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STRUCTURE PLANS

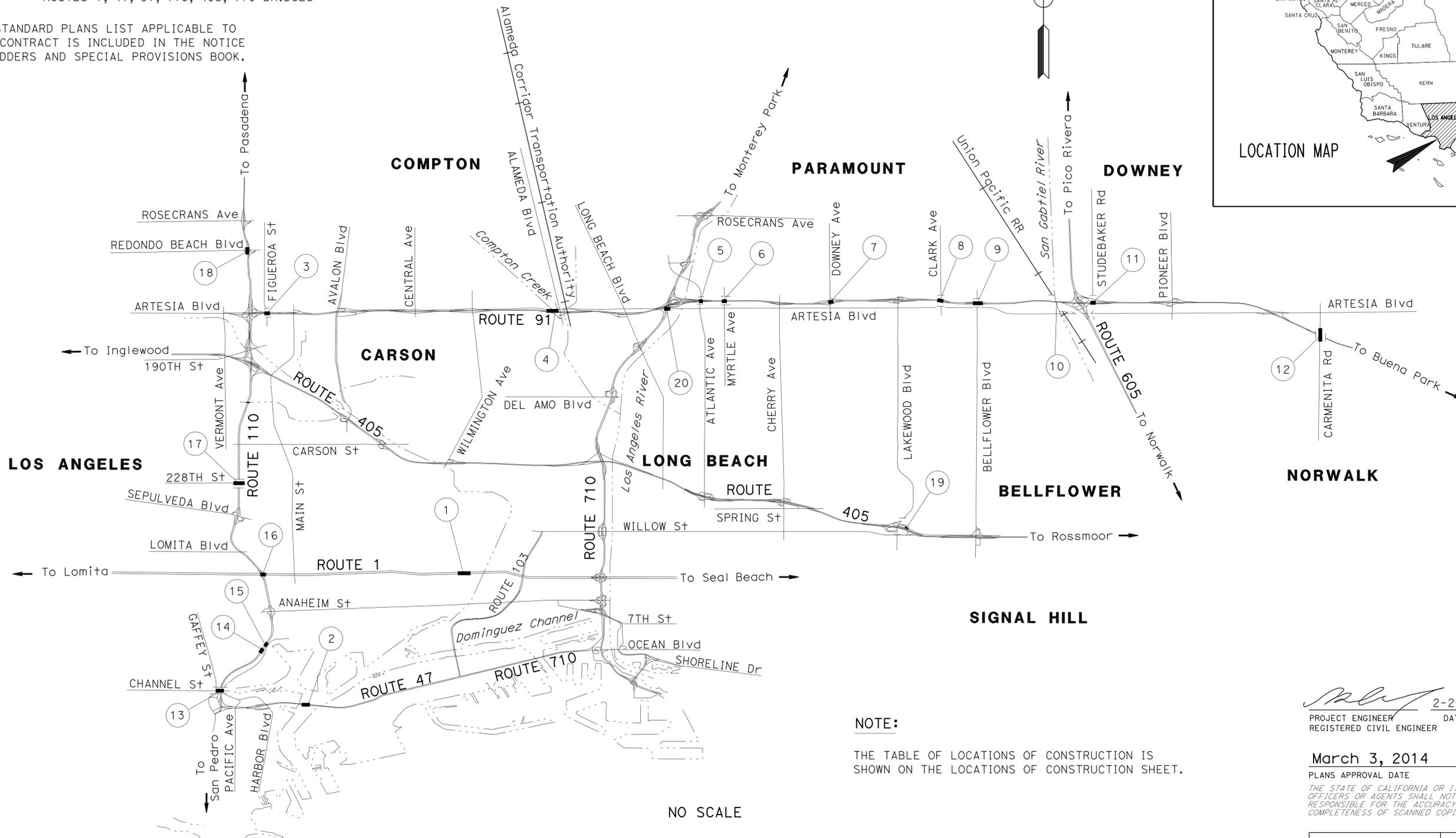
31-48	ROUTES 1, 47, 91, 110, 405, 710 BRIDGES
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

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



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

NO SCALE

PROJECT MANAGER
CHRISTIAN SAM
DESIGN ENGINEER
SHAWN ENGILY

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER
DATE 2-20-14
March 3, 2014
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.	07-1W6104
PROJECT ID	0712000410

DATE PLOTTED => 20-MAR-2014 TIME PLOTTED => 11:53

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

REVISOR BY
 MARLON SARMIENTO
 SHAWN ENFELY

DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 PAUL CRISPI

DATE PLOTTED => 20-MAR-2014
 TIME PLOTTED => 12:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	2	48

REGISTERED CIVIL ENGINEER DATE 2-20-14
 3-3-14
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 SHAHIN ENGLY
 No. 50125
 Exp. 6-30-15
 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.

LOCATIONS OF CONSTRUCTION				
Loc No. #	BRIDGE No.	PM	ROUTE	BRIDGE NAME
1	53-0355	8.72	1	PIPE LINE UC
2	53-1471	0.86	47	VINCENT THOMAS BRIDGE
3	53-2551	R6.52	91	FIGUEROA St UC
4	53-2235	R10.19	91	COMPTON CREEK BOH
5	53-2124	R12.09	91	ATLANTIC Ave UC
6	53-2121	R12.34	91	MYRTLE Ave UC
7	53-1761	R14.10	91	DOWNEY Ave UC
8	53-1759	R15.10	91	CLARK Ave UC
9	53-1718	R15.61	91	BELLFLOWER Blvd UC
10	53-1257	R16.54	91	EAST BELLFLOWER OH
11	53-1706	R17.08	91	STUDEBAKER Rd UC
12	53-1432	R20.45	91	CARMENITA Rd OC
13	53-1938K	R1.25	110	CHANNEL St OH
14	53-0977	2.50	110	UNION OIL OH
15	53-1033	2.58	110	UNION OIL UC
16	53-0969	4.06	110	ROUTE 110/1 SEPERATION
17	53-0965	6.14	110	228TH St OC
18	53-0954	11.24	110	REDONDO BEACH Blvd UC
19	53-1481G	3.20	405	N LAKEWOOD Blvd - N405 Conn
20	53-0820	12.89	710	ARTESIA Blvd OC

LOCATIONS OF CONSTRUCTION
 LC-1

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07	LA	1,47,91,110 405,710	Var	3	48

REGISTERED CIVIL ENGINEER DATE 2-20-14
 3-3-14
 PLANS APPROVAL DATE

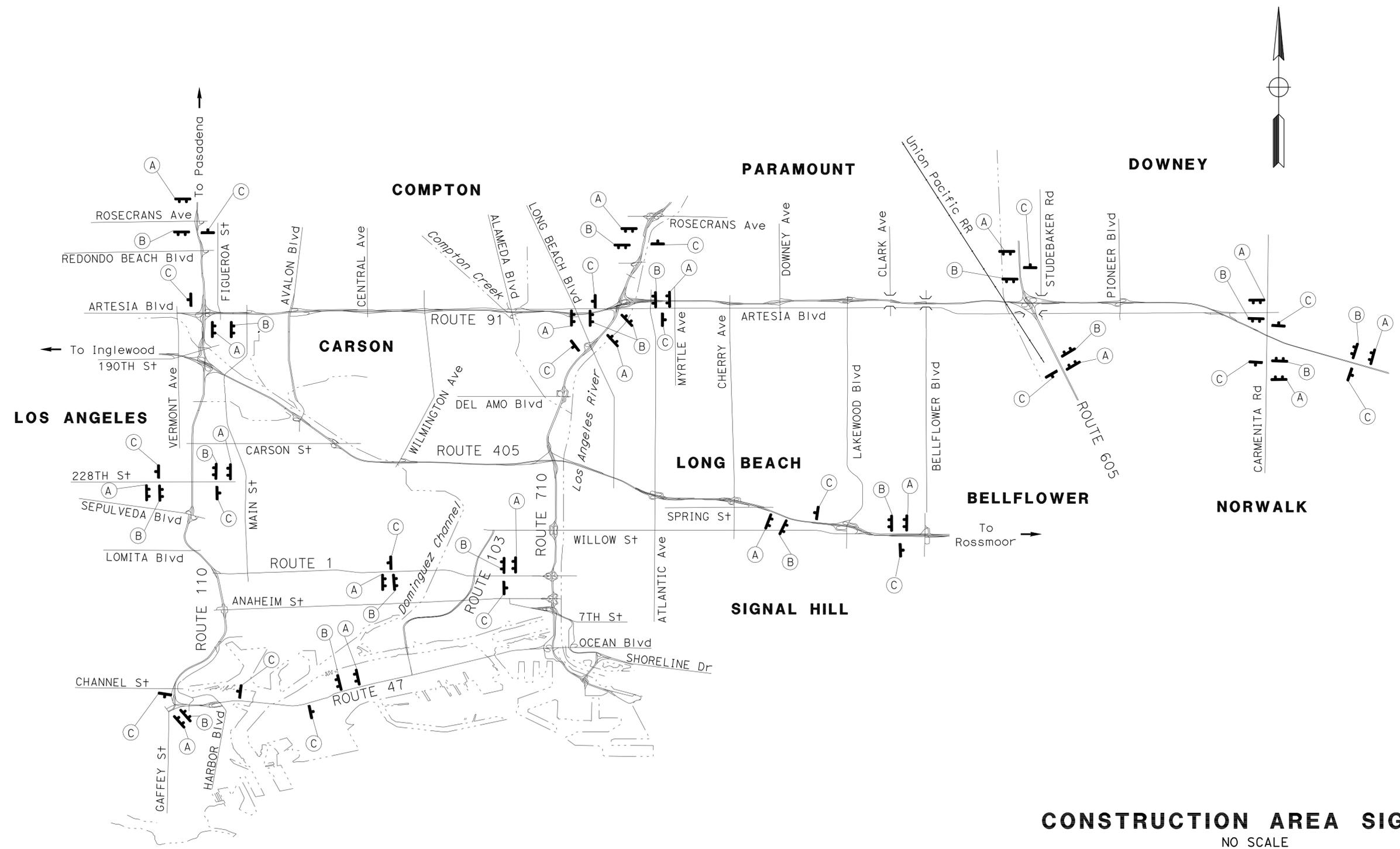
REGISTERED PROFESSIONAL ENGINEER
SHAHIN ENGLIY
 No. 50125
 Exp. 6-30-15
 CIVIL
 STATE OF CALIFORNIA

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NOTES:

- C40 SIGNS MUST BE PLACED APPROXIMATELY 500' IN ADVANCE OF W20-1 SIGNS OR AS THE ENGINEER DETERMINES.
- LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. 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)	72" x 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	19
(B)	W20-1		48" x 48"	ROAD WORK AHEAD	2 - 4" x 6"	18
(C)	G20-2		36" x 18"	END ROAD WORK	1 - 4" x 4"	20



CONSTRUCTION AREA SIGNS
NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: PAUL CRISPI

CALCULATED/DESIGNED BY: MARLON SARMIENTO

CHECKED BY: SHAWN ENFELY

REVISOR: MARLON SARMIENTO

DATE: 7/2/2010

REVISIONS:

NO.	DATE	DESCRIPTION

LAST REVISION: 03-03-14
 DATE PLOTTED => 20-MAR-2014
 TIME PLOTTED => 12:18

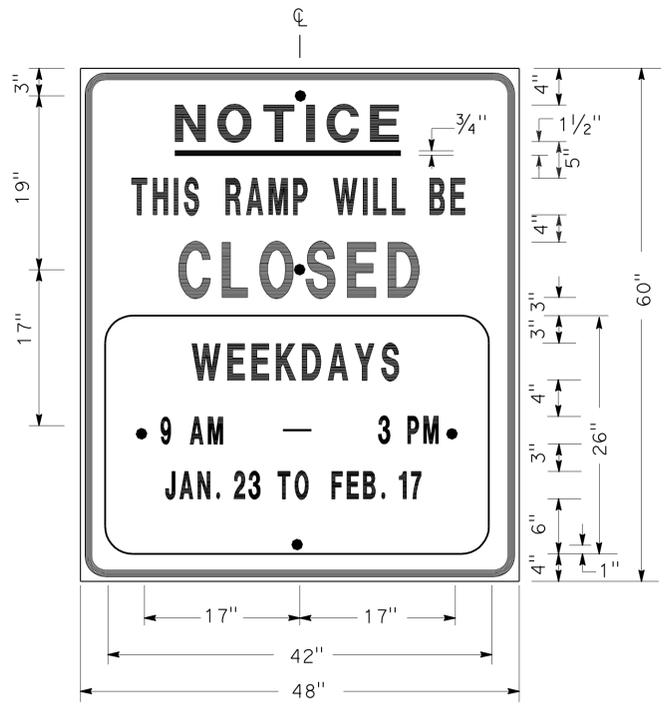
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	4	48

Duke M Huynh 2-28-14
 REGISTERED CIVIL ENGINEER DATE

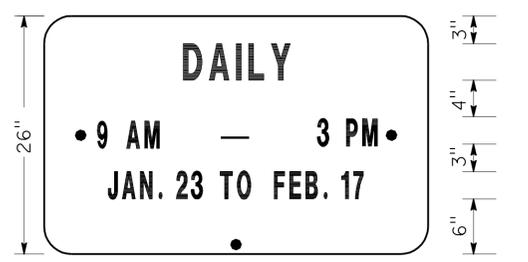
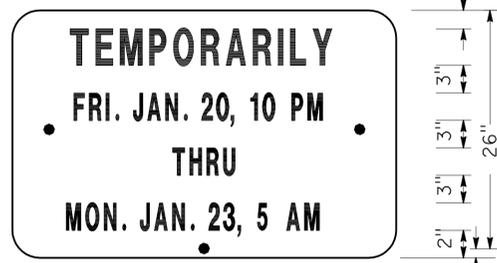
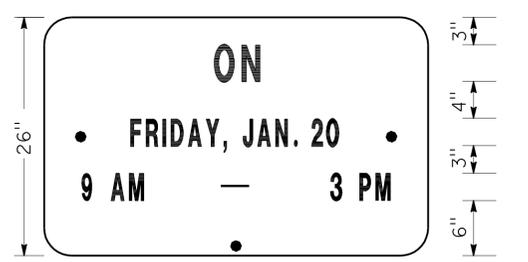
3-3-14
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 DUKE HUYNH
 No. 65591
 Exp. 9-30-15
 CIVIL
 STATE OF CALIFORNIA



SIGN SP-1



ALTERNATE OVERLAY PANELS (TYPICAL)

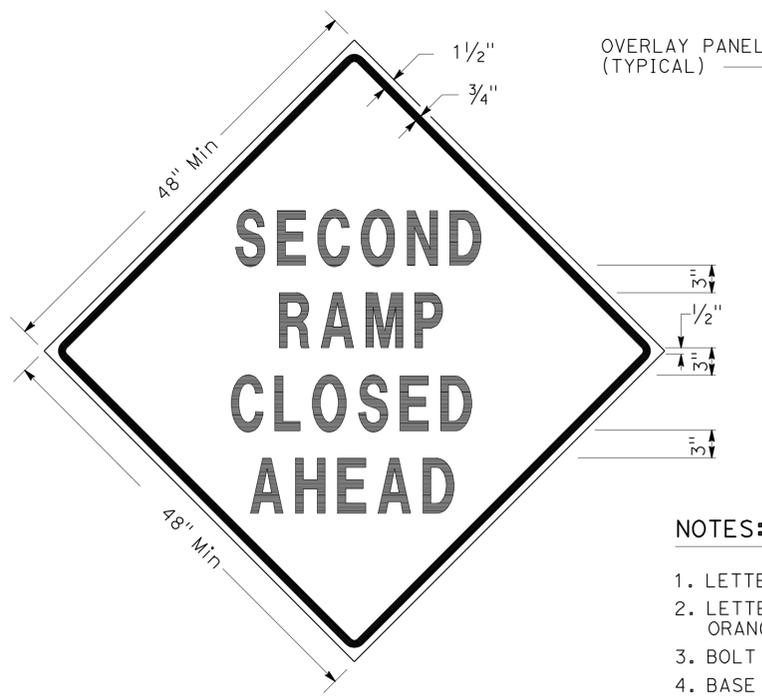
NOTES: SIGN SP-1

- 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 REVISED STANDARD PLAN RSP T14.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES

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

SHEET 1 OF 2

NO SCALE

THD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

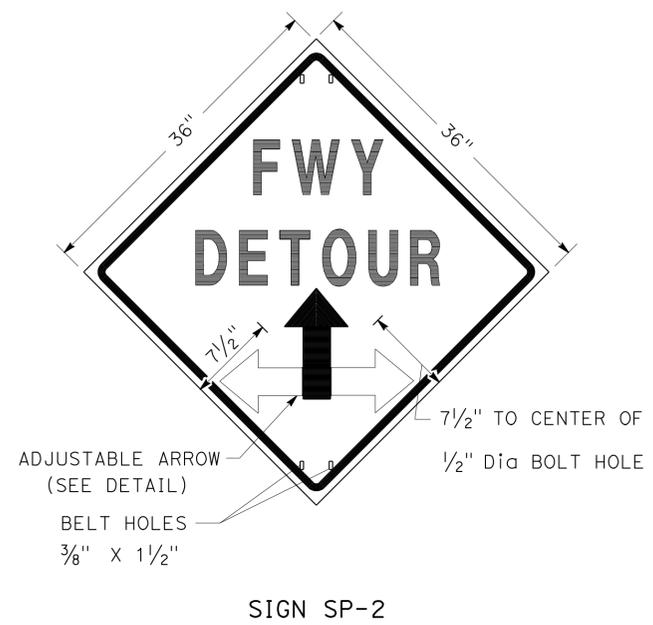
FUNCTIONAL SUPERVISOR
DENIS S KATAYAMA

CALCULATED/DESIGNED BY
ALBERT K YU

CHECKED BY
DUKE HUYNH

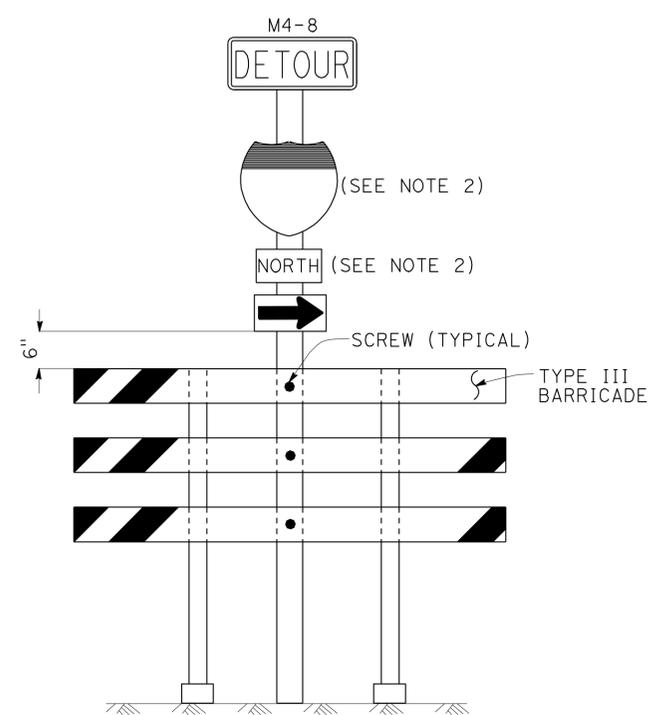
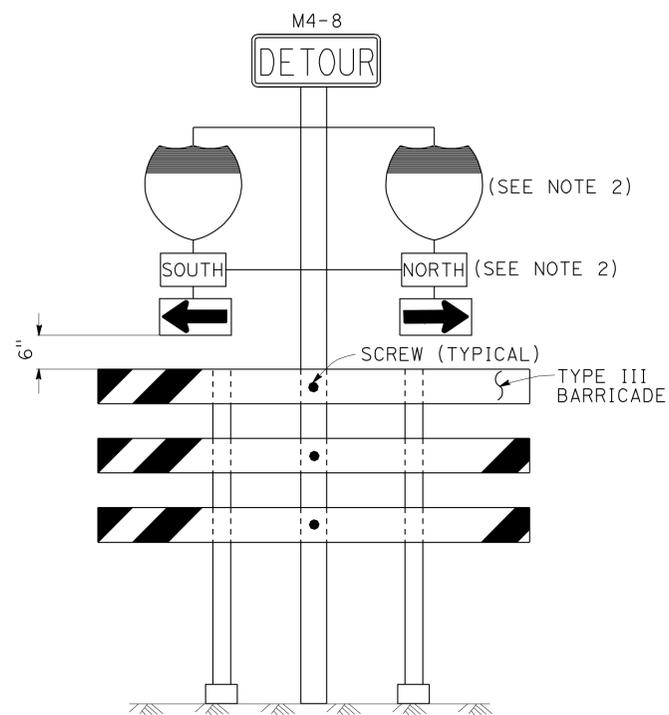
REVISOR
JC

DATE REVISION
3/12



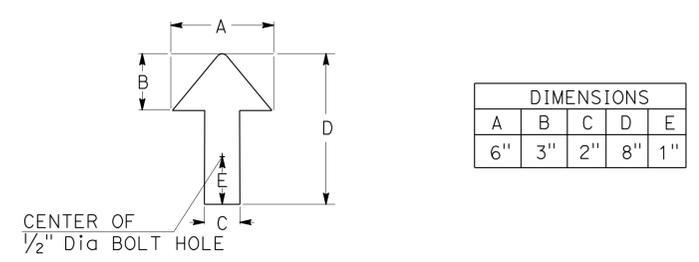
- NOTES:** SIGN SP-2
- LETTERS - 6" SERIES E.
 - LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
 - BASE MATERIAL FOR SIGNS AND ARROWS SHALL BE ALUMINUM (MINIMUM 0.06").
 - BELTS (LUGGAGE STRAPS) SHALL BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
 - 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



- 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



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	1,47,91,110 405,710	Var	6	48

Duke M Huynh 2-28-14
 REGISTERED CIVIL ENGINEER DATE

3-3-14
 PLANS APPROVAL DATE

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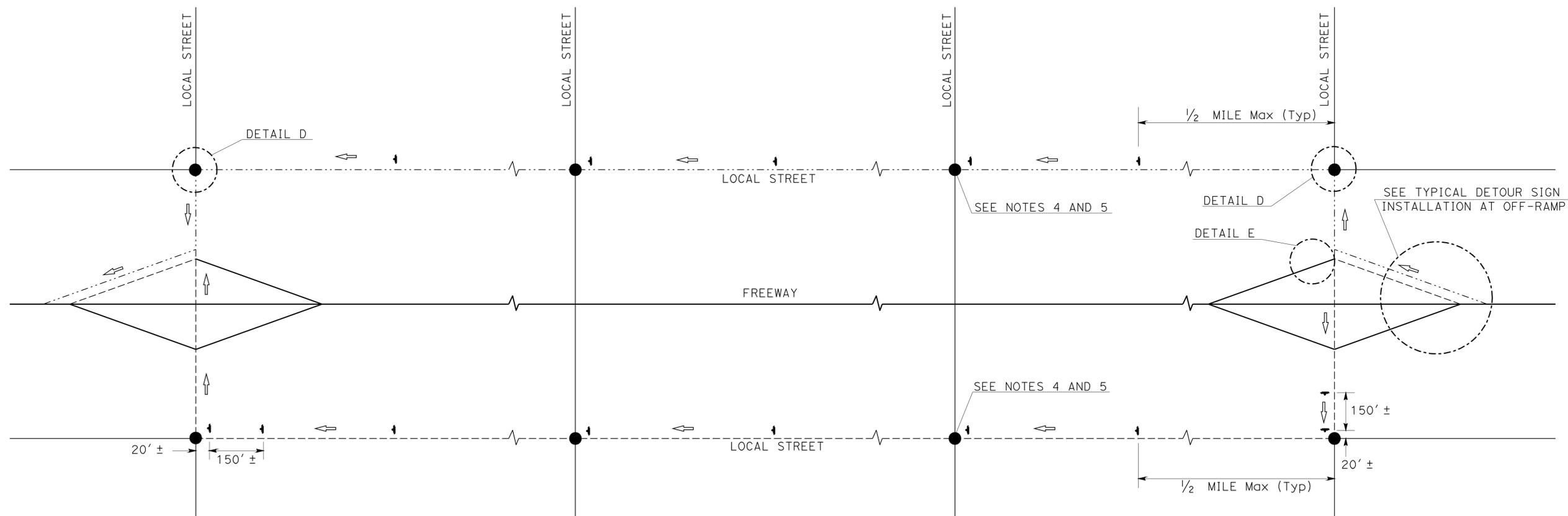
REGISTERED PROFESSIONAL ENGINEER
 DUKE HUYNH
 No. 65591
 Exp. 9-30-15
 CIVIL
 STATE OF CALIFORNIA

LEGEND

- ↑ SIGN SP-2
- AND/OR DESIGNATED DETOUR ROUTE
- ⇨ DETOUR DIRECTION
- CONTROLLED INTERSECTION

NOTES:

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. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
4. 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.
5. 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.
6. 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

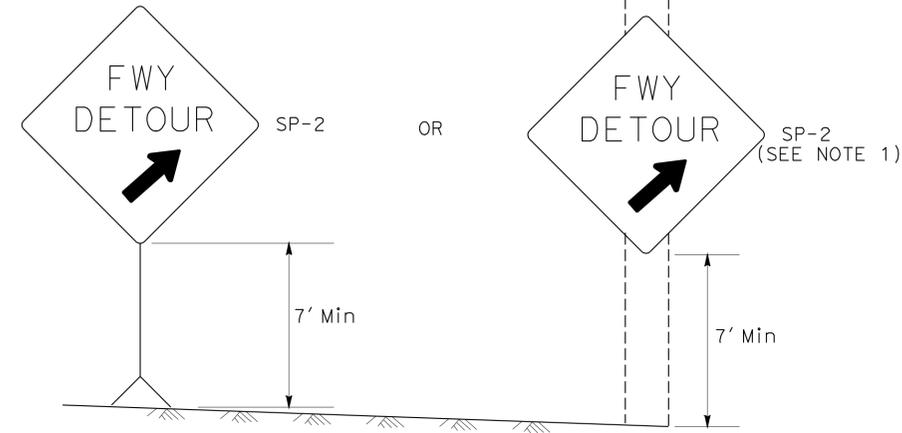
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DT M
 DENIS S. KATAYAMA
 FUNCTIONAL SUPERVISOR
 CHECKED BY
 DUKE HUYNH
 REVISOR BY
 ALBERT K. YU
 DATE REVISION
 3/12
 JC

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	7	48

Duke M Huynh 2-28-14
 REGISTERED CIVIL ENGINEER DATE
 3-3-14
 PLANS APPROVAL DATE

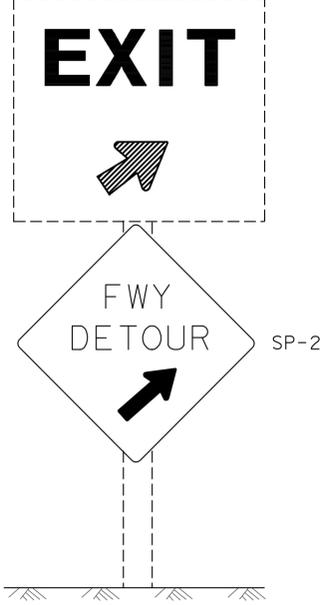
REGISTERED PROFESSIONAL ENGINEER
 DUKE HUYNH
 No. 65591
 Exp. 9-30-15
 CIVIL
 STATE OF CALIFORNIA

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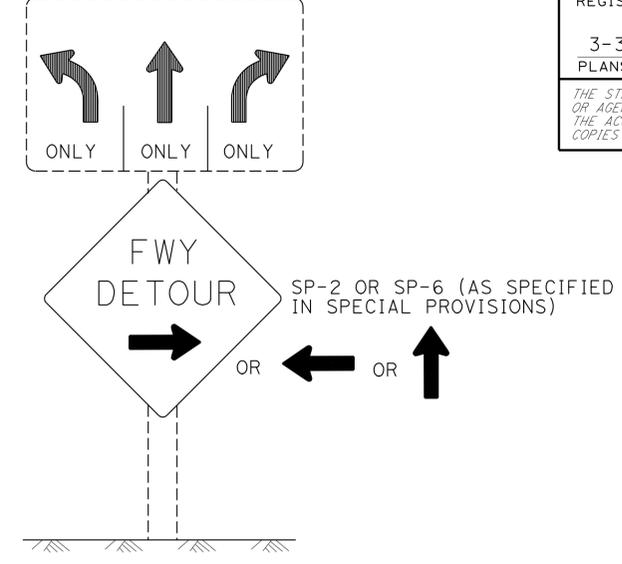
DETAIL A (SEE NOTE 3)

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

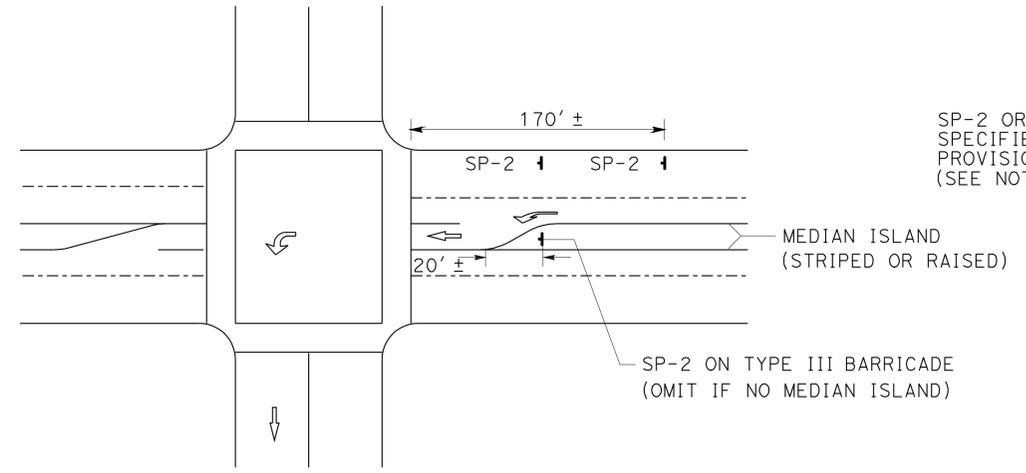


DETAIL B (SEE NOTE 3)

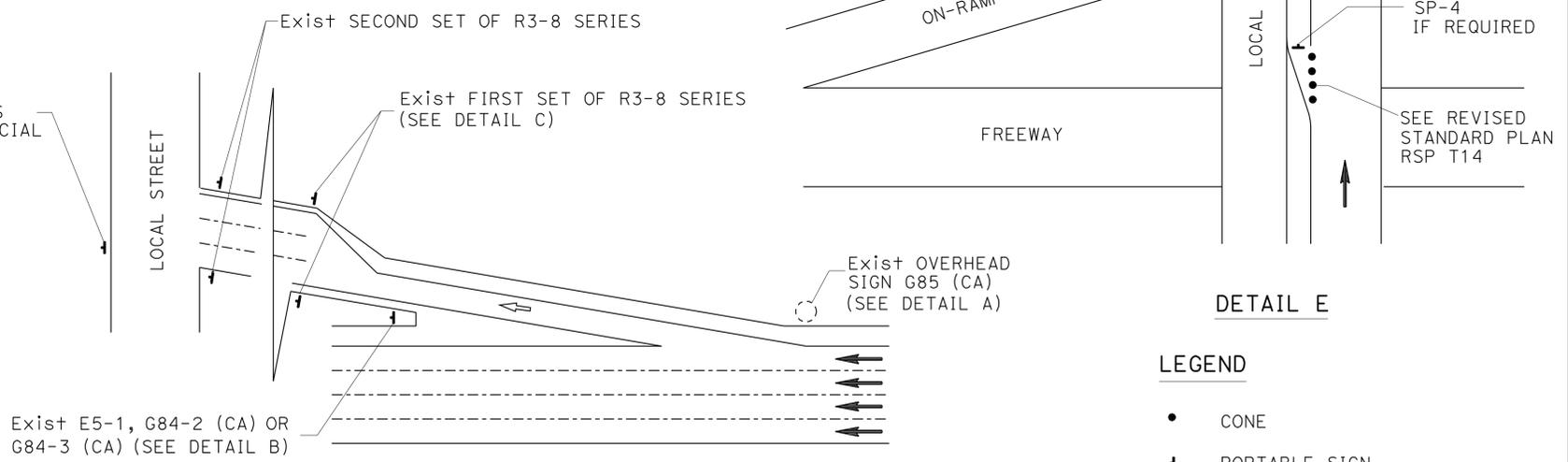
Exist R3-8 SERIES



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.

