

INDEX OF PLANS

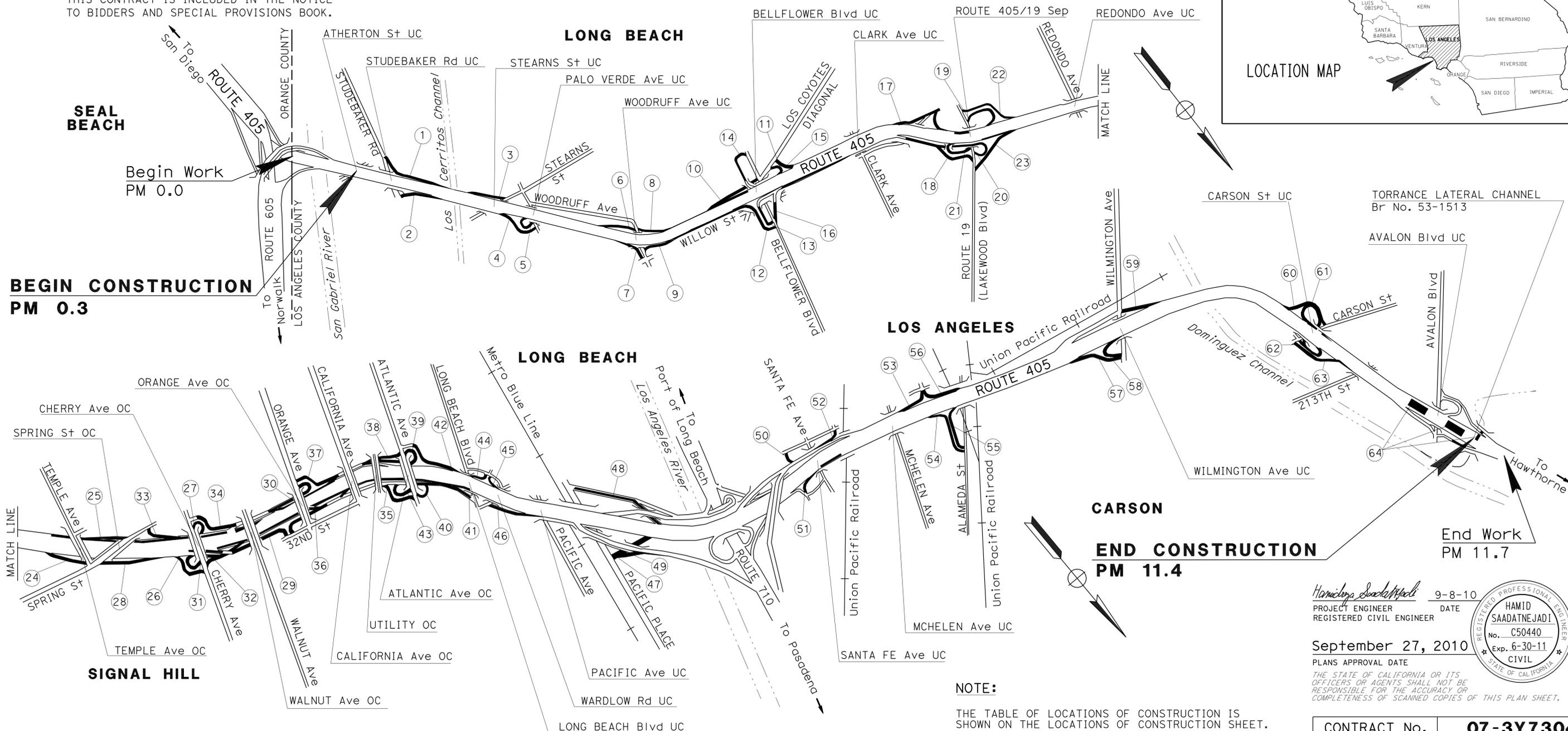
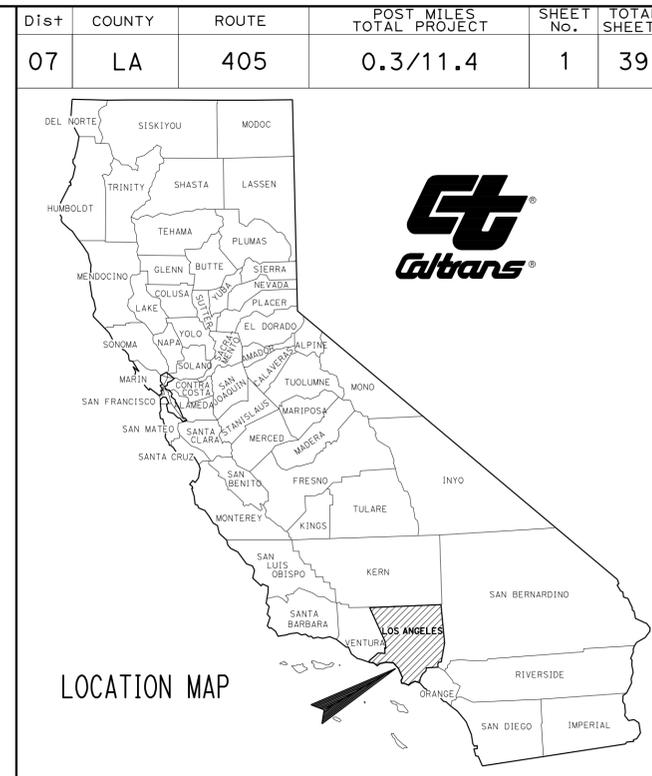
SHEET No.	DESCRIPTION
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
AT VARIOUS LOCATIONS
FROM ATHERTON STREET UNDERCROSSING
TO TORRANCE LATERAL CHANNEL

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



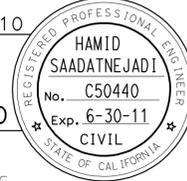
NOTE:
THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

NO SCALE

PROJECT MANAGER
GARY KEYORKIAN

 DESIGN ENGINEER
HAMID SAADATNEJADI

Hamid Saadatnejadi
 PROJECT ENGINEER
 REGISTERED CIVIL ENGINEER
 DATE 9-8-10
 September 27, 2010
 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.



CONTRACT No.	07-3Y7304
PROJECT ID	070000766

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	2	39

Hamid Saadatnejadi
 REGISTERED CIVIL ENGINEER DATE 9-8-10
 9-27-10
 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.

LOCATIONS OF CONSTRUCTION

Loc	PM	DESCRIPTION	Loc	PM	DESCRIPTION
1	0.60	SB OFF-RAMP TO STUDEBAKER ROAD	33	5.12	SB OFF-RAMP TO SPRING STREET
2	0.62	NB ON-RAMP FROM STUDEBAKER ROAD	34	5.31	SB OFF-RAMP TO SB CHERRY AVENUE
3	0.88	SB ON-RAMP FROM STEARNS STREET	35	5.46	NB OFF-RAMP TO NB ATLANTIC AVENUE
4	1.02	NB OFF-RAMP TO PALO VERDE AVENUE	36	5.61	NB ON-RAMP FROM 32ND STREET
5	1.11	NB ON-RAMP FROM PALO VERDE AVENUE	37	5.69	SB OFF-RAMP TO ORANGE AVENUE
6	1.48	SB ON-RAMP FROM WOODRUFF AVENUE	38	5.76	SB ON-RAMP FROM NB ATLANTIC AVENUE
7	1.52	NB OFF-RAMP TO WOODRUFF AVENUE	39	5.77	SB ON-RAMP FROM SB ATLANTIC AVENUE
8	1.74	SB OFF-RAMP TO WOODRUFF AVENUE	40	5.95	NB OFF-RAMP TO SB ATLANTIC AVENUE
9	1.82	NB ON-RAMP FROM WOODRUFF AVENUE	41	6.16	NB OFF-RAMP TO LONG BEACH BOULEVARD
10	2.08	SB ON-RAMP FROM NB BELLFLOWER BOULEVARD	42	6.17	SB OFF-RAMP TO ATLANTIC AVENUE
11	2.11	SB ON-RAMP FROM SB BELLFLOWER BOULEVARD	43	6.28	NB ON-RAMP FROM NB ATLANTIC AVENUE
12	2.12	NB OFF-RAMP TO BELLFLOWER BOULEVARD	44	6.34	SB ON-RAMP FROM LONG BEACH BOULEVARD
13	2.36	NB ON-RAMP FROM NB BELLFLOWER BOULEVARD	45	6.55	SB OFF-RAMP TO LONG BEACH BOULEVARD
14	2.39	SB OFF-RAMP TO NB BELLFLOWER BOULEVARD	46	6.61	NB ON-RAMP FROM LONG BEACH BOULEVARD
15	2.44	SB OFF-RAMP TO SB BELLFLOWER BOULEVARD	47	7.23	NB ON-RAMP FROM PACIFIC PLACE
16	2.55	NB ON-RAMP FROM SB BELLFLOWER BOULEVARD	48	7.28	SB OFF-RAMP TO PACIFIC PLACE
17	2.92	SB ON-RAMP FROM WILLOW STREET	49	7.29	PACIFIC PLACE ON-RAMP TO NB 710
18	3.00	NB OFF-RAMP TO NB LAKEWOOD BOULEVARD	50	7.98	SB OFF-RAMP TO SANTA FE AVENUE
19	3.13	SB ON-RAMP FROM SB LAKEWOOD BOULEVARD	51	8.02	NB ON-RAMP FROM SANTA FE AVENUE
20	3.16	NB OFF-RAMP TO SB LAKEWOOD BOULEVARD	52	8.08	SB ON-RAMP FROM SANTA FE AVENUE/WARDLOW ROAD
21	3.23	NB ON-RAMP FROM NB LAKEWOOD BOULEVARD	53	8.49	SB ON-RAMP FROM ALAMEDA STREET/223RD STREET
22	3.49	SB OFF-RAMP TO SB LAKEWOOD BOULEVARD	54	8.62	NB OFF-RAMP TO ALAMEDA STREET
23	3.59	NB ON-RAMP FROM SB LAKEWOOD BOULEVARD	55	8.71	NB ON-RAMP FROM ALAMEDA STREET
24	4.22	NB OFF-RAMP TO TEMPLE AVENUE	56	8.72	SB OFF-RAMP TO ALAMEDA STREET/223RD STREET
25	4.39	SB ON-RAMP FROM SPRING STREET	57	9.38	NB OFF-RAMP TO WILMINGTON AVENUE
26	4.63	NB OFF-RAMP TO NB CHERRY AVENUE	58	9.51	NB ON-RAMP FROM WILMINGTON AVENUE
27	4.79	SB ON-RAMP FROM SB CHERRY AVENUE	59	9.72	SB OFF-RAMP TO WILMINGTON AVENUE
28	4.80	NB ON-RAMP FROM SPRING STREET	60	10.4	SB ON-RAMP FROM CARSON STREET
29	4.90	NB OFF-RAMP TO 32ND STREET	61	10.5	SB OFF-RAMP TO CARSON STREET
30	4.93	SB ON-RAMP FROM ORANGE AVENUE	62	10.6	NB OFF-RAMP TO CARSON STREET
31	4.99	NB ON-RAMP FROM NB CHERRY AVENUE	63	10.7	NB ON-RAMP FROM CARSON STREET
32	5.01	NB ON-RAMP FROM SB CHERRY AVENUE	64	11.2	0.2 MILE NORTH AND SOUTH OF AVALON BOULEVARD UC

LOCATIONS OF CONSTRUCTION

LC-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HECTOR OBESO
 CALCULATED/DESIGNED BY: MARLON SARMIENTO
 CHECKED BY: HAMID SAADATNEJADI
 REVISED BY: DATE
 REVISIONS:



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	3	39

9-8-10
 REGISTERED CIVIL ENGINEER DATE
 9-27-10
 PLANS APPROVAL DATE

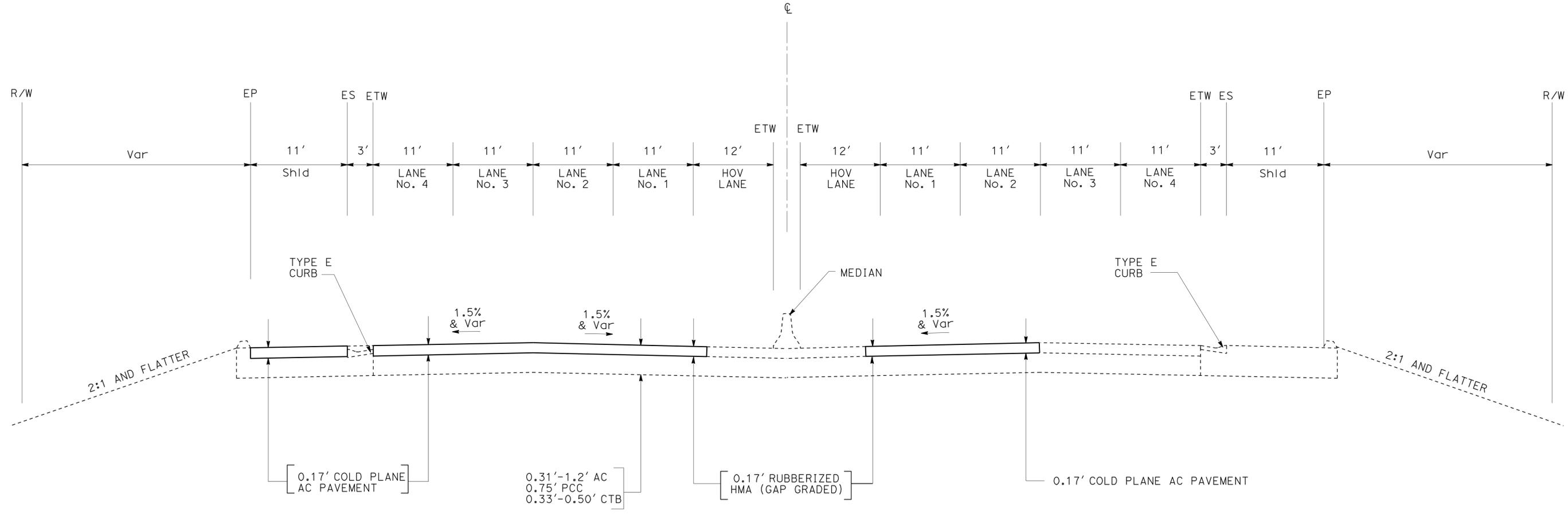
Hamid Saadatnejadi
 REGISTERED PROFESSIONAL ENGINEER
 No. C50440
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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

NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- EXISTING DRAINAGE INLETS HAVE NOT BEEN PLOTTED ON THESE PLANS.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- EXACT PAVING LIMITS WILL BE DETERMINED BY THE ENGINEER.
- EXISTING STRUCTURE FACILITIES ARE NOT SHOWN ON THE PLANS.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HECTOR OBESO
 CALCULATED/DESIGNED BY: MARLON SARMIENTO
 CHECKED BY: HAMID SAADATNEJADI
 REVISOR BY: DATE
 REVISOR BY: DATE



**ROUTE 405
PM 11.0 to 11.4**

**TYPICAL CROSS SECTIONS
NO SCALE**

X-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	4	39
<i>Hamid Saadatnejadi</i> REGISTERED CIVIL ENGINEER			9-8-10	DATE	
9-27-10 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.					

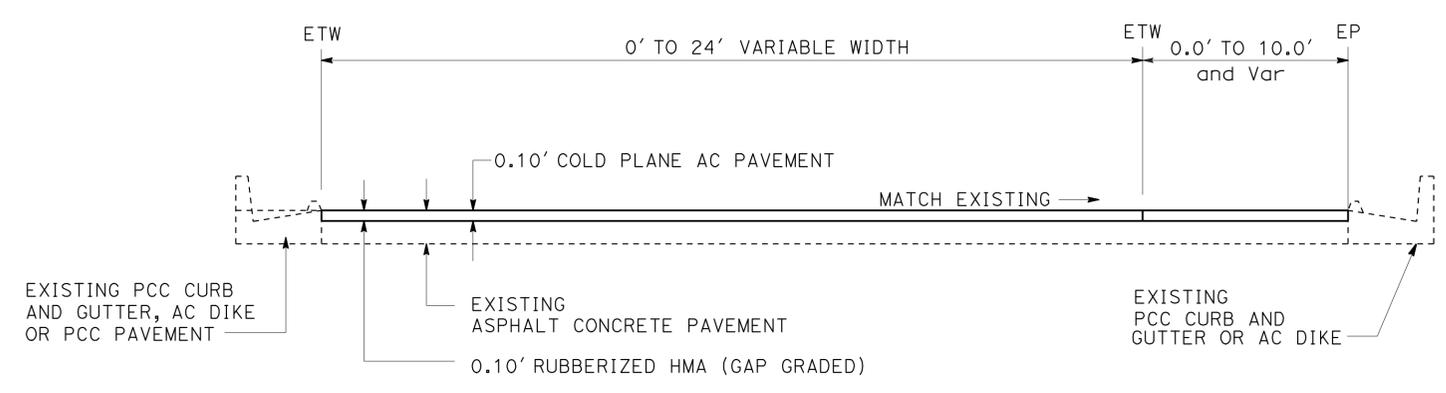


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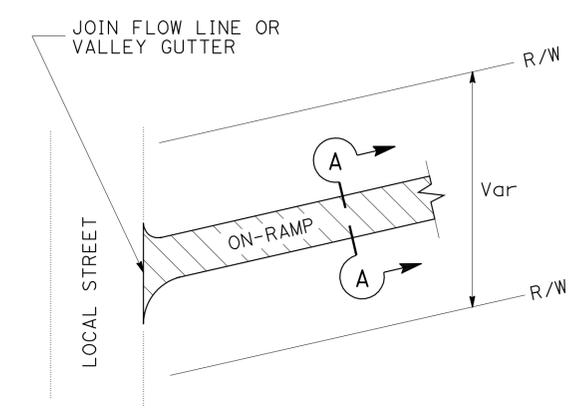
- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- EXISTING DRAINAGE INLETS HAVE NOT BEEN PLOTTED ON THESE PLANS.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- EXACT PAVING LIMITS WILL BE DETERMINED BY THE ENGINEER.

LEGEND:

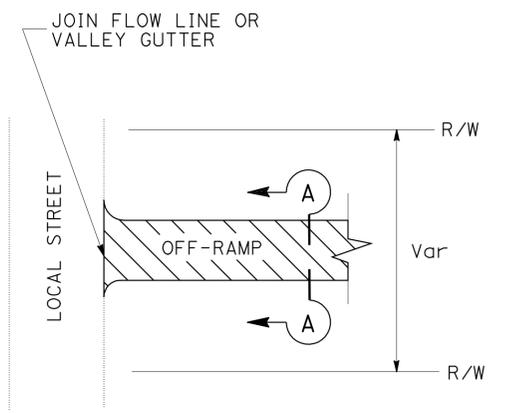
- COLD PLANE 0.10' AC PAVEMENT AND PLACE 0.10' RUBBERIZED HMA (GAP GRADED)
- DIRECTION OF TRAVEL



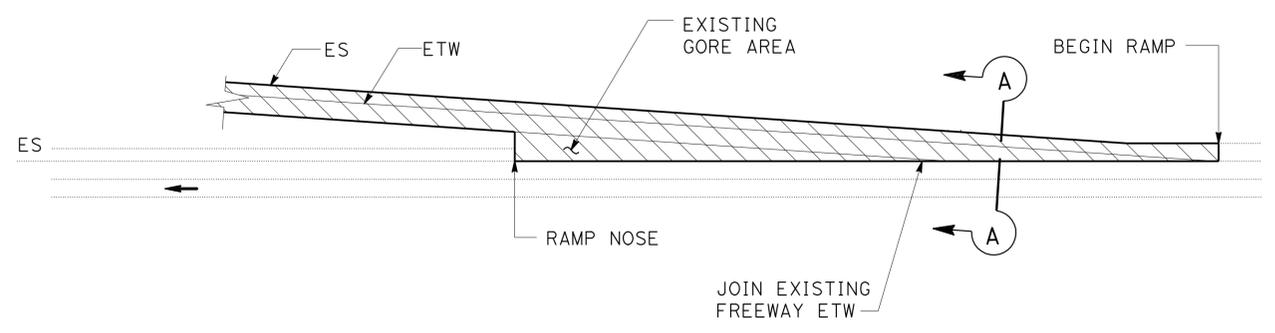
TYPICAL SECTION A-A



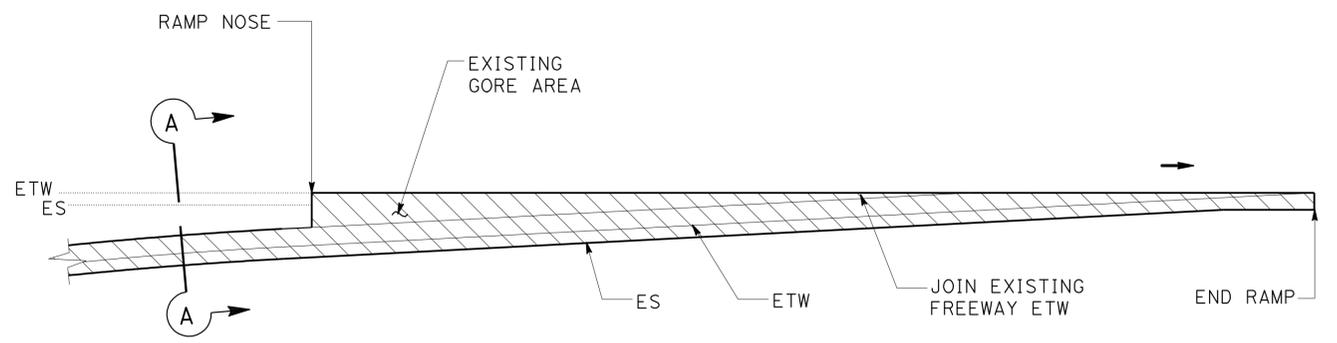
ON-RAMP



OFF-RAMP



OFF-RAMP



ON-RAMP

TYPICAL RAMP PAVING DETAILS

SEE SHEET Q-1 FOR LOCATIONS

CONSTRUCTION DETAILS

NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HECTOR OBESO
 CALCULATED/DESIGNED BY: MARLON SARMIENTO
 CHECKED BY: HAMID SAADATNEJADI
 REVISOR BY: MARLON SARMIENTO
 DATE REVISOR: HAMID SAADATNEJADI

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	5	39

<i>Hamid Saadatnejadi</i>		9-8-10
REGISTERED CIVIL ENGINEER	DATE	
9-27-10		
PLANS APPROVAL DATE		

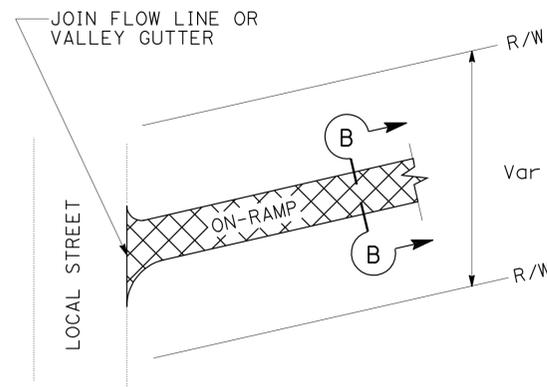
REGISTERED PROFESSIONAL ENGINEER	HAMID SAADATNEJADI
No. C50440	Exp. 6-30-11
CIVIL	

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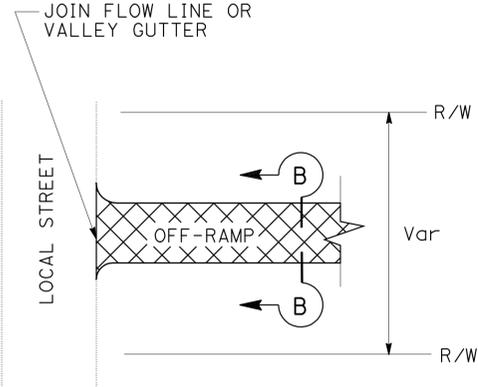
NOTE:

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

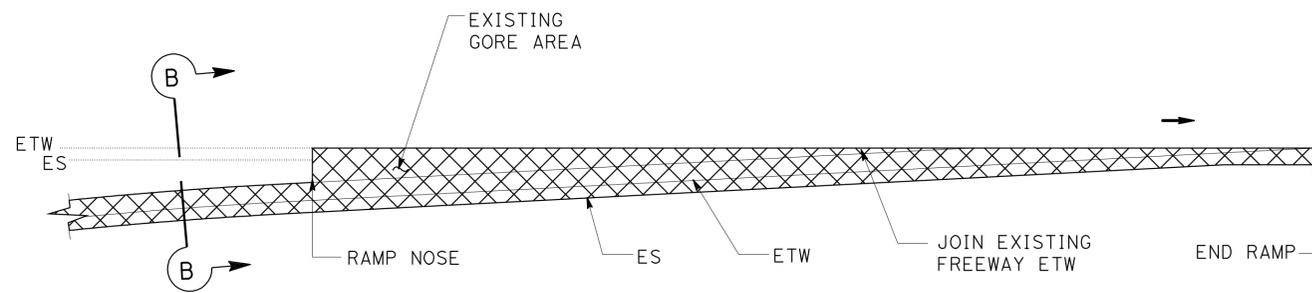
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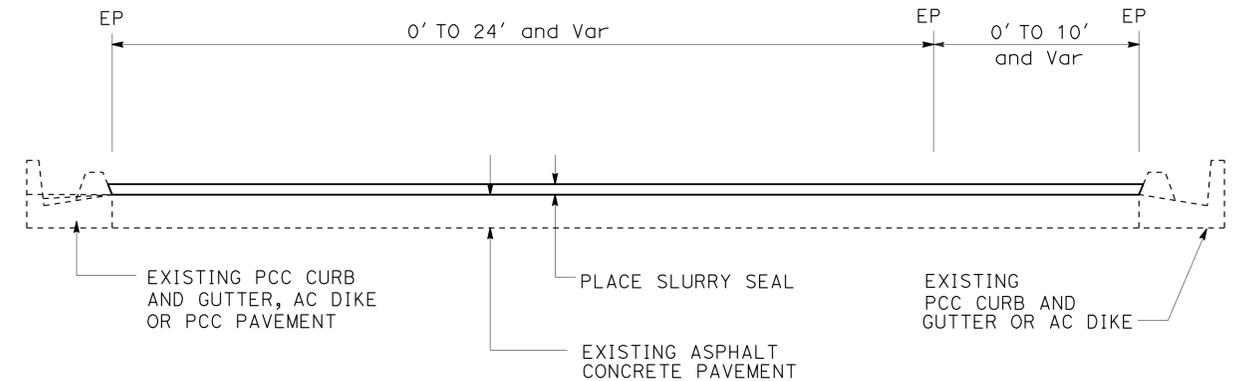
ON-RAMP



