Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	1	42

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	LOCATIONS OF CONSTRUCTION
3	CONSTRUCTION AREA SIGNS
4-14	TRAFFIC HANDLING DETAILS
15	PAVEMENT DELINEATION QUANTITIES
16	SUMMARY OF QUANTITIES
17-21	TRAFFIC CONTROL SYSTEM PLANS
22-25	REVISED STANDARD PLANS

STRUCTURE PLANS

26-42	Rte 405 & 710 BRIDGES

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

STATE OF CALIFORNIA

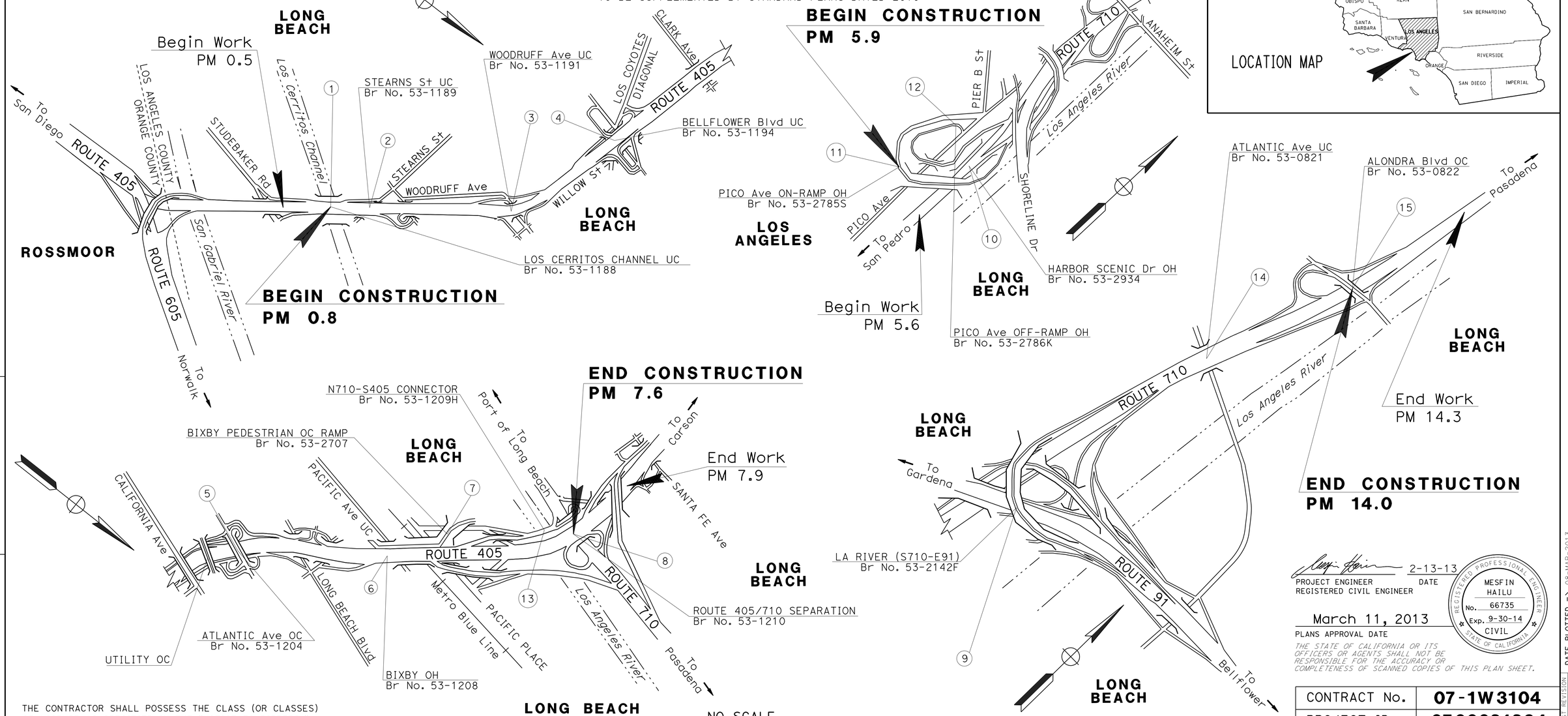
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN LOS ANGELES COUNTY IN LONG BEACH ON ROUTE 405 FROM LOS CERRITOS CHANNEL UNDERCROSSING TO ROUTE 405/710 SEPARATION AND ON ROUTE 710 FROM PICO AVENUE ON-RAMP OVERHEAD TO ALONDRA BOULEVARD OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



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

NO SCALE

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE 2-13-13

MESFIN HAILU No. 66735 Exp. 9-30-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

March 11, 2013
PLANS APPROVAL DATE

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

CONTRACT No.	07-1W3104
PROJECT ID	0700021234

PROJECT MANAGER: CHRISTIAN SAM
DESIGN ENGINEER: MESFIN HAILU

LAST REVISION 03-08-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	2	42

REGISTERED CIVIL ENGINEER 2-13-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MESFIN HAILU
No. 66735
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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

LOCATIONS OF CONSTRUCTION

Loc	BRIDGE. No.	PM	Rte	DESCRIPTION
1	53-1188	0.78	405	LOS CERRITOS CHANNEL UC
2	53-1189	0.96	405	STEARNS St UC
3	53-1191	1.64	405	WOODRUFF Ave UC
4	53-1194	2.18	405	BELLFLOWER UC
5	53-1204	6.08	405	ATLANTIC Ave OC
6	53-1208	6.98	405	BIXBY OH
7	53-2707	6.98	405	BIXBY Ped OC RAMP
8	53-1210	7.57	405	Rte 405/710 Sep
9	53-2142F	13.03	710	LOS ANGELES RIVER (S710-E91)
10	53-2934	M5.95	710	HARBOR SCENIC Dr OH
11	53-2785S	5.98	710	PICO Ave ON-RAMP OH
12	53-2786K	6.00	710	PICO Ave OFF-RAMP OH
13	53-1209H	9.30	710	N710-S405 Conn
14	53-0821	13.62	710	ATLANTIC Ave UC
15	53-0822	13.95	710	ALONDRA Blvd OC

LOCATIONS OF CONSTRUCTION

LC-1

REVISED BY | DATE REVISED
MARLON SARMIENTO | MESFIN HAILU
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: HECTOR OBESO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 02-25-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	3	42

REGISTERED CIVIL ENGINEER 2-13-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MESFIN HAILU No. 66735 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

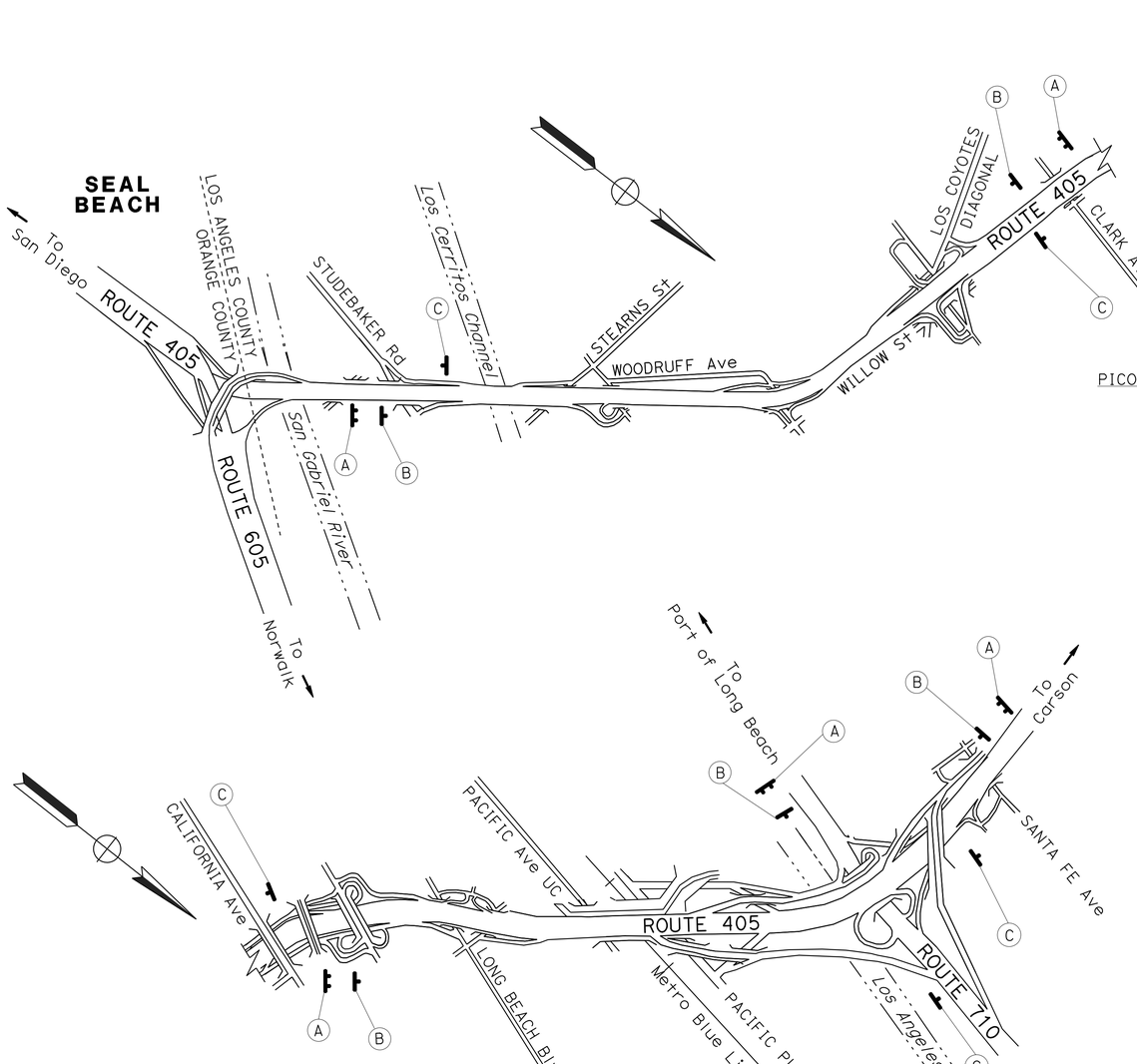
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

