Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	1	53

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

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	LOCATIONS OF CONSTRUCTION
3-5	CONSTRUCTION AREA SIGNS
6-16	TRAFFIC HANDLING DETAILS
17-18	PAVEMENT DELINEATION QUANTITIES
19-33	REVISED STANDARD PLANS

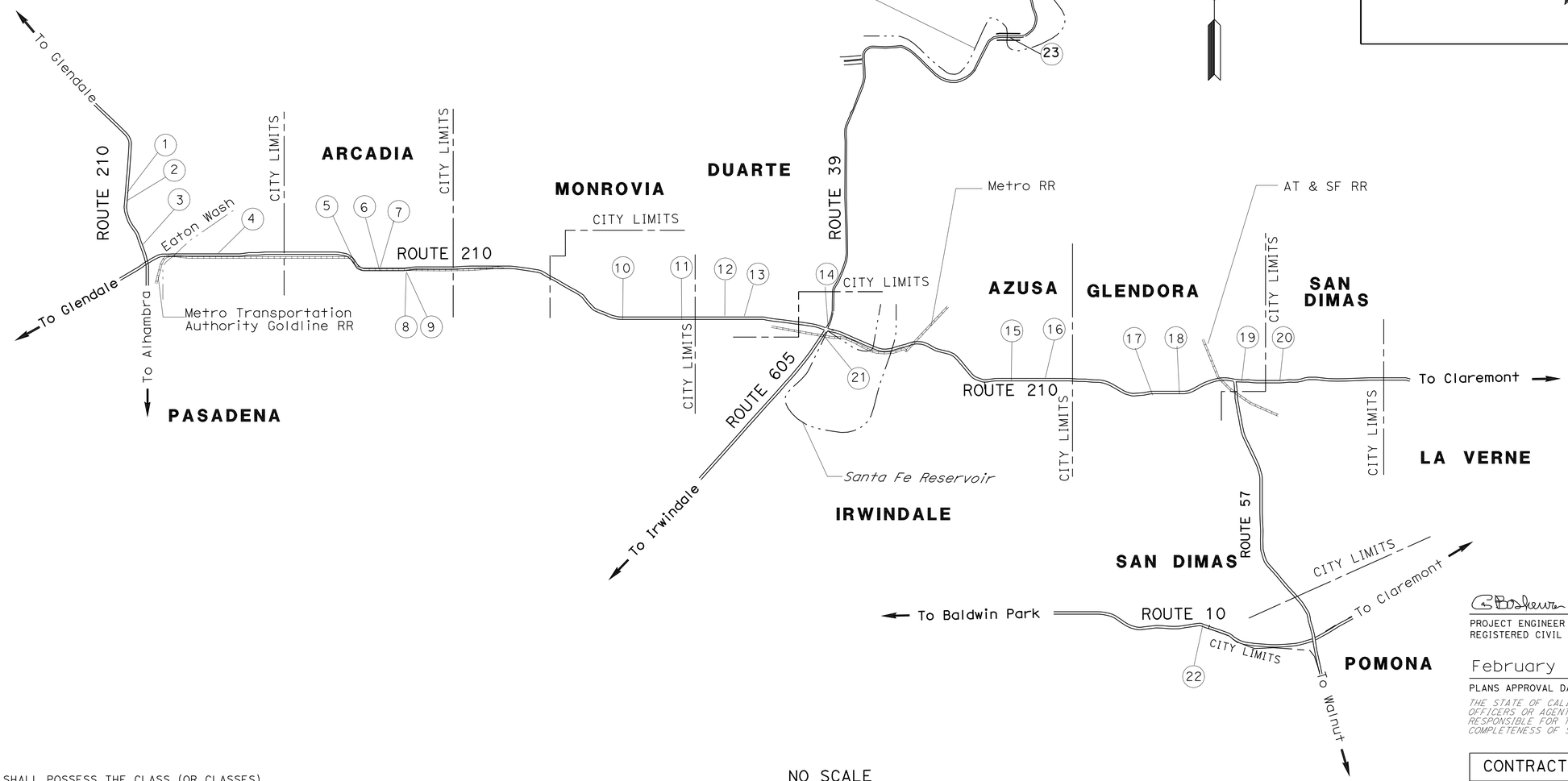
STRUCTURE PLANS

34-53 ROUTE 10, 39, 210, 605 BRIDGES

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

NOTE:

THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTIONS SHEET.



NO SCALE

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

PROJECT MANAGER: CHRISTIAN SAM
DESIGN ENGINEER: LARRY WIERING

PROJECT ENGINEER / REGISTERED CIVIL ENGINEER — DATE: 2-6-14

February 24, 2014
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — GHASSAN BASHOURA — No. C 53065 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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

CONTRACT No.	07-1W5904
PROJECT ID	0712000362

LAST REVISION 02-24-14
DATE PLOTTED => 20-MAR-2014
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	2	53

REGISTERED CIVIL ENGINEER 2-6-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GHASSAN BASHOURA No. C 53065 Exp. 06-30-15 CIVIL STATE OF CALIFORNIA

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

LOCATIONS OF CONSTRUCTION

Loc No. (X)	ROUTE	PM	BRIDGE No.	BRIDGE NAME
1	210	R24.17	53 2160	LINCOLN AVENUE UC
2	210	R24.17	53 2160S	LINCOLN AVENUE UC
3	210	R24.64	53 2195	ORANGE GROVE BOULEVARD OC
4	210	R26.33	53 2276	LAKE AVENUE OC
5	210	R28.87	53 2099L	FOOTHILL BOULEVARD UC
6	210	R29.29	53 1966R	MADRE STREET UC
7	210	R29.35	53 2398S	MADRE STREET RAMP SEPRATION
8	210	R29.49	53 1957L	ROUTE 210/164 SEPARATION
9	210	R29.49	53 1957R	ROUTE 210/164 SEPARATION
10	210	R33.67	53 1817	MAGNOLIA AVENUE UC
11	210	R34.74	53 1821	MOUNTAIN AVENUE UC
12	210	R35.24	53 1822	BUENA VISTA STREET UC
13	210	R35.87	53 1824	HIGHLAND AVENUE UC
14	210	R36.39	53 2969K	HUNTINGTON Dr E & W 210/CENTRAL
15	210	R40.07	53 2023	CERRITOS AVENUE OC
16	210	R40.60	53 2024	CITRUS AVENUE OC
17	210	R42.10	53 2072	GLENDORA AVENUE UC
18	210	R42.66	53 2025	BONNIE COVE AVENUE UC
19	210	R44.71	53 1994	AMELIA AVENUE UC
20	210	R45.71	53 2068	WALNUT AVENUE UC
21	605	25.60	53 1972G	N605-W210 CONNECTOR OC
22	10	40.46	53 0870	VIA VERDE UC
23	39	17.82	53 0113	SAN GABRIEL RIVER

LOCATIONS OF CONSTRUCTION

LC-1

REVISED BY | DATE REVISED
GHASSAN BASHOURA | LARRY WIERING
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | LARRY WIERING
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	3	53

REGISTERED CIVIL ENGINEER 2-6-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GHASSAN BASHOURA No. C 53065 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

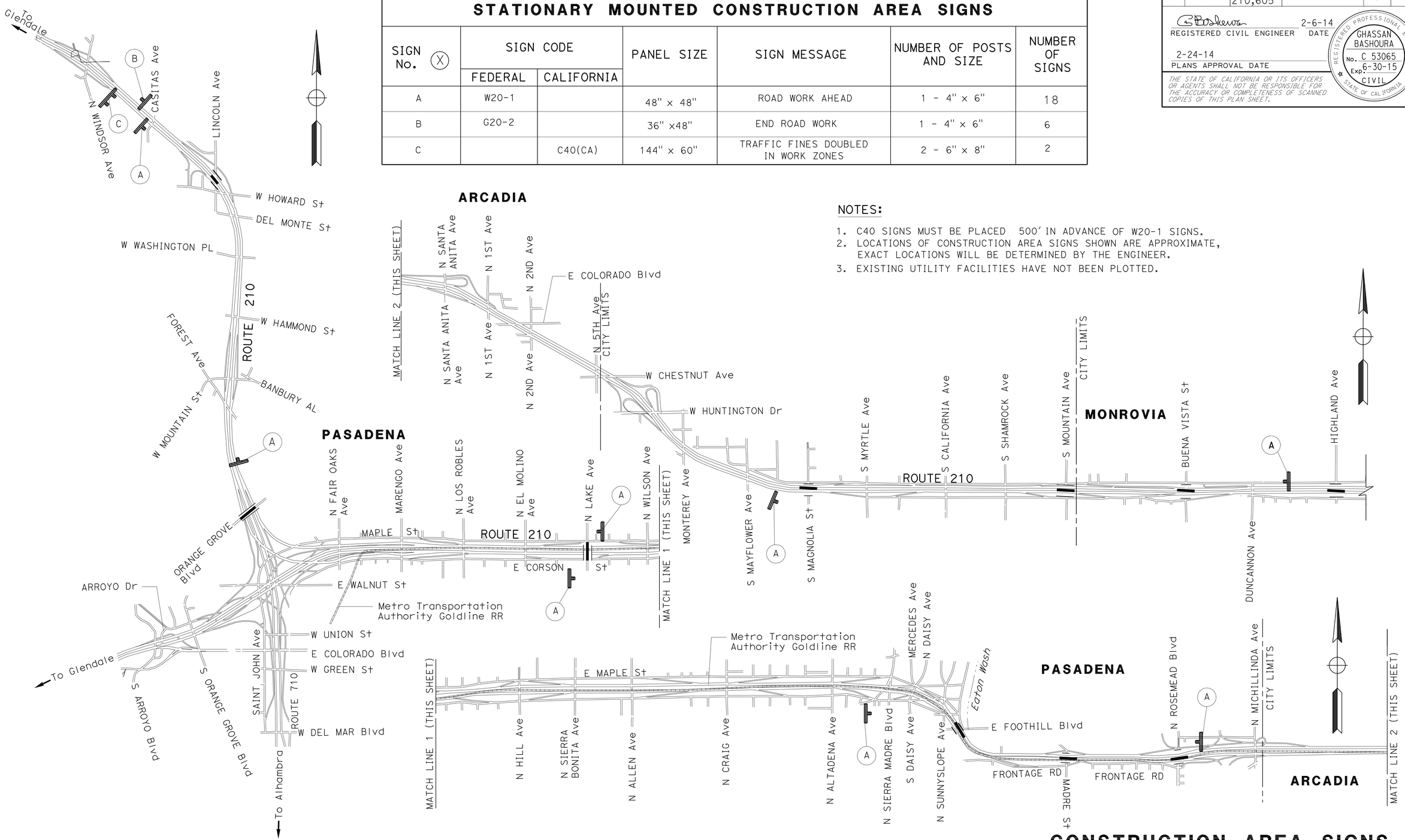
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE FEDERAL	SIGN CODE CALIFORNIA	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	18
B	G20-2		36" x48"	END ROAD WORK	1 - 4" x 6"	6
C		C40(CA)	144" x 60"	TRAFFIC FINES DOUBLED IN WORK ZONES	2 - 6" x 8"	2

NOTES:

1. C40 SIGNS MUST BE PLACED 500' IN ADVANCE OF W20-1 SIGNS.
2. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED.



CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: LARRY WIERING
CALCULATED-DESIGNED BY: GHASSAN BASHOURA
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-24-14
DATE PLOTTED => 20-MAR-2014
TIME PLOTTED => 10:20

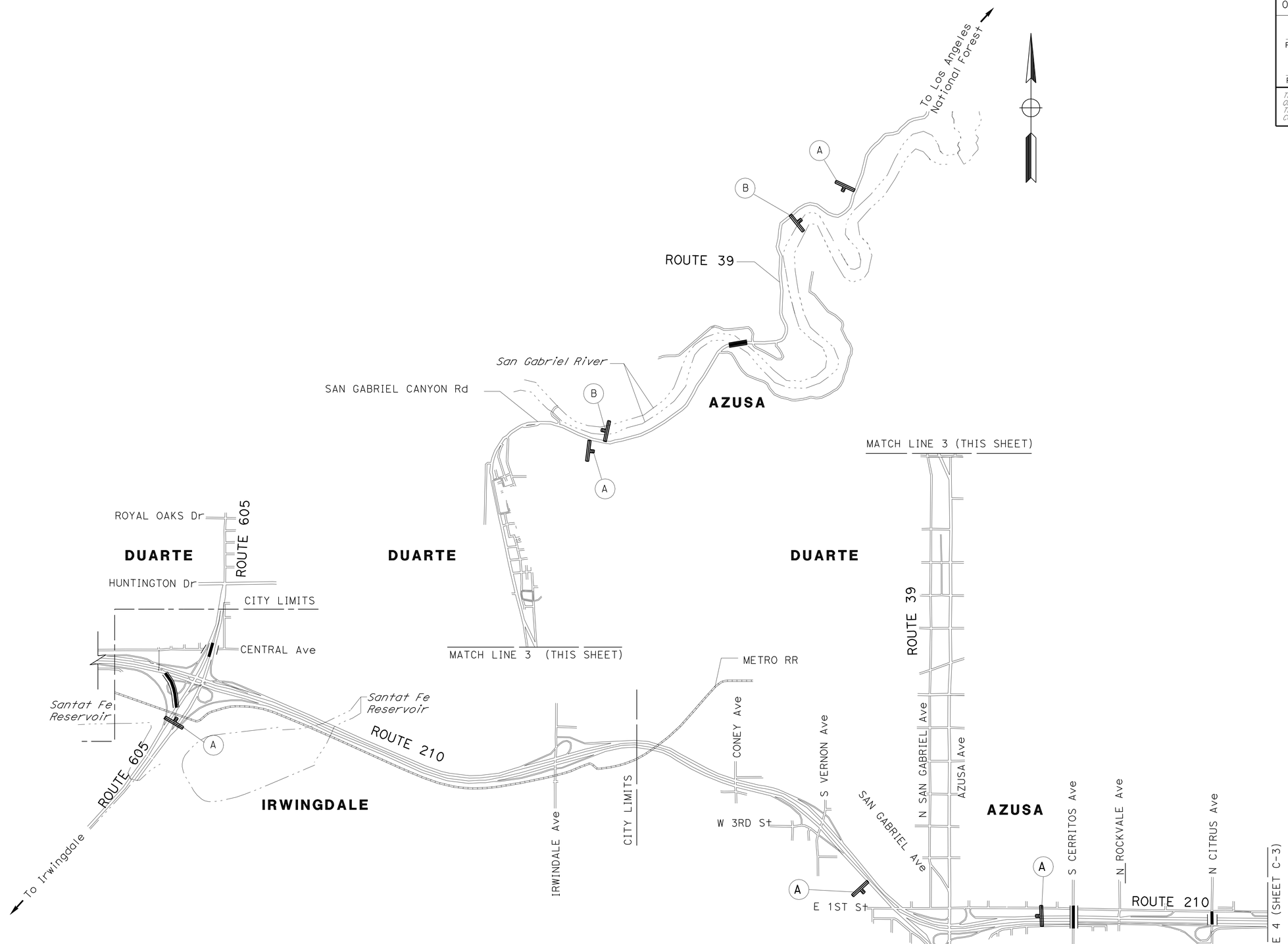
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	4	53

REGISTERED CIVIL ENGINEER 2-6-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GHASSAN BASHOURA
No. C 53065
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

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



CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: LARRY WIERING
CALCULATED-DESIGNED BY: GHASSAN BASHOURA
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-24-14
DATE PLOTTED => 20-MAR-2014
TIME PLOTTED => 10:21

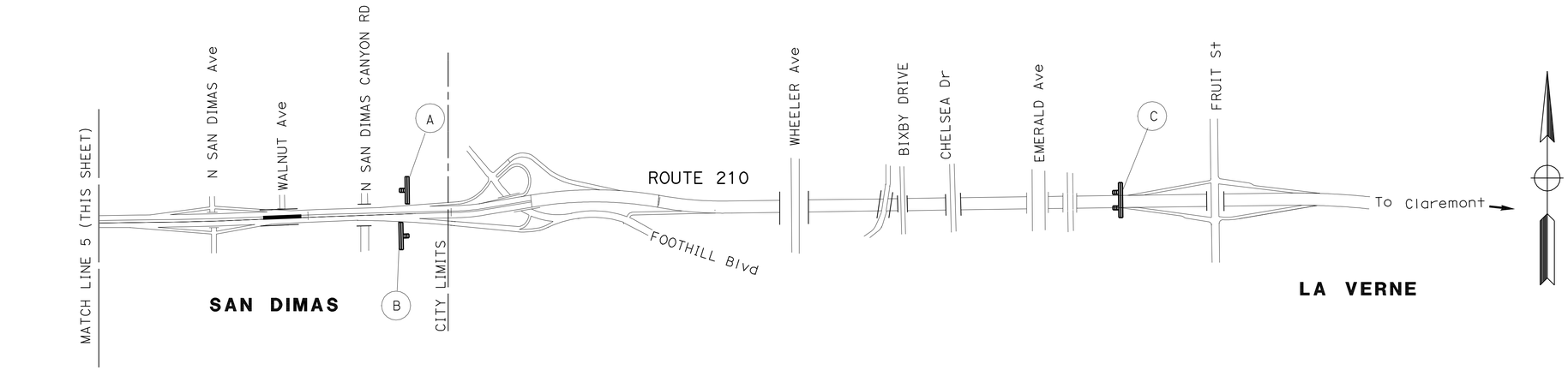
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	5	53

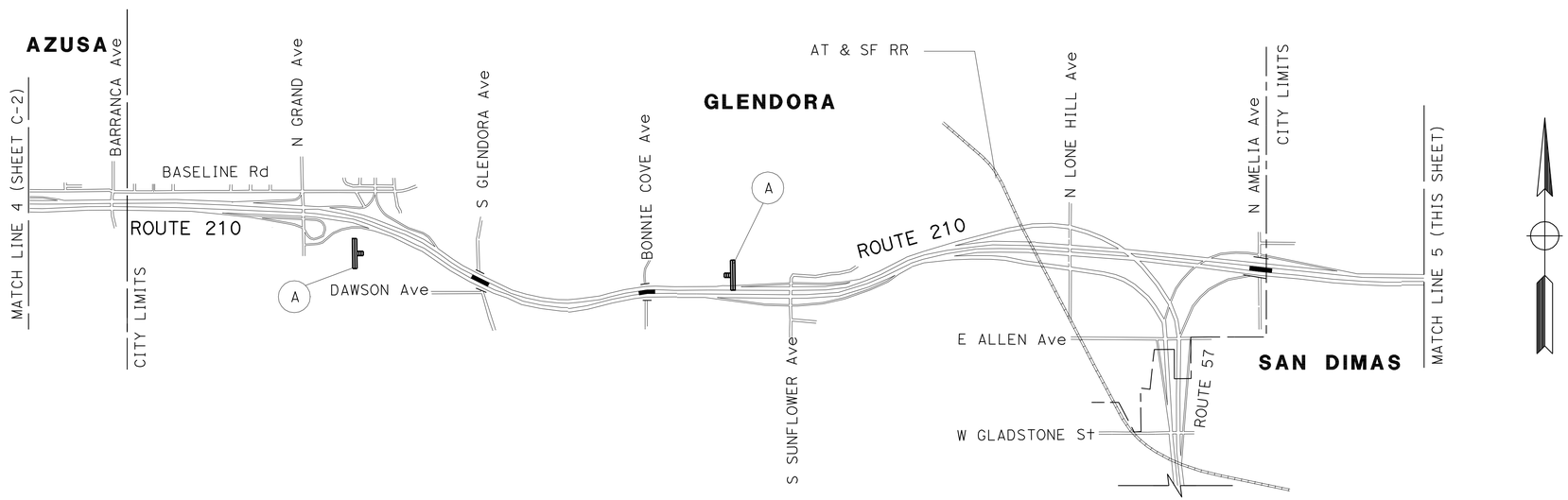
REGISTERED CIVIL ENGINEER 2-6-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GHASSAN BASHOURA No. C 53065 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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





CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: LARRY WIERING
CALCULATED-DESIGNED BY: GHASSAN BASHOURA
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-24-14 | DATE PLOTTED => 20-MAR-2014 | TIME PLOTTED => 10:21

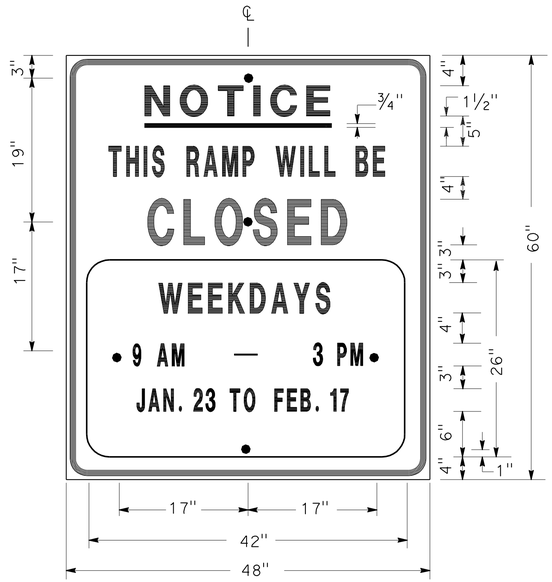
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39 210, 605	Var	6	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

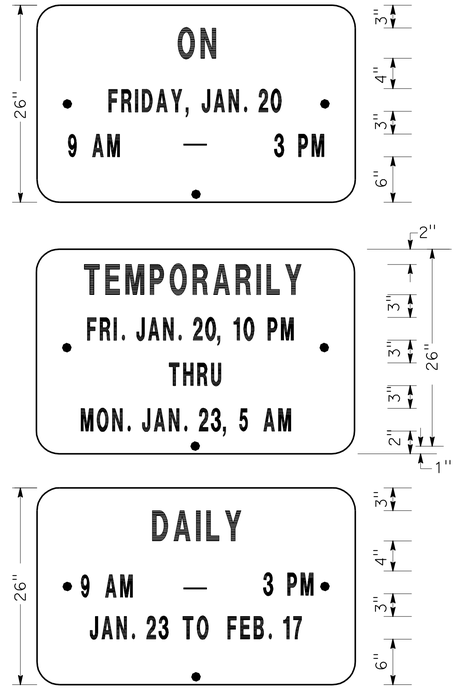
2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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



SIGN SP-1



ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN

NOTES: SIGN SP-1

1. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
2. BOLT HOLES MUST BE 3/8" DIAMETER.
3. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
4. SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.

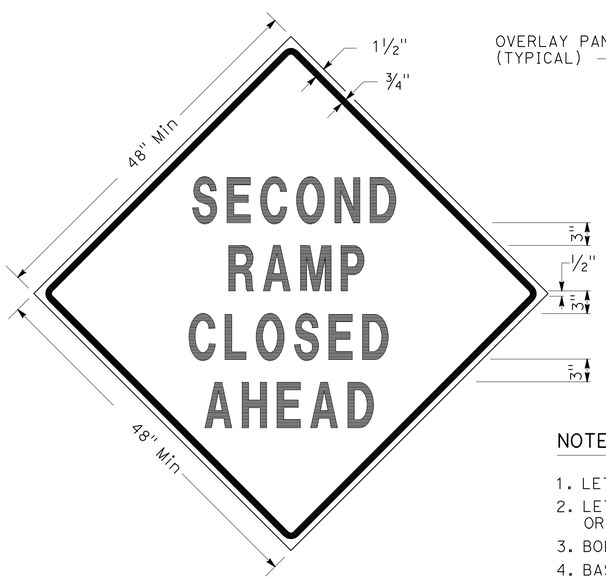
SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5, 6, & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"
* CONDENSED SPACING IF NECESSARY								

SIGN SP-4

NOTES: SIGN SP-4

1. LETTERS - 6" SERIES C.
2. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED WHITE BACKGROUND.
3. BOLT HOLES MUST BE 3/8" DIAMETER.
4. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
5. SIGNS MUST BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH REVISED STANDARD PLAN RSP T14.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES



SIGN SP-3

SIGN SP-5

NOTES: SIGNS SP-3 & SP-5

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

SPECIAL SIGNS FOR EXIT 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: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	7	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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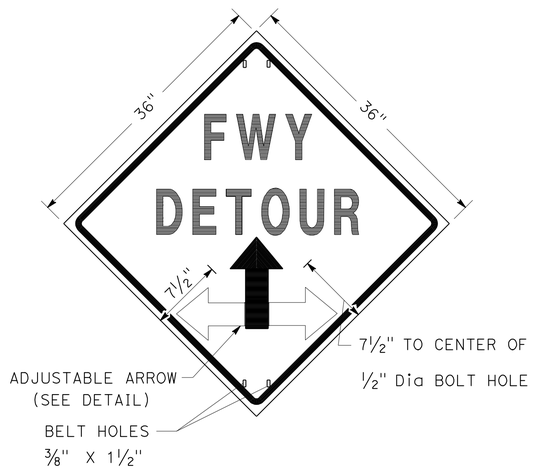
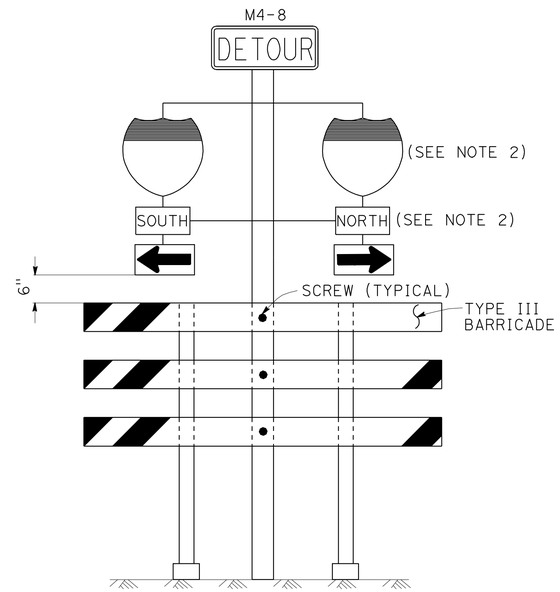
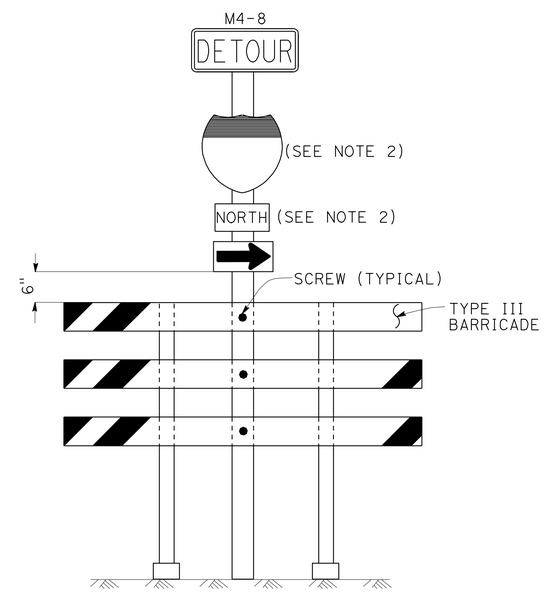


SIGN SP-2



SIGN SP-6 (SEE NOTE 1)



SIGN SP-7 (SEE NOTE 1)

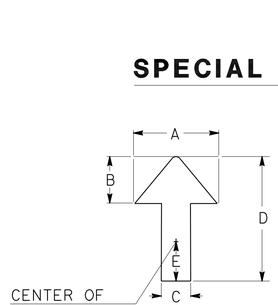
NOTES: SIGN SP-2

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

NOTES: SIGNS SP-6 & SP-7

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

SPECIAL PORTABLE FREEWAY DETOUR SIGNS



DIMENSIONS				
A	B	C	D	E
6"	3"	2"	8"	1"

ADJUSTABLE ARROW DETAIL

ABBREVIATION

(CA) CALIFORNIA CODE

TRAFFIC HANDLING DETAILS

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

SHEET 2 OF 2

NO SCALE

THD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	8	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-14 CIVIL STATE OF CALIFORNIA

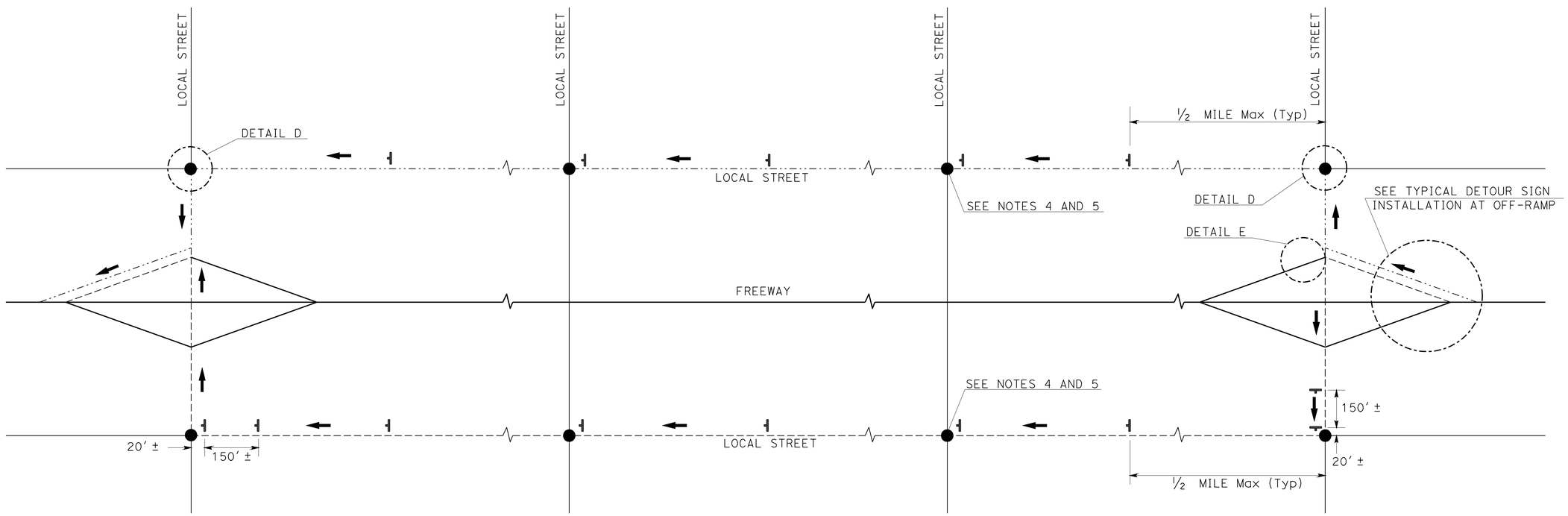
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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 MUST 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 MUST 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 MUST 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® DTM