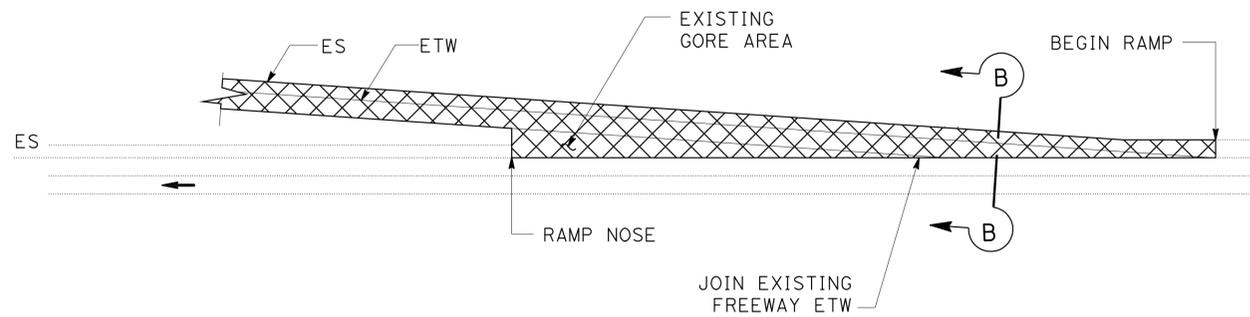
OFF-RAMP



ON-RAMP



TYPICAL SECTION B-B



OFF-RAMP

TYPICAL RAMP SLURRY SEAL DETAILS

SEE SHEET Q-1 FOR LOCATIONS

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
Caltrans MAINTENANCE ENGINEERING	HECTOR OBESO	CHECKED BY	MARLON SARMIENTO	9-27-10
			HAMID SAADATNEJADI	

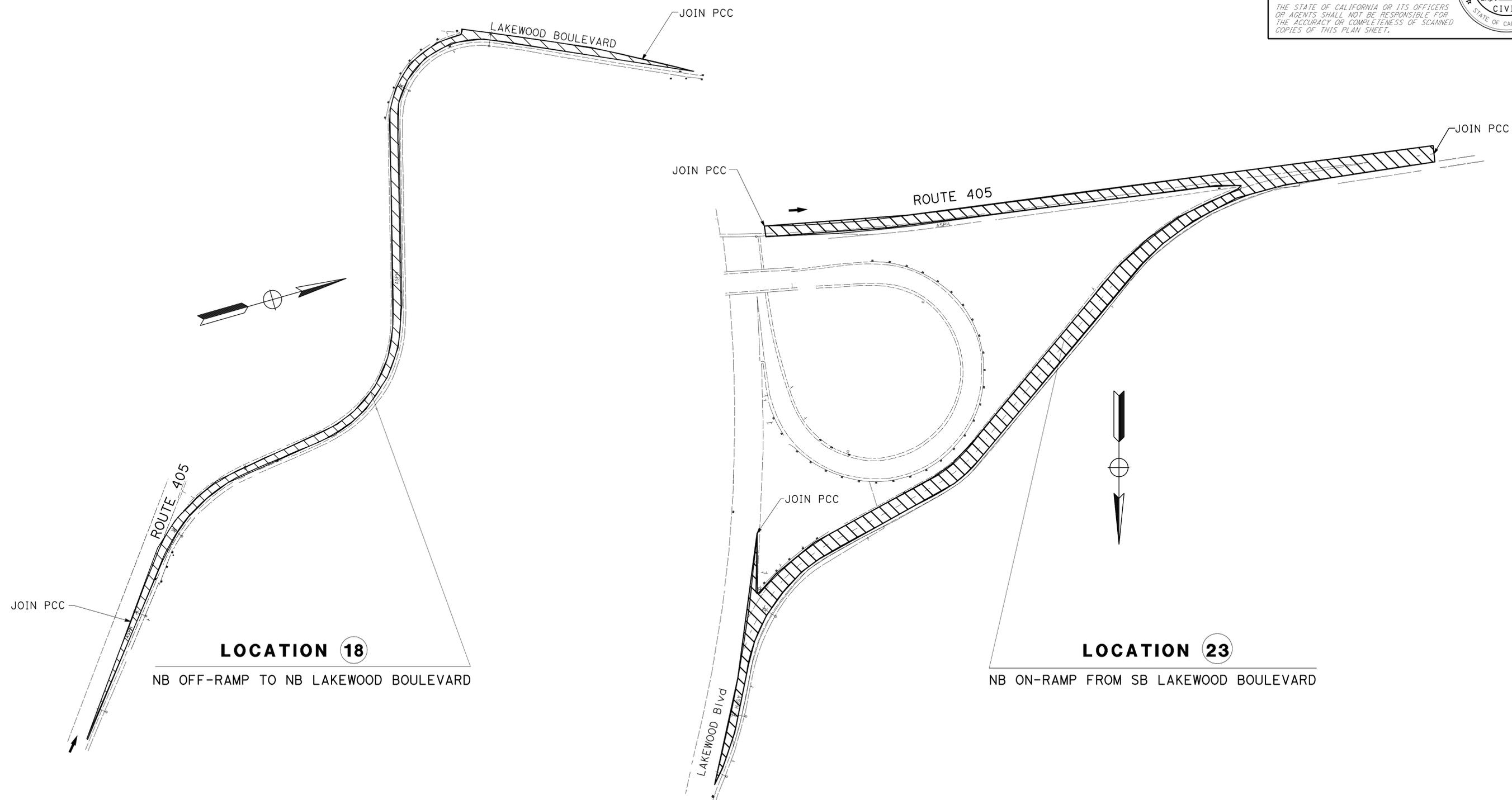
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	8	39

Hamid Saadatnejadi 9-8-10
 REGISTERED CIVIL ENGINEER DATE
 9-27-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 HAMID SAADATNEJADI
 No. C50440
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans MAINTENANCE ENGINEERING	HECTOR OBESO	CHECKED BY	DATE
		MARLON SARMIENTO	
		HAMID SAADATNEJADI	



RAMP PAVING DETAIL

CONSTRUCTION DETAILS

NO SCALE

C-5

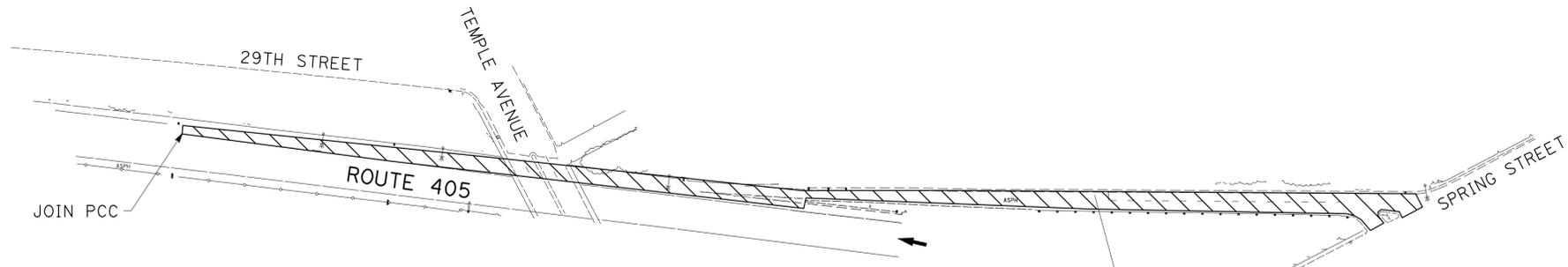
LAST REVISION | DATE PLOTTED => 13-OCT-2010
 09-27-10 | TIME PLOTTED => 10:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	9	39

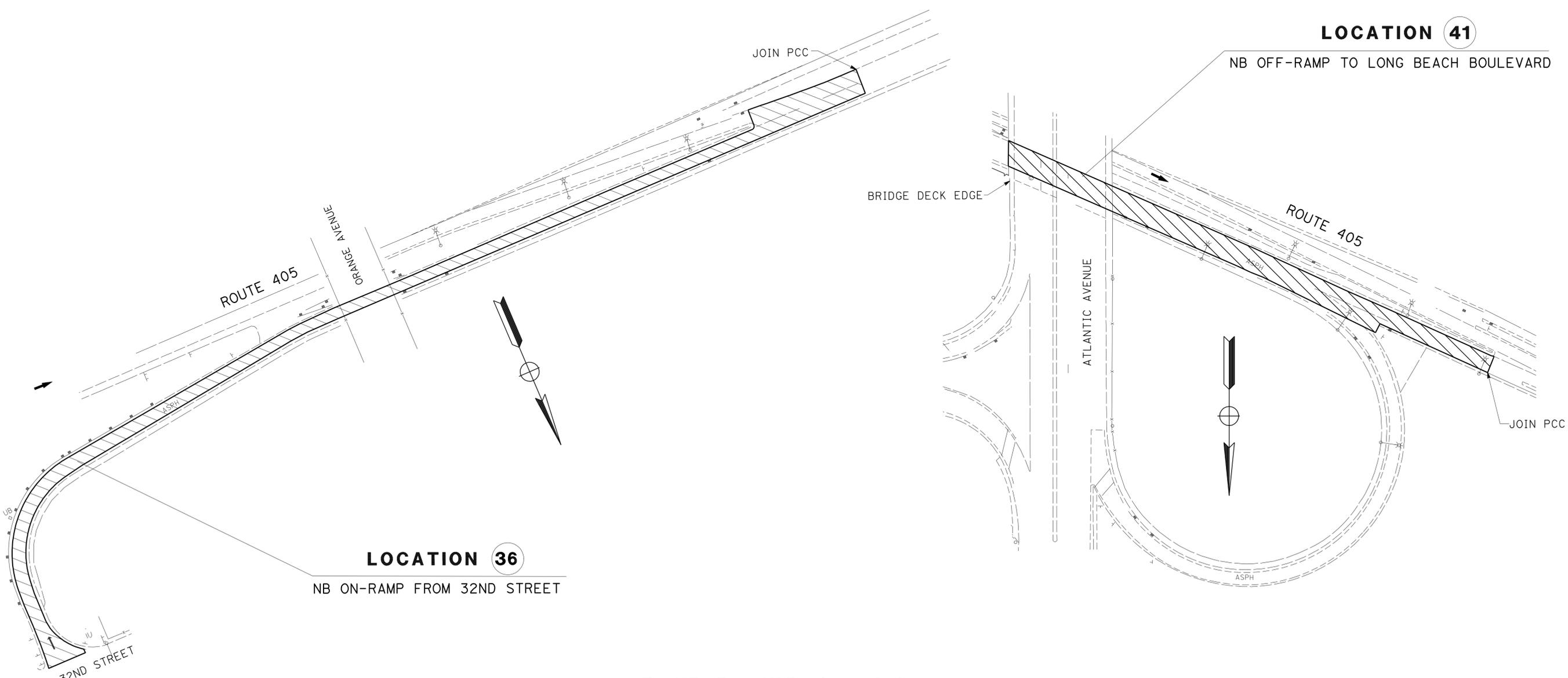
Hamid Saadatnejadi
 REGISTERED CIVIL ENGINEER DATE 9-8-10
 9-27-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 HAMID SAADATNEJADI
 No. C50440
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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LOCATION 25
SB ON-RAMP FROM SPRING STREET



LOCATION 36
NB ON-RAMP FROM 32ND STREET

LOCATION 41
NB OFF-RAMP TO LONG BEACH BOULEVARD

RAMP PAVING DETAILS

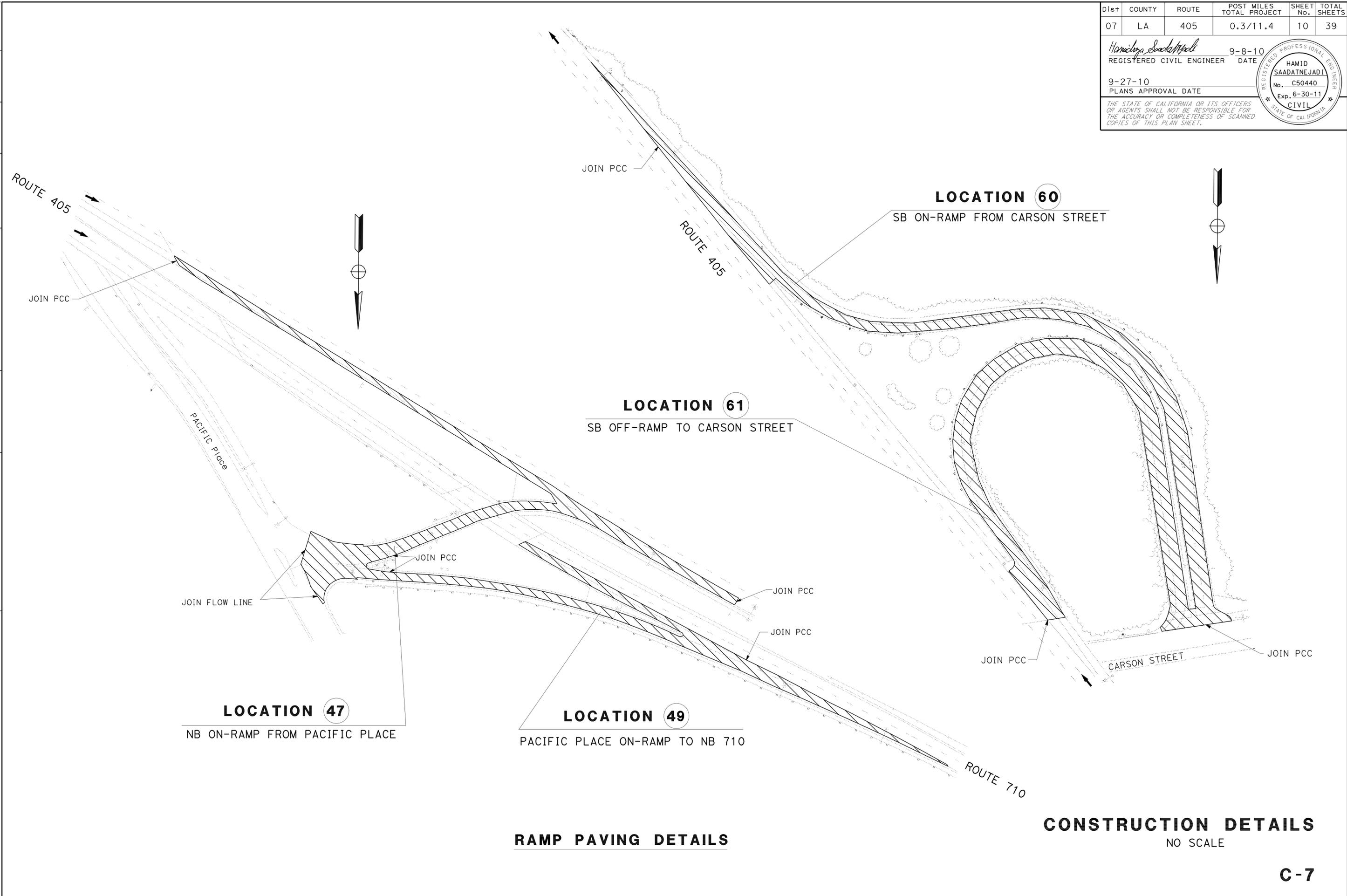
CONSTRUCTION DETAILS
NO SCALE

C-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans MAINTENANCE ENGINEERING	HECTOR OBESO	CHECKED BY	MARLON SARMIENTO
			HAMID SAADATNEJADI
			DATE
			REVISOR
			DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	10	39
<i>Hamid Saadatnejadi</i> REGISTERED CIVIL ENGINEER			9-8-10 DATE		
9-27-10 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>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE
Caltrans MAINTENANCE ENGINEERING	HECTOR OBESO	CHECKED BY	MARLON SARMIENTO	
			HAMID SAADATNEJADI	



RAMP PAVING DETAILS

CONSTRUCTION DETAILS
NO SCALE

C-7



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	11	39

Hamid Saadatnejadi
 REGISTERED CIVIL ENGINEER DATE 9-8-10
 9-27-10
 PLANS APPROVAL DATE

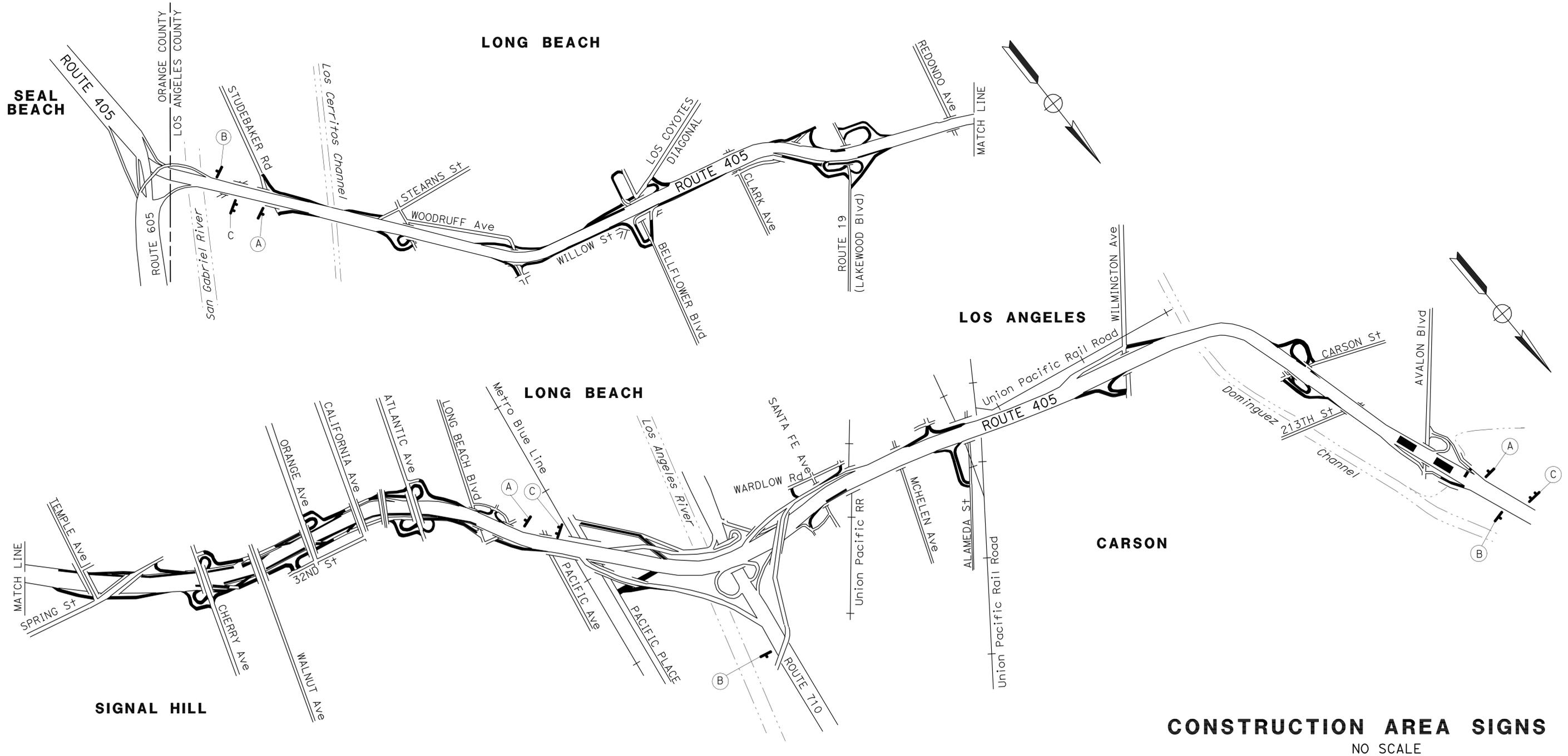
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

- "TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES" SIGNS SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF "ROAD WORK AHEAD" SIGNS OR AS DETERMINED BY THE ENGINEER.
- LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	3
B	G20-2	48" x 24"	END ROAD WORK	1 - 4" x 6"	3
C	C40 (CA)	132" x 84"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	3



CONSTRUCTION AREA SIGNS
NO SCALE

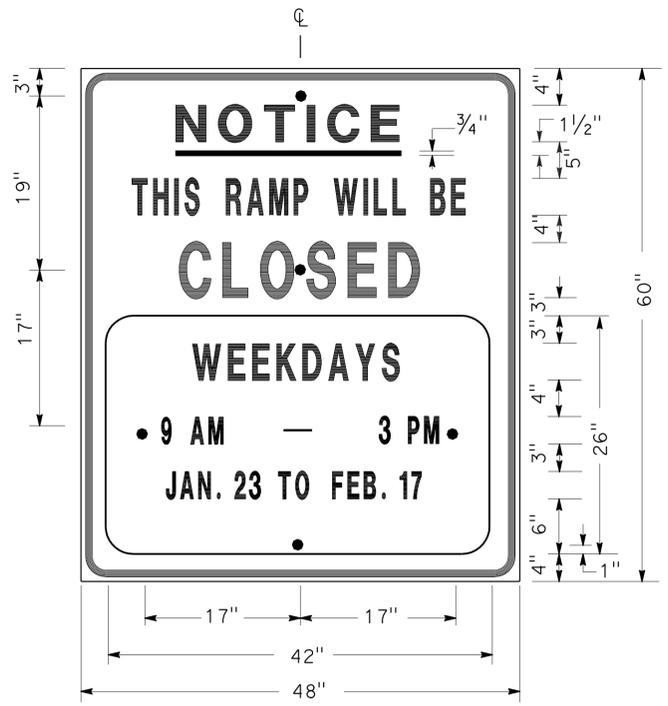
CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

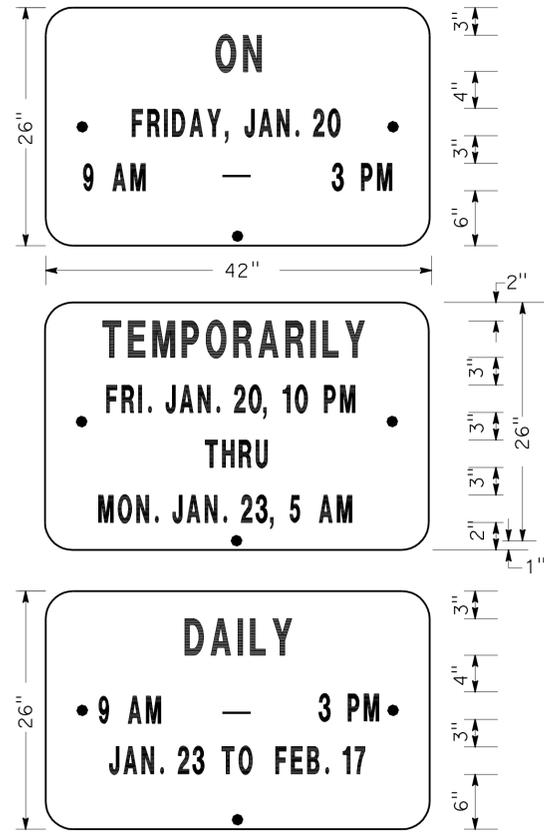
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HECTOR OBESO
 CALCULATED/DESIGNED BY: [blank] CHECKED BY: [blank]
 MARLON SARMIENTO
 HAMID SAADATNEJADI
 REVISED BY: [blank] DATE REVISED: [blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	12	39

Dennis Katayama 9-8-10
 REGISTERED CIVIL ENGINEER DATE
 9-27-10
 PLANS APPROVAL DATE
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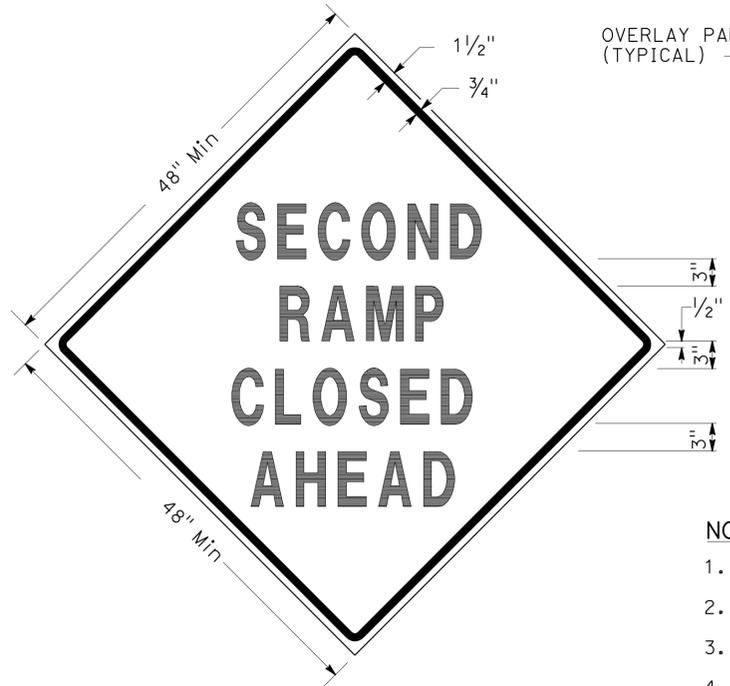


SIGN SP-1



ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN



SIGN SP-3



SIGN SP-5

- NOTES: (SIGNS SP-3 & SP-5)
1. LETTERS - 6" SERIES D.
 2. LETTERS AND BORDERS - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
 3. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
 4. SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND.

