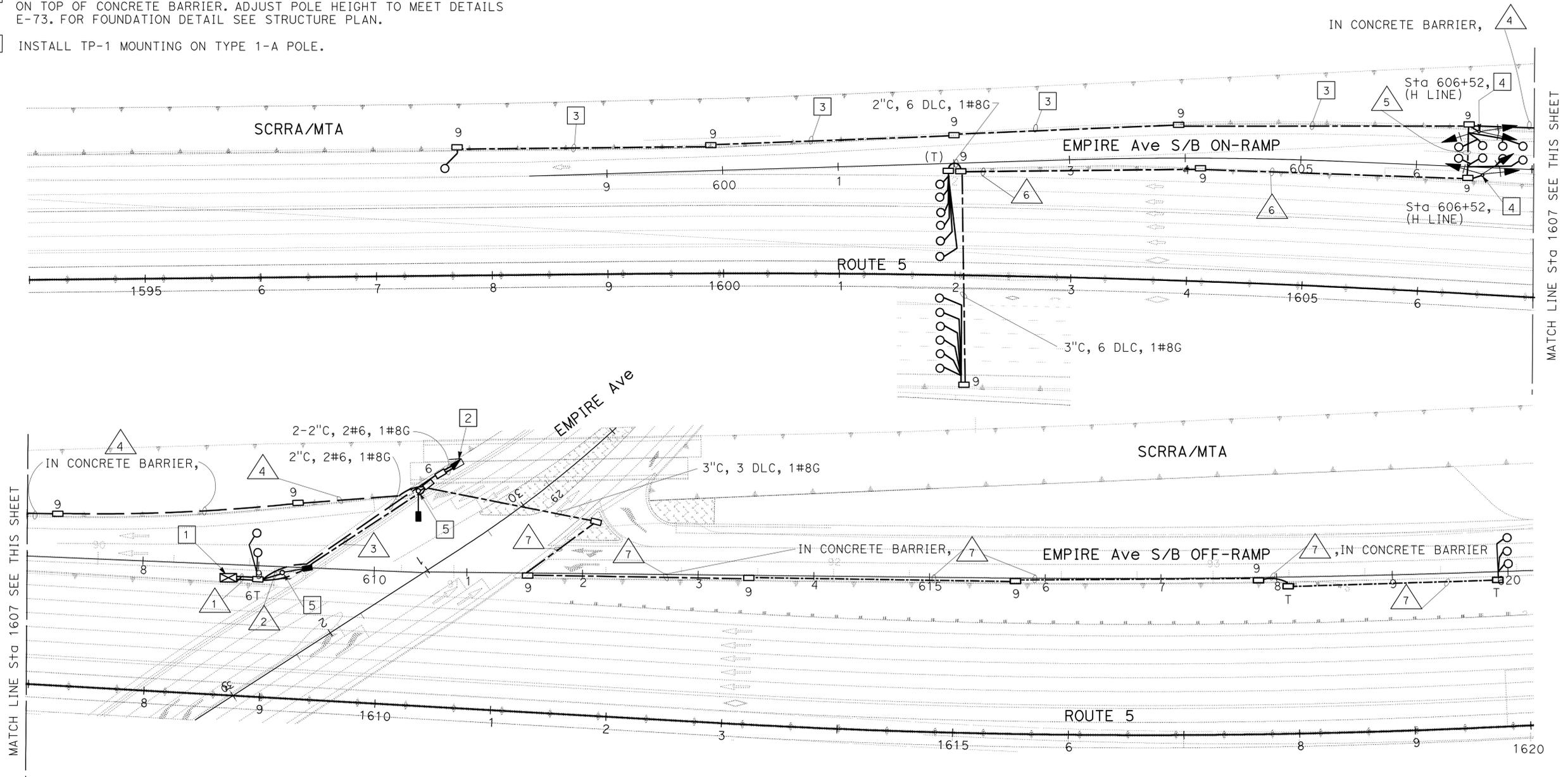
PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY AND MODEL 334 CABINET.
- 2 120/240 V TYPE III-CF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
METER 1:
100 A, 240 V, 2P, CB - MAIN
30 A, 120 V, 1P, CB - RAMP METERING
30 A, 120 V, 1P, CB - SIGN ILLUMINATION
2-30 A, 240 V, 2P, CB - FWY LIGHTING
15 A, 120 V, 1P, CB - TYPE V PEC
ID No. 07-53-005-R-030.351 PM
ADDRESS: SB RAMP ROUTE 5 AT EMPIRE.
FOR REFERENCE ONLY, FOR INSTALLATION SEE E-19.
- 3 2" C, 1#8G, 1 DLC IN CONCRETE BARRIER.
- 4 INSTALL TV-2-T AND SV-1-T MOUNTING ON MODIFIED TYPE 1-A RAMP METER POLE ON TOP OF CONCRETE BARRIER. ADJUST POLE HEIGHT TO MEET DETAILS E-73. FOR FOUNDATION DETAIL SEE STRUCTURE PLAN.
- 5 INSTALL TP-1 MOUNTING ON TYPE 1-A POLE.

CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	1	2	3	4*	5	6*	7
9CSC	RAMP SIGNAL	2		2	2	1		
5CSC	METER-ON SIGN	2	1	1				
DLC	DEMAND DETECTOR	2		2	2	1		
	PASSAGE DETECTOR	2		2	2	1		
	COUNT DETECTOR ON-RAMP	1		1	1			
	COUNT DETECTOR OFF-RAMP	3		3				3
	QUEUE DETECTOR	2						
1#8G	GROUND	1	1	1	1	1	1	1
2#6	SERVICE	2						
	CONDUIT SIZE	2-3"C	2"C	3"C	2"C	3"C	2"C	2"C

* IN CONCRETE BARRIER



REVISIONS: x
 REVISOR: KARINE PARTAMIAN
 CHECKED BY: JESSE RUELAS
 DESIGNED BY: YI TSAU
 SUPERVISOR: YI TSAU
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

MODIFY RAMP METERING SYSTEM

SCALE: 1" = 50'

E-54

FOR RAMP METERING DETAILS SEE E-73
APPROVED FOR ELECTRICAL WORK ONLY



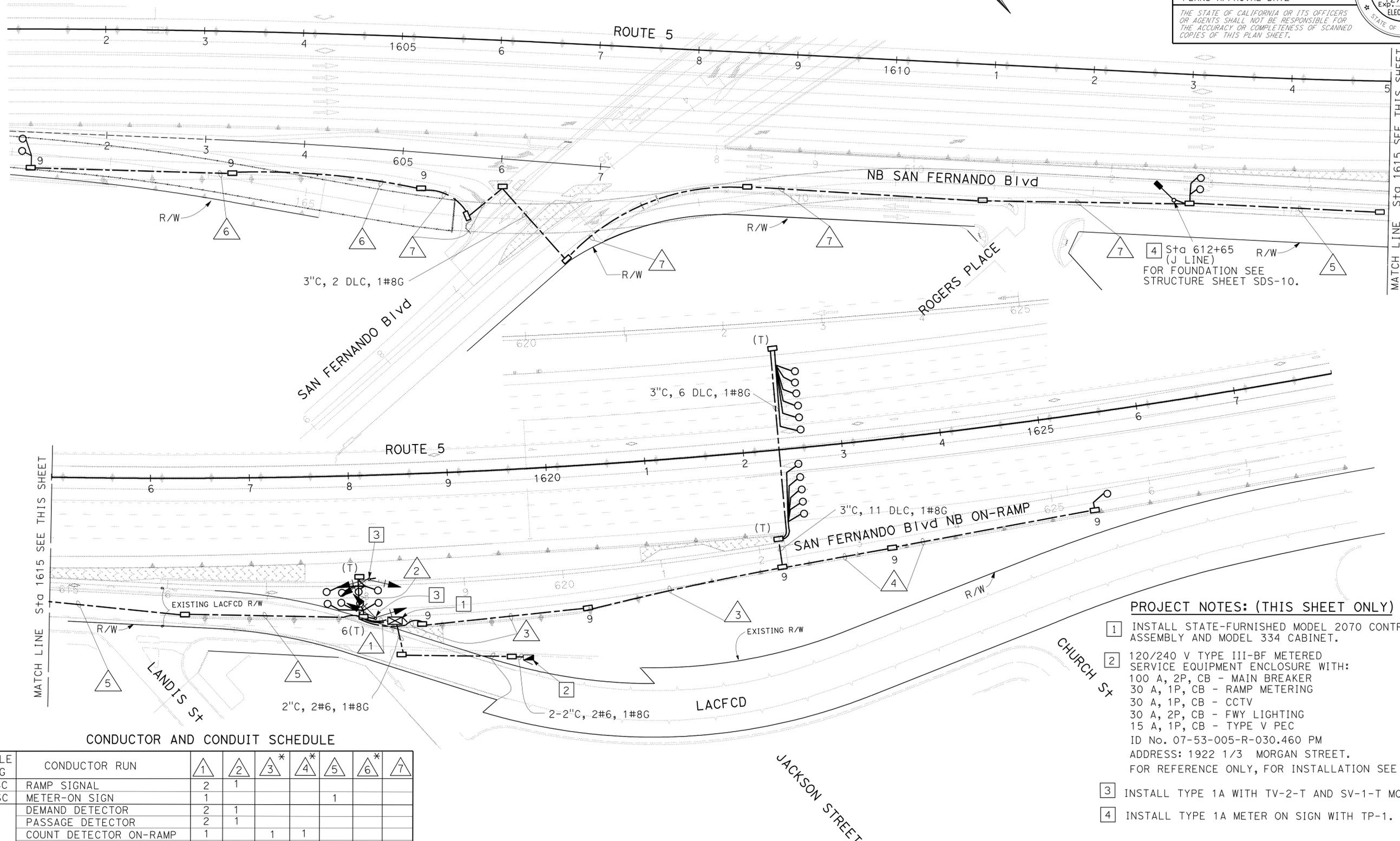
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	603	1931

Jesse Ruelas 2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JESSE RUELAS
 No. E015604
 Exp. 12/31/13
 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.



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	1	2	3*	4*	5	6*	7
9CSC	RAMP SIGNAL	2	1					
5CSC	METER-ON SIGN	1				1		
DLC	DEMAND DETECTOR	2	1					
	PASSAGE DETECTOR	2	1					
	COUNT DETECTOR ON-RAMP	1		1	1			
	COUNT DETECTOR OFF-RAMP	2				2	2	2
	QUEUE DETECTOR	2				2		
1#8G	MAIN LINE DETECTOR	11		11				
1#8G	GROUND	1	1	1	1	1	1	1
	CONDUIT SIZE	2-3"C	3"C	2"C	2"C	2"C	2"C	2"C

* IN CONCRETE BARRIER.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY AND MODEL 334 CABINET.
- 2 120/240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
 100 A, 2P, CB - MAIN BREAKER
 30 A, 1P, CB - RAMP METERING
 30 A, 1P, CB - CCTV
 30 A, 2P, CB - FWY LIGHTING
 15 A, 1P, CB - TYPE V PEC
 ID No. 07-53-005-R-030.460 PM
 ADDRESS: 1922 1/3 MORGAN STREET.
 FOR REFERENCE ONLY, FOR INSTALLATION SEE E-20.
- 3 INSTALL TYPE 1A WITH TV-2-T AND SV-1-T MOUNTING.
- 4 INSTALL TYPE 1A METER ON SIGN WITH TP-1.

FOR RAMP METERING DETAILS SEE E-73.
APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM
SCALE: 1" = 50'
E-55

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: JESSE RUELAS
 CHECKED BY:
 REVISOR: KARINE PARTAMIAN
 DATE REVISOR: JESSE RUELAS
 DATE REVISOR:

LAST REVISION DATE PLOTTED => 21-MAY-2012
 00-00-00 TIME PLOTTED => 10:17

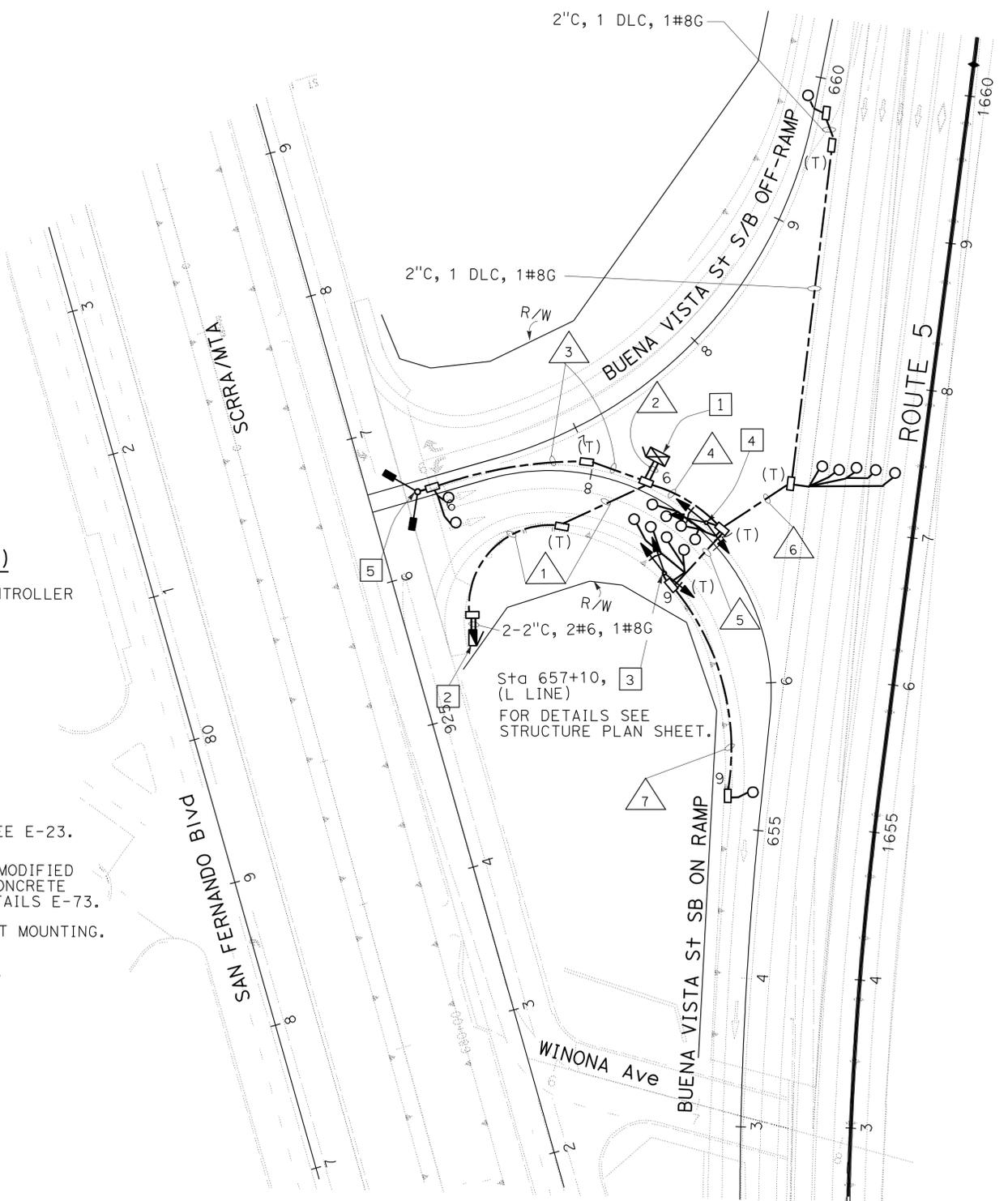
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: YI TSAU
 CHECKED BY: YI TSAU
 REVISIONS: KARINE PARTAMIAN, JESSE RUELAS, YI TSAU
 REVISED BY: KARINE PARTAMIAN, JESSE RUELAS, YI TSAU
 DATE REVISED: [Blank], [Blank], [Blank]

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	604	1931

Jesse Ruelas 2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 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.



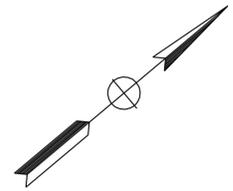
PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY AND MODEL 334 CABINET.
- 2 120/240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
 100 A, 240 V, 2P, CB - MAIN BREAKER
 30 A, 120 V, 1P, CB - RAMP METERING
 30 A, 120 V, 1P, CB - CCTV
 2-30 A, 240 V, 2P, CB - FWY LIGHTING
 30 A, 240 V, 2P, CB - SIGN ILLUMINATION
 20 A, 120 V, 1P, CB - IRRIGATION
 15 A, 120 V, 1P, CB - TYPE V PEC
 ID No. 07-53-005-R-031.381 PM
 ADDRESS: 2898 1/3 SAN FERNANDO ROAD
 FOR REFERENCE ONLY, FOR INSTALLATION SEE E-23.
- 3 INSTALL TV-2-T AND SV-1-T MOUNTING ON MODIFIED TYPE 1-A RAMP METER POLE. ON TOP OF CONCRETE BARRIER, ADJUST POLE HEIGHT TO MEET DETAILS E-73.
- 4 INSTALL TYPE 1-A WITH TV-2-T AND SV-1-T MOUNTING.
- 5 INSTALL TP-2 MOUNTING ON TYPE 1-A POLE.

CONDUCTOR AND CONDUIT SCHEDULE (SB)

CABLE AWG	CONDUCTOR RUN	1	2	3	4	5	6	7*
9CSC	RAMP SIGNAL		2		2	1		
5CSC	METER-ON SIGN		1	1				
DLC	DEMAND DETECTOR		2		2	1		
	PASSAGE DETECTOR		2		2	1		
	COUNT DETECTOR ON-RAMP		1		1	1		1
	COUNT DETECTOR OFF-RAMP		1		1		1	
	QUEUE DETECTOR		2	2				
2#6	MAIN LINE DETECTOR		5		5		5	
	SERVICE	2	2					
1#8G	GROUND	1	1	1	1	1	1	1
	CONDUIT SIZE	2"C	2-3"C	2"C	2"C	2"C	2"C	2"C

* IN CONCRETE BARRIER.



FOR RAMP METERING DETAILS SEE E-73.
 APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM
 SCALE: 1" = 50'
E-56

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 KARINE PARTAMIAN
 JESSE RUELAS
 REVISED BY: [Blank]
 DATE REVISED: [Blank]

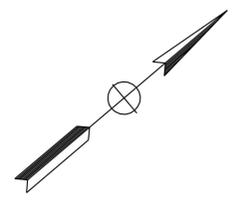
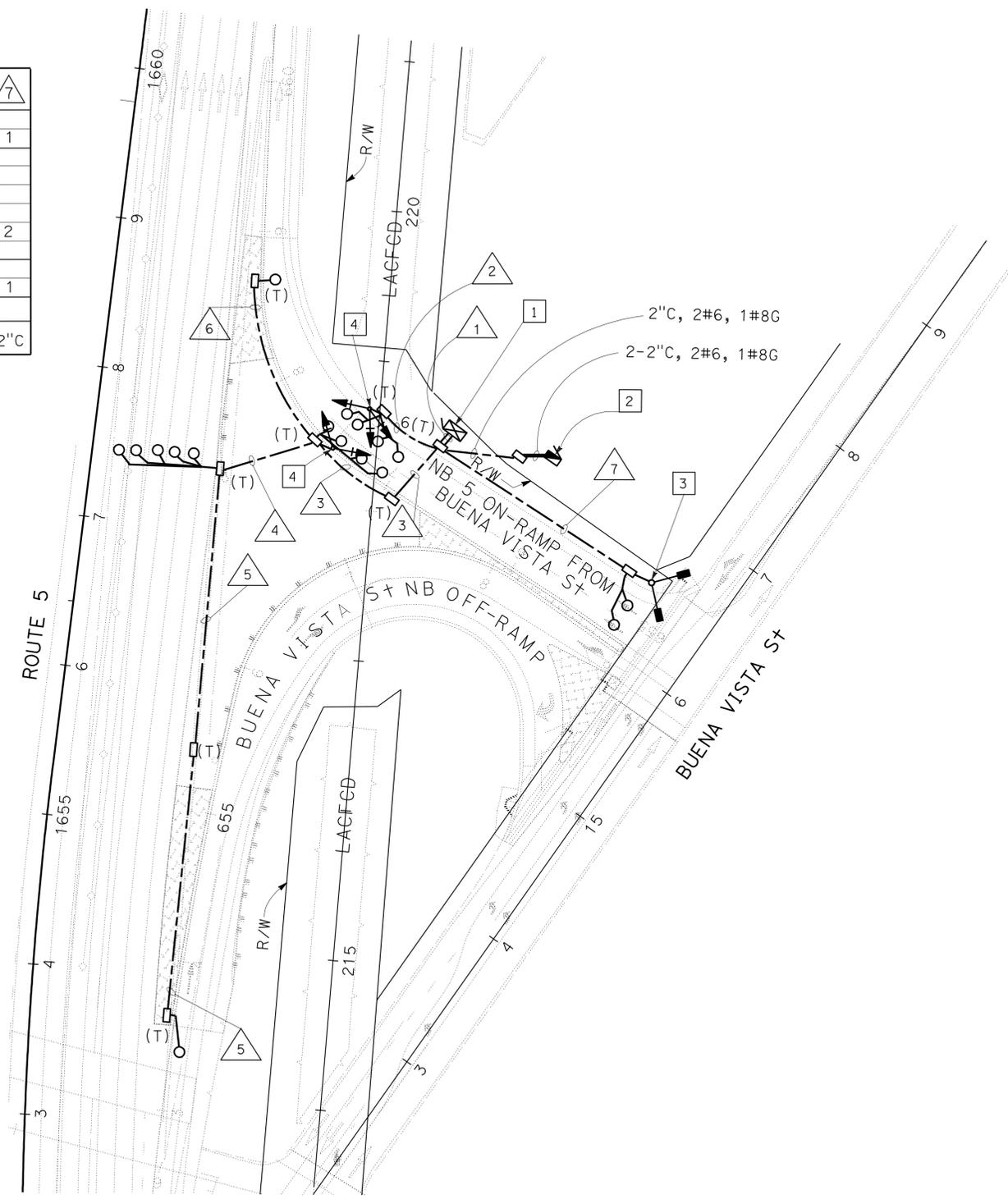
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	605	1931

Jesse Ruelas 2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 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.

CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	1	2	3	4	5	6	7
9CSC	RAMP SIGNAL	2	1	1				
5CSC	METER-ON SIGN	1						1
DLC	DEMAND DETECTOR	2	1	1				
	PASSAGE DETECTOR	2	1	1				
	COUNT DETECTOR ON-RAMP	1		1			1	
	COUNT DETECTOR OFF-RAMP	1		1	1	1		
	QUEUE DETECTOR	2						2
	MAIN LINE DETECTOR	5		5	5			
1#6	SERVICE	2						
1#8G	GROUND	1	1	1	1	1	1	1
	CONDUIT SIZE	2-3"C	2"C	3"C	3"C	2"C	2"C	2"C



PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL STATE -FURNISHED MODEL 2070 CONTROLLER ASSEMBLY AND MODEL 334 CABINET.
- 2 120/240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
 100 A, 240 V, 2P, CB - MAIN
 30 A, 120 V, 1P, CB - RAMP METERING
 30 A, 240 V, 2P, CB - FWY LIGHTING
 30 A, 240 V, 2P, CB - SIGN ILLUMINATION
 15 A, 120 V, 1P, CB - TYPE V PEC
 ADDRESS: NB ON-RAMP ROUTE 5 AND BUENA VISTA ST
 ID No. 07-53-005-R-031.380 PM
 FOR REFERENCE ONLY, FOR INSTALLATION SEE E-23.
- 3 INSTALL TYPE 1 METER ON SIGN WITH TP-2 MOUNTING.
- 4 INSTALL TYPE 1-A WITH TV-2-T AND SV-1-T MOUNTING.

FOR RAMP METERING DETAILS SEE E-73.
 APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1" = 50'

E-57

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

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

EXISTING POLE AND EQUIPMENT SCHEDULE

No.	Type	STANDARD		VEH SIG MTG		PED SIGNAL	PPB		HPS LUMINAIRE	SPECIAL REQUIREMENTS
		SMA	LMA	Mast Arm	Pole		MTG	Ø		
A	61-5-129	60'	12'	1-MAT 2-MAS	SV-1-T	-	-	-	400 W	← FRONT St
B	1-A	-	-	-	TV-2-T	-	-	-	-	-
C	17-3-70	15'	12'	MAS	SV-1-T	-	-	-	400 W	BURBANK Blvd
D	1-A	-	-	-	TV-2-T	-	-	-	-	-
E	19-1-100 *(N)	15' (N)	12' (N)	MAS (N)	SV-1-T(N)	-	-	-	400 W (N)	-
F	17-3-70	15'	12'	MAS	SV-1-T	SP-1-T	-	-	400 W	FRONT St →
G	1-A	-	-	-	TV-2-T	-	2	→	-	-
H	19-2-70	30'	12'	MAS	SV-2-TA	-	-	-	400 W	BURBANK Blvd
I	PPB	-	-	-	-	-	2	←	-	-
J	15TS	-	-	-	SV-2-TA SV-1-T	SP-1-T	-	-	-	-
K	1-A	-	-	-	TV-1-T	-	-	-	-	-

* - INSTALL TEMPORARY POLE ON PLATE WITH CONCRETE BLOCKS. (SEE SES-10 & SES-11 FOR DETAILS)
 (N) - NEW

PROJECT NOTES: (THIS SHEET ONLY)

- COVER SIGNAL HEAD.
- RS TRAFFIC SIGNAL POLE AND EQUIPMENT COMPLETE. RC ADJACENT PULL BOX.
- INSTALL TYPE 4 2" C AT GROUND LEVEL AGAINST K-RAIL.
- INSTALL TYPE 4 2" C BELOW GROUND TO JUST BEYOND CROSSWALK.
- INSTALL SIGN R3-4 (2' X 2') ON TYPE 3 BARRICADE.

NOTES: (THIS SHEET ONLY)

- ALL NEW SIGNAL MODIFICATIONS ON THIS SHEET ARE TO BE COMPLETED AND FUNCTIONING AT START OF THIS STAGE.
- TEMPORARY SIGNAL POLE (E) TO BE REUSED ON STAGE 6.
- SEE LEGEND ON E-61.

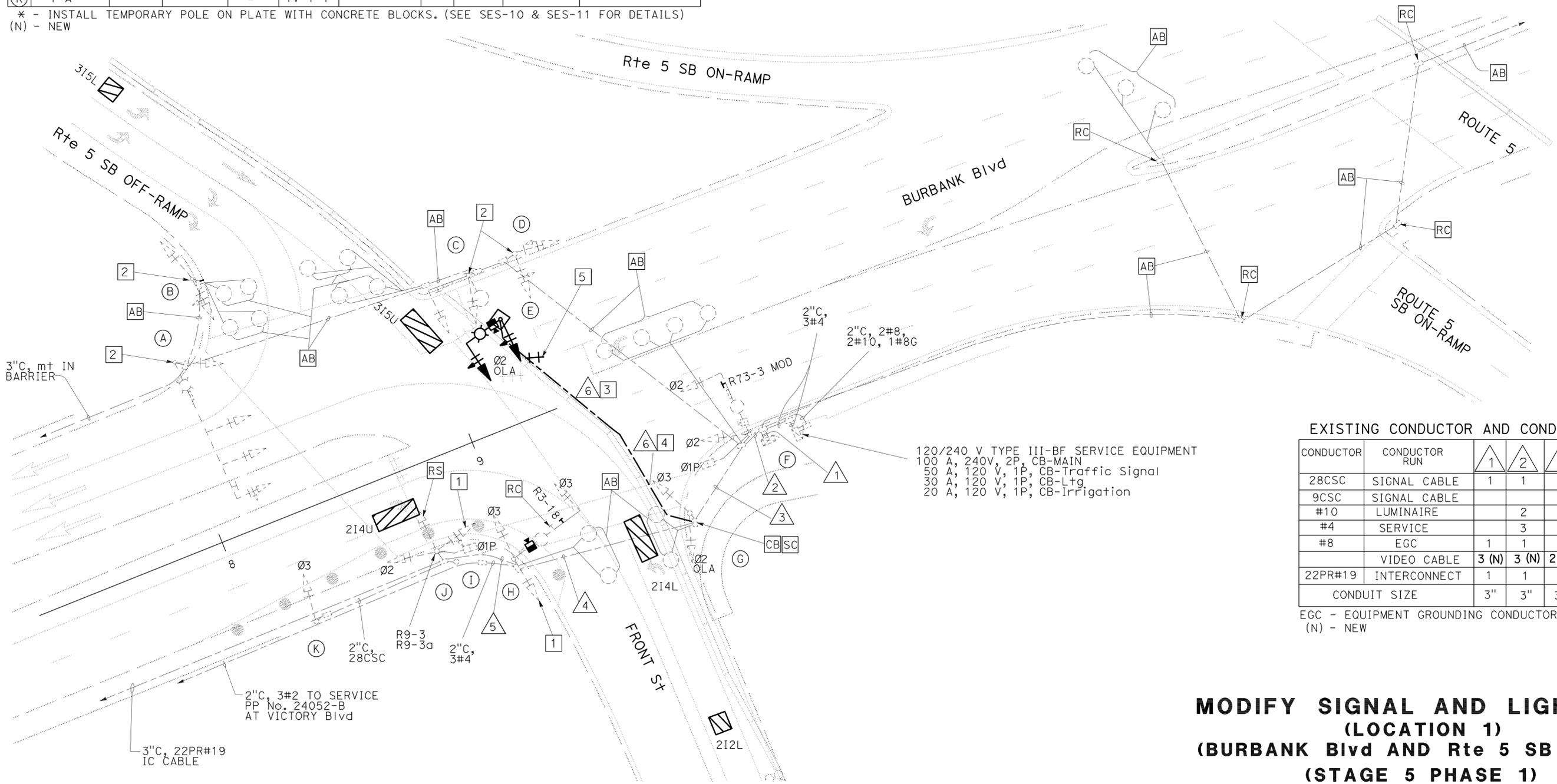
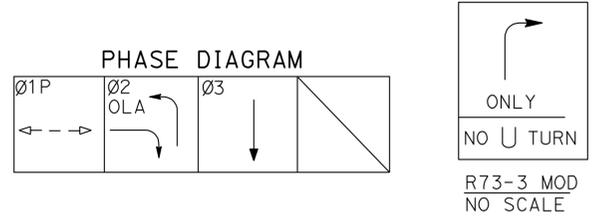
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	606	1931

2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE

5-21-12
 PLANS APPROVAL DATE

C. BURCIAGA
 No. E015302
 Exp. 3/31/13
 ELECT

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



EXISTING CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4	5	6
28CSC	SIGNAL CABLE	1	1	1	1	1	
9CSC	SIGNAL CABLE						1 (N)
#10	LUMINAIRE		2	2	2		2 (N)
#4	SERVICE		3	3	3		
#8	EGC	1	1	1	1	1	1 (N)
	VIDEO CABLE	3 (N)	3 (N)	2 (N)	1 (N)		1 (N)
22PR#19	INTERCONNECT	1	1	1	1	1	
	CONDUIT SIZE	3"	3"	3"	3"	3"	2" (N)

EGC - EQUIPMENT GROUNDING CONDUCTOR
 (N) - NEW

**MODIFY SIGNAL AND LIGHTING
 (LOCATION 1)
 (BURBANK Blvd AND Rte 5 SB RAMP)
 (STAGE 5 PHASE 1)
 SCALE: 1" = 20'**

APPROVED FOR ELECTRICAL WORK ONLY

NOTE:

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

PROJECT NOTE: (THIS SHEET ONLY)

1 COVER SIGNAL HEAD.

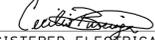
EXISTING POLE AND EQUIPMENT SCHEDULE

No.	STANDARD			VEH SIG MTG		PED SIGNAL	PPB		HPS LUMINAIRE	SPECIAL REQUIREMENTS
	Type	SMA	LMA	Mast Arm	Pole	MTG	Ø	ARROW		
(A)	19-1-100	15'	12'	MAS	SV-1-T				400 W	
(B)	17-3-70	15'	12'	MAS	SV-1-T	SP-1-T	-	-	400 W	FRONT St →
(C)	1-A	-	-	-	TV-2-T	-	2	→	-	-
(D)	19-2-70	30'	12'	MAS	SV-2-TA	-	-	-	400 W	BURBANK Blvd
(E)	PPB	-	-	-	-	-	2	←	-	-
(F)	15TS	-	-	-	SV-2-TA SV-1-T	SP-1-T	-	-	-	-
(G)	1-A	-	-	-	TV-1-T	-	-	-	-	-

NOTES: (THIS SHEET ONLY)

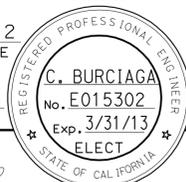
- CAMERAS ARE NOT USED IN THIS STAGE.
- TRAFFIC SIGNAL SYSTEM TO REMAIN IN PLACE. COVER SIGNAL HEAD AS SHOWN ON PLAN.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	607	1931

 2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE

5-21-12
 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.




STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 QUINCIE TRAN: CECILIO BURCIAGA
 REVISED BY: [Blank]
 DATE REVISED: [Blank]



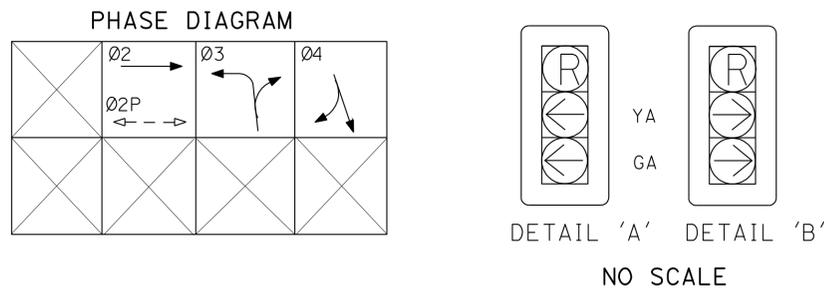
MODIFY SIGNAL AND LIGHTING
(LOCATION 1)
(BURBANK Blvd AT Rte 5 SB RAMP)
(STAGE 5 PHASE 2)
 SCALE: 1" = 20'

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION: DATE PLOTTED => 14-JUN-2012 TIME PLOTTED => 08:15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 QUINCIE TRAN: CECILIO BURCIAGA
 REVISIONS: (Grids 1-5)
 REVISOR: (Grids 1-5)
 DATE: (Grids 1-5)

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



EXISTING POLE AND EQUIPMENT SCHEDULE

No.	Type	STANDARD		VEH SIG MTG		PED SIGNAL		APS		SPECIAL REQUIREMENTS
		SMA	LMA	Mast Arm	Pole	MTG	Ø	ARROW	HPS LUMINAIRE	
(A)	24A-4-100 (N)	35' (N)	15' (N)	MAS (N)	SV-1-T(N)	SP-1-T(N)	-	-	400 W (N)	FRONT St → (N)
(B)	1-A (N)	-	-	-	TV-2-T (N)	-	2 (N)	→	-	-
(C)	19-2-70	35'	12'	-	SV-2-TA	-	2	←	400 W	BURBANK Blvd
(D)	PPB	-	-	-	-	-	-	-	-	-
(E)	15TS	-	-	-	SV-2-TA (N) SV-1-T	SP-1-T	-	-	-	-
(F)	15TS (M) (N)	-	12' (N)	-	SV-2-TA (N)	-	-	-	400 W (N)	-
(G)	19-1-100 (R)	15'	12'	MAS	SV-2-TA	-	-	-	400 W	-

(M) - MODIFIED TYPE 15TS, SEE SES-10 FOR DETAILS.
 (R) - RELOCATED TEMPORARY POLE ON PLATE WITH CONCRETE BLOCKS FROM STAGE 5.
 (N) - NEW
 APS - ACCESSIBLE PEDESTRIAN SIGNAL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	608	1931

2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE

5-21-12
 PLANS APPROVAL DATE

C. BURCIAGA
 No. E015302
 Exp. 3/31/13
 ELECT

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.

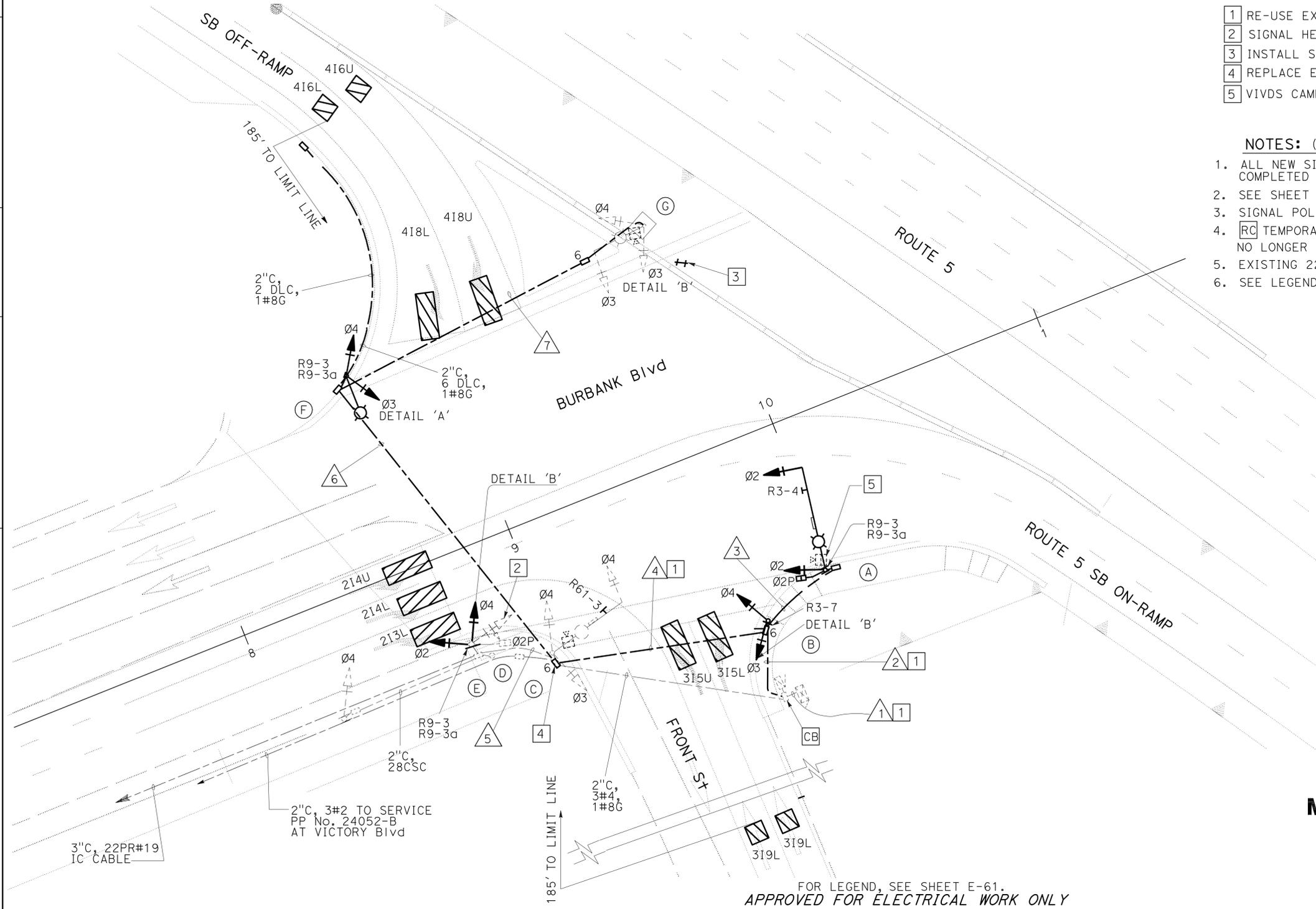


PROJECT NOTES: (THIS SHEET ONLY)

- RE-USE EXISTING 22PR#19 SIC.
- SIGNAL HEAD REMAIN COVERED FROM PREVIOUS STAGE.
- INSTALL SIGNS R3-4 AND R61-19(CA) (2' X 2') ON TYPE 3 BARRICADE.
- REPLACE EXISTING PULL BOX WITH NEW. SC CONDUCTORS.
- VIVDS CAMERA RELOCATED FROM PREVIOUS STAGE.

NOTES: (THIS SHEET ONLY)

- ALL NEW SIGNAL MODIFICATIONS ON THIS SHEET ARE TO BE COMPLETED AND FUNCTIONING AT START OF THIS STAGE.
- SEE SHEET SES-2 FOR CAMERA INSTALLATION DETAILS.
- SIGNAL POLES A THRU F ARE TO REMAIN FOR PERMANENT USE IN FINAL PLAN.
- RC TEMPORARY POLE (G) AT THE END OF THIS STAGE WHEN NO LONGER NEEDED, RL CAMERA, OR AS DIRECTED BY THE ENGINEER.
- EXISTING 22PR#19 SIC TO BE COILED AND REUSED IN FINAL PLAN E-61.
- SEE LEGEND ON E-61.



CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4	5	6	7
28CSC	SIGNAL CABLE					1 (E)		
12CSC	SIGNAL CABLE	2	2	1	2		1	1
5CSC	APS CABLE	1	1	1	1	1		
#6	LUMINAIRE	2	2	2	2		2	2
#6	SERVICE	2						
	VIVDS CABLE	3	3	1	3		2	1
#8	EGC	1	1	1	1	1	1	1
	22PR#19 SIC	1 (E)	1 (E)		1 (E)	1 (E)		
	CONDUIT SIZE	2-3" (E)	2"	3"	3"	3" (E)	3"	3"

EGC - EQUIPMENT GROUNDING CONDUCTOR
 (E) - EXISTING

**MODIFY SIGNAL AND LIGHTING
 (LOCATION 1)
 (BURBANK Blvd AT Rte 5 SB RAMP)
 (STAGE 6 PHASE 1)**

SCALE: 1" = 20'

E-60

NOTE:

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

NEW CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9
28CSC	C1	1	1	1	1	1	1	1	1	1
	C2	1	1	1	1	1	1	1	1	1
#6	LUMINAIRE		2	2	2	2	2	2		2
#8	SERVICE	2								
DLC	Ø1	2	2	2	2					
	Ø3	5	5					5		5
	Ø4	12	12	4	4					
	Ø6	3	3	3	3					5
TOTAL		22	22	9	9					5
VIVDS CABLE		2	2			1	1			1
#8	EGC	1	1	1		1	1	1	1	1
CONDUIT SIZE		2-3"	3"	3"	3"	3"	3"	3"	3"(E)	3"

EGC - EQUIPMENT GROUNDING CONDUCTOR

NEW POLE AND EQUIPMENT SCHEDULE

No.	STANDARD		VEH SIG MTG		PED SIGNAL	APS		HPS	STREET NAME SIGN	
	Type	SMA	LMA	Mast Arm	Pole	MTG	Ø	ARROW		LUMINAIRE
(A)	15TS (M)	-	12'	-	SV-1-T SV-2-TA	-	-	-	400 W	FRONT St
(B)	61A-5-100	60'	15'	MAS	SV-1-T	-	-	-	400 W	FRONT St
(C)	15TS (M)	-	12'	-	SV-1-T SV-2-TA	-	-	-	400 W	BURBANK Blvd
(D)	17A-2-100	15'	15'	MAS	SV-1-T	SP-1-T	2	→	400 W	BURBANK Blvd
(E)	1-A	-	-	-	TV-1-T	SP-1-T	2	←	-	-
(F)	24A-4-100	35'	15'	MAS	SV-1-T	SP-1-T	-	-	400 W	FRONT St
(G)	1-A	-	-	-	TV-2-T	-	2	→	-	-
(H)	19-2-70 (E)	30'(E)	12'(E)	MAS(E)	SV-2-TA(E)	-	-	-	400 W (E)	BURBANK Blvd (E)
(I)	PPB (E)	-	-	-	-	-	2	←	-	-
(J)	15TS (E)	-	-	-	SV-1-T (E) SV-2-TA (E)	SP-1-T (E)	-	-	-	-
(K)	1-A (E)	-	-	-	TV-1-T (E)	-	-	-	-	-

(M) - MODIFIED 15TS, SEE STRUCTURE SHEET SES-1 FOR POLE DETAILS
(E) - EXISTING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	609	1931

REGISTERED ELECTRICAL ENGINEER DATE 2/2/12
 5-21-12 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.

C. BURCIAGA
 No. E015302
 Exp. 3/31/13
 ELECT

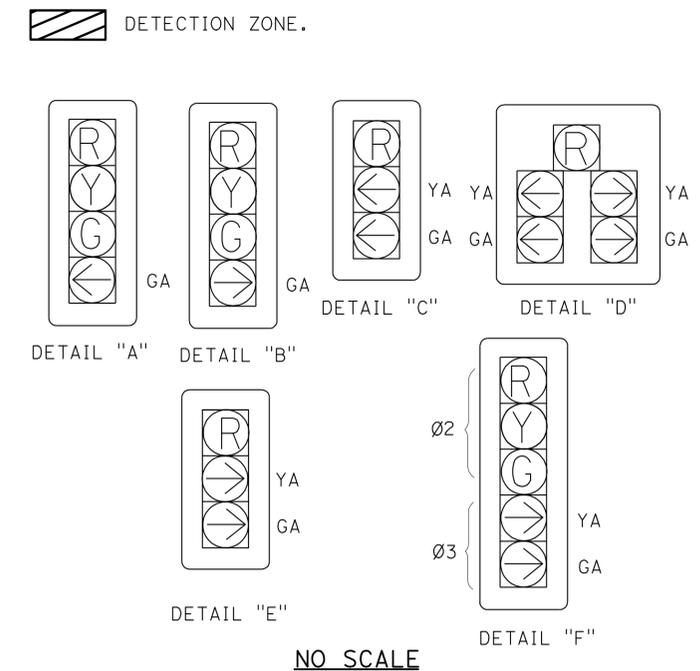
NOTES: (THIS SHEET ONLY)

- VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODE (LED) TYPE.
- LOOP DETECTORS IN THE STRUCTURE SHALL BE PRE-FORMED.
- SEE SHEET SES-2 FOR CAMERA INSTALLATION DETAILS.
- STREET NAME SIGNS ARE RETRO-REFLECTIVE.
- SEE SHEET E-30 FOR INSTALLATION OF SERVICE EQUIPMENT ENCLOSURE CABINET, CONDUITS, PULL BOXES AND OTHER PERTINENT EQUIPMENT FOR THIS TRAFFIC SIGNAL SYSTEM.
- RC SIGNAL EQUIPMENT, RS CONTROLLER, RS SERVICE EQUIPMENT ENCLOSURE, AND AB CONDUIT FROM STAGING PLANS THAT ARE NOT USED IN THIS FINAL SIGNAL PLAN, OR AS DIRECTED BY THE ENGINEER.

PROJECT NOTES: (THIS SHEET ONLY)

- INSTALL STATE FURNISHED MODEL 2070 CONTROLLER ASSEMBLY IN MODEL 332 CONTROLLER CABINET. INSTALL STATE FURNISHED MODEL 170E CONTROLLER, MODEL 2070-6B MODEM AND C2 MODEM HARNESS. INSTALL BATTERY BACK UP SYSTEM AND STATE FURNISHED COMPONENTS OF BATTERY BACK UP SYSTEM. INSTALL TRAFFIC SIGNAL INTERCONNECT, WIRELESS DATA SERVICE SYSTEM AND MODEL 400B MODEM. (SEE DETAIL H ON E-77 AND DETAILS E-78)
- FOR REFERENCE ONLY, SEE E-30 FOR INSTALLATION DETAILS.

LEGEND: (SHEETS E-58 TO E-63)

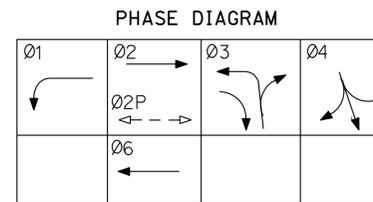
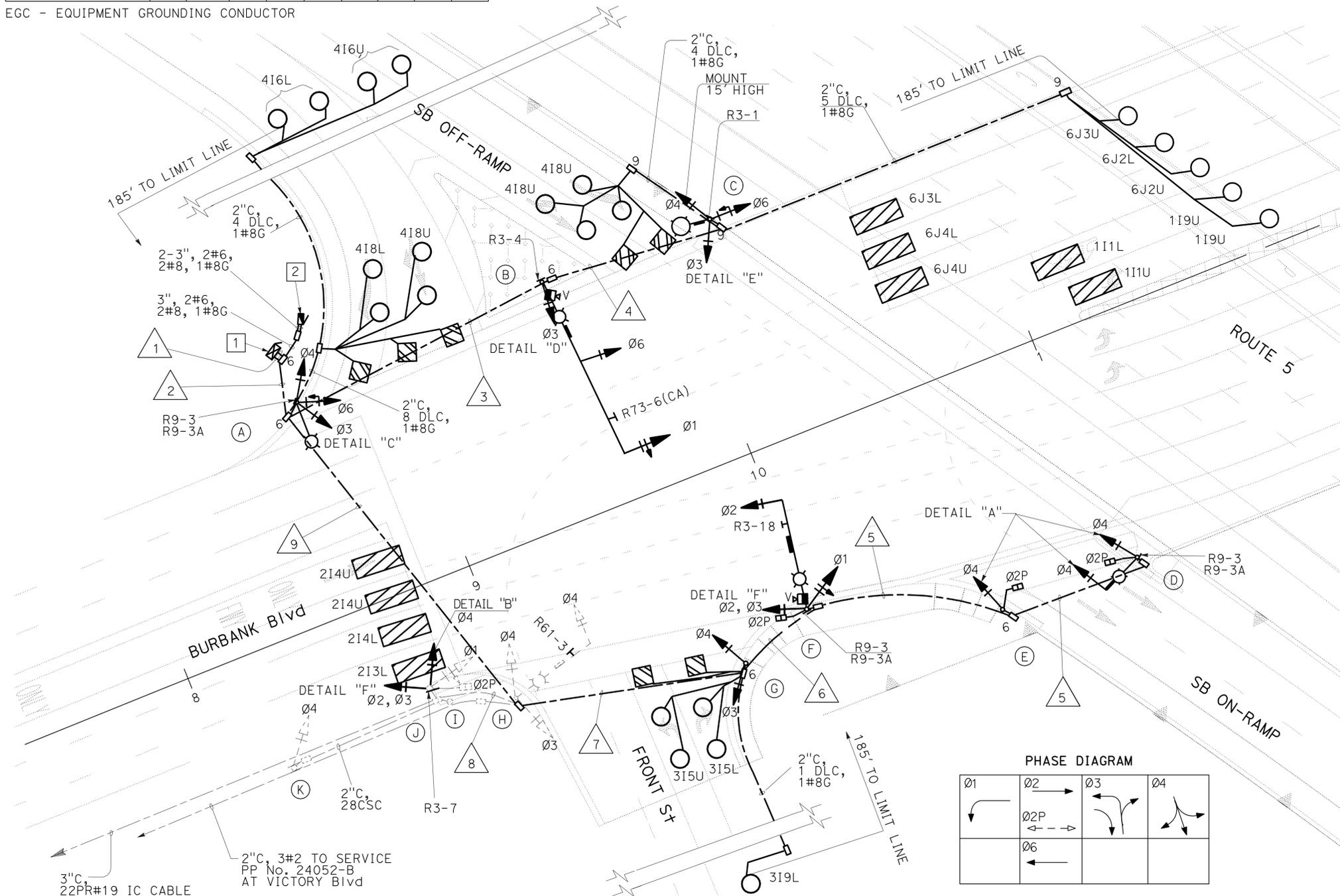


NO SCALE

**MODIFY SIGNAL AND LIGHTING
 (LOCATION 1)
 (BURBANK Blvd AND Rte 5 SB RAMP)
 (FINAL)**

SCALE: 1" = 20'

E-61



APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

QUINCIE TRAN
 CECILIO BURCIAGA
 YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 QUINCIE TRAN: CECILIO BURCIAGA
 REVISIONS: [Grid with X and Y markers]

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

PROJECT NOTES: (THIS SHEET ONLY)

- 1 COVER SIGNAL HEAD.
- 2 INSTALL 2"C.
- 3 ADJUST SIGNAL HEAD TOWARDS REALIGNED OFF-RAMP.
- 4 RC SIGNAL POLE AND EQUIPMENT.

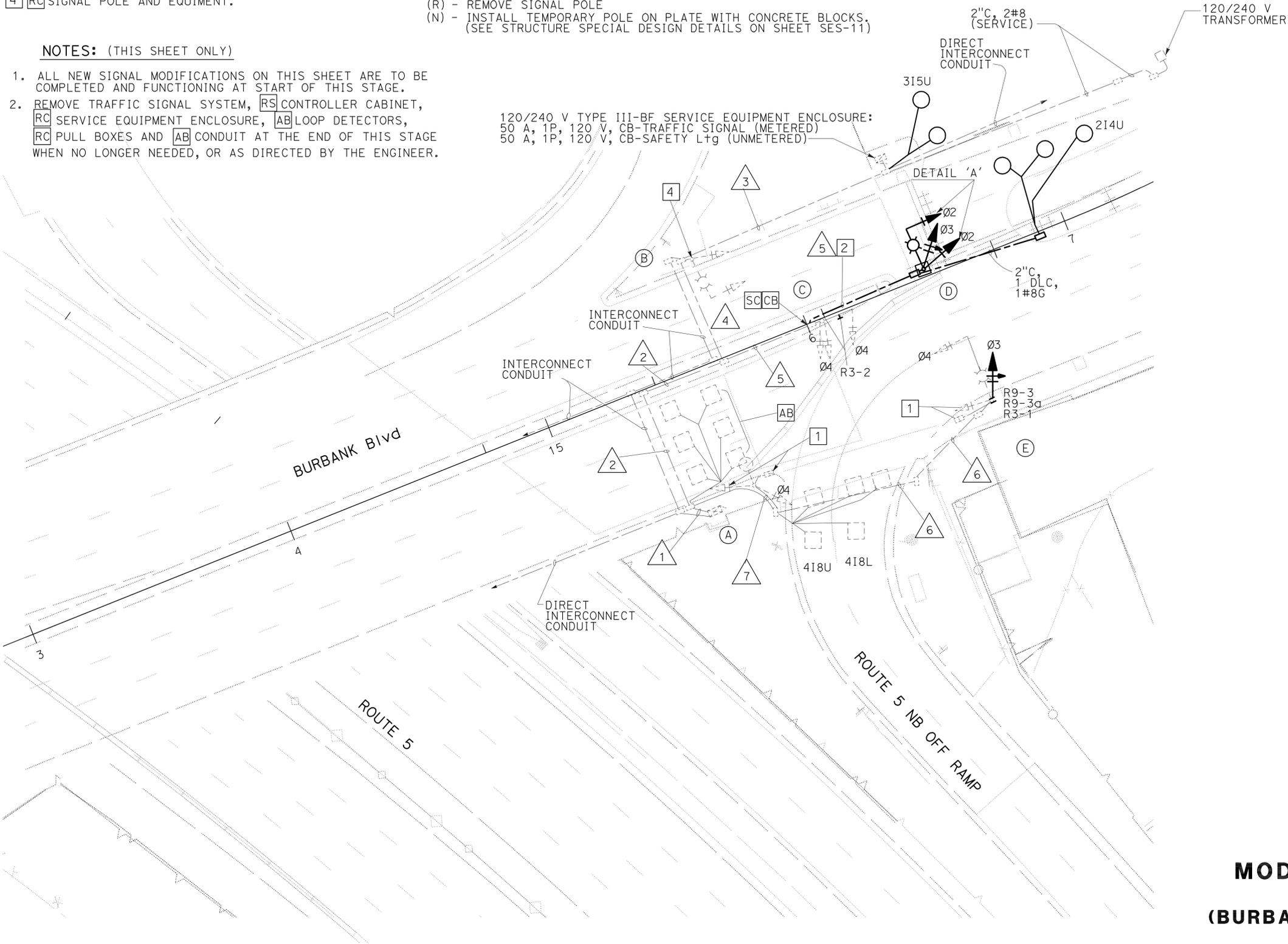
NOTES: (THIS SHEET ONLY)

1. ALL NEW SIGNAL MODIFICATIONS ON THIS SHEET ARE TO BE COMPLETED AND FUNCTIONING AT START OF THIS STAGE.
2. REMOVE TRAFFIC SIGNAL SYSTEM, RS CONTROLLER CABINET, RC SERVICE EQUIPMENT ENCLOSURE, AB LOOP DETECTORS, RC PULL BOXES AND AB CONDUIT AT THE END OF THIS STAGE WHEN NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.

EXISTING POLE AND EQUIPMENT SCHEDULE

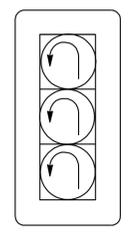
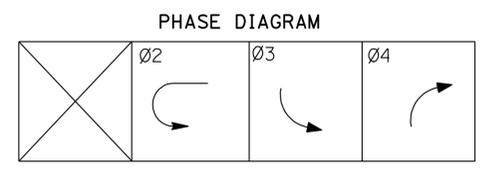
No.	STANDARD		VEH SIG MTG		PED SIGNAL	PPB		HPS	
	Type	SMA	LMA	Mast Arm	Pole	MTG	Ø	ARROW	LUMINAIRE
(A)	15TS	-	12'	-	SV-2-T	SP-1-T (C)	-	-	200 W
(B)	17D-1-70 (R)	18'	12'	-	-	-	-	-	200 W
(C)	33	15'	-	MAS	SV-1-T SV-1-T	-	-	-	-
(D)	19-1-100 (N)	15(N)	12'(N)	MAS(N)	SV-2-T (N)	-	-	-	200 W (N)
(E)	19-1-70	25'	12'	MAS	SV-2-T	SP-1-T (C)	-	-	200 W

(C) - COVER SIGNAL HEAD
 (R) - REMOVE SIGNAL POLE
 (N) - INSTALL TEMPORARY POLE ON PLATE WITH CONCRETE BLOCKS.
 (SEE STRUCTURE SPECIAL DESIGN DETAILS ON SHEET SES-11)



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	610	1931

REGISTERED ELECTRICAL ENGINEER DATE: 2/2/12
 C. BURCIAGA No. E015302 Exp. 3/31/13 ELECT
 PLANS APPROVAL DATE: 5-21-12



CONDUCTOR AND CONDUIT SCHEDULE

CON-DUCTOR	CONDUIT RUN	1	2	3	4	5	6	7
12CSC	SIGNAL CABLE	1	1			1	1	1
#10	LUMINAIRE		2	2	2	2	2	2
#8	SERVICE	2	2	2	2			
DLC	Ø2	1 (N)	1 (N)			1 (N)		
	Ø3	1 (N)	1 (N)	1 (N)	1 (N)			
	Ø4	2						2
#8	EGC	1	1	1	1	1	1	1
#19	INTERCONNECT	2		1				
CONDUIT SIZE		2-3"	2"	2"	2"	2"	2"	2"

MODIFY SIGNAL AND LIGHTING (LOCATION 2)
(BURBANK Blvd AND Rte 5 NB OFF RAMP)
(STAGE 5)

SCALE: 1" = 20'

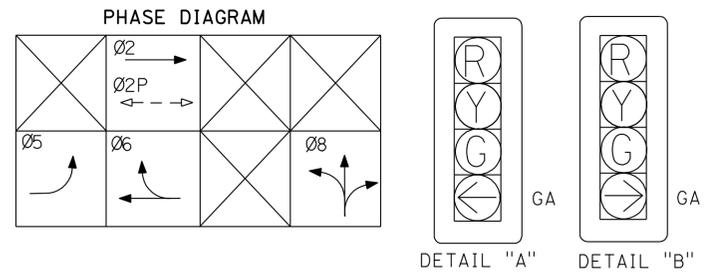
E-62

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

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

NOTES: (THIS SHEET ONLY)

1. VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODE (LED) TYPE.
2. LOOP DETECTORS IN THE STRUCTURE SHALL BE PRE-FORMED.
3. STREET NAME SIGNS ARE RETRO-REFLECTIVE.
4. SEE SHEET SES-2 FOR CAMERA INSTALLATION DETAILS.
5. SEE LEGEND ON E-61.

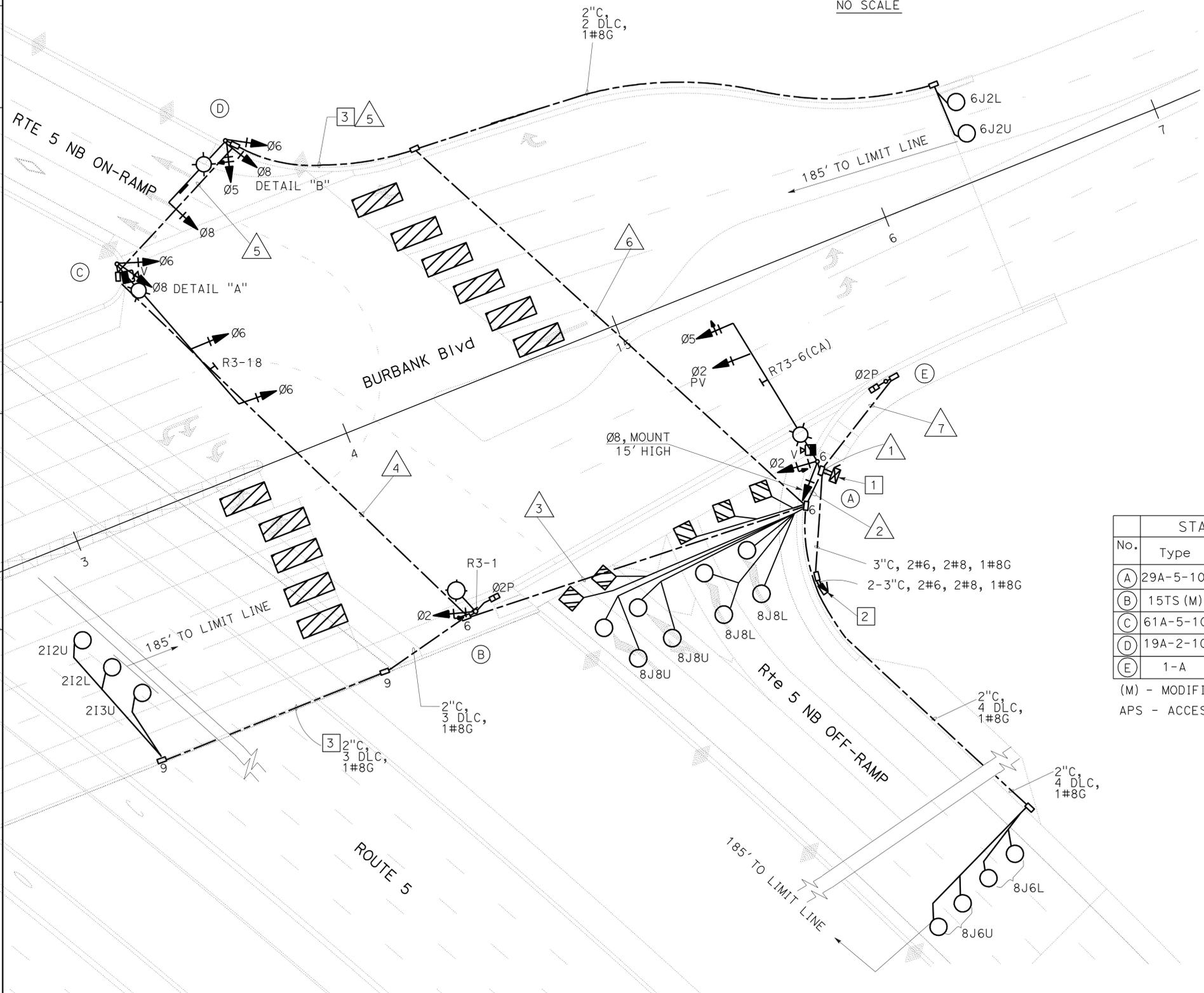


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	611	1931

REGISTERED ELECTRICAL ENGINEER DATE 2/2/12
 C. BURCIAGA
 No. E015302
 Exp. 3/31/13
 ELECT

5-21-12
 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.



PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY IN MODEL 332 CONTROLLER CABINET. INSTALL STATE-FURNISHED MODEL 2070-6B MODEM AND C2 MODEM HARNESSSES. INSTALL BATTERY BACK UP SYSTEM WITH STATE-FURNISHED COMPONENTS OF BATTERY BACK UP SYSTEM. INSTALL TRAFFIC SIGNAL INTERCONNECT AND WIRELESS DATA SERVICE SYSTEM. (SEE DETAIL G ON E-77 AND DETAILS E-78)
2. FOR REFERENCE ONLY, SEE E-30 FOR INSTALLATION DETAILS.
3. INSTALL CONDUIT IN CONCRETE BARRIER.
4. INSTALL 3"C, 4#6, 1#8G.

CONDUCTOR AND CONDUIT SCHEDULE

CON-DUCTOR	CONDUCTOR RUN	1	2	3	4	5	6	7
28CSC	C1	1	1	1	1	1	1	
	C2	1	1	1	1	1	1	
5CSC	SIGNAL CABLE	1						1
#6	LUMINAIRE		2	2		2	2	
#8	SIGNAL SERVICE	2						
DLC	EGC	1	1	1	1	1	1	1
	Ø2 DETECTOR	3	3	3				
	Ø6 DETECTOR	2	2				2	
	Ø8 DETECTOR	12	12					
	TOTAL							
	VIDEO CABLE	2	1	1		1	1	
	CONDUIT SIZE	2-3"	3"	3"	3"	3"	3"	2"

EGC - EQUIPMENT GROUNDING CONDUCTOR

NEW POLE AND EQUIPMENT SCHEDULE

No.	STANDARD Type	VEH SIG MTG		PED SIGNAL	APS		HPS LUMINAIRE	STREET NAME	
		SMA	LMA		MTG	Ø			ARROW
(A)	29A-5-100	55'	15'	MAS Mast Arm SV-1-T	-	2	→	400 W	
(B)	15TS (M)	-	15'	-	SV-1-T	SP-1-T	→	400 W	
(C)	61A-5-100	65'	15'	MAS MAS SV-2-TA	-	-	-	400 W	
(D)	19A-2-100	30'	15'	MAS SV-3-TA	-	-	-	400 W	BURBANK Blvd
(E)	1-A	-	-	-	TP-1-T	-	-	-	

(M) - MODIFIED 15TS, SEE STRUCTURE SHEET SES-1 FOR POLE DETAILS
 APS - ACCESSIBLE PEDESTRIAN SIGNAL

MODIFY SIGNAL AND LIGHTING (LOCATION 2)
(BURBANK Blvd AND Rte 5 NB RAMP)
(FINAL)

SCALE: 1" = 20'

E-63

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: CHECKED BY:
 QUINCY TRAN: CECILIO BURCIAGA
 REVISED BY: DATE REVISED:

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

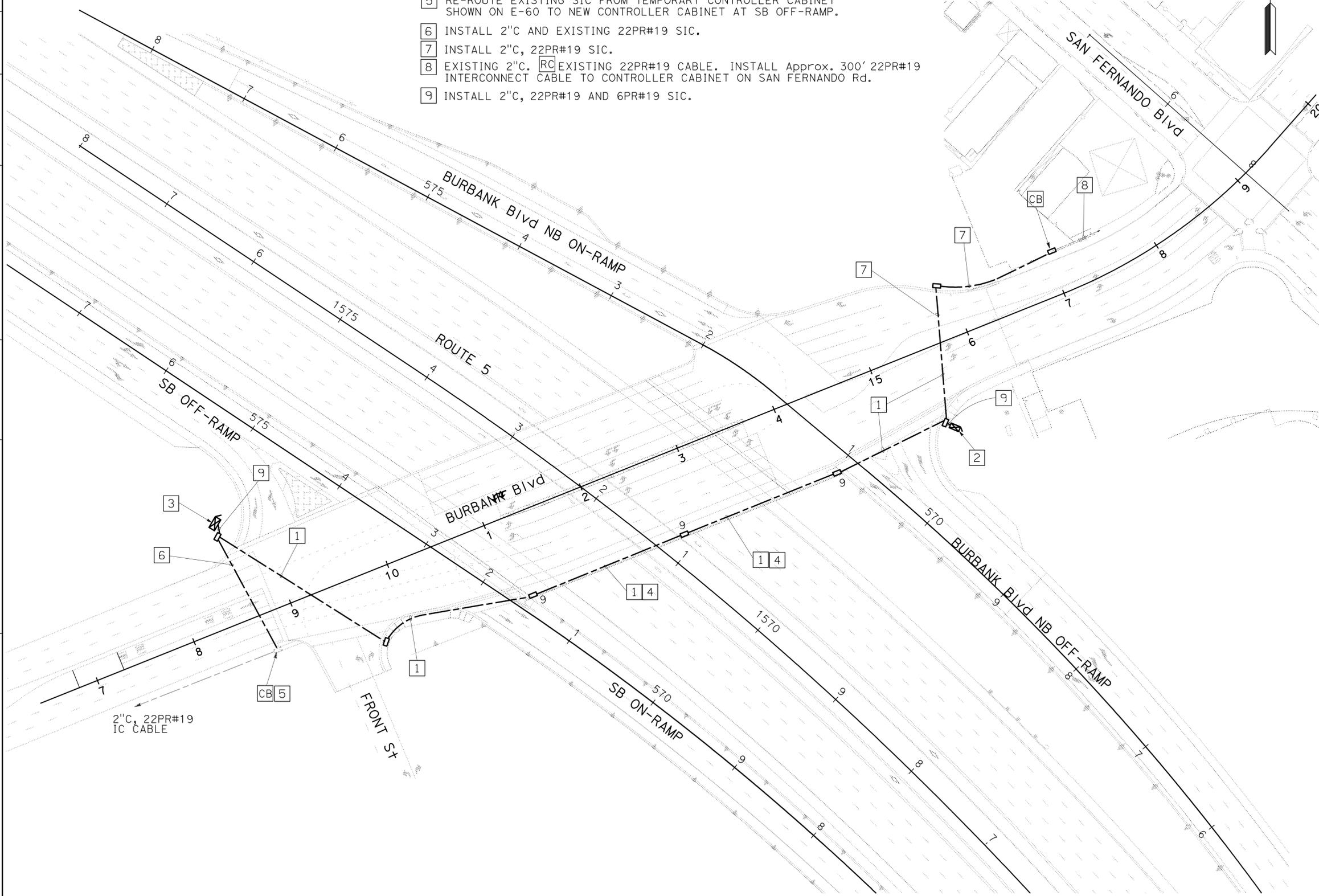
- PROJECT NOTES: (THIS SHEET ONLY)**
- 1 INSTALL 2"C, 6PR#19 SIC.
 - 2 FOR REFERENCE ONLY, SEE SHEET E-63 FOR INSTALLATION DETAILS.
 - 3 FOR REFERENCE ONLY, SEE SHEET E-61 FOR INSTALLATION DETAILS.
 - 4 IN CONCRETE BARRIER.
 - 5 RE-ROUTE EXISTING SIC FROM TEMPORARY CONTROLLER CABINET SHOWN ON E-60 TO NEW CONTROLLER CABINET AT SB OFF-RAMP.
 - 6 INSTALL 2"C AND EXISTING 22PR#19 SIC.
 - 7 INSTALL 2"C, 22PR#19 SIC.
 - 8 EXISTING 2"C, RC EXISTING 22PR#19 CABLE. INSTALL Approx. 300' 22PR#19 INTERCONNECT CABLE TO CONTROLLER CABINET ON SAN FERNANDO Rd.
 - 9 INSTALL 2"C, 22PR#19 AND 6PR#19 SIC.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	612	1931

REGISTERED ELECTRICAL ENGINEER DATE: 2/2/12
 C. BURCIAGA
 No. E015302
 Exp. 3/31/13
 ELECT

5-21-12
 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.



INTERCONNECTION CONDUIT AND CABLE
 SCALE: 1" = 50'
E-64

APPROVED FOR ELECTRICAL WORK ONLY

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

POLE AND EQUIPMENT SCHEDULE

NO.	STANDARD			VEH SIG MTG		PED SIGNAL	APS		HPS LUMINAIRE	IISNS
	TYPE	SMA	LMA	MAST ARM	POLE	MTG	Ø	ARROW		
(A)	15TS	—	12'	—	—	—	—	—	200 W	
(B)	26-4-100	40'	15'	2-MAT	SV-2-TA	SP-2-T	2, 8	↔	200 W	SAN FERNANDO Blvd
(C)	1-A *	—	—	—	TV-1-T	—	—	—	—	
(D)	1-A(7')	—	—	—	SP-1-T	—	—	—	—	
(E)	PPB POST	—	—	—	—	—	8	←	—	
(F)	PPB POST	—	—	—	—	—	8	→	—	
(G)	19-3-100 *	25'	15'	MAS	SV-1-TA	SP-1-T	8	←	200 W	EMPIRE Ave
(H)	STRUCTURE *		** SEE	STRUCTURE	PLANS					
(I)	STRUCTURE *		** SEE	STRUCTURE	PLANS					R3-18 **
(J)	1-A				TV-1-T	SP-1-T	2	←		
(K)	1-A				TV-1-T	—	—	—		
(L)	15TS *		15'		SV-2-TA	—	—	—	200 W	

* - SEE STRUCTURE PLANS FOR FOUNDATION INSTALLATION DETAILS SDS8, SDS9 AND SDS10.
 ** - SEE STRUCTURE PLANS FOR MOUNTING DETAILS ON BRIDGE.
 APS - ACCESSIBLE PEDESTRIAN SIGNAL.

PROJECT NOTES: (THIS SHEET)

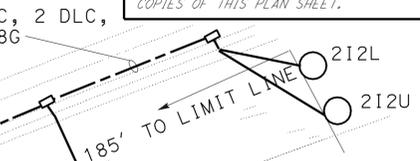
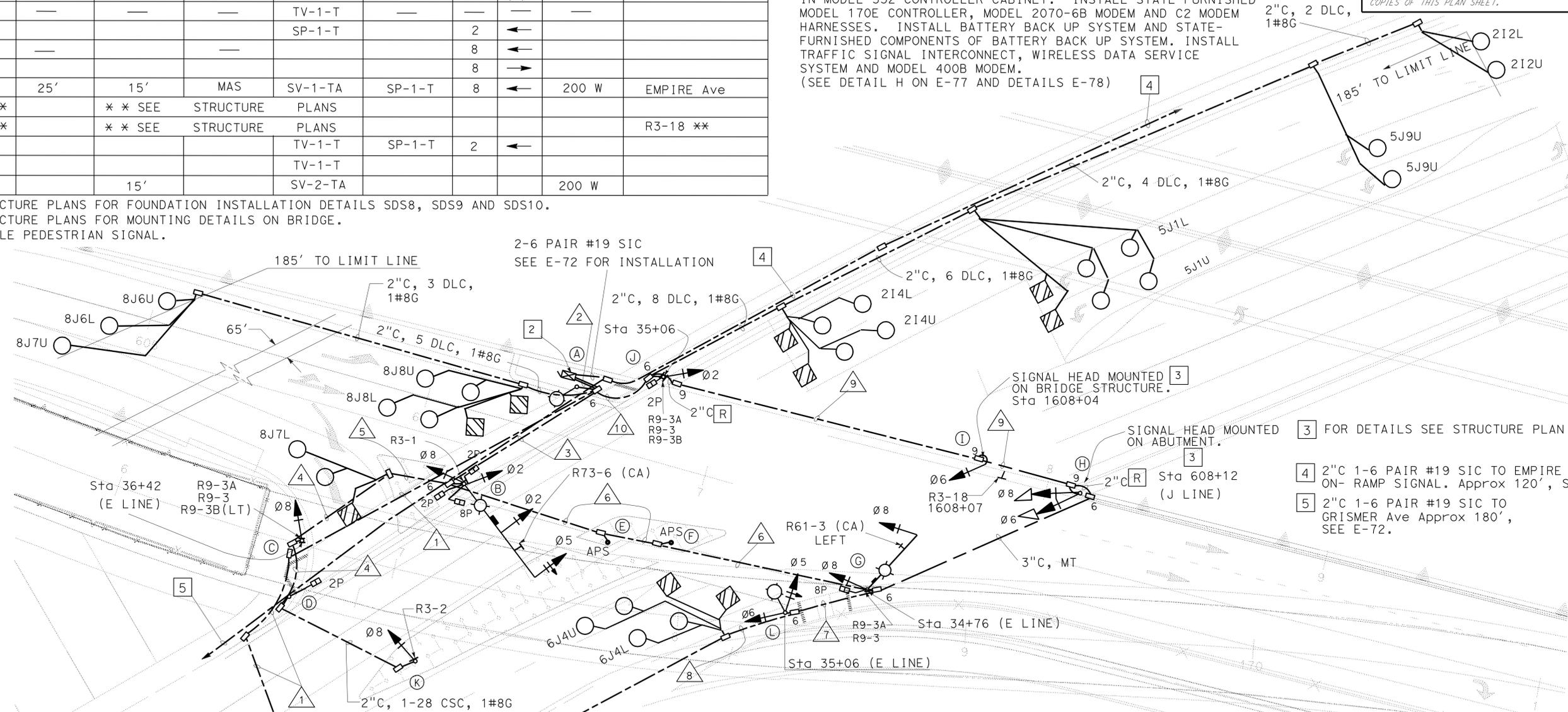
- 120/240 V TYPE III-CF DUAL METERED SERVICE EQUIPMENT ENCLOSURE; SECOND METER WITH:
 1-100 A, 2P, 240 V, CB-MAIN
 1-15 A, 1P, 120 V, CB-IISNS
 1-50 A, 1P, 120 V, CB-SIGNAL
 1-30 A, 2P, 240 V, CB-SAFETY LIGHTING
 1-15 A, 1P, 120 V, CB-TYPE V PEC.
 ID: 07-53-005-R-030.362
 FOR REFERENCE ONLY, FOR DETAILS SEE E-19
- INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY IN MODEL 332 CONTROLLER CABINET. INSTALL STATE-FURNISHED MODEL 170E CONTROLLER, MODEL 2070-6B MODEM AND C2 MODEM HARNESSSES. INSTALL BATTERY BACK UP SYSTEM AND STATE-FURNISHED COMPONENTS OF BATTERY BACK UP SYSTEM. INSTALL TRAFFIC SIGNAL INTERCONNECT, WIRELESS DATA SERVICE SYSTEM AND MODEL 400B MODEM.
 (SEE DETAIL H ON E-77 AND DETAILS E-78)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	613	1931

REGISTERED ELECTRICAL ENGINEER DATE 2/2/12
 5-21-12 PLANS APPROVAL DATE

JESSE RUELAS
 No. E015604
 Exp. 12/31/13
 ELECT

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.



3 FOR DETAILS SEE STRUCTURE PLAN SES-9.

4 2" C 1-6 PAIR #19 SIC TO EMPIRE AVE SB ON-RAMP SIGNAL. Approx 120', SEE SHEET E-72.

5 2" C 1-6 PAIR #19 SIC TO GRISMER Ave Approx 180', SEE E-72.

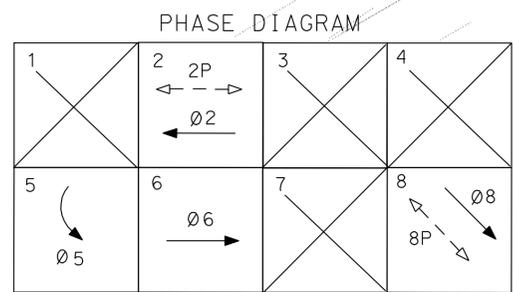
CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9*	10
28CSC	C1		1	1	1	1	1			1	1
28CSC	C2		1	1	1	1	1	1		1	1
#12	IISNS	2		2			2				
#6	SIGNAL SERVICE	2	2								
#10	LUMINAIRE	2		2			2	2			
#8	EGC	1	1	1	1	1	1	1	1	1	1
DLC	Ø 2 DETECTOR		4								4
	Ø 5 DETECTOR		4								4
	Ø 6 DETECTOR		4	4			4	4	4		
	Ø 8 DETECTOR		6	1			1	4	4		
TOTAL		18	5			1	4	4	4		8
CONDUIT SIZE		2" C	2-3" C	3" C	2" C	2" C	3" C	3" C	2" C	2" C	3" C

* CONDUIT IN CONCRETE BARRIER.

GENERAL NOTES: (THIS SHEET)

1. INSTALL 12CSC FROM THE SIGNAL POLE TO THE PULL BOX ADJACENT TO THE SIGNAL POLE AND SPLICE TO THE 28CSC.



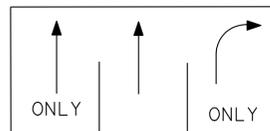
SIGNAL AND LIGHTING (LOCATION 1)

SCALE 1" = 20'

E-65

APPROVED FOR ELECTRICAL WORK ONLY

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



DETAIL A
R61-36 Mod

POLE AND EQUIPMENT SCHEDULE

NO.	STANDARD			VEH SIG MTG		PED SIGNAL		APS		HPS LUMINAIRE	IISNS	SPECIAL INSTRUCTION
	TYPE	SMA	LMA	MAST ARM	POLE	MTG	Ø	ARROW				
(A)	19-3-100	30'	12'	MAT	SV-2-TA	SP-1-T	2	←	200 W			
(B)	26-3-100*	40'	15'	MAS	SV-1-T	—	—	—	200 W	EMPIRE AVENUE		
(C)	1-A	—	—	—	TV-2-T	SP-1-T	2	→	—			
(D)	26-4-100	45'	12'	2-MAT	SV-2-T	—	—	—	200 W	← SB ON RAMP		
(E)	15TS	—	12'	—	SV-2-TA	—	—	—	200 W			

* - SEE STRUCTURE PLANS FOR Mod FOUNDATION.
APS - ACCESSIBLE PEDESTRIAN SIGNAL.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	614	1931

Jesse Ruelas 2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE

5-21-12
 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.