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14
DATE PLOTTED => 18-MAR-2014
TIME PLOTTED => 20:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	9	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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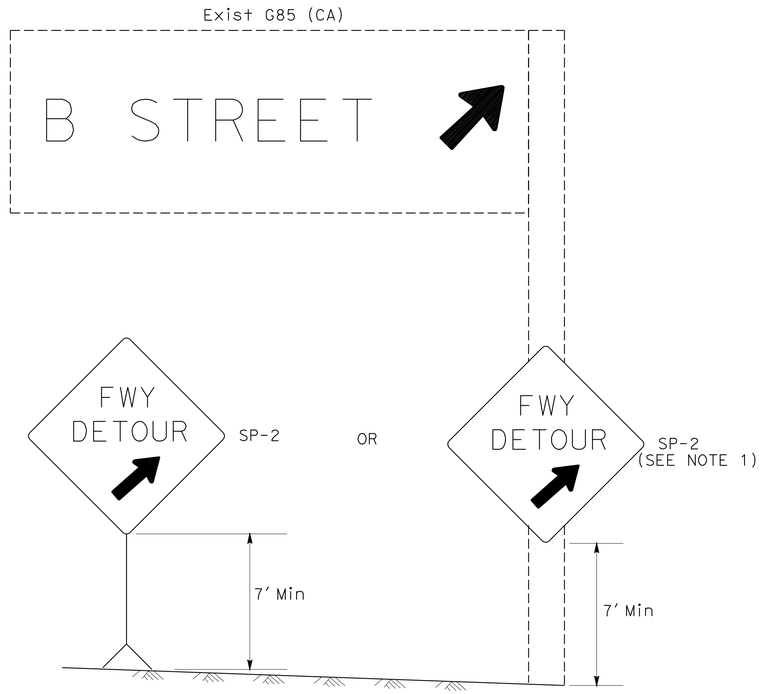
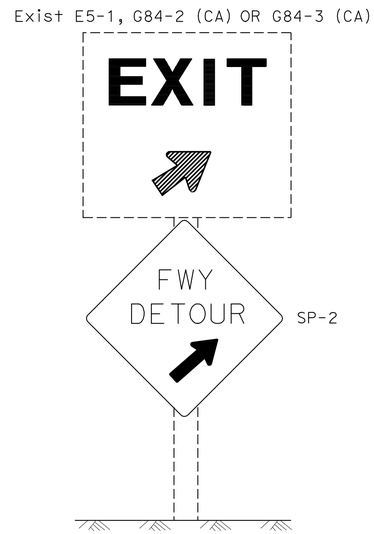
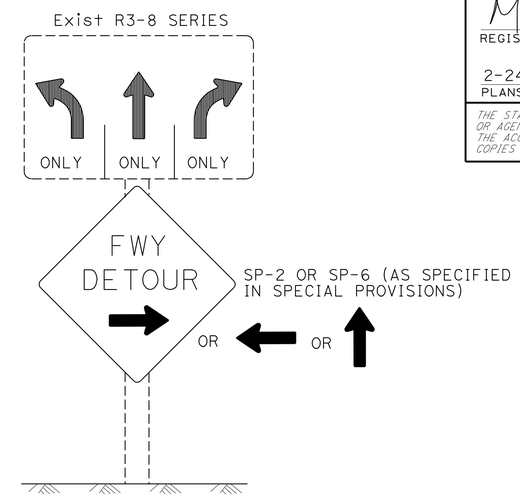


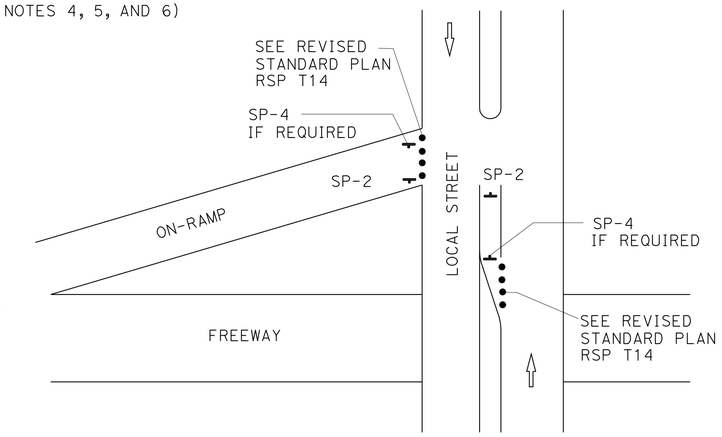
DETAIL A (SEE NOTE 3)



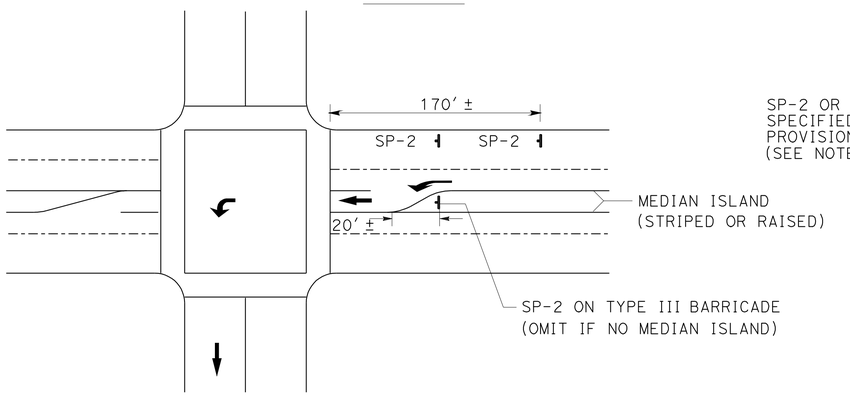
DETAIL B (SEE NOTE 3)



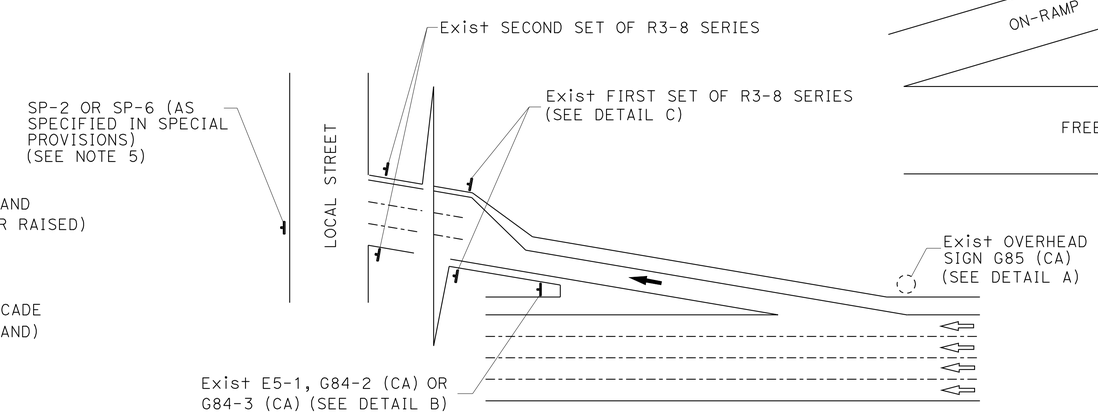
DETAIL C (SEE NOTES 4, 5, AND 6)



DETAIL E



DETAIL D



TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP

LEGEND

- • TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- → DETOUR DIRECTION
- ◌ EXISTING OVERHEAD SIGN

NOTES: SIGN SP-2

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS MUST 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 MUST 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.

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	10	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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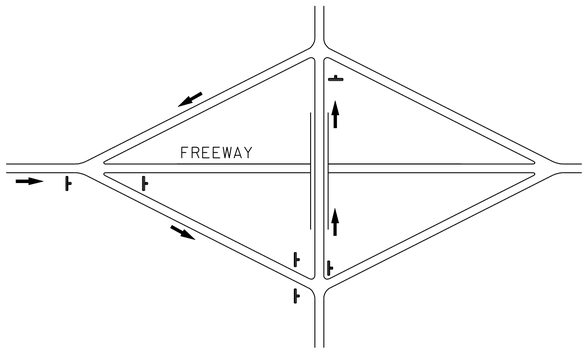
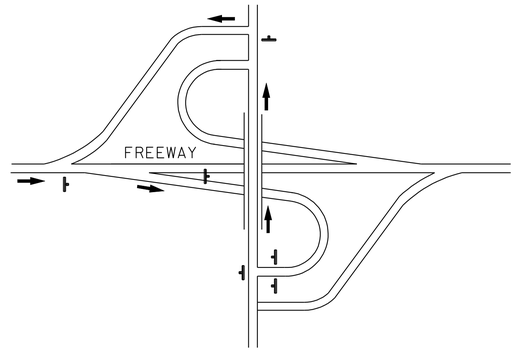
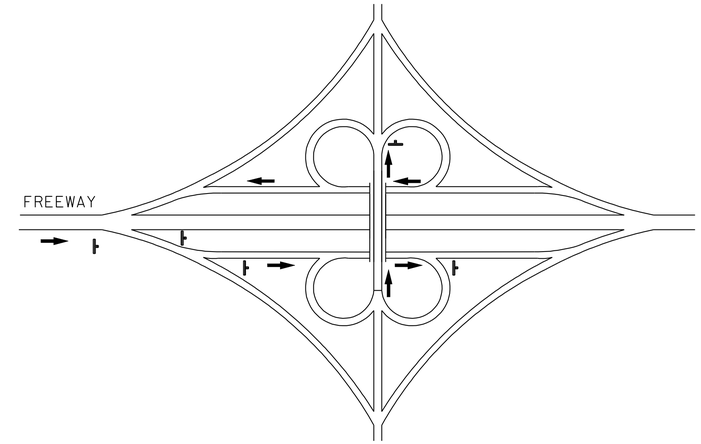


TYPE I



TYPE II



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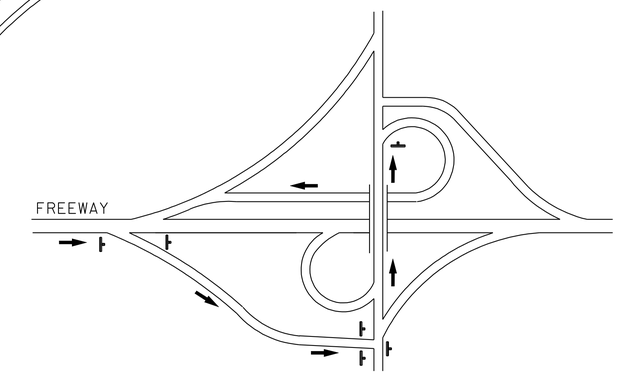
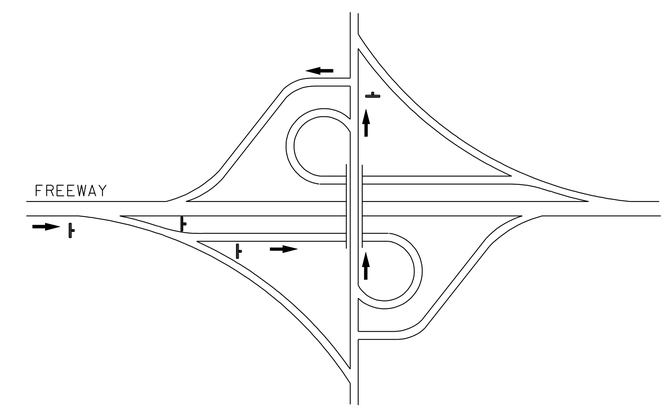


TYPE IV



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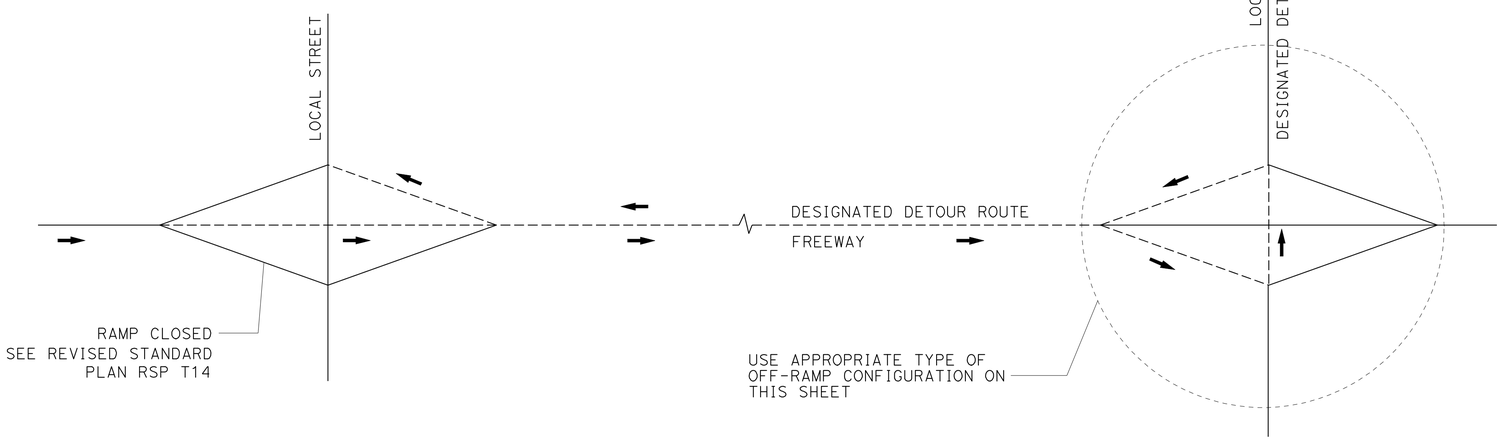


TYPE OF OFF-RAMP CONFIGURATION	MINIMUM No. OF SP-2
TYPE I	6
TYPE II	6
TYPE III	5
TYPE IV	6
TYPE V	4

TYPICAL DETOUR SIGN INSTALLATION FOR OFF-RAMP CLOSURE

NOTES:

1. FOR RAMP CONFIGURATIONS NOT SHOWN, THE EXACT LOCATIONS AND MINIMUM NUMBER OF SP-2 SIGNS MUST BE DETERMINED BY THE ENGINEER.
2. 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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	11	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

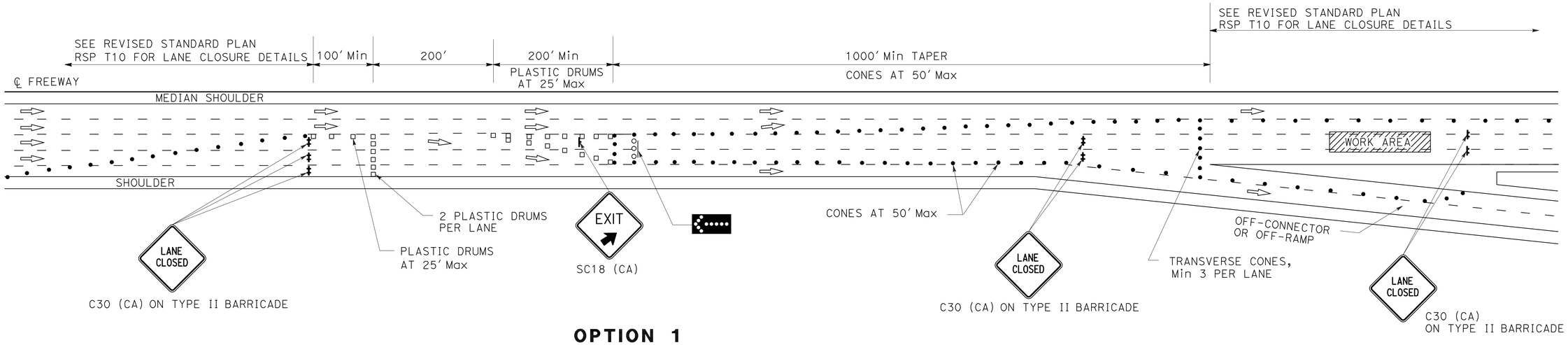
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

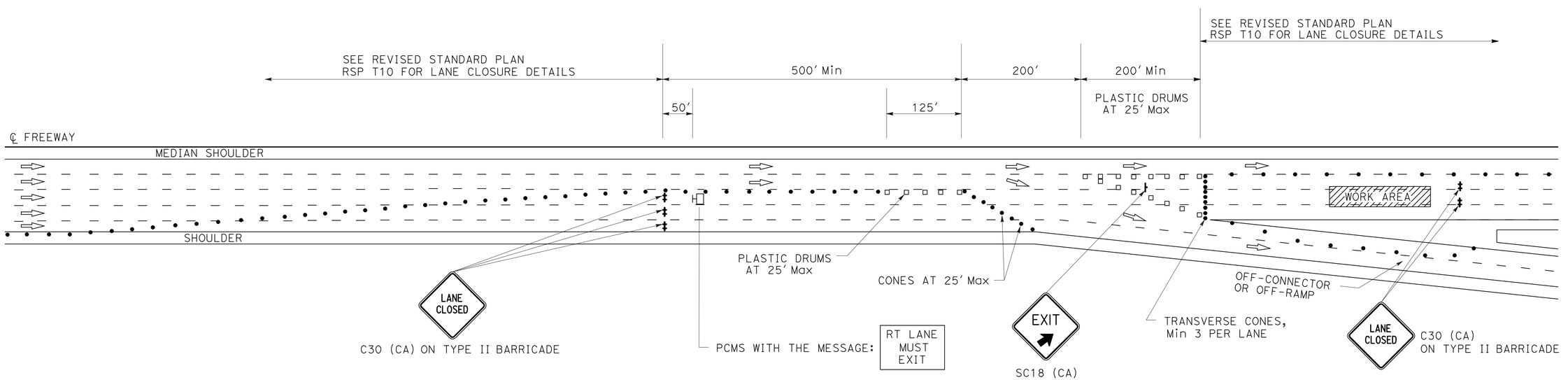
- TRAFFIC CONE
- TRAFFIC PLASTIC DRUM
- TEMPORARY TRAFFIC CONTROL SIGN
- BARRICADES
- PCMS
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER

ABBREVIATION:

(CA) CALIFORNIA CODE



OPTION 1



OPTION 2

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR SLIP-RAMP AT OFF-CONNECTOR OR OFF-RAMP

NO SCALE

THD-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14
DATE PLOTTED => 18-MAR-2014
TIME PLOTTED => 22:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	12	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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

NOTES:

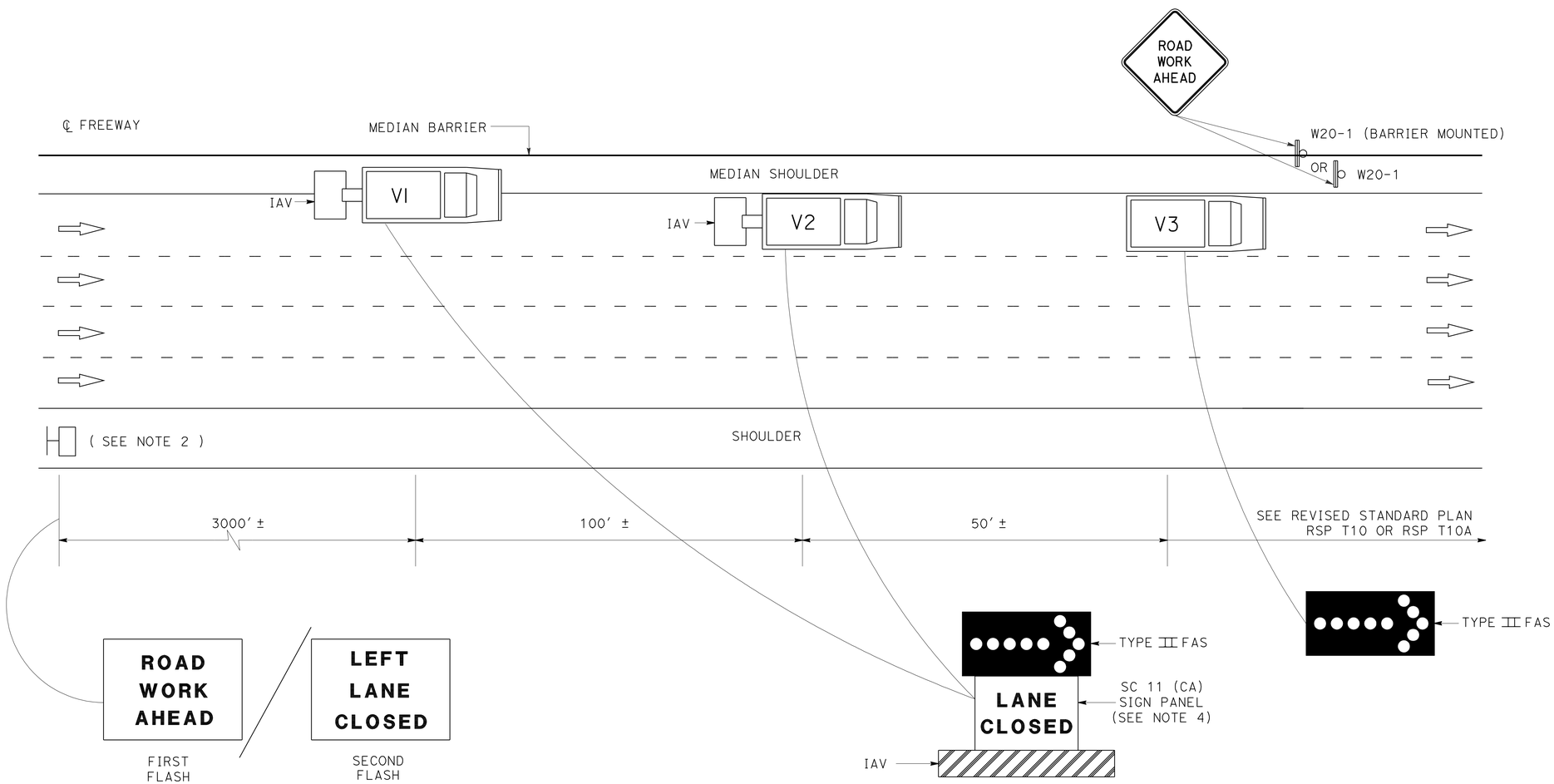
1. LANE CLOSURES MUST NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
2. PCMS MUST BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE LANE.
3. A MINIMUM SIGHT DISTANCE OF 1500′ MUST BE PROVIDED IN ADVANCE OF PCMS.
4. VEHICLE-MOUNTED SIGN PANELS MUST BE TYPE III OR IV RETROREFLECTORIZED 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
	TEMPORARY TRAFFIC CONTROL SIGN
	FLASHING ARROW SIGN (FAS)

ABBREVIATIONS

IAV	IMPACT ATTENUATOR VEHICLE
(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-7

REVISED BY	DATE REVISED
JC	2/14

CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
FUNCTIONAL SUPERVISOR: JOHN YANG

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans

LAST REVISION 2-24-14
DATE PLOTTED => 18-MAR-2014
TIME PLOTTED => 20:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	13	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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

NOTES:

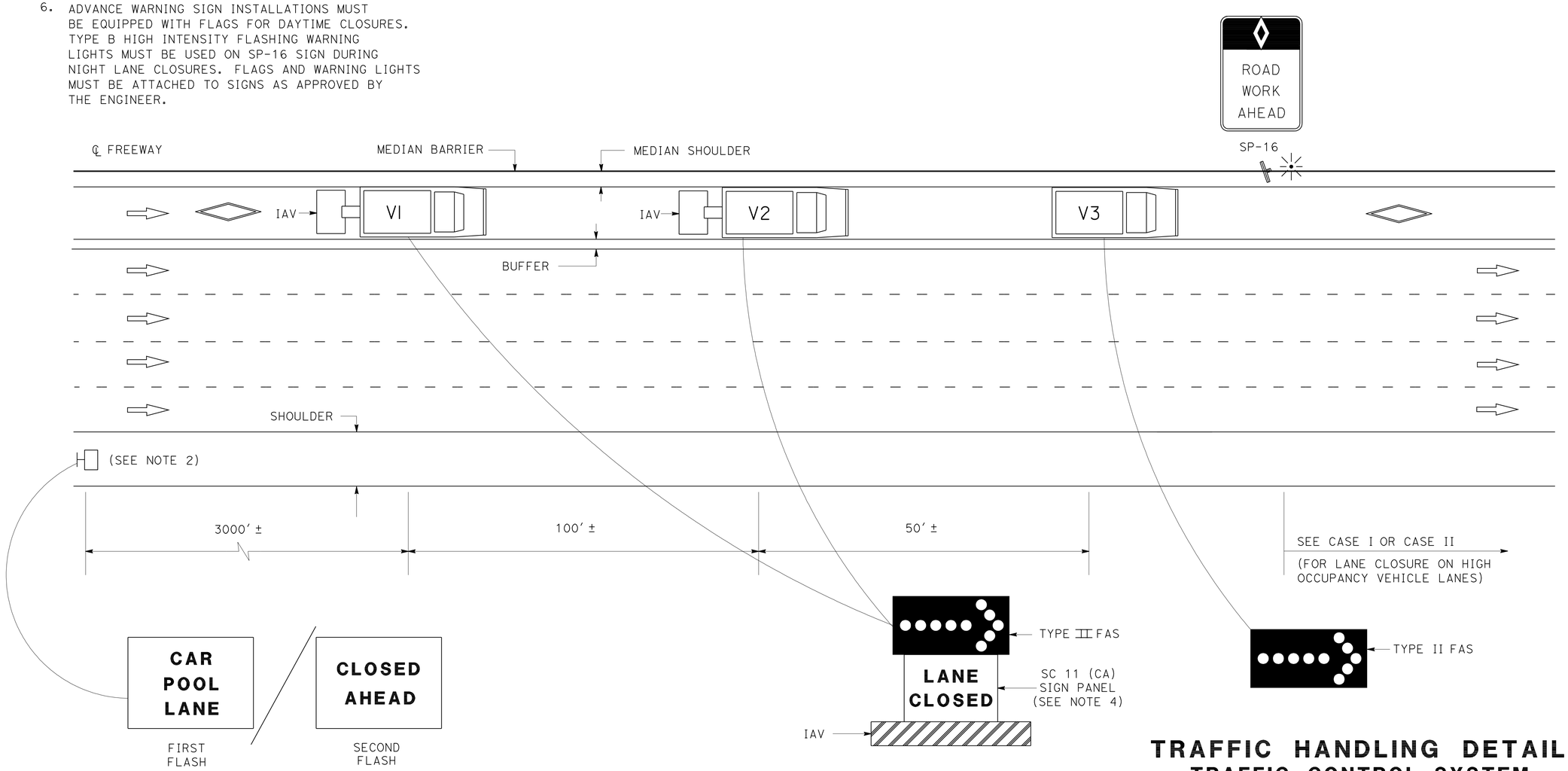
1. LANE CLOSURES MUST NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
2. PCMS MUST BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE HOV LANE.
3. A MINIMUM SIGHT DISTANCE OF 1500′ MUST BE PROVIDED IN ADVANCE OF PCMS.
4. VEHICLE-MOUNTED SIGN PANELS MUST BE TYPE III OR IV RETROREFLECTORIZED SHEETING, BLACK ON WHITE OR BLACK ON ORANGE WITH 8" MINIMUM SERIES D LETTERS PER CALTRANS SIGN SPECIFICATIONS.
5. PLACE PCMS ON THE MEDIAN SHOULDER WHERE SUFFICIENT ROOM (SUCH AS CHP ENFORCEMENT AREAS) EXISTS.
6. ADVANCE WARNING SIGN INSTALLATIONS MUST BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES. TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS MUST BE USED ON SP-16 SIGN DURING NIGHT LANE CLOSURES. FLAGS AND WARNING LIGHTS MUST BE ATTACHED TO SIGNS AS APPROVED BY THE ENGINEER.