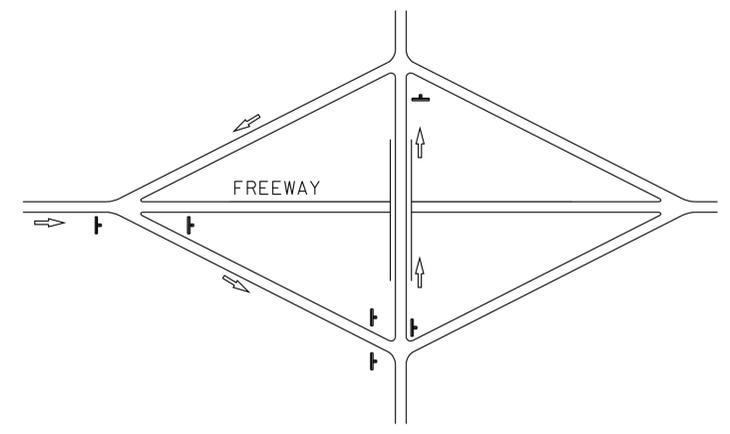
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
 FUNCTIONAL SUPERVISOR DENIS S. KATAYAMA
 CHECKED BY
 CALCULATED/DESIGNED BY
 ALBERT K. YU
 DUKE HUYNH
 REVISOR BY JC
 DATE REVISED 1/14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM

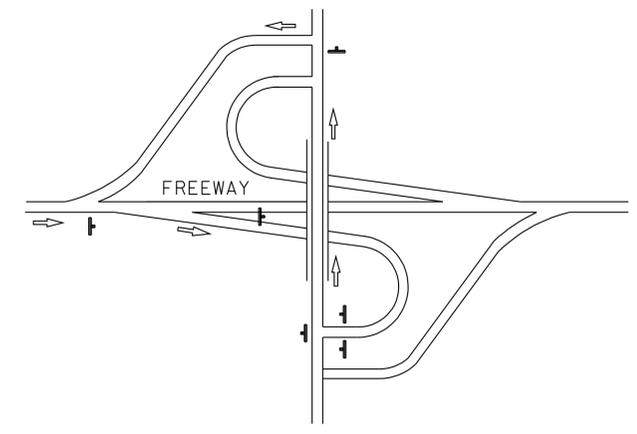
FUNCTIONAL SUPERVISOR
DENIS S. KATAYAMA

REVISOR
ALBERT K. YU
DUKE HUYNH

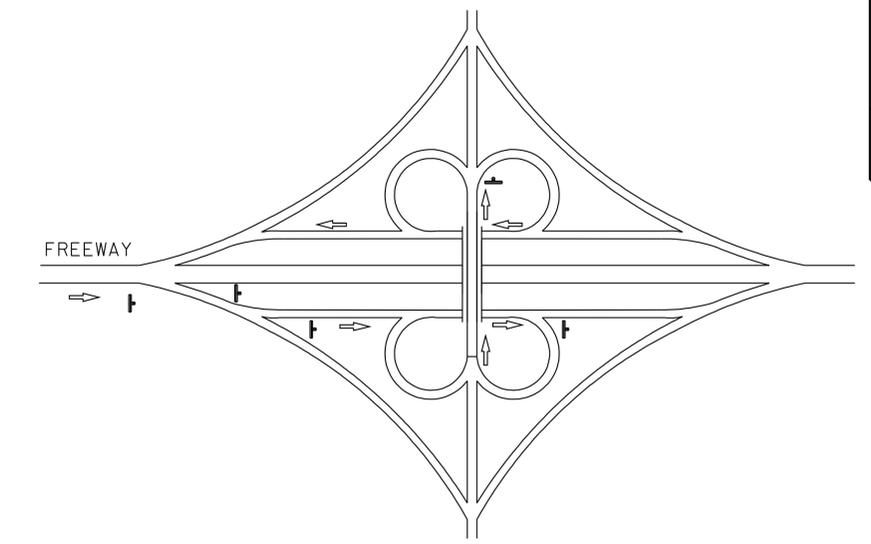
REVISIONS
JC
1/14



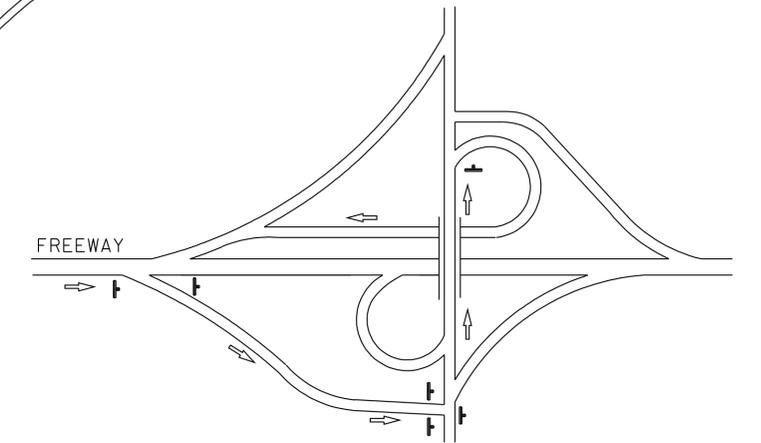
TYPE I



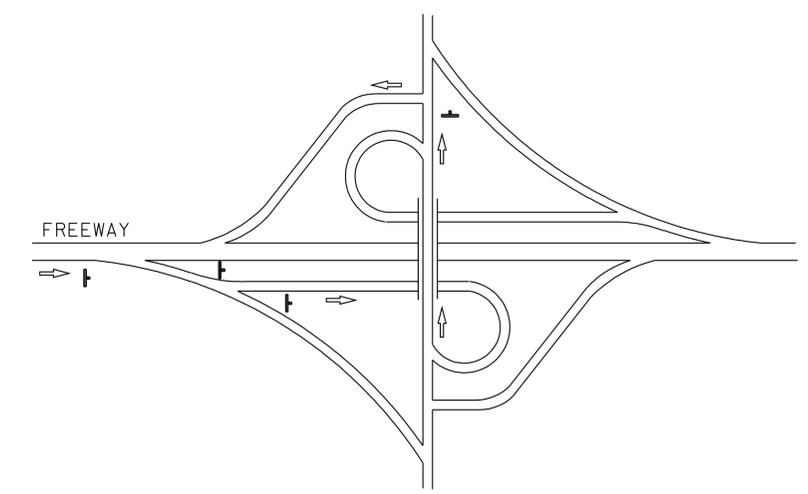
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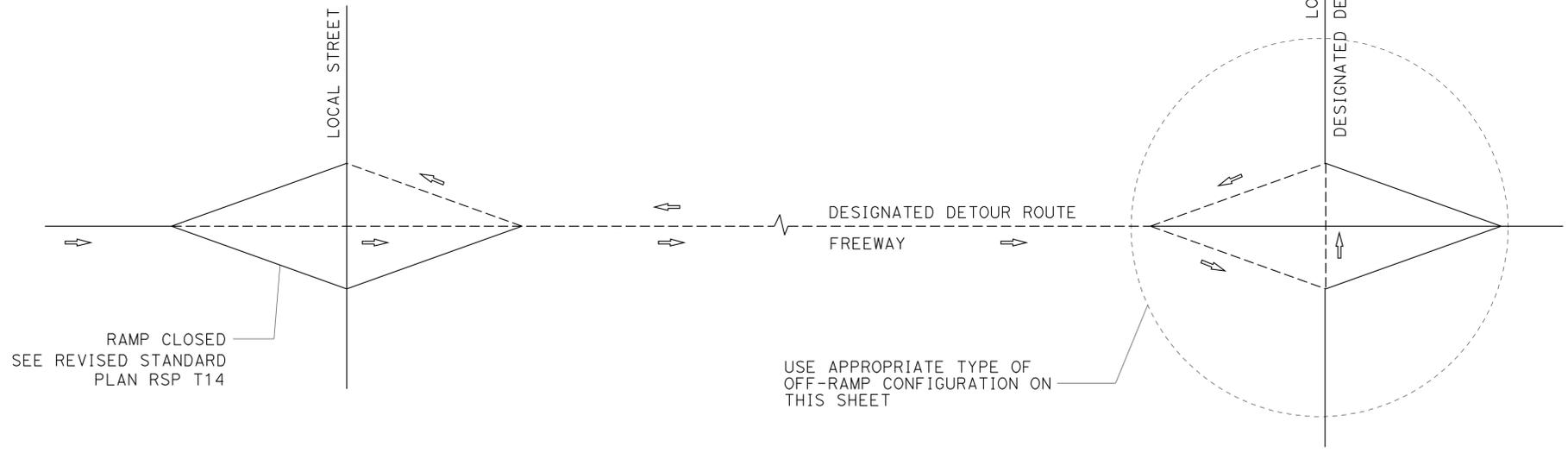
TYPE III



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	1,47,91,110 405,710	Var	9	48

Duke M Huynh 2-28-14
 REGISTERED CIVIL ENGINEER DATE
 3-3-14
 PLANS APPROVAL DATE
 No. 65591
 Exp. 9-30-15
 CIVIL
 STATE OF CALIFORNIA

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NOTES:

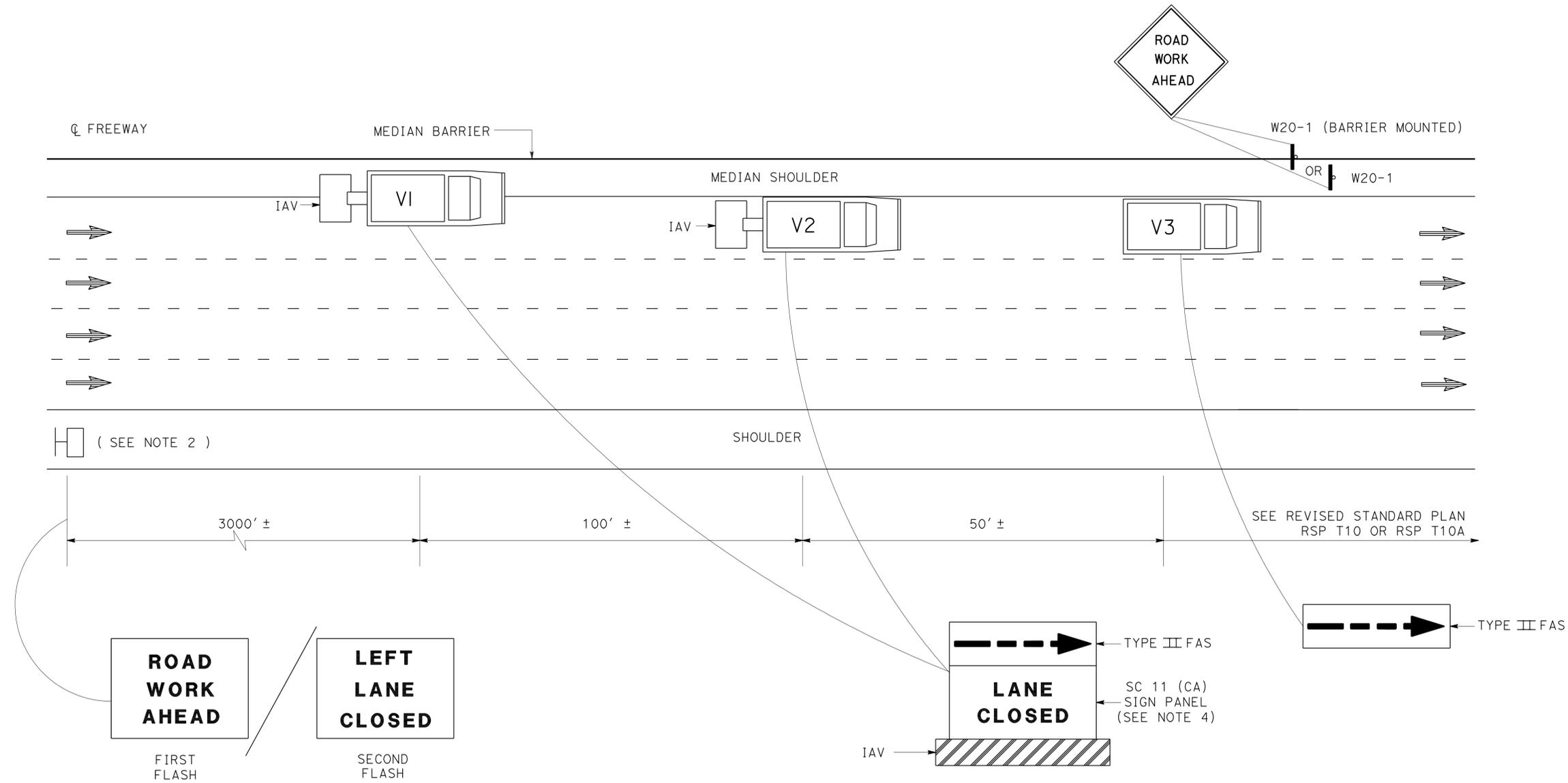
- LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
- PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE LANE.
- A MINIMUM SIGHT DISTANCE OF 1500' SHALL BE PROVIDED IN ADVANCE OF PCMS.
- VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED 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



PCMS OR TRUCK MOUNTED CMS MESSAGE

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

NO SCALE

THD-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans
 FUNCTIONAL SUPERVISOR DENIS S KATAYAMA
 CHECKED BY
 REVISOR BY ALBERT K YU
 DATE REVISED 1/14
 JC

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	10	48

Duke M Huynh 2-28-14
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 3-3-14
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DUKE HUYNH
 No. 65591
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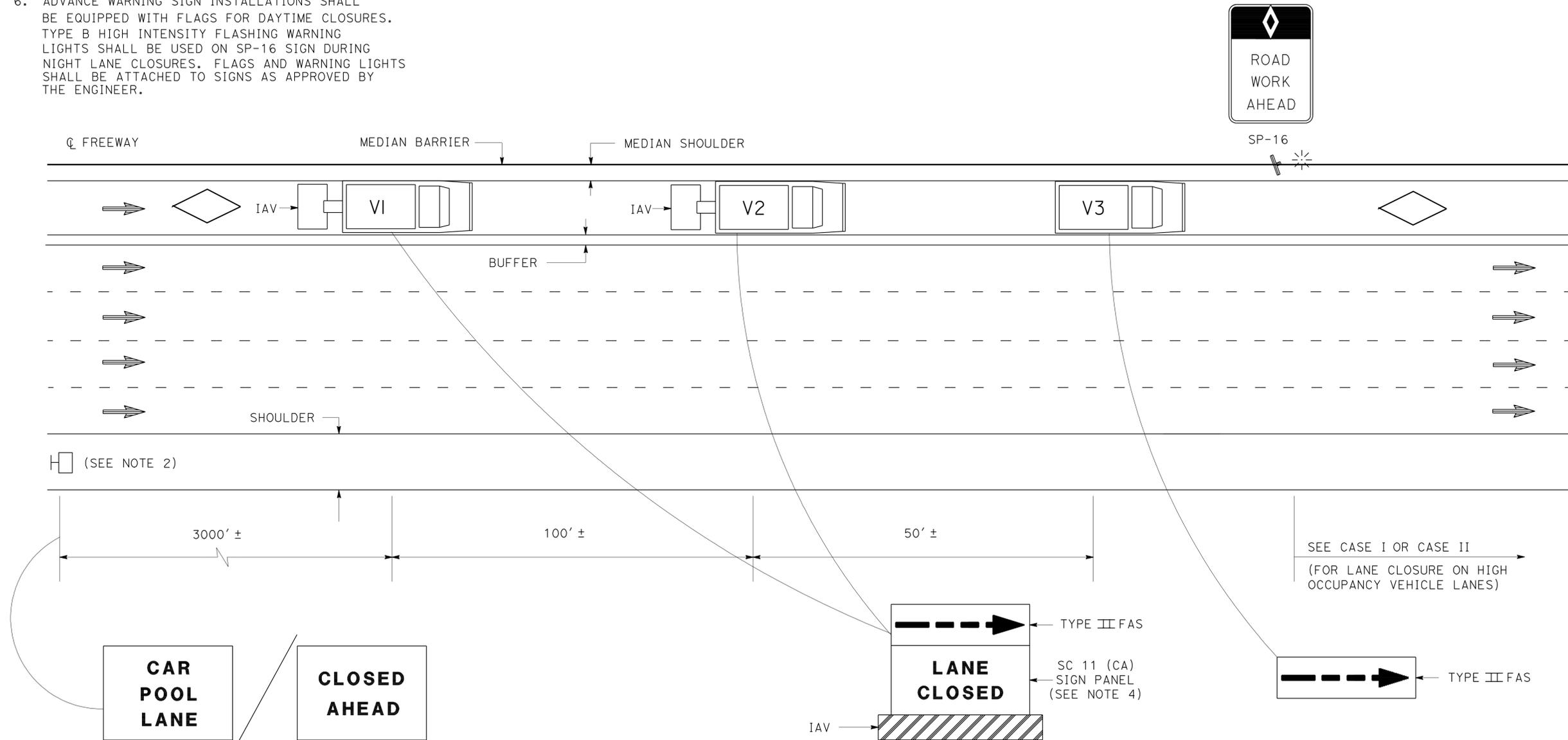
- LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
- PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE HOV LANE.
- A MINIMUM SIGHT DISTANCE OF 1500' SHALL BE PROVIDED IN ADVANCE OF PCMS.
- VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED SHEETING, BLACK ON WHITE OR BLACK ON ORANGE WITH 8" MINIMUM SERIES D LETTERS PER CALTRANS SIGN SPECIFICATIONS.
- PLACE PCMS ON THE MEDIAN SHOULDER WHERE SUFFICIENT ROOM (SUCH AS CHP ENFORCEMENT AREAS) EXISTS.
- ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES. TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS SHALL BE USED ON SP-16 SIGN DURING NIGHT LANE CLOSURES. FLAGS AND WARNING LIGHTS SHALL BE ATTACHED TO SIGNS AS APPROVED BY THE ENGINEER.

LEGEND

- V1, V2 SHADOW VEHICLES
- V3 WORK/APPLICATION VEHICLE
- PCMS
- DIRECTION OF TRAVEL
- HOV LANE
- FLASHING BEACON

ABBREVIATIONS

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



PCMS OR TRUCK MOUNTED CMS MESSAGE

(SEE NOTE 5)

**TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR HIGH OCCUPANCY VEHICLE LANES
WITH MEDIAN SHOULDERS LESS THAN 8 FEET**

NO SCALE

THD-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DT M
 FUNCTIONAL SUPERVISOR
 XXXXX
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED
 3/12
 JC
 DUKE HUYNH
 ALBERT K YU

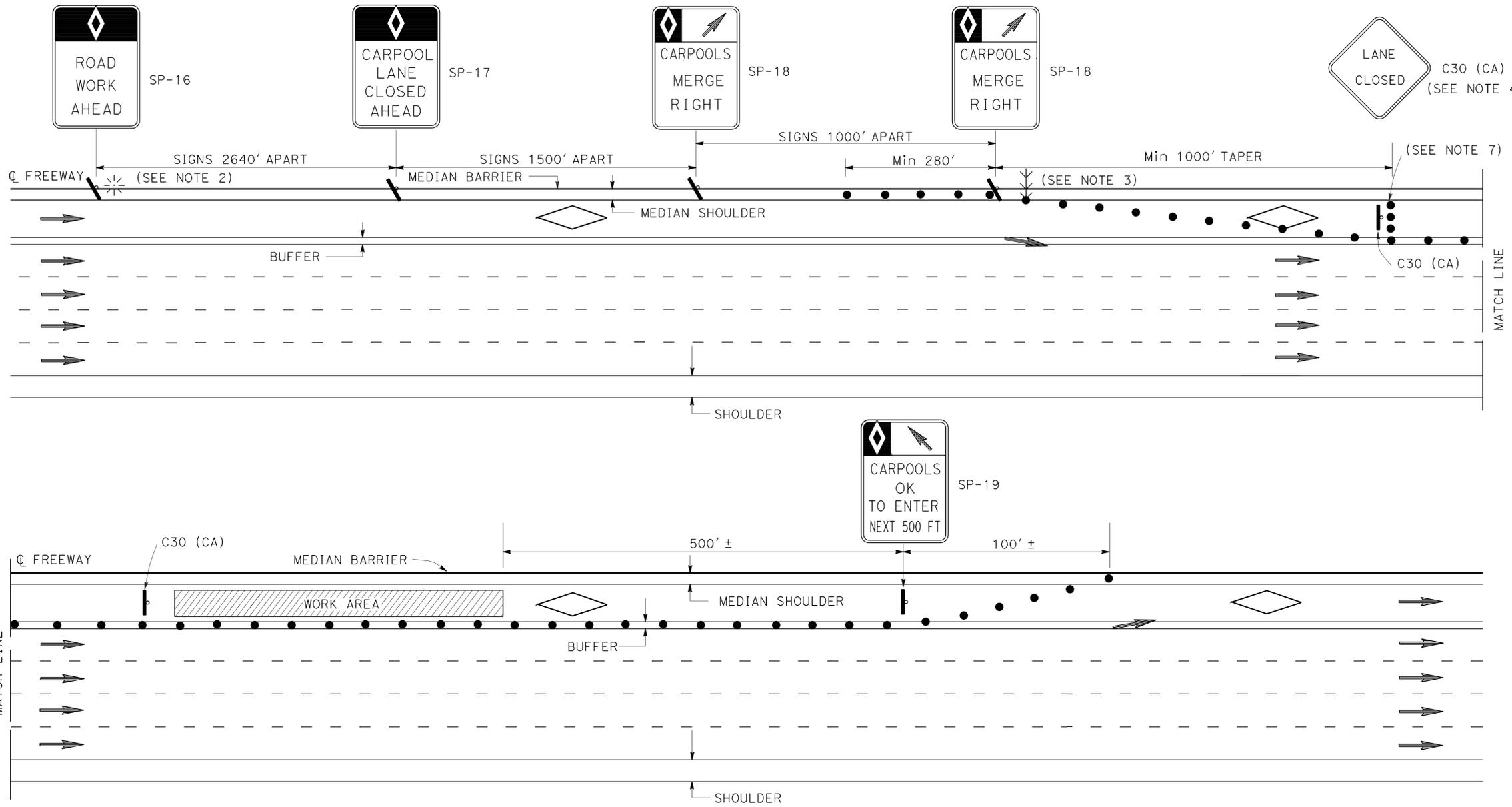
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	11	48

Duke M Huynh 2-28-14
REGISTERED CIVIL ENGINEER DATE

3-3-14
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
DUKE HUYNH
No. 65591
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA



- LEGEND**
- CONE
 - ⚡ FLASHING BEACON
 - ◇ HOV LANE
 - ←←← FLASHING ARROW SIGN
 - ⊥ PORTABLE SIGN
 - DIRECTION OF TRAVEL

- ABBREVIATIONS**
- (CA) CALIFORNIA CODE
 - HOV HIGH OCCUPANCY VEHICLE

SIGN PANEL SIZE (MIN)

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

NOTES: FOR CASE I AND CASE II

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

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

NO SCALE

THD-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

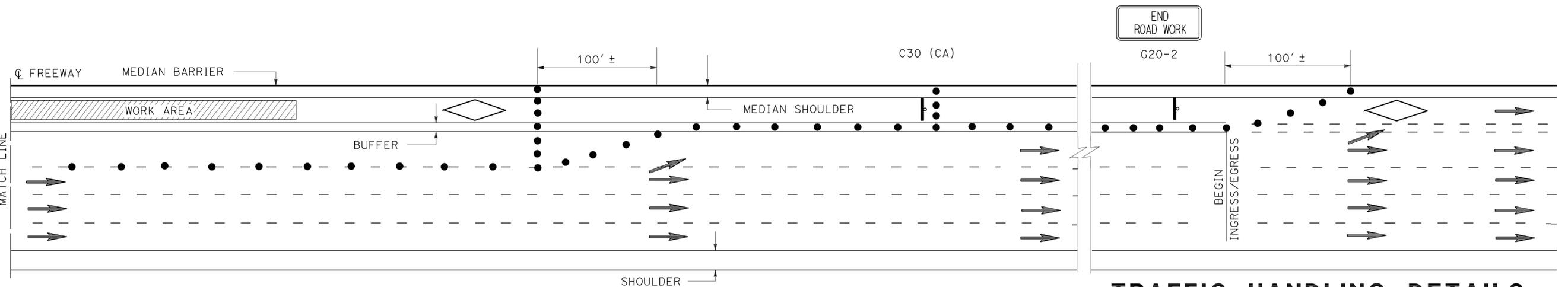
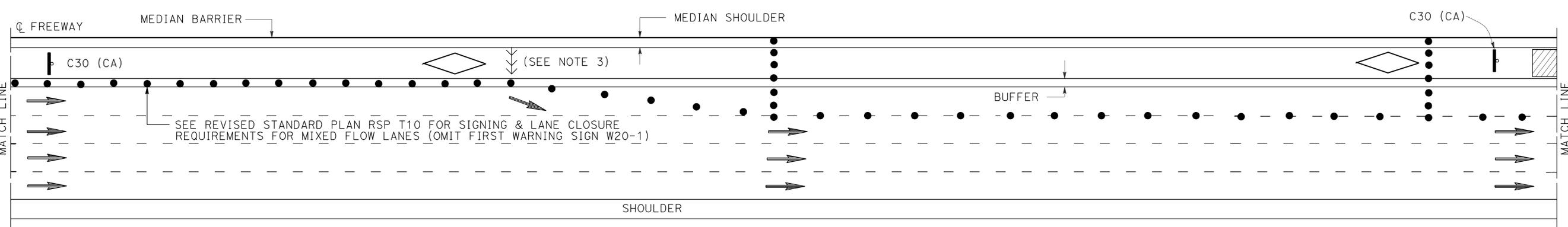
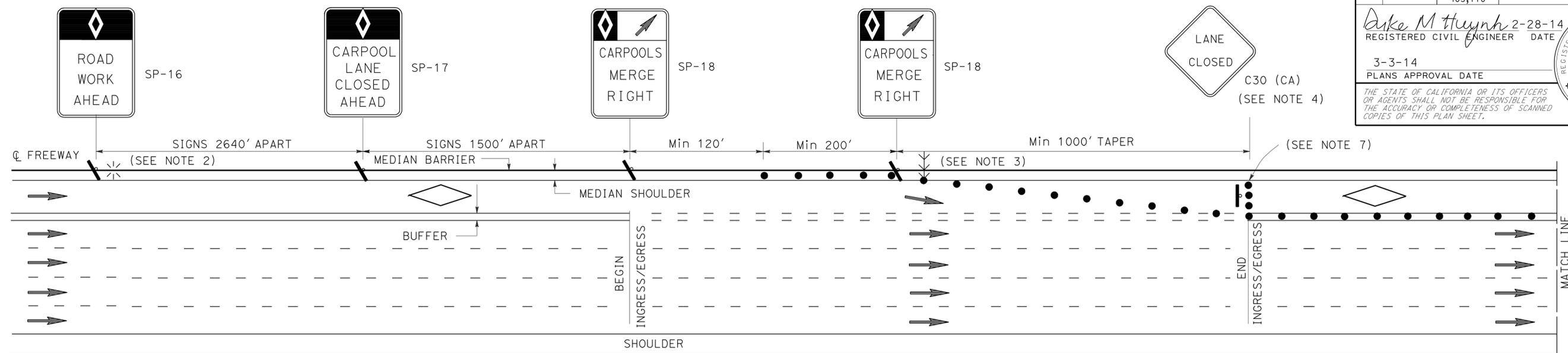
ALBERT K YU
DUKE HUYNH
DENIS S KATAYAMA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	12	48

Duke M Huynh 2-28-14
 REGISTERED CIVIL ENGINEER DATE
 3-3-14
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
 DUKE HUYNH
 No. 65591
 Exp. 9-30-15
 CIVIL
 STATE OF CALIFORNIA



NOTES:

- SEE CASE I FOR NOTES, LEGEND, SIGN PANEL, AND ABBREVIATIONS FOR THIS SHEET.
- CLOSURES OF ONE MIXED FLOW TRAFFIC LANE ADJACENT TO HOV LANE SHOWN ON THIS SHEET. MULTIPLE MIXED FLOW LANE CLOSURES ARE SIMILAR.

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR HIGH OCCUPANCY
VEHICLE LANES AND ADJACENT FREEWAY LANES
BETWEEN INGRESS/EGRESS AREAS
CASE II
 NO SCALE **THD-9**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DT M
 FUNCTIONAL SUPERVISOR DENIS S. KATAYAMA
 CHECKED BY
 CALCULATED/DESIGNED BY
 REVISED BY ALBERT K. YU DATE REVISED 1/14
 JC

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LAA	1,47,91,110 405,710	Var	13	48

Duke M Huynh 2-28-14
REGISTERED CIVIL ENGINEER DATE

3-3-14
PLANS APPROVAL DATE

DUKE HUYNH
No. 65591
Exp. 9-30-15
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:

- EXACT LOCATION OF PCMS WILL BE DETERMINED BY THE ENGINEER TO PROVIDE ADEQUATE VISIBILITY.
- PCMS MESSAGE DISPLAYED WILL BE APPROVED BY THE ENGINEER.
- PCMS MESSAGE SHALL BE CHANGED AT THE BEGINNING OF CURE PERIOD TO REFLECT NUMBER OF CLOSED LANES.

ABBREVIATIONS

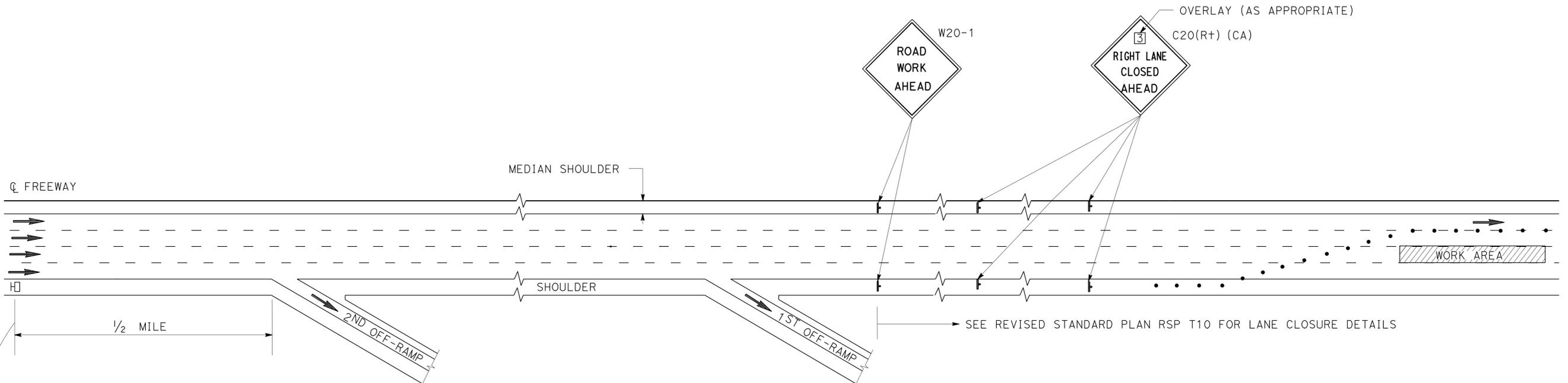
PCMS PORTABLE CHANGEABLE MESSAGE SIGN
(CA) CALIFORNIA CODE

LEGEND

- CONE
- ↑ PORTABLE SIGN
- DIRECTION OF TRAVEL
- PCMS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®

FUNCTIONAL SUPERVISOR: DENIS S. KATAYAMA
CHECKED BY: DUKE HUYNH
DESIGNED BY: ALBERT K. YU
REVISOR: JC
DATE: 1/14



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

WORDING FORMAT FOR PCMS MESSAGE

**TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR CONCRETE PAVEMENT AND
APPROACH SLAB REPLACEMENT**

NO SCALE

THD-10

LAST REVISION: DATE PLOTTED => 20-MAR-2014 03-03-14 TIME PLOTTED => 11:55

THERMOPLASTIC TRAFFIC STRIPE															
LOCATION Nos.	DESCRIPTION	DETAIL No.													
		1	12	13 (Mod)	22	25A	27	27B	29	36	36 A/B	38A	38B	37	39
		LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
1	PIPE LINE UC			180		120	120	60							
3	FIGUEROA St UC			600	1,200	300	600	373		73	73				
4	COMPTON CREEK BOH			90	30	15	120	60							
10	EAST BELLFLOWER OH			1,640		820	820	410				65	140		
13	CHANNEL St OH					740	1,480	740							
15	UNION OIL OH			285		70	190	95							
15	UNION OIL UC			90			30	15							
17	228TH St OC	220													
18	REDONDO BEACH Blvd OC			880		330	660	330							
19	N LAKEWOOD Blvd - N405					135	270	135							
20	ARTESIA Blvd OC		530						1,070			170		1,090	
SUB-TOTAL		220	530	3,765	1,230	2,530	4,290	2,218	1,070	73	73	170	65	140	1,090
SHEET TOTAL		220	4,295				11,338				381			140	1,090

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	14	48

REGISTERED CIVIL ENGINEER DATE 2-20-14

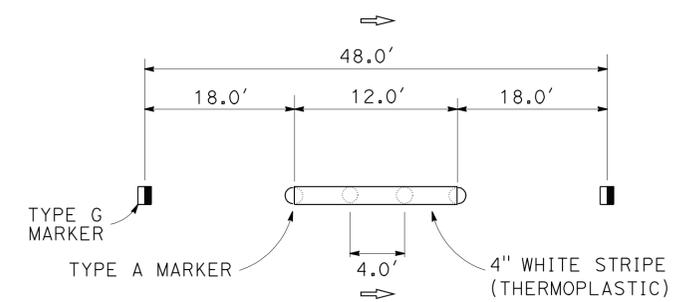
3-3-14 PLANS APPROVAL DATE

SHAHIN ENGLY No. 50125 Exp. 6-30-15 CIVIL

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

NOTE:
PLACE 4" WIDE THERMOPLASTIC STRIPE 12.0' LONG ON TOP OF TYPE A NON REFLECTIVE MARKERS.

LEGEND:
⇨ DIRECTION OF TRAVEL



DETAIL 13 (MODIFIED)
NO SCALE

PAVEMENT MARKER												
LOCATION Nos.	DESCRIPTION	DETAIL No.										
		13 (Mod)	12	29	36 A/B	38B	37	25A	27	22		
		TYPE A (NON-REFLECTIVE)	TYPE G (RETROREFLECTIVE)				TYPE C (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)		TYPE D (RETROREFLECTIVE)		
	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
1	PIPE LINE UC	16	5					11				
3	FIGUEROA St UC	51	14		4			26				
4	COMPTON CREEK BOH	9	3					2		2		
10	EAST BELLFLOWER OH	138	35			13	11	2	69	5		
13	CHANNEL St OH								63			
15	UNION OIL OH	25	7					7				
15	UNION OIL UC	9	3									
18	REDONDO BEACH Blvd OC	74	19					29				
19	N LAKEWOOD Blvd - N405							12				
20	ARTESIA Blvd OC											
SUB-TOTAL		321	85	12	23	4	13	11	2	219	5	2
SHEET TOTAL		321						377				

THERMOPLASTIC PAVEMENT MARKING					
LOCATION Nos.	DESCRIPTION	DIAGONALS	CHEVRONS	BIKE LANE SYMBOL WITH PERSON	BIKE LANE ARROW
		SQFT	SQFT	SQFT	SQFT
13	CHANNEL St OH	126			
20	ARTESIA Blvd OC		142	14	21
TOTAL			303		

PAVEMENT DELINEATION QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110 405,710	Var	15	48

REGISTERED CIVIL ENGINEER DATE 2-20-14

3-3-14
PLANS APPROVAL DATE

SHAHIN ENGLY
No. 50125
Exp. 6-30-15
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.