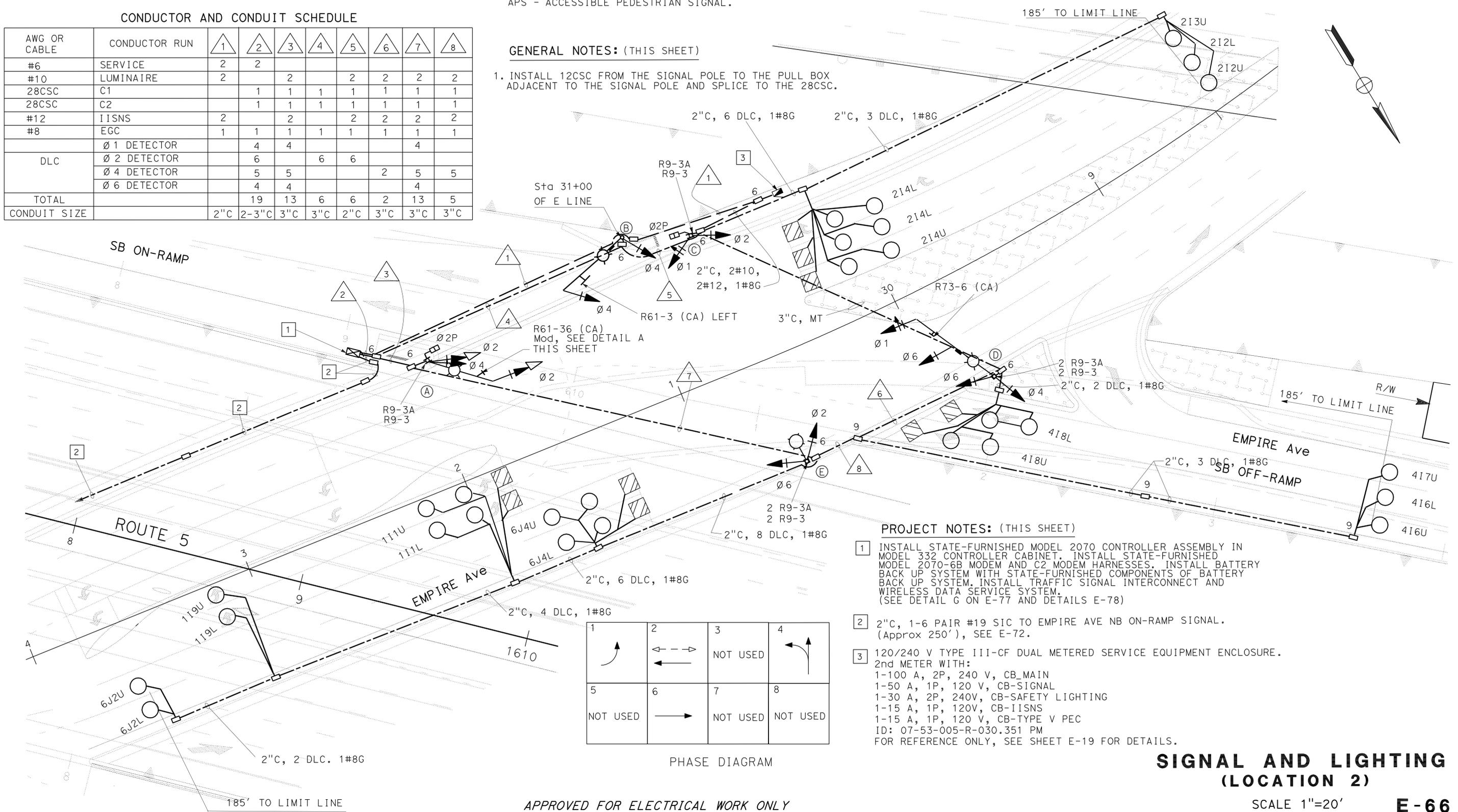
REGISTERED PROFESSIONAL ENGINEER
 JESSE RUELAS
 No. E015604
 Exp. 12/31/13
 ELECT

CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8
#6	SERVICE	2	2						
#10	LUMINAIRE	2							
28CSC	C1		1	1	1	1	1	1	1
28CSC	C2		1	1	1	1	1	1	1
#12	IISNS	2		2		2	2	2	2
#8	EGC	1	1	1	1	1	1	1	1
	Ø 1 DETECTOR		4	4				4	
	Ø 2 DETECTOR		6		6	6			
	Ø 4 DETECTOR		5	5			2	5	5
	Ø 6 DETECTOR		4	4				4	
TOTAL			19	13	6	6	2	13	5
CONDUIT SIZE		2" C	2-3" C	3" C	3" C	2" C	3" C	3" C	3" C

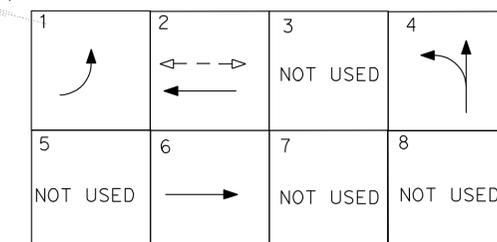
GENERAL NOTES: (THIS SHEET)

- INSTALL 12CSC FROM THE SIGNAL POLE TO THE PULL BOX ADJACENT TO THE SIGNAL POLE AND SPLICE TO THE 28CSC.



PROJECT NOTES: (THIS SHEET)

- INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY IN MODEL 332 CONTROLLER CABINET. INSTALL STATE-FURNISHED MODEL 2070-6B MODEM AND C2 MODEM HARNESES. INSTALL BATTERY BACK UP SYSTEM WITH STATE-FURNISHED COMPONENTS OF BATTERY BACK UP SYSTEM. INSTALL TRAFFIC SIGNAL INTERCONNECT AND WIRELESS DATA SERVICE SYSTEM. (SEE DETAIL G ON E-77 AND DETAILS E-78)
- 2" C, 1-6 PAIR #19 SIC TO EMPIRE AVE NB ON-RAMP SIGNAL. (Approx 250'), SEE E-72.
- 120/240 V TYPE III-CF DUAL METERED SERVICE EQUIPMENT ENCLOSURE. 2nd METER WITH:
 1-100 A, 2P, 240 V, CB_MAIN
 1-50 A, 1P, 120 V, CB-SIGNAL
 1-30 A, 2P, 240V, CB-SAFETY LIGHTING
 1-15 A, 1P, 120V, CB-IISNS
 1-15 A, 1P, 120 V, CB-TYPE V PEC
 ID: 07-53-005-R-030.351 PM
 FOR REFERENCE ONLY, SEE SHEET E-19 FOR DETAILS.



PHASE DIAGRAM

APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING
(LOCATION 2)

SCALE 1"=20'

E-66

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

PROJECT NOTE: (THIS SHEET ONLY)

- 1 RS POLE AND EQUIPMENT RC ADJACENT PULL BOX.
- 2 RS CITY-FURNISHED COHU
3955 CCTV CAMERA
- 3 RS TYPE III-BF SERVICE
EQUIPMENT ENCLOSURE, WITH:
100 A, 2P, 240 V, CB-MAIN
50 A, 1P, 120 V, CB-SIGNAL
15 A, 1P, 120 V, CB-STREET SIGN LIGHTING
20 A, 1P, 120 V, CB-LIGHTING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	617	1931

2/2/12
REGISTERED ELECTRICAL ENGINEER DATE

Jesse Ruelas
No. E015604
Exp. 12/31/13
ELECT

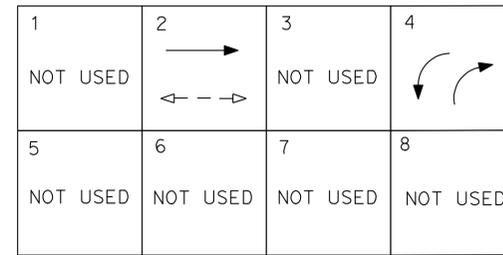
5-21-12
PLANS APPROVAL DATE

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.

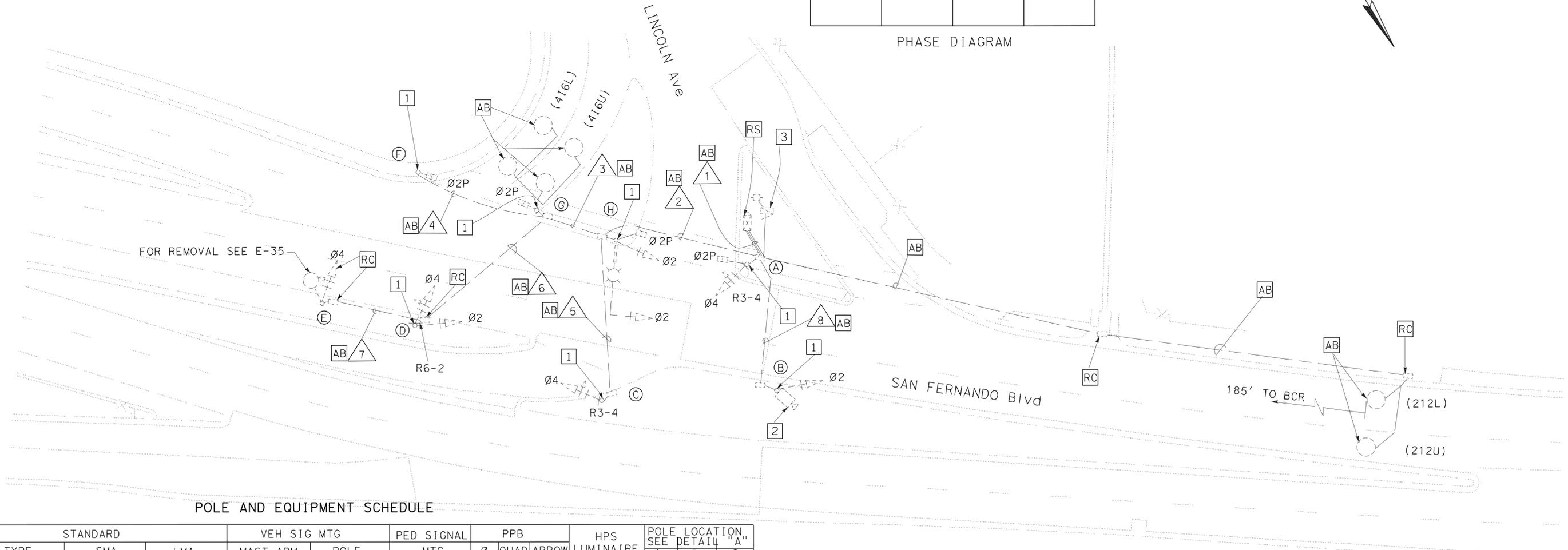
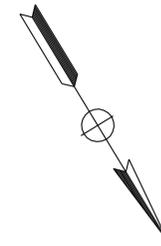
CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8
28 CONDUCTOR CABLE (28CSC)	VEHICLE, PED AND PPB	2	1	1	1	1	1	1	1
#10	LUMINAIRE	—	2	2	—	—	2	2	—
#6	SERVICE	2	—	—	—	—	—	—	—
DLC	Ø 2 DETECTOR	2	—	—	—	—	—	—	—
	Ø 4 DETECTOR	3	3	2	—	1	—	—	—
	TOTAL	5	3	2	—	1	—	—	—
CCTV CABLE		1	—	—	—	—	—	—	1
12 SMFO CABLE		1	—	—	—	—	—	—	—
CONDUIT SIZE		3-3"C 2*	2½"C	2"C	1½"C	1½"C	1½"C	1½"C	2"C

* FIBER OPTIC



PHASE DIAGRAM



POLE AND EQUIPMENT SCHEDULE

NO.	STANDARD			VEH SIG MTG		PED SIGNAL	PPB			HPS LUMINAIRE	POLE LOCATION, SEE DETAIL "A"		
	TYPE	SMA	LMA	MAST ARM	POLE	MTG	Ø	QUAD	ARROW		A	B	C
(A)	1A	—	—	—	SV-1-T	CS-1-T	2	S	→	—	—	—	
(B)	C-1	—	—	—	SV-1-T	—	—	—	—	—	—	3'	
(C)	1A	—	—	—	TV-1-T	—	—	—	—	—	—	—	
(D)	1A	—	—	—	SV-2-TA	—	—	—	—	—	—	—	
(E)	15	—	—	—	SV-1-T	—	—	—	—	400 W	—	—	
(F)	1A	—	—	—	—	TP-1	2	S	←	—	—	—	
(G)	1A	—	—	—	—	TP-1-T	2	S	→	—	—	3'	
(H)	19-4-129	30'	15'	MAS	SV-1-T	CS-1-T	2	S	←	400 W	—	3'	

**MODIFY SIGNAL AND LIGHTING
(LOCATION 4)
(CITY)
(REMOVAL)**

APPROVED FOR ELECTRICAL WORK ONLY SCALE: 1" = 20'

E-69

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: YI TSAU
 CHECKED BY: []
 DESIGNED BY: []
 CALCULATED BY: []
 REVISIONS: []
 DATE: []
 REVISOR: []
 DATE: []

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

POLE AND EQUIPMENT SCHEDULE

No.	STANDARD			VEH SIG MTG		PED SIGNAL		APS		HPS LUMINAIRE	SPECIAL REQUIREMENTS
	Type	SMA	LMA	Mast Arm	Pole	MTG	Ø	ARROW			
(A)	1-A	—	—	—	TV-3-T	SP-1-T	4	←			
(B)	1-A	—	—	—	TV-1-T						
(C)	19-3-100	30'	—	—	SV-1-T					200 W	
(D)	15TS	—	15'	2MAS	SV-1-T SV-1-T	SP-1-T	6	→		200 W	
(E)	17-2-100	20'	15'	MAS	SV-2-T	SP-2-T	4,6	↔		200 W	

APS - ACCESSIBLE PEDESTRIAN SIGNAL

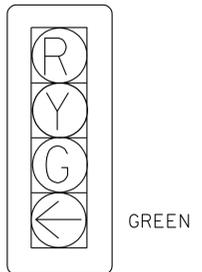
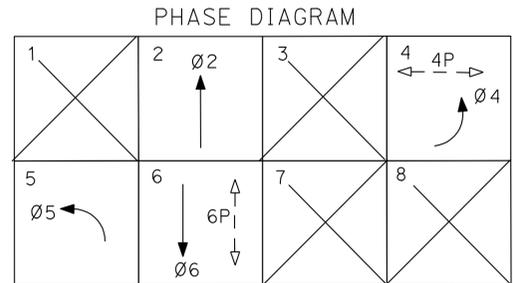
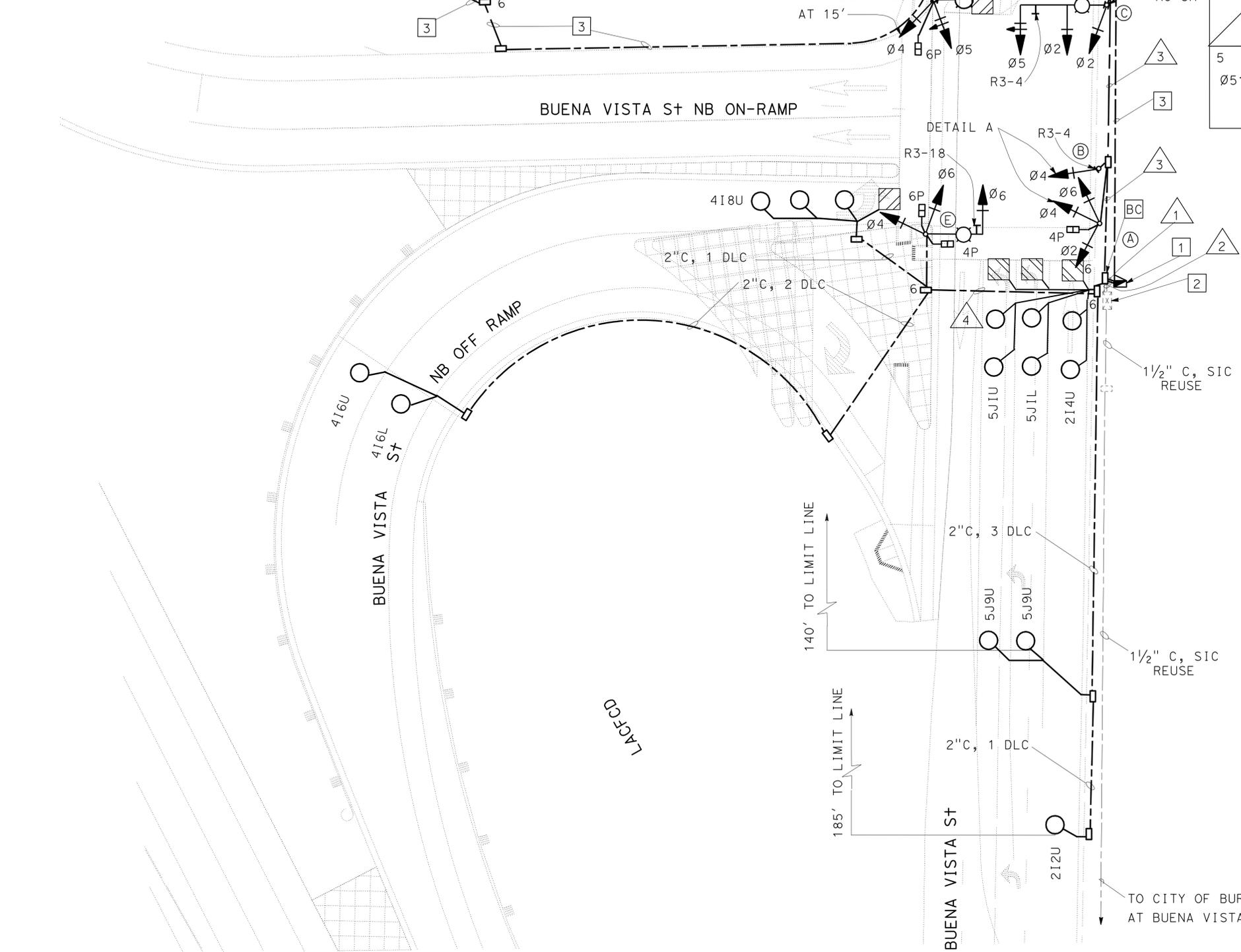
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	618	1931

REGISTERED ELECTRICAL ENGINEER
 JESSE RUELAS
 No. E015604
 Exp. 12/31/13
 ELECT

2/2/12
 REGISTERED ELECTRICAL ENGINEER DATE

5-21-12
 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.



DETAIL "A"
 NO SCALE

GENERAL NOTE: (THIS SHEET)

- INSTALL 12CSC FROM THE SIGNAL POLE TO THE PULL BOX ADJACENT TO THE SIGNAL POLE AND SPLICE TO THE 28CSC.

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4
28CSC	C1		1	1	1
28CSC	C2		1	1	1
#10	LUMINAIRE	2		2	2
#6	SIGNAL SERVICE	2	2		
#8G	GROUND	1	1	1	1
DLC	Ø 2 DETECTOR		2		
	Ø 4 DETECTOR		3		3
	Ø 5 DETECTOR		4		
	Ø 6 DETECTOR		2	2	
	TOTAL		11	2	3
CONDUIT SIZE		2" C	Exist 2-3" C	2" C	3" C

PROJECT NOTES: (THIS SHEET)

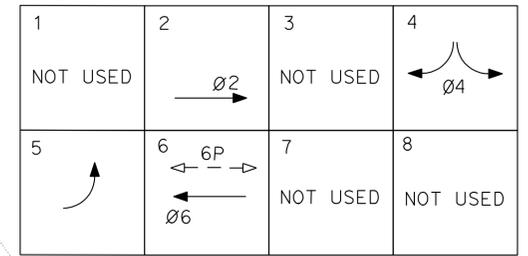
- INSTALL 120/240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
 1-100 A, 2P, 240 V, CB-MAIN
 1-50 A, 1P, 120 V, CB-SIGNAL
 1-30 A, 2P, 240 V, CB-SAFETY LIGHTING
 1-15 A, 1P, 120 V, CB-TYPE V PEC.
 ADDRESS: 2350 1/2 BUENA VISTA St.
 PP No 114887H.
- MODEL 2070 CONTROLLER ASSEMBLY IN TYPE 332 CABINET TO REMAIN.
- 3" C, MT, PER SERVING UTILITY. CONDUCTORS BY BWP.

**MODIFY SIGNAL AND LIGHTING
 (LOCATION 3)
 (CITY)**

SCALE: 1" = 20'

E-70

FOR LEGEND SEE E-68.
 APPROVED FOR ELECTRICAL WORK ONLY



PHASE DIAGRAM

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4	5	6	7	8
28CSC	C1		1	1	1	1	1	1	1
	C2		1	1	1	1	1	1	1
#12	IISNS	2		2	2	2	2	2	2
#10	LUMINAIRE	2		2	2	2	2	2	2
#6	SERVICE	2	2						
#8	GROUND	1	1	1	1	1	1	1	1
DLC	Ø2 DETECTOR		4	4	4				
	Ø4 DETECTOR		5	3					
	Ø5 DETECTOR		2	2	2				
	Ø6 DETECTOR		5	5		5	5		
TOTAL		16	14	6	5	5			
CONDUIT SIZE		2"C	2-3"C	3"C	3"C	3"C	3"C	3"C	2"C

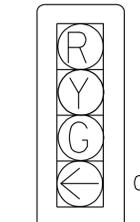
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

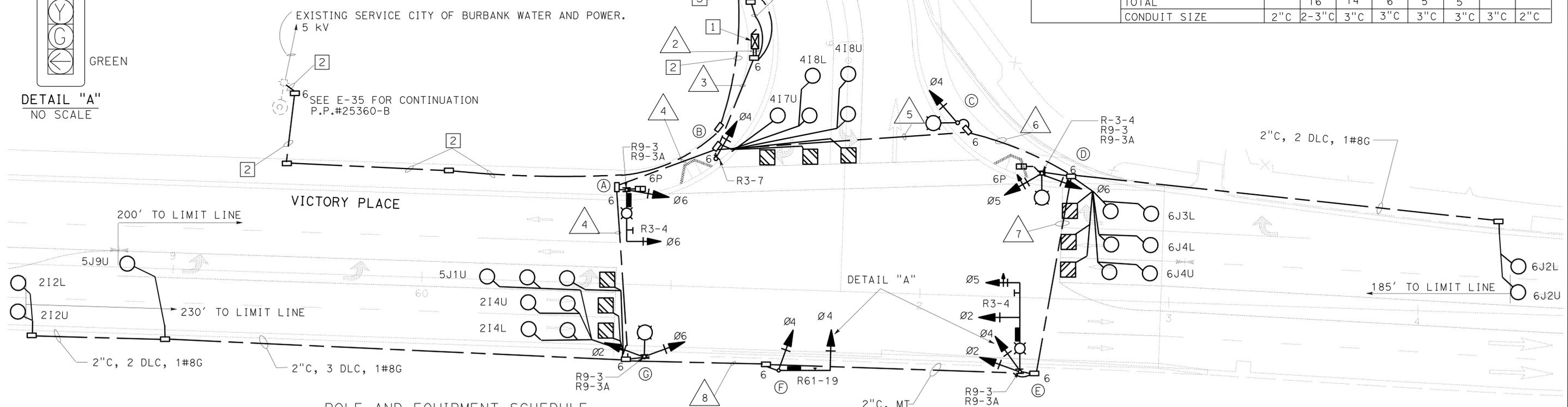
- INSTALL STATE-FURNISHED MODEL 332 CONTROLLER ASSEMBLY WITH MODEL 2070 CONTROLLER AND BATTERY BACK UP SYSTEM.
- 3"C, MT, PER SERVING UTILITY. CONDUCTORS BY OTHER.
- 2"C, 2#6 (SIGNAL), 2#10 (SAFETY LIGHTING), 2#12 (IISNS), 1#8G.
- INSTALL 120/240 V TYPE III-BF NON METERED SERVICE EQUIPMENT ENCLOSURE WITH:
 100 A, 2P, 240 V, CB-MAIN
 50 A, 1P, 120 V, CB-SIGNAL
 15 A, 1P, 120 V, CB-STREET NAME SIGN LIGHTING
 30 A, 2P, 240 V, CB-SAFETY LIGHTING
 15 A, 1P, 120 V, CB-PEC

GENERAL NOTE: (THIS SHEET)

- INSTALL 12CSC FROM THE SIGNAL POLE TO PULL BOX ADJACENT TO THE SIGNAL POLE AND SPLICE TO THE 28CSC.



DETAIL "A"
NO SCALE



POLE AND EQUIPMENT SCHEDULE

No.	STANDARD		VEH SIG MTG		PED SIGNAL	APS		HPS LUMINAIRE	SPECIAL REQUIREMENTS IISNS
	Type	SMA	LMA	Mast Arm		Pole	MTG		
(A)	17-3-100	20'	12'	MAS	SV-1-T	SP-1-T		200 W	LINCOLN St
(B)	1-A				TV-1-T		6		
(C)	15TS		12'		SV-1-T			200 W	
(D)	15TS		12'		SV-2-T	SP-1-T	6	200 W	
(E)	24-4-100	35'	12'	2-MAS	SV-2-T			200 W	LINCOLN St
(F)	16-3-100	20'		MAS	SV-1-T				SAN FERNANDO Blvd
(G)	15TS		12'		SV-2-T			200 W	

APS - ACCESSIBLE PEDESTRIAN SIGNAL

MODIFY SIGNAL AND LIGHTING (LOCATION 4) (CITY)

APPROVED FOR ELECTRICAL WORK ONLY

SCALE: 1" = 20'

E-71

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Karine Partamian
 Functional Supervisor
 YI TSAU
 Traffic Design

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	620	1931

<i>Jesse Ruelas</i> 2/2/12	
REGISTERED ELECTRICAL ENGINEER	DATE
5-21-12	
PLANS APPROVAL DATE	

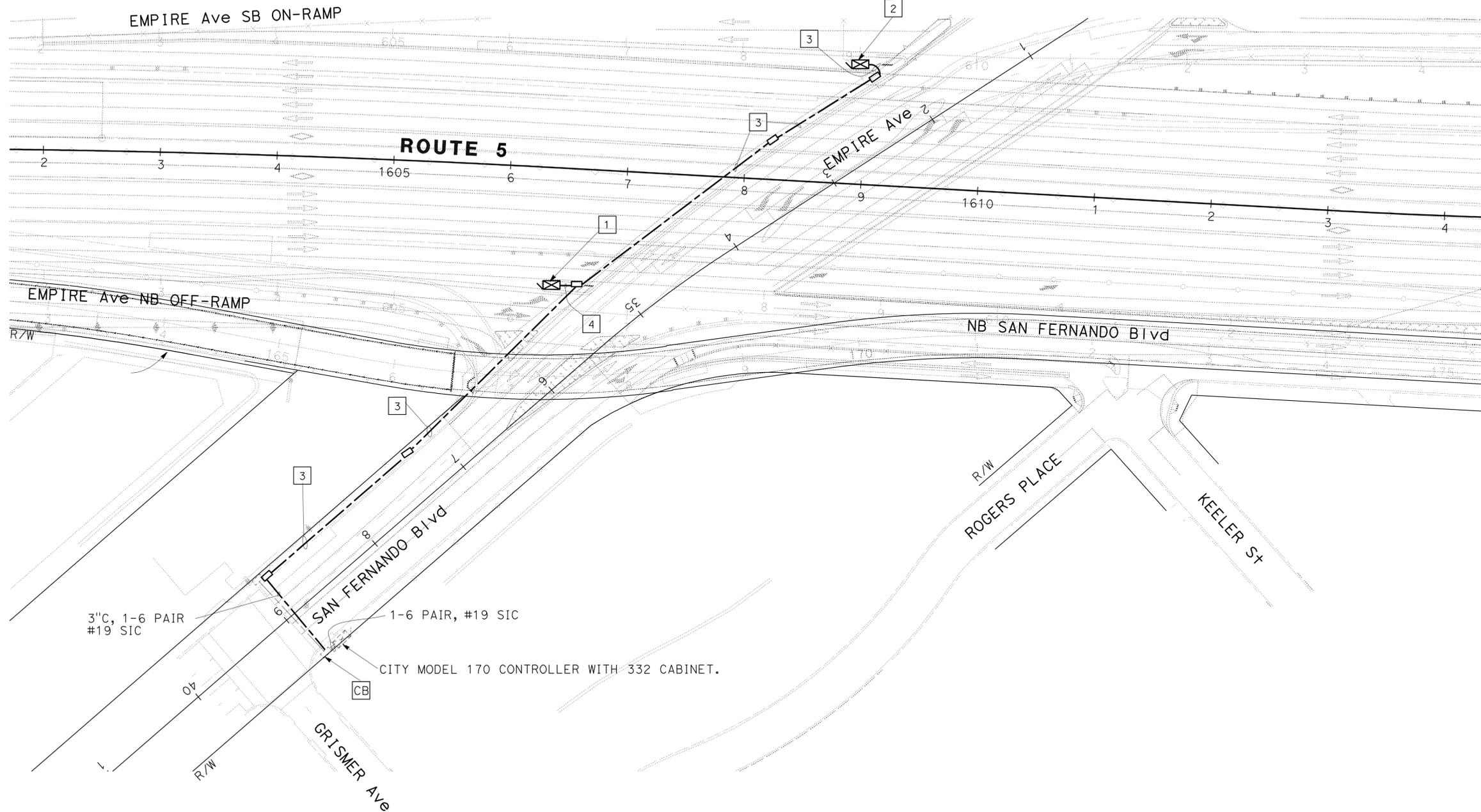
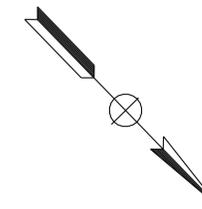
REGISTERED PROFESSIONAL ENGINEER
JESSE RUELAS
No. E015604
Exp. 12/31/13
ELECT
STATE OF CALIFORNIA

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.

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

NOTES: (THIS SHEET ONLY)

- 1 STATE-FURNISHED MODEL 2070 CONTROLLER, REFERENCE ONLY. FOR DETAILS SEE SIGNAL PLAN E-66. FOR DETAIL G SEE E-77 AND E-78.
- 2 STATE-FURNISHED MODEL 2070 CONTROLLER, REFERENCE ONLY. FOR DETAILS SEE SIGNAL PLAN E-65. FOR DETAIL H SEE E-77 AND E-78.
- 3 2" C, 1-6 PAIR #19 SIC.
- 4 2" C, 2-6 PAIR #19 SIC.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR
YI TSAU
CALCULATED-DESIGNED BY
CHECKED BY
KARINE PARTAMIAN
JESSE RUELAS
REVISED BY
DATE REVISED

INTERCONNECTION CONDUIT AND CABLE

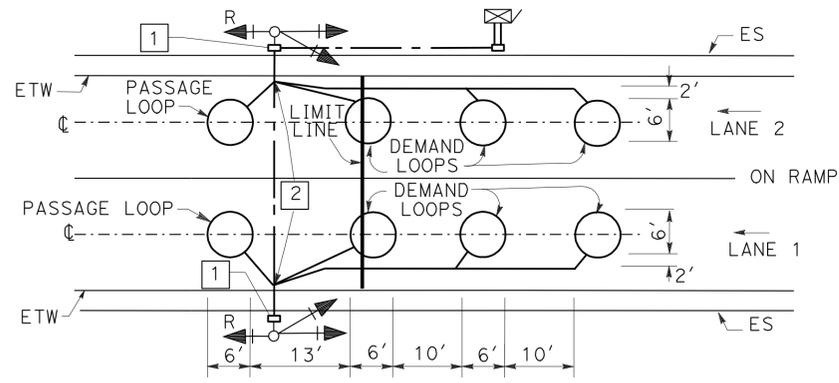
APPROVED FOR ELECTRICAL WORK ONLY

SCALE: 1" = 50'

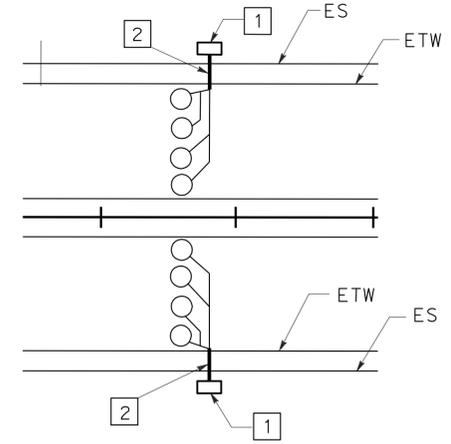
E-72



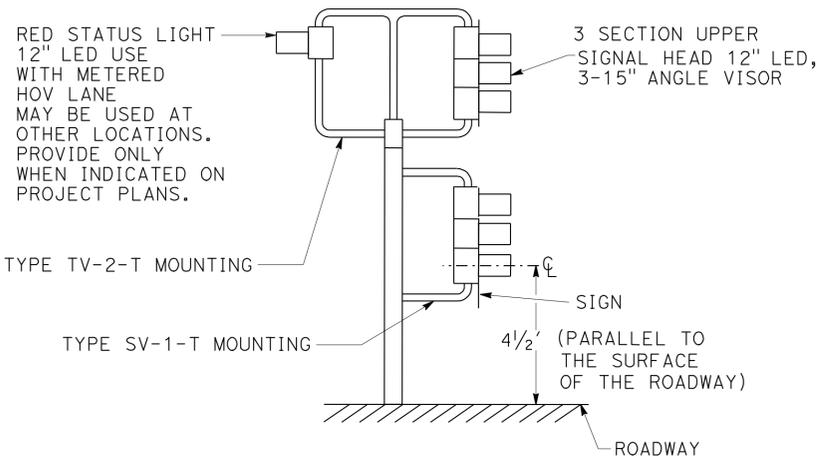
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	621	1931
 REGISTERED ELECTRICAL ENGINEER DATE 2/2/12			CECILIO BURCIAGA No. E015302 Exp. 03-31-13 ELECTRICAL		
5-21-12 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



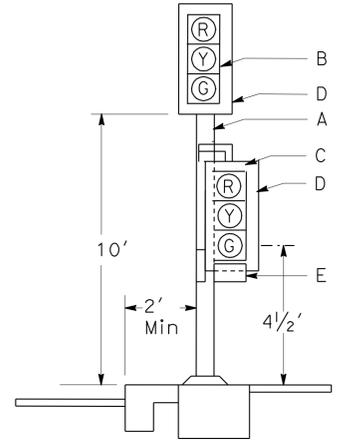
TYPICAL 2-LANE RAMP METERING SYSTEM INSTALLATION



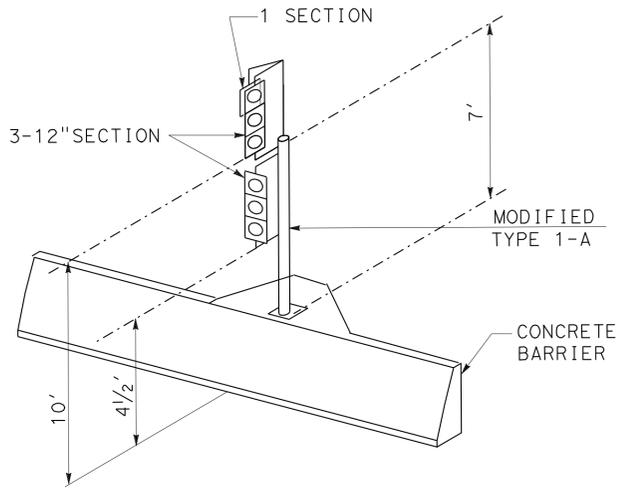
TYPICAL TRAFFIC MONITORING LOOP CONFIGURATION



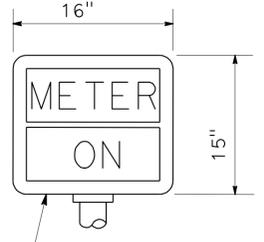
RAMP METER SIGNAL



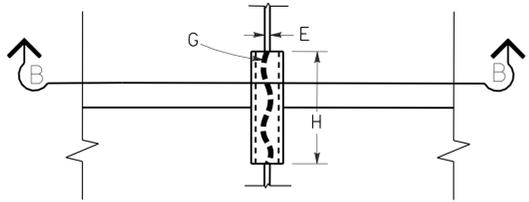
- A. TYPE 1-A SIGNAL STANDARD.
- B. 3-SECTION 12" LED SIGNAL HEAD (RED, YELLOW, GREEN). 18" x 7 7/8" ANGLED VISORS ARE REQUIRED WHERE SHOWN ON PLANS.
- C. 3-SECTION 12" LED SIGNAL HEAD (RED, YELLOW, GREEN). 12" FULL CIRCLE VISORS TYPE SV-1-T BRACKET MOUNTING ON SIDE OF STANDARD, AWAY FROM TRAFFIC.
- D. BACKPLATE.
- E. R89(CA) MOUNT ON BACK PLATE AND CENTER BETWEEN GREEN SECTION AND BOTTOM OF BACK PLATES AND SIDES. ATTACH WITH 1/4" x 3/4" BOLTS, HEX NUTS, PLAIN AND LOCK WASHERS.



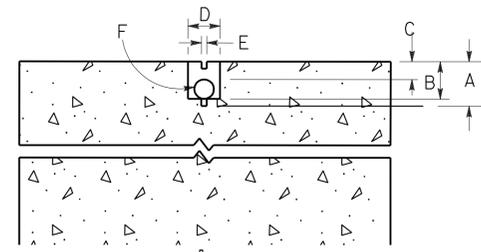
TYPICAL DETAIL FOR RAMP METER SIGNAL ON CONCRETE BARRIER



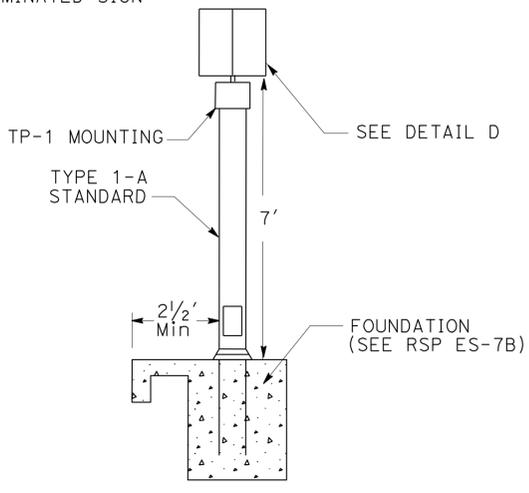
DETAIL D METER-ON SIGN



PLAN VIEW



SECTION B-B



METER-ON SIGN

- A. SAW-CUT DEPTH TO ACCOMMODATE SPECIFIED NUMBER OF CONDUCTORS WITH A MINIMUM OF 1/2" FROM TOP OF WIRE TO PAVEMENT SURFACE (3 1/4" Max).
- B. SLOT SAW-CUT DEPTH TO ACCOMMODATE 1" TYPE 3 CONDUIT WITH 1/2" MINIMUM FROM TOP OF CONDUIT TO PAVEMENT SURFACE.
- C. 1/2" MINIMUM BETWEEN TOP OF CONDUIT AND PAVEMENT SURFACE.
- D. SAW-CUT WIDTH TO ACCOMMODATE 1" TYPE 3 CONDUIT WITH 1/2" CLEARANCE.
- E. SAW-CUT 2/5" WIDE (Max).
- F. 1" TYPE 3 CONDUIT, 6" LONG, PLUG BOTH ENDS WITH CAULKING COMPOUND TO KEEP OUT EPOXY.
- G. CONDUCTORS WITH 1/2" MINIMUM SLACK INSIDE CONDUIT.
- H. SAW-CUT LENGTH OF SLOT 1/8" LONGER THAN CONDUIT.

TYPICAL LOOP LEAD-IN DETAIL AT PAVEMENT JOINT

NOTES: (THIS SHEET ONLY)

- 1. SEE PLANS FOR CONDUIT SIZES & TYPES OF PULL BOXES. SEE TYPICAL LOOP LEAD-IN DETAIL AT PAVEMENT JOINT ON THIS SHEET.
- 2. SEE ES-5D.
- 3. THE CONTRACTOR SHALL VERIFY ALL CONTROLLER FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING MATERIAL.

MODIFY RAMP METERING SYSTEM (DETAILS)

NO SCALE

E-73

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - TRAFFIC DESIGN
 CECILIO BURCIAGA
 YI TSAU
 YI TSAU
 YI TSAU
 YI TSAU

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	622	1931

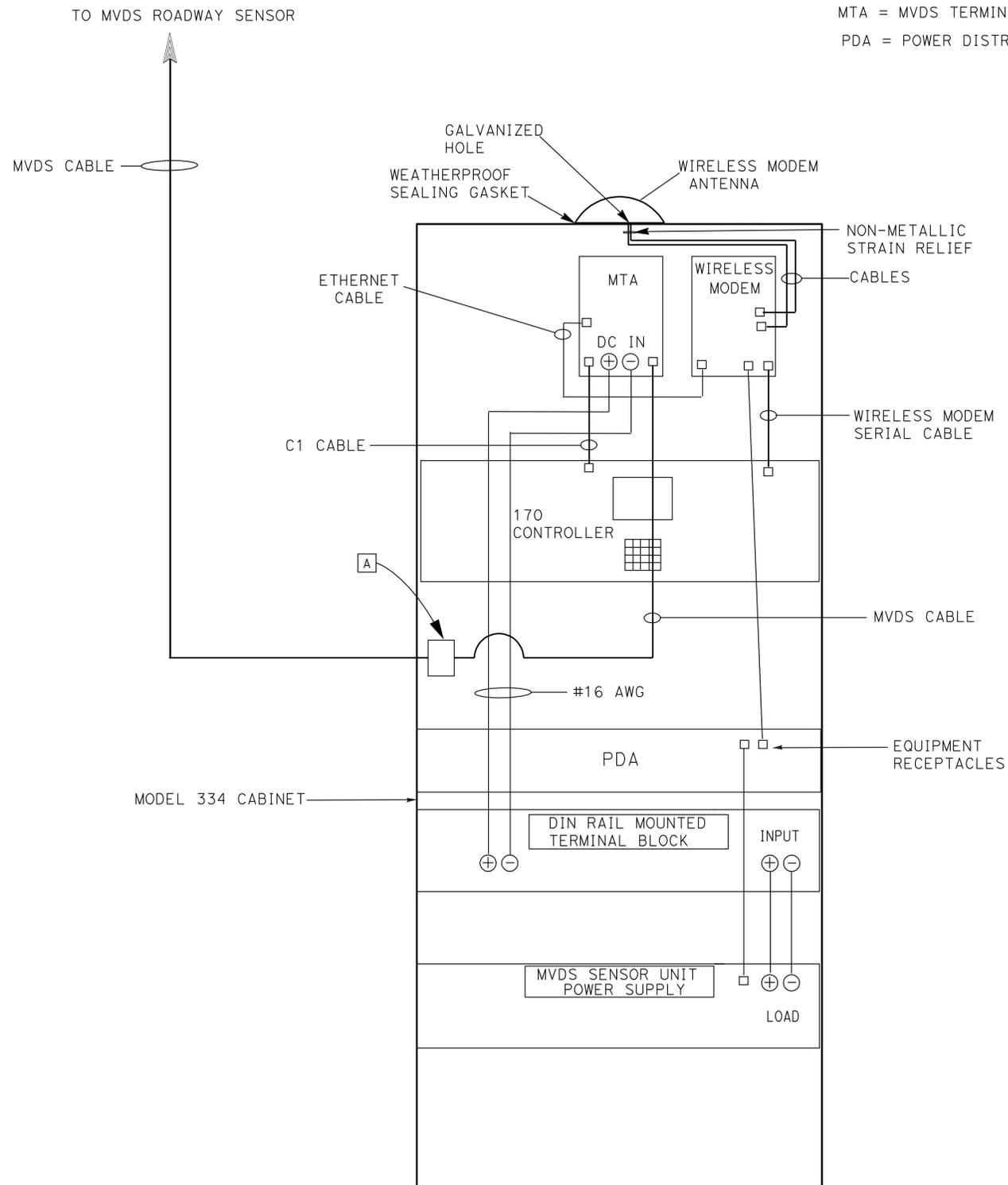
<i>C. Burciaga</i>	2/2/12
REGISTERED ELECTRICAL ENGINEER	DATE
5-21-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
C. BURCIAGA
No. E015302
Exp. 3/31/13
ELECTRICAL
STATE OF CALIFORNIA

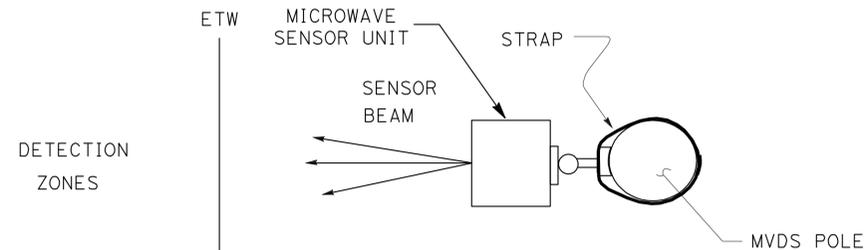
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: (THIS SHEET ONLY)

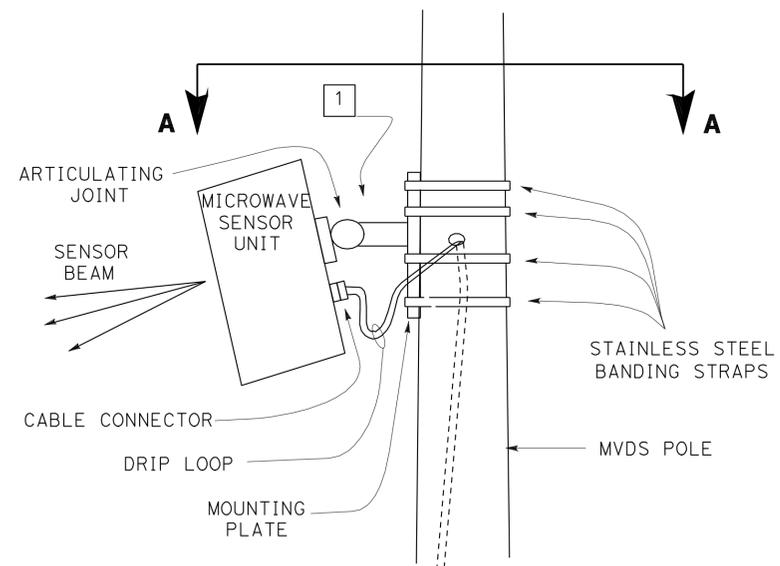
- 1 MOUNTING PLATE, ARTICULATING JOINT AND RADAR UNIT ASSEMBLY CONNECTIONS PER MANUFACTURER'S RECOMMENDATION.
 - A SURGE PROTECTOR(S)
- MTA = MVDS TERMINATION ASSEMBLY
PDA = POWER DISTRIBUTION ASSEMBLY



DETAIL 'A'
TYPICAL ENCLOSURE LAYOUT



SECTION A-A



ELEVATION

DETAIL 'B'

**MICROWAVE VEHICLE
DETECTION SYSTEM
(TEMPORARY)
(DETAILS)**

NO SCALE

E-74

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: YI TSAU
 CHECKED BY: YI TSAU
 REVISOR: CECILIO BURCIAGA
 DATE: YI TSAU

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	623	1931

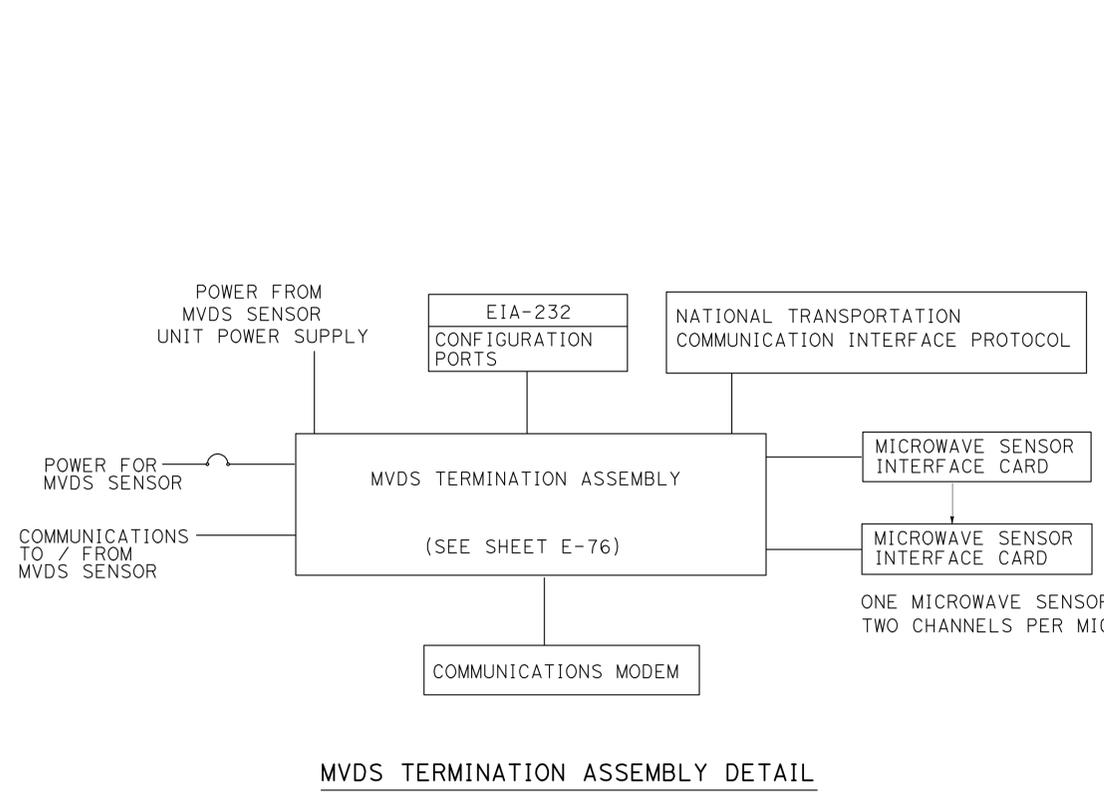
REGISTERED ELECTRICAL ENGINEER DATE 2/2/12
 CECILIO BURCIAGA
 No. E015302
 Exp. 03-31-13
 ELECTRICAL
 STATE OF CALIFORNIA

5-21-12
 PLANS APPROVAL DATE

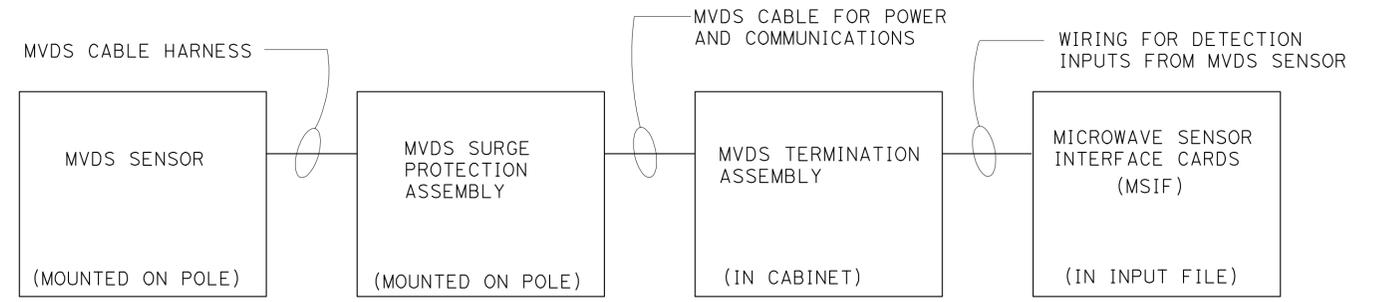
THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.

TYPICAL WIRE USAGE IN MVDS CABLE

MS	CONNECTOR	WIRE	PAIR	FUNCTION	CONNECTS TO	CONNECTS TO	POSITION	SAMPLE LANE ASSIGNMENT
PIN ID	NUMBER	NUMBER	NUMBER		MTA PANEL			
A	1	1	1	DETECTOR #1	TB 5	1		LANE#1 WB or NB
B	2	1	1	DETECTOR #1 RETURN	TB 5	2		
C	3	2	2	DETECTOR #2	TB 5	3		LANE#2 WB or NB
D	4	2	2	DETECTOR #2 RETURN	TB 5	4		
E	5	3	3	DETECTOR #3	TB 5	5		LANE#3 WB or NB
F	6	3	3	DETECTOR #3 RETURN	TB 5	6		
G	7	4	4	DETECTOR #4	TB 5	7		LANE#4 WB or NB
H	8	4	4	DETECTOR #4 RETURN	TB 5	8		
J	9	5	5	DETECTOR #5	TB 6	1		LANE#1 EB or SB
K	10	5	5	DETECTOR #5 RETURN	TB 6	2		
L	11	6	6	DETECTOR #6	TB 6	3		LANE#2 EB or SB
M	12	6	6	DETECTOR #6 RETURN	TB 6	4		
N	13	7	7	DETECTOR #7	TB 6	5		LANE#3 EB or SB
P	14	7	7	DETECTOR #7 RETURN	TB 6	6		
R	15	8	8	DETECTOR #8	TB 6	7		LANE#4 EB or SB
S	16	8	8	DETECTOR #8 RETURN	TB 6	8		
T	17	9	9	RS232 RX (RECEIVE)	TB 1	1		
U	18	9	9	RS232 G (RECEIVE GROUND)	TB 1	2		
V	19	10	10	RS232 TX (TRANSMIT)	TB 1	3		
W	20	10	10	RS232 G (TRANSMIT GROUND)	TB 1	4		
f	21	11	11	12-24 VOLTS AC/DC POWER	TB 1	5		
g	22	11	11	12-24 VOLTS AC/DC POWER	TB 1	6		



MVDS TERMINATION ASSEMBLY DETAIL



MVDS UNIT CONNECTIONS DETAIL

MICROWAVE VEHICLE DETECTION SYSTEM (DETAILS)

APPROVED FOR ELECTRICAL WORK ONLY

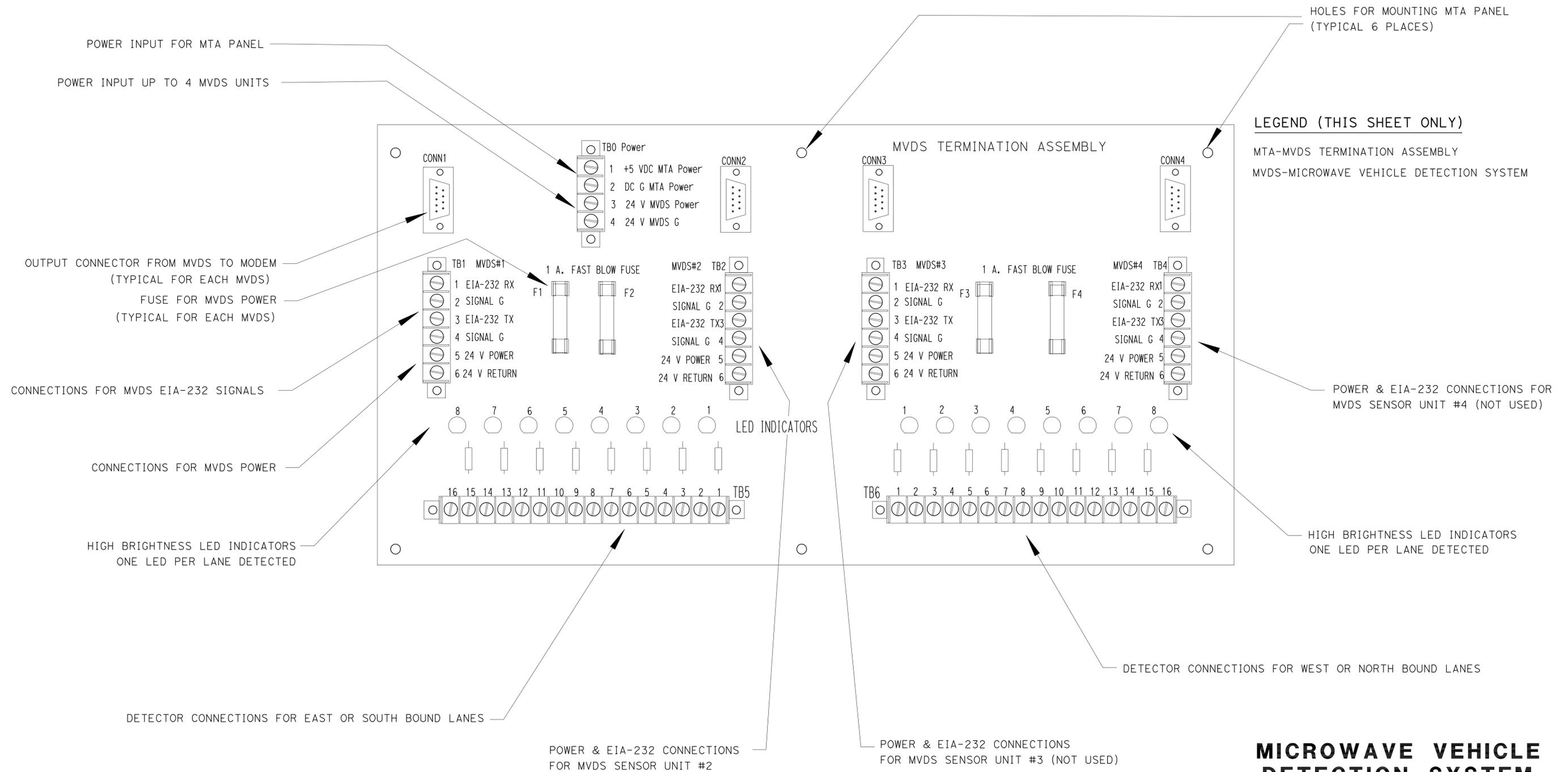
NO SCALE

E-75

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans
 TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: CECILIO BURCIAGA
 CHECKED BY: YI TSAU
 REVISED BY: [blank]
 DATE REVISED: [blank]

LAST REVISION: 00-00-00
 DATE PLOTTED => 21-MAY-2012
 TIME PLOTTED => 10:20

TYPICAL MVDS TERMINATION ASSEMBLY PANEL



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR YI TSAU
 CALCULATED/DESIGNED BY YI TSAU
 CHECKED BY
 CECILIO BURCIAGA
 YI TSAU
 REVISED BY DATE
 REVISIONS

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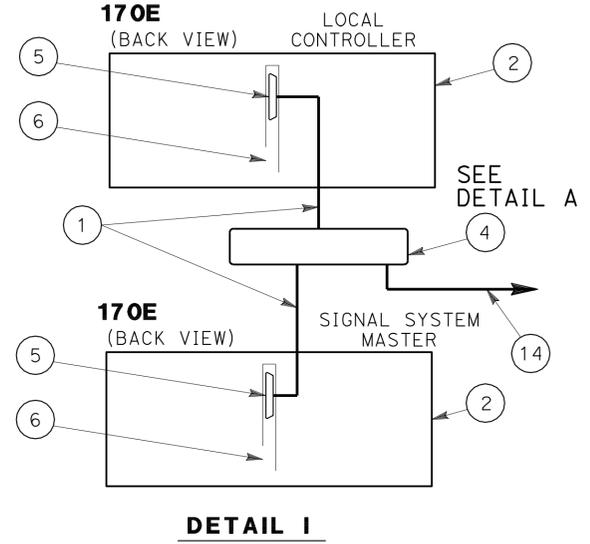
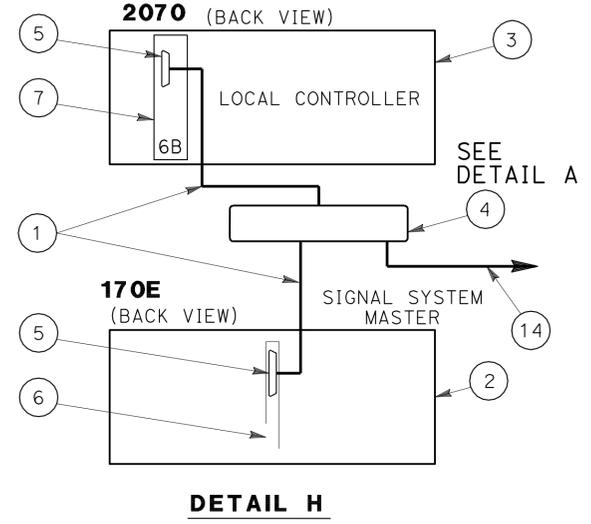
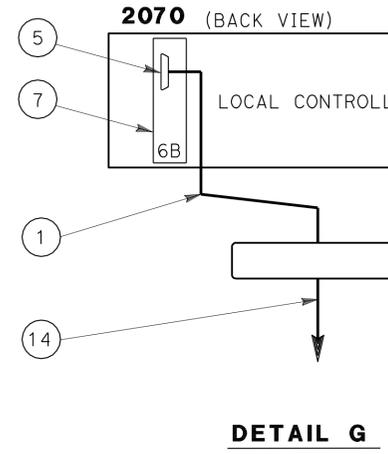
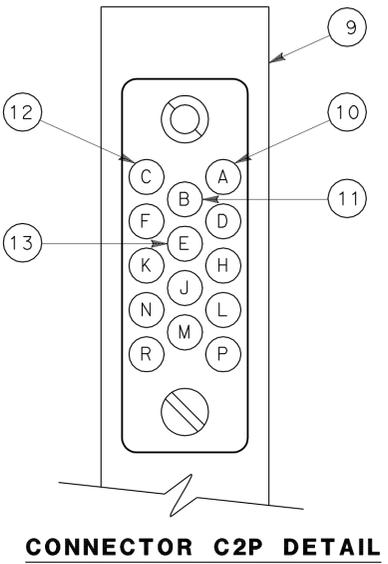
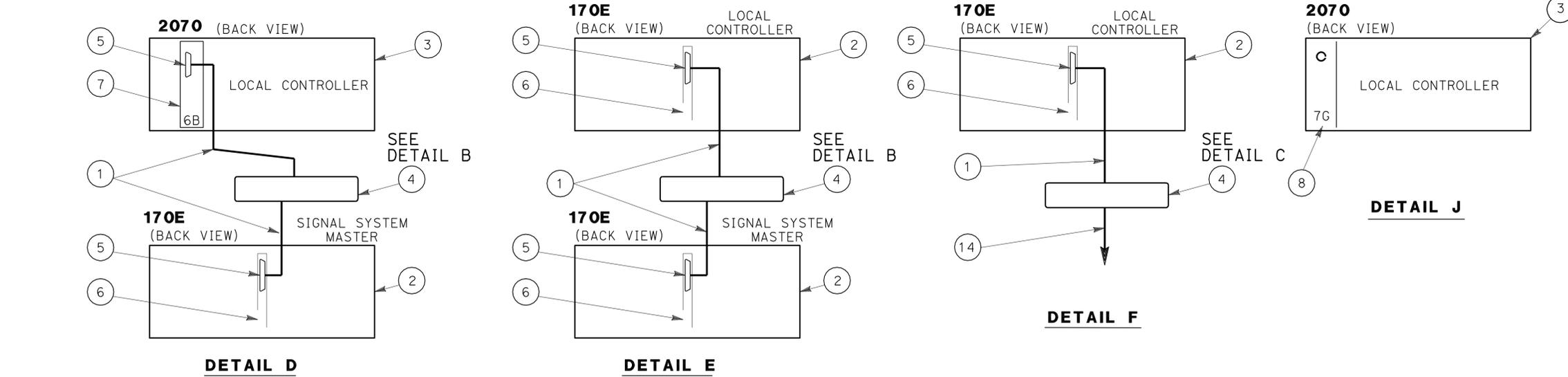
MICROWAVE VEHICLE DETECTION SYSTEM (DETAILS)

NO SCALE

E-76

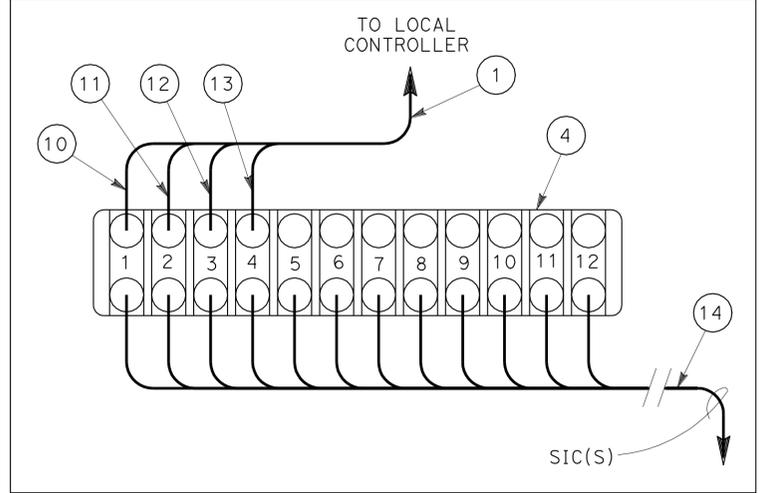
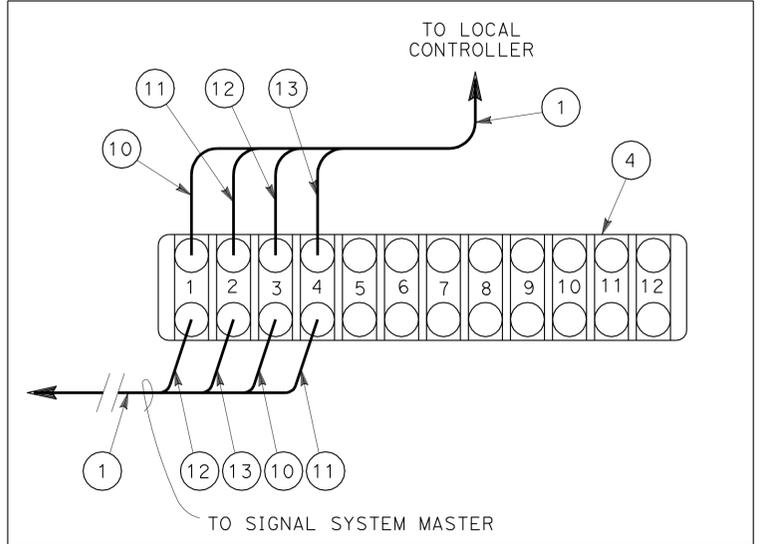
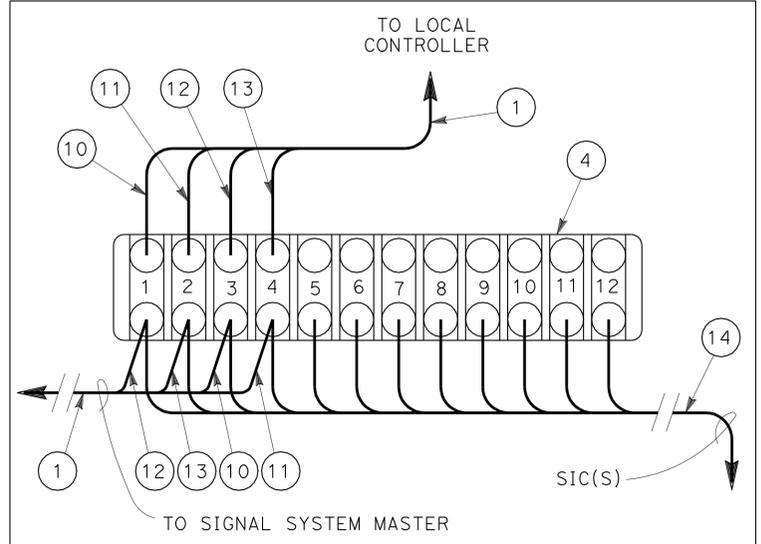
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	625	1931

REGISTERED ELECTRICAL ENGINEER DATE: 2/2/12
 JORGE FUENTES No. E13875 Exp. 6/30/12 ELECT
 PLANS APPROVAL DATE: 5-21-12
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



- NOTES: (THIS SHEET ONLY)**
- C2 MODEM HARNESS
 - MODEL 170E CONTROLLER
 - MODEL 2070 CONTROLLER
 - TERMINAL BLOCK Ø (TBØ)
 - C2S PORT
 - MODEL 400B MODEM IN MODEM SLOT 1
 - MODEL 2070-6B MODEM IN SLOT A2
 - MODEL 2070-7G MODULE IN SLOT A1
 - CONNECTOR C2P
 - C2 A SIGNAL (WHITE)
 - C2 B SIGNAL (GREEN)
 - C2 C SIGNAL (RED)
 - C2 E SIGNAL (BLACK)
 - SIC(S) SIGNAL INTERCONNECT CABLE(S) TO OTHER CABINET(S)

- LEGEND: (THIS SHEET)**
- SIC SIGNAL INTERCONNECT CABLE
 - C2P C2 PLUG
 - C2S C2 SOCKET



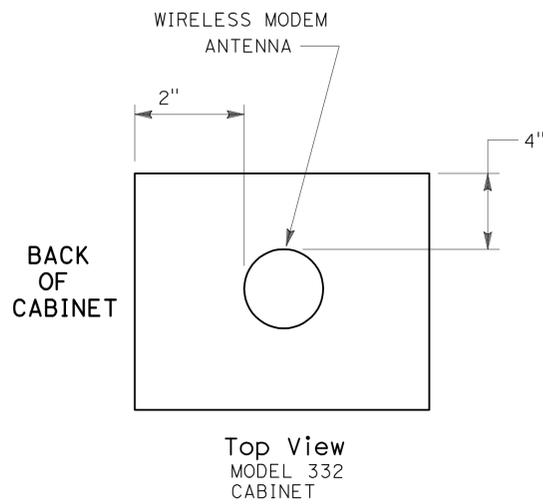
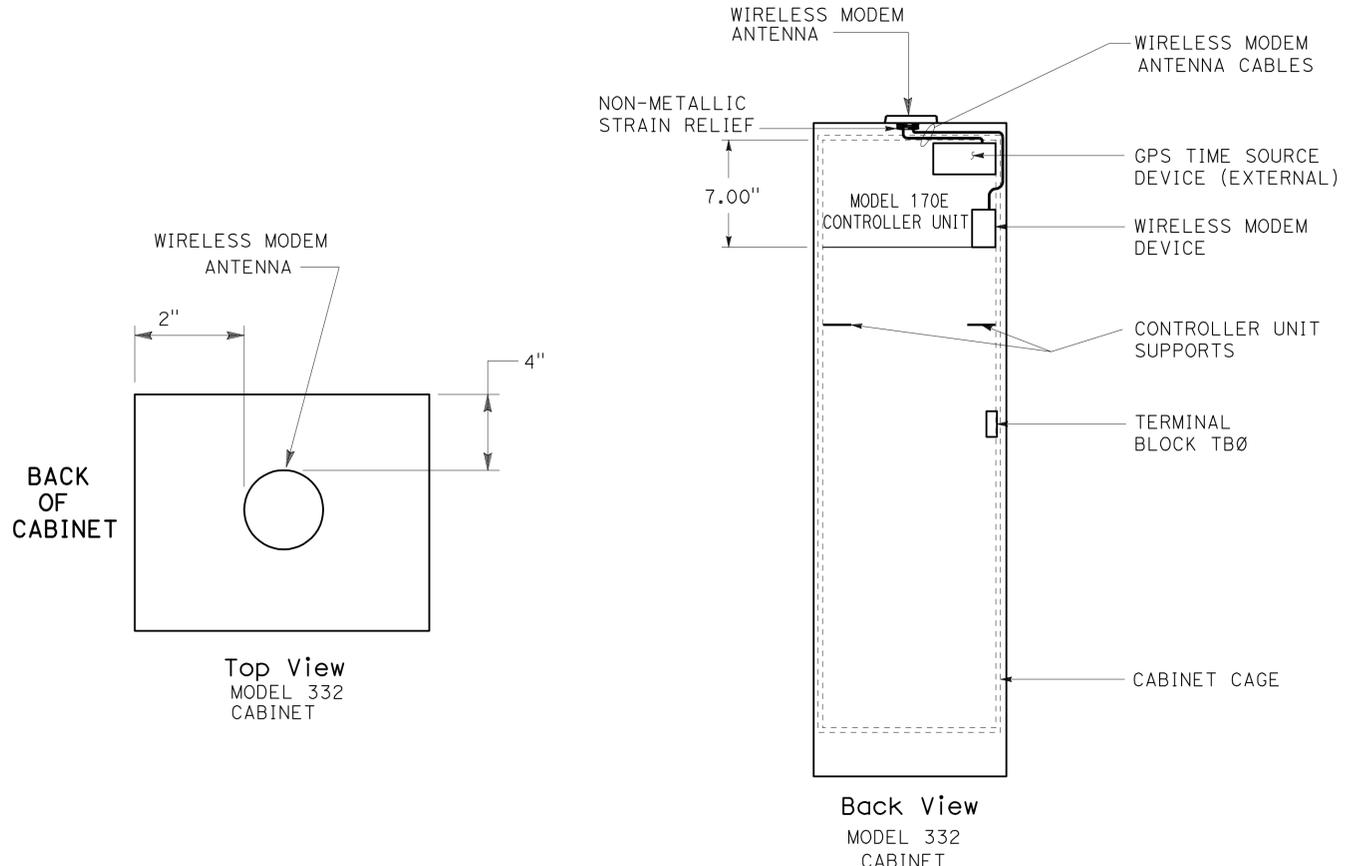
TRAFFIC SIGNAL INTERCONNECT AND WIRELESS DATA SERVICE SYSTEM (DETAILS)

APPROVED FOR ELECTRICAL WORK ONLY

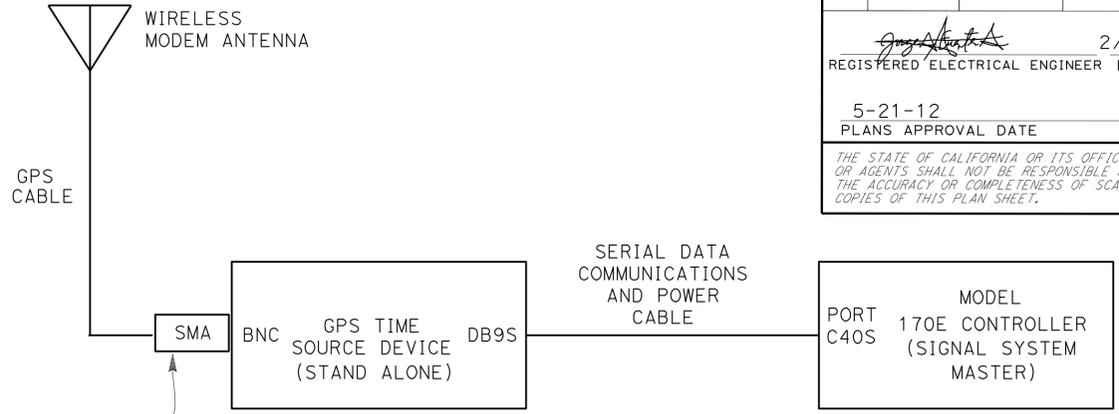
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E-77

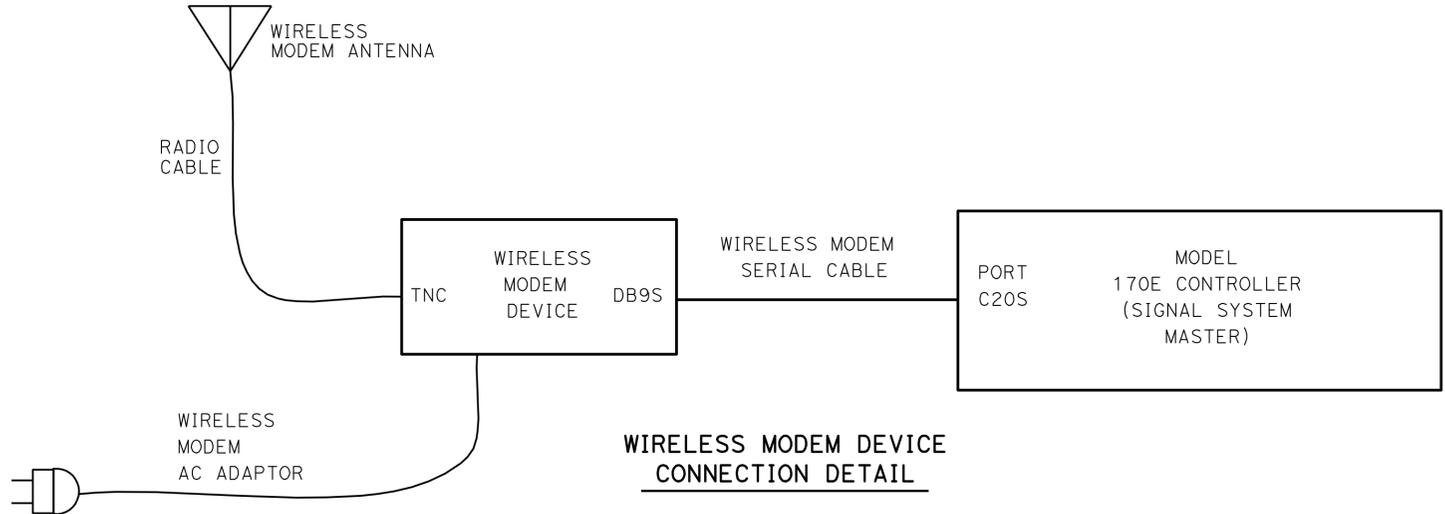
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	626	1931
			2/2/12		
REGISTERED ELECTRICAL ENGINEER			DATE		
5-21-12			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



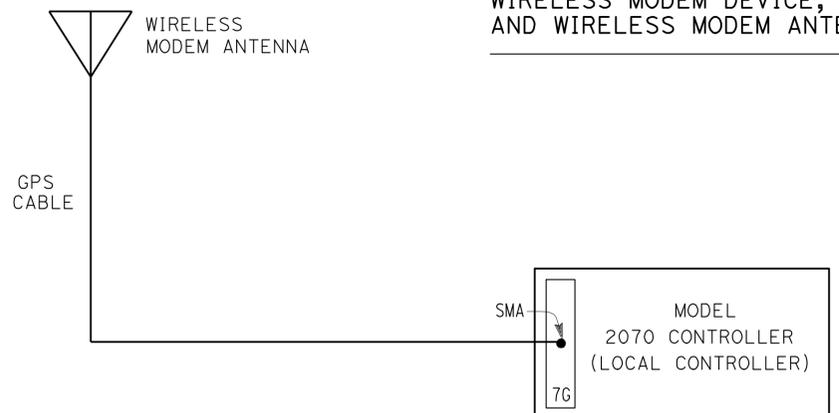
WIRELESS MODEM DEVICE, GPS TIME SOURCE DEVICE, AND WIRELESS MODEM ANTENNA PLACEMENT DETAIL



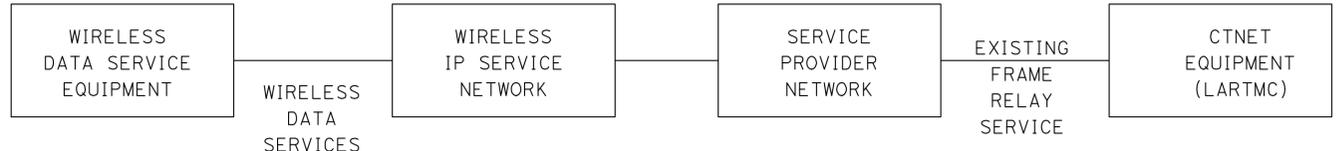
GPS TIME SOURCE DEVICE CONNECTION DETAIL



WIRELESS MODEM DEVICE CONNECTION DETAIL



2070-7G MODULE CONNECTION DETAIL



WIRELESS CONNECTIVITY DETAIL

TRAFFIC SIGNAL INTERCONNECT AND WIRELESS DATA SERVICE SYSTEM (DETAILS)

NO SCALE

E-78

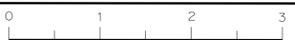
APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - OFFICE OF ITS FUNCTIONAL SUPERVISOR

REVISOR: JORGE FUENTES, DATE: 7/2/2010, CHECKED BY: JESSE RUELAS

DESIGNER: JORGE FUENTES

DESIGNER: JORGE FUENTES



ABBREVIATIONS: (FOR SHEETS E-80 TO E-105)

#	NUMBER
4WTO	4 WIRE TRANSMIT ONLY
4SMFO	4 SINGLE MODE FIBER OPTIC CABLE
12SMFO	12 SINGLE MODE FIBER OPTIC CABLE
36SMFO	36 SINGLE MODE FIBER OPTIC CABLE
72SMFO	72 SINGLE MODE FIBER OPTIC CABLE
AC	ALTERNATING CURRENT
AWG	AMERICAN WIRE GAUGE
ATMS	ADVANCED TRANSPORTATION MANAGEMENT SYSTEM
BNC	BAYONET NEILL-CONCELMAN CONNECTOR
CAT-5E	ANSI/TIA-568-B STANDARD
CCTV	CLOSED-CIRCUIT TELEVISION
COAX	COAXIAL CABLE
DB-9	9 PIN D-SUBMINIATURE CONNECTOR
DB-25	25 PIN D-SUBMINIATURE CONNECTOR
DS-1	DIGITAL SIGNAL LEVEL 1 OR OPTICAL MODEM
DEC	DECODER
EIA-232	ELECTRONICS INDUSTRIES ASSOCIATION STANDARD RS-232
EIA-422	ELECTRONICS INDUSTRIES ASSOCIATION STANDARD RS-422
FEP	FRONT END PROCESSOR
FDU	FIBER DISTRIBUTION UNIT
FOSC	FIBER OPTIC SPLICE CLOSURE
GBIC	GIGABIT INTERFACE CONVERTER
HT	HIGH TEMPERATURE
ID	IDENTIFICATION NUMBER
MPEG-4	MOVING PICTURE EXPERTS GROUP
MUX	MULTIPLEX
PC	PERSONNAL COMPUTER
P19	PAIR 19 AMERICAN WIRE GAUGE
P22	PAIR 22 AMERICAN WIRE GAUGE
PDA	POWER DISTRIBUTION ASSEMBLY
PR	PAIR
RMS	RAMP METERING SYSTEM
RG-6A/U	COAXIAL CABLE
BP8C	8 PIN 8 CONDUCTOR CONNECTOR
RTS	REQUEST TO SEND
RX	RECEIVE OR RECEIVER
SFP	SMALL FORM FACTOR PLUGGABLE TRANSCEIVER (LX TYPE)
SMFO	SINGLE MODE FIBER OPTIC CABLE
T-1	1.544 MEGABIT PER SECOND
TPC	TWISTED PAIR CABLE
TPSC	TWISTED PAIR SPLICE CLOSURE
TS	TEMPERATURE SENSOR
TX	TRANSMIT OR TRANSMITTER
UPS	UNINTERRUPTABLE POWER SUPPLY
W/GFI	WITH GROUND FAULT INTERRUPTOR

GENERAL NOTES: (FOR SHEETS E-80 TO E-105)

- THE LOCATION OF EXISTING CONTROLLER CABINETS, SERVICE ENCLOSURES, PULL BOXES, CONDUITS AND POWER VAULT ARE APPROXIMATE, THE CONTRACTOR MUST VERIFY THEIR LOCATIONS PROIR TO CONSTRUCTION PER FIELD CONDITIONS.
- INSTALL CONTROLLER CABINET 30 FEET FROM ETW OR 4 FEET BEHIND GUARD RAIL.
- EXISTING COMMUNICATION CABLES, WHERE SHOWN ON THE PLANS TO BE REMOVED, MUST BE REINSTALLED OR REPLACED AND SPLICE TO THE SAME ASSIGNED TWISTED PAIR OR FIBER NUMBER.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- CONDUIT CONTAINING FIBER OPTIC CABLE MUST ENTER PULL BOXES ON THE SHORT SIDE ONLY. PULL BOXES MUST NOT BE USED TO CHANGE ALIGNMENT OF THE COMMUNICATION CONDUIT.
- EXISTING IRRIGATION SYSTEMS ARE NOT SHOWN FOR CLARITY.
- NEW AND EXISTING FIBER OPTIC COMMUNICATION CONDUIT RUNS MUST HAVE A TRACER WIRE.
- NUMBER OF CONDUITS IN SOME COMMUNICATION RUNS MAY NOT BE SHOWN FOR CLARITY. THE CONTRACTOR MUST REROUTE IMPACTED CONDUITS AND REPLACE ITS CONTENTS AS NOTED IN THE PLANS.
- EXISTING FOUNDATIONS OF VARIOUS ELEMENTS TO BE RELOCATED OR REMOVED MUST BE REMOVED AS PART OF ROADWAY EXCAVATION.
- CONDUITS INSTALLED ACROSS NEW WALLS MUST BE CORED THRU THE WALL OR MUST BE INSTALLED DURING SOUNDWALL CONSTRUCTION.
- ALL ABANDONED CONDUITS AND CONDUIT CONCRETE ENCASEMENTS IN THE AREAS OF ROADWAY EXCAVATION AND INTERFERING WITH THE NEW STRUCTURAL SECTION MUST BE REMOVED AND DISPOSED AT THE CONTRACTORS EXPENSE AND AS PART OF ROADWAY EXCAVATION.
- ALL PULL BOXES AND SPLICE VAULTS INSTALLED IN THE SHOULDER MUST BE TRAFFIC RATED.