LEGEND:

V1, V2	SHADOW VEHICLES
V3	WORK/APPLICATION VEHICLE
	PCMS
	PORTABLE FLASHING BEACON
	TEMPORARY TRAFFIC CONTROL SIGN
	FLASHING ARROW SIGN (FAS)

ABBREVIATIONS:

IAV	IMPACT ATTENUATOR VEHICLE
(CA)	CALIFORNIA CODE
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-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DTM

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	14	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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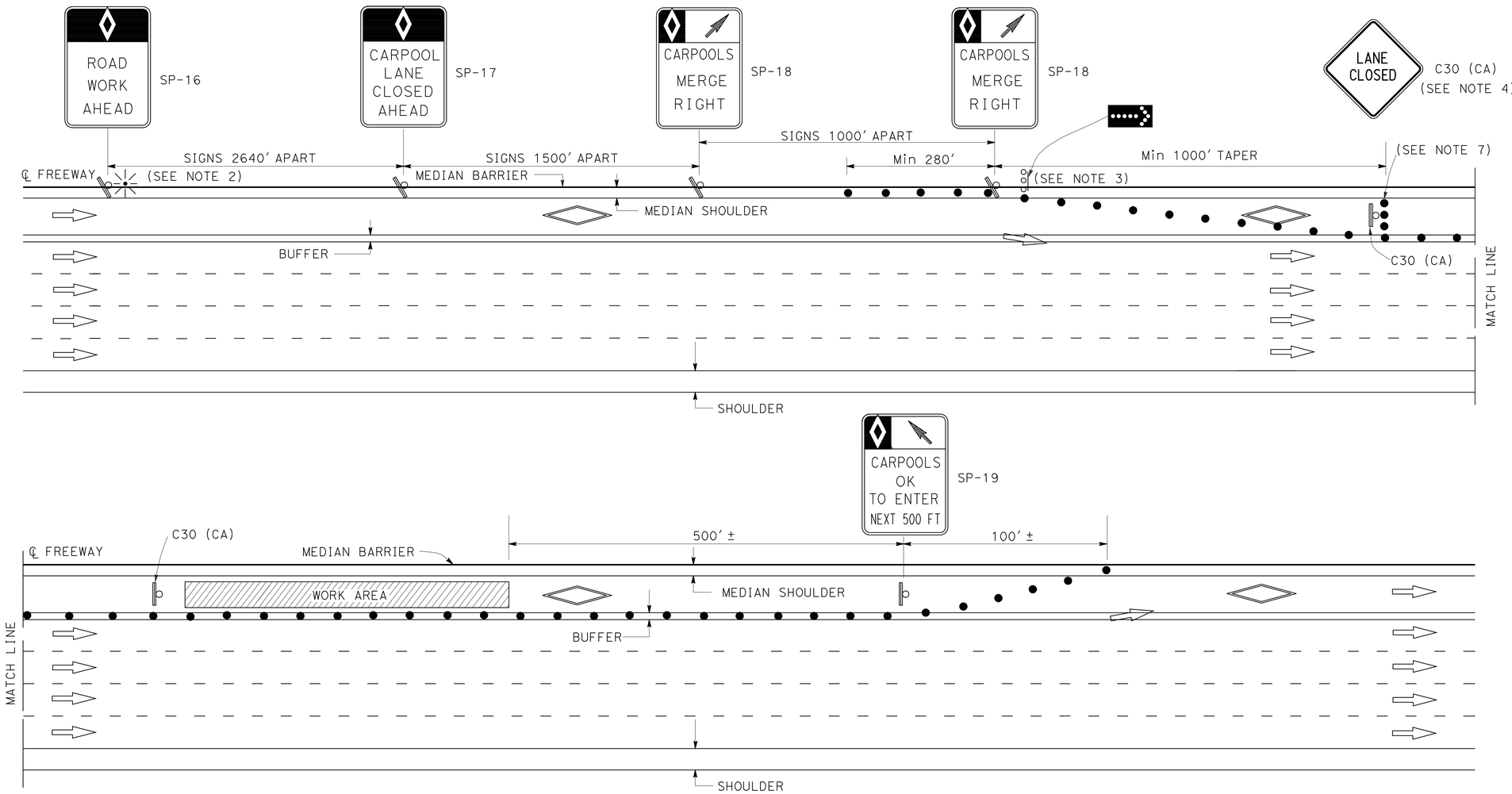

LEGEND:

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

ABBREVIATIONS:

(CA) CALIFORNIA CODE

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 MUST 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 MUST BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES. TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS MUST BE USED ON SP-16 SIGN DURING NIGHT LANE CLOSURES. FLAGS AND WARNING LIGHTS MUST BE ATTACHED TO SIGNS AS APPROVED BY THE ENGINEER.
3. THE FLASHING ARROW SIGN MUST BE TYPE I.
4. PLACE C30 (CA) SIGNS EVERY 2000' THROUGHOUT THE LENGTH OF LANE CLOSURE.
5. A MINIMUM 1500' OF SIGHT DISTANCE MUST BE PROVIDED WHERE POSSIBLE FOR VEHICLES APPROACHING THE FLASHING ARROW SIGN. LANE CLOSURES MUST 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 MUST 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 MUST 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) MUST BE BLACK ON ORANGE BACKGROUND. SIGN SP-19 MUST BE BLACK ON WHITE BACKGROUND. DIAMONDS ON SIGNS MUST BE WHITE.
11. FOR CLOSURE OF LANE(S) ADJACENT TO HOV LANES, SEE CASE II.
12. THE MAXIMUM SPACING BETWEEN CONES MUST 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-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OEREGL
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	15	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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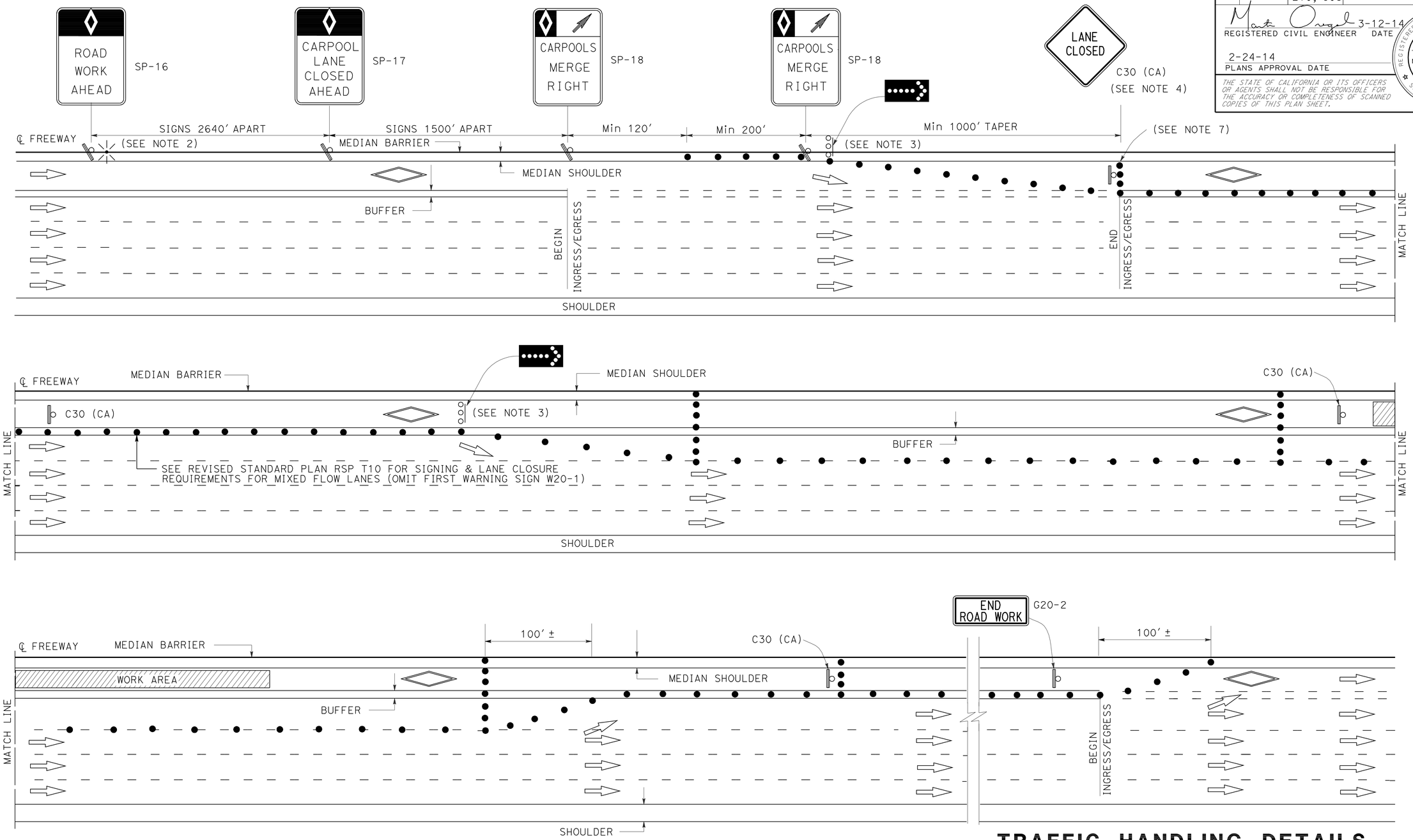


NOTES:

1. SEE CASE I FOR NOTES, LEGEND, SIGN PANEL, AND ABBREVIATIONS FOR THIS SHEET.
2. 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-10

REVISED BY	DATE REVISED
JC	2/14

CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: MARTIN OREGEL
FUNCTIONAL SUPERVISOR: JOHN YANG

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 20:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10, 39, 210, 605	Var	16	53

REGISTERED CIVIL ENGINEER 3-12-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARTIN OREGEL No. 56816 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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

LEGEND:

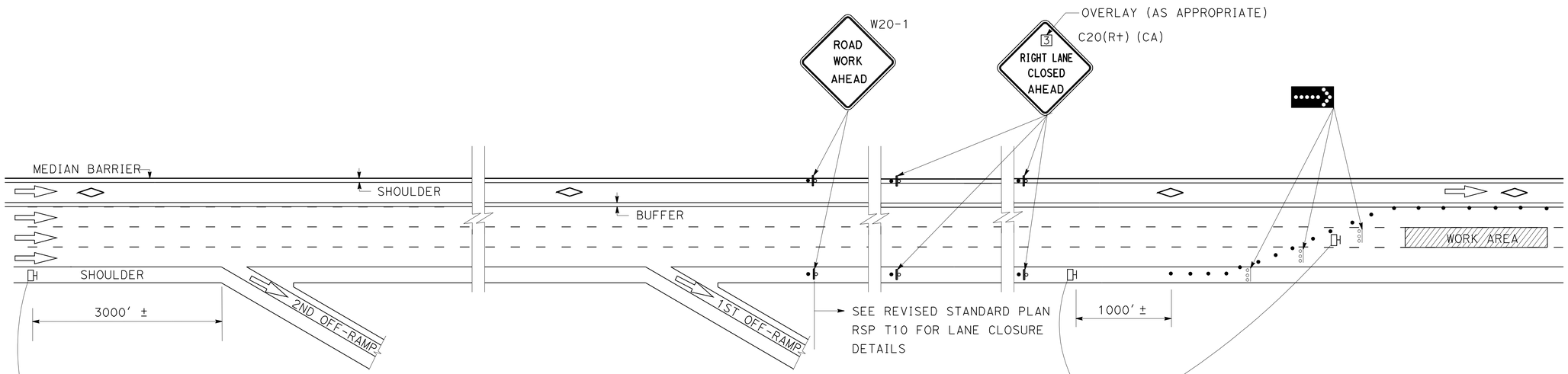
- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PCMS
- HOV LANE
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER

NOTES:

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

ABBREVIATIONS:

(CA) CALIFORNIA CODE



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

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

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
WITH HIGH OCCUPANCY VEHICLE LANES
FOR PORTABLE CHANGEABLE MESSAGE SIGN LOCATIONS
FOR CONCRETE PAVEMENT AND APPROACH SLAB REPLACEMENT

NO SCALE

THD-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: JOHN YANG
CALCULATED-DESIGNED BY: A HEDAYATI
CHECKED BY: MARTIN OREGEL
REVISED BY: JC
DATE REVISED: 3/12

LAST REVISION: 02-24-14
DATE PLOTTED => 18-MAR-2014
TIME PLOTTED => 20:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	17	53

REGISTERED CIVIL ENGINEER 2-6-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GHASSAN BASHOURA No. C 53065 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA

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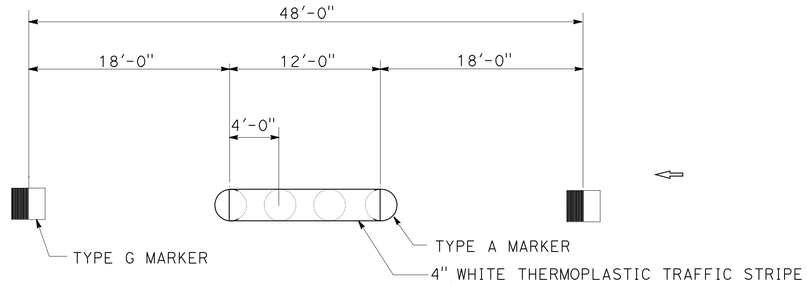

DETAIL 13 (MODIFIED)

NO SCALE

PAVEMENT DELINEATION QUANTITIES

LOCATION No.	ROUTE	POST MILE	BRIDGE No.	DESCRIPTION	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE PAVEMENT MARKER	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	THERMOPLASTIC TRAFFIC STRIPE DETAIL 13 (MODIFIED) 4"(BROKEN 36-12) WHITE	27B 4" WHITE	22, 25 4" YELLOW	38 8" WHITE	THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER RETROREFLECTIVE TYPE G	RETROREFLECTIVE TYPE D	NON-REFLECTIVE TYPE A
					LF	EA	SQFT	LF	LF				SQFT	EA		
1	210	R24.17	53 2160	LINCOLN AVENUE UC	1,687	428	49	750	1,750	750	750	180	49	47	21	146
2	210	R24.17	53 2160S	LINCOLN AVENUE UC	313	58		250	250	250	250			5	7	21
4	210	R26.33	53 2267	LAKE AVENUE OC	1,960	312	198	560	1,120	560	560	560	198	47	16	93
5	210	R28.87	53 2099L	FOOTHILL BOULEVARD UC					150		18				4	14
6	210	R29.29	53 1966R	MADRE STREET UC	800	206		720	720	260	720	180		23	20	60
7	210	R29.35	53 2398S	MADRE STREET RAMP SEPARATION	435	24	97	435		435	435		97		12	
8	210	R29.49	53 1957L	ROUTE210/164 SEPARATION	300	98	23	300	400	200	300		23	8	8	33
10	210	R33.67	53 1817	MAGNOLIA AVENUE UC	473	102	10	378	378	378	378		10	8	11	32
11	210	R34.74	53 1821	MOUNTAIN AVENUE UC	690	138	48	400	552	552	400		48	12	11	46
12	210	R35.24	53 1822	BUENA VISTA STREET UC	529	166	32	558	644	368	558		32	13	16	54
TOTAL					7,187	1,532	457	4,351	5,964	8,122		920	457	289		499

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: LARRY WIERING
CALCULATED-DESIGNED BY: GHASSAN BASHOURA
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-24-14 DATE PLOTTED => 18-MAR-2014 TIME PLOTTED => 20:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	18	53

REGISTERED CIVIL ENGINEER 2-6-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GHASSAN BASHOURA No. C 53065 Exp. 06-30-15 CIVIL STATE OF CALIFORNIA

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PAVEMENT DELINEATION QUANTITIES

LOCATION No.	ROUTE	POST MILE	BRIDGE No.	DESCRIPTION	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE PAVEMENT MARKER	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	THERMOPLASTIC TRAFFIC STRIPE DETAIL 13 (MODIFIED)	THERMOPLASTIC TRAFFIC STRIPE DETAIL 27B	THERMOPLASTIC TRAFFIC STRIPE DETAIL 22, 25	THERMOPLASTIC TRAFFIC STRIPE DETAIL 38	THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER RETROREFLECTIVE TYPE G	PAVEMENT MARKER RETROREFLECTIVE TYPE D	PAVEMENT MARKER NON-REFLECTIVE TYPE A
					LF	EA	SQFT	LF	4"(BROKEN 36-12) WHITE LF	4" WHITE LF	4" YELLOW LF	8" WHITE LF	SQFT	EA	EA	EA
13	210	R35.87	53 1824	HIGHLAND AVENUE UC	893	168		498	581	249	498	249		22	14	48
14	210	R36.39	53 2969K	HUNTINGTON Dr E & W 210/CENTRAL	134	8	28	134		134	134		30		4	
15	210	R40.07	53 2023	CERRITOS AVENUE OC	533	114	152	426	426	426	426		150	9	12	36
16	210	R40.60	53 22024	CITRUS AVENUE OC	928	26		464		928	464				13	
17	210	R42.10	53 2072	GLENDORA AVENUE UC	868	250		948	948	632	948			20	26	79
18	210	R42.66	53 2025	BONNIE COVE AVENUE UC	790	178		630	630	420	630	105		18	18	53
19	210	R44.71	53 1994	AMELIA AVENUE UC	1,173	250		804	938	670	804	134		25	22	78
20	210	R45.71	53 2068	WALNUT AVENUE UC	578	190	20	1,050	630	420	1050		20	13	29	53
22	10	40.46	53 0870	VIA VERDE UC					20					9		4
				TOTAL	5,897	1,184	200	4,954	4,173	8,833		488	200	254		351
				TOTAL FROM SHEET PDQ-1	7,187	1,532	457	4,351	5,964	8,122		920	457	289		499
				GRAND TOTAL	13,084	2,716	657	9,305	10,137	16,955		1,408	657	543		850

PAVEMENT DELINEATION QUANTITIES

PDQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: LARRY WIERING
CALCULATED-DESIGNED BY: GHASSAN BASHOURA
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-24-14 | DATE PLOTTED => 18-MAR-2014 | TIME PLOTTED => 22:28

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
Mtl	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

Oblr	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 Mtl	PERMEABLE MATERIAL

P continued

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
ℙ,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
℄	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
Tel	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
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME

W

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	10,39, 210,605	Var	19	53

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Grace M. Tsushima No. C49814 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 2-24-14

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
kip	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.

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	20	53

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

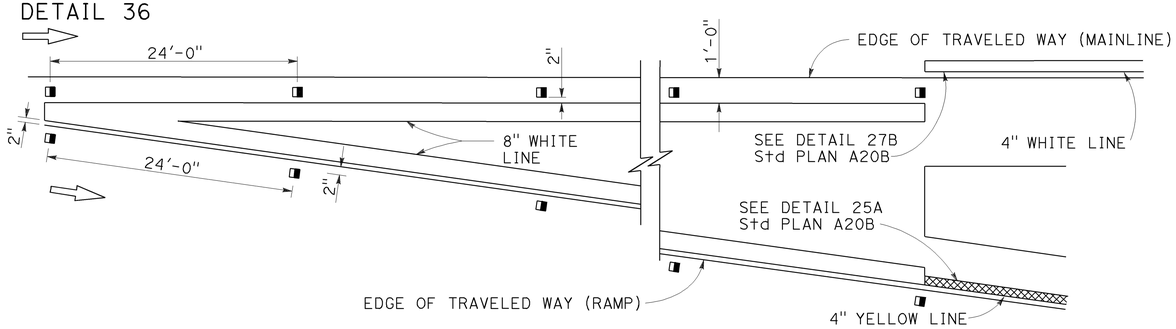
REGISTERED PROFESSIONAL ENGINEER Roberta L. McLaughlin No. C40375 Exp. 3-31-15 CIVIL STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 2-24-14

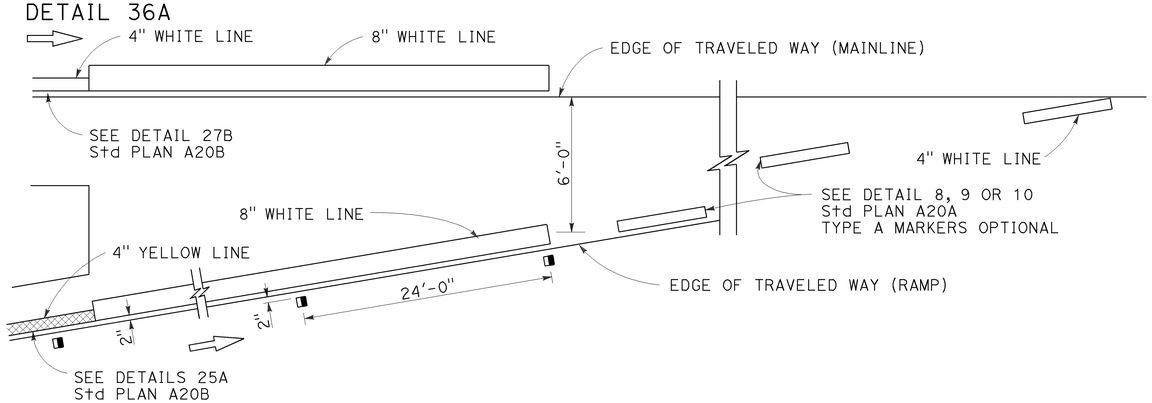
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT

DETAIL 36



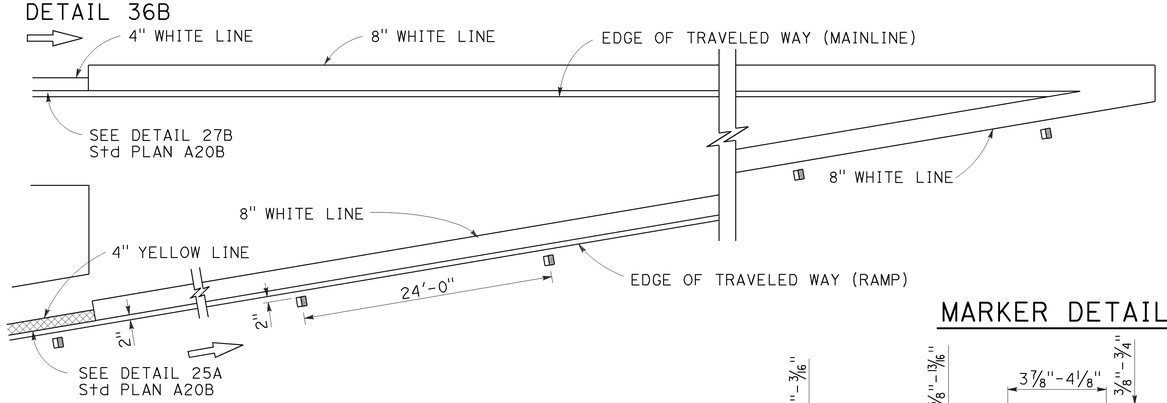
ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT

DETAIL 36A



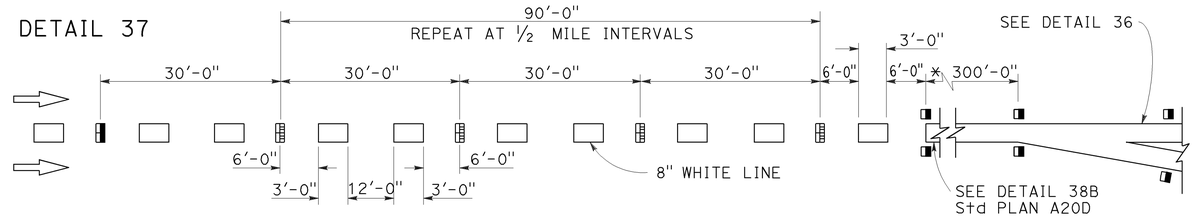
ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

DETAIL 36B

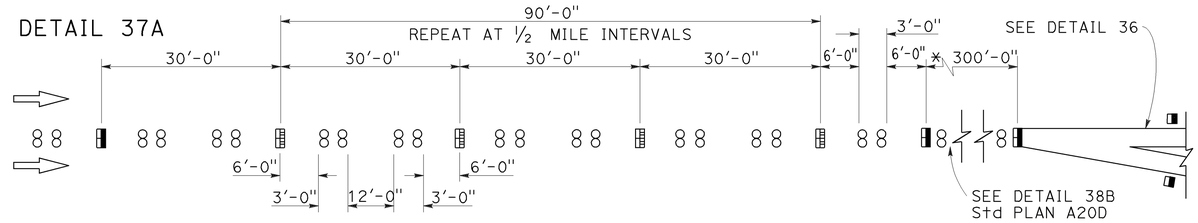


LANE DROP AT EXIT RAMPS

DETAIL 37



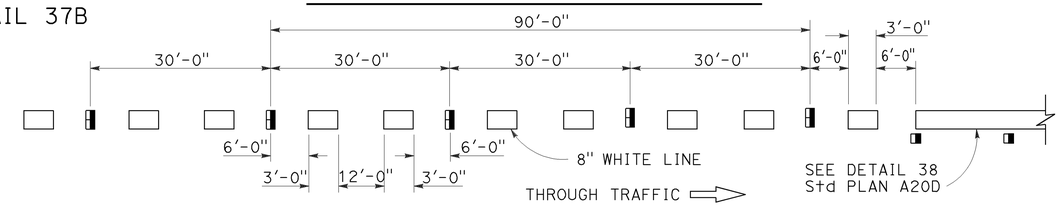
DETAIL 37A



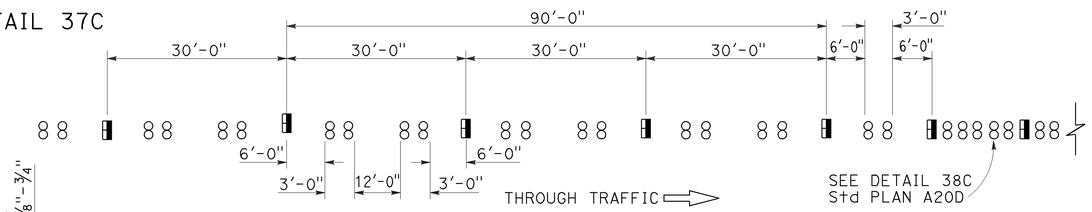
* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

LANE DROP AT INTERSECTIONS

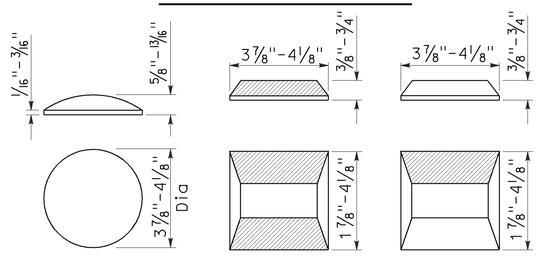
DETAIL 37B



DETAIL 37C



MARKER DETAILS



RETROREFLECTIVE FACE

LEGEND:

MARKERS

- ○ TYPE A WHITE NON-REFLECTIVE
- ⊟ TYPE C RED-CLEAR RETROREFLECTIVE
- ◨ TYPE G ONE-WAY CLEAR RETROREFLECTIVE

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

4-29-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	21	53

REGISTERED CIVIL ENGINEER

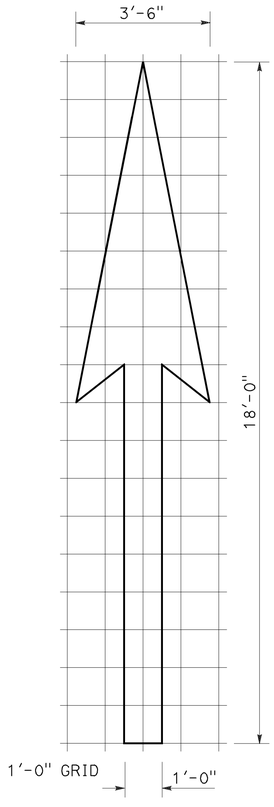
April 20, 2012
PLANS APPROVAL DATE

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

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

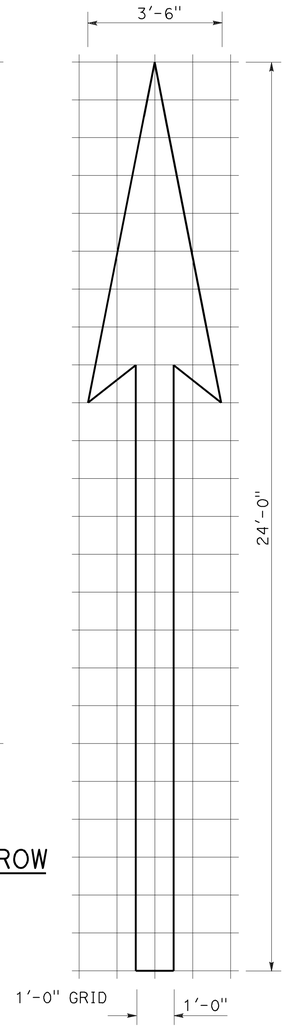
TO ACCOMPANY PLANS DATED 2-24-14

2010 REVISED STANDARD PLAN RSP A24A



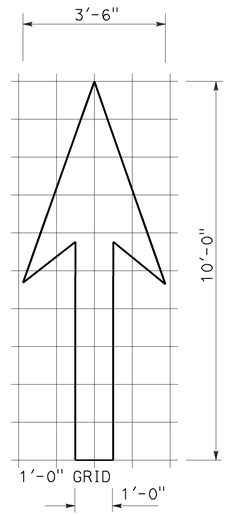
A=25 ft^2

TYPE I 18'-0" ARROW



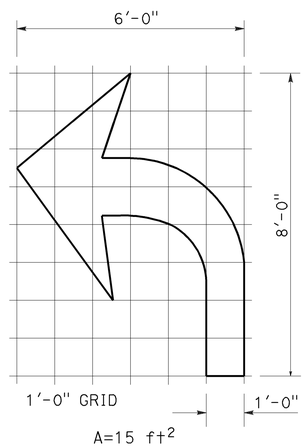
A=31 ft^2

TYPE I 24'-0" ARROW



A=14 ft^2

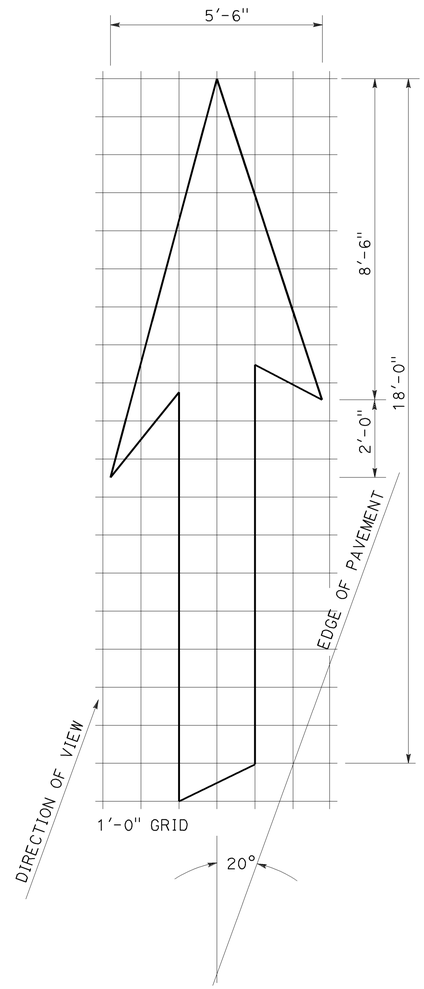
TYPE I 10'-0" ARROW



A=15 ft^2

TYPE IV (L) ARROW

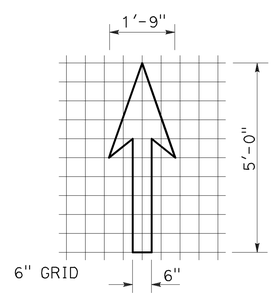
(For Type IV (R) arrow, use mirror image)



A=42 ft^2

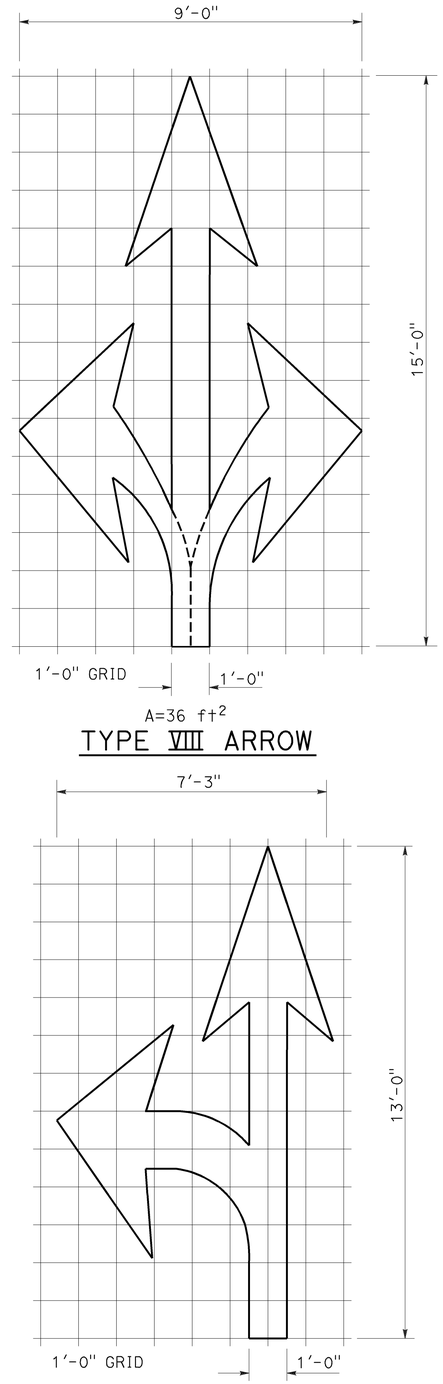
TYPE VI ARROW

Right lane drop arrow
(For left lane, use mirror image)



A=3.5 ft^2

BIKE LANE ARROW



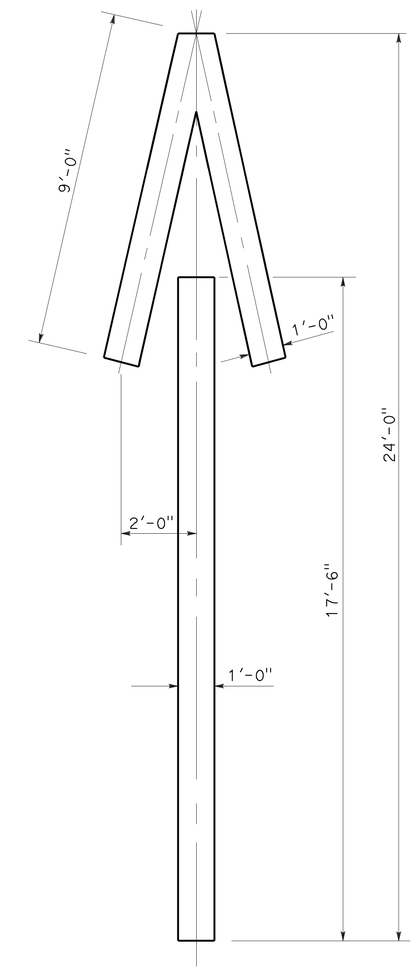
A=36 ft^2

TYPE VIII ARROW

A=27 ft^2

TYPE VII (L) ARROW

(For Type VII (R) arrow, use mirror image)



A=33 ft^2

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	22	53

REGISTERED CIVIL ENGINEER

October 19, 2012
PLANS APPROVAL DATE

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

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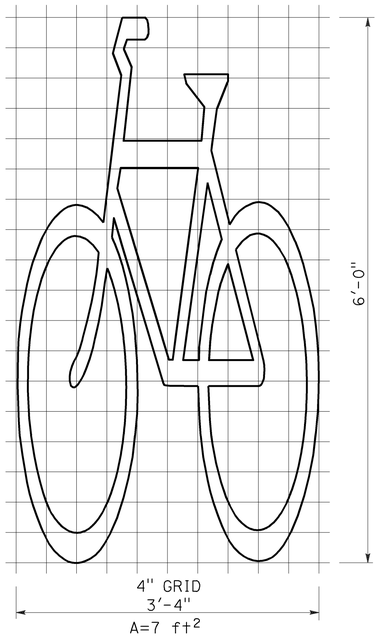
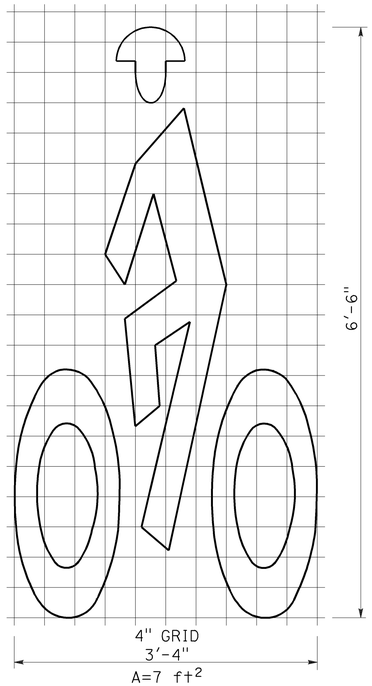
NOTE: TO ACCOMPANY PLANS DATED 2-24-14

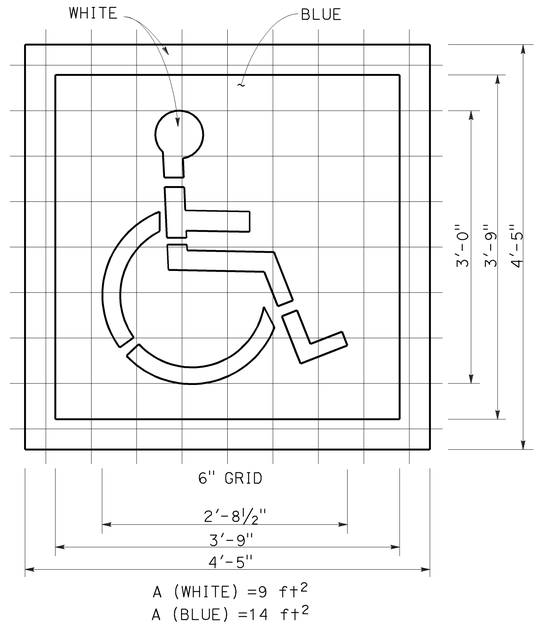
Minor variations in dimensions may be accepted by the Engineer.