SPECIAL SIGN FOR EXIT RAMP CLOSURES



SIGN SP-4

OVERLAY PANEL (TYPICAL)

- NOTES: (SIGN SP-4)
1. LETTERS - 6" SERIES C.
 2. LETTERS AND BORDERS - BLACK ON RETROREFLECTORIZED WHITE BACKGROUND.
 3. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
 4. SIGNS SHALL BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH STANDARD PLAN T14.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES

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

SHEET 1 OF 2

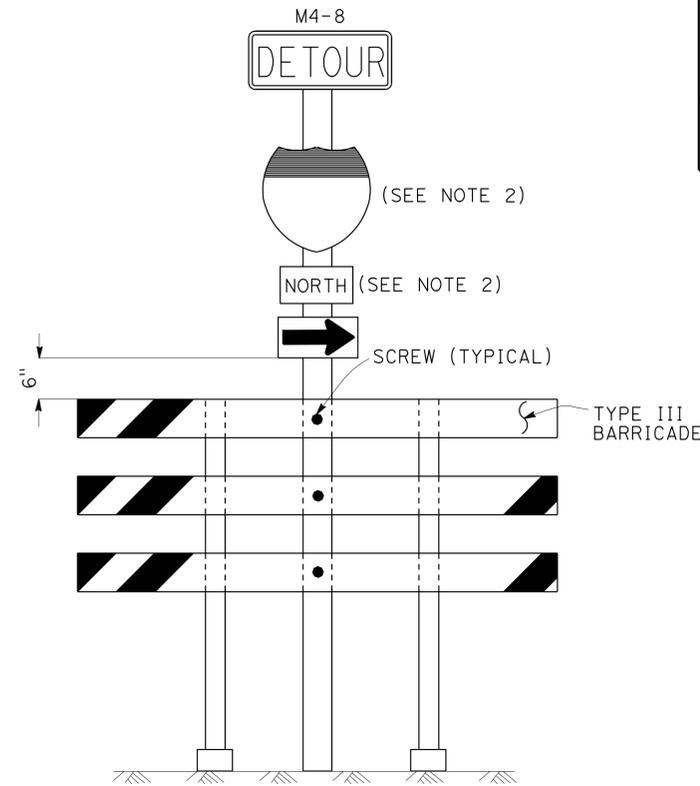
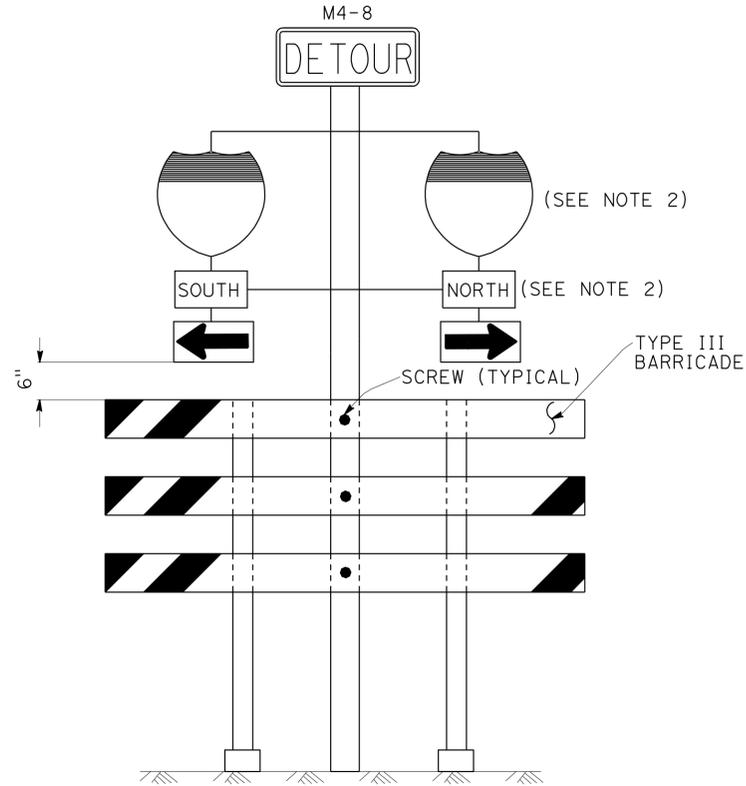
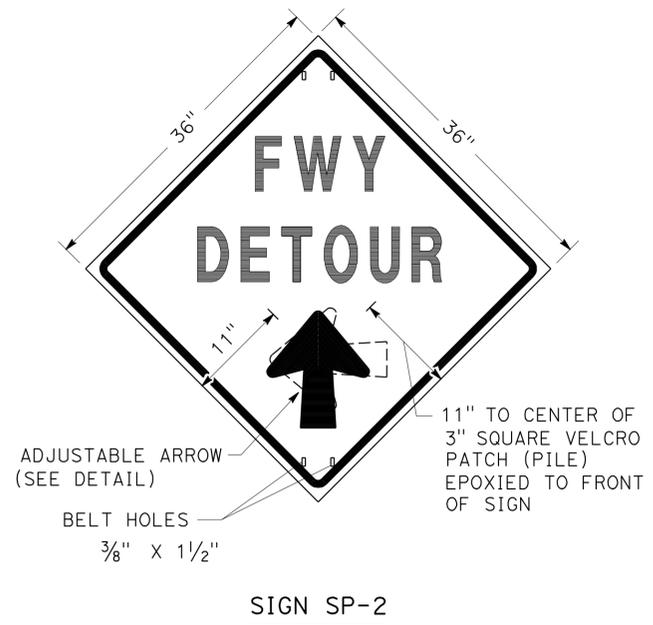
NO SCALE

THD-1

- NOTES: (SIGN SP-1)
1. SIGNS SHALL HAVE ORANGE RETROREFLECTORIZED BACKGROUND WITH BLACK BORDER AND LETTERS.
 2. BOLT HOLES SHALL BE 3/8" DIAMETER.
 3. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
 4. SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND.

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

* CONDENSED SPACING IF NECESSARY

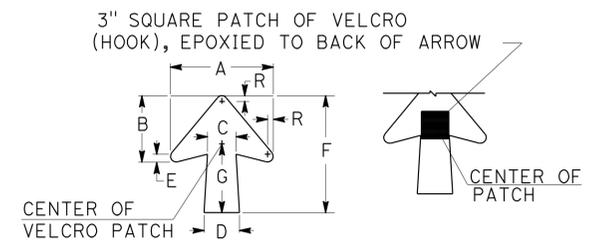


- NOTES:** (SIGN SP-2)
- LETTERS -6" SERIES E.
 - LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
 - BASE MATERIAL FOR SIGNS AND ARROWS SHALL BE ALUMINUM (MINIMUM 0.06").
 - BELTS (LUGGAGE STRAPS) SHALL BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
 - SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

ABBREVIATION
 (CA) CALIFORNIA CODE

- NOTES:** (SIGNS SP-6 & SP-7)
- IN LIEU OF PLACING SIGNS ON TYPE III BARRICADES, SIGNS, INCLUDING POSTS, MAY BE PLACED INTO THE GROUND OR FASTENED ONTO ELECTROLIERS.
 - USE APPROPRIATE ROUTE SHIELD [G26-2(CA), G27-2(CA), G28-2(CA)] AND CARDINAL DIRECTION [NORTH (M3-1), SOUTH (M3-3), EAST (M3-2), WEST (M3-4)]

SPECIAL PORTABLE FREEWAY DETOUR SIGNS



DIMENSIONS							
A	B	C	D	E	F	G	R
11 1/4"	7 1/4"	3 1/8"	4"	7/8"	13"	7 1/2"	5/8"

SPECIAL PORTABLE FREEWAY DETOUR SIGN

ADJUSTABLE ARROW DETAIL

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR RAMP CLOSURES, DETOUR SIGNS
AND MISCELLANEOUS DETAILS
SHEET 2 OF 2
 NO SCALE

THD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: JOHN YANG
 CHECKED BY: JOCELYN C CHIANG
 REVISOR: ALBERT K YU
 DATE REVISOR: 7/08
 JC
 9/08

LAST REVISION DATE PLOTTED => 13-OCT-2010
 09-27-10 TIME PLOTTED => 10:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	14	39

Denise Katayama 9-8-10
 REGISTERED CIVIL ENGINEER DATE

9-27-10
 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
D.S. KATAYAMA
 No. 50648
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

NOTES:

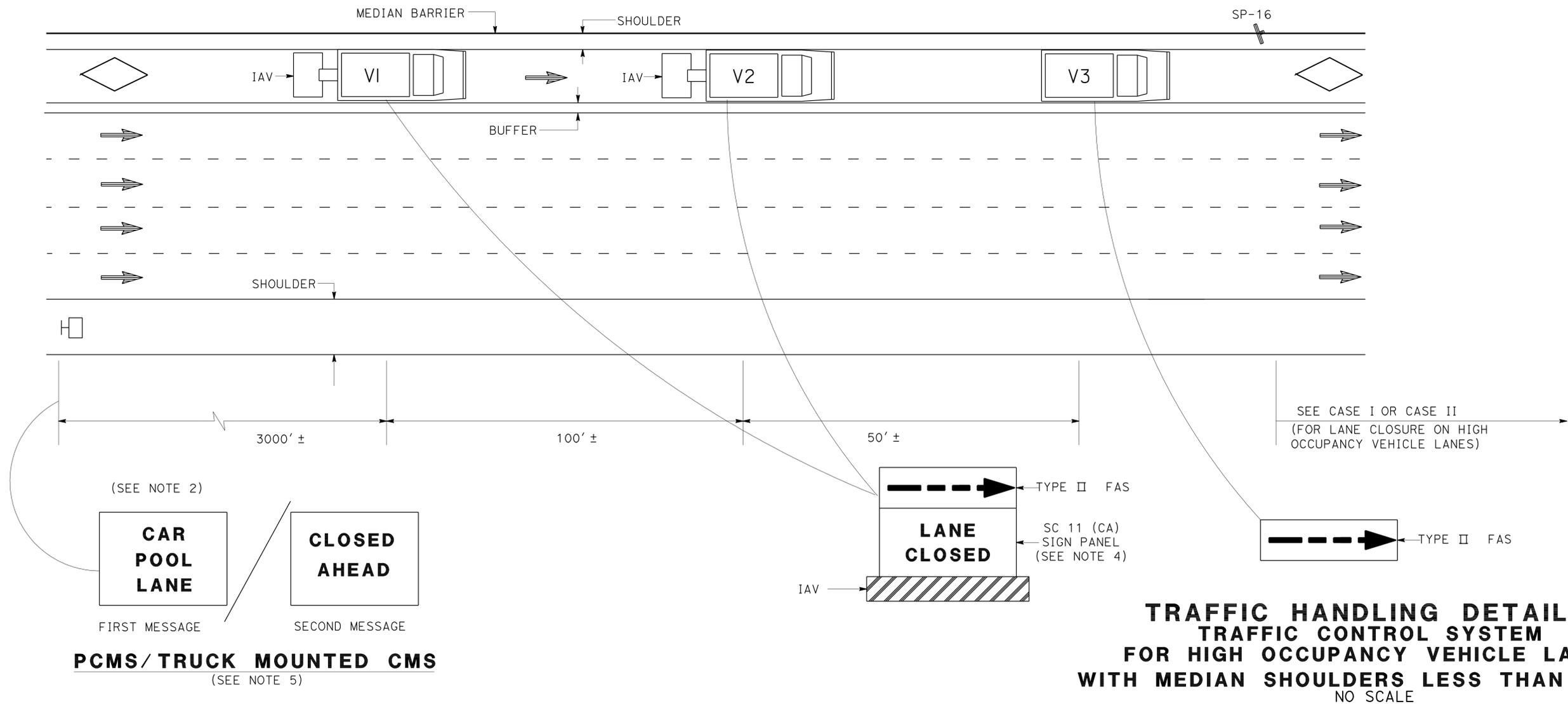
- LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
- PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE HOV LANE.
- A MINIMUM SIGHT DISTANCE OF 1500' SHALL BE PROVIDED IN ADVANCE OF PCMS.
- VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED SHEETING, BLACK ON WHITE OR BLACK ON ORANGE WITH 8" MINIMUM SERIES D LETTERS PER CALTRANS SIGN SPECIFICATIONS.
- PLACE PCMS ON THE MEDIAN SHOULDER WHERE SUFFICIENT ROOM (SUCH AS CHP ENFORCEMENT AREAS) EXISTS.

LEGEND

- V1, V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
-  PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
-  DIRECTION OF TRAVEL
-  HOV LANE

ABBREVIATIONS

- FAS FLASHING ARROW SIGN
- IAV IMPACT ATTENUATOR VEHICLE
- CMS CHANGEABLE MESSAGE SIGN
- (CA) CALIFORNIA CODE
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- HOV HIGH OCCUPANCY VEHICLE



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	ALBERT K YU	REVISOR	JC	DATE	7/08
	JOCELYN C CHIANG	CHECKED BY	JC	DATE	9/08
DTM	JOHN YANG	FUNCTIONAL SUPERVISOR			
		CALCULATED/DESIGNED BY			

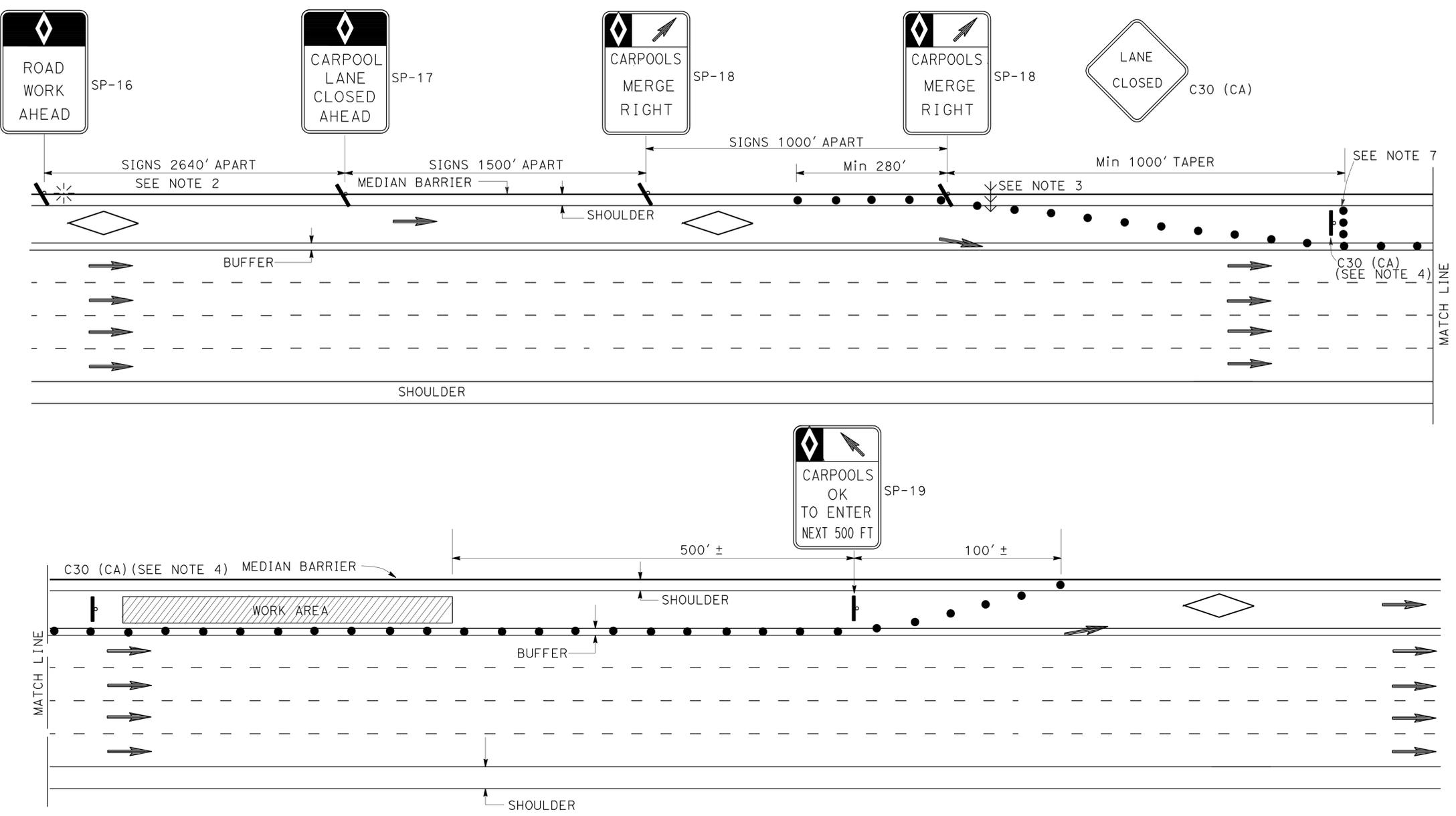
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	15	39

Genus Katayama 9-8-10
 REGISTERED CIVIL ENGINEER DATE

9-27-10
 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
D.S. KATAYAMA
 No. 50648
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA



ABBREVIATIONS

(CA)	CALIFORNIA CODE
HOV	HIGH OCCUPANCY VEHICLE

NOTES: FOR CASE I AND CASE II

- AT LEAST ONE PERSON SHALL BE ASSIGNED TO FULL TIME MAINTENANCE OF TRAFFIC CONTROL DEVICES ON NIGHT LANE CLOSURES OR DAY-TIME CLOSURES EXCEEDING 1 MILE LENGTH, INCLUDING TAPERS.
- ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES. TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS SHALL BE USED ON SP-16 SIGNS DURING NIGHT LANE CLOSURES. FLAGS AND WARNING LIGHTS SHALL BE ATTACHED TO SIGNS AS APPROVED BY THE ENGINEER.
- THE FLASHING ARROW SIGN SHALL BE TYPE I.
- PLACE C30 (CA) SIGNS EVERY 2000' THROUGHOUT THE LENGTH OF LANE CLOSURE.
- A MINIMUM 1500' OF SIGHT DISTANCE SHALL BE PROVIDED WHERE POSSIBLE FOR VEHICLES APPROACHING THE FLASHING ARROW SIGN. LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
- PORTABLE DELINEATORS PLACED AT ONE-HALF THE SPACING INDICATED FOR TRAFFIC CONES MAY BE USED INSTEAD OF CONES FOR DAYTIME CLOSURES.
- A MINIMUM OF 3 CONES SHALL BE PLACED TRANSVERSELY ACROSS CLOSED LANES WHERE TAPERS END AND EVERY 2000'. TWO TYPE II BARRICADES MAY BE USED INSTEAD OF 3 CONES. THE ALIGNMENT OF CONES OR BARRICADES MAY BE SHIFTED FROM THE TRANSVERSE ALIGNMENT TO PROVIDE ACCESS TO WORK.
- IF AN INGRESS/EGRESS AREA IS WITHIN 5250' UPSTREAM OR DOWNSTREAM OF THE WORK AREA, LANE CLOSURES SHALL BE EXTENDED TO THAT AREA AS SHOWN IN CASE II.
- SIGNS SP-16, 17, 18, AND 19 MAY BE OVERLAID ON EXISTING CARPOOL SIGNS IN MEDIANS AS APPROVED BY THE ENGINEER.
- SIGNS SP-16, 17, 18, AND C30 (CA) SHALL BE BLACK ON ORANGE BACKGROUND. SIGN SP-19 SHALL BE BLACK ON WHITE BACKGROUND. DIAMONDS ON SIGNS SHALL BE WHITE.
- FOR CLOSURE OF LANE(S) ADJACENT TO HOV LANES, SEE CASE II.
- THE MAXIMUM SPACING BETWEEN CONES SHALL BE APPROXIMATELY 50' IN TAPERS AND 100' ON TANGENTS.

LEGEND

- CONE
- ⚡ FLASHING BEACON
- ◇ HOV LANE
- ←←← FLASHING ARROW SIGN
- ▬ PORTABLE SIGN
- DIRECTION OF TRAVEL

SIGN PANEL SIZE (MIN)

SP-16	36" X 54"
SP-17	36" X 54"
SP-18	36" X 48"
SP-19	36" X 60"
C30 (CA)	30" X 30"
G20-2	48" X 24"

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR HIGH OCCUPANCY VEHICLE LANES
AT NON-INGRESS/EGRESS AREAS

CASE I
 NO SCALE

THD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: JOHN YANG
 CHECKED BY: JOCELYN C CHIANG
 REVISIONS:
 JC 9/08
 JC 7/08
 REVISIONS BY: JC
 DATE REVISED: 7/08

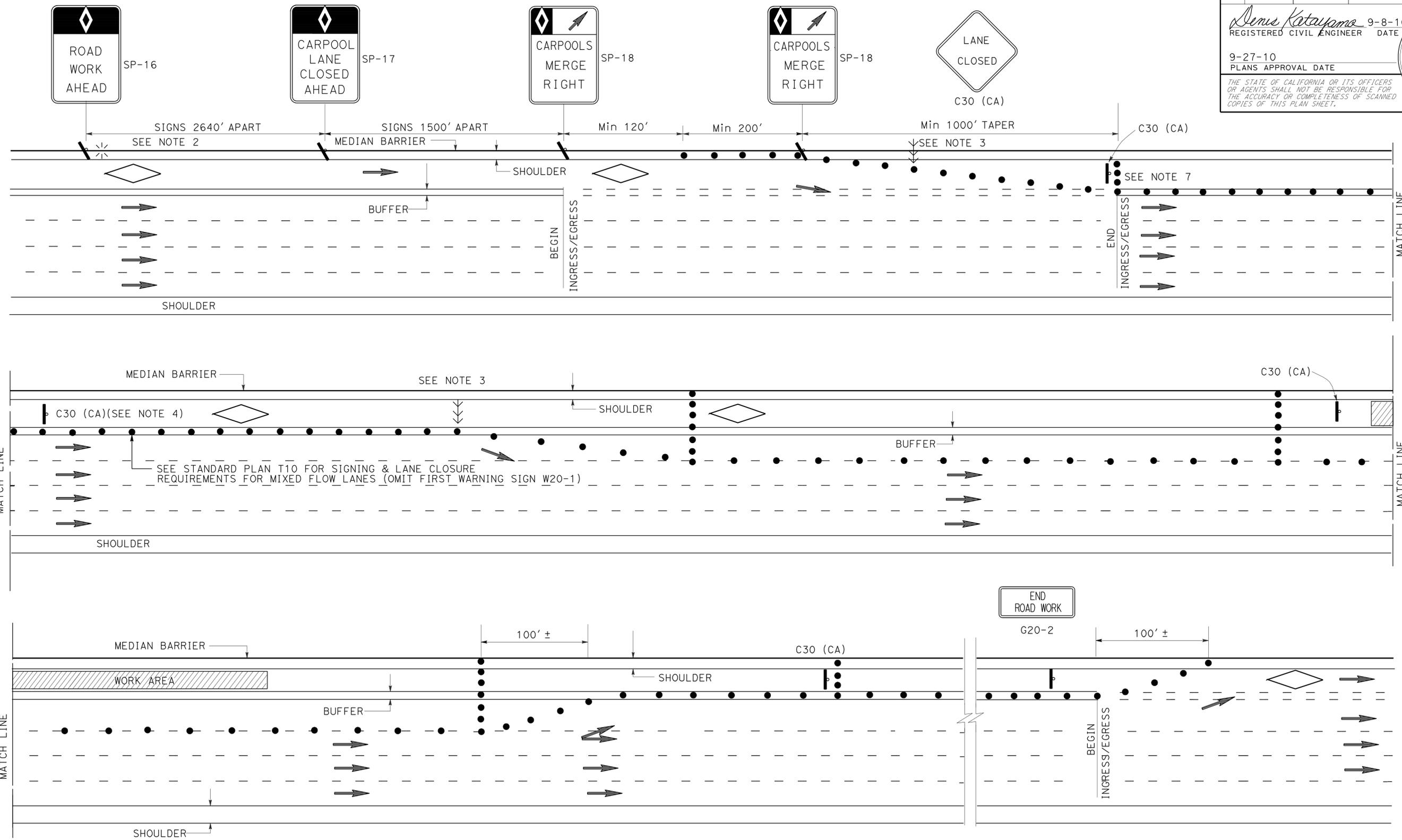
LAST REVISION: 09-27-10 DATE PLOTTED => 13-OCT-2010 TIME PLOTTED => 10:35

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: JOHN YANG
 CHECKED BY: JOCELYN C CHIANG
 REVISIONS:
 JC 9/08
 JC 7/08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	16	39

REGISTERED CIVIL ENGINEER
 D.S. KATAYAMA
 No. 50648
 Exp. 9-30-11
 CIVIL
 9-27-10
 PLANS APPROVAL DATE
 DATE 9-8-10

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:**
- SEE CASE I FOR NOTES, LEGENDS AND ABBREVIATIONS FOR THIS SHEET.
 - CLOSURES OF ONE MIXED FLOW TRAFFIC LANE ADJACENT TO HOV LANE SHOWN. MULTIPLE MIXED FLOW LANE CLOSURES ARE SIMILAR.

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR HIGH OCCUPANCY
VEHICLE LANES AND ADJACENT FREEWAY LANES
BETWEEN INGRESS/EGRESS AREAS
CASE II
NO SCALE

THD-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	17	39

Senju Katayama 9-8-10
 REGISTERED CIVIL ENGINEER DATE

9-27-10
 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
D.S. KATAYAMA
 No. 50648
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

NOTES:

- WORDING DISPLAYED ON PCMS WILL BE APPROVED BY THE ENGINEER.
- EXACT LOCATIONS OF PCMS WILL BE DETERMINED BY THE ENGINEER.
- CHANGE PCMS MESSAGE AT THE BEGINNING OF CURE PERIOD TO REFLECT NUMBER OF CLOSED LANES.