LEGENDS: (FOR SHEETS E-80 TO E-106)

	EXISTING SPLICE VAULT
	EXISTING CCTV AND DATA NODE CABINET
	EXISTING CCTV CABINET
	NEW CCTV CABINET
	NEW SPLICE VAULT WITH SPLICE CLOSURE
	EXISTING FIBER OPTIC CABLE
	EXISTING ADJUSTABLE CALIBRATED THERMOSTAT
	EXISTING DUPLEX RECEPTACLE
	EXISTING EQUIPMENT GROUND
	NEW SURGE PROTECTOR
	NEW HIGH TEMPERATURE RELAY COIL
	NEW THERMOSTATIC CONTROL
	NEW ADJUSTABLE CALIBRATED THERMOSTAT
	NEW EQUIPMENT GROUND
	DELIMITER FOR PROJECT NOTES

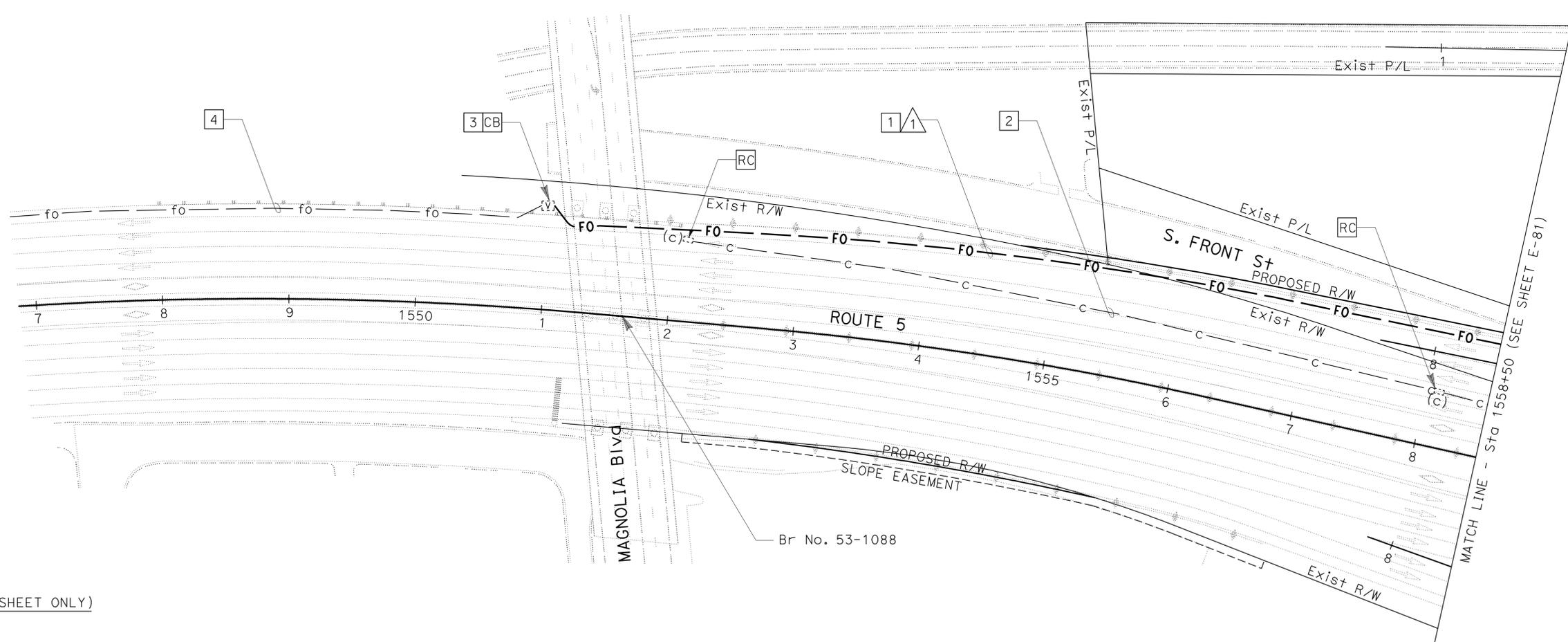
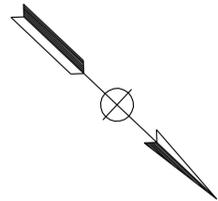
EXAMPLE:

**MODIFY COMMUNICATION SYSTEM
 (NOTES, ABBREVIATIONS AND LEGENDS)**

APPROVED FOR ELECTRICAL WORK ONLY.

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT/ CONDUCTOR	FUNCTION	RUN			
		1			
36SMFO CABLE	SPARE	1			
72SMFO CABLE	SPARE		1		
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1	
1 INCH INNERDUCT		1	1	1	1
#12 AWG	TRACER WIRE				1
CONDUIT SIZE		4"		4"	



PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-98 FOR DETAILS.
- 2 RC COMMUNICATION CONDUITS AND CABLES AS PART OF ROADWAY EXCAVATION.
- 3 SPLICE NEW 36SMFO AND 2-72SMFO WITH EXISTING 36SMFO AND 2-72SMFO ACCORDINGLY. INSTALL SPLICE CLOSURE.
- 4 EXISTING FIBER OPTIC TO REMAIN.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION OFFICE OF ITS
 Caltrans®
 FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
 CHECKED BY: JACQUELINE C. TAN
 TUVEN NGO
 JACQUELINE C. TAN
 REVISED BY: JACQUELINE C. TAN
 DATE REVISED: 01/12

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

MODIFY COMMUNICATION SYSTEM

SCALE: 1" = 50'

E-80

LAST REVISION DATE PLOTTED => 21-MAY-2012 10:21
 01-31-12 TIME PLOTTED => 10:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	629	1931

1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 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
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA

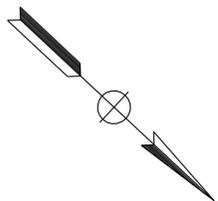
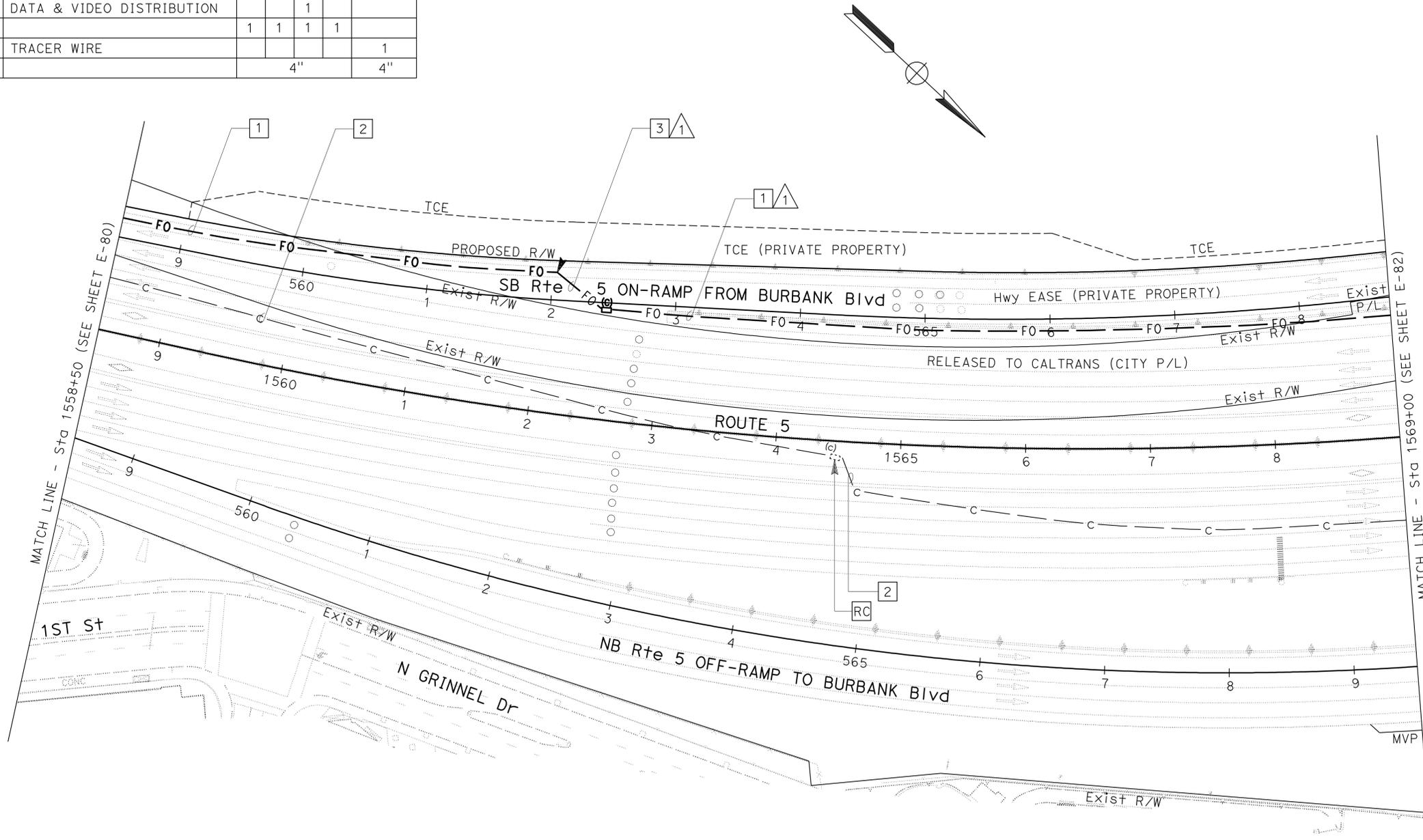
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-98 FOR DETAILS.
- 2 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF ROADWAY EXCAVATION.
- 3 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-97 FOR DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT/ CONDUCTOR	FUNCTION	RUN				
		1				
36SMFO CABLE	SPARE	1				
72SMFO CABLE	SPARE		1			
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1		
1 INCH INNERDUCT		1	1	1	1	
#12 AWG	TRACER WIRE					1
CONDUIT SIZE			4"		4"	



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE C. TAN
 CHECKED BY
 JACQUELINE C. TAN
 TUVEN NGO
 JACQUELINE C. TAN
 REVISED BY
 DATE REVISED
 01/12

MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

SCALE: 1" = 50' **E-81**

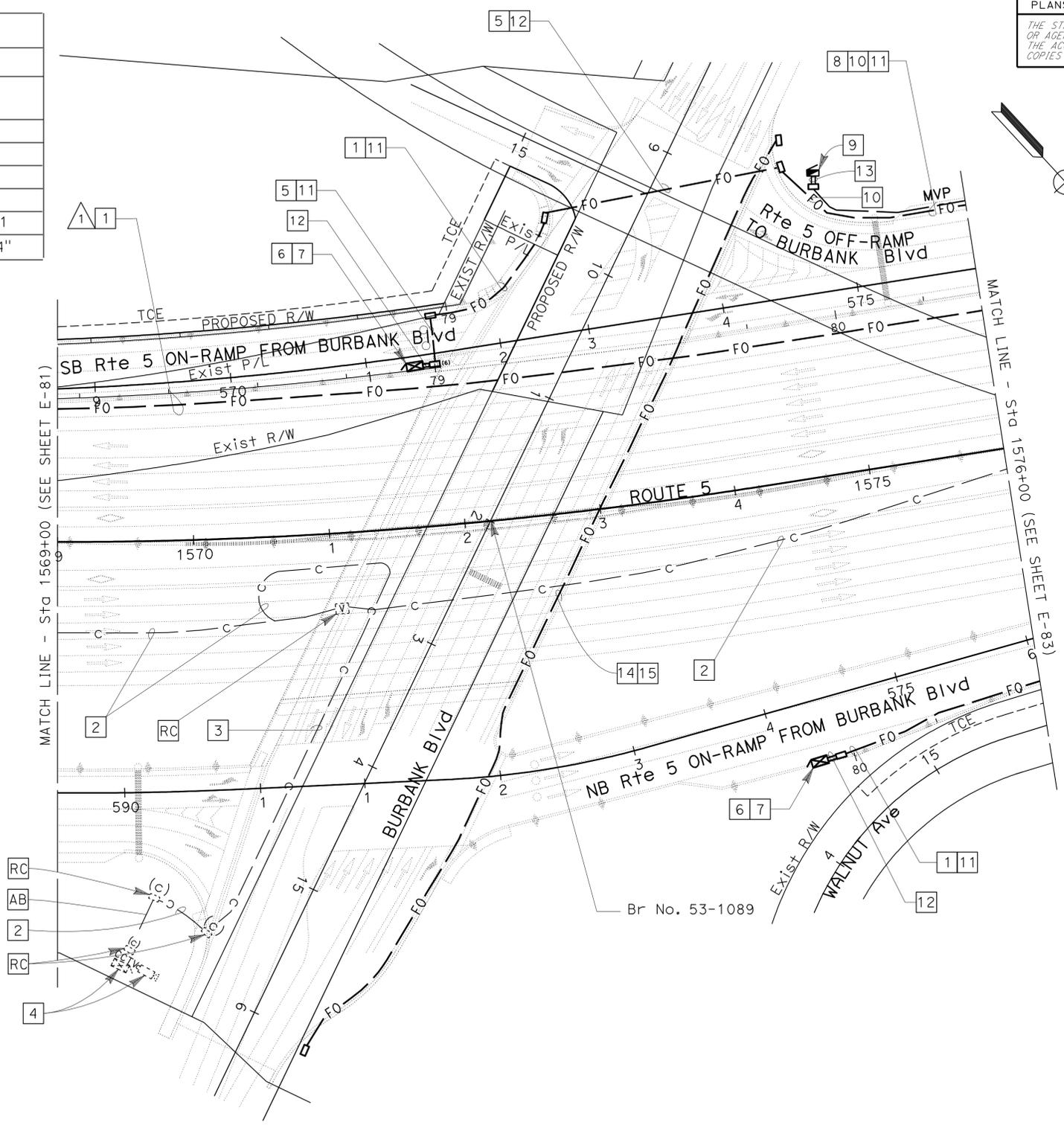
LAST REVISION DATE PLOTTED => 21-MAY-2012
 01-31-12 TIME PLOTTED => 10:21

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUIT/ CONDUCTOR	FUNCTION	RUN		
		1		
36SMFO CABLE	SPARE	1		
72SMFO CABLE	SPARE		1	
72SMFO CABLE	DATA & VIDEO DISTRIBUTION		1	
1 INCH INNERDUCT		1	1	1
#12 AWG	TRACER WIRE			1
CONDUIT SIZE			4"	4"

PROJECT NOTES:

- 1 INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-98 FOR DETAILS.
- 2 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF ROADWAY EXCAVATION.
- 3 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF BRIDGE CONSTRUCTION.
- 4 RS EXISTING CCTV CAMERA, CONTROLLER CABINET AND ITS CONTENTS. RC FOUNDATION AND POLE.
- 5 JACK CONDUITS UNDER ROADWAY, SEE SHEET E-97 FOR DETAILS.
- 6 SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLAN SHEET E-52 FOR INSTALLATION OF RMS No. 0242 AND 0243.
- 7 INSTALL LAYER 2 ETHERNET SWITCH WITH 2-SFP MODULE ETHERNET CARD AND FDU IN RMS CONTRLLER CABINET. SEE SHEET E-100.
- 8 INSTALL CONDUITS IN SOIL, SHARED TRENCH. SEE SHEET E-98 FOR DETAILS.
- 9 SEE ELECTRICAL PLANS FOR THE SERVICE EQUIPMENT ENCLOSURE, PULL BOXES AND CONDUITS INSTALLATION.
- 10 INSTALL 2"C, 2#6, 1#8G.
- 11 INSTALL 2"C, 12SMFO.
- 12 INSTALL 3"C, 12SMFO.
- 13 INSTALL 2-3"C, 2#6, 1#8G
- 14 INSTALL 2"C, FOR FUTURE USE.
- 15 INSTALL CONDUIT IN BRIDGE. FOR REFERENCE ONLY. SEE BRIDGE STRUCTURE PLANS FOR DETAILS.



MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

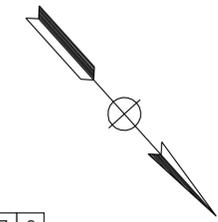
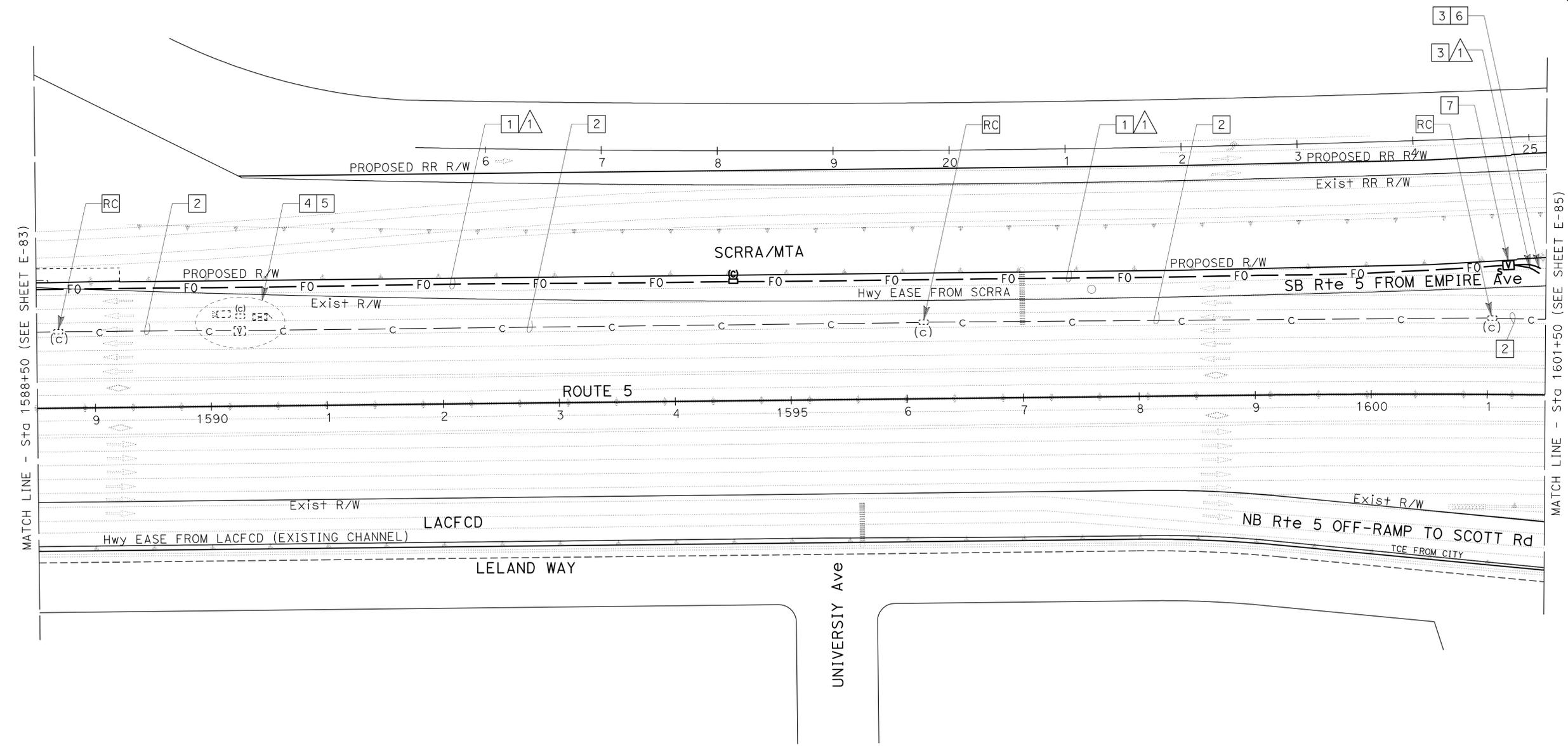
SCALE: 1" = 50' **E-82**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION OFFICE OF ITS
 Functional Supervisor: JACQUELINE C. TAN
 Calculated/Designed By: JACQUELINE C. TAN
 Checked By:
 Tuyen Ngo
 Revised By: JACQUELINE C. TAN
 Date Revised: 01/12

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT/ CONDUCTOR	FUNCTION	RUN			
		1			
36SMFO CABLE	SPARE	1			
72SMFO CABLE	SPARE		1		
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1	
1 INCH INNERDUCT		1	1	1	1
#12 AWG	TRACER WIRE				1
CONDUIT SIZE		4"		4"	

- PROJECT NOTES: (FOR THIS SHEET ONLY)**
- 1 INSTALL CONDUITS IN PAVEMENT, SEE SHEET E-98 FOR DETAILS.
 - 2 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF ROADWAY EXCAVATIONS.
 - 3 JACK CONDUIT(S) UNDER ROADWAY, SEE SHEET E-97 FOR DETAILS.
 - 4 RS CCTV CAMERA AND POLE, RS TYPE 334 CCTV 25 AND DATA NODE 4 CONTROLLER CABINET AND ITS CONTENTS. RC CCTV CAMERA FOUNDATION AND CONTROLLER CABINET FOUNDATIONS. RC PULL BOX AND SPLICE VAULT.
 - 5 SEE NEW CCTV CAMERA LOCATION 25 AT Sta 1578+60. SEE SHEET E-83.
 - 6 INSTALL 3"C, 12SMFO.
 - 7 INSTALL SPLICE CLOSURE, SPLICE 12SMFO TO 72SMFO VIDEO AND DATA DISTRIBUTION ACCORDINGLY.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE C. TAN
 CHECKED BY
 JACQUELINE C. TAN
 TUYEN NGO
 REVISOR BY
 JACQUELINE C. TAN
 DATE REVISOR
 01/12

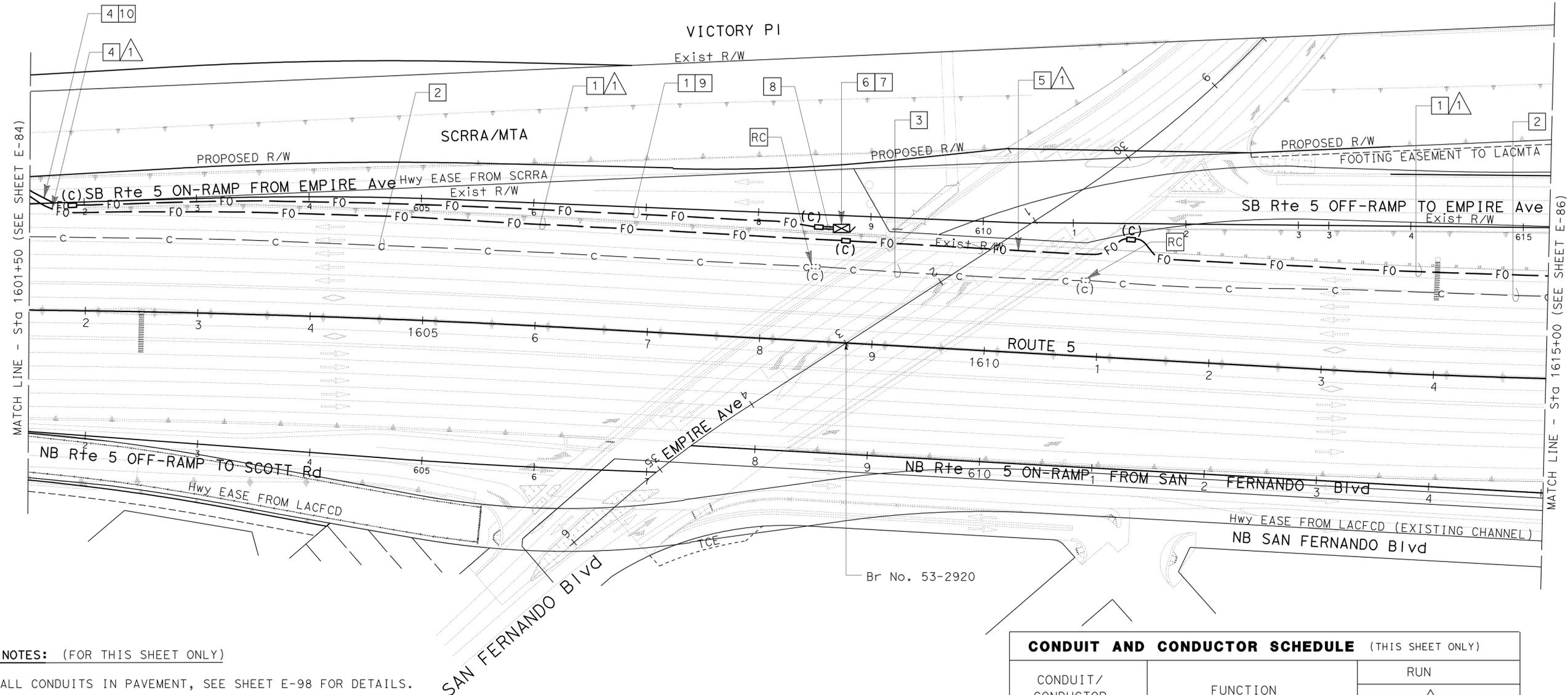
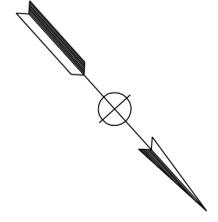
MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

SCALE: 1" = 50' **E-84**

LAST REVISION DATE PLOTTED => 21-MAY-2012 03-20-12 TIME PLOTTED => 10:21

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



PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 INSTALL CONDUITS IN PAVEMENT, SEE SHEET E-98 FOR DETAILS.
- 2 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF ROADWAY EXCAVATION.
- 3 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF BRIDGE CONSTRUCTION.
- 4 JACK CONDUIT(S) UNDER ROADWAY, SEE SHEET E-97 FOR DETAILS.
- 5 INSTALL CONDUIT(S) IN BRIDGE, FOR REFERENCE ONLY. SEE BRIDGE STRUCTURE PLANS FOR DETAILS.
- 6 SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLAN SHEET E-54 FOR INSTALLATION OF RMS No. 0225.
- 7 INSTALL LAYER 2 ETHERNET SWITCH WITH 2-SFP MODULE ETHERNET CARD AND FDU IN RMS CONTROLLER CABINET. SEE SHEET E-100.
- 8 INSTALL 2-3"C, 12SMFO.
- 9 INSTALL 2"C, 12SMFO.
- 10 INSTALL 3"C, 12SMFO.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)		RUN			
CONDUIT/ CONDUCTOR	FUNCTION	1			
		36SMFO CABLE	SPARE	1	
72SMFO CABLE	SPARE		1		
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1	
1 INCH INNERDUCT		1	1	1	1
#12 AWG	TRACER WIRE				1
CONDUIT SIZE		4"		4"	

MODIFY COMMUNICATION SYSTEM

E-85

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE C. TAN
 CHECKED BY
 JACQUELINE C. TAN
 REVISOR
 TUYEN NGO
 DATE REVISOR
 01/12

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

PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 INSTALL CONDUITS IN PAVEMENT, SEE SHEET E-98 FOR DETAILS.
- 2 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF ROADWAY EXCAVATION.
- 3 JACK CONDUIT(S) UNDER ROAD WAY. SEE SHEET E-97 FOR DETAILS.
- 4 INSTALL 2"C, 2#6, 1#8G.
- 5 INSTALL 2"C, 12SMFO.
- 6 SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLAN SHEET E-55 FOR INSTALLATION OF RMS No. 0241.
- 7 INSTALL LAYER 2 ETHERNET SWITCH WITH 2-SFP MODULE ETHERNET CARD AND FDU IN RMS CONTROLLER CABINET. SEE SHEET E-100.
- 8 INSTALL SPLICE CLOSURE, SPLICE 2-12SMFO TO 72SMFO VIDEO & DATA DISTRIBUTION ACCORDINGLY. DO NOT SPLICE 12 SMFO FOR FUTURE (PUMP STATION).
- 9 INSTALL 3"C, 12SMFO.
- 10 INSTALL 3"C, 2#6, 1#8G.
- 11 INSTALL 2"C, 2-12SMFO
- 12 RS CCTV CAMERA AND POLE, RS TYPE 334 CONTROLLER CABINET AND ITS CONTENTS.
 RC CCTV CAMERA FOUNDATION AND CONTROLLER CABINET FOUNDATION. RC PULL BOX AND SPLICE VAULT.
- 13 SEE NEW CCTV CAMERA LOCATION GS307 AT Sta 1620+05
- 14 INSTALL 3"C, 2-12SMFO.

- 15 COIL 50 FEET 12SMFO FOR FUTURE USE.
- 16 INSTALL 2-3"C, 12SMFO.
- 17 SEE ELECTRICAL PLANS FOR THE SERVICE EQUIPMENT ENCLOSURE, PULL BOXES AND CONDUITS INSTALLATION.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	634	1931

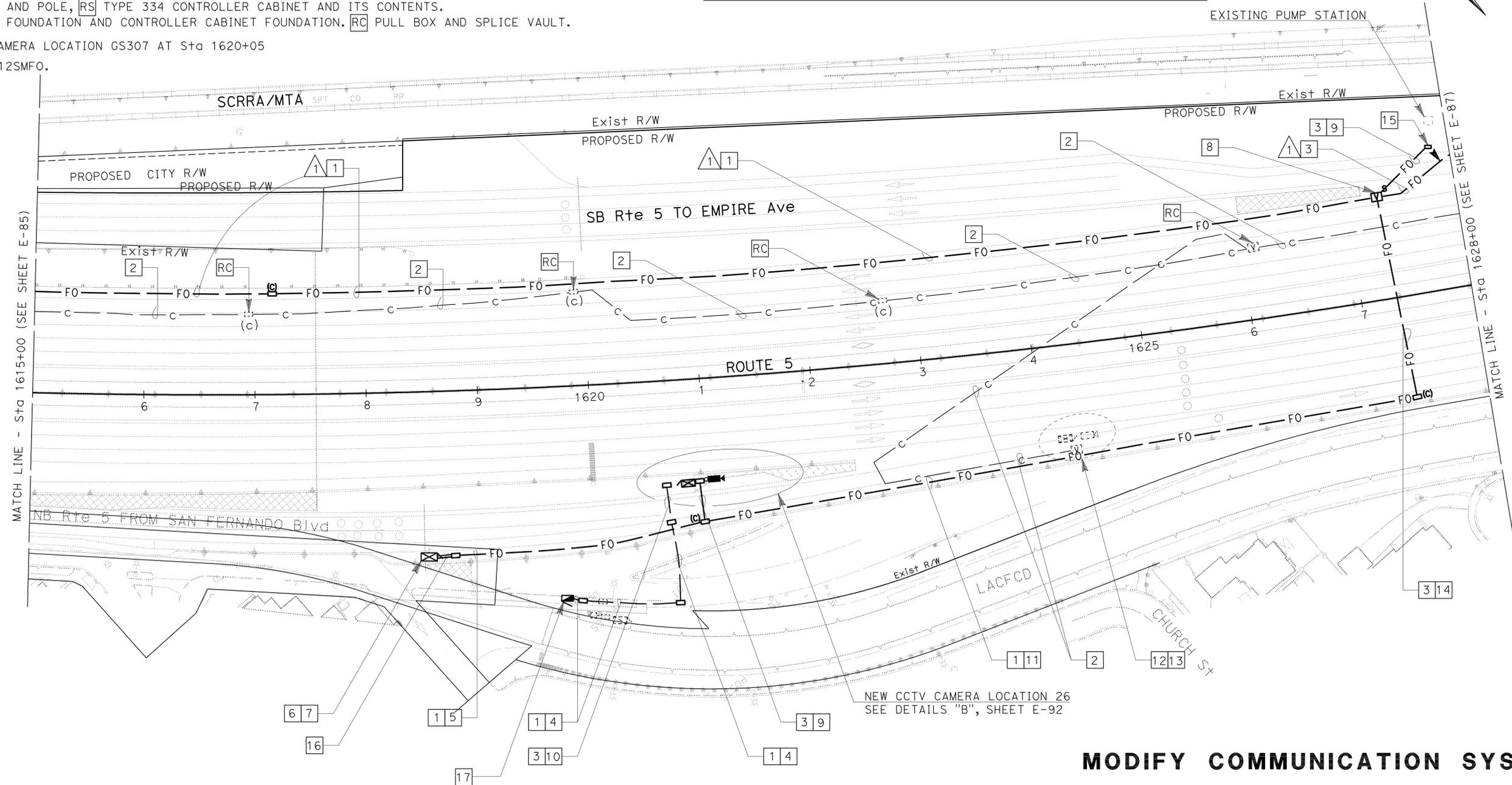
03-20-12
 REGISTERED ELECTRICAL ENGINEER DATE
 JACQUELINE C. TAN
 No. E015611
 Exp 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER

5-21-12
 PLANS APPROVAL DATE

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CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT/ CONDUCTOR	FUNCTION	RUN			
		1	2	3	4
36SMFO CABLE	SPARE	1			
72SMFO CABLE	SPARE		1		
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1	
1 INCH INNERDUCT		1	1	1	1
#12 AWG	TRACER WIRE				1
CONDUIT SIZE			4"	4"	



APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

MODIFY COMMUNICATION SYSTEM

SCALE: 1" = 50' **E-86**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	635	1931

1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
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 Exp. 12/31/13
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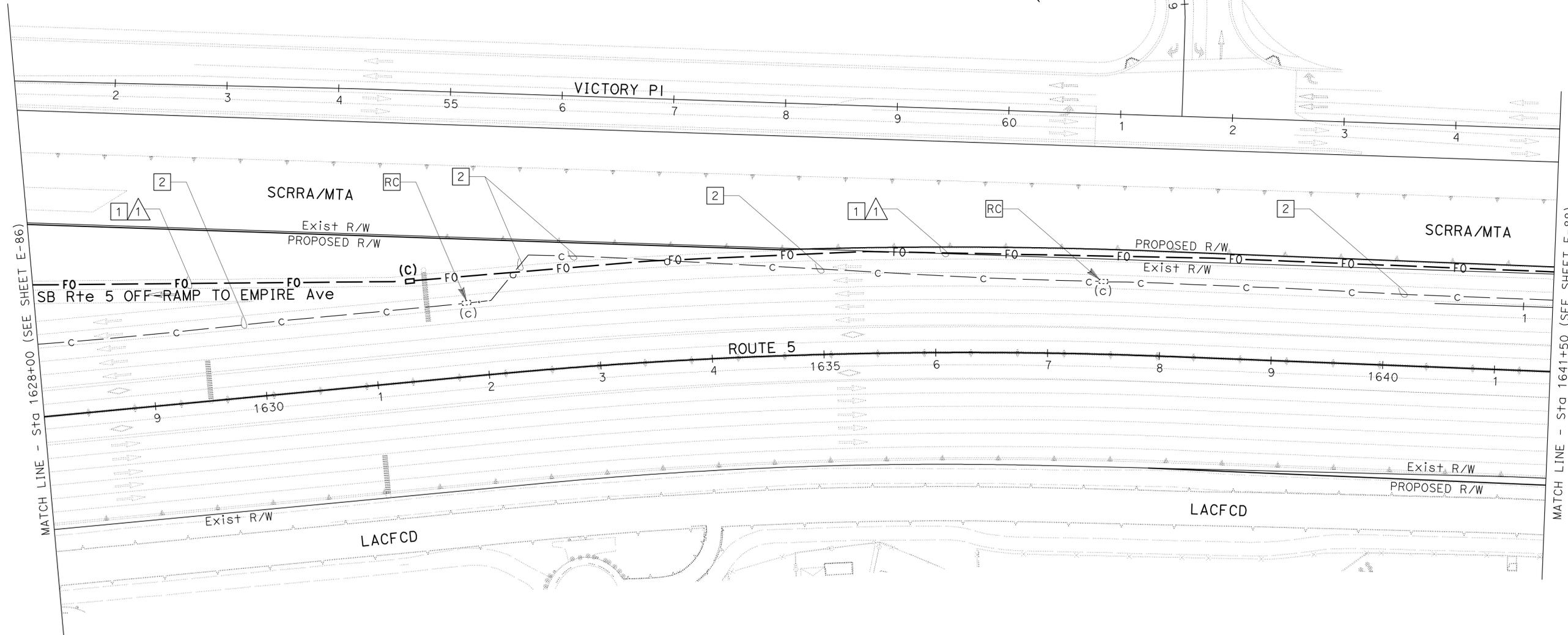
NOTE:

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

PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-98 FOR DETAILS.
- 2 RC COMMUNICATION CONDUIT(S) AND CONTENTS AS PART OF ROADWAY EXCAVATION

CONDUIT/ CONDUCTOR	FUNCTION	RUN			
		1			
36SMFO CABLE	SPARE	1			
72SMFO CABLE	SPARE		1		
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1	
1 INCH INNERDUCT		1	1	1	1
#12 AWG	TRACER WIRE				1
CONDUIT SIZE		4"		4"	



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE C. TAN
 CHECKED BY
 JACQUELINE C. TAN
 REVISIONS BY
 TUVEN NGO
 DATE REVISIONS
 01/12

MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

SCALE: 1" = 50'

E-87

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	636	1931

Jacqueline C. Tan 1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE

5-21-12
 PLANS APPROVAL DATE

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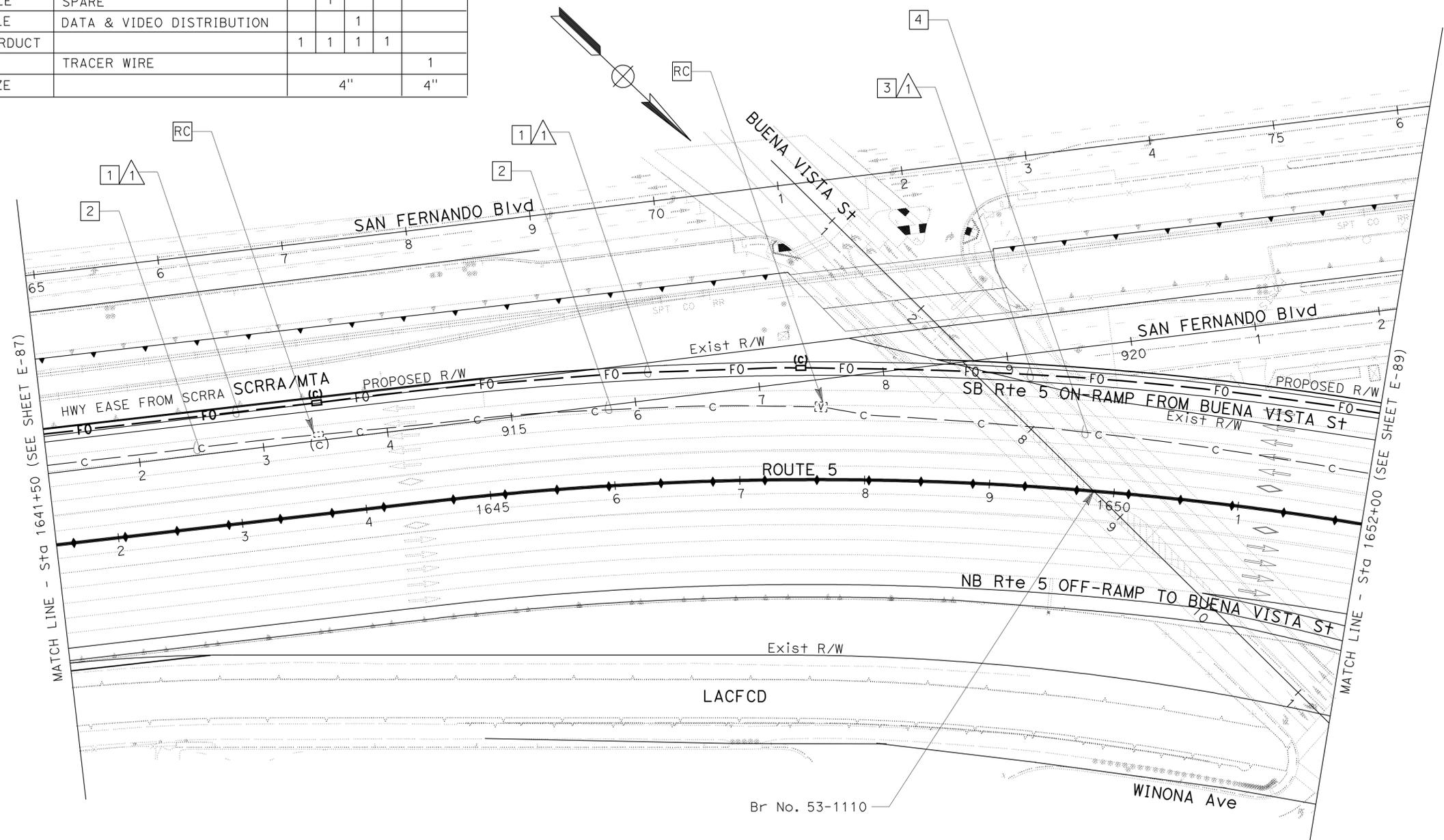
REGISTERED PROFESSIONAL ENGINEER
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA

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

- PROJECT NOTES:** (FOR THIS SHEET ONLY)
- 1 INSTALL CONDUITS IN PAVEMENT, SEE SHEET E-98 FOR DETAILS.
 - 2 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF ROADWAY EXCAVATION.
 - 3 INSTALL TYPE I CONDUIT IN BRIDGE. FOR REFERENCE ONLY. SEE BRIDGE STRUCTURE FOR DETAILS.
 - 4 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF BRIDGE CONSTRUCTION.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT/ CONDUCTOR	FUNCTION	RUN			
		1			
36SMFO CABLE	SPARE	1			
72SMFO CABLE	SPARE		1		
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1	
1 INCH INNERDUCT		1	1	1	1
#12 AWG	TRACER WIRE				1
CONDUIT SIZE		4"		4"	



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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 JACQUELINE C. TAN
 TUVEN NGO
 JACQUELINE C. TAN
 REVISED BY
 DATE REVISID
 01/12

MODIFY COMMUNICATION SYSTEM

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 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

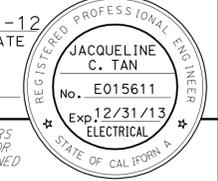
SCALE: 1" = 50'

E-88

LAST REVISION DATE PLOTTED => 21-MAY-2012
 01-31-12 TIME PLOTTED => 10:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	638	1931

Jacqueline C. Tan 1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE
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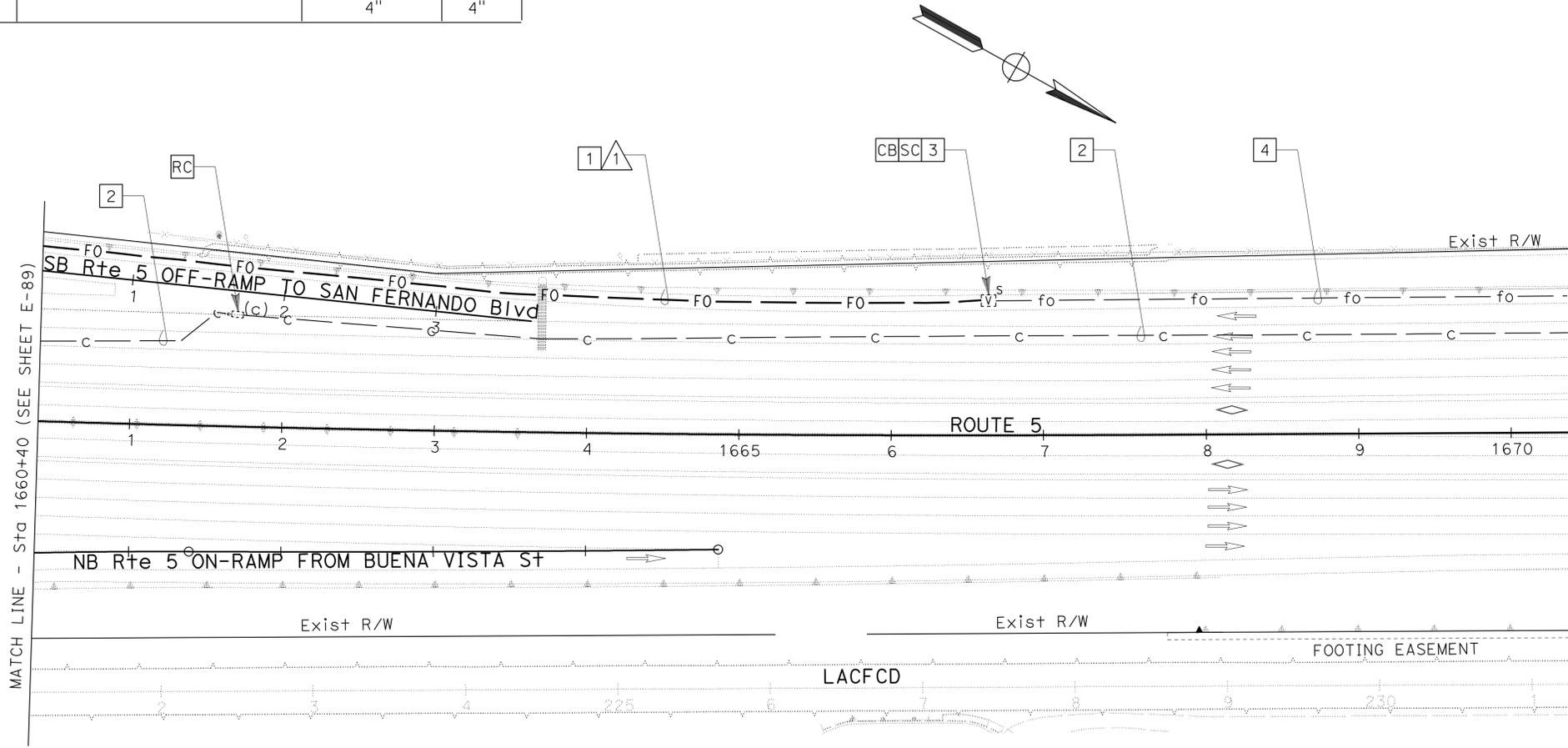


NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

- PROJECT NOTES: (FOR THIS SHEET ONLY)**
- 1 INSTALL CONDUITS IN PAVEMENT, SEE SHEET E-98 FOR DETAILS.
 - 2 RC COMMUNICATION CONDUITS AND CONTENTS AS PART OF ROADWAY EXCAVATION.
 - 3 SPLICE NEW 36SMFO AND 2-72SMFO TO EXISTING 36SMFO AND 2-72SMFO ACCORDINGLY.
 - 4 EXISTING CONDUIT SHOWN FOR REFERENCE ONLY.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT/ CONDUCTOR	FUNCTION	RUN			
		1			
36SMFO CABLE	SPARE	1			
72SMFO CABLE	SPARE		1		
72SMFO CABLE	DATA & VIDEO DISTRIBUTION			1	
1 INCH INNERDUCT		1	1	1	1
#12 AWG	TRACER WIRE				1
CONDUIT SIZE		4"		4"	



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 TUVEN NGO
 JACQUELINE C. TAN
 REVISIONS: 01/12
 REVISOR: JACQUELINE C. TAN
 DATE: 01/12
 CHECKED BY: JACQUELINE C. TAN
 DESIGNED BY: JACQUELINE C. TAN

MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

SCALE: 1" = 50' **E-90**

LAST REVISION DATE PLOTTED => 21-MAY-2012 10:22
 01-31-12 TIME PLOTTED => 10:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	639	1931

<i>Jacqueline C. Tan</i> 1-31-12	
REGISTERED ELECTRICAL ENGINEER	DATE
5-21-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/13 ELECTRICAL STATE OF CALIFORNIA	
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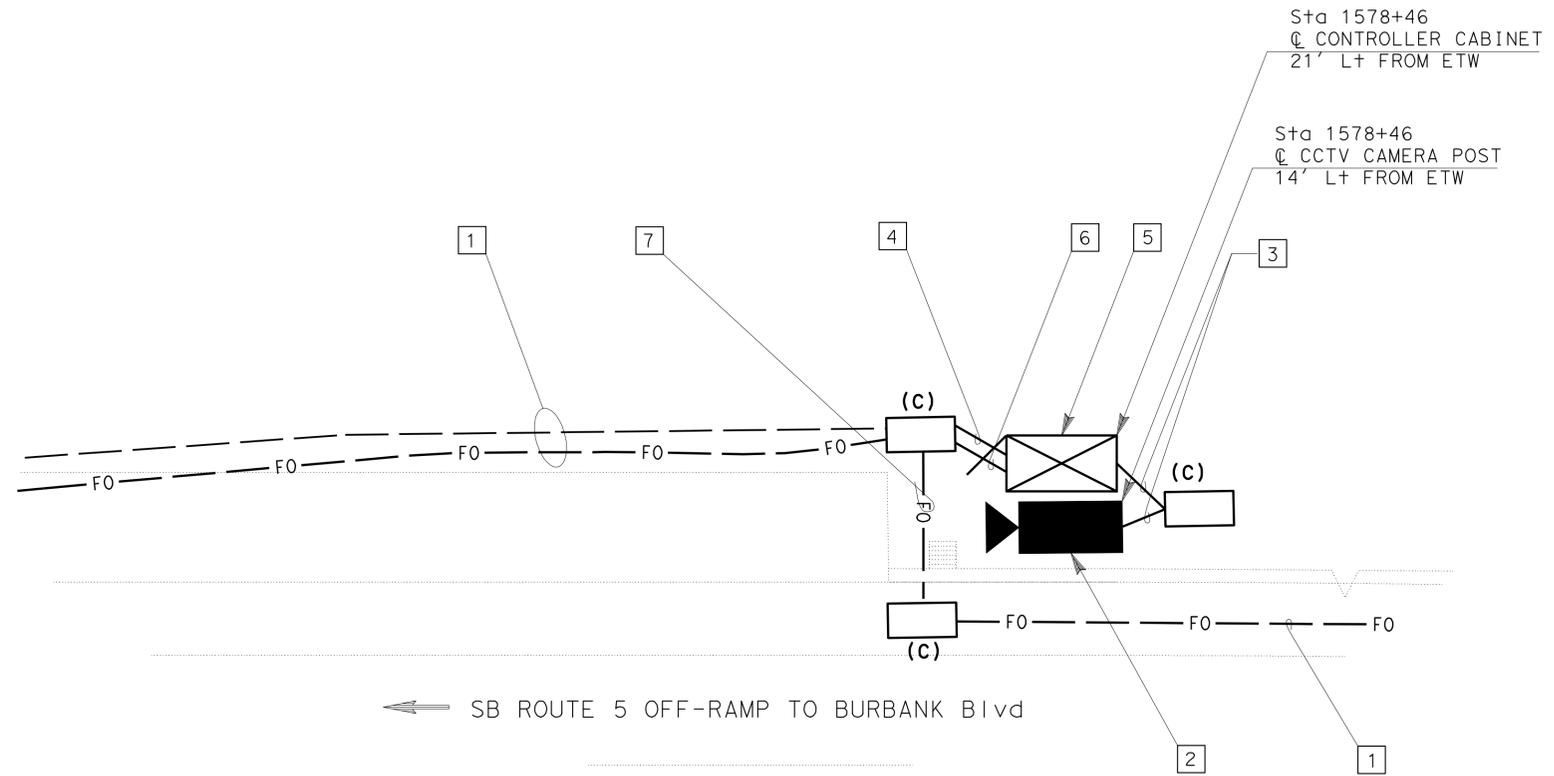
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NOTE:

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PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 SHOWN FOR REFERENCE ONLY. SEE MODIFY COMMUNICATION SYSTEM FOR DETAILS.
- 2 INSTALL CCTV CAMERA POLE TYPE 45 ON NEW FOUNDATION. INSTALL CCTV CAMERA ASSEMBLY ON POLE. SEE SHEET E-101.
- 3 INSTALL 3"C, COMPOSITE VIDEO CABLE (CCTV).
- 4 INSTALL 3"C, 2#6, 1#8G.
- 5 INSTALL MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEETS E-99 AND E-103 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.
- 6 INSTALL 3"C, 12SMFO.
- 7 INSTALL 3"C, 2-12SMFO.



DETAIL "A"

MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

NO SCALE

E-91

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	TUYEN NGO	REVISOR	DATE
Caltrans OFFICE OF ITS	JACQUELINE C. TAN	CHECKED BY	JACQUELINE C. TAN	DATE	01/12

NOTE:

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

PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 SHOWN FOR REFERENCE ON. SEE MODIFY COMMUNICATION SYSTEM FOR DETAILS.
- 2 INSTALL CCTV CAMERA POLE TYPE 45 ON NEW FOUNDATION. INSTALL CCTV CAMERA ASSEMBLY ON POLE. SEE SHEET E-101 FOR DETAILS.
- 3 INSTALL 3"C, COMPOSITE VIDEO CABLE (CCTV).
- 4 INSTALL 3"C, 12SMFO.
- 5 INSTALL MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEETS E-99 AND E-103 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.
- 6 INSTALL 3"C, 2#6, 1#8G.

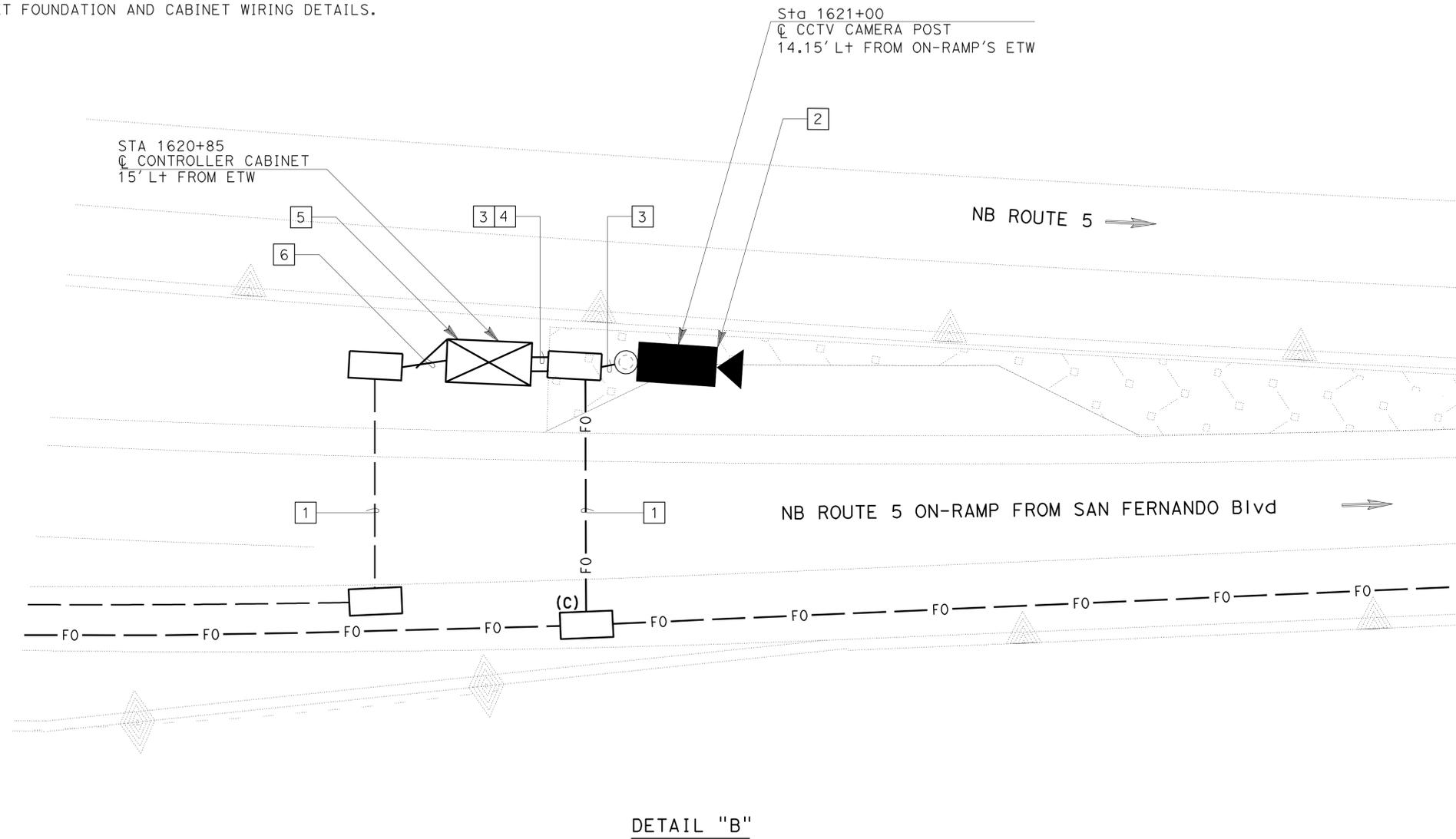
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	640	1931

REGISTERED ELECTRICAL ENGINEER
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL

1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE

5-21-12
 PLANS APPROVAL DATE

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MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

NO SCALE **E-92**

LAST REVISION DATE PLOTTED => 21-MAY-2012 01-31-12 TIME PLOTTED => 10:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	641	1931

Jacqueline C. Tan 1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE

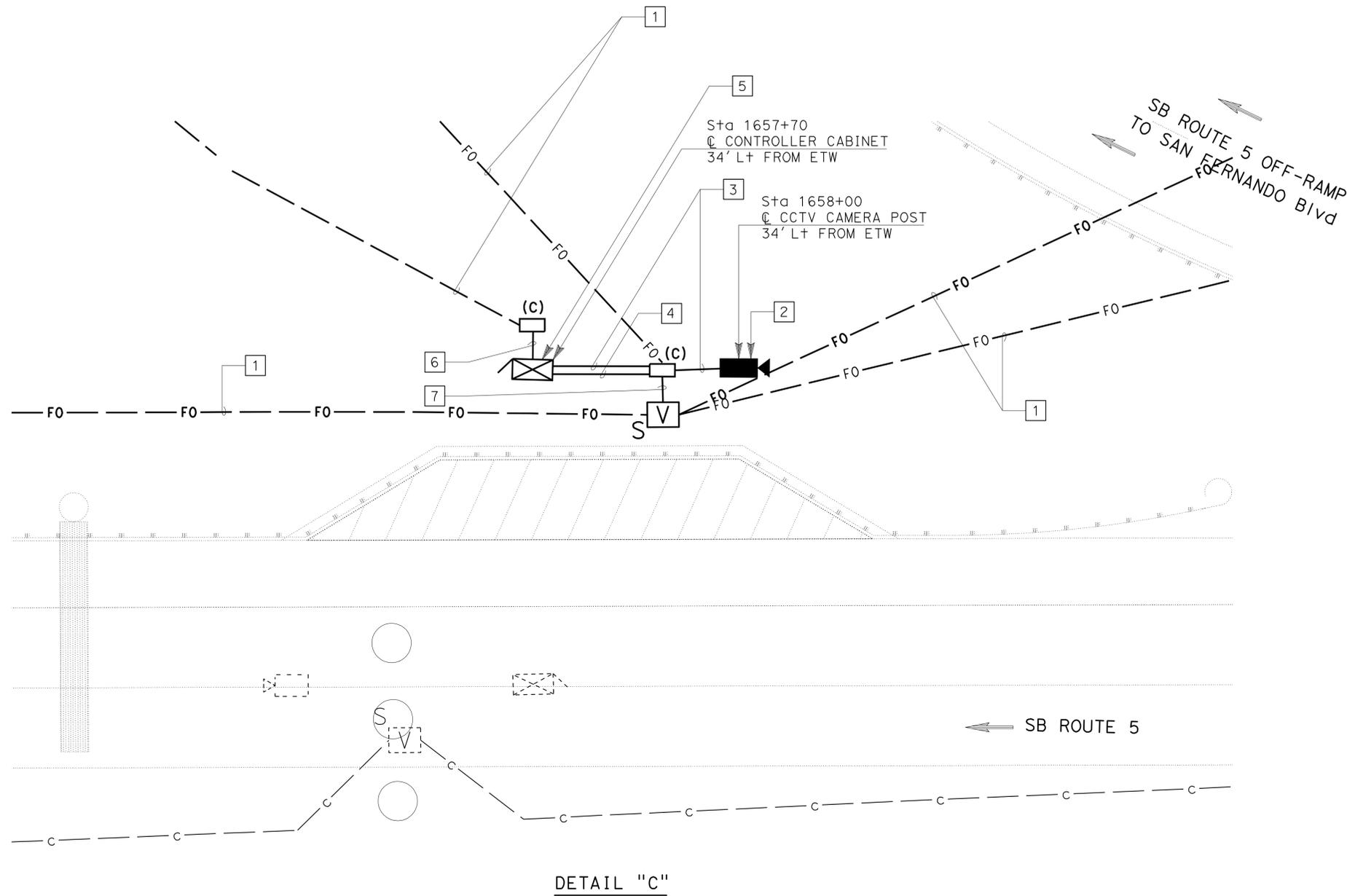
5-21-12
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 JACQUELINE
 C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA

NOTE:

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



DETAIL "C"

PROJECT NOTES: (FOR THIS SHEET ONLY)

- 1 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM FOR DETAILS.
- 2 INSTALL CCTV CAMERA POLE TYPE 45 ON NEW FOUNDATION. INSTALL CCTV CAMERA ASSEMBLY ON POLE. SEE SHEET E-101 FOR DETAILS.
- 3 INSTALL 3"C, COMPOSITE VIDEO CABLE (CCTV).
- 4 INSTALL 3"C, 12SMFO.
- 5 INSTALL MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEETS E-99 AND E-103 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.
- 6 INSTALL 3"C, 2#6, 1#8G.
- 7 INSTALL 3"C, 2-12SMFO.

MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY.
FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

NO SCALE

E-93

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION OFFICE OF ITS
 Tuyen Ngo
 Functional Supervisor
 Jacqueline C. Tan
 Calculated/Designed By
 Checked By
 Revised By
 Date Revised
 01/12

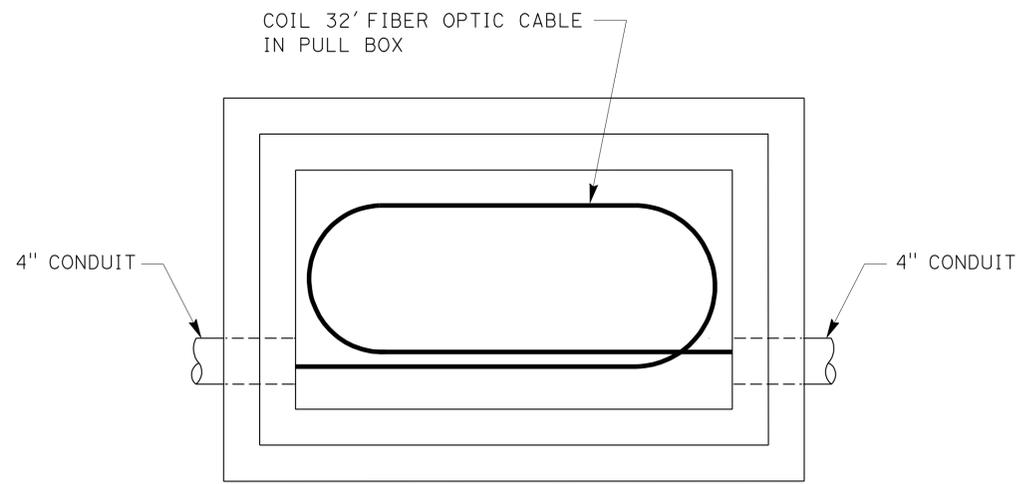
LAST REVISION DATE PLOTTED => 21-MAY-2012 01-31-12 TIME PLOTTED => 10:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	642	1931

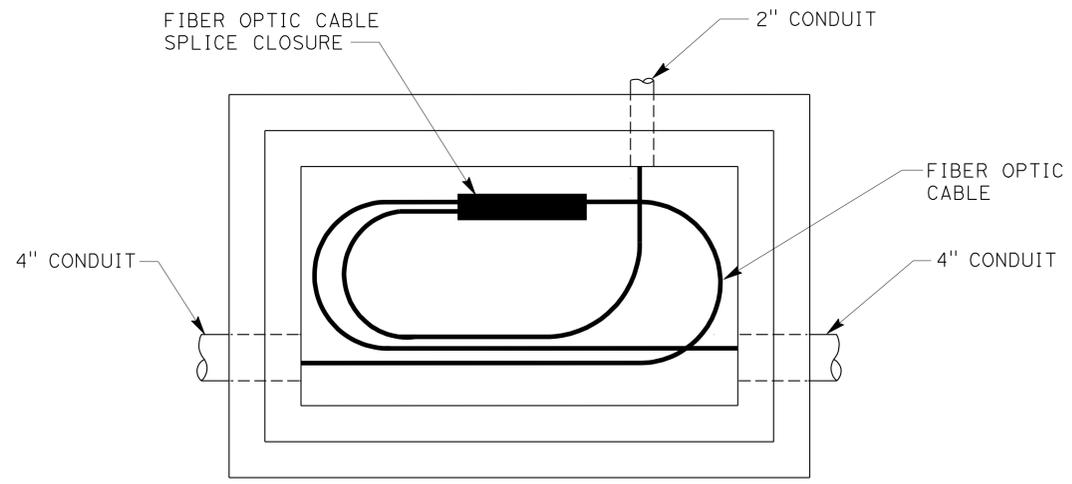
Jacqueline C. Tan 1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JACQUELINE
 C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
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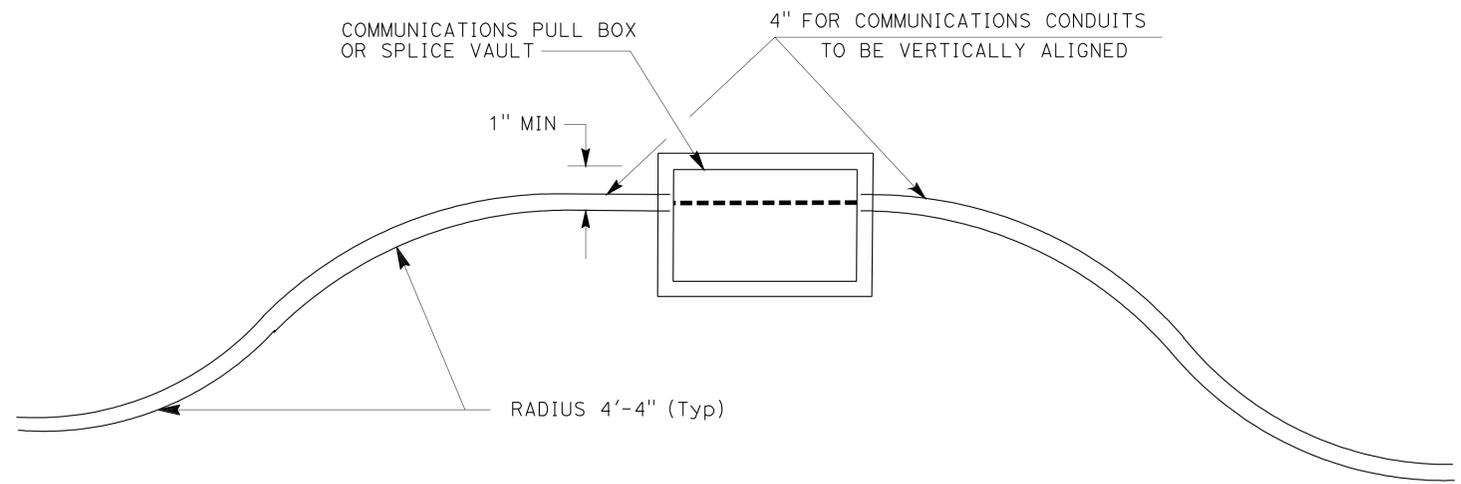
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DETAIL A
COMMUNICATIONS PULL BOX NO SPLICE



DETAIL B
COMMUNICATIONS PULL BOX WITH SPLICE



DETAIL C

NOTES: (THIS SHEET ONLY)

1. DIMENSIONS VARY ACCORDING TO SIZE OF CONDUIT ETC. BUT THE MINIMUM BEND RADIUS OF 4'-3" MUST BE MAINTAINED ON ALL CONDUITS CONTAINING FIBER OPTIC CABLE AND SIX TIMES THE CONDUIT DIAMETER FOR ALL OTHER CONDUITS.
2. ALL BENDS MUST BE FACTORY BENDS.
3. THE CONTRACTOR MUST ADAPT CONDUIT STUBOUTS FOR SPECIFIC PROJECT REQUIREMENTS.
4. ADDITIONAL CONDUIT ENTRANCES AS REQUIRED.
5. CONDUITS MUST EXTEND INTO THE PULL BOX A NOMINAL 2" FROM THE INSIDE WALL.

**(DETAILS FOR NO. 6 AND)
(COMMUNICATIONS PULL BOX)**

**MODIFY COMMUNICATION SYSTEM
(COMMUNICATION PULL BOX DETAILS)**

E-94

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-79.

NO SCALE

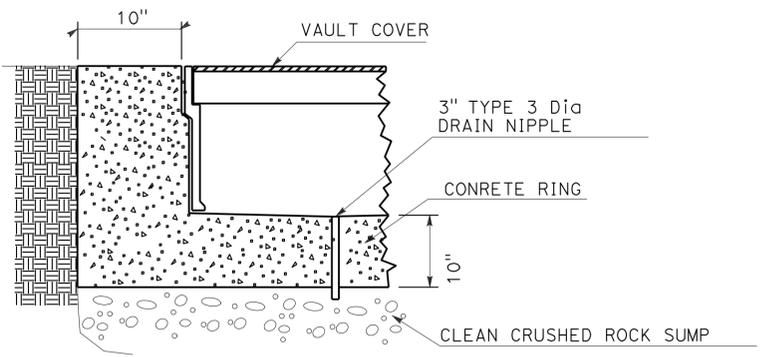
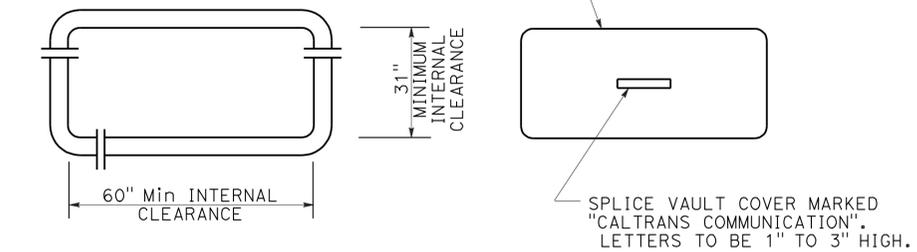
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE C. TAN
 CHECKED BY
 JACQUELINE C. TAN
 TUVEN NGO
 JACQUELINE C. TAN
 REVISED BY
 JACQUELINE C. TAN
 DATE REVISED
 01/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	644	1931

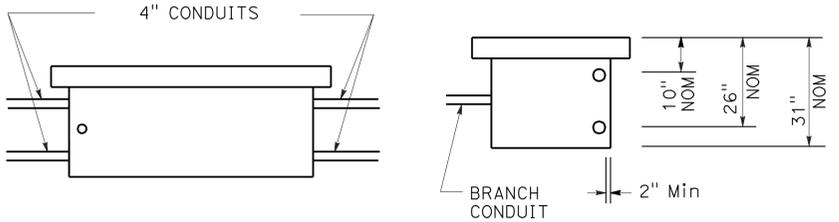
1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
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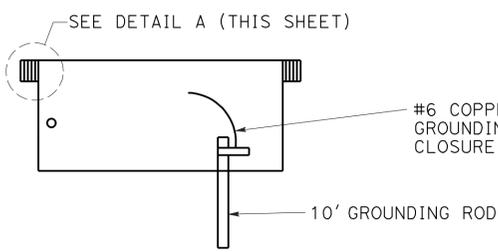
THE FRAME AND LID OF THE VAULT SHALL COMPLY WITH THE LOAD RATING APPLICABLE TO THE VAULT LOCATION AS DESCRIBED IN THE SPECIAL PROVISIONS.



DETAIL A
INSTALLATION IN ASPHALT PAVEMENT



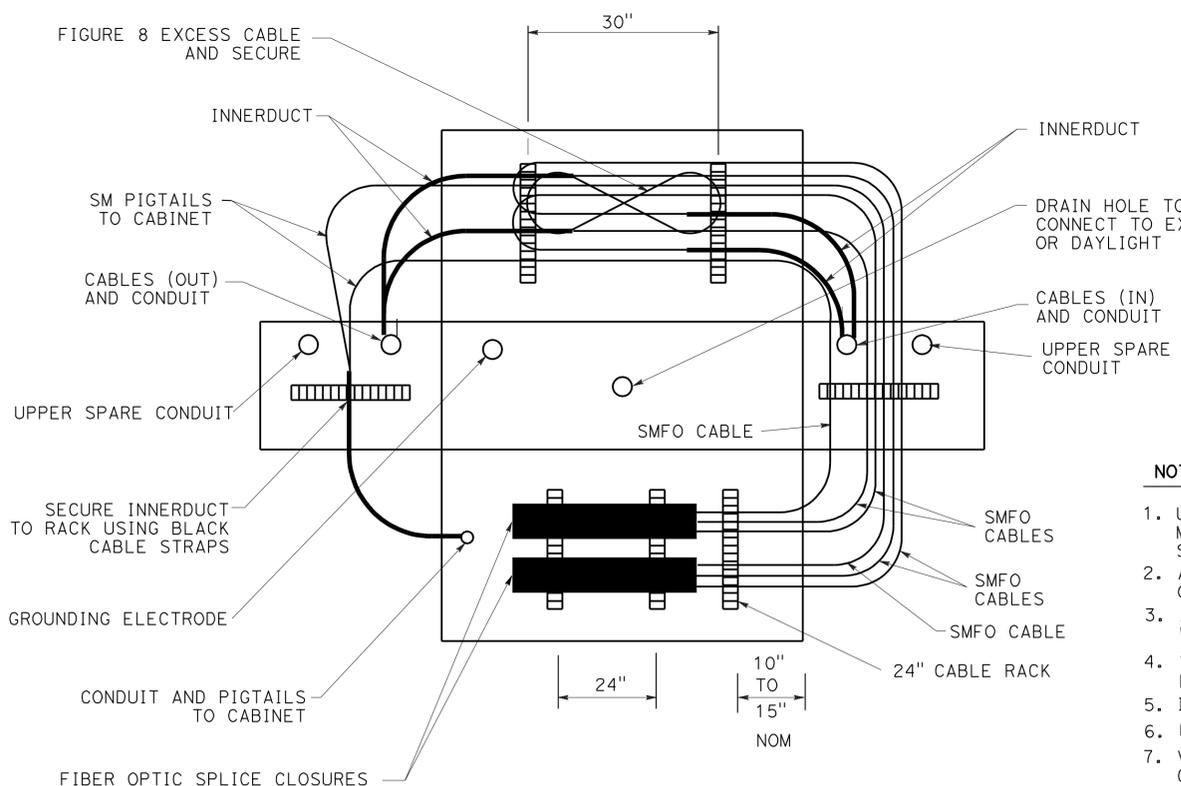
SPLICE VAULT DIMENSIONS



SPLICE VAULT INSTALLATION

INSTALLATION NOTES

1. CONCRETE ENCASEMENT AROUND SPLICE VAULT SHALL BE MINOR CONCRETE.
2. PAVEMENT AND SUBGRADE TO BE AS DIRECTED BY THE ENGINEER.

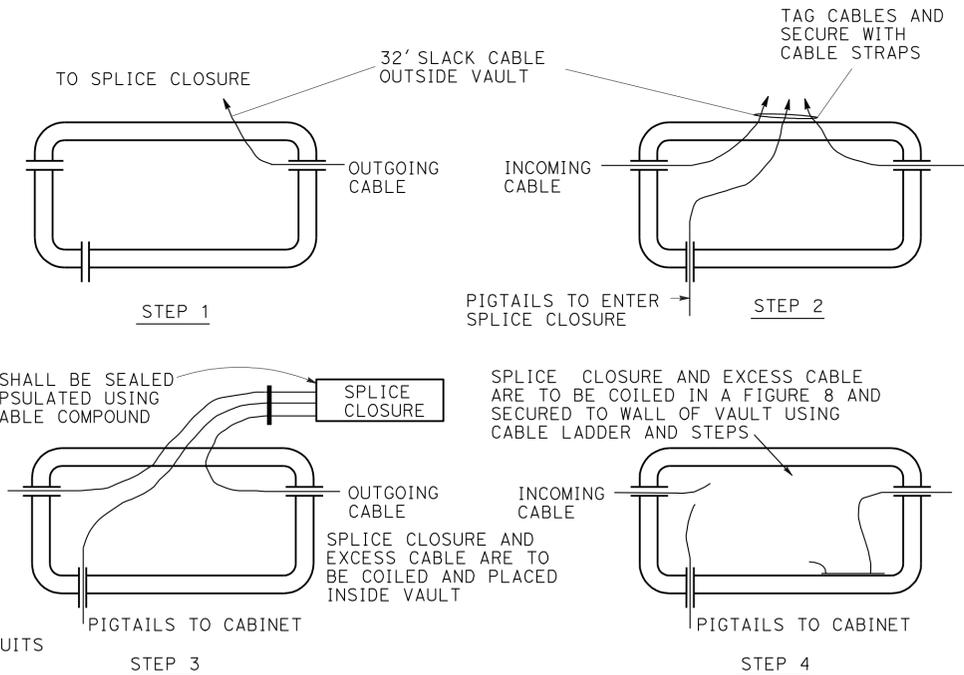


CABLE INSTALLATION
TOP VIEW - WALLS FOLDED DOWN FOR CLARITY

NOTES: (THIS SHEET ONLY)

1. UPON ACCEPTANCE OF THE WORK ALL CONDUITS MUST BE SEALED WITH COMPATIBLE SEALANT MATERIAL.
2. ALL GROUND CONNECTIONS MUST BE COATED WITH OXIDATION PROHIBITING COMPOUND.
3. ALL CABLE STRAPS SHALL BE DESIGNED TO WITHSTAND ULTRA-VIOLET EXPOSURE.
4. THE VAULT MUST BE CAULKED AFTER ALL KNOWN ENTRANCES HAVE BEEN MADE.
5. INSTALL ALL CABLES IN LOWER 4 inch CONDUIT.
6. UPPER 4 inch CONDUIT IS SPARE ONLY.
7. VAULT MUST HAVE INTEGRAL BASE OR SHALL BE GROUTED PER STANDARD SPECIFICATION OF PULL BOXES.
8. NUMBER OF SPLICE CLOSURES MAY VARY.
9. SPLICE VAULTS MUST BE STEEL PLATED.

(SPLICE VAULT DETAILS)



SPLICE PROCEDURE

MODIFY COMMUNICATION SYSTEM (SPLICE VAULT DETAILS)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION OFFICE OF ITS
 TUVEN NGO
 JACQUELINE C. TAN
 JACQUELINE C. TAN
 JACQUELINE C. TAN
 JACQUELINE C. TAN

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-79.