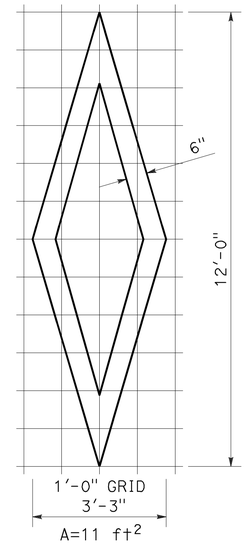
BIKE LANE SYMBOL WITHOUT PERSON



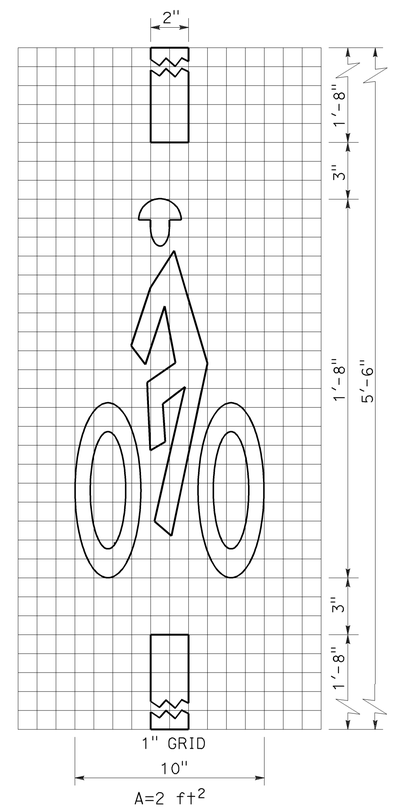
BIKE LANE SYMBOL WITH PERSON



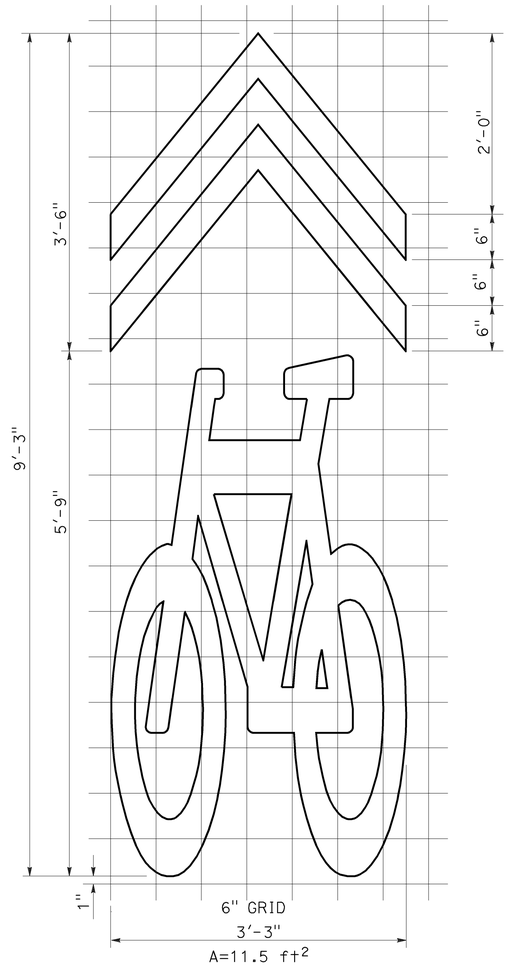
INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING



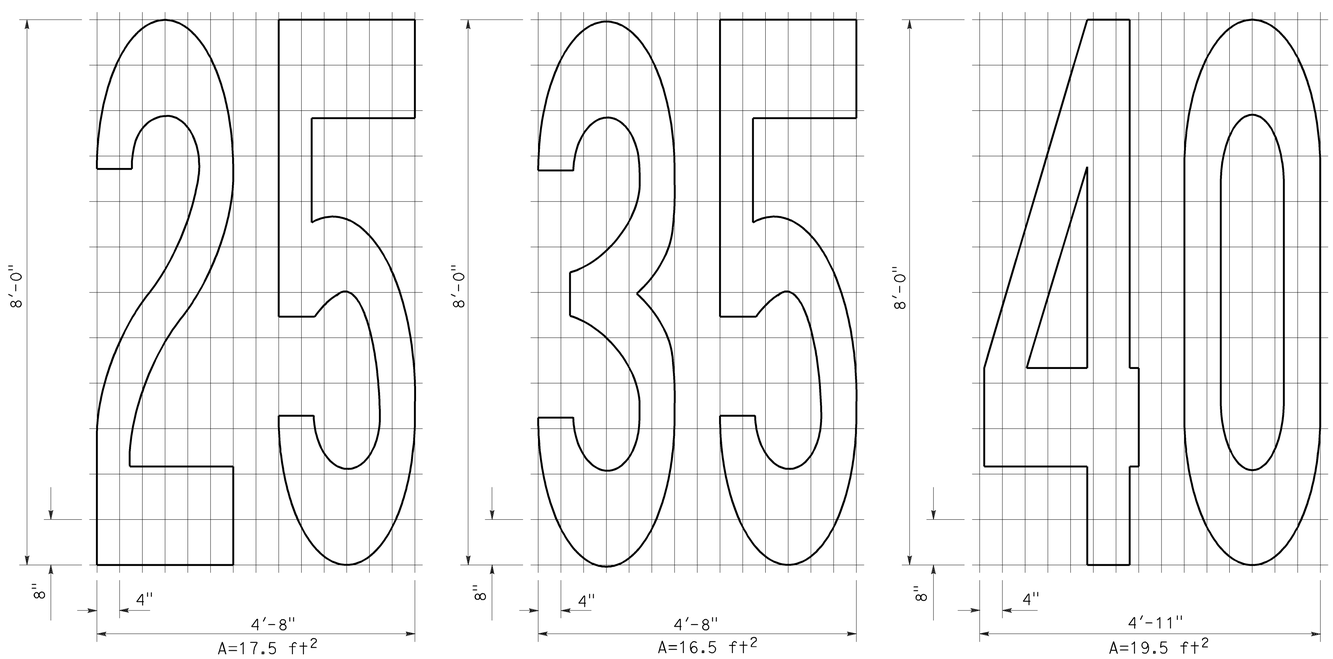
DIAMOND SYMBOL



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

6-28-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	23	53

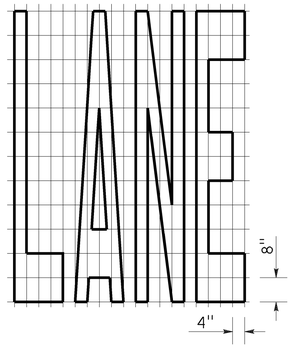
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

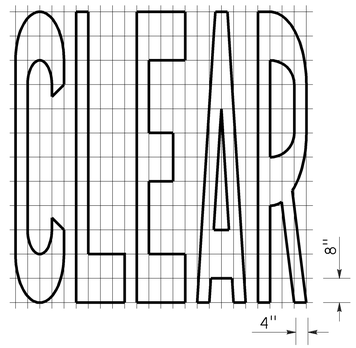
REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 2-24-14



A=24 ft²



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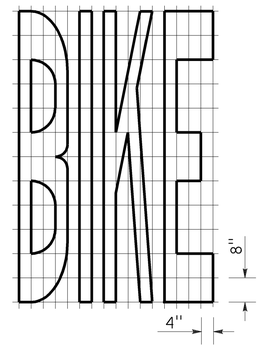

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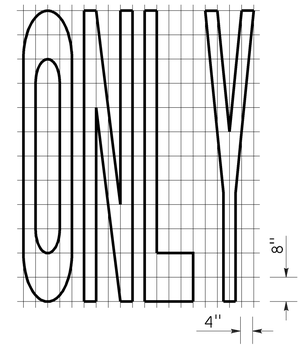

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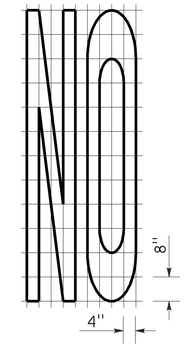

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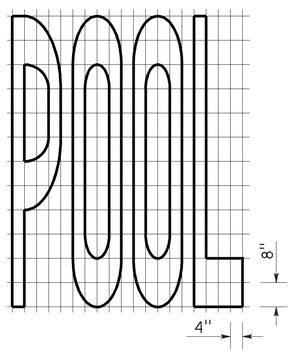

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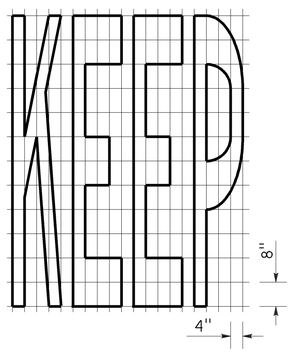

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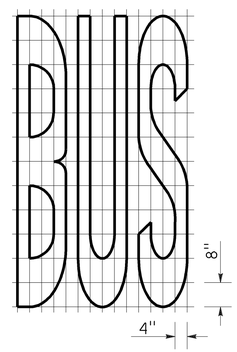

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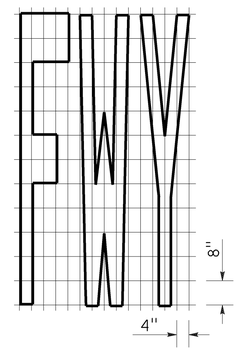
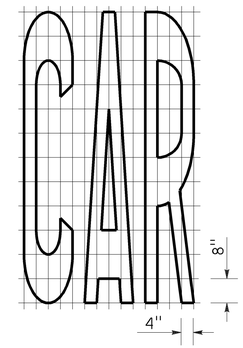
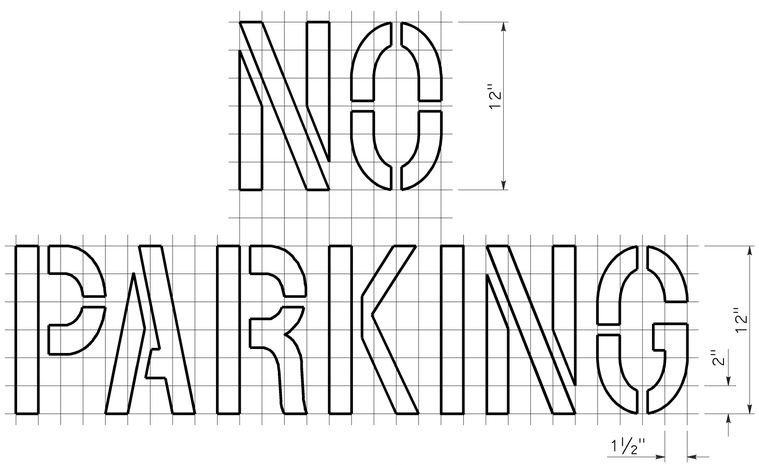


A=16 ft²

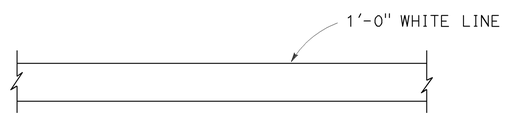


A=17 ft²

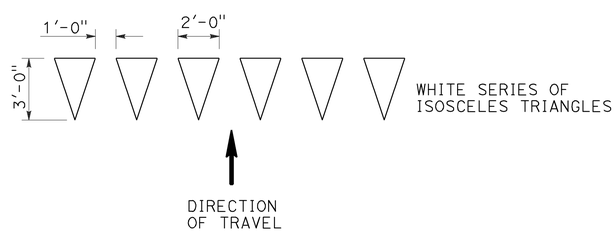
WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



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

2010 REVISED STANDARD PLAN RSP A24E

6-12-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	24	53

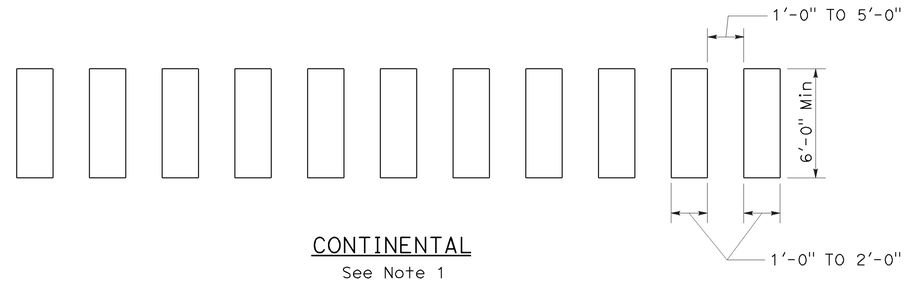
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

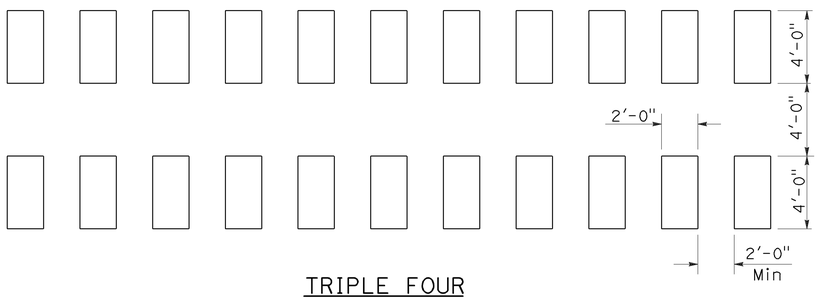
REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

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

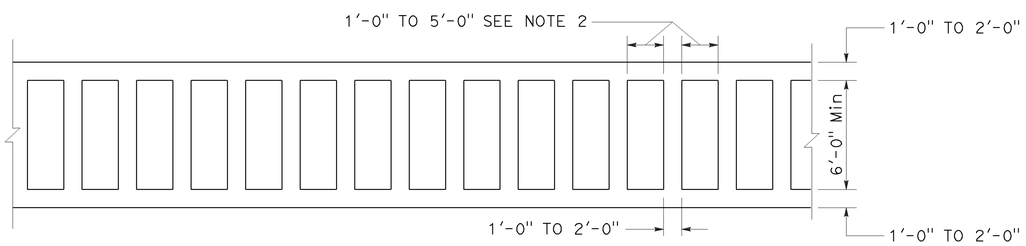
TO ACCOMPANY PLANS DATED 2-24-14



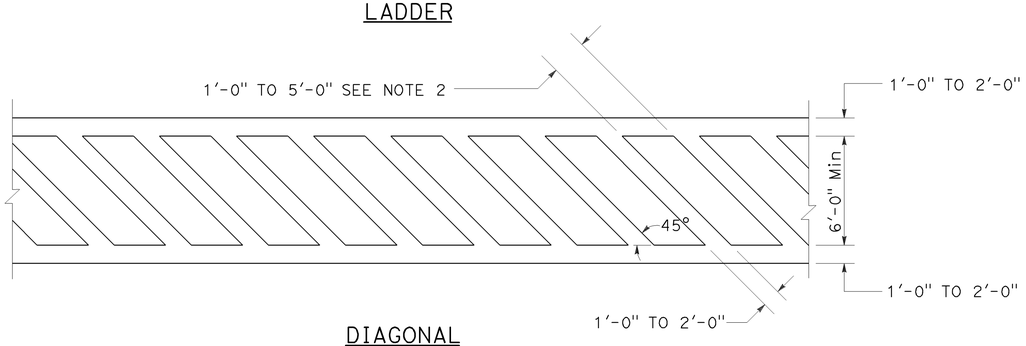
CONTINENTAL
See Note 1



TRIPLE FOUR
See Note 1



LADDER

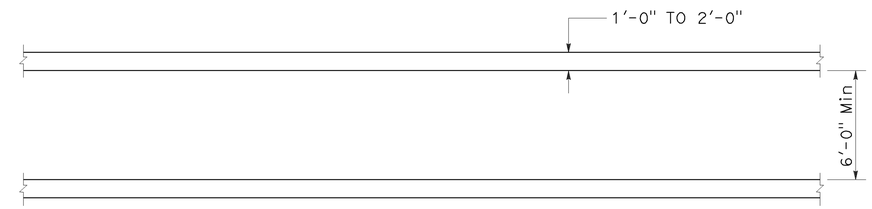


DIAGONAL

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.

REVISED STANDARD PLAN RSP A24F

2010 REVISED STANDARD PLAN RSP A24F

6-28-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	25	53

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 2-24-14

2010 REVISED STANDARD PLAN RSP T9

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		
					X	Y	Z **
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	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%
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 recommmended 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

4-30-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	26	53

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 2-24-14

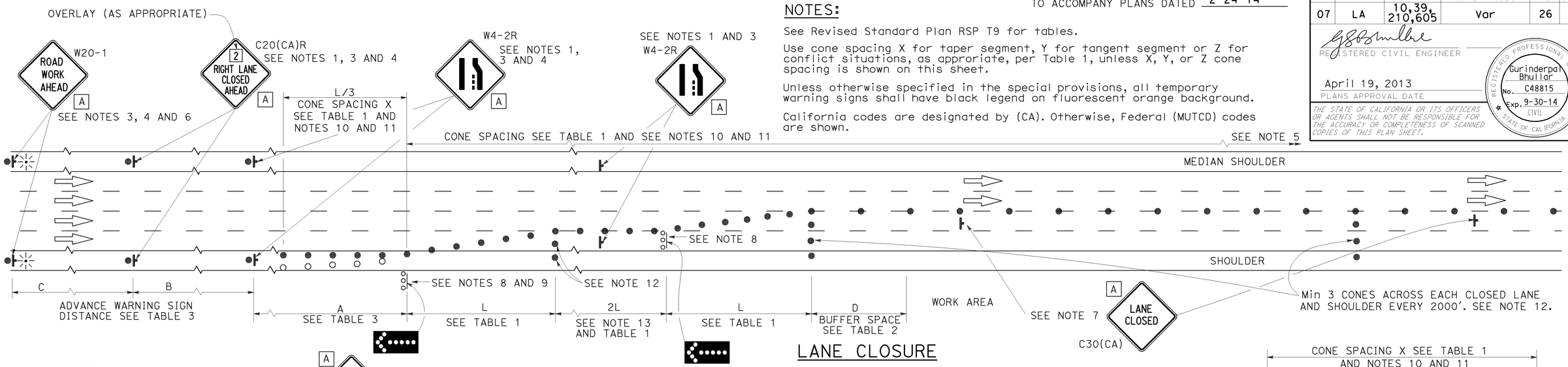
NOTES:

See Revised Standard Plan RSP T9 for tables.

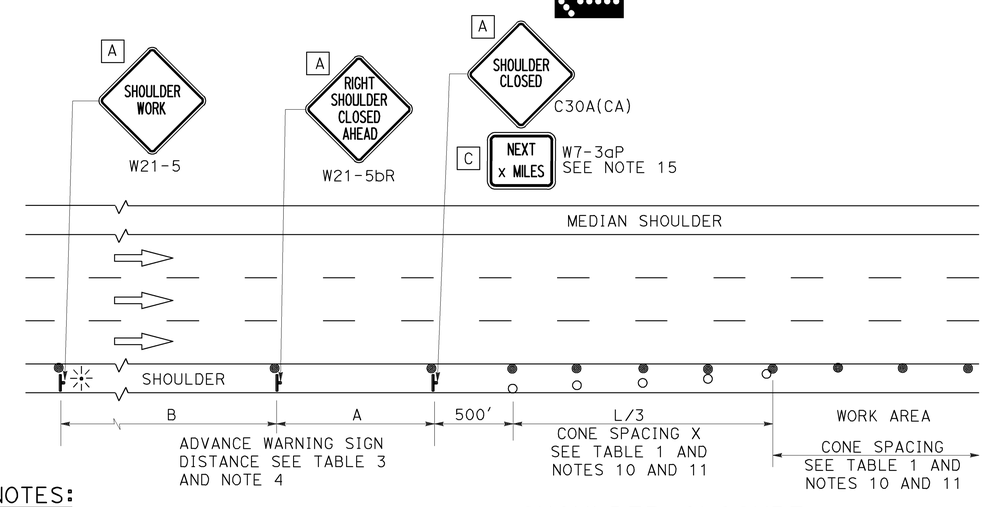
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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

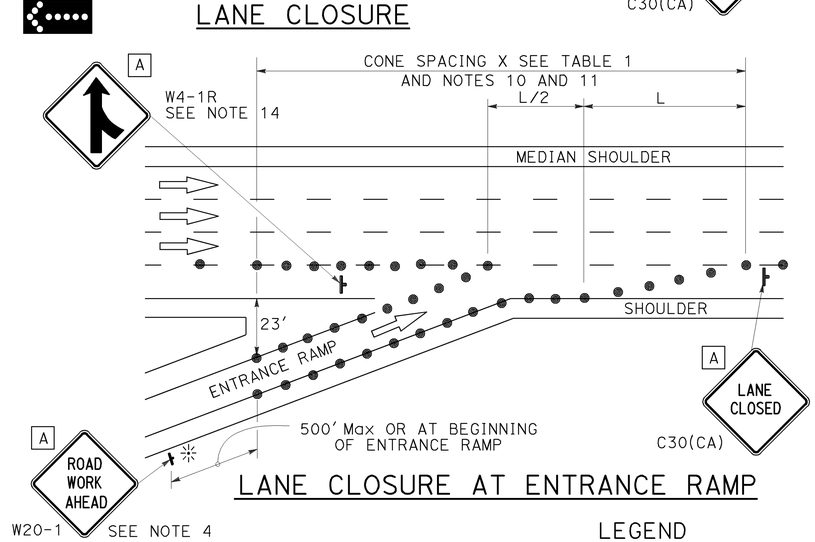
California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



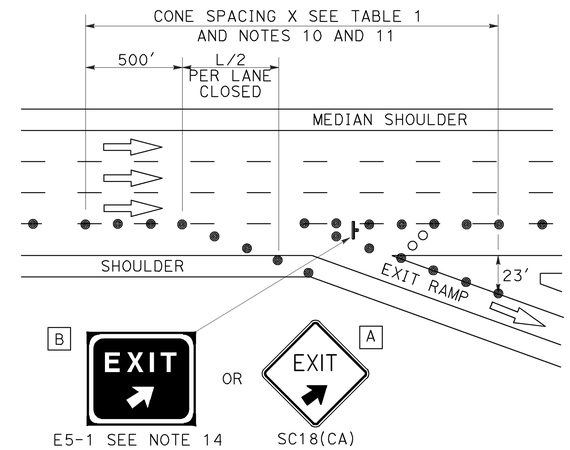
LANE CLOSURE



SHOULDER CLOSURE



LANE CLOSURE AT ENTRANCE RAMP



LANE CLOSURE AT EXIT RAMP

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.
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) sign for the first advance warning sign.
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.
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 theshoulder 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"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

12-18-12

TO ACCOMPANY PLANS DATED 2-24-14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	27	53

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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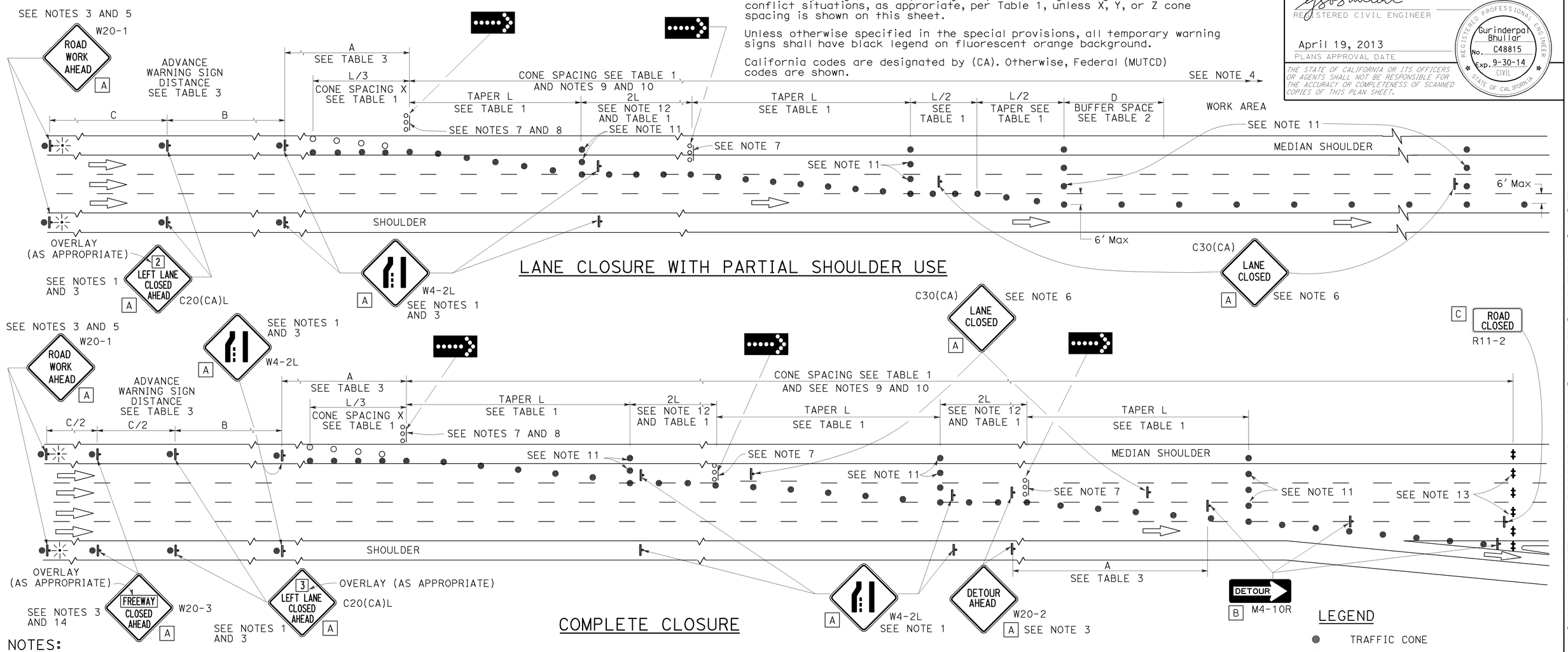
NOTES: See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, 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.



LANE CLOSURE WITH PARTIAL SHOULDER USE

COMPLETE CLOSURE

NOTES:

1. 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.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. 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.
4. 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.
5. 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.
6. Place a C30(CA) sign every 2000' throughout length of lane closure.
7. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
8. 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.
9. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
10. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
11. 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.
12. 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.
13. 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.
14. 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

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	28	53

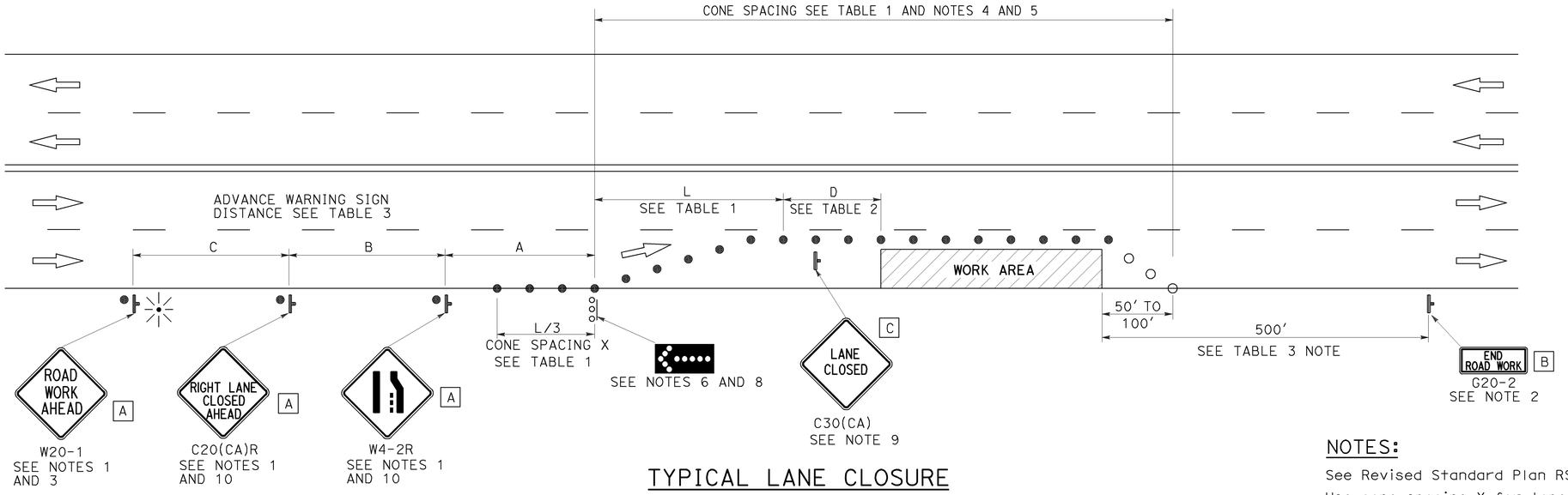
REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 2-24-14



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 approriate, 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.