PAVEMENT DELINEATION REMOVAL QUANTITIES					
LOCATION No.	DESCRIPTION	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE PAVEMENT MARKER
		LF	LF	SQFT	EA
1	PIPE LINE UC	240	105		32
3	FIGUEROA St UC	2,100	669		95
4	COMPTON CREEK BOH	165	83		15
10	EAST BELLFLOWER OH	1,640	913		274
13	CHANNEL St OH	2,220	740	126	63
14	UNION OIL OH	260	166		39
15	UNION OIL UC				
17	228TH St OC		84		
18	REDONDO BEACH Blvd	990	550		122
19	N LAKEWOOD Blvd - N405	405	135		12
20	ARTESIA Blvd OC	1,070	2,963	177	35
TOTAL		9,090	6,407	303	686

PAVEMENT DELINEATION QUANTITIES

PDQ-2

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

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

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	16	48

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE



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

TO ACCOMPANY PLANS DATED 3-3-14

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

TABLE A

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

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

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

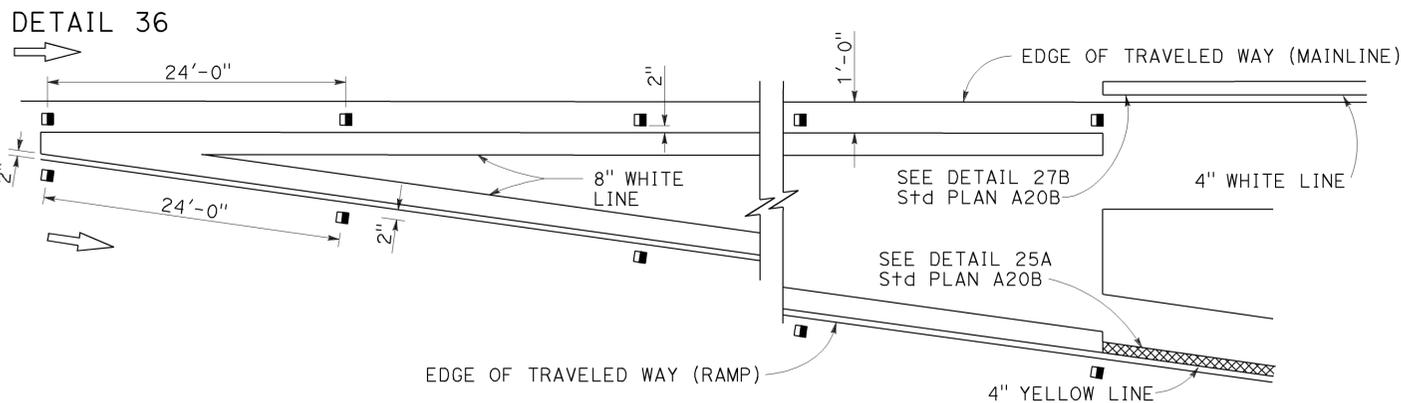
**ABBREVIATIONS
(SHEET 2 OF 2)**

NO SCALE

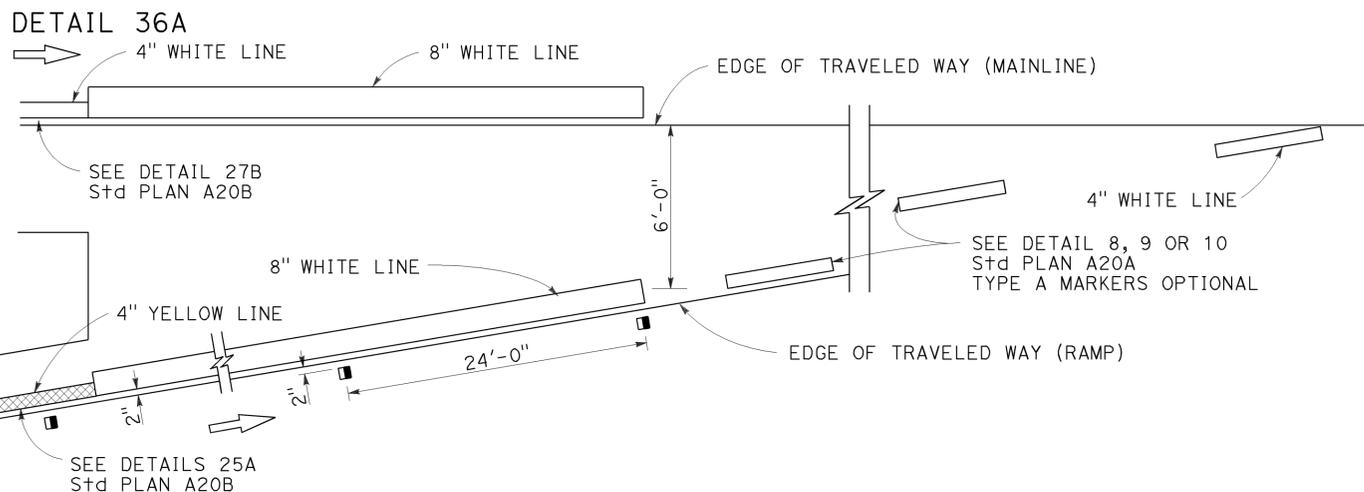
RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

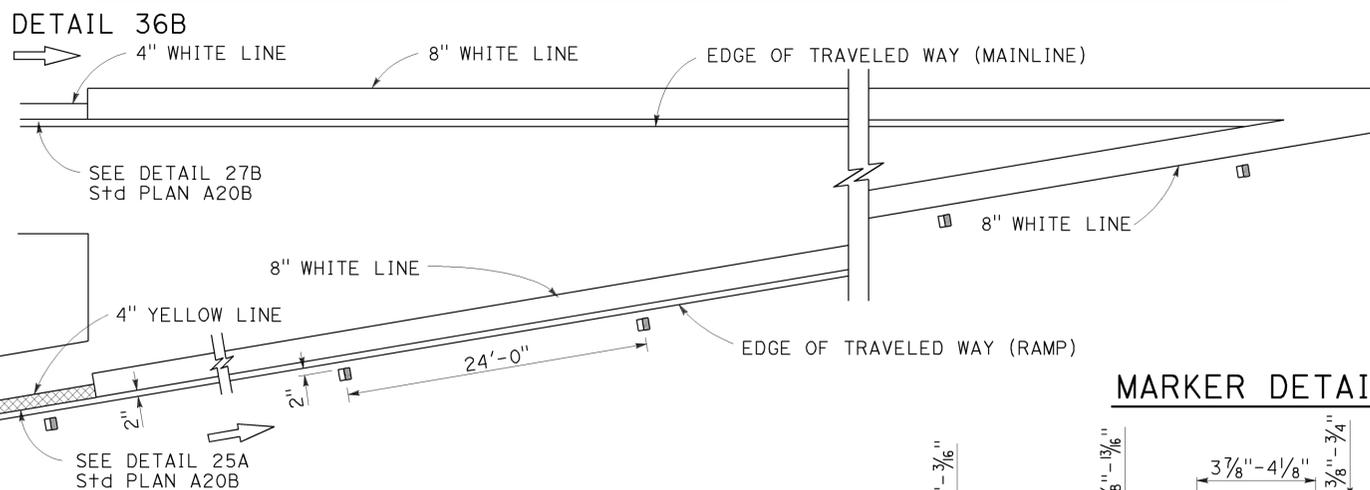
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

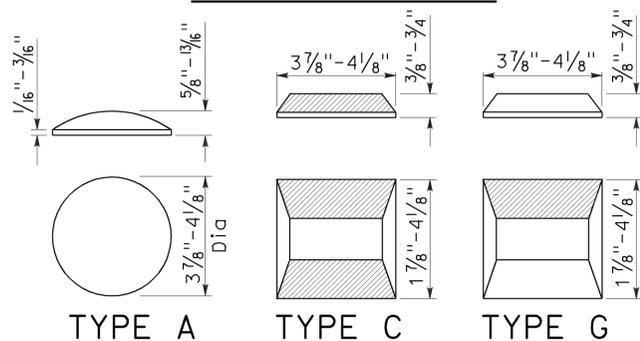


MARKER DETAILS

LEGEND:

MARKERS

- TYPE A WHITE NON-REFLECTIVE
- ◻ TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE



RETROREFLECTIVE FACE

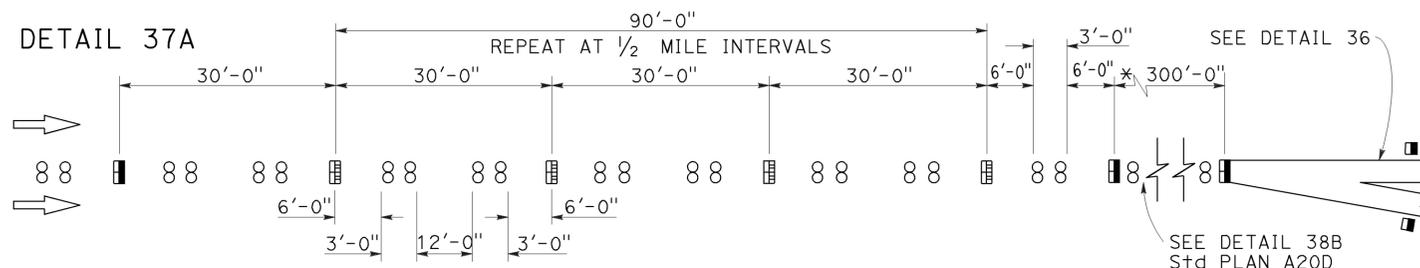
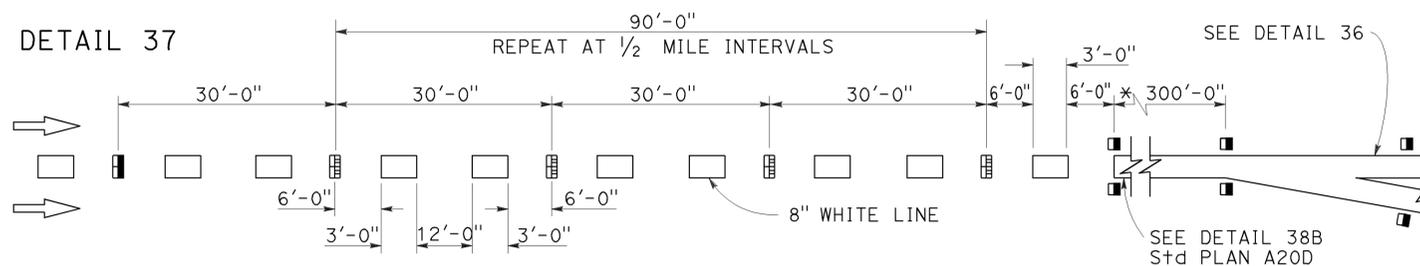
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	17	48

Roberta L. McLaughlin
 REGISTERED CIVIL ENGINEER
 No. C40375
 Exp. 3-31-15
 CIVIL
 STATE OF CALIFORNIA

July 19, 2013
 PLANS APPROVAL DATE
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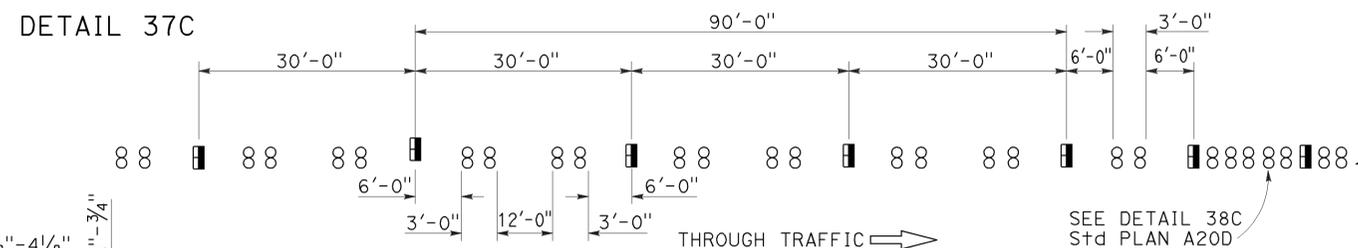
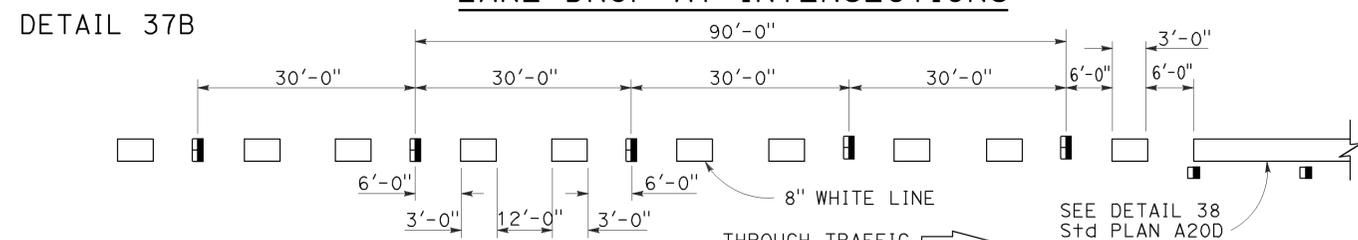
TO ACCOMPANY PLANS DATED 3-3-14

LANE DROP AT EXIT RAMP



* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

NO SCALE

RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

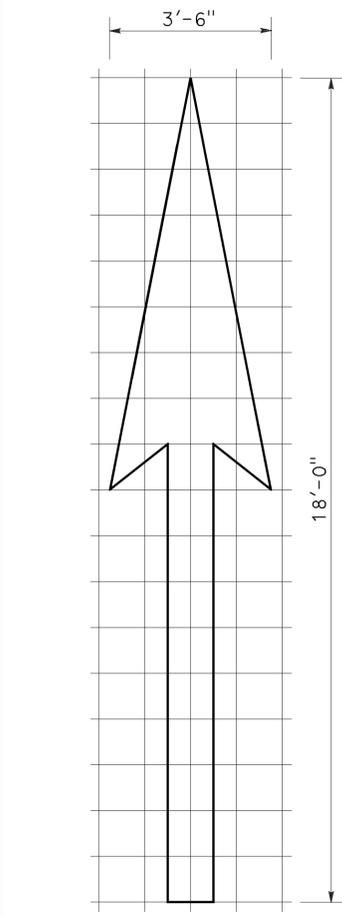
REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

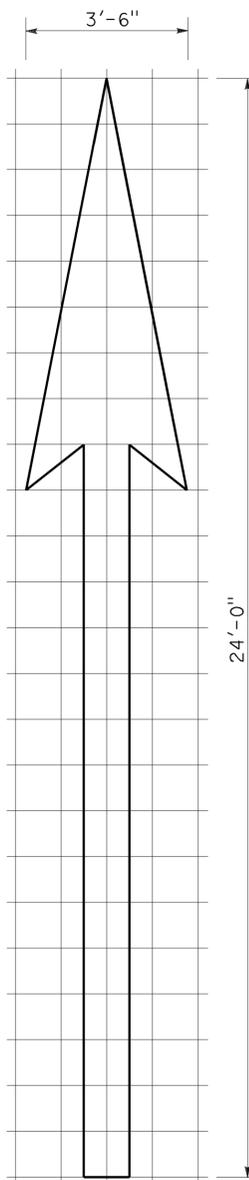
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	18	48
<i>Roberta L. McLaughlin</i> REGISTERED CIVIL ENGINEER April 20, 2012 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



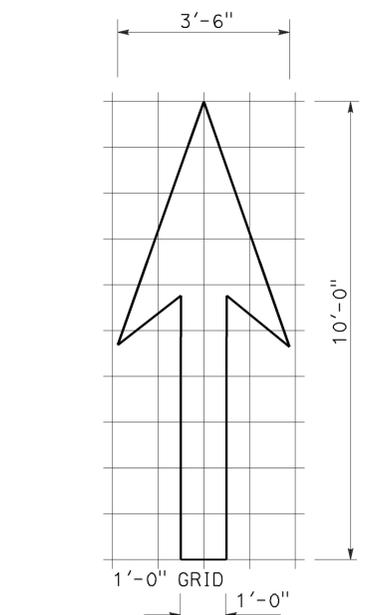
TO ACCOMPANY PLANS DATED 3-3-14



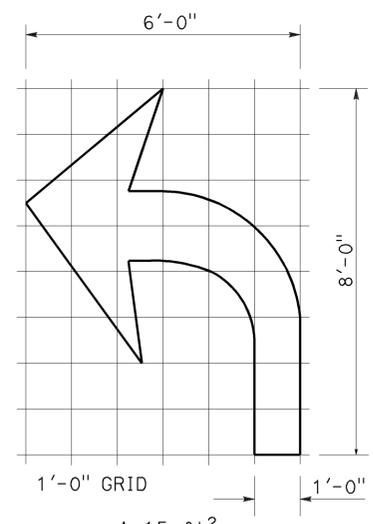
A=25 ft²
TYPE I 18'-0" ARROW



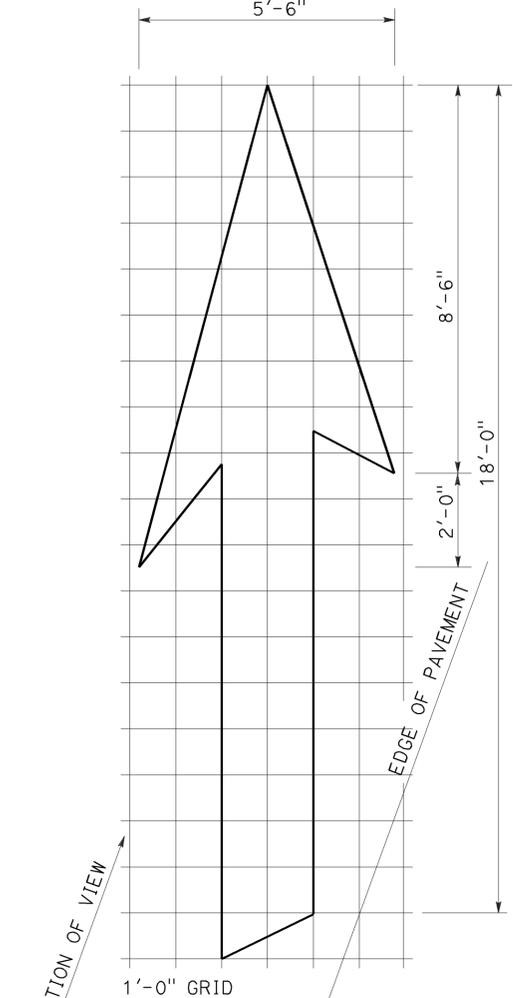
A=31 ft²
TYPE I 24'-0" ARROW



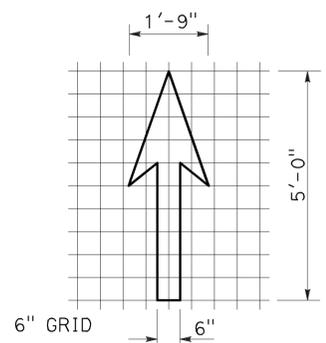
A=14 ft²
TYPE I 10'-0" ARROW



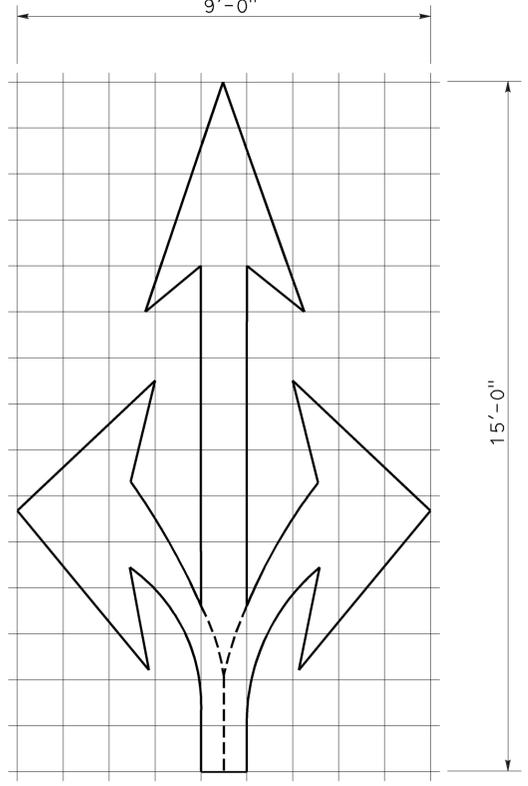
A=15 ft²
TYPE IV (L) ARROW
(For Type IV (R) arrow, use mirror image)



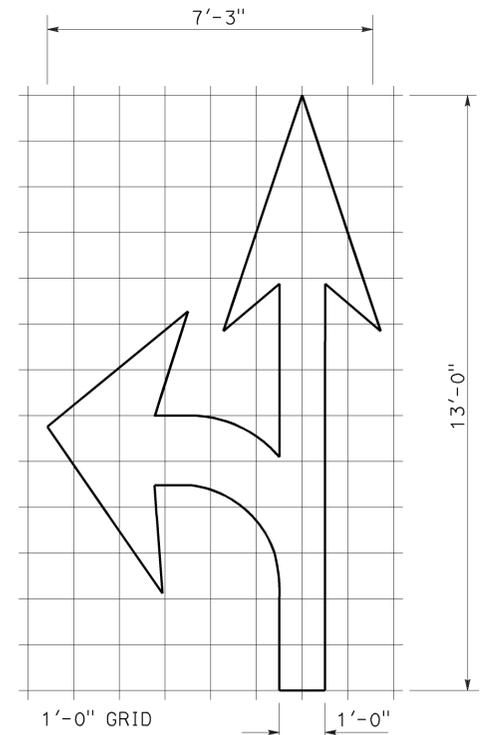
A=42 ft²
TYPE VI ARROW
Right lane drop arrow
(For left lane, use mirror image)



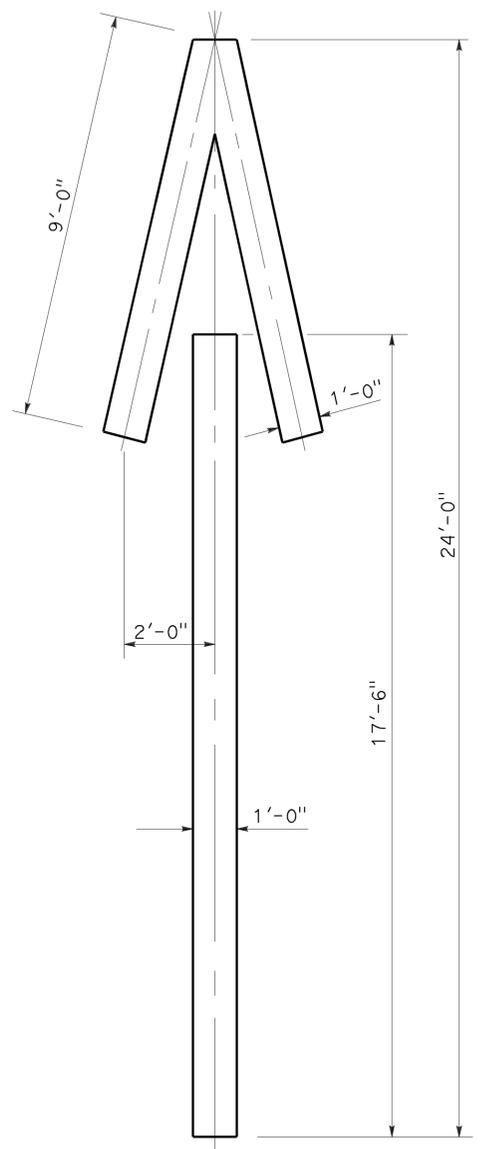
A=3.5 ft²
BIKE LANE ARROW



A=36 ft²
TYPE VIII ARROW



A=27 ft²
TYPE VII (L) ARROW
(For Type VII (R) arrow, use mirror image)



A=33 ft²
TYPE V ARROW

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

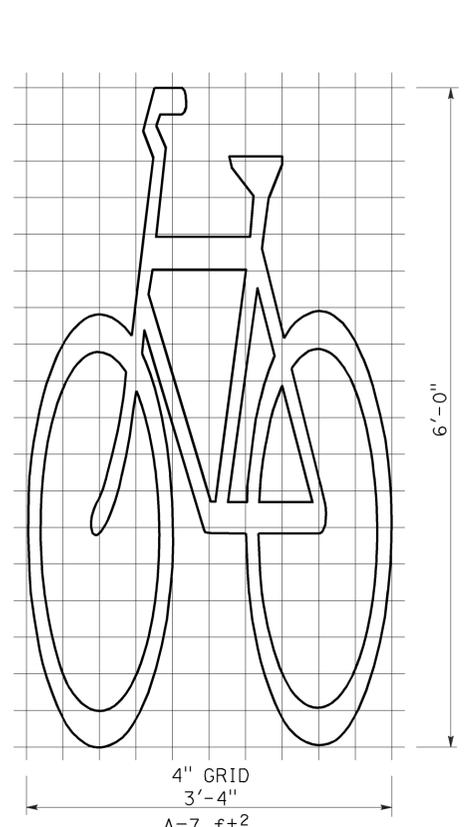
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

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

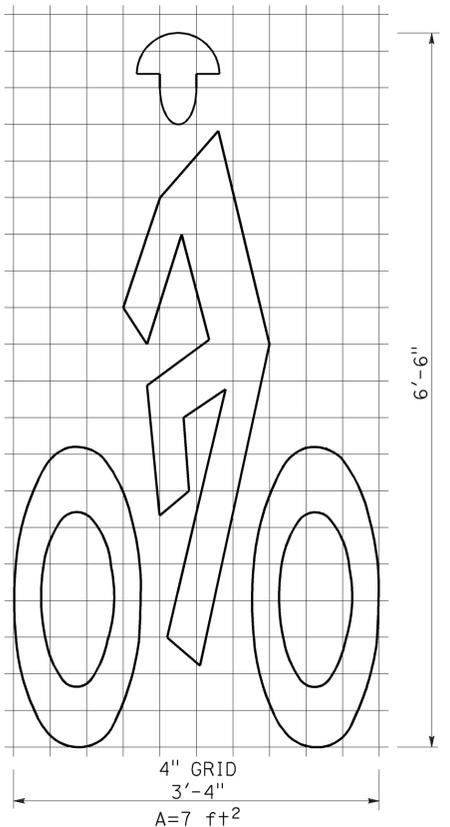
REVISED STANDARD PLAN RSP A24A

2010 REVISED STANDARD PLAN RSP A24A

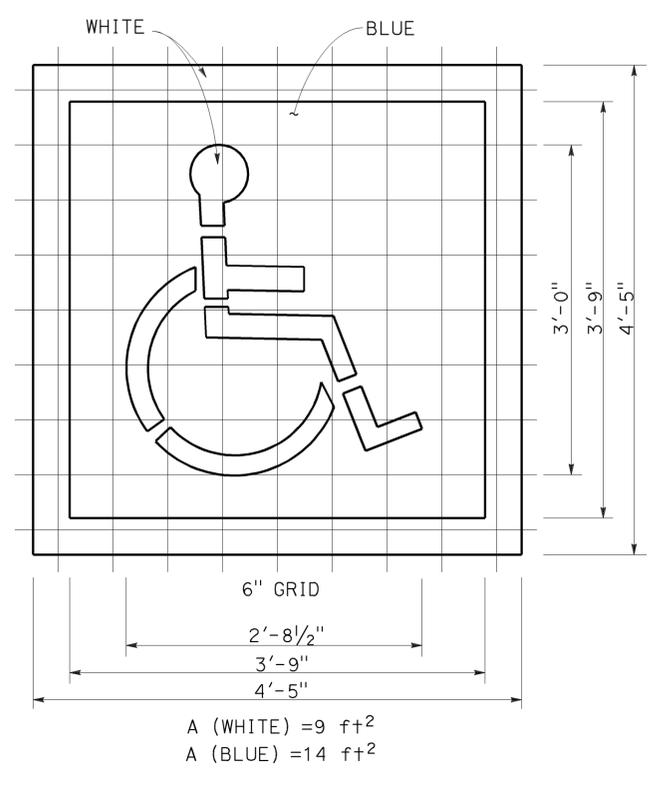
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	19	48
<i>Roberta L. McLaughlin</i> REGISTERED CIVIL ENGINEER October 19, 2012 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



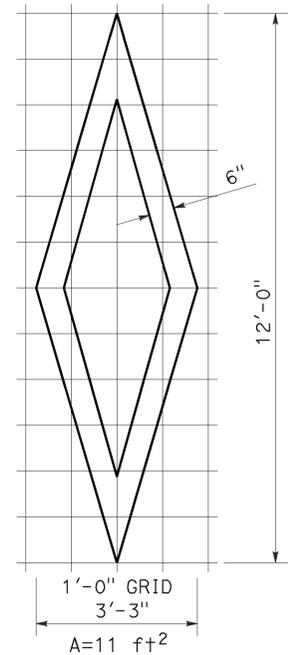
BIKE LANE SYMBOL WITHOUT PERSON



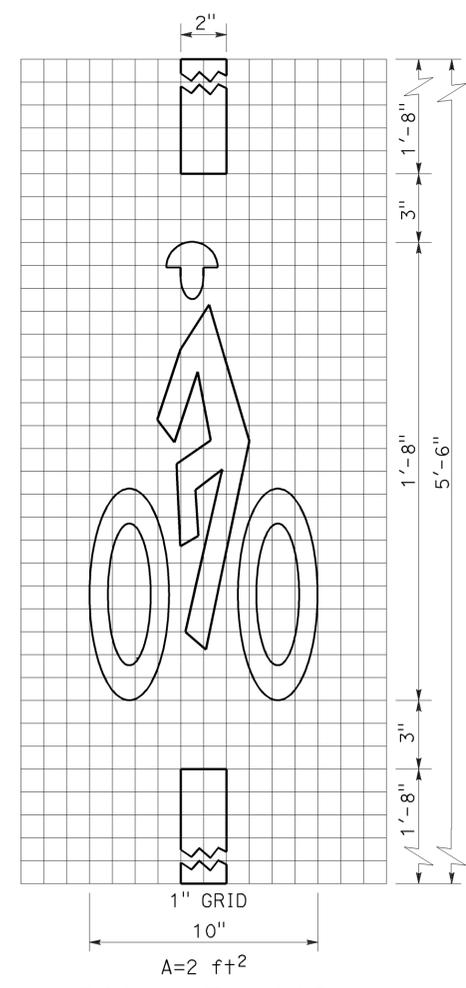
BIKE LANE SYMBOL WITH PERSON



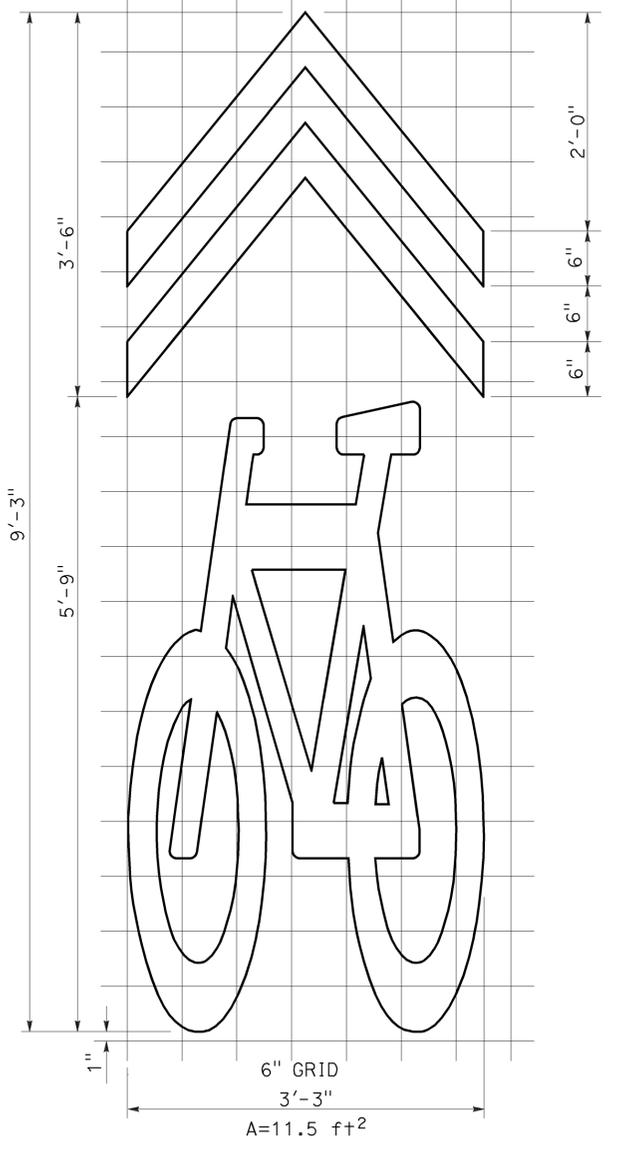
INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING



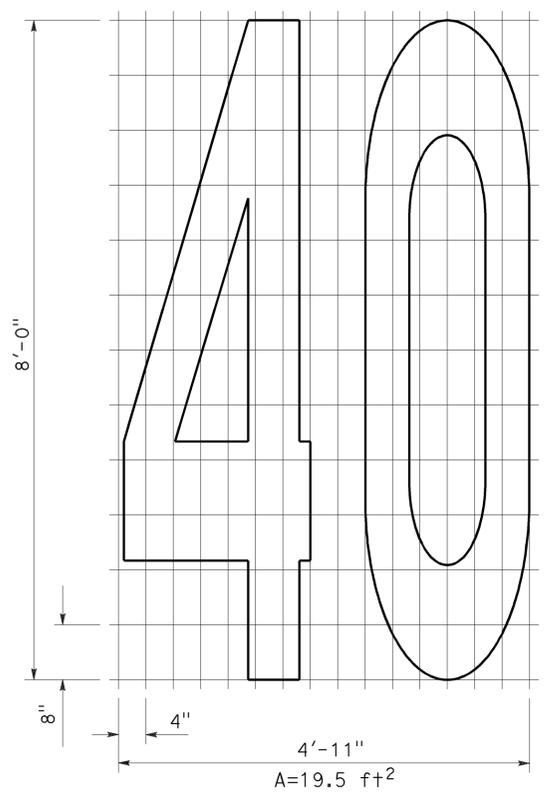
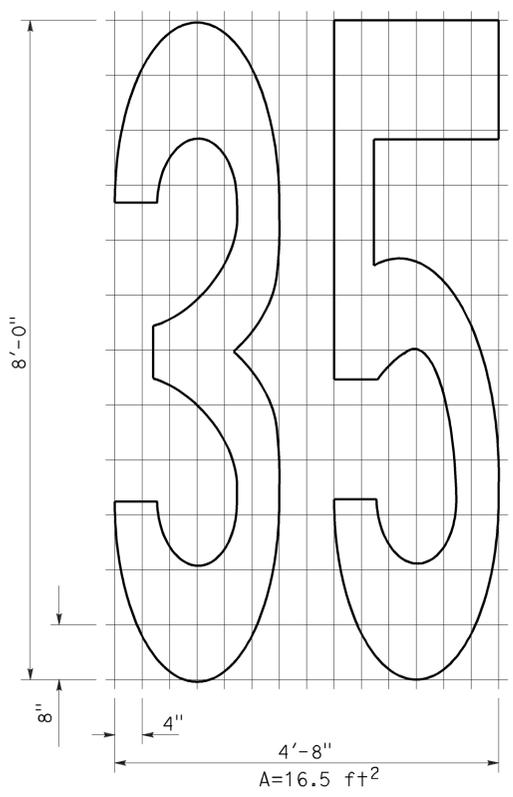
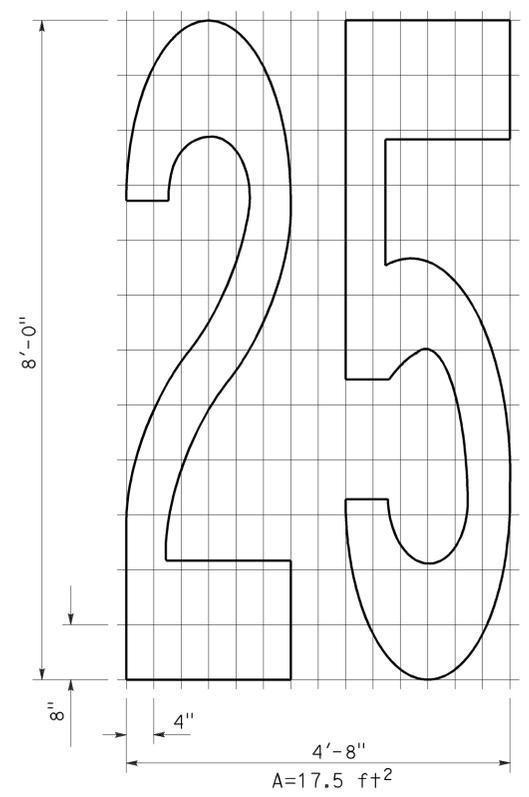
DIAMOND SYMBOL



BICYCLE LOOP DETECTOR SYMBOL



SHARED ROADWAY BICYCLE MARKING



NUMERALS

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

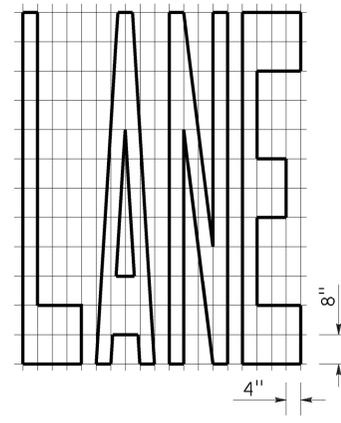
RSP A24C DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A24C DATED MAY 20, 2011 - PAGE 15 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24C

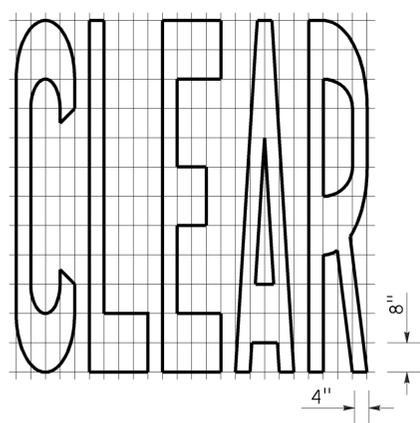
2010 REVISED STANDARD PLAN RSP A24C

TO ACCOMPANY PLANS DATED 3-3-14

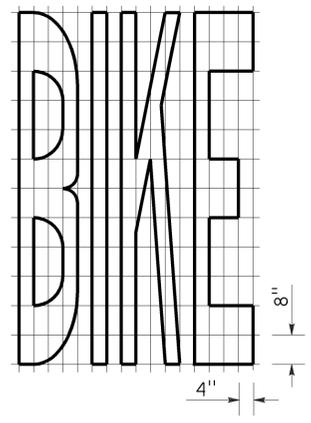
2010 REVISED STANDARD PLAN RSP A24E



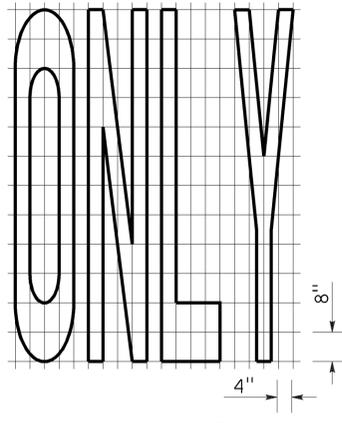
A=24 ft²



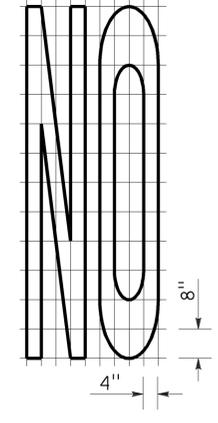
A=27 ft²



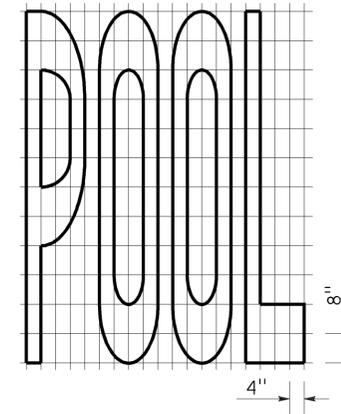
A=21 ft²



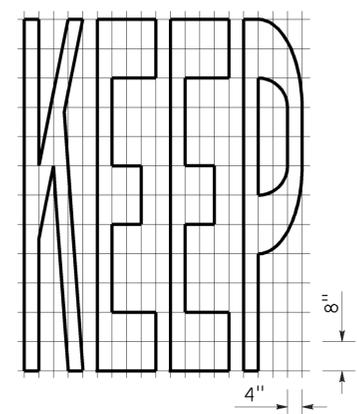
A=22 ft²



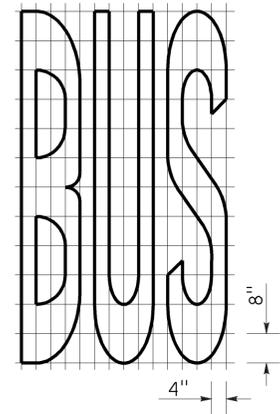
A=14 ft²



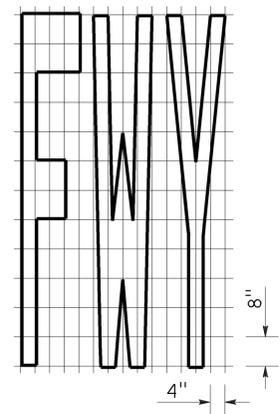
A=23 ft²



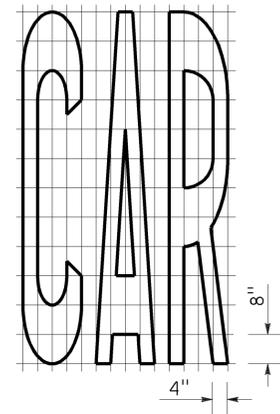
A=24 ft²



A=20 ft²

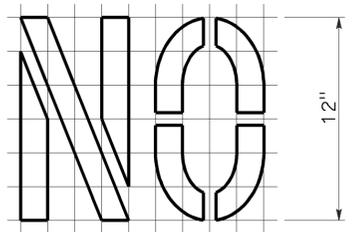


A=16 ft²



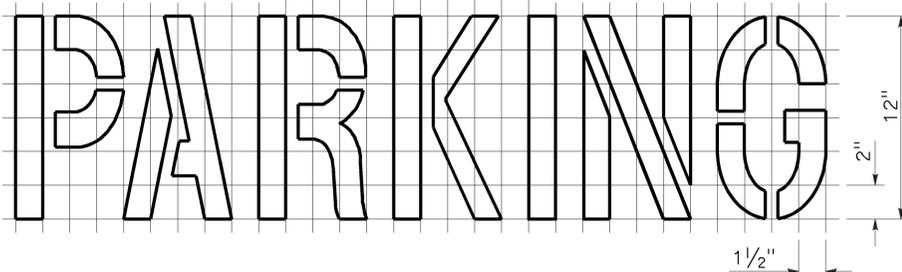
A=17 ft²

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



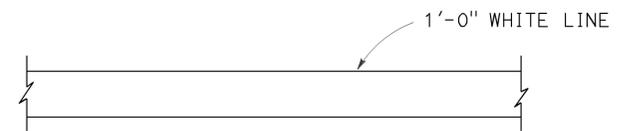
A=2 ft²

See Notes 6 and 7



A=2 ft²

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

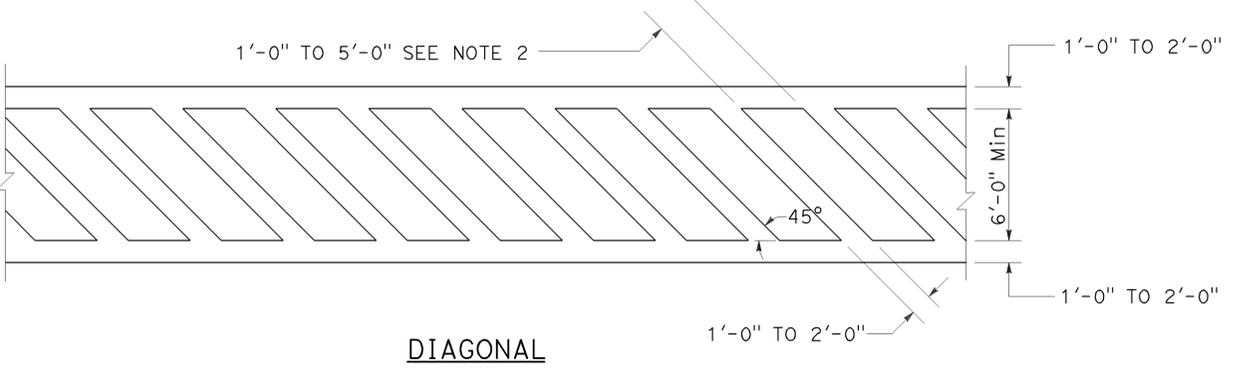
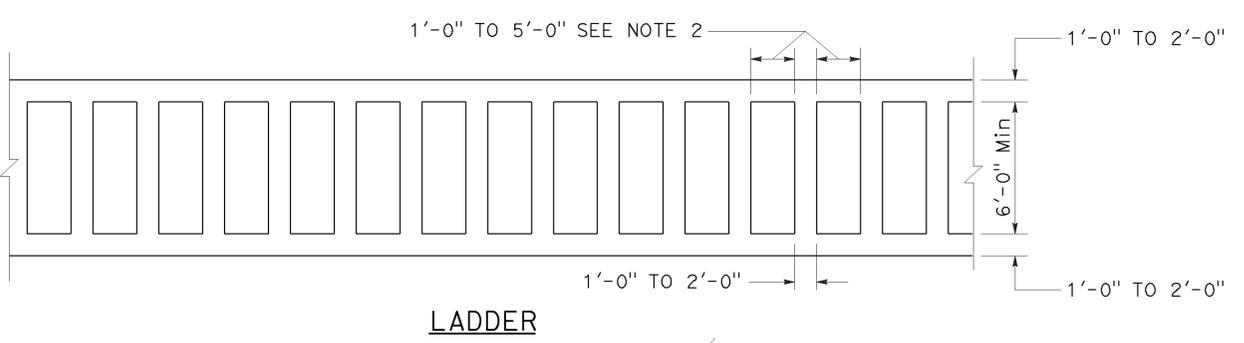
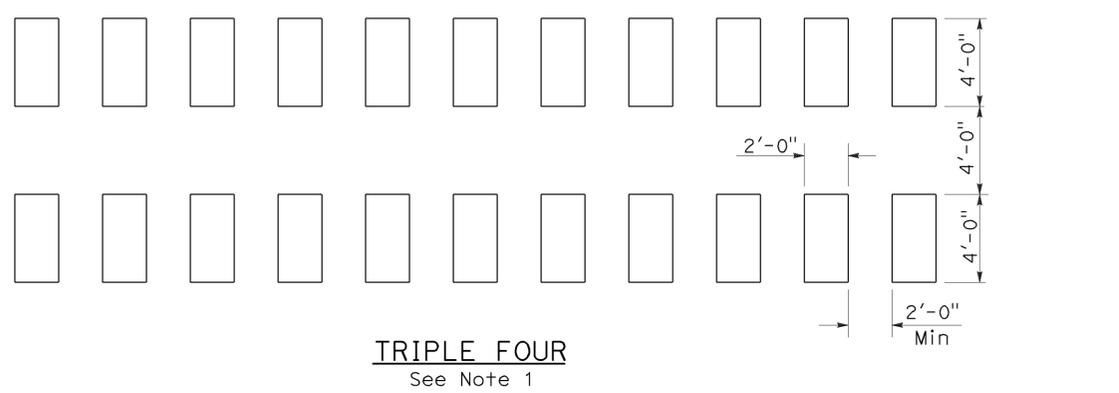
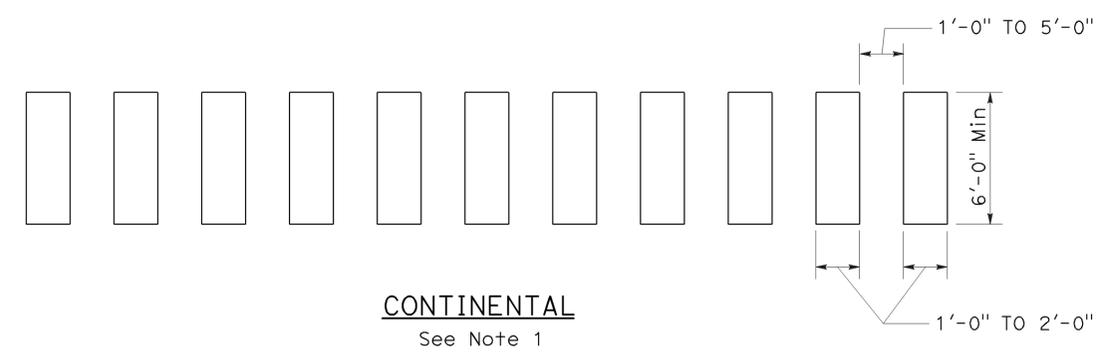
RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	21	48

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.

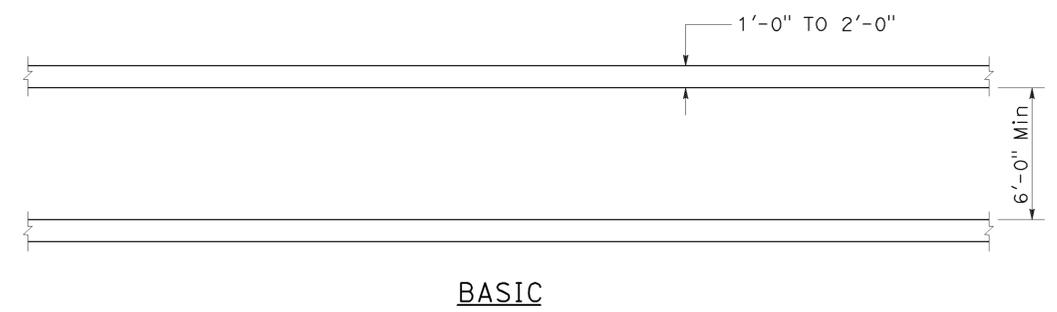
TO ACCOMPANY PLANS DATED 3-3-14



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.



BASIC

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

TO ACCOMPANY PLANS DATED 3-3-14

TABLE 1

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

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

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

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

TABLE 2

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

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

TABLE 3

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

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM TABLES
 FOR LANE AND RAMP CLOSURES**

NO SCALE

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

REVISED STANDARD PLAN RSP T9

2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	23	48

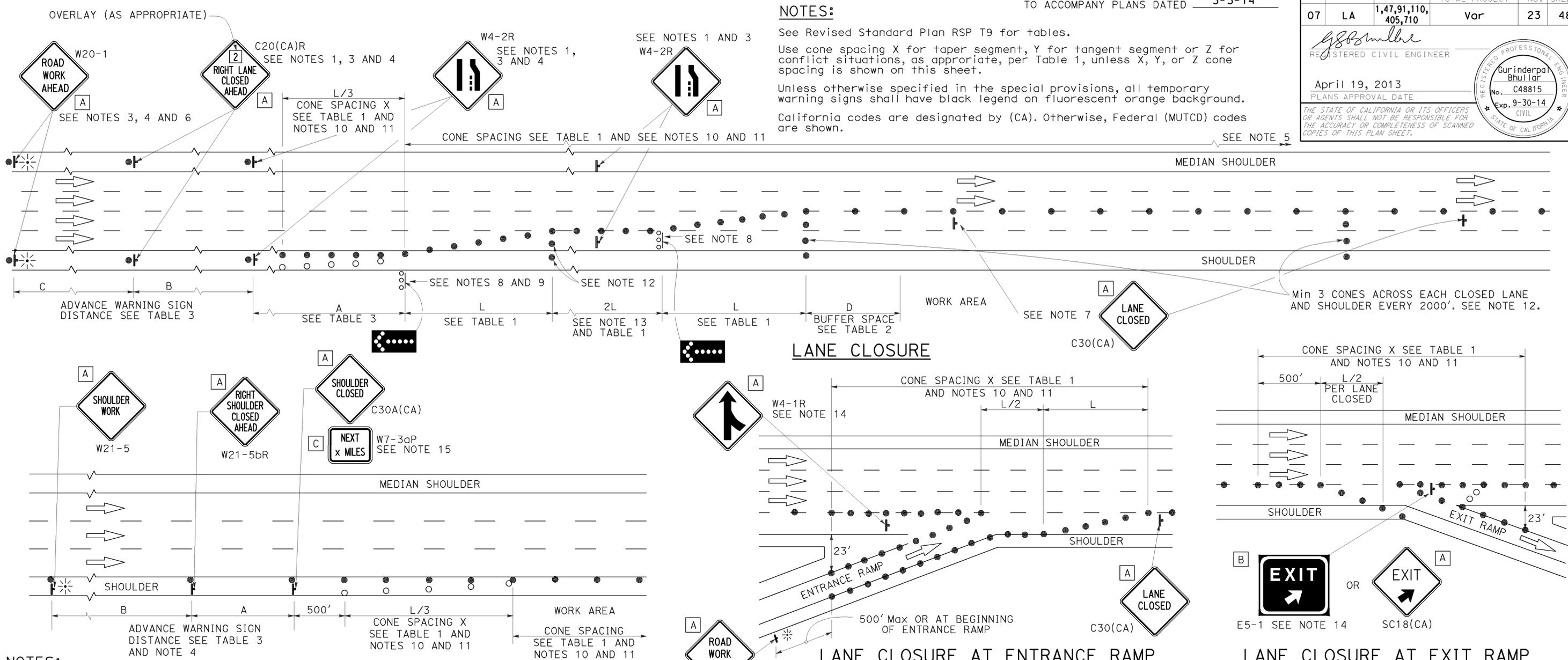
REGISTERED CIVIL ENGINEER
Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

April 19, 2013
 PLANS APPROVAL DATE

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

NOTES:

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



NOTES:

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

SHOULDER CLOSURE

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

LANE CLOSURE AT ENTRANCE RAMP

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

LEGEND

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

SIGN PANEL SIZE (Min)

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

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	24	48

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

April 19, 2013
 PLANS APPROVAL DATE

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

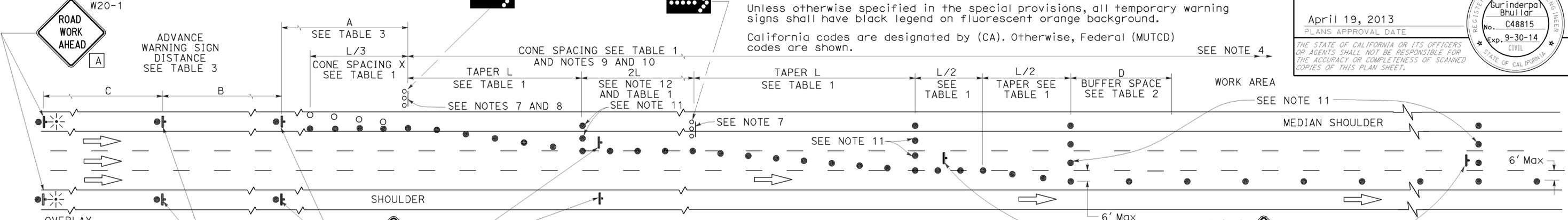
NOTES: See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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

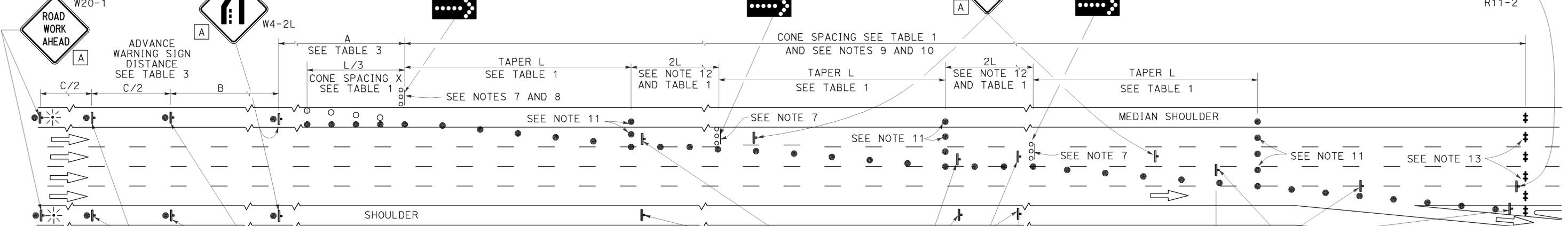
California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

SEE NOTES 3 AND 5



LANE CLOSURE WITH PARTIAL SHOULDER USE

SEE NOTES 3 AND 5



COMPLETE CLOSURE

NOTES:

- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R 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 G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT ___ MILES", use a C20(CA) 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 flashing arrow signs shall be Type I.
- 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 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
- A minimum of Two Type II or III 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
- TRAFFIC CONE (OPTIONAL TAPER)
- ⊥ TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10A

2010 REVISED STANDARD PLAN RSP T10A

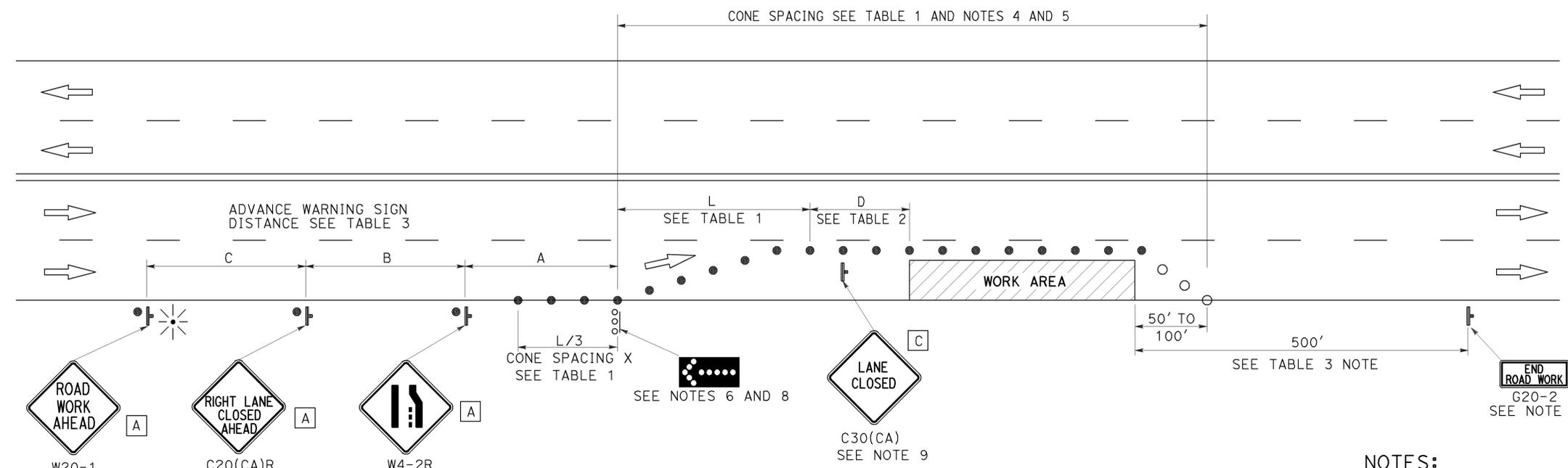
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	25	48

Registered Civil Engineer
 Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

April 19, 2013
 PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 3-3-14



TYPICAL LANE CLOSURE

NOTES:

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

NOTES:

- 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 G20-2 "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 G20-1 "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.
- 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.
- 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.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- 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.

LEGEND

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

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 MULTILANE CONVENTIONAL
 HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11 DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	27	48

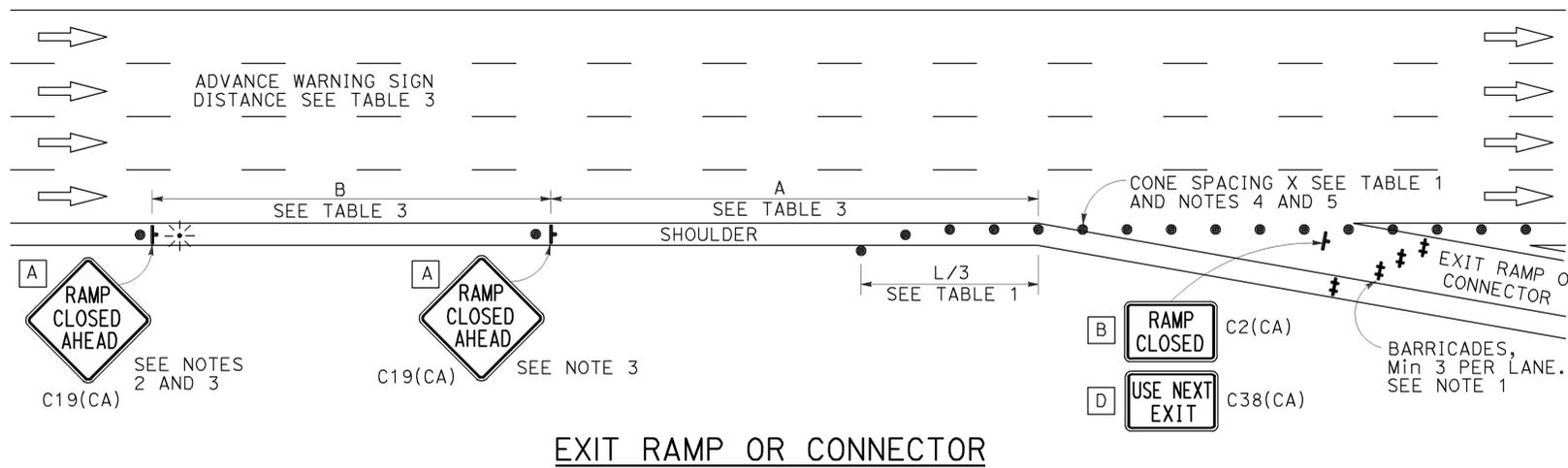
Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

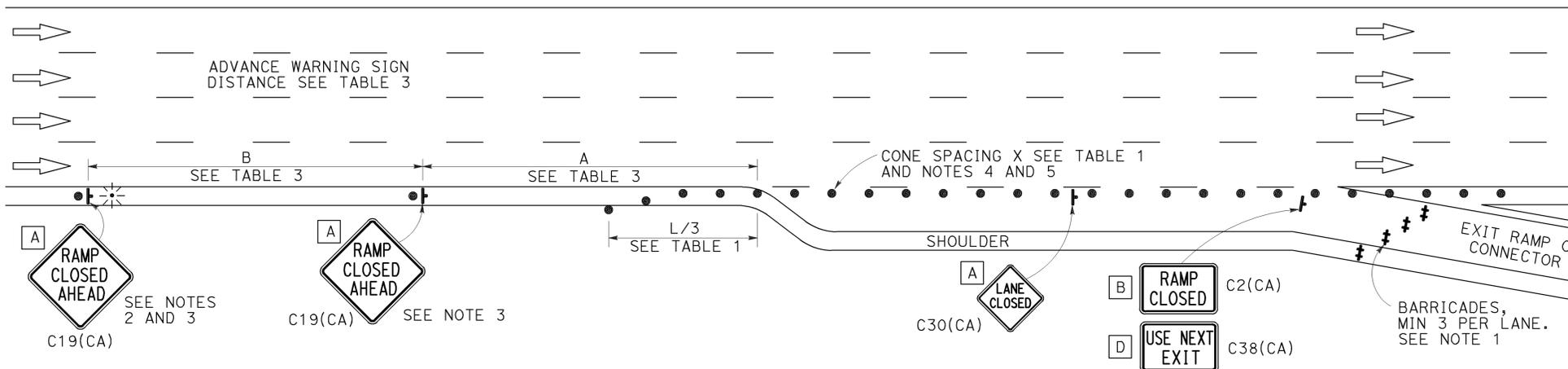
TO ACCOMPANY PLANS DATED **3-3-14**

NOTES:

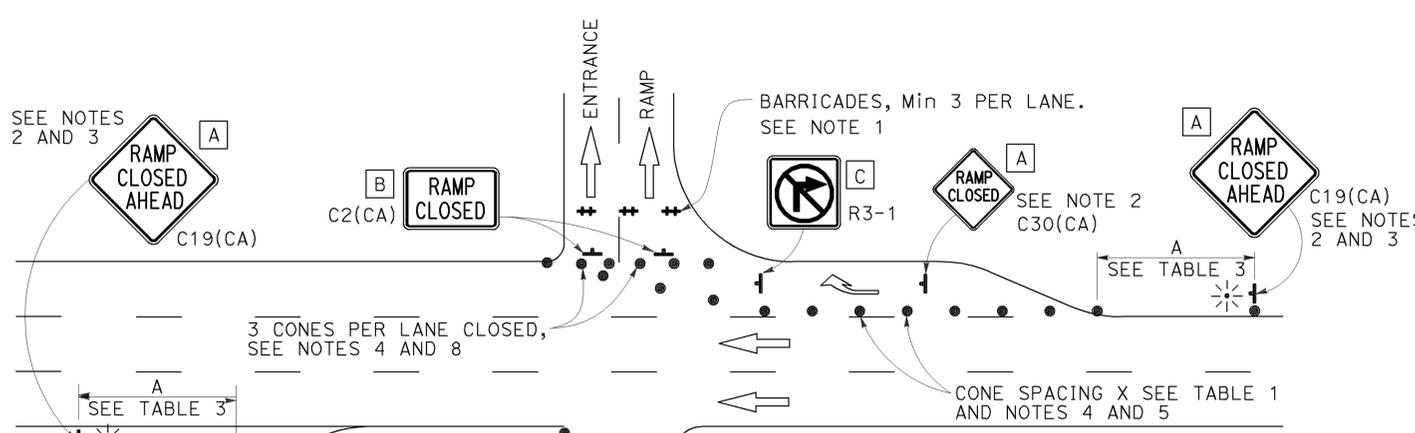
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed 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. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
- 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" signs shall be covered during ramp closures.
- A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.