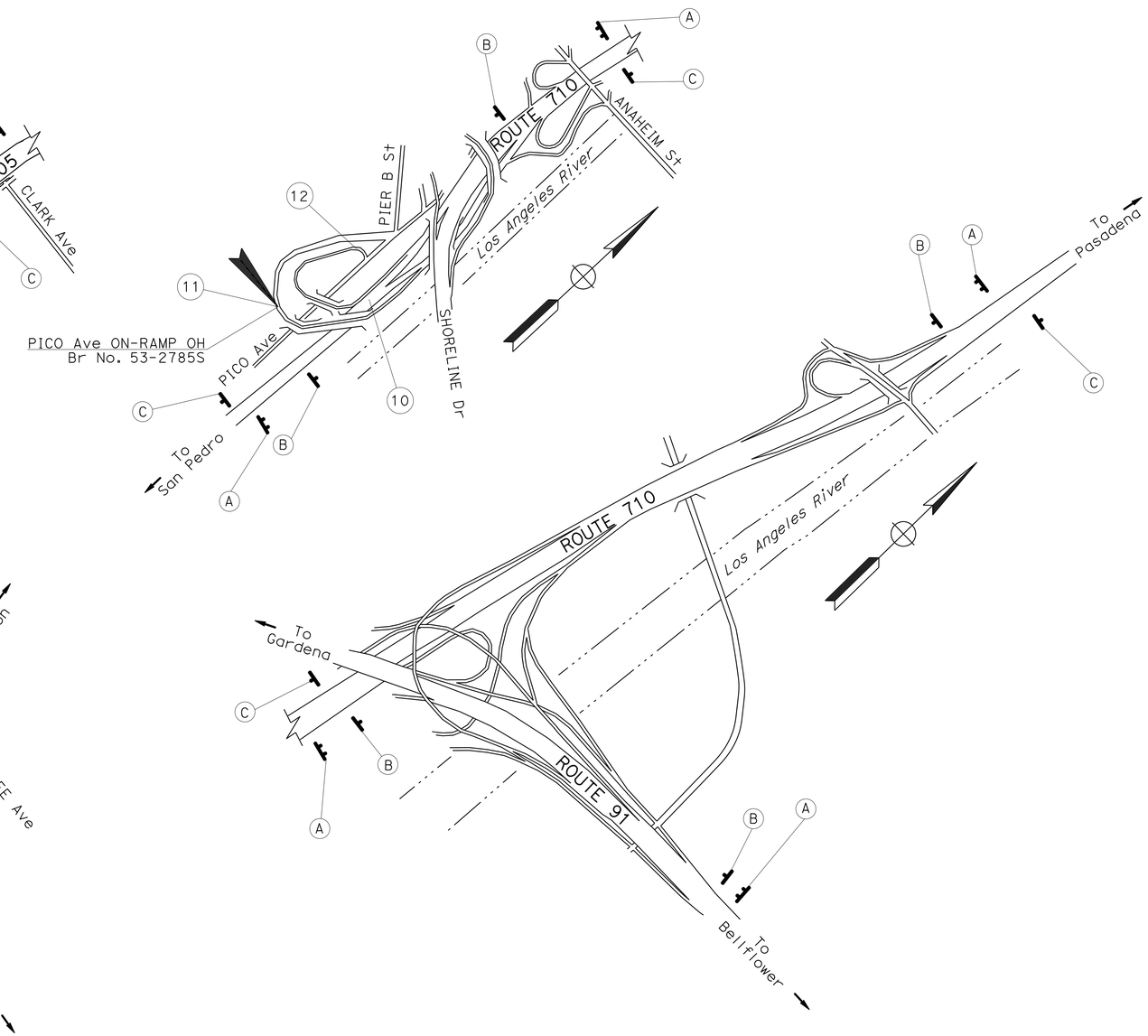
NOTES:

1. "TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES" SIGNS MUST BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF "ROAD WORK AHEAD" SIGNS OR AS THE ENGINEER DETERMINES.
2. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. THE ENGINEER DETERMINES EXACT LOCATIONS.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN	SIGN CODE FEDERAL	SIGN CODE CALIFORNIA	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A		C40 (CA)	132" x 84"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	10
B	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	10
C	G20-2		48" x 24"	END ROAD WORK	1 - 4" x 6"	9





CONSTRUCTION AREA SIGNS

NO SCALE

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: MARLON SARMIENTO
CHECKED BY: MESFIN HAILU
REVISED BY
DATE REVISED

LAST REVISION 02-25-13
DATE PLOTTED => 08-MAR-2013
TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	4	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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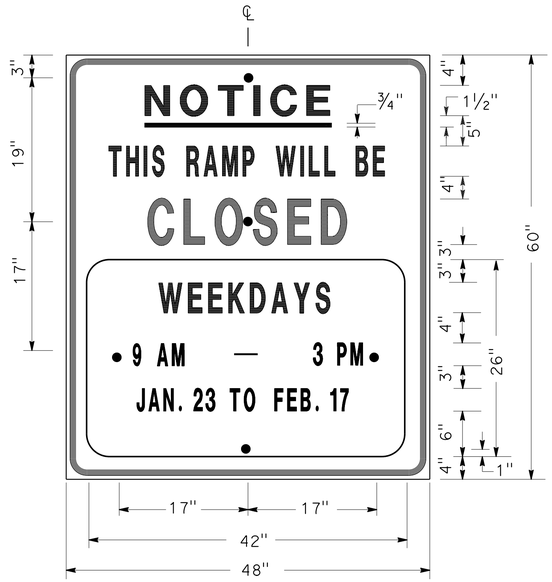
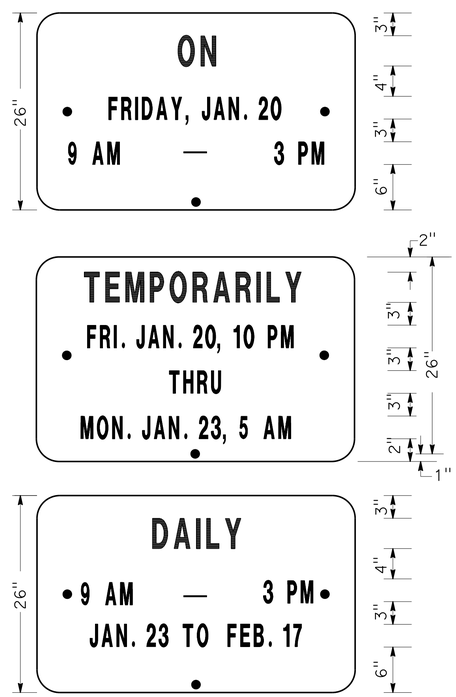


SIGN SP-1



ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN

NOTES: SIGN SP-1

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

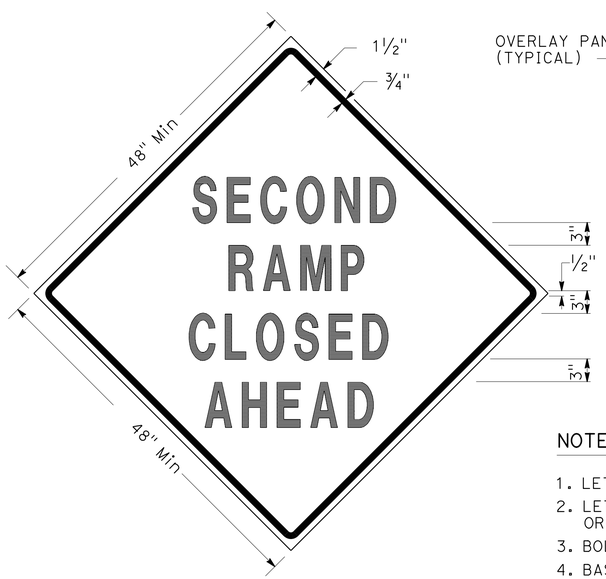
SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5, 6, & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"
* CONDENSED SPACING IF NECESSARY								