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"

NOTES:

1. 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.
2. 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.
3. 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.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. 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.
8. 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.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
11. 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.

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

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	29	53

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 2-24-14

LEGEND

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

SIGN PANEL SIZE (Min)

A	48" x 48"
B	24" x 24"
C	36" x 18"

NOTES:

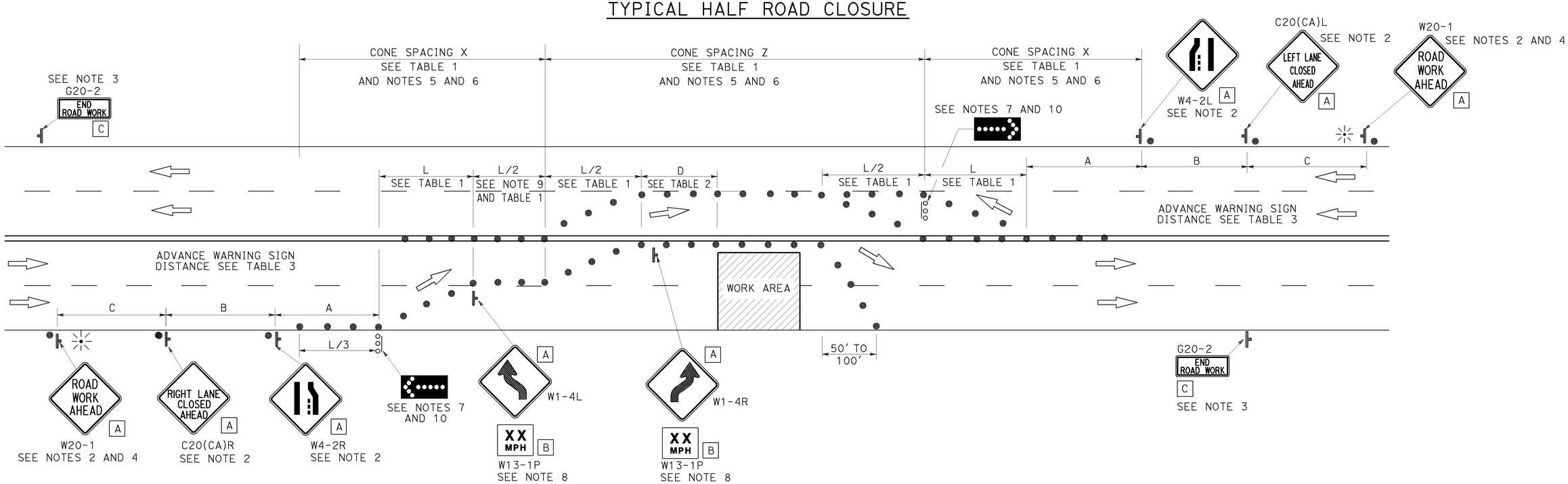
See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, 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.

TYPICAL HALF ROAD CLOSURE



NOTES:

1. 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.
2. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. 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.
4. 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.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow signs shall be either Type I or Type II.
8. Advisory speed will be determined by the Engineer. The W13-1P Plaque will not be required when advisory speed is more than the posted or maximum speed limit.
9. Unless otherwise specified in the special provisions, the tangent (L/2) shall be used.
10. 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.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR HALF ROAD CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS AND EXPRESSWAYS

NO SCALE

RSP T12 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T12
DATED MAY 20, 2011 - PAGE 240 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T12

2010 REVISED STANDARD PLAN RSP T12

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	30	53

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 2-24-14

NOTES:

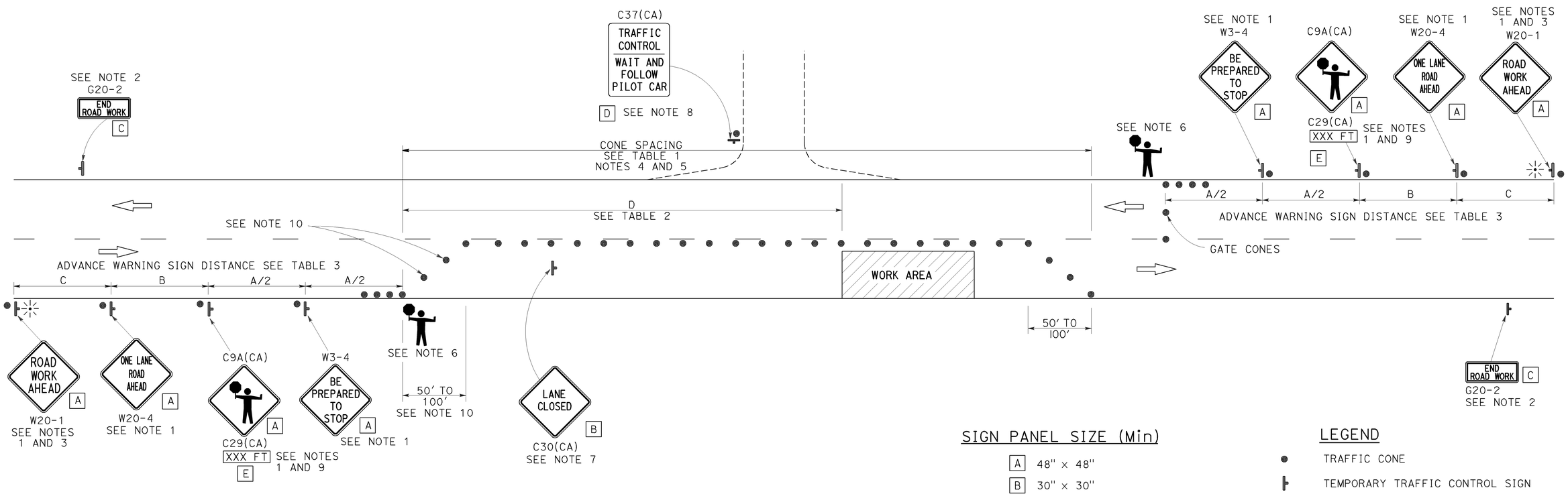
See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, 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.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



SIGN PANEL SIZE (Min)

A	48" × 48"
B	30" × 30"
C	36" × 18"
D	36" × 42"
E	20" × 7"

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

NOTES:

1. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
7. Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
8. When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
9. An optional C29(CA) sign may be placed below the C9A(CA) sign.
10. Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

RSP T13 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

2010 REVISED STANDARD PLAN RSP T13

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	31	53

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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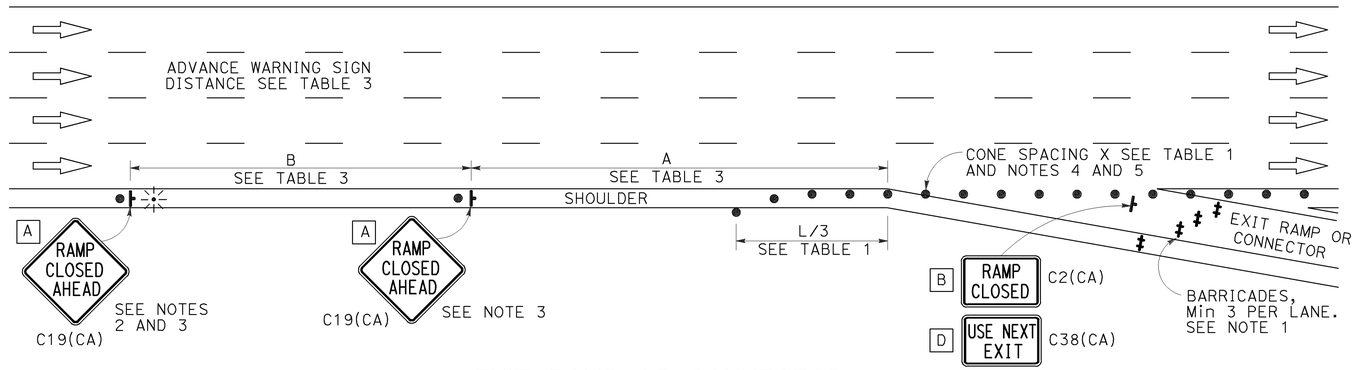
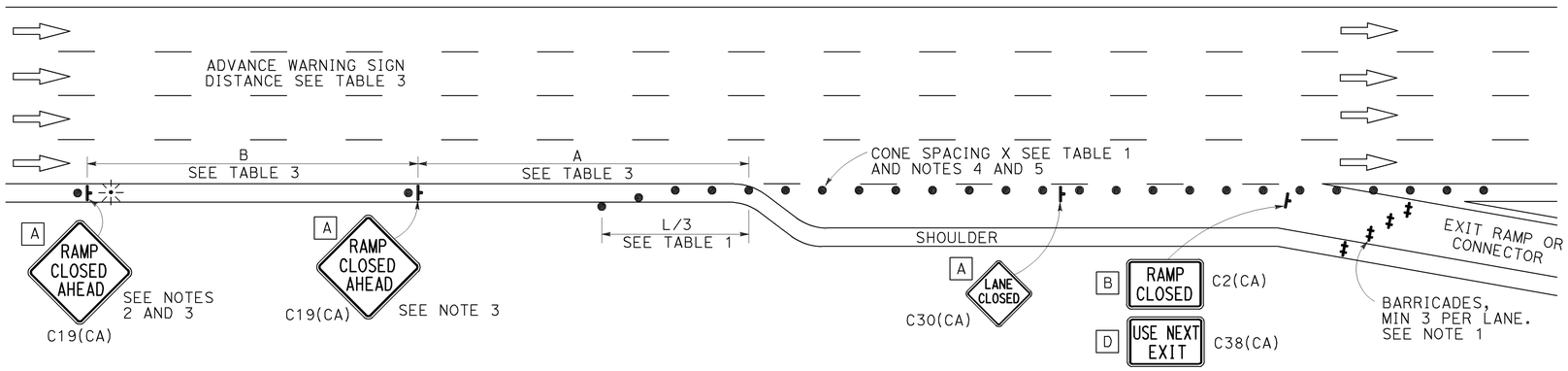
TO ACCOMPANY PLANS DATED 2-24-14

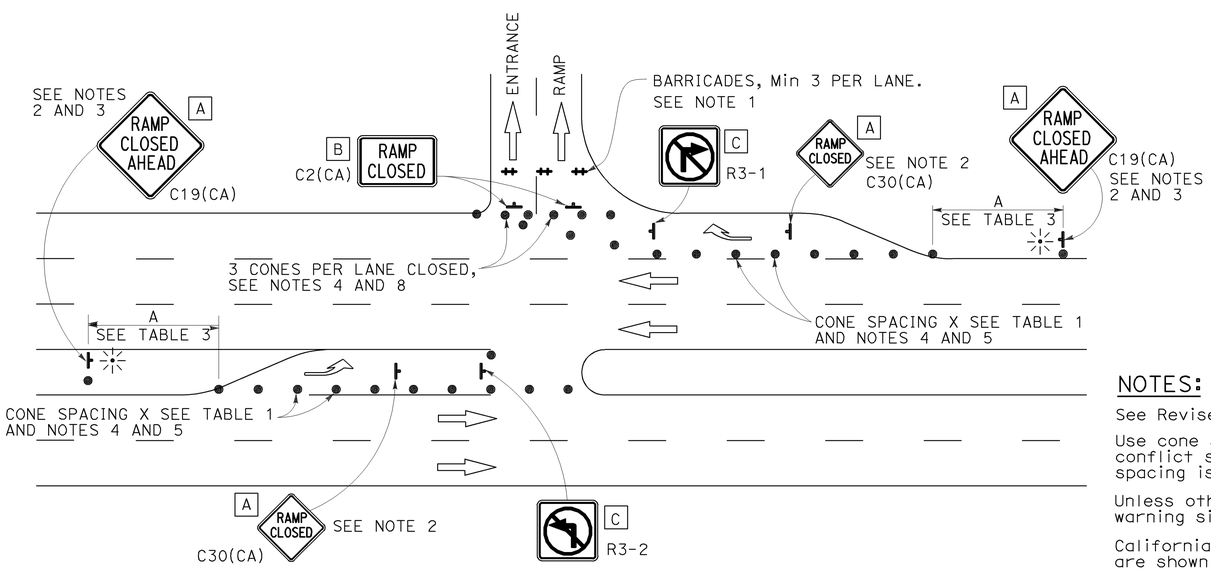
TYPICAL RAMP CLOSURES



EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS

SIGN PANEL SIZE (Min)

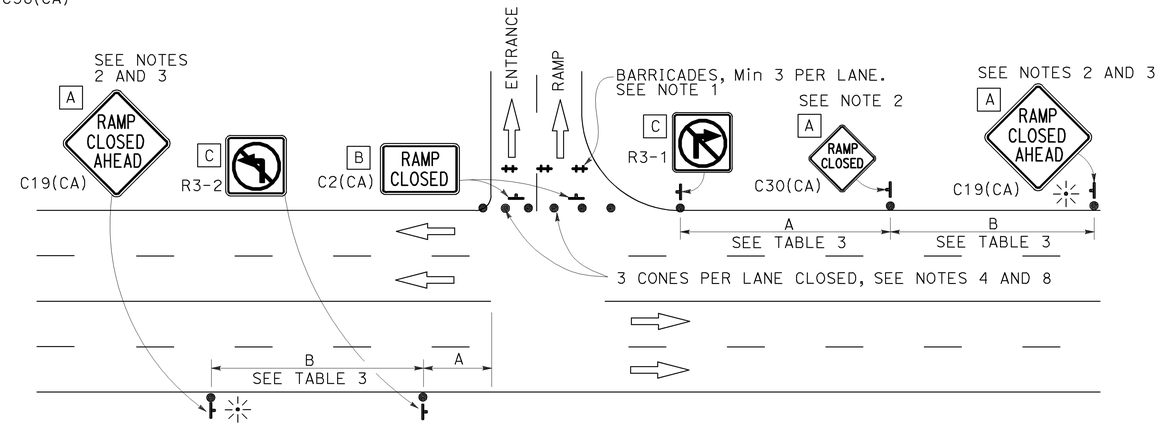
- A 48" × 48"
- B 48" × 30"
- C 36" × 36"
- D 48" × 36"

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- BARRICADES
- PORTABLE FLASHING BEACON

NOTES:

1. 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.
2. 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.
3. 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" × 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.
4. All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
6. At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
7. The existing "EXIT" signs shall be covered during ramp closures.
8. A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.



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 approriate, 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

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	32	53

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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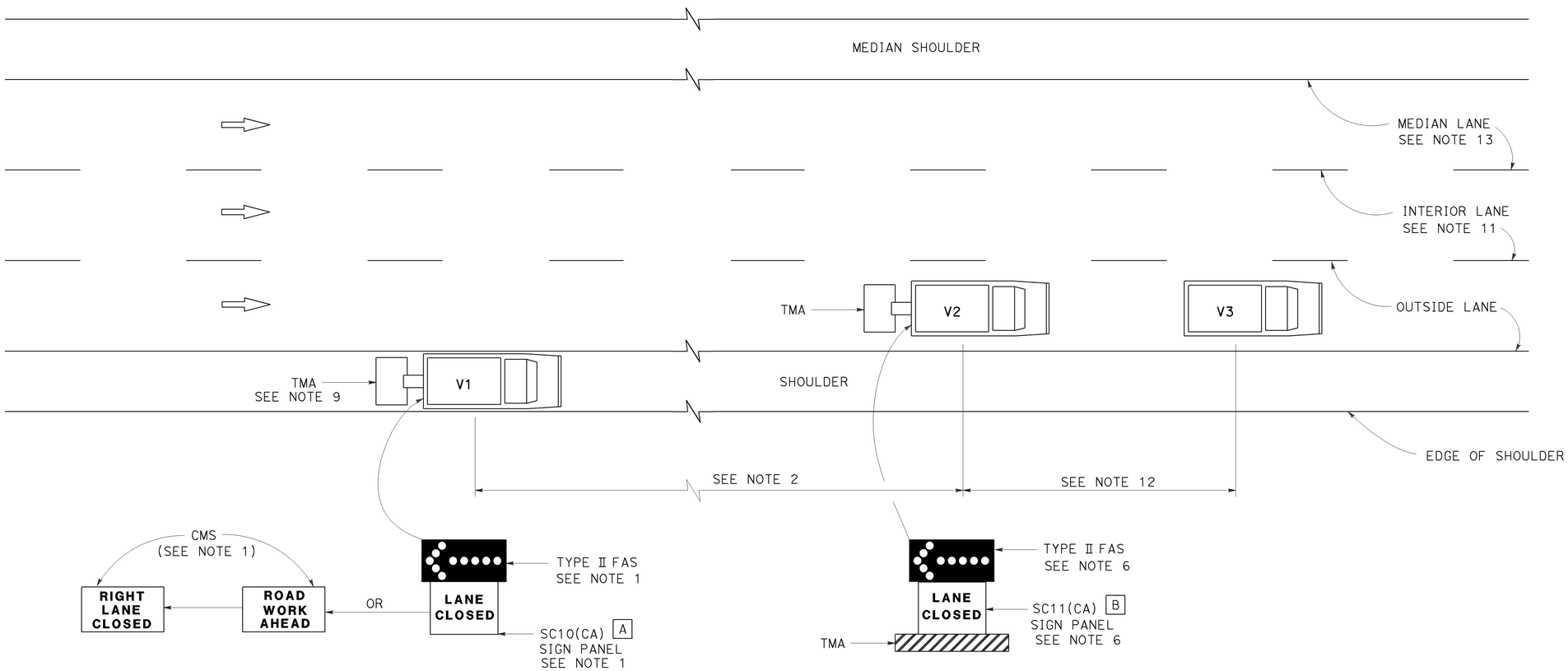
TO ACCOMPANY PLANS DATED 2-24-14



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

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

NOTES:

1. 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".
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. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
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 interior lane of multilane highways, use Revised Standard Plan T16.
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.
13. 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

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39, 210,605	Var	33	53

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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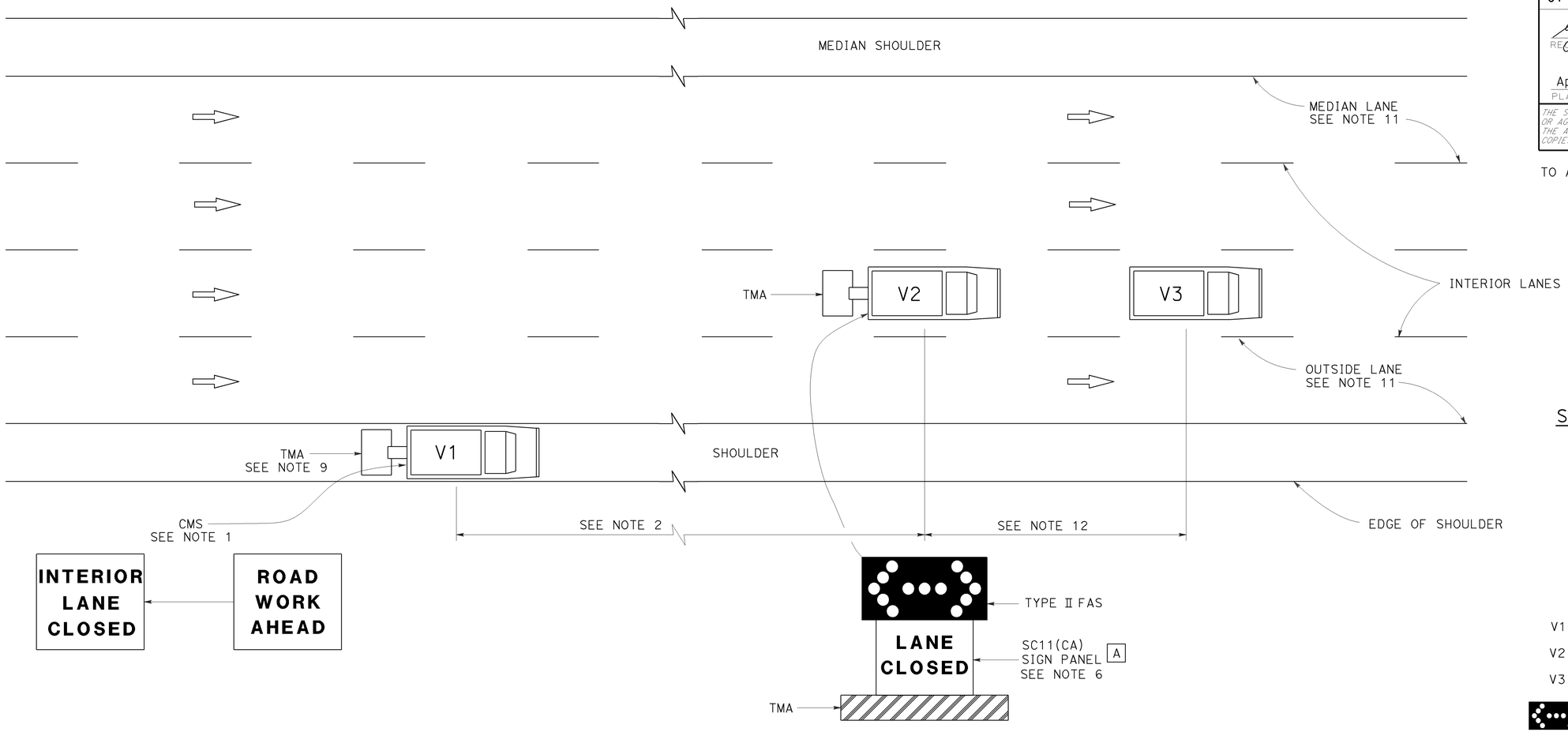
TO ACCOMPANY PLANS DATED 2-24-14



MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

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

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

12-18-12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	34	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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

INDEX TO PLANS

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

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")

STANDARD PLAN SHEET NO.

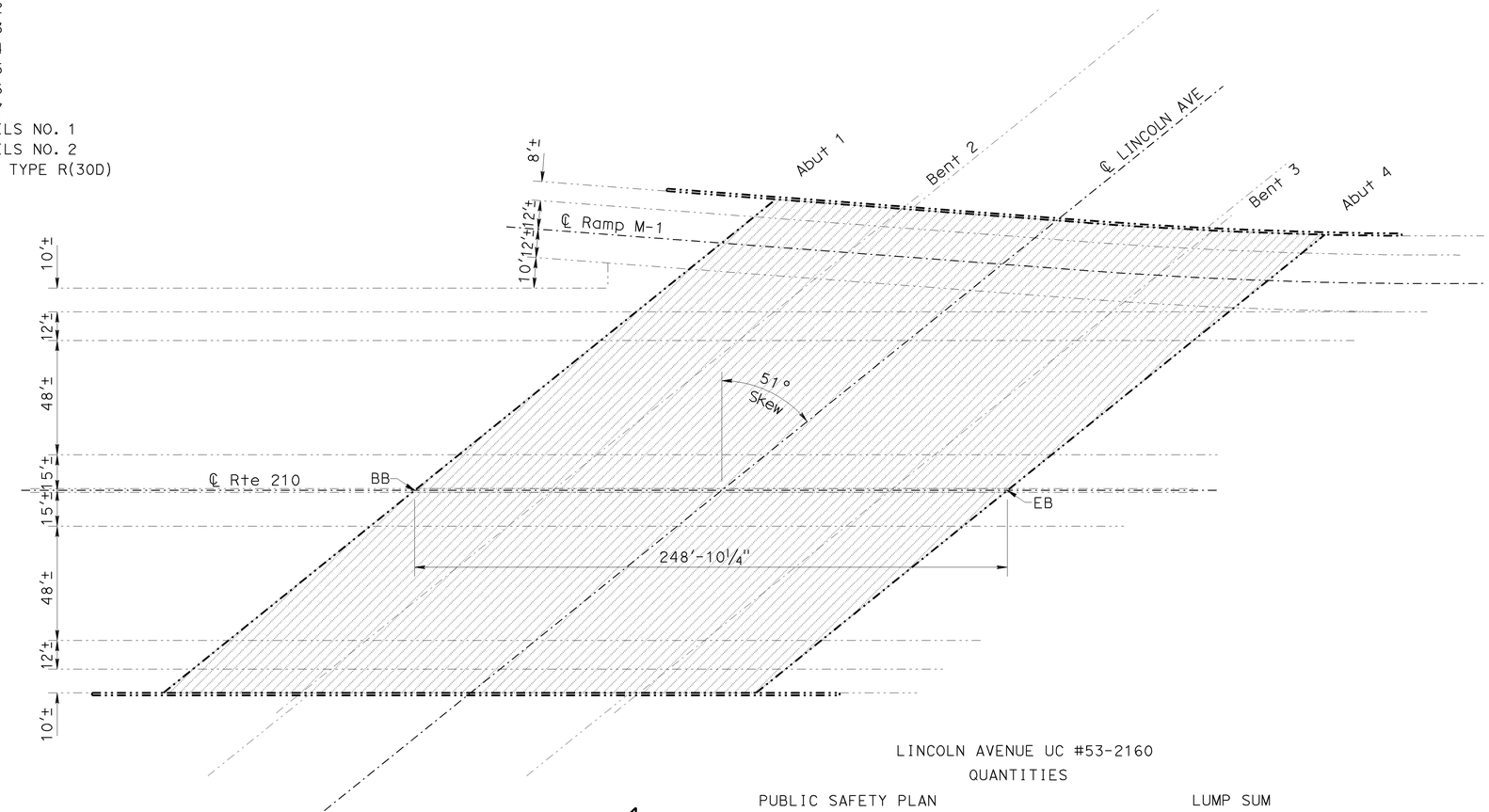
DETAIL NO.

LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.



LINCOLN AVENUE UC

Br No. 53-2160, Rte 210, PM R24.17
No Scale

LINCOLN AVENUE UC #53-2160
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	50,270 SQFT
TREAT BRIDGE DECK	50,270 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	627 GAL

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 1

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 01 OF 20

FILE => 07-1w5901-a-gp01.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	35	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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

LEGEND:

Indicates existing.

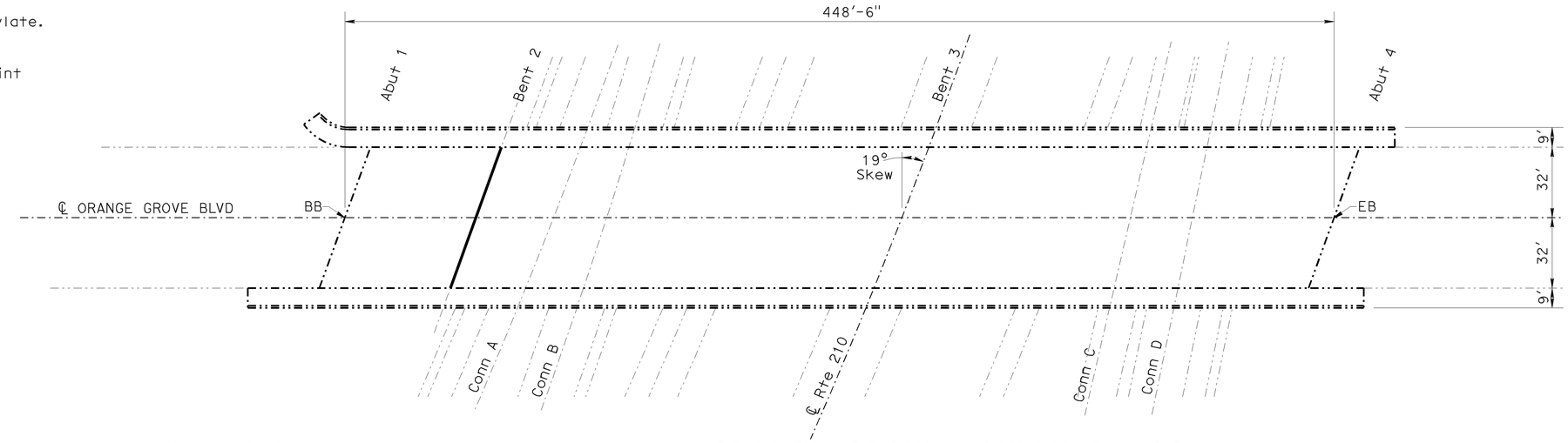
Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates location of clean expansion joint and placement of new joint seal.

ORANGE GROVE BOULEVARD OC #53-2195
QUANTITIES

CLEAN EXPANSION JOINT	70 LF
JOINT SEAL (MR 2")	70 LF

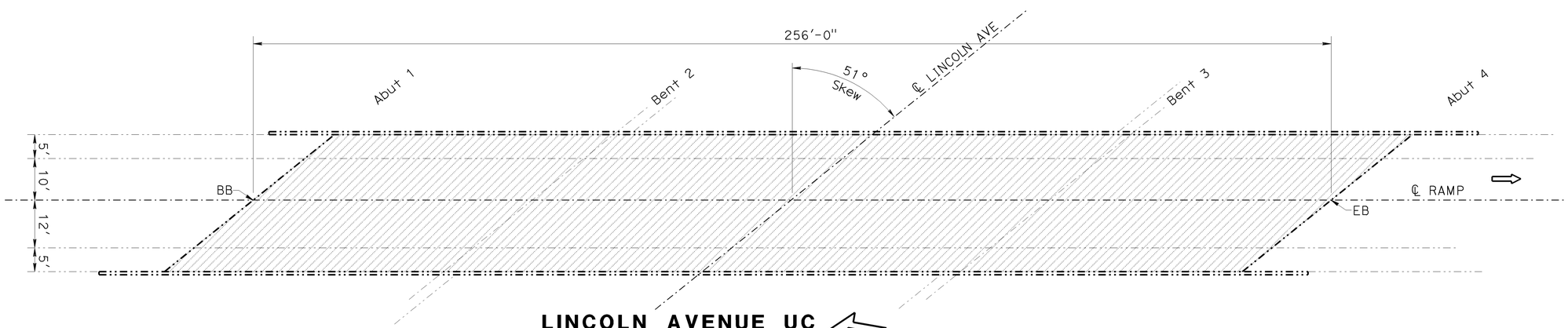


ORANGE GROVE BOULEVARD OC

Br No. 53-2195, Rte 210, PM R24.64
No Scale

LINCOLN AVENUE UC #53-2160S
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	8,200 SQFT
TREAT BRIDGE DECK	8,200 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	103 GAL



LINCOLN AVENUE UC

Br No. 53-2160S, Rte 210, PM R24.17
No Scale

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
LAYOUT	BY Clayton Tom	CHECKED Mazin Ibrahim
SPECIFICATIONS	BY Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 2

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 02 OF 20

FILE => 07-1w5901-a-gp02.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	36	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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

LEGEND:

Indicates existing.