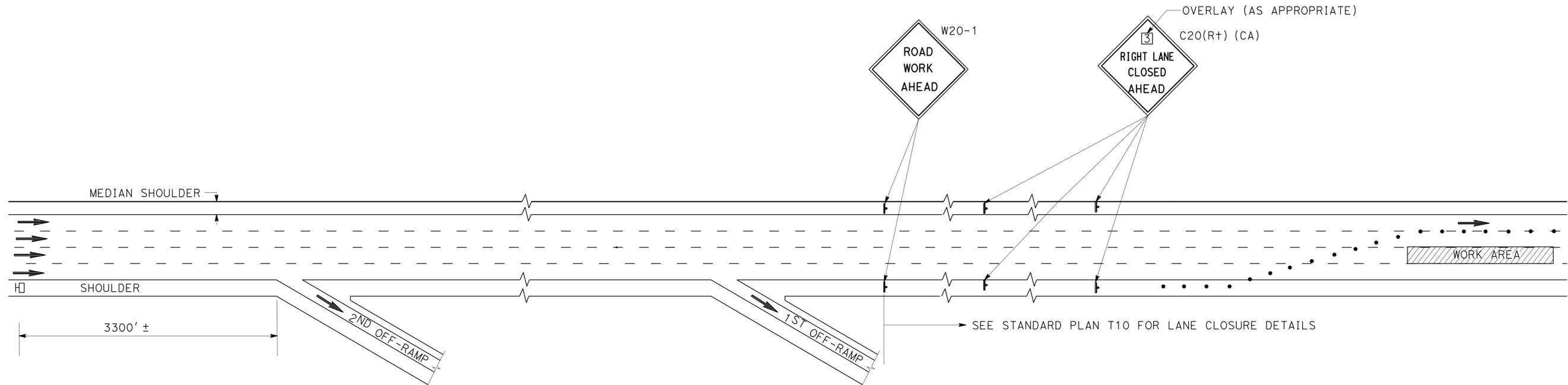
ABBREVIATIONS

PCMS PORTABLE CHANGEABLE MESSAGE SIGN
 (CA) CALIFORNIA CODE

LEGEND

- CONE
- ⊥ PORTABLE SIGN
- ➔ DIRECTION OF TRAVEL
- ☐ PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- (CA) CALIFORNIA CODE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DTMM
 FUNCTIONAL SUPERVISOR JOHN YANG
 CHECKED BY JOCELYN C CHIANG
 CALCULATED/DESIGNED BY ALBERT K YU
 REVISED BY JC
 DATE REVISED 7/08
 JC
 9/08



FIRST FLASH MESSAGE	X (NO OF LANES) RIGHT / LEFT LANES CLOSED	1ST LINE (TYPICAL)
		2ND LINE (TYPICAL)
		3RD LINE (TYPICAL)
SECOND FLASH MESSAGE	A ST TO B DR	LIMIT OF CLOSURE (TYPICAL)
		LIMIT OF CLOSURE (TYPICAL)

WORDING FOR PORTABLE CHANGEABLE MESSAGE SIGN

**TRAFFIC HANDLING DETAILS
 TRAFFIC CONTROL SYSTEM
 FOR CONCRETE PAVEMENT AND
 APPROACH SLAB REPLACEMENT
 NO SCALE**

THD-6

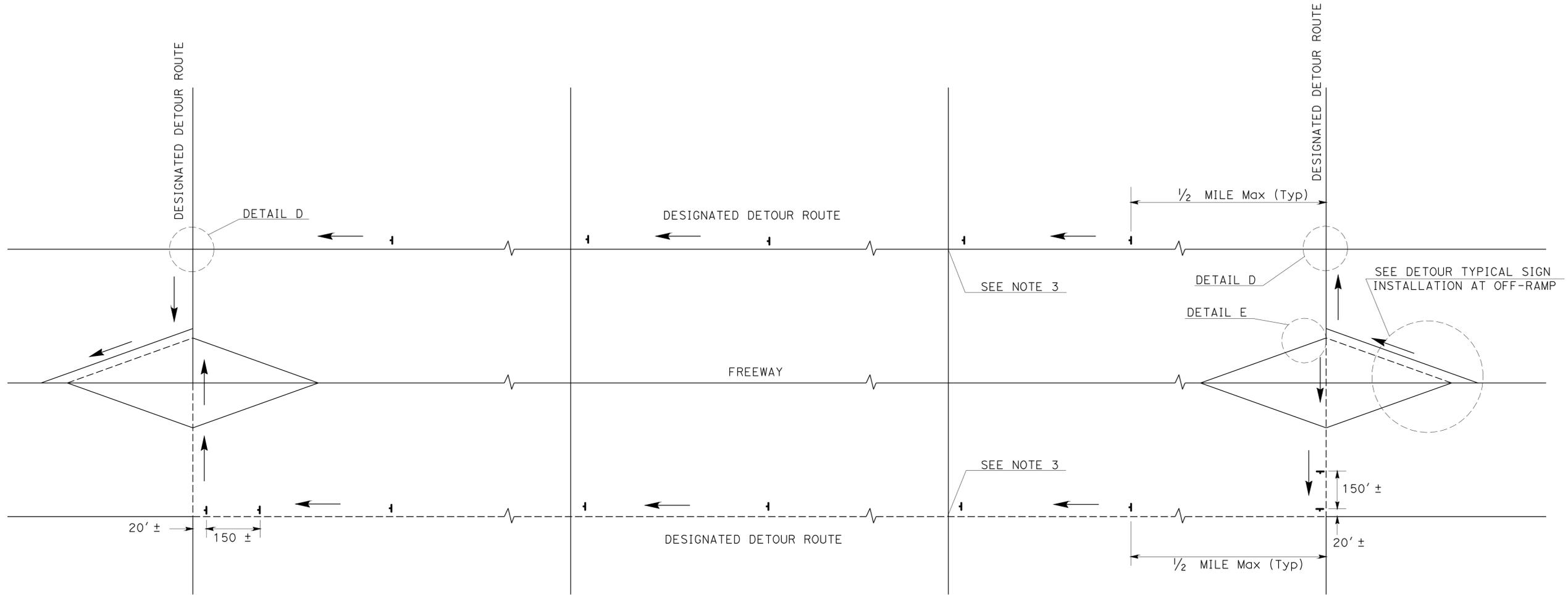
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	18	39

Senju Katayama 9-8-10
 REGISTERED CIVIL ENGINEER DATE

9-27-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
D.S. KATAYAMA
 No. 50648
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

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TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

LEGEND

- SIGN SP-2
- AND/OR DESIGNATED DETOUR ROUTE
-
- DIRECTION OF TRAVEL

NOTES:

1. SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
2. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
3. SP-2 SIGNS SHALL BE POSTED AT SIGNALIZED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE OR 1/2 MILE MAXIMUM APART.

**TRAFFIC HANDLING DETAILS
 TRAFFIC CONTROL SYSTEM
 FOR DETOUR SIGN INSTALLATION
 ALONG DESIGNATED DETOUR ROUTE
 SHEET 1 OF 2
 NO SCALE**

THD-7

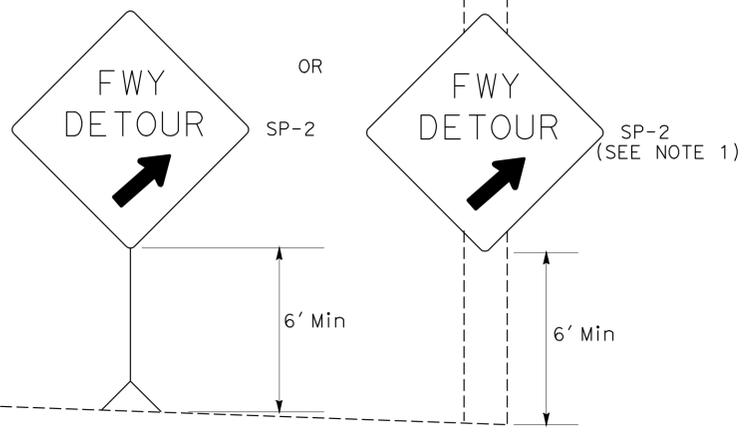
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DTM
 FUNCTIONAL SUPERVISOR: JOHN YANG
 CHECKED BY: JOCELYN C CHIANG
 DESIGNED BY: ALBERT K YU
 REVISIONS:
 JC 7/08
 JC 9/08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	19	39

Senju Katayama 9-8-10
 REGISTERED CIVIL ENGINEER DATE
 9-27-10
 PLANS APPROVAL DATE

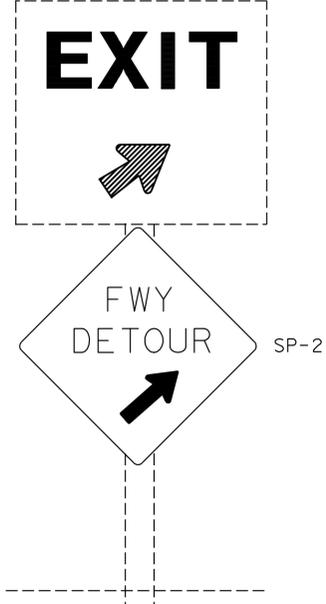
REGISTERED PROFESSIONAL ENGINEER
D.S. KATAYAMA
 No. 50648
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

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

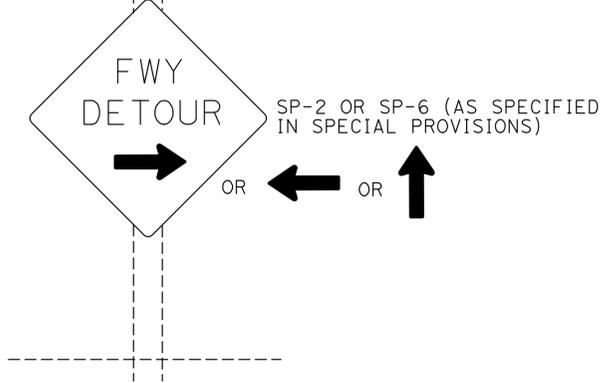
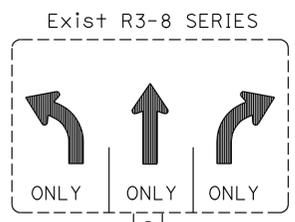


DETAIL A (SEE NOTE 2)

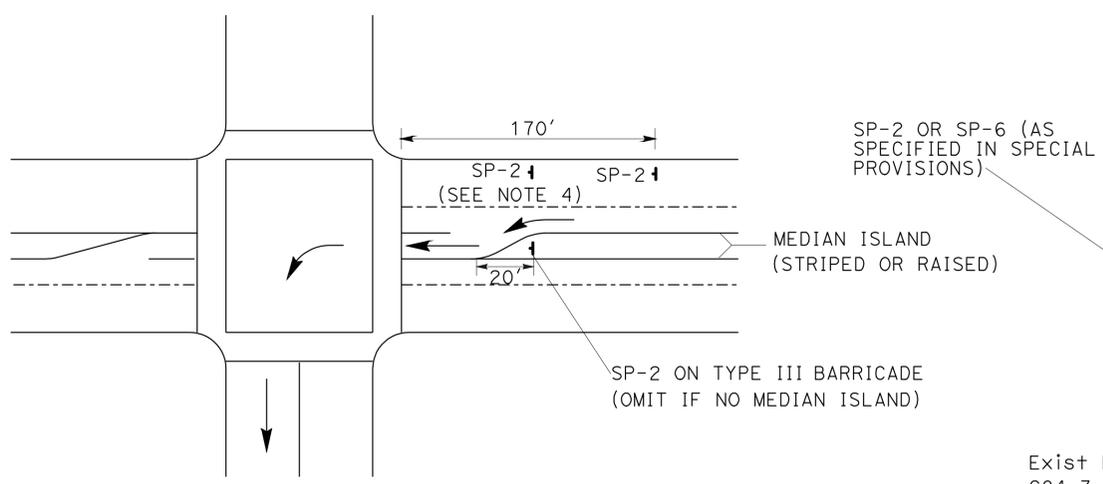
Exist E5-1, G84-2 (CA) OR G84-3 (CA)



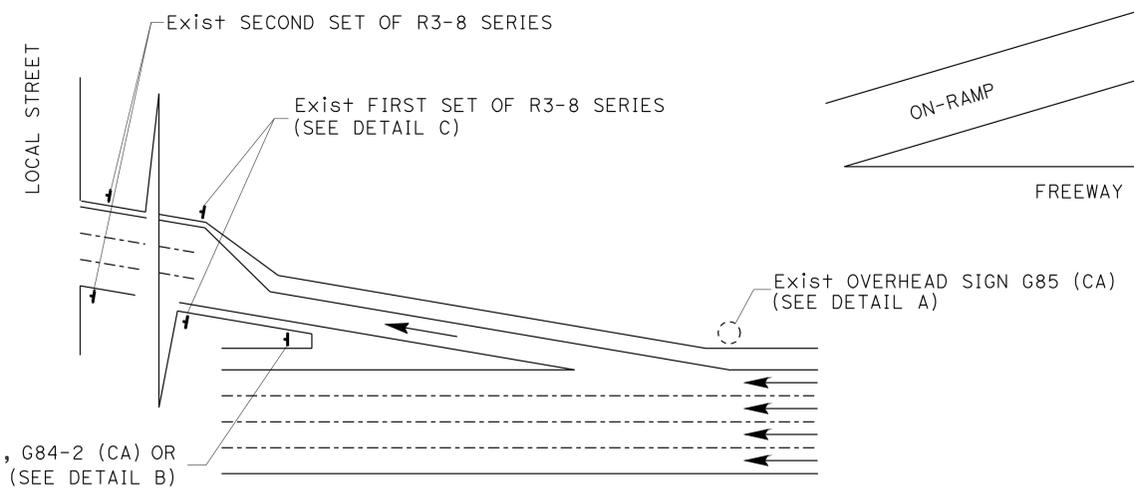
DETAIL B (SEE NOTE 2)



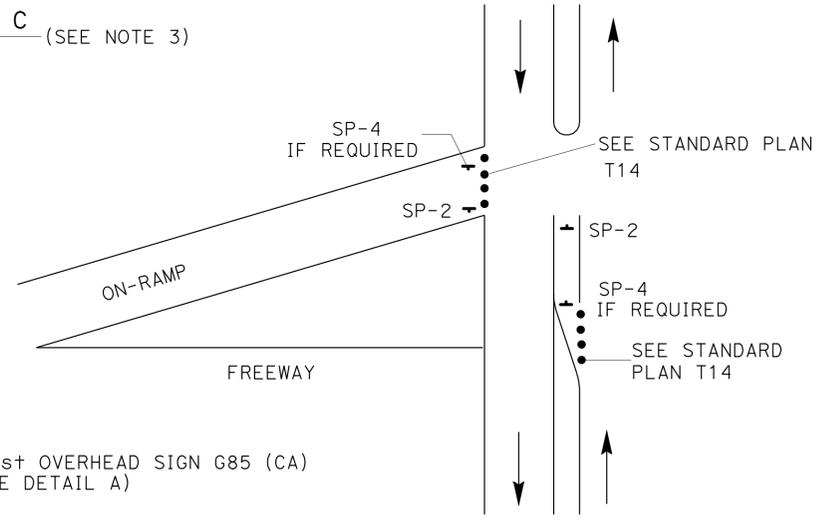
DETAIL C (SEE NOTE 3)



DETAIL D



TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP



DETAIL E

- NOTES:**
1. SP-2 MAY BE STRAPPED ON EXISTING ELECTROLIER SIGNAL POSTS OR SIGN POSTS.
 2. OMIT DETAIL A AND DETAIL B FOR FULL FREEWAY CLOSURES.
 3. SEE TRAFFIC HANDLING DETAILS PLAN-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS AND MISCELLANEOUS DETAILS SHEET 2 OF 2 FOR SP-6.
 4. OMIT IF MEDIAN ISLAND EXIST.

ABBREVIATIONS
 (CA) CALIFORNIA CODE

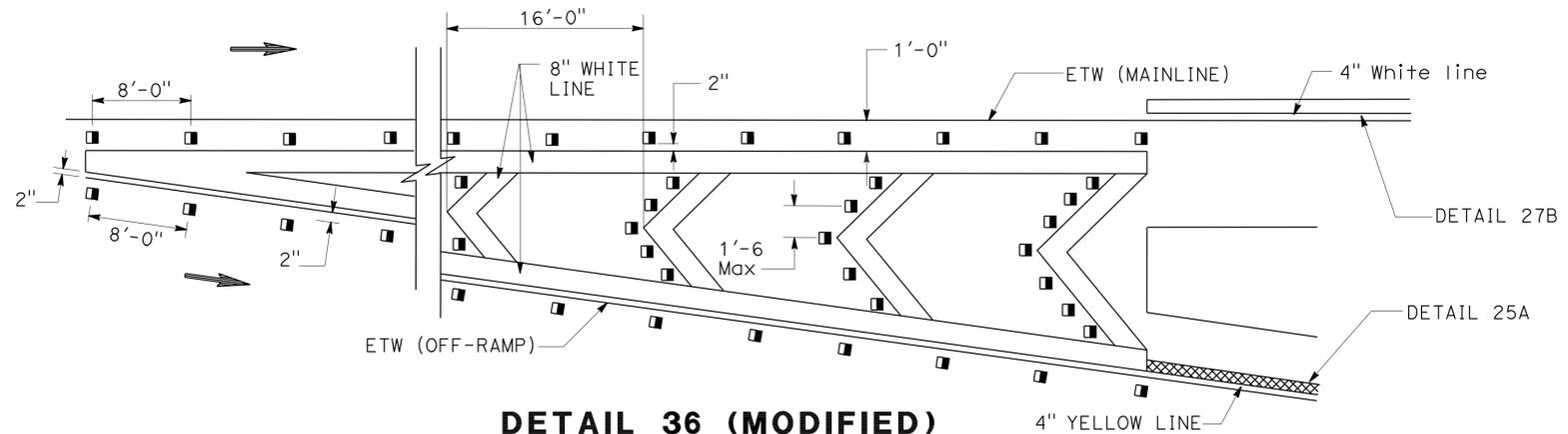
- LEGENDS**
- CONE
 - † PORTABLE SIGN
 - DIRECTION OF TRAVEL
 - EXISTING OVERHEAD SIGN

**TRAFFIC HANDLING DETAILS
 TRAFFIC CONTROL SYSTEM
 FOR DETOUR SIGN INSTALLATION
 ALONG DESIGNATED DETOUR ROUTE
 SHEET 2 OF 2
 NO SCALE**

THD-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DT M
 FUNCTIONAL SUPERVISOR: JOHN YANG
 CHECKED BY: JOCELYN C CHIANG
 REVISOR: ALBERT K YU
 DATE REVISOR: 7/08
 DESIGNED BY: JC
 DATE DESIGNED: 9/08

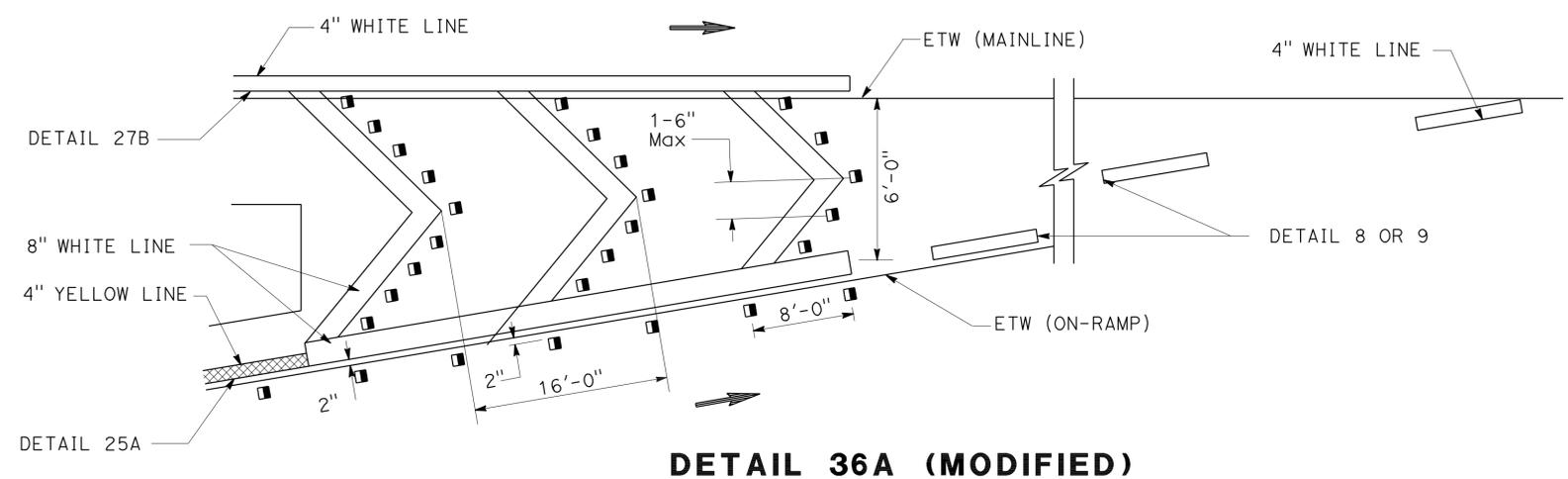
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	20	39
<i>Hamid Saadatnejadi</i> REGISTERED CIVIL ENGINEER			9-8-10	DATE	
9-27-10 PLANS APPROVAL DATE			REGISTERED PROFESSIONAL ENGINEER HAMID SAADATNEJADI No. C50440 Exp. 6-30-11 CIVIL STATE OF CALIFORNIA		
<small>THE 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>					



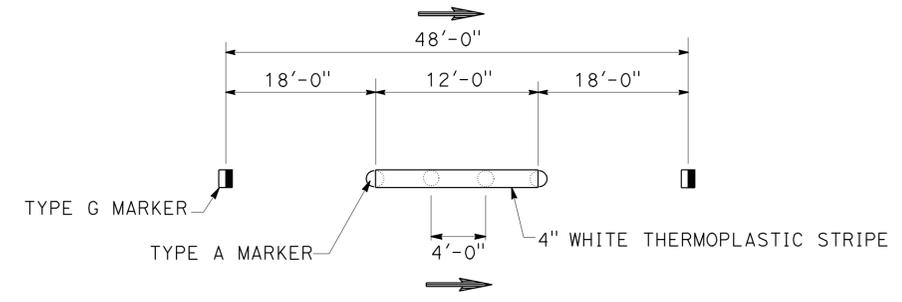
DETAIL 36 (MODIFIED)

NOTE:
 1. APPLY 4" WIDE THERMOPLASTIC TRAFFIC STRIPE ON TOP OF TYPE A NON-REFLECTIVE MARKERS.

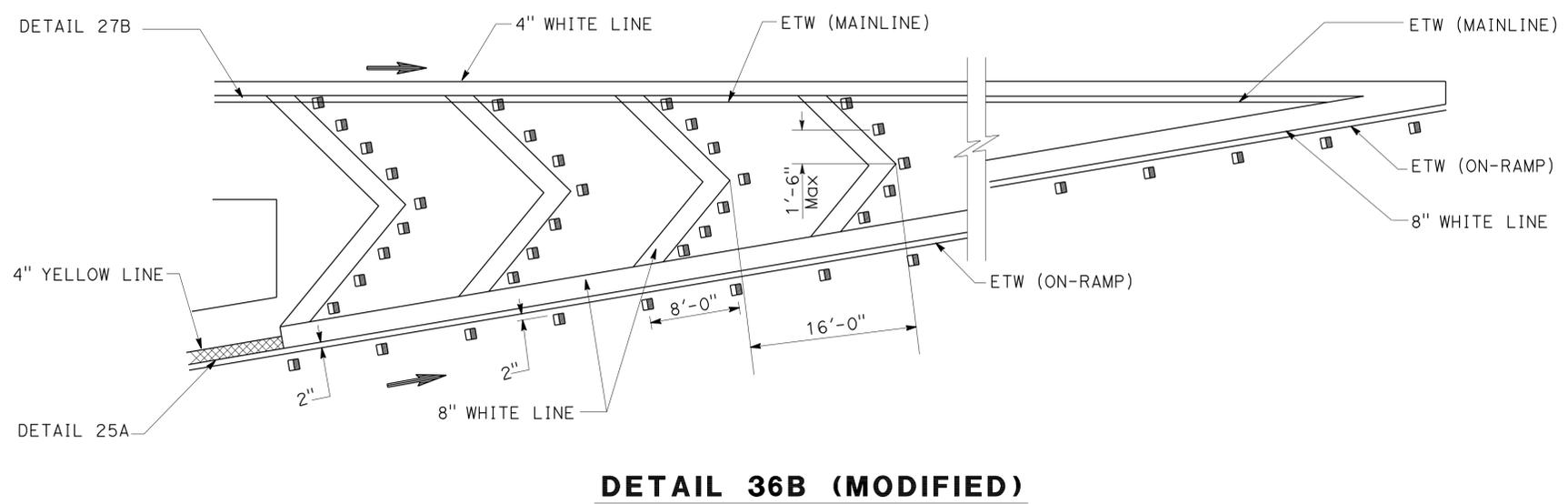
LEGEND:
 DIRECTION OF TRAVEL
 TYPE G ONE-WAY CLEAR RETROREFLECTIVE



DETAIL 36A (MODIFIED)



DETAIL 13 (MODIFIED)



DETAIL 36B (MODIFIED)

PAVEMENT DELINEATION DETAILS
 NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
 CALCULATED/DESIGNED BY: HECOR OBESO
 CHECKED BY: HAMID SAADATNEJADI
 MARLON SARMIENTO
 REVISED BY: MARLON SARMIENTO
 DATE REVISED: HAMID SAADATNEJADI

USERNAME => s122436
 DGN FILE => 0700000766nb001.dgn

RELATIVE BORDER SCALE IS IN INCHES
 0 1 2 3

UNIT 1959

PROJECT NUMBER & PHASE

07000007661

LAST REVISION DATE PLOTTED => 13-OCT-2010
 09-27-10 TIME PLOTTED => 10:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	21	39

Hamid Saadatnejadi
 REGISTERED CIVIL ENGINEER DATE 9-8-10
 9-27-10
 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.