SIGN SP-4

NOTES: SIGN SP-4

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

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 SHALL BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
3. BOLT HOLES SHALL BE 3/8" DIAMETER.
4. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
5. SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.
6. SIGN SP-5 SHALL 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: DENIS KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 3/12

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

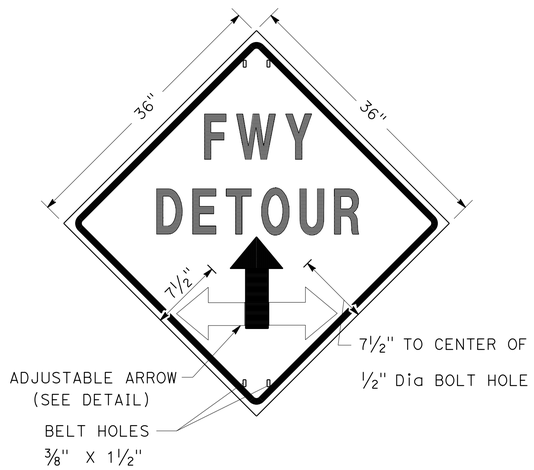
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	5	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

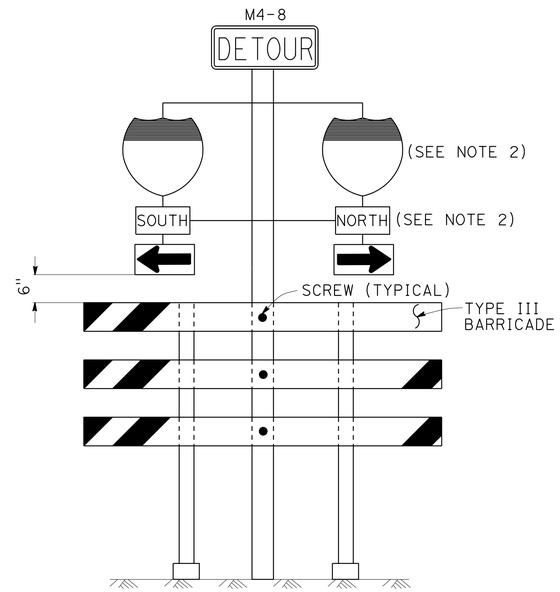
3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

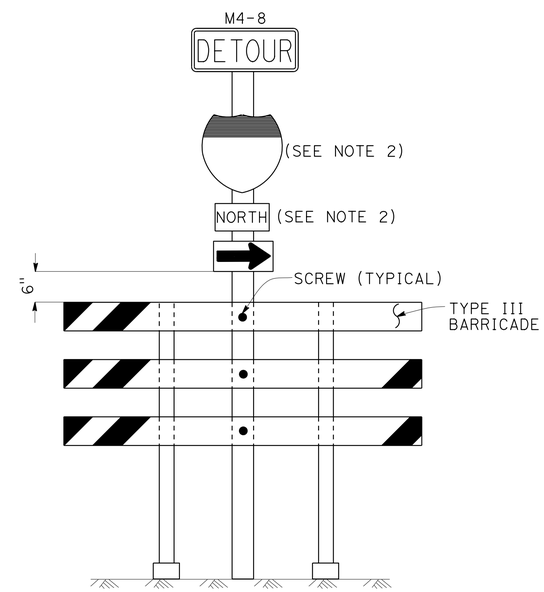
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SIGN SP-2



SIGN SP-6 (SEE NOTE 1)



SIGN SP-7 (SEE NOTE 1)

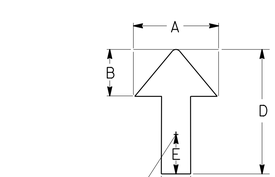
NOTES: SIGN SP-2

1. LETTERS - 6" SERIES E.
2. LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
3. BASE MATERIAL FOR SIGNS AND ARROWS SHALL BE ALUMINUM (MINIMUM 0.06").
4. BELTS (LUGGAGE STRAPS) SHALL BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
5. SIGNS SHALL 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: DENIS KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 3/12

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	6	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

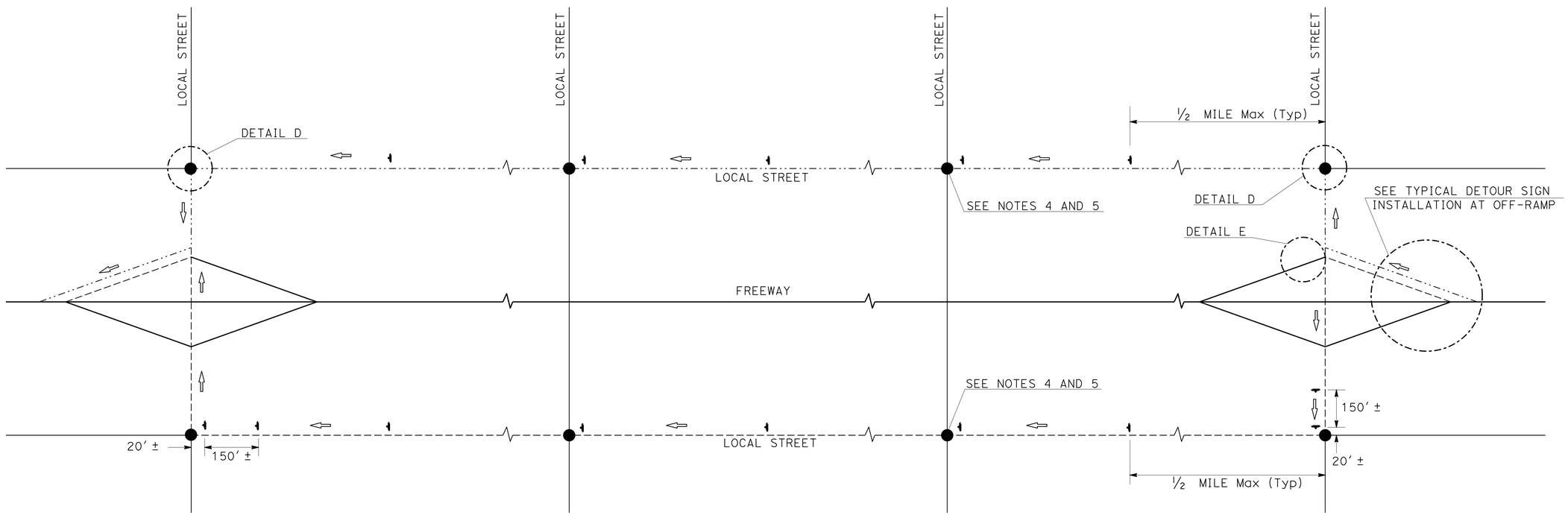
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

SHEET 1 OF 3

NO SCALE

THD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

FUNCTIONAL SUPERVISOR: DENIS KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 3/12

LAST REVISION 03-01-13
DATE PLOTTED => 08-MAR-2013
TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	7	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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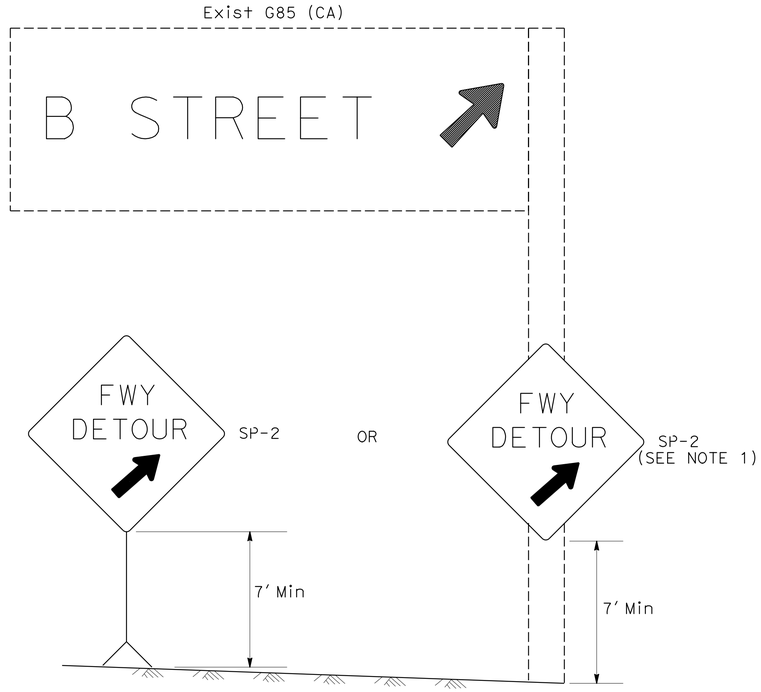
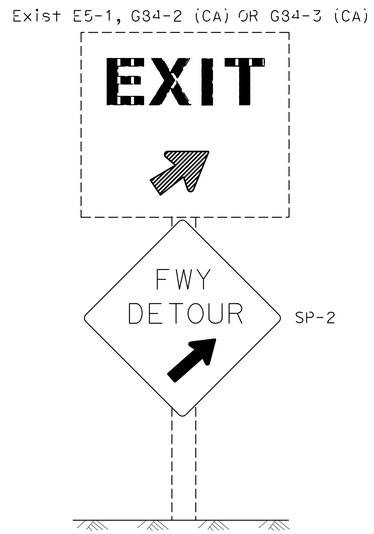
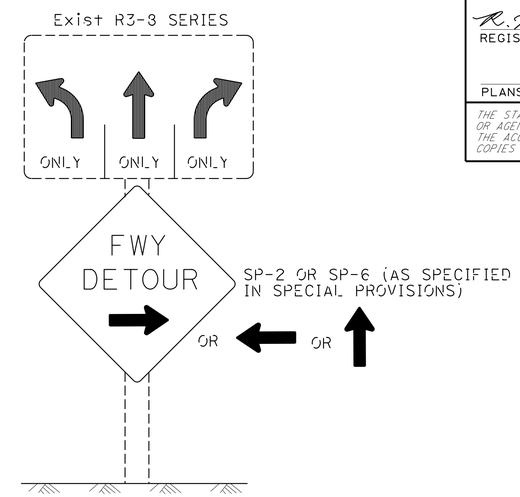