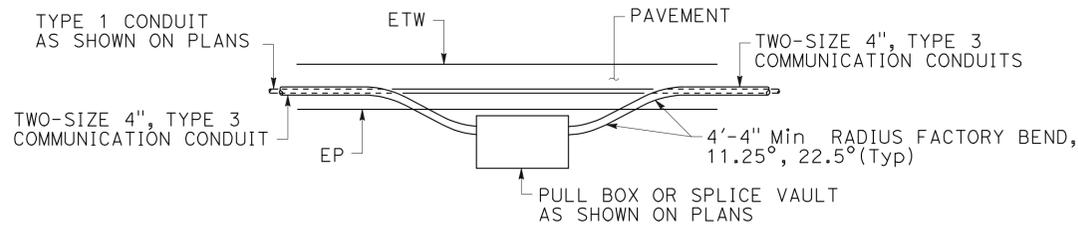
NO SCALE

E-96

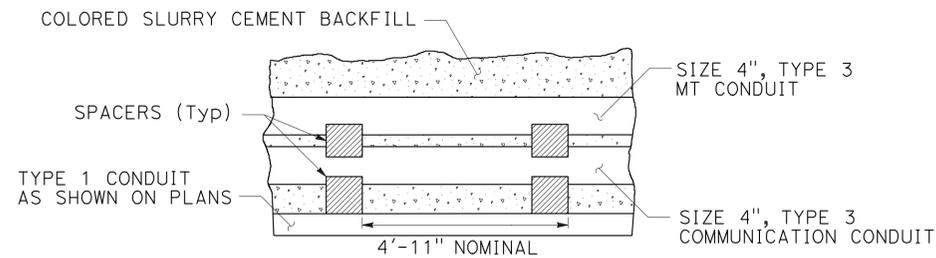
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	646	1931

<i>Jacqueline C. Tan</i> 1-31-12 REGISTERED ELECTRICAL ENGINEER DATE	
5-21-12 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>	

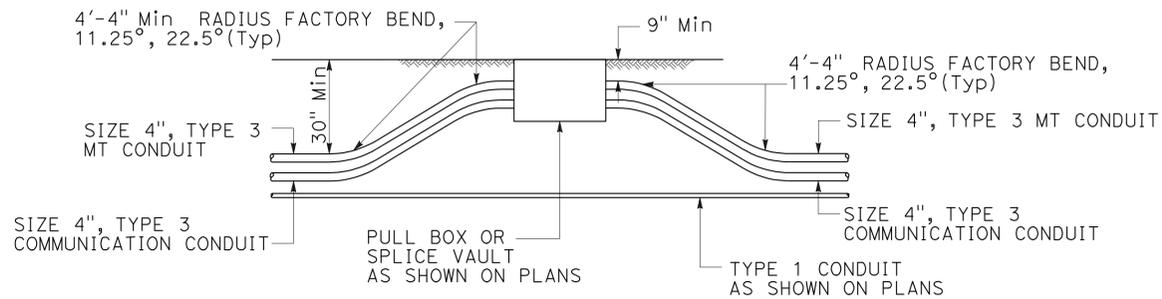
REGISTERED PROFESSIONAL ENGINEER
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
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OUTSIDE SHOULDER PULL BOX INSTALLATION (TOP VIEW)



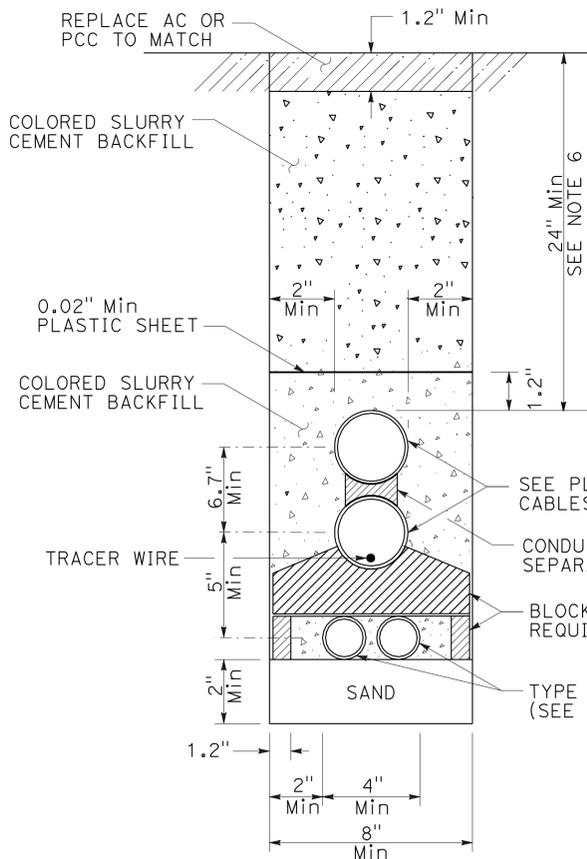
CONDUIT SPACER PLACEMENT (SIDE VIEW)



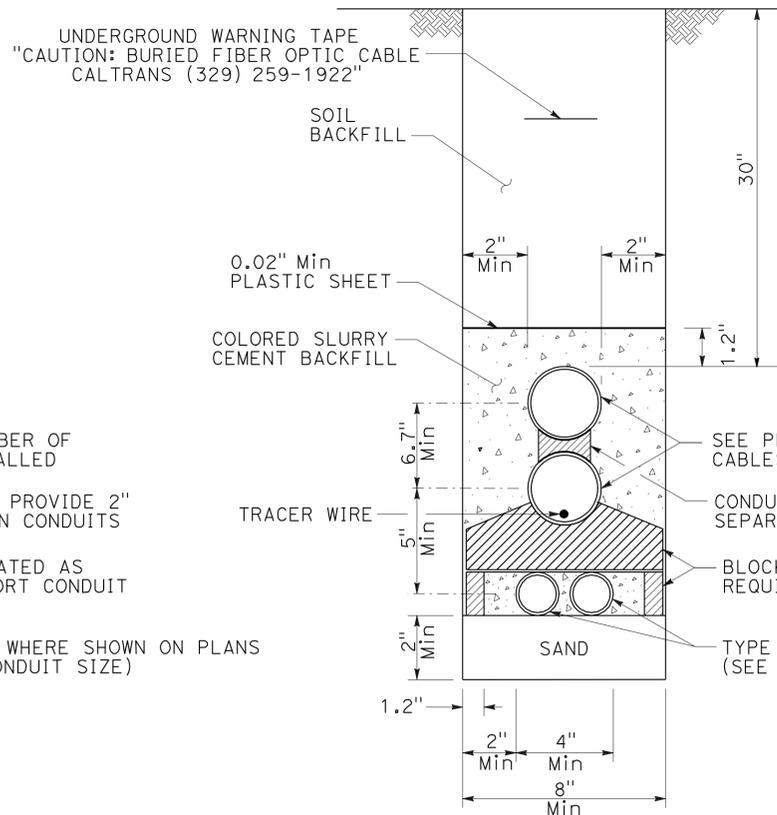
PULL BOX FOR SOIL AREA TRENCHING (ELEVATION)

NOTES: (THIS SHEET ONLY)

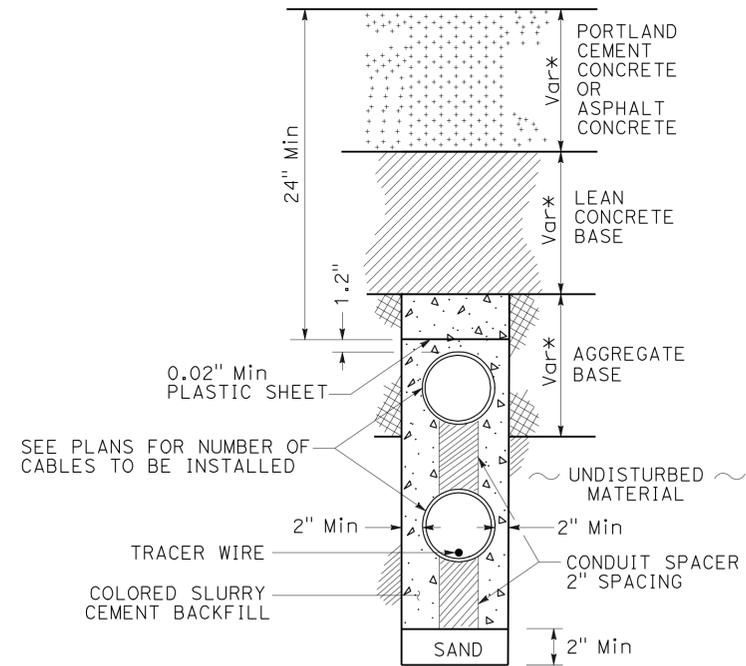
1. REPLACE AC DIKE IN KIND, AS NECESSARY.
2. TRENCH TO BE CENTERED IN SHOULDER OR AS DIRECTED BY THE ENGINEER.
3. MAINTAIN 24" MINIMUM COVER AND BACKFILL TRENCH WITH SLURRY CEMENT BETWEEN PULL BOX AND PAVED SHOULDER.
4. WHERE TRENCH TRANSITIONS FROM ASPHALT TO UNPAVED AREA, EXCEPT AT PULL BOXES, CONDUIT TO GRADUALLY TRANSITION FROM 24" MINIMUM DEPTH TO 30" MINIMUM DEPTH WITHIN THE ASPHALT AREA.
5. 24" MINIMUM COVER MAY BE REDUCED TO 9" MINIMUM COVER IF NEEDED TO CLEAR A STORM DRAIN OR OTHER FIXED OBJECT AS DIRECTED BY THE ENGINEER.
6. PROVIDE MINIMUM 4'-11" CLEARANCE BETWEEN ANY CONDUIT AND EXISTING STRUCTURE FOUNDATIONS.
7. ANCHOR/RESTRAIN TOP CONDUIT FROM FLOATING DURING SLURRY CEMENT BACKFILL.
8. CONDUITS MUST BE INSTALLED IN NEW ASPHALT PAVEMENT AFTER AGGREGATE BASE IS PLACED AND COMPACTED.



TRENCH IN PAVEMENT (CONCRETE OR ASPHALT) WITH TYPE 3 COMMUNICATION CONDUIT(S) AND TYPE 1 CONDUIT(S)



TRENCH IN SOIL WITH TYPE 1 COMMUNICATION CONDUIT(S) AND TYPE 1 CONDUIT(S)



NEW PAVEMENT (PCC or ASPHALT) WITH TYPE 3 COMMUNICATION CONDUIT(S)
 (* PAVEMENT THICKNESS, SEE TYPICAL CROSS SECTION PLANS)

MODIFY COMMUNICATION SYSTEM (TRENCH DETAILS)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE C. TAN
 TUVEN NGO JACQUELINE C. TAN
 REVISOR DATE 01/12
 CALCULATED/DESIGNED BY CHECKED BY
 x x x x

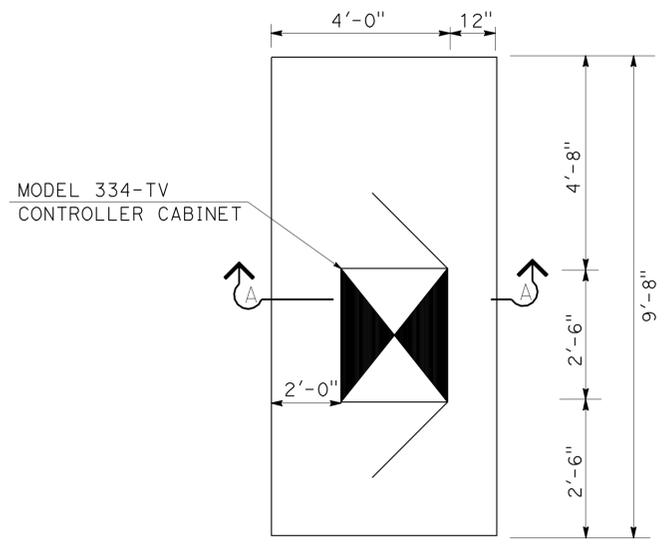
FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-79.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	647	1931

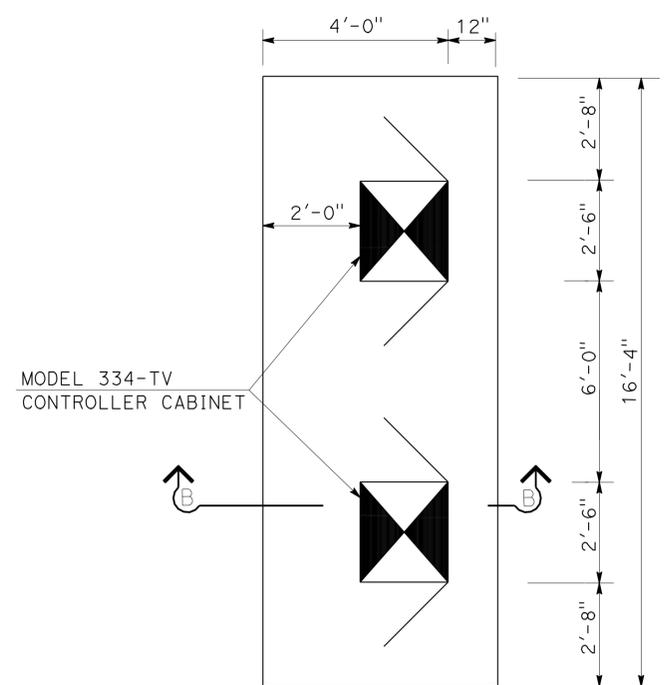
Jacqueline C. Tan 1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JACQUELINE
 C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA

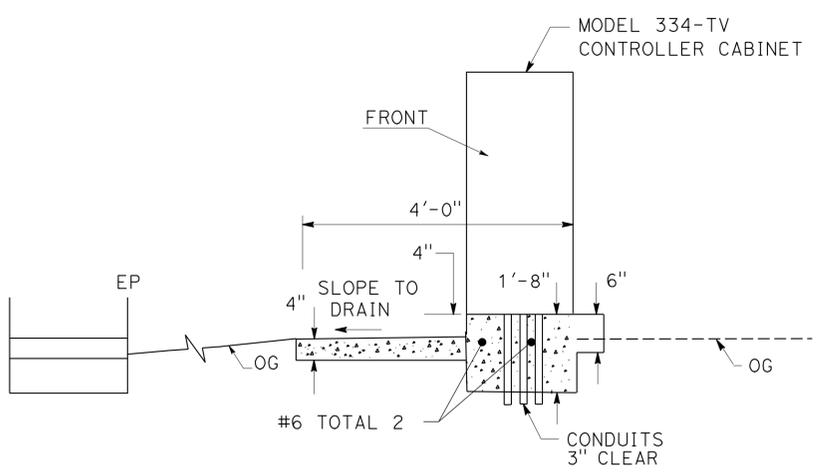
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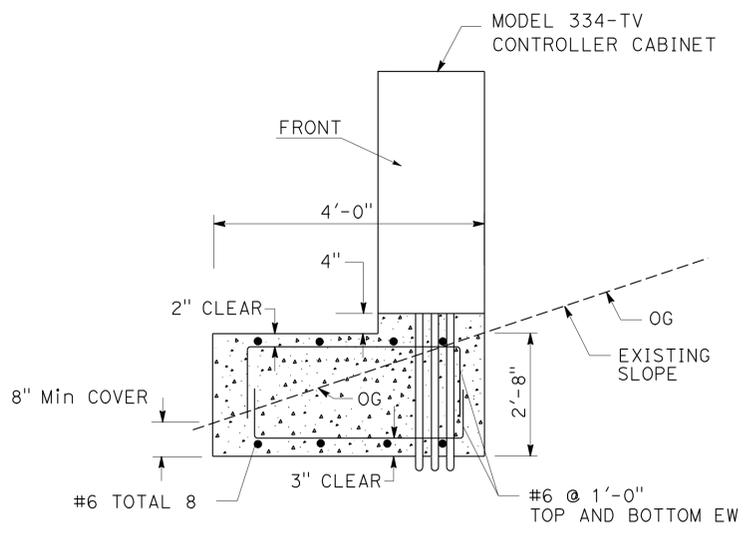
**DETAIL A
PLAN VIEW**



**DETAIL B
PLAN VIEW**



**SECTION A-A
ELEVATION VIEW FOR DETAIL A**



**SECTION B-B
ELEVATION VIEW FOR DETAIL B**

NOTES: (THIS SHEET ONLY)

1. FOR INFORMATION NOT SHOWN, SEE STANDARD PLANS SHEET RSP ES-3C.
2. CONSTRUCT PAD AND GRADE TO DRAIN AROUND AND AWAY FOR CABINET IN KEEPING WITH EXISTING DRAINAGE PATTERN.
3. CABINET DOOR MUST BE LOCATED PER PLAN AND HINGED TO AWAY FROM TRAVEL WAY.
4. SECTION OF PAD IS LOWER TO 4" WHEN REQUIRED BY FIELD CONDITION.

**MODIFY COMMUNICATION SYSTEM
(CONTROLLER CABINET FOUNDATION DETAILS)**

NO SCALE

E-99

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-79.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - OFFICE OF ITS
 Caltrans®
 TUVEN NGO
 JACQUELINE C. TAN
 JACQUELINE C. TAN
 REVISOR
 DATE
 01/12
 REVISION
 DATE

USERNAME => s121614
DGN FILE => 71218wud099.dgn

RELATIVE BORDER SCALE
IS IN INCHES

UNIT 1885

PROJECT NUMBER & PHASE

07000211191

BORDER LAST REVISED 7/2/2010

LAST REVISION DATE PLOTTED => 21-MAY-2012
 01-31-12 TIME PLOTTED => 10:23

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	649	1931

1-31-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 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
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA

NOTE:

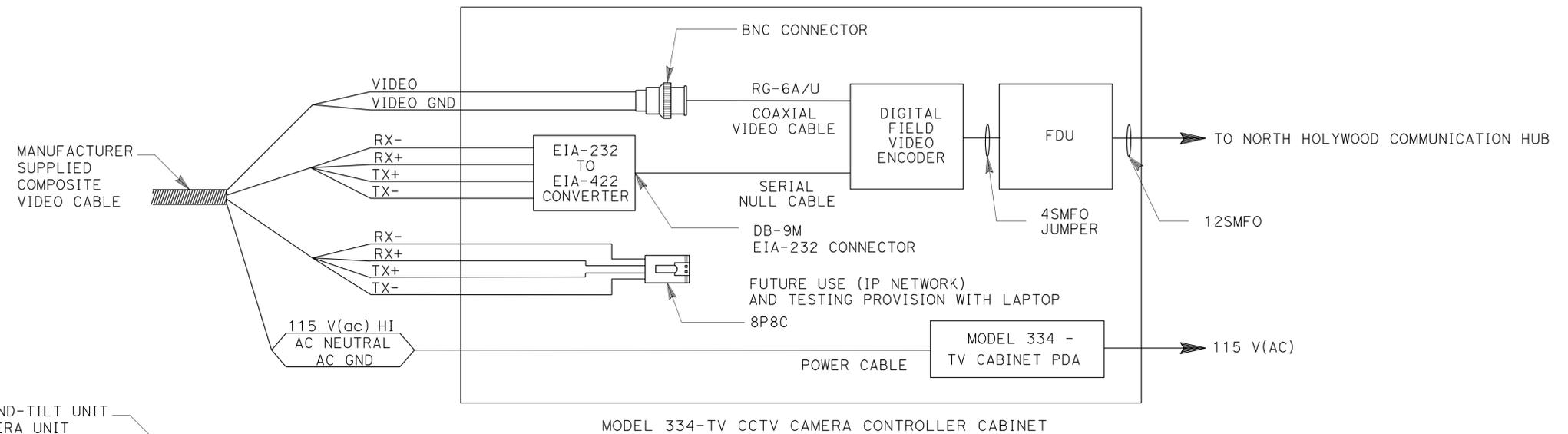
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

NOTES: (FOR SHEETS E-101 TO E-103)

ALL COMPONENTS AND CONNECTORS MUST MEET NEMA TS2 REQUIREMENT.

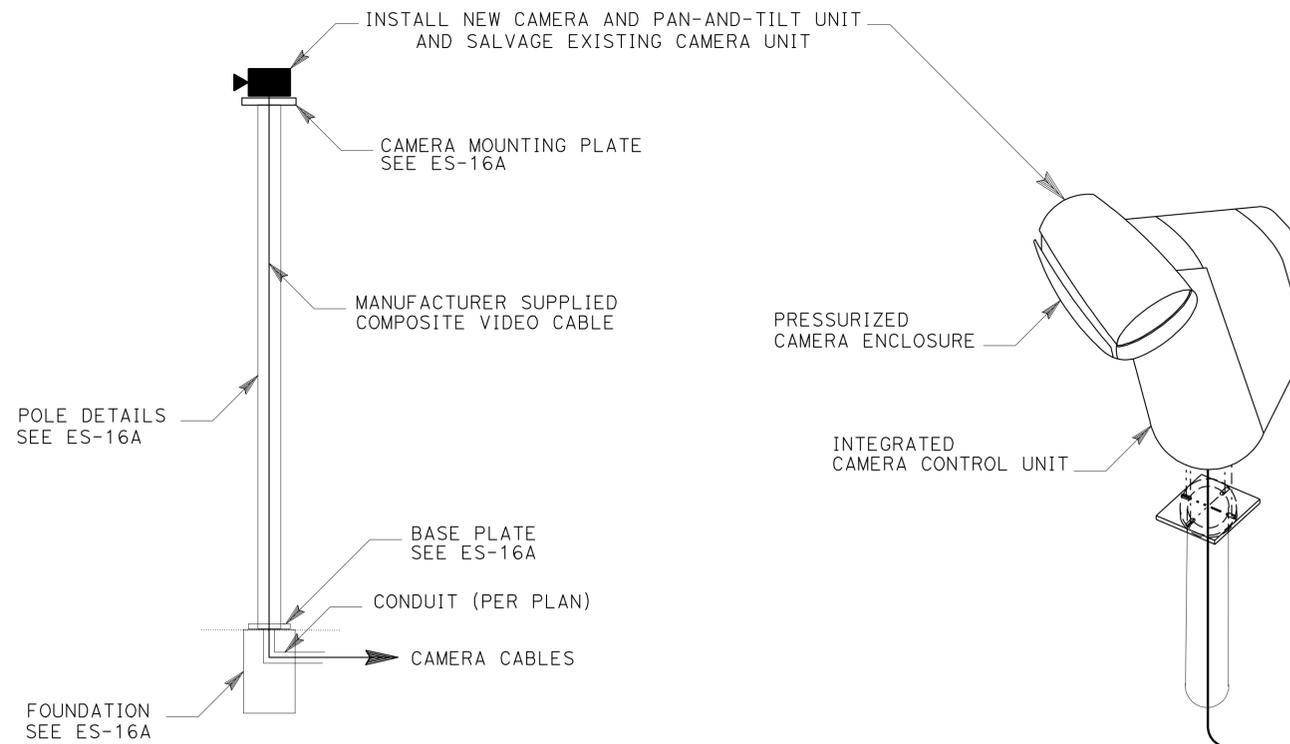
PROJECT NOTES: (FOR THIS SHEET ONLY)

1. THE CONTRACTOR MUST PROVIDE CABLE LENGTH FROM THE CAMERA ASSEMBLY TO THE LOCAL PATCH PANEL INCLUDING CONNECTORS AS SHOWN IN THIS SHEET.
2. THE CONTRACTOR MUST PROVIDE ALL CABLES FROM THE LOCAL PATCH PANEL TO THE DIGITAL VIDEO ENCODER AND PDA.
3. ALL CABLES MUST BE ALUMINUM SHIELDED TO PREVENT CROSS TALK.
4. IN THE CCTV CAMERA CONTROLLER CABINET, THE NUMBER IDENTIFIES THE SPECIFIC CONDUCTOR TO BE USED FOR THE INDICATED FUNCTION.
5. CONNECT ALL DRAIN WIRES OF SHIELDED-CONDUCTORS TO CABINET GROUND AT THE LOCAL PATCH PANEL.
6. INSTALL CONNECTORS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. WATERPROOF ALL CONNECTORS AND CABLES USING WATER-TIGHT GROMMETS, SEALING COMPOUNDS AND TAPE.
8. AS REQUIRED, THE CONTRACTOR MUST INSTALL ADAPTER MOUNTING PLATES TO MOUNT CCTV CAMERA ON POLE.

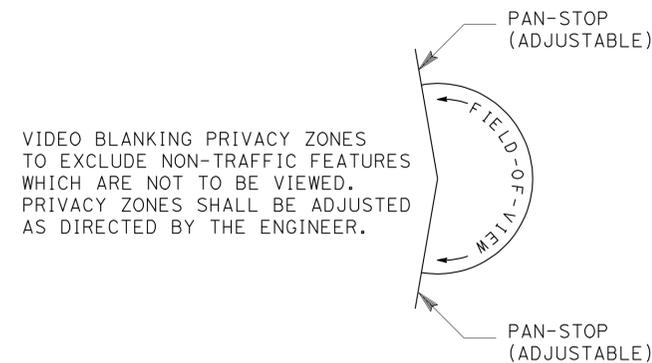


MODEL 334-TV CCTV CAMERA CONTROLLER CABINET

TYPICAL WIRING DIAGRAM



TYPICAL CAMERA WITH PAN-AND-TILT UNIT



ADJUSTABLE PAN-STOP DETAIL

**MODIFY COMMUNICATION SYSTEM
(CLOSED CIRCUIT TELEVISION CAMERA SYSTEM
WIRING DIAGRAM WITH PAN-AND-TILT UNIT)**

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-79.

NO SCALE

E-101

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	650	1931

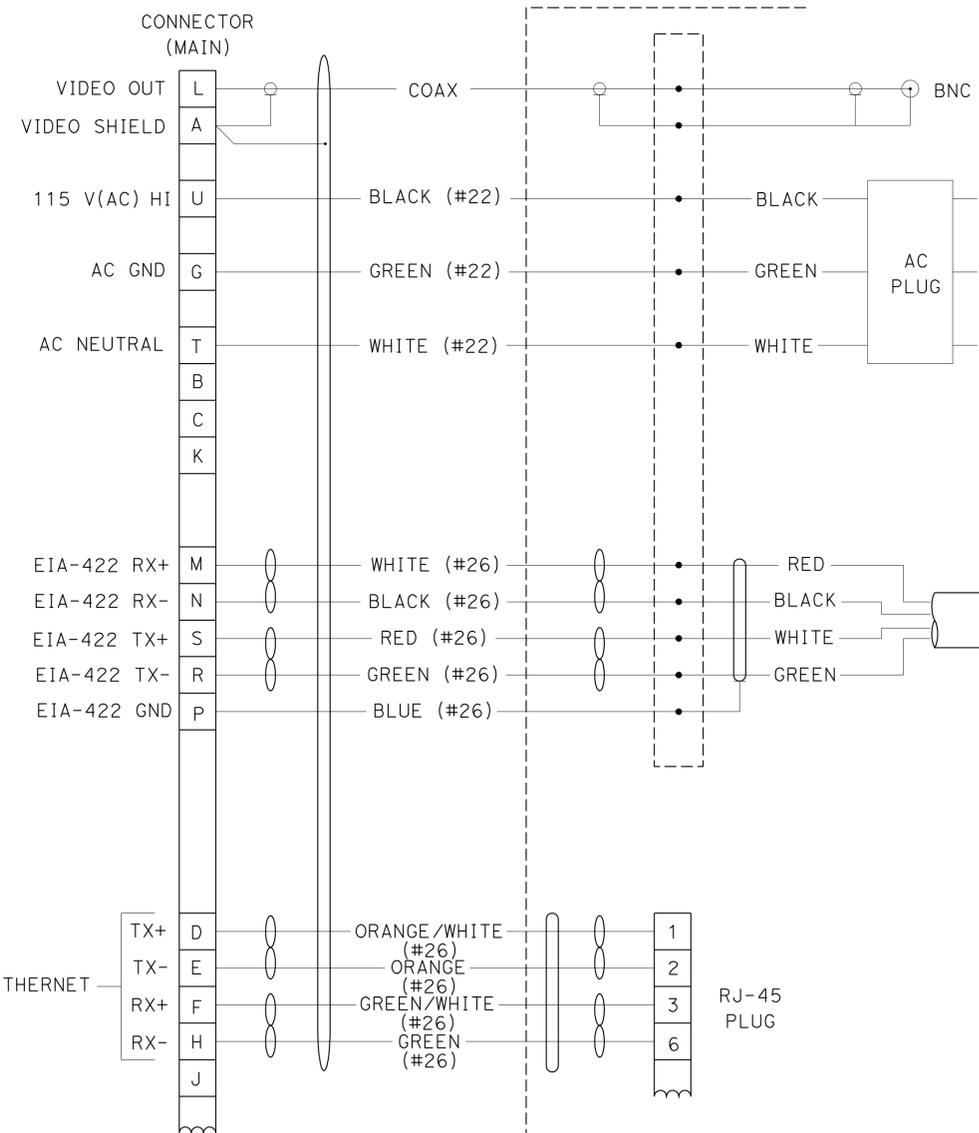
REGISTERED ELECTRICAL ENGINEER DATE		
1-31-12		
PLANS APPROVAL DATE		
5-21-12		

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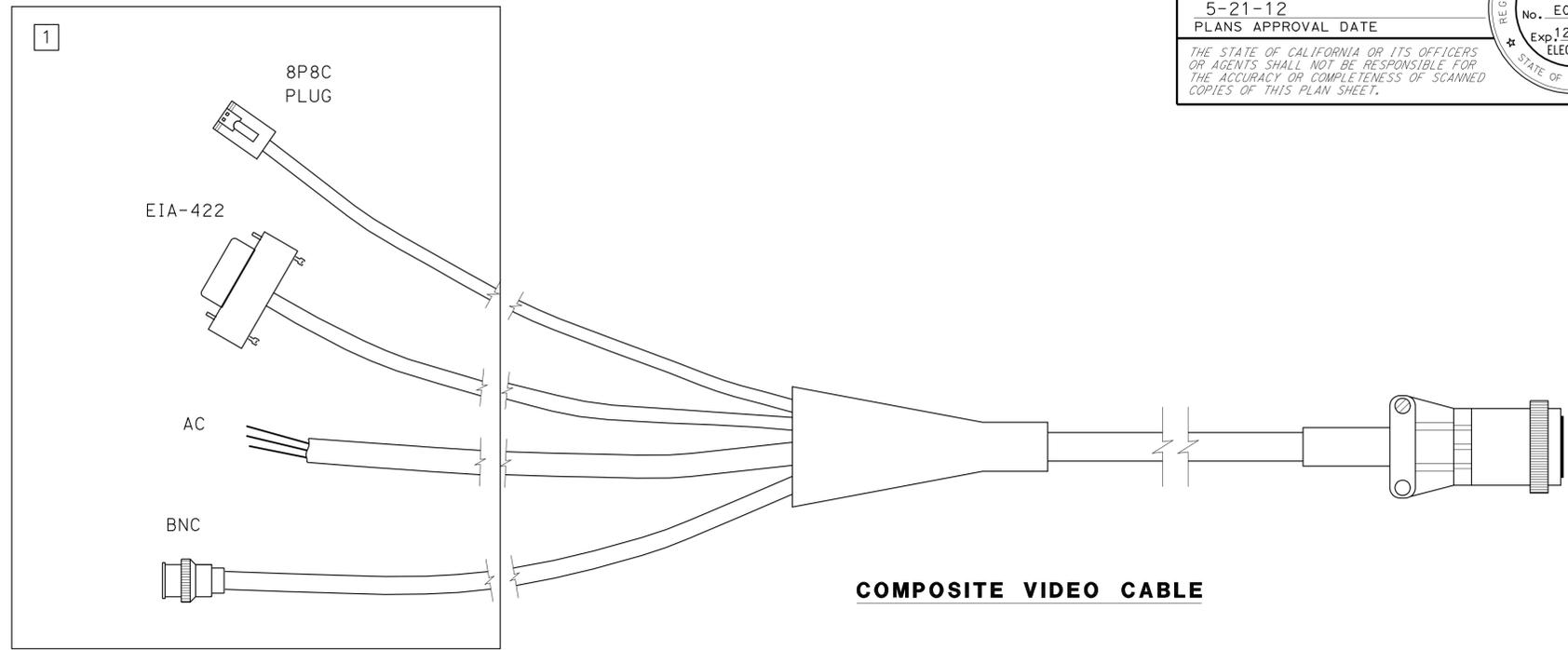
PROJECT NOTE: (THIS SHEET ONLY)

1 CONNECTORIZING DONE BY THE CONTRACTOR AT THE MODEL 334-TV CONTROLLER CABINET

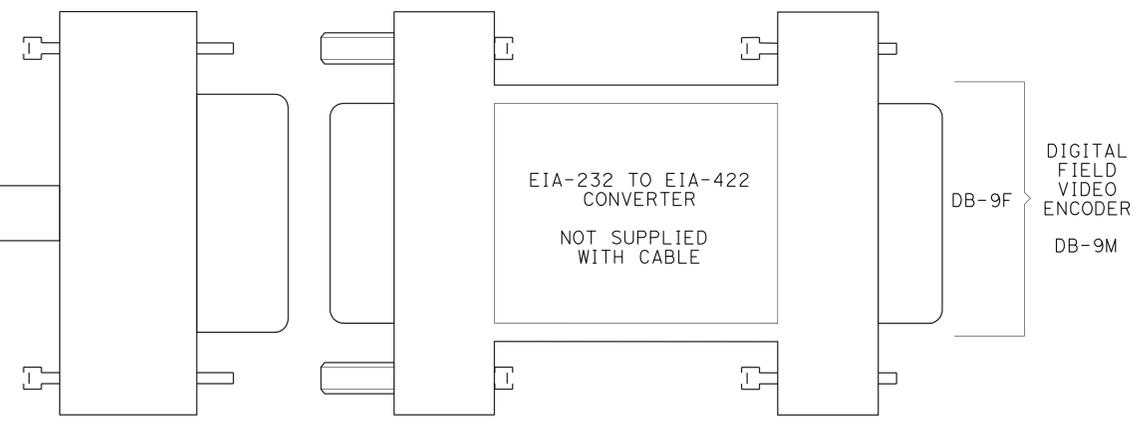
SEE SHEET E-101 FOR DETAIL



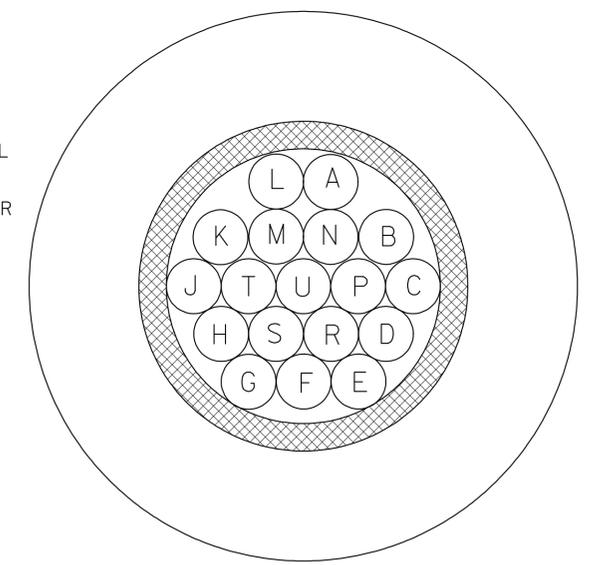
CABLE SCHEMATIC



COMPOSITE VIDEO CABLE



EIA-232 TO EIA-422 CONVERTER



COMPOSITE VIDEO CABLE CROSS SECTION

**MODIFY COMMUNICATION SYSTEM
(CLOSED CIRCUIT TELEVISION CAMERA SYSTEM
COMPOSITE VIDEO CABLE DETAILS)**

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-79.

NO SCALE

E-102

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - OFFICE OF ITS SUPERVISOR - JACQUELINE C. TAN

TUYEN NGO
REVISOR
JACQUELINE C. TAN
DESIGNER

CALCULATED/DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
JACQUELINE C. TAN

REVISOR
DATE
REVISED BY
DATE
REVISED

01/12

x

x

x

x

x

LAST REVISION | DATE PLOTTED => 21-MAY-2012
01-31-12 | TIME PLOTTED => 10:24

DATA DISTRIBUTION FIBER OPTIC CABLE (72SMFO) ASSIGNMENT TABLE (PM 29.39 to PM 31.57)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	652	1931

Jacqueline C. Tan 03-20-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA

FIBER OPTIC CABLE (12SMFO) ASSIGNMENT TABLE (PM 29.39 to PM 31.57)

USE	DATE REVISION													FIBER
	PM	E-80	E-82	E-82	E-83	E-85	E-86	E-86	E-86	E-89	E-89	E-89	E-90	
TRANSMIT IN	*	X	X	X	X	X	X	X	X	X	X	X	*	FIBER 1
TRANSMIT OUT	*	X	X	X	X	X	X	X	X	X	X	X	*	FIBER 2
*													*	FIBER 3
*													*	FIBER 4
*													*	FIBER 5
*													*	FIBER 6
*													*	FIBER 7
*													*	FIBER 8
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...												
*													*	FIBER 72

USE	DATE REVISION													FIBER
	PM	E-80	E-82	E-82	E-83	E-85	E-86	E-86	E-86	E-89	E-89	E-89	E-90	
F/O DROP IN	*	X	X	X	X	X	X	X	X	X	X	X	*	FIBER 1
F/O DROP OUT	*	X	X	X	X	X	X	X	X	X	X	X	*	FIBER 2
*													*	FIBER 3
*													*	FIBER 4
*													*	FIBER 5
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*													*	FIBER 8
*													*	FIBER 9
*													*	FIBER 10
*													*	FIBER 11
*													*	FIBER 12

LEGEND: (THIS SHEET ONLY)

- X - TERMINATED ACTIVE ON FDU
- * - SPLICE WITH EXISTING DATA & VIDEO DISTRIBUTION CABLE (72SMFO) IN KIND

NOTE: (THIS SHEET ONLY)

1. FIBER NUMBERS MAY BE RE-ASSIGNED BY THE ENGINEER DURING CONSTRUCTION.

**MODIFY COMMUNICATION SYSTEM
(FIBER ASSIGNMENT TABLE)
(VIDEO DISTRIBUTION)**

NO SCALE

E-104

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-79

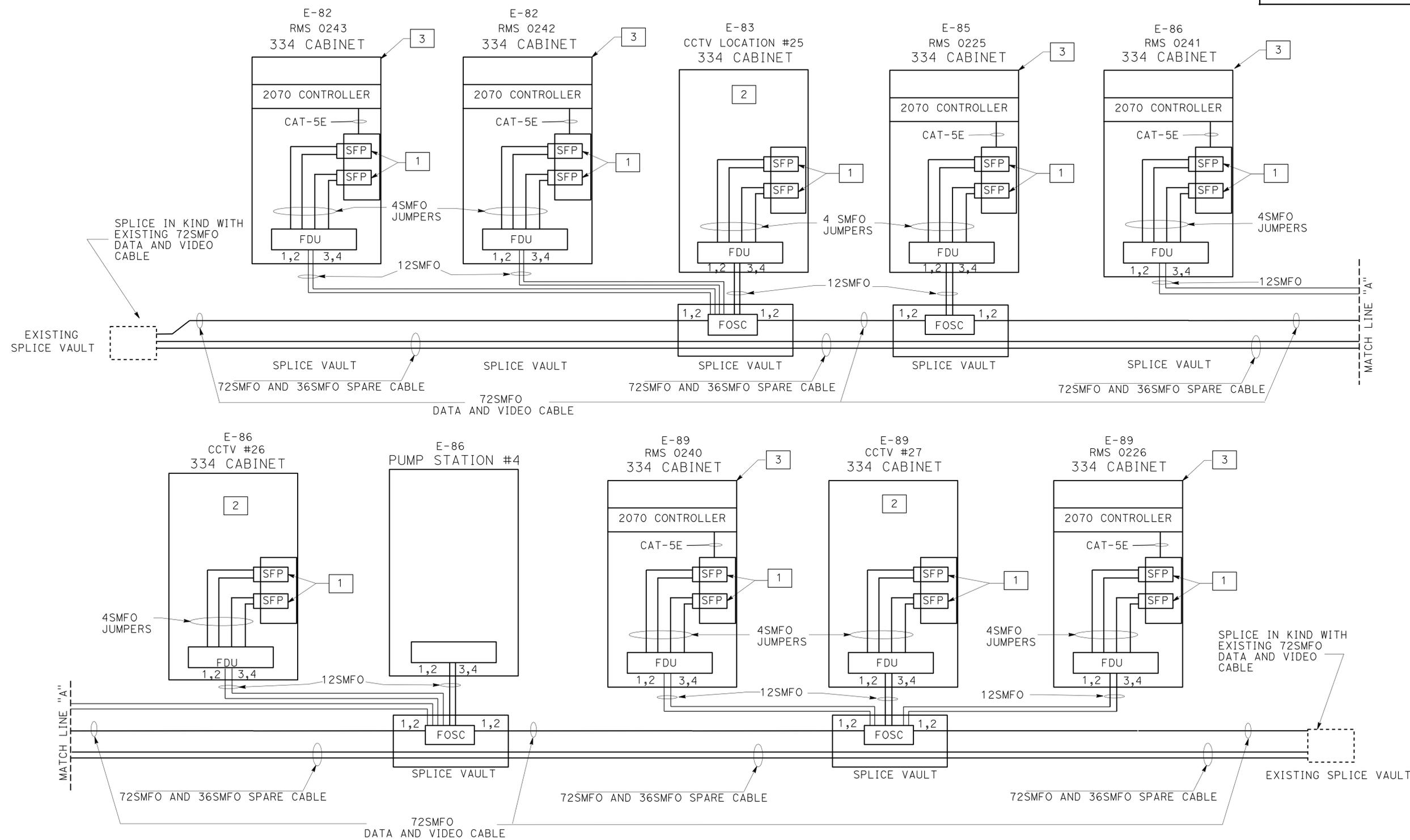
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	653	1931

03-02-12
 REGISTERED ELECTRICAL ENGINEER DATE
 5-21-12
 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
 JACQUELINE C. TAN
 No. E015611
 Exp. 12/31/13
 ELECTRICAL
 STATE OF CALIFORNIA

NOTES: (THIS SHEET ONLY)

- 1 LAYER 2 ETHERNET SWITCH, SMALL FORM FACTOR.
- 2 SEE SHEET E-103 FOR COMPONET DETAILS.
- 3 FOR REFERENCE ONLY. SEE ELECTRICAL SHEET E-100 FOR COMPONENT DETAILS.



**MODIFY COMMUNICATION SYSTEM
(BLOCK DIAGRAM)**

FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE SHEET E-79.

NO SCALE

E-105

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	654	1931

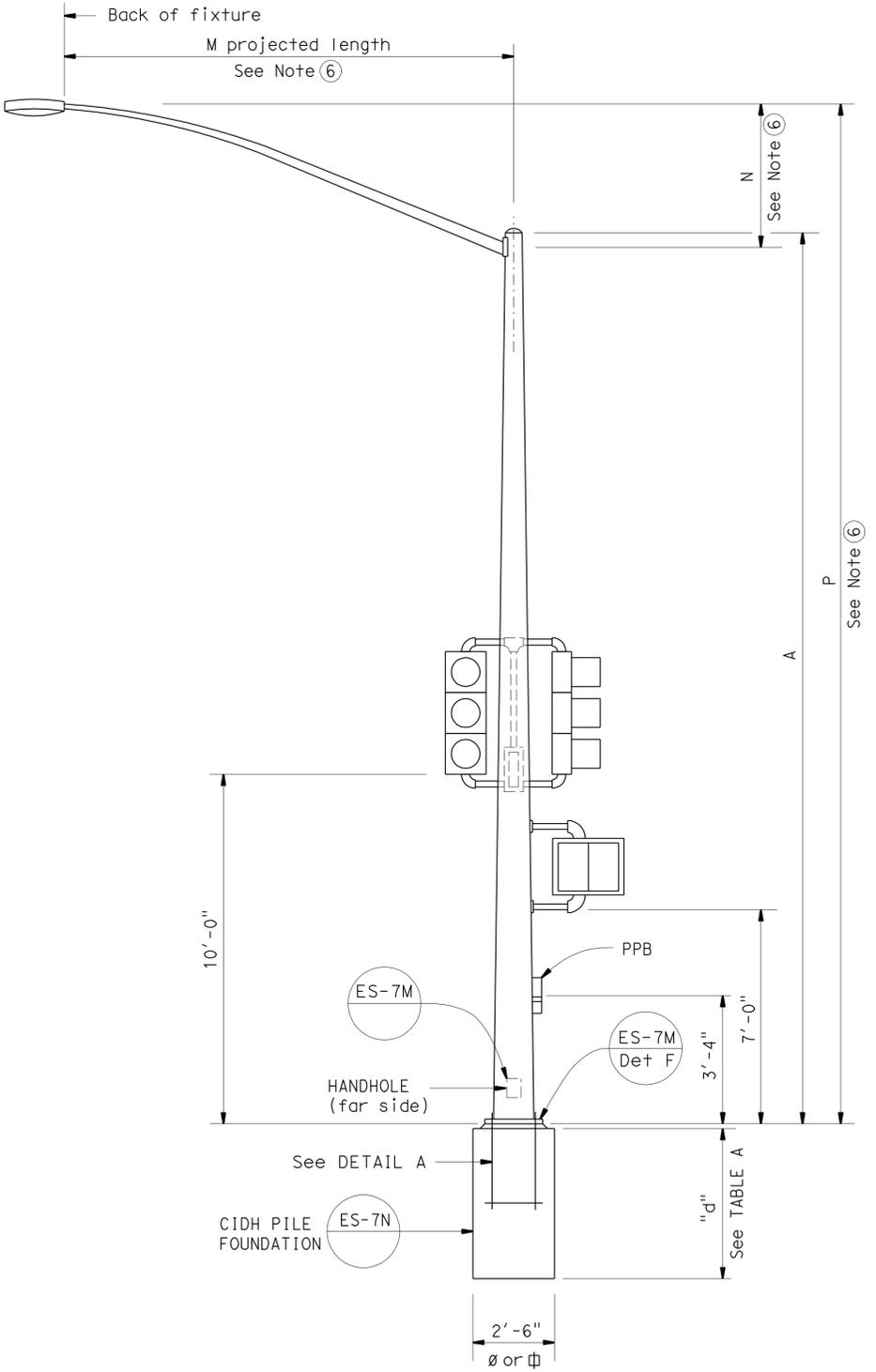
Mahfoud A. Licha 4-26-12
 REGISTERED CIVIL ENGINEER DATE

5-21-12
 PLANS APPROVAL DATE

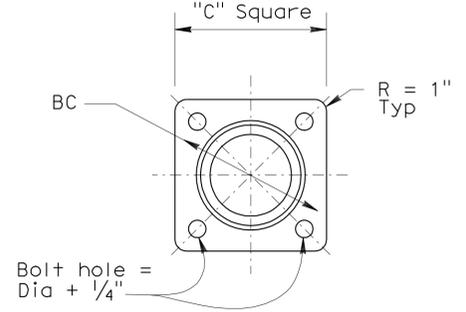
No. C62816
 Exp. 6/30/12
 CIVIL
 STATE OF CALIFORNIA

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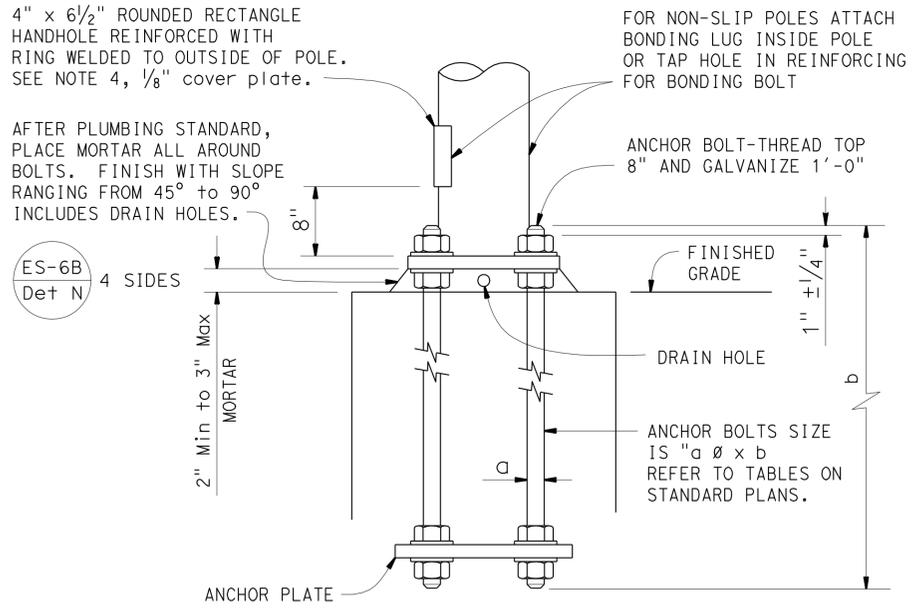
Pole Type	Pole Data			Base Plate Data				"d" 2'-6"Ø CIDH Pile		Structural Steel LBS plus 3.5% Galvanizing	
	Height "h"	Min OD		Thickness	"c"	Thickness	Anchor Bolts				
		BASE	TOP				SIZE	BC = BOLT CIRCLE	LEVEL GROUND		SLOPING GROUND
15TS MODIFIED	35'	9 3/8"	3 3/16"	0.1793"	1'-3"	2"	1 1/2"Ø x 42"	1'-2"	10'-0"	12'-0"	742



**ELEVATION
TYPE 15TS MODIFIED**
See Note (2)



BASE PLATE



**HANDHOLE AND ANCHORAGE
DETAIL A**

- NOTES:
- Pipe dimensions for pedestrian push button post are nominal, See ASTM A6M.
 - For additional details and data for Type 15TS Standard, see RSP ES-6A.

GENERAL NOTES:

SPECIFICATIONS

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.

LOADING

Wind Loadings: 100 MPH

UNIT STRESSES

Structural Steel: $f_y = 48,000$ psi tapered steel tube
 $f_y = 36,000$ psi unless otherwise noted.
 Anchor bolts = A307
 Reinforced Concrete: $f'_c = 3,600$ psi
 $f_y = 60,000$ psi

NOTES:

- For pole locations, see "ELECTRICAL" Plans.
- All steel shall be galvanized after fabrication.
- During pole erection the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- The foundation shall be treated as level ground condition if the slope inclination is flatter than 4H:1V.
- Foundation design is based on AASHTO 2001 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30 degrees and unit weight of soil used is 120 lbs/ft³.
- For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS".

NO SCALE

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

BRANCH CHIEF	DESIGN	BY M LICHA	CHECKED E LOPEZ
	DETAILS	BY A R DUDSAK	CHECKED M LICHA
	QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH

BRIDGE NO.	N/A
POST MILE	

**TYPE 15TS MODIFIED
POLE DETAILS**

SES-1

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3619
PROJECT NUMBER & PHASE: 0700021119-1

CONTRACT NO.: 07-1218W1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	10-12-11	3-19-12
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SHEET OF

USERNAME => s121614 DATE PLOTTED => 21-MAY-2012 TIME PLOTTED => 10:29

NOTES:

- ① All metallic conduits, bolts straps and misc hardware shall be galvanized.
- ② Elements (total VIVDS assembly) shall have a maximum weight of 10 lbs and a maximum effective pressure area of 1 square foot.
- ③ Maximum of 2 VIVDS elements added per traffic signal structure. Maximum of 1 element per arm (lighting arm or traffic signal arm).
- ④ This detail applies only for steel luminaire arms on newly installed and temporary poles designated according to Caltrans Standard Plans.

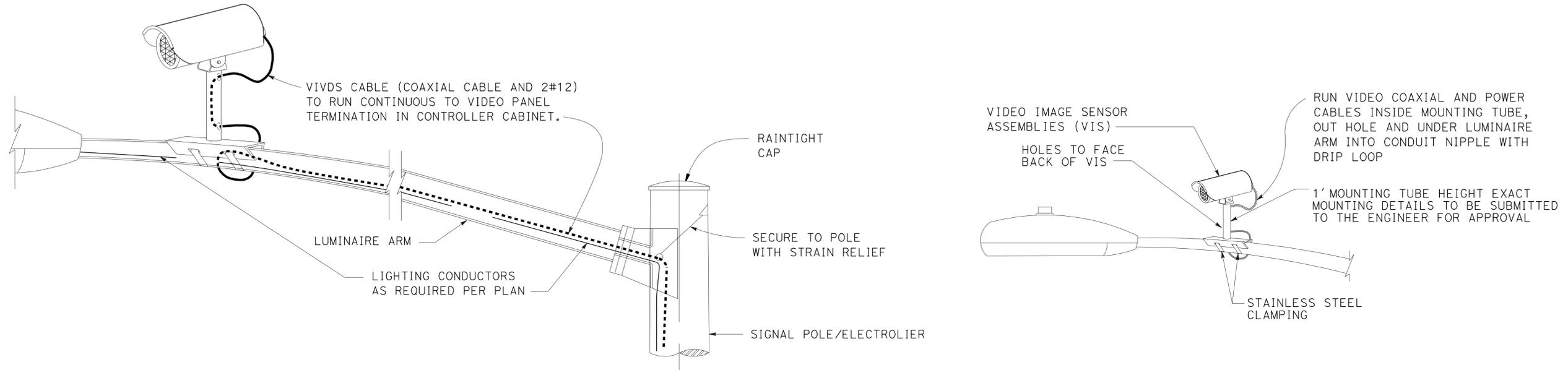
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	655	1931

Maqfoud A. Licha 4-26-12
 REGISTERED CIVIL ENGINEER DATE

5-21-12
 PLANS APPROVAL DATE

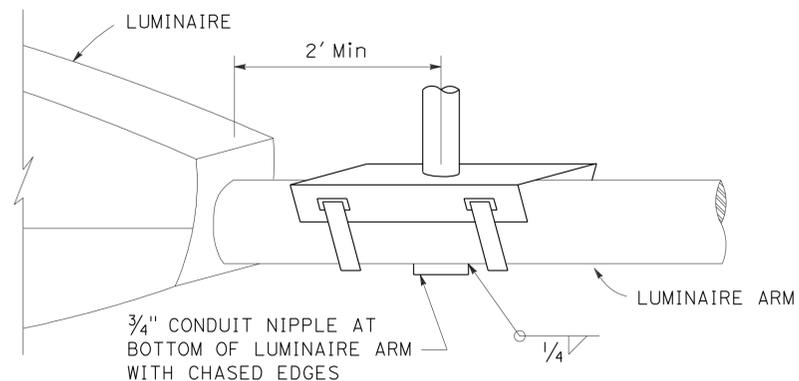
No. C62816
 Exp. 6/30/12
 CIVIL
 STATE OF CALIFORNIA

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CAMERA MOUNTING DETAILS

NO SCALE



DETAIL A

NO SCALE

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

NO SCALE

BRANCH CHIEF JEFFREY B WOODY	DESIGN	BY <i>M LICHA</i>	CHECKED <i>E LOPEZ</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	CAMERA MOUNTING DETAILS SIGNAL AND LIGHTING SYSTEM	SES-2
	DETAILS	BY <i>A R DUDSAK</i>	CHECKED <i>M LICHA</i>			POST MILE			
	QUANTITIES	BY	CHECKED						

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

UNIT: 3619
 PROJECT NUMBER & PHASE: 0700021119-1
 CONTRACT NO.: 07-1218W1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-12-11

SHEET OF

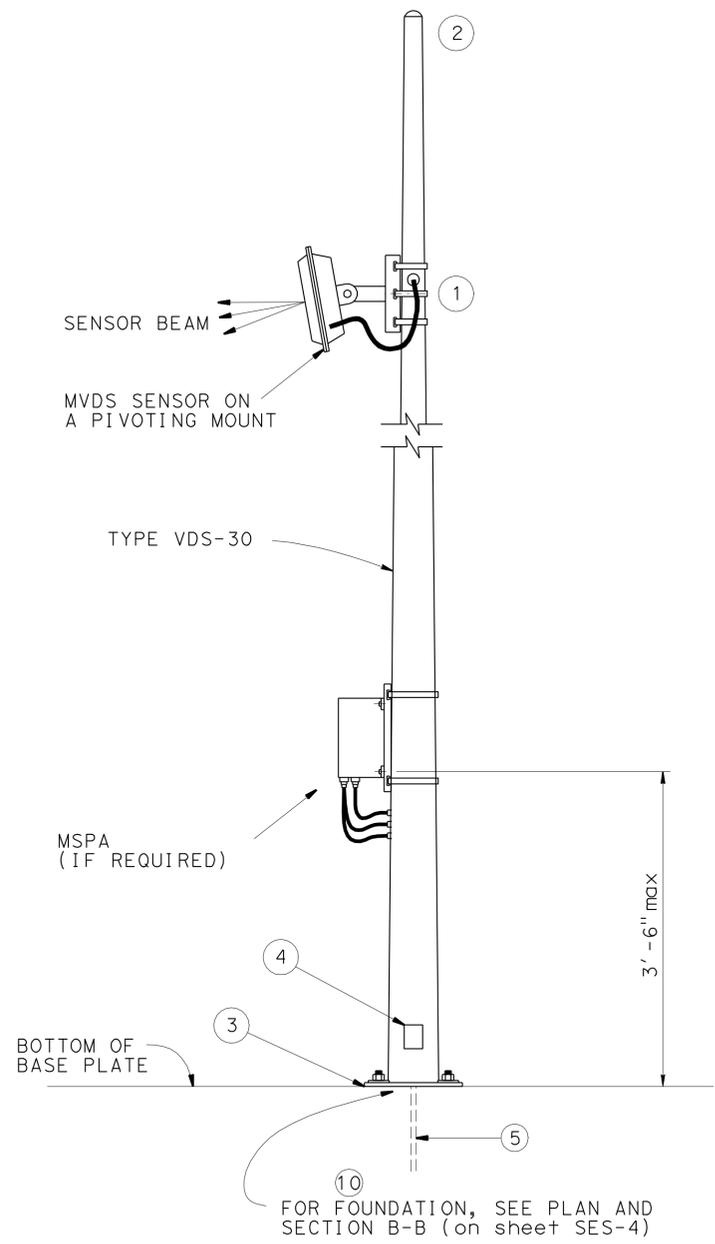
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	656	1931

Mahfoud A. Licha 4-26-12
 REGISTERED CIVIL ENGINEER DATE

5-21-12
 PLANS APPROVAL DATE

No. C62816
 Exp. 6/30/12
 CIVIL
 STATE OF CALIFORNIA

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TYPE VDS-30

NOTES:

- 1 For devices mounted and mounting heights, see TABLE B on sheet SES-5.
- 2 Rain tight cap.
- 3 No grout required.
- 4 For Handhole details, see 2006 Standard Plan ES-7M.
- 5 For wiring connection details, See Electrical Plans.
- 6 Pole Location:
-(New Mainline Station)-Rte 5 1582+50 right
- 7 For details not shown, see 2006 Standard Plans and 2006 Revised Standard Plans .
- 8 All steel shall be galvanized after fabrication.
- 9 During pole installation the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- 10 The foundation shall be on level ground compacted to at least 90 percent relative compaction
- 11 Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.
- 12 Wind Loadings: 100 mph (3-second gust)
- 13 Unit Stresses (Structural Steel):
a. fy = 55,000 psi (tapered steel tube)
b. fy = 50,000 psi (unless otherwise noted)
- 14 Anchor bolts: fy = 55,000 psi
- 15 Threaded rod: fy = 55,000 psi
- 16 Unit Stresses (Reinforced Concrete):
a. minor concrete
b. fy = 60,000 psi (rebar)

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

NO SCALE

BRANCH CHIEF JEFFREY B WOODY	DESIGN	BY <i>A HOUGH</i>	CHECKED <i>M LICHA</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	ELECTRICAL SYSTEMS MICROWAVE VEHICLE DETECTION SYSTEM TEMPORARY POLE DETAILS	SES-3
	DETAILS	BY <i>A R DUDSAK</i>	CHECKED <i>A HOUGH</i>			POST MILE			
	QUANTITIES	BY	CHECKED						

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

UNIT: 3619
 PROJECT NUMBER & PHASE: 0700021119-1
 CONTRACT NO.: 07-1218W1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-12-11 4-26-12

SHEET OF

USERNAME => s121614 DATE PLOTTED => 21-MAY-2012 TIME PLOTTED => 10:29

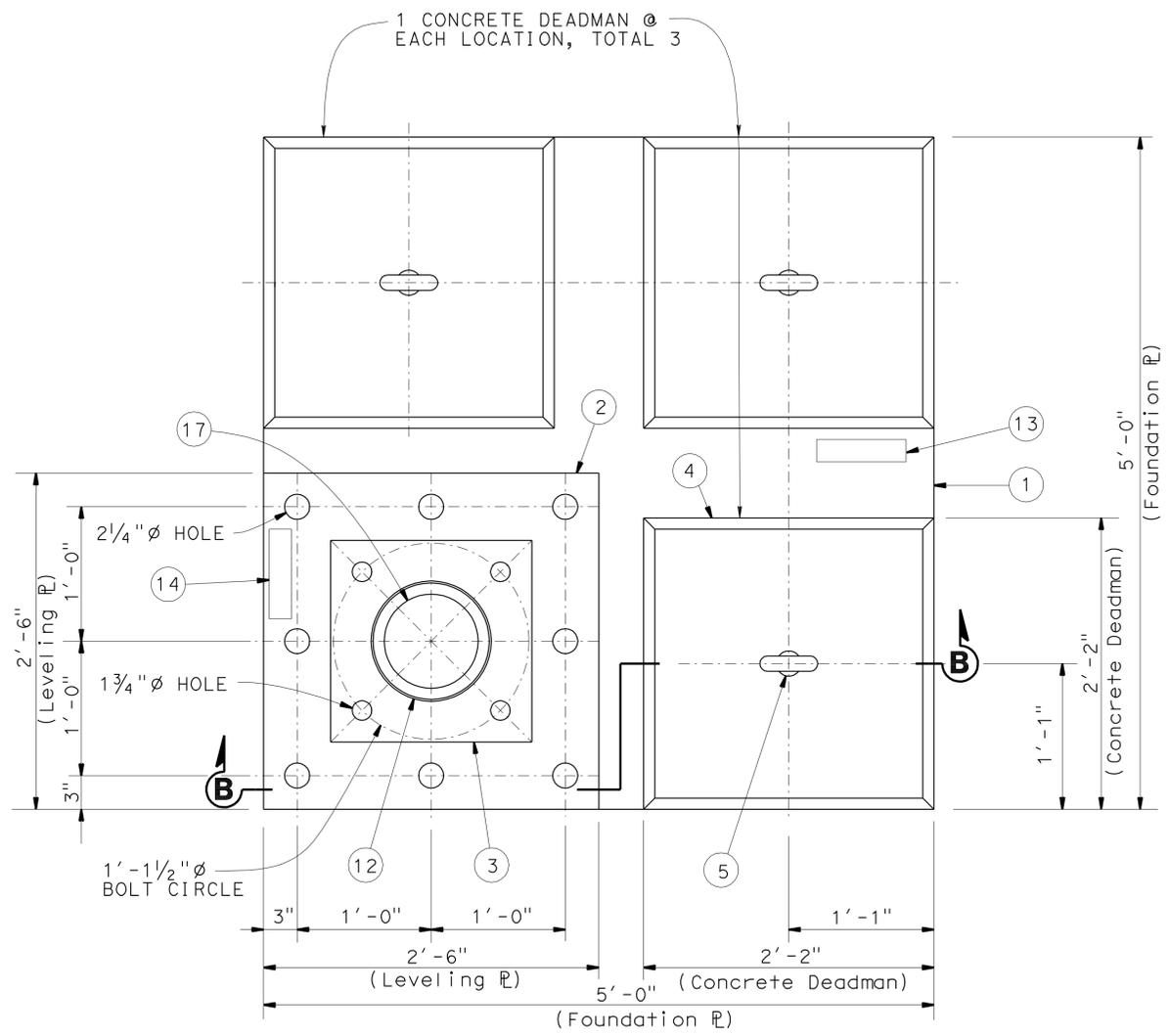
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	657	1931

Maifoud A. Licha 4-26-12
REGISTERED CIVIL ENGINEER DATE

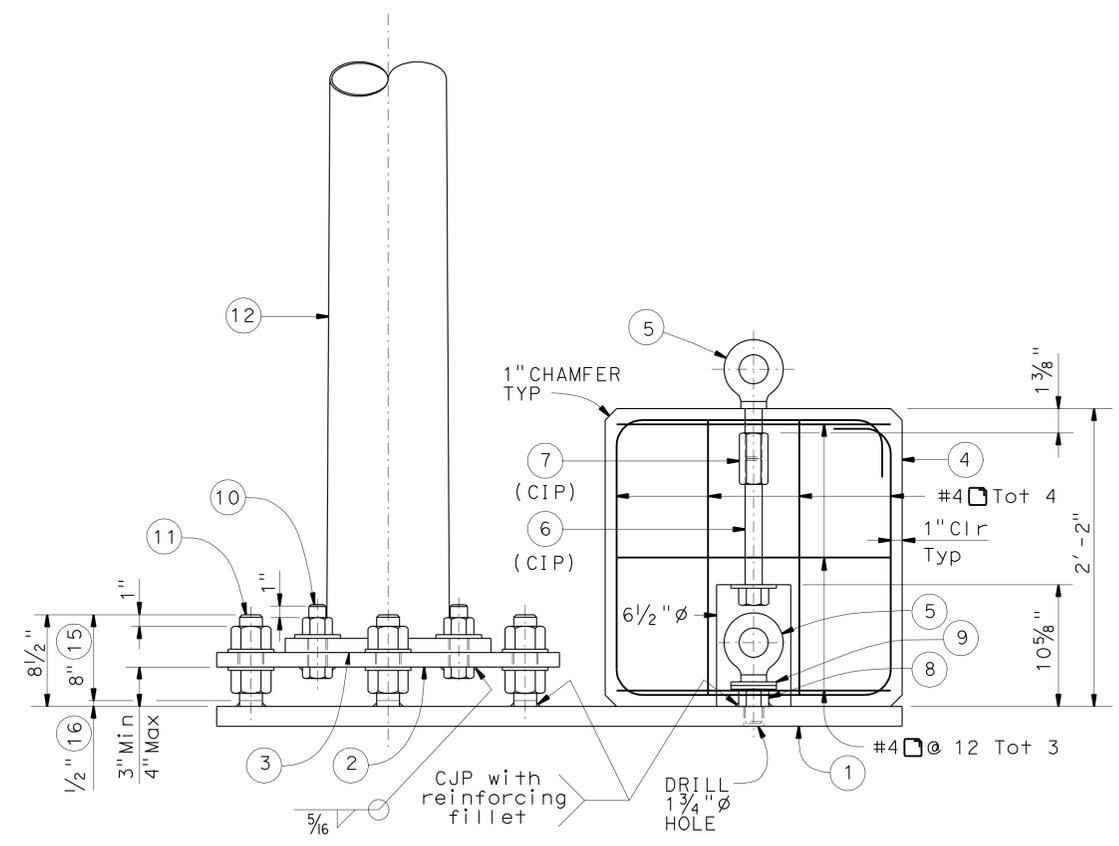
5-21-12
PLANS APPROVAL DATE

No. C62816
Exp. 6/30/12
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PLAN



SECTION B-B

- NOTES:**
- Foundation \square 1 3/4" X 5'-0" X 5'-0"
 - Leveling \square 1 1/4" X 2'-6" X 2'-6"
 - Base \square 1 1/2" X 1'-1 1/2" X 1'-1 1/2"
 - Concrete Deadman 2'-2" X 2'-2" X 2'-2"
 - 1/2" ϕ Forged eyebolt with 3 5/8" shank
 - 1/2" ϕ X 12" Heavy hex bolt with 4" ϕ X 5/16" thick washer (CIP)
 - 1/2" ϕ Hex coupling nut (CIP)
 - 1/2" ϕ Heavy hex nut
 - 1/2" ϕ X 5/16" thick washer total (2) each location
 - 1/2" ϕ Heavy hex bolt with nut and 4" ϕ X 5/16" thick washers
 - 2" ϕ X 8 1/2" Threaded rod with (2) heavy hex nuts and (2) 4" ϕ X 5/16" thick washer
 - VDS-30 Pole
 - Stamp Foundation \square with "Lift \square with minimum of (2) forged eyebolts".
 - Stamp Leveling \square with " \square for VDS-30 pole".
 - Threaded rod
 - Non-Threaded Rod
 - Hole in Leveling \square to be same size as hole in Base \square .

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

NO SCALE

BRANCH CHIEF JEFFREY B WOODY	DESIGN	BY <i>A HOUGH</i>	CHECKED <i>M LICHA</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A	BRIDGE NO.	N/A	ELECTRICAL SYSTEMS MICROWAVE VEHICLE DETECTION SYSTEM TEMPORARY POLE DETAILS	SES-4			
	DETAILS	BY <i>A R DUDSAK</i>	CHECKED <i>A HOUGH</i>			POST MILE						
	QUANTITIES	BY	CHECKED									
(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3619	PROJECT NUMBER & PHASE: 0700021119-1	CONTRACT NO.: 07-1218W1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF

USERNAME => s121614 DATE PLOTTED => 21-MAY-2012 TIME PLOTTED => 10:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	658	1931

Mahfoud A. Licha 4-26-12
REGISTERED CIVIL ENGINEER DATE

5-21-12
PLANS APPROVAL DATE

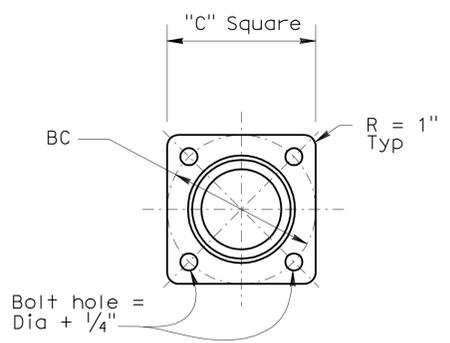
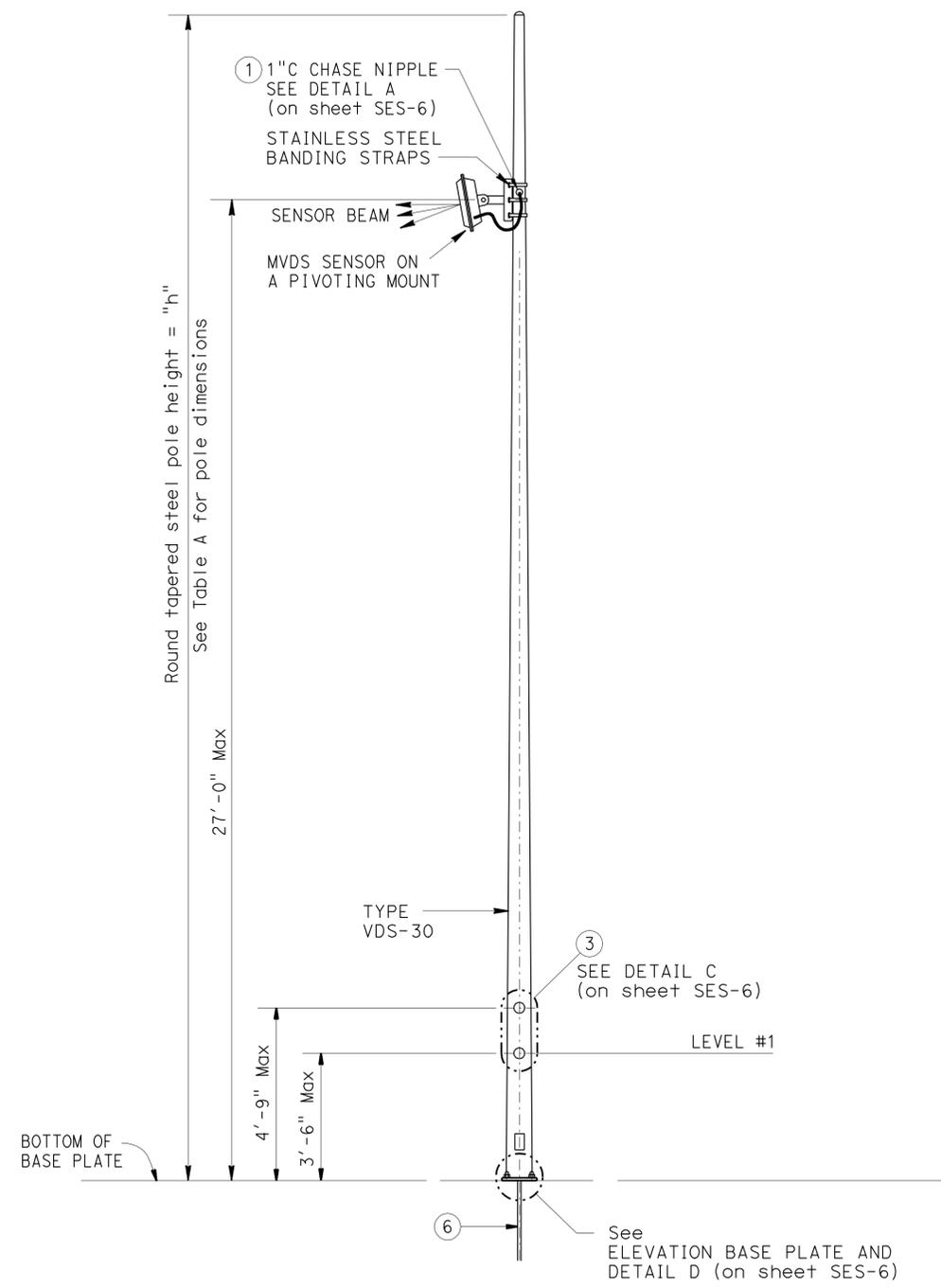
REGISTERED PROFESSIONAL ENGINEER
MAHFOUD A. LICHA
No. C62816
Exp. 6/30/12
CIVIL
STATE OF CALIFORNIA

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TABLE A								
POLE TYPE	POLE DATA				BASE PLATE DATA			
	HEIGHT "h"	MIN OD		THICKNESS	"C"	THICKNESS	ANCHOR BOLTS	
		BASE	TOP				SIZE	BC = BOLT CIRCLE
VDS 30	30'	8"	3 7/8"	0.1793"	1'-1 1/2"	1 1/2"	1 1/2"Ø	1'-1 1/2"

TABLE B		
ATTACHMENT	MOUNTED HEIGHT	WEIGHT LIMITS (MAX)
MVDS	27' MAX	10 LBS

TABLE C - LIMITATION ON ATTACHMENTS *		
LOCATION	MAXIMUM TOTAL EPA PER LEVEL (SQUARE FEET)	MAXIMUM TOTAL WEIGHT (LB)
LEVEL #1	10	200



BASE PLATE

ABBREVIATIONS:
VDS = Vehicle Detection System
MVDS = Microwave Vehicle Detection System

- NOTES:**
- Drill and tap for 1" C Chase nipple and plug with raintight plug.
 - Place all nipples & couplings on the same side of pole.
 - Coupling location above ground and spacing shall be verified to match choice of enclosure, prior to fabrication.
 - All attachments, unless otherwise noted, shall be mounted to pole with stainless steel straps or other method without drilling holes in pole. Enclosure may require drilling through post for mounting. Method of mounting enclosure will require Engineer approval.
 - Use the manufacturer's Effective Projected Area (EPA) for attachments. Assign attachments to nearest level and sum the total at each level, See Table C for limitations.
 - For wiring connection details, see Electrical plans.

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

BRANCH CHIEF JEFFREY B WOODY	DESIGN BY A HOUGH	CHECKED M LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO. N/A	ELECTRICAL SYSTEMS MICROWAVE VEHICLE DETECTION SYSTEM TEMPORARY POLE DETAILS	SES-5
	DETAILS BY A R DUDSAK	CHECKED A HOUGH			POST MILE		
	QUANTITIES BY	CHECKED					

UNIT: 3619 PROJECT NUMBER & PHASE: 0700021119-1 CONTRACT NO.: 07-1218W1

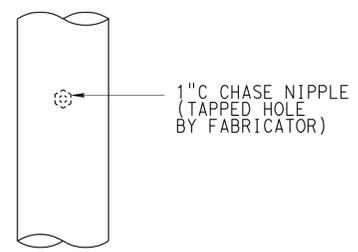
REVISION DATES: 10-12-11, 4-26-12

DISREGARD PRINTS BEARING EARLIER REVISION DATES

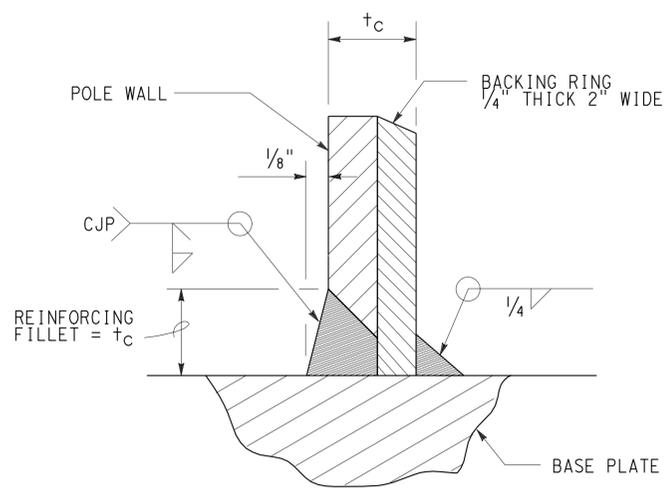
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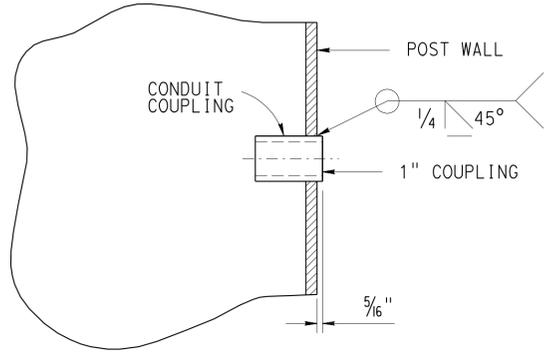
Mahfoud A. Licha 4-26-12
 REGISTERED CIVIL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE
 No. C62816
 Exp. 6/30/12
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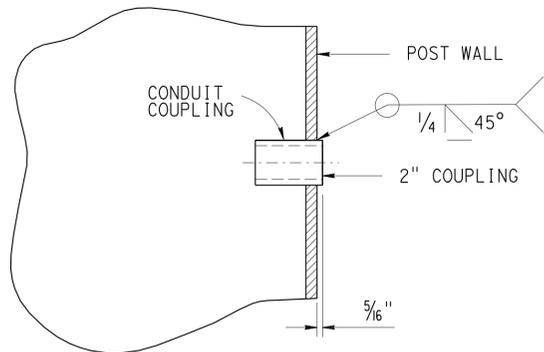
DETAIL A



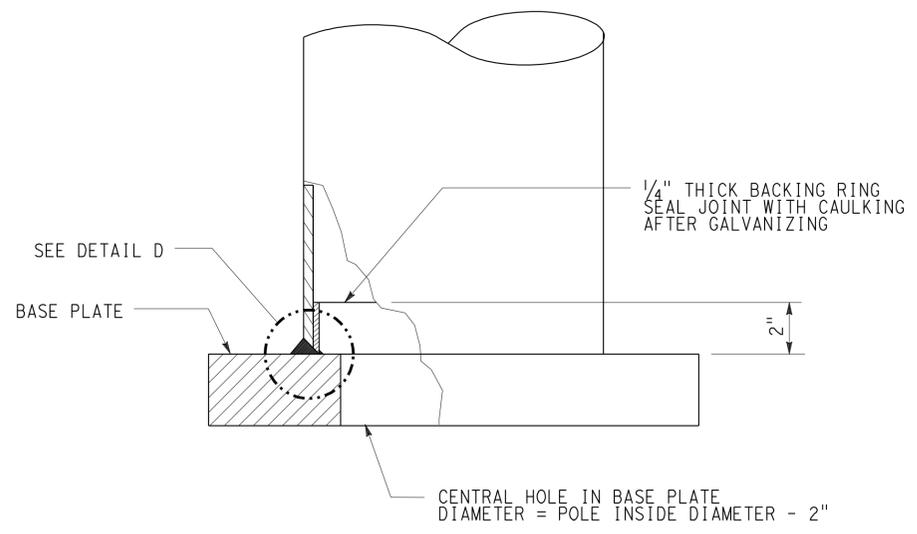
DETAIL D



**RAINTIGHT COUPLING-1"Ø MAX
DETAIL B**



**RAINTIGHT COUPLING-2"Ø MAX
DETAIL C**



ELEVATION BASE PLATE

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

NO SCALE

BRANCH CHIEF **JEFFREY B WOODY**

DESIGN	BY <i>A HOUGH</i>	CHECKED <i>M LICHA</i>
DETAILS	BY <i>A R DUDSAK</i>	CHECKED <i>A HOUGH</i>
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.	N/A
POST MILE	

ELECTRICAL SYSTEMS
MICROWAVE VEHICLE DETECTION SYSTEM
TEMPORARY POLE DETAILS

SES-6

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



UNIT: 3619
PROJECT NUMBER & PHASE: 0700021119-1
CONTRACT NO.: 07-1218W1

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	10-12-11		

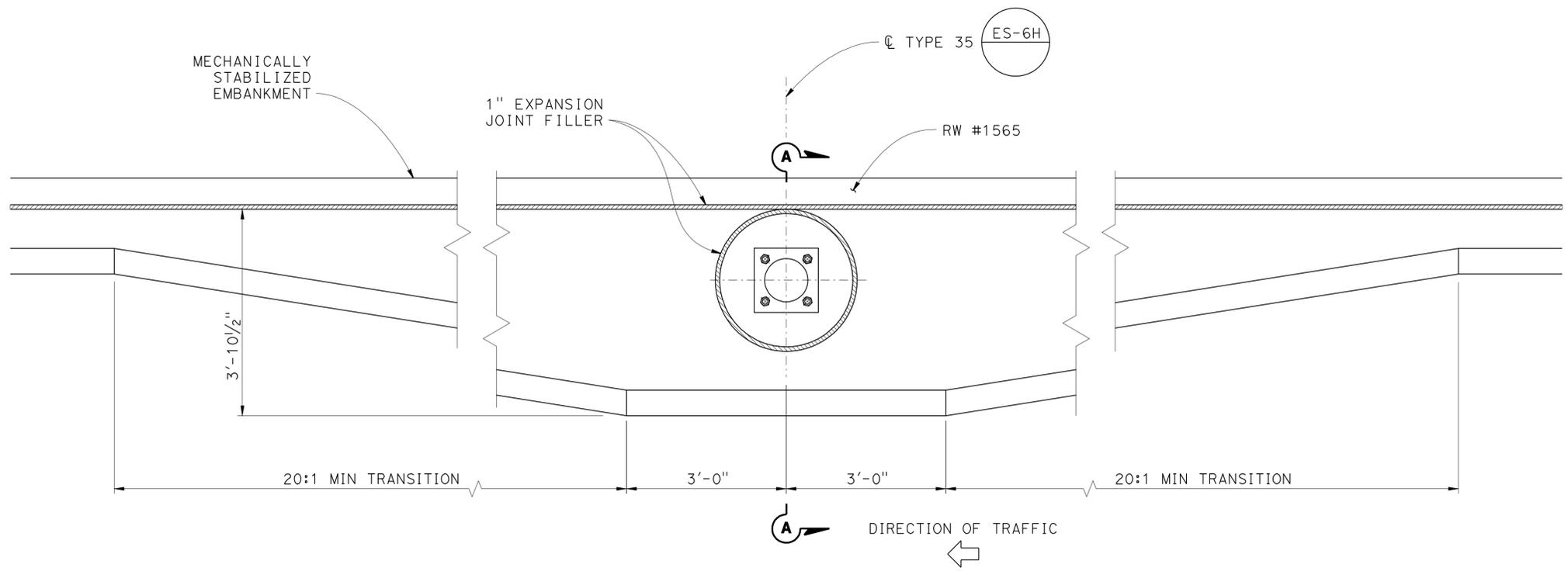
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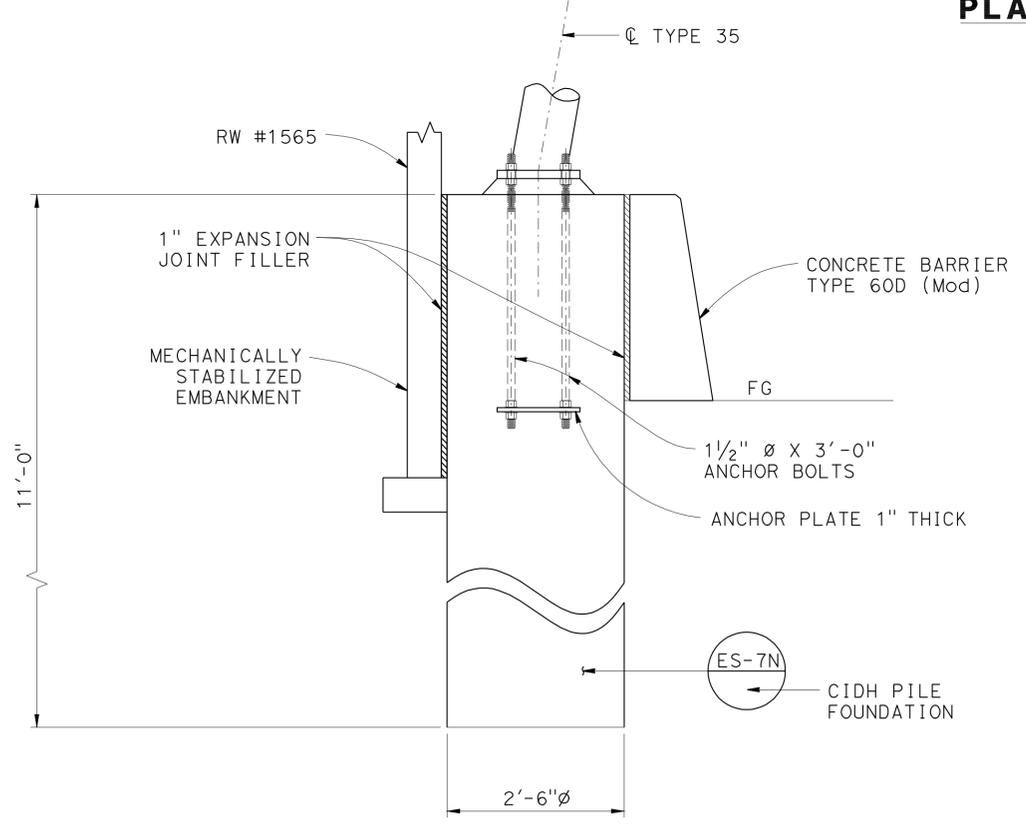
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07	LA	5	29.4/31.6	660	1931

Mahfoud A. Licha 4-26-12
 REGISTERED CIVIL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE
 No. C62816
 Exp. 6/30/12
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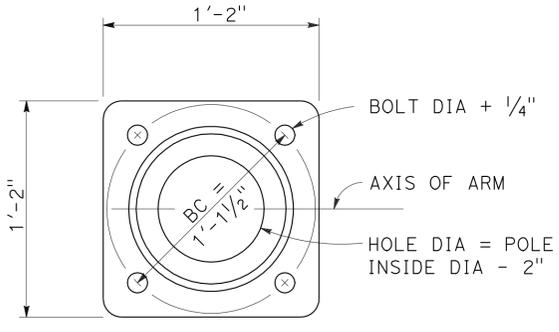
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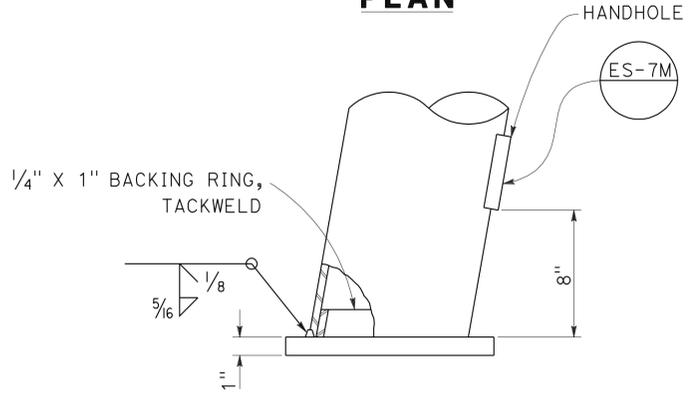
PLAN



SECTION A-A

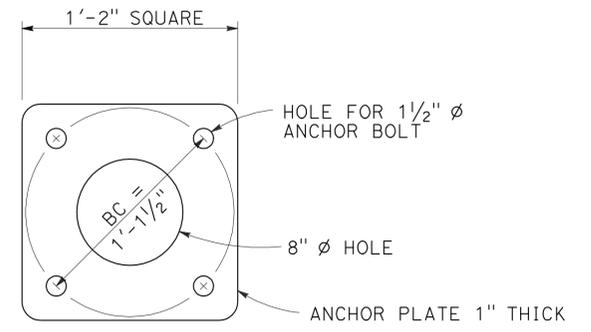


PLAN



ELEVATION

BASE PLATE DETAILS



ANCHOR PLATE DETAILS

GENERAL NOTES:

SPECIFICATIONS

Design : AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.