LOCATION No.	DESCRIPTION	THERMOPLASTIC PAVEMENT TRAFFIC STRIPE										PAVEMENT MARKER										
		DETAIL No.										DETAIL No.										
		8	9	13	25A	27B	36 (Mod)	36A/B (Mod)	37	38	38A	38B	13 (Mod)	9	36 (Mod)	36A/B (Mod)	38	38B	37	25A		
												TYPE A (NON-REFLECTIVE)	TYPE G (RETROREFLECTIVE)						TYPE C (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)		
		LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
1	SB OFF-RAMP TO STUDEBAKER Rd		64	306	836	1,683	813					10	7	2	165				18	3	36	
2	NB ON-RAMP FROM STUDEBAKER Rd		688		558	1,625		217						15		47					24	
3	SB ON-RAMP FROM STEARNS St	86		239	453	1,113		191	37	451		8	6			42	20		3	1	20	
4	NB OFF-RAMP TO PALO VERDE Ave		418		707	893	650							10	133						30	
5	NB ON-RAMP FROM PALO VERDE Ave				584																25	
6	SB ON-RAMP FROM WOODRUFF Ave				806	1,604															35	
7	NB OFF-RAMP TO WOODRUFF Ave			380	617	2,513	671		1,302		276	12	9		137			25	89	22	27	
8	SB OFF-RAMP TO WOODRUFF Ave				388	1,447	1,219		523						246				46	9	17	
9	NB ON-RAMP FROM WOODRUFF Ave				794	2,459		206	2,970							45			200	50	34	
10	SB ON-RAMP FROM NB BELLFLOWER Blvd				764	2,668		480	523							99			46	9	33	
11	SB ON-RAMP FROM SB BELLFLOWER Blvd				782	1,056		39								12					34	
12	NB OFF-RAMP TO BELLFLOWER Blvd		919		131	1,662	1,344							20	270			5			6	
13	NB ON-RAMP FROM NB BELLFLOWER Blvd		546								36			12								
14	SB OFF-RAMP TO NB BELLFLOWER Blvd				695	811	22								16						30	
15	SB OFF-RAMP TO SB BELLFLOWER Blvd					1,452	1,612			349					323							
16	NB ON-RAMP FROM SB BELLFLOWER Blvd		758		638	1,655	281	303	117			18	14	42		120			2	10	28	
17	SB ON-RAMP FROM WILLOW St		2,368		852	2,455		162		607				50		36	26				37	
18	NB OFF-RAMP TO NB LAKEWOOD Blvd				982	1,733	158								35						42	
19	SB ON-RAMP FROM SB LAKEWOOD Blvd		391			1,616		52		391				9		14						
20	NB OFF-RAMP TO SB LAKEWOOD Blvd			1,351		2,039			305	180	697	39	29				9	60	22	5		
21	SB ON-RAMP FROM NB LAKEWOOD Blvd		280		825	1,398		287		269	106			7		61	12				35	
22	SB OFF-RAMP TO SB LAKEWOOD Blvd	645			1,169	1,354	243	269						14	55	56					50	
23	NB ON-RAMP FROM SB LAKEWOOD Blvd	216			883	2,191		136		862		26	19			31	37				38	
24	NB OFF-RAMP TO TEMPLE Ave		540							108				12								
25	SB ON-RAMP FROM SPRING St			861	753	1,819		192		337	166	25	19			42	15				32	
26	NB OFF-RAMP TO CHERRY Ave					61	506								104							
27	SB ON-RAMP FROM SB CHERRY Ave				553	785		64								17					24	
28	NB ON-RAMP FROM SPRING St				521	2,045	743		95	225	521				151		10	45	8	2	23	
29	NB OFF-RAMP TO 32ND St		1,424				663							31	135							
30	SB ON-RAMP FROM ORANGE Ave				193	984	1,087		639	740					219		32		45	11	9	
31	NB ON-RAMP FROM NB CHERRY Ave				632	969	69									18					27	
32	NB ON-RAMP FROM SB CHERRY Ave				431	1,166		123								28					19	
SUB-TOTAL		947	10,354	4,643	16,547	43,256	10,081	2,721	6,713	3,671	1,254	1,494	138	103	241	1,989	668	161	135	479	122	715
SHEET TOTAL		11,301		4,643	59,803				2,5934				138					4,613				

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HECTOR OBESO
 CALCULATED/DESIGNED BY: MARLON SARMIENTO
 CHECKED BY: HAMID SAADATNEJADI
 REVISED BY: DATE REVISED:

LAST REVISION: DATE PLOTTED => 13-OCT-2010
 TIME PLOTTED => 10:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	22	39

Hamid Saadatnejadi
 REGISTERED CIVIL ENGINEER DATE 9-8-10
 9-27-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 HAMID SAADATNEJADI
 No. C50440
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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

LOCATION No.	DESCRIPTION	THERMOPLASTIC PAVEMENT TRAFFIC STRIPE										PAVEMENT MARKER										
		DETAIL No.										DETAIL No.										
		8	9	13	25A	27B	36 (Mod)	36A/B (Mod)	37	38	38A	38B	13 (Mod)	9	36 (Mod)	36A/B (Mod)	38	38B	37	37	25A	
4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	4" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE				TYPE A (NON-REFLECTIVE)	TYPE G (RETROREFLECTIVE)						TYPE C (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)							
LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA		
33	SB OFF-RAMP TO SPRING St		383		747	899	632				39			9	129						32	
34	SB OFF-RAMP TO CHERRY AVE				805	1,001	303							64							35	
35	NB OFF-RAMP TO NB ATLANTIC Ave		371		1,279	1,247	583						9	120							54	
36	NB ON-RAMP FROM 32ND St				1,005	1,229		163							36						43	
37	SB OFF-RAMP TO ORANGE Ave	104	34			1,712	1,195	150			54			2	244							
38	SB ON-RAMP FROM NB ATLANTIC Ave									61							4					
39	SB ON-RAMP FROM SB ATLANTIC Ave										71											
40	NB OFF-RAMP TO SB ATLANTIC Ave				356	2,075	941	216						167	69	20	23	104	25	16		
41	NB OFF-RAMP TO LONG BEACH Blvd		238			297	385		117		104		90	80		5	10	10	2			
42	SB OFF-RAMP TO ATLANTIC Ave		356			901	491		158				8	101				13	3			
43	NB ON-RAMP FROM NB ATLANTIC Ave				663						66					4					29	
44	SB ON-RAMP FROM LONG BEACH Blvd		250		408	517					253			6		12					18	
45	SB OFF-RAMP TO LONG BEACH Blvd		207			370					238	34		5		11						
46	NB ON-RAMP FROM LONG BEACH Blvd		186		592	1,080		161			349			5		16					26	
47	NB ON-RAMP FROM PACIFIC PLACE	211			292	1,215		95	209		230				23	11		19	3	13		
48	SB OFF-RAMP TO PACIFIC PLACE		676				1,611				681			15	323		29					
49	PACIFIC PLACE ON-RAMP TO NB 710	93			441	1,175		139							32						19	
50	SB OFF-RAMP TO SANTA FE Ave		135		611		433	91					44	4	85	26					26	
51	NB ON-RAMP FROM SANTA FE Ave	147			271	816					184		87			9					12	
52	SB ON-RAMP FROM SANTA FE Ave / WARDLOW Rd				662	1,286	14						510		7						29	
53	SB ON-RAMP FROM ALAMEDA St / 223RD St	334				520							154									
54	NB OFF-RAMP TO ALAMEDA St		572		1,227	1,213								13							52	
55	NB ON-RAMP FROM ALAMEDA St		603		853	853								14							37	
56	SB OFF-RAMP TO ALAMEDA St / 223RD St	213				353																
57	NB OFF-RAMP TO WILMINGTON Ave	74			513	932	1,867									374					22	
58	NB ON-RAMP FROM WILMINGTON Ave	98				1,503		133			225				30							
59	SB OFF-RAMP TO WILMINGTON Ave				2,171	751	431				61				89						91	
60	SB ON-RAMP FROM CARSON St	133			1,073	238		278			759				59		33				46	
61	SB OFF-RAMP TO CARSON St		566		881	959	342				158			13	72						38	
62	NB OFF-RAMP TO CARSON St	394				963	306				187				65		9					
63	NB ON-RAMP FROM CARSON St	131				1,731		223							48							
64	0.2 MILE NORTH AND SOUTH OF AVALON Blvd UC		90			60						30	4	3			5					
	SUB-TOTAL	1,932	4,667		14,850	25,896	9,534	1,649	484	3,578	1,437	376	4	3	109	1,598	681	168	33	146	33	638
	SHEET TOTAL	6,599			40,746				17,058				4					3,409				
	GRAND TOTAL (SHEET PDQ-1 + SHEET PDQ-2)	17,900	4,643		100,549				42,992				142					8,022				

PAVEMENT DELINEATION QUANTITIES

PDQ-2



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	23	39

Hamid Saadatnejadi
 REGISTERED CIVIL ENGINEER DATE 9-8-10
 9-27-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 HAMID SAADATNEJADI
 No. C50440
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR HECTOR OBESO
 CALCULATED/DESIGNED BY CHECKED BY
 MARLON SARMIENTO HAMID SAADATNEJADI
 REVISED BY DATE REVISED

LOCATION No.	DESCRIPTION	THERMOPLASTIC PAVEMENT MARKING																				
		ARROWS AND SYMBOLS										CROSSWALKS AND WORDS										
		TYPE I 10' ARROW	TYPE I 18' ARROW	TYPE I 24' ARROW	TYPE II (L/R) ARROW	TYPE II (B) ARROW	TYPE III (L/R) ARROW	TYPE III (B) ARROW	TYPE IV (L/R) ARROW	TYPE V ARROW	TYPE VII (L/R) ARROW	DIAMOND	CROSSWALK & LIMIT LINE	DIAGONALS	STOP	SIGNAL	AHEAD	YIELD	LANE	ONLY	CAR	POOL
SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	
1	SB OFF-RAMP TO STUDEBAKER Rd							45	66			88				66						
2	NB ON-RAMP FROM STUDEBAKER Rd			62								124										
3	SB ON-RAMP FROM EB STEARNS St			31							33	88								22	34	46
4	NB OFF-RAMP TO PALO VERDE Ave														64	62						
5	NB ON-RAMP FROM PALO VERDE Ave									33		71										
6	SB ON-RAMP FROM WOODRUFF Ave											12										
7	NB OFF-RAMP TO WOODRUFF Ave									66					64	62						
8	SB OFF-RAMP TO SB WOODRUFF Ave																					
9	NB ON-RAMP FROM WOODRUFF Ave									33		79										
10	SB ON-RAMP FROM BELLFLOWER Blvd		25									59										
11	SB ON-RAMP FROM SB BELLFLOWER Blvd											149										
12	NB OFF-RAMP TO BELLFLOWER Blvd					118	168			99		80			96	93						
13	NB ON-RAMP FROM NB BELLFLOWER Blvd		50									74										
14	SB OFF-RAMP TO NB BELLFLOWER Blvd		50									30										
15	SB OFF-RAMP TO SB BELLFLOWER Blvd						42	73		66		60			64	62						
16	NB ON-RAMP FROM NB BELLFLOWER Blvd											24										
17	SB ON-RAMP FROM WILLOW St			62							22	24	280						48		34	46
18	NB OFF-RAMP TO NB LAKEWOOD Blvd		50																			
19	SB ON-RAMP FROM SB LAKEWOOD Blvd			31								33	24					48			34	46
20	NB OFF-RAMP TO SB LAKEWOOD Blvd											66										
21	NB ON-RAMP FROM NB LAKEWOOD Blvd			62								33	24						48		34	46
22	SB OFF-RAMP TO SB LAKEWOOD Blvd		25											73								
23	NB ON-RAMP FROM SB LAKEWOOD Blvd		25									66										
24	NB OFF-RAMP TO TEMPLE Ave	14							15	66		61			64	62						
25	SB ON-RAMP FROM SPRING St			62								33	87					48			34	46
26	NB OFF-RAMP TO CHERRY Ave						42									31	48					
27	SB ON-RAMP FROM SB CHERRY Ave		25									12										
28	NB ON-RAMP FROM SPRING St		25									12										
29	NB OFF-RAMP TO 32ND St									33		52			88	62						
30	SB ON-RAMP FROM ORANGE Ave		50								44	24						48			34	46
31	NB ON-RAMP FROM NB CHERRY Ave		25									12										
32	NB ON-RAMP FROM SB CHERRY Ave		25									12										
	SUB-TOTAL	14	375	310		177	252	73	75	462	66	264	1,282	353	154	352	465	48	240	22	204	276
	SHEET TOTAL												5,464									

PAVEMENT DELINEATION QUANTITIES

PDQ-3



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	24	39

Hamid Saadatnejadi
 REGISTERED CIVIL ENGINEER DATE 9-8-10
 9-27-10
 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.

LOCATION No.	DESCRIPTION	THERMOPLASTIC PAVEMENT MARKING											CROSSWALKS AND WORDS										
		ARROWS AND SYMBOLS											CROSSWALKS AND WORDS										
		TYPE I 10' ARROW	TYPE I 18' ARROW	TYPE I 24' ARROW	TYPE II (L/R) ARROW	TYPE II (B) ARROW	TYPE III (L/R) ARROW	TYPE III (B) ARROW	TYPE IV (L/R) ARROW	TYPE V ARROW	TYPE VII (L/R) ARROW	DIAMOND	CROSSWALK & LIMIT LINE	DIAGONALS	STOP	SIGNAL	AHEAD	YIELD	LANE	ONLY	CAR	POOL	
SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	
33	SB OFF-RAMP TO SPRING St																						
34	SB OFF-RAMP TO CHERRY AVE																						
35	NB OFF-RAMP TO NB ATLANTIC Ave		50							33						32	31						
36	NB ON-RAMP FROM 32ND St		25																				
37	SB OFF-RAMP TO ORANGE Ave						84			66					88		62						
38	SB ON-RAMP FROM NB ATLANTIC Ave																						
39	SB ON-RAMP FROM SB ATLANTIC Ave																						
40	NB OFF-RAMP TO SB ATLANTIC Ave		50																				
41	NB OFF-RAMP TO LONG BEACH Blvd									66													
42	SB OFF-RAMP TO ATLANTIC Ave									132													
43	NB ON-RAMP FROM NB ATLANTIC Ave		25																				
44	SB ON-RAMP FROM LONG BEACH Blvd		50																				
45	SB OFF-RAMP TO LONG BEACH Blvd						84			66													
46	NB ON-RAMP FROM LONG BEACH Blvd		50																				
47	NB ON-RAMP FROM PACIFIC PLACE		25								22	13							24			17	23
48	SB OFF-RAMP TO PACIFIC PLACE									66				120						22		17	23
49	PACIFIC PLACE ON-RAMP TO NB 710		25																				
50	SB OFF-RAMP TO SANTA FE Ave						84			66													
51	NB ON-RAMP FROM SANTA FE Ave		50																				
52	SB ON-RAMP FROM SANTA FE Ave / WARDLOW Rd			62																			
53	SB ON-RAMP FROM ALAMEDA St / 223RD St		50																				
54	NB OFF-RAMP TO ALAMEDA St									66													
55	NB ON-RAMP FROM ALAMEDA St																						
56	SB OFF-RAMP TO ALAMEDA St / 223RD St						45			66													
57	NB OFF-RAMP TO WILMINGTON Ave																						
58	NB ON-RAMP FROM WILMINGTON Ave		50																				
59	SB OFF-RAMP TO WILMINGTON Ave									33	54												
60	SB ON-RAMP FROM CARSON St		50									66	114	22							22	17	23
61	SB OFF-RAMP TO CARSON St						84			66			116	36									
62	NB OFF-RAMP TO CARSON St									66			72										
63	NB ON-RAMP FROM CARSON St		50										114										
64	0.2 MILE NORTH AND SOUTH OF AVALON Blvd UC																						
	SUB-TOTAL	550	62	45		761				891	54	110	1438	360	242	384	527	24	24	44	51	69	
	SHEET TOTAL												5,636										
	GRAND TOTAL (SHEET PDQ-3 + SHEET PDQ-4)												11,100										

PAVEMENT DELINEATION QUANTITIES

PDQ-4

LAST REVISION DATE PLOTTED => 13-OCT-2010
 09-27-10 TIME PLOTTED => 10:37

FUNCTIONAL SUPERVISOR
 HECTOR OBESO

CALCULATED/DESIGNED BY
 CHECKED BY

MARLON SARMIENTO
 HAMID SAADATNEJADI

REVISED BY
 DATE REVISED

ROADWAY QUANTITIES					
LOCATION No.	DESCRIPTION	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE PAVEMENT MARKER
		LF	LF	SQFT	EA
1	SB OFF-RAMP TO STUDEBAKER Rd				
2	NB ON-RAMP FROM STUDEBAKER Rd	558	2,536	186	48
3	SB ON-RAMP FROM EB STEARNS St				
4	NB OFF-RAMP TO PALO VERDE Ave	707	1,873	126	65
5	NB ON-RAMP FROM PALO VERDE Ave	584		104	25
6	SB ON-RAMP FROM WOODRUFF Ave	806	1,604	12	35
7	NB OFF-RAMP TO WOODRUFF Ave	617	5,051	192	263
8	SB OFF-RAMP TO SB WOODRUFF Ave				
9	NB ON-RAMP FROM WOODRUFF Ave	794	5,607	112	443
10	SB ON-RAMP FROM BELLFLOWER Blvd				
11	SB ON-RAMP FROM SB BELLFLOWER Blvd				
12	NB OFF-RAMP TO BELLFLOWER Blvd	131	4,077	654	81
13	NB ON-RAMP FROM NB BELLFLOWER Blvd		582	124	12
14	SB OFF-RAMP TO NB BELLFLOWER Blvd				
15	SB OFF-RAMP TO SB BELLFLOWER Blvd		3,953	367	76
16	NB ON-RAMP FROM NB BELLFLOWER Blvd				
17	SB ON-RAMP FROM WILLOW St	852	5,570	516	120
18	NB OFF-RAMP TO NB LAKEWOOD Blvd				
19	SB ON-RAMP FROM SB LAKEWOOD Blvd		2,443	216	12
20	NB OFF-RAMP TO SB LAKEWOOD Blvd		4,572	66	142
21	NB ON-RAMP FROM NB LAKEWOOD Blvd	825	2,301	247	66
22	SB OFF-RAMP TO SB LAKEWOOD Blvd				
23	NB ON-RAMP FROM SB LAKEWOOD Blvd				
24	NB OFF-RAMP TO TEMPLE Ave				
25	SB ON-RAMP FROM SPRING St				
26	NB OFF-RAMP TO CHERRY Ave				
27	SB ON-RAMP FROM SB CHERRY Ave				
28	NB ON-RAMP FROM WB SPRING St				
29	NB OFF-RAMP TO 32ND St		1,997	294	56
30	SB ON-RAMP FROM ORANGE Ave	193	3,303	246	170
31	NB ON-RAMP FROM NB CHERRY Ave				
32	NB ON-RAMP FROM SB CHERRY Ave				
	SUB-TOTAL	6,067	45,469	3,462	1,614

ROADWAY QUANTITIES					
LOCATION No.	DESCRIPTION	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE PAVEMENT MARKER
		LF	LF	SQFT	EA
33	SB OFF-RAMP TO SPRING St				
34	SB OFF-RAMP TO CHERRY Ave				
35	NB OFF-RAMP TO NB ATLANTIC Ave	1,279	2,122	166	85
36	NB ON-RAMP FROM ORANGE Ave/32ND St				
37	SB OFF-RAMP TO ORANGE Ave		3,067	381	52
38	SB ON-RAMP FROM NB ATLANTIC Ave		61	76	4
39	SB ON-RAMP FROM SB ATLANTIC Ave		71	94	
40	NB OFF-RAMP TO SB ATLANTIC Ave	356	5,326	108	311
41	NB OFF-RAMP TO LONG BEACH Blvd		1,179	172	55
42	SB OFF-RAMP TO ATLANTIC Ave		1,840	258	52
43	NB ON-RAMP FROM NB ATLANTIC Ave	663	66	98	32
44	SB ON-RAMP FROM LONG BEACH Blvd	408	1,020	75	36
45	SB OFF-RAMP TO LONG BEACH Blvd		849	241	16
46	NB ON-RAMP FROM LONG BEACH Blvd	592	1,754	149	53
47	NB ON-RAMP FROM PACIFIC PLACE				
48	SB OFF-RAMP TO PACIFIC PLACE		2,750	66	104
49	PACIFIC PLACE ON-RAMP TO NB 710				
50	SB OFF-RAMP TO SANTA FE Ave				
51	NB ON-RAMP FROM SANTA FE Ave				
52	SB ON-RAMP FROM SANTA FE Ave/WARDLOW Rd				
53	SB ON-RAMP FROM ALAMEDA St/223RD St				
54	NB OFF-RAMP TO ALAMEDA St				
55	NB ON-RAMP FROM ALAMEDA St				
56	SB OFF-RAMP TO ALAMEDA St/223RD St				
57	NB OFF-RAMP TO WILMINGTON Ave				
58	NB ON-RAMP FROM WILMINGTON Ave				
59	SB OFF-RAMP TO WILMINGTON Ave				
60	SB ON-RAMP FROM CARSON St				
61	SB OFF-RAMP TO CARSON St				
62	NB OFF-RAMP TO CARSON St				
63	NB ON-RAMP FROM CARSON St				
64	0.2 MILE NORTH AND SOUTH OF AVALON Blvd UC				
	SUB-TOTAL	3,298	20,105	1,884	800
	GRAND TOTAL	9,365	65,574	5,346	2,414

PAVEMENT DELINEATION QUANTITIES

PDQ-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	25	39

Hamid Saadatnejadi 9-8-10
 REGISTERED CIVIL ENGINEER DATE

9-27-10
 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.

LAST REVISION DATE PLOTTED => 13-OCT-2010
 09-27-10 TIME PLOTTED => 10:38

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR
 HECTOR OBESO

CALCULATED/DESIGNED BY
 CHECKED BY

MARLON SARMIENTO
 HAMID SAADATNEJADI

REVISED BY
 DATE REVISED

ROADWAY QUANTITIES

LOCATION NO.	DESCRIPTION	ROADWAY QUANTITIES				
		COLD PLANE ASPHALT CONCRETE PAVEMENT SQYD	SLURRY SEAL TON	RUBBERIZED HOT MIX ASPHALT (GAP GRADED) TON	TACK COAT TON	GRIND EXISTING CONCRETE PAVEMENT SQYD
1	SB OFF-RAMP TO STUDEBAKER Rd	3,745		270	0.64	
2	NB ON-RAMP FROM STUDEBAKER Rd		55			
3	SB ON-RAMP FROM EB STEARNS St	2,621		189	0.45	
4	NB OFF-RAMP TO PALO VERDE Ave		37			
5	NB ON-RAMP FROM PALO VERDE Ave		16			
6	SB ON-RAMP FROM WOODRUFF Ave		30			
7	NB OFF-RAMP TO WOODRUFF Ave		63			
8	SB OFF-RAMP TO SB WOODRUFF Ave	3,860		278	0.66	
9	NB ON-RAMP FROM WOODRUFF Ave		74			
10	SB ON-RAMP FROM BELLFLOWER Blvd	5,044		545	0.86	
11	SB ON-RAMP FROM SB BELLFLOWER Blvd	2,186		236	0.37	
12	NB OFF-RAMP TO BELLFLOWER Blvd		35			
13	NB ON-RAMP FROM NB BELLFLOWER Blvd		25			
14	SB OFF-RAMP TO NB BELLFLOWER Blvd	1,674		181	0.29	
15	SB OFF-RAMP TO SB BELLFLOWER Blvd		86			
16	NB ON-RAMP FROM NB BELLFLOWER Blvd	6,106		659	1.04	
17	SB ON-RAMP FROM WILLOW St		99			
18	NB OFF-RAMP TO NB LAKEWOOD Blvd	3,222		348	0.55	
19	SB ON-RAMP FROM SB LAKEWOOD Blvd		48			
20	NB OFF-RAMP TO SB LAKEWOOD Blvd		72			
21	NB ON-RAMP FROM NB LAKEWOOD Blvd		95			
22	SB OFF-RAMP TO SB LAKEWOOD Blvd	3,493		377	0.59	
23	NB ON-RAMP FROM SB LAKEWOOD Blvd	5,146		556	0.88	
24	NB OFF-RAMP TO TEMPLE Ave	2,868		310	0.49	
25	SB ON-RAMP FROM SPRING St	4,212		455	0.72	
26	NB OFF-RAMP TO CHERRY Ave	1,546		167	0.26	
27	SB ON-RAMP FROM SB CHERRY Ave	1,264		136	0.22	
28	NB ON-RAMP FROM WB SPRING St	2,712		293	0.46	
29	NB OFF-RAMP TO 32ND St		90			
30	SB ON-RAMP FROM ORANGE Ave		86			
31	NB ON-RAMP FROM NB CHERRY Ave	1,433		155	0.24	
32	NB ON-RAMP FROM SB CHERRY Ave	1,165		126	0.20	
	SUB-TOTAL	52,297	911	5,281	8.92	0

ROADWAY QUANTITIES

LOCATION NO.	DESCRIPTION	ROADWAY QUANTITIES				
		COLD PLANE ASPHALT CONCRETE PAVEMENT SQYD	SLURRY SEAL TON	RUBBERIZED HOT MIX ASPHALT (GAP GRADED) TON	TACK COAT TON	GRIND EXISTING CONCRETE PAVEMENT SQYD
33	SB OFF-RAMP TO SPRING St	2,901		313	0.49	
34	SB OFF-RAMP TO CHERRY AVE	2,272		245	0.39	
35	NB OFF-RAMP TO NB ATLANTIC Ave		56			
36	NB ON-RAMP FROM ORANGE Ave / 32ND St	2,386		258	0.41	
37	SB OFF-RAMP TO ORANGE Ave		78			
38	SB ON-RAMP FROM NB ATLANTIC Ave		17			
39	SB ON-RAMP FROM SB ATLANTIC Ave		38			
40	NB OFF-RAMP TO SB ATLANTIC Ave		98			
41	NB OFF-RAMP TO LONG BEACH Blvd		50			
42	SB OFF-RAMP TO ATLANTIC Ave		45			
43	NB ON-RAMP FROM NB ATLANTIC Ave		44			
44	SB ON-RAMP FROM LONG BEACH Blvd		20			
45	SB OFF-RAMP TO LONG BEACH Blvd		38			
46	NB ON-RAMP FROM LONG BEACH Blvd		19			
47	NB ON-RAMP FROM PACIFIC PLACE	6,497		702	1.11	
48	SB OFF-RAMP TO PACIFIC PLACE		66			
49	PACIFIC PLACE ON-RAMP TO NB 710	1,806		195	0.31	
50	SB OFF-RAMP TO SANTA FE Ave	1,468		159	0.25	
51	NB ON-RAMP FROM SANTA FE Ave	3,408		368	0.58	
52	SB ON-RAMP FROM SANTA FE Ave / WARDLOW Rd	2,340		253	0.40	
53	SB ON-RAMP FROM ALAMEDA St / 223RD St	2,164		234	0.37	
54	NB OFF-RAMP TO ALAMEDA St	3,998		432	0.68	
55	NB ON-RAMP FROM ALAMEDA St	2,383		257	0.41	
56	SB OFF-RAMP TO ALAMEDA St / 223RD St	1,816		196	0.31	
57	NB OFF-RAMP TO WILMINGTON Ave	2,901		313	0.49	
58	NB ON-RAMP FROM WILMINGTON Ave	2,706		292	0.46	
59	SB OFF-RAMP TO WILMINGTON Ave	1,430		154	0.24	
60	SB ON-RAMP FROM CARSON St	3,857		417	0.66	
61	SB OFF-RAMP TO CARSON St	2,826		305	0.48	
62	NB OFF-RAMP TO CARSON St	2,853		308	0.49	
63	NB ON-RAMP FROM CARSON St	2,613		282	0.44	
64	0.2 MILE NORTH AND SOUTH OF AVALON Blvd UC	6,345		777		1,320
	SUB-TOTAL	58,970	569	6,460	8.97	1,320
	GRAND TOTAL	111,267	1,480	11,741	17.89	1,320

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405	0.3/11.4	26	39

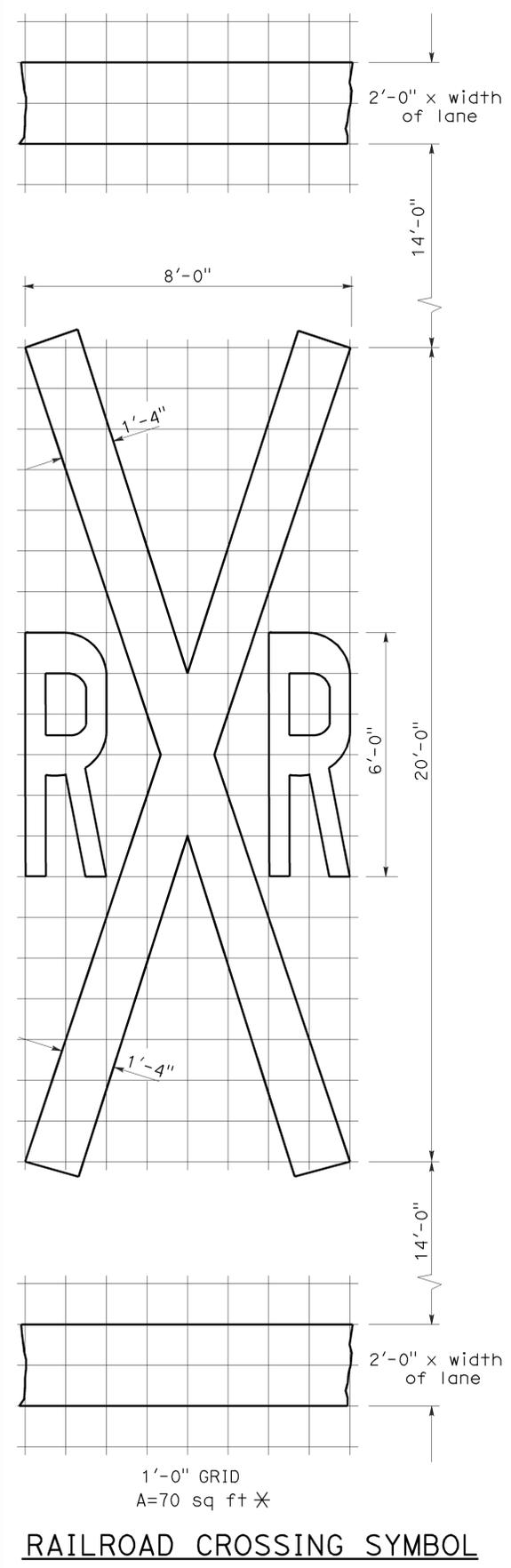
Hamid Saadatnejadi 9-8-10
 REGISTERED CIVIL ENGINEER DATE

