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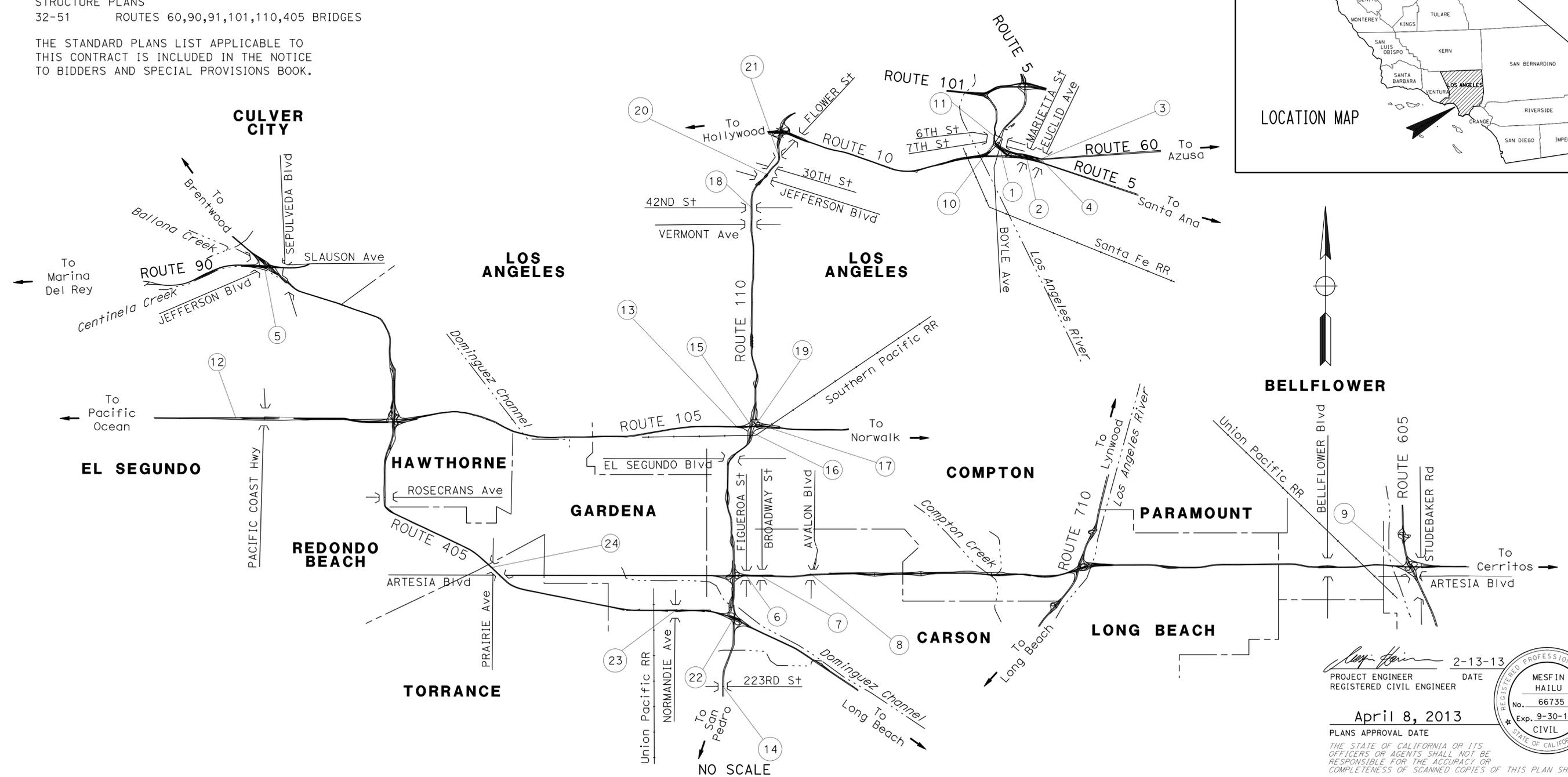
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY  
IN LOS ANGELES COUNTY  
AT VARIOUS LOCATIONS**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,105, etc.	Var	1	51

LOCATION MAP



NO SCALE

PROJECT MANAGER  
CHRISTIAN SAM  
  
DESIGN ENGINEER  
MESFIN HAILU

PROJECT ENGINEER  
 REGISTERED CIVIL ENGINEER  
 DATE 2-13-13  
 April 8, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



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

CONTRACT No.	<b>07-1W2904</b>
PROJECT ID	<b>0700021229</b>

DATE PLOTTED => 04-APR-2013  
TIME PLOTTED => 07:00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,105, etc.	Var	2	51

*Mesfin Hailu* 2-13-13  
 REGISTERED CIVIL ENGINEER DATE  
 4-8-13  
 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	BRIDGE No.	PM	Rte	DESCRIPTION
1	53-1396L	0.28	60	BOYLE Ave OC
2	53-1394G	R6.9	60	MARIETTA St UC (E60-S5)
3	53-0069R	R0.94	60	EUCLID Ave UC
4	53-0070L	R0.97	60	EUCLID Ave OC
5	53-1401F	2.62	90	W90-N405 OC (SLAUSON Ave)
6	53-2551	6.52	91	FIGUEROA St UC
7	53-2663F	R6.73	91	W91-N110 Conn (BROADWAY)
8	53-2458	R7.44	91	AVALON Blvd UC
9	53-1703G	R16.97	91	E91-N605 Conn OC
10	53-0596	S0.00	101	SEVENTH St OC
11	53-0595	S0.20	101	SIXTH St OC
12	53-2400L	R0.34	105	AIRPORT VIADUCT
13	53-2682E	R7.11	105	E105-N110 HOV Conn OC
14	53-0964	6.52	110	223RD St OC
15	53-2408H	13.70	110	N&S110-E105 Conn OH
16	53-2679F	13.82	110	S110-E105 HOV Conn OC
17	53-2406F	13.90	110	S110-E105 Conn OC
18	53-0905	19.25	110	42ND St OC
19	53-2677F	13.95	110	S110-E105 HOV Conn
20	53-2735	20.33	110	HOV VIADUCT #3
21	53-1010	20.76	110	FLOWER St OC
22	53-1138	12.83	405	405/N110-N405 Sep
23	53-1179	13.83	405	NORMANDIE Ave OH
24	53-1228	16.78	405	PRAIRIE Ave UC

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

# LOCATIONS OF CONSTRUCTION

## LC-1

LAST REVISION | DATE PLOTTED => 04-APR-2013  
 02-25-13 | TIME PLOTTED => 07:00

**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.

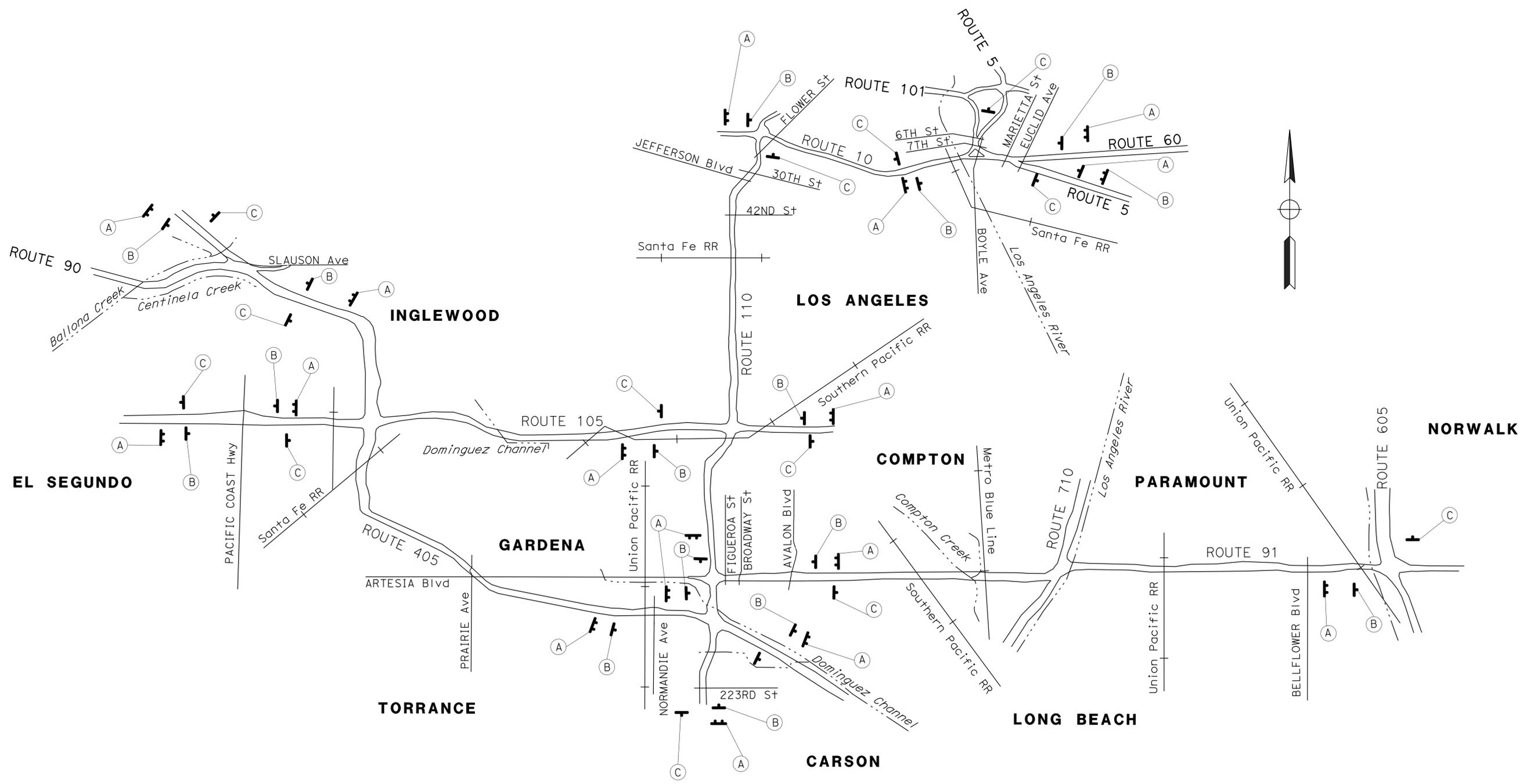
STATIONARY MOUNTED CONSTRUCTION AREA SIGNS						
SIGN	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A		C40 (CA)	132" x 84"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	17
B	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	17
C	G20-2		48" x 24"	END ROAD WORK	1 - 4" x 6"	18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 105, etc.	Var	3	51

REGISTERED CIVIL ENGINEER DATE 2-13-13  
 4-8-13  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MESFIN HAILU  
 No. 66735  
 Exp. 9-30-14  
 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.



**CONSTRUCTION AREA SIGNS**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY.

NO SCALE

**CS-1**

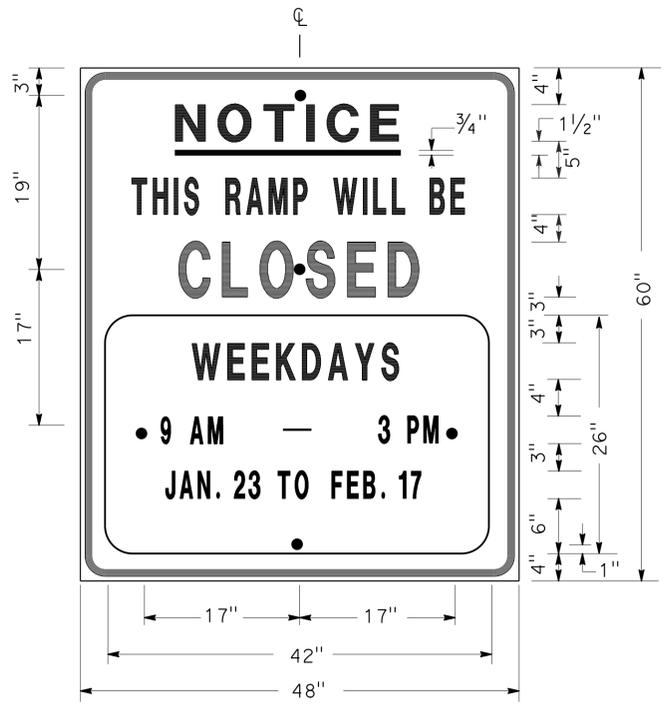
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE ENGINEERING  
 FUNCTIONAL SUPERVISOR: HECTOR OBESO  
 CALCULATED/DESIGNED BY: MARLON SARMIENTO  
 CHECKED BY: MESFIN HAILU  
 REVISED BY: DATE REVISIONS

x  
x  
x  
x  
x  
x  
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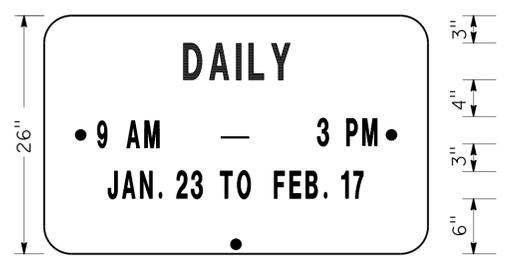
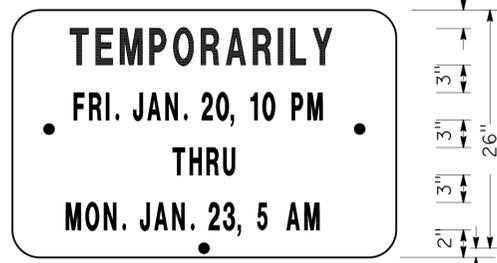
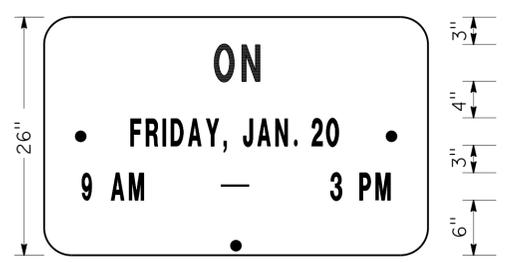
LAST REVISION | DATE PLOTTED => 04-APR-2013  
 02-25-13 | TIME PLOTTED => 07:00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	4	51

REGISTERED CIVIL ENGINEER DATE: 4-8-13  
 PLANS APPROVAL DATE: 4-8-13  
 No. C56816  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA



SIGN SP-1



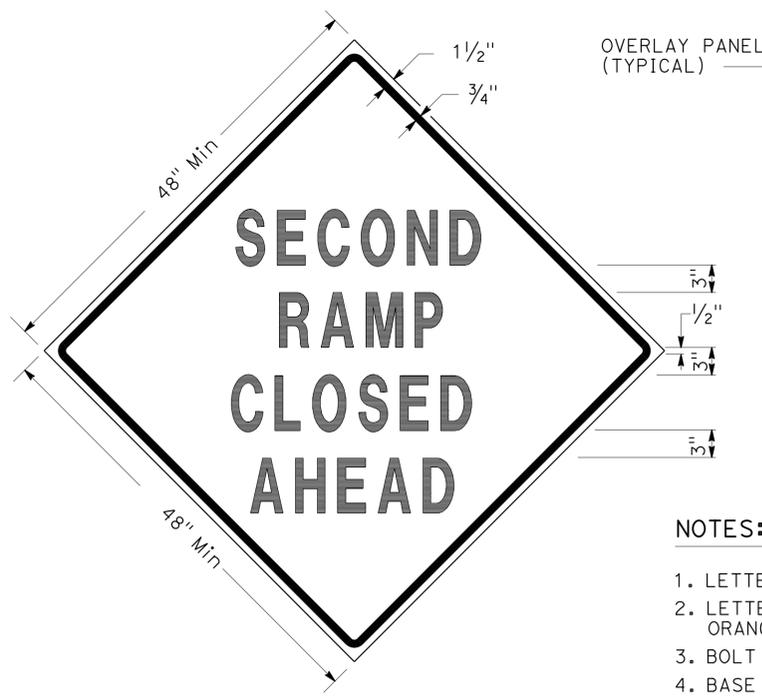
ALTERNATE OVERLAY PANELS (TYPICAL)

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

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

\* CONDENSED SPACING IF NECESSARY

**SPECIAL ADVANCE NOTICE PUBLICITY SIGN**



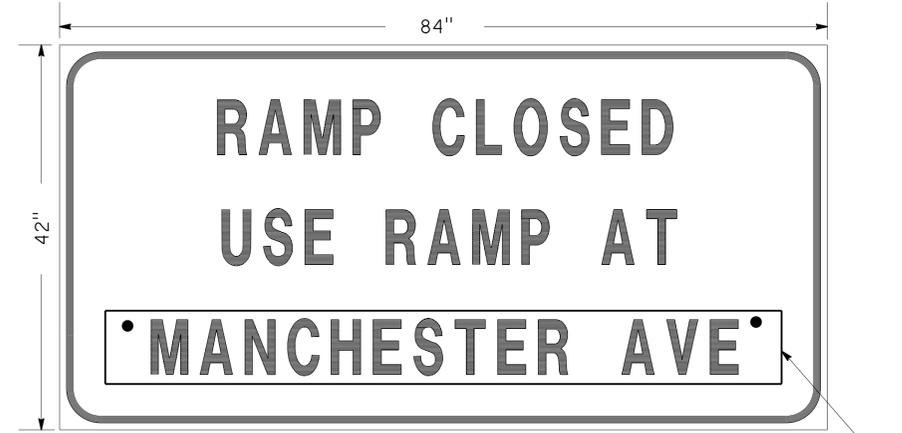
SIGN SP-3



SIGN SP-5

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

**SPECIAL SIGNS FOR EXIT RAMP CLOSURES**



SIGN SP-4

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

**SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES**

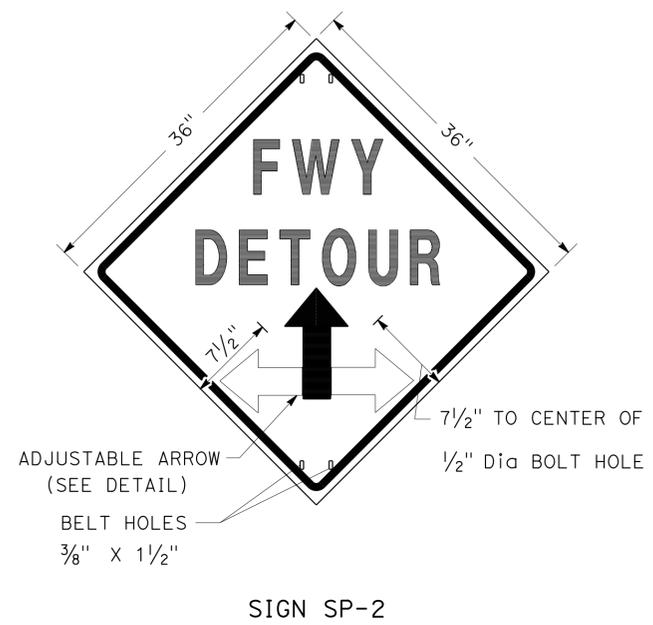
**TRAFFIC HANDLING DETAILS  
 TRAFFIC CONTROL SYSTEM  
 FOR RAMP CLOSURES, DETOUR SIGNS,  
 AND MISCELLANEOUS DETAILS**

SHEET 1 OF 2

NO SCALE

THD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DTM  
 FUNCTIONAL SUPERVISOR MARTIN OREGEL  
 CHECKED BY JOCELYN C CHIANG  
 DESIGNED BY ALBERT K YU  
 REVISIONS: JC 3/12  
 REVISIONS: DATE REVISION



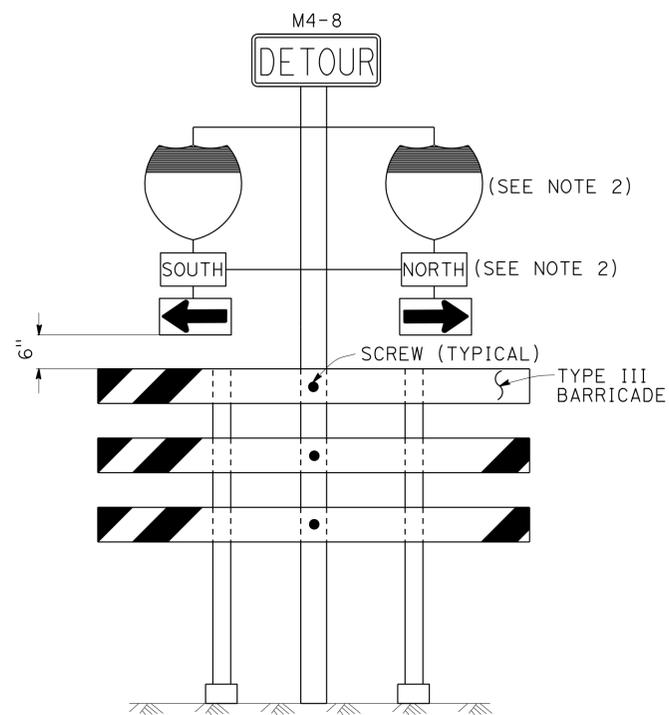
SIGN SP-2

NOTES: SIGN SP-2

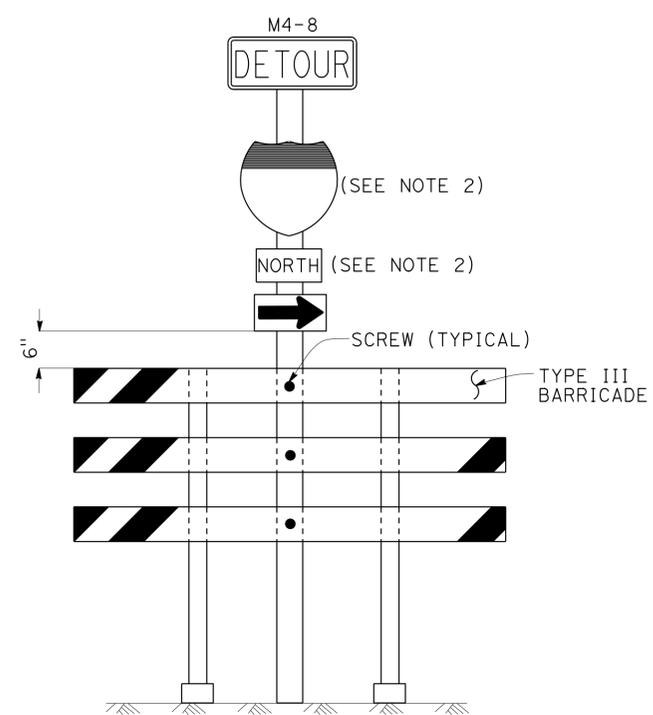
- LETTERS - 6" SERIES E.
- LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
- BASE MATERIAL FOR SIGNS AND ARROWS SHALL BE ALUMINUM (MINIMUM 0.06").
- BELTS (LUGGAGE STRAPS) SHALL BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
- SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

ABBREVIATION

(CA) CALIFORNIA CODE



SIGN SP-6 (SEE NOTE 1)

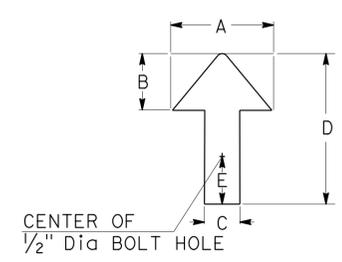


SIGN SP-7 (SEE NOTE 1)

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 MARKER [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
6"	3"	2"	8"	1"

ADJUSTABLE ARROW DETAIL

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

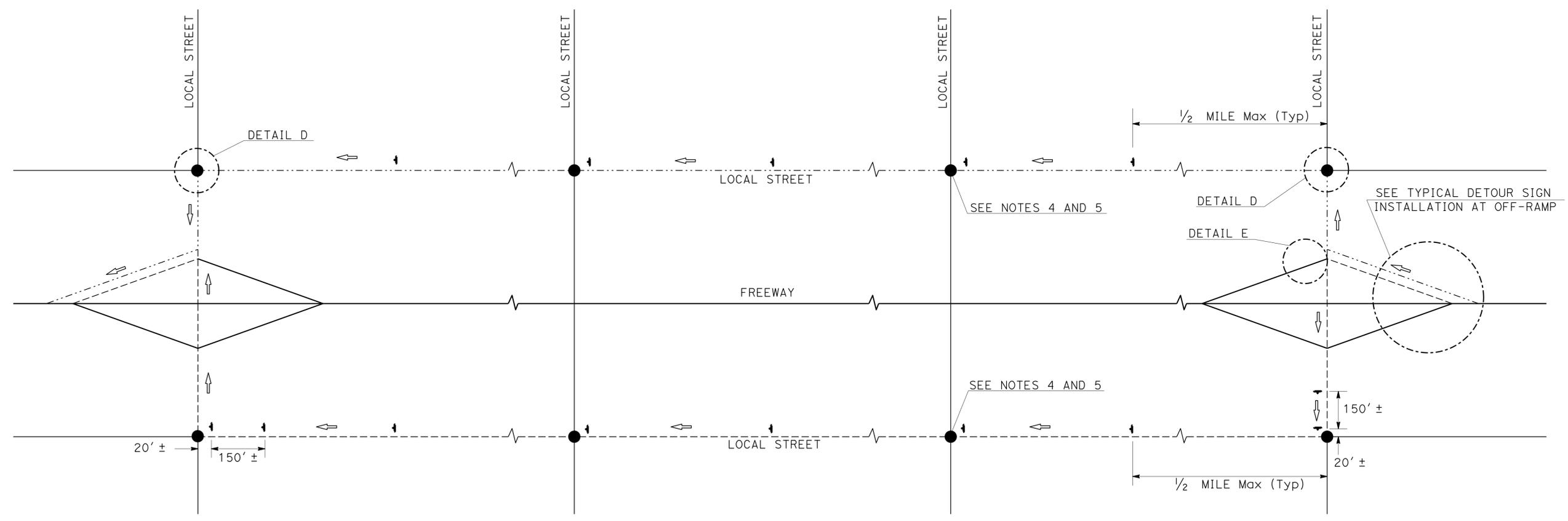
SHEET 2 OF 2  
 NO SCALE

THD-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	6	51
<i>Martin Oregel</i> REGISTERED CIVIL ENGINEER DATE 4-8-13			10-18-12 DATE 4-8-13 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.					

- LEGEND**
- ↓ SIGN SP-2
  - AND/OR DESIGNATED DETOUR ROUTE
  - ⇨ DETOUR DIRECTION
  - CONTROLLED INTERSECTION

- NOTES:**
- SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
  - SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
  - SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
  - SP-2 SIGNS SHALL BE POSTED AT EACH CONTROLLED INTERSECTION (EXCEPT AT COMMERCIAL PROPERTY, RESIDENTIAL COMPLEX OR T-INTERSECTION FROM ONE-WAY STREET) ALONG THE DESIGNATED DETOUR ROUTE.
  - UNLESS OTHERWISE SHOWN ON OTHER THD PLANS, WHEN CONTROLLED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE ARE CLOSELY SPACED, PLACE SP-2 SIGNS AT CONTROLLED INTERSECTIONS AT A DISTANCE NOT TO EXCEED 1/4 MILE FROM THE PRECEDING DETOUR SIGN.
  - EXCEPT AS OTHERWISE SHOWN ON OTHER PLANS OR SPECIFIED IN THE SPECIAL PROVISIONS, SP-2 SIGNS SHALL BE PLACED AS SHOWN ON THIS PLAN.



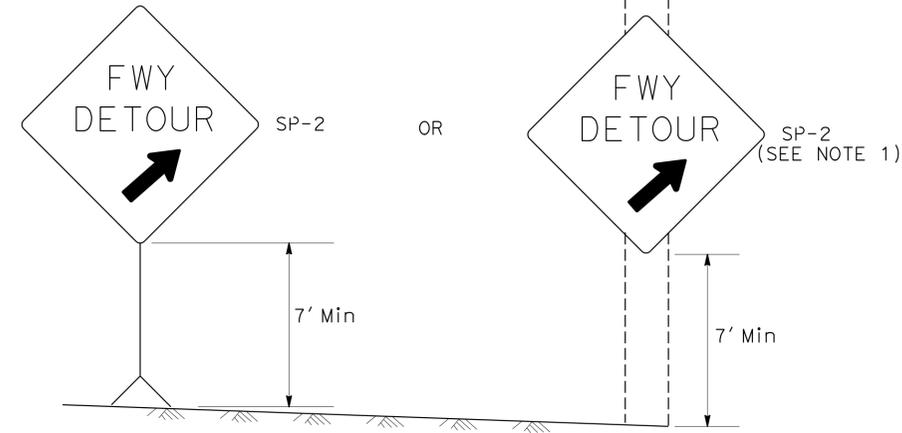
**TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE**

**TRAFFIC HANDLING DETAILS  
 TRAFFIC CONTROL SYSTEM  
 FOR DETOUR SIGN INSTALLATION  
 ALONG DESIGNATED DETOUR ROUTE  
 SHEET 1 OF 3  
 NO SCALE  
 THD-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: MARTIN OREGEL  
 CALCULATED/DESIGNED BY: ALBERT K YU  
 CHECKED BY: JOCELYN C CHIANG  
 REVISED BY: JC  
 DATE REVISED: 3/12

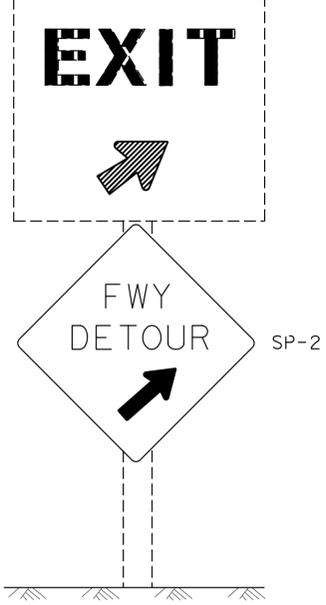
x  
x  
x  
x  
x  
x  
x

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	7	51
REGISTERED CIVIL ENGINEER DATE 4-8-13 PLANS APPROVAL DATE			REGISTERED PROFESSIONAL ENGINEER No. C56816 Exp. 6-30-13 CIVIL		



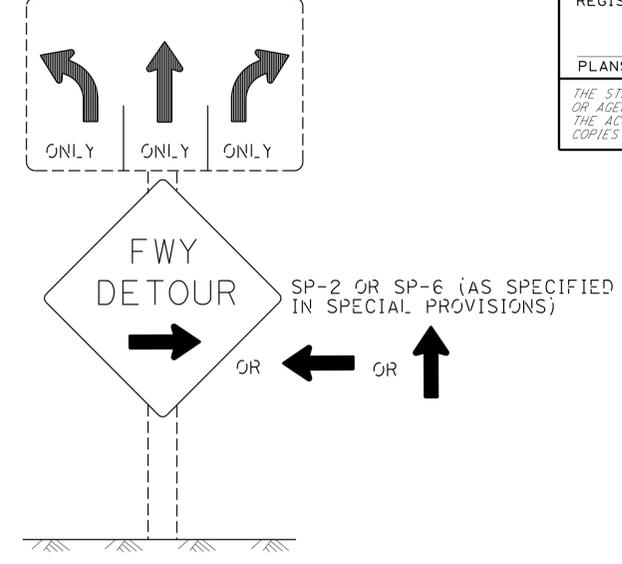
DETAIL A (SEE NOTE 3)

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

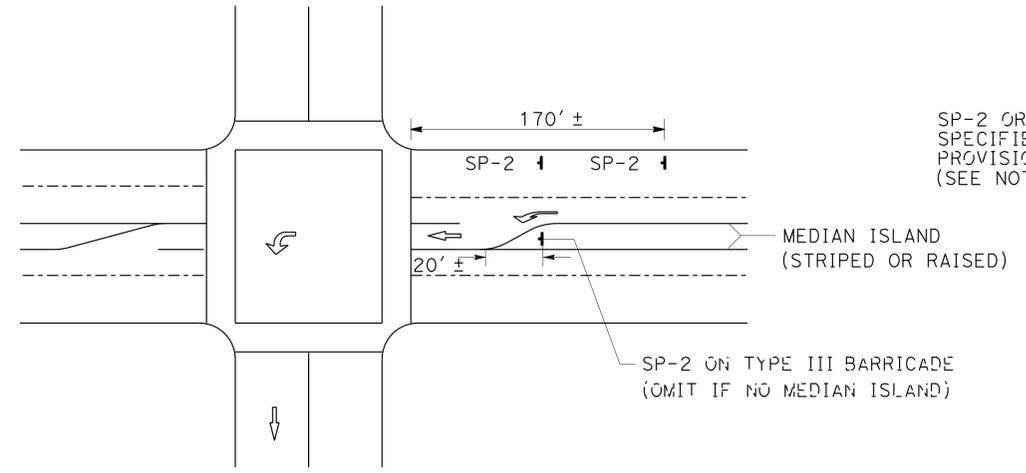


DETAIL B (SEE NOTE 3)

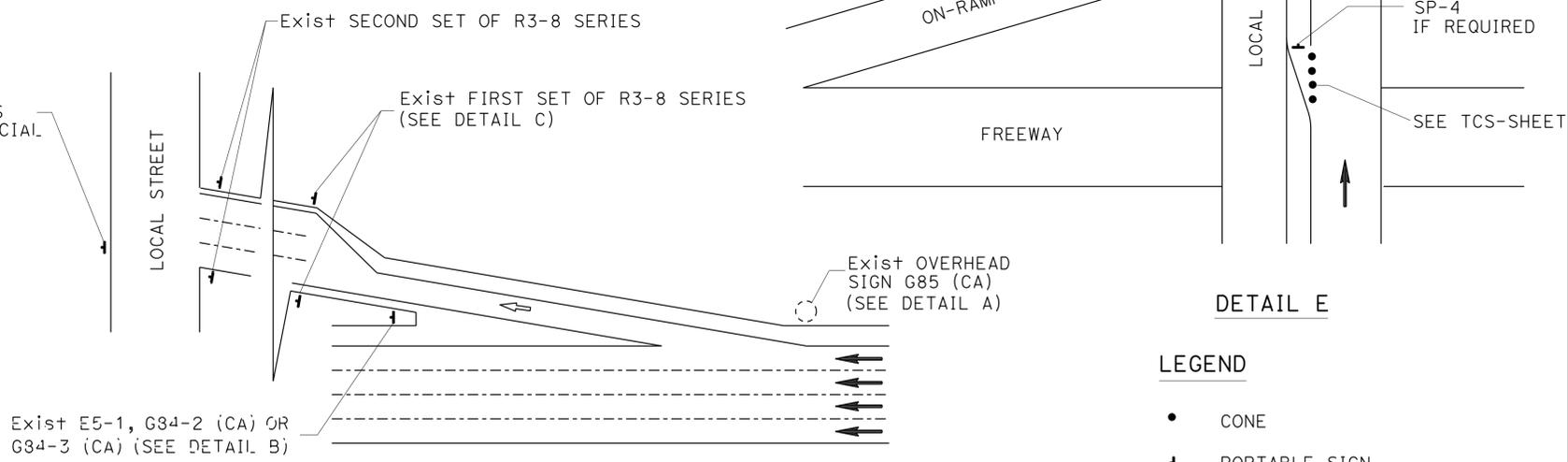
Exist R3-8 SERIES



DETAIL C (SEE NOTES 4, 5, AND 6)



DETAIL D



DETAIL E

- LEGEND**
- CONE
  - ↑ PORTABLE SIGN
  - DIRECTION OF TRAVEL
  - ⇨ DETOUR DIRECTION
  - EXISTING OVERHEAD SIGN

**TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP**

**SIGN CODE LEGEND**

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

**TRAFFIC HANDLING DETAILS  
 TRAFFIC CONTROL SYSTEM  
 FOR DETOUR SIGN INSTALLATION  
 ALONG DESIGNATED DETOUR ROUTE  
 SHEET 2 OF 3**

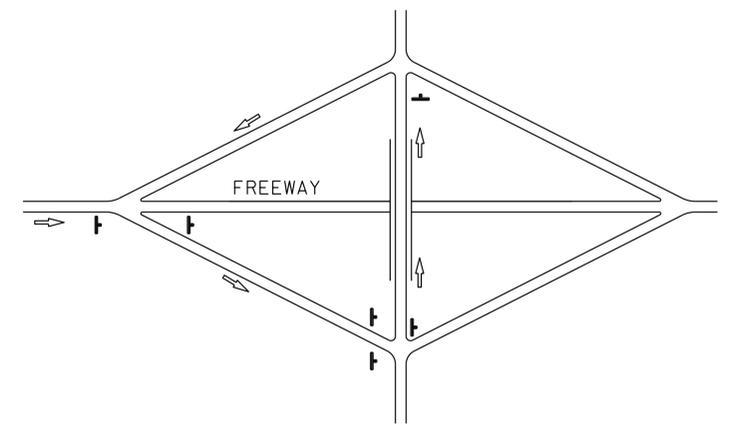
NO SCALE **THD-4**

**NOTES: SIGN SP-2**

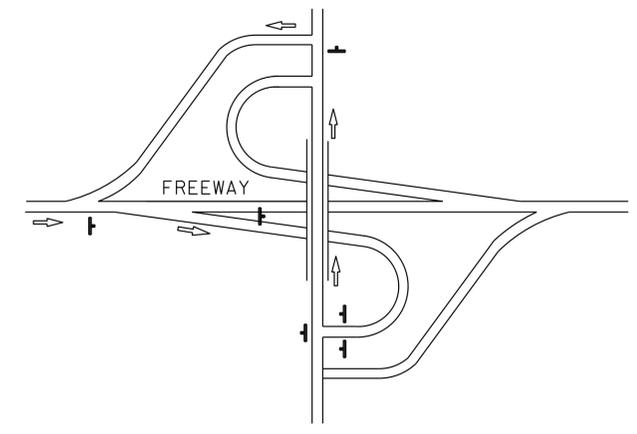
1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. OMIT DETAILS A AND B FOR FULL FREEWAY CLOSURES.
4. SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS PLAN SHEET 2 OF 2 FOR SP-6 SIGN DETAILS.
5. IF R3-8 SERIES SIGNS ARE NOT PRESENT AT THE OFF-RAMP, SP-2 OR SP-6 SIGNS SHALL BE FASTENED ONTO EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
6. EXCEPT FOR DETAILS A & B, OMIT SP-2 SIGNS IF RAMP HAS MANDATORY SINGLE MOVE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 FUNCTIONAL SUPERVISOR  
 MARTIN OREGEL  
 DTM  
 ALBERT K YU  
 JOCELYN C CHIANG  
 REVISOR BY  
 DATE REVISED  
 3/12  
 JC