LOADING

Wind Loadings (3 second gust) : 100 mph

UNIT STRESSES

Structural Steel : $f_y = 48,000$ psi tapered steel tube
 $f_y = 36,000$ psi unless otherwise noted.
 Anchor bolts = A307
 Reinforced Concrete : $f'_c = 3,600$ psi
 $f_y = 60,000$ psi

NOTES:

- For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS".
- For pole locations, see "ELECTRICAL" plans.
- All steel shall be galvanized after fabrication.
- Foundation design is based on 2001 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30degrees and unit weight of soil used is 120 lbs/ft³.
- For Type 35 pole details not shown, see ES-6H.

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

BRANCH CHIEF JEFF WOODY	DESIGN	BY M LICHA	CHECKED A HOUGH	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	TYPE 35 LIGHT ON TYPE 60 BARRIER (MOD) MOUNTING DETAILS 1	SES-7
	DETAILS	BY D W JUSTICE Jr	CHECKED A HOUGH			POST MILE	29.4/31.6		
	QUANTITIES	BY	CHECKED						

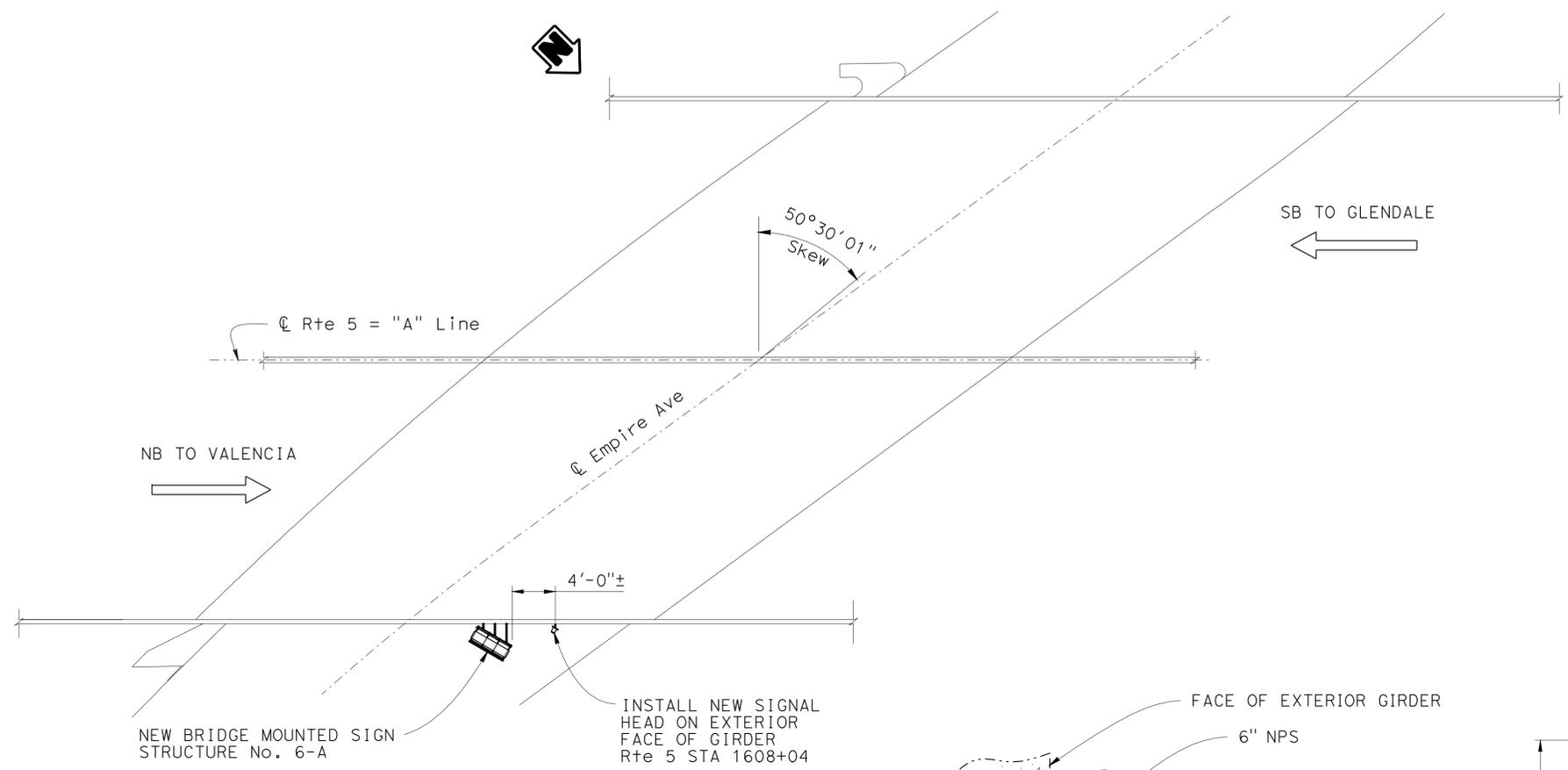
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07	LA	5	29.4/31.6	661	1931

Mahfoud A. Licha 6-12-12
 REGISTERED CIVIL ENGINEER DATE

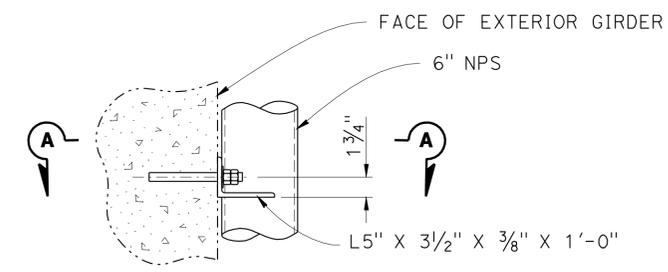
5-21-12
 PLANS APPROVAL DATE

No. C62816
 Exp. 6/30/12
 CIVIL

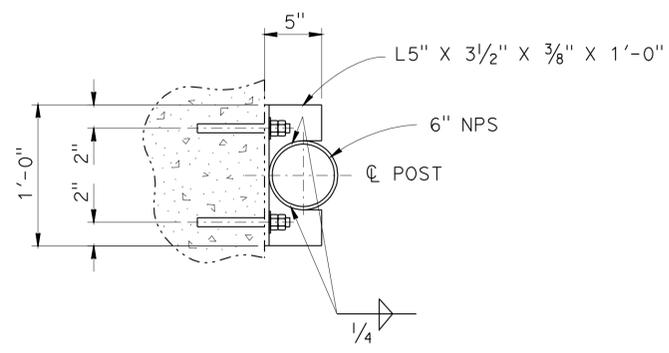
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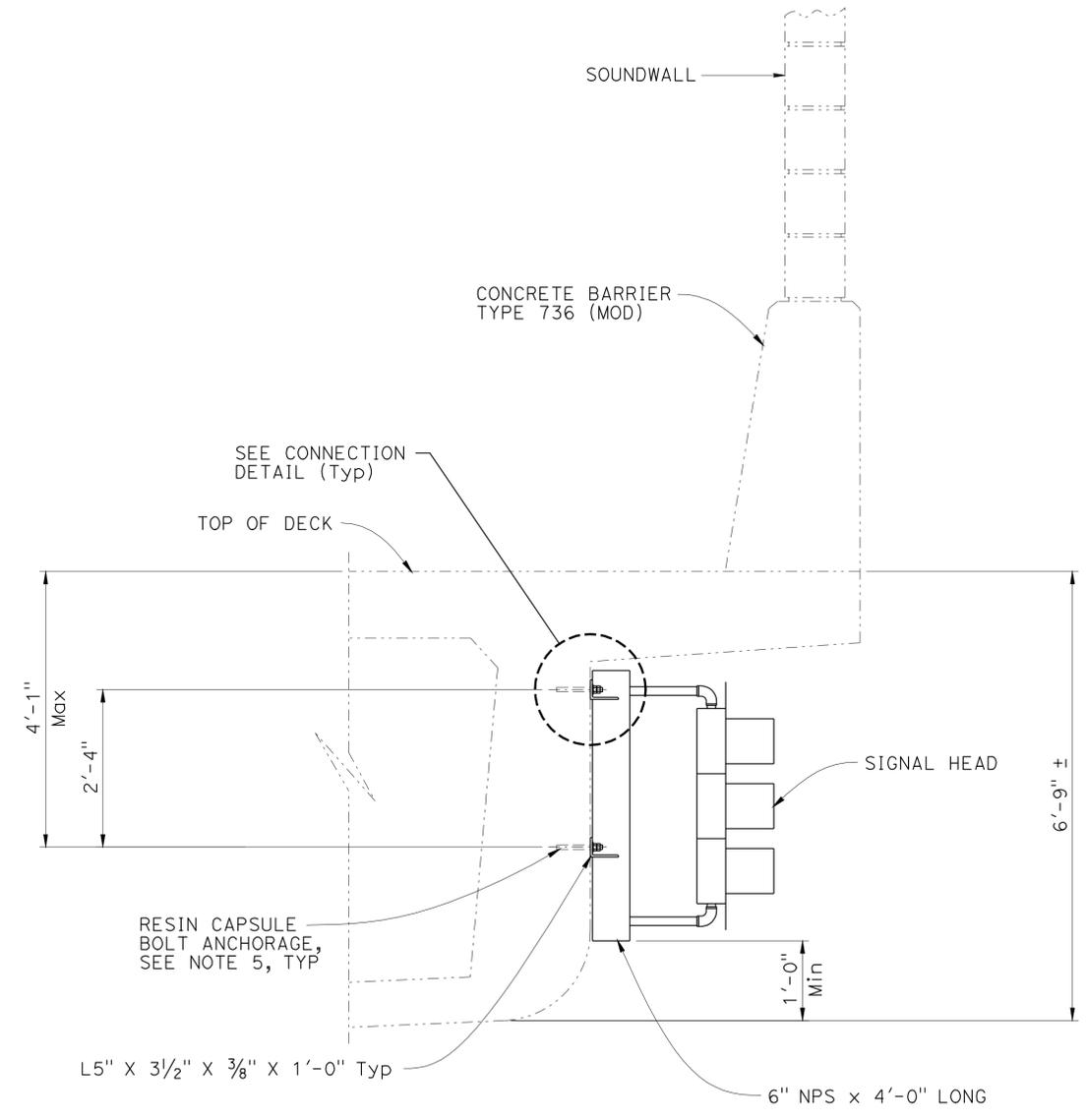
LOCATION PLAN



CONNECTION DETAIL



SECTION A-A



TYPICAL SECTION

Rte 5 STA 1608+04

- NOTES:**
1. For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS".
 2. All bolts shall have a washer under the nut.
 3. All steel shall be galvanized after fabrication.
 4. Washer assembly consists of two over size washers, two fiber washers, nut and jamb nut.
 5. For resin capsule bolt anchorage, see sheet SES-9.
 6. Resin capsule anchorage is subject to approval of engineer. Installation procedure shall comply with manufacturer's instructions. Resin capsule bolt anchors shall be installed in sound concrete free of cracks or delamination.
 7. Clearance from bottom of signal to finish grade shall be 17'-0".

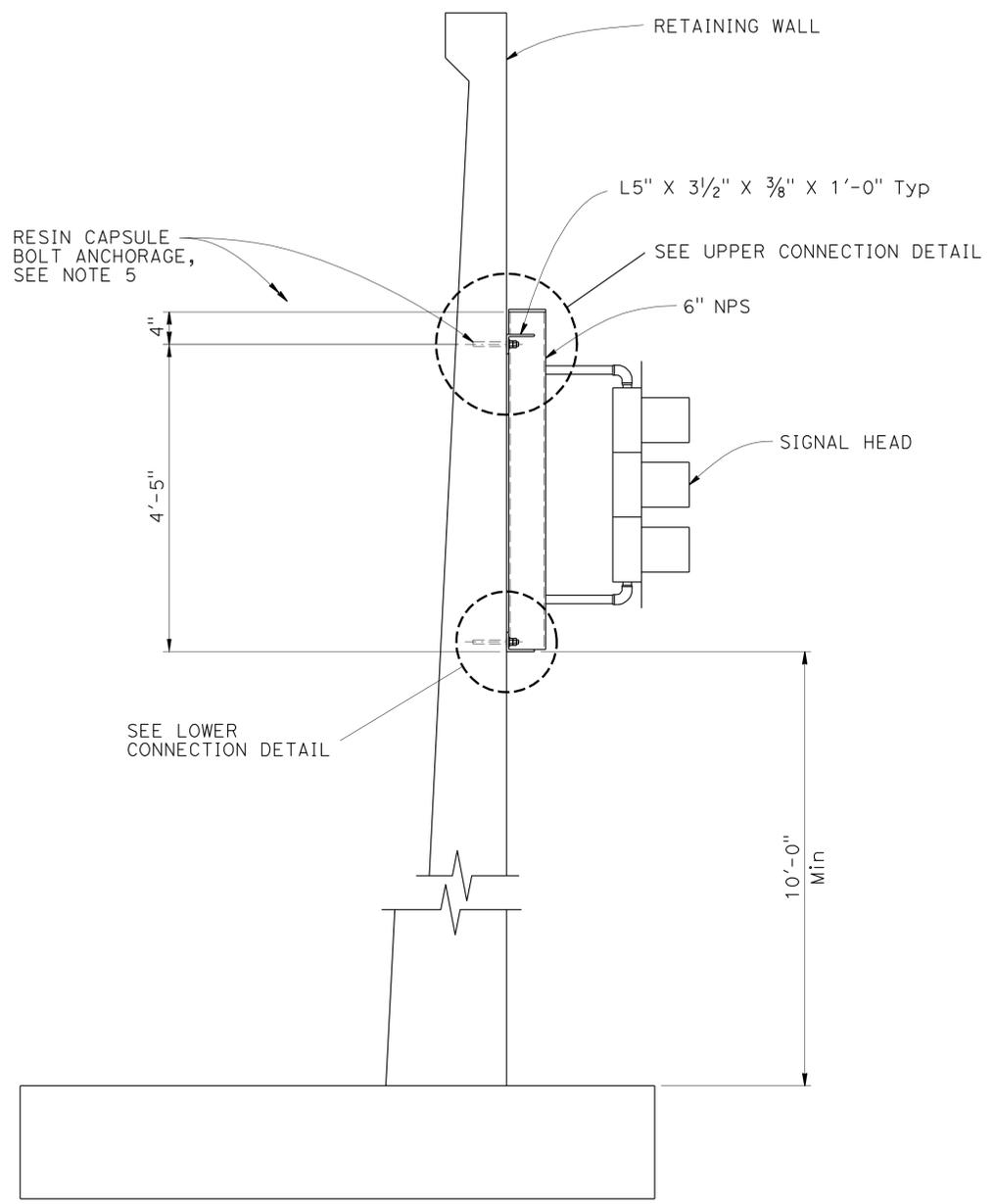
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF JEFF WOODY	DESIGN	BY J DATILES	CHECKED M LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	EMPIRE AVE UC (REPLACE) SIGNAL MOUNTING DETAIL	SES-8
	DETAILS	BY D W JUSTICE Jr	CHECKED J DATILES			53-2920		
	QUANTITIES	BY	CHECKED			POST MILE		

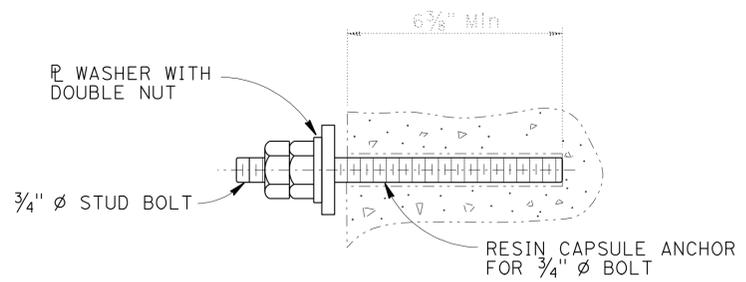
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07	LA	5	29.4/31.6	662	1931

Mahfoud A. Licha 4-26-12
 REGISTERED CIVIL ENGINEER DATE
 5-21-12
 PLANS APPROVAL DATE
 No. C62816
 Exp. 6/30/12
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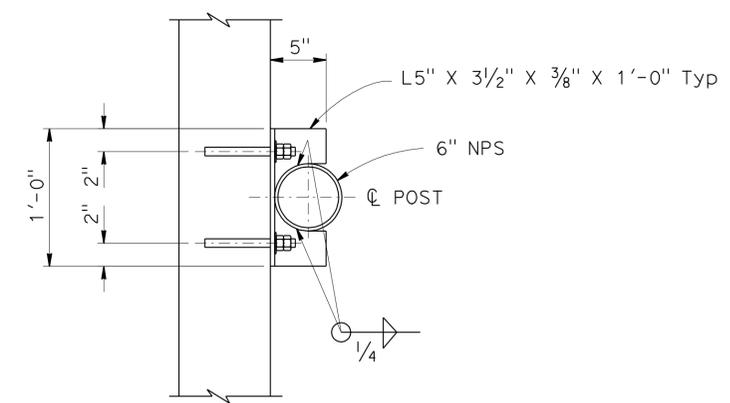
ELEVATION



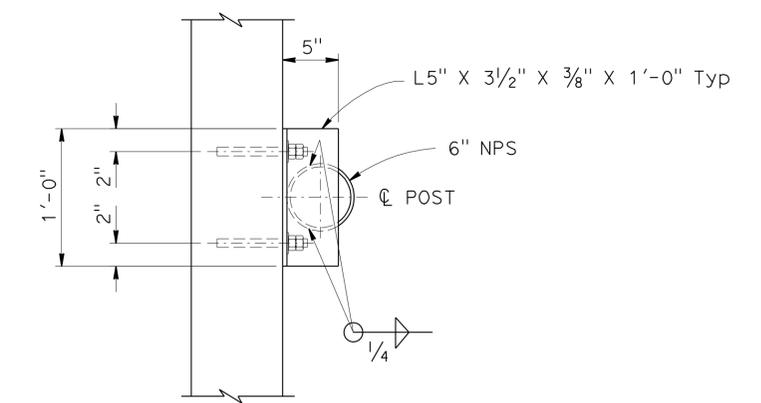
RESIN CAPSULE BOLT ANCHORAGE
SEE NOTE 5

NOTES:

1. For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS".
2. All bolts shall have a washer under the nut.
3. All steel shall be galvanized after fabrication.
4. Washer assembly consists of two over size washers, two fiber washers, nut and jamb nut.
5. Resin capsule anchorage is subject to approval of engineer. Installation procedure shall comply with manufacturer's instructions. Resin capsule bolt anchors shall be installed in sound concrete free of cracks of delamination.



UPPER CONNECTION DETAIL



LOWER CONNECTION DETAIL

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

BRANCH CHIEF JEFF WOODY	DESIGN	BY J DATILES	CHECKED M LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	EMPIRE AVE UC SIGNAL ABUTMENT DETAIL	SES-9
	DETAILS	BY D W JUSTICE Jr	CHECKED J DATILES			53-2920		
	QUANTITIES	BY	CHECKED			POST MILE		

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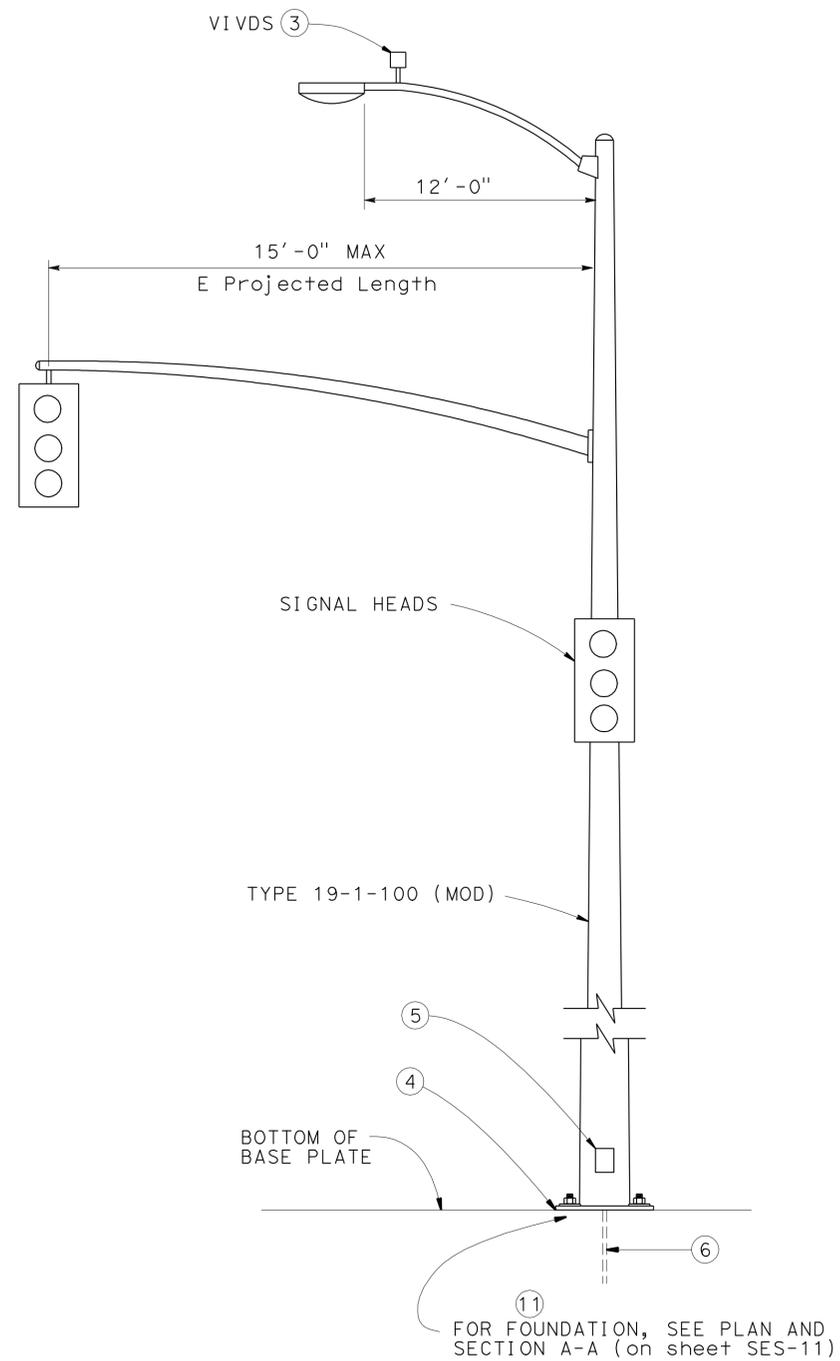
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	663	1931

Mahfoud A. Licha 4-26-12
REGISTERED CIVIL ENGINEER DATE

5-21-12
PLANS APPROVAL DATE

No. C62816
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TYPE 19-1-100 (MOD)

NOTES:

- ① Type 19-1-100 (MOD) shall conform to 2006 Standard Plan RSP ES-7C (foundation excluded).
- ② For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS"
- ③ For VIVDS details, see sheet SES-2.
- ④ No grout required.
- ⑤ For Handhole details, see 2006 Standard Plan ES-7M.
- ⑥ For wiring connection details, See Electrical Plans.
- ⑦ Pole Location:
-Burbank Blvd STA 9+25 Lt
- ⑧ For details not shown, see 2006 Standard Plans and 2006 Revised Standard Plans.
- ⑨ All steel shall be galvanized after fabrication.
- ⑩ During pole installation the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- ⑪ The foundation shall be on level ground compacted to at least 90 percent relative compaction.
- ⑫ Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.
- ⑬ Wind Loadings: 100 mph (3-second gust)
- ⑭ Unit Stresses (Structural Steel):
a. fy = 55,000 psi (tapered steel tube)
b. fy = 50,000 psi (unless otherwise noted)
- ⑮ Anchor bolts: fy = 55,000 psi
- ⑯ Threaded rod: fy = 55,000 psi
- ⑰ Unit Stresses (Reinforced Concrete):
a. minor concrete
b. fy = 60,000 psi (rebar)

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

NO SCALE

BRANCH CHIEF JEFFREY B WOODY	DESIGN	BY <i>A HOUGH</i>	CHECKED <i>M LICHA</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A	BRIDGE NO.	N/A	ELECTRICAL SYSTEMS MODIFY SIGNAL AND LIGHTING TEMPORARY POLE DETAILS	SES-10			
	DETAILS	BY <i>A R DUDSAK</i>	CHECKED <i>A HOUGH</i>			POST MILE						
	QUANTITIES	BY	CHECKED									
(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3619	PROJECT NUMBER & PHASE: 0700021119-1	CONTRACT NO.: 07-1218W1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF

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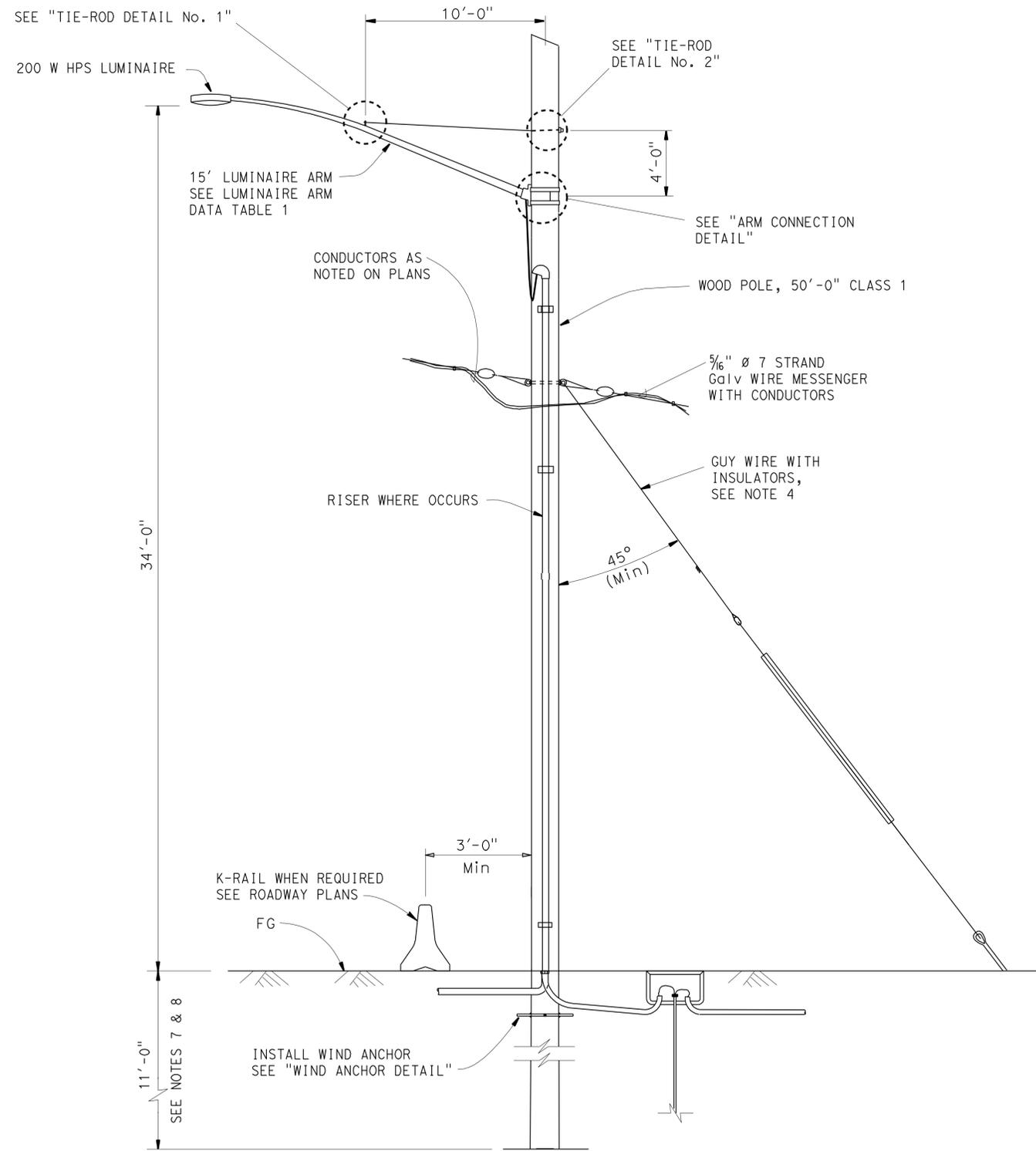


TABLE 1

LUMINAIRE ARM DATA			
Projected Length	N Rise	Min OD At Pole	Thickness
15'-0"	4'-9"	4 1/4"	0.1196"

Refer to RSP ES-6A for Luminaire arm details

GENERAL NOTES:

SPECIFICATIONS

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.

LOADING

Wind Loadings: 100 MPH

UNIT STRESSES

Timber Poles: Fb = 1850 psi Tapered treated round pole
 Fv = 110 psi ASTM D2899 Standard

TREATMENT

E = 1500 x 10³ psi

SPECIFICATIONS

Caltrans Standard Specifications May 2006
 ANSI 05 Wood Poles
 ASTM A 475 Utility Grade Wires

NOTES:

- All overhead cables shall be slack spanned with 20'-0" minimum overhead clearance.
- Conductors shall be suspended from span-wire as follows:
 A) Main run span-wire with 4.5% ±0.5% sag.
 No spare conductors allowed except as noted.
- Overhead line construction not specifically covered here shall conform with the provisions of General Order No. 95 of Public Utilities Commission.
- Wood poles shall be stabilized using guy wires, breast blocks or rakes at each dead end, corner, drop or line deviation more than 15° from straight line. The direction of the guy shall counteract the resultant of unbalanced force applied to pole. Where space or conflict prevent guy installation, a diagonal brace shall be used. The brace shall be wood and shall be connected to the pole by means to satisfy structural and electrical requirements. The direction of the brace shall counteract the resultant of unbalanced horizontal force of 2000 pounds (Min) applied to the pole.
- Guy shall be attached to pole as nearly as practical to the center of conductors load, or 3'-0" Max otherwise, See Note 4.
- All attachments shall be mounted with stainless steel straps or other manufacturers methods without drilling holes in pole, except as shown. Drilling through pole will require the Engineer's approval.
- Foundation design is based on AASHTO 2001 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of Internal friction used is 30° and unit weight of soil used is 120 lb/ft³. The Contractor to verify actual soil condition.
- If pole is located on a steep slope add 2 feet extra for embedment.
- See Sheets SES-13 - SES-14 for details.
- For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS"
- All temporary poles support OH Conductors. Attach luminaire arm as specified at locations where indicated on Electrical Sheets.
- Attachments shown on pole apply as noted on Plans.

TYPICAL WOOD POLE SUPPORT WITH LUMINAIRE

NO SCALE

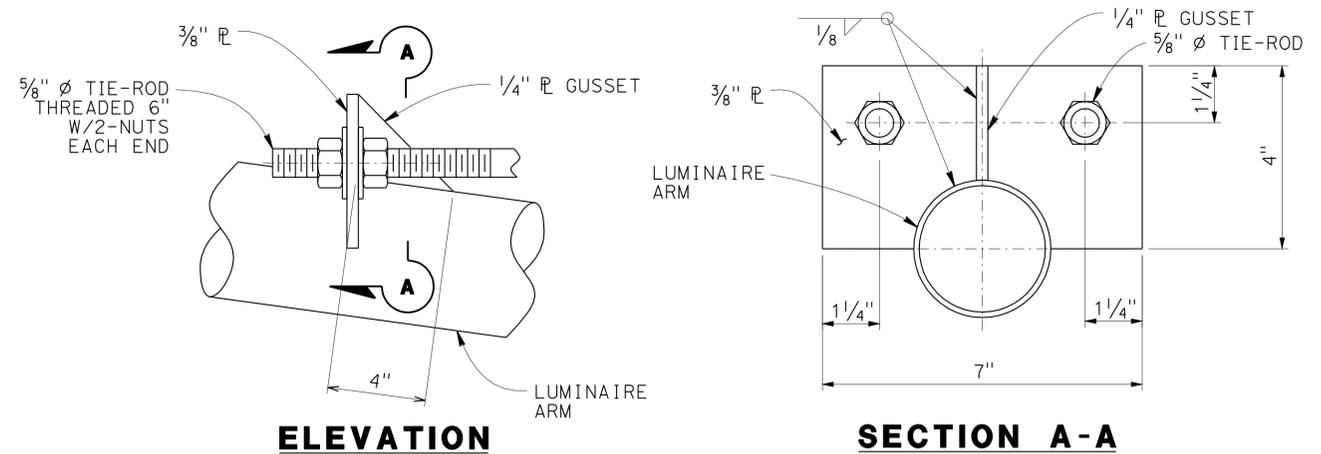
NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF JAMES SAGAR	DESIGN	BY T MARCHENKO	CHECKED A MALAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	LIGHTING (TEMPORARY) TEMPORARY WOOD POLE	SES-12
	DETAILS	BY H NGUYEN	CHECKED B NAGID			POST MILE	29.4/31.6		
	QUANTITIES	BY	CHECKED						

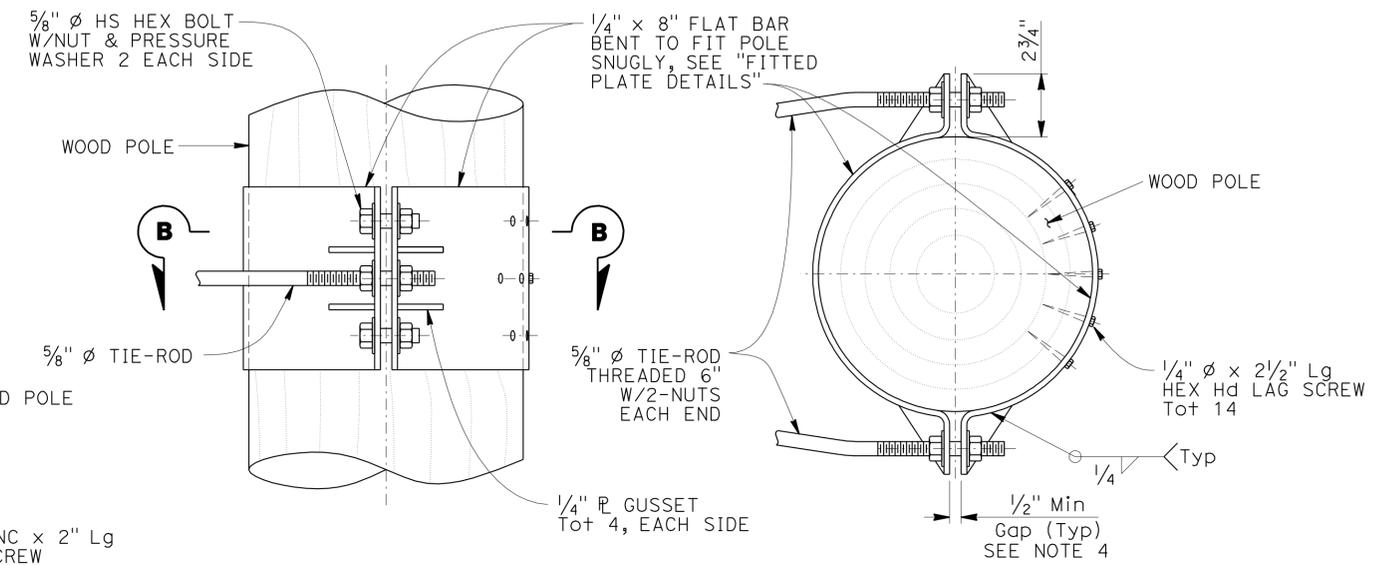
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07	LA	5	29.4/31.6	666	1931
			4/26/12		
			REGISTERED/CIVIL ENGINEER DATE		
			5-21-12		
			PLANS APPROVAL DATE		
			REGISTERED PROFESSIONAL ENGINEER TAMARA S. MARCHENKO No. C76837 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA		
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NOTES:

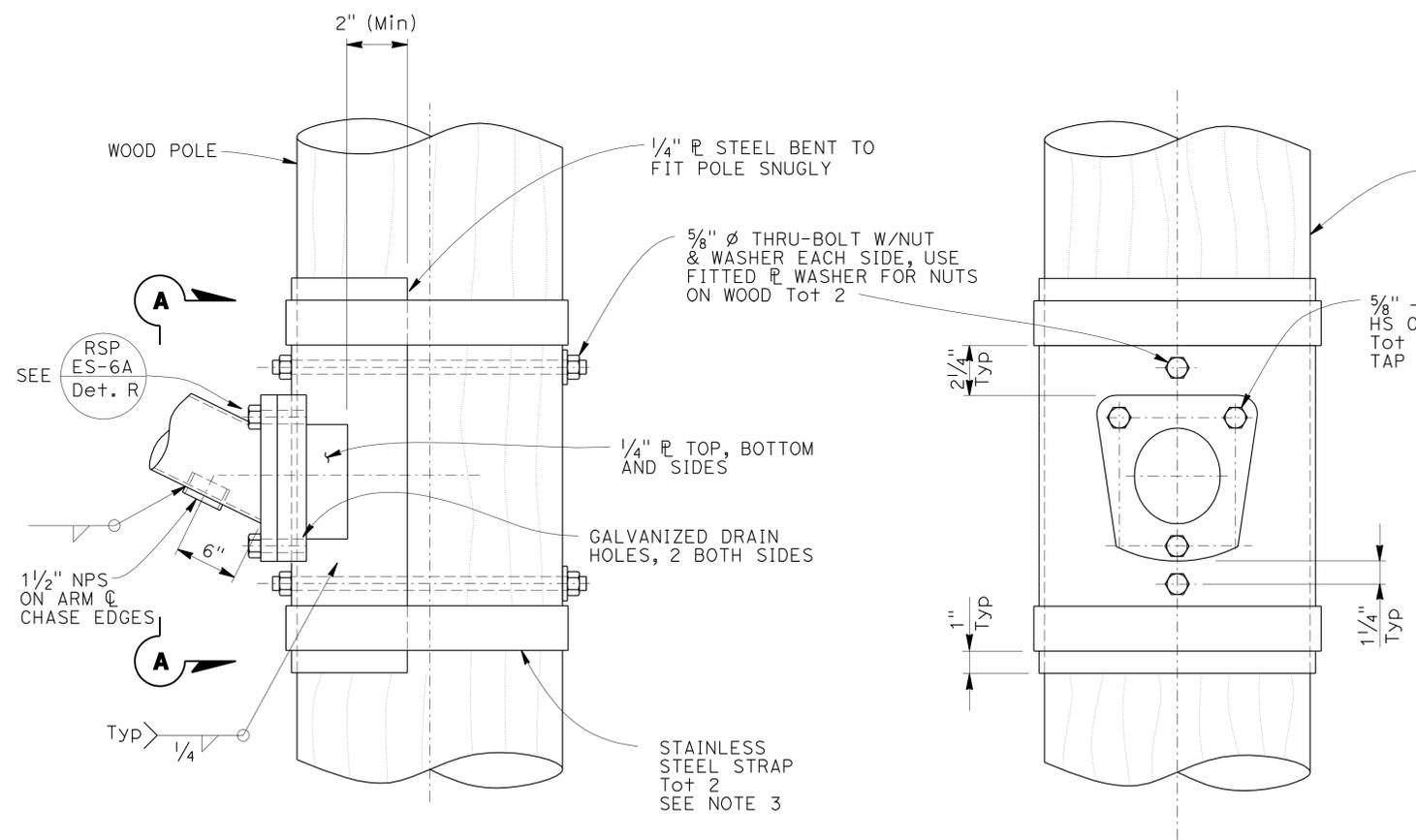
- All hardware and steel shall be galvanized after fabrication.
- Arm Base connection details shall be in compliance with Standard Plans Detail Sheet RSP ES-6A with noted modifications.
- 3500 LB Min capacity strap system shall be used for top and bottom of plate.
- The Contractor to verify pole dimensions at Tie-Rod attachment height. Fabricate 8" flat bar with "L" Dimension to maintain an open gap between encasement in finished installation.



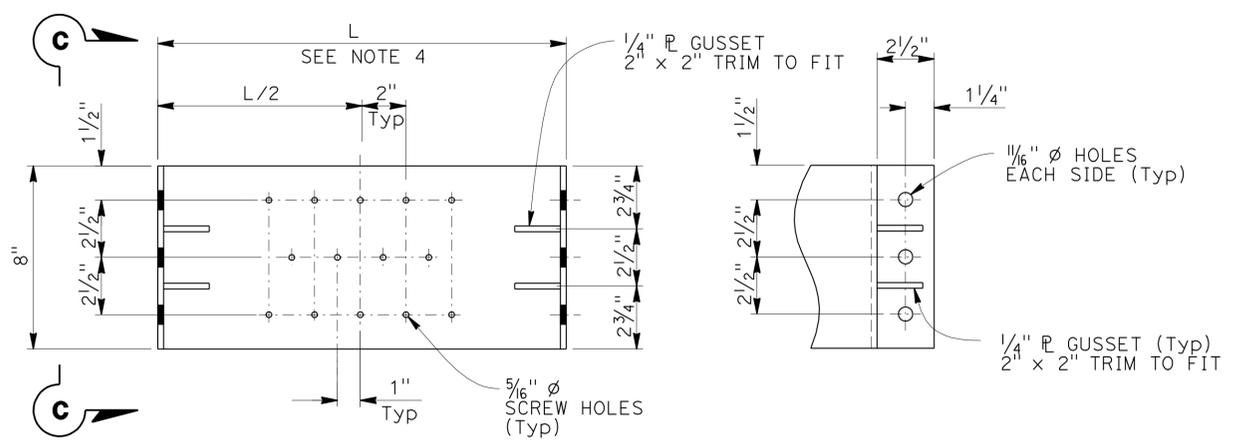
TIE-ROD DETAIL No. 1



TIE-ROD DETAIL No. 2



ARM CONNECTION DETAILS



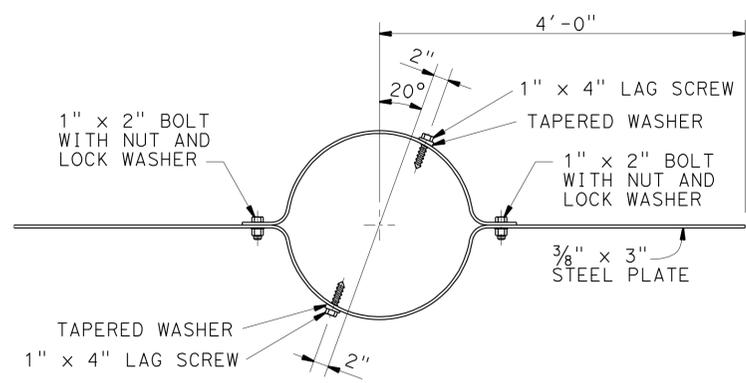
FITTED PLATE DETAILS

Note: 2 Required (1 w/screw holes, 1 without)

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

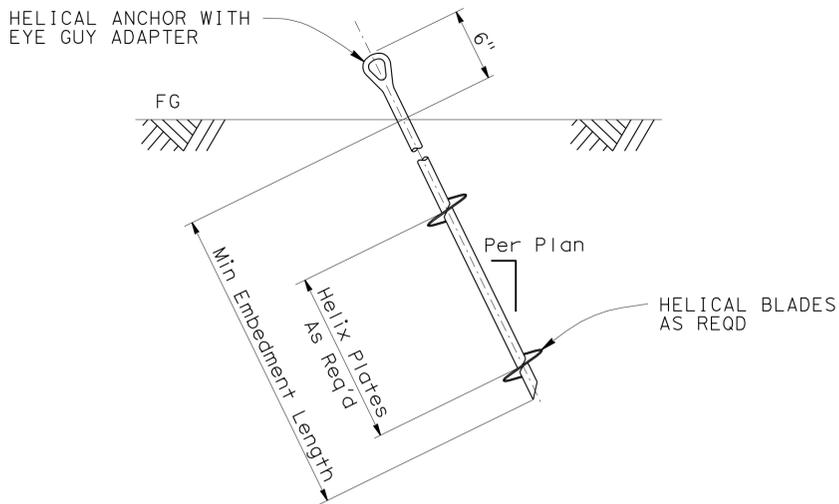
BRANCH CHIEF JAMES SAGAR	DESIGN	BY T MARCHENKO	CHECKED A MALAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	LIGHTING (TEMPORARY) WOOD POLE MOUNTING DETAILS	SES-13
	DETAILS	BY H NGUYEN	CHECKED B NAGID			POST MILE	29.4/31.6		
	QUANTITIES	BY	CHECKED						

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	667	1931
			4/26/12		
REGISTERED CIVIL ENGINEER			DATE		
5-21-12			PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER TAMARA S. MARCHENKO No. C76837 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA					
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WIND ANCHOR

To be installed perpendicular to luminaire arms and 2'-0" Min below grade



ALTERNATIVE GUY WIRE INSTALLATION DETAIL

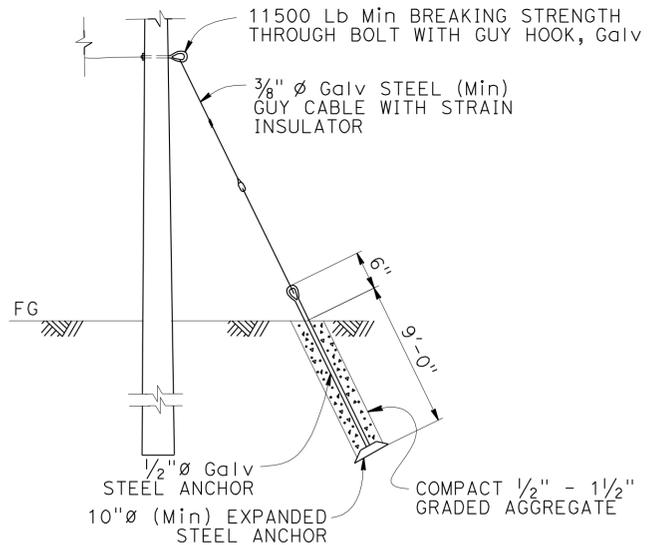
(See Helical Anchor Specifications Table)

HELICAL ANCHOR SPECIFICATIONS					
Anchor Location	Type	Helix Plate Diameter*	Allowable Min Tension Cap., "Q _a "	Embedment Length (Min)	Installation Torque (Min)**, "T"
See Note 4 Sheet SES-1	Tension	10"	3000 Lbs	9'-0"	600 Ft-LBs

SPECIFICATION NOTES:

- During installation the torque will be continuously monitored and recorded. If a drop in torque is recorded, the anchor must then continue to be inserted past the soft soil layer until Minimum Installation Torque is achieved.
- Anchors and Hardware to be installed per the manufacturers specifications.

* Number of helical plates is not specified; Contractors choice.
 ** Adjust accordingly if required, See Note 3.



GUY WIRE INSTALLATION DETAIL

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

NOTES:

- Contractor to verify soil condition, slope, and adjust anchoring to satisfy basic design requirements per Note 7 on SES-1 sheet.
- Use of alternative Guy Wire Installation Detail requires that the soil bearing capacity be verified by the installation Contractor.
- Installation Contractor shall determine the most appropriate value for k₊ based on soil conditions and shall adjust the Min Installation Torque based on the revised k₊. A k₊ value of 10 was assumed for the Min Installation Torque shown in the table.
 The Helical Installation torque Formula is Q_u = k₊*T where,
 Q_u = Q_a*FS = Ultimate Helical Anchor Capacity (LBs)
 FS = Factor of Safety = 2.0
 Q_a = Allowable Helical Anchor Capacity (LBs)
 k₊ = Empirical Torque Factor (ft⁻¹)
 T = Min Installation Torque (Ft-LBs)
- Requests made by Helical Anchor Installation Contractor to reduce the minimum embedment length and/or Helix diameter require Engineer's approval.
- The Contractor shall locate and mark all of the substructures and utilities. Installation of anchors underneath utilities or subsurface structures is prohibited. Horizontal clearances of anchors shall be determined by Inspector during construction.

NO SCALE

BRANCH CHIEF JAMES SAGAR	DESIGN	BY T MARCHENKO	CHECKED A MALAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	LIGHTING (TEMPORARY) WOOD POLE ANCHORING DETAILS	SES-14
	DETAILS	BY H NGUYEN	CHECKED B NAGID			POST MILE	29.4/31.6		
	QUANTITIES	BY	CHECKED						

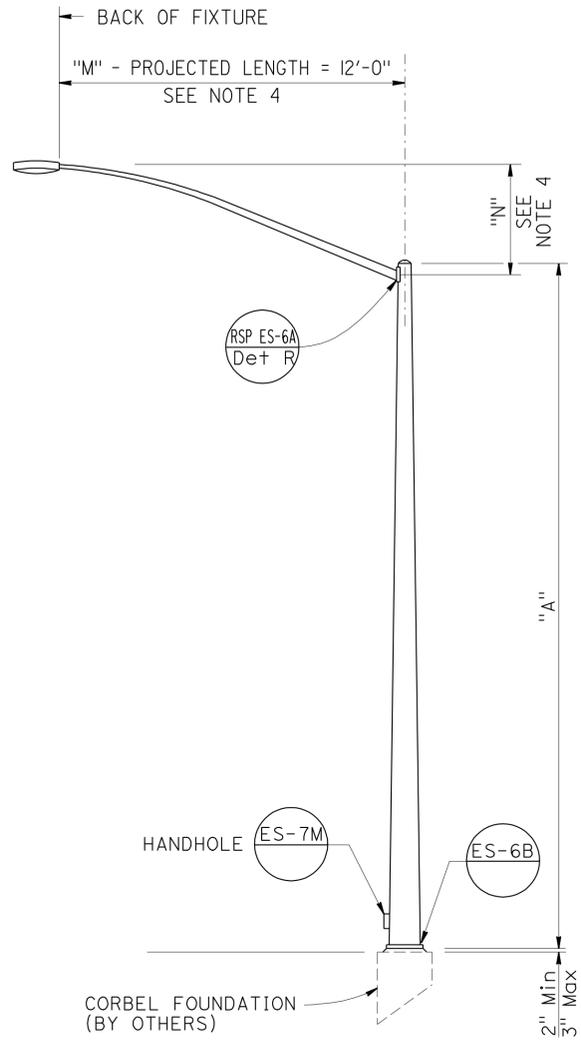
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5	29.4/31.6	668	1931

Maifoud A. Licha 5-11-12
REGISTERED CIVIL ENGINEER DATE

5-21-12
PLANS APPROVAL DATE

No. C62816
Exp. 6/30/12
CIVIL

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ELEVATION
TYPE 21

TABLE A				
POLE DATA				
LOCATION	"A" HEIGHT	Min OD		WALL THICKNESS
		BASE	TOP	
SB ROUTE 5, RW 1595				
1590+30	31'-4"	8 5/8"	3 7/8"	0.1196"
1592+10	29'-6"			
1593+90	28'-8"			
1595+70	29'-2"			
1597+50	31'-5"			
1599+30	34'-7"			
SB ROUTE 5, RW 1635				
1634+10	25'-8"	8 5/8"	3 7/8"	0.1196"
1635+90	25'-3"			
1637+70	24'-4"			
1639+50	27'-1"			
1641+30	29'-0"			
1643+10	35'-3"			
1644+90	38'-0"			

GENERAL NOTES:

SPECIFICATIONS

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.

LOADING

Wind Loadings: 100 MPH

UNIT STRESSES

Structural Steel: fy = 48,000 psi tapered steel tube
fy = 36,000 psi unless otherwise noted.

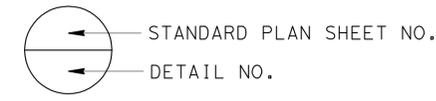
Anchor bolts = A307

Reinforced Concrete: f'c = 3,600 psi
fy = 60,000 psi

NOTES:

- For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS".
- All steel shall be galvanized after fabrication.
- During pole erection the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- For additional details and data for Type 21, see RSP ES-6A.

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



NO SCALE

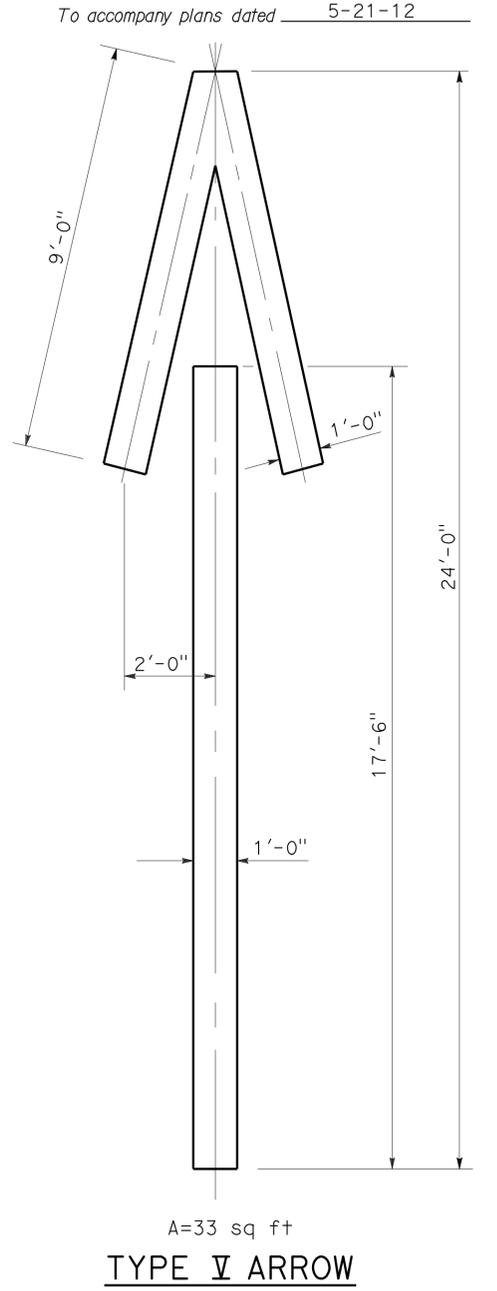
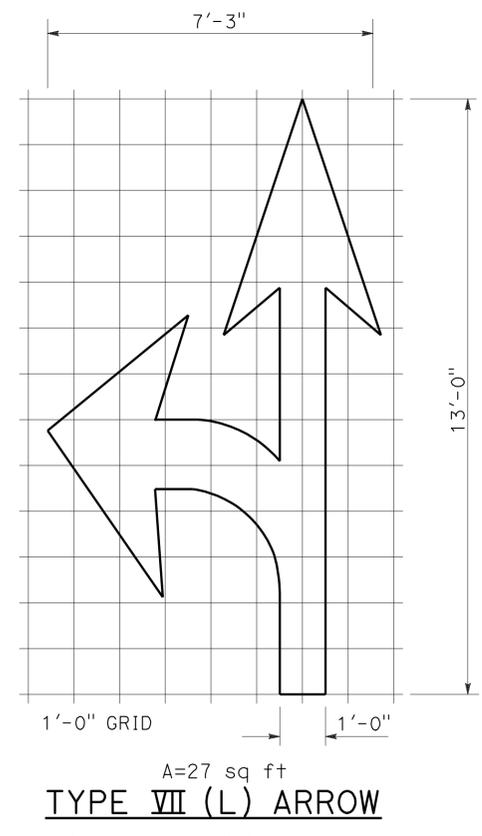
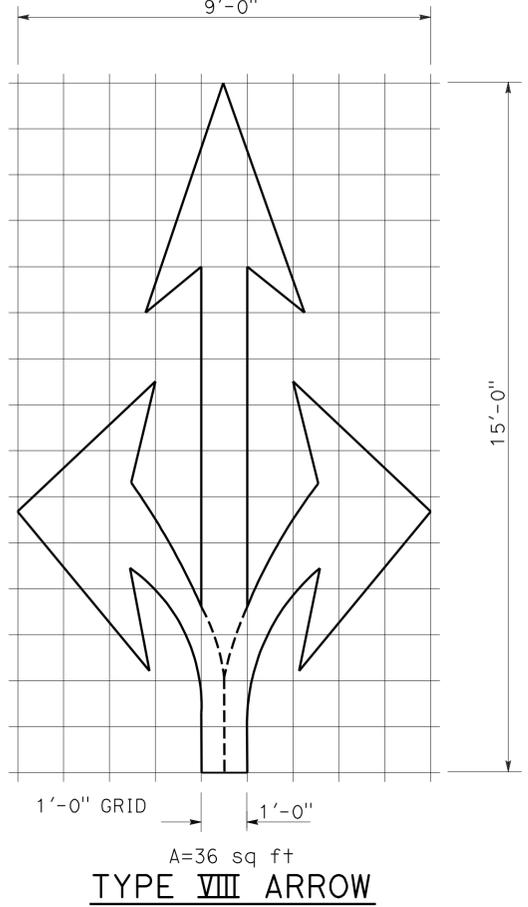
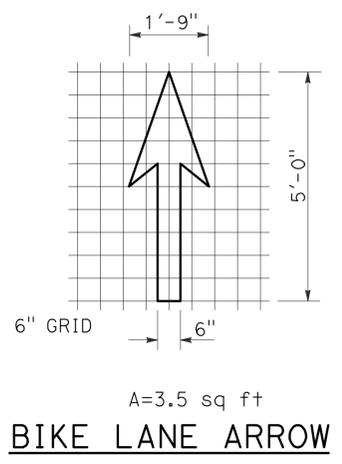
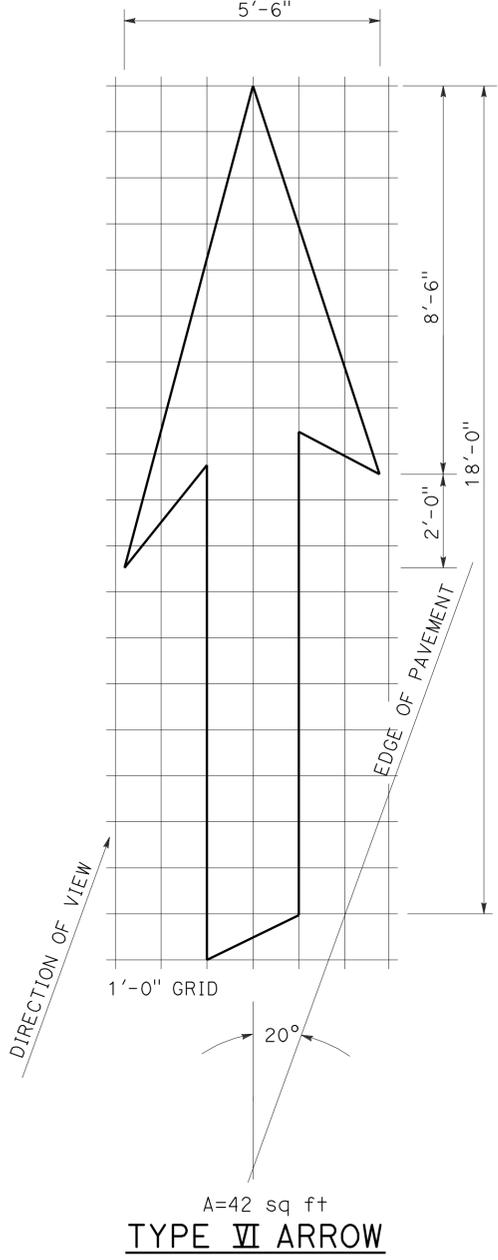
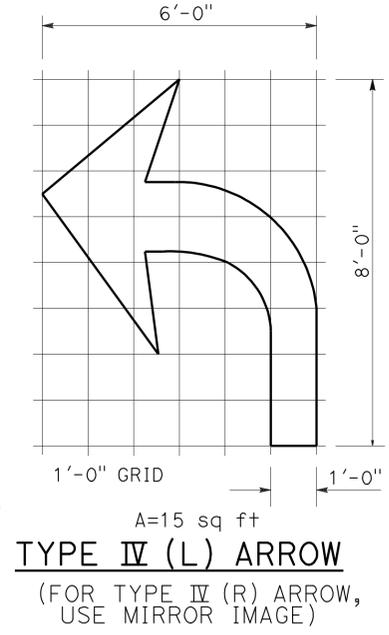
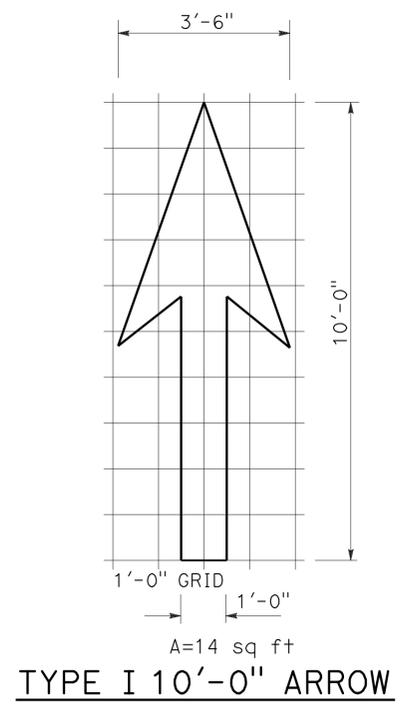
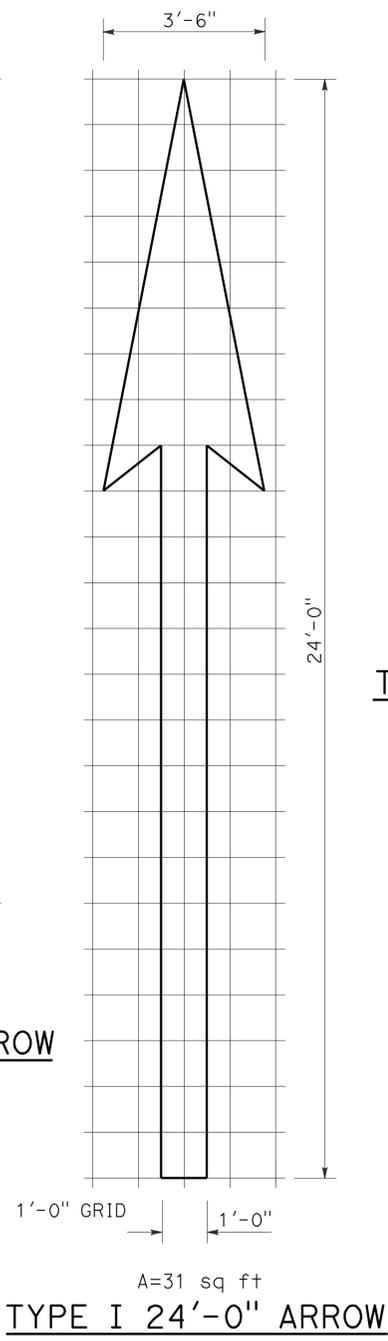
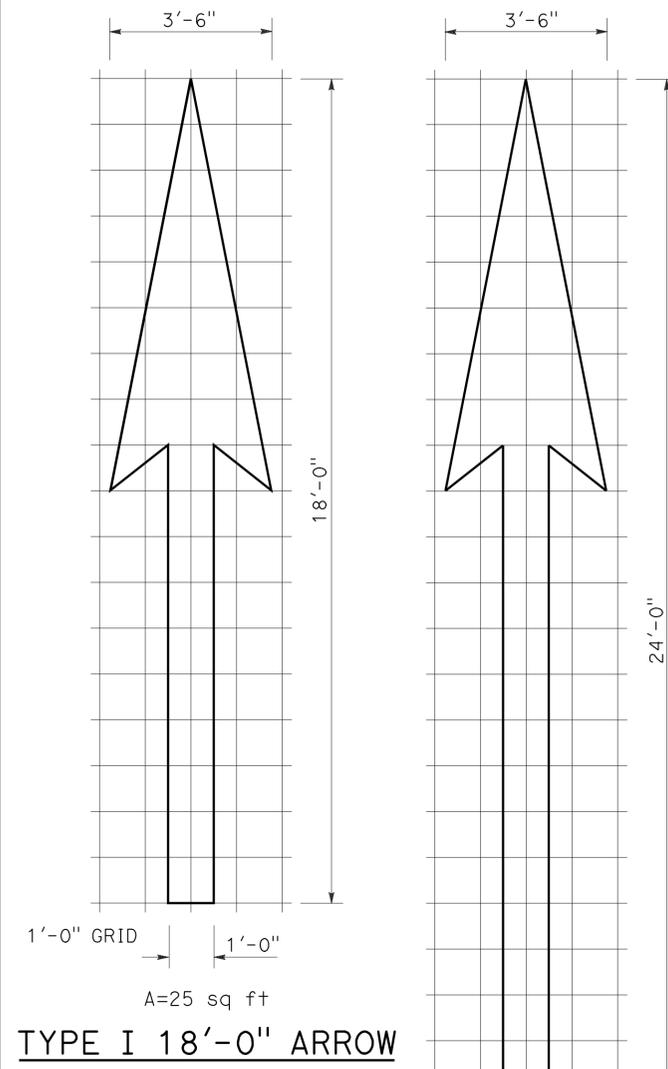
BRANCH CHIEF JEFF WOODY	DESIGN	BY M LICHA	CHECKED J MAGANA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	TYPE 21 (MOD)	SES-15
	DETAILS	BY D W JUSTICE Jr	CHECKED M LICHA			N/A		
	QUANTITIES	BY M LICHA	CHECKED J MAGANA			POST MILE		

USERNAME => s121614 DATE PLOTTED => 21-MAY-2012 TIME PLOTTED => 11:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	669	1931

Roberto L. McLaughlin
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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



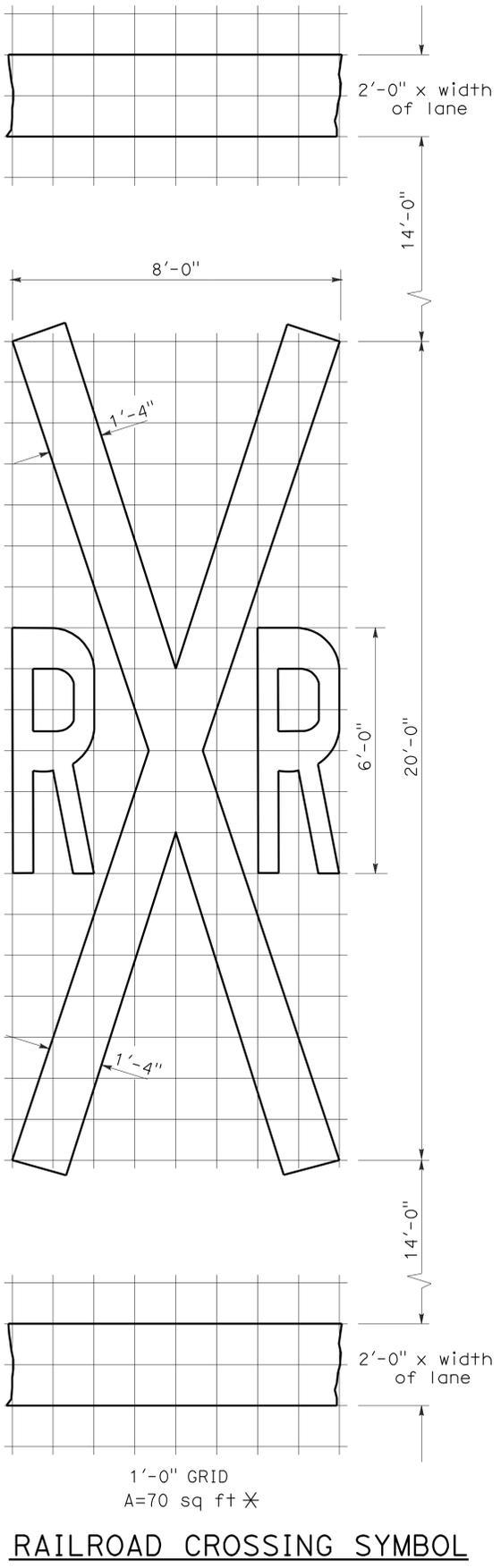
NOTE:
MINOR VARIATIONS IN DIMENSIONS
MAY BE ACCEPTED BY THE ENGINEER.

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

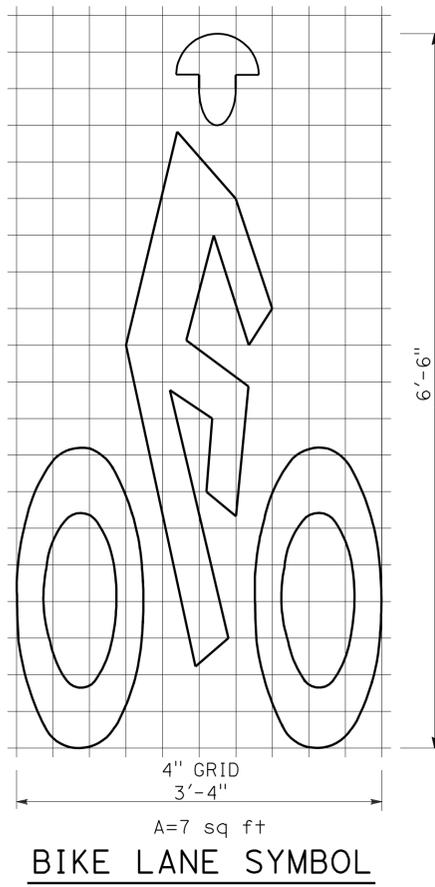
RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A
DATED MAY 1, 2006 - PAGE 9 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A24A

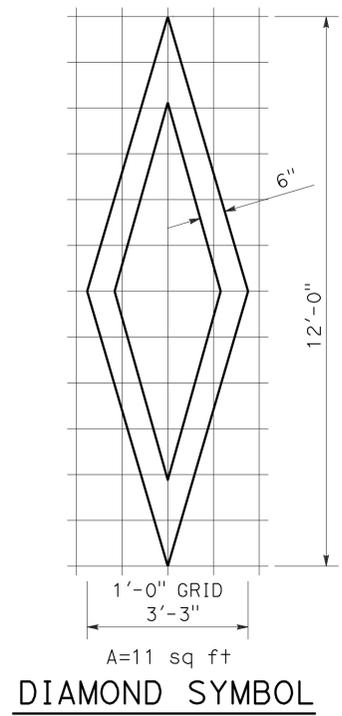
To accompany plans dated 5-21-12



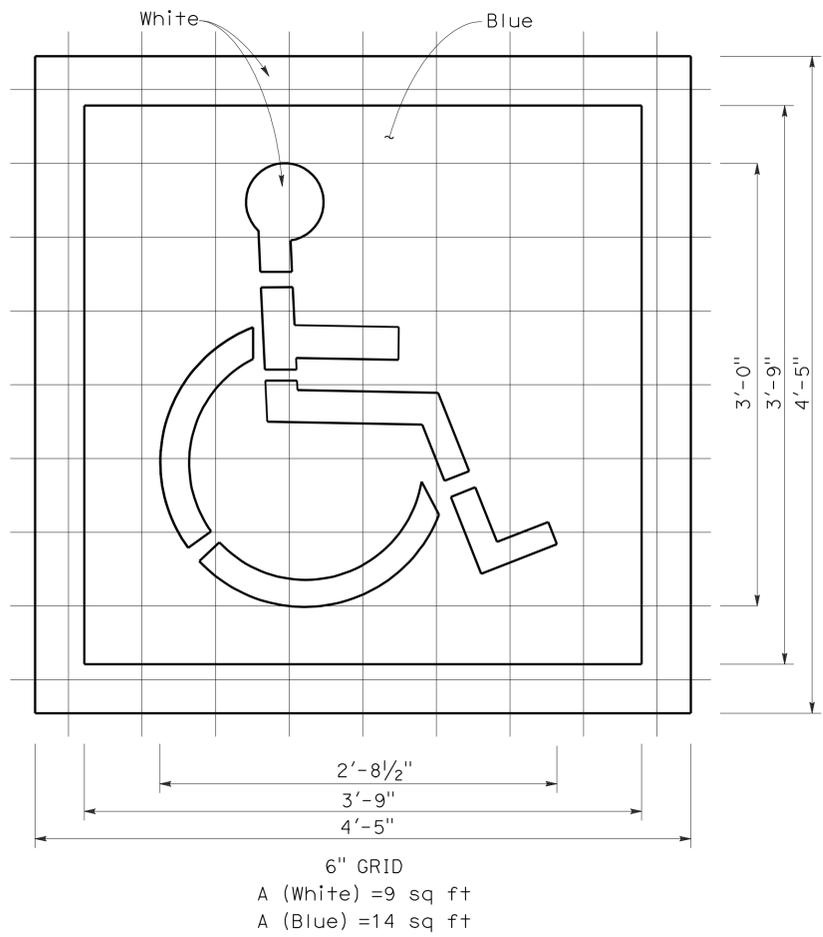
RAILROAD CROSSING SYMBOL
 *70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



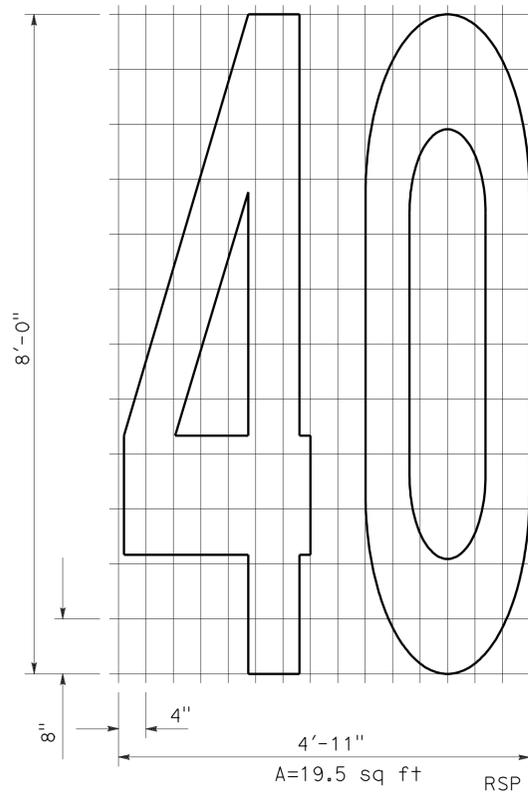
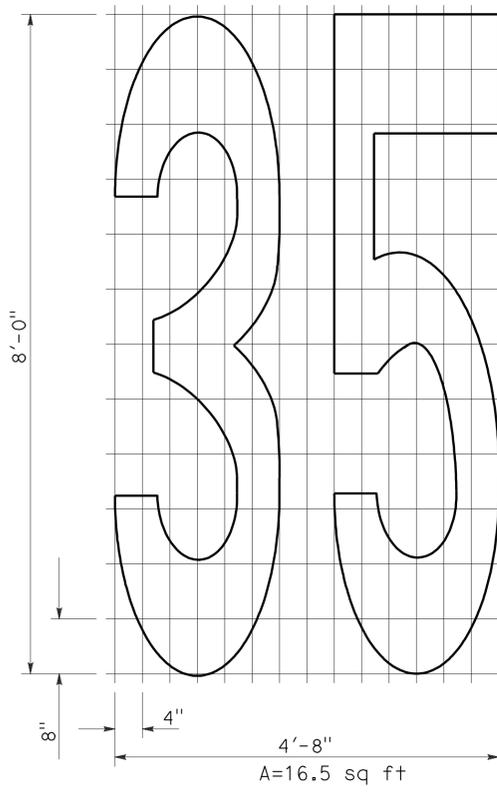
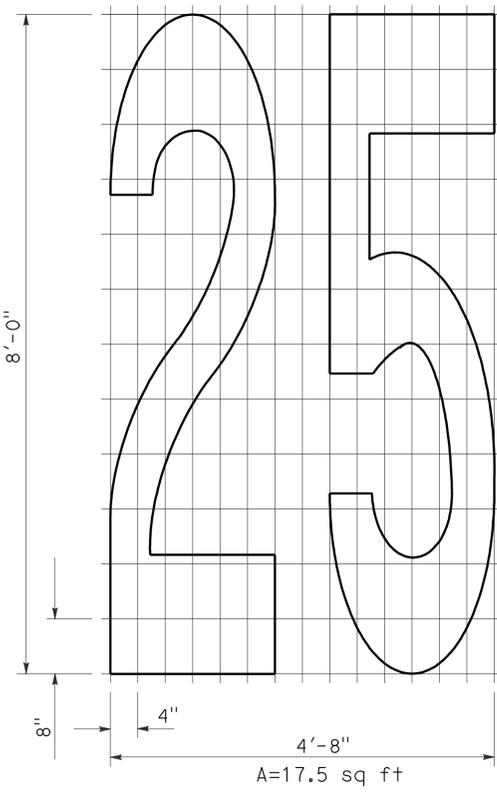
BIKE LANE SYMBOL



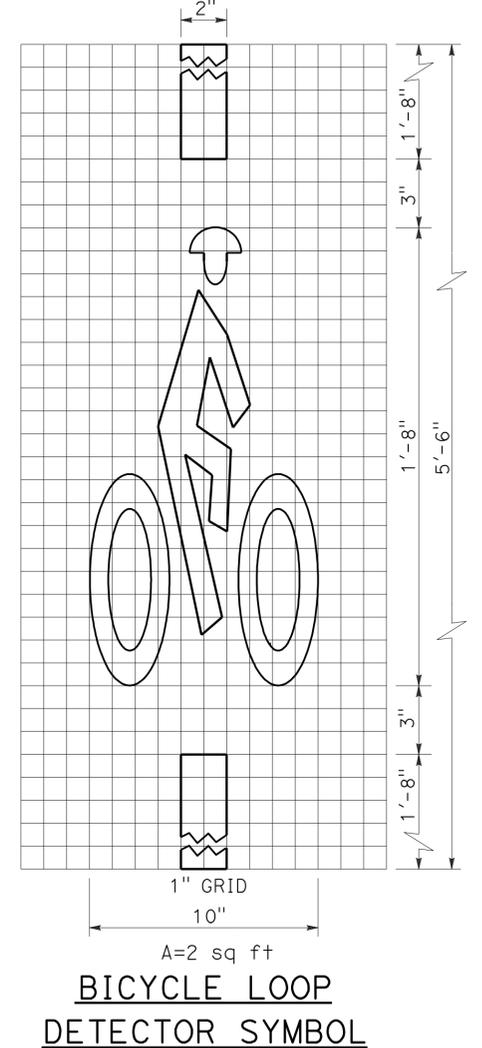
DIAMOND SYMBOL



INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



NUMERALS



BICYCLE LOOP DETECTOR SYMBOL

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

2006 REVISED STANDARD PLAN RSP A24C

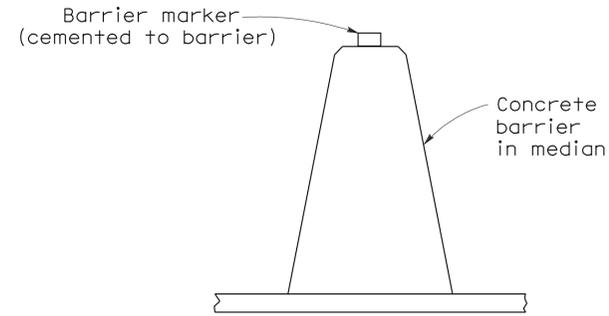
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	671	1931

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

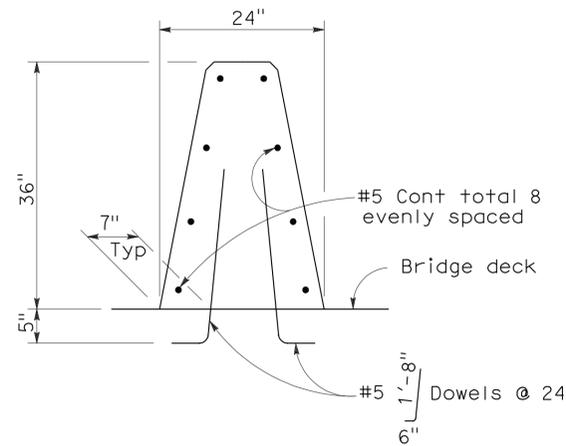
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 5-21-12



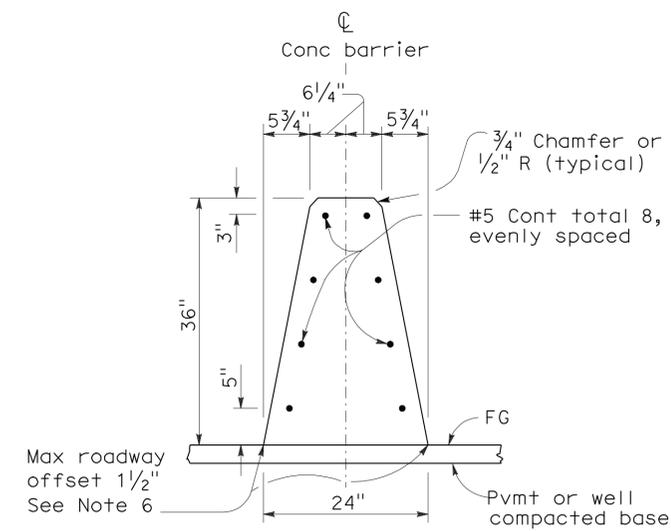
CONCRETE BARRIER TYPE 60 DELINEATION

See Notes 7 and 8



CONCRETE BARRIER TYPE 60A

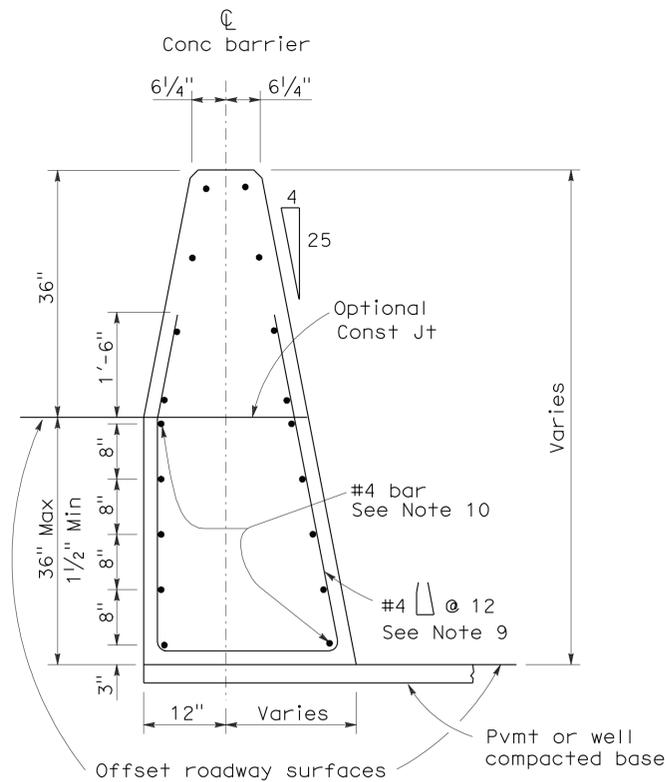
Details similar to Type 60 except as noted.