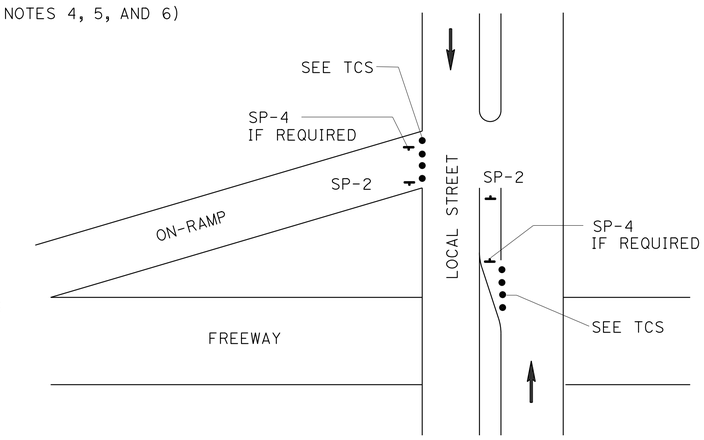
DETAIL A (SEE NOTE 3)



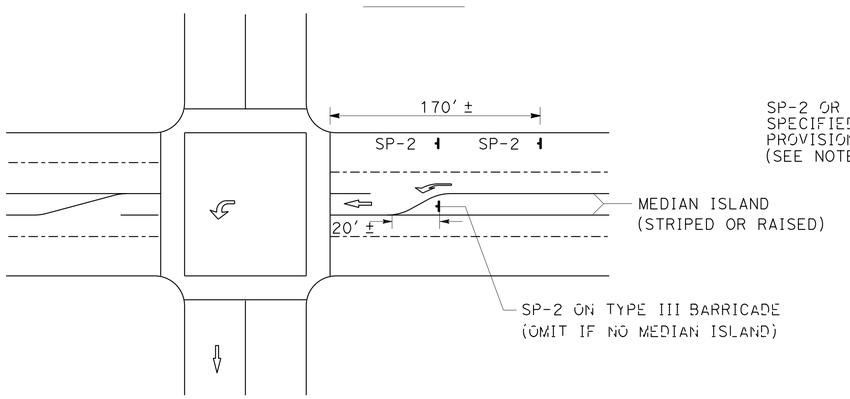
DETAIL B (SEE NOTE 3)



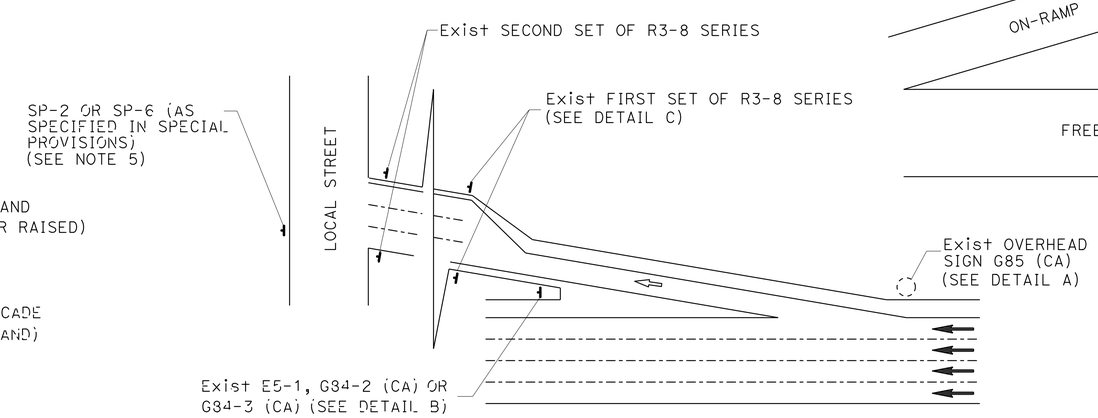
DETAIL C (SEE NOTES 4, 5, AND 6)



DETAIL E



DETAIL D



TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP

LEGEND

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

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: DENIS KATAYAMA
REVISED BY: JC
DATE REVISED: 3/12
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG

LAST REVISION: DATE PLOTTED => 08-MAR-2013 TIME PLOTTED => 09:17
03-01-13

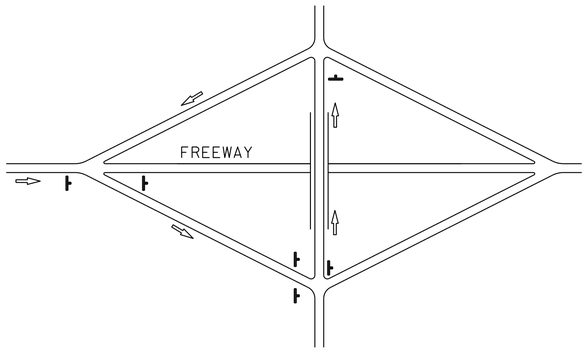
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	8	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

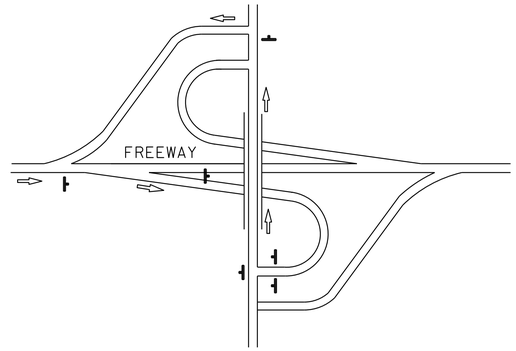
3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

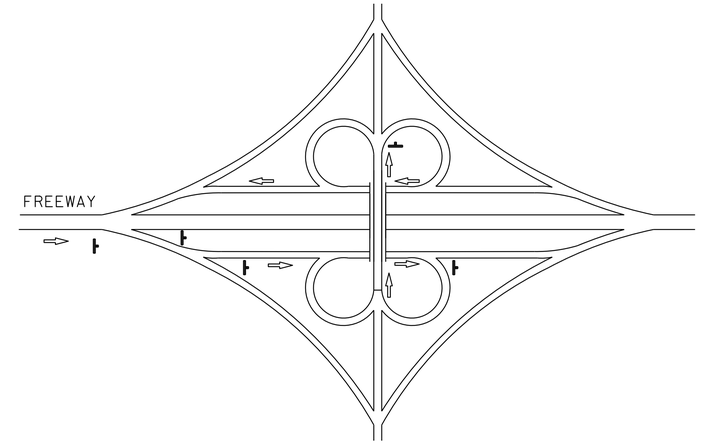
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TYPE I