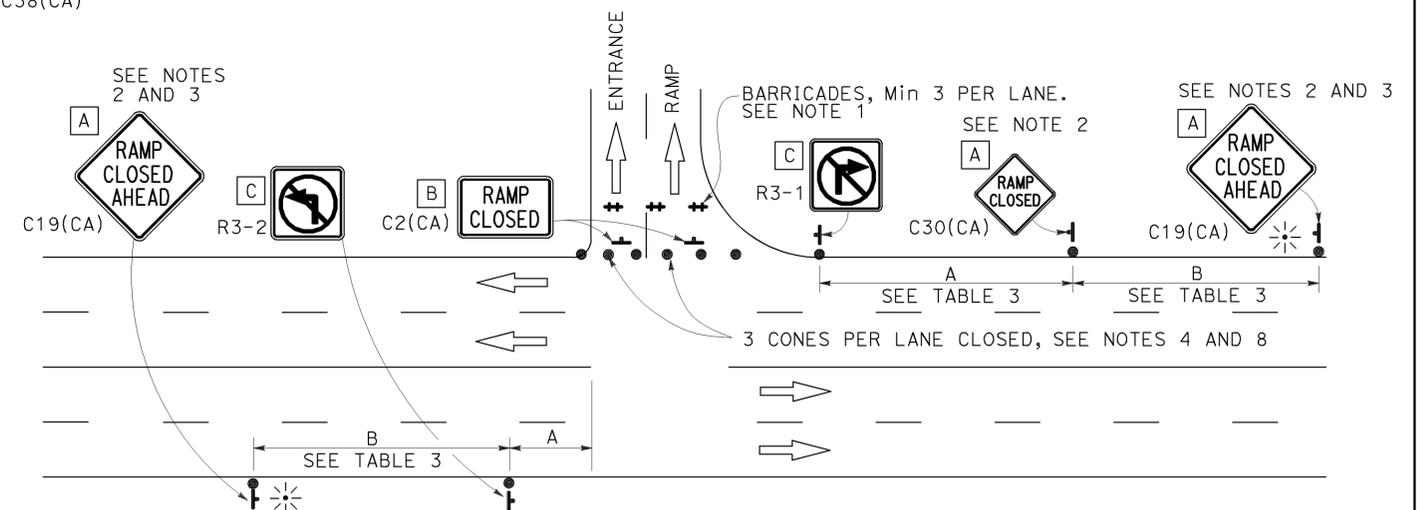
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

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

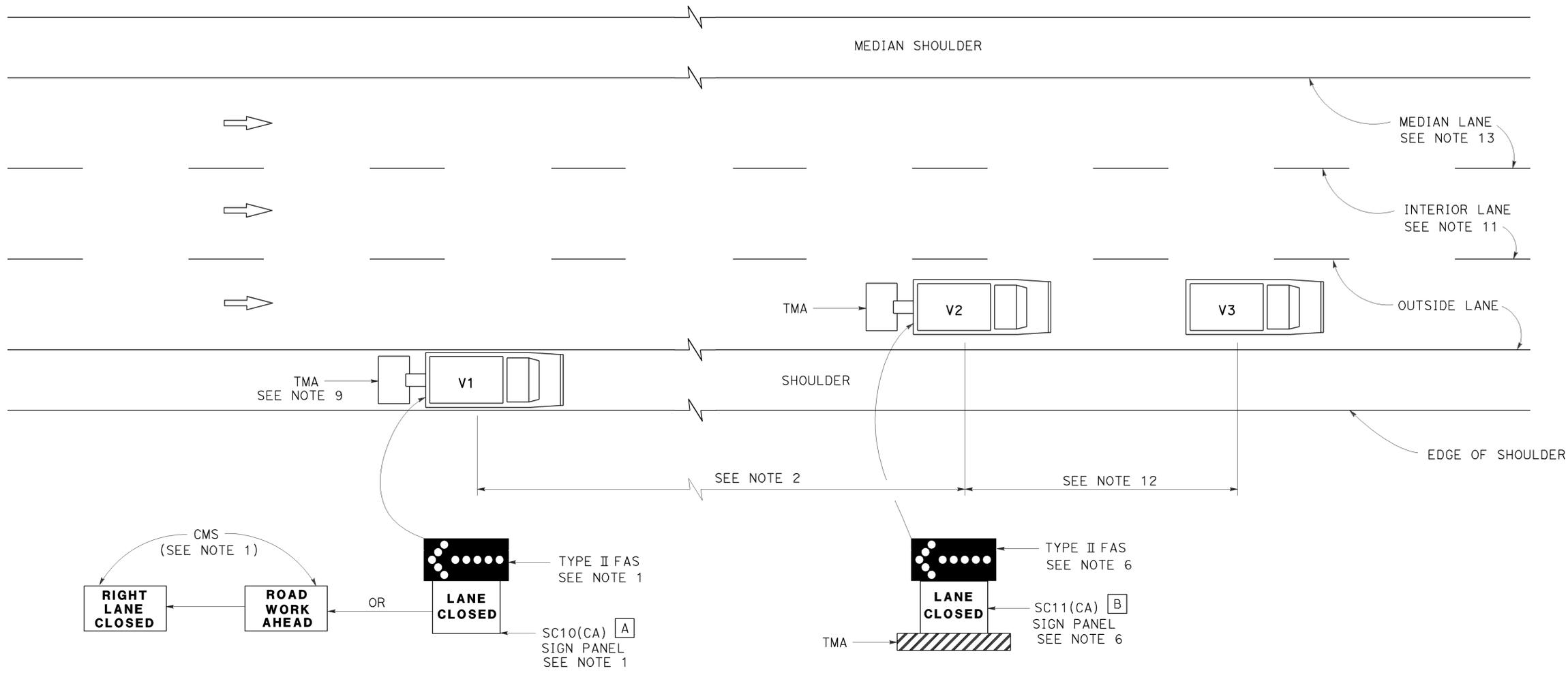
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR RAMP CLOSURE**
 NO SCALE

RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14
 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T14

2010 REVISED STANDARD PLAN RSP T14

TO ACCOMPANY PLANS DATED 3-3-14



SIGN PANEL SIZE (Min)

- A 66" x 36"
- B 54" x 42"

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- FLASHING ARROW SIGN (FAS)
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

MOVING LANE CLOSURE ON MEDIAN LANE OR OUTSIDE LANE OF MULTILANE HIGHWAYS

NOTES:

- Either a changeable message sign or a SC10(CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
- If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
- A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
- Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
- Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
- Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
- All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
- All vehicles shall be equipped with flashing or rotating amber lights.
- If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
- Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
- For moving lane closure on interior lane of multilane highways, use Revised Standard Plan T16.
- The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
- When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS
NO SCALE

RSP T15 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T15 DATED MAY 20, 2011 - PAGE 243 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T15

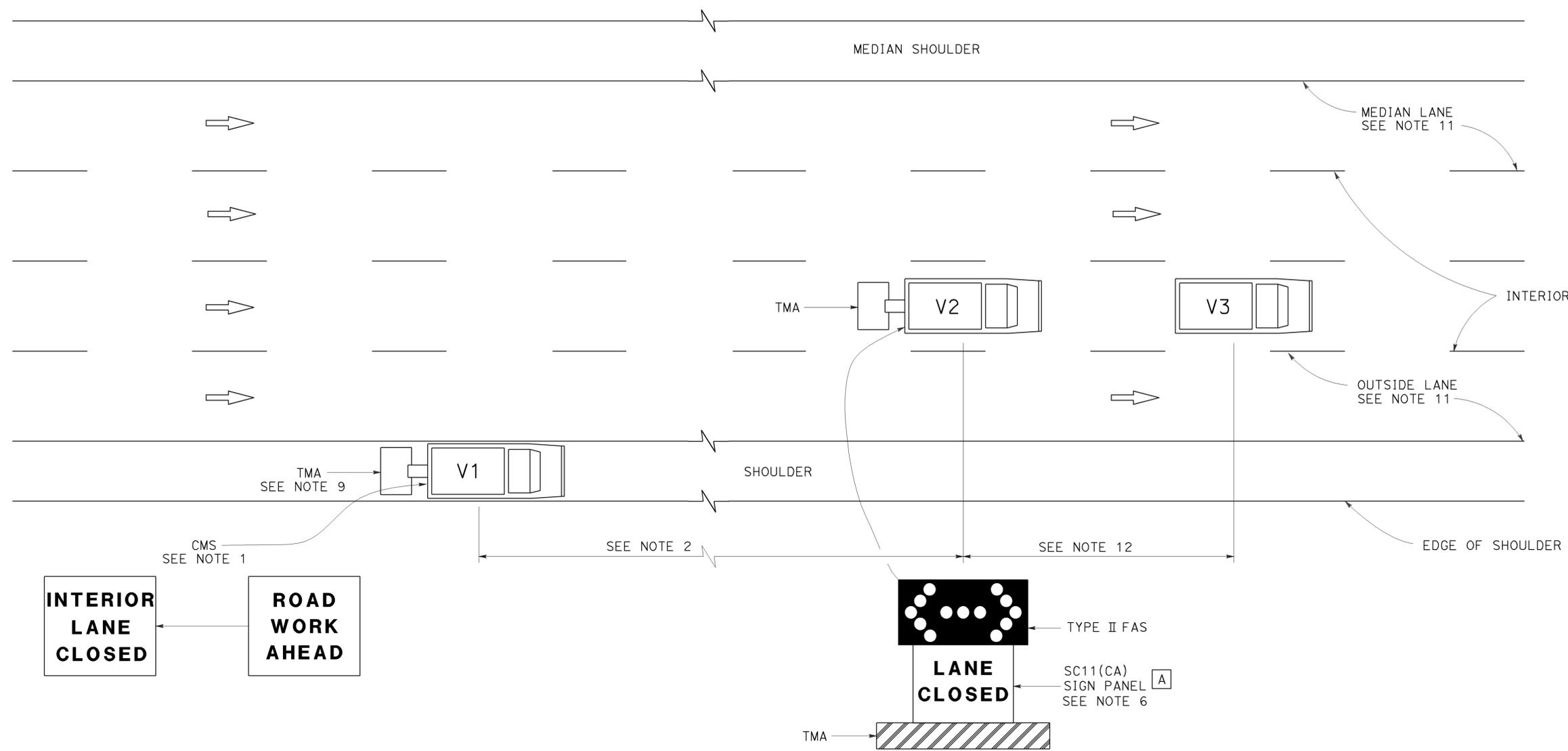
2010 REVISED STANDARD PLAN RSP T15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	29	48

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



TO ACCOMPANY PLANS DATED 3-3-14



SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- FLASHING ARROW SIGN (FAS) IN FLASHING DOUBLE ARROW MODE
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

NOTES:

1. A changeable message sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "INTERIOR LANE CLOSED" message. The message "CENTER LANE CLOSED" may be used in place of the "INTERIOR LANE CLOSED" message.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11 etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on median lane or outside lane of multilane highways, use Revised Standard Plan T15.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.

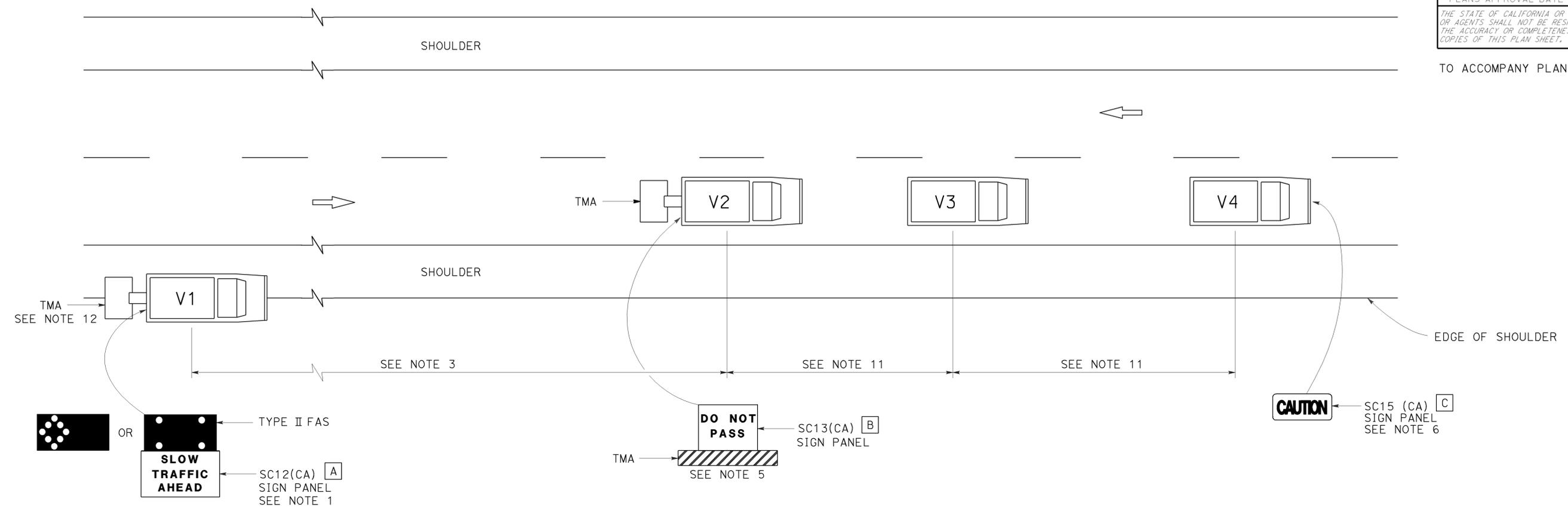
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR MOVING LANE CLOSURE
 ON MULTILANE HIGHWAYS**
 NO SCALE

RSP T16 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T16 DATED MAY 20, 2011 - PAGE 244 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T16

2010 REVISED STANDARD PLAN RSP T16

TO ACCOMPANY PLANS DATED 3-3-14



NOTES:

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.

7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- V4 SIGN VEHICLE
- TMA TRUCK-MOUNTED ATTENUATOR
-  FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
-  FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

SIGN PANEL SIZE (Min)

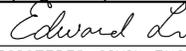
- A 72" x 42"
- B 54" x 42"
- C 54" x 24"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR MOVING LANE CLOSURE
 ON TWO LANE HIGHWAYS**
 NO SCALE

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17
 DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T17

2010 REVISED STANDARD PLAN RSP T17

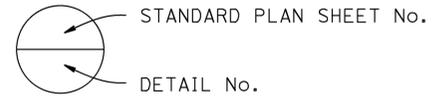
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	31	48
 REGISTERED CIVIL ENGINEER			DATE	11/06/13	
PLANS APPROVAL DATE 3-3-14					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

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	MISCELLANEOUS DETAILS NO. 1
16	MISCELLANEOUS DETAILS NO. 2
17	STRUCTURE APPROACH SLAB TYPE R (30D)
18	STEEL COLUMN CASING DETAILS

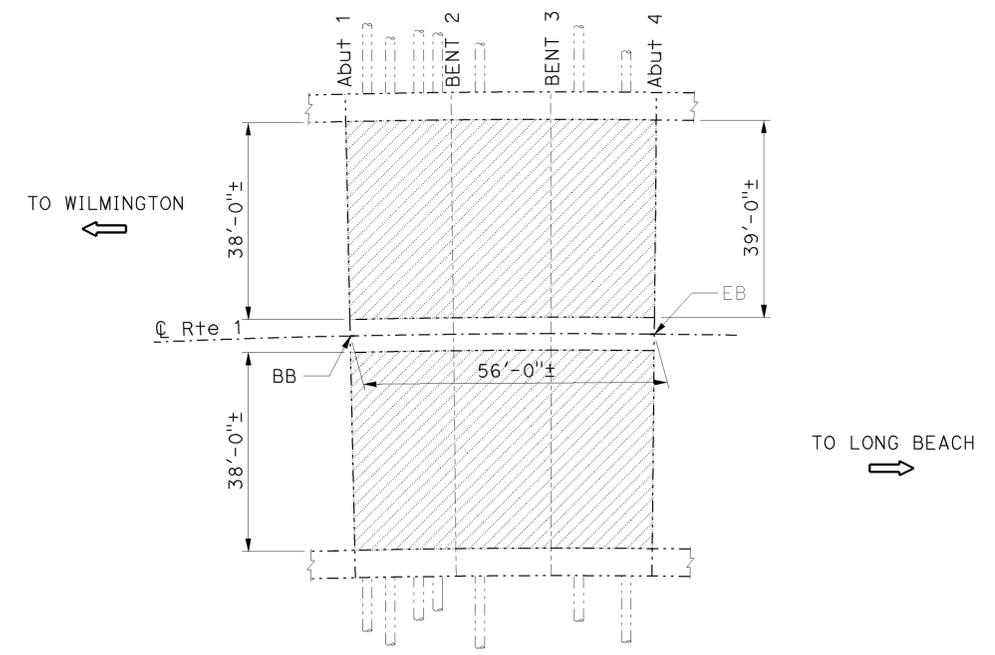
STANDARD PLANS DATED 2010

SHEET NO.	TITLE
A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")



LEGEND:

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



PIPE LINE UC
 Br No. 53-0355, Rte 1, PM 8.72
 N.T.S.



PIPE LINE UC BRIDGE NO. 53-0355

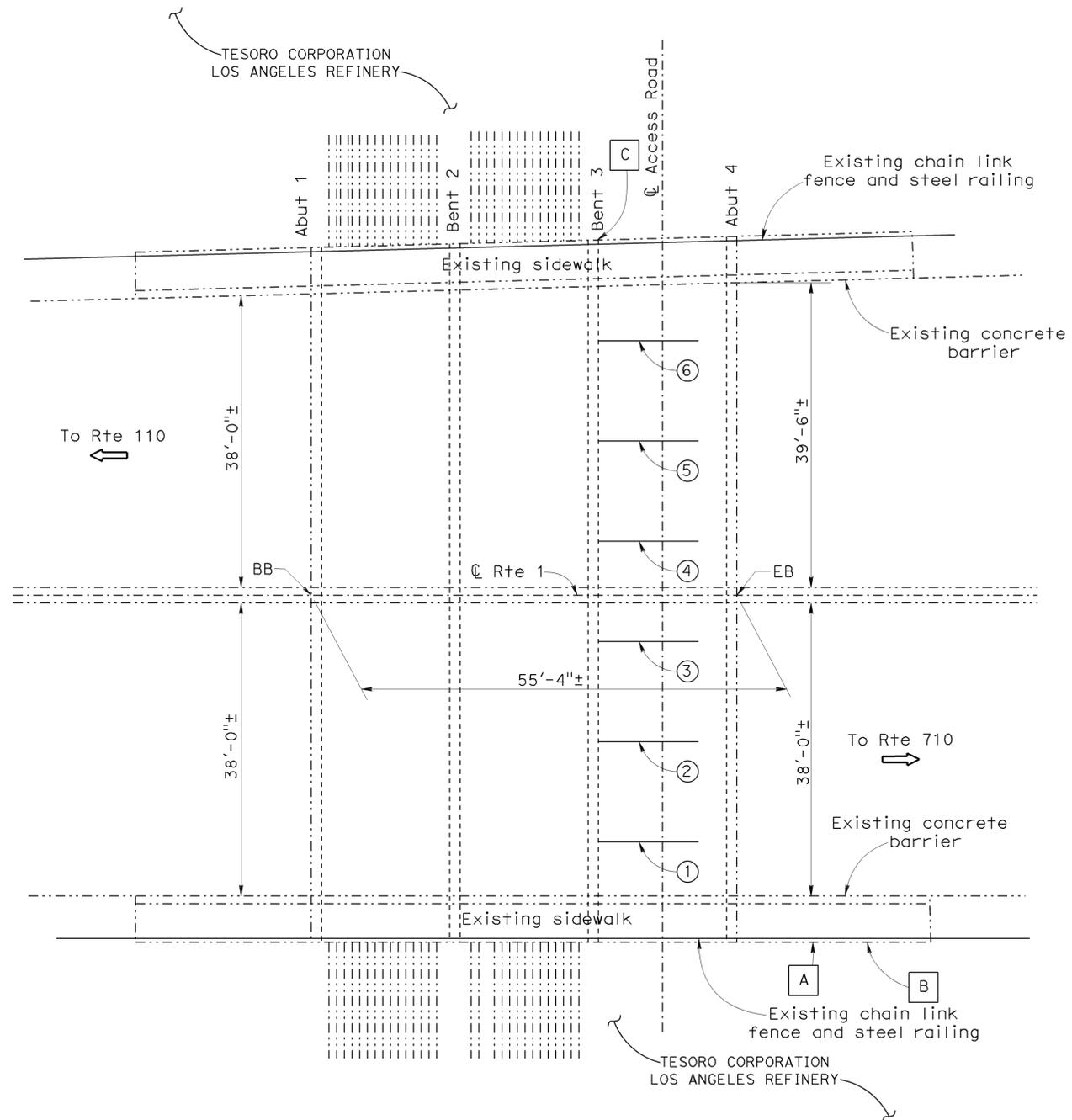
QUANTITIES	
PUBLIC SAFETY PLAN	LUMP SUM
REPAIR SPALLED SURFACE AREA	7 SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	4,300 SQFT
TREAT BRIDGE DECK	4,300 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	54 GAL
INJECT CRACK (EPOXY)	144 LF

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.

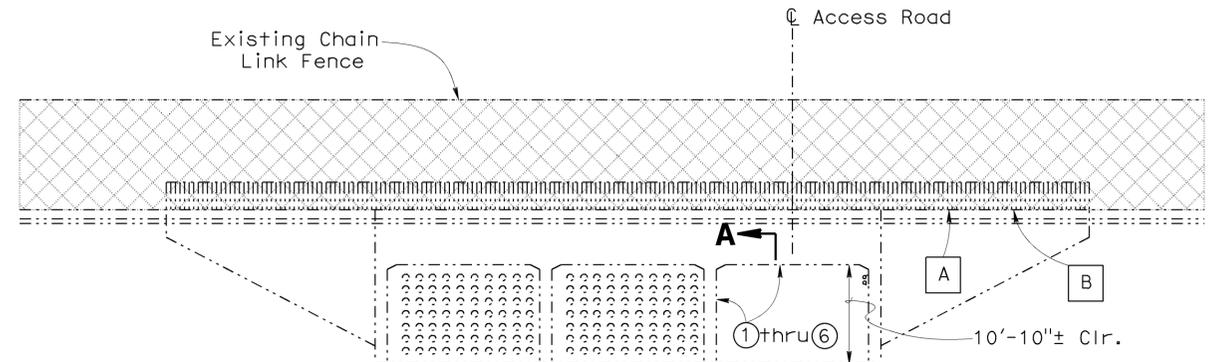
DESIGN ENGINEER TONY D. BRAKE	DESIGN BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. Various	RTE 1,47,91,110,405,710 BRIDGES GENERAL PLAN NO. 1		
	DETAILS BY Tom Dang	CHECKED Edward Li	LAYOUT BY Tom Dang	CHECKED Edward Li			POST MILE Varies			
	QUANTITIES BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS BY Xiahong Li	PLANS AND SPECS COMPARED Xiahong Li						
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: 0712000410 1	CONTRACT NO.: 07-1W6104	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 3/10/13 5/10/13 11/06/13	SHEET 01 OF 18

LEGEND:

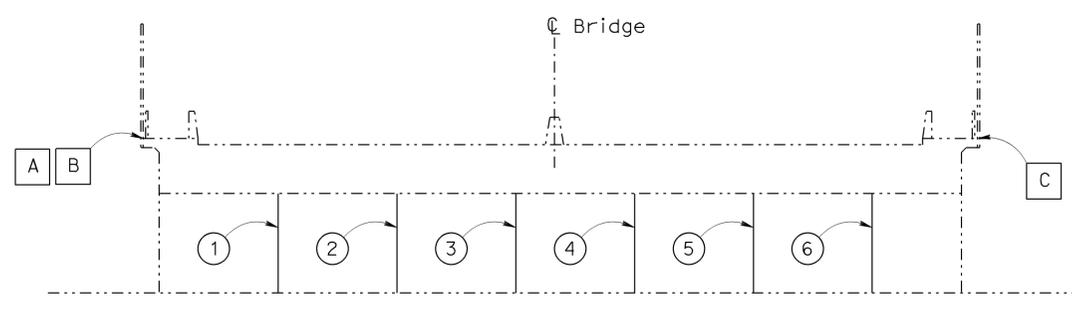
- Indicates existing.
- ➔ Indicates direction of traffic.
- ① Indicates location of inject vertical crack on bent 3 wall and soffit with epoxy. See TABLE 1.
- A Indicates location of repair spalled surface area. See TABLE 2.



REFLECTED SOFFIT - PLAN



ELEVATION



VIEW A-A

LOCATION	LENGTH OF CRACK (LF)
①	24
②	24
③	24
④	24
⑤	24
⑥	24
TOTAL	144

LOCATION	APPROX. SIZE (L X W)
A	Steel railing post pocket at south EOD 18" X 18"
B	Steel railing post pocket at south EOD 18" X 18"
C	Steel railing post pocket at north EOD 18" X 18"

PIPE LINE UC
 Br No. 53-0355, Rte 1, PM 8.72
 1" = 10'



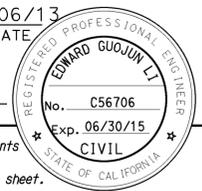
NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

DESIGN BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN BY Tom Dang	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS BY Vinh Dang/Tom Dang	CHECKED Edward Li	LAYOUT BY Tom Dang	CHECKED Edward Li
QUANTITIES BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS BY Xiahong Li	PLANS AND SPECS COMPARED Xiahong Li

STATE OF CALIFORNIA	DIVISION OF MAINTENANCE	BRIDGE NO.
DEPARTMENT OF TRANSPORTATION	STRUCTURE MAINTENANCE DESIGN	53-1257
		POST MILE R16.54

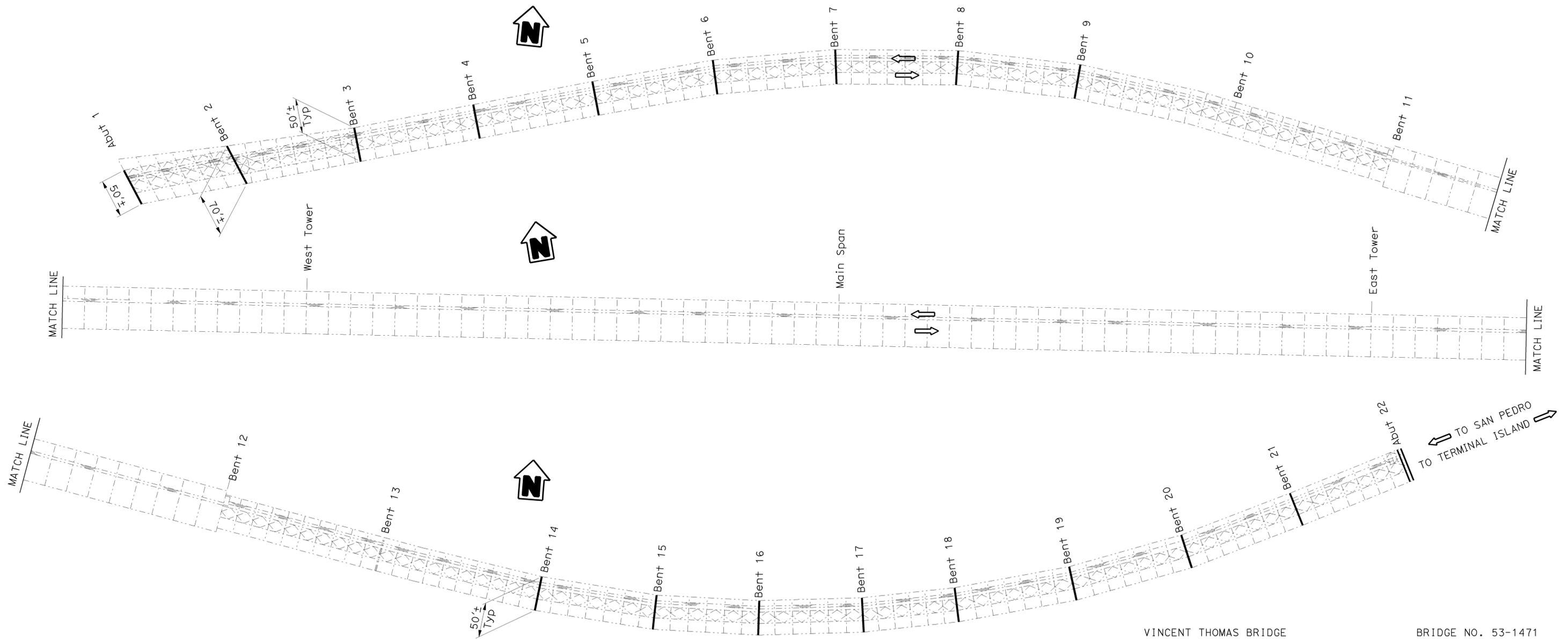
RTE 1,47,91,110,405,710 BRIDGES		
GENERAL PLAN NO. 2		
REVISION DATES	SHEET	OF
5/10/13	02	18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	33	48
<i>Edward Li</i> REGISTERED CIVIL ENGINEER			DATE	11/06/13 3-3-14 PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



LEGEND:

- Indicates existing.
- Indicates direction of traffic.
- /— Indicates location of clean expansion joint and placement of new joint seal.



VINCENT THOMAS BRIDGE

Br No. 53-1471, Rte 47, PM 0.9
NO SCALE

VINCENT THOMAS BRIDGE BRIDGE NO. 53-1471

QUANTITIES

CLEAN EXPANSION JOINT	970	LF
JOINT SEAL (MR 1/2")	100	LF
BONDED JOINT SEAL (MR 1")	50	LF
BONDED JOINT SEAL (MR 1 1/2")	820	LF

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 Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

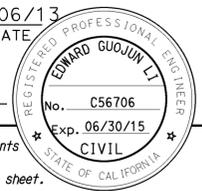
DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 53-1471
POST MILE 0.9

RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN NO. 3

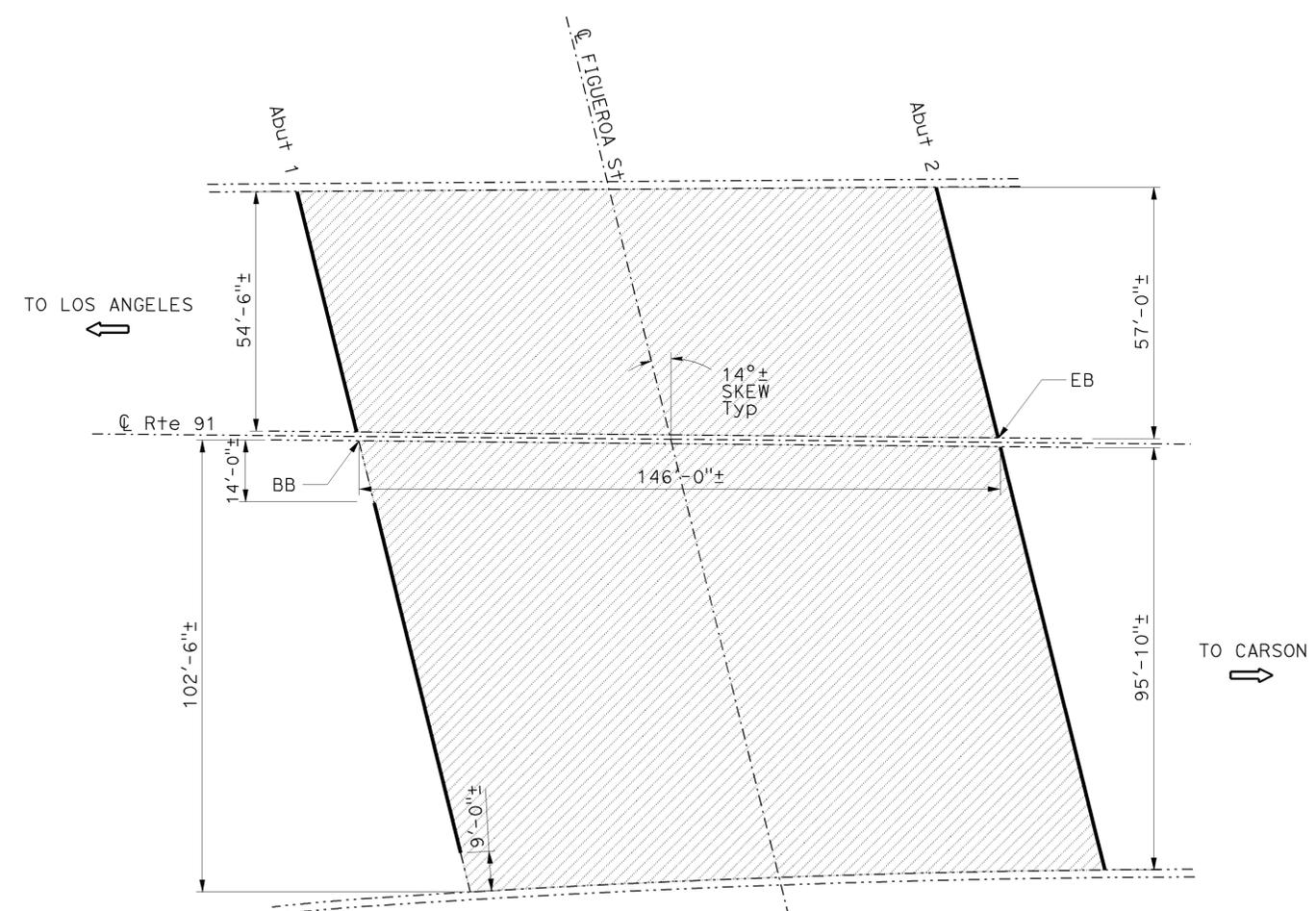
USERNAME => s129239 DATE PLOTTED => 10-DEC-2013 TIME PLOTTED => 09:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110,405,710	Var	34	48
<i>Edward Li</i> REGISTERED CIVIL ENGINEER			DATE	11/06/13	
PLANS APPROVAL DATE			3-3-14		
<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 with high molecular weight methacrylate.
- /— Indicates location of clean expansion joint and placement of new joint seal.



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



FIGUEROA STREET UC BRIDGE NO. 53-2551

QUANTITIES	
PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	22,615 SQFT
TREAT BRIDGE DECK	22,615 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	283 GAL
CLEAN EXPANSION JOINT	296 LF
BONDED JOINT SEAL (MR 1 1/2")	296 LF

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 Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	BY Tom Dang	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang	CHECKED Edward Li
QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li	PLANS AND SPECS COMPARED Xiahong Li

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. 53-2551
		POST MILE R6.52
	RTE 1,47,91,110,405,710 BRIDGES	

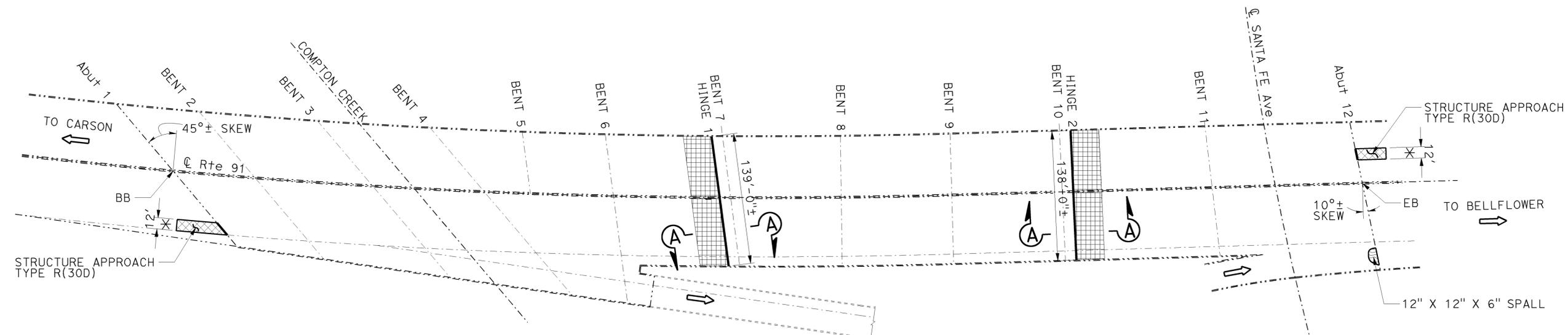
GENERAL PLAN NO. 4	
REVISION DATES	SHEET OF
5/10/13	04 18

USERNAME => s129239 DATE PLOTTED => 10-DEC-2013 TIME PLOTTED => 09:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	35	48
Edward Li REGISTERED CIVIL ENGINEER			11/06/13 DATE		
3-3-14 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

LEGEND:

- Indicates existing.
- Indicates direction of traffic.
- /— Indicates location of clean expansion joint and placement of new joint seal.
- ▨ Indicates limits of remove AC roadway and construct new structure approach slabs with paving notch extension.
- ▧ Indicates removal of unsound concrete and place rapid setting concrete patch. Actual area may vary and will be determined by the Engineer.
- ▩ Indicates limits of preparing existing concrete deck and place 3/4" depth polyester concrete overlay.
- ✱ Indicates limits of paving notch extension.