CONCRETE BARRIER TYPE 60

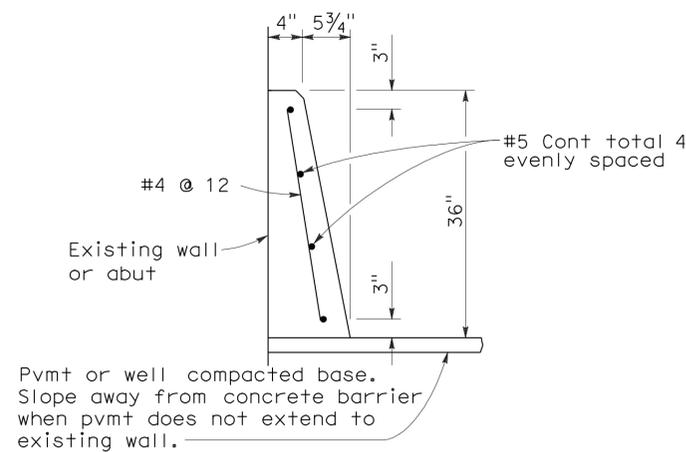
NOTES:

- See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
- See Standard Plan A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
- Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
- Where the concrete barrier is added to the face of existing concrete structure, match existing weep holes.
- Expansion joints in concrete barrier shall be located at all deck, pavement and principal wall joints. Expansion joint filler material shall be the same size as joint or 1/2" minimum.
- Where roadway offset is greater than 1 1/2", see Concrete Barrier Type 60C.
- Barrier delineation to be used when required by the Special Provisions.
- Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.
- Reinforcing stirrup not required for roadway offsets less than 1'-0".
- For roadway surfaces offset greater than 1 1/2" to 3", no rebars required. For roadway surfaces offset greater than 3" to 8" use two #4 rebars at 3" above the lower roadway surface. For roadway surfaces offset greater than 8" to 12", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at 8" above the lower roadway surface. For roadway surfaces offset greater than 12" to 36", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at every 8" increment vertical spacing above the first two #4 rebars.



CONCRETE BARRIER TYPE 60C

Details similar to Type 60 except as noted. Concrete barrier end anchor when necessary. 36" roadway surfaces offset shown.



CONCRETE BARRIER TYPE 60D

CONCRETE BARRIER TYPE 60

NO SCALE

RSP A76A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A76A DATED MAY 1, 2006 - PAGE 29 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76A

2006 REVISED STANDARD PLAN RSP A76A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	672	1931

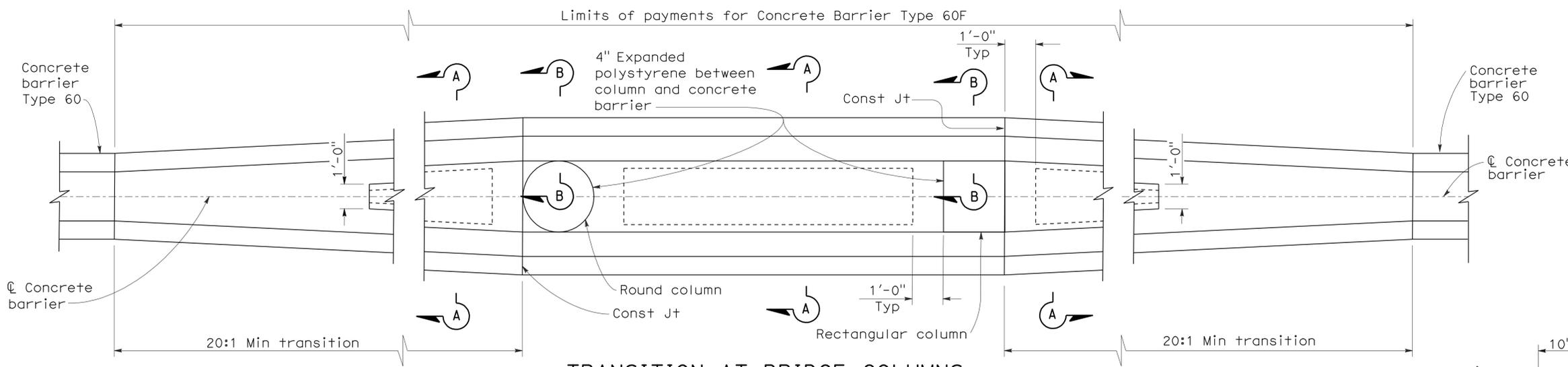
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

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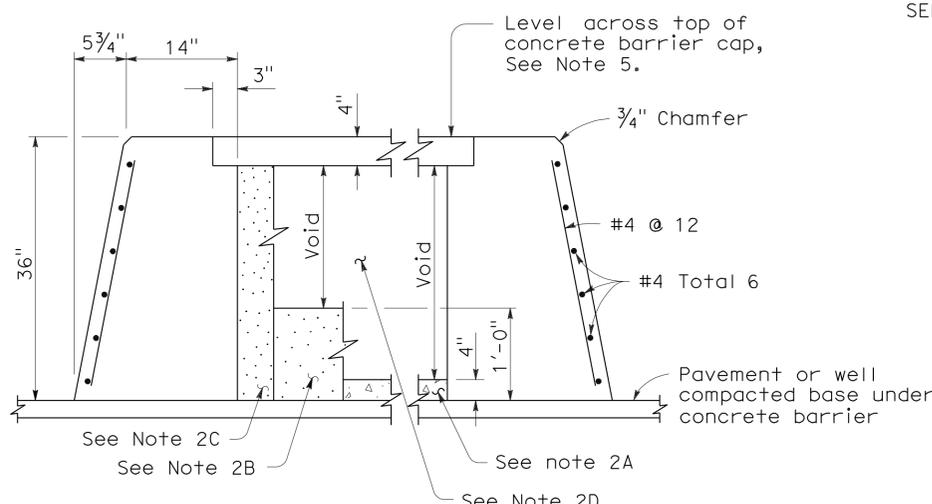
To accompany plans dated 5-21-12

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

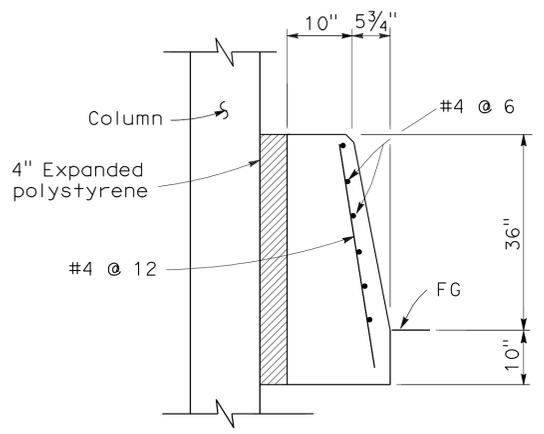


TRANSITION AT BRIDGE COLUMNS

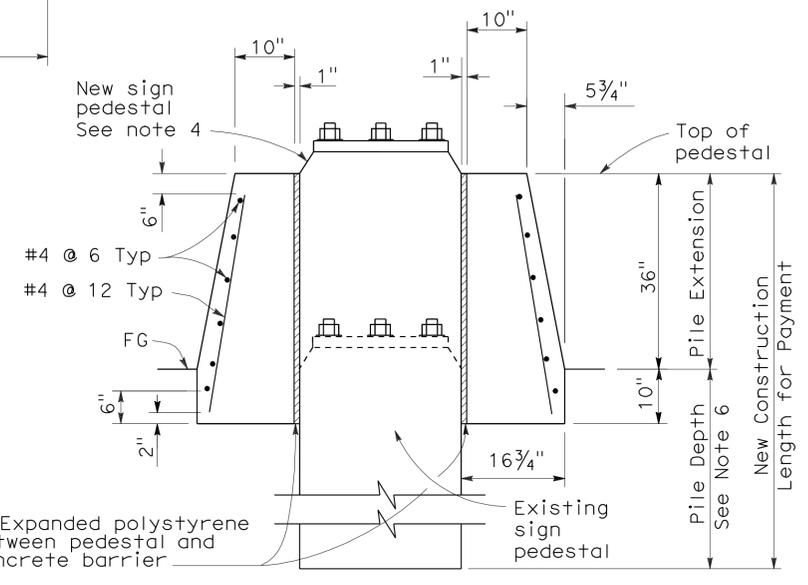
CONCRETE BARRIER TYPE 60F
SEE NOTE 7



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

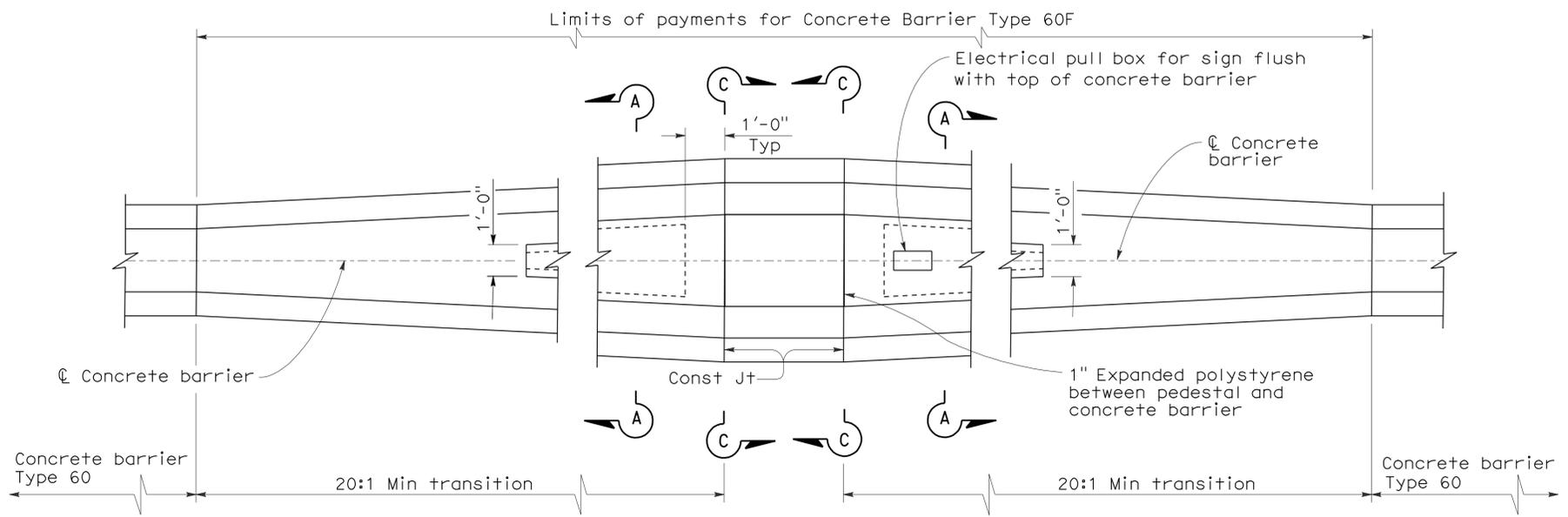
- See Revised Standard Plan RSP A76A for Concrete Barrier Type 60.
- Contractor options for fill between concrete barrier walls:
 - Place 4" PCC at base between concrete barrier walls.
 - Place 1'-0" of granular material at base between walls.
 - Place granular material from base to bottom of 4" cap.
 - Monolithic concrete with foam blockouts is not permitted.
- Reinforcing steel shall extend continuous through construction joints.
- See "Overhead Sign" plans for sign pedestal elevations on new construction.
- Adjust height of concrete barrier wall on low side of offset or superelevated roadways to provide level grade across top of concrete barrier cap.
- See Overhead Signs Standard Plan Pile Foundation Tables.
- All locations with limited shoulder width available for barrier, see Revised Standard Plan RSP A76F for use of Concrete Barrier Type 60GE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER TYPE 60F
NO SCALE

RSP A76C DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A76C
DATED MAY 1, 2006 - PAGE 31 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76C



TRANSITION AT SIGN PEDESTAL

CONCRETE BARRIER TYPE 60F
SEE NOTE 7

2006 REVISED STANDARD PLAN RSP A76C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	673	1931

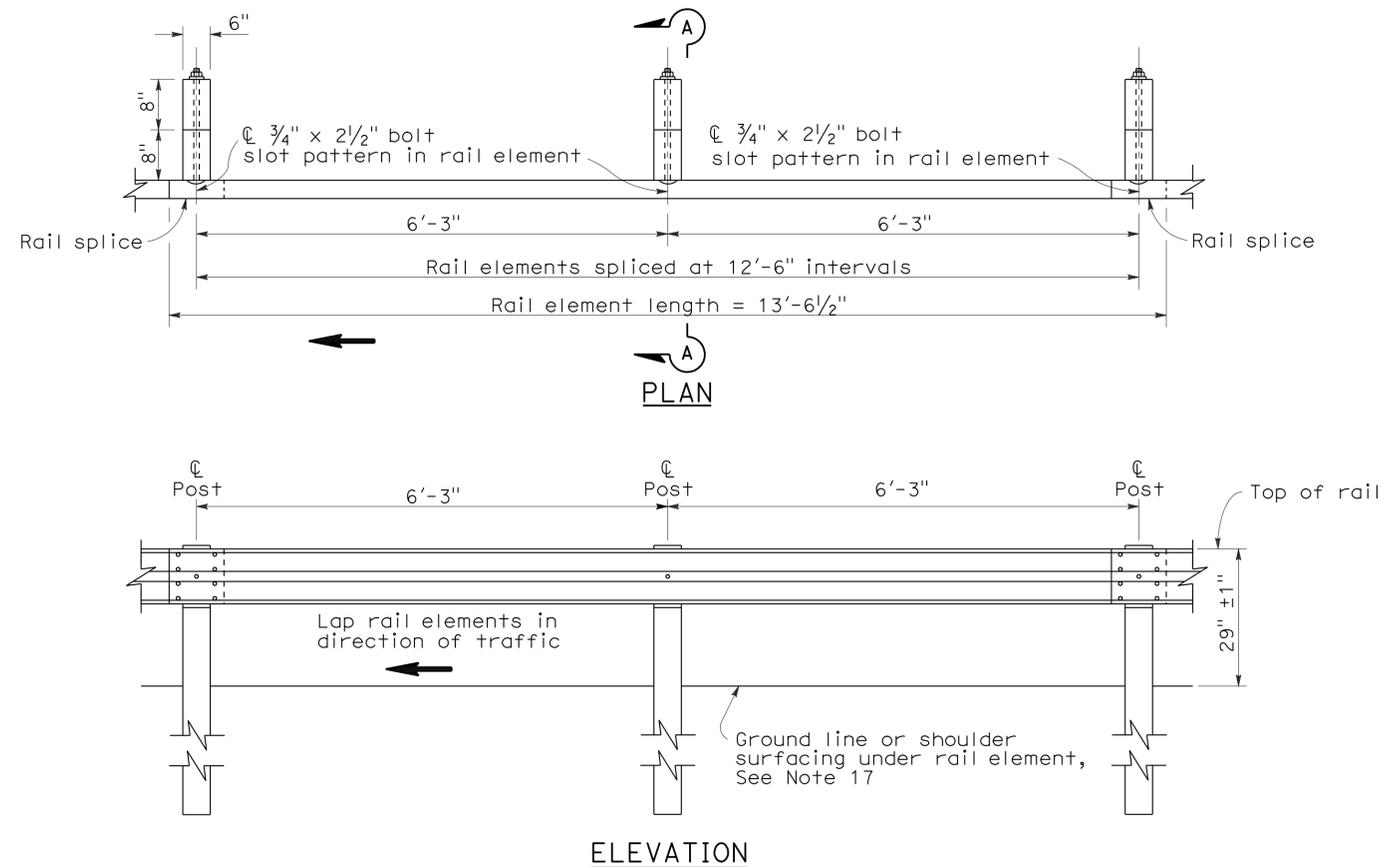
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

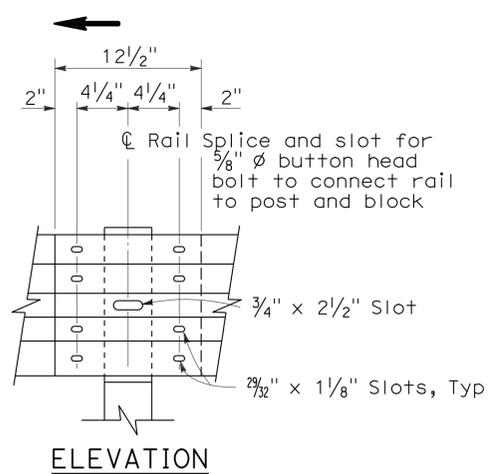
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To accompany plans dated 5-21-12

Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

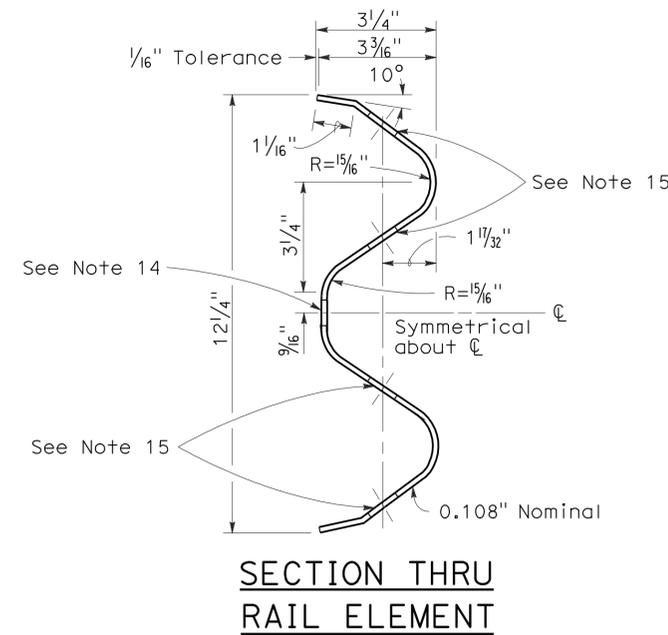


METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS

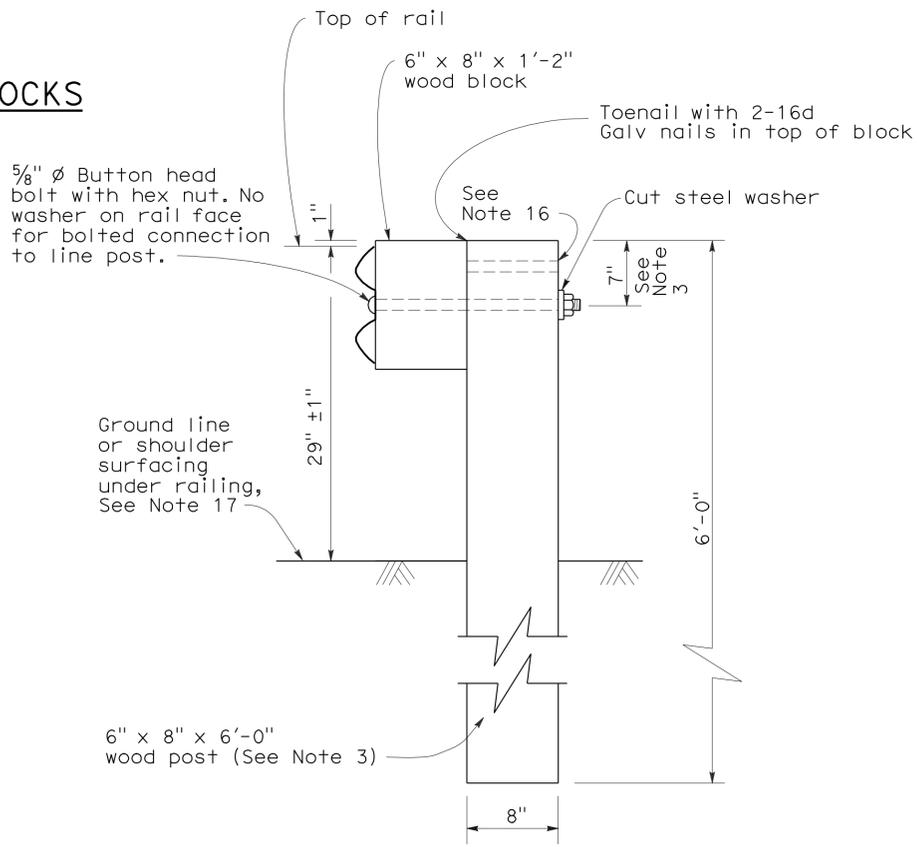


RAIL ELEMENT SPLICE DETAIL

- Connect the over lapped end of the rail elements with 5/8" ϕ x 1 3/8" button head oval shoulder splice bolts inserted into the 2 3/32" x 1 1/8" slots and bolted together with 5/8" ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION THRU RAIL ELEMENT



**SECTION A-A
TYPICAL WOOD LINE
POST INSTALLATION**

See Note 4

NOTES:

- For details of steel post installations, see Standard Plan A77A2.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of wood posts and wood blocks used to construct guard railing, see Standard Plan A77C1.
- For additional installation details, see Standard Plan A77C3.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
- For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
- For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
- For details of guard railing transition to bridge railing, see Standard Plan A77J4.
- For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
- For guard railing connection details to abutments and walls, see Standard Plan A77J3.
- Direction of adjacent traffic indicated by \rightarrow .
- For typical guard railing delineation and dike positioning details, see Standard Plan A77C4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77C1.
- Install posts in soil.

**METAL BEAM GUARD RAILING
STANDARD RAILING SECTION
(WOOD POST WITH
WOOD BLOCK)**

NO SCALE

RSP A77A1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A1
DATED MAY 1, 2006 - PAGE 41 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A1

2006 REVISED STANDARD PLAN RSP A77A1

To accompany plans dated 5-21-12

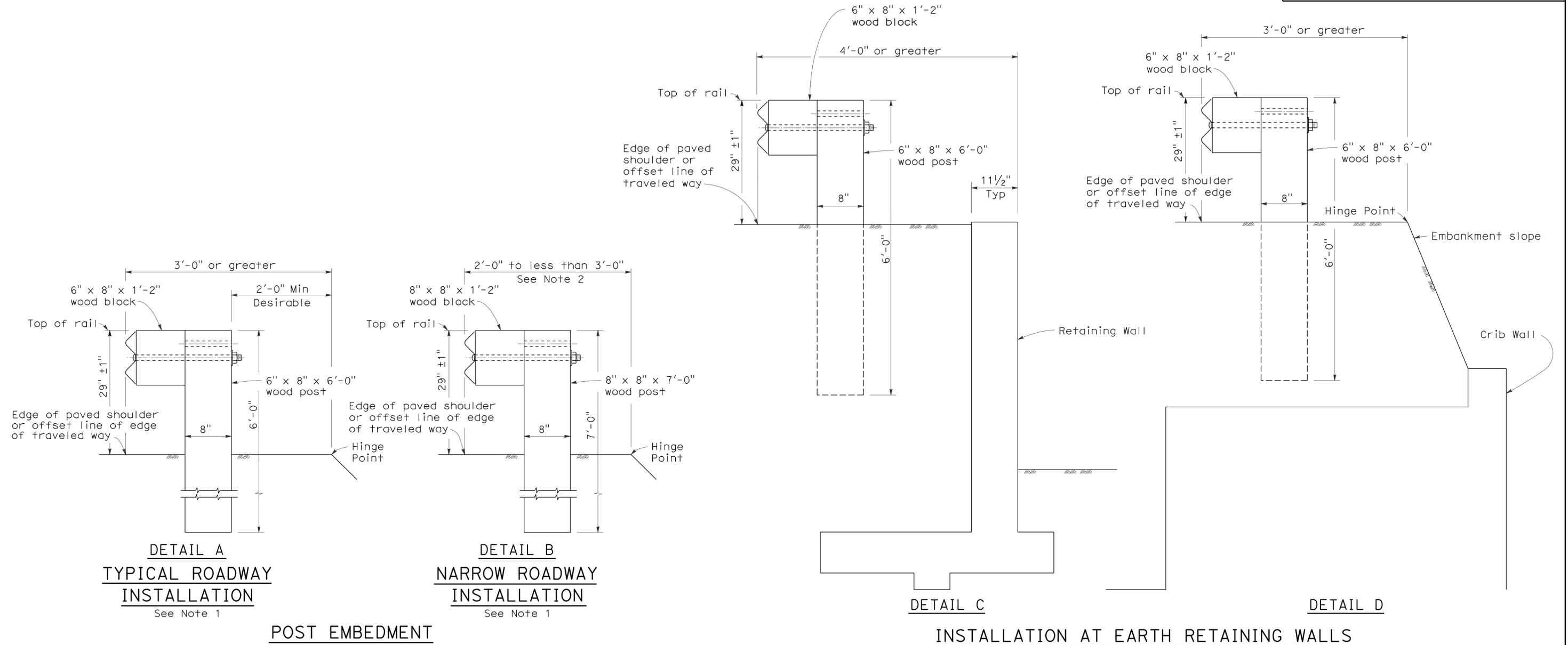
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	674	1931

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 9 steel post, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 9 steel post, 7'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Standard Plans A77A1 and A77A2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-0", see the Project Plans for special details.
3. For dike positioning with guard railing installations, see Standard Plan A77C4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS**

NO SCALE

RSP A77C3 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77C3
DATED MAY 1, 2006 - PAGE 46 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C3

2006 REVISED STANDARD PLAN RSP A77C3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	675	1931

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

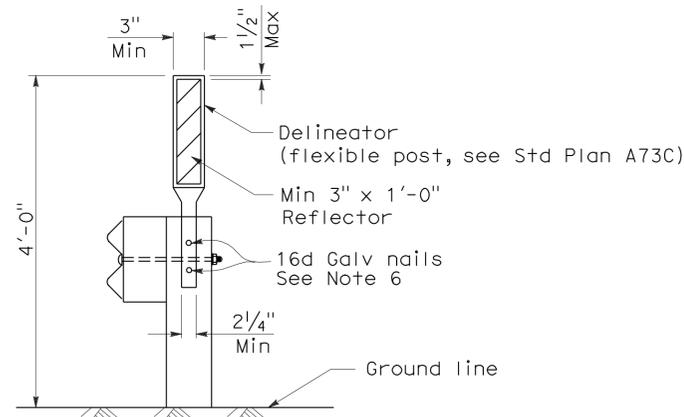
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 5-21-12

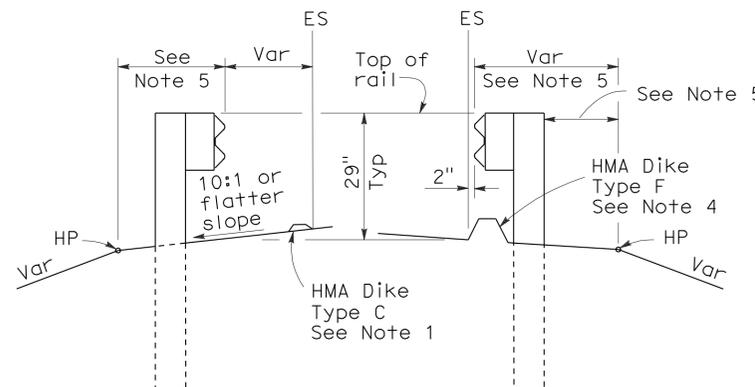
NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Standard Plans A87A and A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



GUARD RAILING DELINEATION

See Note 3



DIKE POSITIONING

See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77C4 DATED MAY 20, 2011 SUPERSEDES RSP A77C4 DATED JUNE 6, 2008 AND STANDARD PLAN A77C4 DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	676	1931

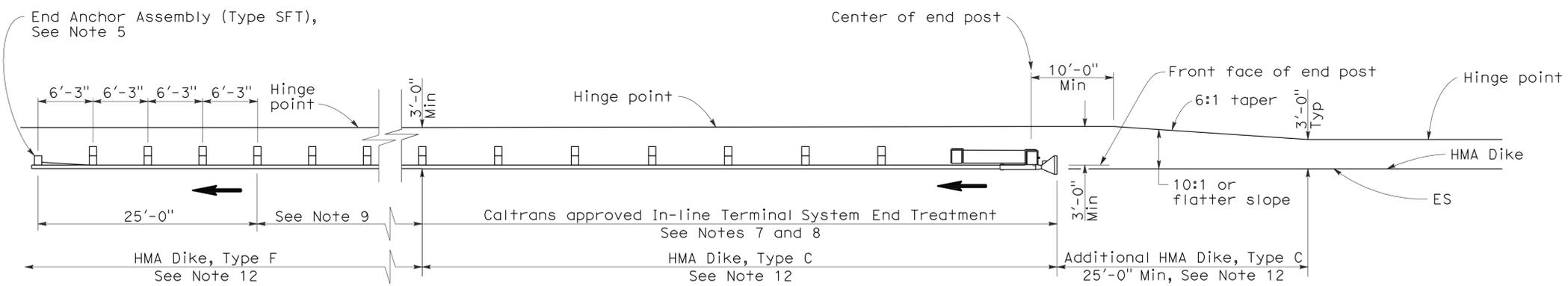
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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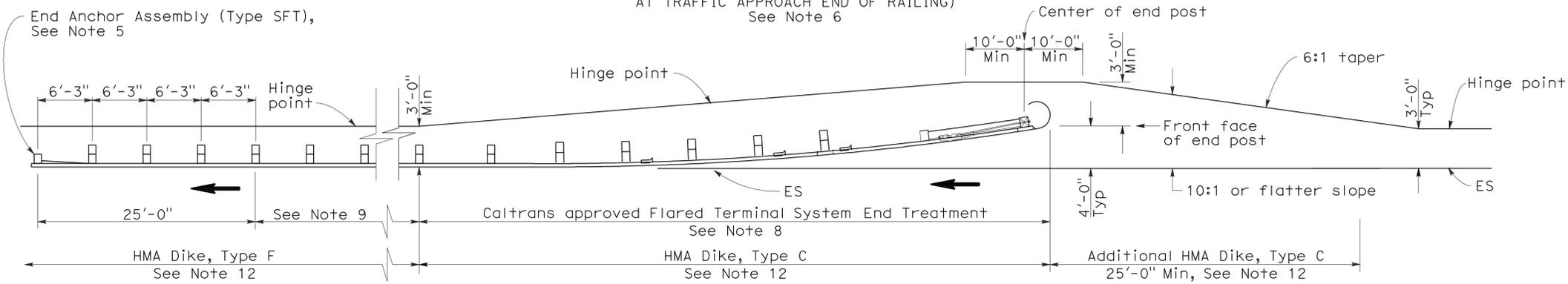
To accompany plans dated 5-21-12

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No. C50200
Exp. 6-30-09
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STATE OF CALIFORNIA



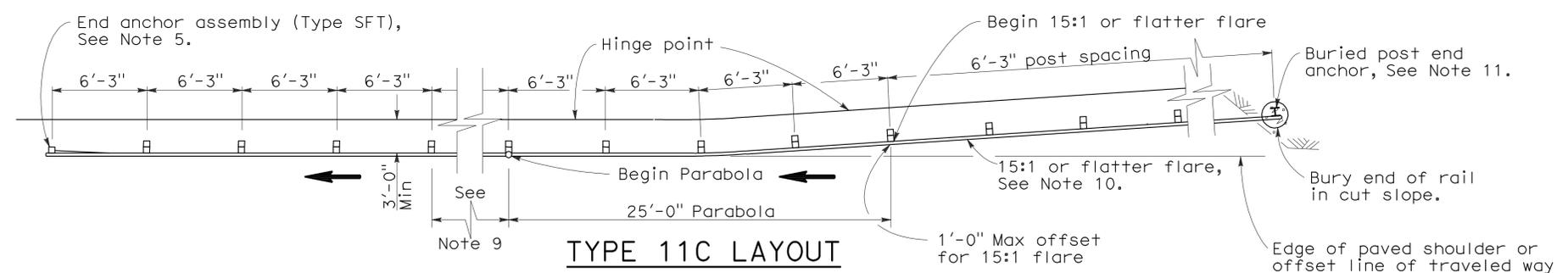
TYPE 11A LAYOUT

(EMBANKMENT GUARD INSTALLATION WITH IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Note 6



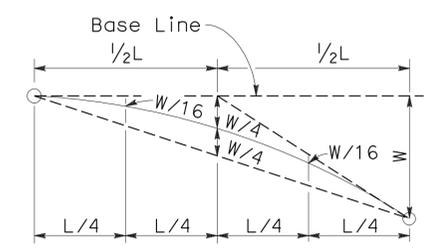
TYPE 11B LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Note 6

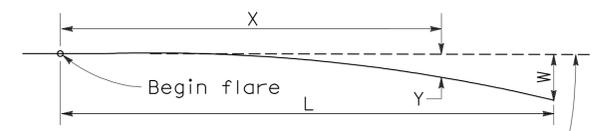


TYPE 11C LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 6 and 12



TYPICAL PARABOLIC LAYOUT

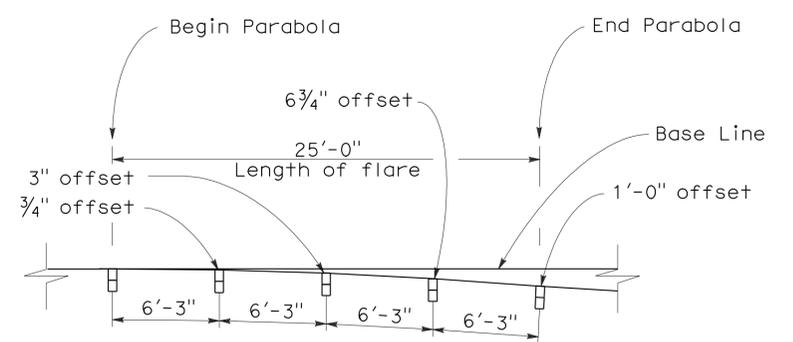


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$Y = \frac{WX^2}{L^2}$

Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1, and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or recycled plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- Layout Types 11A, 11B or 11C are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for only one direction of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11C Layout, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR EMBANKMENTS
NO SCALE

RSP A77E1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E1
DATED MAY 1, 2006 - PAGE 48 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E1

2006 REVISED STANDARD PLAN RSP A77E1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	677	1931

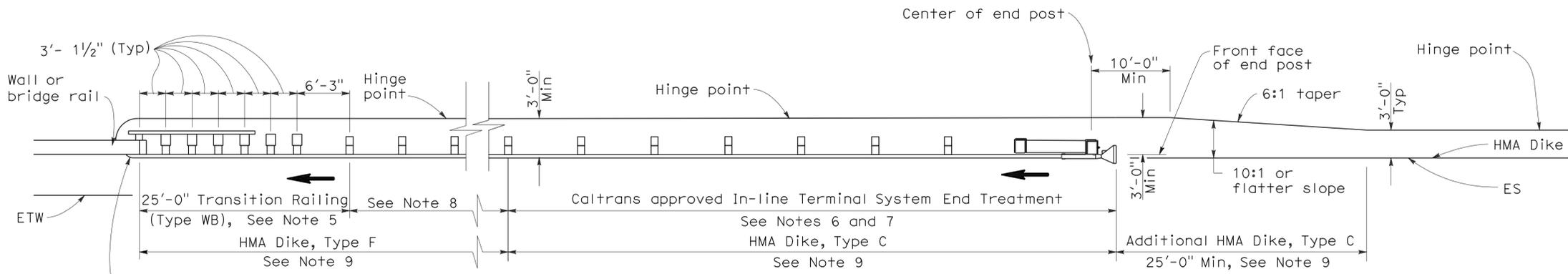
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

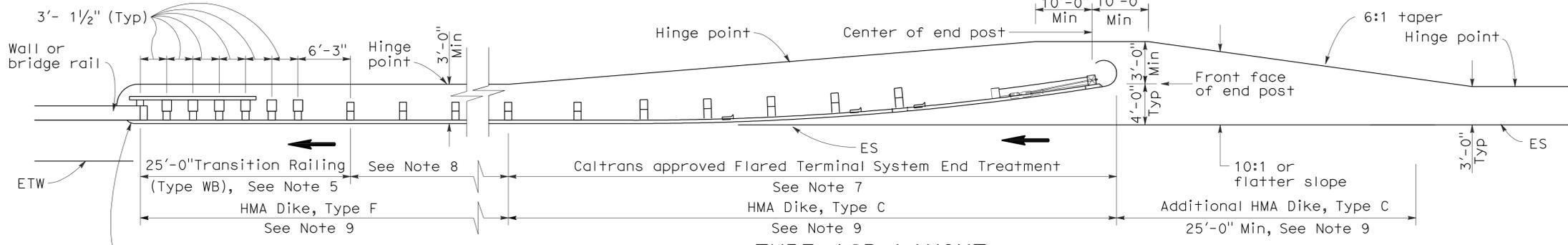
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To accompany plans dated 5-21-12



TYPE 12A LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10



TYPE 12B LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.

- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
 - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
 - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.

- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
- For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77F1

2006 REVISED STANDARD PLAN RSP A77F1

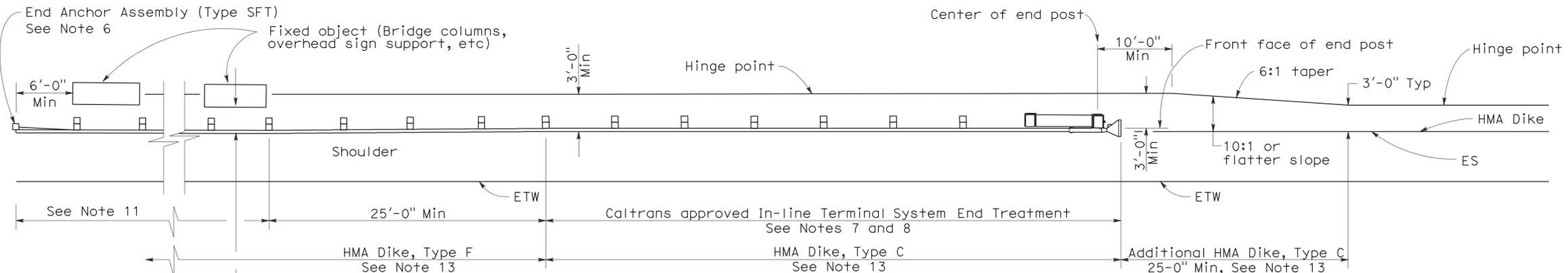
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	678	1931

RANDALL D. HIATT
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 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

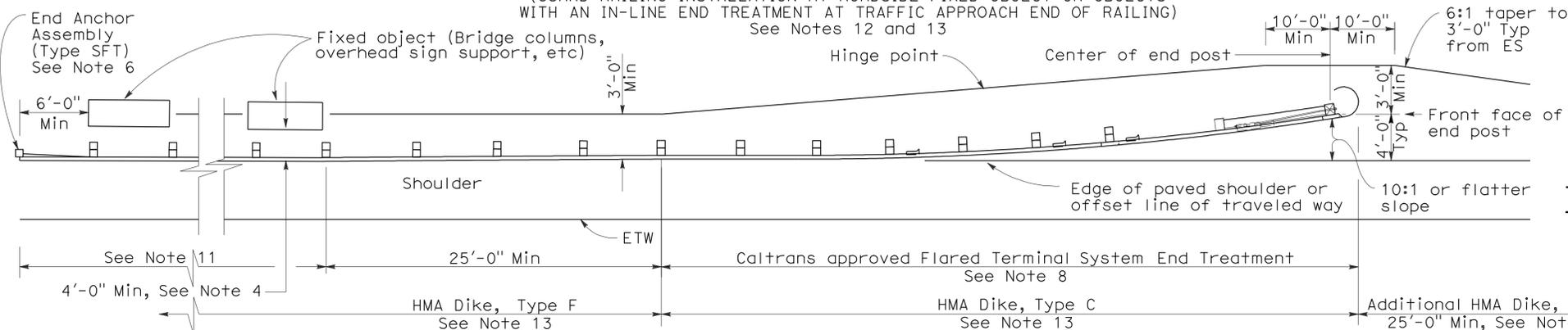
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To accompany plans dated 5-21-12



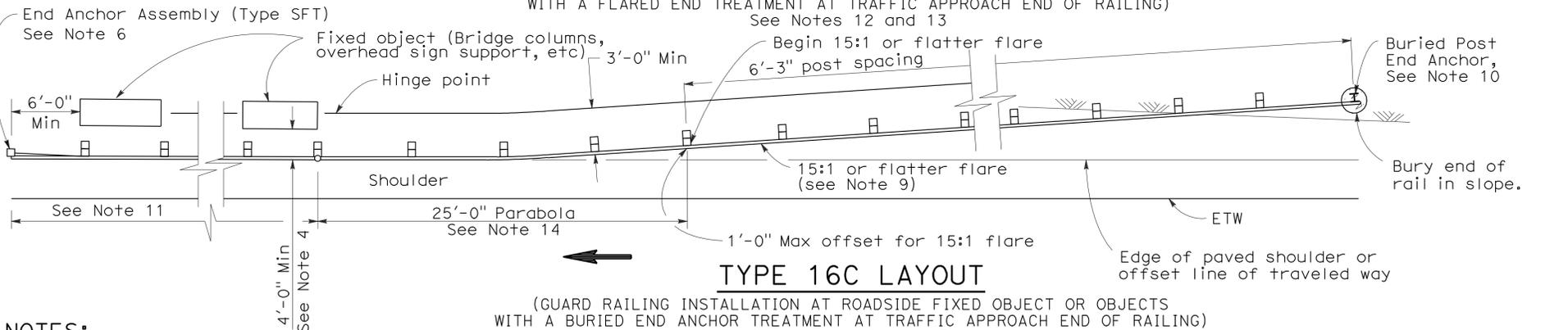
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



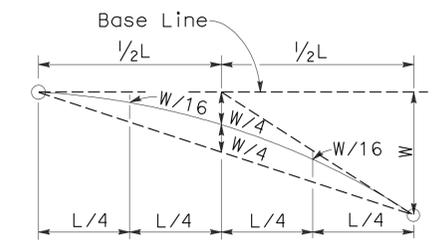
TYPE 16B LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

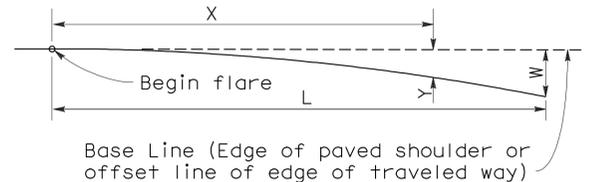


TYPE 16C LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



TYPICAL PARABOLIC LAYOUT

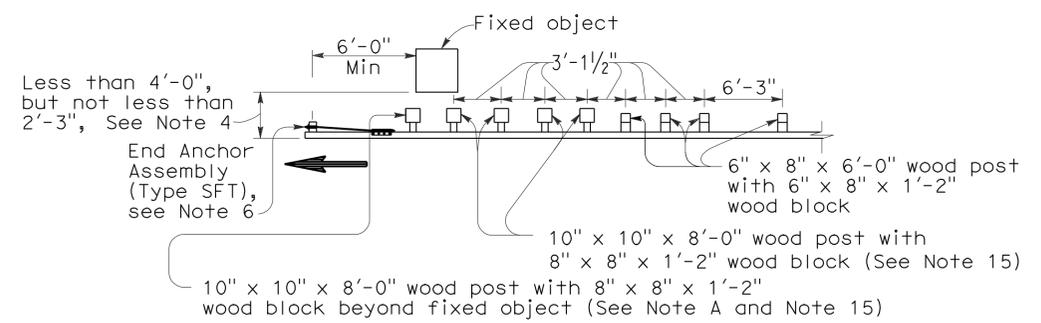


$$Y = \frac{WX^2}{L^2}$$
 Y = Offset from base line
 W = Maximum offset
 X = Distance along base line
 L = Length of flare

PARABOLIC FLARE OFFSETS

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Types 16A, 16B or 16C Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE
RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3 DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

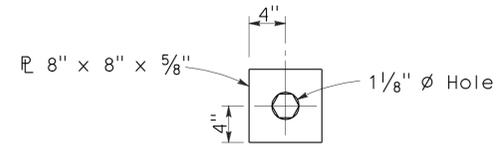
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	679	1931

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

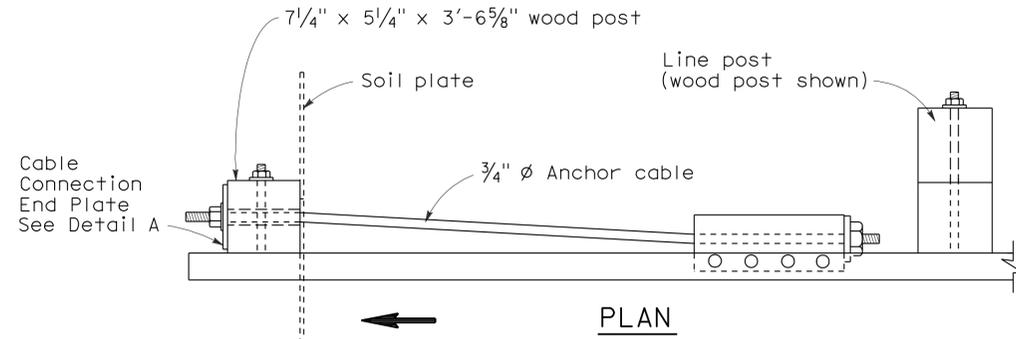
May 20, 2011
PLANS APPROVAL DATE

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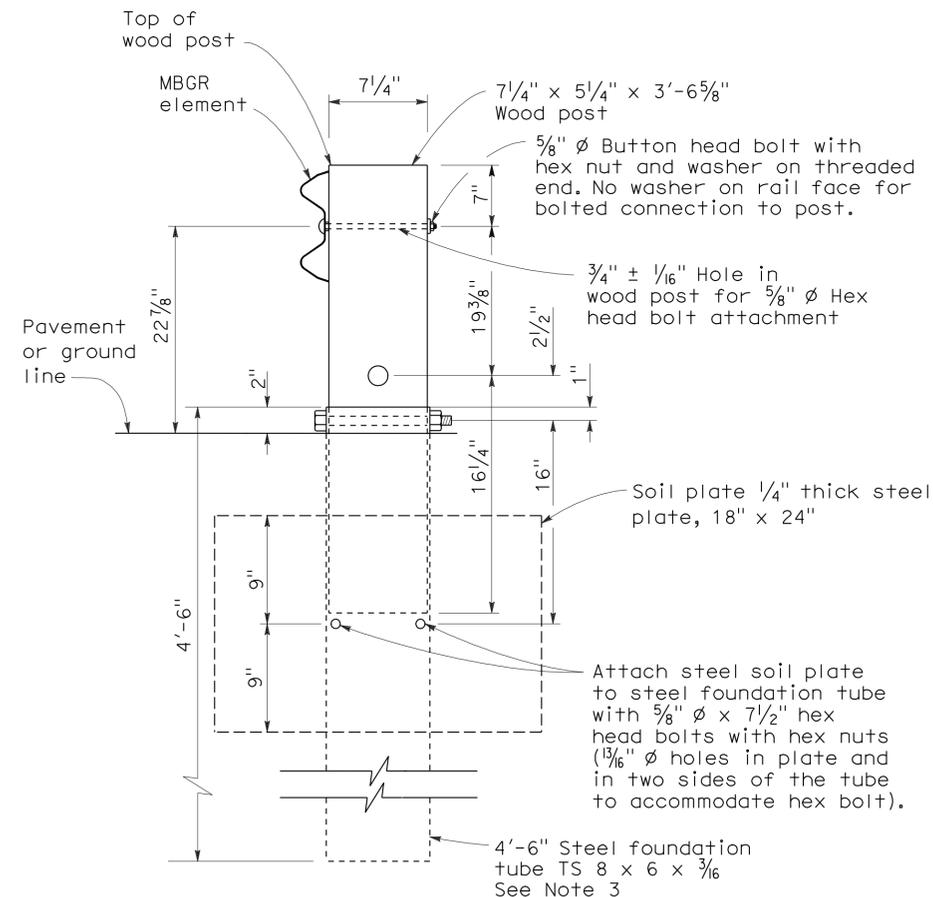
To accompany plans dated 5-21-12



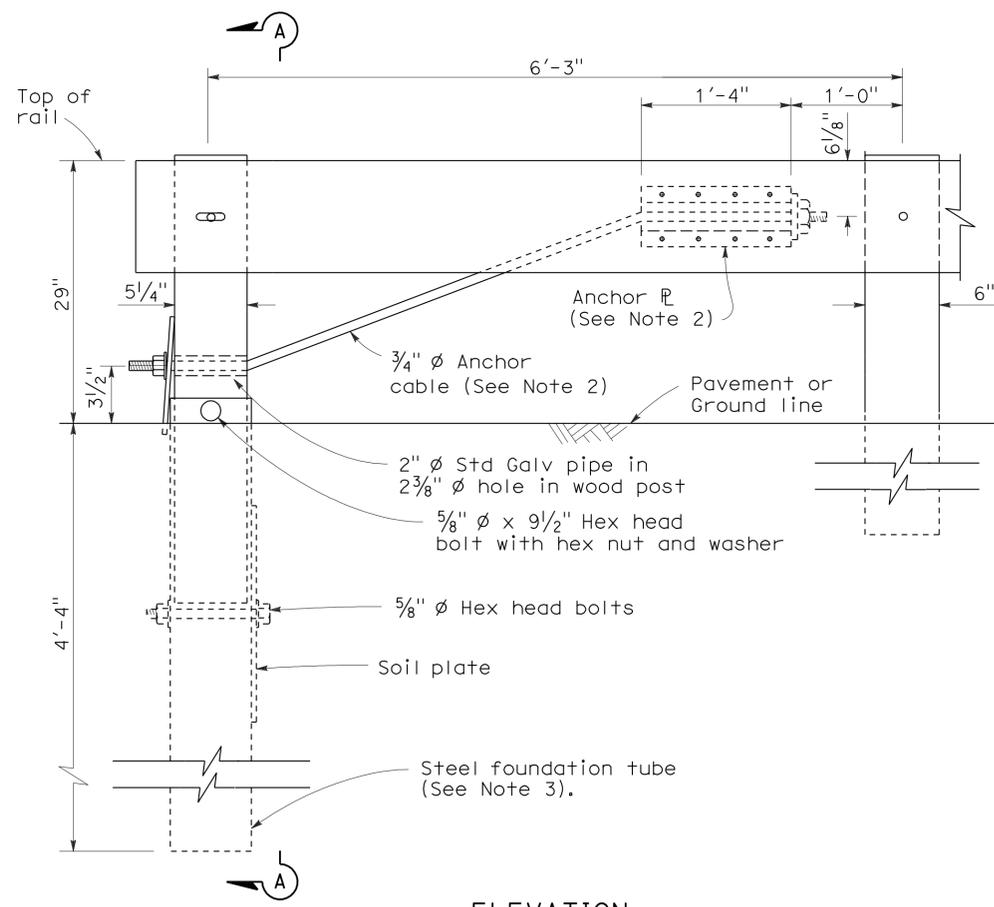
DETAIL A
CABLE CONNECTION
END PLATE



PLAN



SECTION A-A



ELEVATION
END ANCHOR
ASSEMBLY (TYPE SFT)
See Note 1

NOTES:

1. See the A77E, A77F and A77G series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Standard Plan A77H3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Direction of traffic indicated by \Rightarrow .
5. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL RAILING
END ANCHOR ASSEMBLY
(TYPE SFT)

NO SCALE

RSP A77H1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77H1
DATED MAY 1, 2006 - PAGE 67 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77H1

2006 REVISED STANDARD PLAN RSP A77H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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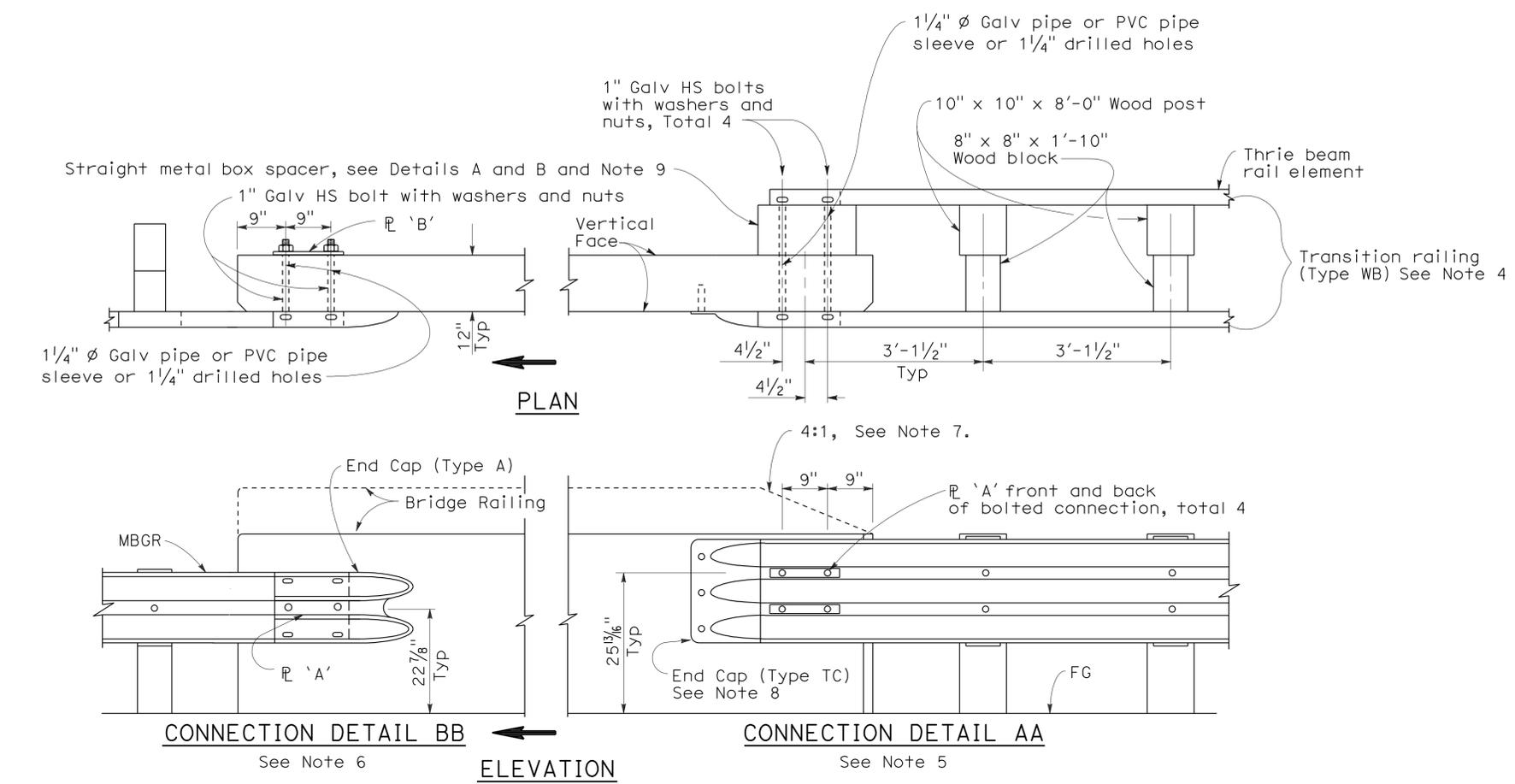
Randell D. Hiatt
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May 20, 2011
PLANS APPROVAL DATE

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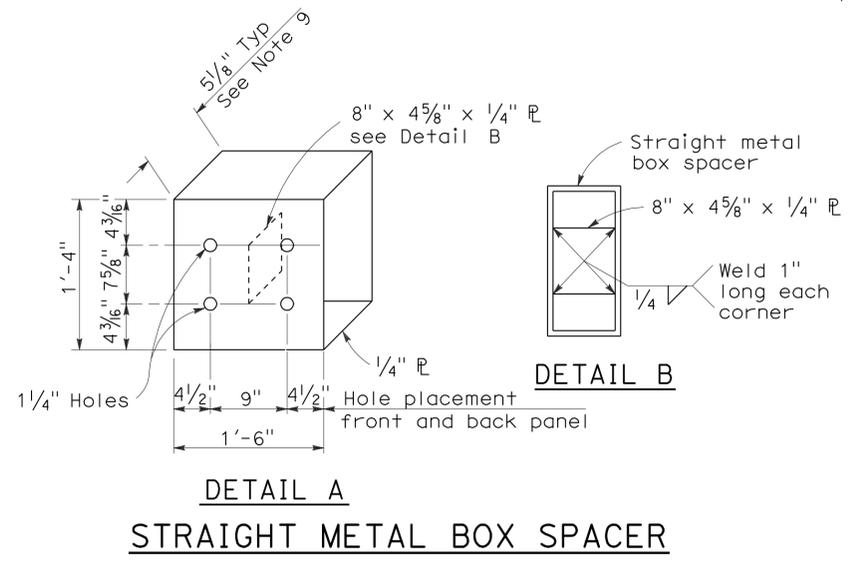
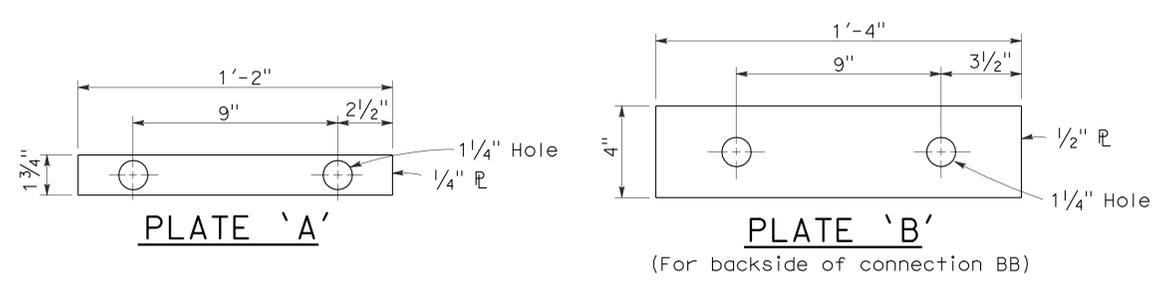
To accompany plans dated 5-21-12



GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77J2 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by \rightarrow .
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
5. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
6. For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.
7. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
8. For details of End Cap (Type TC), see Standard Plan A77J4.
9. See Standard Plan A77J4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.1

NO SCALE
RSP A77J1 DATED MAY 20, 2011 SUPERSEDES RSP A77J1 DATED JUNE 6, 2008 AND STANDARD PLAN A77J1 DATED MAY 1, 2006 - PAGE 72 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	681	1931

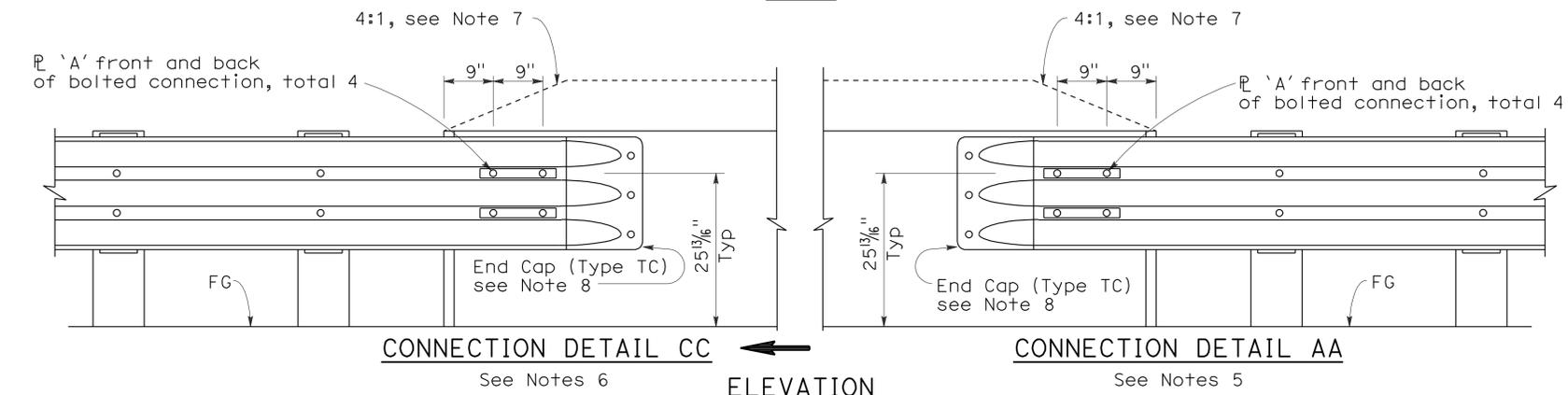
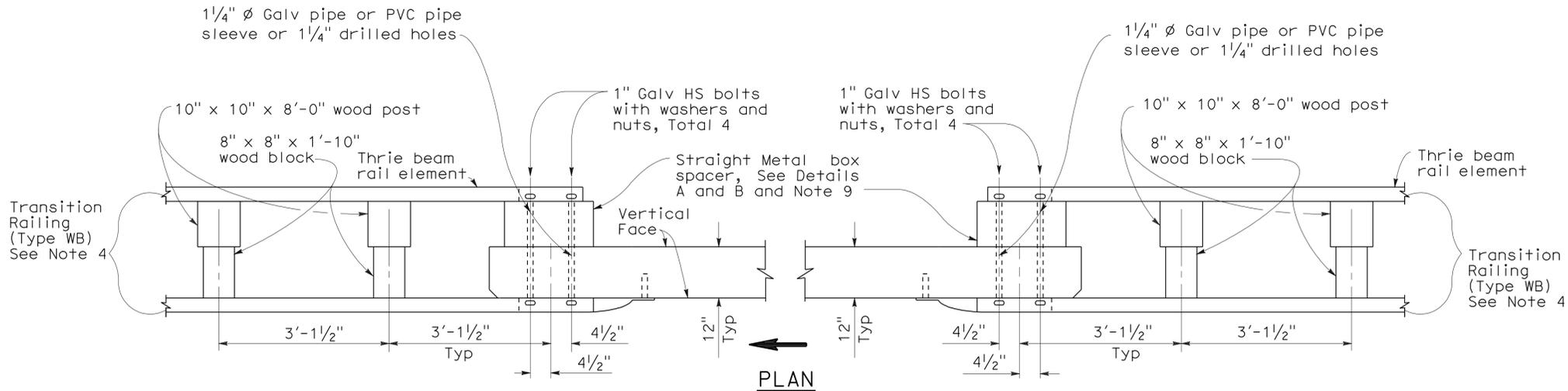
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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No. C50200
Exp. 6-30-09
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STATE OF CALIFORNIA

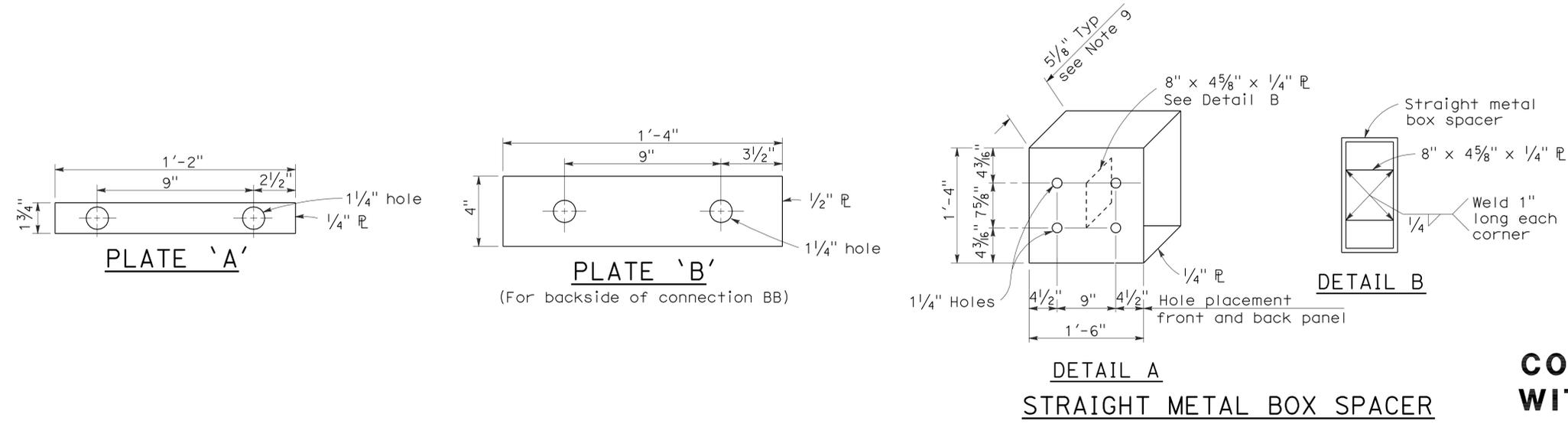
To accompany plans dated 5-21-12



GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

- See Revised Standard Plan RSP A77J1 for additional connection details to bridges without sidewalks.
- Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
- Direction of adjacent traffic indicated by →.
- For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
- For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
- For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Standard Plan A77F4 and Layout Type 12CC on Standard Plan A77F5.
- Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
- For details of End Cap (Type TC), see Standard Plans A77J4.
- See Standard Plans A77J4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.2

NO SCALE
RSP A77J2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J2
DATED MAY 1, 2006 - PAGE 73 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77J2

2006 REVISED STANDARD PLAN RSP A77J2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	29.4/31.6	682	1931

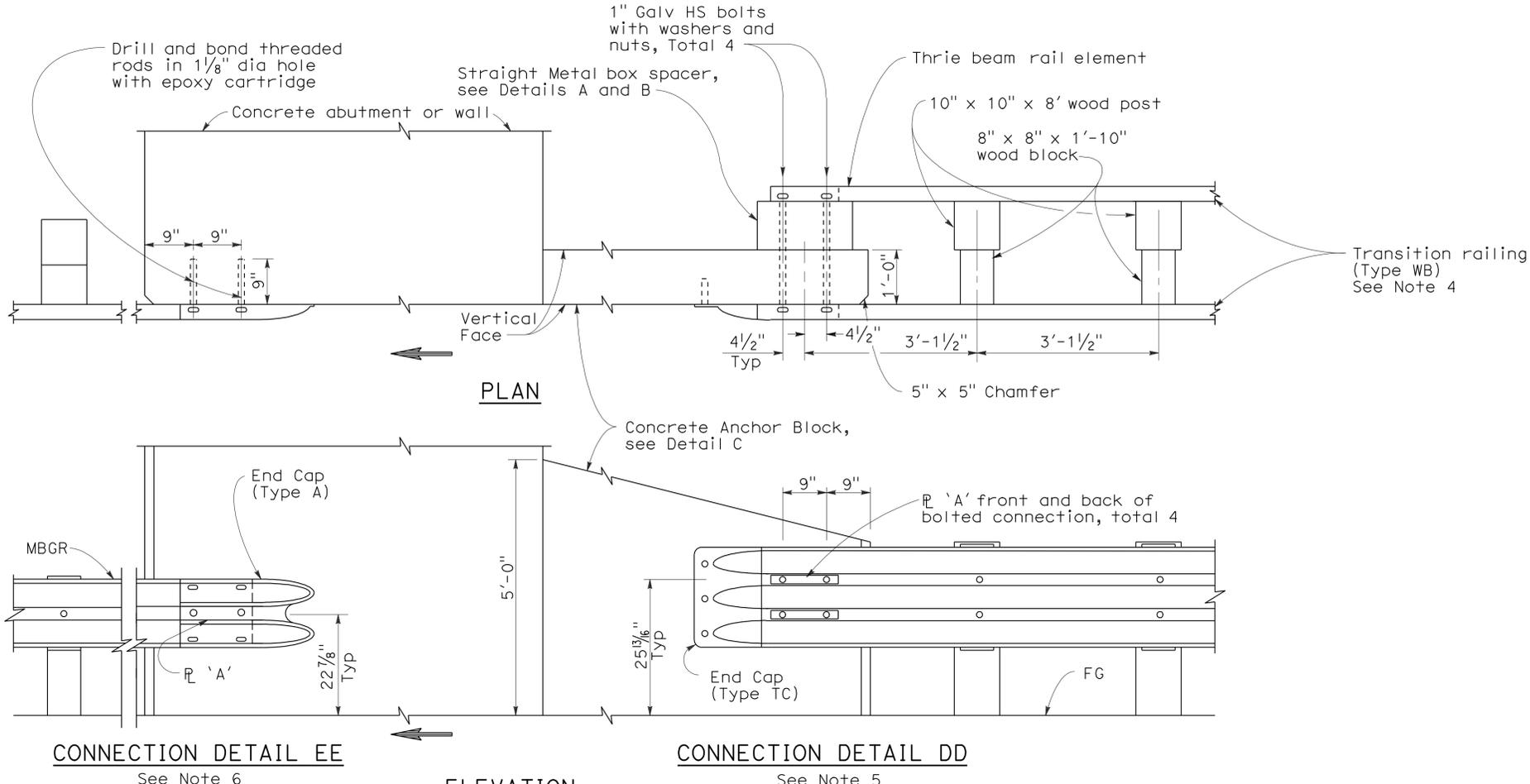
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 5-21-12



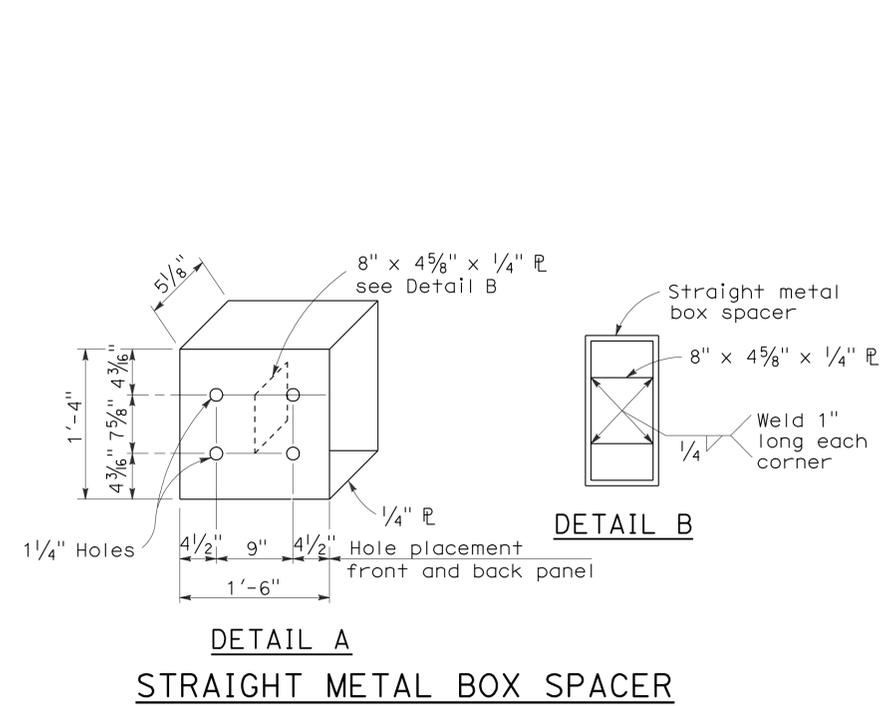
NOTES:

1. These connection details apply to abutments and walls.
2. Additional details of posts, blocks and hardware are shown on Standard Plans A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by \rightarrow .
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4 Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete anchor block.
5. For typical use of Connection Details DD, See Layout Types 12A and 12B on Standard Plan A77F1 and Layout Types 12C and 12D on Standard Plan A77F2.
6. For typical use of Connection Detail EE, see Layout Type 12D on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.

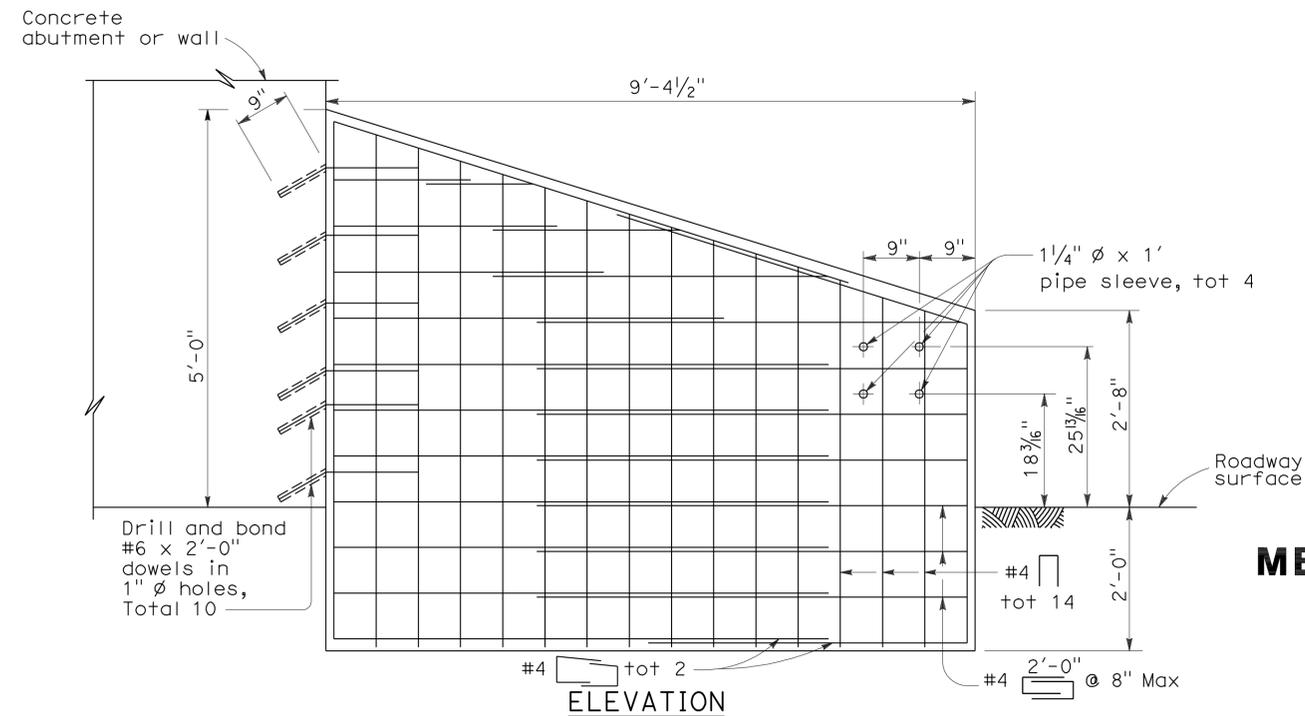
CONNECTION DETAIL EE See Note 6

CONNECTION DETAIL DD See Note 5

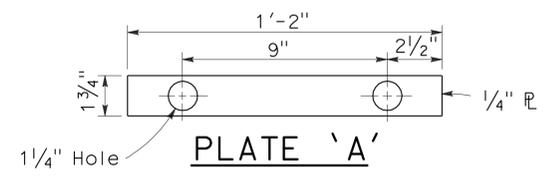
GUARD RAILING CONNECTION TO ABUTMENT OR WALL



STRAIGHT METAL BOX SPACER



ANCHOR BLOCK FOR TRANSITION RAILING CONNECTION



DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING CONNECTIONS TO ABUTMENTS AND WALLS

NO SCALE

RSP A77J3 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77J3 DATED MAY 1, 2006 - PAGE 74 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77J3

2006 REVISED STANDARD PLAN RSP A77J3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	683	1931

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

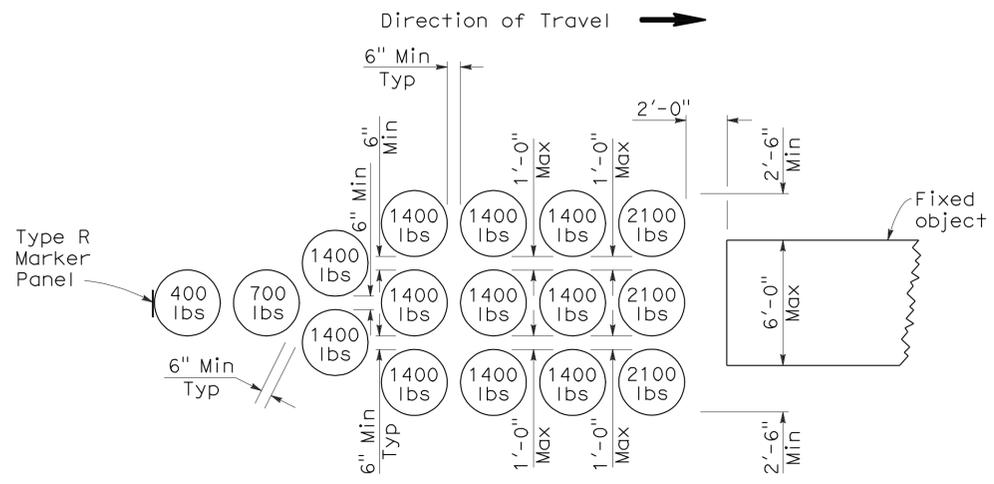
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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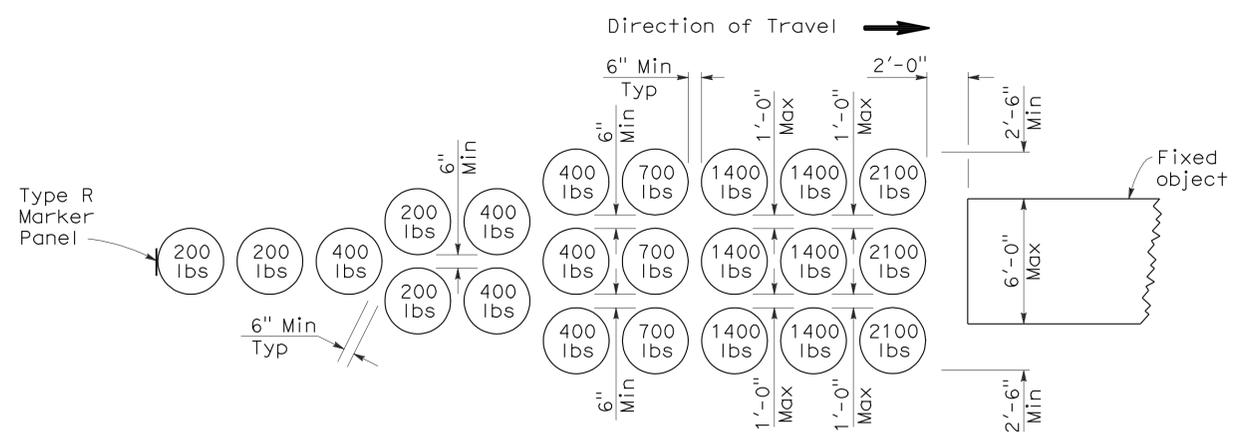
To accompany plans dated 5-21-12

NOTES:

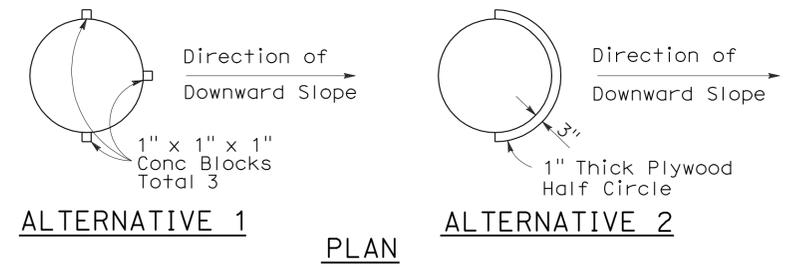
1. (XXX) Indicates module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the modules.
2. All sand weights are nominal.
3. Each module is to contain amount of sand indicated, supported according to the manufacturer's instructions.
4. Modules shall be placed on asphalt concrete, epoxy mortar or concrete surface. Modules to be placed on surfacing with greater than 5% downward slope shall be seated as shown.
5. Mass of sand and outline of each module shall be painted on the surface at each module location.
6. Module blocking, epoxied to the deck surface, is required for all modules placed on bridge decks. Two acceptable alternatives are shown. Other alternatives recommended by the manufacturer and approved by the Engineer will be accepted.
7. Place the top of the Type R marker panel 1" below the module lid.
8. Approach speeds indicated conform to NCHRP Report criteria.