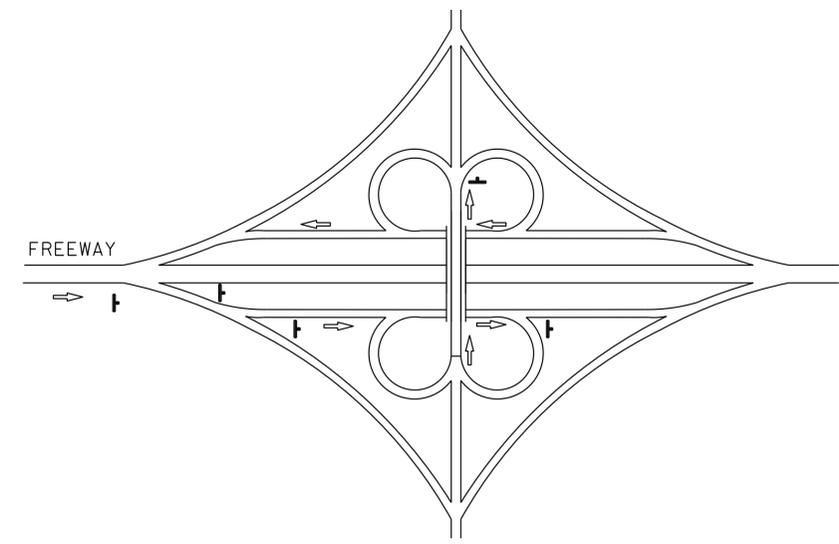
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DTM  
 FUNCTIONAL SUPERVISOR  
 MARTIN OREGEL  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISIONS: 3/12  
 REVISED BY  
 DATE REVISED  
 ALBERT K YU  
 JOCELYN C CHIANG  
 JC  
 3/12



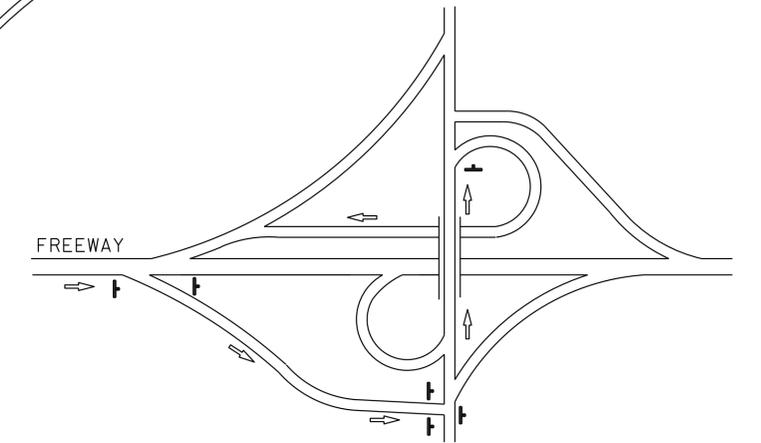
TYPE I



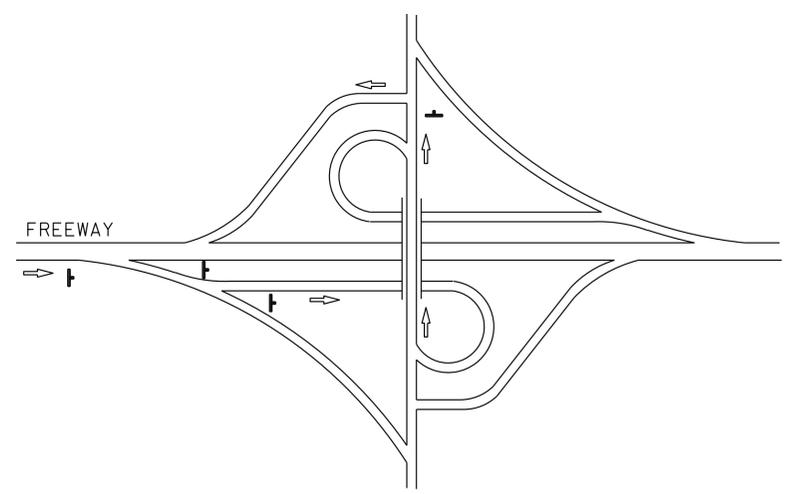
TYPE II



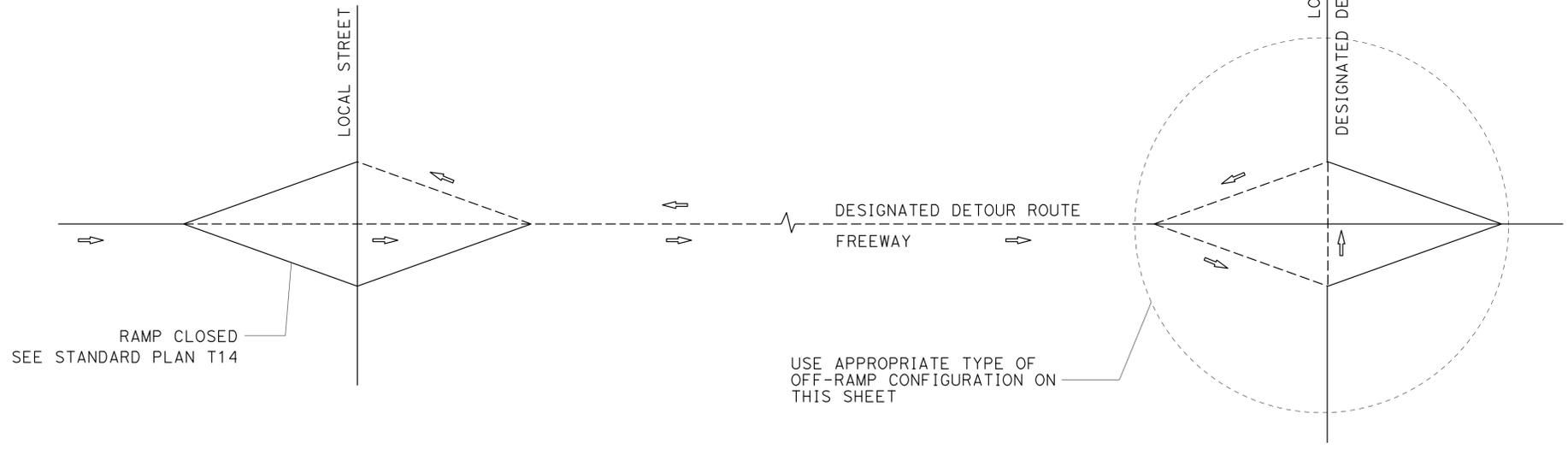
TYPE III



TYPE IV



TYPE V



TYPE OF OFF-RAMP CONFIGURATION	MINIMUM No. OF SP-2
TYPE I	6
TYPE II	6
TYPE III	5
TYPE IV	6
TYPE V	4

**TYPICAL DETOUR SIGN INSTALLATION FOR OFF-RAMP CLOSURE**

**NOTES:**

- FOR RAMP CONFIGURATIONS NOT SHOWN, THE EXACT LOCATIONS AND MINIMUM NUMBER OF SP-2 SIGNS SHALL BE DETERMINED BY THE ENGINEER.
- SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS PLAN SHEET 2 OF 2 FOR SP-2 SIGN DETAILS.

**LEGEND**

- SIGN SP-2
- DETOUR DIRECTION
- DESIGNATED DETOUR ROUTE

**TRAFFIC HANDLING DETAILS  
TRAFFIC CONTROL SYSTEM  
FOR DETOUR SIGN INSTALLATION  
ALONG DESIGNATED DETOUR ROUTE  
SHEET 3 OF 3**

NO SCALE

**THD-5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	9	51
<i>Martin Oregel</i> 10-18-12 REGISTERED CIVIL ENGINEER DATE					
4-8-13			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>					

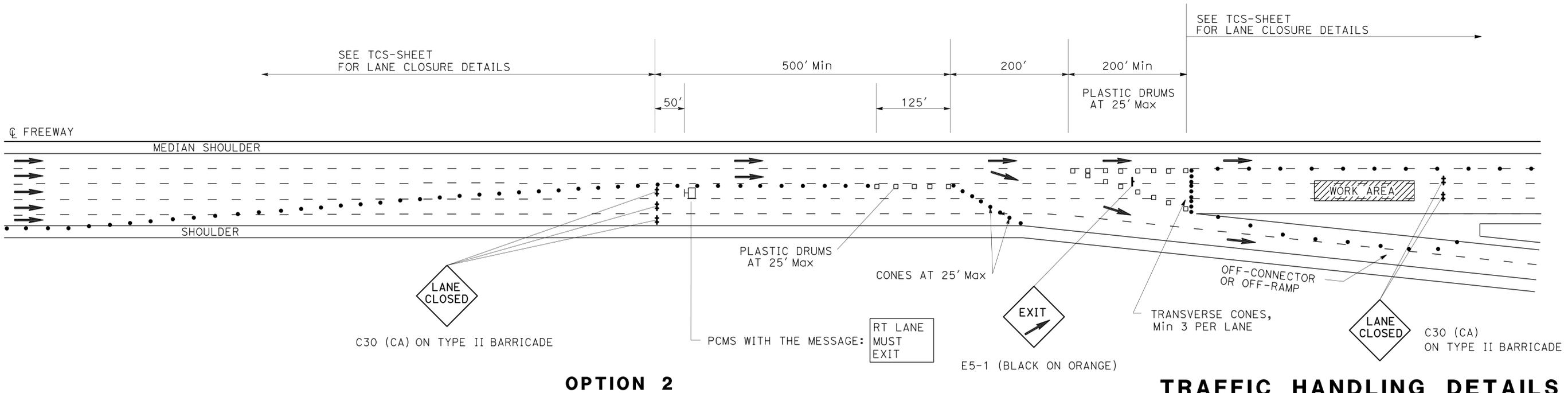
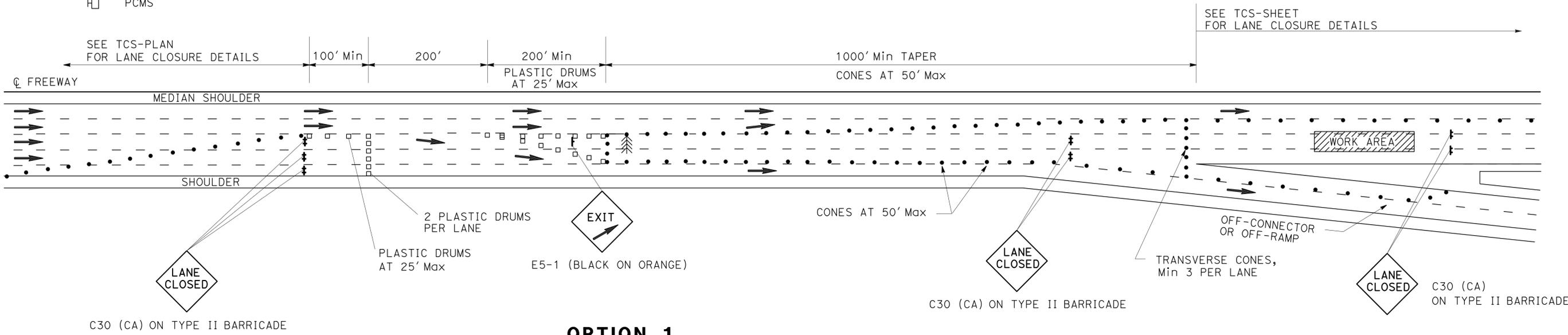
**LEGEND**

- CONE
- TRAFFIC PLASTIC DRUM
- ⚡ FLASHING ARROW SIGN
- ┆ PORTABLE SIGN
- ➔ DIRECTION OF TRAVEL
- ⊞ PCMS

**ABBREVIATIONS**

- (CA) CALIFORNIA CODE
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DT  
 FUNCTIONAL SUPERVISOR  
 MARTIN OREGEL  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISIONS  
 REVISED BY  
 DATE REVISED  
 3/12  
 JOCELYN C CHIANG  
 ALBERT K YU  
 JC  
 3/12



**TRAFFIC HANDLING DETAILS**  
**TRAFFIC CONTROL SYSTEM**  
**FOR SLIP-RAMP AT**  
**OFF-CONNECTOR OR OFF-RAMP**  
 NO SCALE  
**THD-6**

LAST REVISION DATE PLOTTED => 04-APR-2013  
 00-00-00 TIME PLOTTED => 07:00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	10	51
Martin Oregel 4-18-13 REGISTERED CIVIL ENGINEER DATE					
4-8-13				PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

- 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 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.

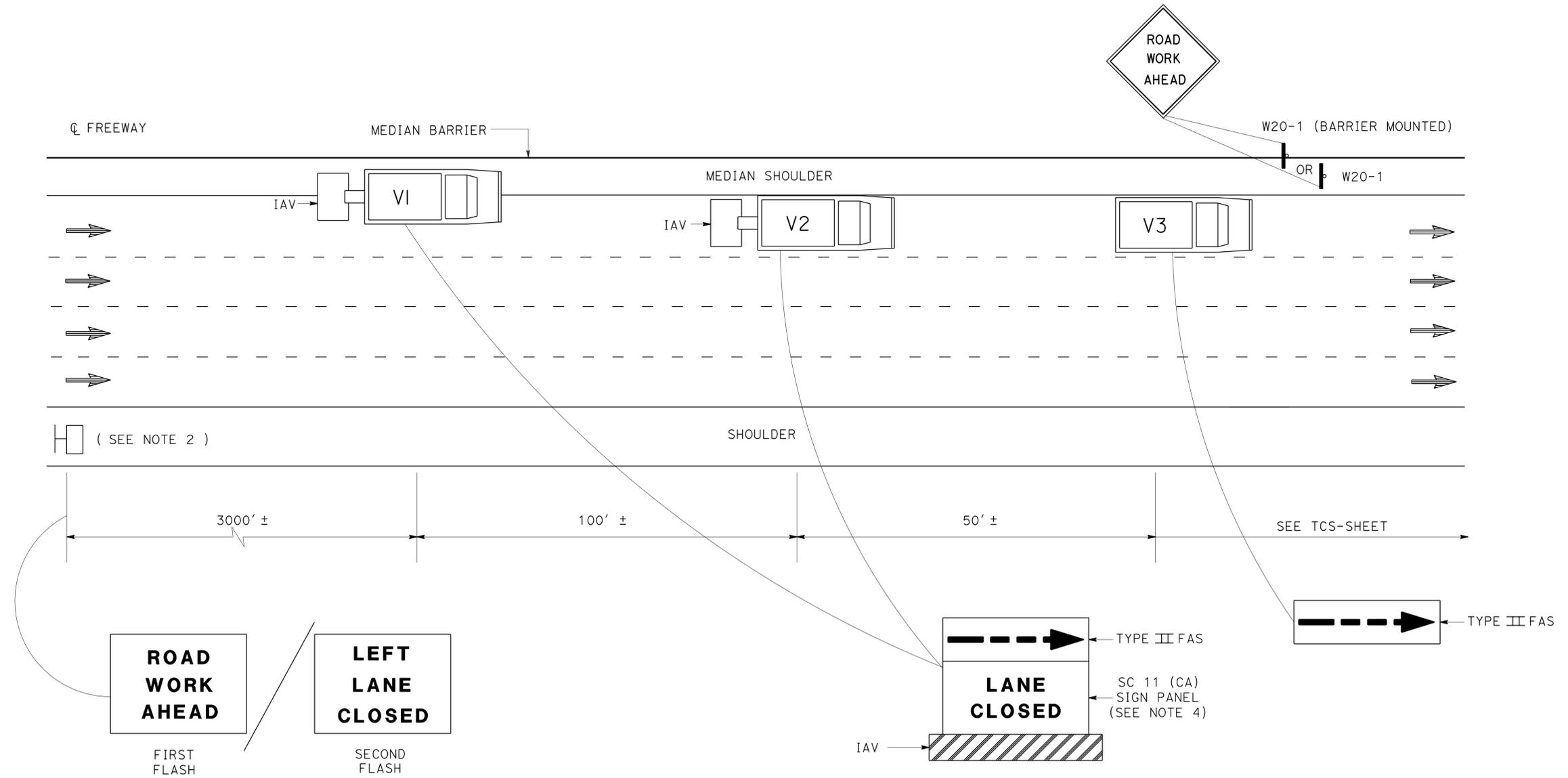
**LEGEND**

- V1, V2 SHADOW VEHICLES
- V3 WORK/APPLICATION VEHICLE
- PCMS
- DIRECTION OF TRAVEL
- CONSTRUCTION AREA SIGN

**ABBREVIATIONS**

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans  
 FUNCTIONAL SUPERVISOR  
 MARTIN OREGEL  
 CHECKED BY  
 JOCELYN C CHIANG  
 REVISOR BY  
 ALBERT K YU  
 DATE REVISOR  
 3/12  
 JC



**PCMS OR TRUCK MOUNTED CMS MESSAGE**

**TRAFFIC HANDLING DETAILS  
TRAFFIC CONTROL SYSTEM  
FOR MEDIAN SHOULDERS LESS THAN 8 FEET**

NO SCALE

**THD-7**

LAST REVISION | DATE PLOTTED => 04-APR-2013  
 03-14-13 | TIME PLOTTED => 07:00

**LEGEND:**

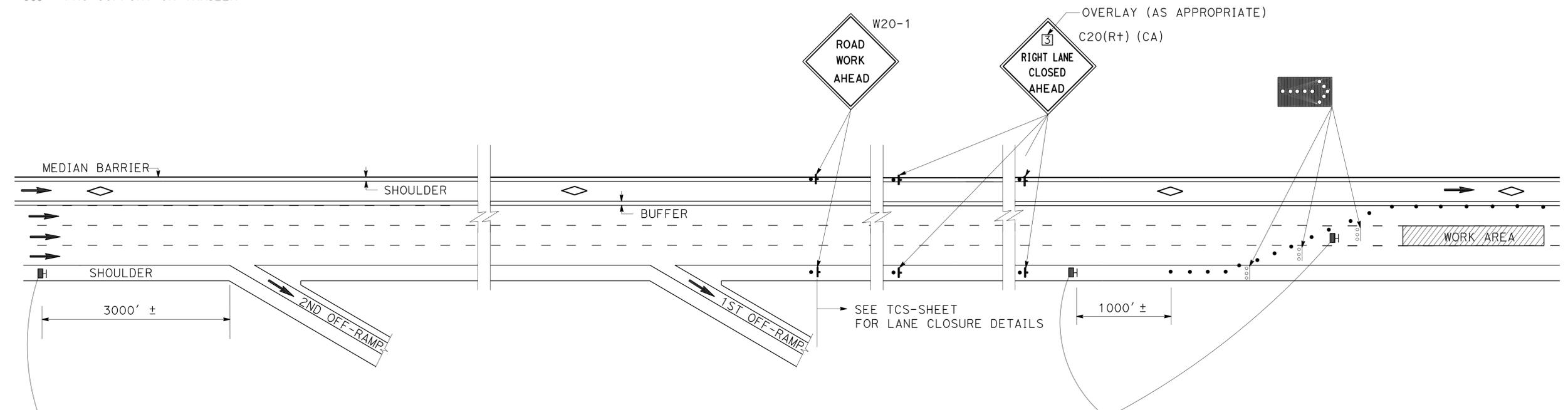
- CONE
- ▬ PORTABLE SIGN
- DIRECTION OF TRAVEL
- ▬ PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- ◇ HOV LANE
- ◼ FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER

**NOTES:**

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

**ABBREVIATIONS:**

- PCMS PORTABLE CHANGEABLE MESSAGE SIGN  
 (CA) CALIFORNIA CODE



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

FIRST FLASH MESSAGE	<b>ALL TRAFFIC</b>	← 1ST LINE (TYPICAL)
		← 2ND LINE (TYPICAL)
SECOND FLASH MESSAGE	<b>OK USE CARPOOL LANE</b>	← 1ST LINE (TYPICAL)
		← 2ND LINE (TYPICAL)
		← 3RD LINE (TYPICAL)

**TRAFFIC HANDLING DETAILS**  
**TRAFFIC CONTROL SYSTEM**  
**WITH HIGH OCCUPANCY VEHICLE LANES**  
**FOR PORTABLE CHANGEABLE MESSAGE SIGN LOCATIONS**  
**FOR BRIDGE DECK METHACRYLATE TREATMENT**  
 NO SCALE

**THD-8**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DT M  
 FUNCTIONAL SUPERVISOR MARTIN OREGEL  
 CHECKED BY JOCELYN C CHIANG  
 REVISIONS BY ALBERT K YU  
 DATE REVISED 3/12  
 REVISIONS BY JC

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 105, etc.	Var	12	51

REGISTERED CIVIL ENGINEER DATE 2-13-13  
 4-8-13  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MESFIN HAILU  
 No. 66735  
 Exp. 9-30-14  
 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.

THERMOPLASTIC PAVEMENT MARKING				
LOCATION No.	DESCRIPTION	TYPE IV (L/R) (8' ARROW)	CROSSWALK & LIMIT LINE	DIAGONALS
		SQFT	SQFT	SQFT
2	MARIETTA St UC (E60-S5)			135
6	FLOWER St OC	15	35	
15	405/N110-N405 Sep			13
	<b>SUB-TOTAL</b>	15	35	148
	<b>TOTAL</b>		198	

LOCATION No.	DESCRIPTION	THERMOPLASTIC TRAFFIC STRIPE											PAVEMENT MARKER										
		DETAIL No.											DETAIL No.										
		8	9	5	13(M)	21	24	25A	27	28	29	38	38A	37	13 (Mod)	9	38	37	29	25A	27		
		4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	4" THERMOPLASTIC TRAFFIC STRIPE				8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE (BRKN 12-3)	TYPE A (NON-REFLECTIVE)	TYPE G (RETROREFLECTIVE)			TYPE C (RETROREFLECTIVE)	TYPE D (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)							
		LF	LF	LF	LF	LF	LF	LF	LF	LF			LF	EA	EA	EA	EA	EA	EA	EA	EA		
1	BOYLE Ave UC		430						860														
2	MARIETTA St UC			185			185	370						16	5					16			
3	EUCLID Ave UC			580			145	290						49	13					13			
4	EUCLID Ave OC			175																			
5	W90-N405 OC (SLAUSON Ave)			250			250	500						22	6					22			
8	AVALON Blvd UC						215	860		3,010			215				16	4	64	19	5		
9	E91-N605 Conn OC			285			285	570						25	7					25			
10	SEVENTH St OC	335						110	840				210				16	4					
11	SIXTH St OC	440			340																		
14	223RD St OC		330					200				175			8	7							
18	42ND St OC					240																	
21	FLOWER St OC	530					265					230								23			
22	405/N110-N405 Sep			540			180	720						46	12					16	2		
	<b>SUB-TOTAL</b>	1,305	760	175	1,840	340	240	1,525	3,620	1,700	3,010	175	230	425	158	43	18	7	32	9	64	134	7
	<b>TOTAL</b>		2,065		2,015			10,435				405	425	158					314				

**PAVEMENT DELINEATION QUANTITIES**

**PDQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - **Caltrans** MAINTENANCE ENGINEERING  
 FUNCTIONAL SUPERVISOR: HECTOR OBESO  
 MARLON SARMIENTO  
 MESFIN HAILU  
 REVISOR: MESFIN HAILU  
 DATE: 4-8-13  
 REVISION: 02-25-13

LAST REVISION | DATE PLOTTED => 04-APR-2013  
 02-25-13 | TIME PLOTTED => 07:00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: GRISH BIGLIARIAN  
 REVISIONS: SHAHAN PETROSSIAN, JENNIFER NGUYEN  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 REVISOR: DATE: REVISED BY: DATE REVISED:

BORDER LAST REVISED 7/2/2010

USERNAME => s112049  
 DGN FILE => 71w2900a001.dgn

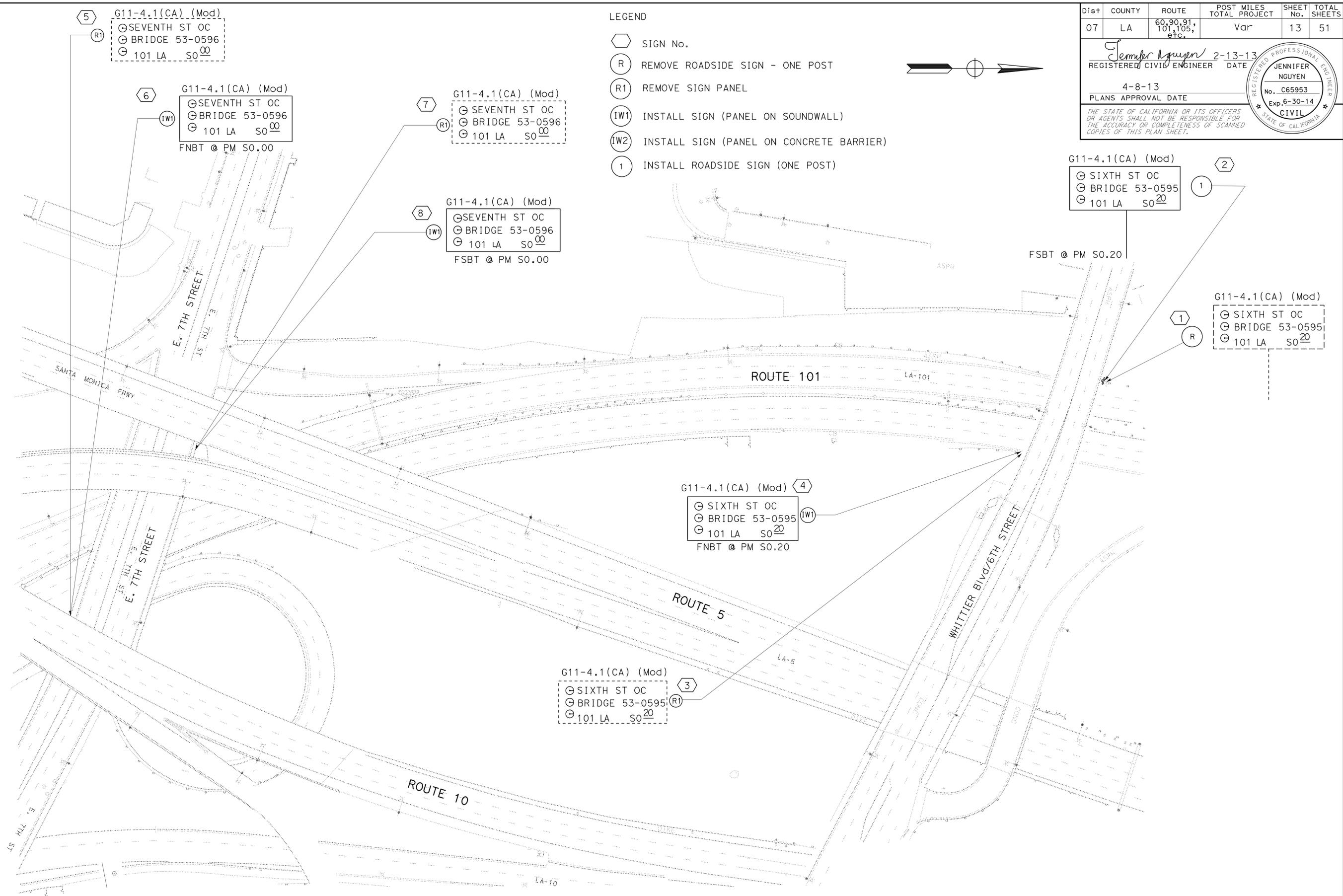
RELATIVE BORDER SCALE IS IN INCHES



UNIT 1877

PROJECT NUMBER & PHASE

07000212291



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	13	51

REGISTERED CIVIL ENGINEER: Jennifer Nguyen  
 DATE: 2-13-13  
 PLANS APPROVAL DATE: 4-8-13  
 No. C65953  
 Exp. 6-30-14  
 CIVIL  
 STATE OF CALIFORNIA

**SIGN PLAN**  
 NO SCALE  
**S-1**

LAST REVISION DATE PLOTTED => 04-APR-2013  
 02-25-13 TIME PLOTTED => 07:00

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

**Caltrans** TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: GRISH BICLIARIAN

DESIGNED BY: SHAHAN PETROSSIAN

CHECKED BY: JENNIFER NGUYEN

REVISOR: JENNIFER NGUYEN

DATE: 4-8-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,105, etc.	Var	14	51

REGISTERED CIVIL ENGINEER: Jennifer Nguyen, No. C65953, Exp. 6-30-14

DATE: 2-13-13

PLANS APPROVAL DATE: 4-8-13

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.

G11-5 (CA) (Mod)

- ⊖ E105-N110 HOV
- ⊖ CONN OC
- ⊖ BRIDGE 53-2682E

105 LA R7<sup>11</sup>

G11-5 (CA) (Mod)

- ⊖ NW TRANSIT
- ⊖ CONN OC
- ⊖ BRIDGE 53-2682E

105 LA R7<sup>05</sup>

G11-5 (CA) (Mod)

- ⊖ S110-E105
- ⊖ CONN OC
- ⊖ BRIDGE 53-2406F

110 LA 13<sup>90</sup>

G11-5 (CA) (Mod)

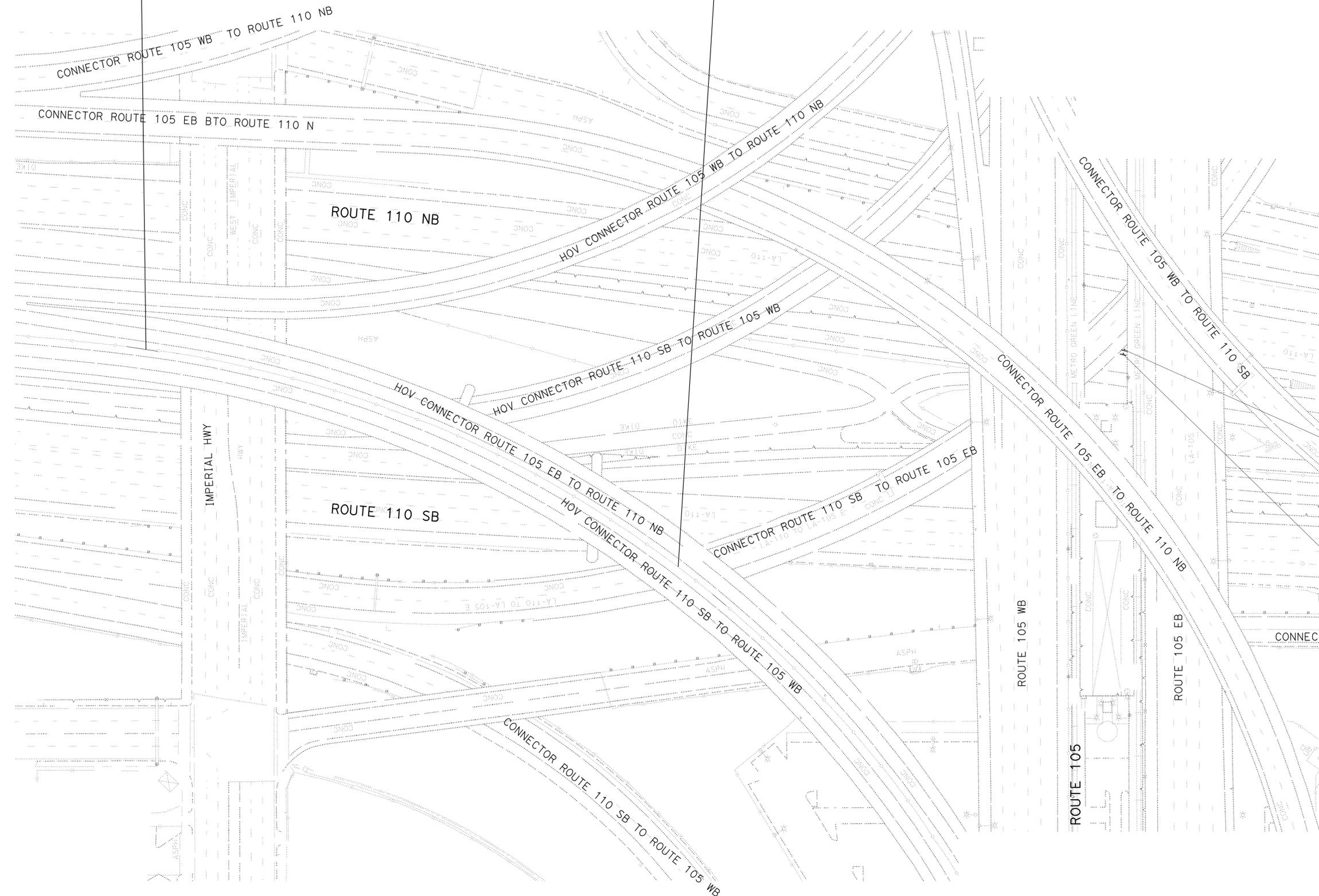
- ⊖ S110-E105
- ⊖ CONN OC
- ⊖ BRIDGE 53-2406F

110 LA 13<sup>90</sup>

CONNECTOR ROUTE 105 TO ROUTE 110 N @ PM R7.11

CONNECTOR ROUTE 105 TO ROUTE 110 N @ PM R7.05

CONNECTOR ROUTE 110 TO ROUTE 105 E @ PM 13.90



**SIGN PLAN**

NO SCALE

APPROVED FOR SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,105, etc.	Var	15	51
		<i>Jennifer Nguyen</i> 2-13-13 REGISTERED CIVIL ENGINEER DATE			
		4-8-13 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>					



G11-4.1(CA) (Mod)  
 ① PRAIRIE AVE UC  
 ② BRIDGE 52-1228  
 ③ 405 LA 16<sup>79</sup>  
 ROUTE 405 SB @ PM 16.79

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> TRAFFIC DESIGN	GRISH BICLIARIAN	CHECKED BY	DATE
		SHAHAN PETROSSIAN	REVISOR
		JENNIFER NGUYEN	DATE

APPROVED FOR SIGN WORK ONLY

**SIGN PLAN**  
 NO SCALE **S-3**

LAST REVISION | DATE PLOTTED => 04-APR-2013 02-25-13 | TIME PLOTTED => 07:00

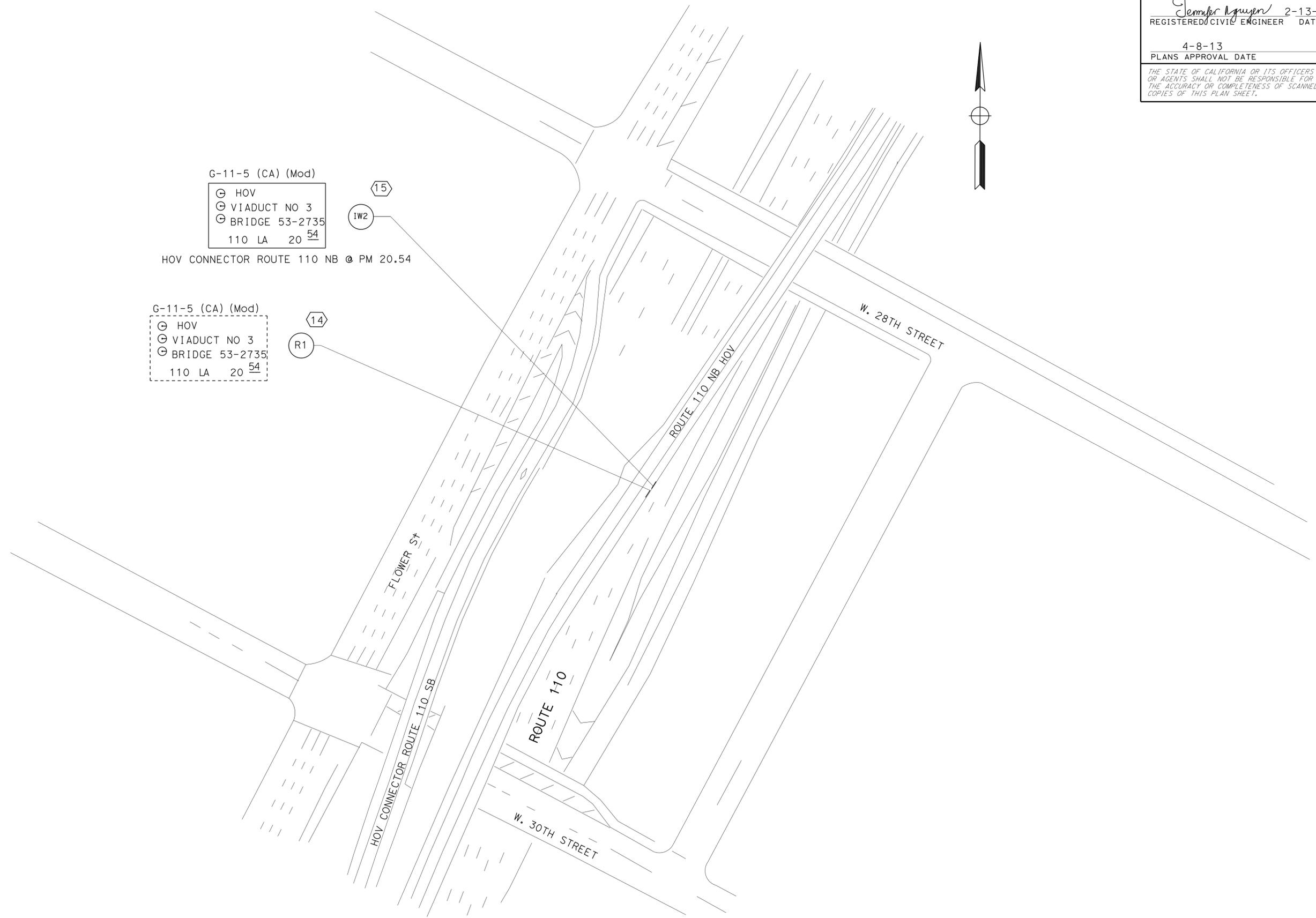
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: GRISH BICLIARIAN  
 CALCULATED/DESIGNED BY: SHAHAN PETROSSIAN  
 CHECKED BY: JENNIFER NGUYEN  
 REVISED BY: DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 105, etc.	Var	16	51

*Jennifer Nguyen* 2-13-13  
 REGISTERED CIVIL ENGINEER DATE  
 4-8-13  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JENNIFER NGUYEN  
 No. C65953  
 Exp. 6-30-14  
 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.