TYPE II



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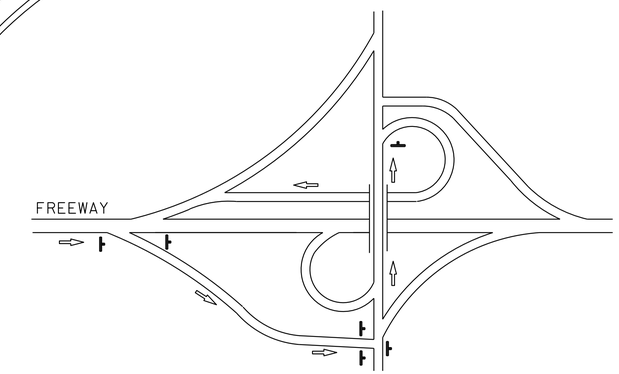
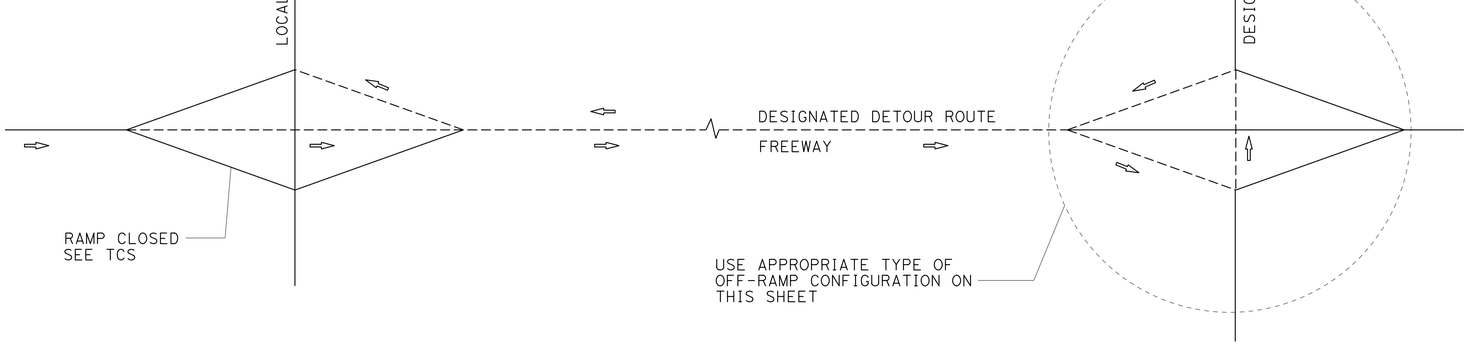
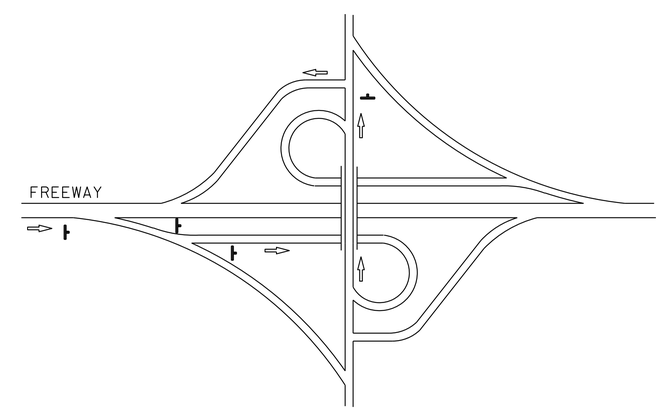


TYPE IV





TYPE V

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

TYPICAL DETOUR SIGN INSTALLATION FOR OFF-RAMP CLOSURE

NOTES:

1. FOR RAMP CONFIGURATIONS NOT SHOWN, THE EXACT LOCATIONS AND MINIMUM NUMBER OF SP-2 SIGNS SHALL 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: DENIS KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 3/12

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	9	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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

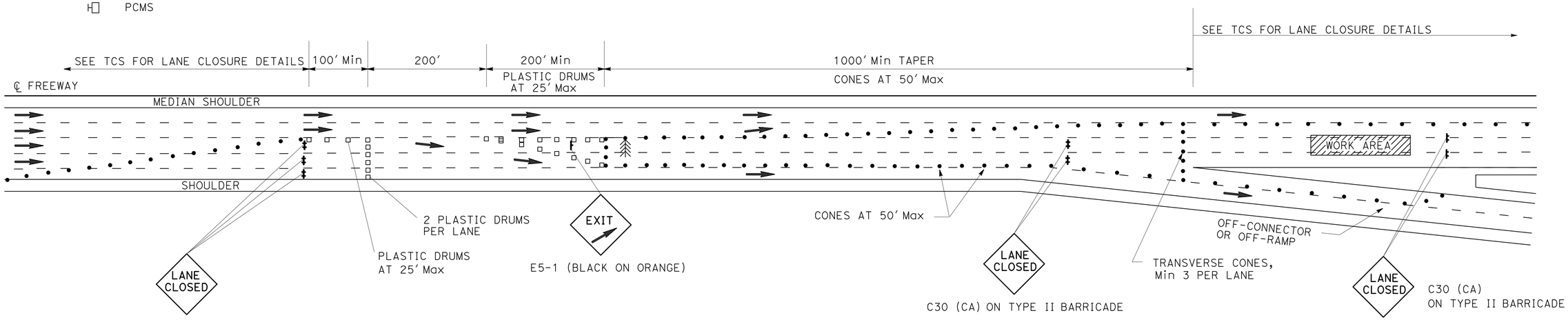
LEGEND

- CONE
- TRAFFIC PLASTIC DRUM
- FLASHING ARROW SIGN
- PORTABLE SIGN
- DIRECTION OF TRAVEL
- PCMS

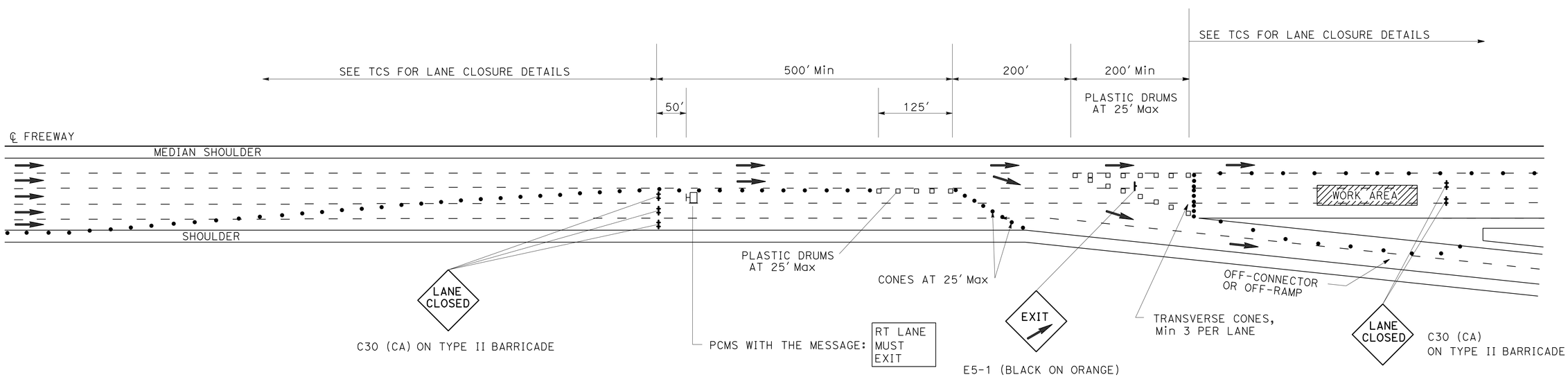
ABBREVIATIONS

(CA) CALIFORNIA CODE

PCMS PORTABLE CHANGEABLE MESSAGE SIGN



OPTION 1



OPTION 2

TRAFFIC HANDLING DETAILS

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

NO SCALE

THD-6

REVISED BY	DATE REVISED
JC	3/12

CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
FUNCTIONAL SUPERVISOR: DENIS KATAYAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DTM

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	10	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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

NOTES:

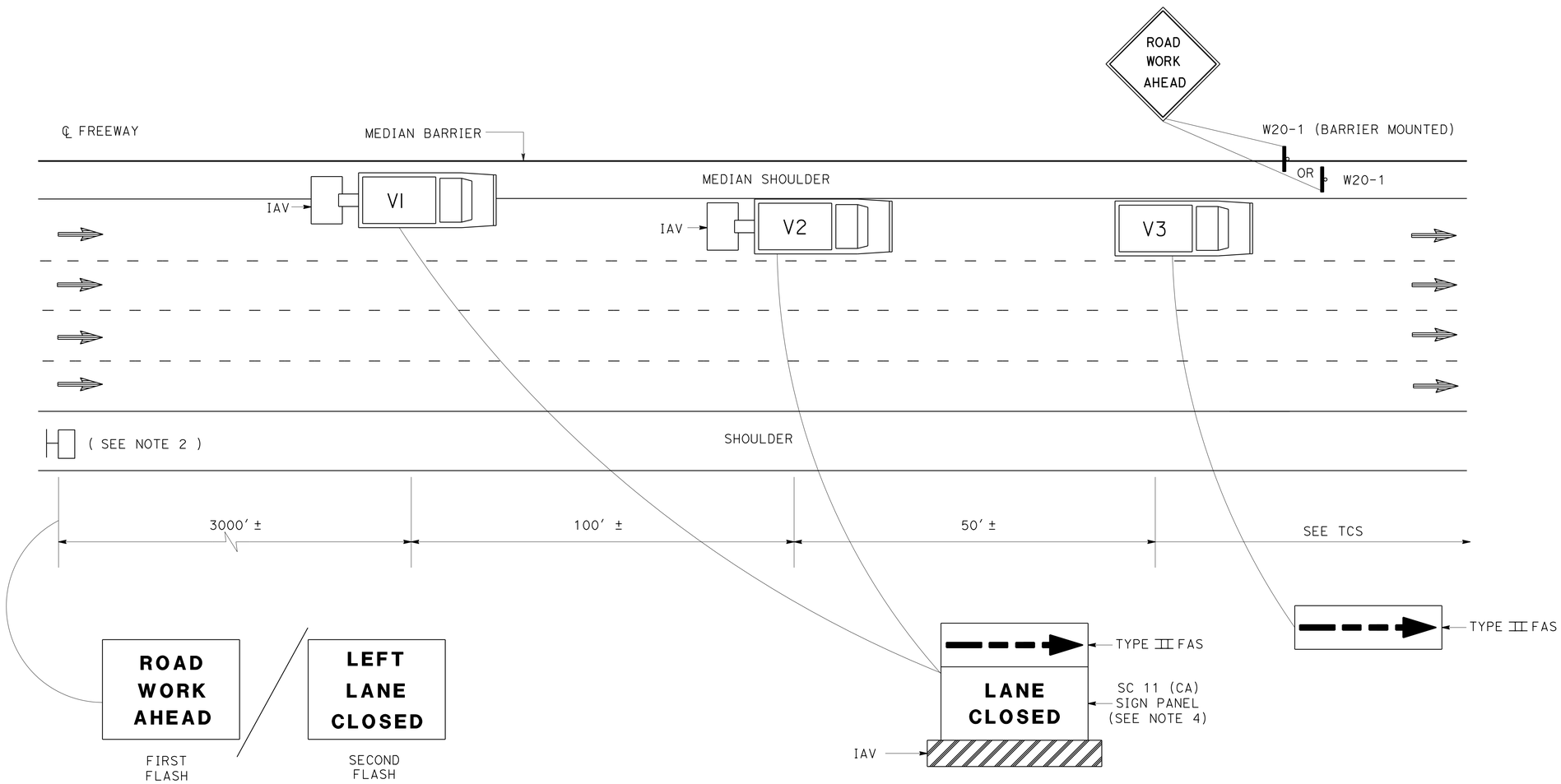
1. LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
2. PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE LANE.
3. A MINIMUM SIGHT DISTANCE OF 1500′ SHALL BE PROVIDED IN ADVANCE OF PCMS.
4. VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED SHEETING, BLACK ON WHITE OR BLACK ON ORANGE WITH 8" MINIMUM SERIES D LETTERS PER CALTRANS SIGN SPECIFICATIONS.