9-27-10
 PLANS APPROVAL DATE

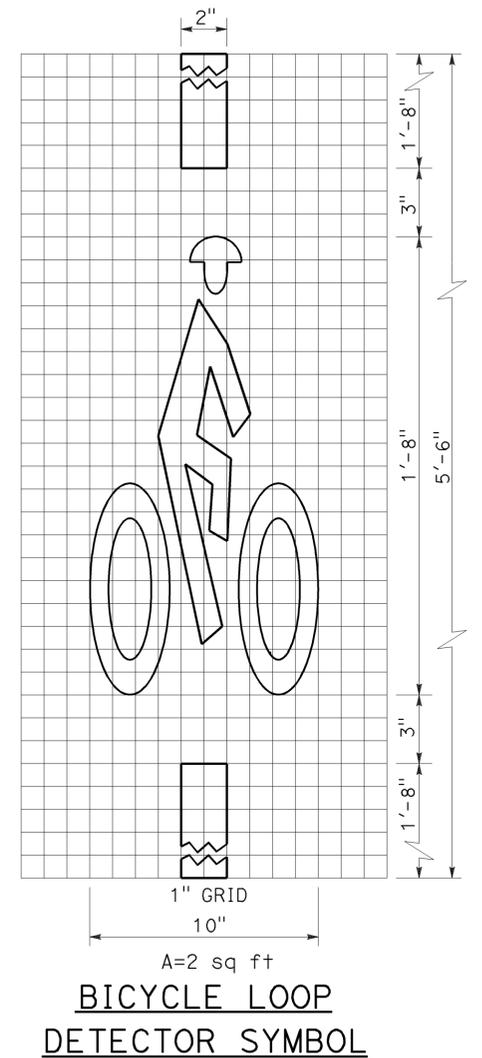
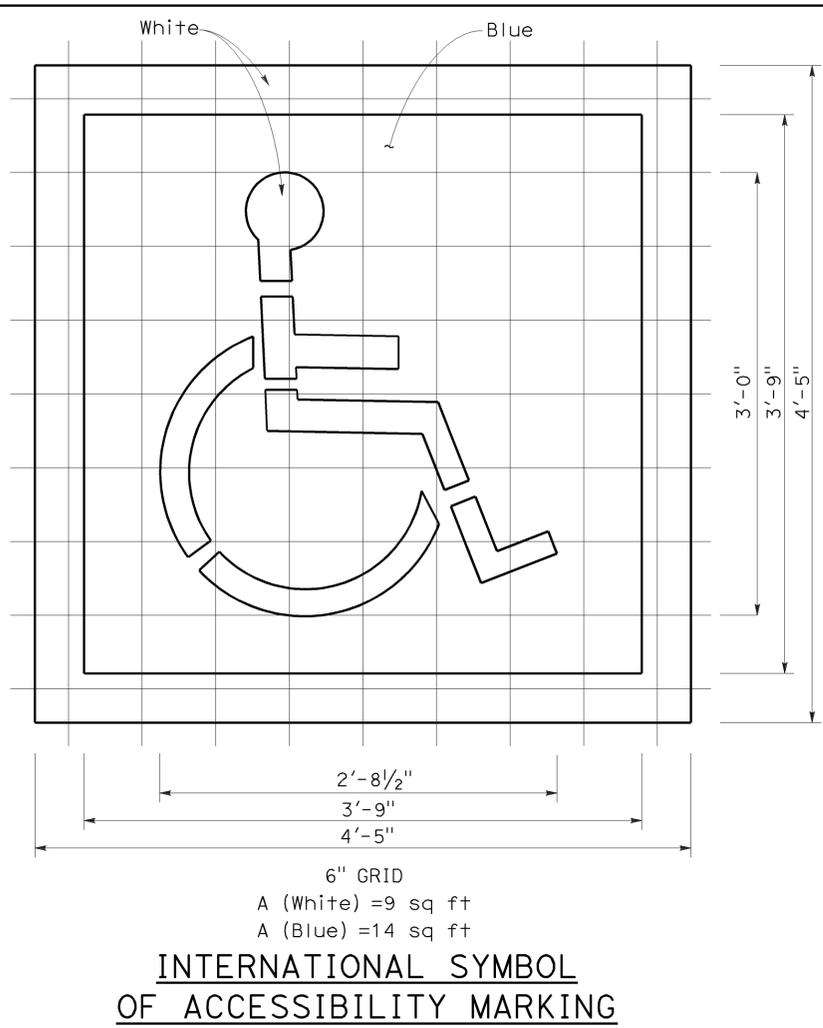
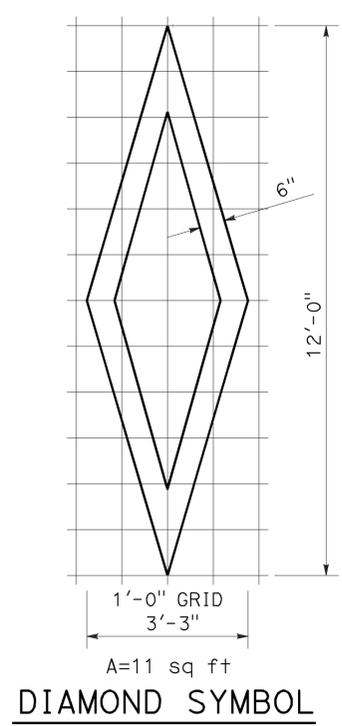
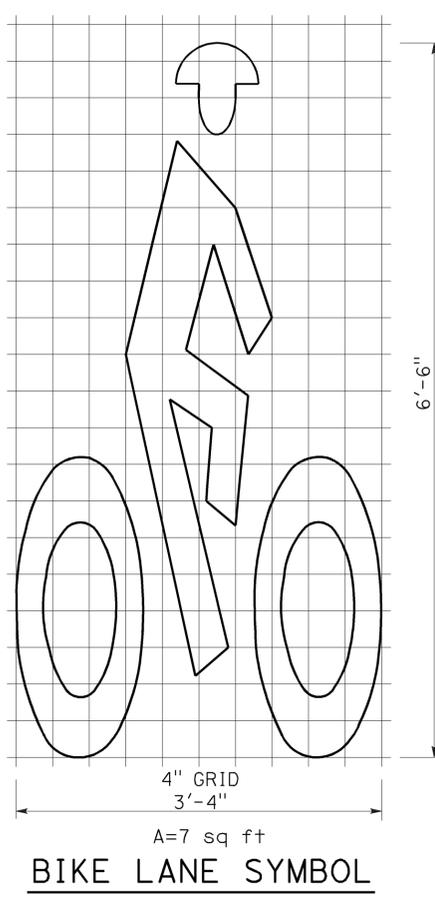
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

SUMMARY OF QUANTITIES

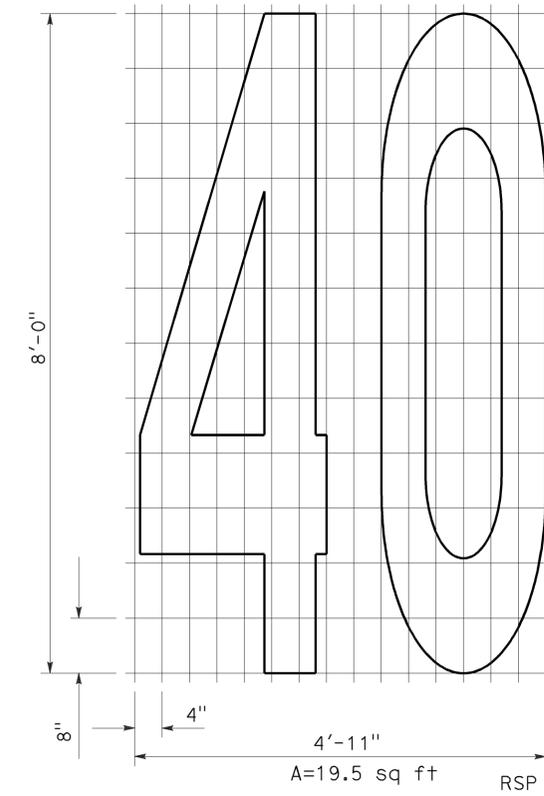
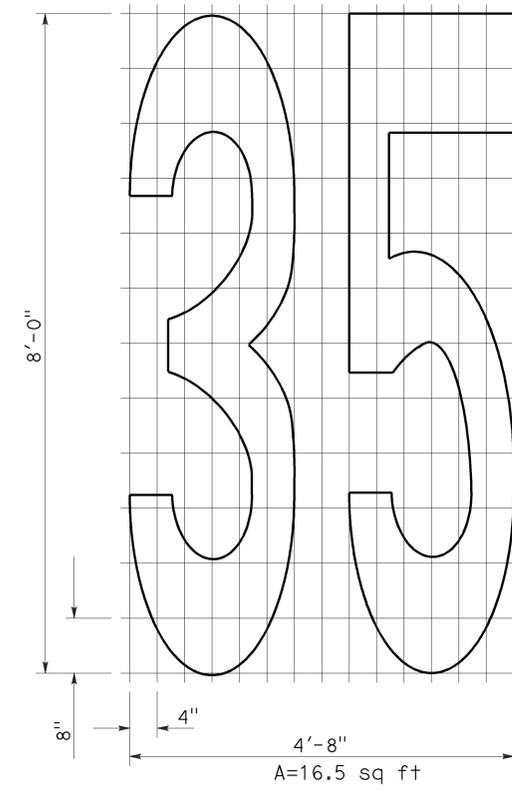
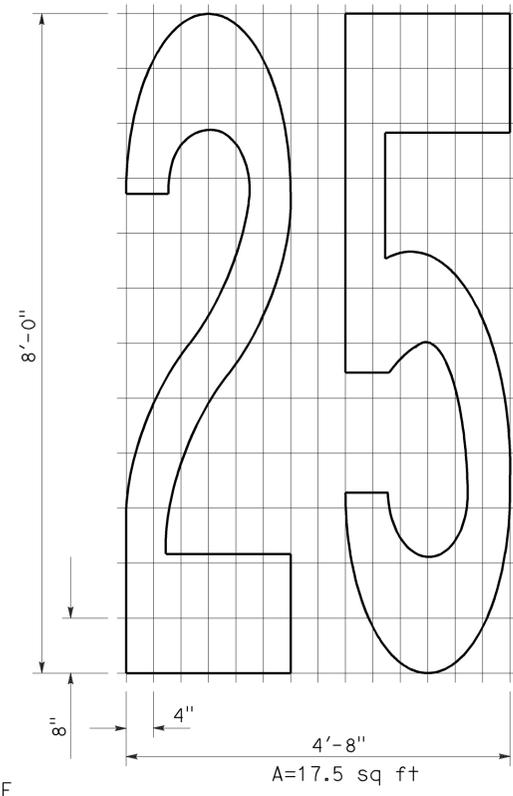
To accompany plans dated 9-27-10



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



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



NUMERALS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS SYMBOLS AND NUMERALS
 NO SCALE

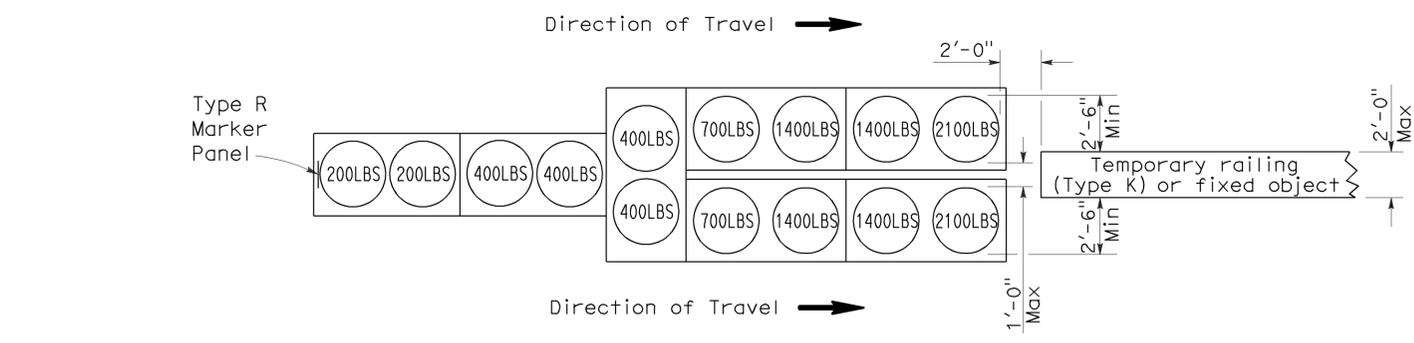
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	0.3/11.4	29	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

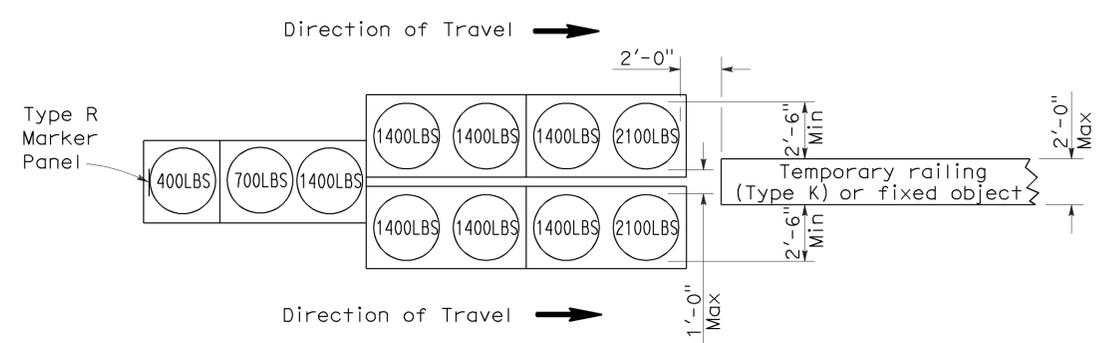
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 9-27-10



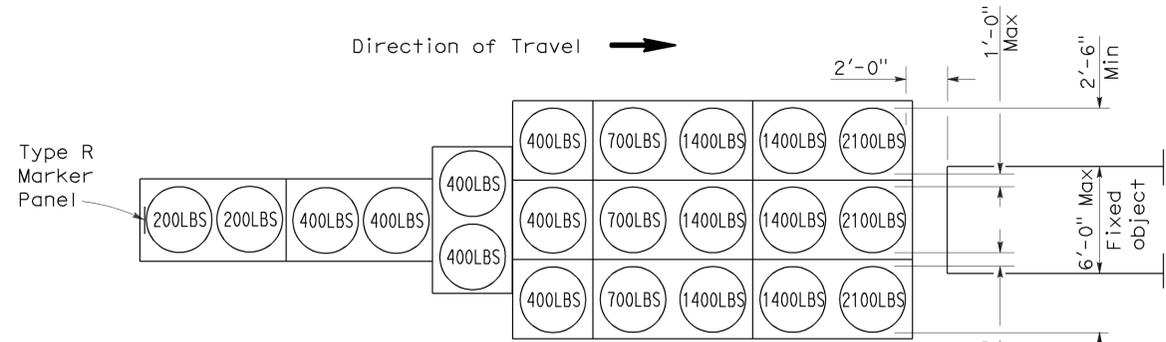
ARRAY 'TU14'

Approach speed 45 mph or more



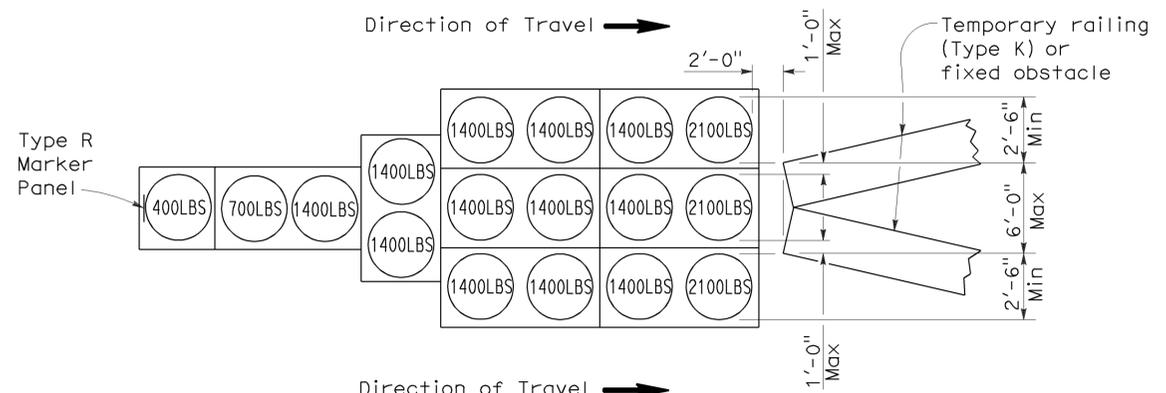
ARRAY 'TU11'

Approach speed less than 45 mph



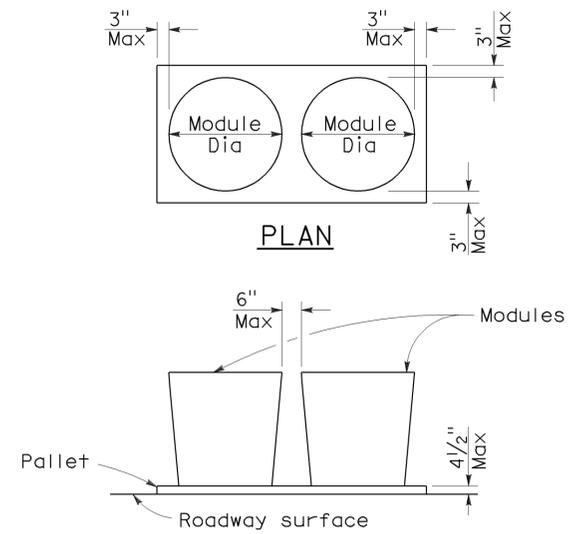
ARRAY 'TU21'

Approach speed 45 mph or more



ARRAY 'TU17'

Approach speed less than 45 mph



CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

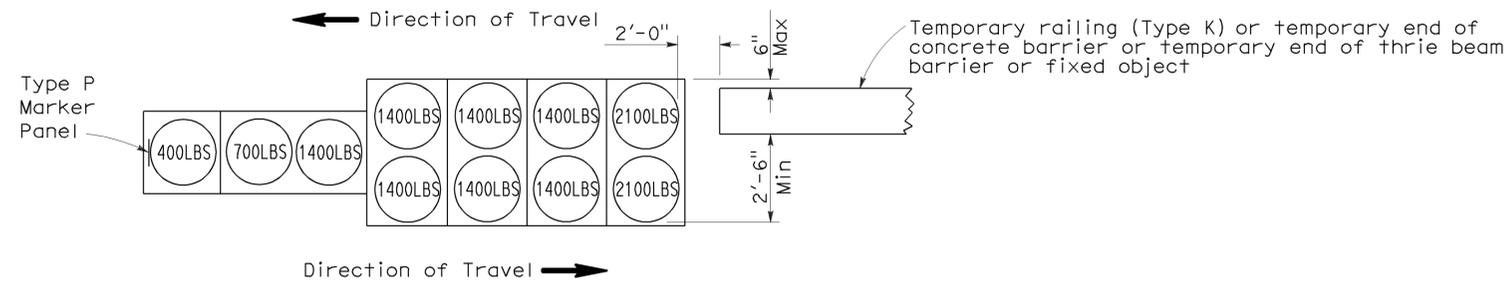
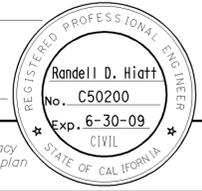
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	0.3/11.4	30	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

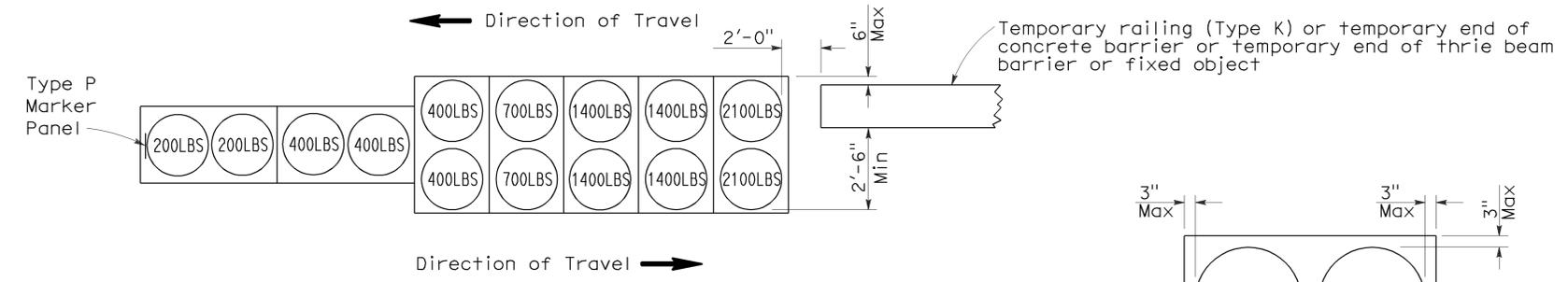
June 6, 2008
PLANS APPROVAL DATE

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.

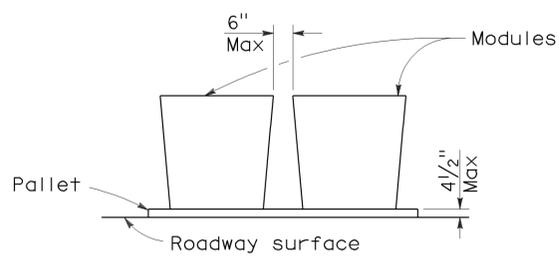
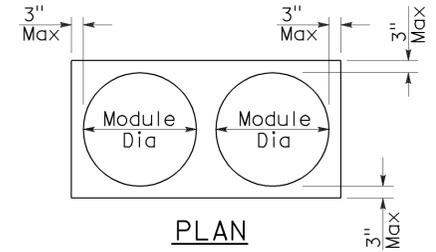
To accompany plans dated 9-27-10



ARRAY 'TB11'
Approach speed less than 45 mph



ARRAY 'TB14'
Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

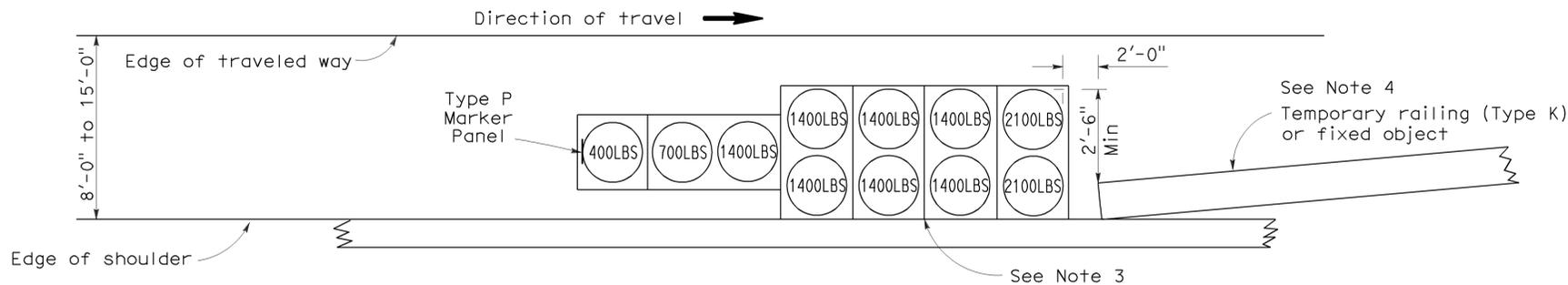
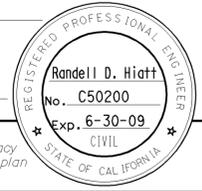
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	0.3/11.4	31	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

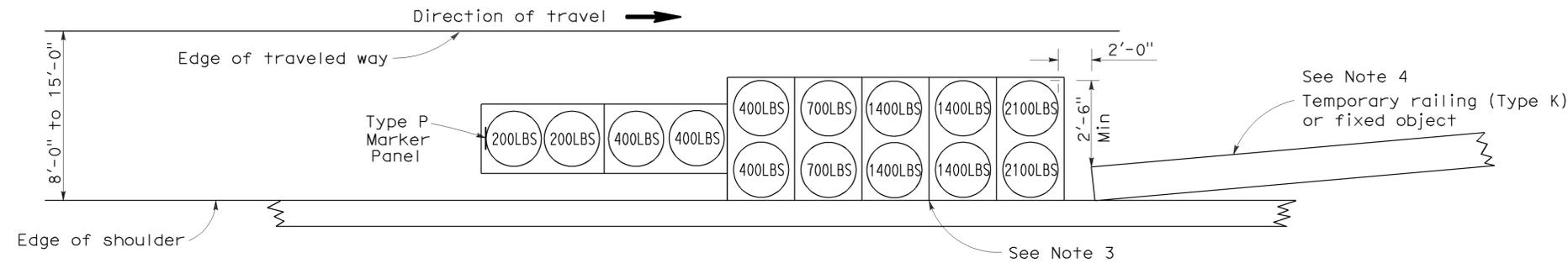
June 6, 2008
PLANS APPROVAL DATE

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 9-27-10



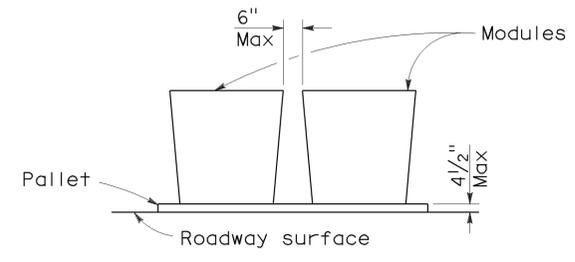
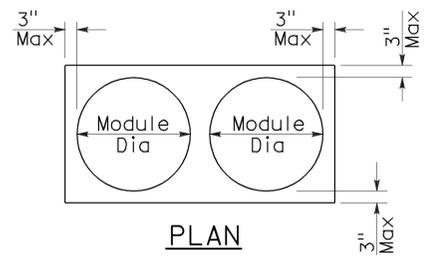
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