APPROVED FOR SIGN WORK ONLY

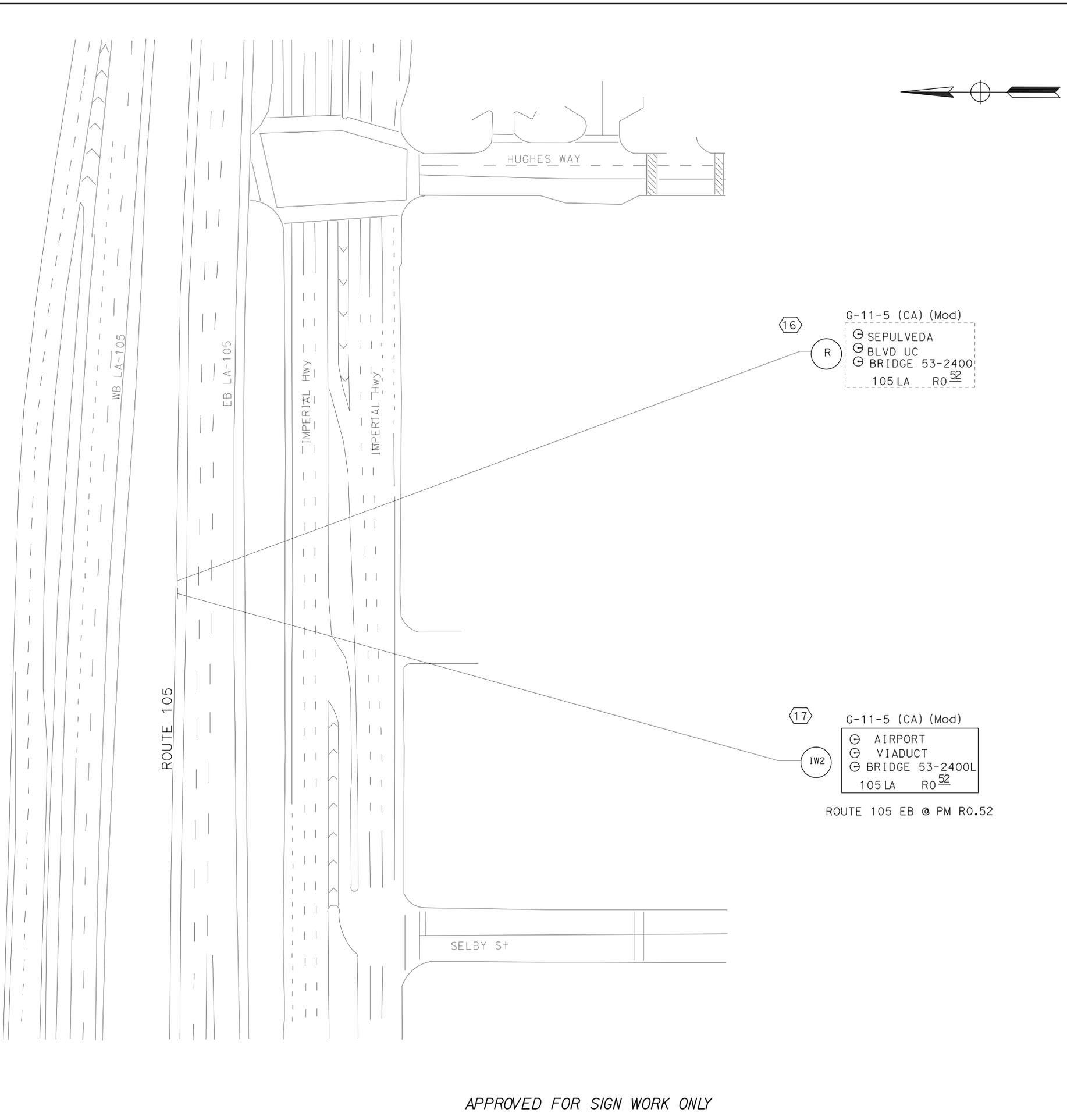
**SIGN PLAN**

NO SCALE

**S-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	SHAHAN PETROSSIAN	REVISED BY	
	GRISH BICLIARIAN	CHECKED BY	JENNIFER NGUYEN	DATE REVISED	
<b>Caltrans</b> TRAFFIC DESIGN					

1w2901\71w2900a005.dgn  
 BORDER LAST REVISED 7/2/2010

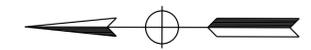


16  
 G-11-5 (CA) (Mod)  
 ⊕ SEPULVEDA  
 ⊕ BLVD UC  
 ⊕ BRIDGE 53-2400  
 105 LA RO 52

17  
 G-11-5 (CA) (Mod)  
 ⊕ AIRPORT  
 ⊕ VIADUCT  
 ⊕ BRIDGE 53-2400L  
 105 LA RO 52

ROUTE 105 EB @ PM R0.52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	17	51
<i>Jennifer Nguyen</i> 2-13-13 REGISTERED CIVIL ENGINEER DATE			4-8-13 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.					



APPROVED FOR SIGN WORK ONLY

**SIGN PLAN**  
 NO SCALE  
**S-5**

USERNAME => s112049  
 DGN FILE => 71w2900a005.dgn



UNIT 1877

PROJECT NUMBER & PHASE 07000212291

LAST REVISION | DATE PLOTTED => 04-APR-2013  
 02-25-13 TIME PLOTTED => 07:00

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 GRISH BICLIARIAN  
 TRAFFIC DESIGN

REVISOR	DATE	REVISION	DATE	REVISION
SHAHAN PETROSSIAN		JENNIFER NGUYEN		
CALCULATED/DESIGNED BY	CHECKED BY			

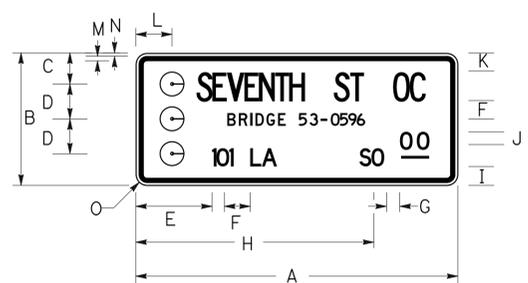
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 105, etc.	Var	18	51

Jennifer Nguyen 2-13-13  
 REGISTERED CIVIL ENGINEER DATE

4-8-13  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JENNIFER NGUYEN  
 No. C65953  
 Exp. 6-30-14  
 CIVIL  
 STATE OF CALIFORNIA

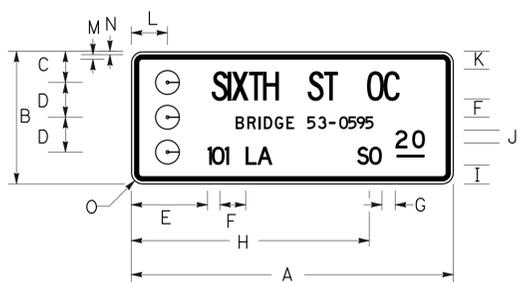
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SIGN No. 6 AND SIGN No. 8  
 G11-4.1(CA) (Mod)  
 (S-1)

BLACK BORDER  
 BLACK LEGEND & WHITE BACKGROUND

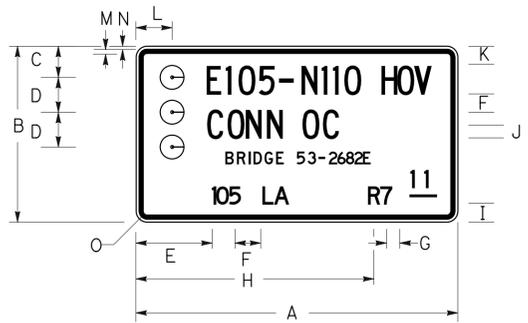
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SIGN No. 2 AND SIGN No. 4  
 G11-4.1(CA) (Mod)  
 (S-1)

BLACK BORDER  
 BLACK LEGEND & WHITE BACKGROUND

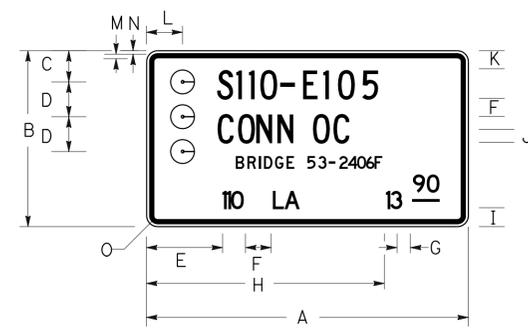
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SIGN No. 10  
 G11-5(CA) (Mod)  
 (S-2)

BLACK BORDER  
 BLACK LEGEND & WHITE BACKGROUND

SIGN SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	LINE 1	LINE 2	LINE 3
44"x24"	44"	24"	4 7/8"	4 3/4"	8"	2 1/2"	1 1/2"	27 1/2"	2 1/4"	1 3/4R	3 1/4"	4"	5/8"	3/8"	1 1/2"	4B	1 3/4D	2 1/2D



SIGN No. 12  
 G11-5(CA) (Mod)  
 (S-2)

BLACK BORDER  
 BLACK LEGEND & WHITE BACKGROUND

SIGN SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	LINE 1	LINE 2	LINE 3
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## SIGN DETAILS

NO SCALE

SD-1

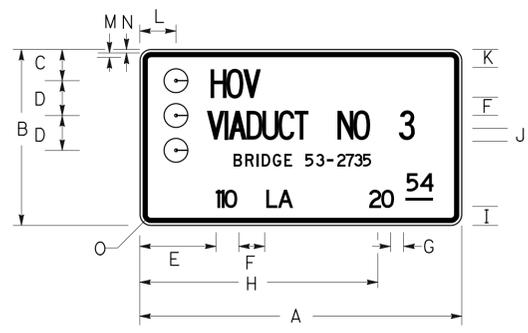
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 105, etc.	Var	19	51

*Jennifer Nguyen* 2-13-13  
REGISTERED CIVIL ENGINEER DATE

4-8-13  
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.

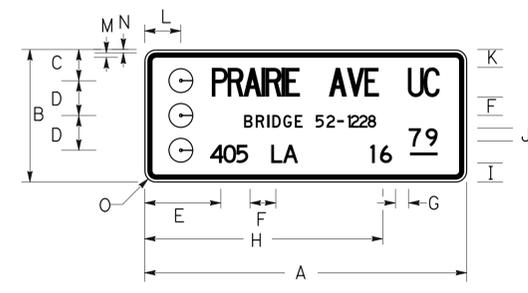
REGISTERED PROFESSIONAL ENGINEER  
JENNIFER NGUYEN  
No. C65953  
Exp. 6-30-14  
CIVIL  
STATE OF CALIFORNIA



SIGN No. 15  
G11-5(CA) (Mod)  
(S-4)

BLACK BORDER  
BLACK LEGEND & WHITE BACKGROUND

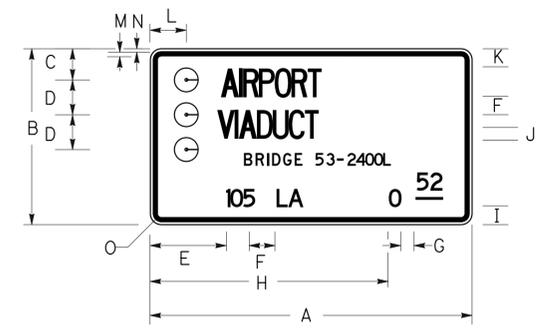
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SIGN No. 13  
G11-4.1(CA) (Mod)  
(S-3)

BLACK BORDER  
BLACK LEGEND & WHITE BACKGROUND

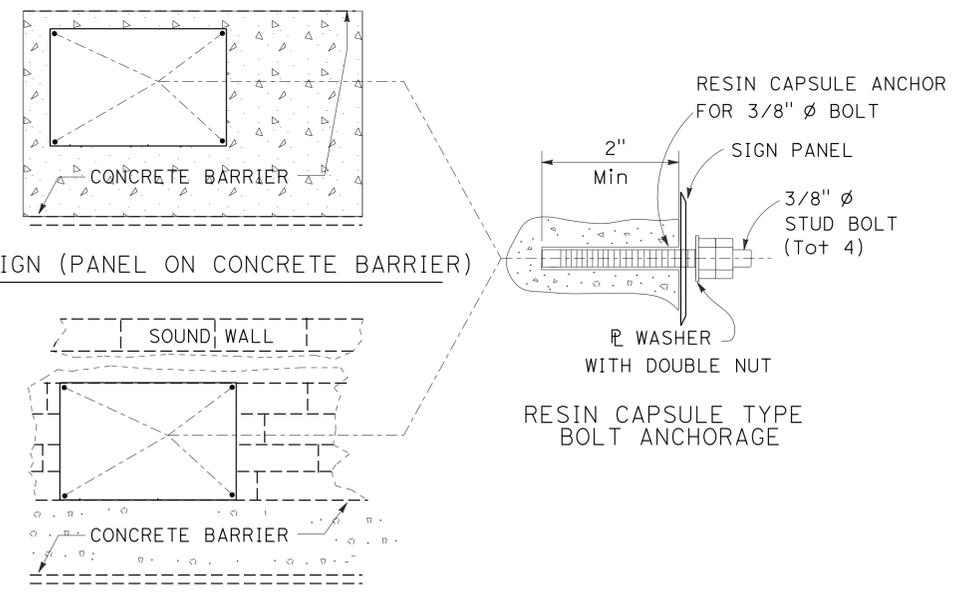
SIGN SIZE	A	B	C	D	E	F	G	H	I	J	K	L	LINE 1	LINE 2	LINE 3
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SIGN No. 17  
G11-5(CA) (Mod)  
(S-5)

BLACK BORDER  
BLACK LEGEND & WHITE BACKGROUND

SIGN SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	LINE 1	LINE 2	LINE 3
44"x24"	44"	24"	4 7/8"	4 3/4"	8"	2 1/2"	1 1/2"	27 1/2"	2 1/4"	1 3/4R	3 1/4"	4"	5/8"	3/8"	1 1/2"	4D	1 3/4D	2 1/2D



(IW2) INSTALL SIGN (PANEL ON CONCRETE BARRIER)

(IW1) INSTALL SIGN (PANEL ON SOUNDWALL)

NOTES:

1. FOR DETAILS NOT SHOWN SEE STANDARD PLANS.
2. DAMAGED SOUNDWALL BLOCKS SHALL BE REPLACED IN KIND.
3. ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION.

**SIGN DETAILS**  
NO SCALE

**SD-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: GRISH BICLIARIAN

REVISOR: SHAHAN PETROSSIAN, JENNIFER NGUYEN

DATE: 7/2/2010

S:\projects\1w2301\71w290ob002.dgn

LAST REVISION DATE PLOTTED => 04-APR-2013  
02-25-13 TIME PLOTTED => 07:00



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	21	51

REGISTERED CIVIL ENGINEER *Mesfin Hailu* 2-13-13  
 DATE

4-8-13  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MESFIN HAILU  
 No. 66735  
 Exp. 9-30-14  
 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					
		REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE PAVEMENT MARKER	TREATED WOOD WASTE
		LF	LF	SQFT	EA	LB
1	BOYLE Ave UC		430		10	
2	MARIETTA St UC	185	370	135	38	
3	EUCLID Ave UC	145	725		76	
4	EUCLID Ave OC	175				
5	W90-N405 OC (SLAUSON Ave)	250	500		50	
8	AVALON Blvd UC	2,150	645		107	
9	E91-N605 Conn OC	285	570		56	
10	SEVENTH St OC	840	600		20	
11	SIXTH St OC	340	440			39
14	223RD St OC		605		16	
18	42ND St OC	240				
21	FLOWER St OC	265	760	50	23	
22	405/N110-N405 Sep	270	900	13	76	39
	<b>TOTAL</b>	<b>5,145</b>	<b>6,545</b>	<b>198</b>	<b>472</b>	<b>78</b>

## SUMMARY OF QUANTITIES

Q-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	22	51

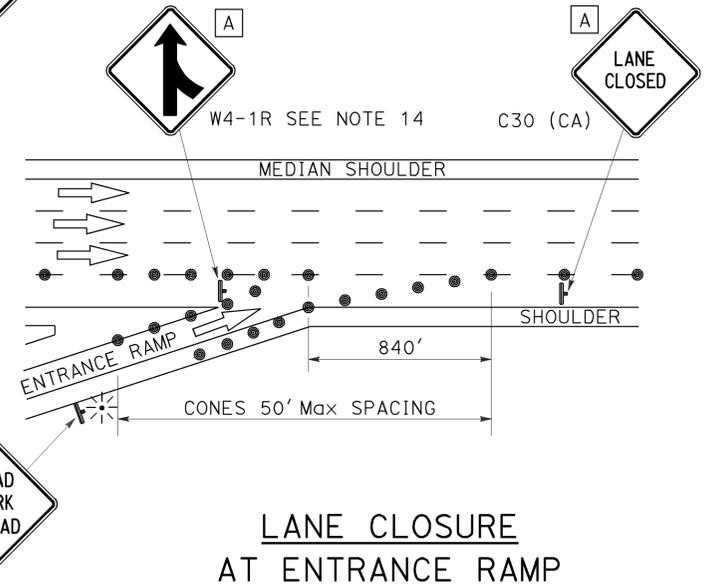
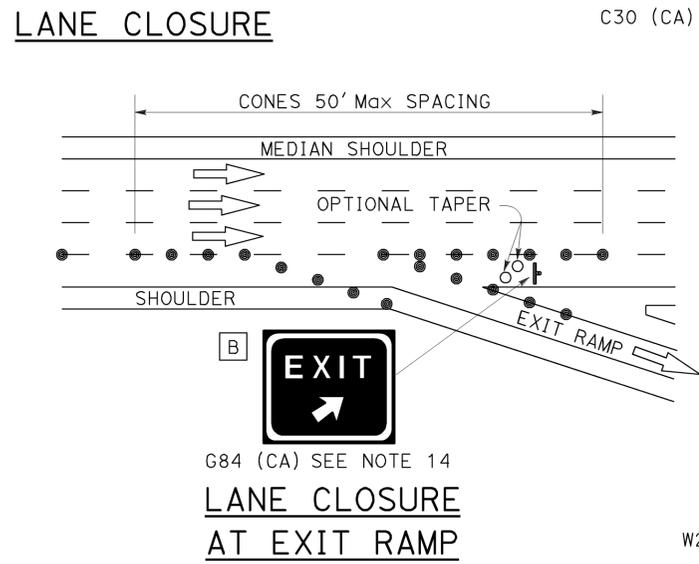
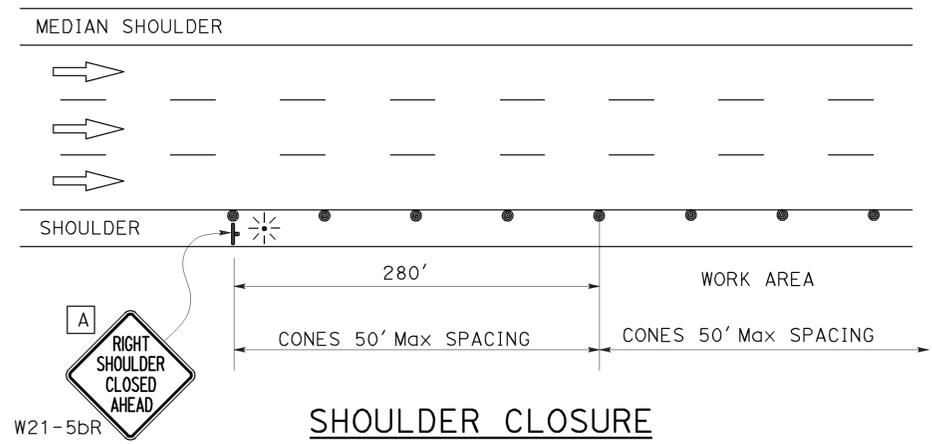
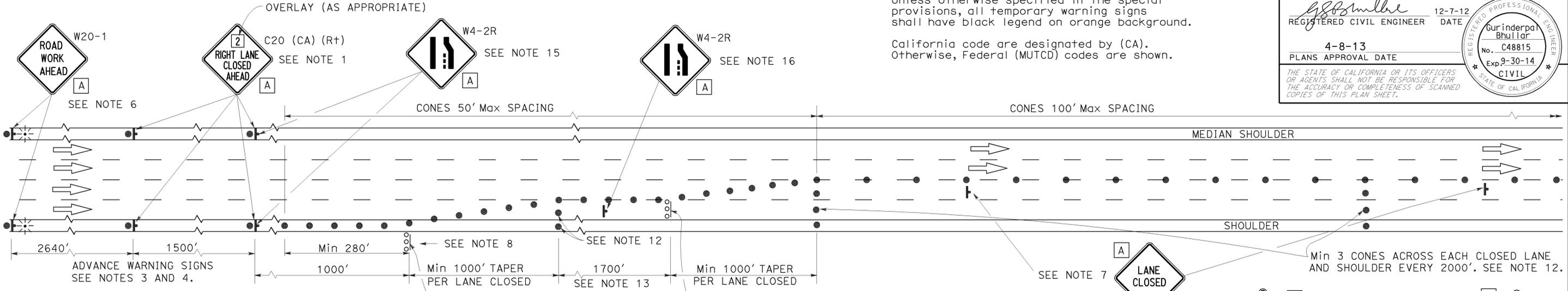
<i>ggsmlbr</i>		12-7-12
REGISTERED CIVIL ENGINEER	DATE	
4-8-13		
PLANS APPROVAL DATE		

Gurinderpal Bhullar	
No. C48815	Exp. 9-30-14
CIVIL	

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

**NOTES:**  
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.  
 California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



- NOTES:**
- Median lane closures shall conform to the details for outside lane closures except that C20 (CA) (Lt) signs shall be used.
  - At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
  - Duplicate sign installations are not required:
    - On opposite shoulder if at least one-half of the available lanes remain open to traffic.
    - In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
  - Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
  - A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
  - If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20 (CA) sign for the first advance warning sign.
  - Place a C30 (CA) sign every 2000' throughout length of lane closure.
  - One flashing arrow sign for each lane closed. The first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
  - A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
  - All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
  - Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
  - Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
  - Unless otherwise specified in the special provisions, the 1700' tangent shown along lane lines shall be used between the 1000' tapers required for each closed traffic lane.
  - Unless otherwise specified in the special provisions, the G84 (CA) and W4-1 signs shall be used as shown.
  - When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.
  - The W4-2 "LANE ENDS" symbol sign shown at this location is to be used where the W4-2 sign is used as advance warning as described in Note 15.

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 54" x 48"

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY SIGN
- ⊛ FLASHING ARROW SIGN (FAS)
- ⊞ FAS SUPPORT OR TRAILER
- ⊛ PORTABLE FLASHING BEACON

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURE ON  
 FREEWAYS AND EXPRESSWAYS**

NO SCALE

**TCS-1**

REVISOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CALCULATED BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 FUNCTIONAL SUPERVISOR: HECTOR OBESO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE ENGINEERING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	23	51

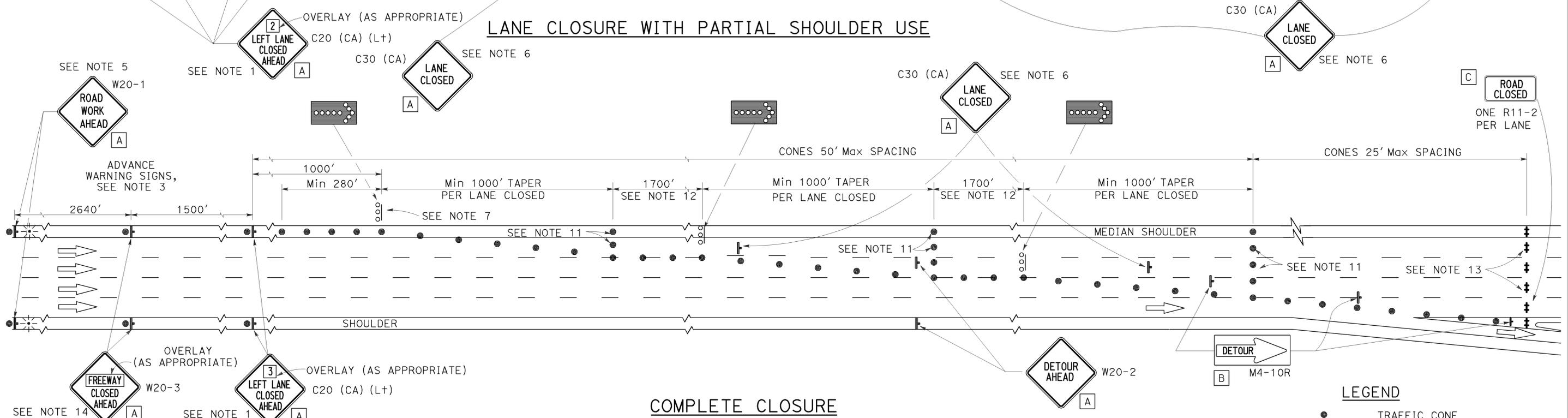
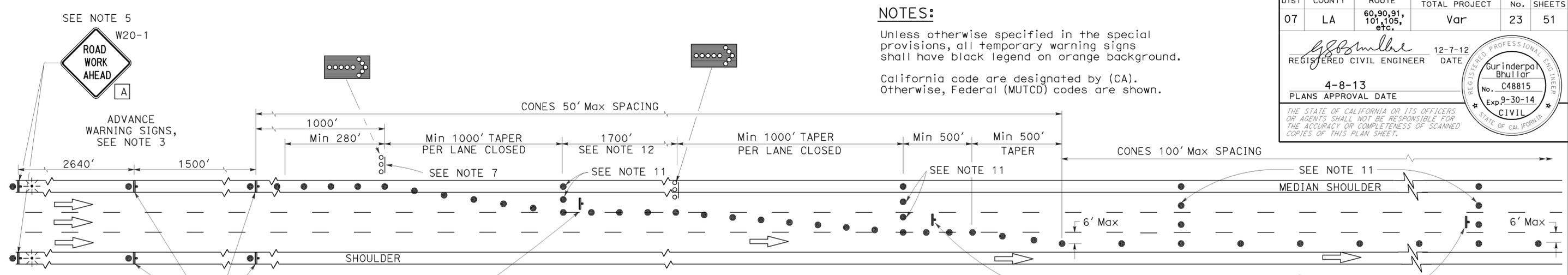
REGISTERED CIVIL ENGINEER		DATE
Gurinderpal Bhullar		12-7-12
No. C48815		
Exp. 9-30-14		
CIVIL		

4-8-13  
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:**  
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.  
 California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



- NOTES:**
- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details for inside lane closure except that C20 (CA) (Rt) signs shall be used.
  - At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
  - Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" X 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
  - A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
  - If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT \_\_\_ MILES", use a C20 (CA) sign for the first advance warning sign.
  - Place a C30 (CA) sign every 2000' throughout length of lane closure.

- One flashing arrow sign for each lane closed. The first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure With Partial Shoulder Use" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- Unless otherwise specified in the special provisions, the 1700' tangent shown along lane lines shall be used between the 1000' tapers required for each closed traffic lane.
- A minimum of Two Type II barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

**SIGN PANEL SIZE (Min)**

A	48" x 48"
B	48" x 18"
C	48" x 30"

**LEGEND**

●	TRAFFIC CONE
⊥	TEMPORARY SIGN
⊕	BARRICADE
⊙	FLASHING ARROW SIGN (FAS)
⊙	FAS SUPPORT OR TRAILER
⊙	PORTABLE FLASHING BEACON

**TRAFFIC CONTROL SYSTEM FOR LANE AND COMPLETE CLOSURES ON FREEWAYS AND EXPRESSWAYS**

NO SCALE

**TCS-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE ENGINEERING  
 HECTOR OBESO  
 REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

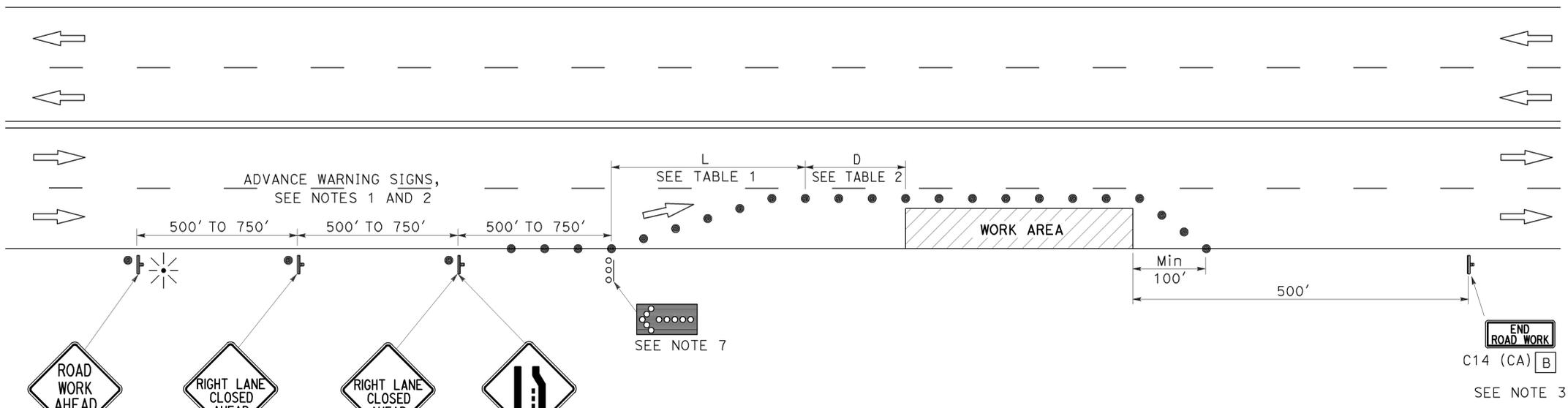
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	24	51

12-7-12  
 REGISTERED CIVIL ENGINEER DATE  
 4-8-13  
 PLANS APPROVAL DATE

Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL

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### TYPICAL LANE CLOSURE



**NOTES:**

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.

California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TABLE 1

APPROACH SPEED	* MINIMUM L	** Max SPACING OF CONES ALONG TAPER
mph	ft	ft
20 AND BELOW	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
Over 50	SEE NOTE 9	
* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.		
** SEE NOTE 8.		

TABLE 2

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
OVER 50	SEE NOTE 9			
* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.				

**LEGEND**

- TRAFFIC CONE
- TEMPORARY SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

- A 36" x 36"
- B 36" x 18"

**NOTES:**

- Where approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
- Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT" MILES", use a C20 (CA) sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Flashing arrow sign shall be either Type I or Type II.
- The maximum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

**TCS-3**

REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.



**LEGEND**

- TRAFFIC CONE
- TEMPORARY SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- PORTABLE FLASHING BEACON

**TABLE 1**

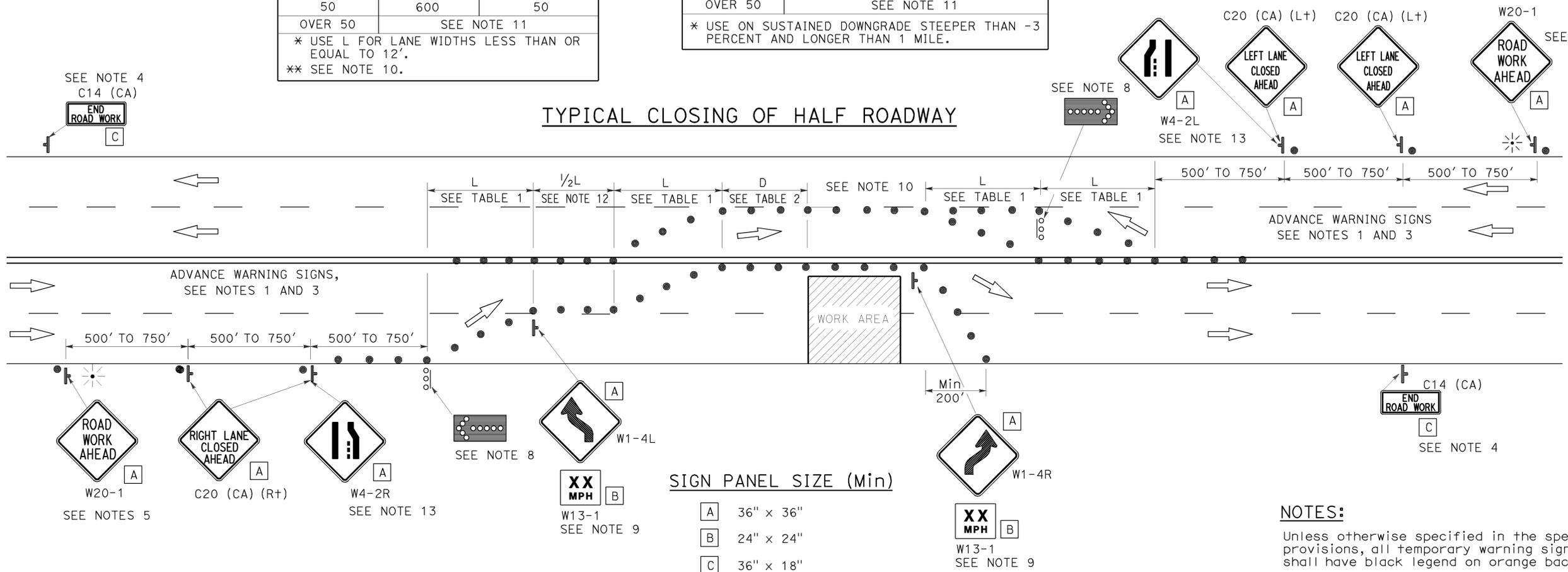
APPROACH SPEED	* MINIMUM L	** Max SPACING OF CONES ALONG TAPER
mph	ft	ft
20 and below	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
OVER 50	SEE NOTE 11	

\* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.  
\*\* SEE NOTE 10.

**TABLE 2**

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
OVER 50	SEE NOTE 11			

\* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.



**SIGN PANEL SIZE (Min)**

- A 36" x 36"
- B 24" x 24"
- C 36" x 18"

**NOTES:**  
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.  
 California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

**NOTES:**

- Where Approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.
- Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT MILES", use a C20 (CA) sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Flashing arrow signs shall be either Type I or Type II.
- Advisory speed will be determined by the Engineer. The W13-1 Sign will not be required when advisory speed is more than the posted or maximum speed limit.
- The maximum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
- For approach speeds over 50 mph, use the "Traffic Control System For Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- Unless otherwise specified in the special provisions, the (1/2 L) shown between the two (L) lane closure tapers shall be used.
- When specified in the special provisions, a W4-2 "Lane Ends" symbol sign is to be used in place of the C20 (CA) "RIGHT (LEFT) LANE CLOSED AHEAD" sign.

**TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS**

NO SCALE

**TCS - 4**

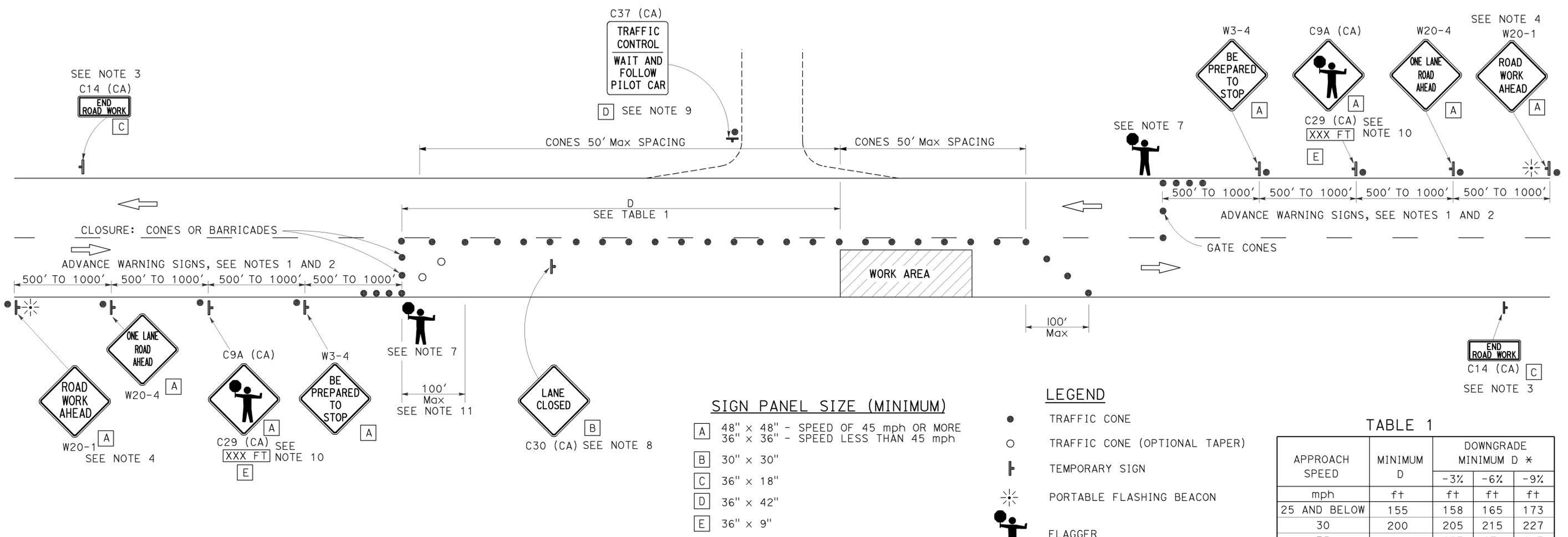
REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

**NOTES:**

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.