Indicates direction of traffic.

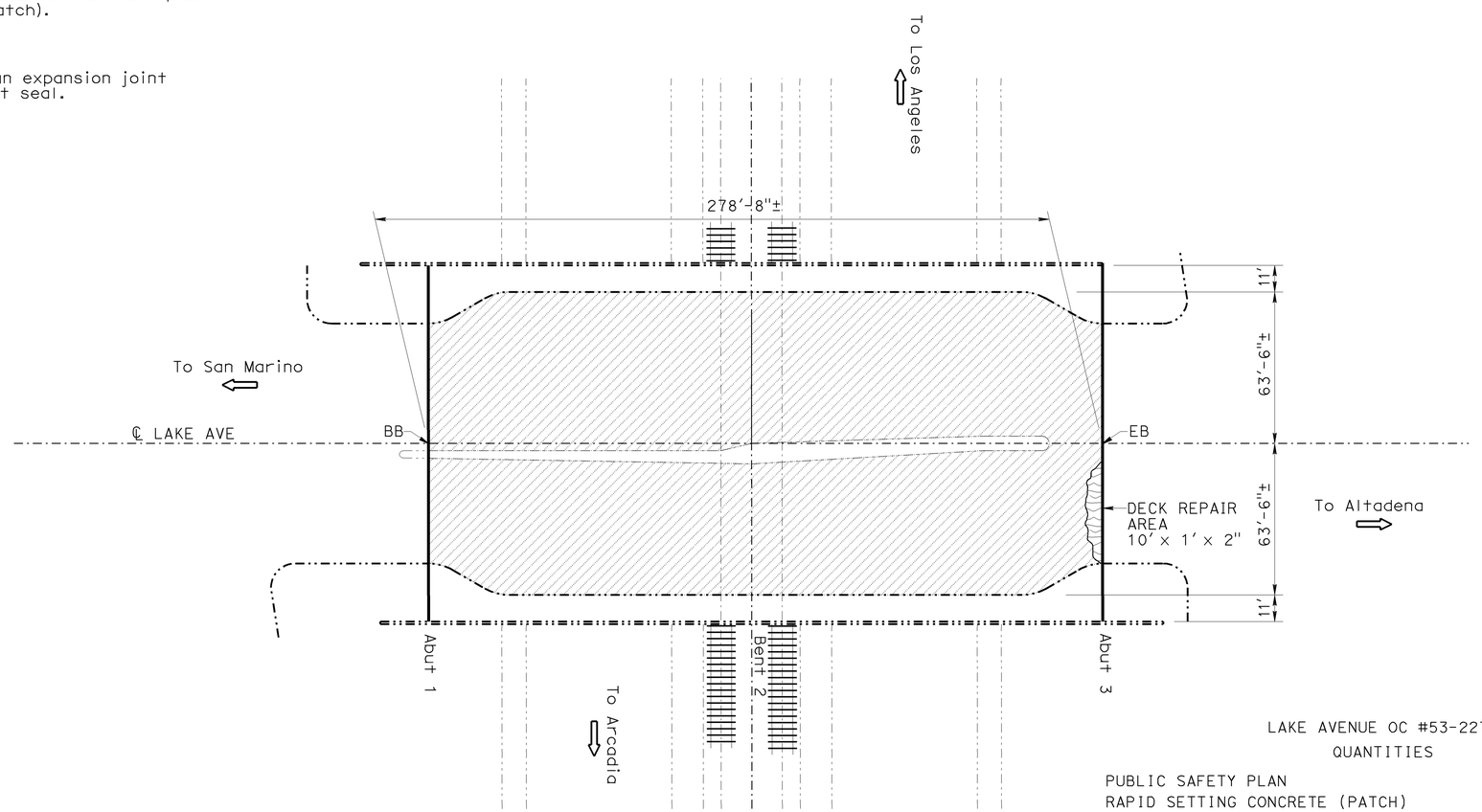
Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates removal of unsound concrete and place rapid setting concrete (patch).

Indicates location of clean expansion joint and placement of new joint seal.

NOTE:

1. For deck repair details, see "DECK DAMAGE REPAIR DETAIL" on "MISCELLANEOUS DETAILS NO. 2" sheet.



LAKE AVENUE OC

Br No. 53-2276, Rte 210, PM R26.33
No Scale

LAKE AVENUE OC #53-2276
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	2 CF
REMOVE UNSOUND CONCRETE	2 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	35,400 SQFT
TREAT BRIDGE DECK	35,400 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	443 GAL
CLEAN EXPANSION JOINT	300 LF
JOINT SEAL (MR 1½")	300 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 3

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 03 OF 20

FILE => 07-1w5901-a-gp03.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:31

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	37	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates limits of remove existing PCC and AC approach and place new Structure Approach Type R(30D). For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.

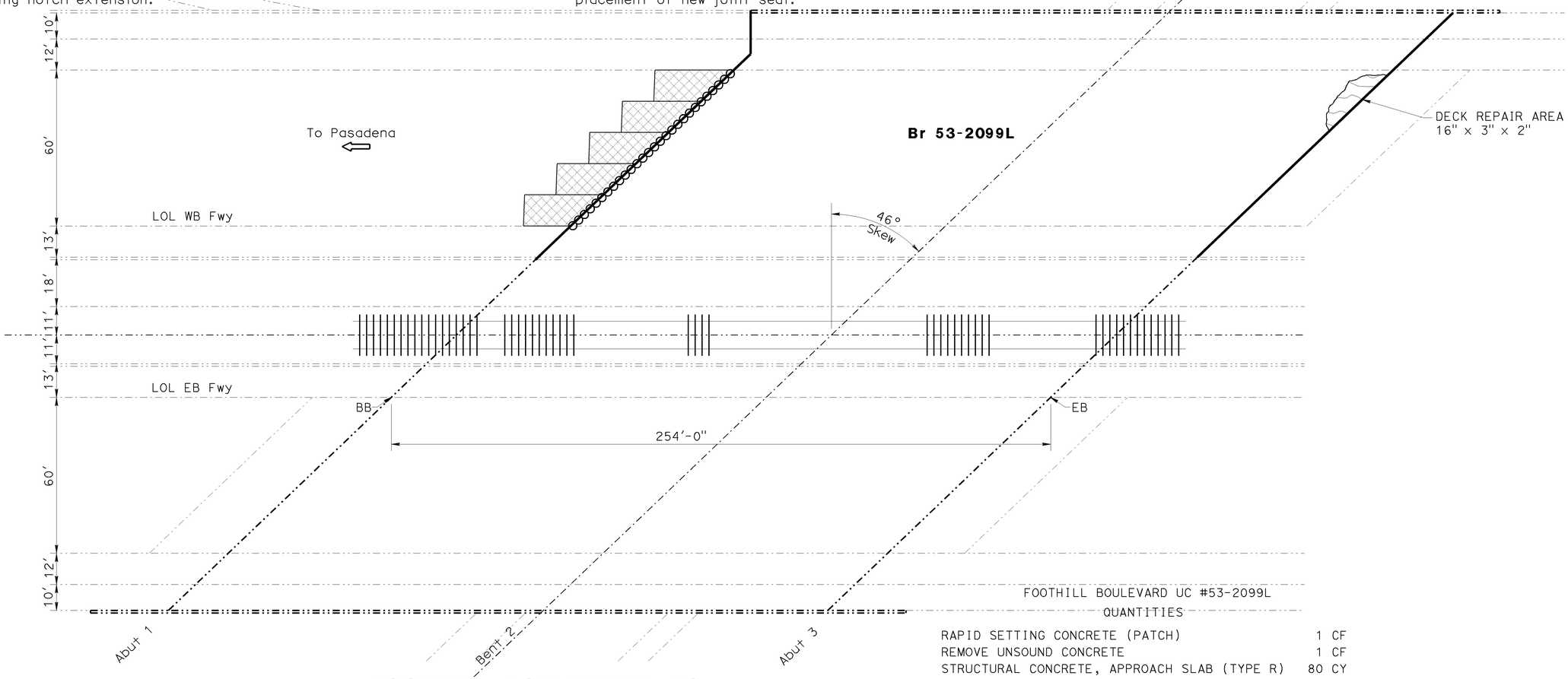
Indicates removal of unsound concrete and place rapid setting concrete (patch).

Indicates location of placement of new joint seal and paving notch extension.

Indicates location of clean expansion joint and placement of new joint seal.

NOTE:

1. For deck repair details, see "DECK DAMAGE REPAIR DETAIL" on "MISCELLANEOUS DETAILS NO. 2" sheet.



FOOTHILL BOULEVARD UC

Br No. 53-2099L, Rte 210, PM R28.87
No Scale

FOOTHILL BOULEVARD UC #53-2099L

QUANTITIES

RAPID SETTING CONCRETE (PATCH)	1 CF
REMOVE UNSOUND CONCRETE	1 CF
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	80 CY
PAVING NOTCH EXTENSION	60 CF
CLEAN EXPANSION JOINT	183 LF
JOINT SEAL (MR 1½")	272 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

		BY	CHECKED
LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		
LAYOUT		Clayton Tom	Mazin Ibrahim
SPECIFICATIONS		Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 4

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 04 OF 20

FILE => 07-1w5901-a-gp04.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:31

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	38	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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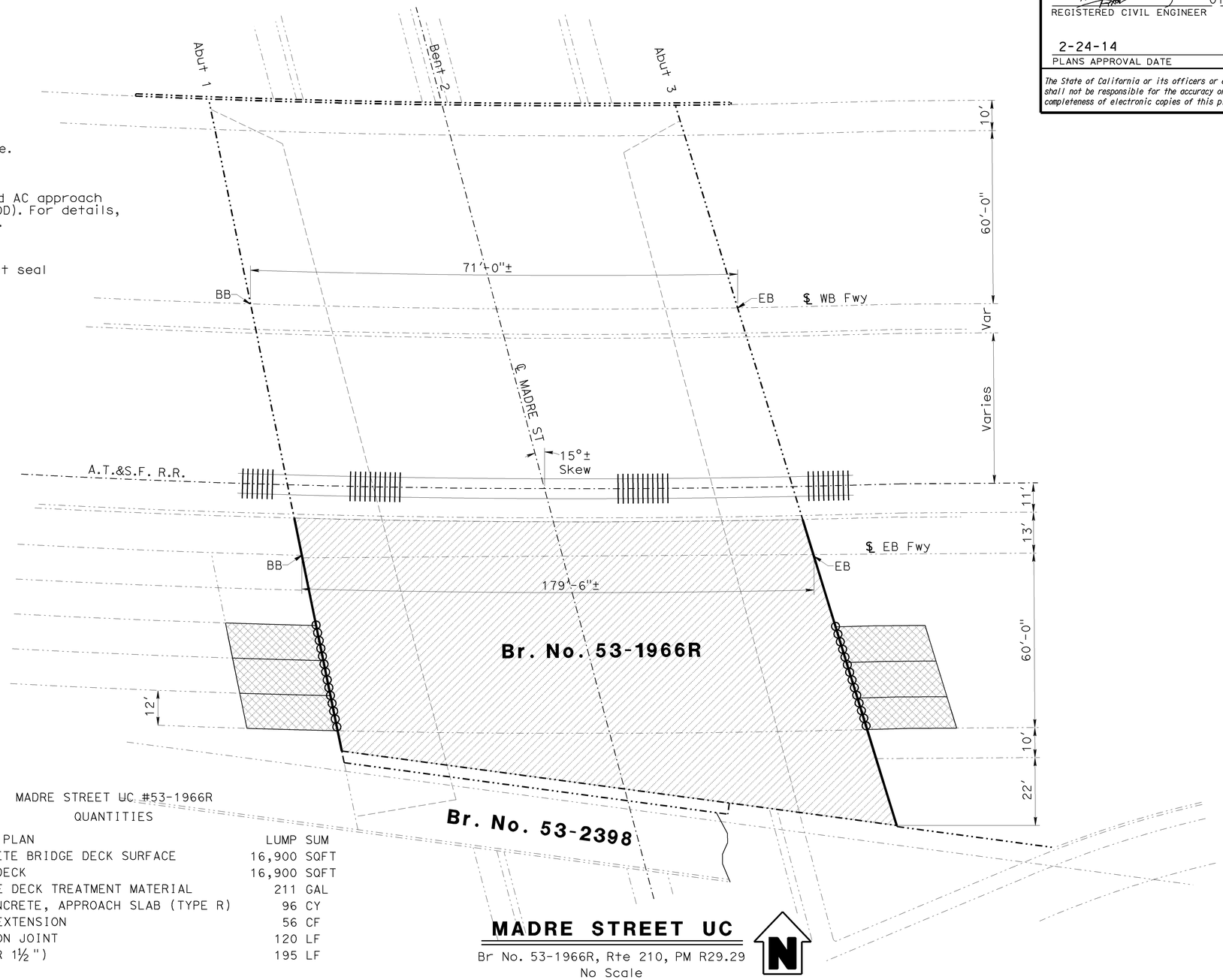
LEGEND:

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



MADRE STREET UC #53-1966R
QUANTITIES

PUBLIC SAFETY PLAN	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	16,900	SQFT
TREAT BRIDGE DECK	16,900	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	211	GAL
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	96	CY
PAVING NOTCH EXTENSION	56	CF
CLEAN EXPANSION JOINT	120	LF
JOINT SEAL (MR 1½")	195	LF

MADRE STREET UC

Br No. 53-1966R, Rte 210, PM R29.29
No Scale

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Mazin Ibrahim	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Mazin Ibrahim	LAYOUT	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran	SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 5

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES 06-17-13 08-15-13 01-06-14 01-16-14 SHEET 05 OF 20

FILE => 07-1w5901-a-gp05.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:31

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	39	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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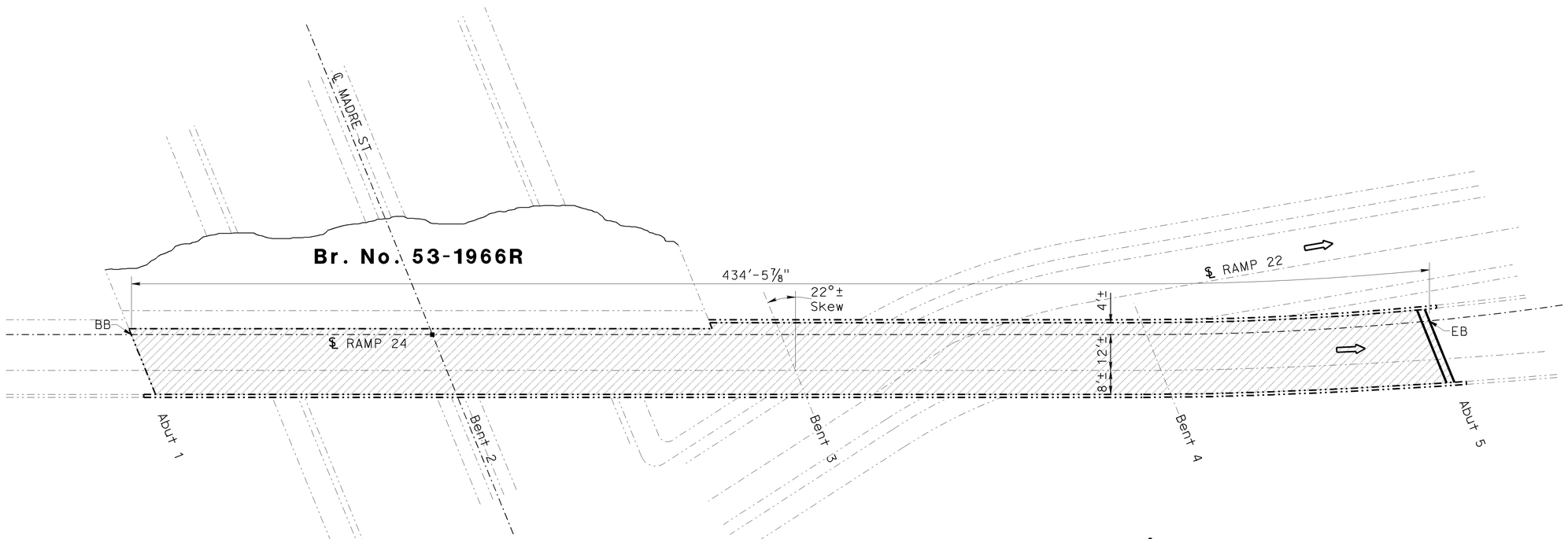
LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates location of clean expansion joint and placement of new joint seal.



MADRE STREET RAMP SEPARATION

Br No. 53-2398S, Rte 210, PM R29.35
No Scale

MADRE STREET RAMP SEPARATION #53-2398S
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	10,430 SQFT
TREAT BRIDGE DECK	10,430 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	130 GAL
CLEAN EXPANSION JOINT	52 LF
JOINT SEAL (MR ½")	26 LF
JOINT SEAL (MR 1½")	26 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

	BY	CHECKED
LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 6

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 06 OF 20

FILE => 07-1w5901-a-gp06.dgn

USERNAME => s817283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:31

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	40	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates location of clean expansion joint and placement of new joint seal.

Indicates limits of remove existing PCC and AC approach and place new Structure Approach Type R(30D). For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.

Indicates location of placement of new joint seal and paving notch extension.

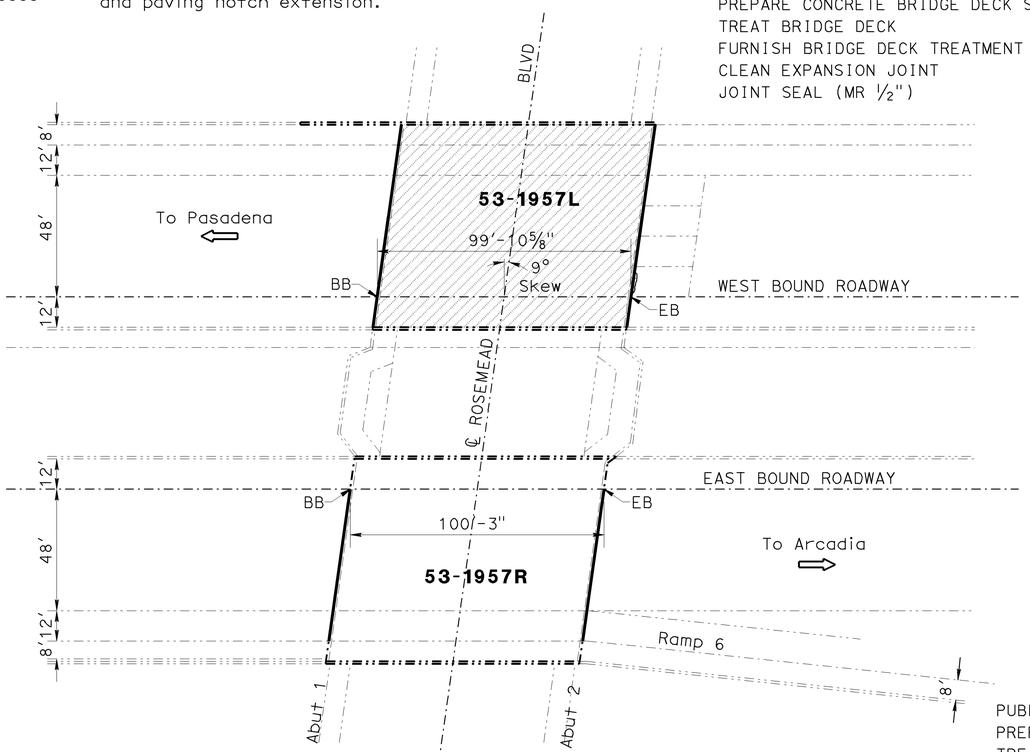
NOTE:

1. For deck repair details, see "DECK DAMAGE REPAIR DETAIL" on "MISCELLANEOUS DETAILS NO. 2" sheet.

ROUTE 210/64 SEPARATION #53-1957L/R

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	8,000 SQFT
TREAT BRIDGE DECK	8,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	100 GAL
CLEAN EXPANSION JOINT	284 LF
JOINT SEAL (MR ½")	284 LF



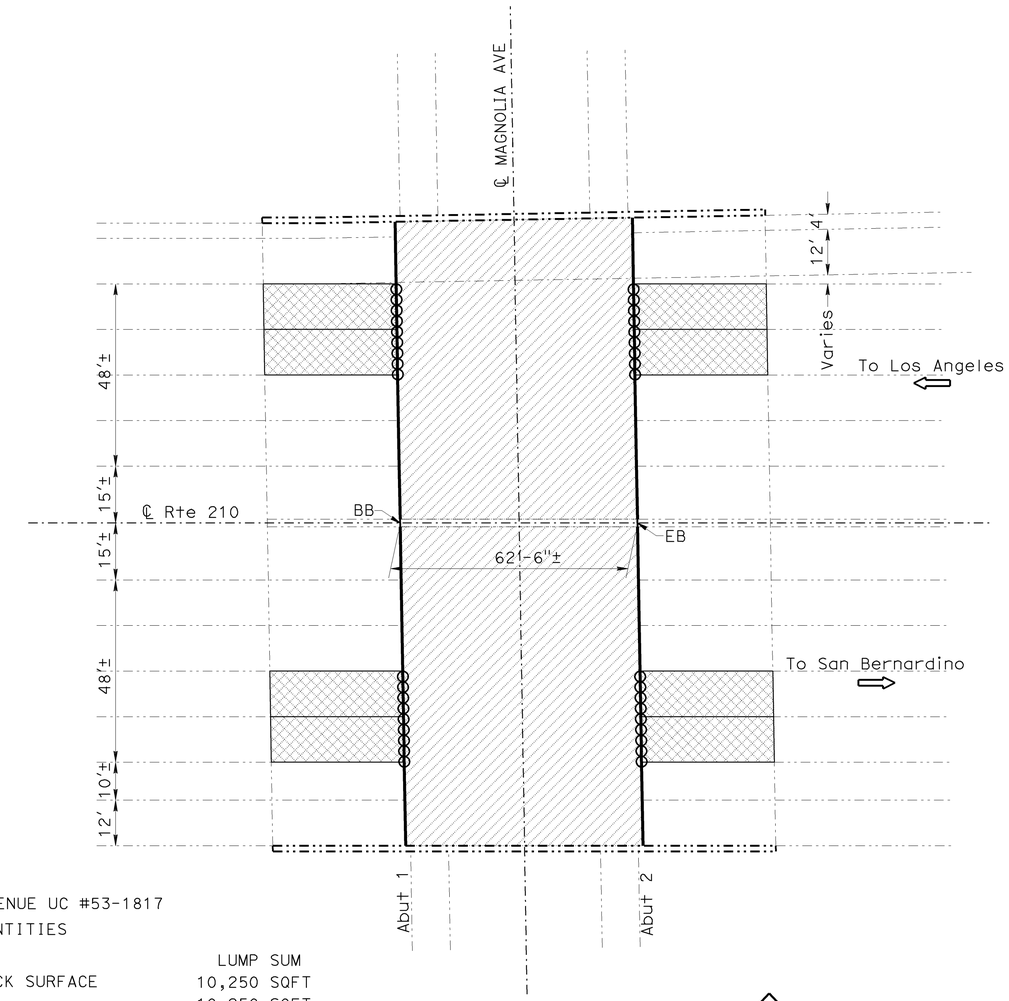
ROUTE 210/164 SEPARATION

Br No. 53-1957L/R, Rte 210, PM R29.49
No Scale

MAGNOLIA AVENUE UC #53-1817

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	10,250 SQFT
TREAT BRIDGE DECK	10,250 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	128 GAL
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	130 CY
PAVING NOTCH EXTENSION	72 CF
CLEAN EXPANSION JOINT	232 LF
JOINT SEAL (MR ½")	328 LF



MAGNOLIA AVENUE UC

Br No. 53-1817, Rte 210, PM R33.67
No Scale

NOTE:
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TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 7

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 07 OF 20

FILE => 07-1w5901-a-gp07.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	41	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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LEGEND:

Indicates existing.

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Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates location of placement of new joint seal and paving notch extension.

Indicates removal of unsound concrete and place rapid setting concrete (patch).

Indicates limits of remove existing PCC and AC approach and place new Structure Approach Type R(30D). For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.

Indicates location of clean expansion joint and placement of new joint seal.

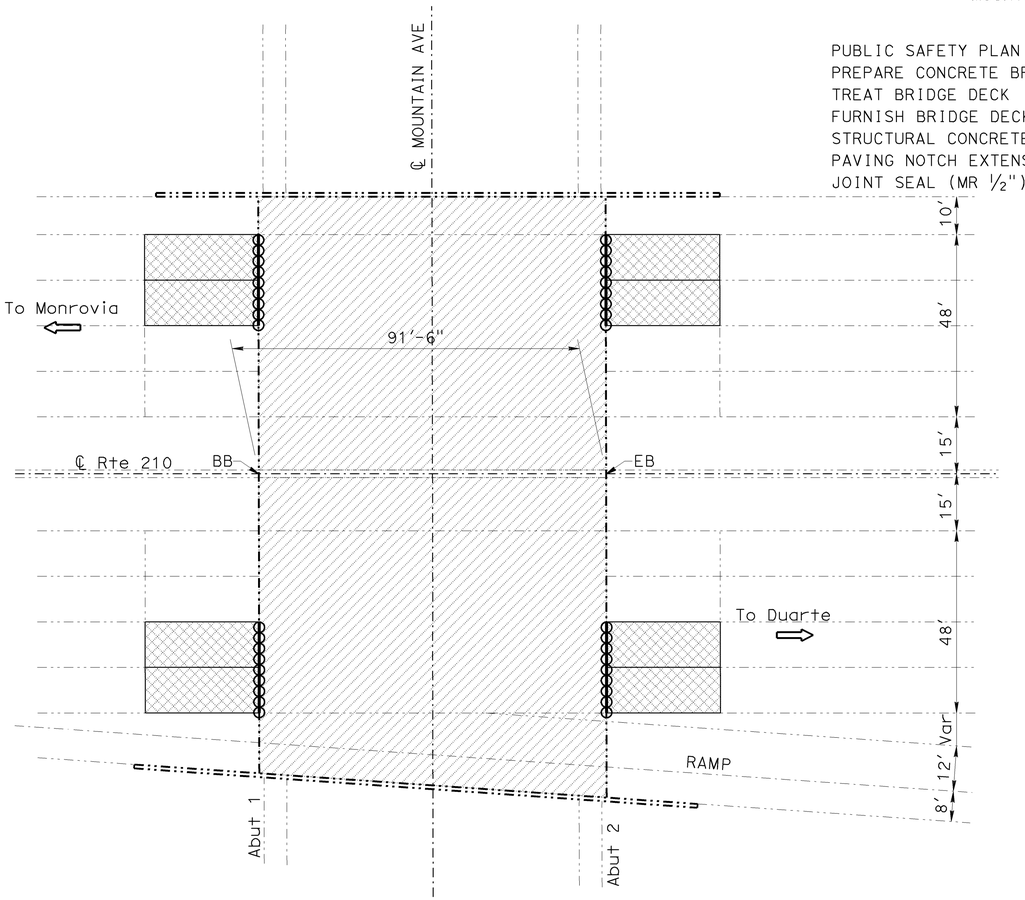
NOTE:

1. For spalled surface repair details, see "MISCELLANEOUS DETAILS NO. 2" sheet.

MOUNTAIN AVENUE UC #53-1821

QUANTITIES

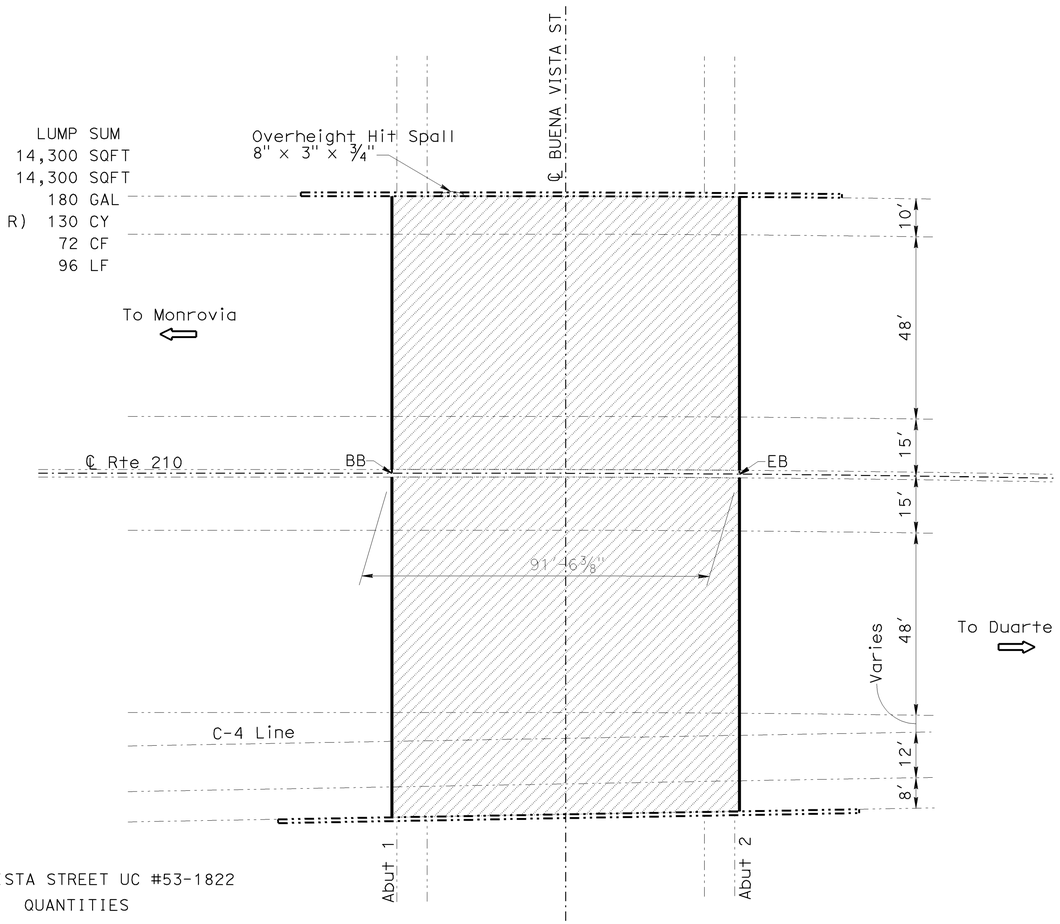
PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	14,300 SQFT
TREAT BRIDGE DECK	14,300 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	180 GAL
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	130 CY
PAVING NOTCH EXTENSION	72 CF
JOINT SEAL (MR ½")	96 LF



MOUNTAIN AVENUE UC

Br No. 53-1821, Rte 210, PM R34.74
No Scale

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



BUENA VISTA STREET UC #53-1822

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
REPAIR SPALLED SURFACE AREA	1 SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	14,500 SQFT
TREAT BRIDGE DECK	14,500 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	181 GAL
CLEAN EXPANSION JOINT	313 LF
JOINT SEAL (MR ½")	313 LF

BUENA VISTA STREET UC

Br No. 53-1822, Rte 210, PM R35.24
No Scale

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 8

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 08 OF 20

FILE => 07-1w5901-a-gp08.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	42	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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LEGEND:

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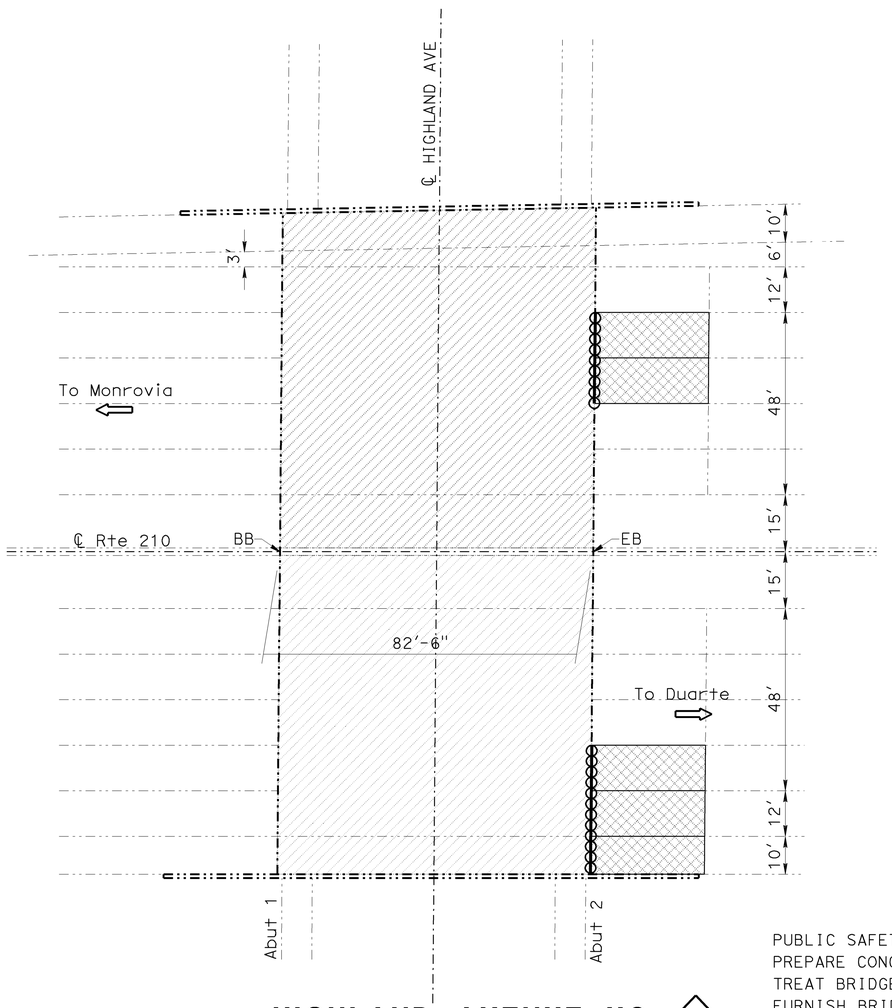
Indicates location of placement of new joint seal and paving notch extension.