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



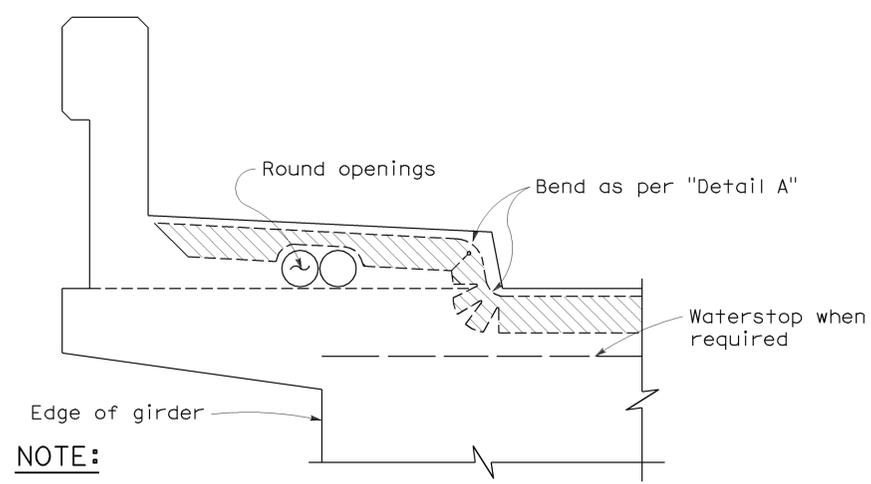
CRASH CUSHION PALLET DETAIL
See Note 11

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

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

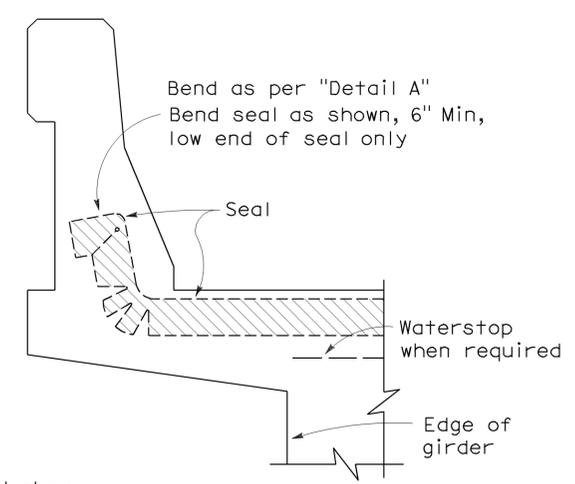
REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

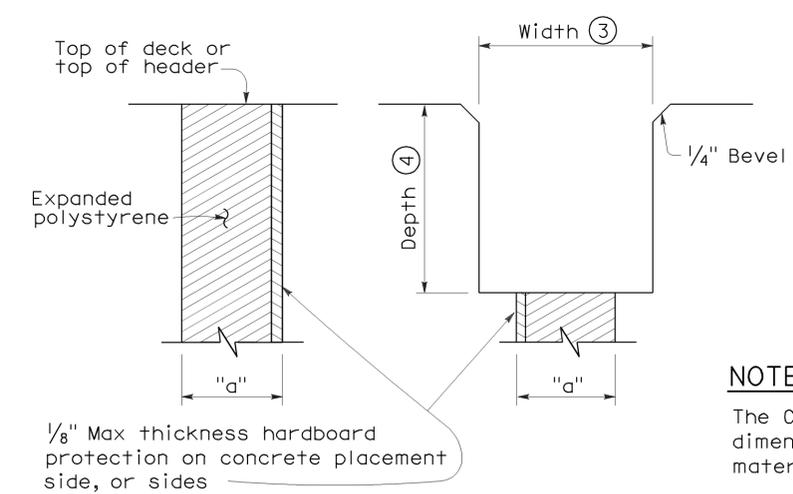


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



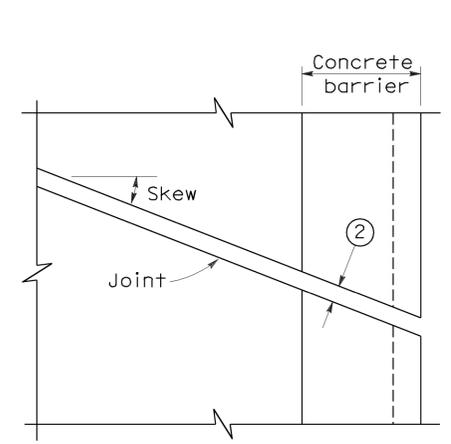
CONCRETE BARRIER



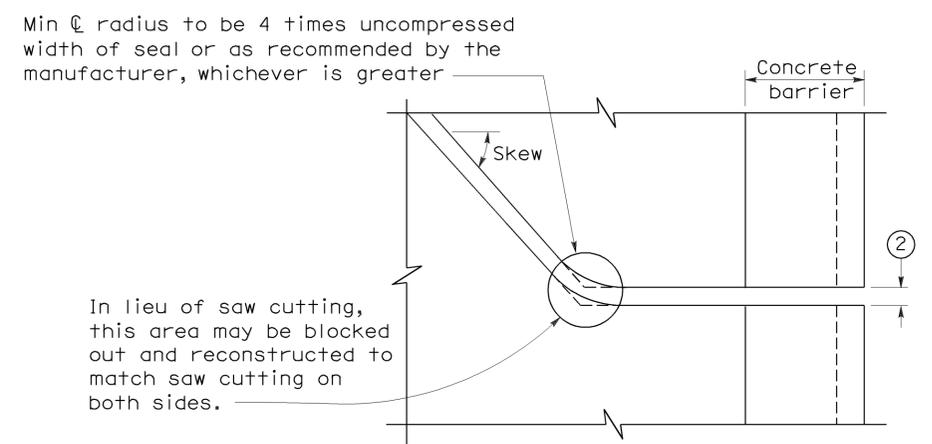
FORMING DETAIL SAWCUT DETAIL

NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

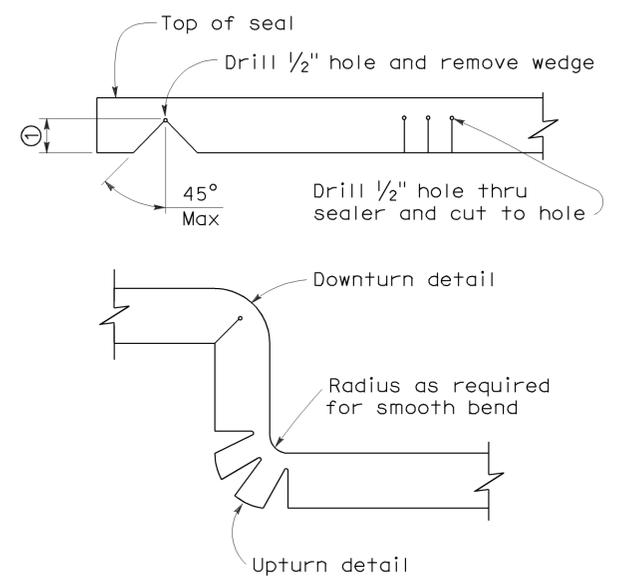
JOINT SEALS DETAILS



PLAN OF JOINT (SKEW ≤ 20°)



PLAN OF JOINT (SKEW > 20°)

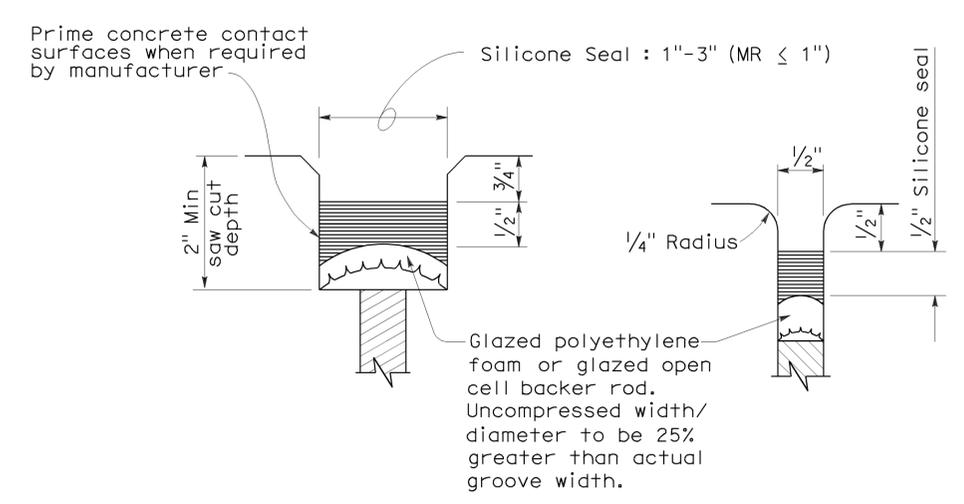


DETAIL A

- NOTES:**
- Make smooth cuts from the bottom of seal to 1 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
 - Opening in barrier to match width of sawn deck joint.
 - Sawcut groove widths shall be as ordered by the Engineer.
 - Depth of sawcut: Type A - Depth to be 2" minimum.
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
 - MR (movement rating) as shown on other plan sheets.
 - Other depths must be approved by the Engineer.

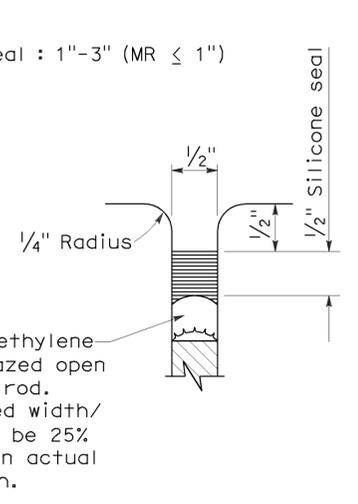
DIMENSIONS "a" OF JOINT REQUIRED

Movement Rating (MR) ⑤	Bridge Type	"a" Dimension		
		Deck Concrete Placed		
		Winter	Fall-Spring	Summer
2"	All except CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	All except CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	All except CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	All except CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"



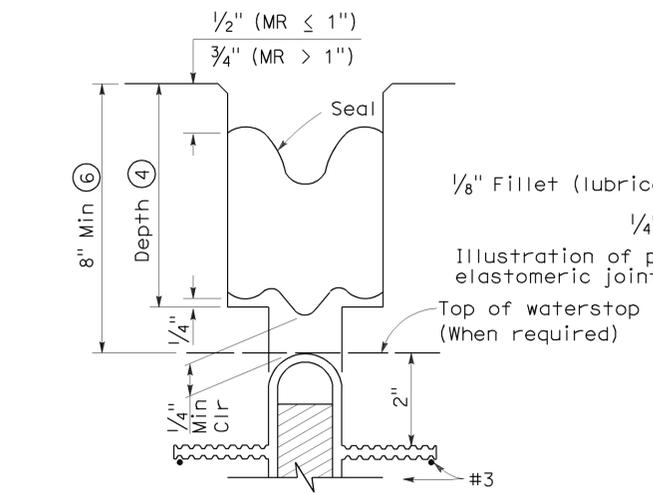
TYPE A SEAL

Movement rating : Silicone = 1" Max

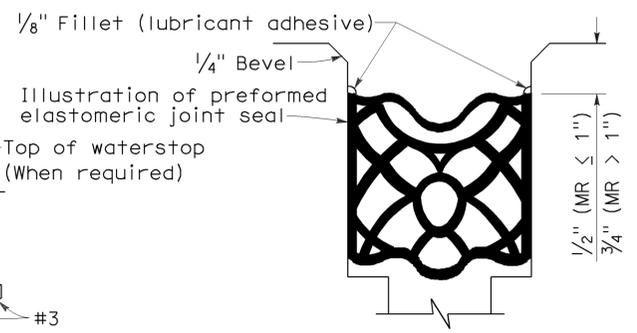


TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)



TYPE B SEAL

Movement Rating ≤ 2"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")
 NO SCALE

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B6-21

2006 REVISED STANDARD PLAN RSP B6-21

ELECTROLIERS

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

NOTES:

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

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

STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	0.3/11.4	33	39

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
REGISTERED PROFESSIONAL ENGINEER
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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

To accompany plans dated 9-27-10

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

NOTE:
Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	0.3/11.4	34	39

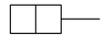
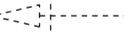
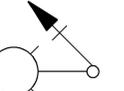
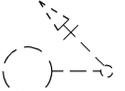
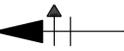
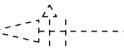
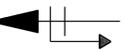
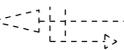
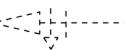
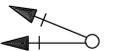
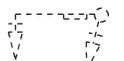
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

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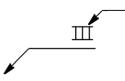
CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

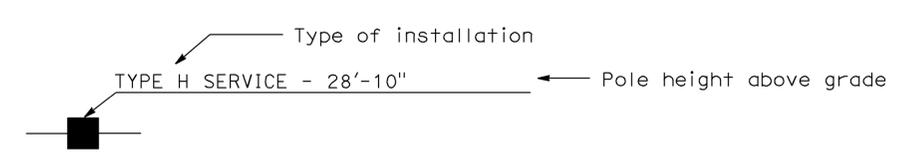
SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" Indicates all non-arrow sections louvered "LG" Indicates louvered green section only "PV" Indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign

SERVICE EQUIPMENT

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

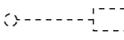
POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

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

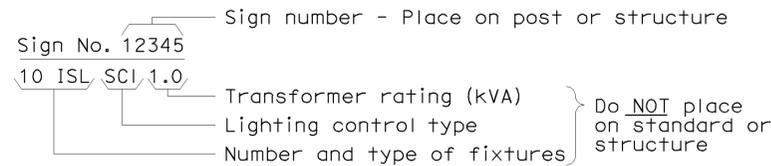
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

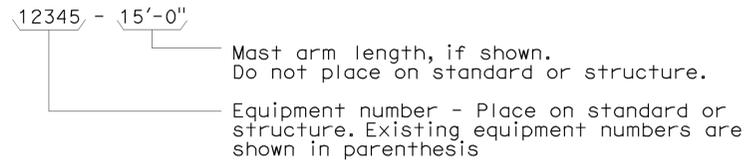
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

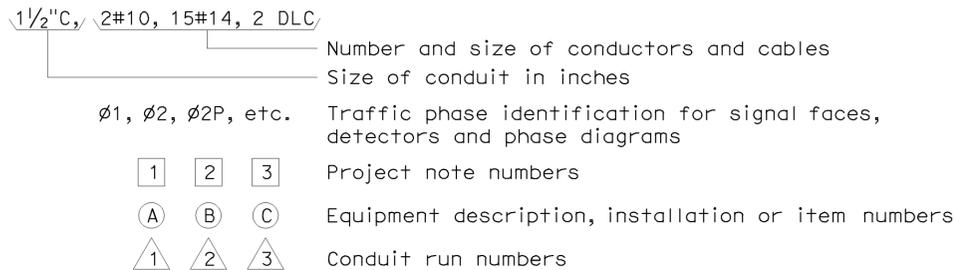
ILLUMINATED SIGN IDENTIFICATION NUMBER:



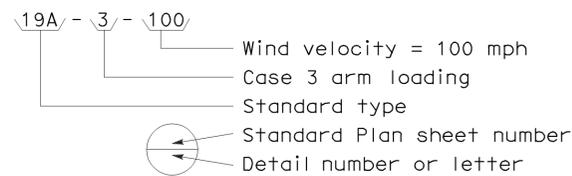
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



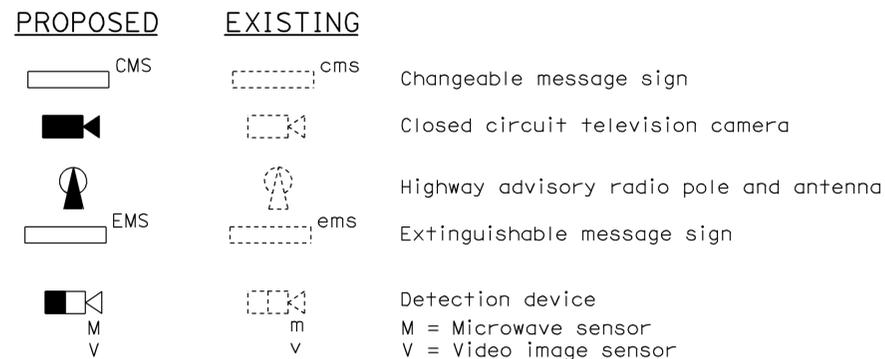
CONDUIT AND CONDUCTOR IDENTIFICATION:



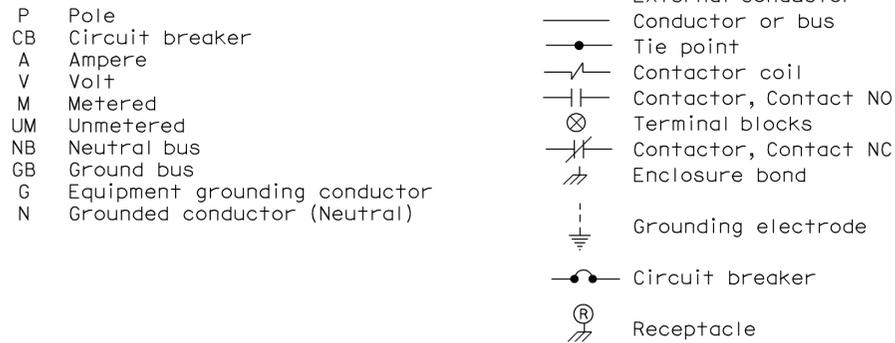
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



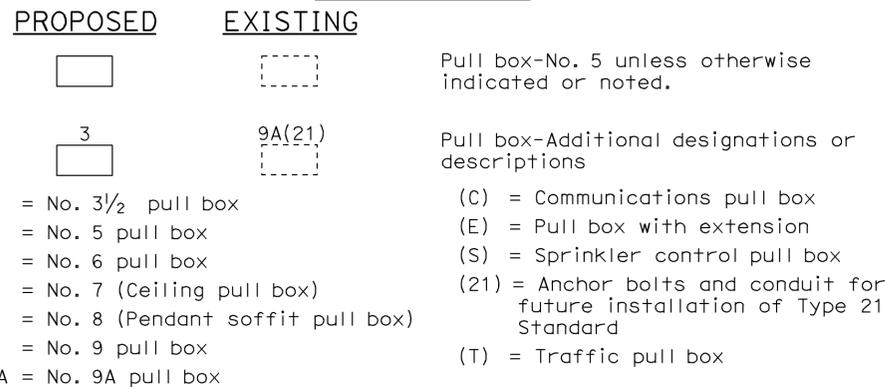
MISCELLANEOUS EQUIPMENT



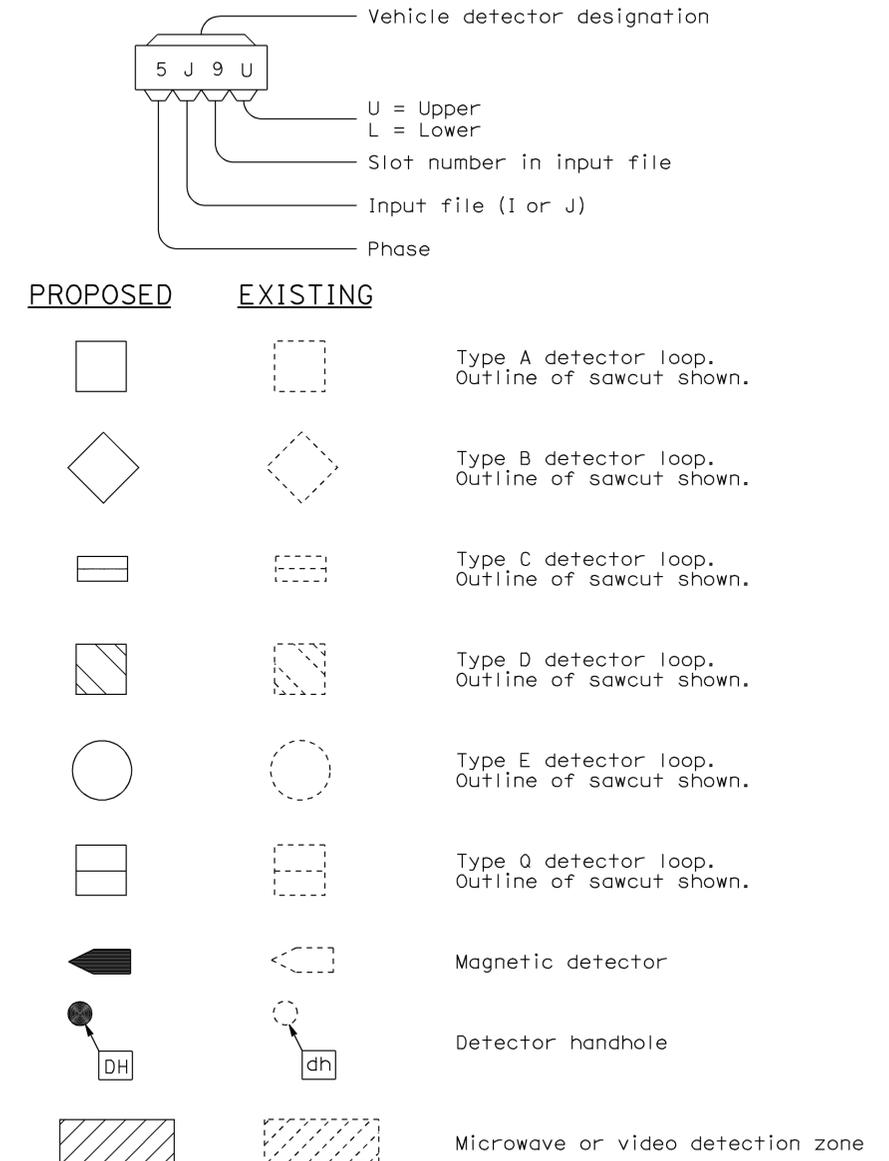
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

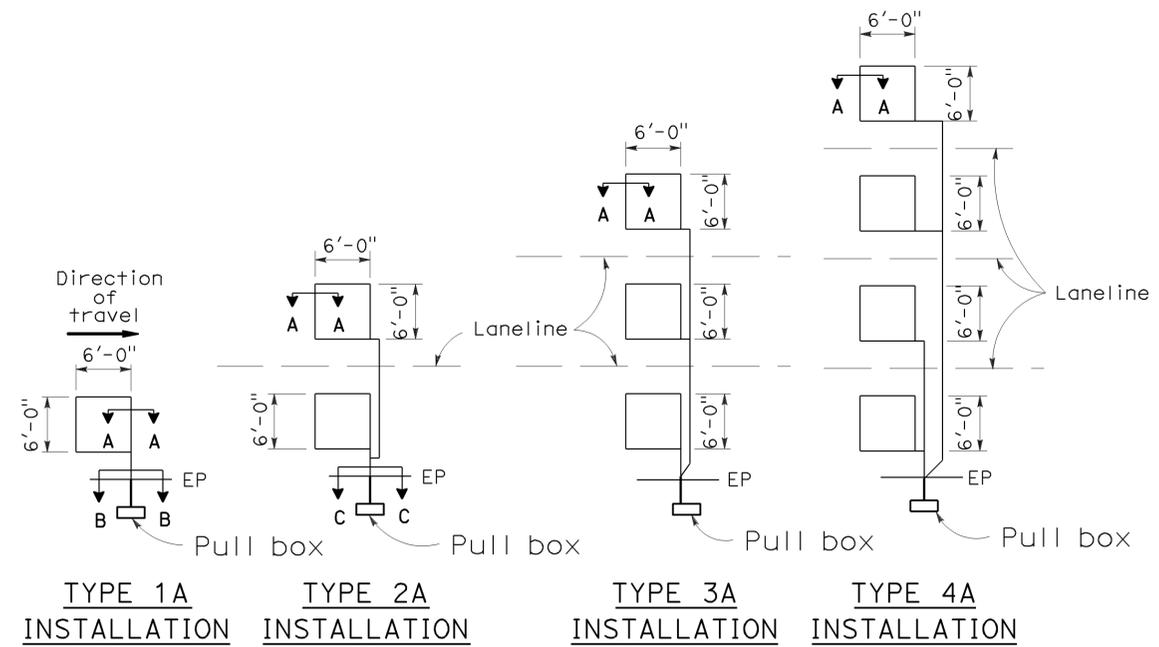
RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

LOOP INSTALLATION PROCEDURE

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

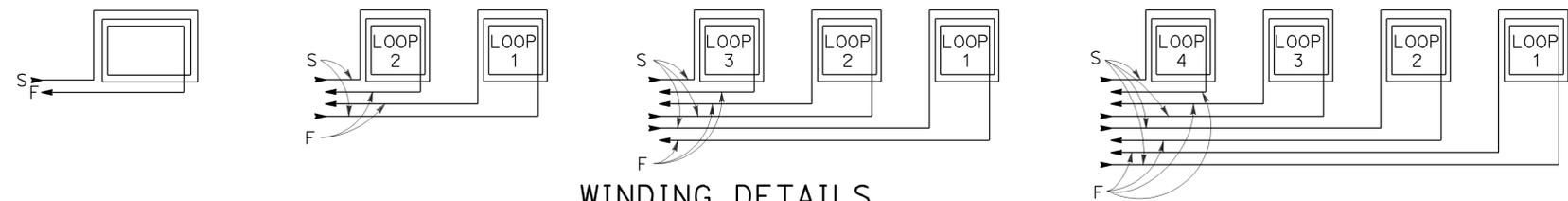


TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION

SAWCUT DETAILS

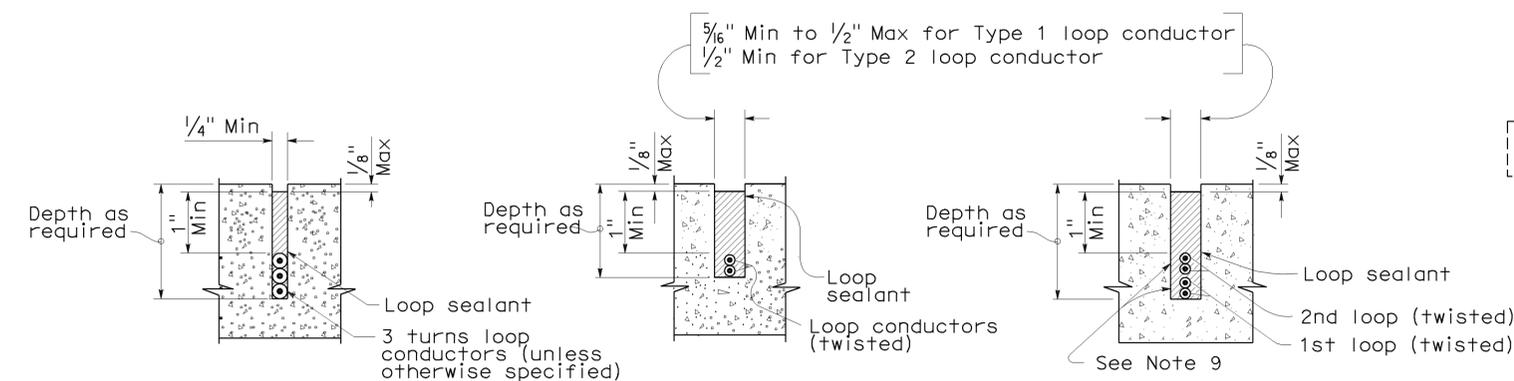
(Type A loop detector configurations illustrated)