California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

**TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL**



**SIGN PANEL SIZE (MINIMUM)**

- A 48" x 48" - SPEED OF 45 mph OR MORE  
36" x 36" - SPEED LESS THAN 45 mph
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 36" x 9"

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- ⊢ TEMPORARY SIGN
- ⚡ PORTABLE FLASHING BEACON
- 👤 FLAGGER

**TABLE 1**

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
25 AND BELOW	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785

\* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

**NOTES:**

- Where approach speeds are low, advance warning signs may be placed at 300' spacing, and closer in urban areas.
- Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT \_\_\_\_\_ MILES", use a W20-4 sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
- Place C30 (CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign at all intersections within traffic control area. Signs shall be clean and visible at all times.
- An optional C29 (CA) sign may be placed below the C9A (CA) sign.
- Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be Type I, II, or III.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM  
FOR LANE CLOSURE ON  
TWO LANE CONVENTIONAL  
HIGHWAYS**

NO SCALE

**TCS-5**

REVISOR: [ ] DATE: [ ]

DESIGNED BY: [ ] CHECKED BY: [ ]

FUNCTIONAL SUPERVISOR: HECTOR OBESO

DEPARTMENT OF TRANSPORTATION - MAINTENANCE ENGINEERING

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 30" x 30"
- D 48" x 48" - SPEED OF 50 mph OR MORE  
36" x 36" - SPEED LESS THAN 50 mph
- E 48" x 36"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	27	51

REGISTERED CIVIL ENGINEER  
 12-7-12 DATE  
 4-8-13  
 PLANS APPROVAL DATE

Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL

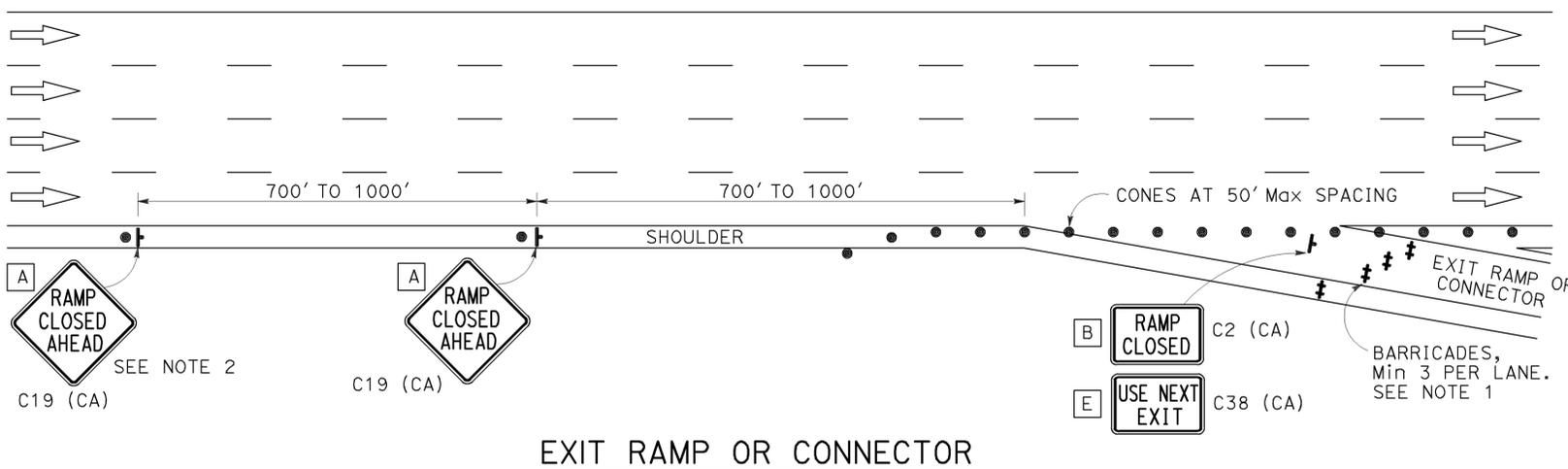
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

## LEGEND

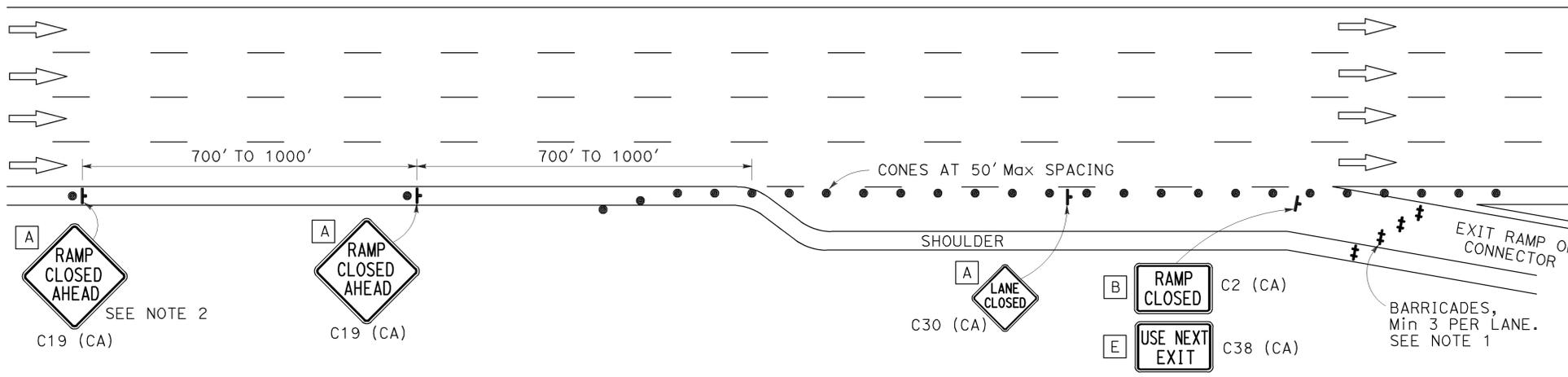
- TRAFFIC CONE
- † TEMPORARY SIGN
- ‡ BARRICADES

## NOTES:

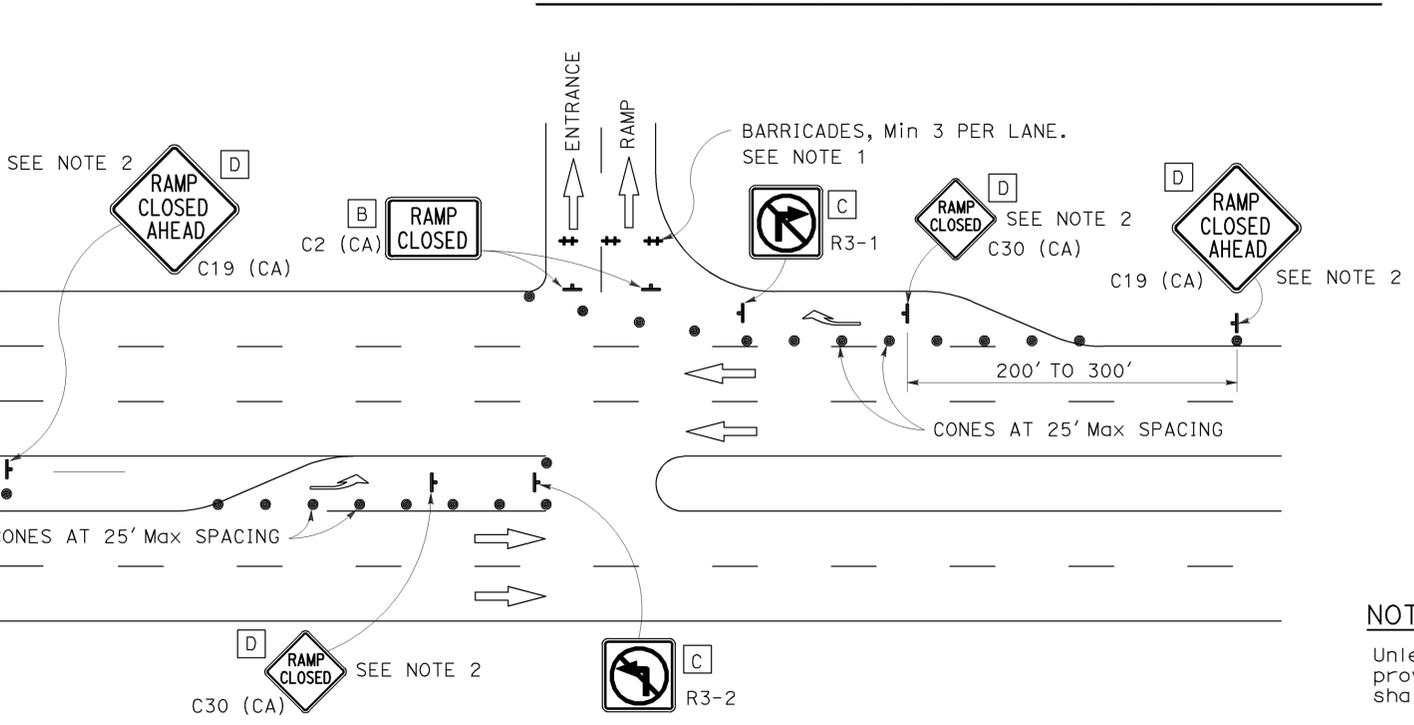
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19 (CA) "RAMP CLOSED AHEAD" and C30 (CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



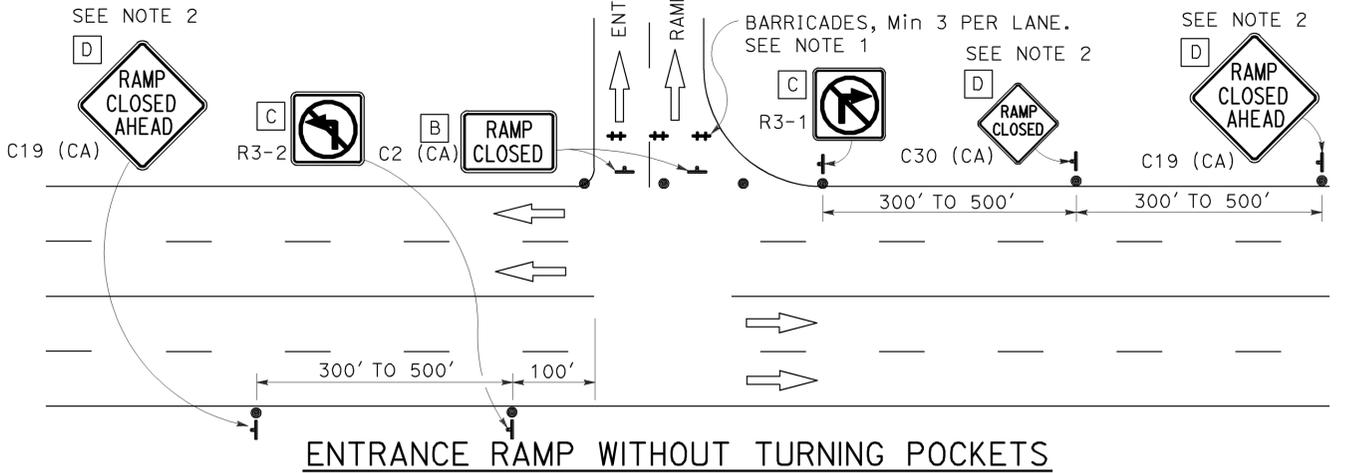
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.
- California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

# TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

TCS-6

REVISOR BY  
DATE

CALCULATED BY  
DESIGNED BY  
CHECKED BY

FUNCTIONAL SUPERVISOR  
HECTOR OBESO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
MAINTENANCE ENGINEERING

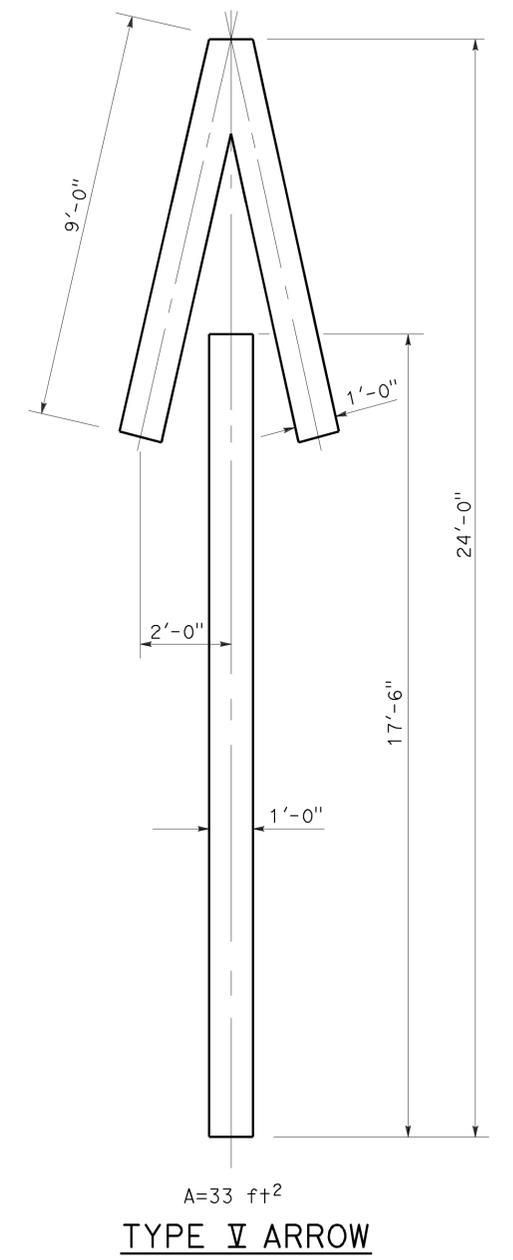
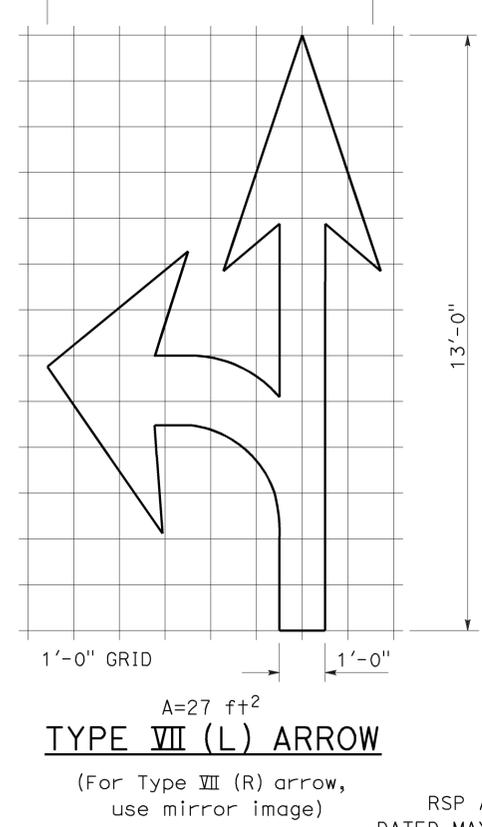
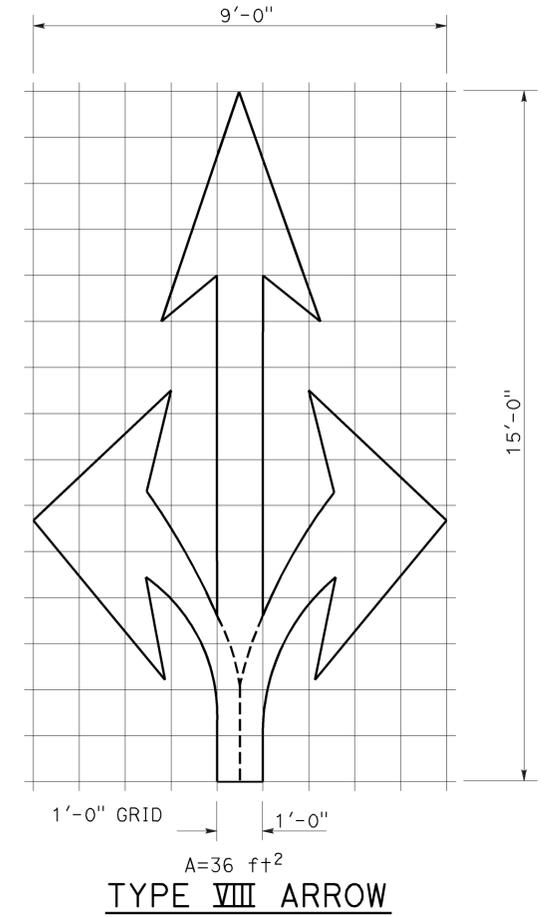
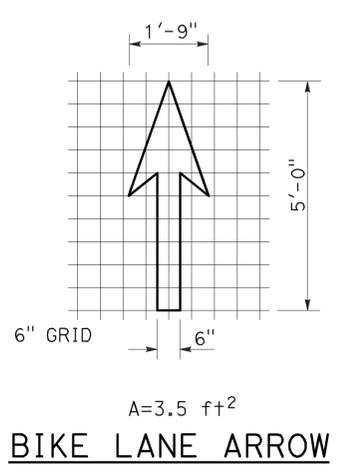
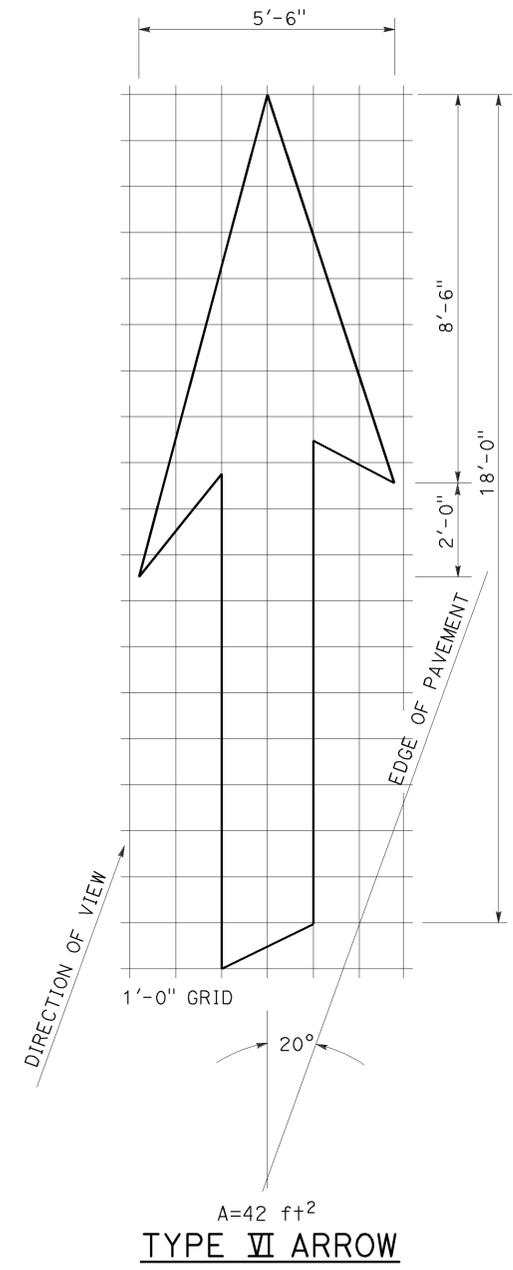
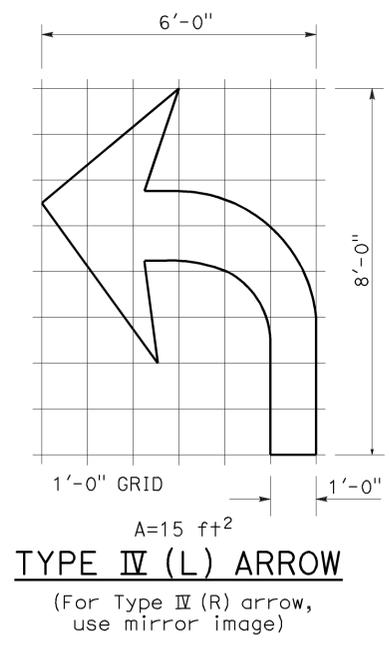
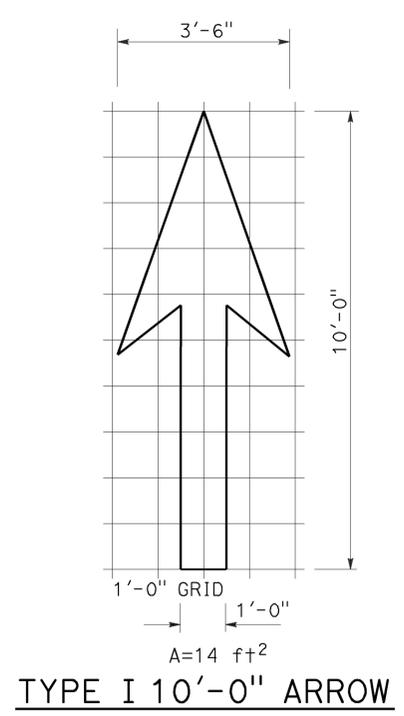
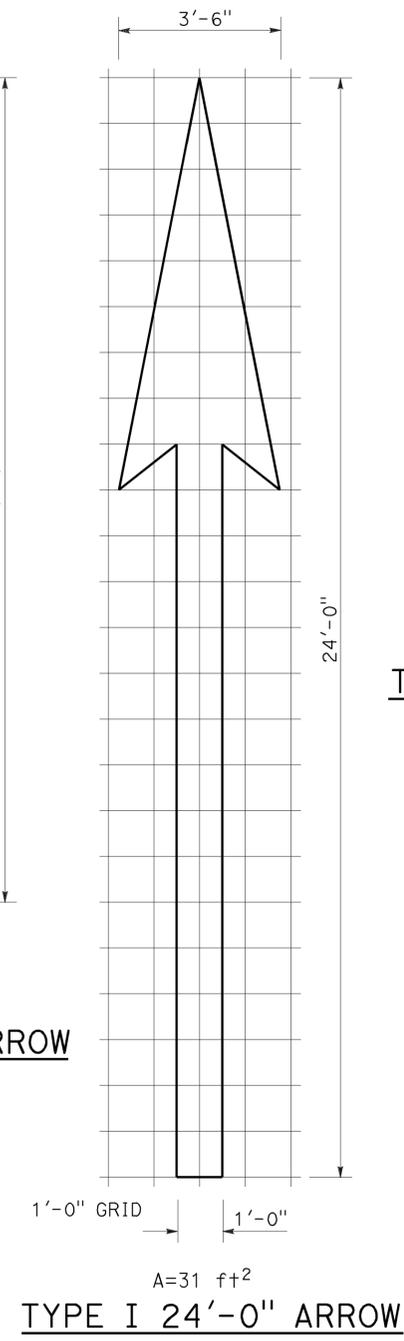
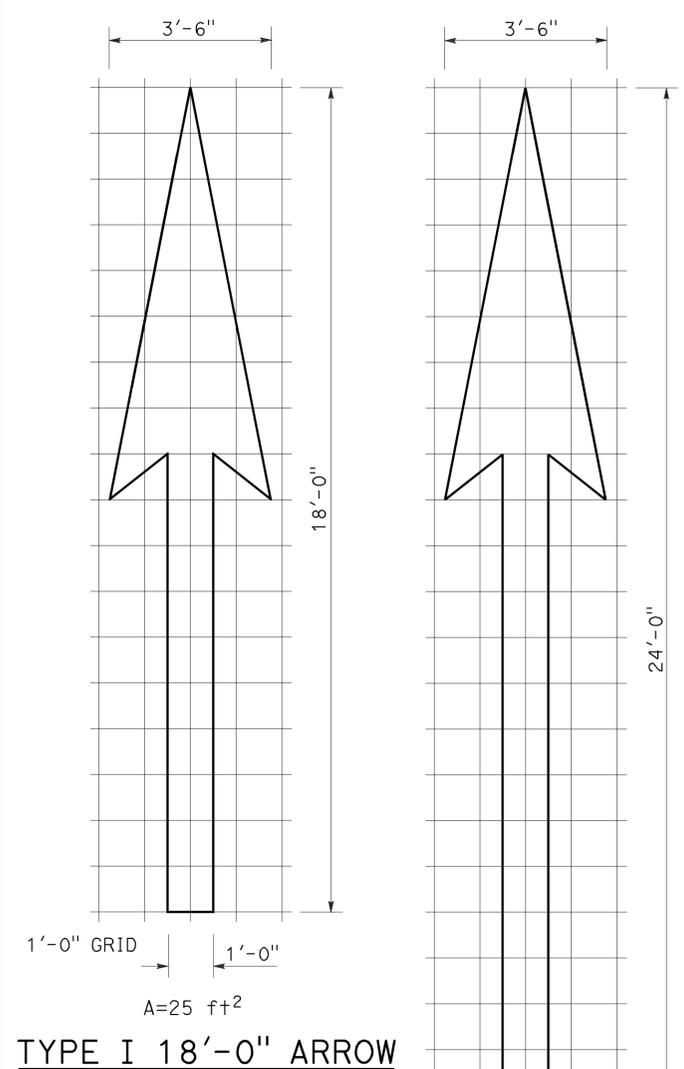
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	28	51

Registered Professional Engineer  
 Roberta L. McLaughlin  
 No. C40375  
 Exp. 3-31-13  
 CIVIL  
 STATE OF CALIFORNIA

April 20, 2012  
 PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 4-8-13



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

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

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

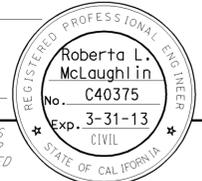
**REVISED STANDARD PLAN RSP A24A**

2010 REVISED STANDARD PLAN RSP A24A

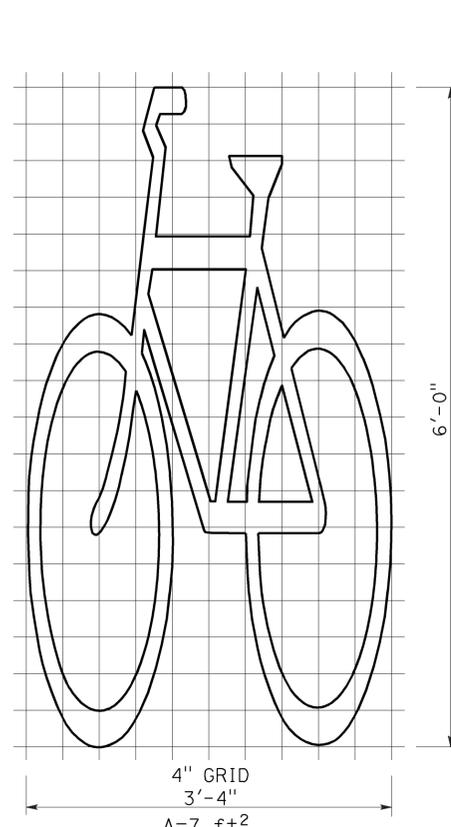
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	29	51

October 19, 2012  
 PLANS APPROVAL DATE

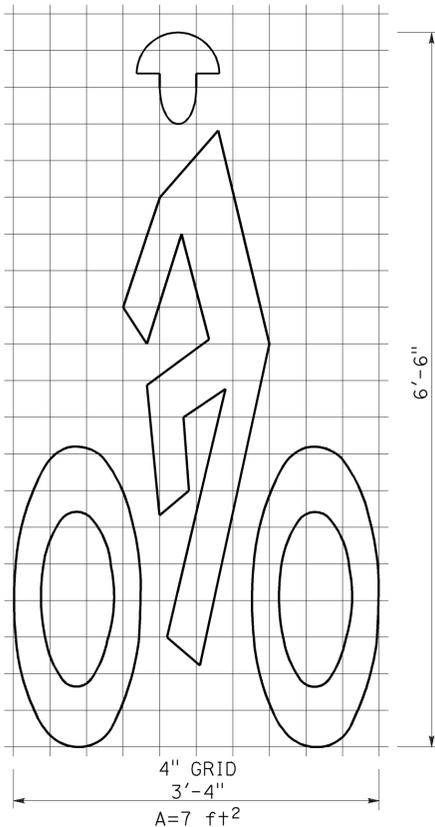
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



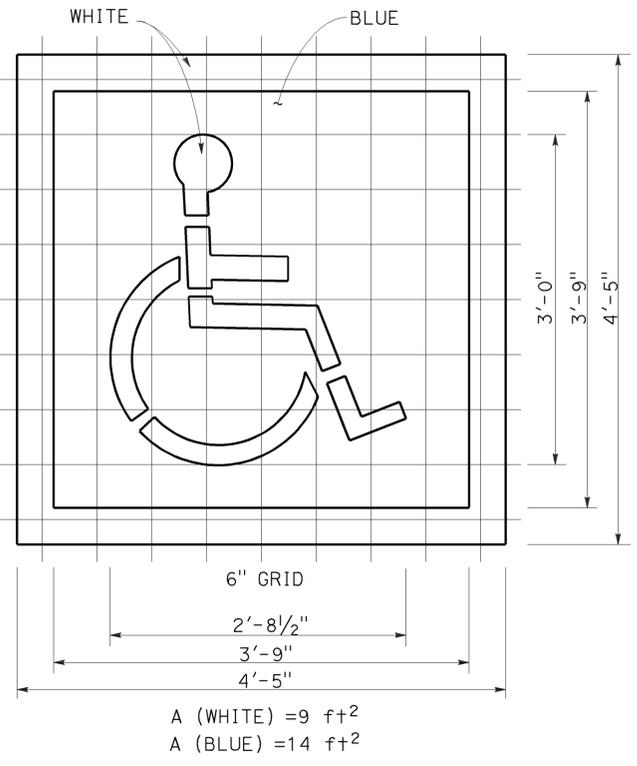
**NOTE:** TO ACCOMPANY PLANS DATED 4-8-13  
 Minor variations in dimensions may be accepted by the Engineer.



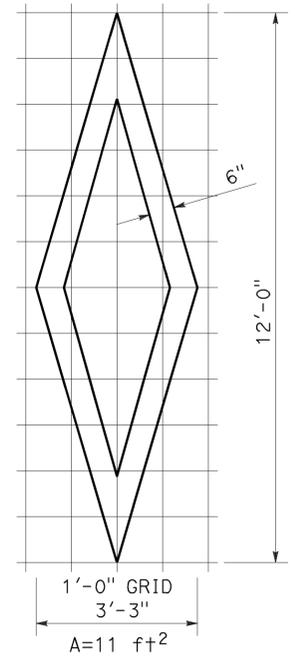
**BIKE LANE SYMBOL WITHOUT PERSON**



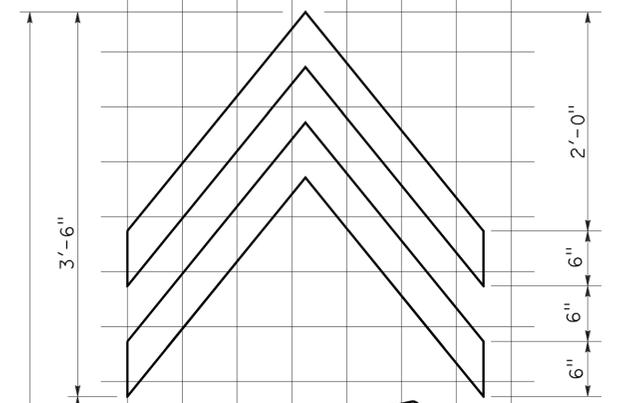
**BIKE LANE SYMBOL WITH PERSON**



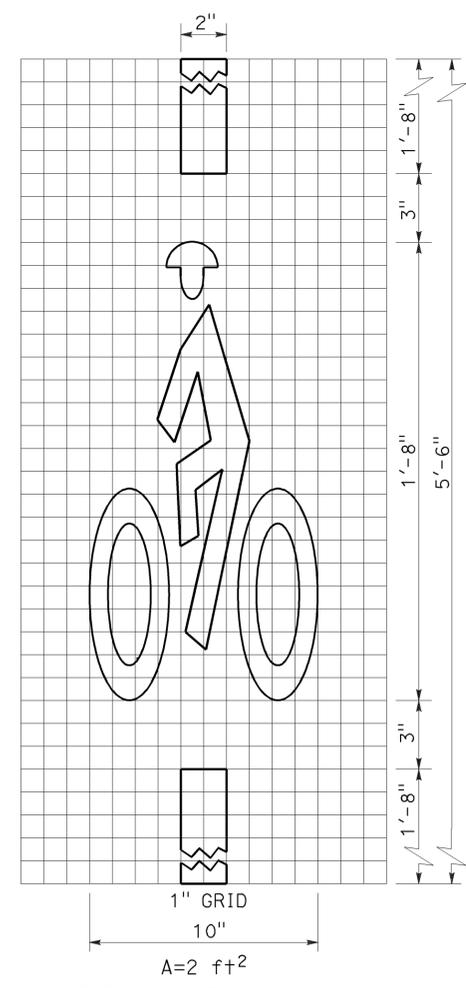
**INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING**



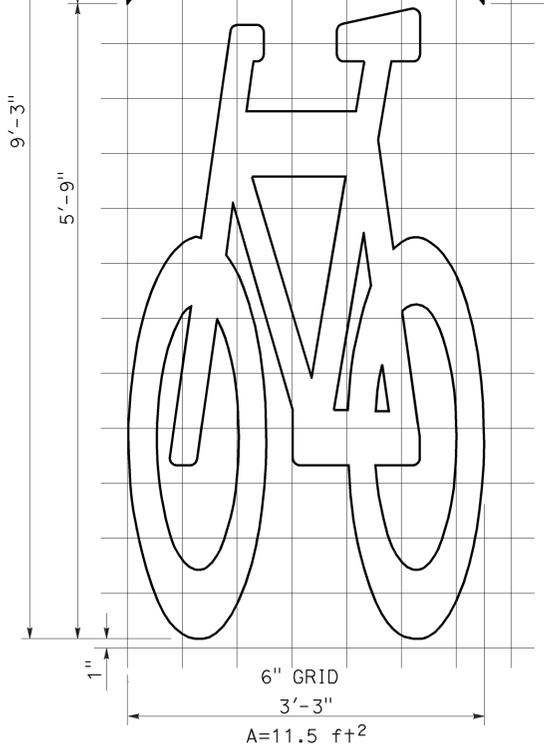
**DIAMOND SYMBOL**



**SHARED ROADWAY BICYCLE MARKING**

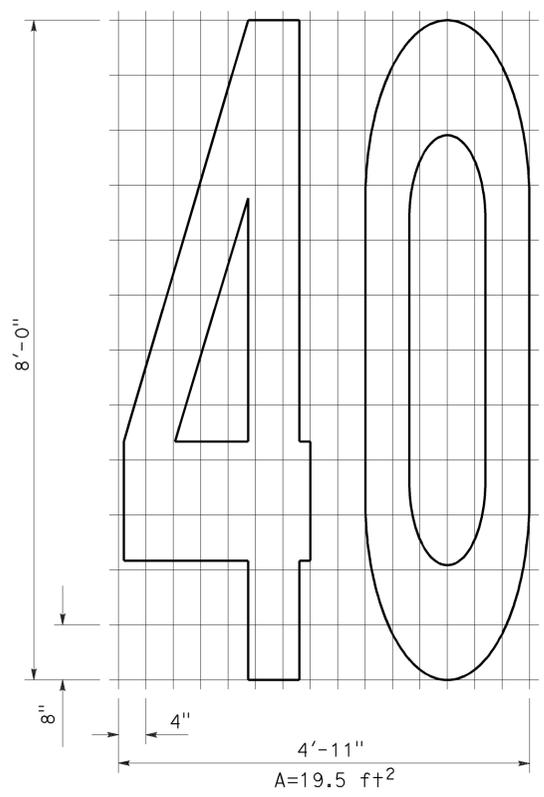
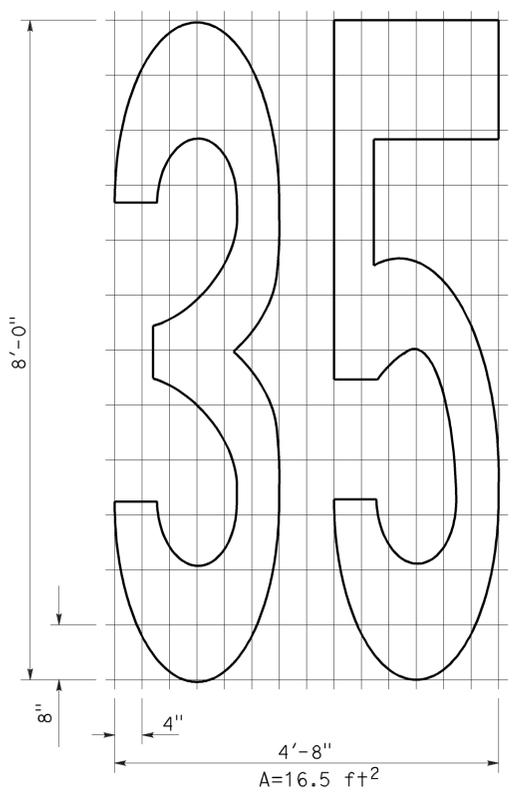
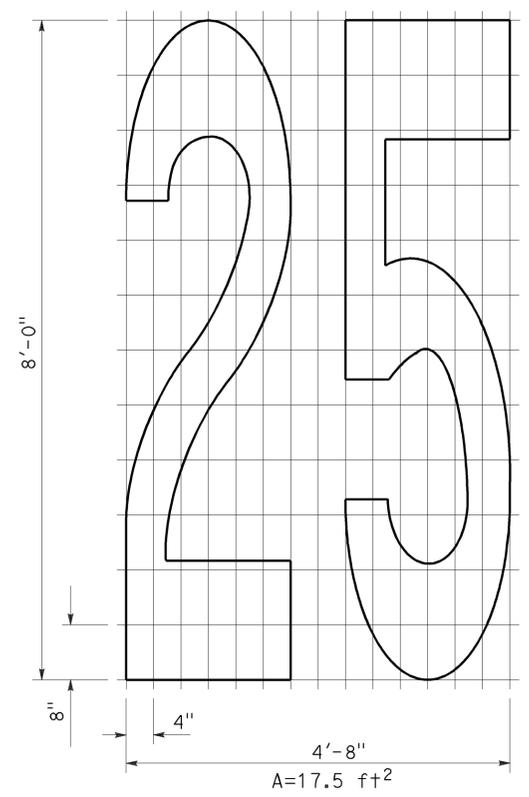


**BICYCLE LOOP DETECTOR SYMBOL**



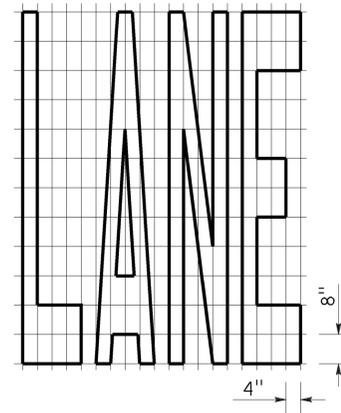
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS SYMBOLS AND NUMERALS**  
 NO SCALE

RSP A24C DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A24C DATED MAY 20, 2011 - PAGE 15 OF THE STANDARD PLANS BOOK DATED 2010.