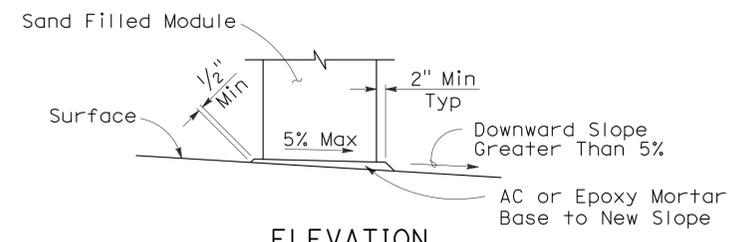
ARRAY 'U16'
Approach speed less than 45 mph



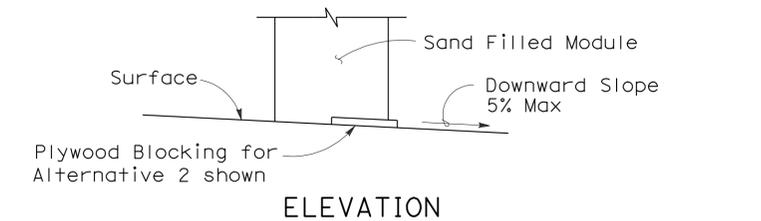
ARRAY 'U21'
Approach speed 45 mph or more



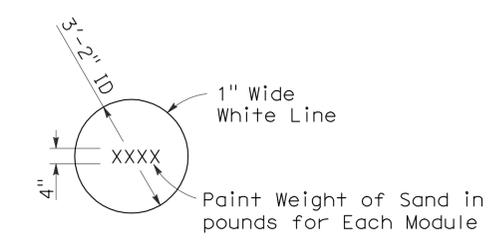
ALTERNATIVE 1 **ALTERNATIVE 2**
PLAN



ELEVATION
SLOPED SEAT DETAIL
(See Note 4)



ELEVATION
BRIDGE DECK MODULE BLOCKING DETAILS
(See Note 6)



PAINTING DETAIL
(See Note 5)

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

RSP A81B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A81B
DATED MAY 1, 2006 - PAGE 100 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A81B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	684	1931

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

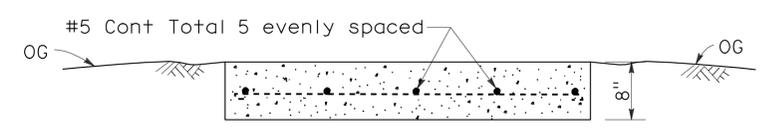
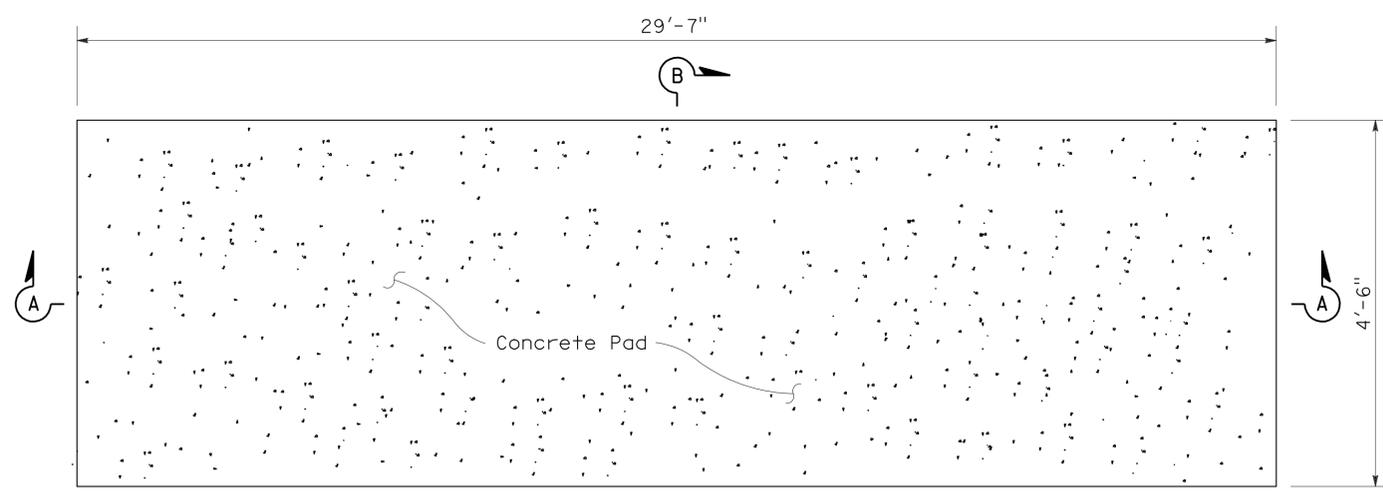
June 6, 2008
PLANS APPROVAL DATE

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

To accompany plans dated 5-21-12

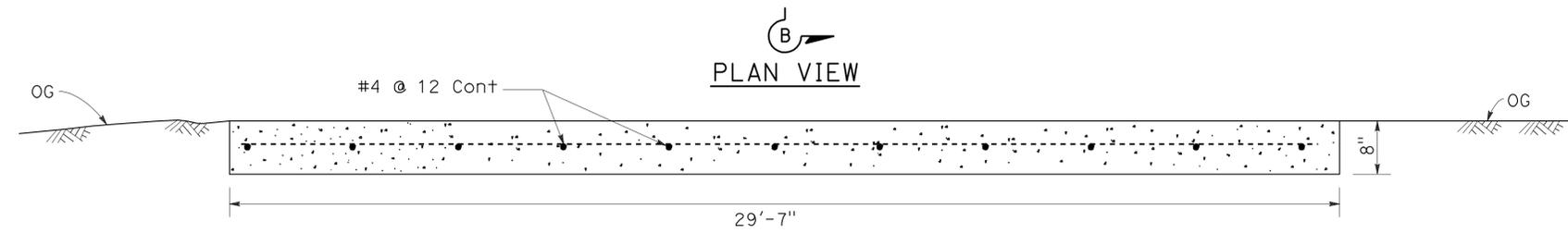
2006 REVISED STANDARD PLAN RSP A82C1



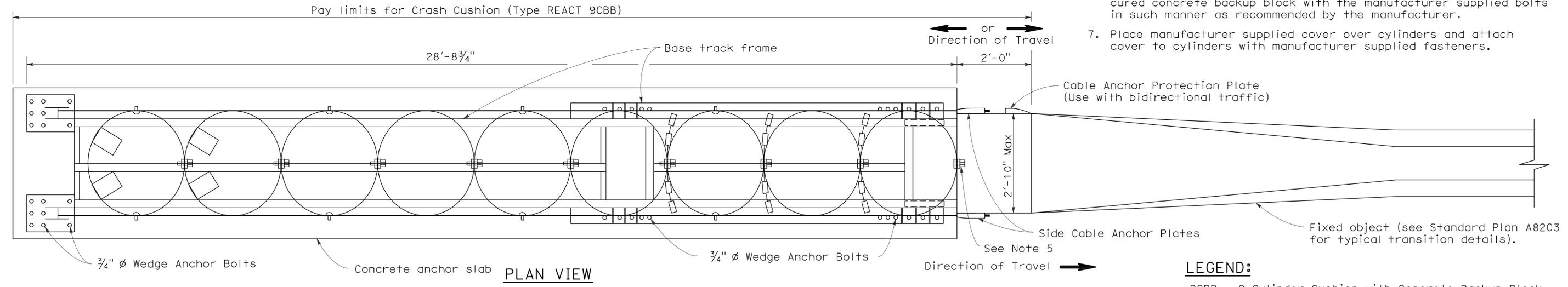
SECTION B-B

NOTES:

- For additional details of this crash cushion, refer to manufacturer's installation instructions.
- For details of the REACT Crash Cushion with self contained backup support (no concrete backup block), see Standard Plan A82D1.
- The base track frame with cylinders attached comes from the manufacturer as a completely pre-assembled unit.
- Place the crash cushion unit on the cured concrete anchor slab and use the base track frame of the crash cushion as a template for drilling anchor bolt holes. Drill holes in slab and attach crash cushion with wedge anchor bolts supplied by the manufacturer.
- Attach last cylinder to concrete backup block with manufacturer supplied fastener in such manner as recommended by the manufacturer.
- Attach the manufacturer supplied side cable anchor plates to the cured concrete backup block with the manufacturer supplied bolts in such manner as recommended by the manufacturer.
- Place manufacturer supplied cover over cylinders and attach cover to cylinders with manufacturer supplied fasteners.

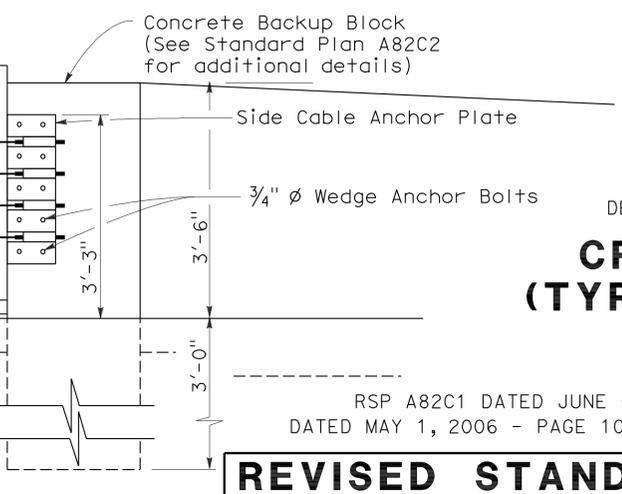
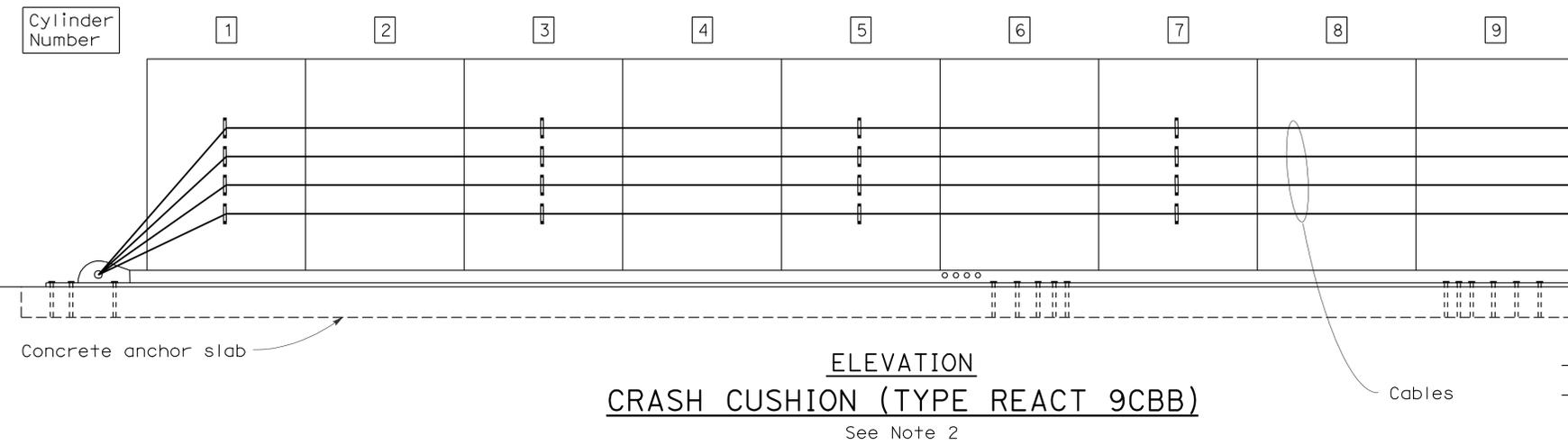


SECTION A-A
CONCRETE ANCHOR SLAB



LEGEND:

9CBB = 9 Cylinder Cushion with Concrete Backup Block



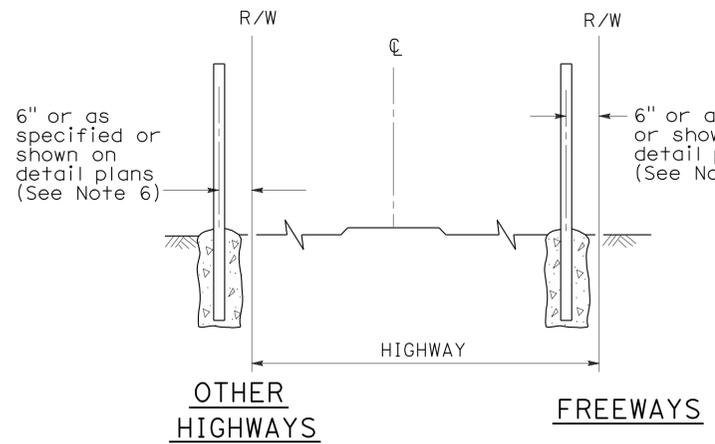
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CRASH CUSHION
(TYPE REACT 9CBB)**

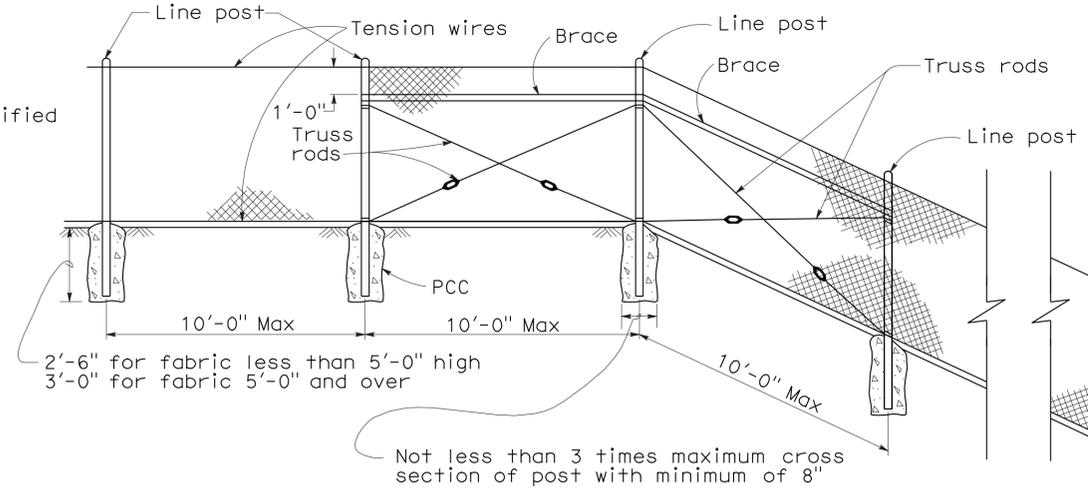
NO SCALE

RSP A82C1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A82C1
DATED MAY 1, 2006 - PAGE 104 OF THE STANDARD PLANS BOOK DATED MAY 2006.

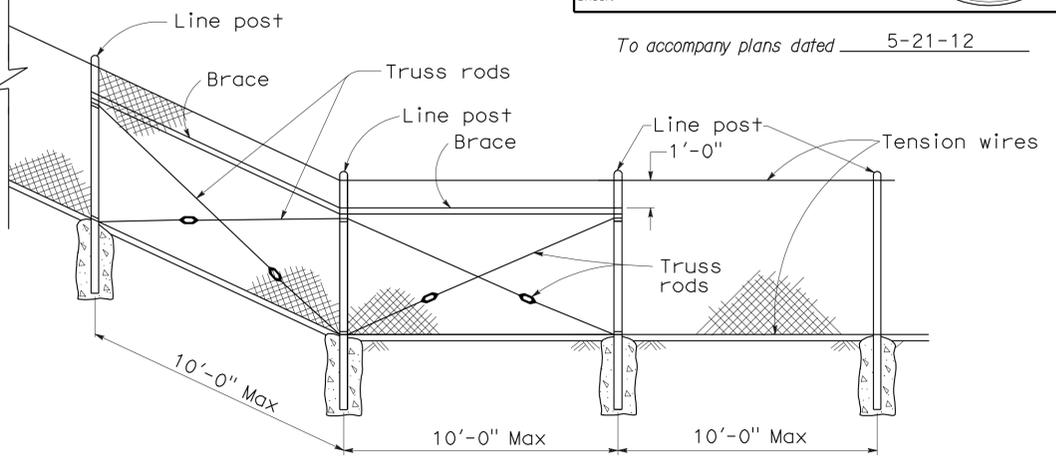
REVISED STANDARD PLAN RSP A82C1



FENCE LOCATION

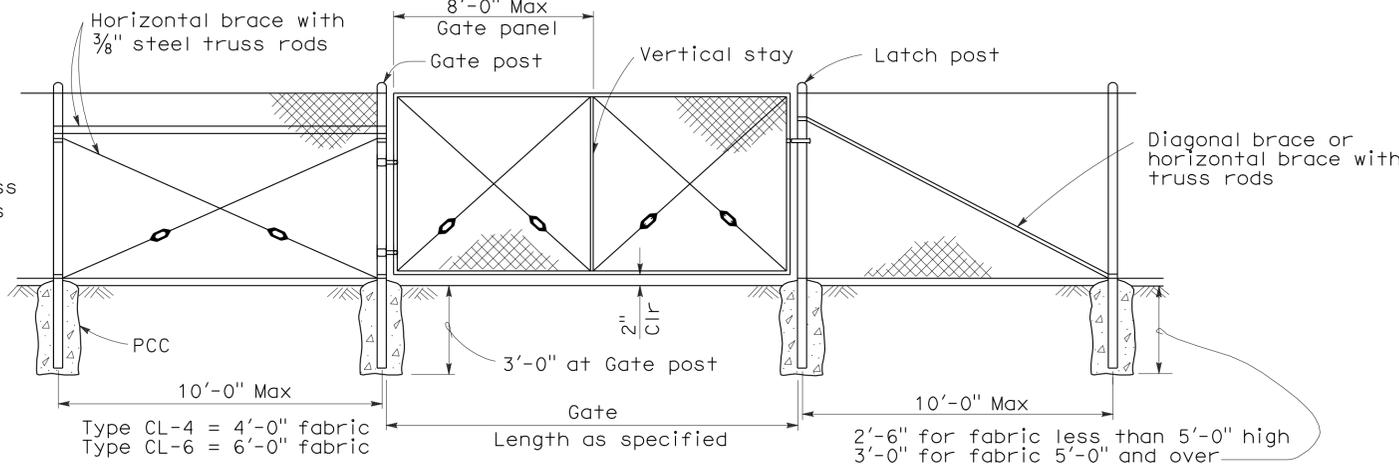
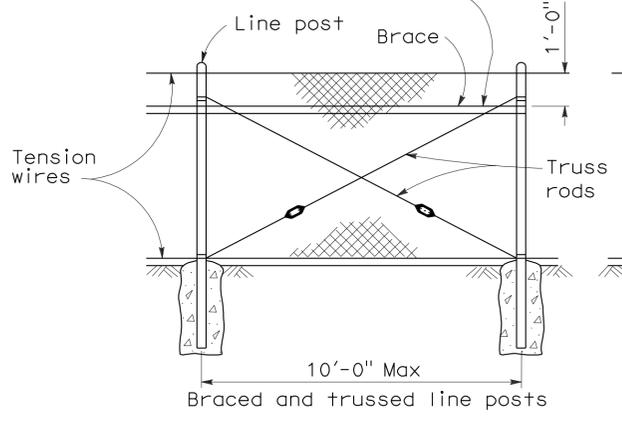


CHAIN LINK FENCE ON SHARP BREAK IN GRADE



To accompany plans dated 5-21-12

Brace to be removed after all other fence construction is completed unless otherwise directed by the Engineer



CHAIN LINK GATE INSTALLATION

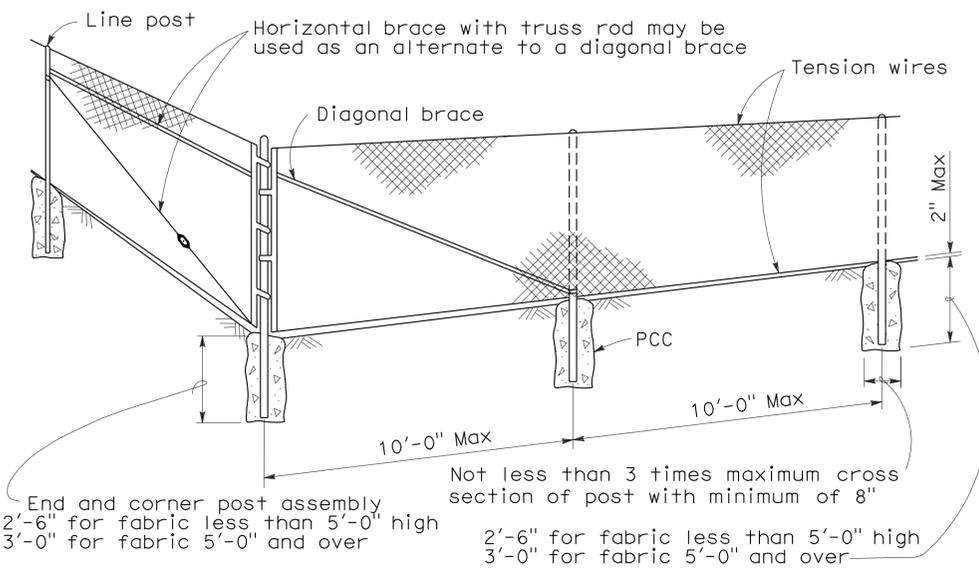
GATE POST			
FENCE HEIGHT	GATE WIDTHS	NOMINAL ID	WEIGHT PER FOOT
6'-0" and Less	Up thru 6'-0"	2 1/2"	4.95 LB
	Over 6'-0" thru 12'-0"	4"	10.79 LB
	Over 12'-0" thru 18'-0"	5"	14.62 LB
	Over 18'-0" to 24'-0" Max	6"	18.97 LB
Over 6'-0"	Up thru 6'-0"	3"	7.58 LB
	Over 6'-0" thru 12'-0"	5"	14.62 LB
	Over 12'-0" thru 18'-0"	6"	18.97 LB
	Over 18'-0" to 24'-0" Max	8"	28.55 LB

Above post dimensions and weights are minimums. Larger sizes may be used on approval of the Engineer.

NOTES:

- The below table shows examples of post and brace sections which may comply with the Specifications.
- Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
- Other sections which comply with the strength requirements and other provisions of the Specifications may be used on approval of the Engineer.
- Options exercised shall be uniform on any one project.
- Dimensions shown are nominal.
- Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.

FENCE HEIGHT	TYPICAL MEMBER DIMENSIONS (See Notes)									
	LINE POSTS			END, LATCH & CORNER POSTS			BRACES			
	ROUND ID	H	ROLL FORMED	ROUND ID	ROLL FORMED		ROUND ID	H	ROLL FORMED	
6' & less	1 1/2"	1 7/8" x 1 5/8"	1 7/8" x 1 5/8"	2"	3 1/2" x 3 1/2"	2" x 1 3/4"	1 1/4"	1 1/2" x 1 5/16"	1 5/8" x 1 1/4"	1 3/4" x 1 1/4"
Over 6'	2"	2 1/4" x 2"	2" x 1 3/4"	2 1/2"	3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	1 1/4"	1 1/2" x 1 5/16"	1 5/8" x 1 1/4"	1 3/4" x 1 1/4"



CORNER POST

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE
 NO SCALE

RSP A85 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN A85 DATED MAY 1, 2006 - PAGE 111 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A85

2006 REVISED STANDARD PLAN RSP A85

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	686	1931

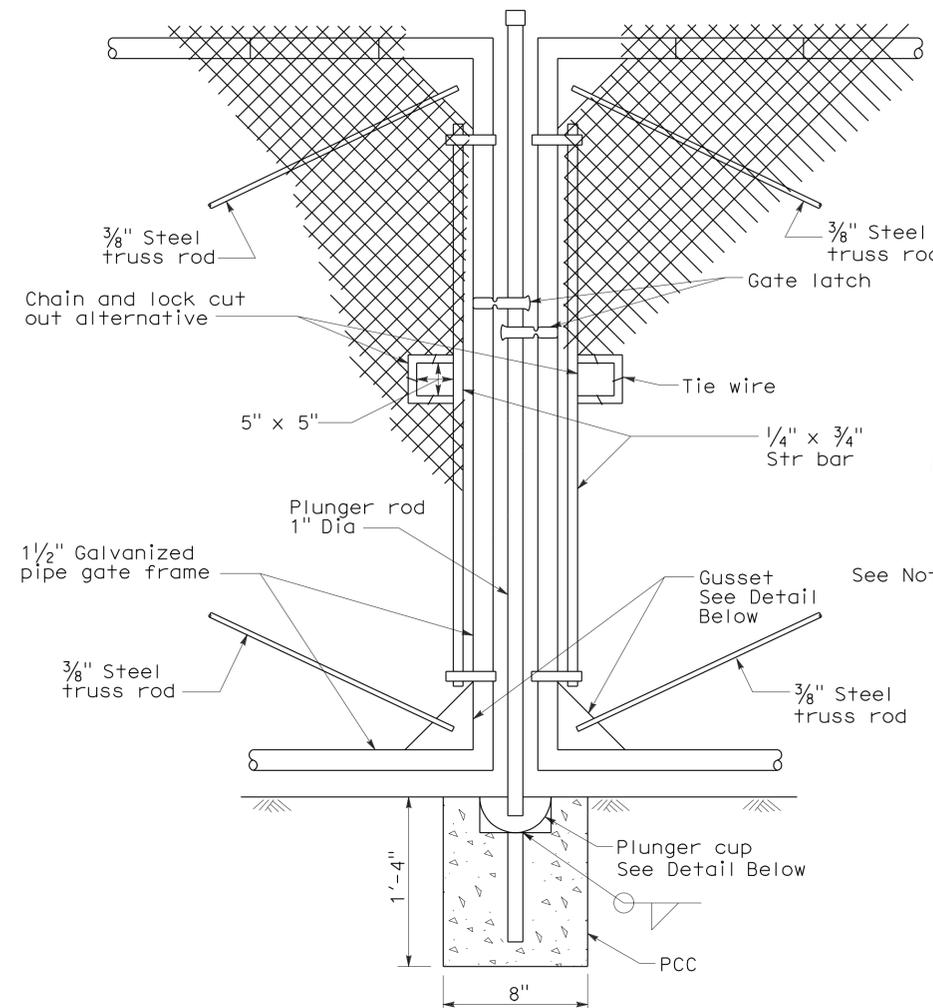
Glenn DeCou
 REGISTERED CIVIL ENGINEER
 No. C34547
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

June 5, 2009
 PLANS APPROVAL DATE

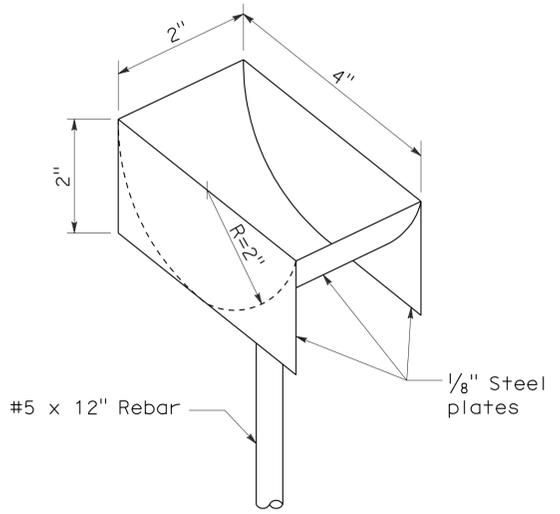
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To accompany plans dated 5-21-12

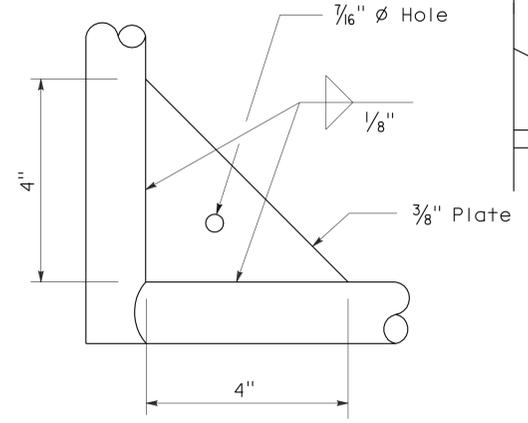
- NOTES:**
- H is 2'-6" for fabric less than 5'-0" high.
H is 3'-0" for fabric 5'-0" and over.
 - T is not less than 3 times maximum cross section of post with minimum of 8".
 - Arms with barbed wire to be used where shown on plans.
 - See Revised Standard Plan RSP A85 for Chain Link Fencing dimensions.
 - Reinforcing must comply with ASTM A 706.
 - See Detail A on New Standard Plan NSP A86B for connection at headwall.



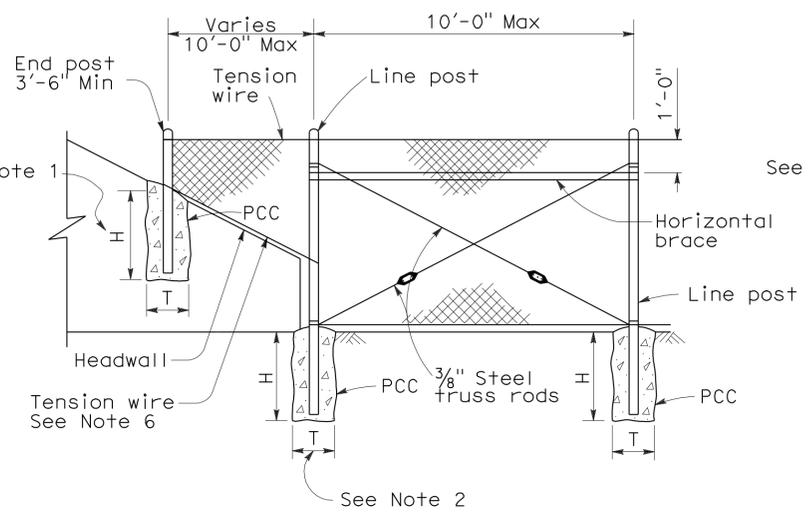
**TYPICAL DOUBLE GATE
REMOVABLE CENTER POST**



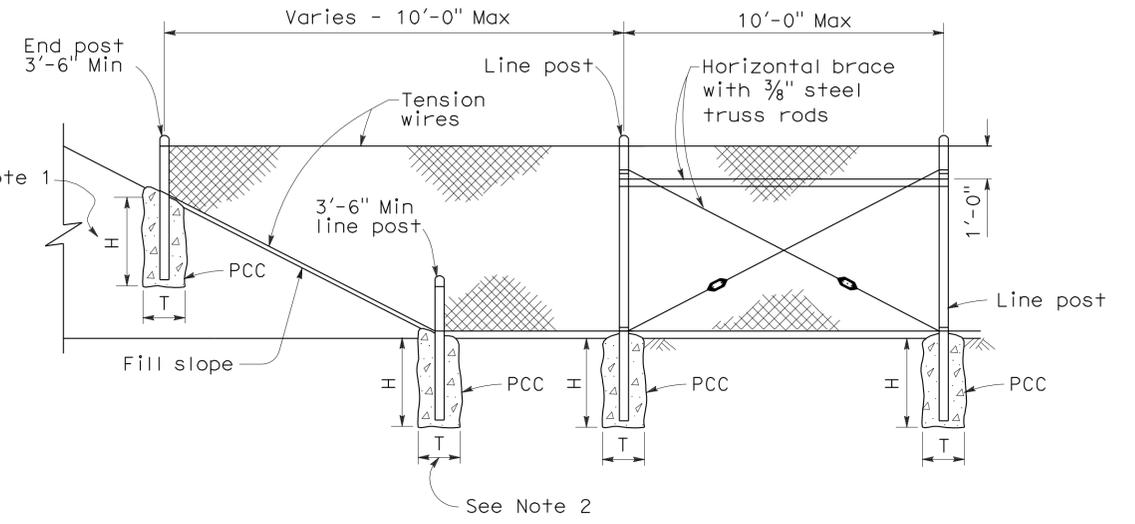
PLUNGER CUP DETAIL



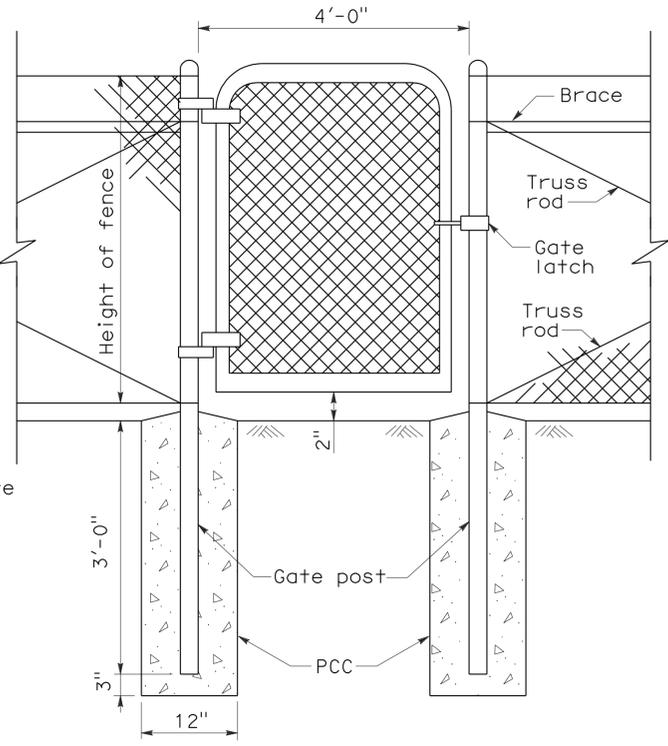
GUSSET DETAIL



METHOD OF TYING FENCE TO HEADWALL



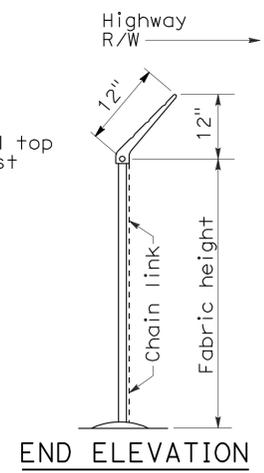
METHOD OF ERECTING FENCE FOR FILL SLOPE



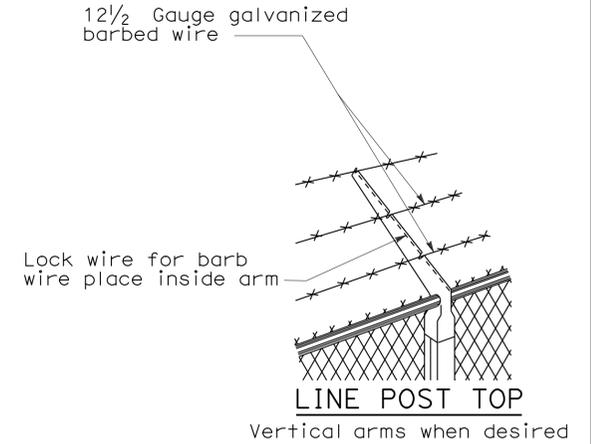
WALK GATE



POST TOP END



BARBED WIRE POST TOP
See Note 3



LINE POST TOP
Vertical arms when desired

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE DETAILS
NO SCALE

NSP A85A DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A85A

2006 NEW STANDARD PLAN NSP A85A

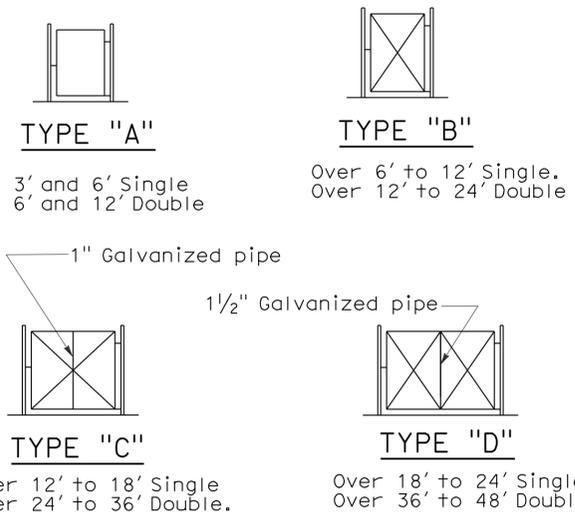
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	687	1931

Glenn DeCou
 REGISTERED CIVIL ENGINEER
 No. C34547
 Exp. 9-30-09
 STATE OF CALIFORNIA

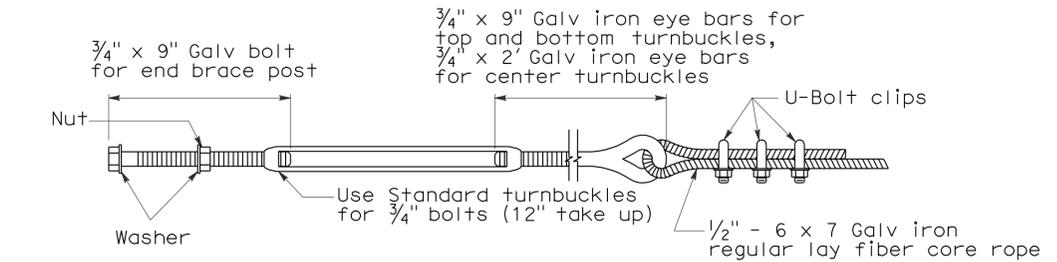
June 5, 2009
 PLANS APPROVAL DATE

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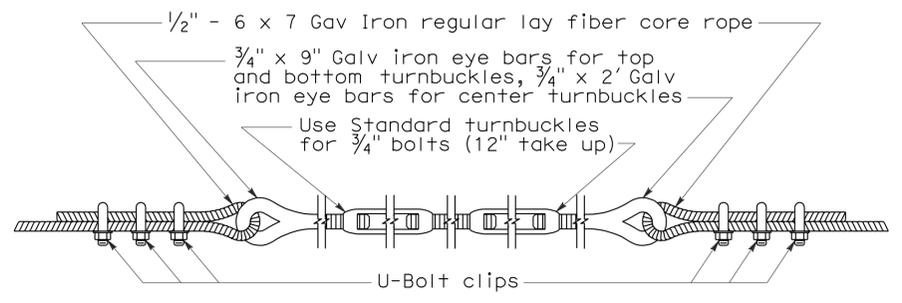
To accompany plans dated 5-21-12



TYPICAL FRAMEWORK SHOWING NUMBER OF BAYS IN GATE



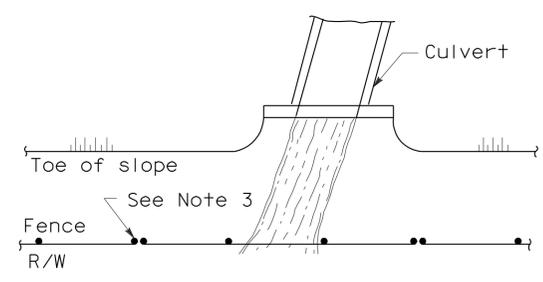
TURNBUCKLE A



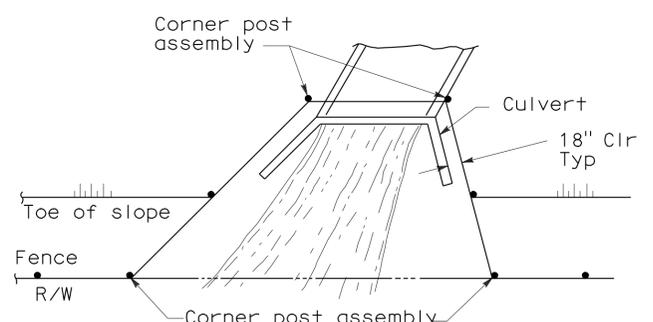
TURNBUCKLE B

NOTES:

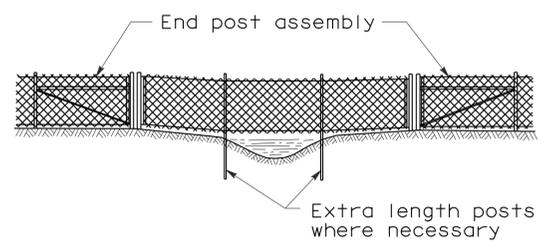
1. All material for abutment connection to be galvanized.
2. The chain link fabric shall be replaced by barbed wire strands at 12" maximum centers between the double posts.
3. When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the Engineer shall be used.
4. Fencing over stream and around headwall may also use Barbed Wire or Wire Mesh fencing with either wood post or steel post installation.
5. See Revised Standard Plan RSP A85 for Chain Link fence dimensions. See Standard Plan A86 for Barbed Wire and Wire Mesh fence dimensions and for wood post and steel post installation.



PLAN

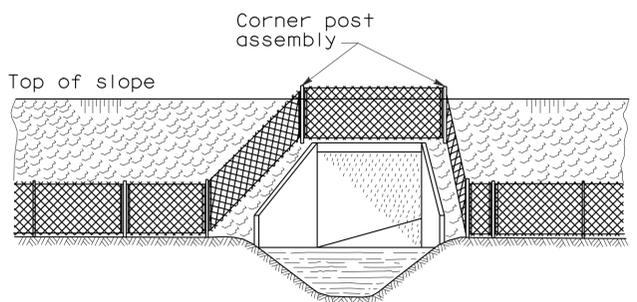


PLAN



ELEVATION

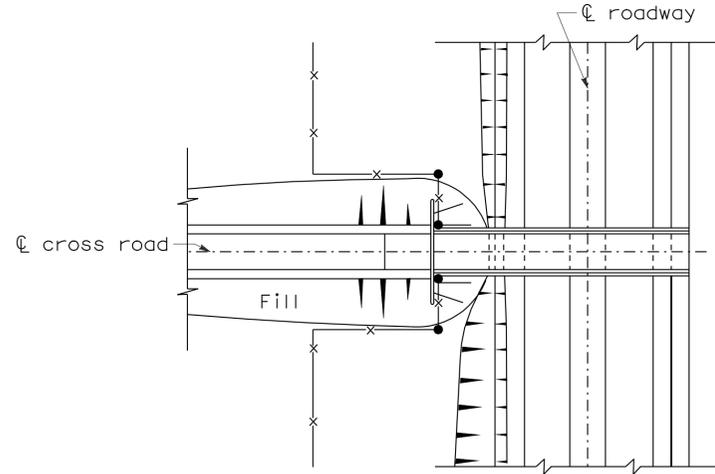
INSTALLATION OVER STREAM



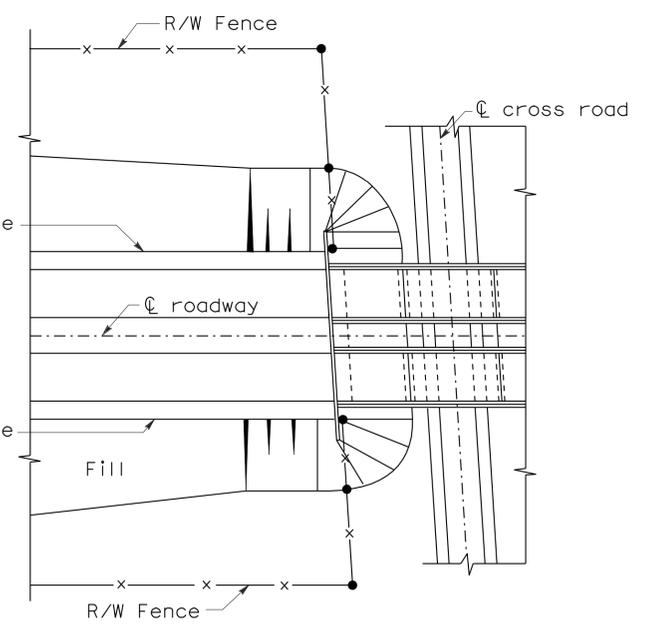
ELEVATION

INSTALLATION AROUND HEADWALL

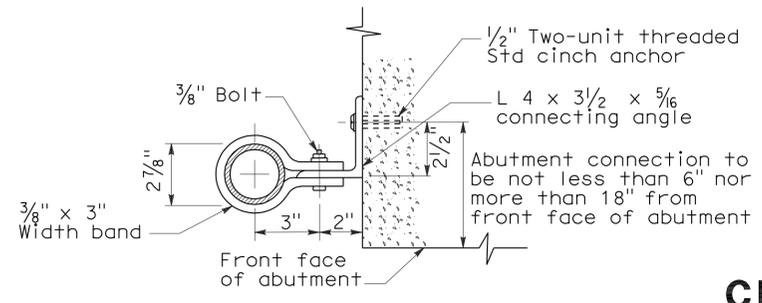
See Note 4



PLAN OF ROADWAY - UNDERPASS



PLAN OF ROADWAY - OVERPASS



ABUTMENT CONNECTION

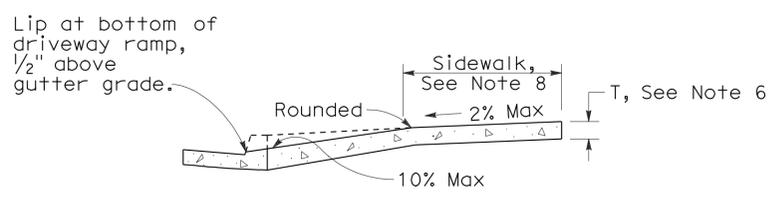
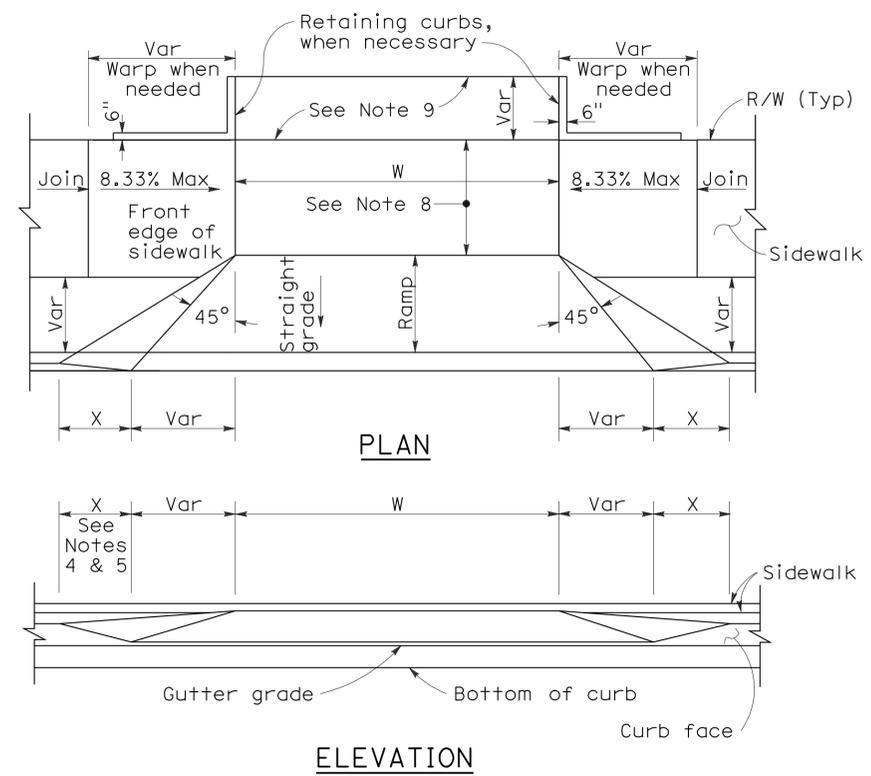
TYPICAL INSTALLATION AT BRIDGES

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE DETAILS
 NO SCALE

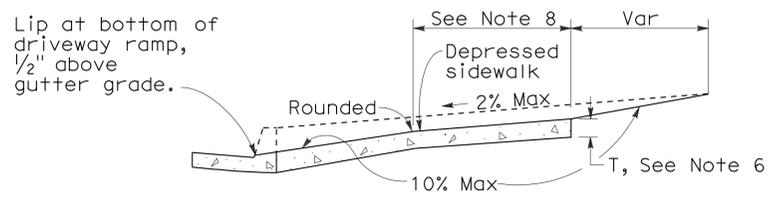
NSP A85B DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A85B

2006 NEW STANDARD PLAN NSP A85B



CASE A
Typical driveway, sidewalk not depressed



CASE B
Driveway with depressed sidewalk

SECTIONS

CURB QUANTITIES

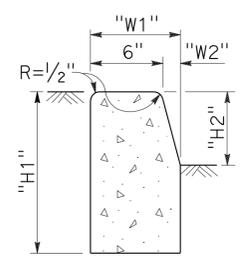
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

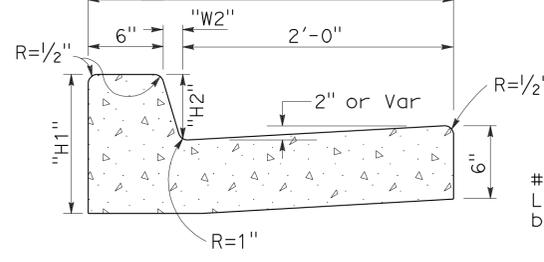
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8 1/2"	3 1/2"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-8"

To accompany plans dated 5-21-12

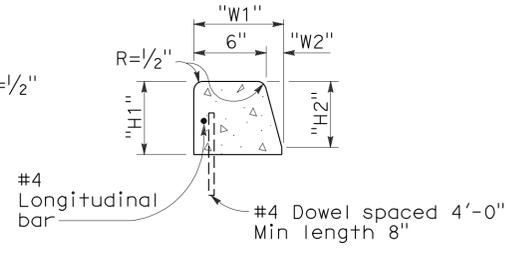
DRIVEWAYS



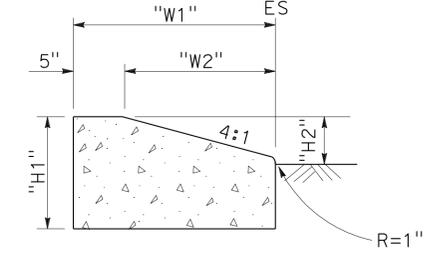
TYPE A1 CURBS
See Table A



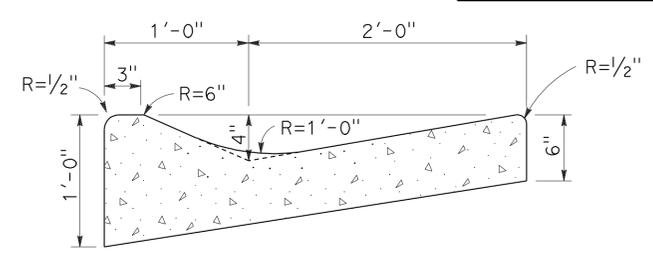
TYPE A2 CURBS
See Table A



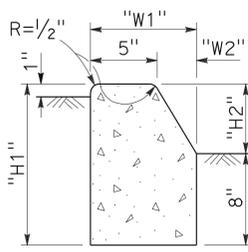
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



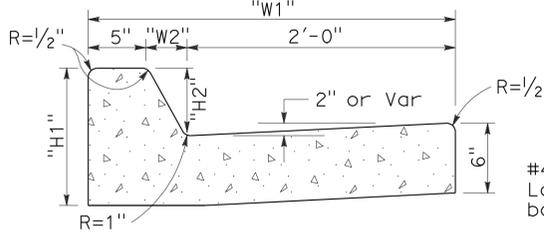
TYPE D CURBS
See Table A



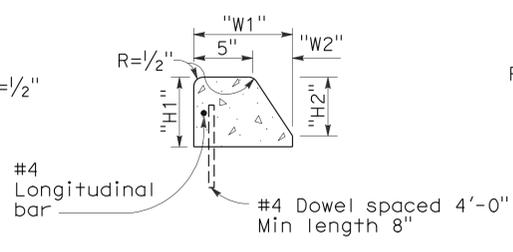
TYPE E CURB



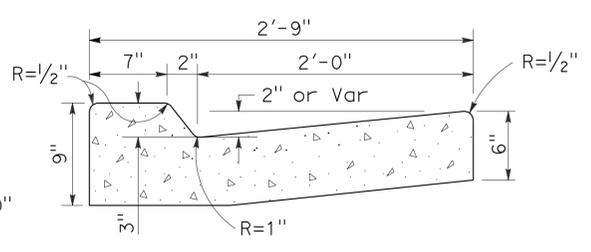
TYPE B1 CURBS
See Table A



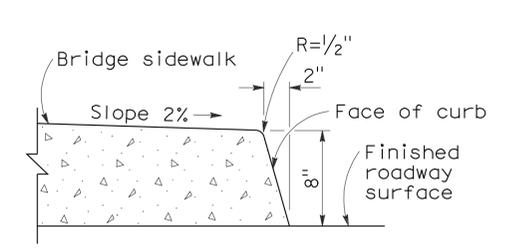
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

NOTES:

- Case A driveway section typically applies.
- Use Case B driveway section when ramp slopes would exceed 10% in Case A.
- Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
- Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-0".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

CURBS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

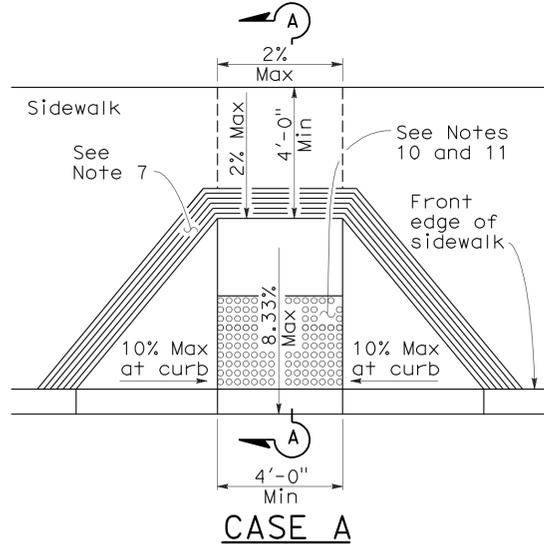
CURBS AND DRIVEWAYS

NO SCALE

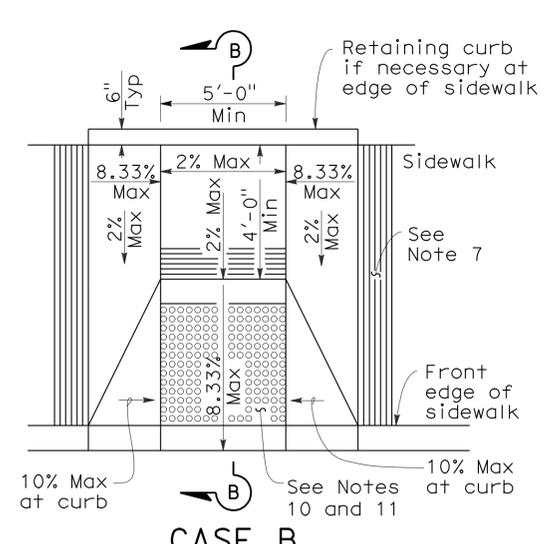
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	689	1931

H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 1, 2006
 PLANS APPROVAL DATE
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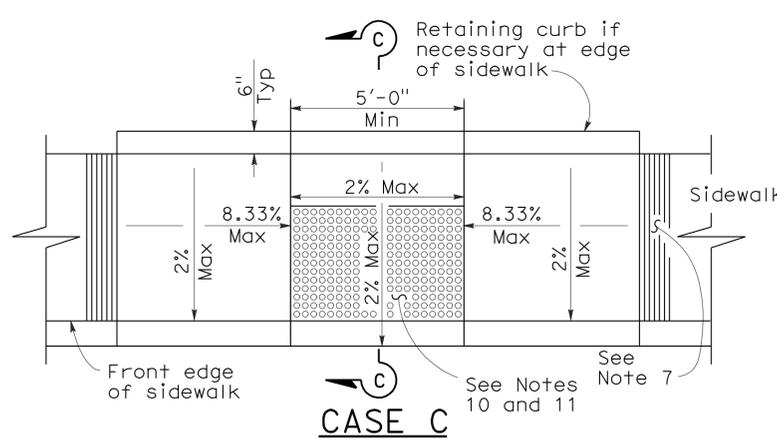
REGISTERED PROFESSIONAL ENGINEER
 Hector David Cordova
 No. C41957
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA



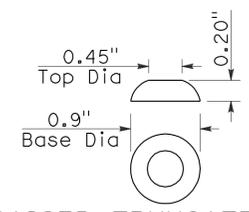
CASE A



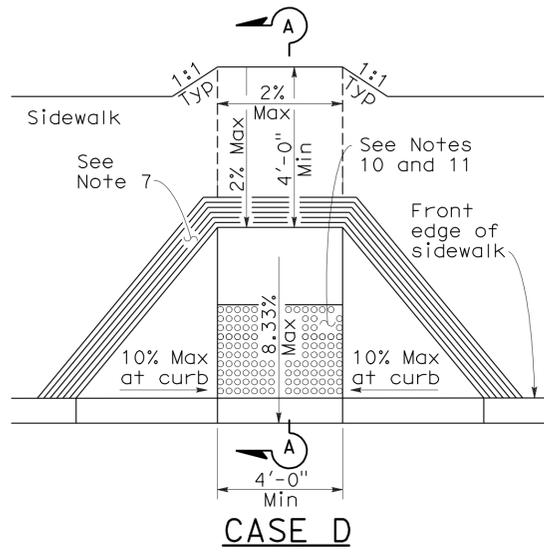
CASE B



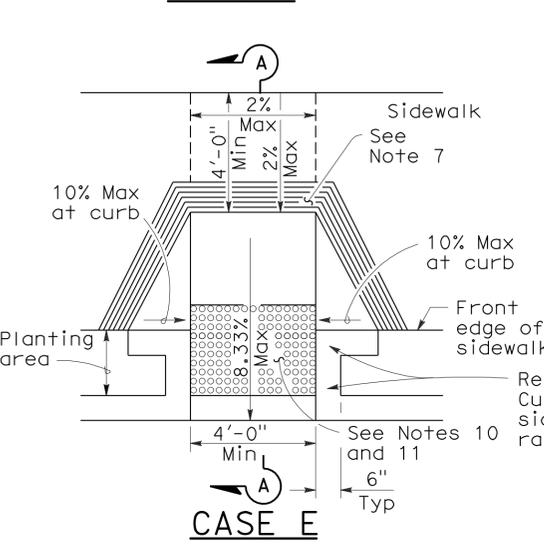
CASE C



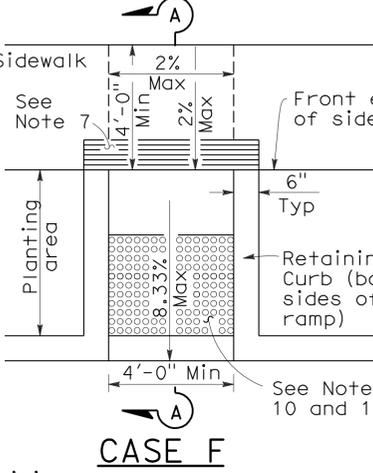
RAISED TRUNCATED DOME



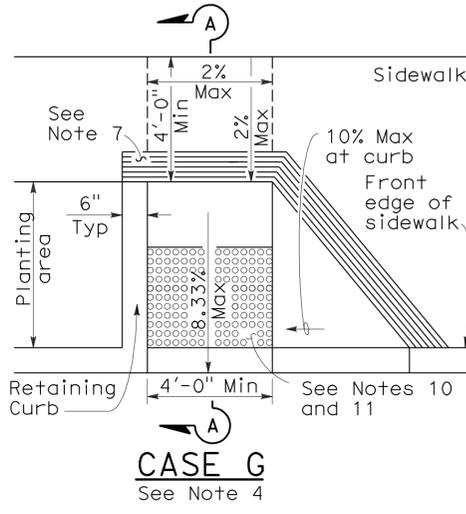
CASE D



CASE E



CASE F

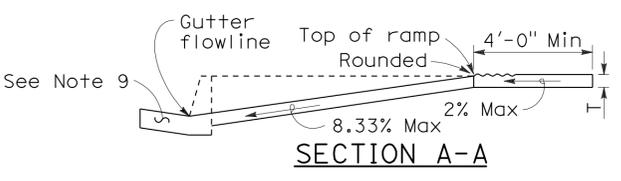


CASE G

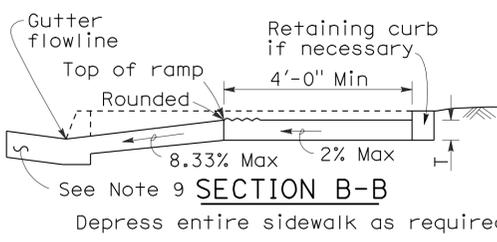
NOTES:

- 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.

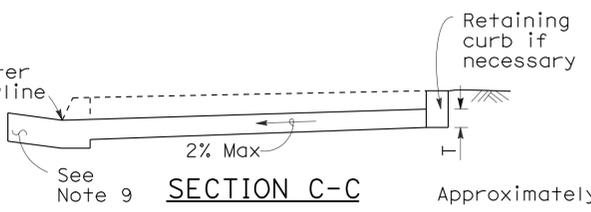
To accompany plans dated 5-21-12



SECTION A-A



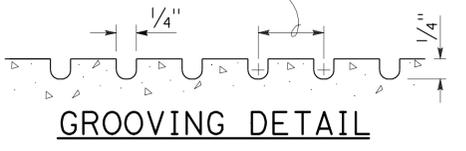
SECTION B-B



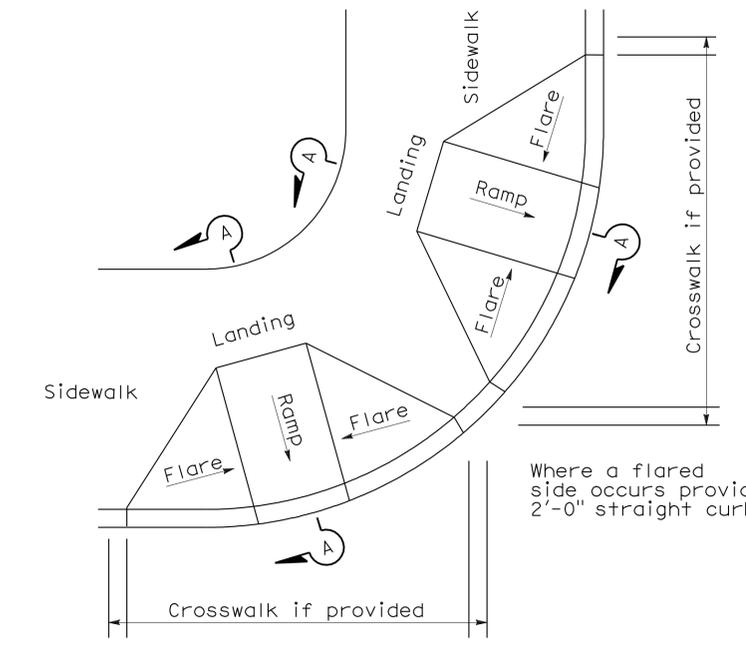
SECTION C-C



RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE



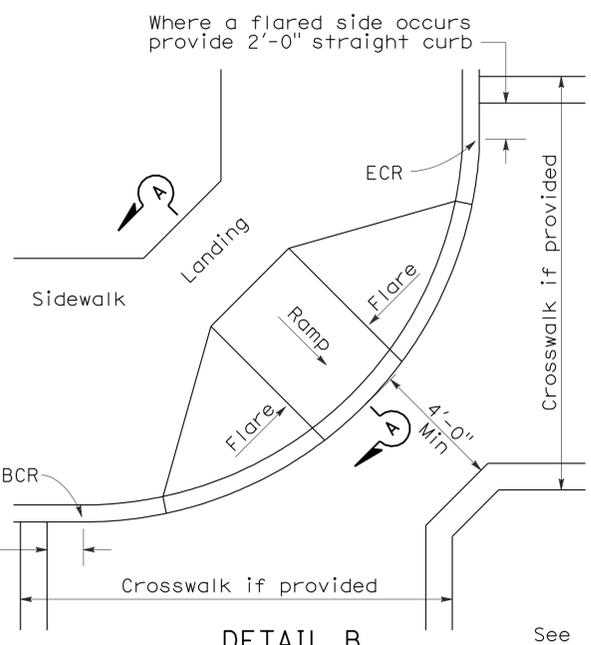
GROOVING DETAIL



DETAIL A

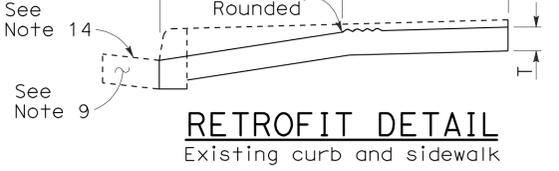
TYPICAL TWO-RAMP CORNER INSTALLATION

See Note 1



DETAIL B TYPICAL ONE-RAMP CORNER INSTALLATION

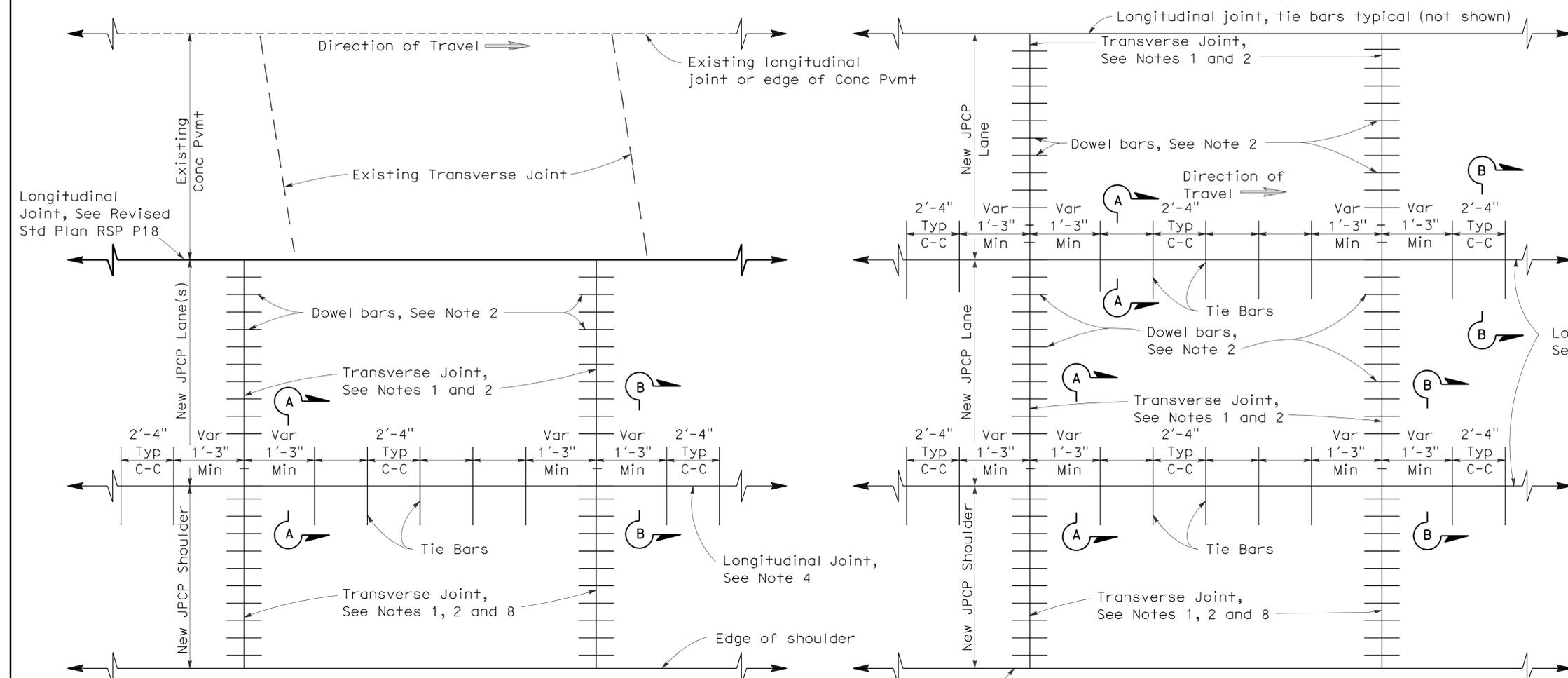
See Notes 1 and 3



RETROFIT DETAIL

Existing curb and sidewalk

To accompany plans dated 5-21-12



PLAN
LANE/SHOULDER ADDITION OR RECONSTRUCTION

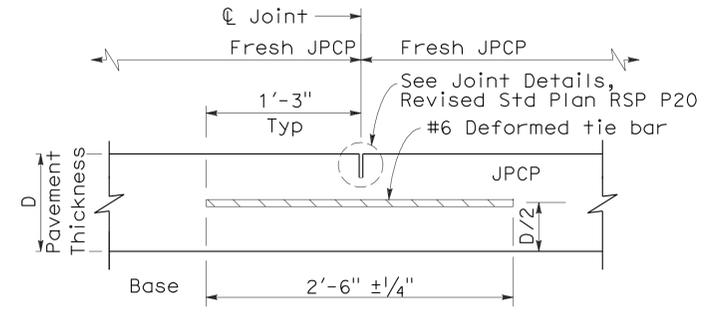
See Notes 6 and 7

PLAN
NEW CONSTRUCTION

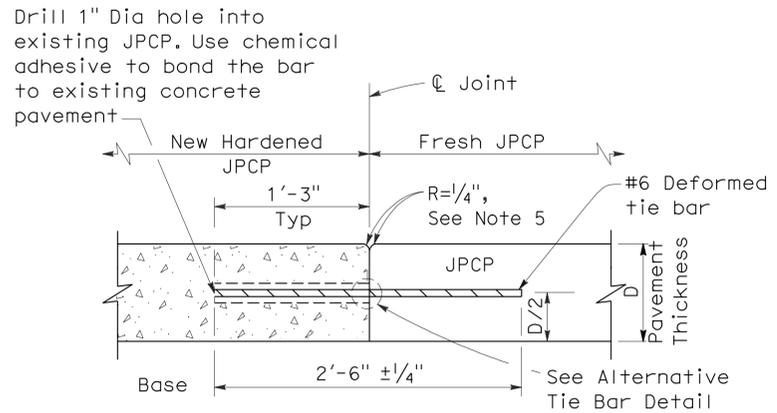
See Notes 6 and 7

NOTES:

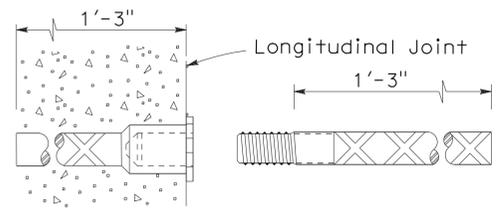
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
3. Construct longitudinal contraction joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal construction joint, as shown in Section B-B.
4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.
6. Joint spacing patterns do not apply to intersections.
7. Details can also apply to inside widening.
8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



SECTION A-A
LONGITUDINAL CONTRACTION JOINT



SECTION B-B
LONGITUDINAL CONSTRUCTION JOINT



ALTERNATIVE TIE BAR SPLICE DETAIL
(Splice Coupler)

TIE BAR DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**JOINTED PLAIN
CONCRETE PAVEMENT**

NO SCALE

RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1
DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P1

2006 REVISED STANDARD PLAN RSP P1

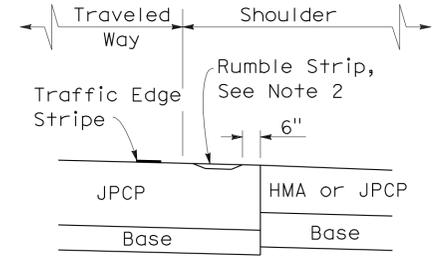
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	691	1931

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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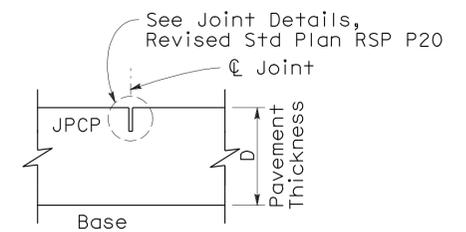
REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 5-21-12

- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new Jointed Plain Concrete Pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
 2. For locations of rumble strips, see project plans. For rumble strip details not shown, see Standard Plans A40A and A40B.
 3. Joint spacing patterns do not apply to intersections.



DETAIL "A"



**SECTION C-C
TRANSVERSE/LONGITUDINAL JOINT**
(no dowel bars/tie bars)

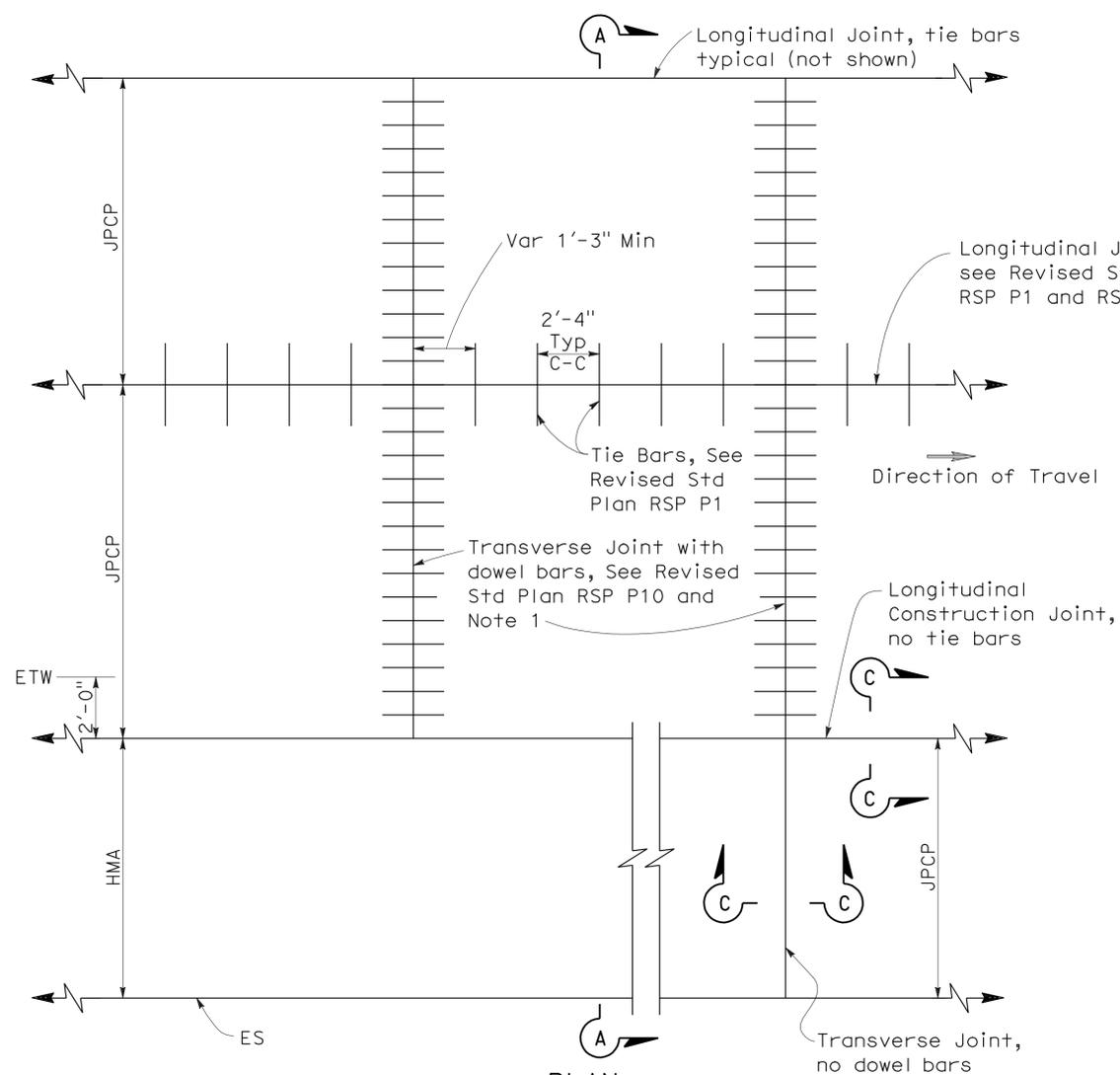
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN CONCRETE
PAVEMENT-WIDENED SLAB DETAILS**

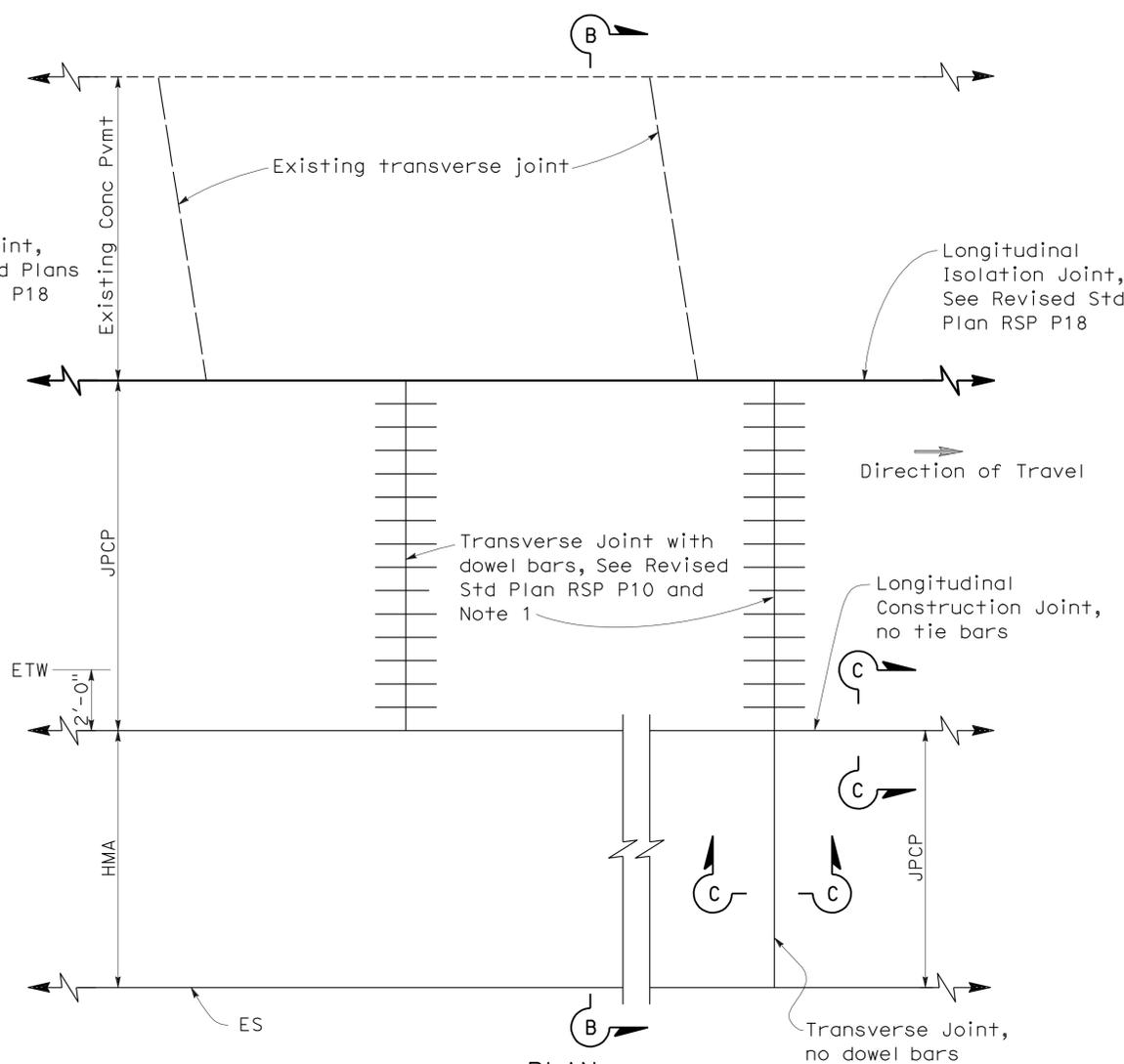
NO SCALE

RSP P2 DATED JUNE 5, 2009 SUPERCEDES STANDARD PLAN P2
DATED MAY 1, 2006 - PAGE 120 OF THE STANDARD PLANS BOOK DATED MAY 2006.