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

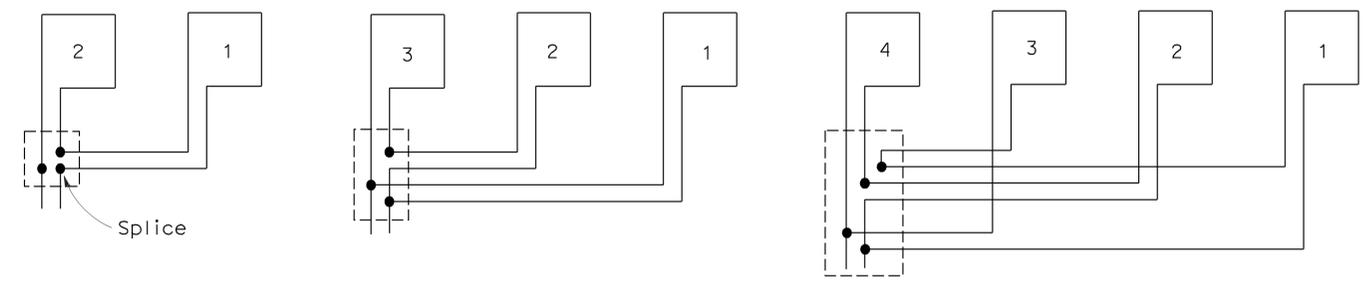


WINDING DETAILS

See Notes 6 and 7



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



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	0.3/11.4	36	39

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

To accompany plans dated 9-27-10

2006 REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	405	0.3/11.4	37	39
<i>Tony D. Brake</i> 05/20/10 REGISTERED CIVIL ENGINEER DATE			Tony D. Brake No. C57863 Exp. 06/30/12 CIVIL STATE OF CALIFORNIA		
9-27-10 PLANS APPROVAL DATE					
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QUANTITIES

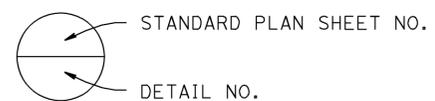
REMOVE UNSOUND CONCRETE	1	CF
AGGREGATE BASE (APPROACH SLAB)	10	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	96	CY
PAVING NOTCH EXTENSION	81	CF
RAPID SETTING CONCRETE (PATCH)	1	CF
JOINT SEAL (MR 1/2")	87	LF

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	JOINT SEAL DETAILS
3	STRUCTURE APPROACH TYPE R(30D)

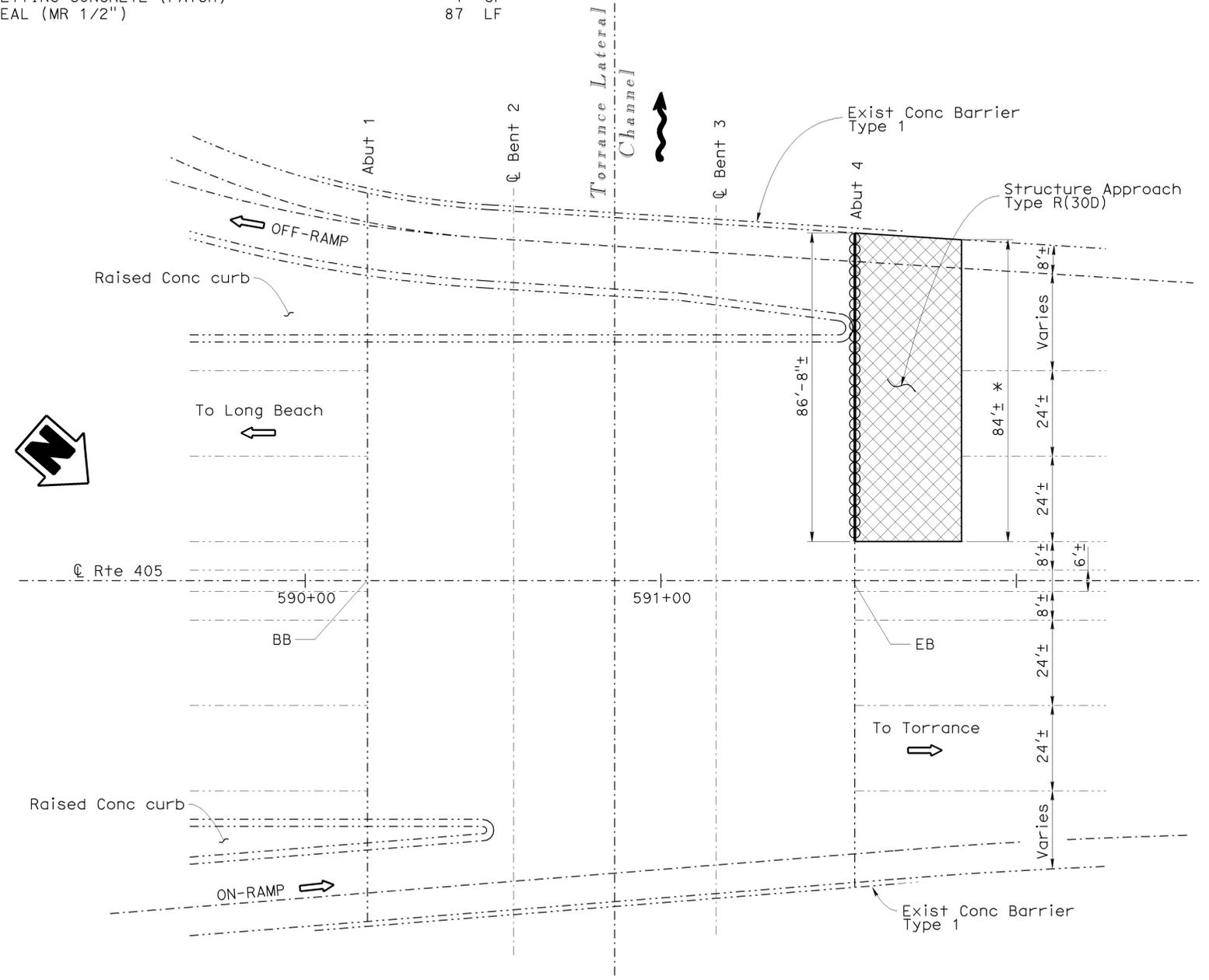
STANDARD PLANS DATED MAY 2006

SHEET NO.	TITLE
A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")



LEGEND:

- - - - - Indicates existing.
- Indicates direction of traffic.
- ~ ~ ~ ~ ~ Indicates direction of flow.
- * Indicates limits of paving notch extension.
- ⊗ Indicates location of existing joint seal removal and placement of new joint seal. Prior to placement of new joint seal repair joint spalls.
- ▨ Indicates limits of remove and replace PCC roadway slabs and construct new structure approach slabs.



TORRANCE LATERAL CHANNEL

1" = 20'

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

TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Tony Brake	CHECKED Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	53-1513	TORRANCE LATERAL CHANNEL GENERAL PLAN		
	DETAILS	BY Tom Dang	CHECKED Tony Brake	LAYOUT	BY Tom Dang		POST MILE	11.39			
	QUANTITIES	BY Tony Brake	CHECKED Hong Tien Tran	SPECIFICATIONS	BY Kevin Ellingson		PLANS AND SPECS COMPARED	Kevin Ellingson			
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 10/25/05)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 07 EA 3Y7301	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 01 OF 03

USERNAME => s129239 DATE PLOTTED => 20-MAY-2010 TIME PLOTTED => 06:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	405	0.3/11.4	38	39

Tony D. Brake 05/20/10
 REGISTERED CIVIL ENGINEER DATE

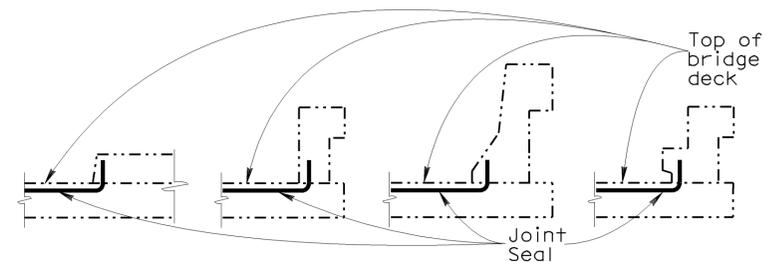
9-27-10
 PLANS APPROVAL DATE

Tony D. Brake
 No. C57863
 Exp. 06/30/12
 CIVIL
 STATE OF CALIFORNIA

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JOINT SEAL TABLE										
BRIDGE NAME	BRIDGE NUMBER	LOCATION		MINIMUM "MR" (INCHES)	APPROX LENGTH (FT)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)	APPROX DEPTH OF JOINT SPALLS (INCHES)	APPROX WIDTH OF JOINT SPALLS (INCHES)	APPROX LENGTH OF JOINT SPALLS (FEET)
TORRANCE LATERAL CHANNEL	53-1513	Abut 4	PN	1/2	87	NO	N/A	3	6	5

PN = Paving notch

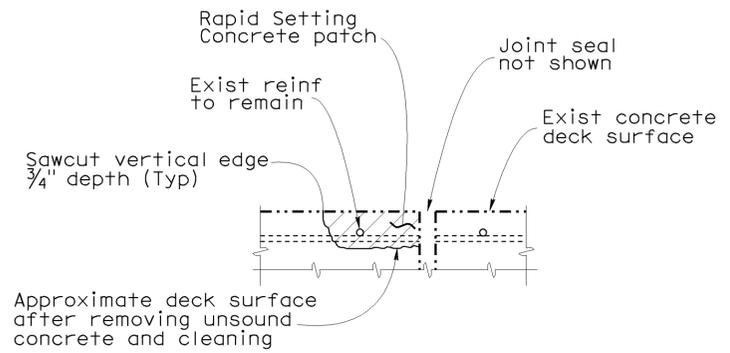


BARRIER RAIL

JOINT SEAL AT LOW SIDE OF DECK

Note: Details shown for illustration purposes only.

For use only where deck joint matches the sidewalk, curb or barrier rail joint.



JOINT SPALL REPAIR DETAIL

Reinforcement may be encountered during deck concrete removal and is to remain undamaged.

NOTES:

The following notes apply to JOINT SEAL TYPE A:

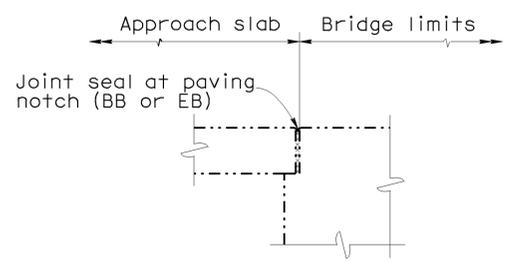
Install Joint Seal (MR = 1/2") or Silicone Joint Seal 3" up into curb or barrier rail on the low side of the deck where deck joint aligns with curb or barrier rail joint.

For details not shown see RSP B6-21 sheet.

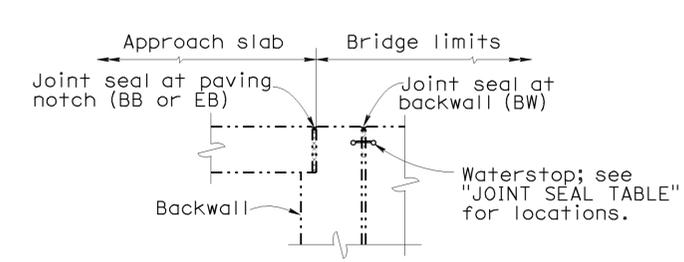
The following notes apply to JOINT SEAL TYPE B:

- Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
- Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be recalculated by the Engineer.
- W1 shall be the smaller of the values determined as follows:
 - 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
 - The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3.0 PSI.
- Bend Type B joint seal 6 inches up into curb or rail on the low side of the deck where deck joint matches curb or rail joint.

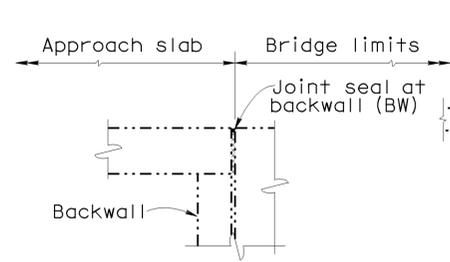
For details not shown see RSP B6-21 sheet.



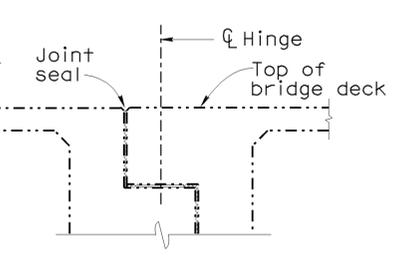
DIAPHRAGM ABUTMENT



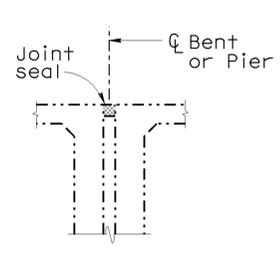
ABUTMENT WITH BACKWALL AND PAVING NOTCH



ABUTMENT WITH BACKWALL



HINGE



BENT OR PIER

JOINT SEAL LOCATION

NO SCALE

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

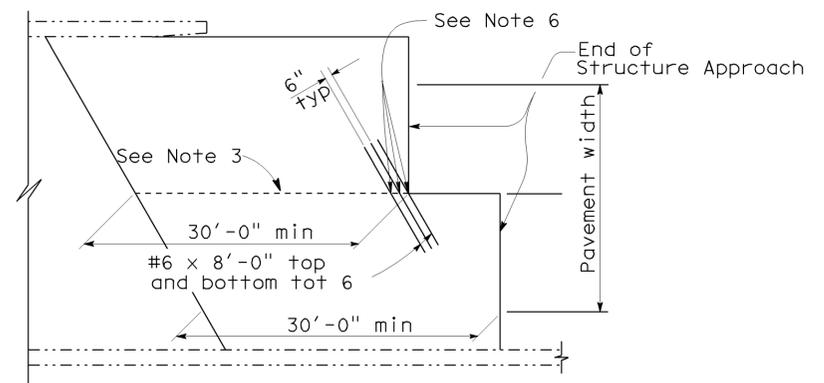
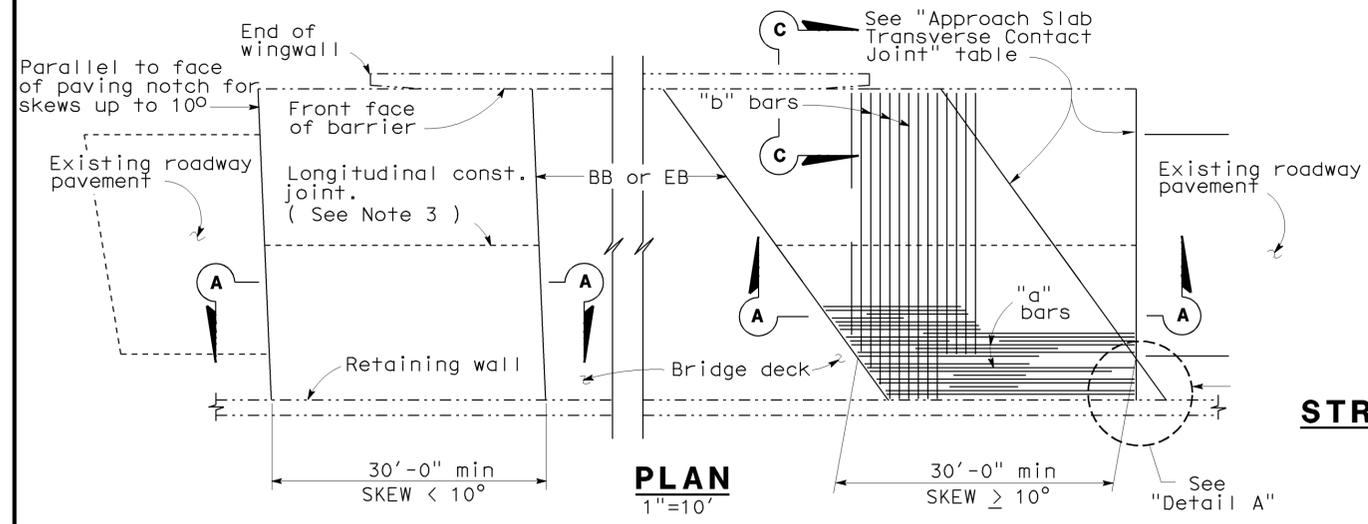
DESIGN BY Tony Brake CHECKED Hong Tien Tran DETAILS BY Tom Dang CHECKED Tony Brake QUANTITIES BY Tony Brake CHECKED Hong Tien Tran	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	53-1513	TORRANCE LATERAL CHANNEL JOINT SEAL DETAILS
			POST MILE	11.39	
			STRUCTURES MAINTENANCE DETAIL SHEET (ENGLISH) (REV. 10/25/05)		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 07 EA 3Y7301	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 02 OF 03

USERNAME => s129239 DATE PLOTTED => 20-MAY-2010 TIME PLOTTED => 06:23

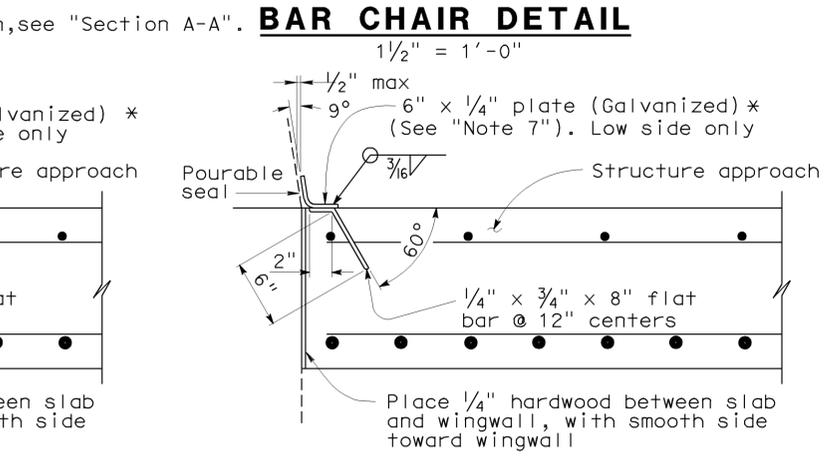
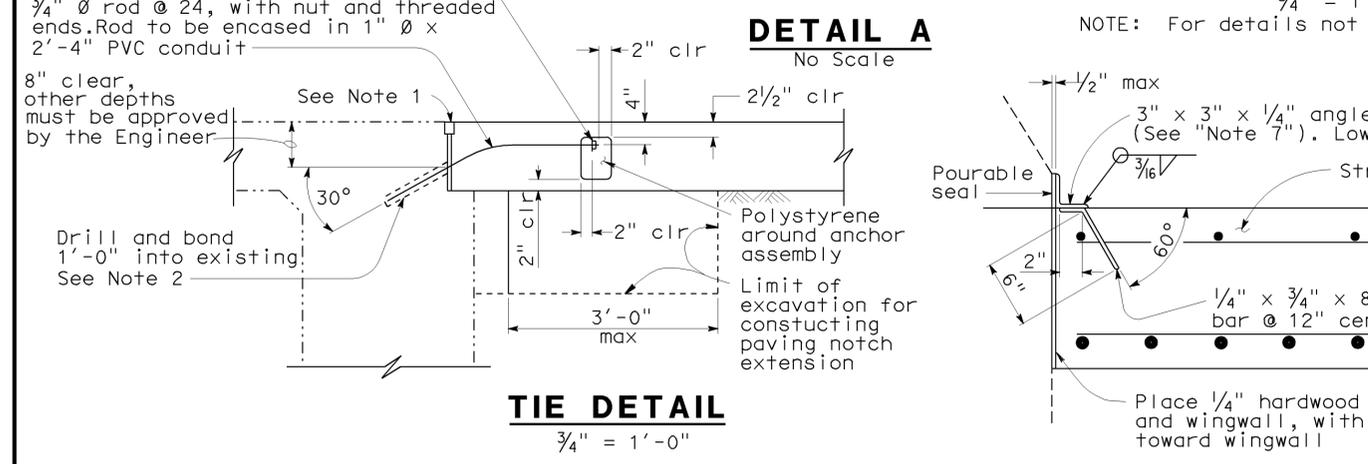
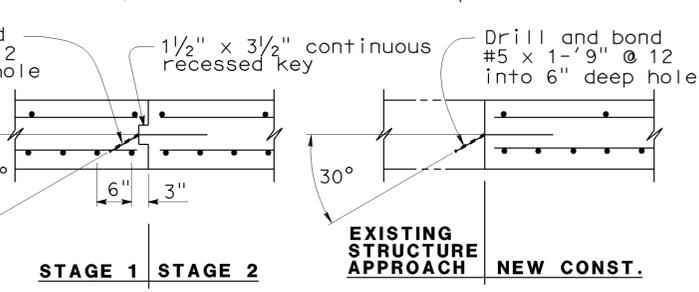
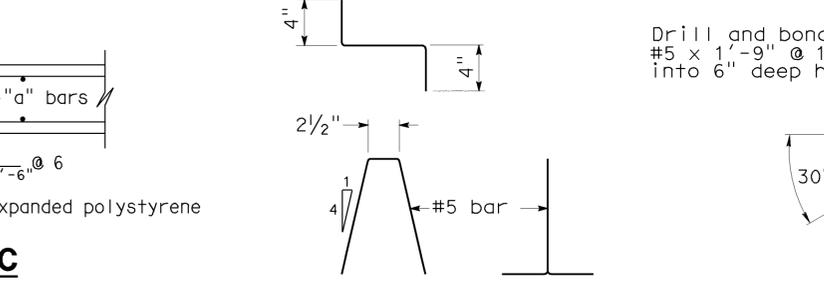
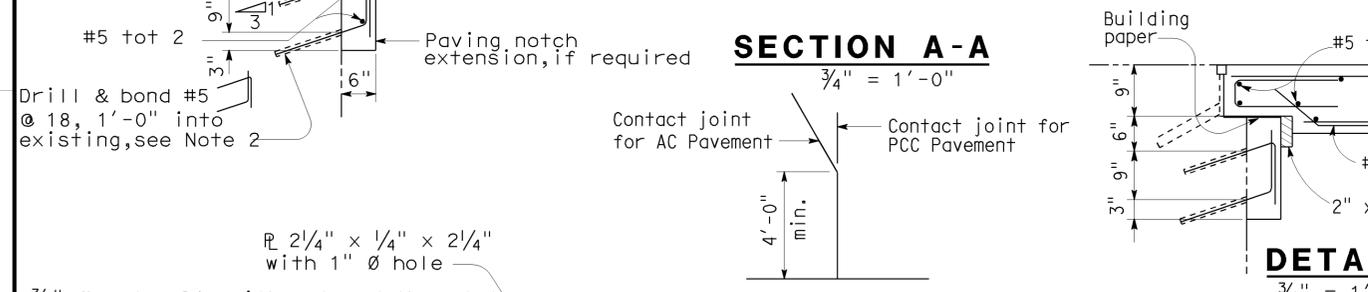
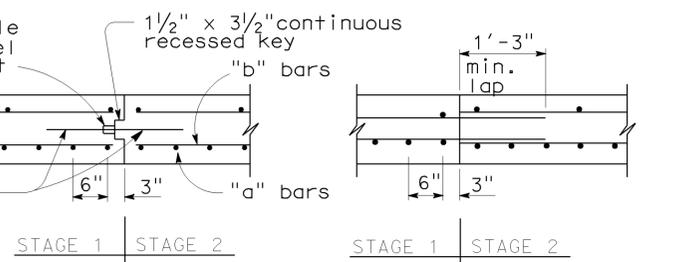
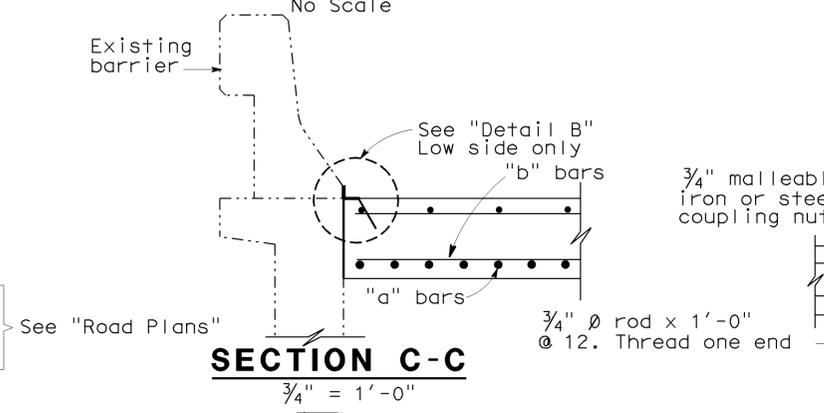
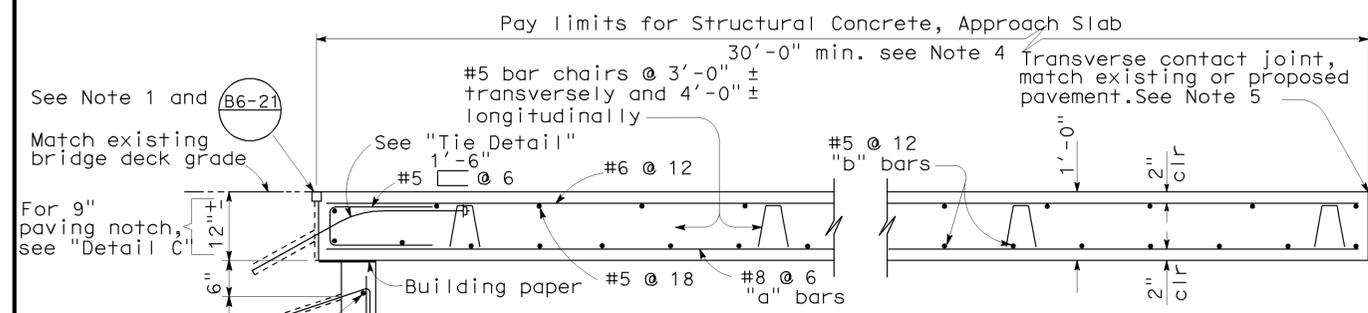
DIST.	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	0.3/11.4	39	39

Tony D. Brake 05/20/10
 REGISTERED ENGINEER - CIVIL
 No. C57863
 Exp. 06/30/12
 CIVIL
 STATE OF CALIFORNIA

9-27-10
 PLANS APPROVAL DATE
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APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	Parallel to face of paving notch	Parallel to face of paving notch
10° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line



- NOTES:**
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
 - Space to avoid existing prestress anchorages and main reinforcement.
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
 - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint.
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
 - Couplers are required for stage construction.
 - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.

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

*(TO BE USED WITH TYPE 25 OR TYPE 27 CONCRETE BARRIER)
*(TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)

STANDARD DRAWING			
RELEASE DATE 3/14/05	DESIGN BY M. TRAFFALIS	CHECKED E. THORKILDSEN	RELEASED BY
FILE NO. xs3-140e	DETAILS BY R. YEE	CHECKED E. THORKILDSEN	
	SUBMITTED BY M. HA	DRAWING DATE 8/92	OFFICE CHIEF

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.
53-1513

MILE POST
11.39

TORRANCE LATERAL CHANNEL
STRUCTURE APPROACH TYPE R(30D)

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 03	OF 03
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