COMPTON CREEK BOH BRIDGE NO. 53-2235

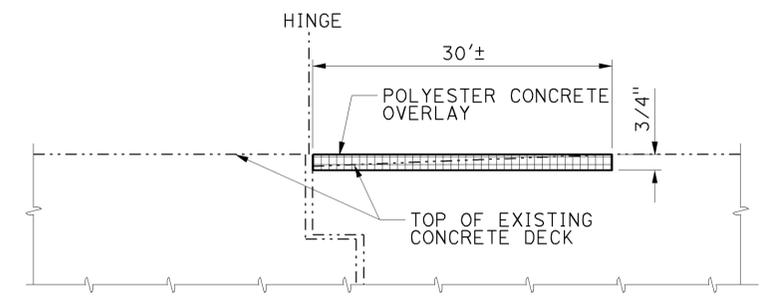
COMPTON CREEK BOH

Br No. 53-2235, Rte 91, PM R10.19
1" = 60'



QUANTITIES

	LUMP	SUM
PUBLIC SAFETY PLAN	1	CF
RAPID SETTING CONCRETE (PATCH)	520	SQFT
REMOVE CONCRETE DECK SURFACE	1	CF
REMOVE UNSOUND CONCRETE	8,310	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	520	CF
FURNISH POLYESTER CONCRETE OVERLAY	8,310	SQFT
PLACE POLYESTER CONCRETE OVERLAY	36	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	27	CF
PAVING NOTCH EXTENSION	277	LF
CLEAN EXPANSION JOINT	29	LF
JOINT SEAL (MR 1/2")	277	LF
JOINT SEAL (MR 1 1/2")		



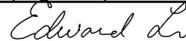
SECTION A-A

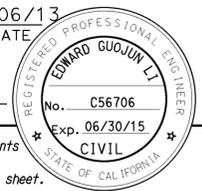
NO SCALE

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.

TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	RTE 1,47,91,110,405,710 BRIDGES GENERAL PLAN NO. 5
	DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang		CHECKED Edward Li	
	QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li	CHECKED Xiahong Li	POST MILE	
							R10.19	

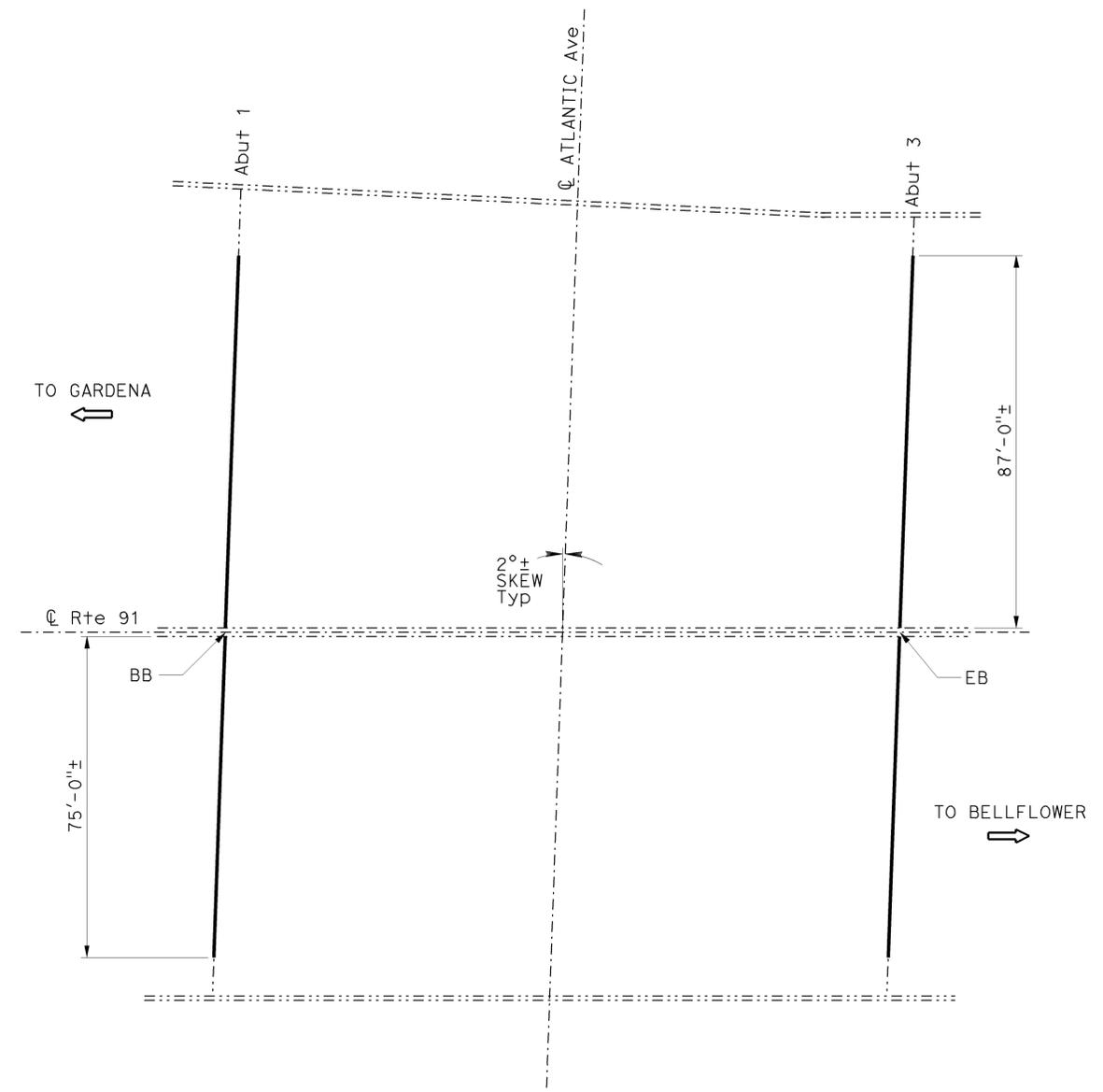
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	36	48
 REGISTERED CIVIL ENGINEER			DATE	11/06/13	
PLANS APPROVAL DATE			3-3-14		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



LEGEND:

- Indicates existing.
- ⇒ Indicates direction of traffic.
- /— Indicates location of clean expansion joint and placement of new joint seal.

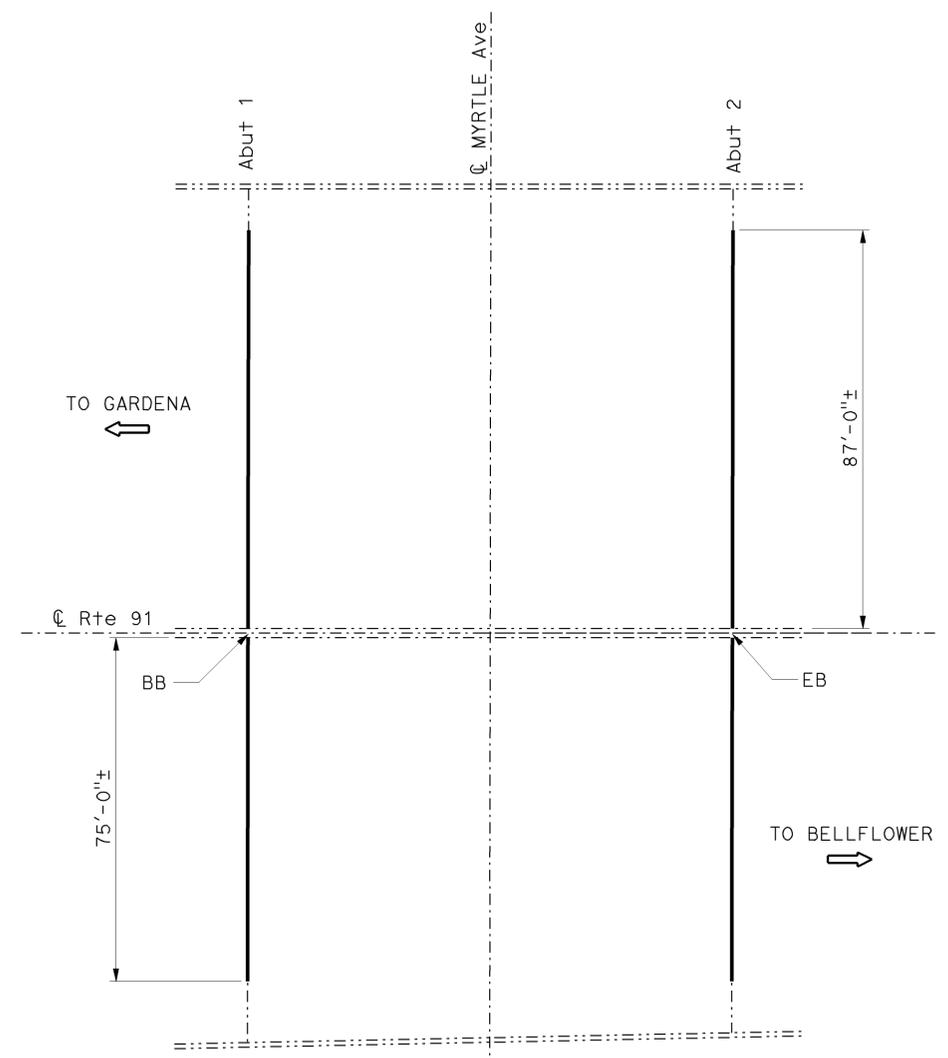


ATLANTIC AVENUE UC

Br No. 53-2124, Rte 91, PM R12.09
1" = 20'



ATLANTIC AVENUE UC	BRIDGE NO. 53-2124
QUANTITIES	
CLEAN EXPANSION JOINT	324 LF
JOINT SEAL (MR 1/2")	324 LF



MYRTLE AVENUE UC

Br No. 53-2121, Rte 91, PM R12.34
1" = 20'



MYRTLE AVENUE UC	BRIDGE NO. 53-2121
QUANTITIES	
CLEAN EXPANSION JOINT	324 LF
JOINT SEAL (MR 1/2")	324 LF

NOTE:
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DESIGN ENGINEER TONY D. BRAKE	DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
	QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies
RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN NO. 6

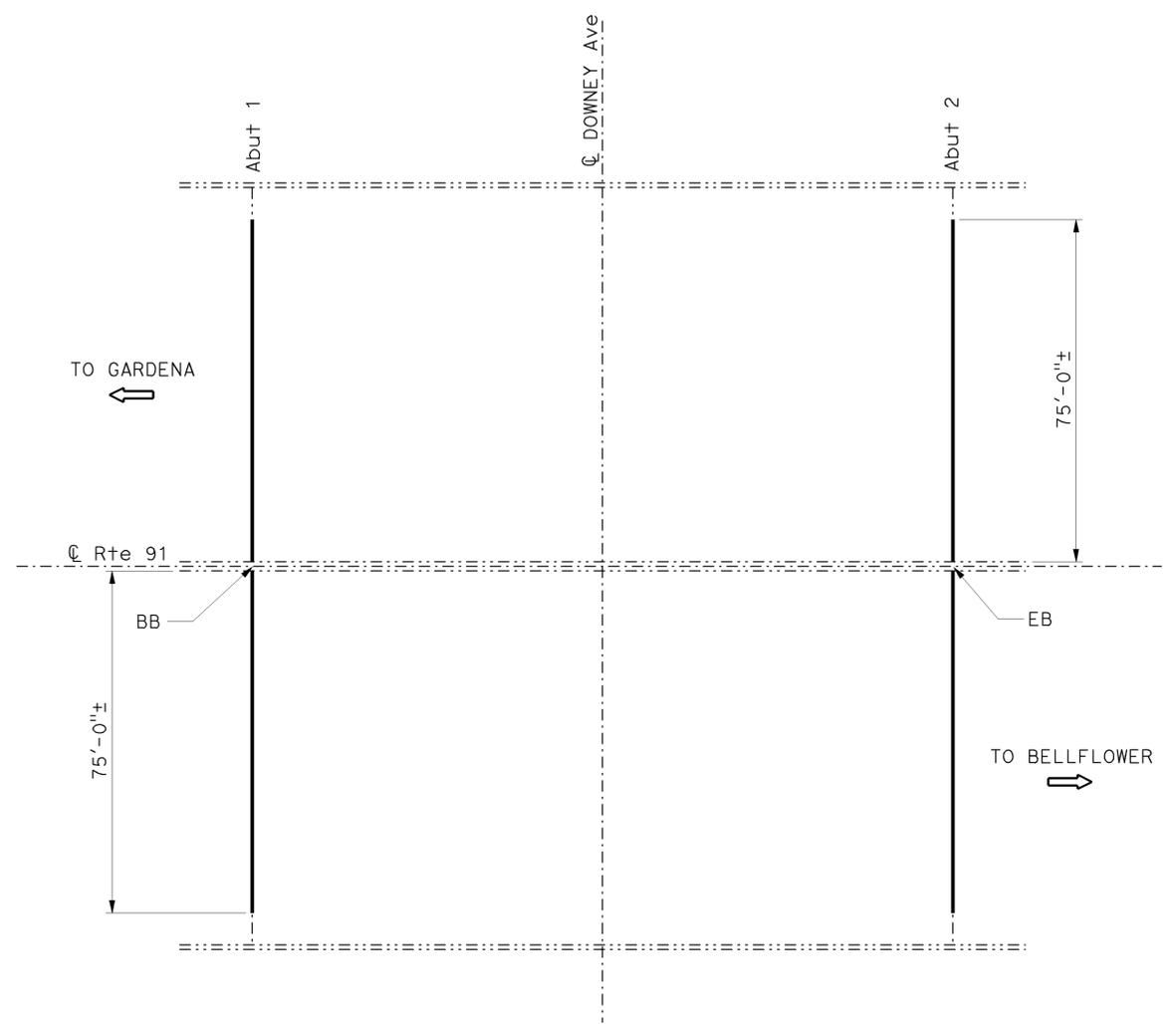
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	37	48
<i>Edward Li</i> REGISTERED CIVIL ENGINEER			DATE	11/06/13	
PLANS APPROVAL DATE			3-3-14		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

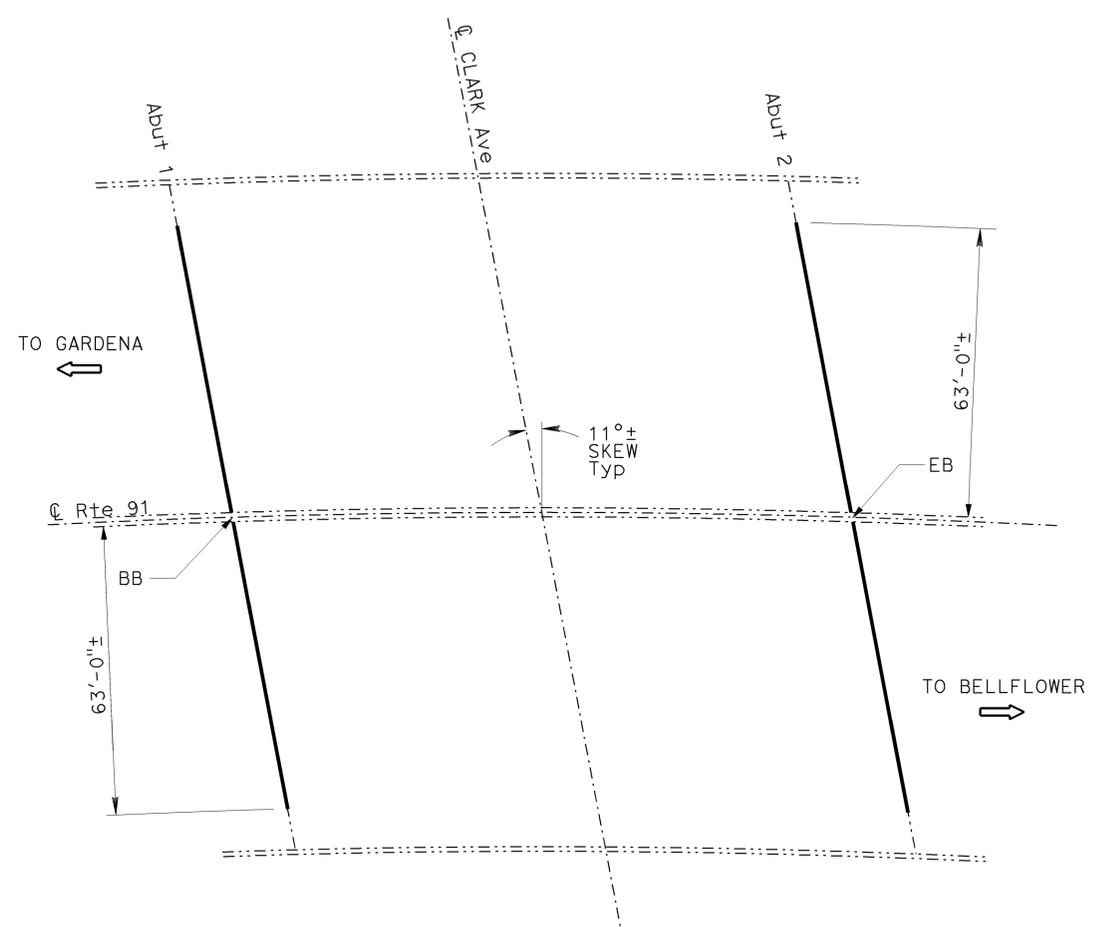


LEGEND:

- Indicates existing.
- ➔ Indicates direction of traffic.
- /— Indicates location of clean expansion joint and placement of new joint seal.



DOWNEY AVENUE UC
 Br No. 53-1761, Rte 91, PM R14.1
 1" = 20'



CLARK AVENUE UC
 Br No. 53-1759, Rte 91, PM R15.1
 1" = 20'

DOWNEY AVENUE UC	BRIDGE NO. 53-1761
QUANTITIES	
CLEAN EXPANSION JOINT	300 LF
JOINT SEAL (MR 1/2")	300 LF

CLARK AVENUE UC	BRIDGE NO. 53-1759
QUANTITIES	
CLEAN EXPANSION JOINT	258 LF
JOINT SEAL (MR 1/2")	258 LF

NOTE:
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TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
	QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
 STRUCTURE MAINTENANCE DESIGN

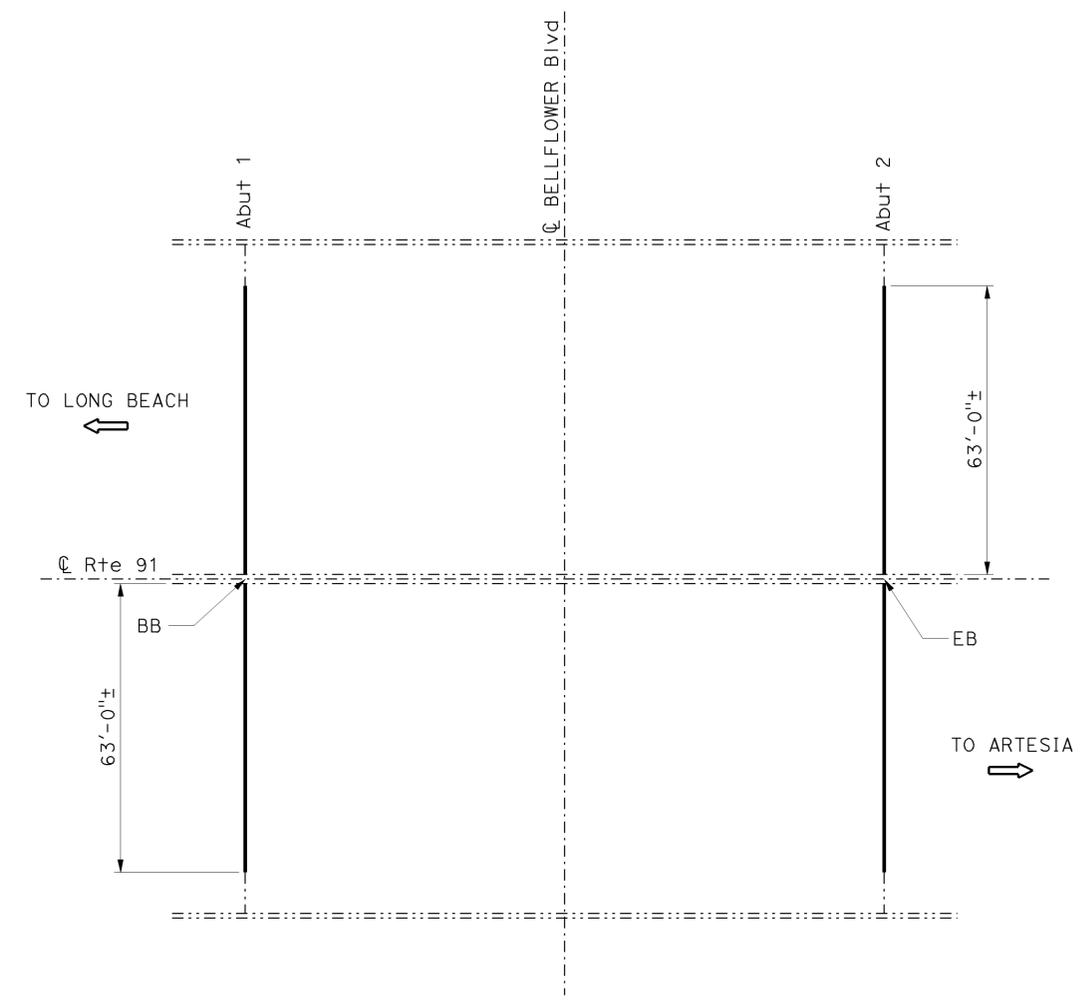
BRIDGE NO. Various
 POST MILE Varies
RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN NO. 7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	38	48
<i>Edward Li</i> REGISTERED CIVIL ENGINEER			11/06/13	DATE	
3-3-14			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 location of clean expansion joint and placement of new joint seal.



BELLFLOWER BLVD UC

Br No. 53-1718, Rte 91, PM R15.61
1" = 20'



BELLFLOWER BLVD UC	BRIDGE NO. 53-1718
QUANTITIES	
CLEAN EXPANSION JOINT	252 LF
JOINT SEAL (MR 1/2")	252 LF

NOTE:
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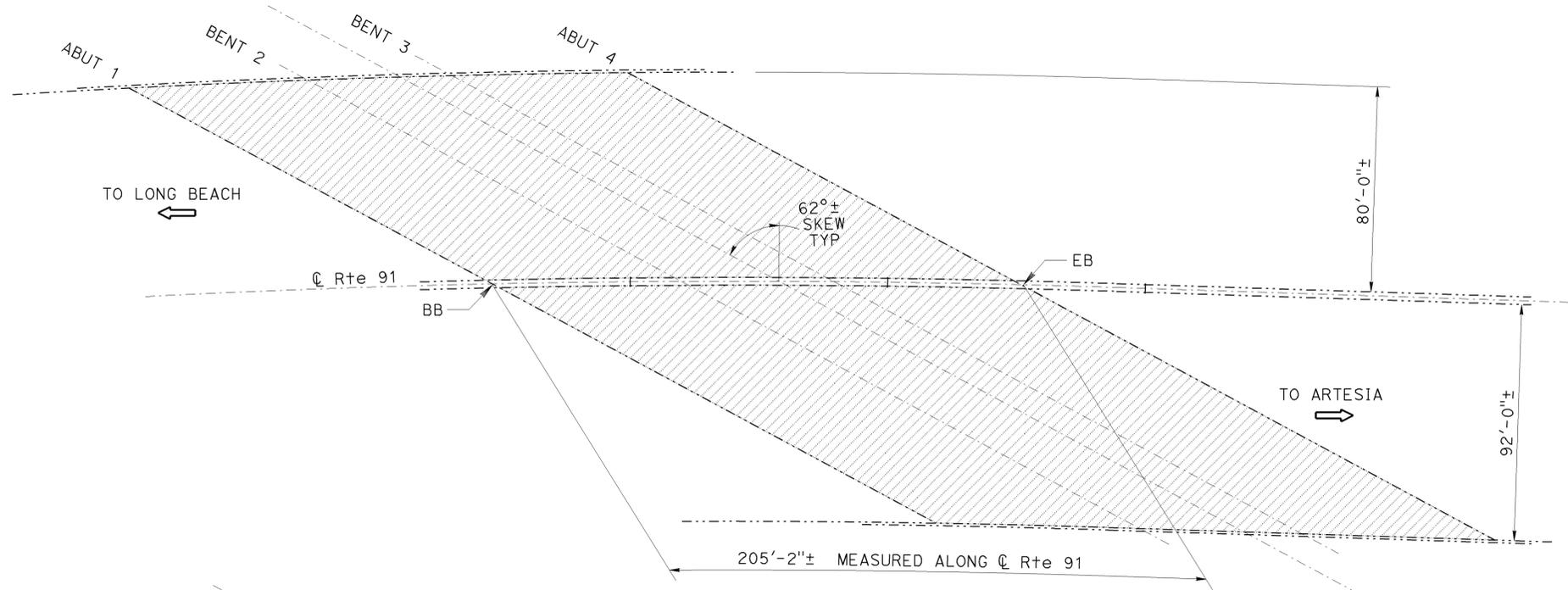
TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
	QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 53-1718
POST MILE R15.61
RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN NO. 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	39	48
Edward Li			11/06/13	REGISTERED CIVIL ENGINEER DATE	
3-3-14			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

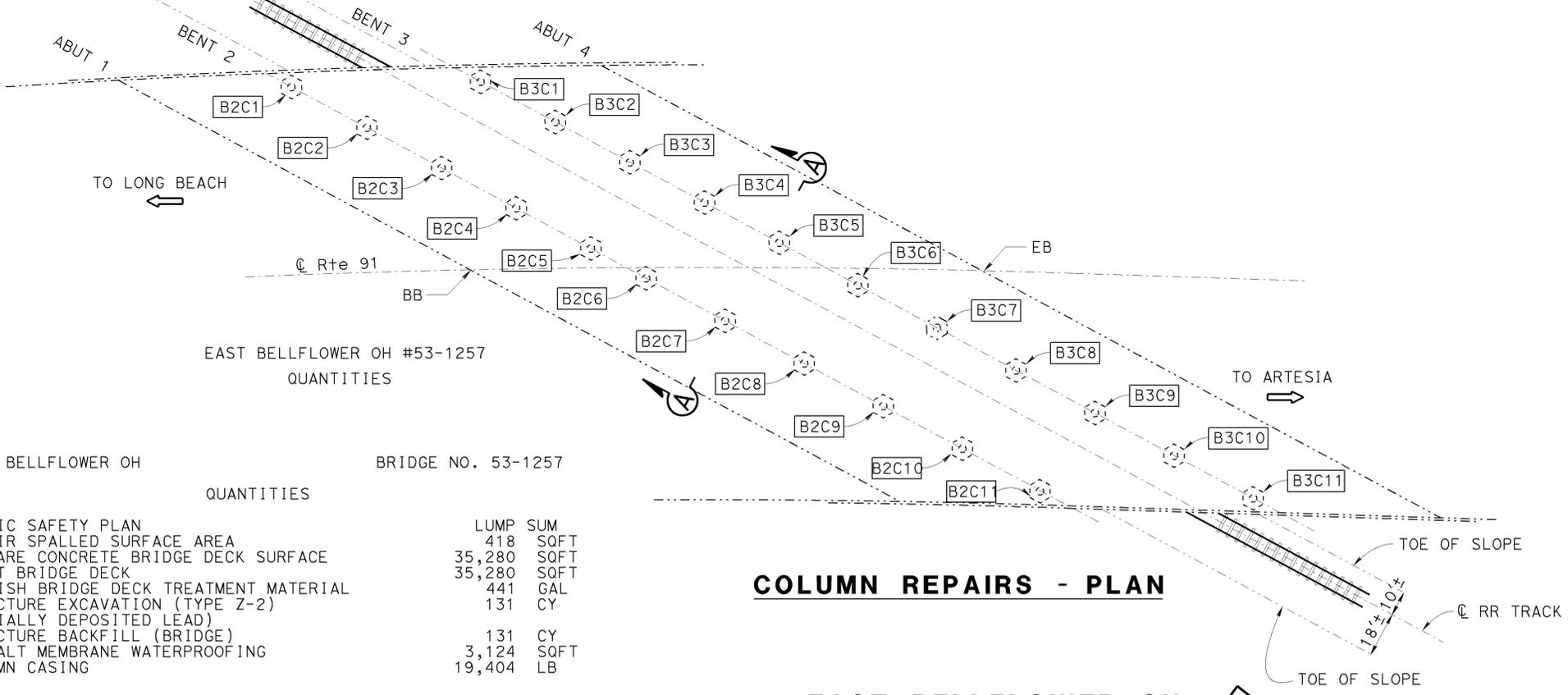


- LEGEND:**
- Indicates existing.
 - ➔ Indicates direction of traffic.
 - ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
 - BxCx Indicates location of repair column spalls and place steel casing. See "STEEL COLUMN CASING DETAILS" sheet.
 - ▩ Indicates limits of repair spalled surface area.

DECK TREATMENT



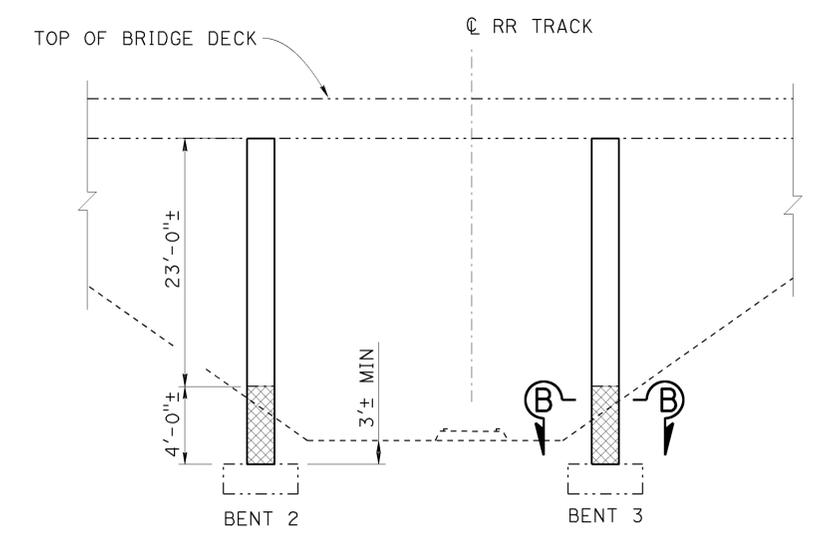
VIEW B-B
NO SCALE



COLUMN REPAIRS - PLAN

EAST BELLFLOWER OH

Br No. 53-1257, Rte 91, PM R16.54
NO SCALE



SECTION A-A

NO SCALE

EAST BELLFLOWER OH #53-1257
QUANTITIES

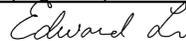
EAST BELLFLOWER OH
BRIDGE NO. 53-1257
QUANTITIES

	LUMP	SUM	
PUBLIC SAFETY PLAN	418		SQFT
REPAIR SPALLED SURFACE AREA	35,280		SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	35,280		SQFT
TREAT BRIDGE DECK	441		GAL
FURNISH BRIDGE DECK TREATMENT MATERIAL	131		CY
STRUCTURE EXCAVATION (TYPE Z-2) (AERIALY DEPOSITED LEAD)	131		CY
STRUCTURE BACKFILL (BRIDGE)	3,124		SQFT
ASPHALT MEMBRANE WATERPROOFING	19,404		LB
COLUMN CASING			

NOTE:
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DESIGN TONY D. BRAKE DESIGN ENGINEER	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. 53-1257	RTE 1,47,91,110,405,710 BRIDGES GENERAL PLAN NO. 9	
	DETAILS BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang			CHECKED Edward Li		POST MILE R16.54
QUANTITIES BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li	CHECKED Xiahong Li	PLANS AND SPECS COMPARED	UNIT: 3489 PROJECT NUMBER & PHASE: 0712000410 1	CONTRACT NO.: 07-1W6104	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	REVISION DATES	SHEET 09 OF 18

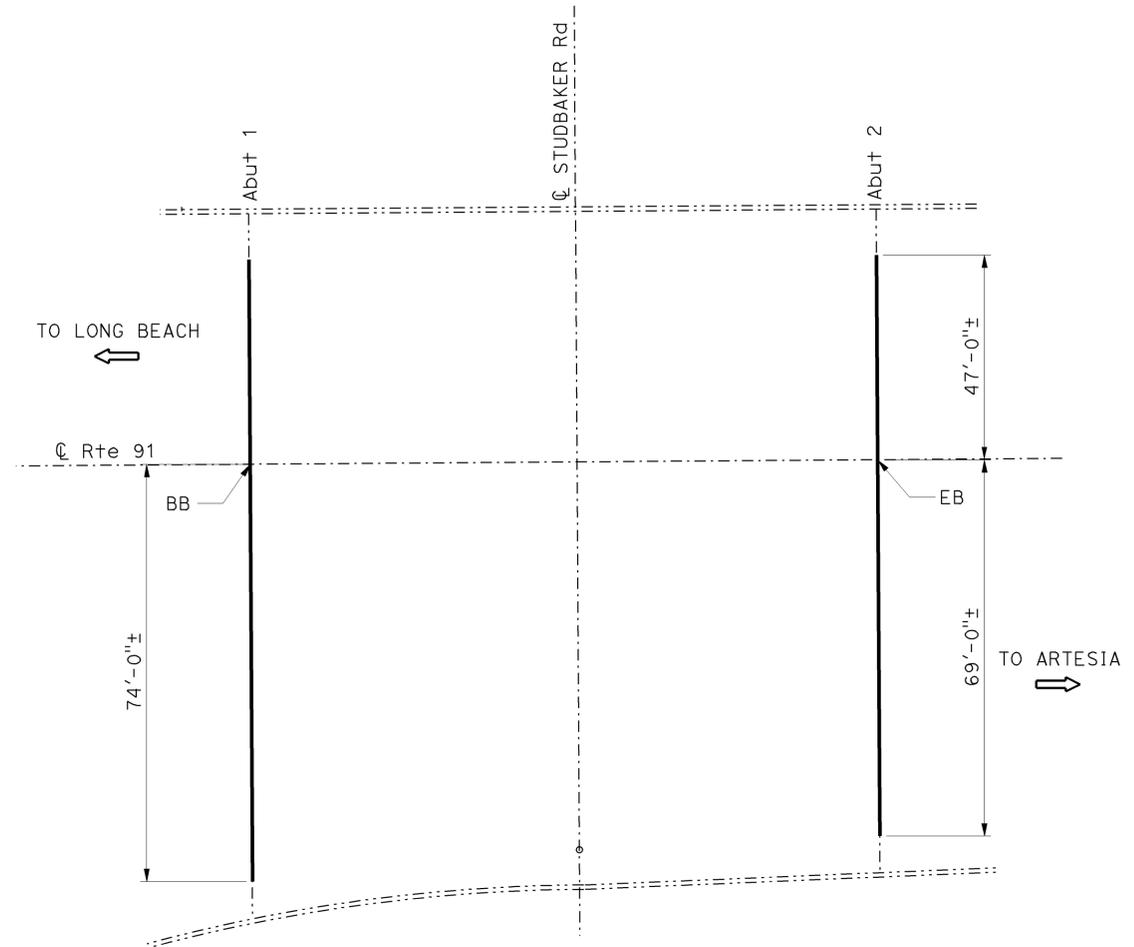
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	40	48
			11/06/13		
REGISTERED CIVIL ENGINEER			DATE		
3-3-14			PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



LEGEND:

-  Indicates existing.
-  Indicates direction of traffic.
-  Indicates location of clean expansion joint and placement of new joint seal.
-  Indicates limits of spalled surface repair at exterior girder.