LEGEND

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

ABBREVIATIONS

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



PCMS OR TRUCK MOUNTED CMS MESSAGE

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

NO SCALE

THD-7

REVISED BY	JC
DATE REVISED	3/12
ALBERT K YU	JOCELYN C CHIANG
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	DENIS KATAYAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	11	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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

NOTES:

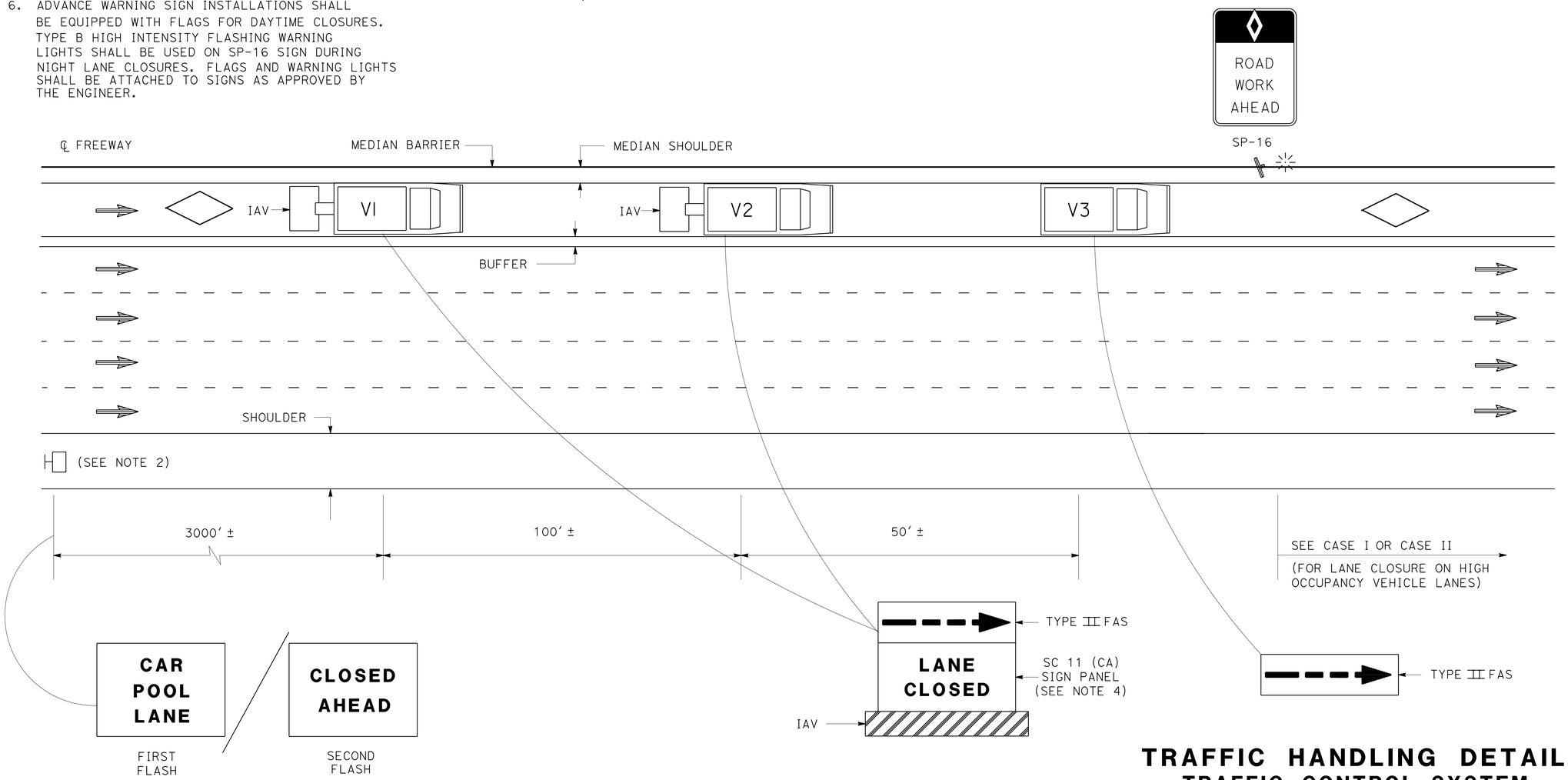
1. LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
2. PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE HOV LANE.
3. A MINIMUM SIGHT DISTANCE OF 1500′ SHALL BE PROVIDED IN ADVANCE OF PCMS.
4. VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED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

LEGEND

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

ABBREVIATIONS

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



PCMS OR TRUCK MOUNTED CMS MESSAGE

(SEE NOTE 5)

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

NO SCALE

THD-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DTM

FUNCTIONAL SUPERVISOR: DENIS KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 3/12

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	12	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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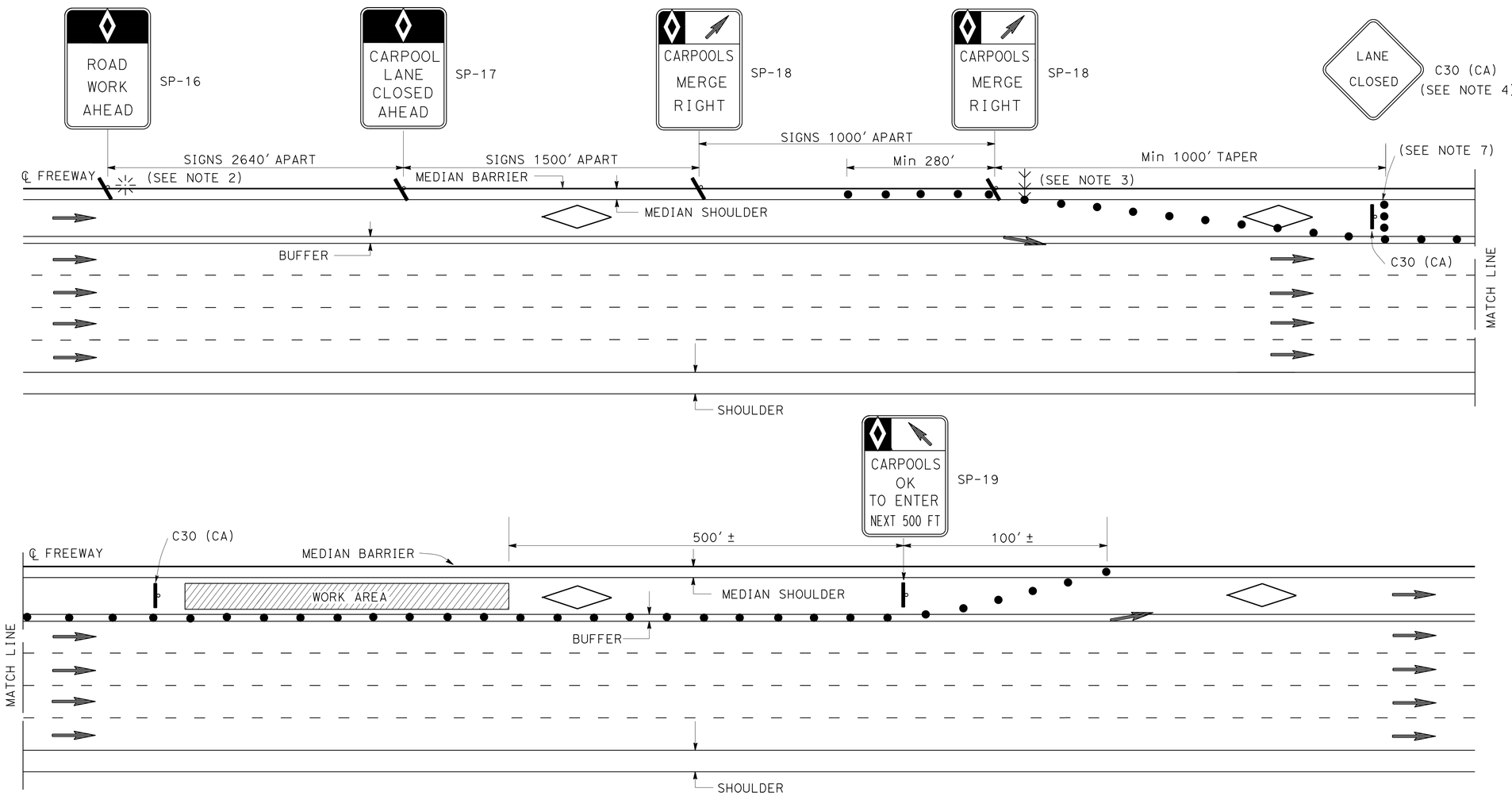