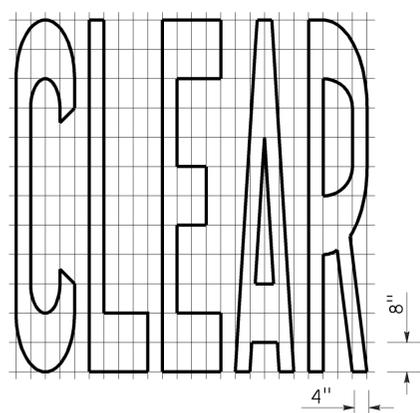


**NUMERALS**

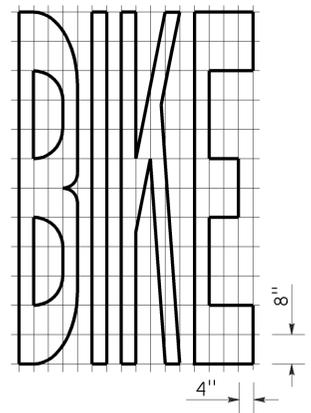
TO ACCOMPANY PLANS DATED 4-8-13



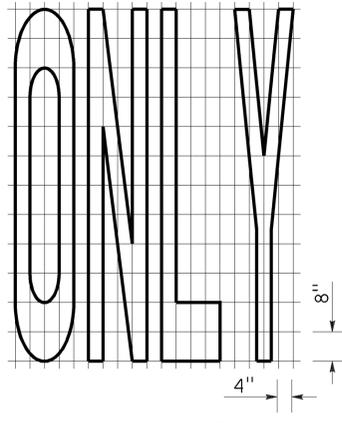
A=24 ft<sup>2</sup>



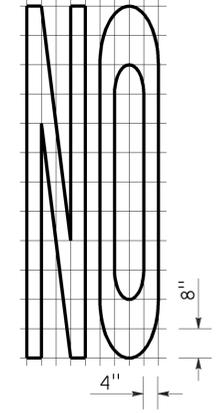
A=27 ft<sup>2</sup>



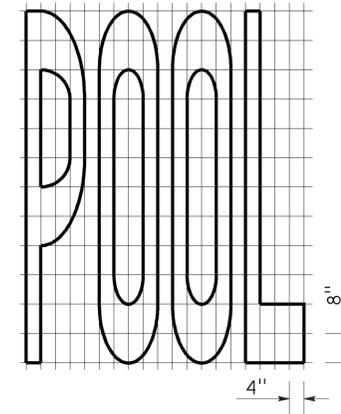
A=21 ft<sup>2</sup>



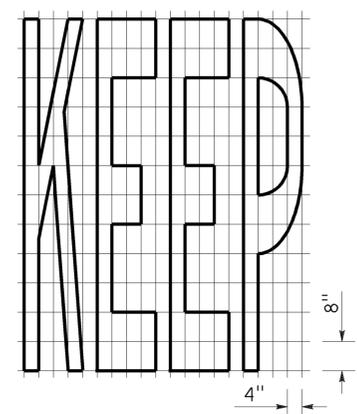
A=22 ft<sup>2</sup>



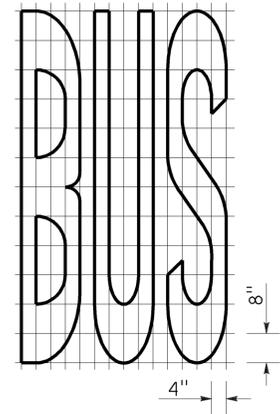
A=14 ft<sup>2</sup>



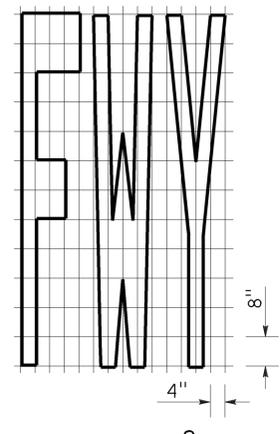
A=23 ft<sup>2</sup>



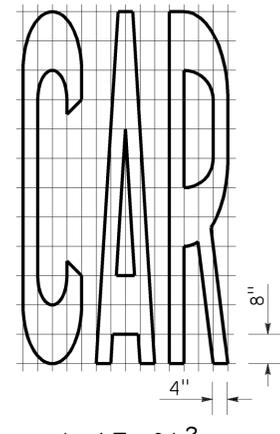
A=24 ft<sup>2</sup>



A=20 ft<sup>2</sup>

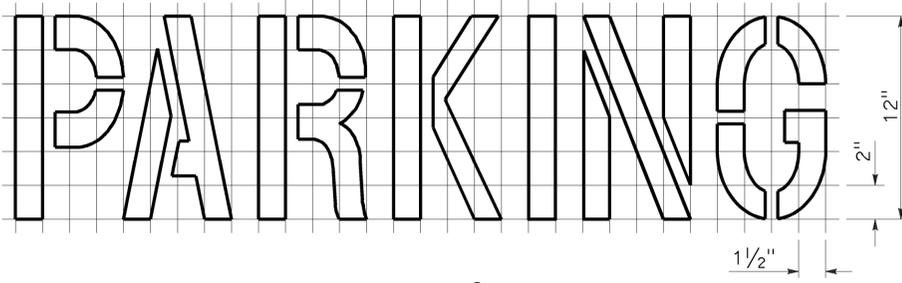
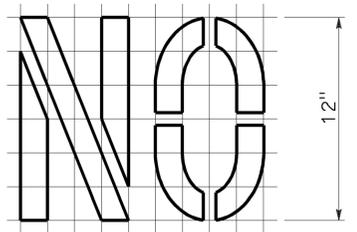


A=16 ft<sup>2</sup>

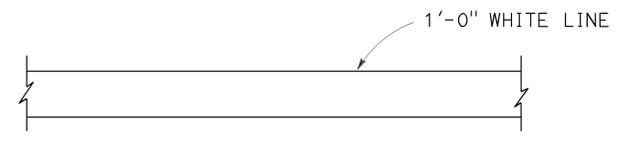


A=17 ft<sup>2</sup>

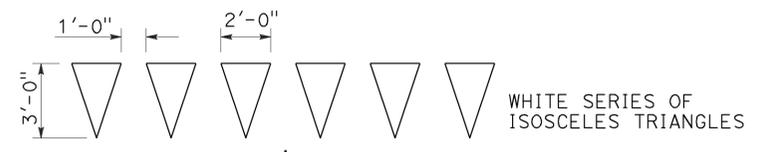
WORD MARKINGS			
ITEM	ft <sup>2</sup>	ITEM	ft <sup>2</sup>
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft<sup>2</sup>  
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

**NOTES:**

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKINGS  
WORDS, LIMIT AND YIELD LINES**

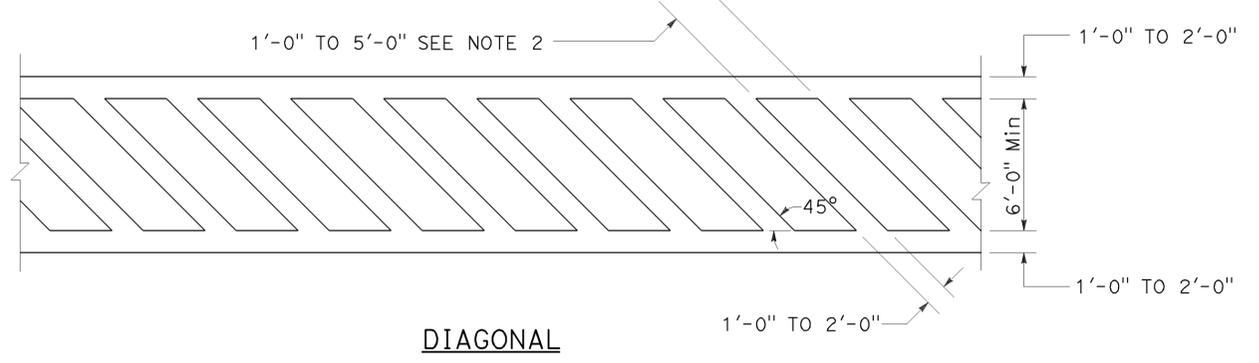
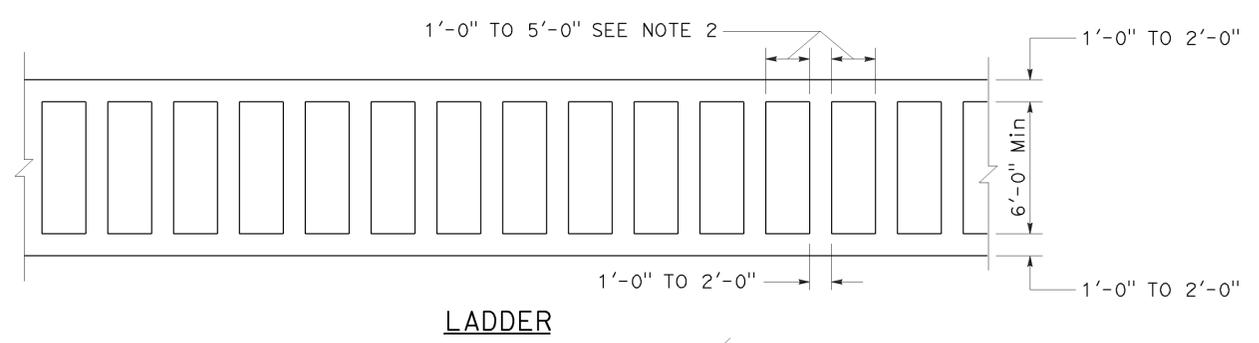
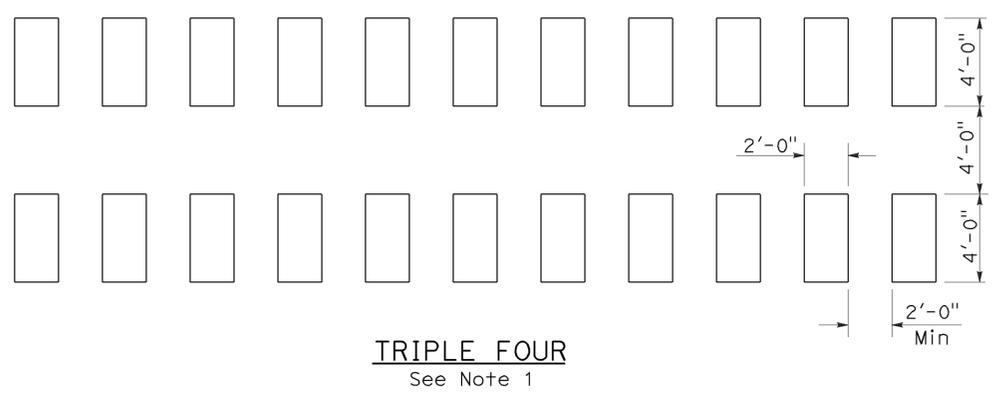
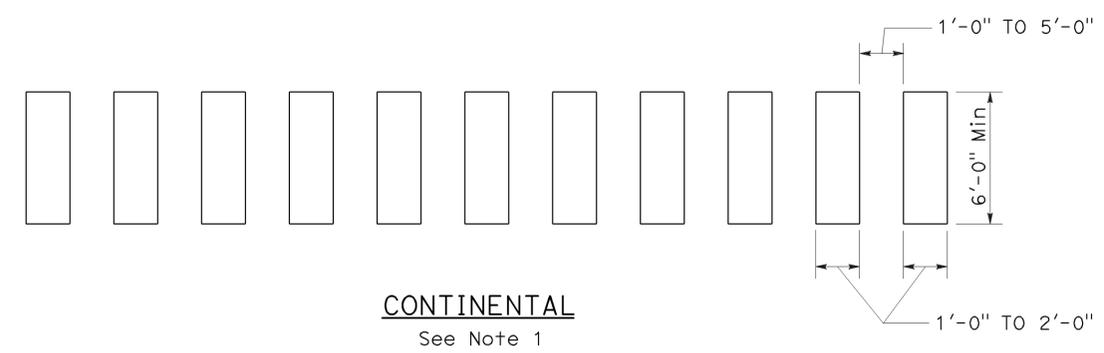
NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E  
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60,90,91, 101,105, etc.	Var	31	51

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

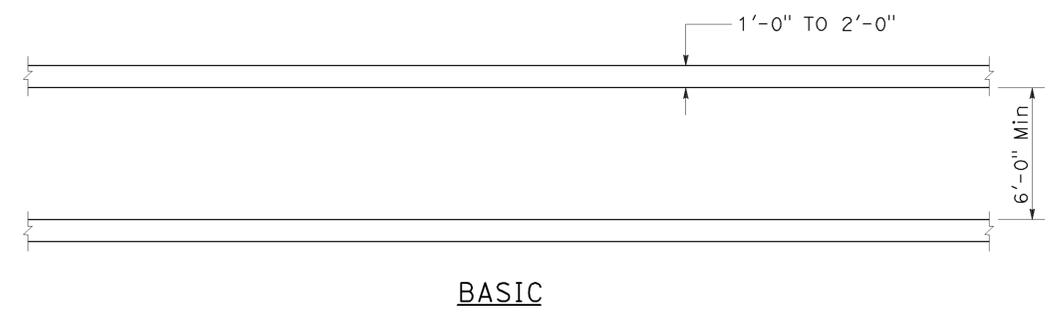
TO ACCOMPANY PLANS DATED 4-8-13



**HIGHER VISIBILITY CROSSWALKS**

**NOTES:**

1. Spaces between markings should be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except for those near schools must be yellow.



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

RSP A24F DATED JULY 20, 2012 SUPPLEMENTS THE  
 STANDARD PLANS BOOK DATED 2010.

**2010 REVISED STANDARD PLAN RSP A24F**

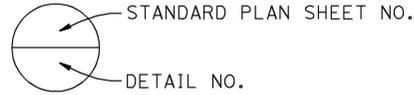
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	32	51
 REGISTERED CIVIL ENGINEER DATE 12-06-12					
4-8-13 PLANS APPROVAL DATE					
<i>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</i>					

**LEGEND:**

- Indicates existing.
- ⇒ Indicates direction of traffic.
-  Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck surface with high molecular weight methacrylate.
- Indicates location of clean expansion joint, and placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).

**STANDARD PLANS DATED MAY 2010**

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)
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")



**NOTES:**

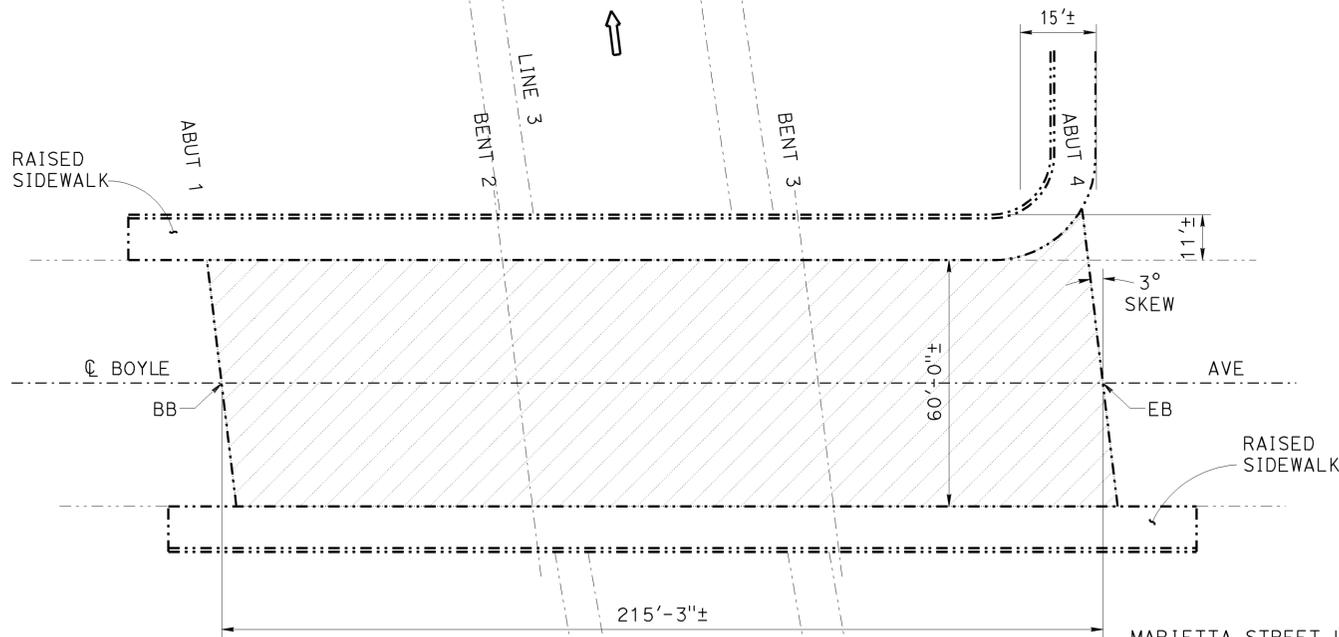
- For clean expansion joint and joint details, see "MISCELLANEOUS DETAILS NO. 1" sheet.
- For deck damage repair detail and spall repair detail, see "MISCELLANEOUS DETAILS NO. 2" sheet.

**INDEX TO PLANS**

SHEET NO.	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	GENERAL PLAN NO. 3
4	GENERAL PLAN NO. 4
5	GENERAL PLAN NO. 5
6	GENERAL PLAN NO. 6
7	GENERAL PLAN NO. 7
8	GENERAL PLAN NO. 8
9	GENERAL PLAN NO. 9
10	GENERAL PLAN NO. 10
11	GENERAL PLAN NO. 11
12	GENERAL PLAN NO. 12
13	GENERAL PLAN NO. 13
14	GENERAL PLAN NO. 14
15	GENERAL PLAN NO. 15
16	GENERAL PLAN NO. 16
17	MISCELLANEOUS DETAILS NO. 1
18	MISCELLANEOUS DETAILS NO. 2
19	MISCELLANEOUS DETAILS NO. 3
20	STRUCTURE APPROACH TYPE R(30D)
21	SOFFIT ACCESS OPENINGS
22	STEEL COLMUN CASING DETAILS

BOYLE AVENUE OC #53-1396L  
QUANTITIES

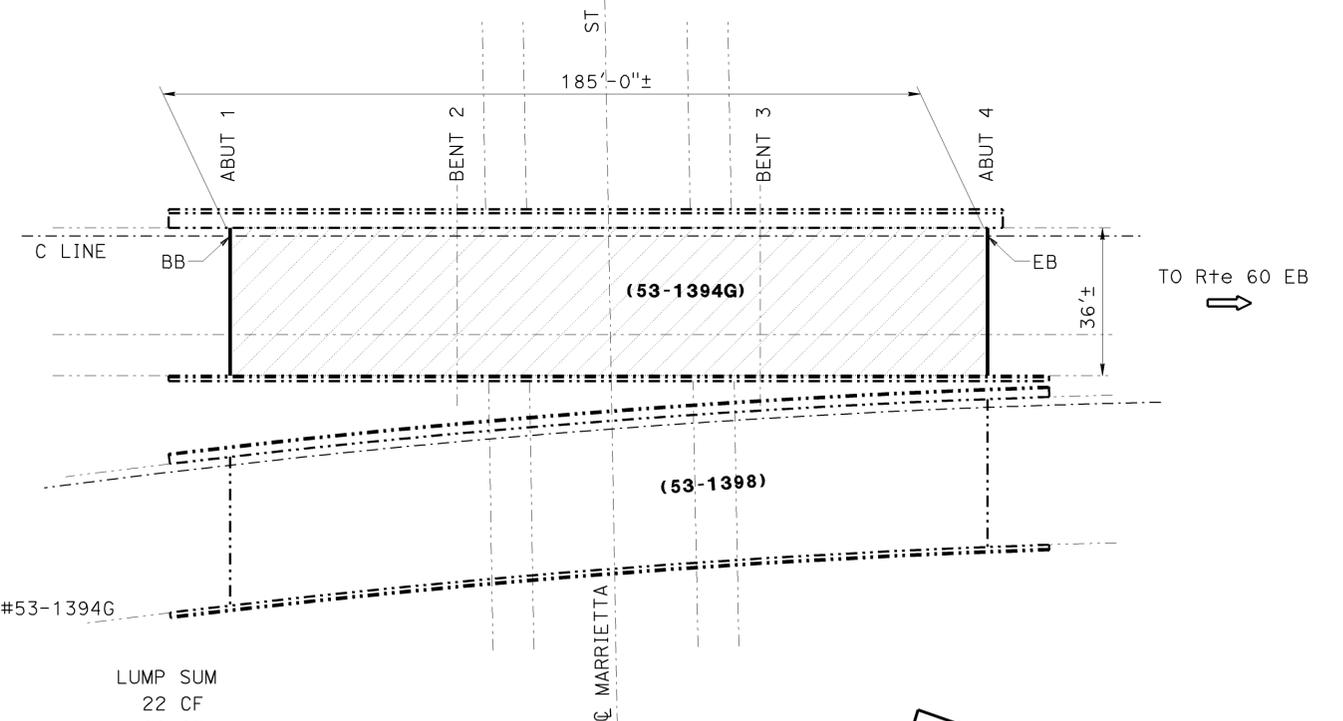
PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	13,000 SQFT
TREAT BRIDGE DECK	13,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	165 GAL



**BOYLE AVENUE OC**  
Br No. 53-1396L, Rte 60, PM 0.28  
SCALE 1"=20'

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	22 CF
REMOVE UNSOUND CONCRETE	22 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	6,700 SQFT
TREAT BRIDGE DECK	6,700 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	85 GAL
CLEAN EXPANSION JOINT	72 LF
JOINT SEAL (MR 1")	72 LF



**MARIETTA STREET UC (E60-S5)**  
Br No. 53-1394G, Rte 60, PM R.69  
SCALE 1"=20'

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

**TONY D. BRAKE**  
DESIGN ENGINEER

DESIGN	BY	CHECKED	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DESIGN	Gerald Joo	Tony Brake		
DETAILS	Clayton Tom	Gerald Joo	LAYOUT	Clayton Tom
QUANTITIES	Gerald Joo	Tony Brake	SPECIFICATIONS	X

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.
Various
POST MILE
Varies

**ROUTES 60,90,91,101,110,405 BRIDGES**  
**GENERAL PLAN NO. 1**

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3489  
PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
05-08-12 05-15-12 11-20-12 12-06-12	01	22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	33	51
 REGISTERED CIVIL ENGINEER DATE 12-06-12					
PLANS APPROVAL DATE 4-8-13					
No. C65380 Exp. 09/30/13 CIVIL					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

**LEGEND:**

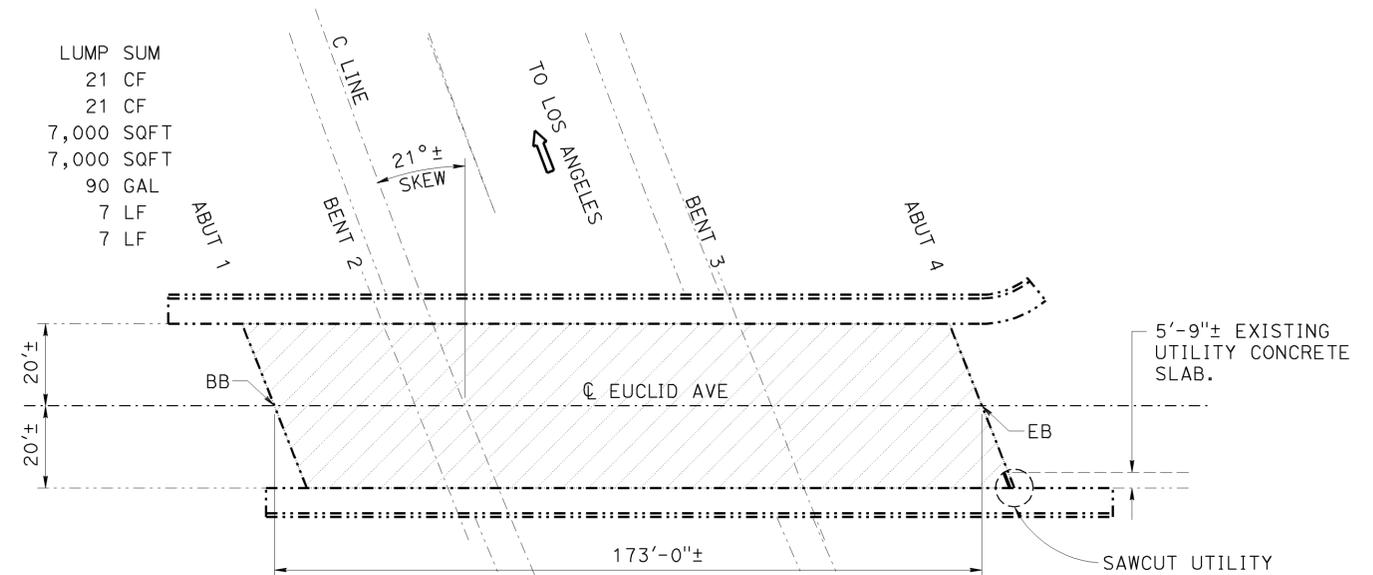
-  Indicates existing.
-  Indicates direction of traffic.
-  Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck surface with high molecular weight methacrylate.
-  Indicates limits of remove existing approach and place new Structure Approach Type R(30D). For details see "STRUCTURE APPROACH TYPE R(30D)" sheet.
-  Indicates location of clean expansion joint and placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).
-  Indicates location of install new joint seal and paving notch extension.

**NOTES:**

1. For approach slab details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.
2. For deck damage repair detail and spall repair detail, see "MISCELLANEOUS DETAILS NO. 2" sheet.

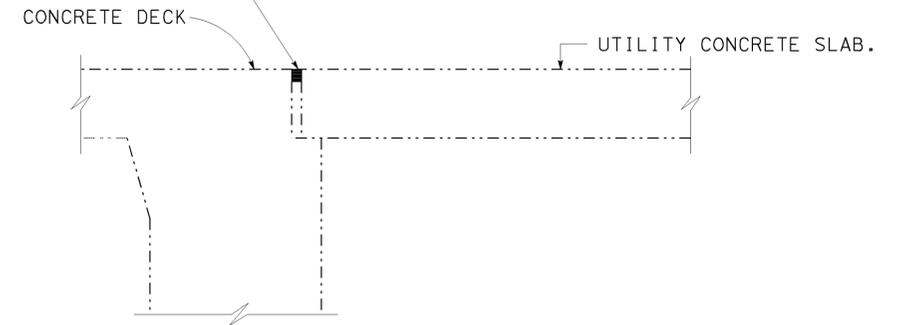
EUCLID AVENUE OC #53-0070L  
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	21 CF
REMOVE UNSOUND CONCRETE	21 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	7,000 SQFT
TREAT BRIDGE DECK	7,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	90 GAL
CLEAN EXPANSION JOINT	7 LF
JOINT SEAL (MR 1")	7 LF

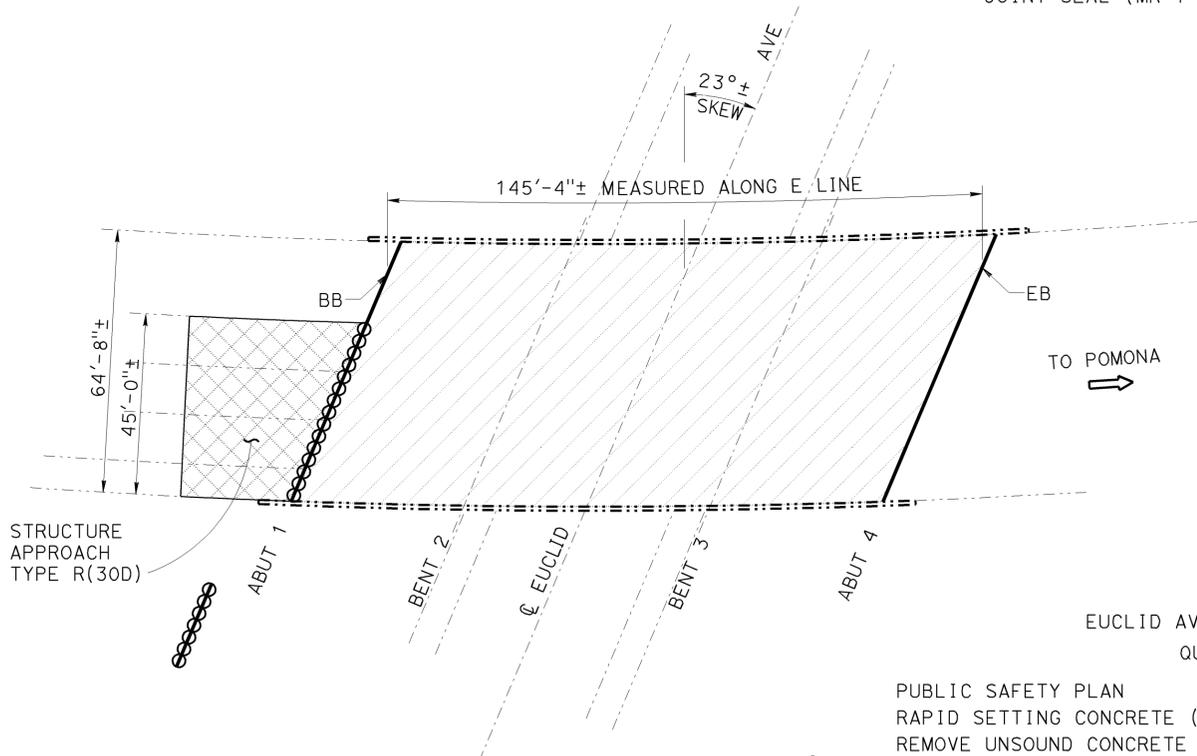


**EUCLID AVENUE OC**  
Br No. 53-0070L, Rte 60, PM R0.97  
SCALE 1"=20'

SAW CUT UTILITY CONCRETE SLAB, DEPTH = 1" AND PLACE NEW JOINT SEAL (MR=1/2").



**ABUTMENT DETAIL**  
SCALE: NONE



**EUCLID AVENUE UC**  
Br No. 53-0069R, Rte 60, PM R0.94  
SCALE 1"=20'

EUCLID AVENUE UC #53-0069R  
QUANTITIES

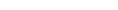
PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	27 CF
REMOVE UNSOUND CONCRETE	27 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	9,400 SQFT
TREAT BRIDGE DECK	9,400 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	120 GAL
AGGREGATE BASE (APPROACH SLAB)	9 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	84 CY
PAVING NOTCH EXTENSION	54 CF
CLEAN EXPANSION JOINT	140 LF
JOINT SEAL (MR 1")	140 LF

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>GENERAL PLAN NO. 2</b>		
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom		POST MILE			
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson		VARIES			
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3489 PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 05-08-12 05-18-12 11-20-12 12-06-12	SHEET 02 OF 20

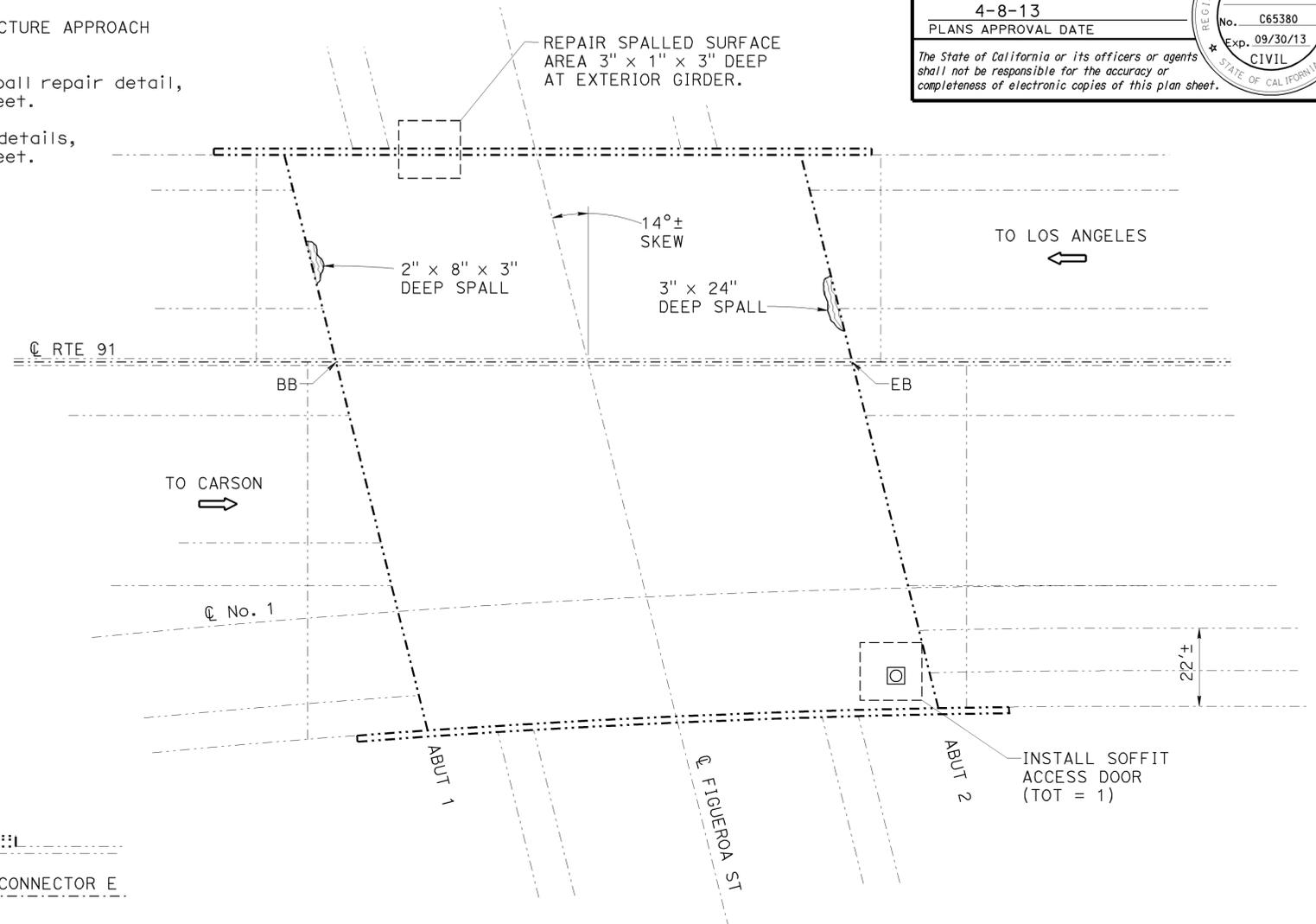
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	34	51
 REGISTERED CIVIL ENGINEER DATE 12-06-12					
PLANS APPROVAL DATE 4-8-13					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

**LEGEND:**

-  Indicates existing.
-  Indicates direction of traffic.
-  Indicates limits of prepare concrete deck surface and treat existing bridge deck surface with high molecular weight methacrylate.
-  Indicates location of existing joint seal removal placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).
-  Indicates location of install soffit access door at existing 2'-6"± diameter soffit opening. See "SOFFIT ACCESS DOOR" sheet.
-  Indicates removal of unsound concrete and place rapid setting concrete patch.

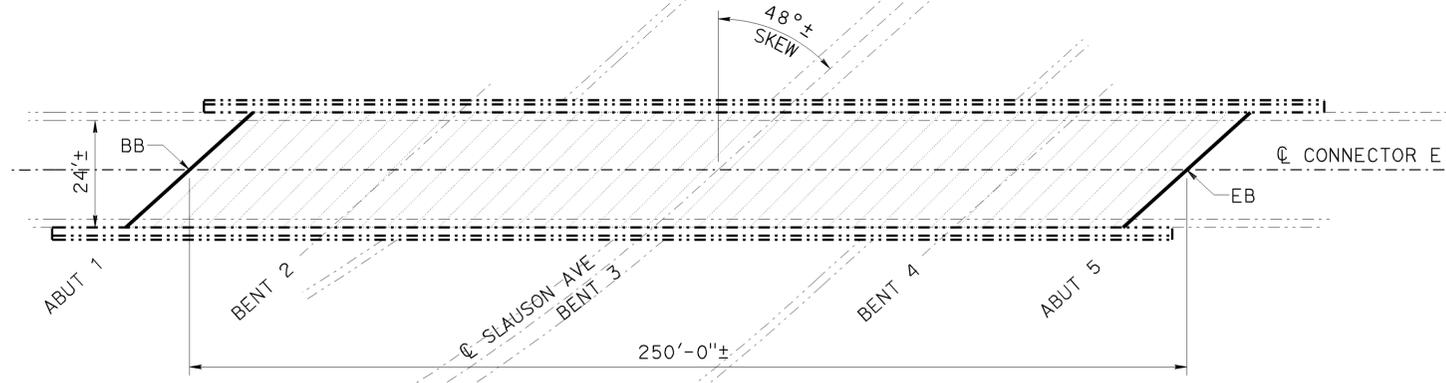
**NOTES:**

1. For approach slab details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.
2. For deck damage repair detail and spall repair detail, see "MISCELLANEOUS DETAILS NO. 2" sheet.
3. For clean expansion joint and joint details, see "MISCELLANEOUS DETAILS NO. 1" sheet.