Indicates limits of remove existing PCC and AC approach and place new Structure Approach Type R(30D). For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.

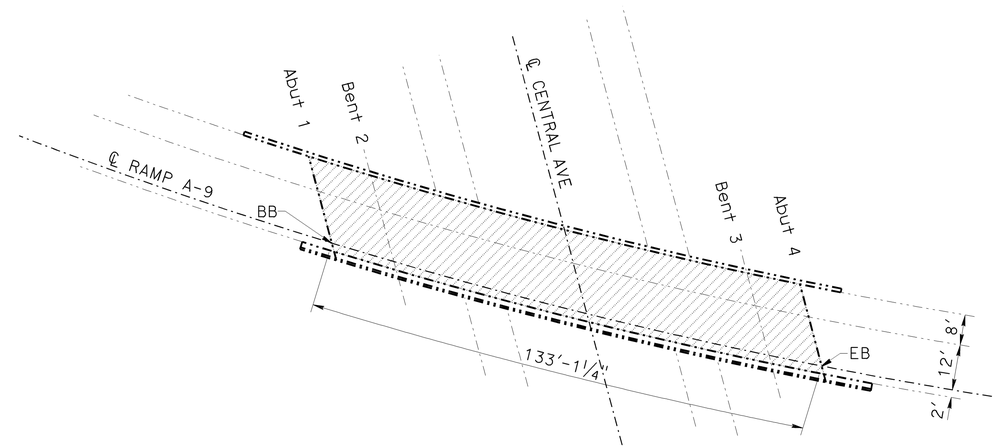


HIGHLAND AVENUE UC

Br No. 53-1824, Rte 210, PM R35.87
No Scale

HIGHLAND AVENUE UC #53-1824
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	14,400 SQFT
TREAT BRIDGE DECK	14,400 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	180 GAL
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	80 CY
PAVING NOTCH EXTENSION	45 CF
JOINT SEAL (MR ½")	58 LF



HUNTINGTON DRIVE-E& W210/ CENTRAL

Br No. 53-2969K, Rte 210, PM R36.39
No Scale

HUNTINGTON DRIVE E&W 210/CENTRAL #53-2969K
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	2,930 SQFT
TREAT BRIDGE DECK	2,930 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	37 GAL

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DESIGN	Mazin Ibrahim	Hong Tien Tran			
DETAILS	Clayton Tom	Mazin Ibrahim	LAYOUT	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran	SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 9

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 09 OF 20

FILE => 07-1w5901-a-gp09.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	43	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

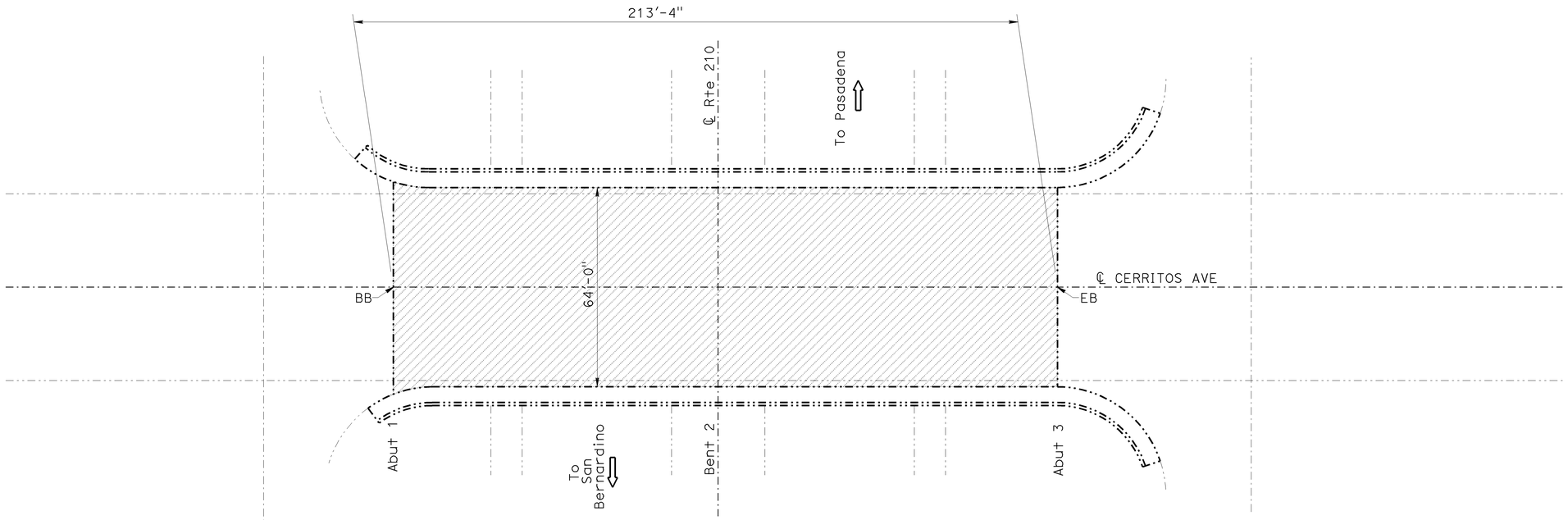
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.



CERRITOS AVENUE OC

Br No. 53-2023, Rte 210, PM R40.07
No Scale

CERRITOS AVENUE OC #53-2023
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	13,660 SQFT
TREAT BRIDGE DECK	13,660 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	171 GAL

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 10

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 10 OF 20

FILE => 07-1w5901-a-gp10.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	44	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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

LEGEND:

Indicates existing.

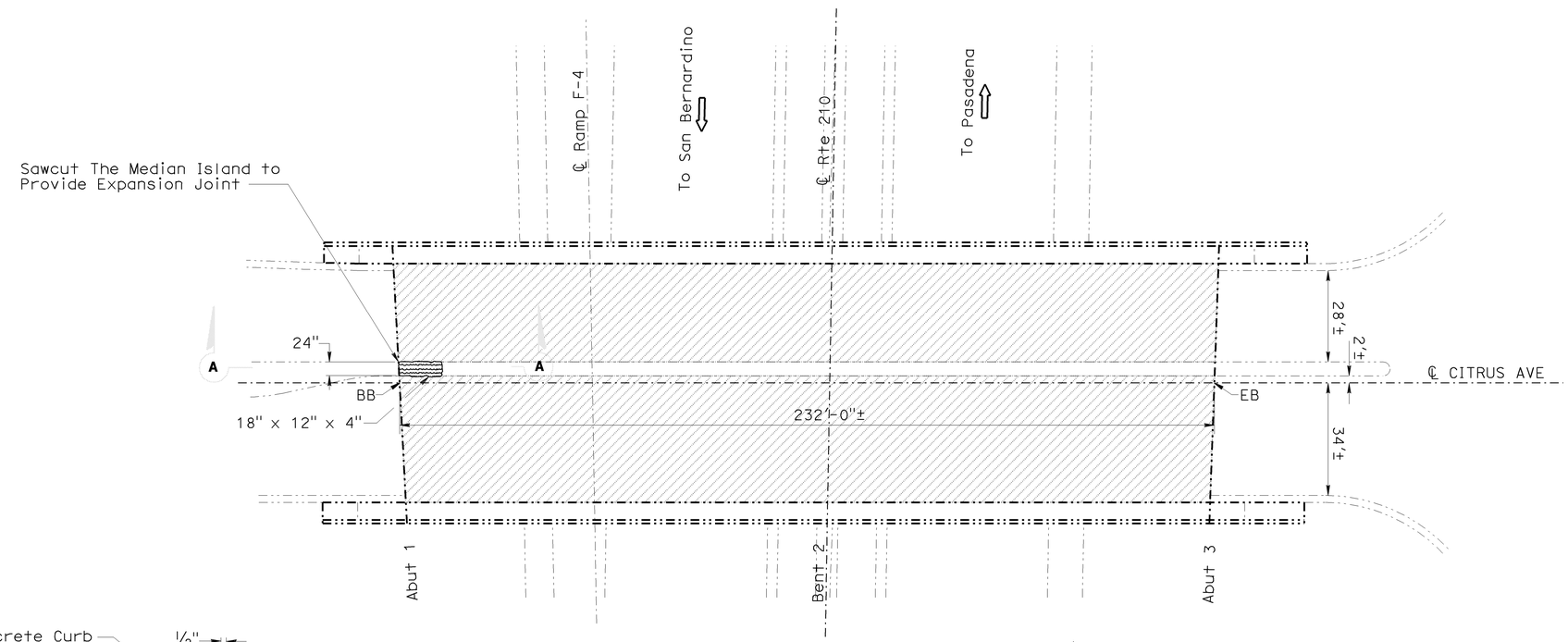
Indicates direction of traffic.

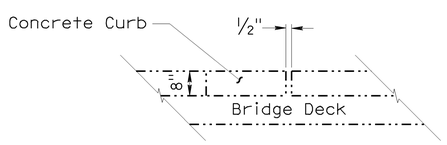
Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates removal of unsound concrete and place rapid setting concrete (patch).

NOTE:

1. For deck repair details, see "DECK DAMAGE REPAIR DETAIL" on "MISCELLANEOUS DETAILS NO. 2" sheet.





SECTION A-A
NO SCALE

CITRUS AVENUE OC

Br No. 53-2024, Rte 210, PM R40.60
No Scale

CITRUS AVENUE OC #53-2024
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	1 CF
REMOVE UNSOUND CONCRETE	1 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	14,830 SQFT
TREAT BRIDGE DECK	14,830 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	180 GAL

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED: Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 11

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 06-17-13 08-18-13 01-06-14 01-16-14

SHEET 11 OF 20

FILE => 07-1w5901-a-gp11.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	45	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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LEGEND:

Indicates existing.

Indicates direction of traffic.

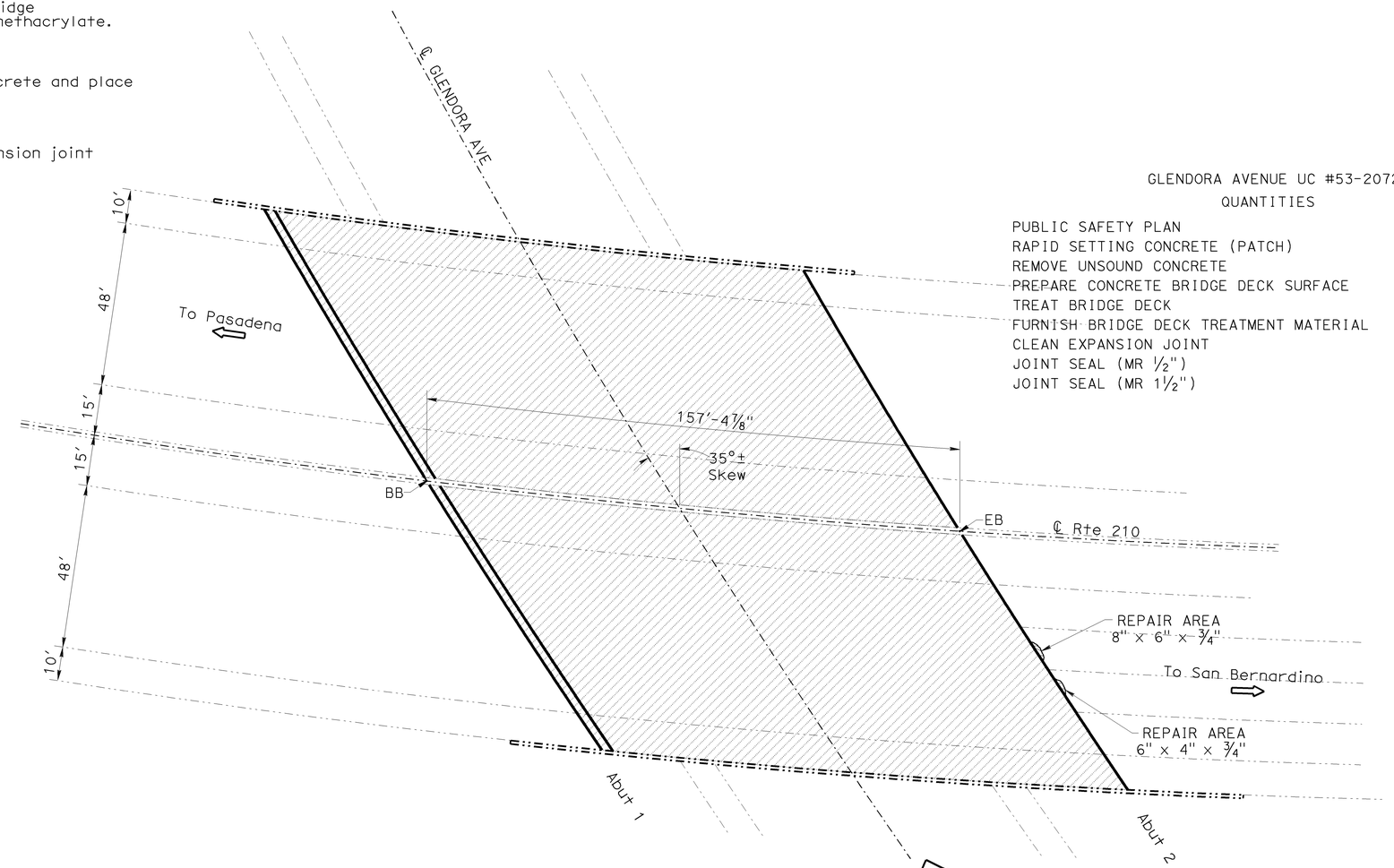
Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates removal of unsound concrete and place rapid setting concrete (patch).

Indicates location of clean expansion joint and placement of new joint seal.

NOTE:

1. For deck repair details, see "DECK DAMAGE REPAIR DETAIL" on "MISCELLANEOUS DETAILS NO. 2" sheet.



GLENDORA AVENUE UC #53-2072
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	1 CF
REMOVE UNSOUND CONCRETE	1 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	23,000 SQFT
TREAT BRIDGE DECK	23,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	288 GAL
CLEAN EXPANSION JOINT	537 LF
JOINT SEAL (MR ½")	179 LF
JOINT SEAL (MR 1½")	358 LF

GLENDORA AVENUE UC

Br No. 53-2072, Rte 210, PM R42.10
No Scale

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED: Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.: Various
POST MILE: Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 12

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 12 OF 20

FILE => 07-1w5901-a-gp12.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	46	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.

Indicates limits of remove existing PCC and AC approach and place new Structure Approach Type R(30D). For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.

Indicates location of placement of new joint seal and paving notch extension.

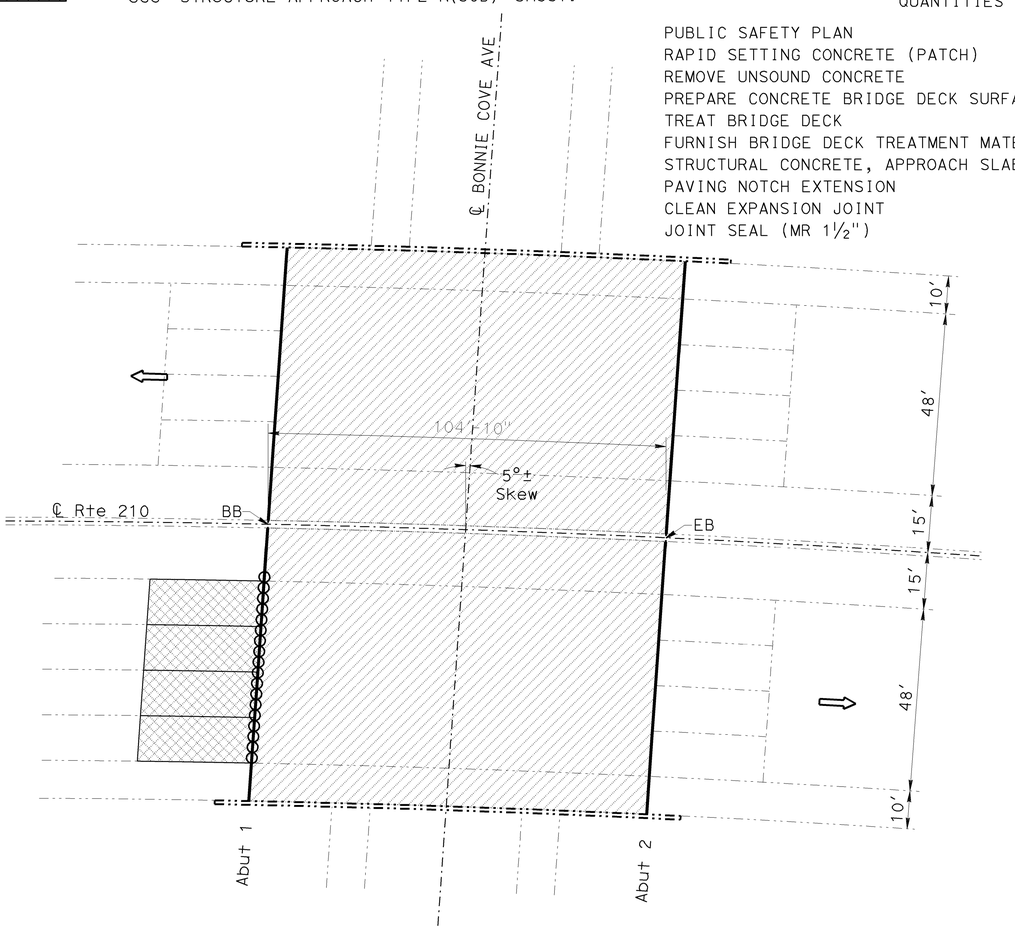
Indicates location of clean expansion joint and placement of new joint seal.

NOTE:

1. For deck repair details, see "DECK DAMAGE REPAIR DETAIL" on "MISCELLANEOUS DETAILS NO. 2" sheet.

BONNIE COVE AVENUE UC #53-2025
QUANTITIES

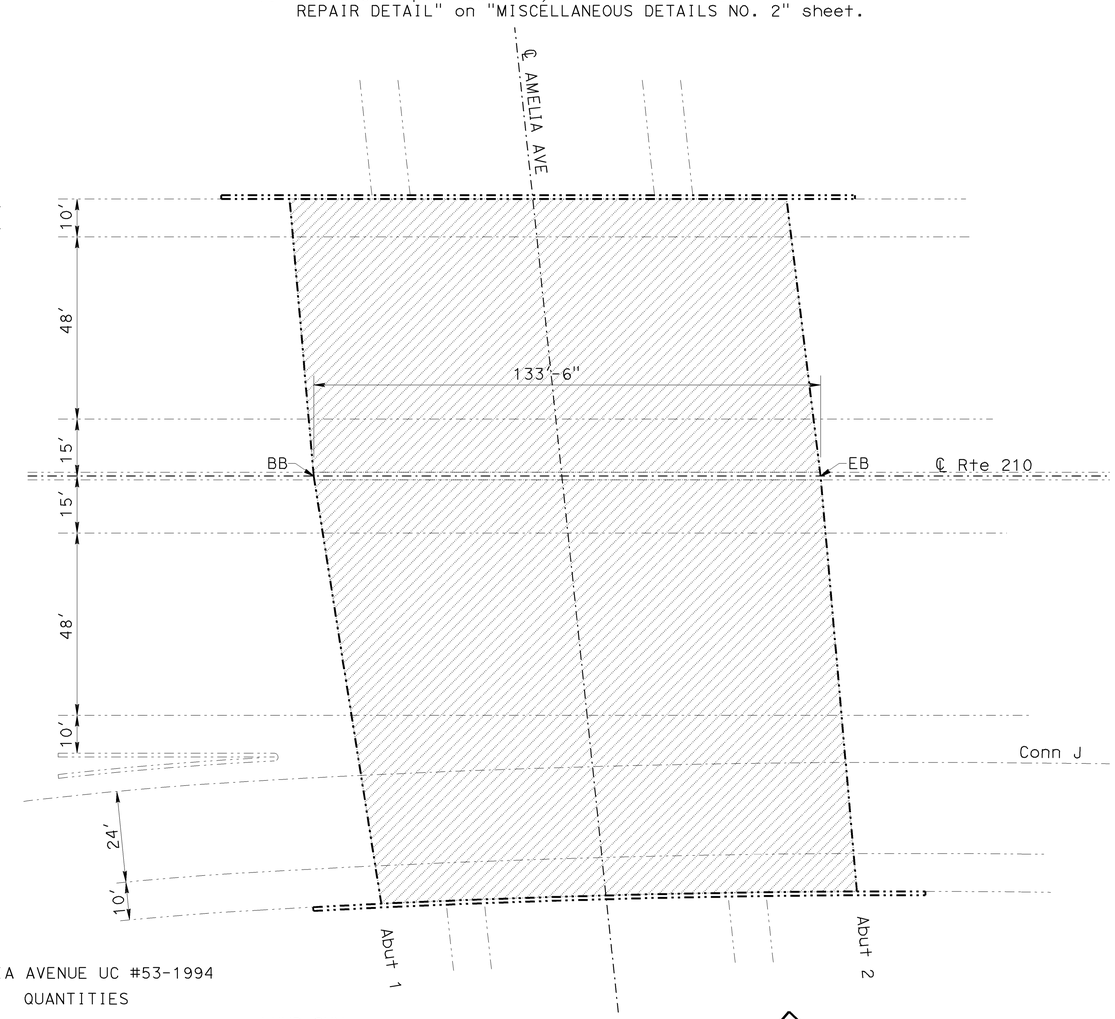
PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	1 CF
REMOVE UNSOUND CONCRETE	1 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	15,320 SQFT
TREAT BRIDGE DECK	15,320 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	192 GAL
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	65 CY
PAVING NOTCH EXTENSION	36 CF
CLEAN EXPANSION JOINT	246 LF
JOINT SEAL (MR 1½")	294 LF



BONNIE COVE AVENUE UC

Br No. 53-2025, Rte 210, PM R42.66
No Scale

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



AMELIA AVENUE UC #53-1994
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	24,130 SQFT
TREAT BRIDGE DECK	24,130 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	302 GAL

AMELIA AVENUE UC

Br No. 53-1994, Rte 210, PM R44.71
No Scale

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Mazin Ibrahim	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Mazin Ibrahim	LAYOUT	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran	SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 13

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-18-13 01-06-14 01-16-14

SHEET 13 OF 20

FILE => 07-1w5901-a-gp13.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	47	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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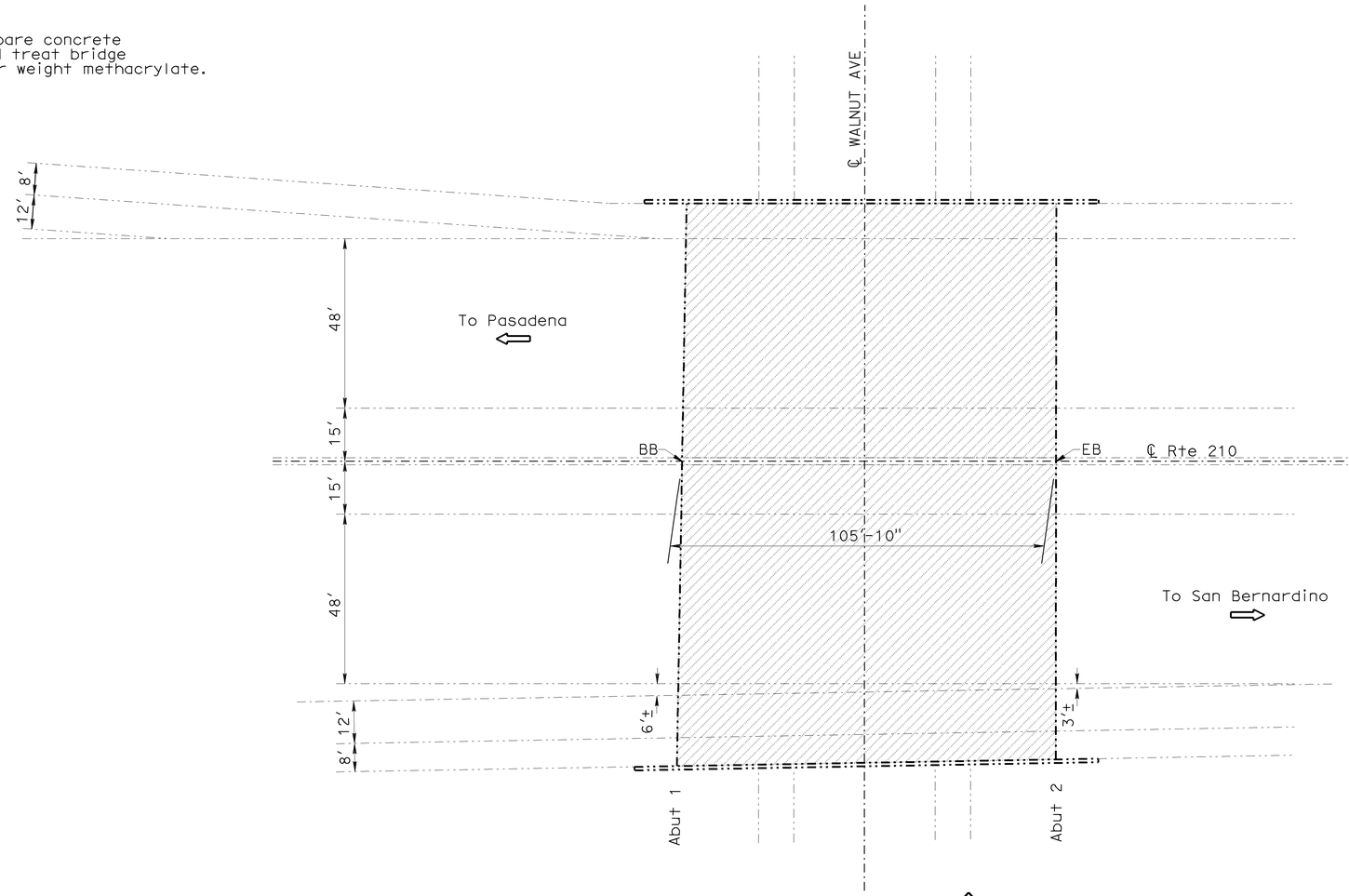
LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.



WALNUT AVENUE UC

Br No. 53-2068, Rte 210, PM R45.71
No Scale

WALNUT AVENUE UC #53-2068
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	16,780 SQFT
TREAT BRIDGE DECK	16,780 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	210 GAL

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 14

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-14-13 08-16-13 01-06-14 01-16-14 SHEET 14 OF 20

FILE => 07-1w5901-a-gp14.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	48	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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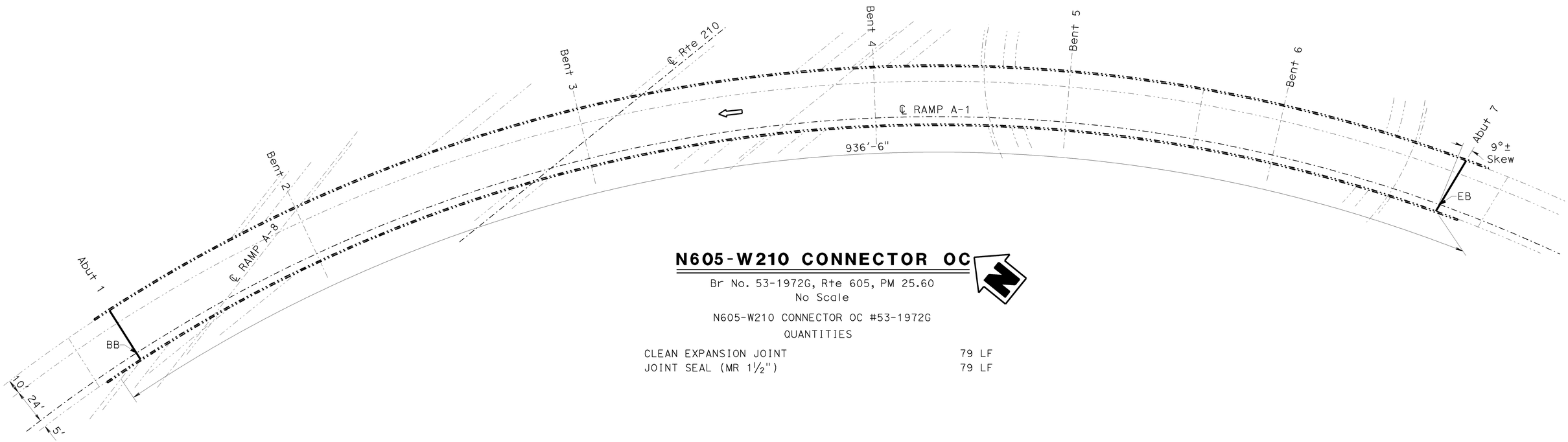
LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates location of existing joint seal removal placement of new joint seal.