LEGEND

- CONE
- FLASHING BEACON
- HOV LANE
- FLASHING ARROW SIGN
- PORTABLE SIGN
- DIRECTION OF TRAVEL

ABBREVIATIONS

(CA)	CALIFORNIA CODE
HOV	HIGH OCCUPANCY VEHICLE

SIGN PANEL

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

NOTES: FOR CASE I AND CASE II

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

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

NO SCALE

THD-9

CALCULATED-DESIGNED BY	JC
CHECKED BY	3/12
REVISED BY	DATE REVISED
FUNCTIONAL SUPERVISOR	DENIS KATAYAMA
ALBERT K YU	JOCELYN C CHIANG

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

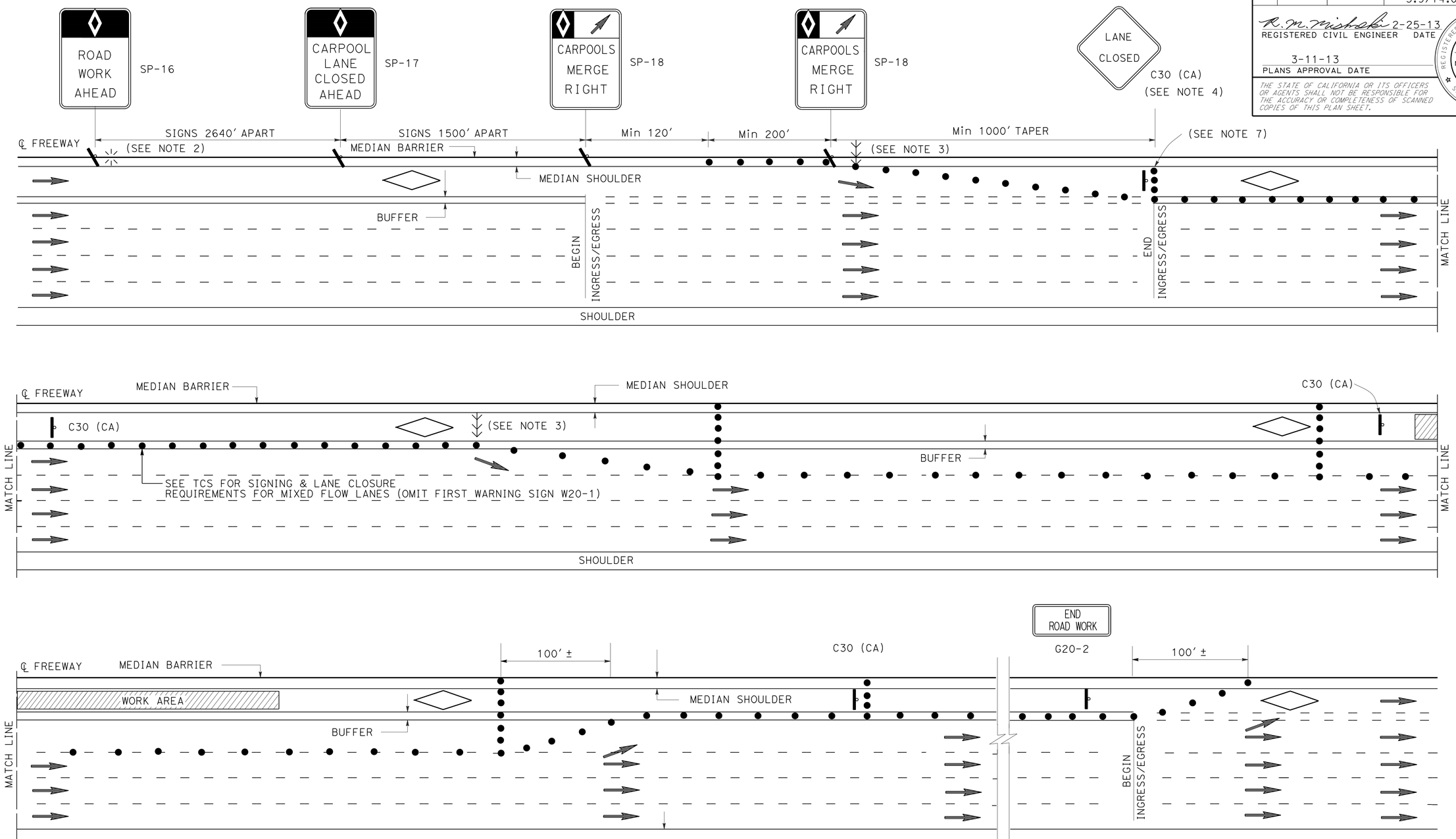
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	13	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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



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

JC	3/12
REVISED BY	DATE REVISED
ALBERT K YU	JOCELYN C CHIANG
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	DENIS KATAYAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	14	42

R.M. Mishreki 2-25-13
REGISTERED CIVIL ENGINEER DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.M. MISHREKI No. C68484 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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

NOTES:

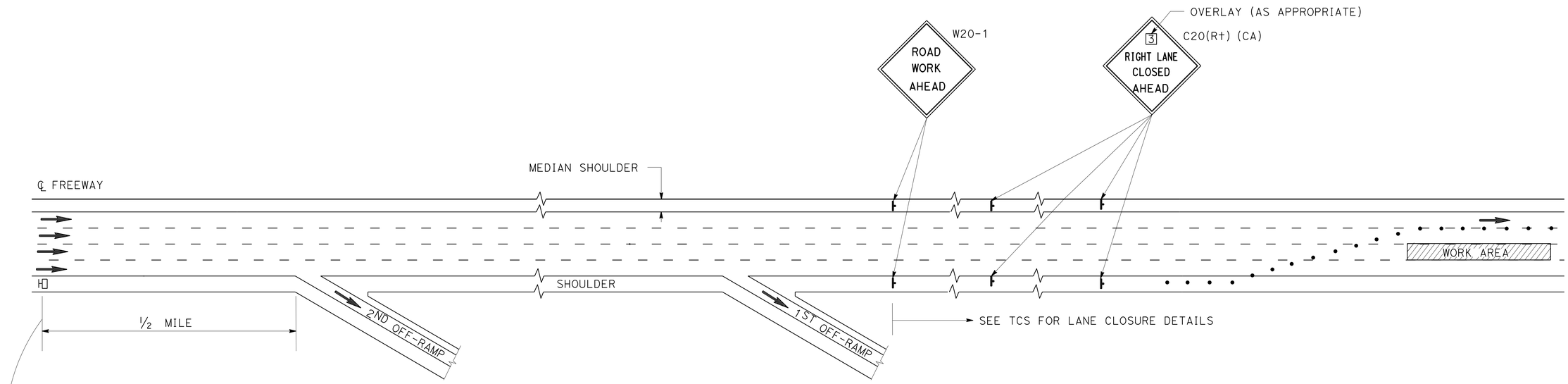
1. EXACT LOCATION OF PCMS WILL BE DETERMINED BY THE ENGINEER TO PROVIDE ADEQUATE VISIBILITY.
2. PCMS MESSAGE DISPLAYED WILL BE APPROVED BY THE ENGINEER.
3. PCMS MESSAGE SHALL BE CHANGED AT THE BEGINNING OF CURE PERIOD TO REFLECT NUMBER OF CLOSED LANES.