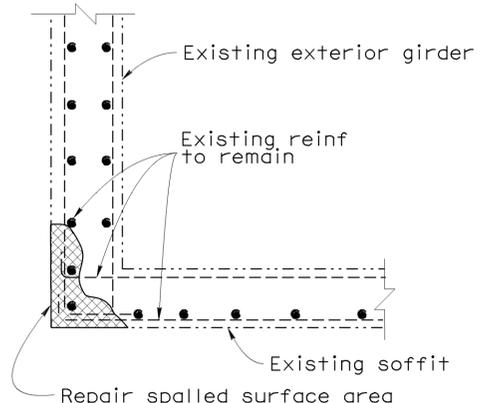


STUDBAKER ROAD UC

Br No. 53-1706, Rte 91, PM R17.08
NO SCALE

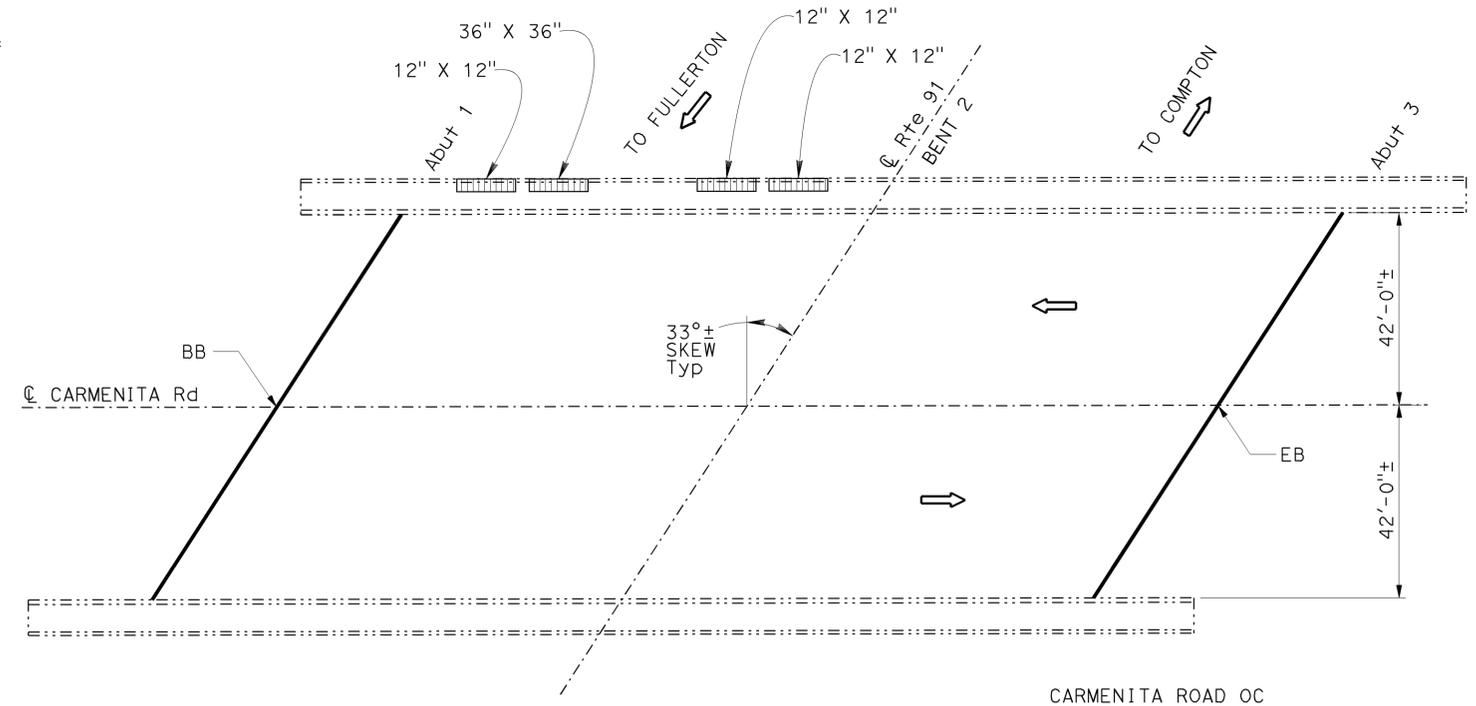


STUDBAKER ROAD UC	BRIDGE NO. 53-1706
CLEAN EXPANSION JOINT	237 LF
JOINT SEAL (MR 1")	237 LF



SPALLED SURFACE AREA DETAIL

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



CARMENITA ROAD OC

Br No. 53-1432, Rte 91, PM R20.45
1" = 20'



CARMENITA ROAD OC	BRIDGE NO. 53-1432
REPAIR SPALLED SURFACE AREA	12 SQFT
CLEAN EXPANSION JOINT	200 LF
JOINT SEAL (MR 1")	200 LF

NOTE:
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DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

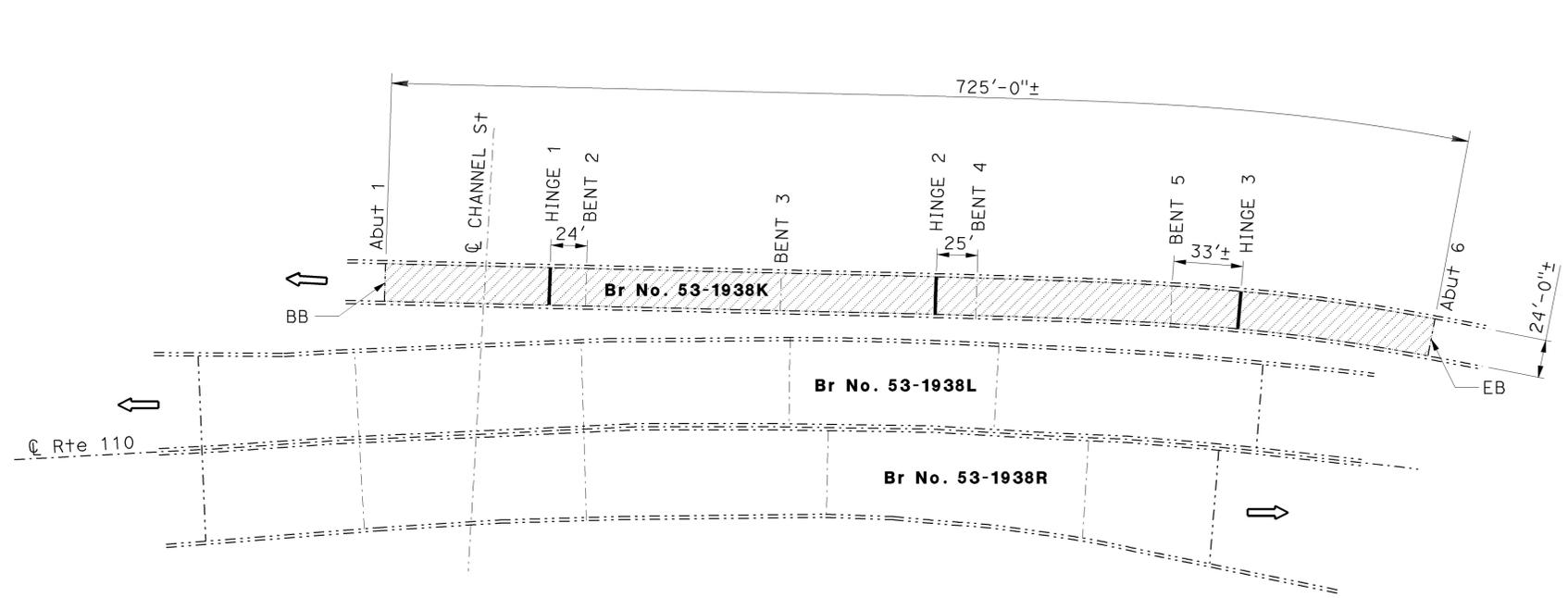
BRIDGE NO. Various
POST MILE Varies

RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN NO. 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	41	48
<i>Edward Li</i> REGISTERED CIVIL ENGINEER			DATE	11/06/13	
PLANS APPROVAL DATE 3-3-14					
<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 with high molecular weight methacrylate.
- /— Indicates location of clean expansion joint and placement of new joint seal.



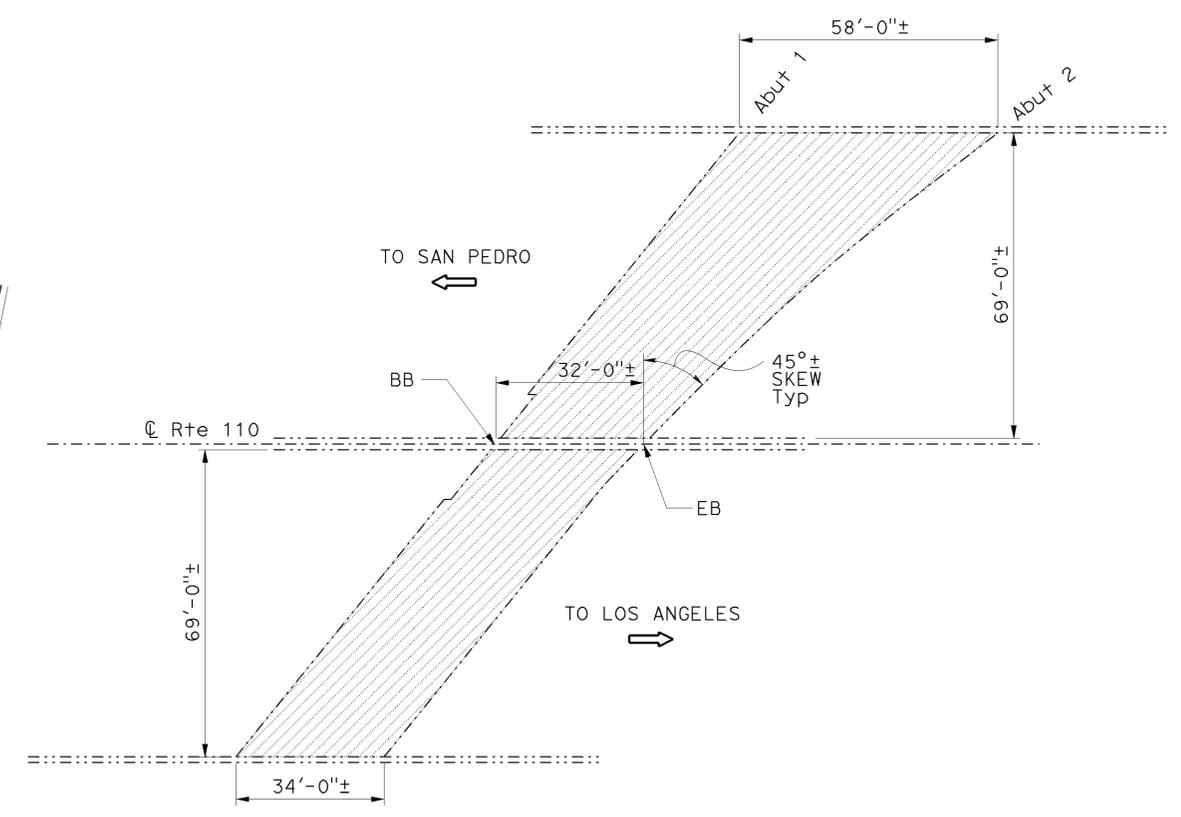
CHANNEL STREET OH

Br No. 53-1938K, Rte 110, PM R1.25
NO SCALE

CHANNEL STREET OH BRIDGE NO. 53-1938K

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	17,400 SQFT
TREAT BRIDGE DECK	17,400 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	218 GAL
CLEAN EXPANSION JOINT	72 LF
JOINT SEAL (MR 1 1/2")	72 LF



UNION OIL OH

Br No. 53-0977, Rte 110, PM 2.5
NO SCALE

UNION OIL OH BRIDGE NO. 53-0977

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	5,520 SQFT
TREAT BRIDGE DECK	5,520 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	69 GAL

NOTE:
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DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

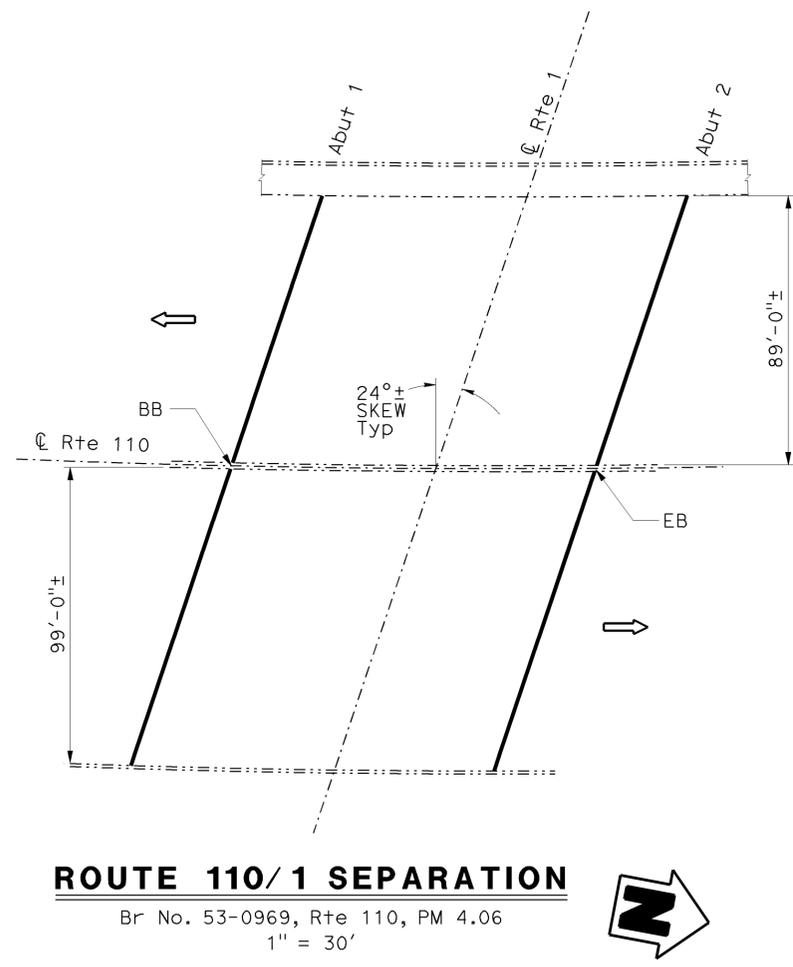
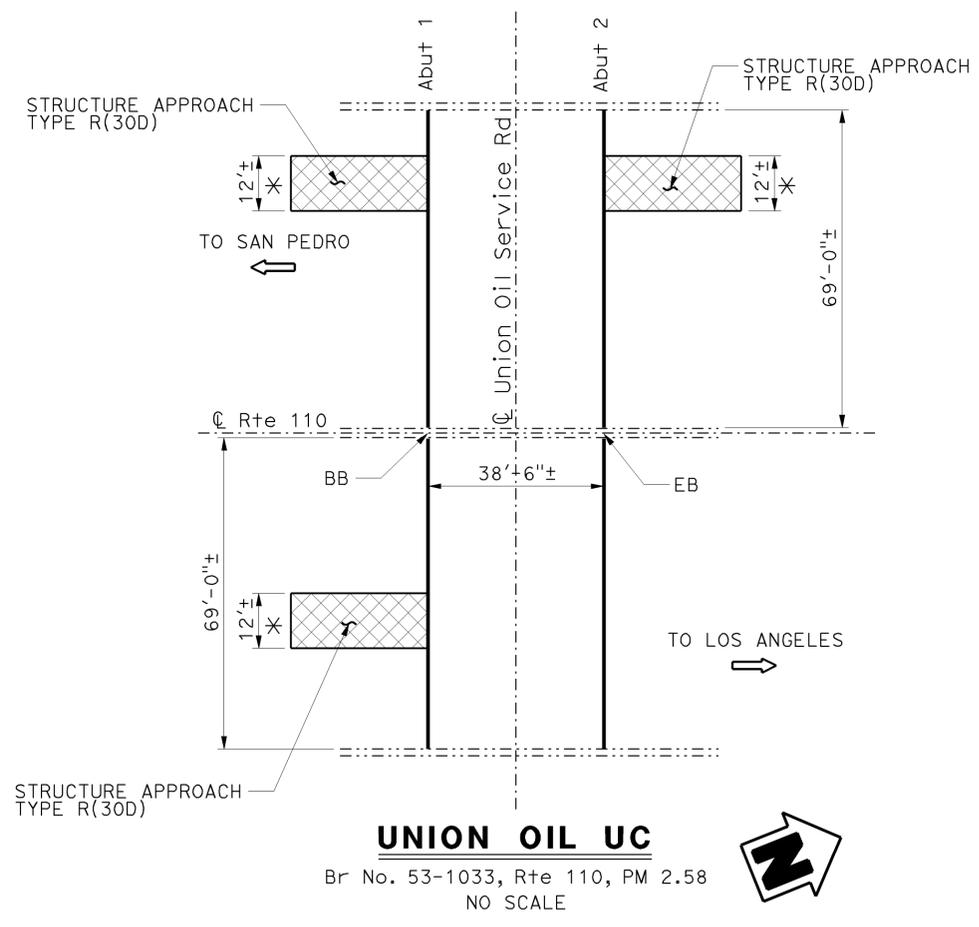
DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies
RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN NO. 11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	42	48
<i>Edward Li</i> REGISTERED CIVIL ENGINEER			DATE	11/06/13	
PLANS APPROVAL DATE 3-3-14					
<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 location of clean expansion joint and placement of new joint seal.
- ▨ Indicates limits of remove AC roadway and construct new structure approach slabs with paving notch extension.
- ✱ Indicates limits of paving notch extension.



UNION OIL UC BRIDGE NO. 53-1033

QUANTITIES

STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	48	CY
PAVING NOTCH EXTENSION	27	CF
CLEAN EXPANSION JOINT	240	LF
JOINT SEAL (MR 1/2")	276	LF

ROUTE 110/1 SEPARATION BRIDGE NO. 53-0969

QUANTITIES

CLEAN EXPANSION JOINT	412	LF
JOINT SEAL (MR 1 1/2")	412	LF

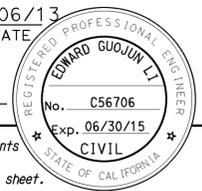
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE	BRIDGE NO.	RTE 1,47,91,110,405,710 BRIDGES GENERAL PLAN NO. 12
	DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang		CHECKED Edward Li	STRUCTURE MAINTENANCE DESIGN	
	QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li	CHECKED Xiahong Li	PLANS AND SPECS COMPARED	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: 0712000410 1 CONTRACT NO.: 07-1W6104 DISREGARD PRINTS BEARING EARLIER REVISION DATES 5/10/13 SHEET 12 OF 18

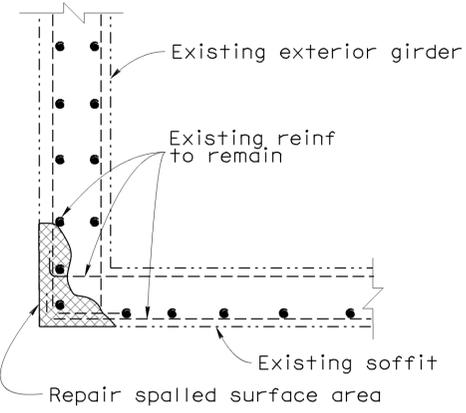
USERNAME => s129239 DATE PLOTTED => 10-DEC-2013 TIME PLOTTED => 09:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	43	48
Edward Li			11/06/13	REGISTERED CIVIL ENGINEER DATE	
3-3-14			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



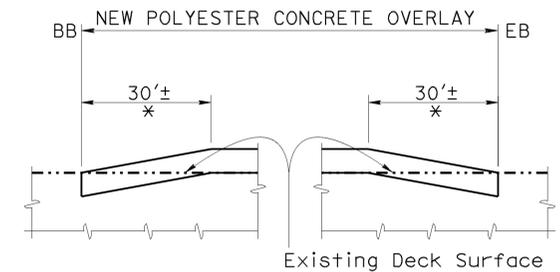
LEGEND:

- Indicates existing.
- ➔ Indicates direction of traffic.
- [Hatched Box] Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
- [Dotted Box] Indicates limits of spalled surface repair at exterior girder.
- [Cross-hatched Box] 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 overlay. See "Deck Repair Table" on sheet 16.



SPALLED SURFACE AREA DETAIL

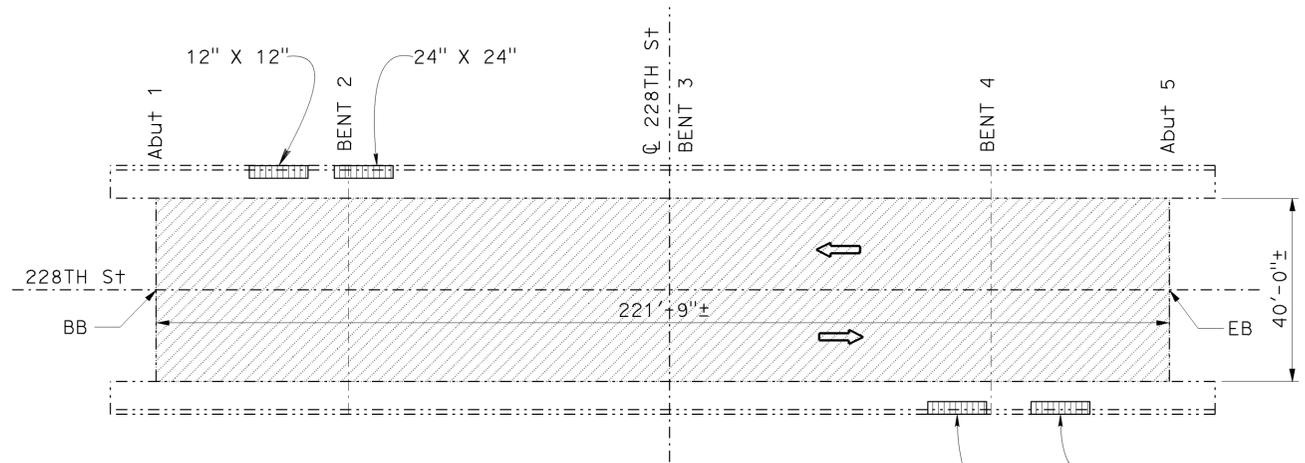
Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.



SECTION A-A

NO SCALE

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



228TH STREET OC

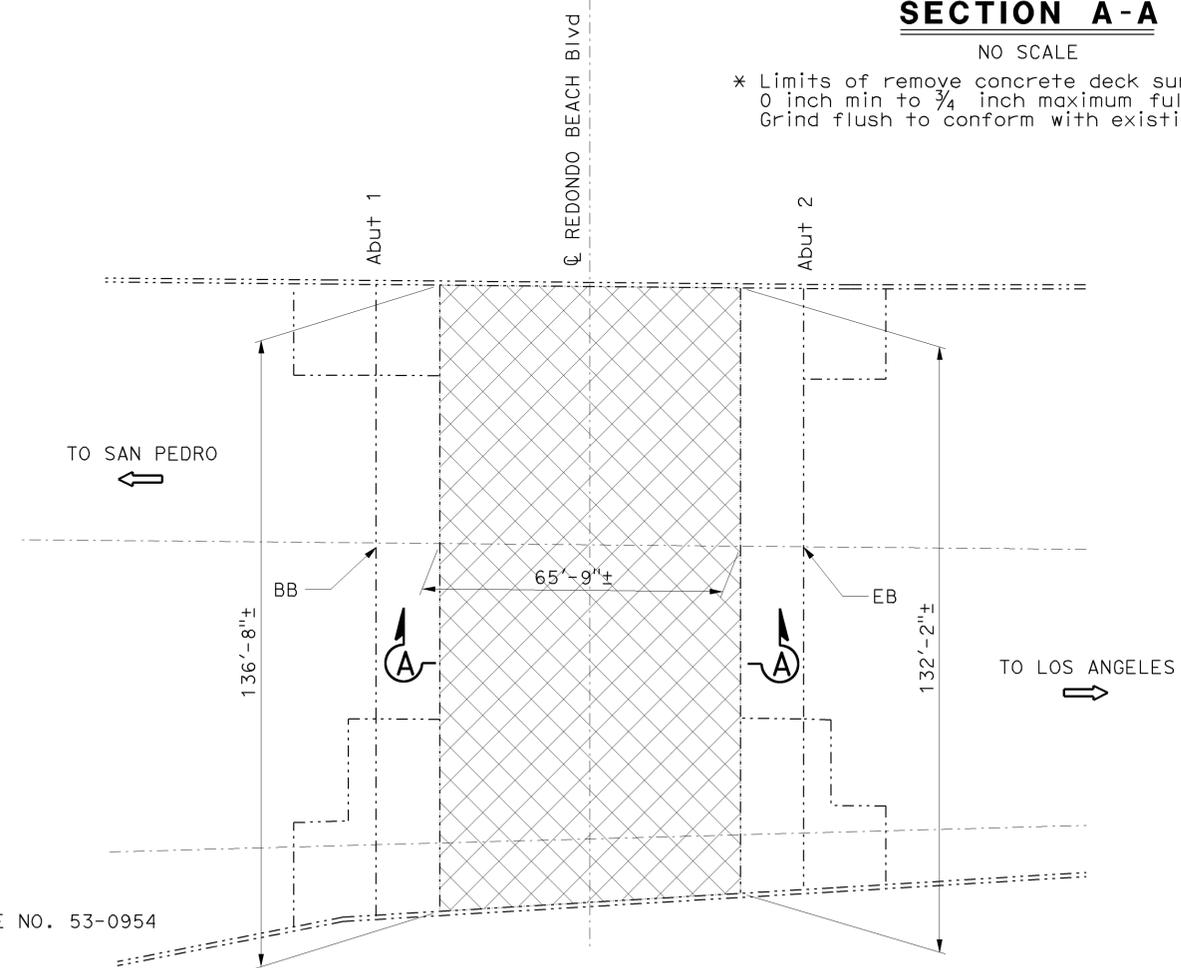
Br No. 53-0965, Rte 110, PM 6.14
1" = 20'

228TH STREET OC

BRIDGE NO. 53-0965

QUANTITIES

PUBLIC SAFETY PLAN	LUMP	SUM
REPAIR SPALLED SURFACE AREA	18	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	8,870	SQFT
TREAT BRIDGE DECK	8,870	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	111	GAL



REDONDO BEACH BLVD UC

Br No. 53-0954, Rte 110, PM 11.24
1" = 20'

BRIDGE NO. 53-0954

QUANTITIES

PUBLIC SAFETY PLAN	LUMP	SUM
RAPID SETTING CONCRETE (PATCH)	22	CF
REMOVE CONCRETE DECK SURFACE	8,840	SQFT
REMOVE UNSOUND CONCRETE	22	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	8,840	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	664	CF
PLACE POLYESTER CONCRETE OVERLAY	8,840	SQFT

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 Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li

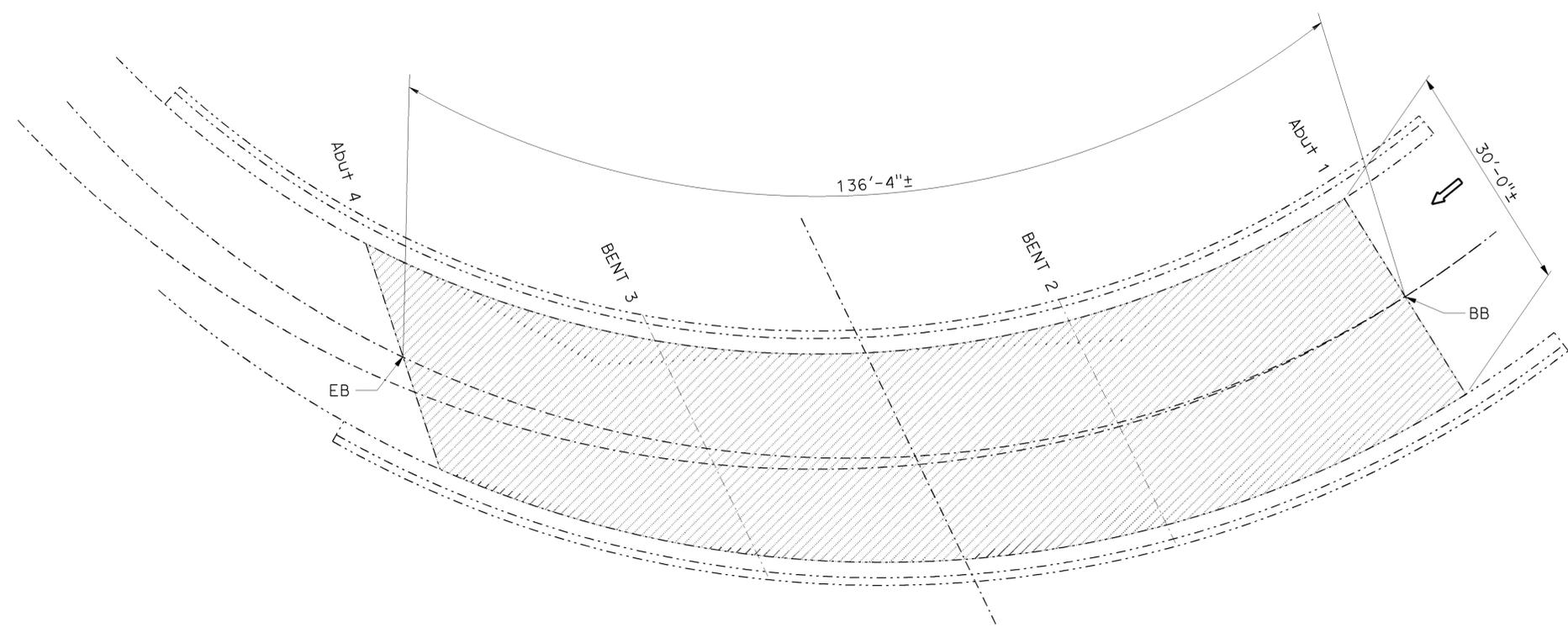
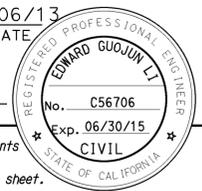
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies
RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN 13

USERNAME => s129239 DATE PLOTTED => 10-DEC-2013 TIME PLOTTED => 09:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	44	48
Edward Li			11/06/13		
REGISTERED CIVIL ENGINEER			DATE		
3-3-14			PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