W90-N405 CONNECTOR OC (SLAUSON) #53-1401F  
QUANTITIES

	LUMP SUM
PUBLIC SAFETY PLAN	
RAPID SETTING CONCRETE (PATCH)	17 CF
REMOVE UNSOUND CONCRETE	17 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	6,000 SQFT
TREAT BRIDGE DECK	6,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	75 GAL
CLEAN EXPANSION JOINT	72 LF
JOINT SEAL (MR 1 1/2")	72 LF



**W90-N405 CONNECTOR OC (SLAUSON)**  
Br No. 53-1401F, Rte 90, PM 2.62  
SCALE 1"=20'

**FIGUEROA STREET UC**  
Br No. 53-2551, Rte 91, PM R6.52  
SCALE 1"=20'

FIGUEROA STREET UC #53-2551  
QUANTITIES

RAPID SETTING CONCRETE (PATCH)	1 CF
REPAIR SPALLED SURFACE AREA	3 SQFT
REMOVE UNSOUND CONCRETE	1 CF
INSTALL SOFFIT ACCESS DOOR	1 EA

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

 DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>GENERAL PLAN NO. 3</b>				
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom		CHECKED Gerald Joo		POST MILE			
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson		CHECKED Kevin Ellingson		Varies			
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3489 PROJECT NUMBER & PHASE: 0700021229 1	CONTRACT NO.: 07-1W2904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 03	OF 20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	35	51

12-06-12  
 REGISTERED CIVIL ENGINEER DATE  
 4-8-13  
 PLANS APPROVAL DATE  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 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.

**LEGEND:**

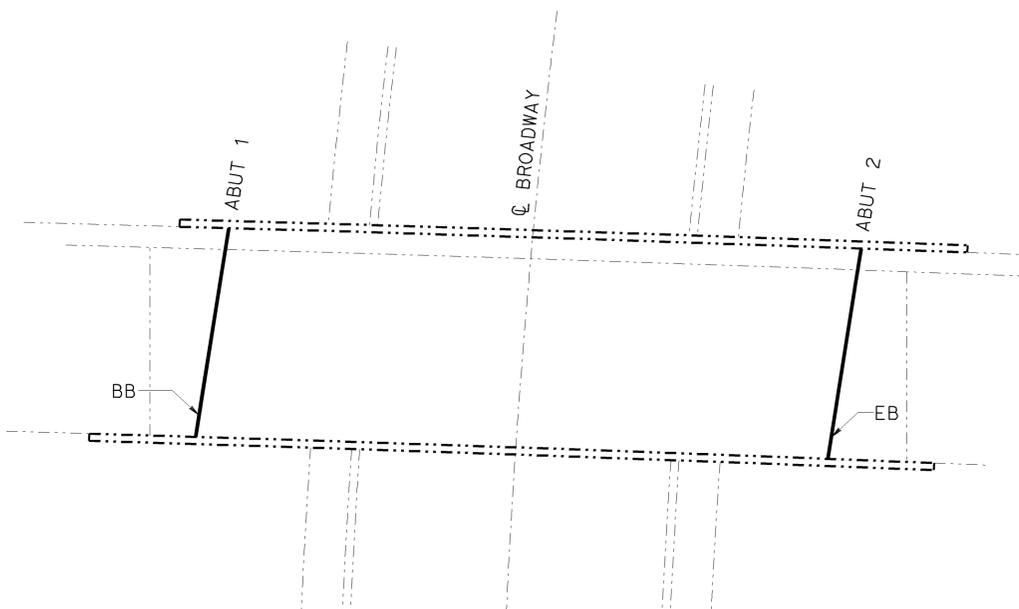
- Indicates existing.
- ⇒ Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface, furnish and place new 3/4" thick min polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. Polyester concrete shall be placed in one lift. Survey grades of the existing bridge deck surface shall be provided prior to placing the polyester concrete overlay.

Indicates location of clean expansion joint and placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).

**NOTE:**

- For clean expansion joint and joint details, see "MISCELLANEOUS DETAILS NO. 1" sheet.



**W91-N110 CONNECTOR (BROADWAY)**

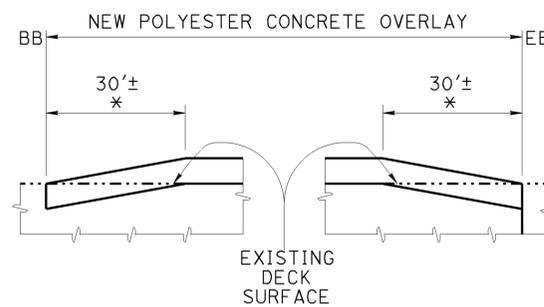
Br No. 53-2663F, Rte 91, PM R6.73  
SCALE 1"=20'



W91-N110 CONNECTOR (BROADWAY) #53-2663F

QUANTITIES

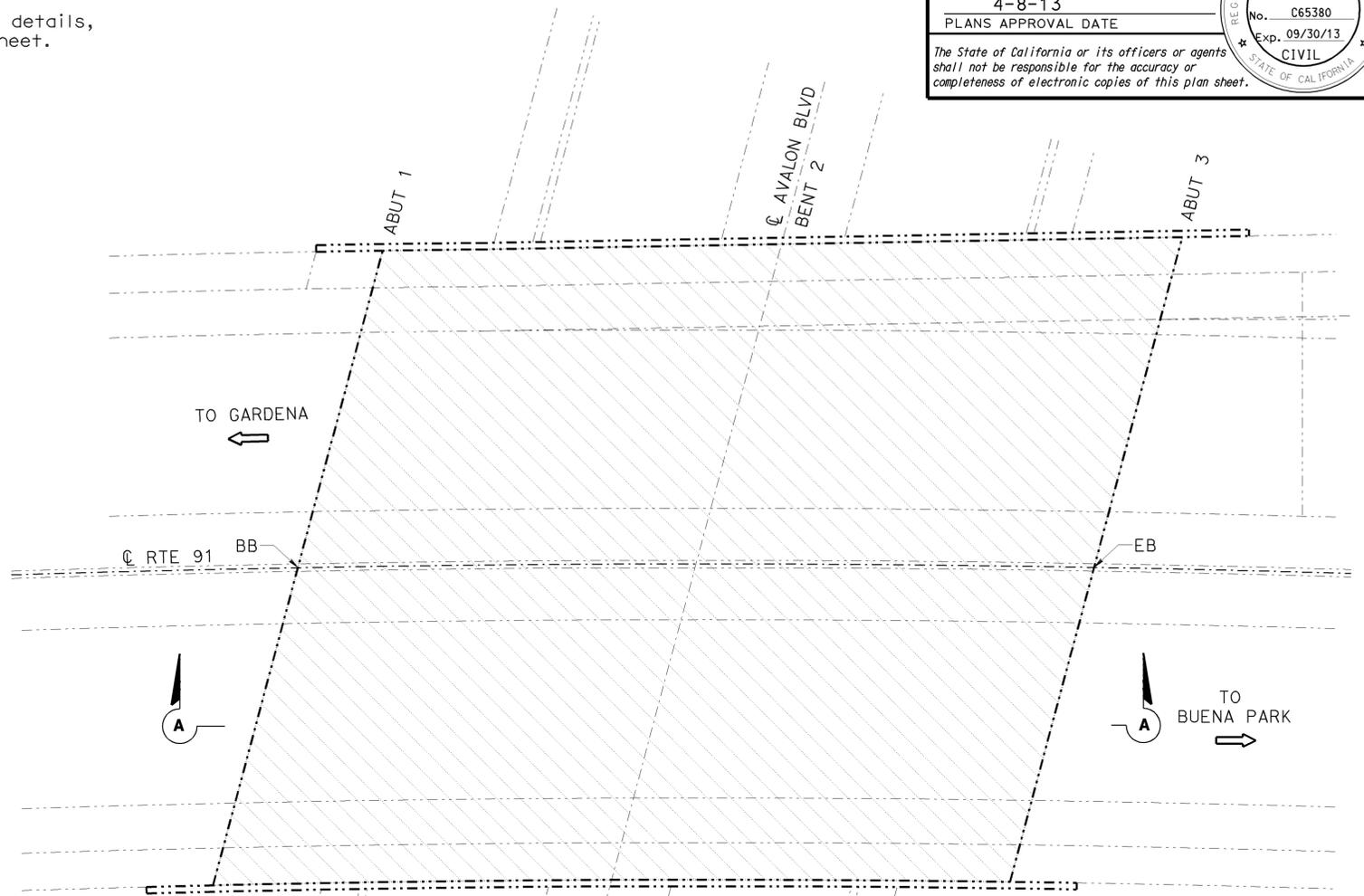
RAPID SETTING CONCRETE (PATCH)	2 CF
REMOVE UNSOUND CONCRETE	2 CF
CLEAN EXPANSION JOINT	106 LF
JOINT SEAL (MR 1 1/2")	106 LF



**SECTION A-A**

NO SCALE

\* Limits of remove concrete surfacing 0 inch min to 3/4 inch maximum full width. Grind flush to conform with existing profile.



**AVALON BOULEVARD UC**

Br No. 53-2458, Rte 91, PM R7.44  
SCALE 1"=20'



AVALON BOULEVARD UC #53-2458

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	98 CF
REMOVE CONCRETE DECK SURFACE	37,500 SQFT
REMOVE UNSOUND CONCRETE	98 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	45,000 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	2,850 CF
PLACE POLYESTER CONCRETE OVERLAY	45,000 SQFT

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

TONY D. BRAKE  
DESIGN ENGINEER

DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
POST MILE Varies

ROUTES 60,90,91,101,110,405 BRIDGES

GENERAL PLAN NO. 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	36	51

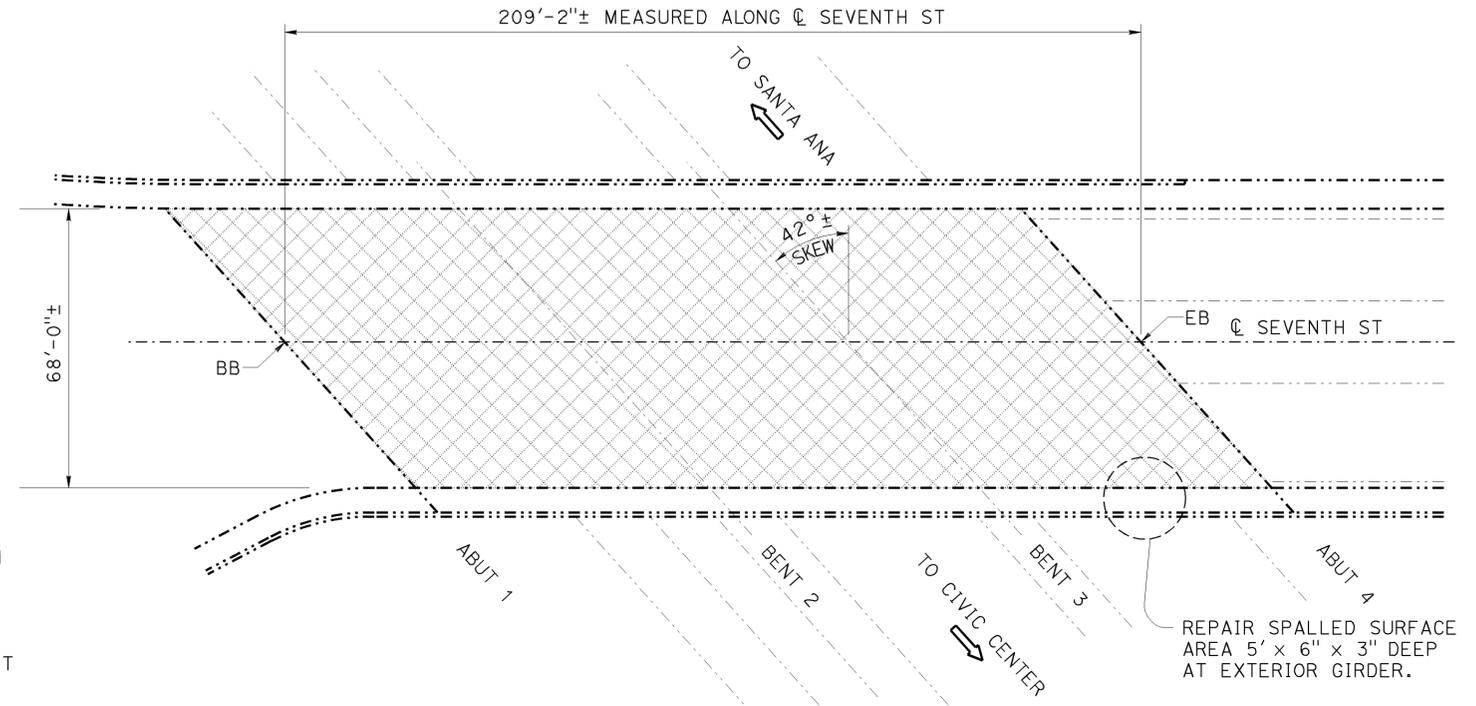
REGISTERED CIVIL ENGINEER DATE 12-06-12  
 PLANS APPROVAL DATE 4-8-13  
 No. C65380 Exp. 09/30/13  
 CIVIL  
 STATE OF CALIFORNIA  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

**LEGEND:**

- Indicates existing.
- Indicates direction of traffic.
- Indicates limits of removal of existing 3" thick Asphalt Concrete Overlay. Prepare concrete bridge deck surface, furnish and place new 3" thick polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. Overlay shall be placed in one lift.
- Indicates location of clean expansion joint and placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).
- Indicates limits of removal of existing 3"± thick deck concrete. Prepare concrete bridge deck surface, furnish and place new 3" thick rapid strength structural concrete (f'c = 3600 psi @ 28 days) after placement of rapid strength structural concrete place ¾" thick polyester concrete overlay. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.

**NOTES:**

- For clean expansion joint and joint details, see "MISCELLANEOUS DETAILS NO. 1" sheet.
- For deck damage repair detail and spall repair detail, see "MISCELLANEOUS DETAILS NO. 2" sheet.



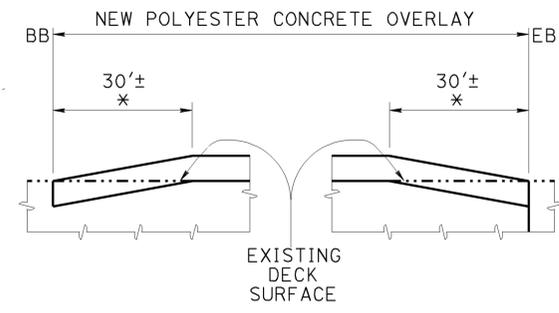
**SEVENTH STREET OC**

Br No. 53-0596, Rte 101, PM S0.02  
SCALE 1"=20'

**SEVENTH STREET OC #53-0596**

QUANTITIES

	LUMP SUM
PUBLIC SAFETY PLAN	
RAPID SETTING CONCRETE (PATCH)	37 CF
REPAIR SPALLED SURFACE AREA	2 SQFT
REMOVE ASPHALT CONCRETE SURFACING	14,300 SQFT
REMOVE UNSOUND CONCRETE	37 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	14,300 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	3,600 CF
PLACE POLYESTER CONCRETE OVERLAY	14,300 SQFT



**SECTION A-A**

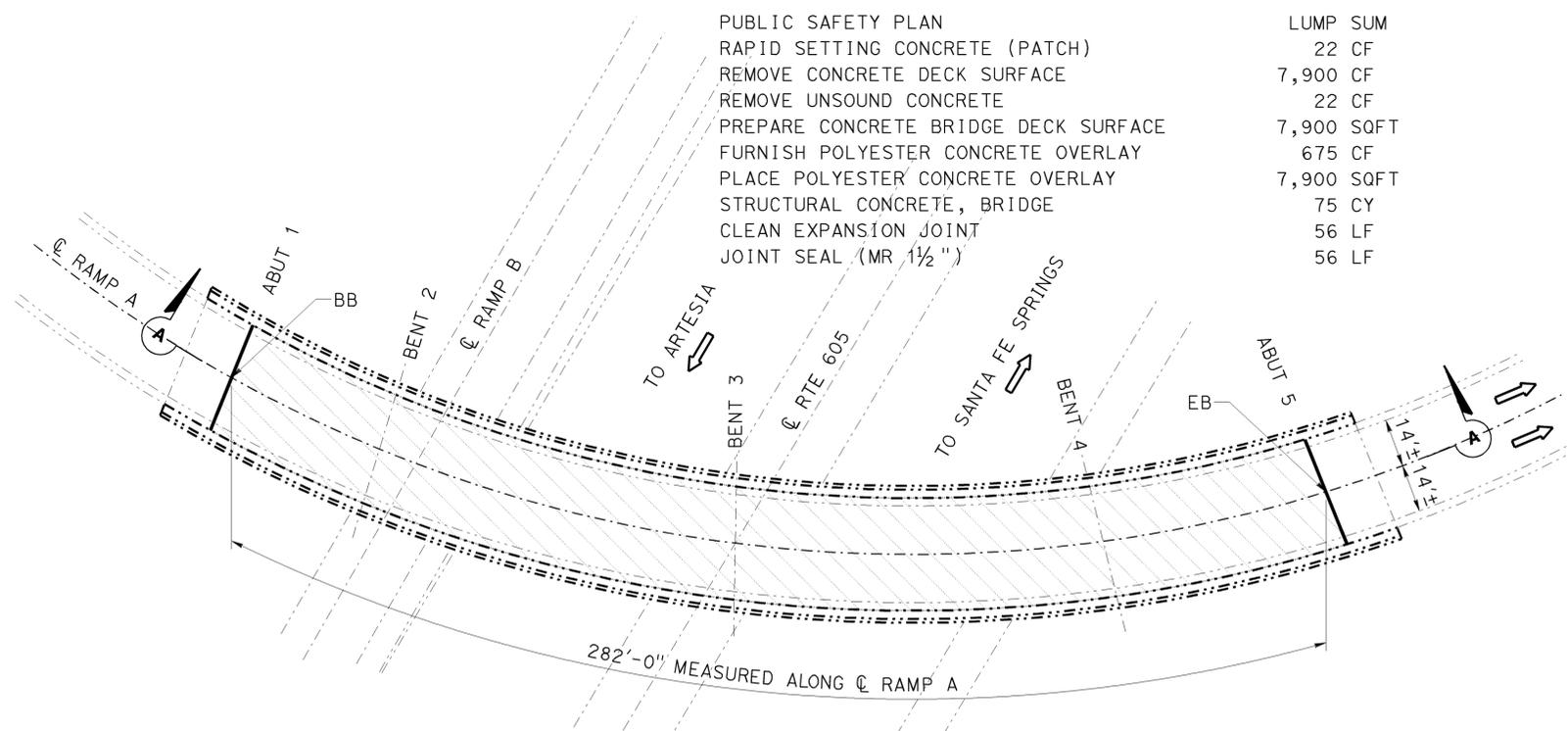
NO SCALE

\* Limits of remove concrete surfacing 0 inch min to ¾ inch maximum full width. Grind flush to conform with existing profile.

**E91-N605 CONNECTOR OC #53-1703G**

QUANTITIES

	LUMP SUM
PUBLIC SAFETY PLAN	
RAPID SETTING CONCRETE (PATCH)	22 CF
REMOVE CONCRETE DECK SURFACE	7,900 CF
REMOVE UNSOUND CONCRETE	22 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	7,900 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	675 CF
PLACE POLYESTER CONCRETE OVERLAY	7,900 SQFT
STRUCTURAL CONCRETE, BRIDGE	75 CY
CLEAN EXPANSION JOINT	56 LF
JOINT SEAL (MR 1½")	56 LF



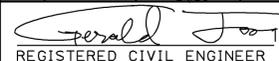
**E91-N605 CONNECTOR OC**

Br No. 53-1703G, Rte 91, PM R16.97  
SCALE 1"=20'

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

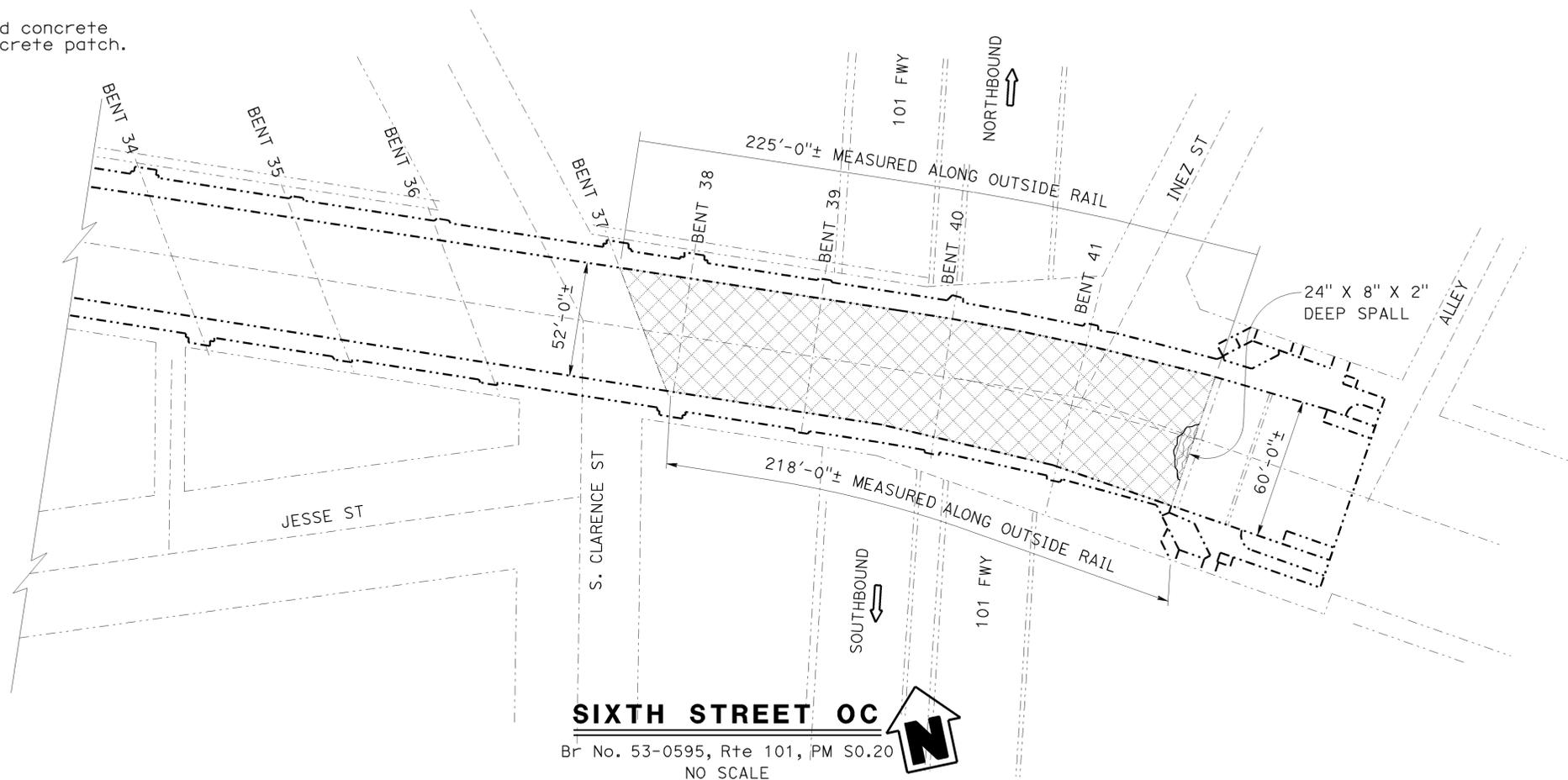
<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>GENERAL PLAN NO. 5</b>
		Various	
		Varies	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 110, 405, etc.	Var	37	51
 REGISTERED CIVIL ENGINEER DATE 12-06-12					
PLANS APPROVAL DATE 4-8-13					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
-  Indicates limits of removal of existing 3"± thick Asphalt Concrete Overlay. Prepare concrete bridge deck surface, furnish and place new 3" thick polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. Overlay shall be placed in one lift.
-  Indicates removal of unsound concrete and place rapid setting concrete patch.



**SIXTH STREET OC**  
 Br No. 53-0595, Rte 101, PM S0.20  
 NO SCALE

**SIXTH STREET OC #53-0595  
 QUANTITIES**

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	36 CF
REMOVE ASPHALT CONCRETE DECK SURFACING	12,500 SQFT
REMOVE UNSOUND CONCRETE	36 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	12,500 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	3,200 CF
PLACE POLYESTER CONCRETE OVERLAY	12,500 SQFT

NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

**TONY D. BRAKE**  
 DESIGN ENGINEER

DESIGN	BY Gerald Joo	CHECKED Edward Li	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
QUANTITIES	BY Gerald Joo	CHECKED Edward Li	SPECIFICATIONS	BY Kevin Ellingson

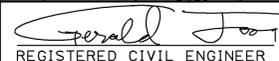
**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
 POST MILE Varies

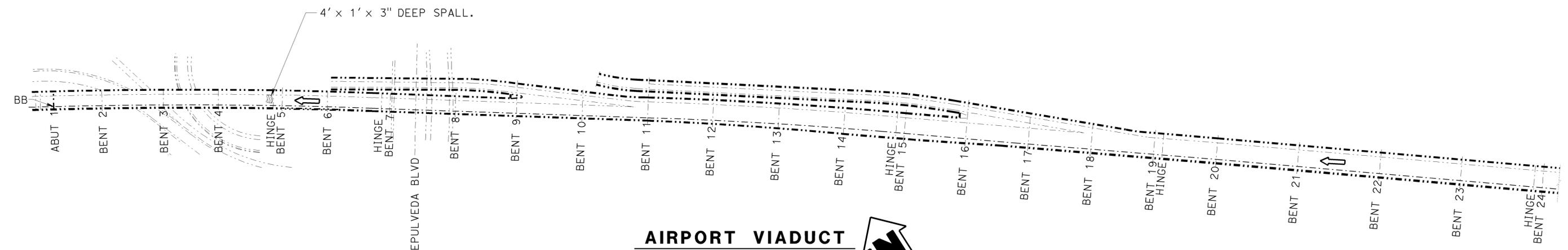
**ROUTES 60, 90, 91, 101, 110, 405 BRIDGES**  
**GENERAL PLAN NO. 6**

USERNAME => s117283 DATE PLOTTED => 05-MAR-2013 TIME PLOTTED => 06:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	38	51
 REGISTERED CIVIL ENGINEER DATE 12-06-12					
PLANS APPROVAL DATE 4-8-13			<i>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.</i>		

**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
-  Indicates removal of unsound concrete and place rapid setting concrete patch.



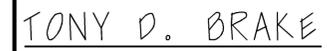
**AIRPORT VIADUCT**

Br No. 53-2400L, Rte 105, PM R.39  
NO SCALE

AIRPORT VIADUCT #53-2400L  
QUANTITIES

RAPID SETTING CONCRETE (PATCH) 2 CF  
REMOVE UNSOUND CONCRETE 2 CF

NOTE:  
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 DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
POST MILE Varies

**ROUTES 60,90,91,101,110,405 BRIDGES**  
**GENERAL PLAN NO. 7**

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: 3489  
PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
05-08-12 05-18-12 11-20-12 12-06-12	07	20

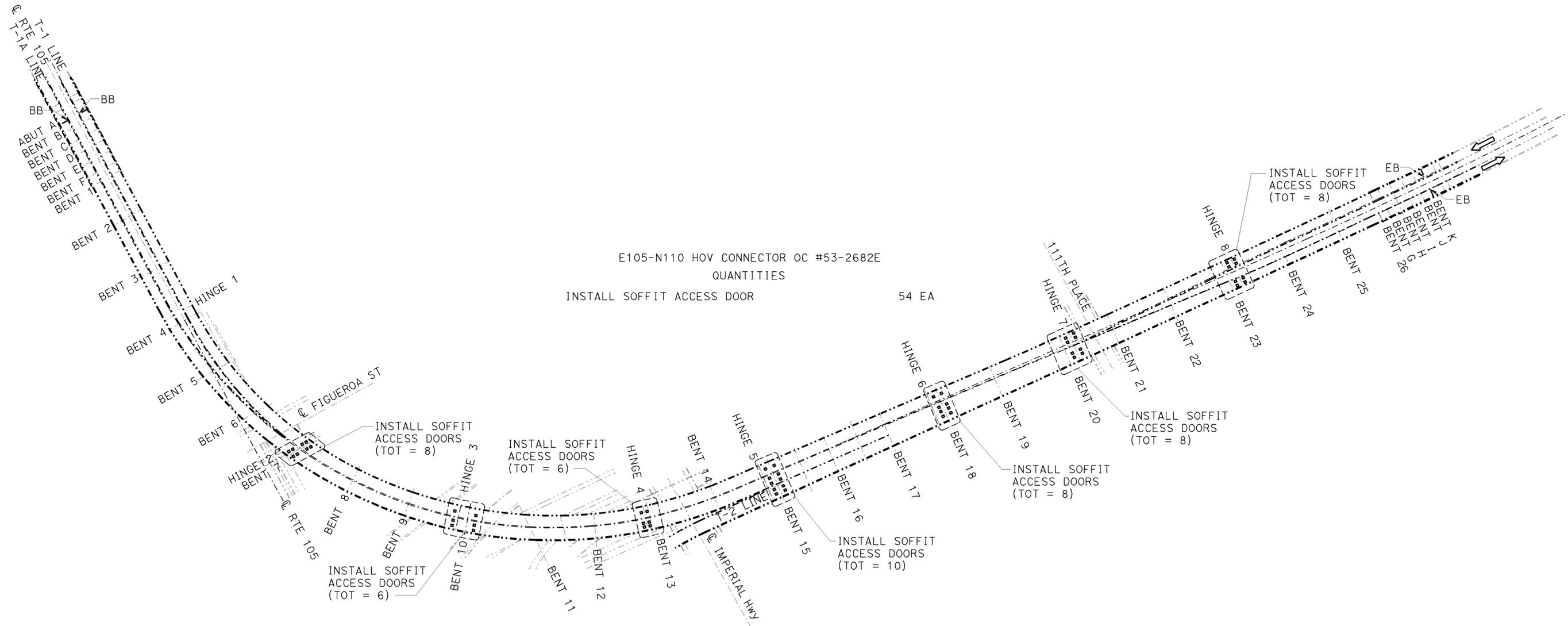
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,105, etc.	Var	39	51

REGISTERED CIVIL ENGINEER DATE 12-06-12  
 PLANS APPROVAL DATE 4-8-13  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 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.

**LEGEND:**

- Indicates existing.
- ⇒ Indicates direction of traffic.
- ☐ Indicates location of install soffit access door at existing 2'-6"± diameter soffit opening. See "SOFFIT ACCESS DOOR" sheet.



**E105-N110 HOV CONNECTOR OC**

Br No. 53-2682E, Rte 105, PM R7.11  
SCALE 1"=20'

NOTE:  
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<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>GENERAL PLAN NO. 8</b>	
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom		CHECKED Gerald Joo		POST MILE
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson		CHECKED Kevin Ellingson		Varies
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3489 PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 05-08-12 05-18-12 11-20-12 12-06-12 SHEET 08 OF 20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	40	51

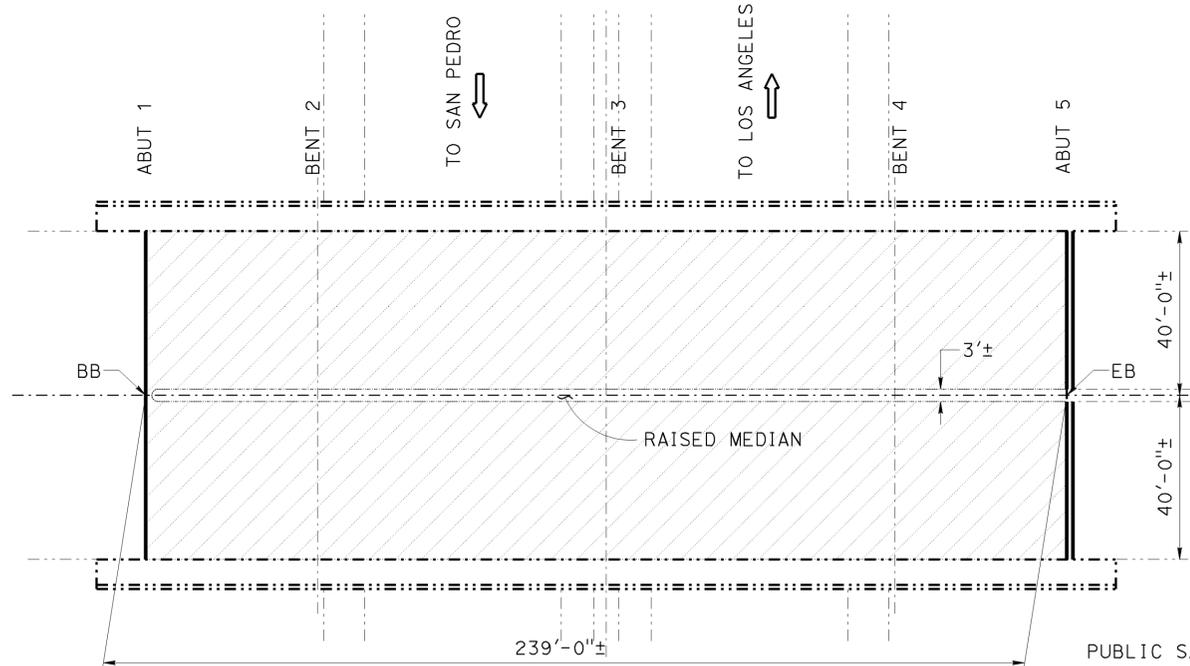
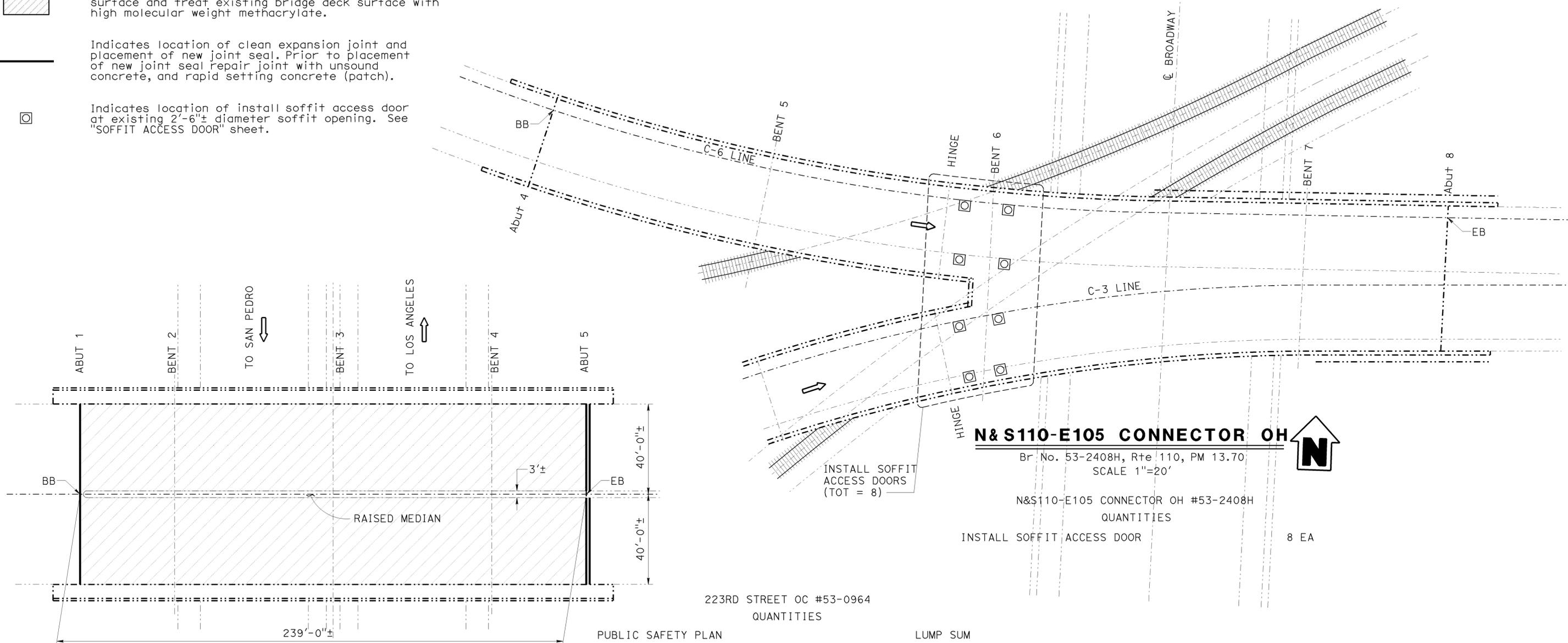
12-06-12  
 REGISTERED CIVIL ENGINEER DATE  
 4-8-13  
 PLANS APPROVAL DATE  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 STATE OF CALIFORNIA  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck surface with high molecular weight methacrylate.
- Indicates location of clean expansion joint and placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).
- Indicates location of install soffit access door at existing 2'-6"± diameter soffit opening. See "SOFFIT ACCESS DOOR" sheet.