N605-W210 CONNECTOR OC

Br No. 53-1972G, Rte 605, PM 25.60
No Scale

N605-W210 CONNECTOR OC #53-1972G
QUANTITIES

CLEAN EXPANSION JOINT	79 LF
JOINT SEAL (MR 1½")	79 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 15

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 15 OF 20

FILE => 07-1w5901-a-gp15.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	49	53

REGISTERED CIVIL ENGINEER — DATE: 01-16-14

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MAZIN S. IBRAHIM — No. C69896 — Exp. 09/30/14 — CIVIL — STATE OF CALIFORNIA

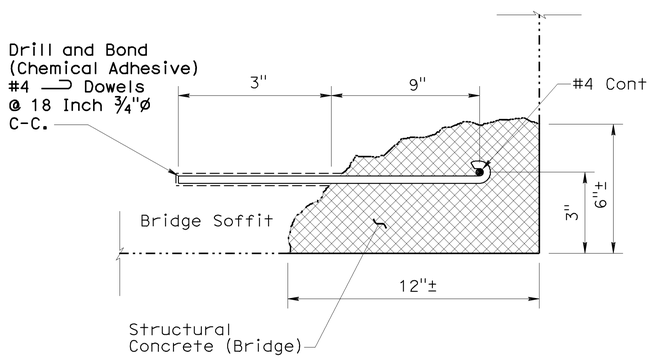
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND:

- Indicates existing.
- Indicates direction of traffic.
- Indicates removal of unsound concrete and place rapid setting concrete (patch).
- Indicates structural concrete (bridge).
- Indicates location of clean expansion joint and placement of new joint seal.
- Indicates limits of remove existing PCC and AC approach and place new Structure Approach Type R(30D). For details see "STRUCTURE APPROACH TYPE R(30D)" SHEET.
- Indicates location of placement of new joint seal and paving notch extension.

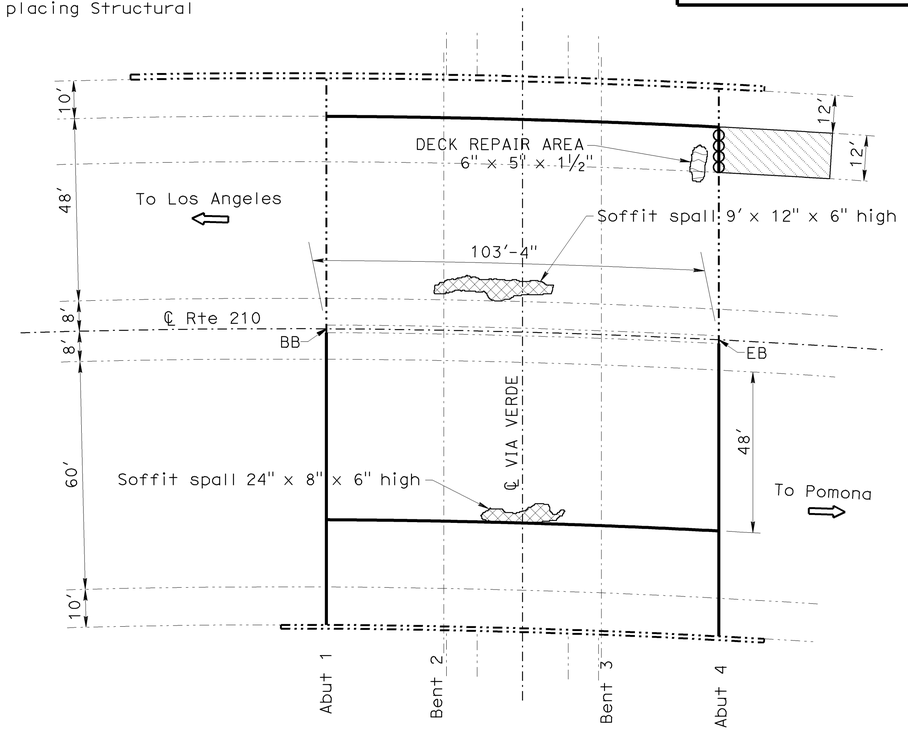
NOTE:

1. For Deck Repair Detail, see "DECK DAMAGE REPAIR DETAIL" on "MISCELLANEOUS DETAILS NO. 2" sheet.
2. For soffit spall repairs, following concrete removal, roughen the existing concrete by 1/4" Amplitude prior to placing Structural Concrete (Bridge).



REPAIR SOFFIT DETAIL

Bridge #53-0870



VIA VERDE UC

Br No. 53-0870, Rte 10, PM 40.46
No Scale

VIA VERDE UC #53-0870
QUANTITIES

RAPID SETTING CONCRETE (PATCH)	1 CF
REMOVE UNSOUND CONCRETE	1 CF
BRIDGE REMOVAL (PORTION)	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE (CF)	6 CF
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	16 CY
PAVING NOTCH EXTENSION	9 CF
DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)	9 EA
CLEAN EXPANSION JOINT	364 LF
JOINT SEAL (MR 1/2")	168 LF
JOINT SEAL (TYPE AL)	208 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

	BY	CHECKED
LAYOUT	Clayton Tom	Mazin Ibrahim
SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED: Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.: Various
POST MILE: Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 16

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES — REVISION DATES: 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 16 OF 20

FILE => 07-1w5901-a-gp16.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	50	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

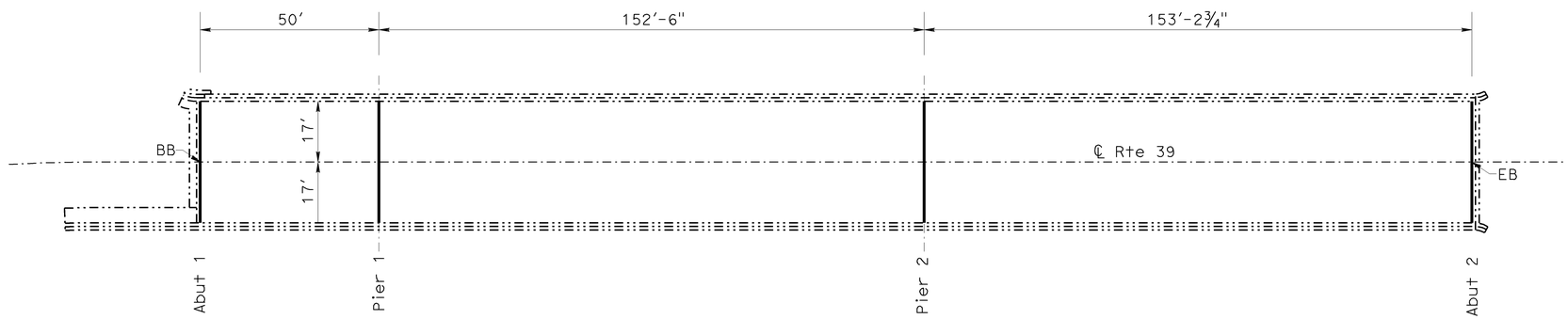
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND:

Indicates existing.

Indicates direction of traffic.

Indicates location of existing joint seal removal placement of new joint seal.



SAN GABRIEL RIVER

Br No. 53-0113, Rte 39, PM 17.82
No Scale

SAN GABRIEL RIVER #53-0113

QUANTITIES

CLEAN EXPANSION JOINT	136 LF
JOINT SEAL (MR ½")	68 LF
JOINT SEAL (MR 1")	68 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Mazin Ibrahim	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Mazin Ibrahim	LAYOUT	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran	SPECIFICATIONS	Vaikunthan Renganathan	PLANS AND SPECS COMPARED Vaikunthan Renganathan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
GENERAL PLAN NO. 17

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: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 17 OF 20

FILE => 07-1w5901-a-gp17.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	51	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZLIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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JOINT SEAL TABLE

BRIDGE NAME	BRIDGE NUMBER	JOINT SEAL LOCATION	MINIMUM "MR" (INCHES)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)	APPROX JOINT LENGTH (ft)	APPROX JOINT LENGTH TO CLEAN EXPANSION JOINT (ft)
Orange Grove Blvd OC	53-2195	Bent 2	2	Yes	12	70	70
Lake Avenue OC	53-2276	Abut 1	1½	No	6	150	150
		Abut 3	1½	No	6	150	150
Foothill Blvd UC	53-2099L	Abut 1	1½	No	6	135	46
		Abut 3	1½	No	6	137	137
Madre Street UC	53-1966R	Abut 1	1½	No	6	86	49
		Abut 3	1½	No	6	109	71
Madre Street Ramp Sep	53-2398S	Abut 5, BW	1½	No	6	26	26
		Abut 5, PN	½	No	6	26	26
Route 210/164 Sep	53-1957L	Abut 1	½	No	6	81	81
		Abut 2	½	No	6	81	81
Route 210/164 Sep	53-1957R	Abut 1	½	No	6	61	61
		Abut 2	½	No	6	61	61
Magnolia Avenue UC	53-1817	Abut 1	½	No	6	164	116
		Abut 2	½	No	6	164	116
Mountain Avenue UC	53-1821	Abut 1	½	No	-	48	-
		Abut 2	½	No	-	48	-
Buena Vista Street UC	53-1822	Abut 1	½	No	6	157	157
		Abut 2	½	No	6	156	156
Highland Avenue UC	53-1824	Abut 2	½	No	-	58	-
Glendora Avenue UC	53-2072	Abut 1, PN	½	No	6	179	179
		Abut 1, BW	1½	No	6	179	179
		Abut 2	1½	No	6	179	179
Bonnie Cove Avenue UC	53-2025	Abut 1	1½	No	6	147	99
		Abut 2	1½	No	6	147	147
N605-W210 Conn OC	53-1972G	Abut 1	1½	No	6	39	39
		Abut 7	1½	No	6	40	40
Via Verde UC	53-0870	Abut 1	½	No	6	78	78
		EB	AL	No	6	104	104
		WB	AL	No	6	104	104
		Abut 4	½	No	6	90	78
San Gabriel River	53-0113	Abut 1	½	No	6	34	34
		Pier 1	1	Yes	12	34	34
		Pier 2	1	Yes	12	34	34
		Abut 2	½	No	6	34	34

NOTES:

The following notes apply to JOINT SEAL TYPE A:

Install Joint Seal (MR = ½") or Silicone Joint Seal 3" up into curb or barrier rail on the low side of the deck where deck joint aligns with curb or barrier rail joint.

For details not shown see Standard Plan B6-21.

The following notes apply to JOINT SEAL TYPE B:

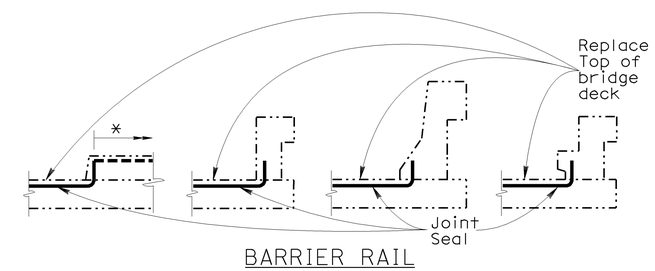
1) Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.

2) Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be recalculated by the Engineer.

3) W1 shall be the smaller of the values determined as follows:
   A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
   B) The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3.0 PSI.

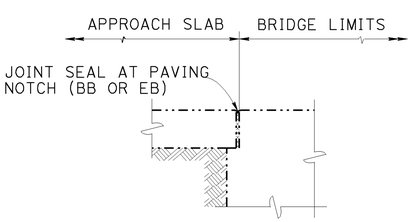
4) Bend Type B joint seal 6 inches up into curb or rail on the low side of the deck where deck joint matches curb or rail joint.

For details not shown see Standard Plan B6-21.

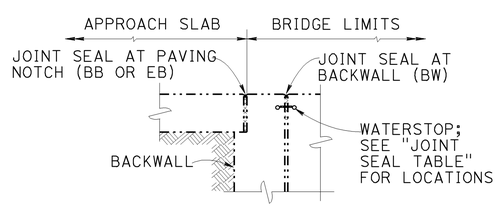


JOINT SEAL AT LOW SIDE OF DECK

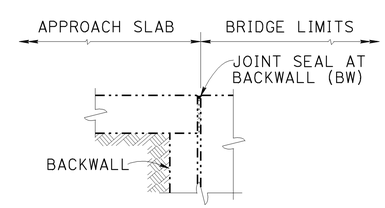
Details shown for illustration purposes only.
For use only where deck joint matches the sidewalk, curb or barrier rail joint.
* Extension of joint will be determined by the Engineer if necessary.



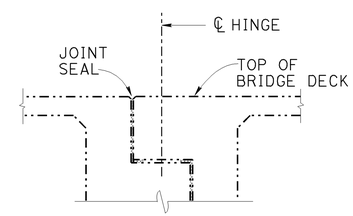
DIAPHRAGM ABUTMENT



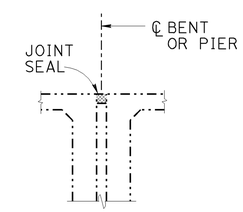
ABUTMENT WITH BACKWALL AND PAVING NOTCH



ABUTMENT WITH BACKWALL



HINGE



BENT OR PIER

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.

JOINT SEAL LOCATION

Abutment joint is not required with AC roadway pavement transverse contact joint.

DESIGN	BY Mazin Ibrahim	CHECKED Hong Tien Tran	
DETAILS	BY Clayton Tom	CHECKED Mazin Ibrahim	
QUANTITIES	BY Mazin Ibrahim	CHECKED Hong Tien Tran	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
MISCELLANEOUS DETAILS NO. 1

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-18-13 01-06-14 01-16-14

SHEET 18 OF 20

FILE => 07-1w5901-u-miscdt01.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:36

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	52	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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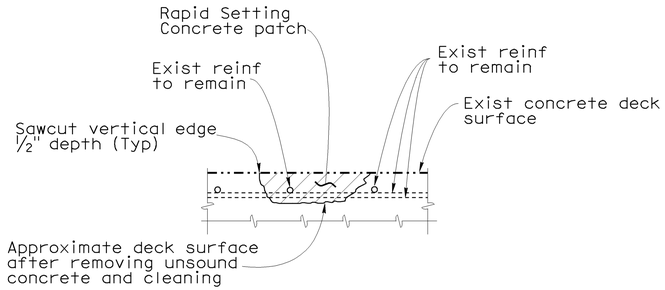
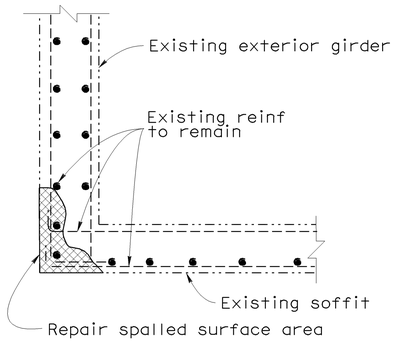


DECK DAMAGE REPAIR DETAIL

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

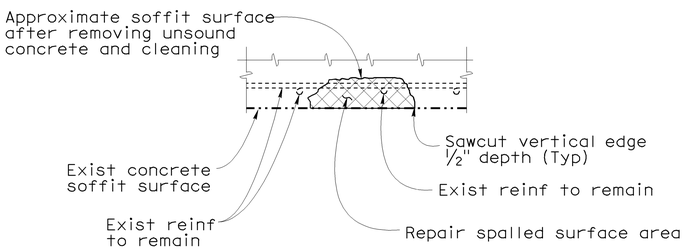


SPALLED SURFACE AREA DETAIL

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

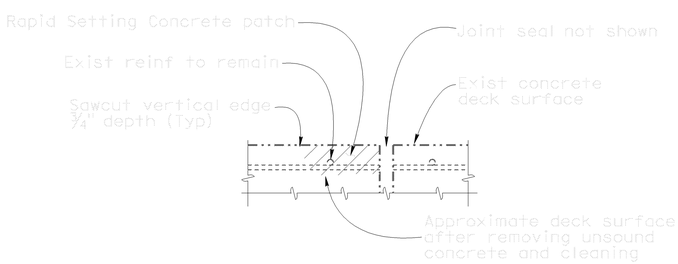
DECK REPAIR NOTES:

1. Existing reinforcement shall be protected in place during unsound concrete removal and patching operations.
2. It is responsibility of the Contractor to repair any reinforcement that is accidently cut by saw cutting operations.
3. When existing transverse reinforcement is exposed in the deck surface, saw cutting may be waived with the approval of the Engineer.
4. The saw cut depth shall not exceed ¾ inch or the concrete cover over the top steel reinforcing bars, whichever is less.
5. Remove unsound Portland Cement concrete and unsound concrete patches to expose sound, hard concrete substrate. Replace original deck surface with rapid setting concrete patch.



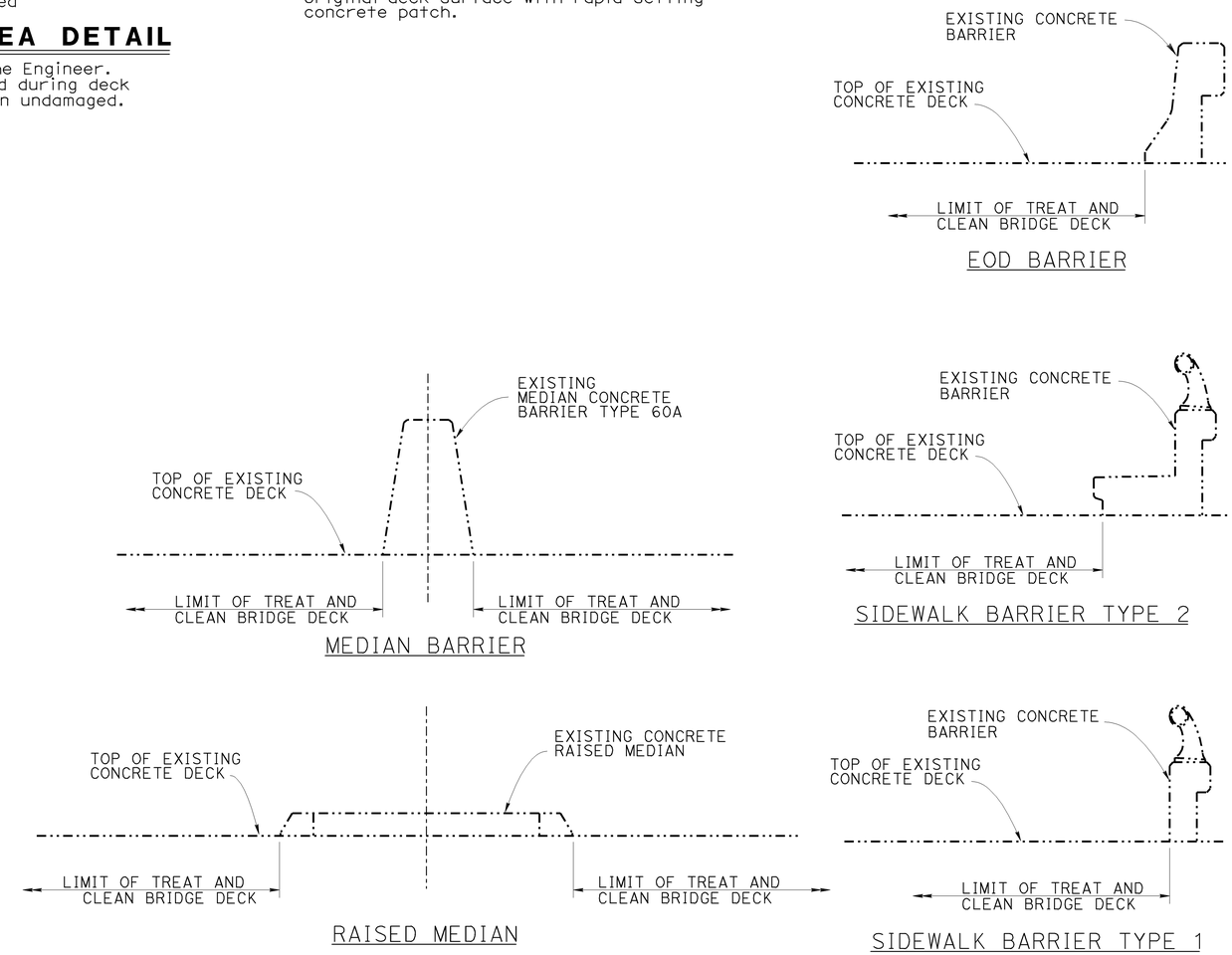
SOFFIT SPALL REPAIR DETAIL

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



JOINT DECK REPAIR DETAIL

Location will 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

NOTE:
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	BY	CHECKED
DESIGN	Mazin Ibrahim	Hong Tien Tran
DETAILS	Clayton Tom	Mazin Ibrahim
QUANTITIES	Mazin Ibrahim	Hong Tien Tran

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 10,39,210,605 BRIDGES
MISCELLANEOUS DETAILS NO. 2

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000362 1 CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 06-17-13 08-15-13 01-06-14 01-16-14

SHEET 19 OF 20

FILE => 07-1w5901-u-miscdt02.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:36

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10,39,210,605	Var	53	53

REGISTERED CIVIL ENGINEER 01-16-14 DATE

2-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MAZLIN S. IBRAHIM No. C69896 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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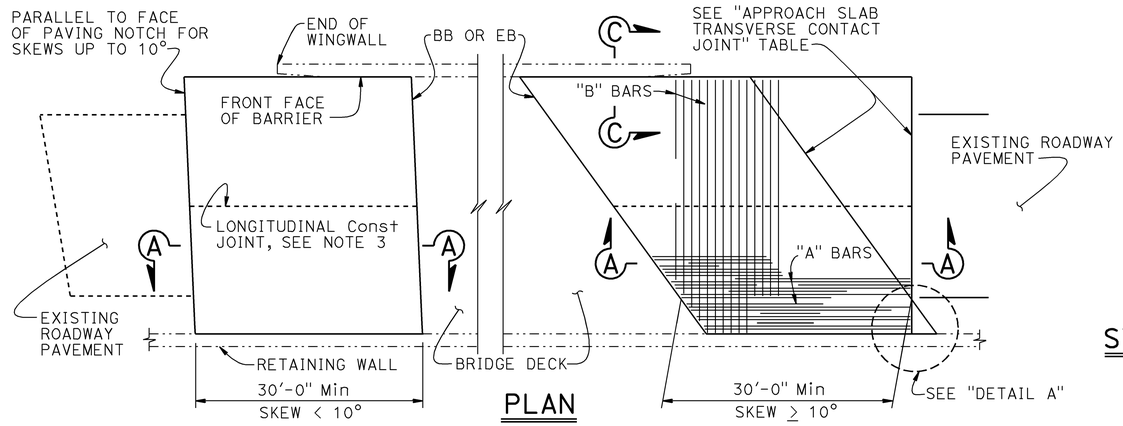
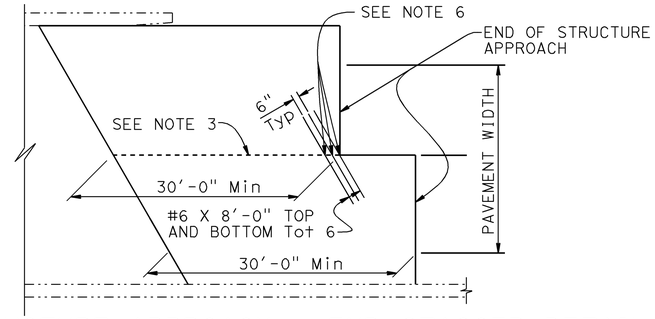
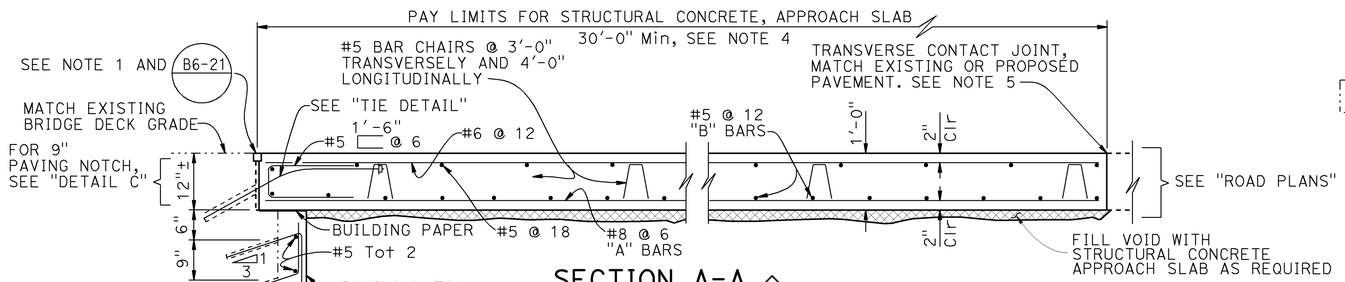


PLAN
1" = 10'

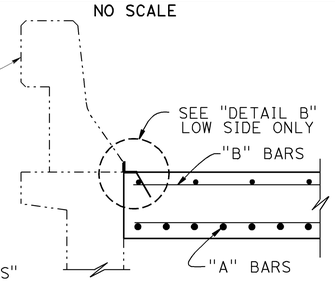


STRUCTURE APPROACH - END STAGGER DETAIL
NO SCALE

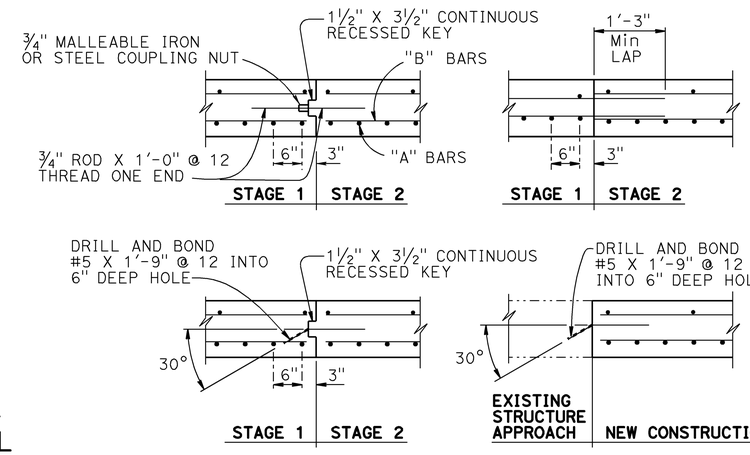
APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT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



SECTION A-A ⟨1⟩
¾" = 1'-0"

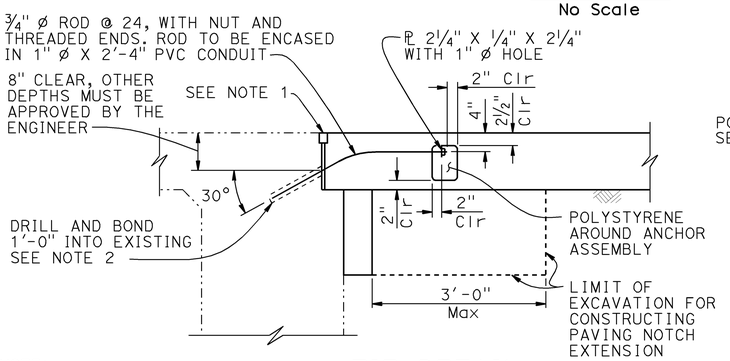


SECTION C-C
¾" = 1'-0"

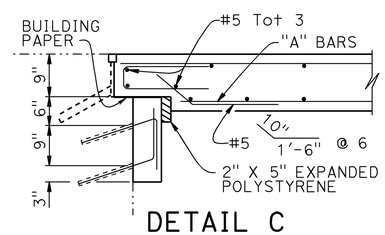


LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES
¾" = 1'-0"

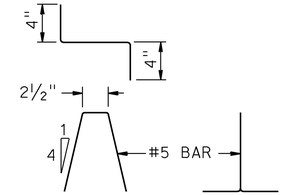
NOTES:
1. For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required
2. Space to avoid existing prestress anchorages and main reinforcement
3. Longitudinal construction joints, when permitted by the Engineer, shall be located on lane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



DETAIL A
No Scale



DETAIL C
¾" = 1'-0"



BAR CHAIR DETAIL
1½" = 1'-0"

TIE DETAIL
¾" = 1'-0"

NOTE:
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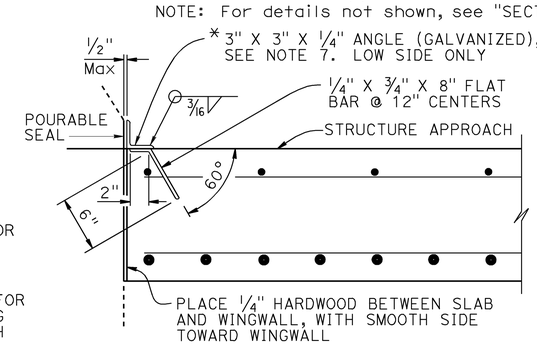
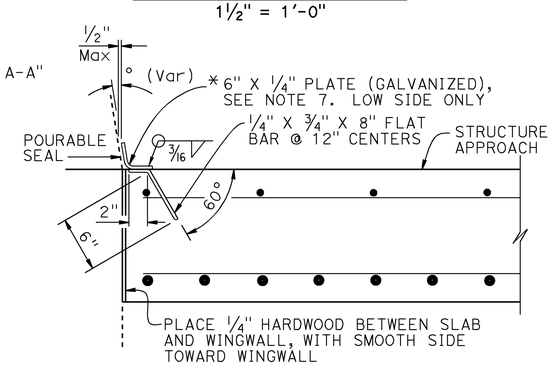
NOTE: For details not shown, see "SECTION A-A"



*(TO BE USED WITH CONCRETE BARRIER WITH VERTICAL FACE)

DETAIL B
1½" = 1'-0"



*(TO BE USED WITH CONCRETE BARRIER WITH SLOPING FACE)

REVISED STANDARD DRAWING

FILE NO. xs3-150

APPROVAL DATE July 2011

⟨1⟩ REVISED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. Various
POST MILE Varies

SPECIAL DETAILS
ROUTE 10,39,210,605 BRIDGES
STRUCTURE APPROACH TYPE R(30D)

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000362 1
CONTRACT NO.: 07-1W5904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 04-22-13 Revised

SHEET 20 OF 20

FILE => 07-1w5901-u-sadt.dgn

USERNAME => s117283 DATE PLOTTED => 21-JAN-2014 TIME PLOTTED => 06:36