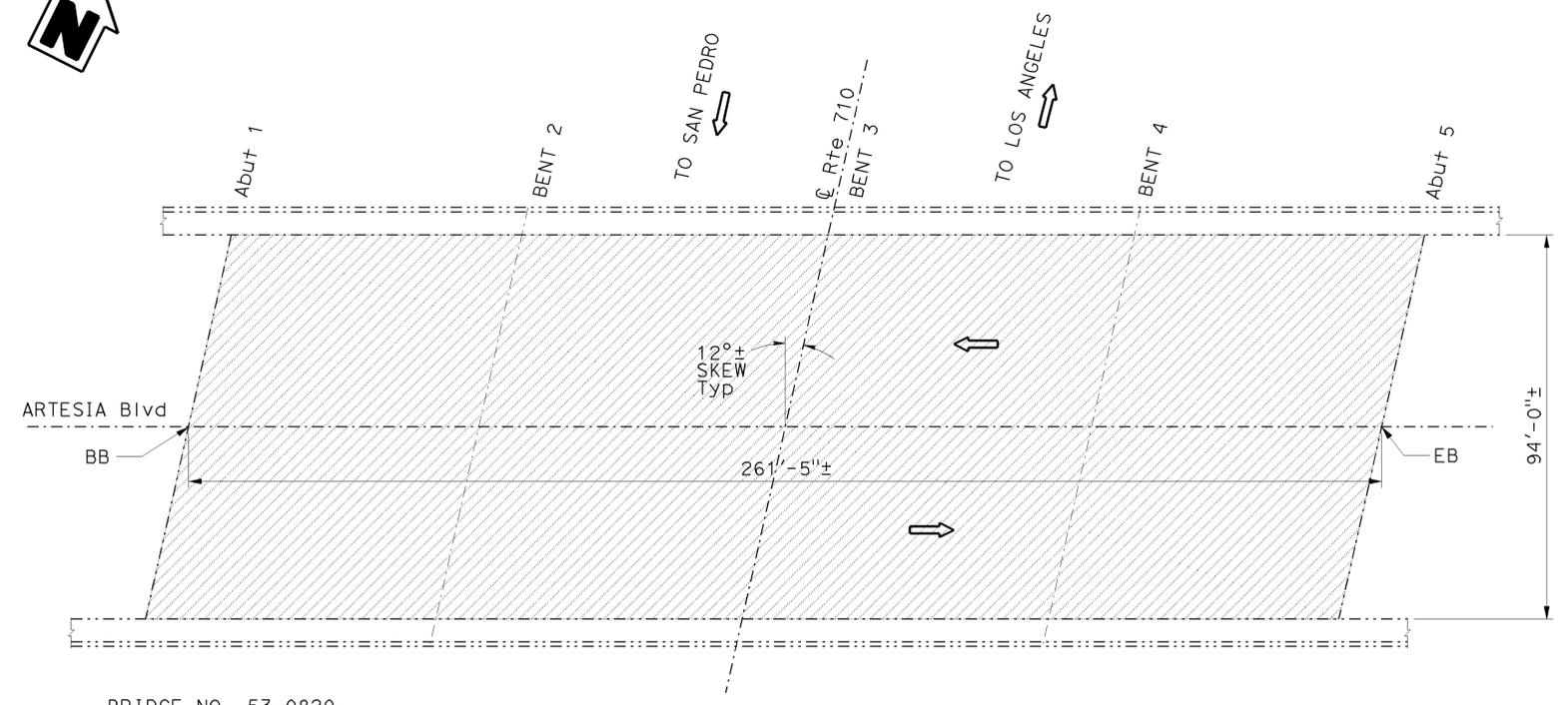


N19-N405 CONNECTOR OC
 Br No. 53-1481G, Rte 405, PM 3.2
 1" = 10'



N19-N405 CONN OC	BRIDGE NO. 53-1481G
QUANTITIES	
PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	4,090 SQFT
TREAT BRIDGE DECK	4,090 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	52 GAL

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



ARTESIA BLVD OC
 Br No. 53-0820, Rte 710, PM 12.89
 1" = 20'



ARTESIA BLVD	BRIDGE NO. 53-0820
QUANTITIES	
PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	24,572 SQFT
TREAT BRIDGE DECK	24,572 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	308 GAL

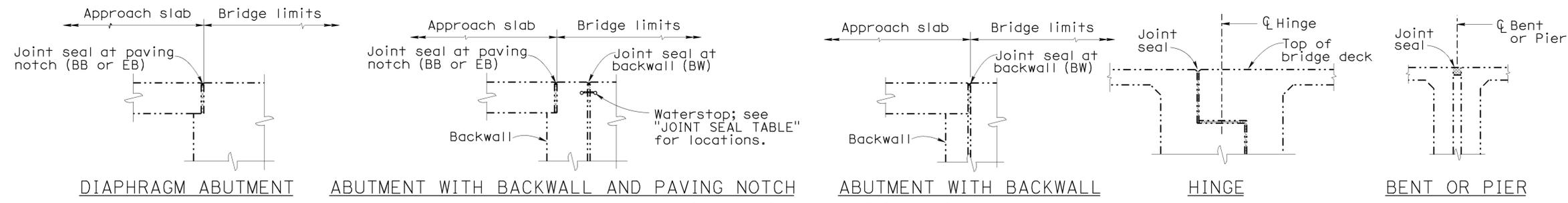
NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

DESIGN	BY Edward Li	CHECKED HongTien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Li	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Li	CHECKED HongTien Tran	SPECIFICATIONS	BY Xiahong Li
				CHECKED Edward Li
				PLANS AND SPECS COMPARED Xiahong Li

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
 STRUCTURE MAINTENANCE DESIGN

RTE 1,47,91,110,405,710 BRIDGES
GENERAL PLAN 14



JOINT SEAL LOCATION

NO SCALE

JOINT SEAL TABLE

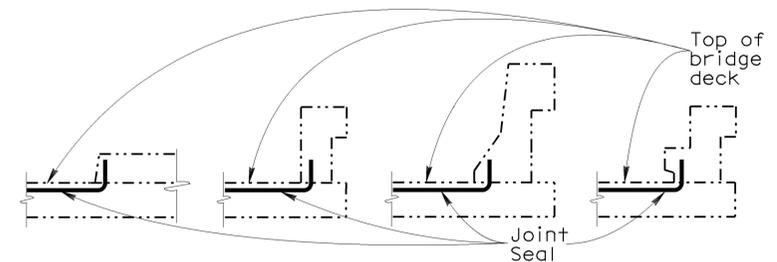
BRIDGE NAME	BRIDGE NUMBER	LOCATION	MINIMUM "MR" (INCHES)	APPROX JOINT LENGTH (LF)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)
VINCENT THOMAS BRIDGE	53-1471	ABUT 1 PN	1/2	50	NO	12
		BENT 2 to 9	1 1/2*	820	NO	12
		BENT 14 to 21	1 1/2*		NO	12
		ABUT 22 BW	1*	50	NO	12
FIGUEROA STREET UC	53-2551	ABUT 1 PN	1 1/2	138	NO	12
		ABUT 2 PN	1 1/2	158	NO	12
COMPTON CREEK BOH	53-2235	ABUT 1 PN	1/2	17	NO	--
		HINGE 1 --	1 1/2	139	NO	12
		HINGE 2 --	1 1/2	138	NO	12
ATLANTIC AVENUE UC	53-2124	ABUT 1 PN	1/2	162	NO	12
		ABUT 3 PN	1/2	162	NO	12
MYRTLE AVENUE UC	53-2121	ABUT 1 PN	1/2	162	NO	12
		ABUT 2 PN	1/2	162	NO	12
DOWNEY AVENUE UC	53-1761	ABUT 1 PN	1/2	150	NO	12
		ABUT 2 PN	1/2	150	NO	12
CLARK AVENUE UC	53-1759	ABUT 1 PN	1/2	129	NO	12
		ABUT 2 PN	1/2	129	NO	12
BELLFLOWER BLVD UC	53-1718	ABUT 1 PN	1/2	126	NO	12
		ABUT 2 PN	1/2	126	NO	12
STUDBAKER ROAD UC	53-1706	ABUT 1 PN	1	121	NO	12
		ABUT 2 PN	1	116	NO	12
CARMENITA ROAD OC	53-1432	ABUT 1 PN	1	100	NO	12
		ABUT 3 PN	1	100	NO	12
CHANNEL STREET OH	53-1938K	HINGE 1, 2, 3	1 1/2	72	NO	12
UNION OIL UC	53-1033	ABUT 1 PN	1/2	138	NO	12
		ABUT 2 PN	1/2	138	NO	12
ROUTE 110/1 SEPARATION	53-0969	ABUT 1 PN	1 1/2	206	NO	12
		ABUT 2 PN	1 1/2	206	NO	12

PN = PAVING NOTCH
 BW = BACKWALL
 * = USE BONDED JOINT SEALS

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.

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 Plans B6-21 sheet.
- The following notes apply to JOINT SEAL TYPE B:
- Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
 - Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be recalculated by the Engineer.
 - W1 shall be the smaller of the values determined as follows:
 - 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
 - The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3.0 PSI.
 - Bend Type B joint seal 6 inches up into curb or rail on the low side of the deck where deck joint matches curb or rail joint.
 - For details not shown see Standard Plans B6-21 sheet.



BARRIER RAIL

JOINT SEAL AT LOW SIDE OF DECK

Note: Details shown for illustration purposes only.

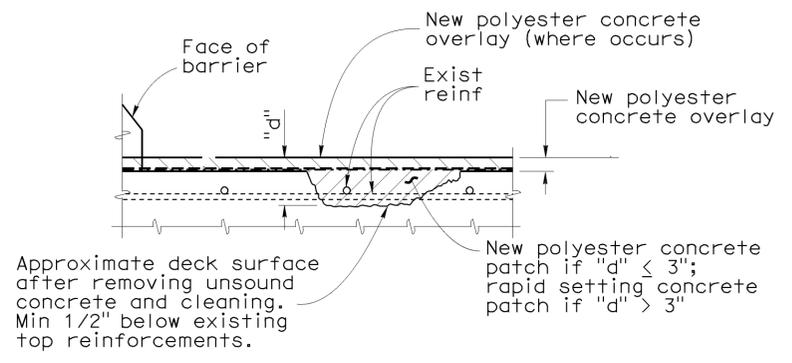
For use only where deck joint matches the sidewalk, curb or barrier rail joint.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1,47,91,110, 405,710	Var	46	48
Edward Li REGISTERED CIVIL ENGINEER			11/06/13 DATE		
3-3-14 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

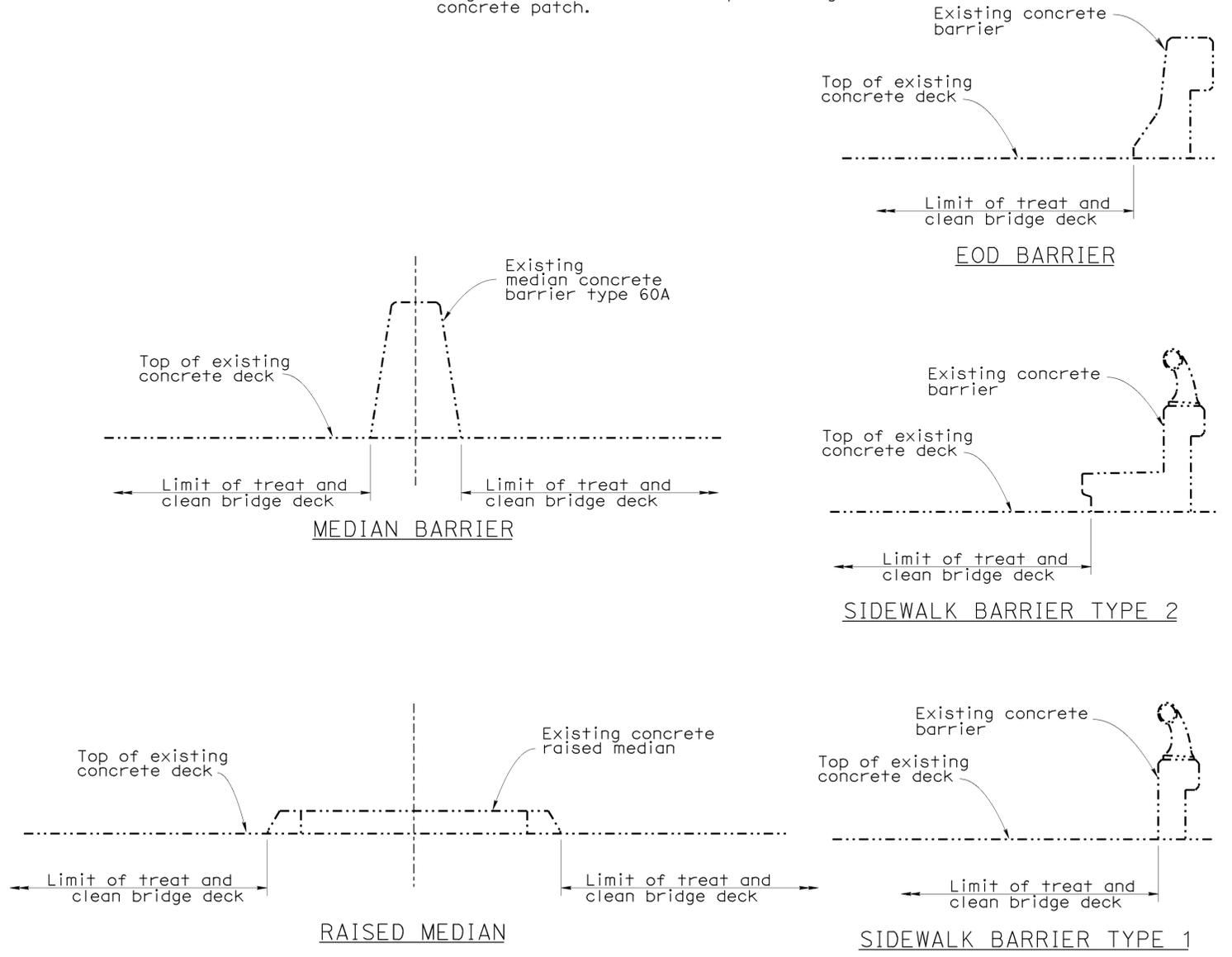
- NOTES:**
- Existing reinforcement shall be protected in place during unsound concrete removal and patching operations.
 - It is responsibility of the Contractor to repair any reinforcement that is accidentally cut by saw cutting operations.
 - When existing transverse reinforcement is exposed in the deck surface, saw cutting may be waived with the approval of the Engineer.
 - The saw cut depth shall not exceed $\frac{3}{4}$ 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.

DECK REPAIR TABLE REMOVE UNSOUND CONCRETE AND RAPID SETTING CONCRETE (PATCH)

BRIDGE NAME	BRIDGE NUMBER	APPROXIMATE AREA DAMAGED (%)	APPROXIMATE DEPTH (INCH)
REDONDO BEACH BLVD UC	53-0954	1	3



DECK OVERLAY DETAIL
 Locations to be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.

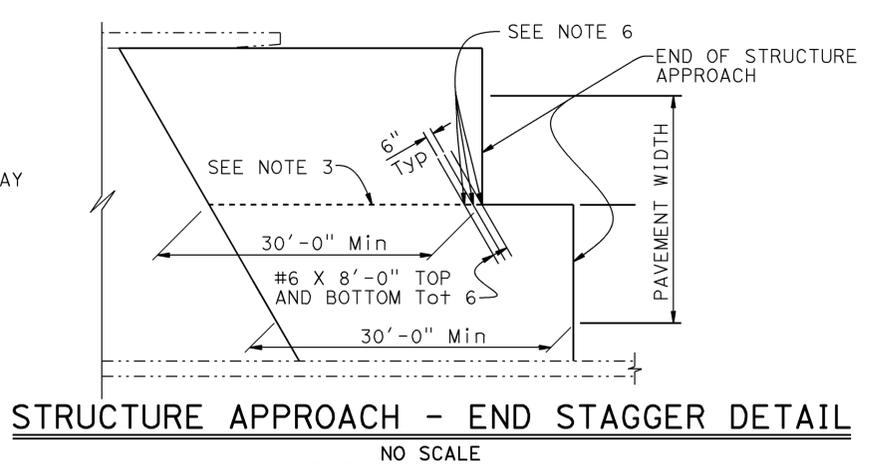
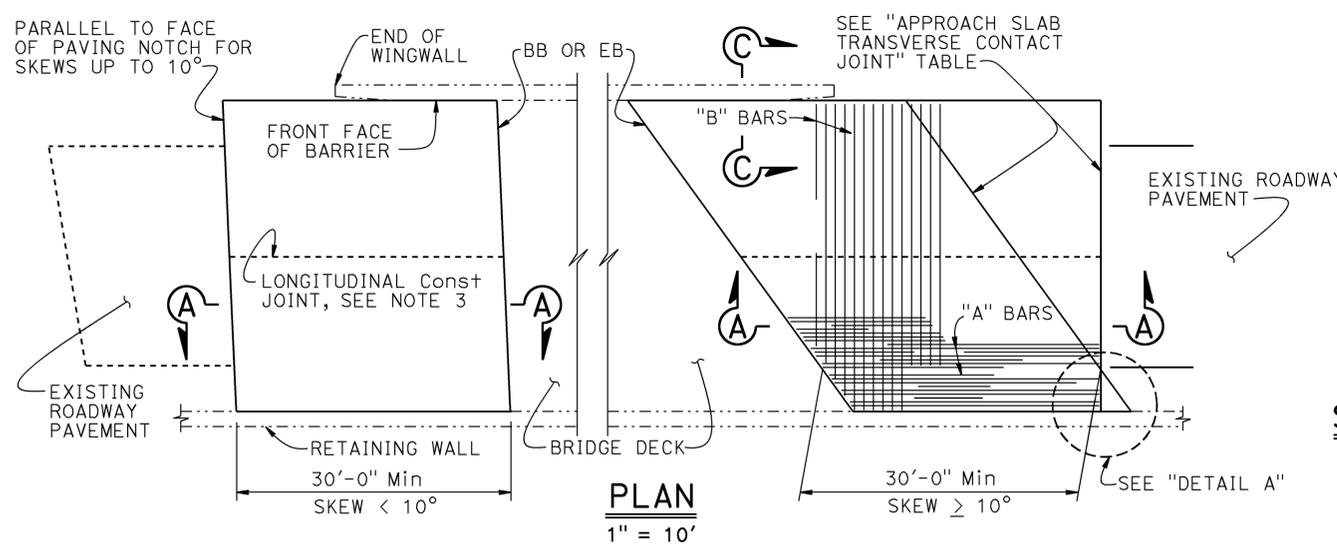


TYPICAL LIMITS OF DECK WORK
NO SCALE

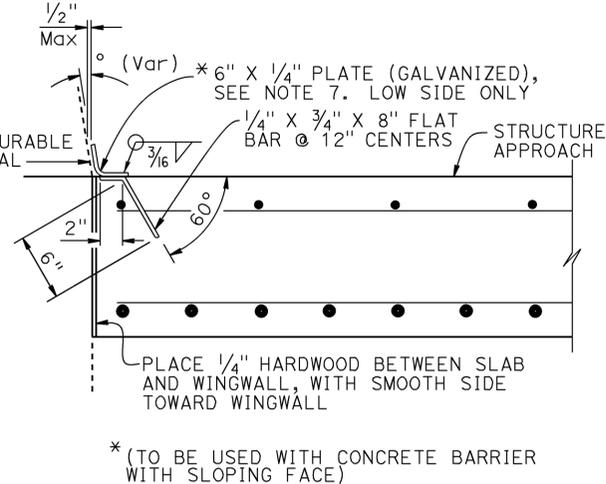
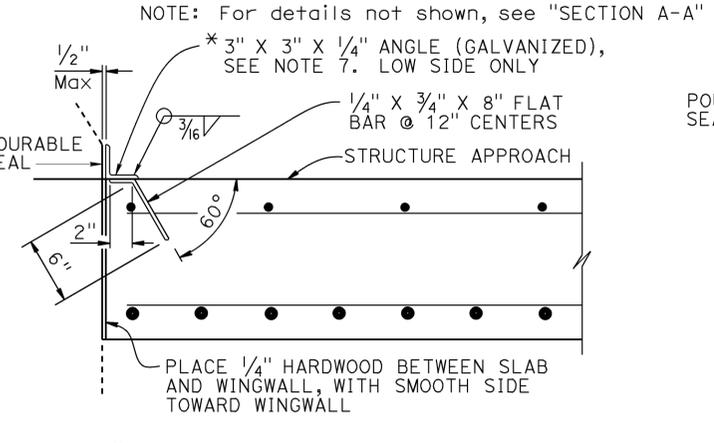
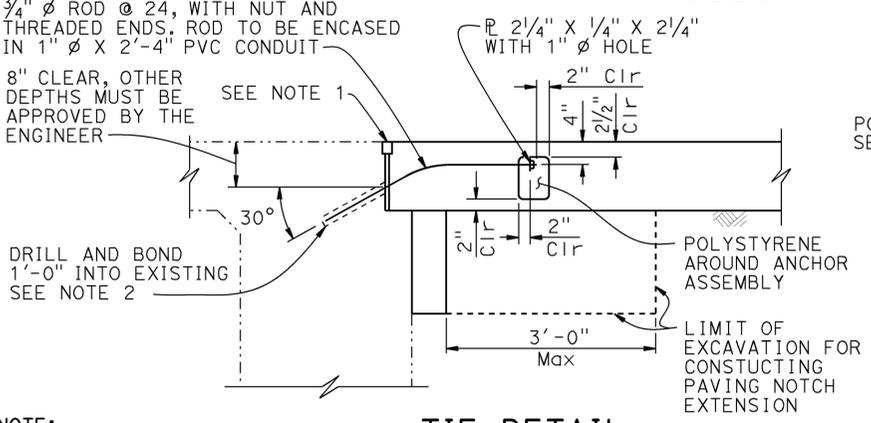
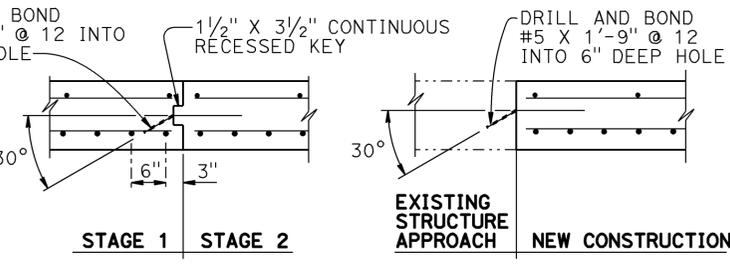
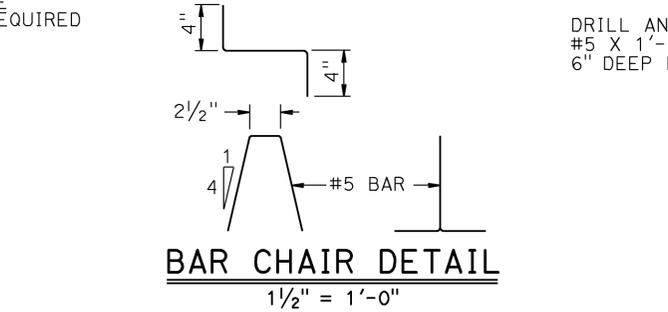
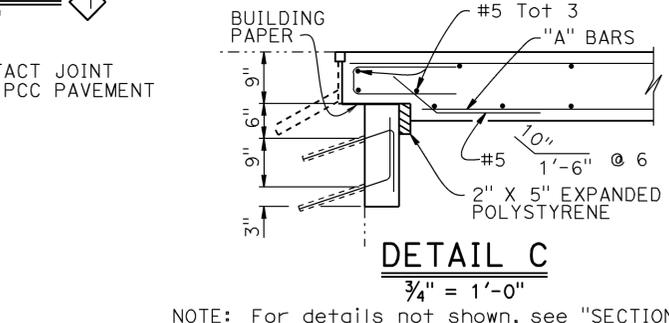
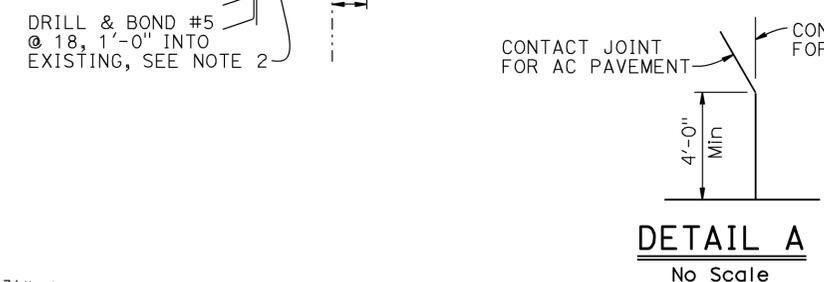
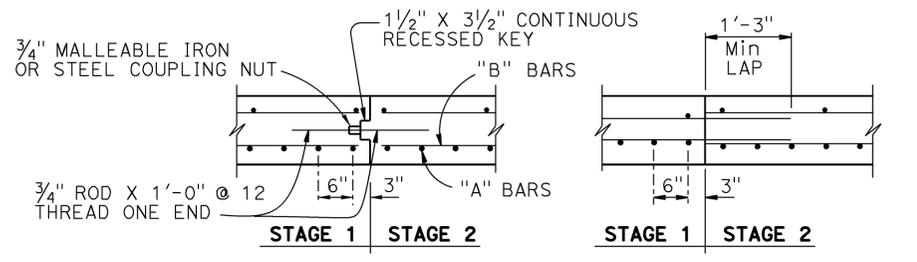
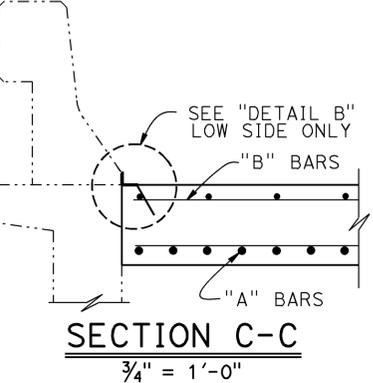
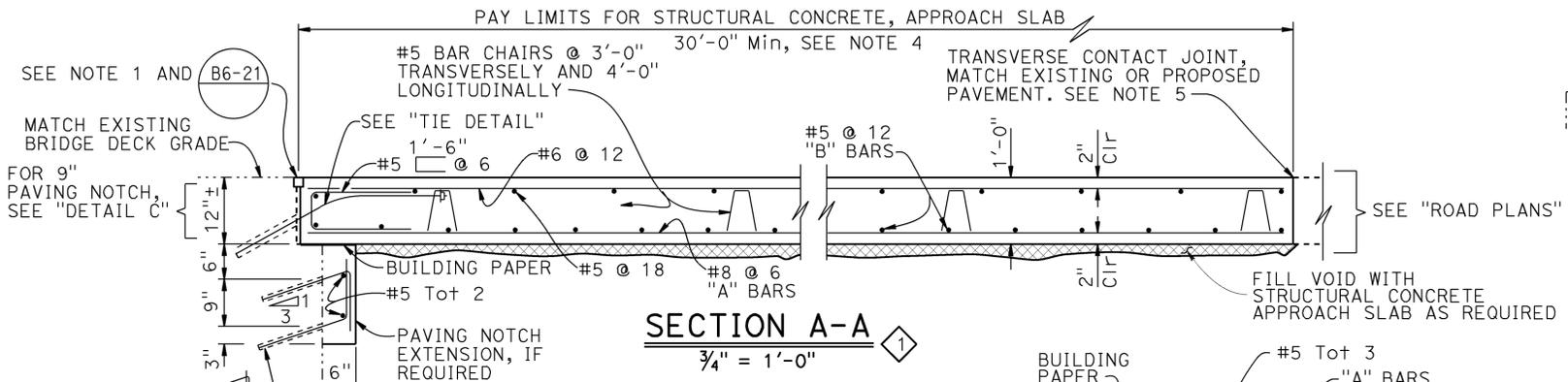
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STRUCTURES MAINTENANCE DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Edward Li	CHECKED HongTien Tran	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	RTE 1,47,91,110,405,710 BRIDGES MISCELLANEOUS DETAILS NO. 2	
	DETAILS	BY Tom Dang	CHECKED Edward Li			Various		
	QUANTITIES	BY Edward Li	CHECKED HongTien Tran			Varies		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3489 PROJECT NUMBER & PHASE: 0712000410 1	CONTRACT NO.: 07-1W6104	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 5/10/13	SHEET 16 OF 18

USER NAME => 81292939 DATE PLOTTED => 10-DEC-2013 TIME PLOTTED => 09:06



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
 1/2" = 1'-0"

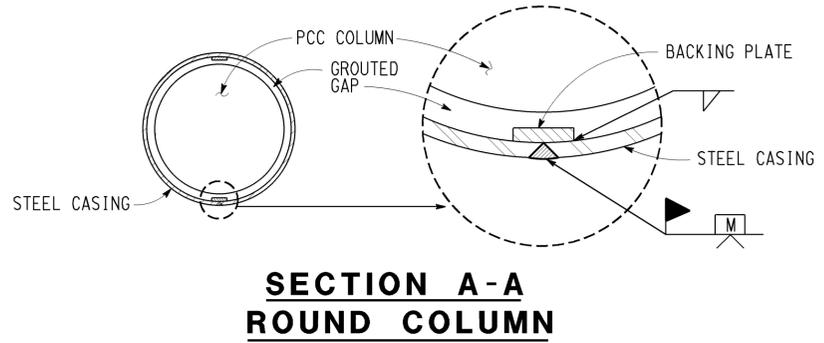
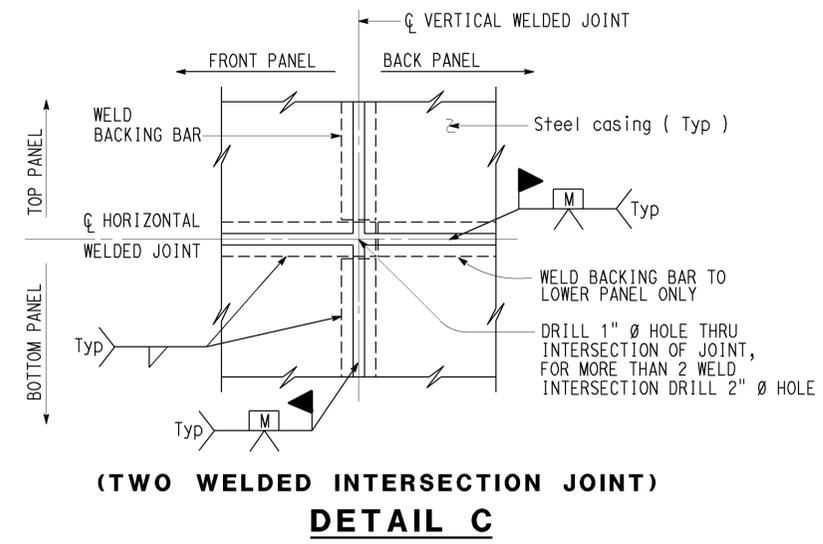
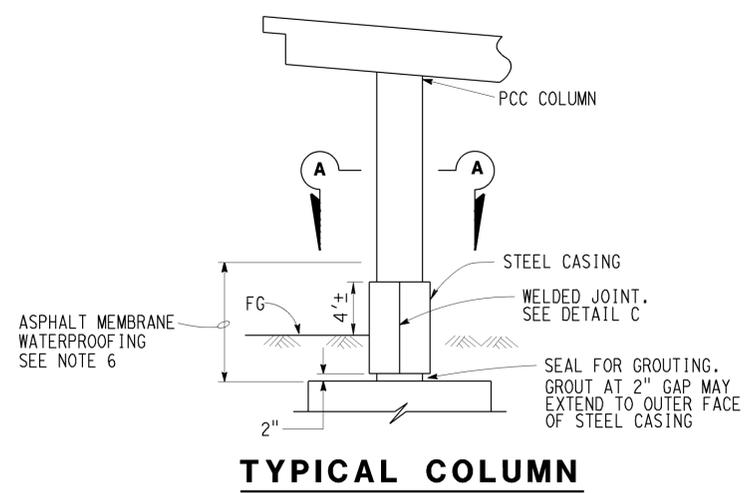
DETAIL B
 1/2" = 1'-0"

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

REVISED

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 BRIDGE NO. Various
 POST MILE Varies
RTE 1,47,91,110,405,710 BRIDGES
STRUCTURE APPROACH TYPE R(30D)



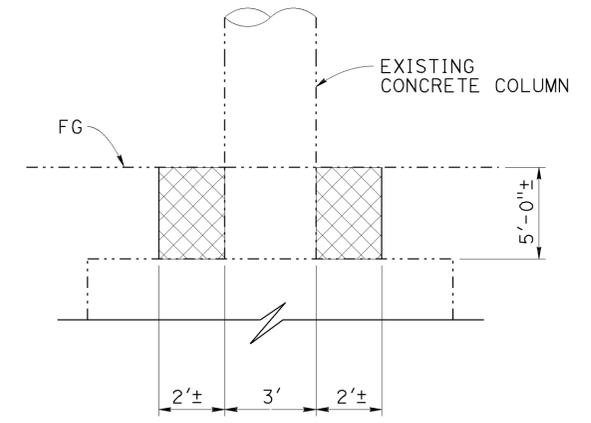
LEGEND:

----- Indicates existing.

Indicates limits of structure excavation (Type Z-2)(Aerially Deposited Lead).

Indicates limits of structure backfill.

- NOTES:**
- 1) For varying thickness steel casing inside surface to remain flush. Minimum clearance from PCC column to casing shall be maintained.
 - 2) Appropriate injection nozzles to be provided on casing, but removed and ground flush following completion of grouting operation.
 - 3) All voids between steel casing and PCC column (Class F) to be filled with grout.
 - 4) Location and number of vertical and horizontal welds to be determined by the Contractor, and subject to the approval of the Engineer. The location of casing welds are for illustration. No skip welds allowed.
 - 5) Circular steel casing to be 1/4" thick minimum for casings with a 6 feet diameter or less. Backing plates to be the same thickness as casing up to maximum 1/2" thick.
 - 6) Waterproof steel casing to 10' above finished grade.
 - 7) Steel Fy = 60 Ksi.



SEQUENCE OF REPAIR COLUMNS SPALLED SURFACE AREA	
GROUP NO.	COLUMN LOCATION
1	B3C3, B3C7, B3C11, B2C2, B2C7, B2C11
2	B3C2, B3C6, B3C10, B2C1, B2C6, B2C10
3	B3C1, B3C5, B3C9, B2C3, B2C5, B2C9
4	B3C4, B3C8, B2C4, B2C8

NOTES:

No more than one group of columns repaired at a time.

NOTE:
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