**NOTE:**

1. For clean expansion joint and joint details, see "MISCELLANEOUS DETAILS NO. 1" sheet.



**N&S110-E105 CONNECTOR OH**  
 Br No. 53-2408H, Rte 110, PM 13.70  
 SCALE 1"=20'  
 N&S110-E105 CONNECTOR OH #53-2408H  
 QUANTITIES  
 INSTALL SOFFIT ACCESS DOOR 8 EA

223RD STREET OC #53-0964  
 QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING COCNRETE (PATCH)	53 CF
REMOVE UNSOUND CONCRETE	53 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	18,450 SOFT
TREAT BRIDGE DECK	18,450 SOFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	235 GAL
CLEAN EXPANSION JOINT	234 LF
JOINT SEAL (MR 1/2")	77 LF
JOINT SEAL (MR 1 1/2")	157 LF

**223RD STREET OC**  
 Br No. 53-0964, Rte 110, PM 6.52  
 SCALE 1"=20'

NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>GENERAL PLAN NO. 9</b>
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom		STRUCTURE MAINTENANCE DESIGN	Various	
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson		Varies		

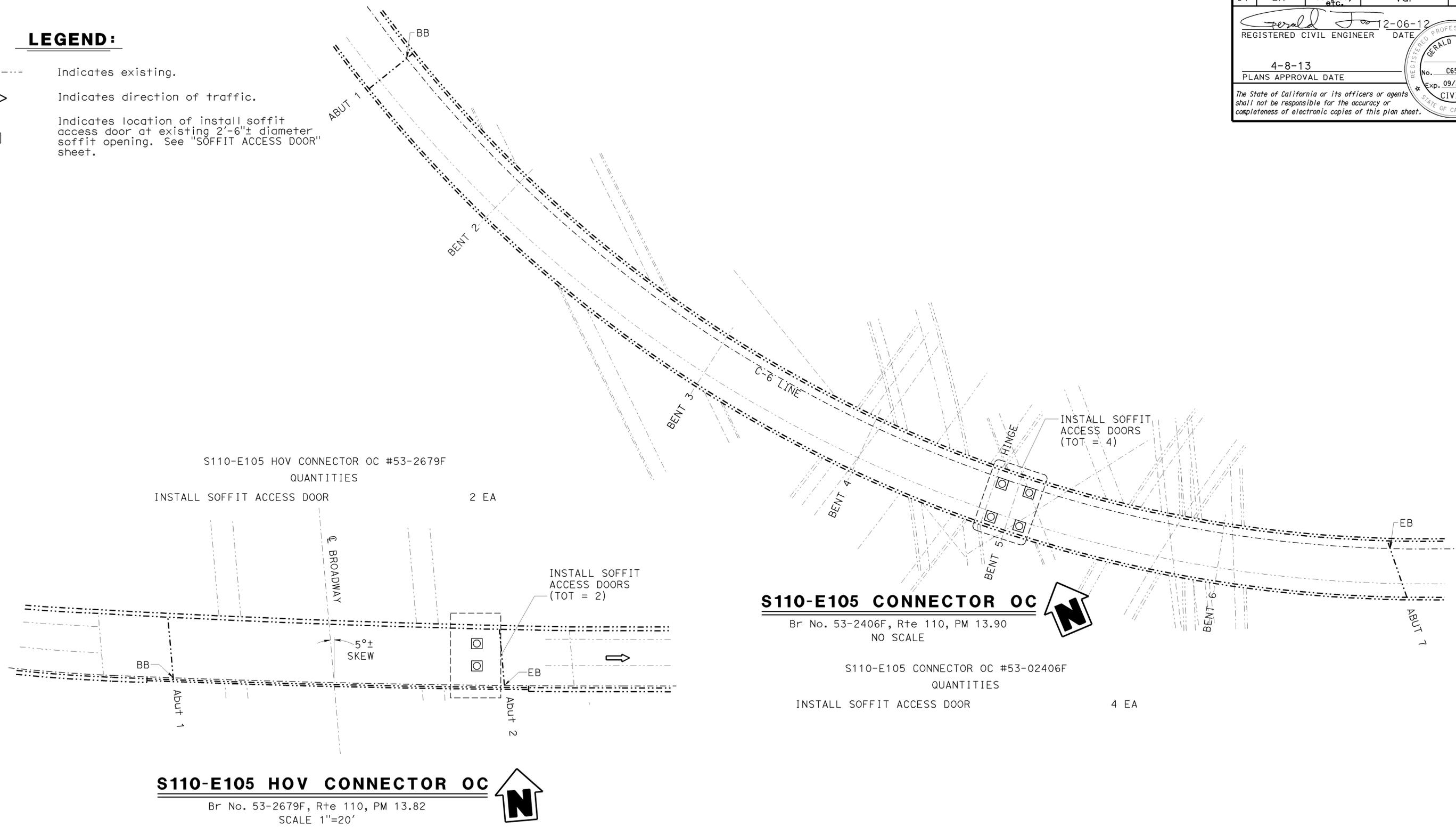
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3  
 UNIT: 3489 PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 05-08-12, 05-15-12, 11-20-12, 12-06-12  
 SHEET 09 OF 20  
 USERNAME => s117283 DATE PLOTTED => 05-MAR-2013 TIME PLOTTED => 06:43  
 FILE => 07-1w2901-a-gp09.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,405, etc.	Var	41	51

REGISTERED CIVIL ENGINEER DATE 12-06-12  
 PLANS APPROVAL DATE 4-8-13  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 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.

**LEGEND:**

- Indicates existing.
- ⇒ Indicates direction of traffic.
- Indicates location of install soffit access door at existing 2'-6"± diameter soffit opening. See "SOFFIT ACCESS DOOR" sheet.



S110-E105 HOV CONNECTOR OC #53-2679F  
 QUANTITIES  
 INSTALL SOFFIT ACCESS DOOR 2 EA

**S110-E105 CONNECTOR OC**  
 Br No. 53-2406F, Rte 110, PM 13.90  
 NO SCALE  
 S110-E105 CONNECTOR OC #53-02406F  
 QUANTITIES  
 INSTALL SOFFIT ACCESS DOOR 4 EA

**S110-E105 HOV CONNECTOR OC**  
 Br No. 53-2679F, Rte 110, PM 13.82  
 SCALE 1"=20'

NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
 STRUCTURE MAINTENANCE DESIGN

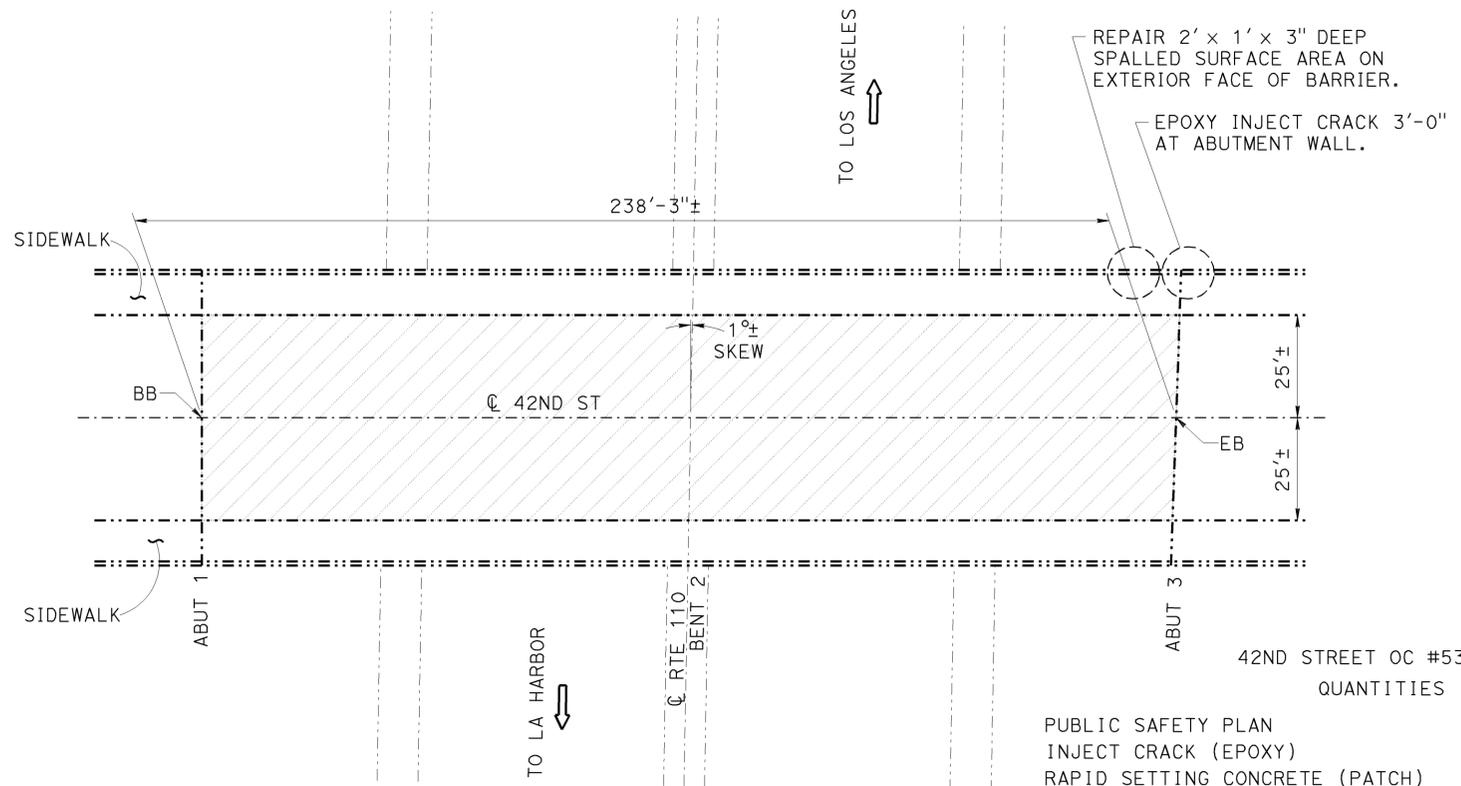
BRIDGE NO. Various  
 POST MILE Varies  
**ROUTES 60,90,91,101,110,405 BRIDGES**  
**GENERAL PLAN NO. 10**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,105, etc.	Var	42	51

4-8-13  
 PLANS APPROVAL DATE  
 REGISTERED CIVIL ENGINEER DATE 12-06-12  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 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.

**LEGEND:**

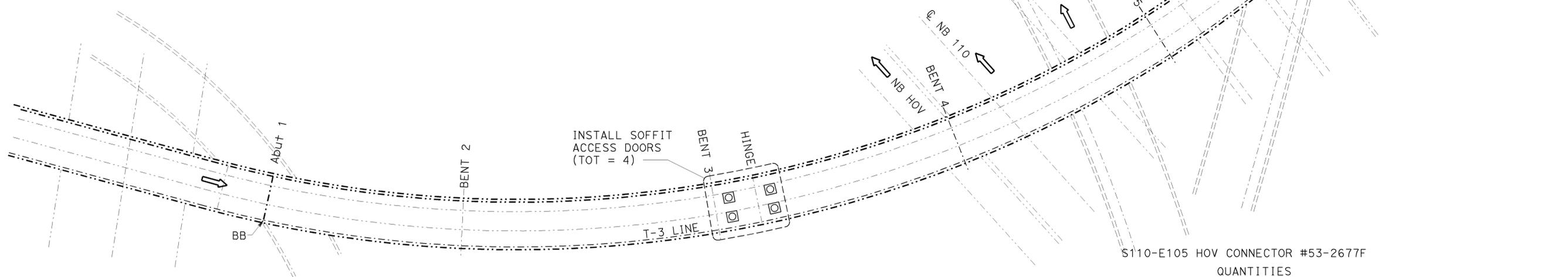
- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck surface with high molecular weight methacrylate.
- Indicates location of install soffit access door at existing 2'-6"± diameter soffit opening. See "SOFFIT ACCESS DOOR" sheet.



**42ND STREET OC**  
 Br No. 53-0905, Rte 110, PM 19.25  
 SCALE 1"=20'

42ND STREET OC #53-0905  
 QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
INJECT CRACK (EPOXY)	3 LF
RAPID SETTING CONCRETE (PATCH)	30 CF
REPAIR SPALLED SURFACE AREA	2 SQFT
REMOVE UNSOUND CONCRETE	30 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	12,000 SQFT
TREAT BRIDGE DECK	12,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	150 GAL



**S110-E105 HOV CONNECTOR**  
 Br No. 53-2677F, Rte 110, PM 13.95  
 NO SCALE

INSTALL SOFFIT ACCESS DOOR 4 EA

NOTE:  
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TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
 POST MILE Varies

**ROUTES 60,90,91,101,110,405 BRIDGES**  
**GENERAL PLAN NO. 11**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 105, etc.	Var	43	51

12-06-12  
 REGISTERED CIVIL ENGINEER DATE  
 4-8-13  
 PLANS APPROVAL DATE  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 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.

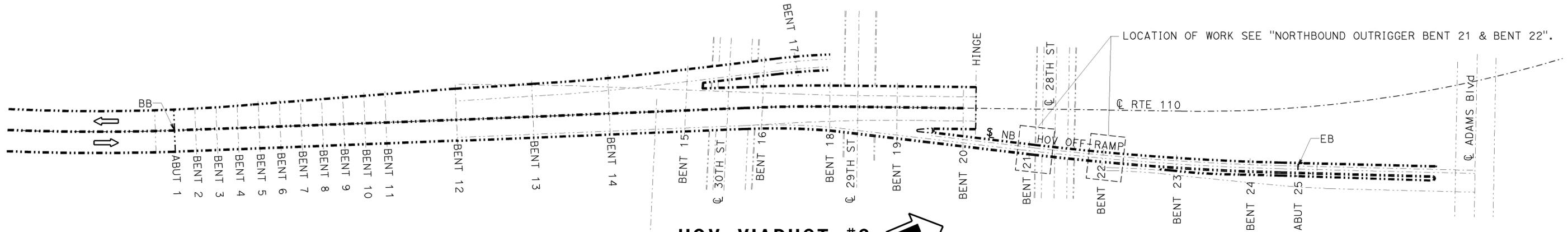
**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates location of seal concrete surface.

**NOTES:**

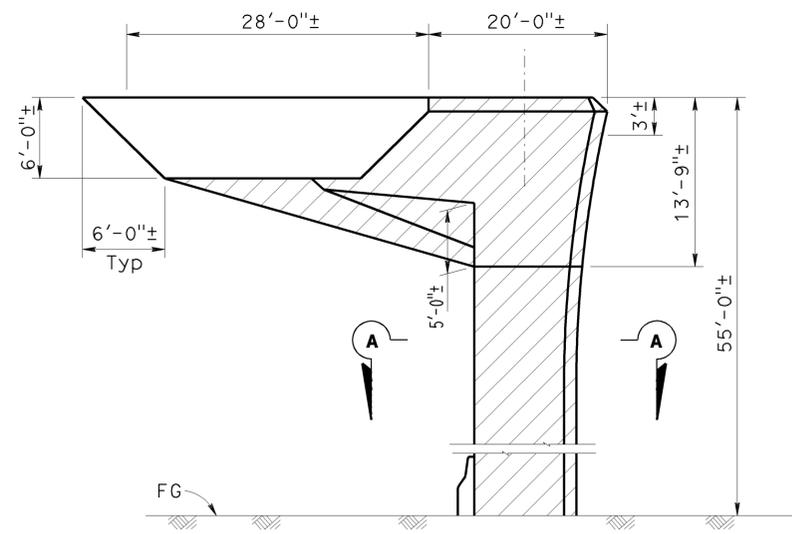
1. Seal concrete surface with mastic epoxy.

HOV VAIDUCT #3 #53-2735  
 QUANTITIES  
 SEAL CONCRETE SURFACE 6,300 SQFT



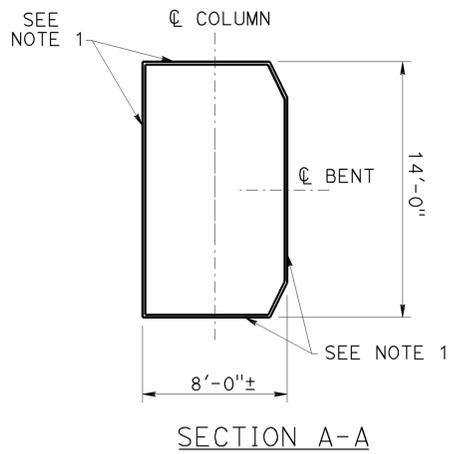
**HOV VIADUCT #3**

Br No. 53-2735, Rte 110, PM 20.33  
 NO SCALE

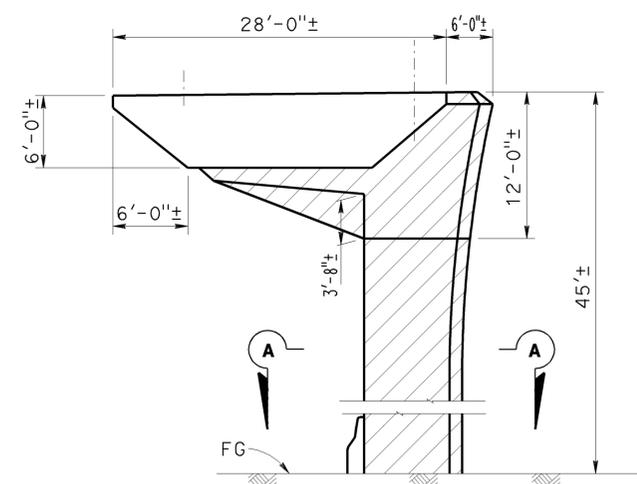


**NORTHBOUND OUTRIGGER BENT 21 DETAILS**

NO SCALE

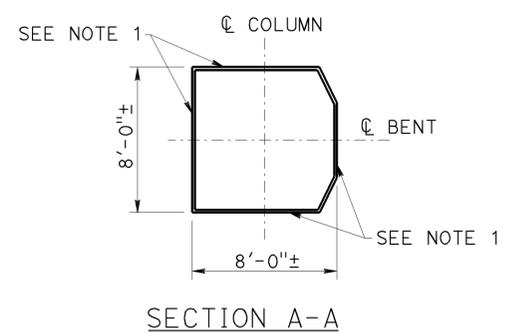


SECTION A-A



**NORTHBOUND OUTRIGGER BENT 22 DETAILS**

NO SCALE



SECTION A-A

NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

DESIGN ENGINEER <b>TONY D. BRAKE</b>	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
 POST MILE Varies

**ROUTES 405 & 710 BRIDGES**  
**GENERAL PLAN NO. 12**

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3489  
 PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 12 OF 20
	05-08-12, 05-15-12, 11-20-12, 12-06-12	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	44	51

2-06-12  
 REGISTERED CIVIL ENGINEER DATE  
 4-8-13  
 PLANS APPROVAL DATE  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 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.

**LEGEND:**

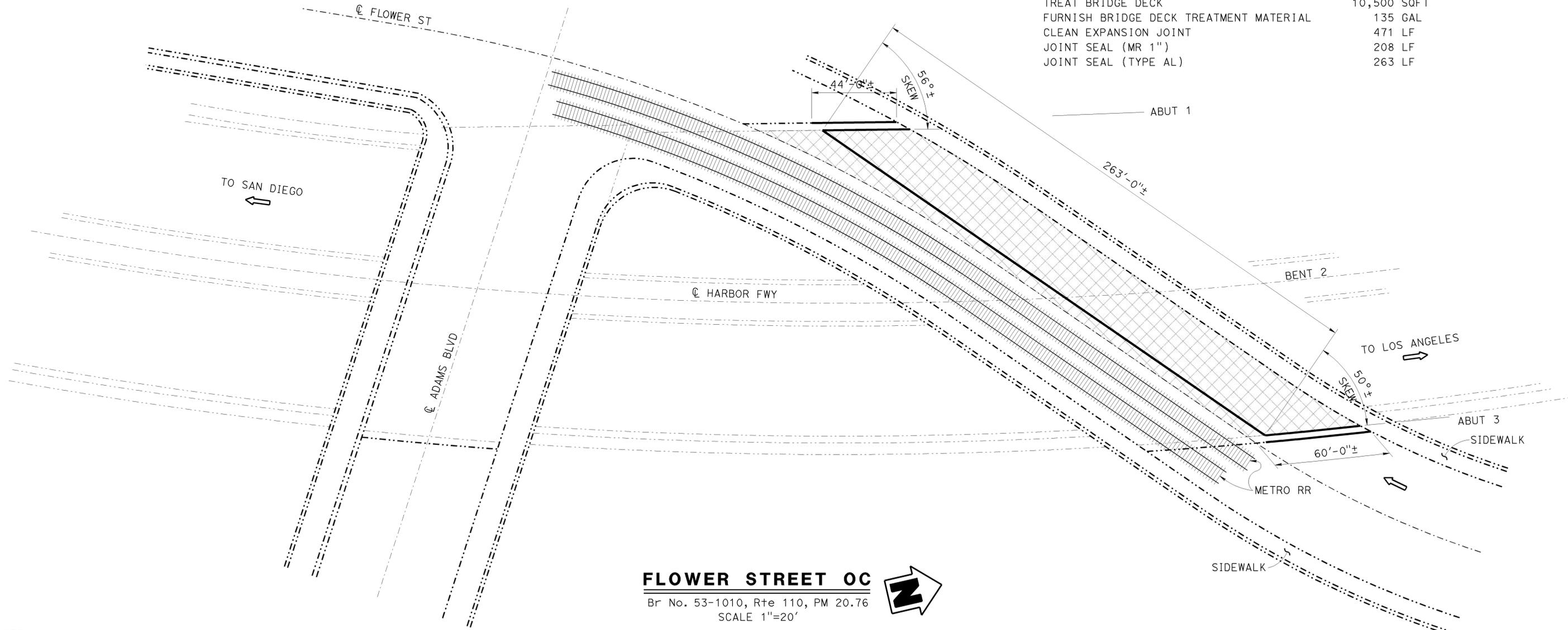
- Indicates existing.
- ⇒ Indicates direction of traffic.
- Indicates location of clean expansion joint and placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck surface with high molecular weight methacrylate.

**NOTES:**

1. For clean expansion joint and joint details, see "MISCELLANEOUS DETAILS NO. 1" sheet.
2. For deck damage repair detail and spall repair detail, see "MISCELLANEOUS DETAILS NO. 2" sheet.

FLOWER STREET OC #53-1010  
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	35 CF
REMOVE UNSOUND CONCRETE	35 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	10,500 SQFT
TREAT BRIDGE DECK	10,500 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	135 GAL
CLEAN EXPANSION JOINT	471 LF
JOINT SEAL (MR 1")	208 LF
JOINT SEAL (TYPE AL)	263 LF



**FLOWER STREET OC**

Br No. 53-1010, Rte 110, PM 20.76  
SCALE 1"=20'

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITIES FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>GENERAL PLAN NO. 13</b>	
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom		CHECKED Gerald Joo		POST MILE
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson		CHECKED Kevin Ellingson		Varies

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3489 PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 05-08-12, 05-15-12, 11-20-12, 12-06-12 SHEET 13 OF 20  
 FILE => 07-1w2901-a-gp13.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	45	51

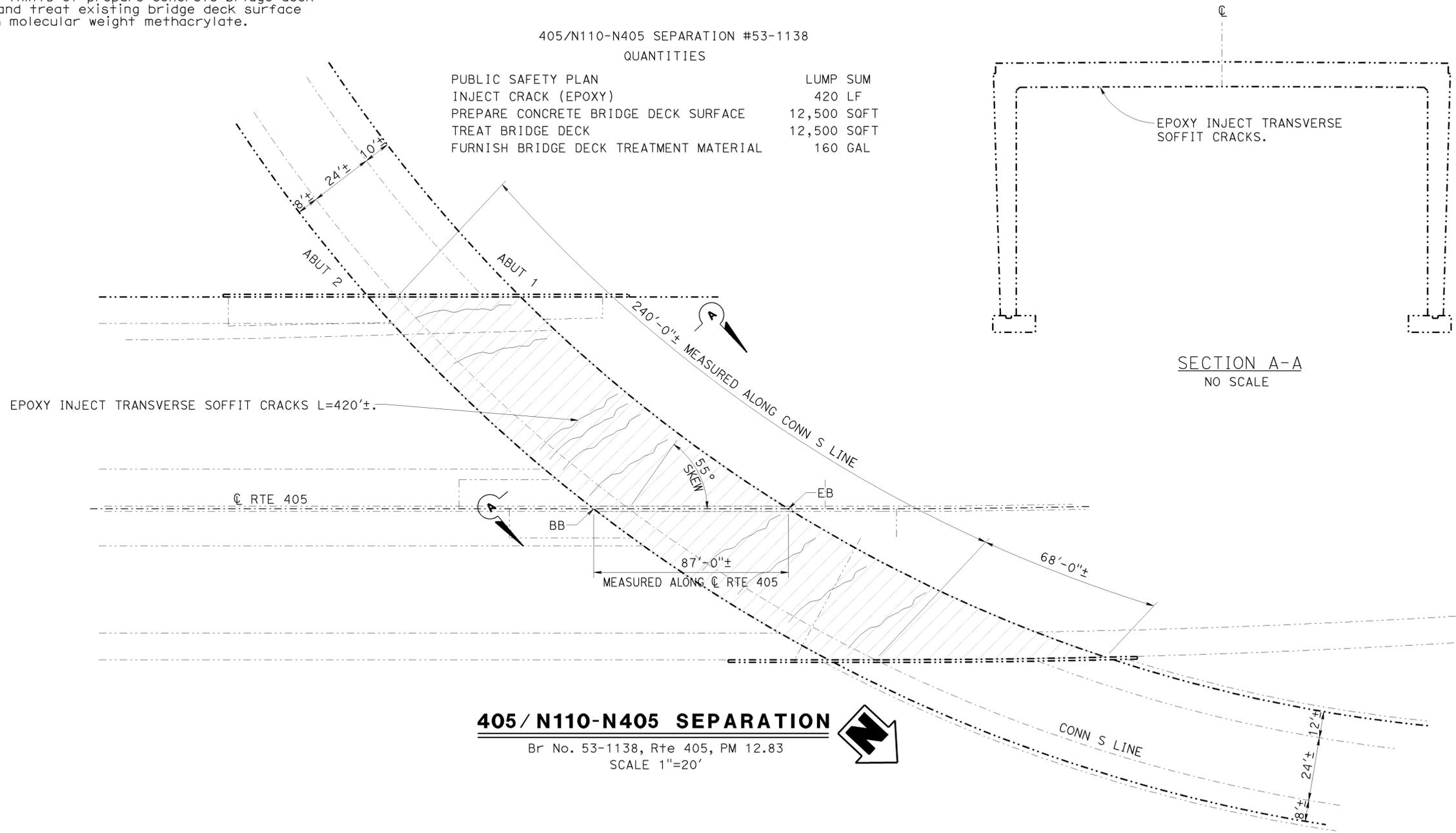
REGISTERED CIVIL ENGINEER DATE 12-06-12  
 PLANS APPROVAL DATE 4-8-13  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 STATE OF CALIFORNIA  
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**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck surface with high molecular weight methacrylate.

405/N110-N405 SEPARATION #53-1138  
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
INJECT CRACK (EPOXY)	420 LF
PREPARE CONCRETE BRIDGE DECK SURFACE	12,500 SQFT
TREAT BRIDGE DECK	12,500 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	160 GAL



**405 / N110-N405 SEPARATION**

Br No. 53-1138, Rte 405, PM 12.83  
SCALE 1"=20'

NOTE:  
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<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>GENERAL PLAN NO. 14</b>	
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom			CHECKED Gerald Joo		POST MILE
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson			CHECKED Kevin Ellingson		Varies

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3489 PROJECT NUMBER & PHASE: 0700021229 1 CONTRACT NO.: 07-1W2904 DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
05-08-12 05-18-12 11-20-12 12-06-12	14	20

FILE => 07-1w2901-a-gp14.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60, 90, 91, 101, 110, 405, etc.	Var	46	51

REGISTERED CIVIL ENGINEER DATE 12-06-12  
 PLANS APPROVAL DATE 4-8-13  
 No. C65380  
 Exp. 09/30/13  
 CIVIL  
 STATE OF CALIFORNIA  
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**LEGEND:**

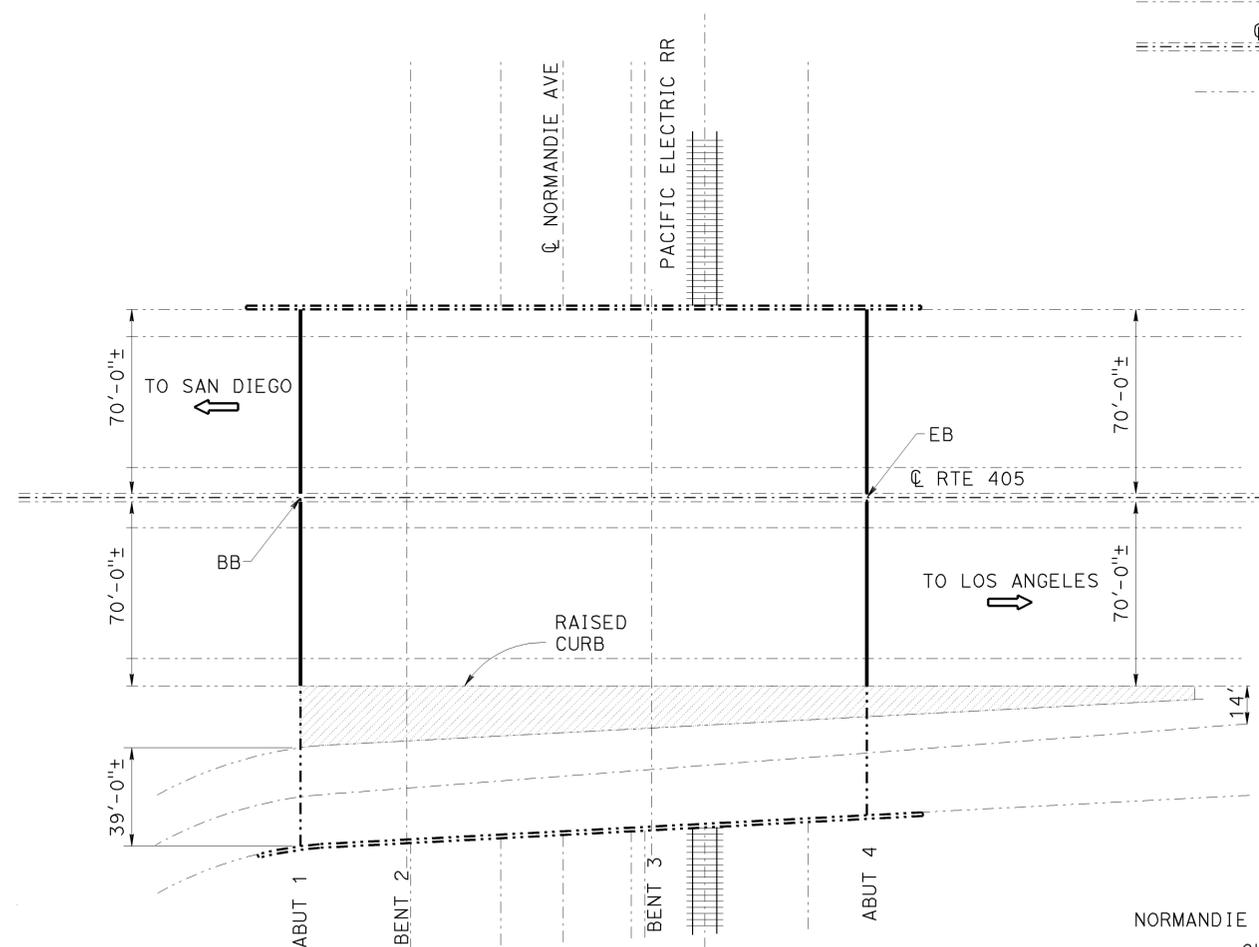
- Indicates existing.
- ➔ Indicates direction of traffic.
- Indicates location of clean expansion joint and placement of new joint seal. Prior to placement of new joint seal repair joint with unsound concrete, and rapid setting concrete (patch).
- ▨ Indicates removal of unsound concrete and place rapid setting concrete patch.
- ▩ Indicates limits of bridge removal (portion).

**NOTE:**

1. For clean expansion joint and joint details, see "MISCELLANEOUS DETAILS NO. 1" sheet.

PRAIRIE AVENUE UC #53-1228 QUANTITIES

RAPID SETTING CONCRETE (PATCH)	4 CF
REMOVE UNSOUND CONCRETE	4 CF
BRIDGE REMOVAL (PORTION)	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	2 CY
DRILL AND BOND DOWEL	50 LF
CLEAN EXPANSION JOINT	438 LF
JOINT SEAL (MR 1")	438 LF
BAR REINFORCING STEEL (BRIDGE)	125 LB



**NORMANDIE AVENUE OH**

Br No. 53-1179, Rte 405, PM 13.83  
SCALE 1"=20'



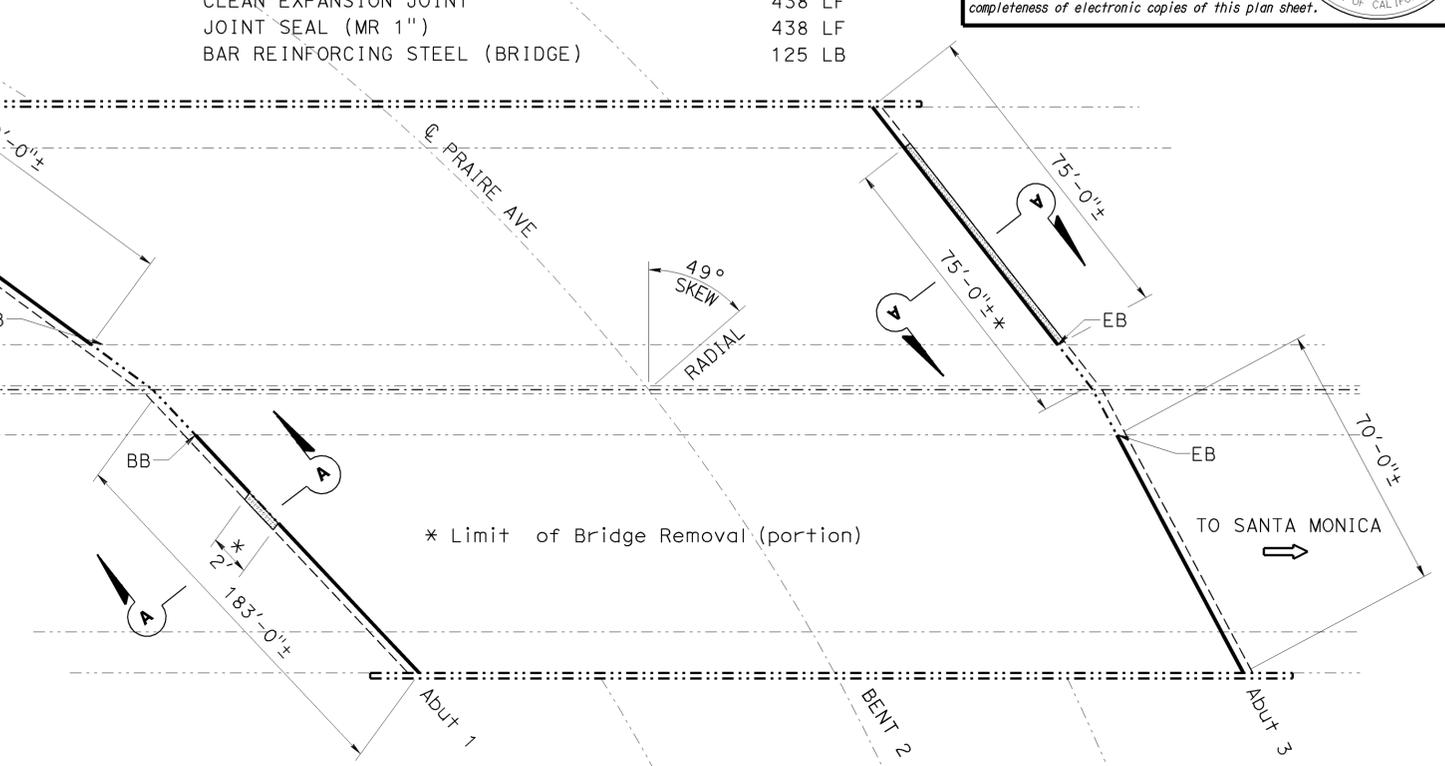
NORMANDIE AVENUE OH #53-1179 QUANTITIES

RAPID SETTING CONCRETE (PATCH)	4 CF
REMOVE UNSOUND CONCRETE	4 CF
CLEAN EXPANSION JOINT	280 LF
JOINT SEAL (MR 1/2")	280 LF

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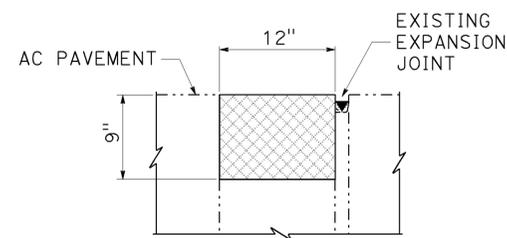
TONY D. BRAKE  
DESIGN ENGINEER

DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom
QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY Kevin Ellingson

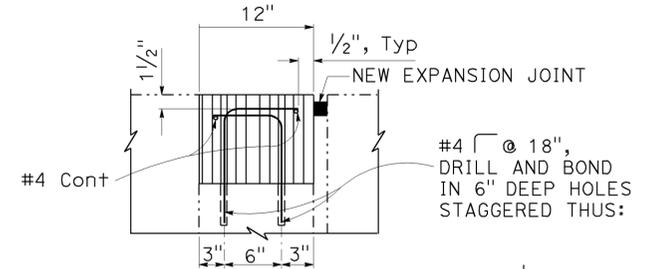


**PRAIRIE AVENUE UC**

Br No. 53-1228, Rte 405, PM 16.78  
SCALE 1"=20'



EXISTING

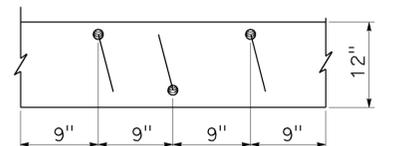


BACKWALL RECONSTRUCTION

**SECTION A-A**

**BACKWALL REPAIRS DETAILS**

NO SCALE



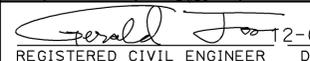
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

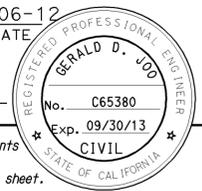
DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
POST MILE Varies

**ROUTES 60, 90, 91, 101, 110, 405 BRIDGES**  
**GENERAL PLAN NO. 15**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	47	51

  
 REGISTERED CIVIL ENGINEER DATE 12-06-12  
 PLANS APPROVAL DATE 4-8-13



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JOINT SEAL TABLE							
BRIDGE NAME	BRIDGE NUMBER	JOINT SEAL LOCATION		MINIMUM "MR" (INCHES)	APPROX LENGTH (ft)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)
Euclid Avenue Uc	53-0069R	Abut 1	PN	1	70	No	12
		Abut 4	PN	1	70	No	12
Euclid Avenue UC	53-0070L	Abut 4	PN	1	7	No	12
W90-N405 Conn OC	53-1401F	Abut 1	PN	1 1/2	36	No	12
		Abut 5	PN	1 1/2	36	No	12
W91-N110 Conn (Broadway)	53-2663F	Abut 1	PN	1 1/2	52	No	12
		Abut 2	PN	1 1/2	54	No	12
E91-N605 Conn OC	53-1703G	Abut 1	PN	1 1/2	28	No	12
		Abut 5	PN	1 1/2	28	No	12
223RD Street OC	53-0964	Abut 1	BW	1 1/2	80	Yes	12
		Abut 5	BW	1 1/2	77	Yes	12
		Abut 5	PN	1/2	77	No	12
Flower Street OC	53-1010	Abut 1	BW	1	44	Yes	12
		Abut 1	PN	1	44	Yes	12
		Longitudinal	-	-	263	No	12
		Abut 3	BW	1	60	Yes	12
Marietta Street UC	53-1394G	Abut 3	PN	1	60	Yes	12
		Abut 1	PN	1	36	No	12
Prairie Avenue UC	53-1228	Abut 4	PN	1	36	No	12
		Abut 1	BW	1	183	No	12
Normandie Avenue OH	53-1179	Abut 4	BW	1	145	No	12
		Abut 1	BW	1/2	140	No	12
		Abut 4	BW	1/2	140	No	12

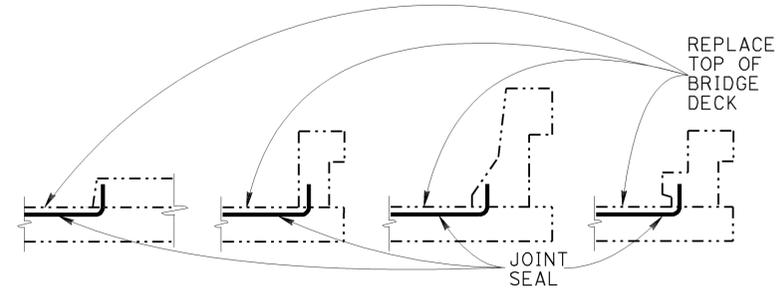
NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

DESIGN BY Gerald Joo CHECKED Tony Brake DETAILS BY Clayton Tom CHECKED Gerald Joo QUANTITIES BY Gerald Joo CHECKED Tony Brake	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>MISCELANEOUS DETAILS NO. 1</b>			
			POST MILE				
			Varies				
STRUCTURES MAINTENANCE DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3489 PROJECT NUMBER & PHASE: 0700021229 1	CONTRACT NO.: 07-1W2904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 05-02-12 06-18-12 11-20-12 12-06-12	SHEET 16 OF 20

FILE => 07-1w2901-u-miscdr01.dgn

USERNAME => s117283 DATE PLOTTED => 06-15-12 TIME PLOTTED => 06:45

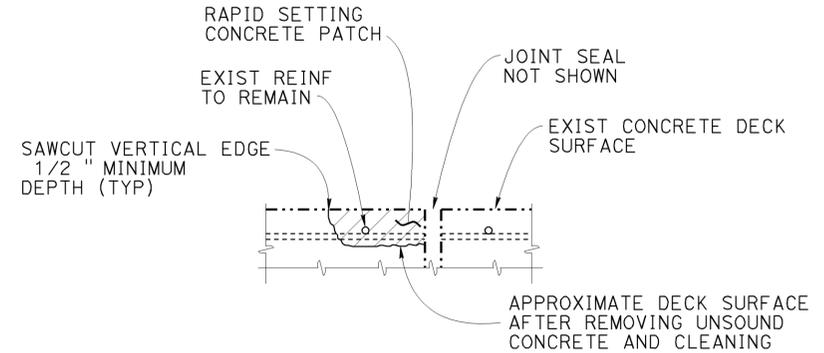
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91, 101, 110, 405, etc.	Var	48	51
 REGISTERED CIVIL ENGINEER DATE 12-06-12					
PLANS APPROVAL DATE 4-8-13					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



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 REPAIR DETAIL**

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

**NOTES:**

The following notes apply to JOINT SEAL TYPE A:

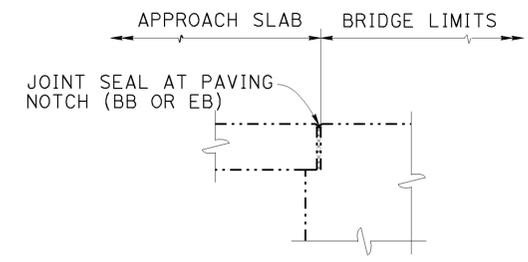
Install Joint Seal (MR = 1/2") or Silicone Joint Seal 3" up into curb or barrier rail on the low side of the deck where deck joint aligns with curb or barrier rail joint.