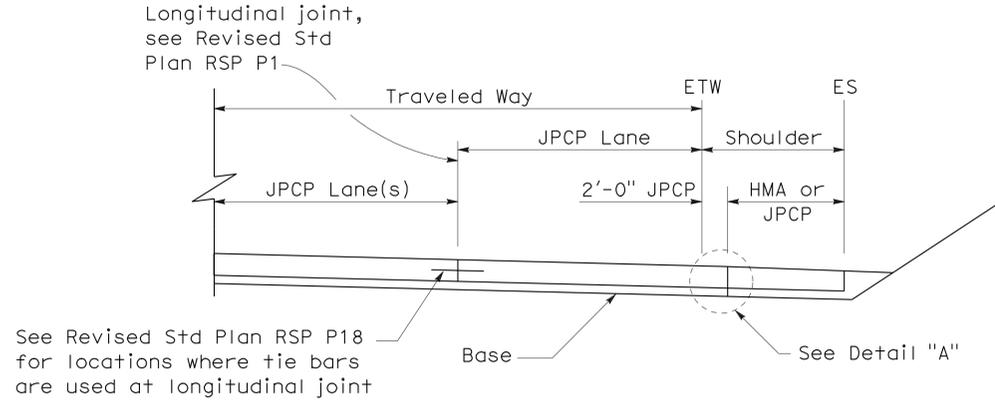
REVISED STANDARD PLAN RSP P2



**PLAN
NEW CONSTRUCTION**



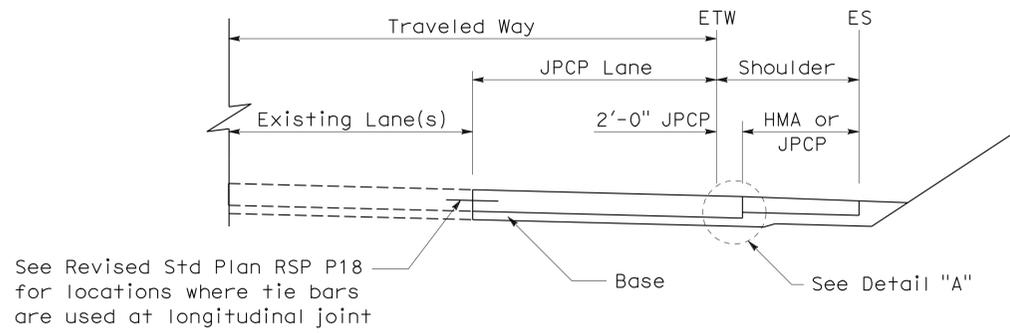
**PLAN
LANE/SHOULDER ADDITION OR RECONSTRUCTION**



SECTION A-A

See Revised Std Plan RSP P18 for locations where tie bars are used at longitudinal joint

See Detail "A"



SECTION B-B

See Revised Std Plan RSP P18 for locations where tie bars are used at longitudinal joint

See Detail "A"

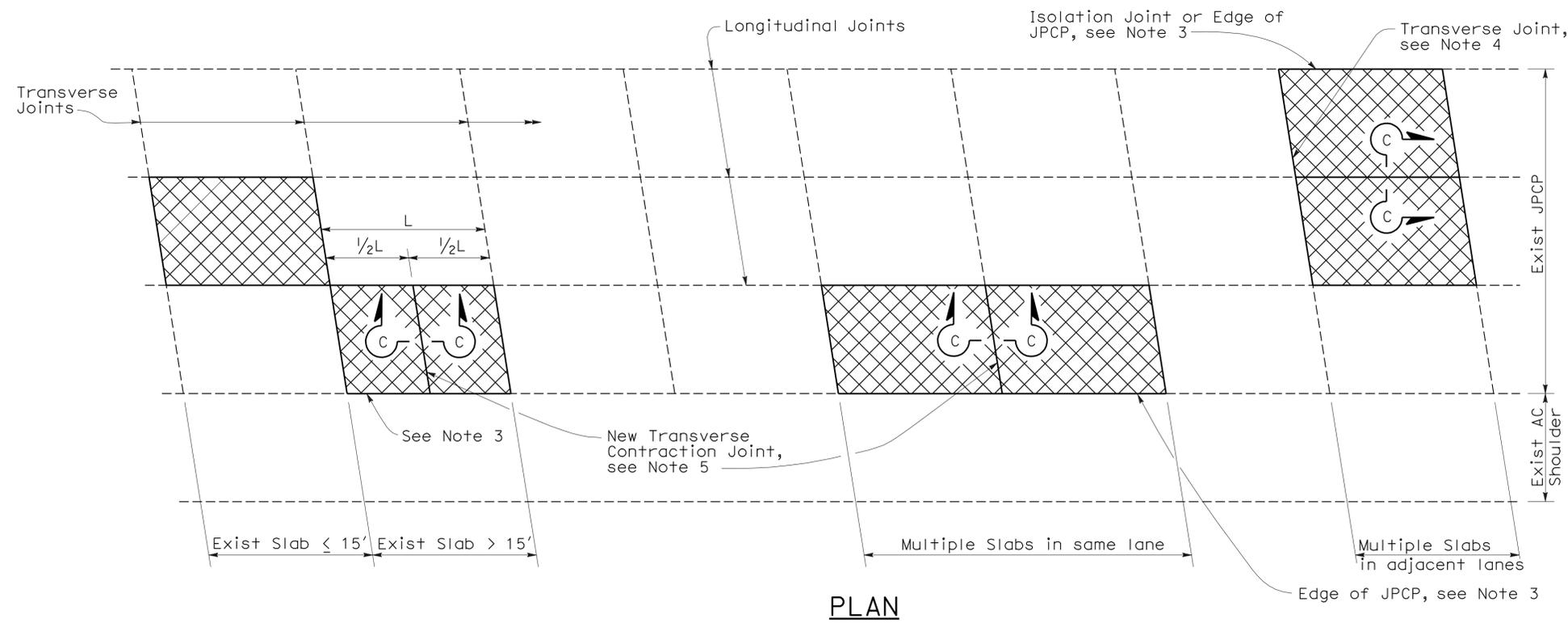
2006 REVISED STANDARD PLAN RSP P2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	692	1931

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 April 20, 2012
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 William K. Farnbach
 No. C49042
 Exp. 9-30-12
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 STATE OF CALIFORNIA

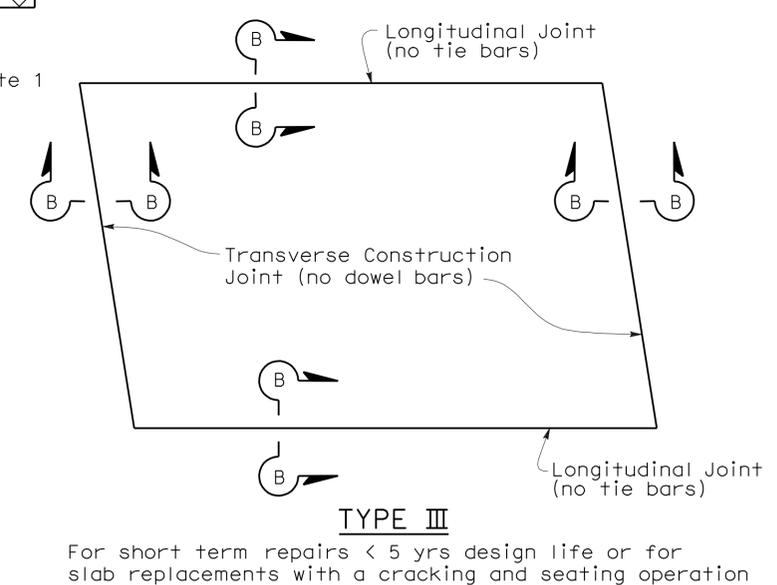
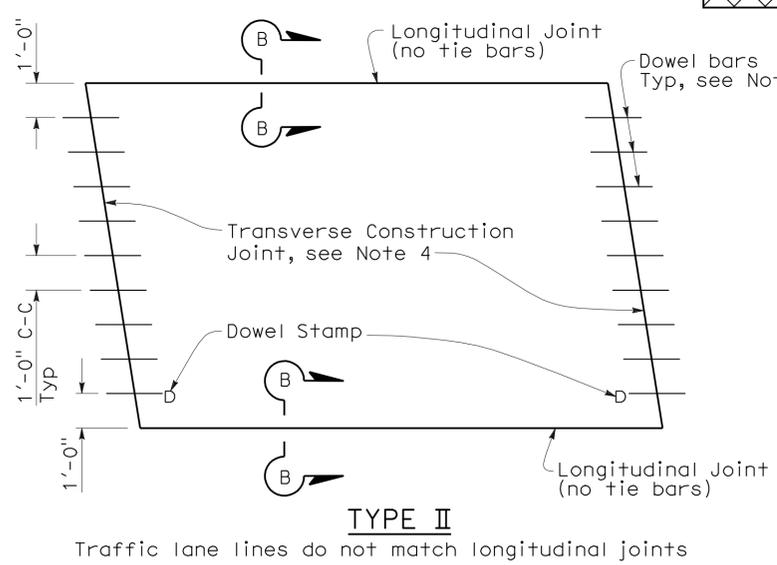
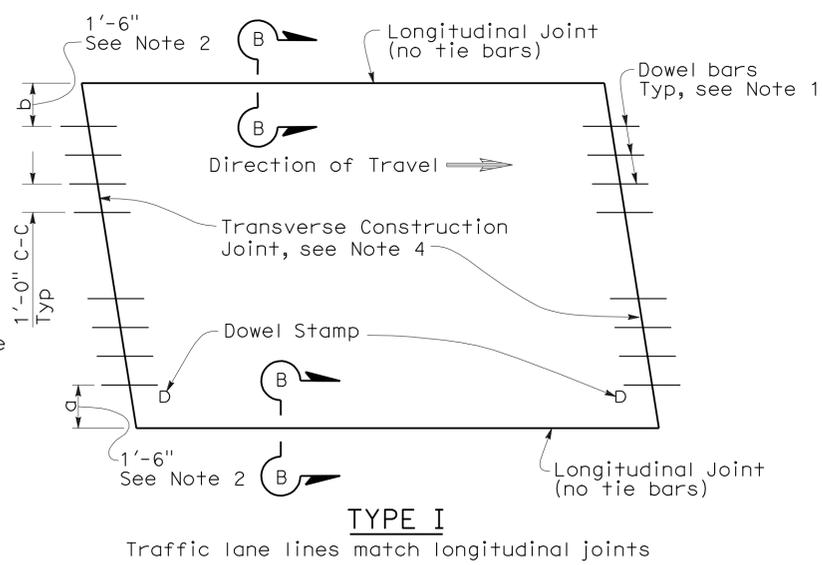
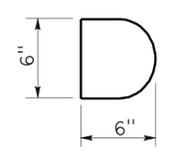
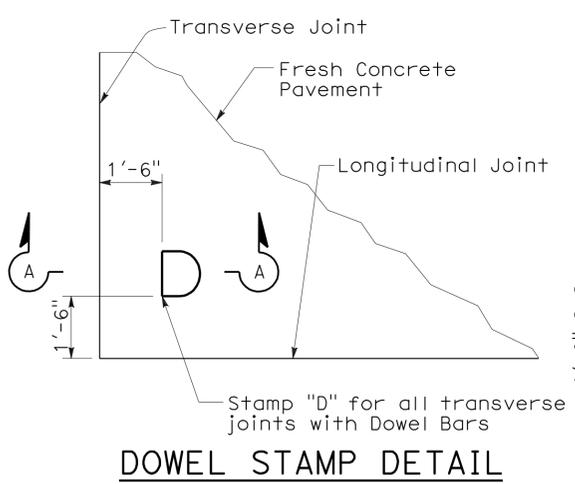
To accompany plans dated 5-21-12



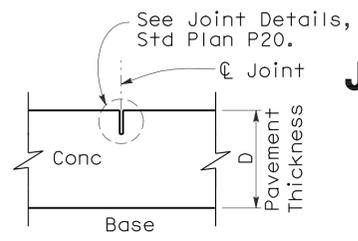
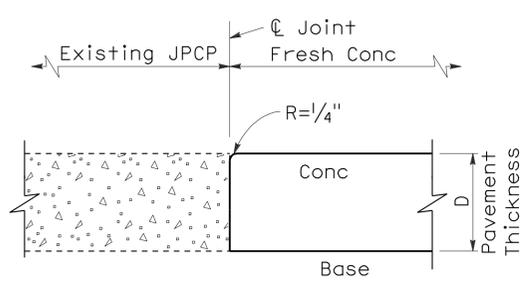
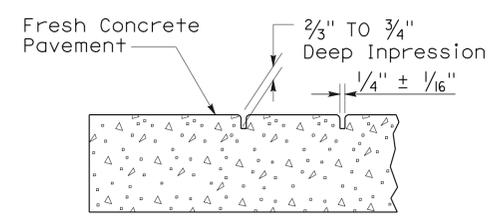
NOTES:

- For details not shown, see Revised Standard Plan RSP P10.
- Where the existing outer shoulder pavement is asphalt concrete pavement, the "a" dimension shall be 1'-0" and the "b" dimension shall be 2'-0".
- Side forms shall be used where edge of pavement is adjacent to asphalt concrete.
- For detail, see Transverse Construction Joint for existing concrete pavement detail on Revised Standard Plan RSP P10.
- Transverse joint to match skew of existing joint. Omit dowel bars.

LEGEND



SLAB LAYOUT

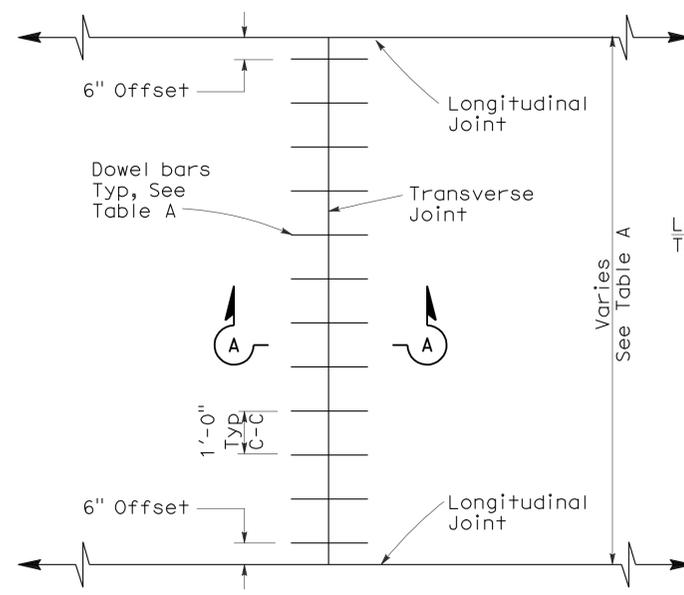


STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**JOINED PLAIN CONCRETE PAVEMENT-
 INDIVIDUAL SLAB REPLACEMENT**
 NO SCALE

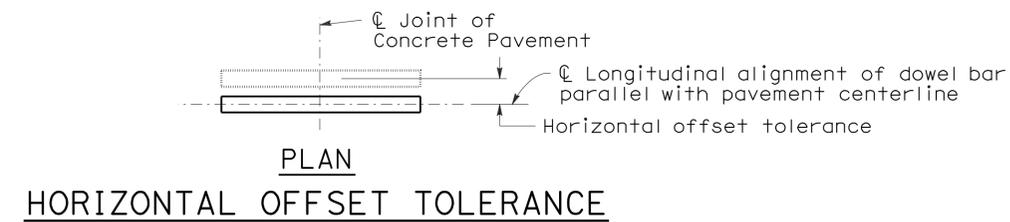
RSP P8 DATED APRIL 20, 2012 SUPERSEDES RSP P8 DATED MAY 15, 2009, RSP P8 DATED SEPTEMBER 1, 2006 AND STANDARD PLAN P8 DATED MAY 1, 2006 - PAGE 123 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P8

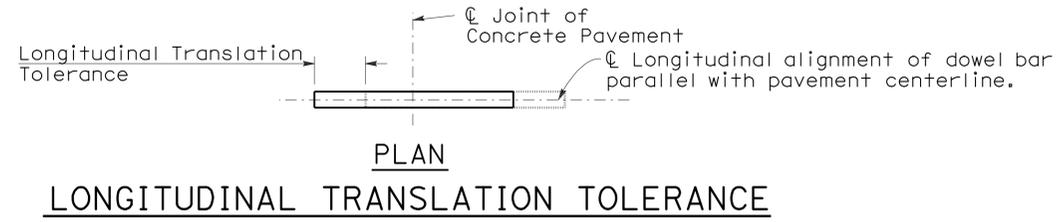
2006 REVISED STANDARD PLAN RSP P8



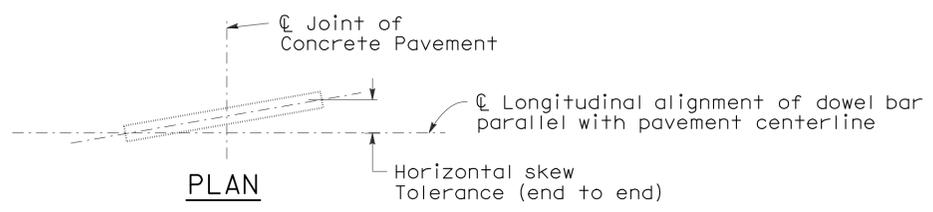
TRANSVERSE JOINT DOWEL BAR LAYOUT



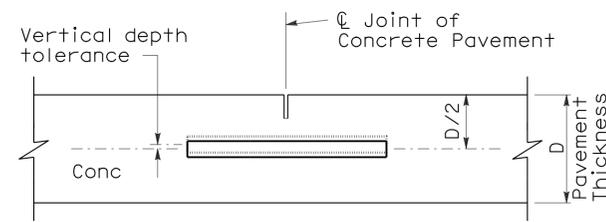
HORIZONTAL OFFSET TOLERANCE



LONGITUDINAL TRANSLATION TOLERANCE

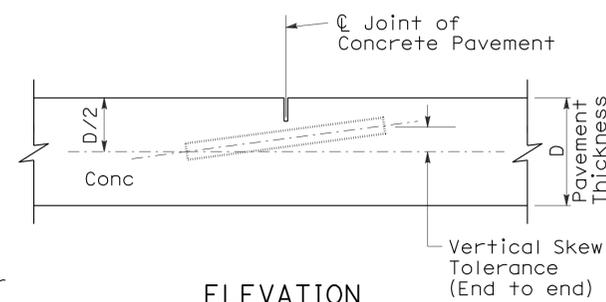


HORIZONTAL SKEW TOLERANCE



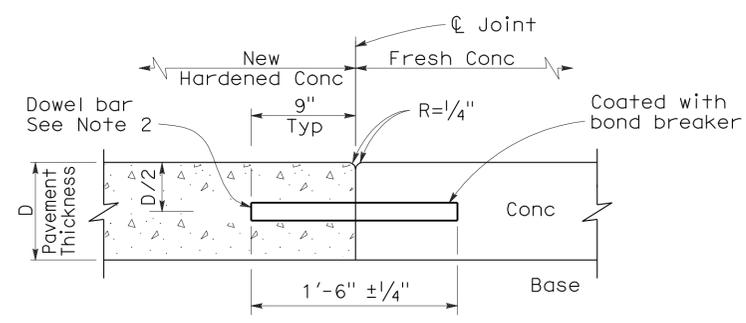
ELEVATION

VERTICAL DEPTH TOLERANCE

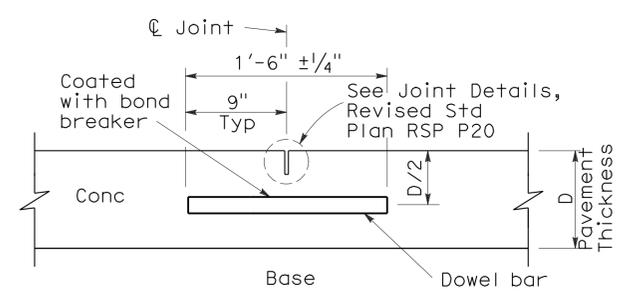


ELEVATION

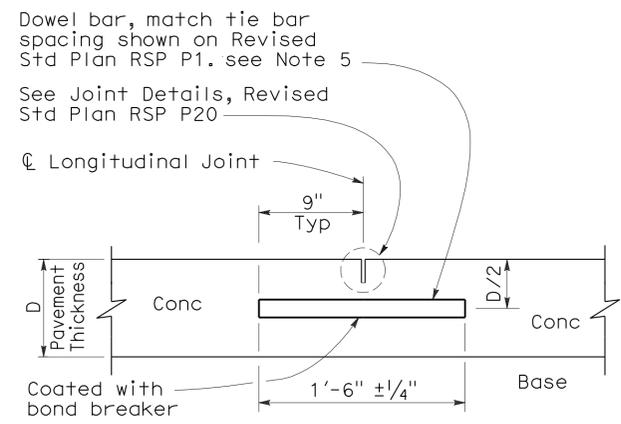
VERTICAL SKEW TOLERANCE



SECTION A-A TRANSVERSE CONSTRUCTION JOINT DETAIL



TRANSVERSE CONTRACTION JOINT

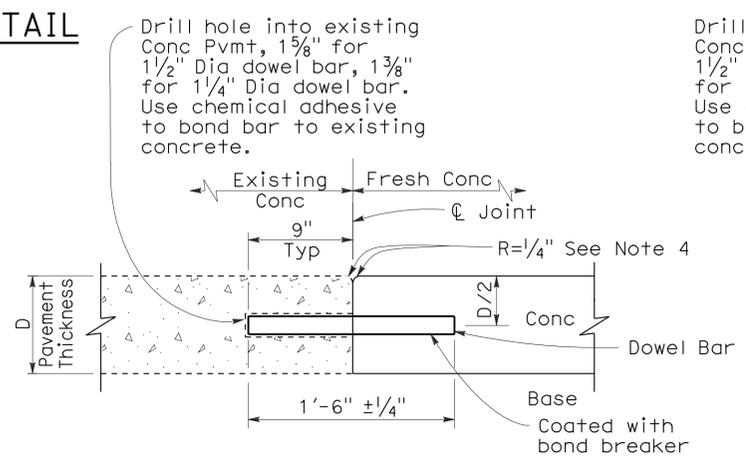


LONGITUDINAL CONTRACTION JOINT WITH DOWEL BARS

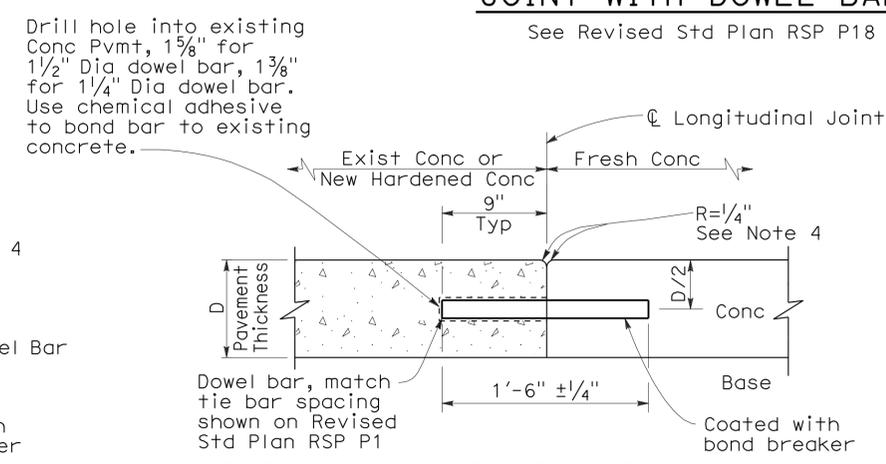
TABLE A (See Note 3)

Dowel Bar Transverse Spacing Table

Width between Longitudinal Joints	Number of Dowels between Longitudinal Joints
14'-0"	14
13'-0"	13
12'-0"	12
11'-0"	11
10'-0"	10
8'-0"	8
5'-0"	5
4'-0"	4



TRANSVERSE CONSTRUCTION JOINT FOR EXISTING CONCRETE PAVEMENT



LONGITUDINAL CONSTRUCTION JOINT WITH DOWEL BARS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-DOWEL BAR DETAILS

NO SCALE

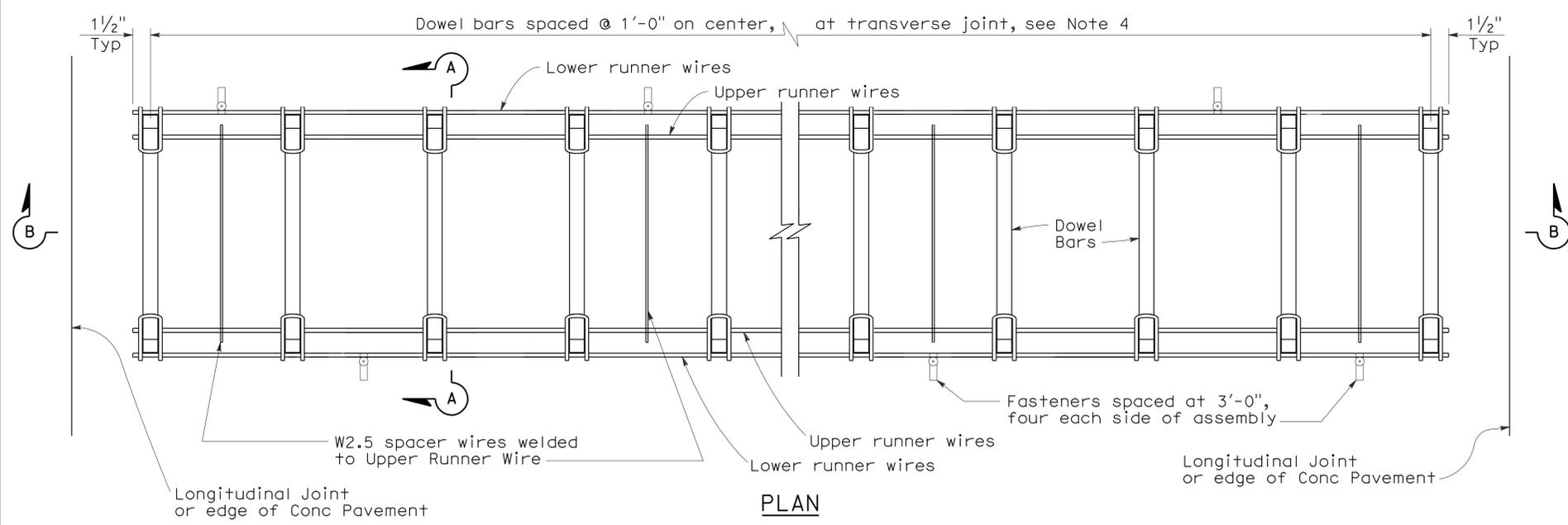
RSP P10 DATED APRIL 20, 2012 SUPERSEDES RSP P10 DATED MAY 15, 2009 AND STANDARD PLAN P10 DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	694	1931

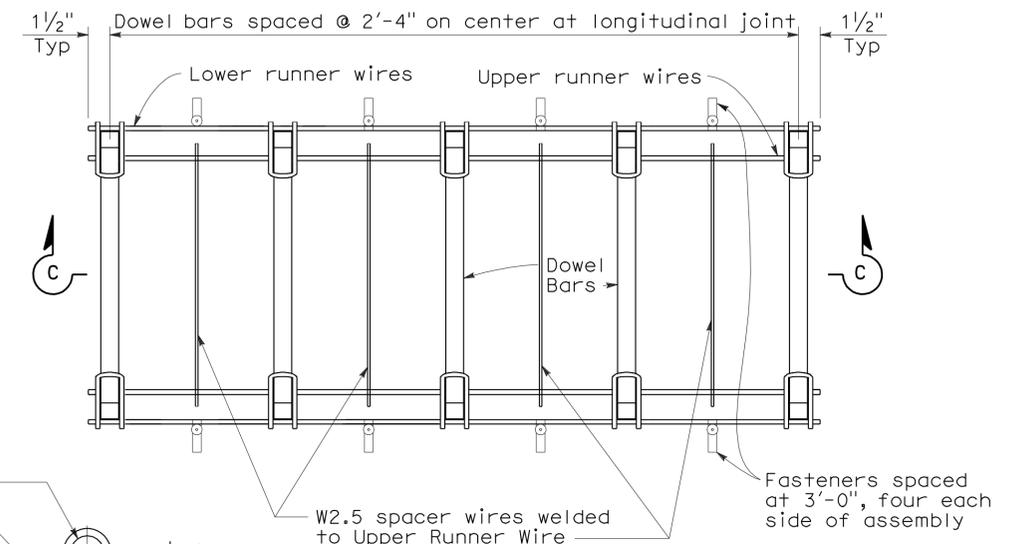
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

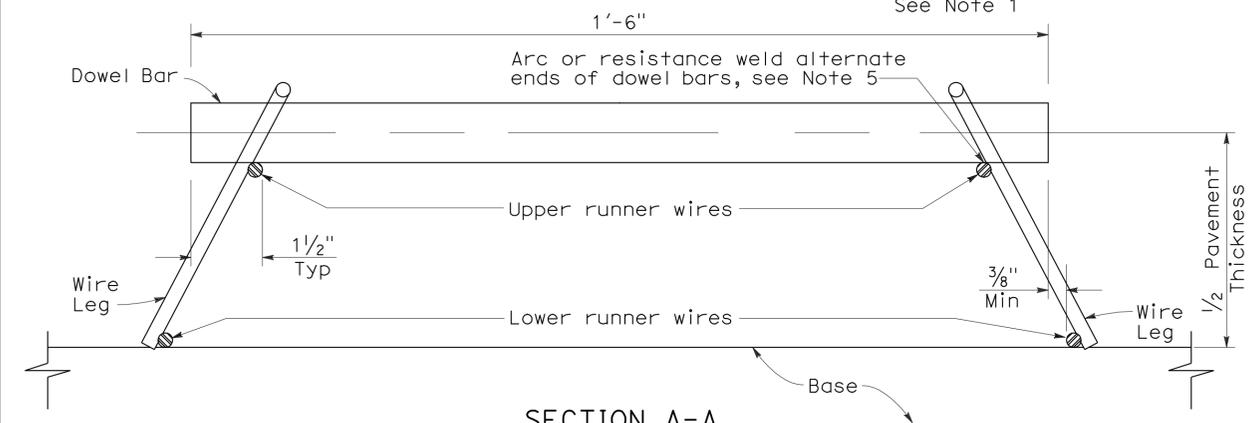
To accompany plans dated 5-21-12



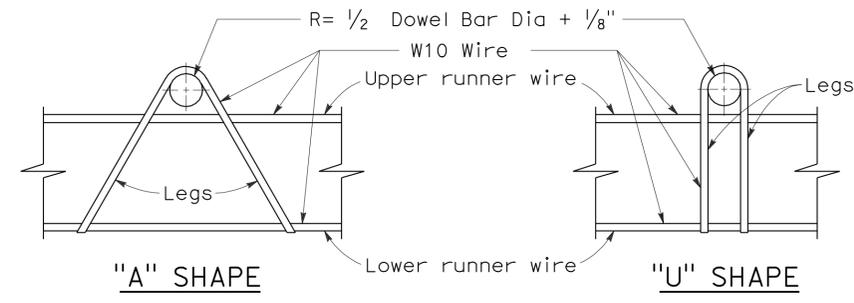
**PLAN
DOWEL BAR BASKET
(TRANSVERSE JOINT)**
See Note 1



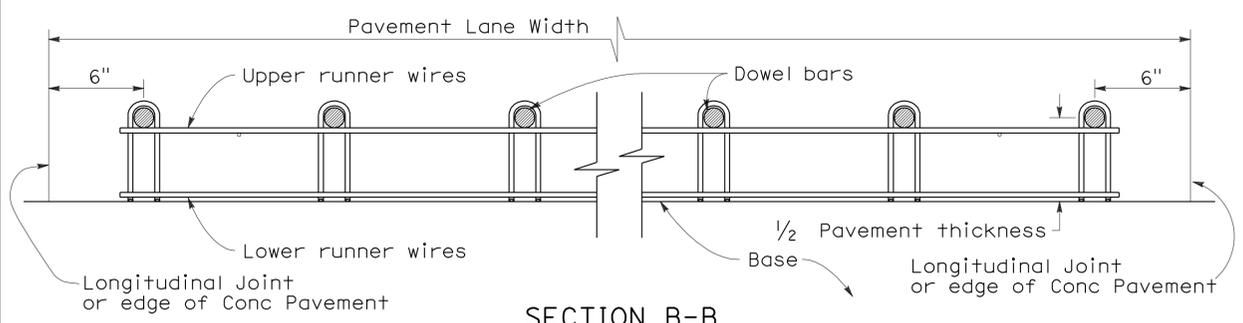
**PLAN
DOWEL BAR BASKET
(LONGITUDINAL JOINT)**
See Note 1



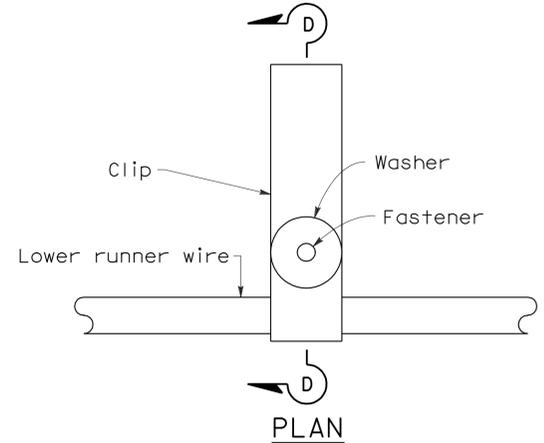
SECTION A-A



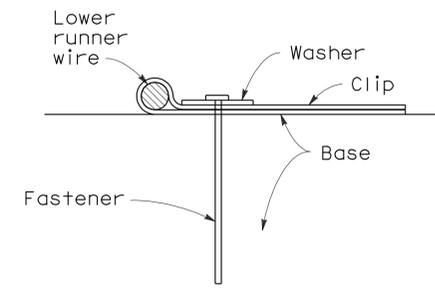
ASSEMBLY FRAME DETAILS



SECTION B-B
See Note 1



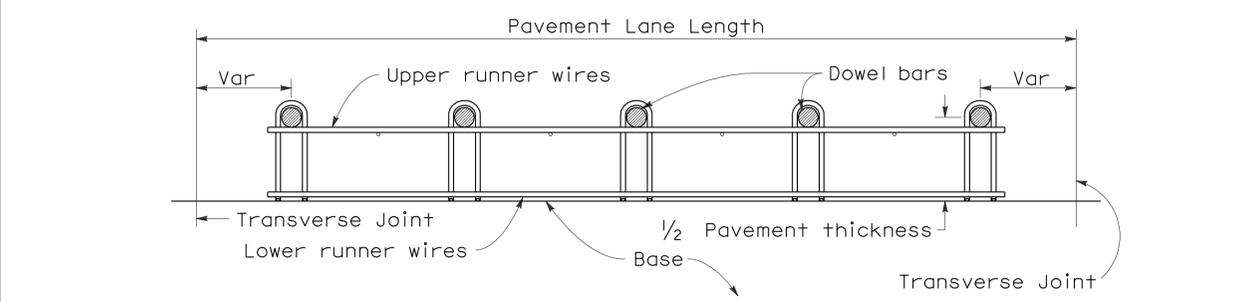
FASTENER DETAIL



SECTION D-D

NOTES:

- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
- Wire sizes shown are minimum required.
- All wire intersections are to be resistance welded.
- Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
- Weld may be at top or bottom of dowel bar.



SECTION C-C
See Notes 1 and 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT-
DOWEL BAR BASKET
DETAILS**

NO SCALE

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

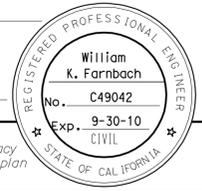
REVISED STANDARD PLAN RSP P12

2006 REVISED STANDARD PLAN RSP P12

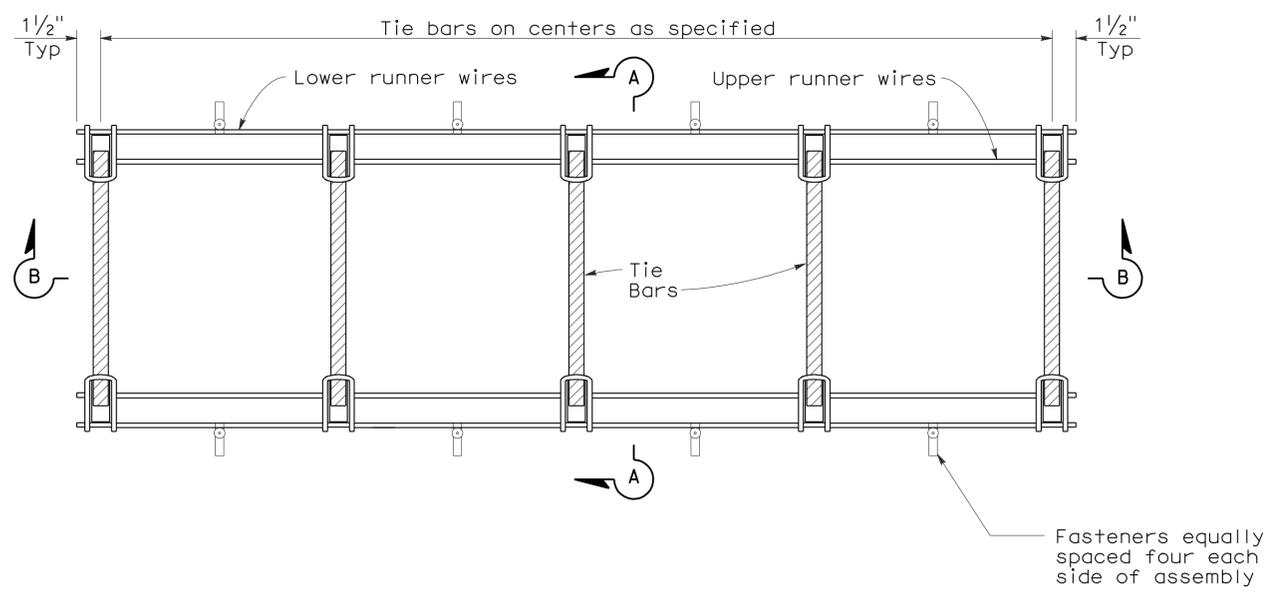
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	695	1931

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE

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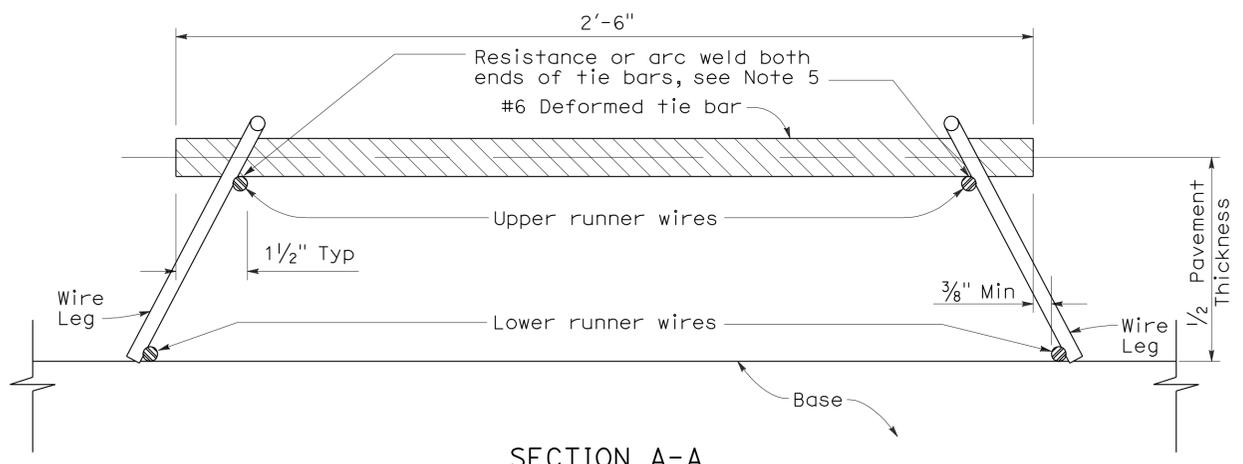


To accompany plans dated 5-21-12

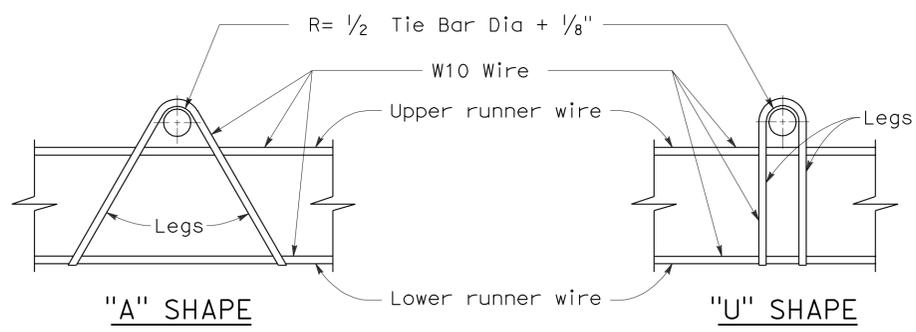


PLAN
TIE BAR BASKET
 (TIE BARS AT LONGITUDINAL JOINT)
 See Note 1

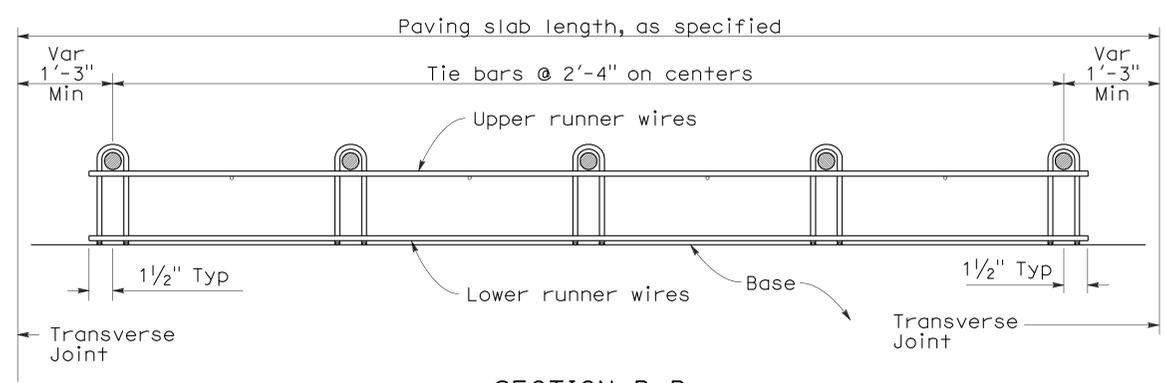
- NOTES:**
- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
 - Wire sizes shown are minimum required.
 - All wire intersections are to be resistance welded.
 - Not for use on nondoweled skewed jointed plain concrete pavement.
 - Weld may be at top or bottom of tie bar.



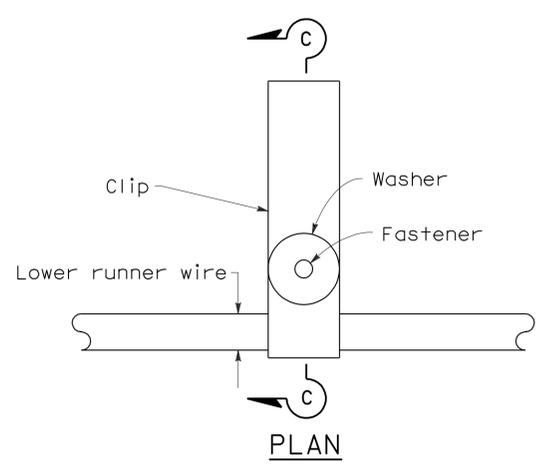
SECTION A-A



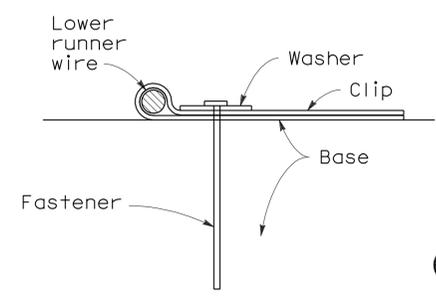
ASSEMBLY FRAME DETAILS



SECTION B-B
 See Note 1



PLAN



SECTION C-C

FASTENER DETAIL

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

RSP P17 DATED MAY 15, 2009 SUPERSEDES RSP P17 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P17 DATED MAY 1, 2006 - PAGE 126 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P17

2006 REVISED STANDARD PLAN RSP P17

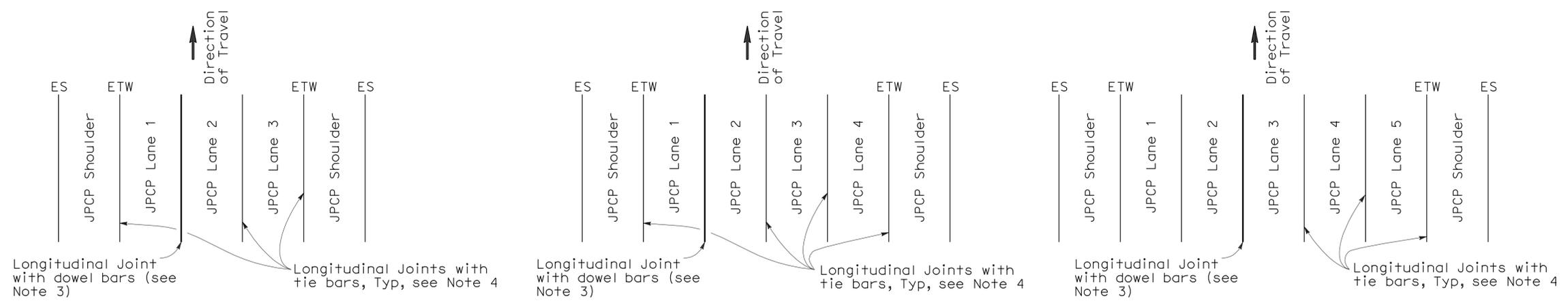
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	696	1931

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE

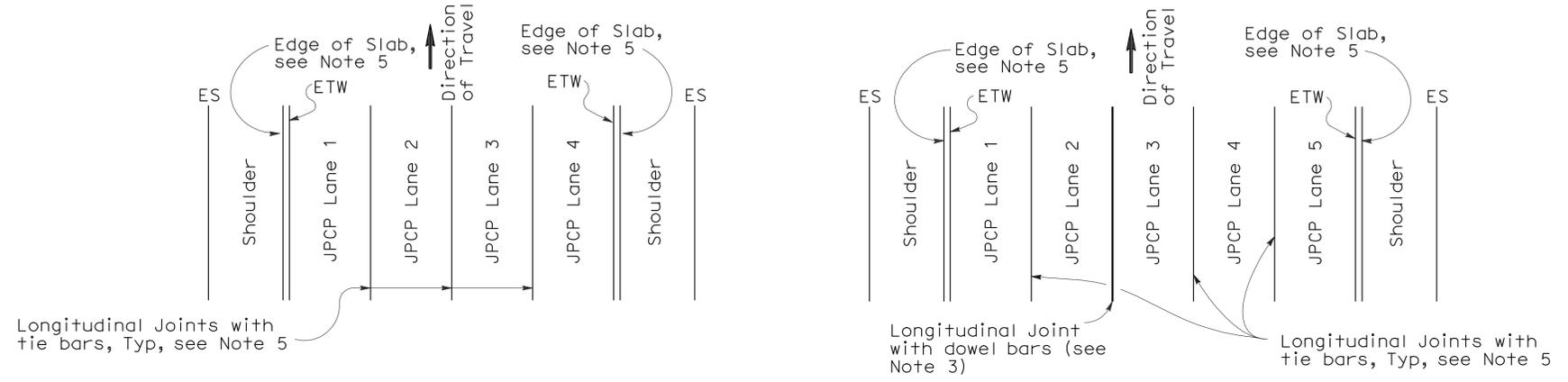
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To accompany plans dated 5-21-12

2006 REVISED STANDARD PLAN RSP P18

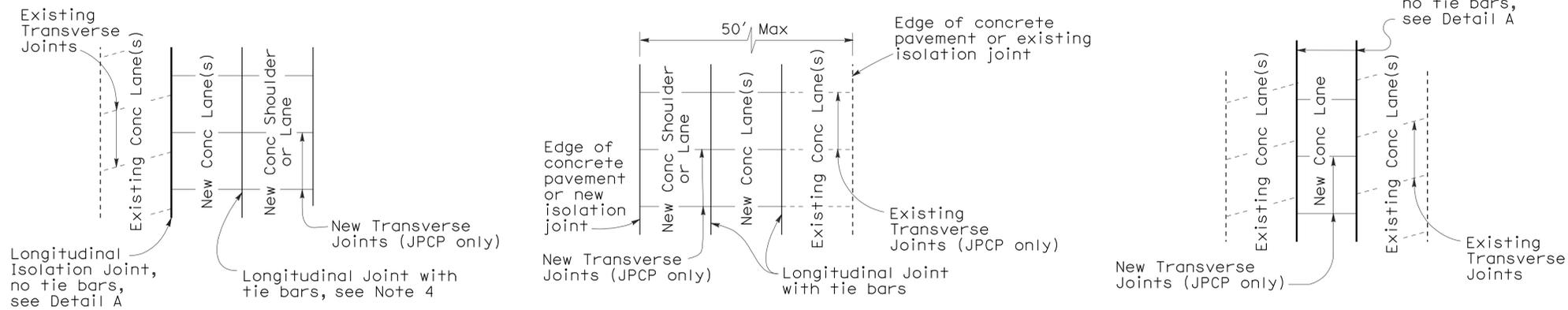


3 LANES WITH TIED CONCRETE SHOULDERS PLAN
 4 LANES WITH TIED CONCRETE SHOULDERS PLAN
 5 LANES WITH TIED CONCRETE SHOULDERS PLAN



4 LANES OR LESS WITH WIDENED SLAB PLAN
 5 LANES WITH WIDENED SLAB PLAN

NEW CONSTRUCTION
Location of Longitudinal Joints For JPCP



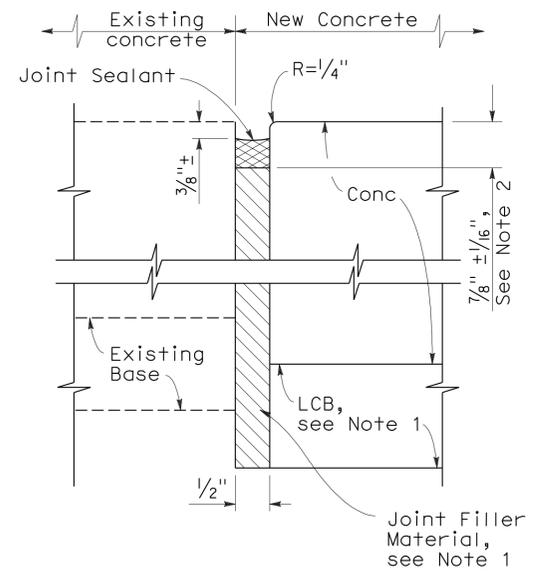
CASE 1 PLAN
CASE 2 PLAN
CASE 3 (INTERIOR LANE REPLACEMENT) PLAN

Transverse Joints do not align between new and existing
 Transverse Joints align between new and existing
 Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION
For JPCP and CRCP

NOTES:

- Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
- Use 5/8" ± 1/16" dimension for silicone sealant.
- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P1.
- See Revised Standard Plan RSP P2.



DETAIL A
ISOLATION JOINT

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-LANE SCHEMATICS AND ISOLATION JOINT DETAIL
 NO SCALE

RSP P18 DATED APRIL 20, 2012 SUPERSEDES RSP P18 DATED JUNE 5, 2009, RSP P18 DATED MAY 15, 2009,
 RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 -
 PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P18

NOTE:

1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.

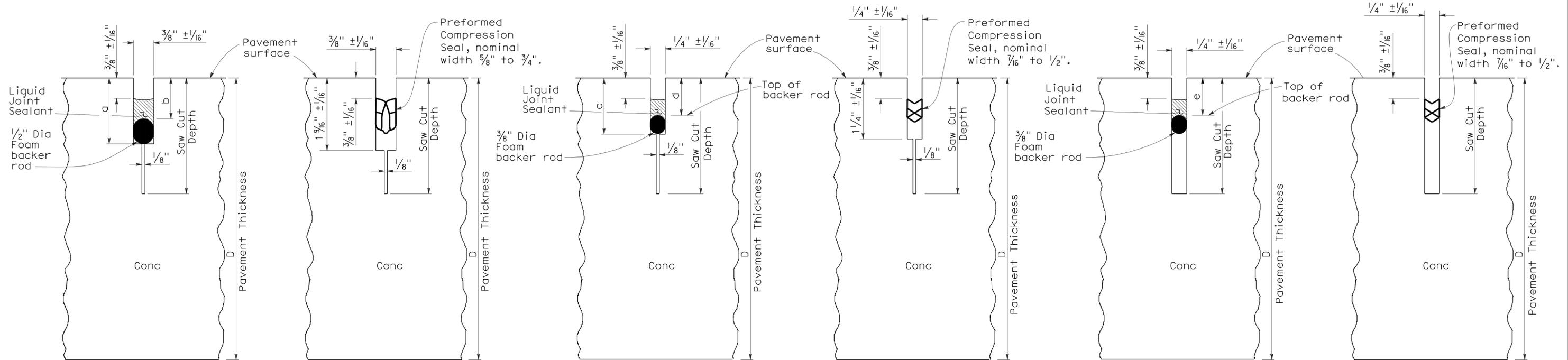
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	697	1931

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

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To accompany plans dated 5-21-12



LIQUID SEALANT

COMPRESSION SEAL

LIQUID SEALANT

COMPRESSION SEAL

LIQUID SEALANT

COMPRESSION SEAL

TYPE A1

TYPE A2

TYPE B

Transverse Contraction Joints

Longitudinal Contraction Joints

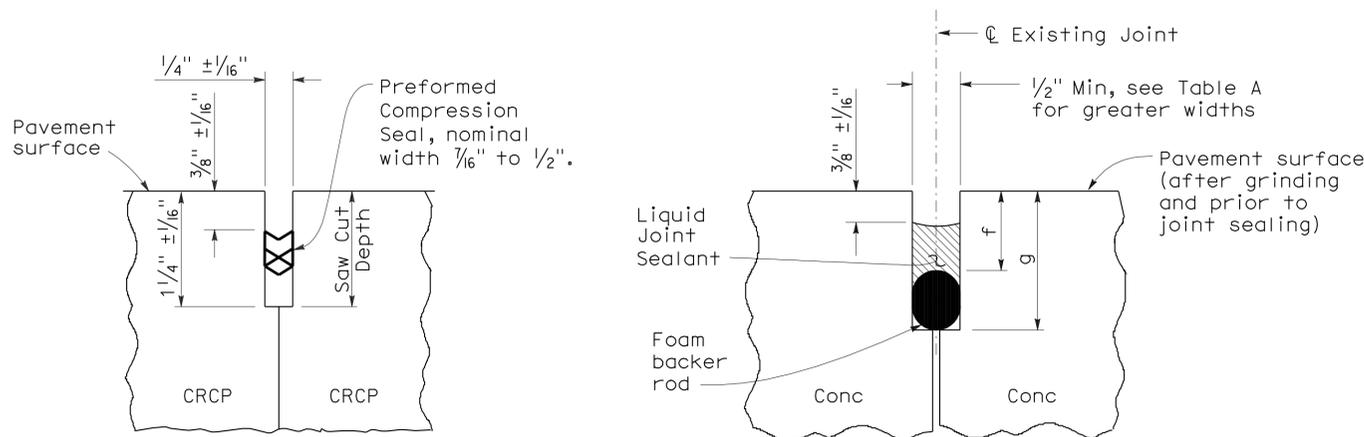
Longitudinal or Transverse Contraction Joint

LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILICONE	1" ± 1/16"	5/8" ± 1/16"	15/16" ± 1/16"	9/16" ± 1/16"	9/16" ± 1/16"
ASPHALT RUBBER	1 3/16" ± 1/16"	3/4" ± 1/16"	1 1/16" ± 1/16"	11/16" ± 1/16"	11/16" ± 1/16"

TABLE A (TYPE R JOINT)

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"



COMPRESSION SEAL

LIQUID SEALANT

TYPE C

TYPE R

Transverse and Longitudinal Construction Joints (For CRCP)

Retrofit Transverse and Longitudinal Joints

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 JOINT DETAILS**

NO SCALE

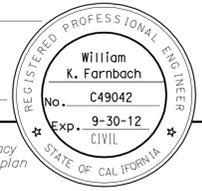
RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20
 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P20

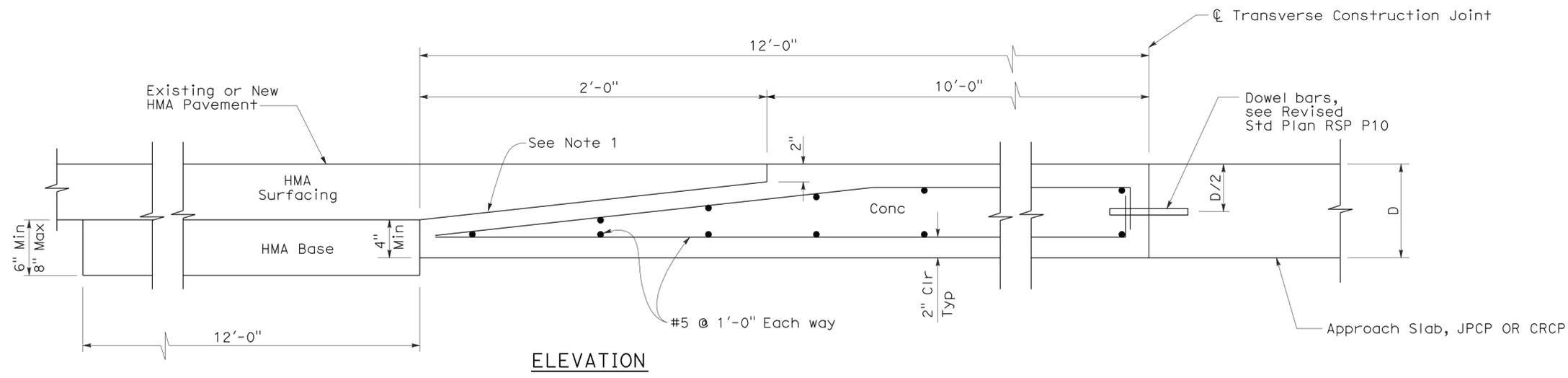
2006 REVISED STANDARD PLAN RSP P20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	698	1931

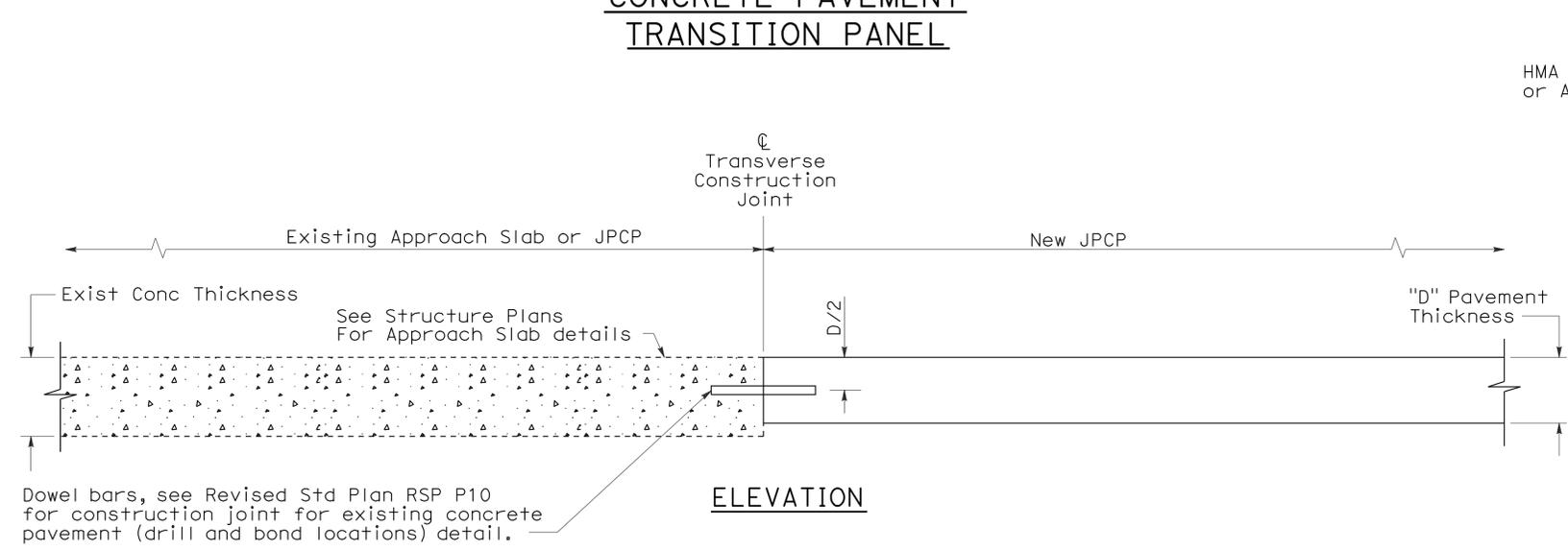
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
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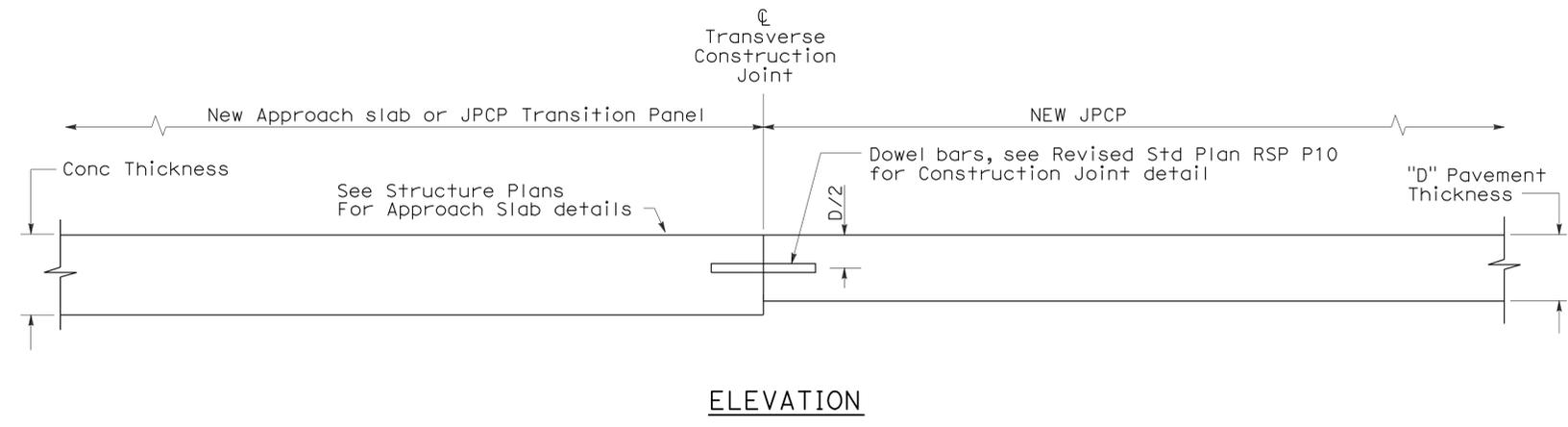
To accompany plans dated 5-21-12



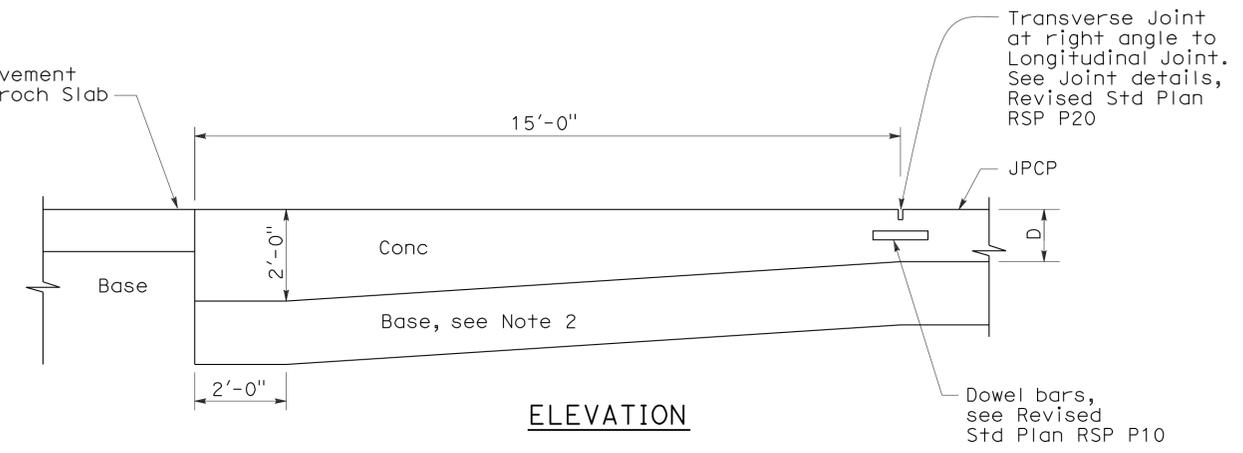
CONCRETE PAVEMENT TRANSITION PANEL



TERMINAL JOINT TYPE 1
For Exist JPCP or Structure Approach Slab



TERMINAL JOINT TYPE 2
For JPCP Transition Panel or Structure Approach Slab



PAVEMENT END ANCHOR
For HMA Pvmnt or Structure Approach Slab

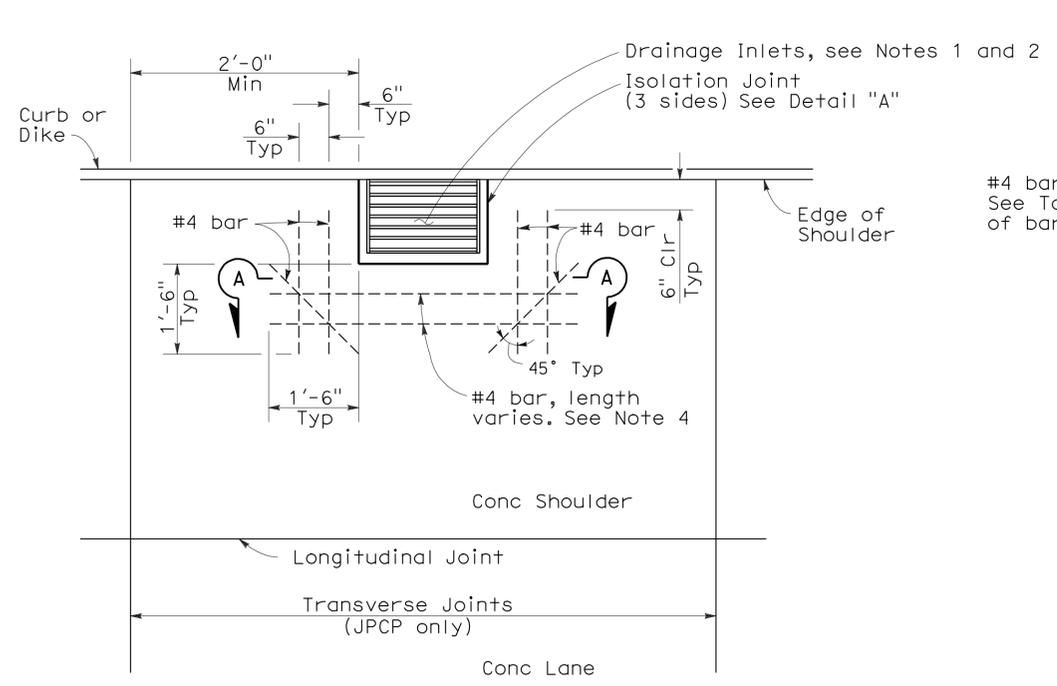
- NOTES:**
1. Heavy broom finish.
 2. Maintain same base thickness as JPCP.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
END PANEL
PAVEMENT TRANSITIONS**

NO SCALE

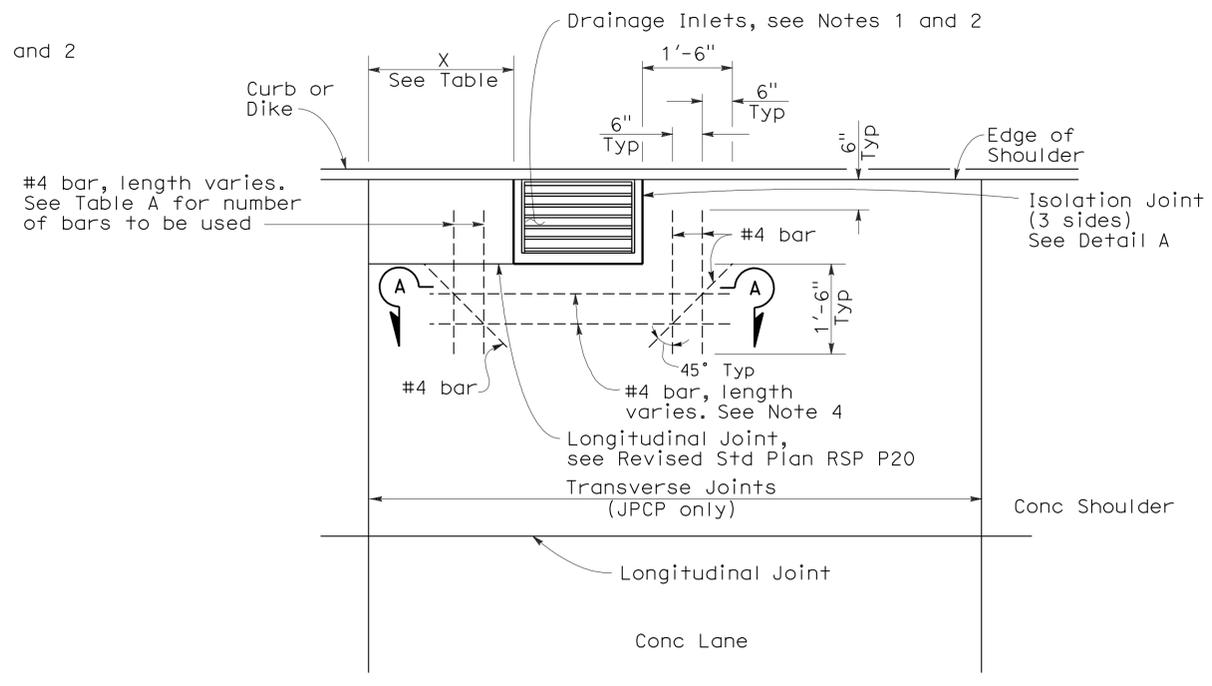
RSP P30 DATED APRIL 20, 2012 SUPERSEDES RSP P30 DATED MAY 15, 2009 AND STANDARD PLAN P30 DATED MAY 1, 2006 - PAGE 129 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP P30



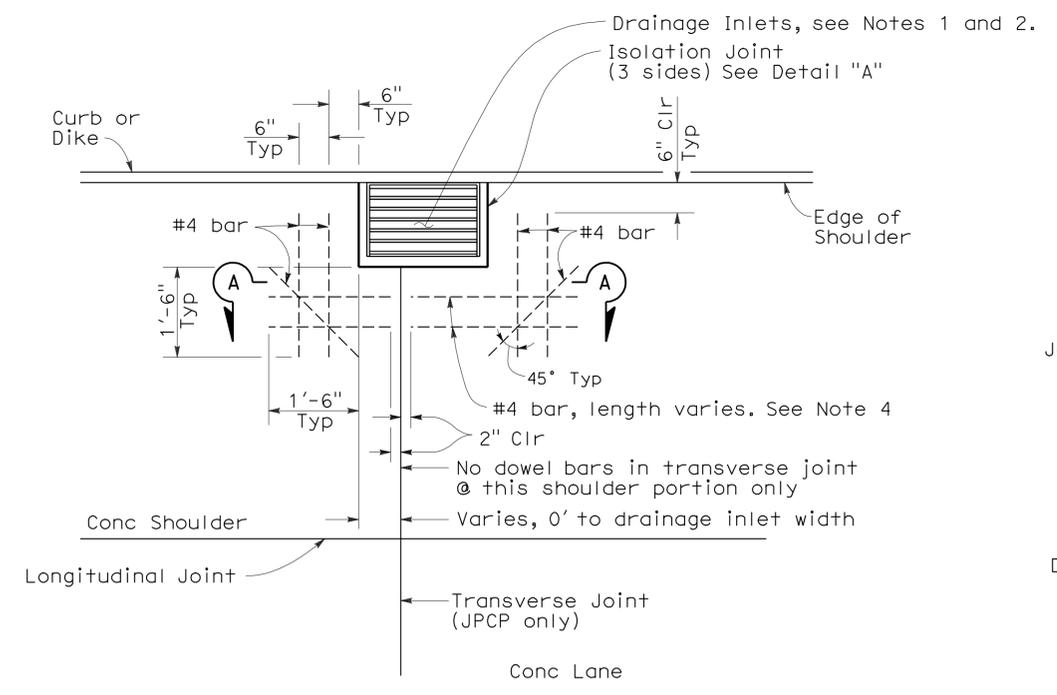
CASE 1

Transverse joint more than 2'-0" clear of drainage inlet wall or no transverse joint



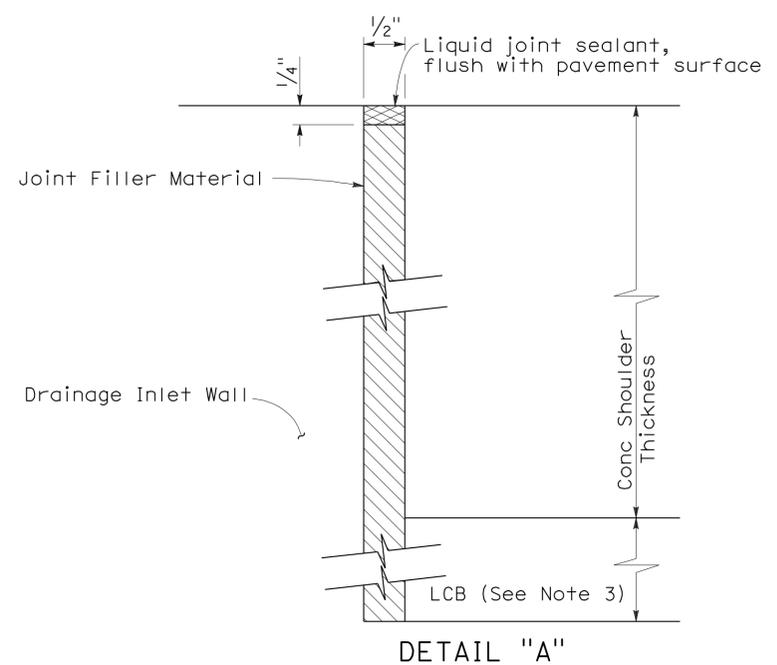
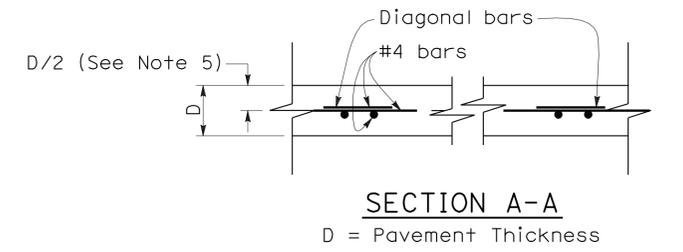
CASE 3

Transverse joint within 2'-0" of drainage inlet wall, or matches drainage inlet wall.



CASE 2

Transverse joint intersects drainage inlet, or matches drainage inlet wall.



ISOLATION JOINT AROUND DRAINAGE INLET

NOTES:

1. Refer to Project Plans for location and Type of drainage inlets.
2. Top of inlet shall be flush with shoulder surface.
3. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
5. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.
6. Dowel and tie bars not shown, see Revised Standard Plan RSP P1.

TABLE A

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 9"	1 @ X/2
9" or less	None

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 DRAINAGE INLET
 DETAILS No. 1**
 NO SCALE

RSP P45 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P45
 DATED MAY 1, 2006 - PAGE 132 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P45

2006 REVISED STANDARD PLAN RSP P45

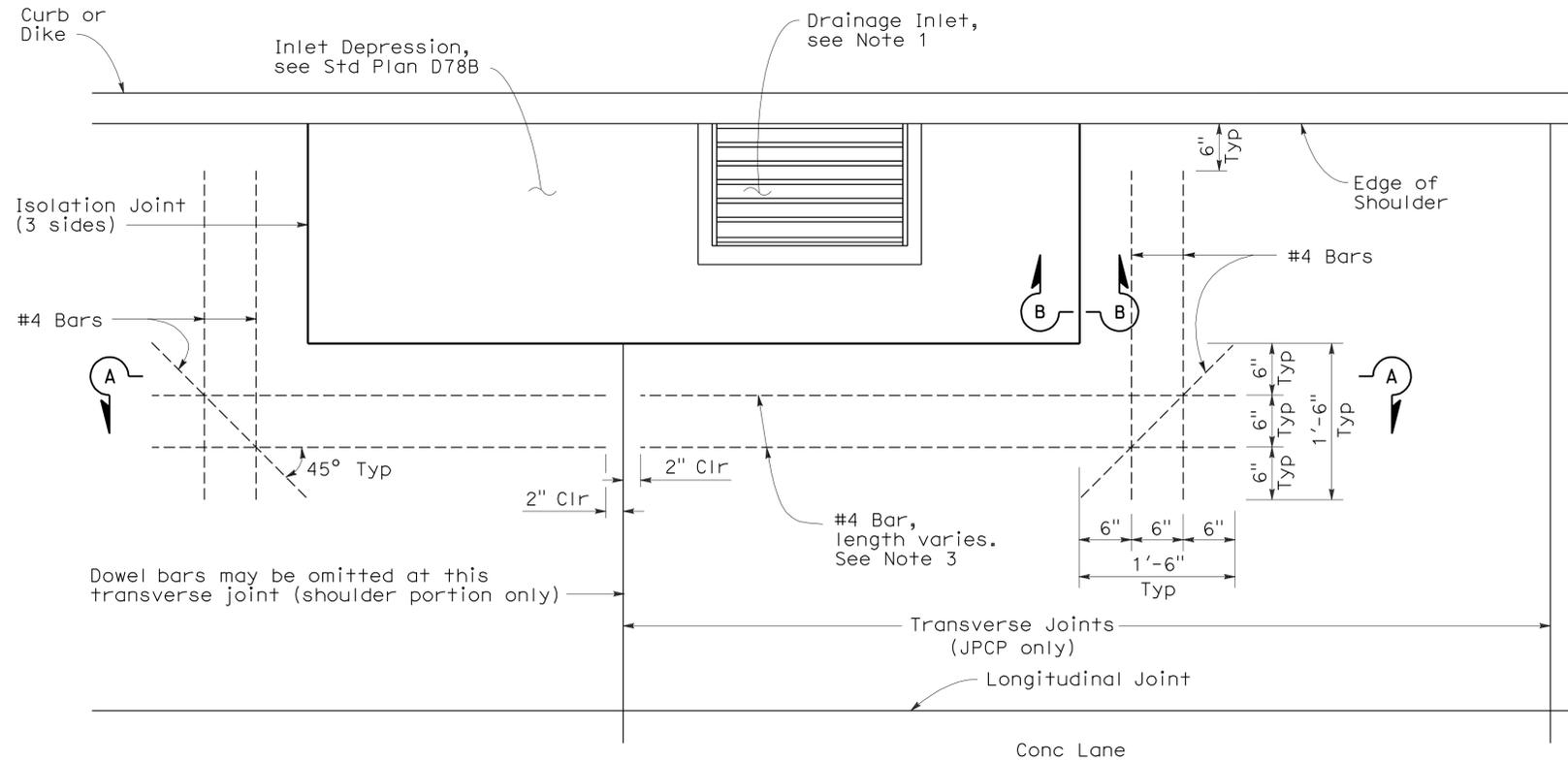
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	29.4/31.6	700	1931

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE

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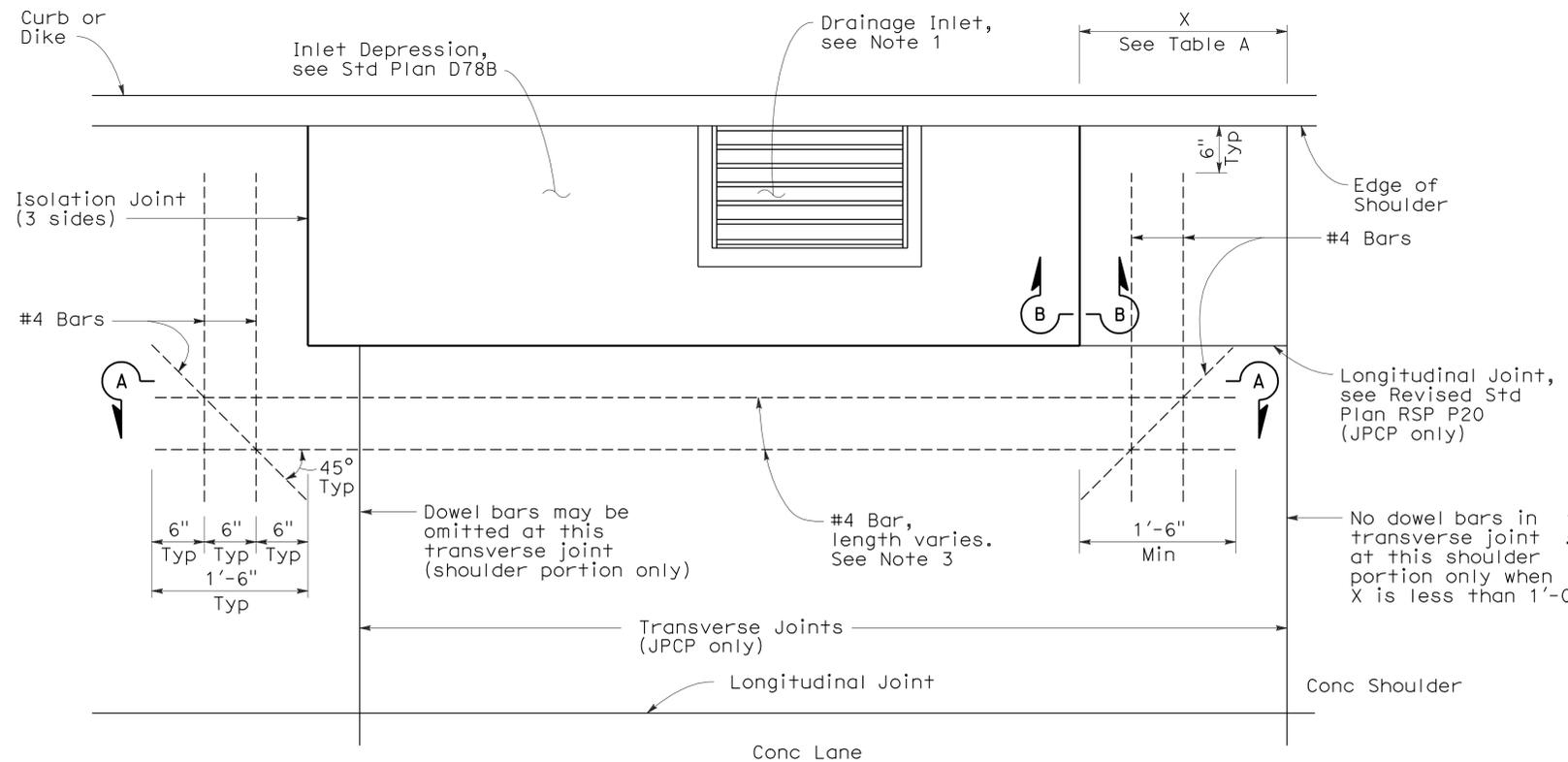
To accompany plans dated 5-21-12

2006 REVISED STANDARD PLAN RSP P46



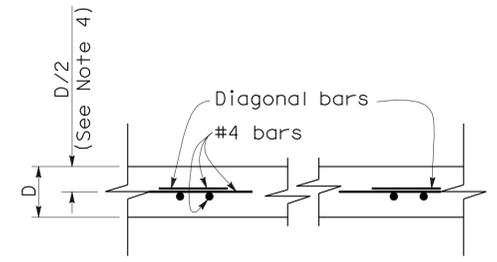
CASE A

Transverse Joint intersects inlet depression or no transverse joints.



CASE B

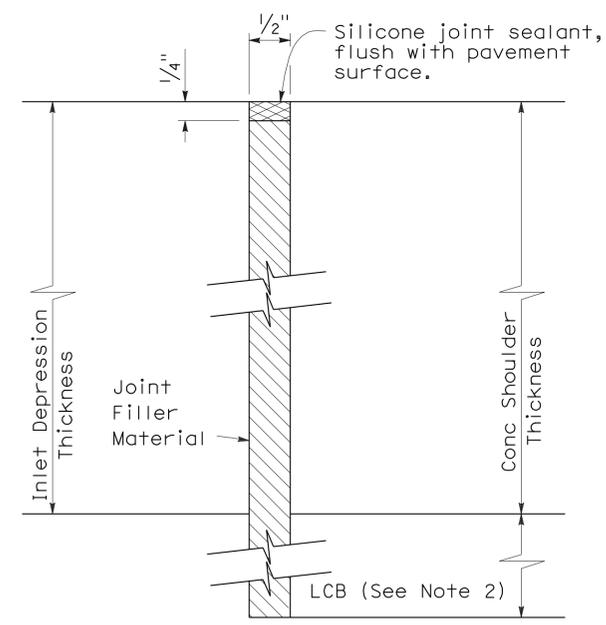
Transverse Joint within 2'-0" of edge of inlet depression.



SECTION A-A
D = Pavement Thickness

TABLE A

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 1'-0"	1
1'-0" or less	None



SECTION B-B

NOTES:

1. Refer to Project Plans for location and type of drainage inlets.
2. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
3. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.

ISOLATION JOINT AROUND INLET DEPRESSION

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 DRAINAGE INLET
 DETAILS No. 2**
 NO SCALE

RSP P46 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P46
 DATED MAY 1, 2006 - PAGE 133 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P46