For details not shown see standard plan B6-21.

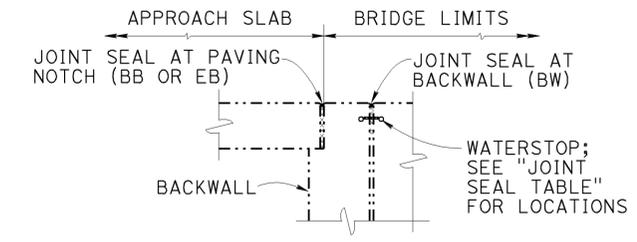
The following notes apply to JOINT SEAL TYPE B:

- 1) Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
- 2) 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.
- 3) W1 shall be the smaller of the values determined as follows:
  - A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
  - B) 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.
- 4) 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.

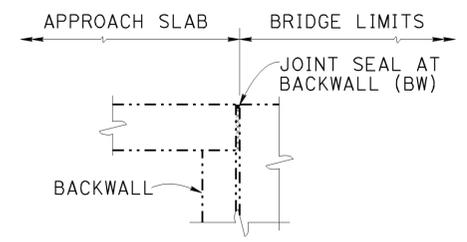
For details not shown see standard plan B6-21.



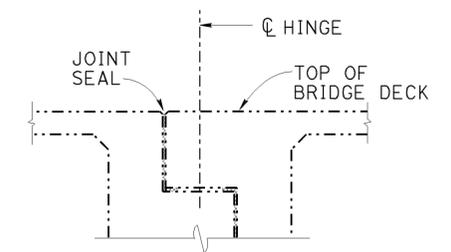
DIAPHRAGM ABUTMENT



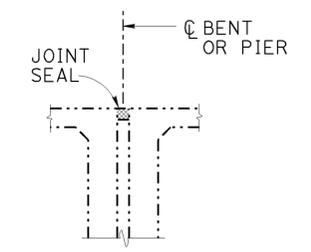
ABUTMENT WITH BACKWALL AND PAVING NOTCH



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. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

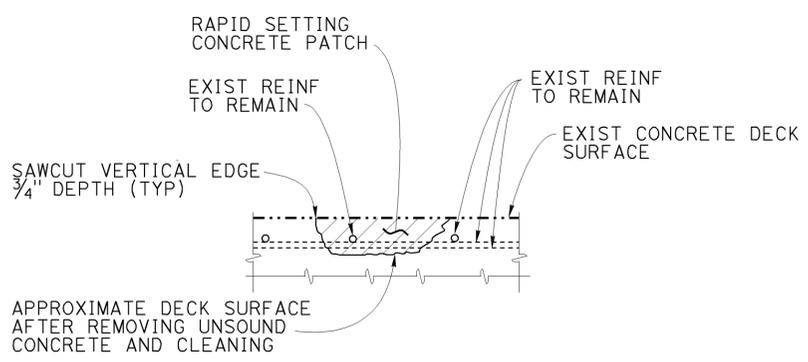
STRUCTURES MAINTENANCE DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Gerald Joo	CHECKED Tony Brake	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	Various	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b>  <b>MISCELANEOUS DETAILS NO. 2</b>								
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo			POST MILE			Varies							
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake													
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0 1 2 3	UNIT: 3489	PROJECT NUMBER & PHASE: 0700021229 1	CONTRACT NO.: 07-1W2904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <td>05-02-12</td> <td>06-15-12</td> <td>11-20-12</td> <td>12-06-12</td> </tr> </table>	05-02-12	06-15-12	11-20-12	12-06-12	SHEET 17	OF 20
05-02-12	06-15-12	11-20-12	12-06-12													

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07	LA	60,90,91,101,110,405, etc.	Var	49	51

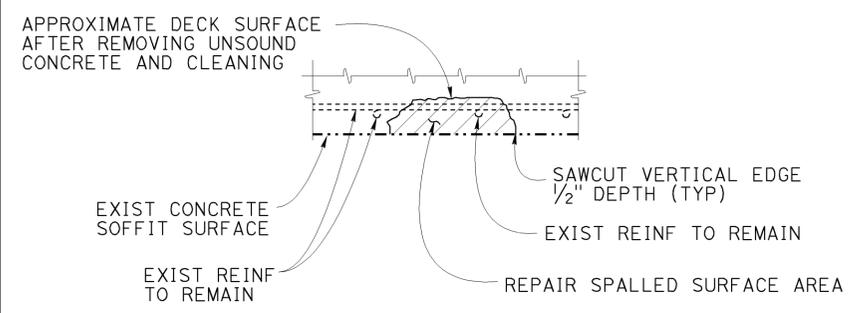
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PLANS APPROVAL DATE 4-8-13	
No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA	

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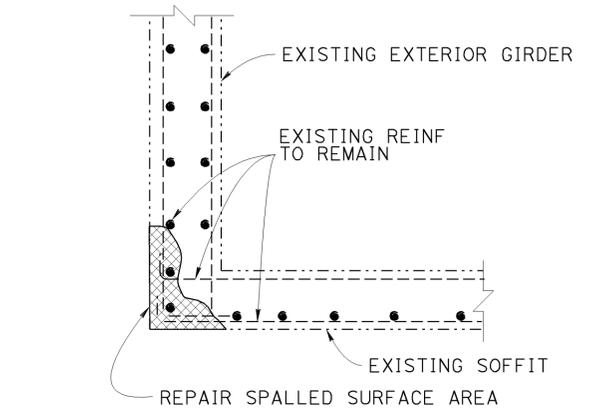
**DECK DAMAGE REPAIR DETAIL**

Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.



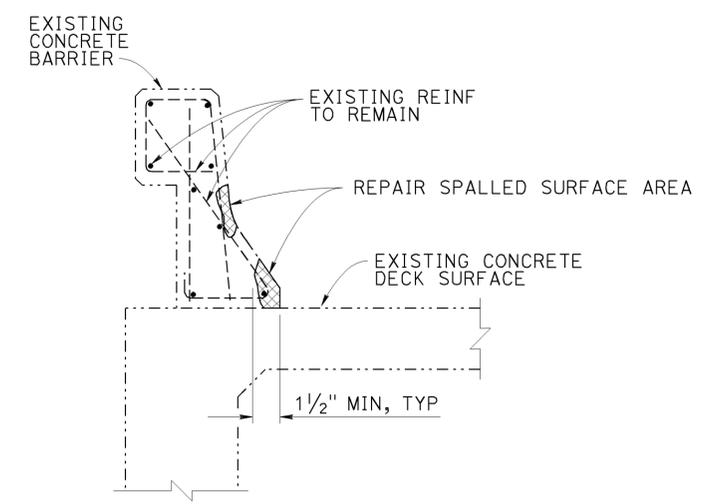
**SOFFIT SPALL REPAIR DETAIL**

Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.



**SPALLED SURFACE AREA DETAIL**

Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.

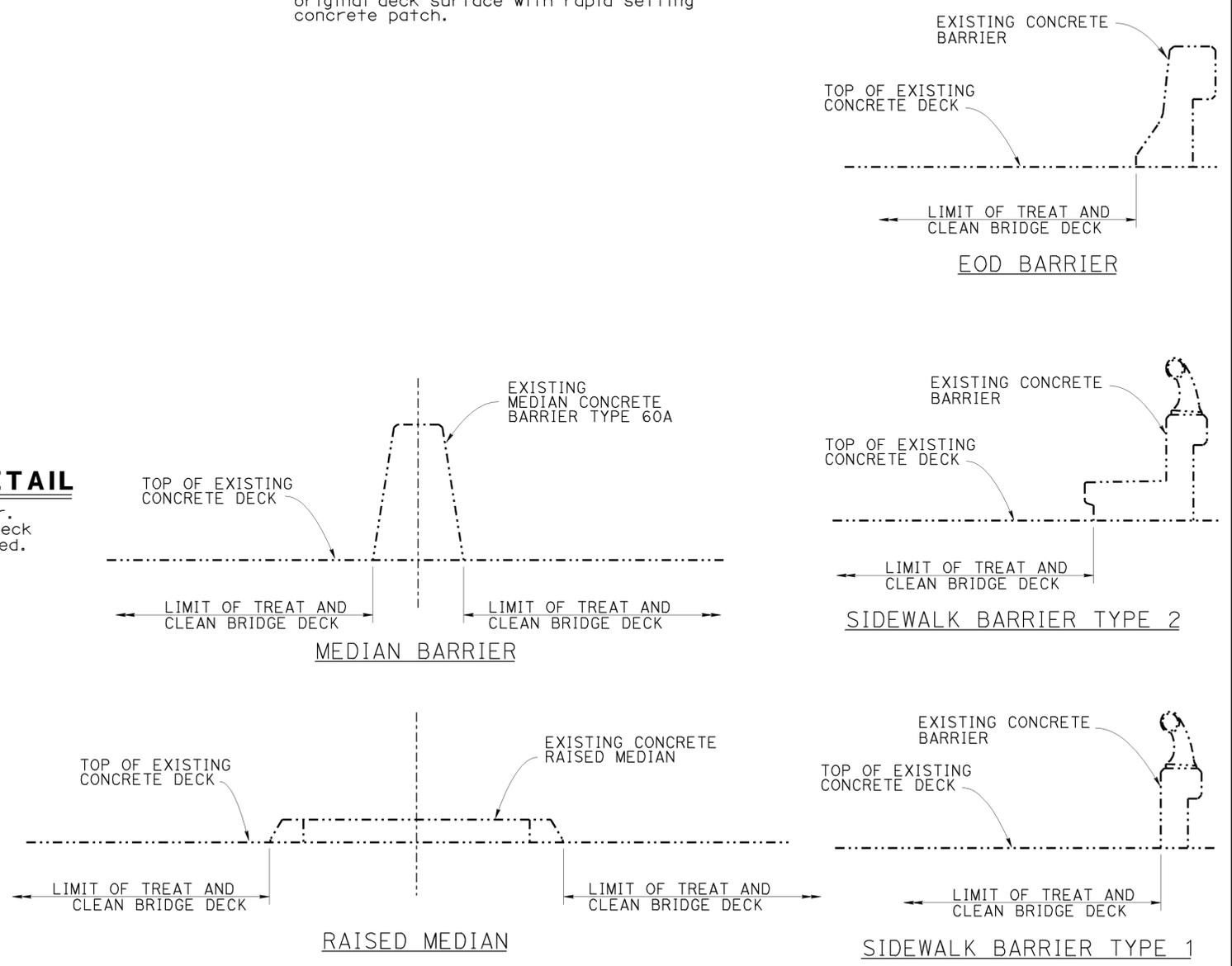


**CONCRETE BARRIER SPALL REPAIR DETAIL**

Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.

**DECK REPAIR NOTES:**

- Existing reinforcement shall be protected in place during unsound concrete removal and patching operations.
- It is responsibility of the Contractor to repair any reinforcement that is accidentally cut by saw cutting operations.
- When existing transverse reinforcement is exposed in the deck surface, saw cutting may be waived with the approval of the Engineer.
- The saw cut depth shall not exceed 1/2 inch or the concrete cover over the top steel reinforcing bars, whichever is less.
- Remove unsound Portland Cement concrete and unsound concrete patches to expose sound, hard concrete substrate. Replace original deck surface with rapid setting concrete patch.



**TYPICAL LIMITS OF DECK WORK**

NO SCALE

NOTE:  
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DESIGN	BY Gerald Joo	CHECKED Tony Brake
DETAILS	BY Clayton Tom	CHECKED Gerald Joo
QUANTITIES	BY Gerald Joo	CHECKED Tony Brake

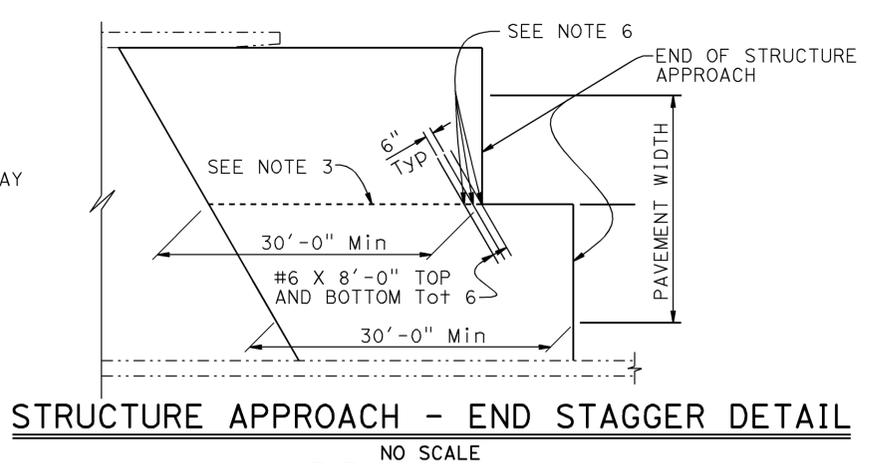
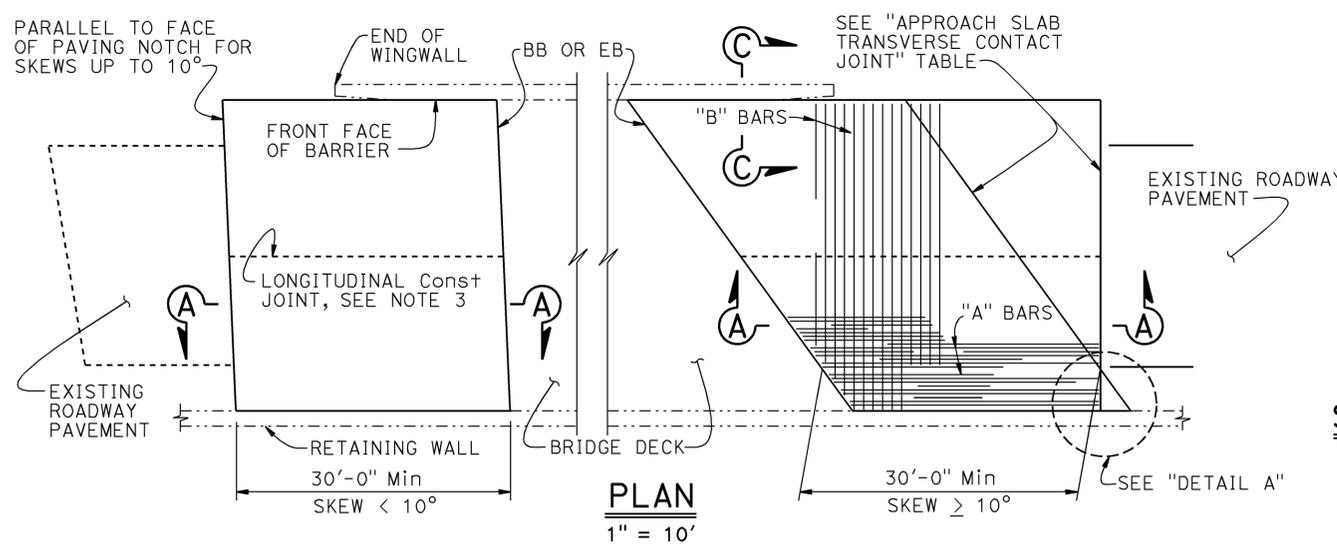
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DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

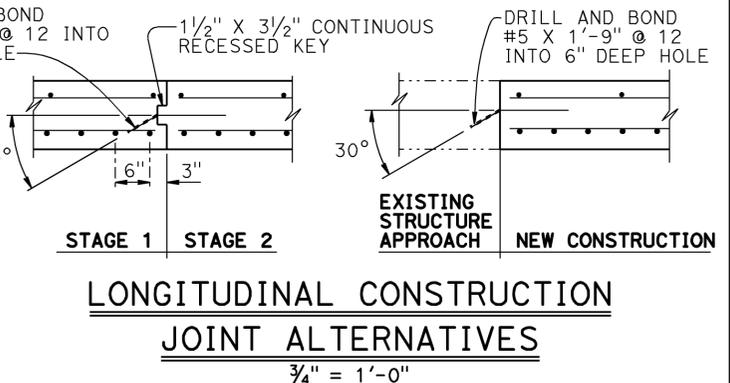
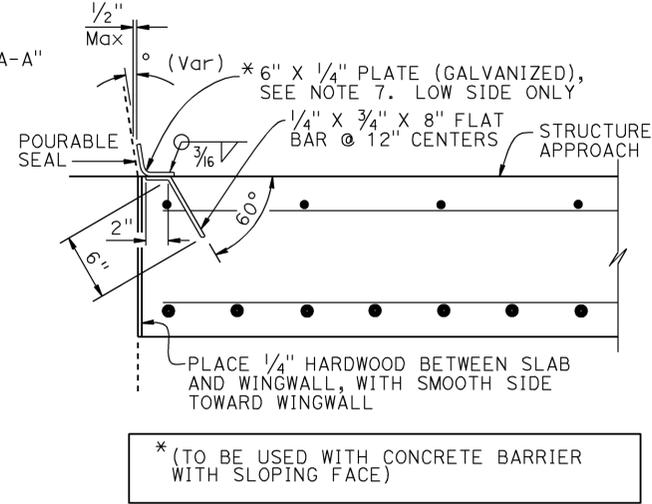
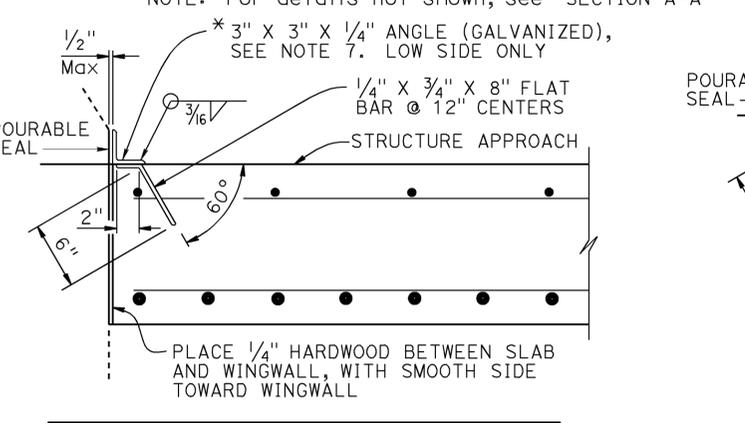
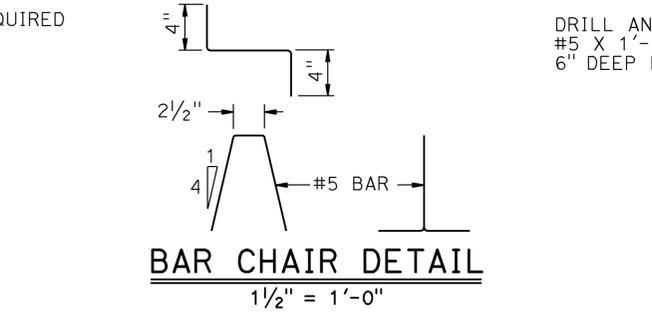
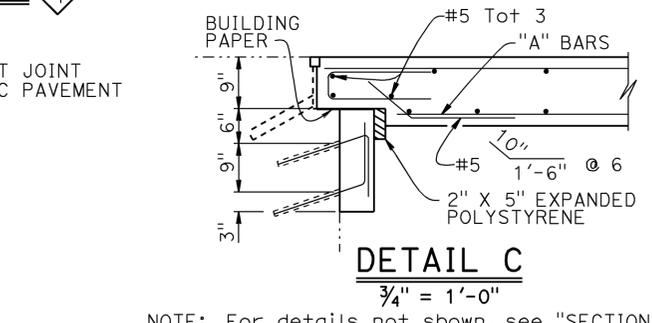
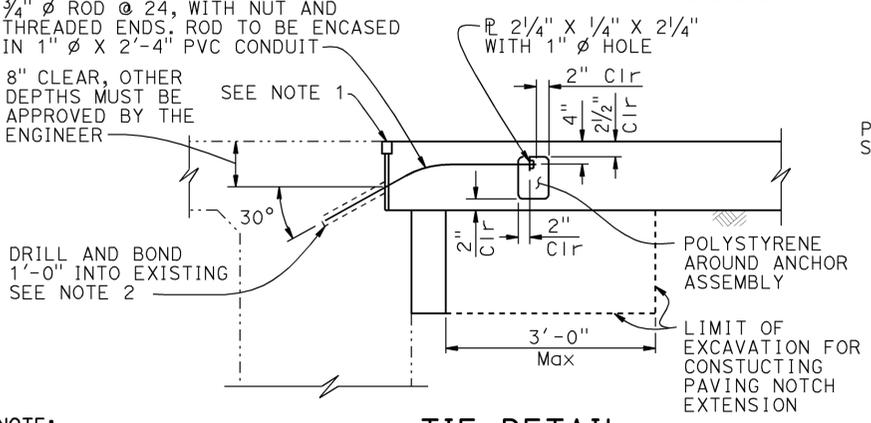
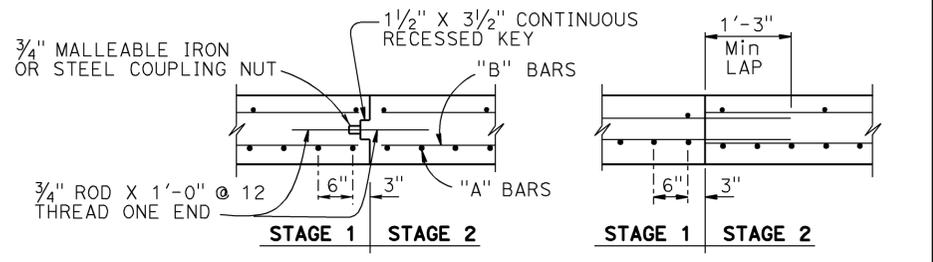
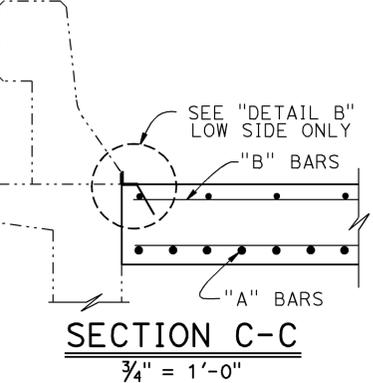
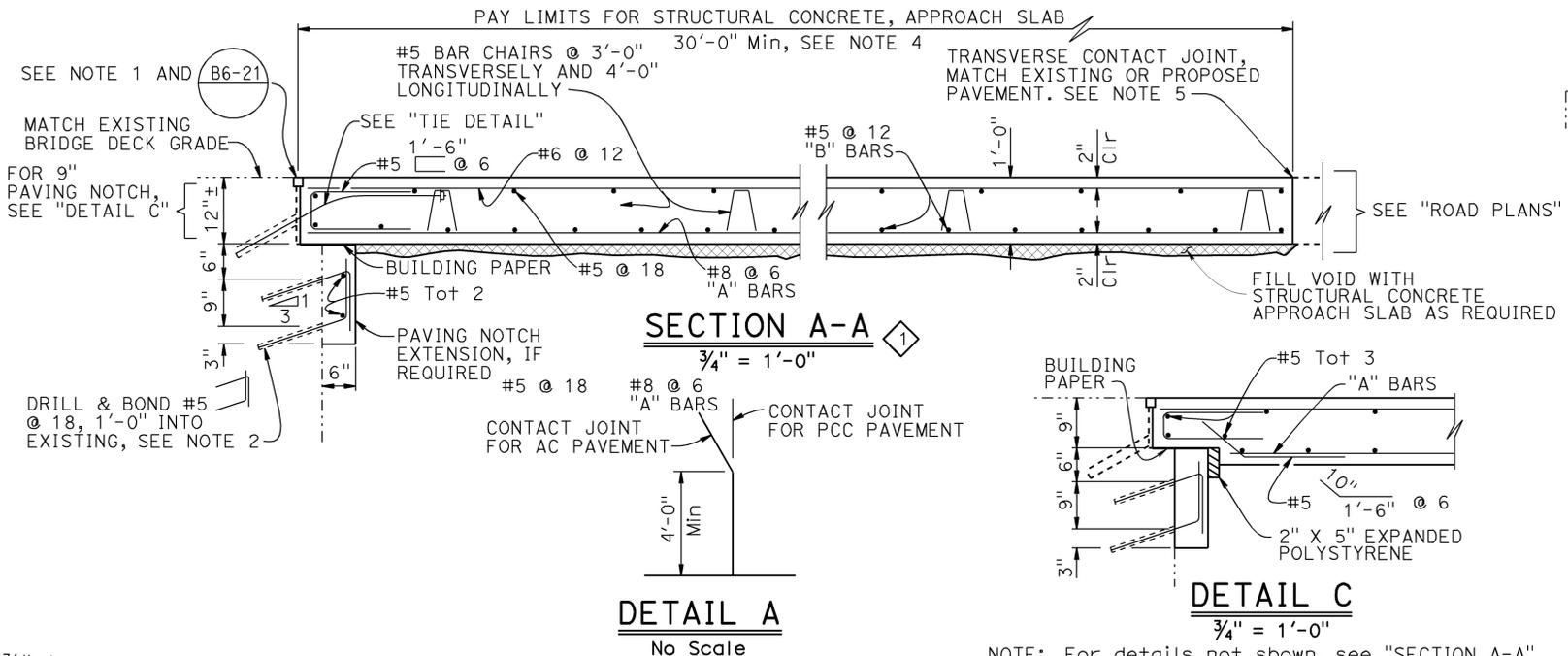
BRIDGE NO. Various  
POST MILE Varies

ROUTES 60,90,91,101,110,405 BRIDGES  
MISCELANEOUS DETAILS NO. 3

TIME PLOTTED => 06:45 05-MAR-2013 DATE PLOTTED => 8:11:26:83 USERNAME =>



APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN 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.

**TIE DETAIL**  
3/4" = 1'-0"

**DETAIL B**  
1 1/2" = 1'-0"

**SPECIAL DETAILS**  
**ROUTE 60, 90, 91, 101, 405 BRIDGES**  
**STRUCTURE APPROACH TYPE R(30D)**

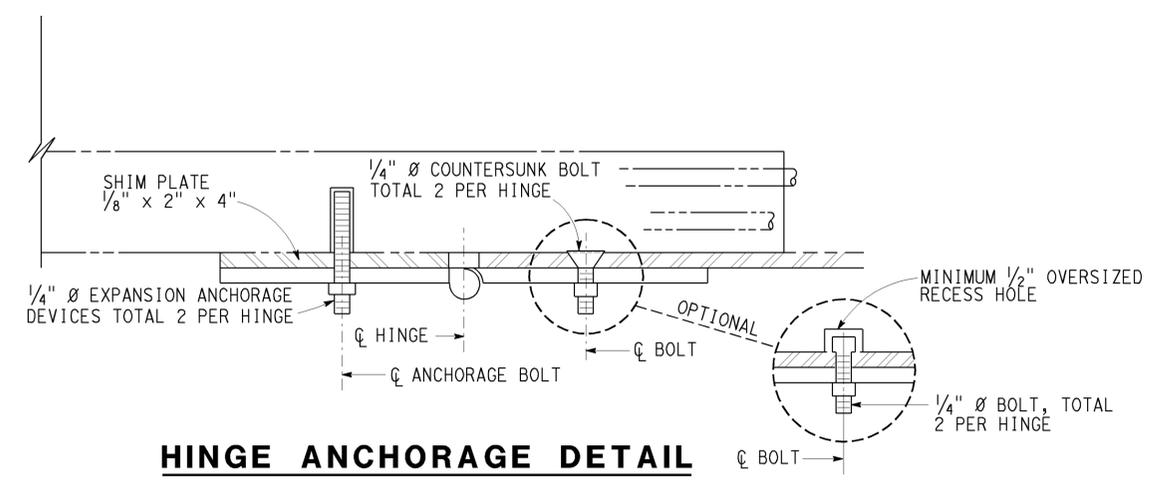
REVISED STANDARD DRAWING  
FILE NO. **xs3-150**  
APPROVAL DATE July 2011

REVISI  
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

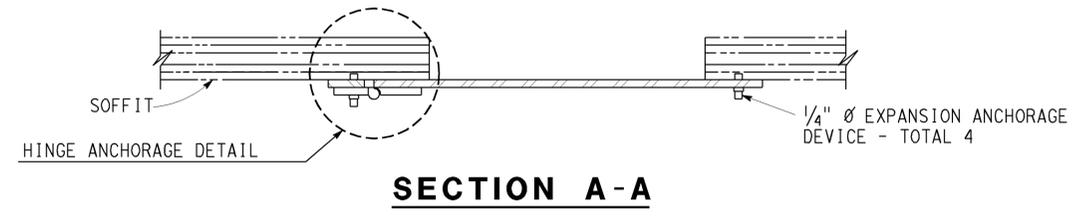
DIVISION OF ENGINEERING SERVICES  
BRIDGE NO. Various  
POST MILE Varies

UNIT: 3489  
PROJECT NUMBER & PHASE: 0700021229 1  
CONTRACT NO.: 07-1W2904  
DISREGARD PRINTS BEARING EARLIER REVISION DATES  
REVISION DATES  
SHEET 19 OF 20

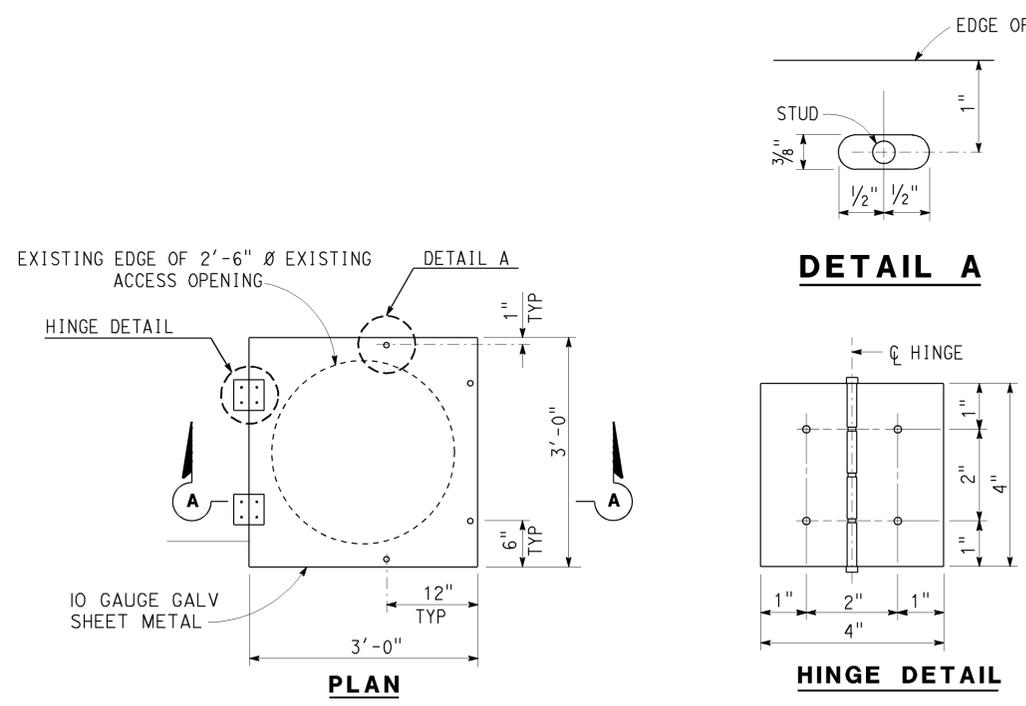
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60,90,91,101,110,405, etc.	Var	51	51
 REGISTERED CIVIL ENGINEER DATE 12-06-12					
PLANS APPROVAL DATE 4-8-13					
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**HINGE ANCHORAGE DETAIL**



**SECTION A-A**



**SOFFIT ACCESS DOOR ASSEMBLY**

Note: Soffit access door opening direction to be determined by the Engineer

**NOTES:**

1. Non-removable pin in hinge.
2. Hinge assembly to be galvanized, brass or stainless steel.
3. Use thread locking system for all hinge nuts.
4. Hinge assembly to be minimum 1/8" thick.

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<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Gerald Joo	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	<b>ROUTES 60,90,91,101,110,405 BRIDGES</b> <b>SOFFIT ACCESS DOOR</b>
	DETAILS	BY Clayton Tom	CHECKED Gerald Joo	LAYOUT	BY Clayton Tom		POST MILE	
	QUANTITIES	BY Gerald Joo	CHECKED Tony Brake	SPECIFICATIONS	BY X		VARIES	
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3489	PROJECT NUMBER & PHASE: 0700021229 1	CONTRACT NO.: 07-1W2904
DISREGARD PRINTS BEARING EARLIER REVISION DATES							REVISION DATES	SHEET 20 OF 20

USERNAME => s117283 DATE PLOTTED => 05-MAR-2013 TIME PLOTTED => 06:45