ABBREVIATIONS

PCMS PORTABLE CHANGEABLE MESSAGE SIGN
(CA) CALIFORNIA CODE

LEGEND

- CONE
- PORTABLE SIGN
- DIRECTION OF TRAVEL
- PCMS



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

WORDING FORMAT FOR PCMS MESSAGE

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

NO SCALE

THD-11

REVISED BY	JC
DATE REVISED	3/12
CALCULATED-DESIGNED BY	ALBERT K YU
CHECKED BY	JOCELYN C CHIANG
FUNCTIONAL SUPERVISOR	DENIS KATAYAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DTM

LAST REVISION 03-01-13 | DATE PLOTTED => 08-MAR-2013 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	15	42

REGISTERED CIVIL ENGINEER 2-13-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MESFIN HAILU
No. 66735
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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THERMOPLASTIC PAVEMENT TRAFFIC STRIPE / PAVEMENT MARKER

LOCATION No.	DESCRIPTION	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)		4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)		4" THERMOPLASTIC TRAFFIC STRIPE				TYPE A (NON-REFLECTIVE)	TYPE G (RETROREFLECTIVE)					TYPE C (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)	
		DETAIL No.								DETAIL No.								
		8	9	12	13 (Mod)	22	25A	27	27B	12	13 (Mod)	9	36	37			25A	27
		LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
2	STEARNS St UC							70	40					3				
3	WOODRUFF Ave UC				960		320	1,280			81	21					28	8
4	BELLFLOWER UC			180	4,720	9,440	1,795	3,630	190	16	394	99		9			151	2
5	ATLANTIC Ave OC	255	510				510						12				44	2
10	HARBOR SCENIC Dr OH				90						9	3			4			
11	PICO Ave ON-RAMP OH		1,500				1,500	3,000					32				126	
12	PICO Ave OFF-RAMP OH		950				950	1,900					21				80	
14	ATLANTIC Ave UC				840		105	210			71	19			16	4	10	
15	ALONDRA Blvd OC	450						210										
	SUB-TOTAL	705	2,960	180	6,610	9,440	5,180	10,290	230	16	555	142	65	12	20	4	438	11
	SHEET TOTAL	3,665		6,790		25,140				571	691							

THERMOPLASTIC PAVEMENT MARKING

LOCATION No.	DESCRIPTION	SYMBOLS	WORDS		
		DIAMOND	ONLY	CAR	POOL
		SQFT	SQFT	SQFT	SQFT
3	WOODRUFF Ave UC	11			
4	BELLFLOWER UC	55	66	34	69
	SUB-TOTAL	66			
	SHEET TOTAL	235			

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: MARLON SARMIENTO
CHECKED BY: MESFIN HAILU
REVISED BY
DATE REVISED

LAST REVISION 03-01-13
DATE PLOTTED => 08-MAR-2013
TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	16	42

REGISTERED CIVIL ENGINEER 2-13-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MESFIN HAILU
No. 66735
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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

ROADWAY QUANTITIES

LOCATION No.	DESCRIPTION	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE PAVEMENT MARKER
		LF	LF	SQFT	EA
2	STEARNS St UC		75		3
3	WOODRUFF Ave UC	960	1,600	11	137
4	BELLFLOWER UC	1,845	6,725	224	655
5	ATLANTIC Ave OC	615	765		57
10	HARBOR SCENIC Dr OH		120		16
11	PICO Ave ON-RAMP OH	1,500	3,000		158
12	PICO Ave OFF-RAMP OH	950	1,900		101
14	ATLANTIC Ave UC	105	1,155		119
15	ALONDRA Blvd OC		550		
	TOTAL	5,975	15,890	235	1,246

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: MARLON SARMIENTO
CHECKED BY: MESFIN HAILU
REVISED BY
DATE REVISED

LAST REVISION 03-01-13
DATE PLOTTED => 08-MAR-2013
TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	17	42

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-11-13
PLANS APPROVAL DATE

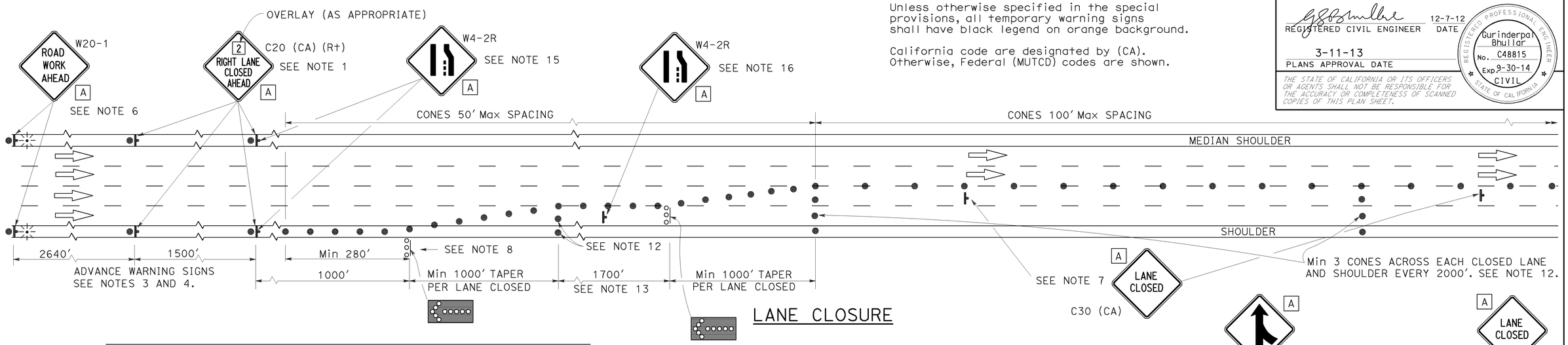
REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar No. C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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.

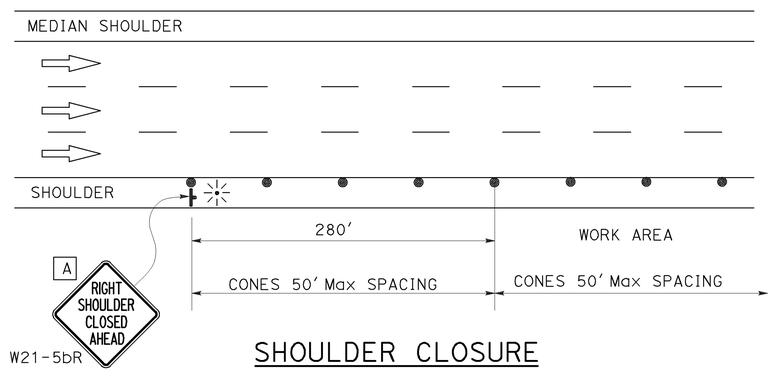
NOTES:

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

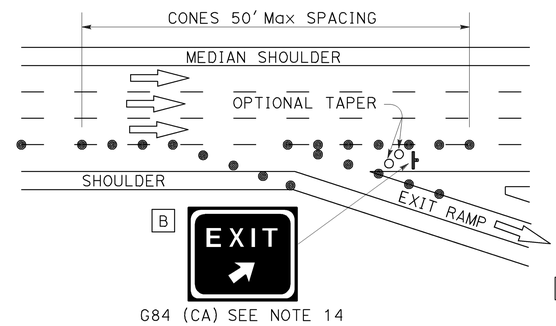
California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



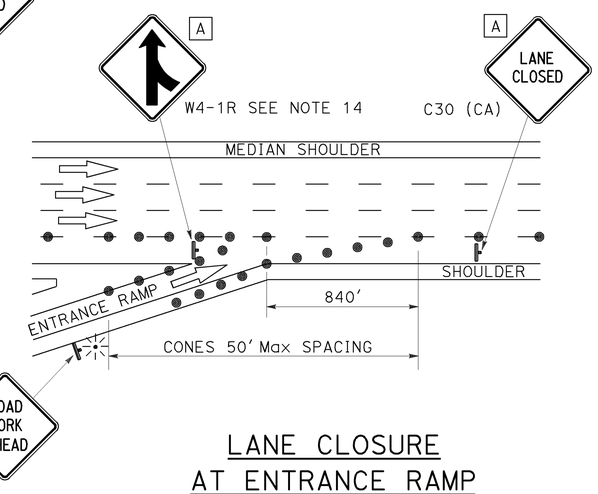
LANE CLOSURE



SHOULDER CLOSURE



LANE CLOSURE AT EXIT RAMP



LANE CLOSURE AT ENTRANCE RAMP

NOTES:

1. Median lane closures shall conform to the details for outside lane closures except that C20 (CA) (Lt) 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 C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
7. Place a C30 (CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
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 1700' tangent shown along lane lines shall be used between the 1000' tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the G84 (CA) and W4-1 signs shall be used as shown.
15. When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.
16. The W4-2 "LANE ENDS" symbol sign shown at this location is to be used where the W4-2 sign is used as advance warning as described in Note 15.

SIGN PANEL SIZE (Min)

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

LEGEND

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE

TCS-1

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR HECTOR OBESO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	18	42

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-11-13
PLANS APPROVAL DATE

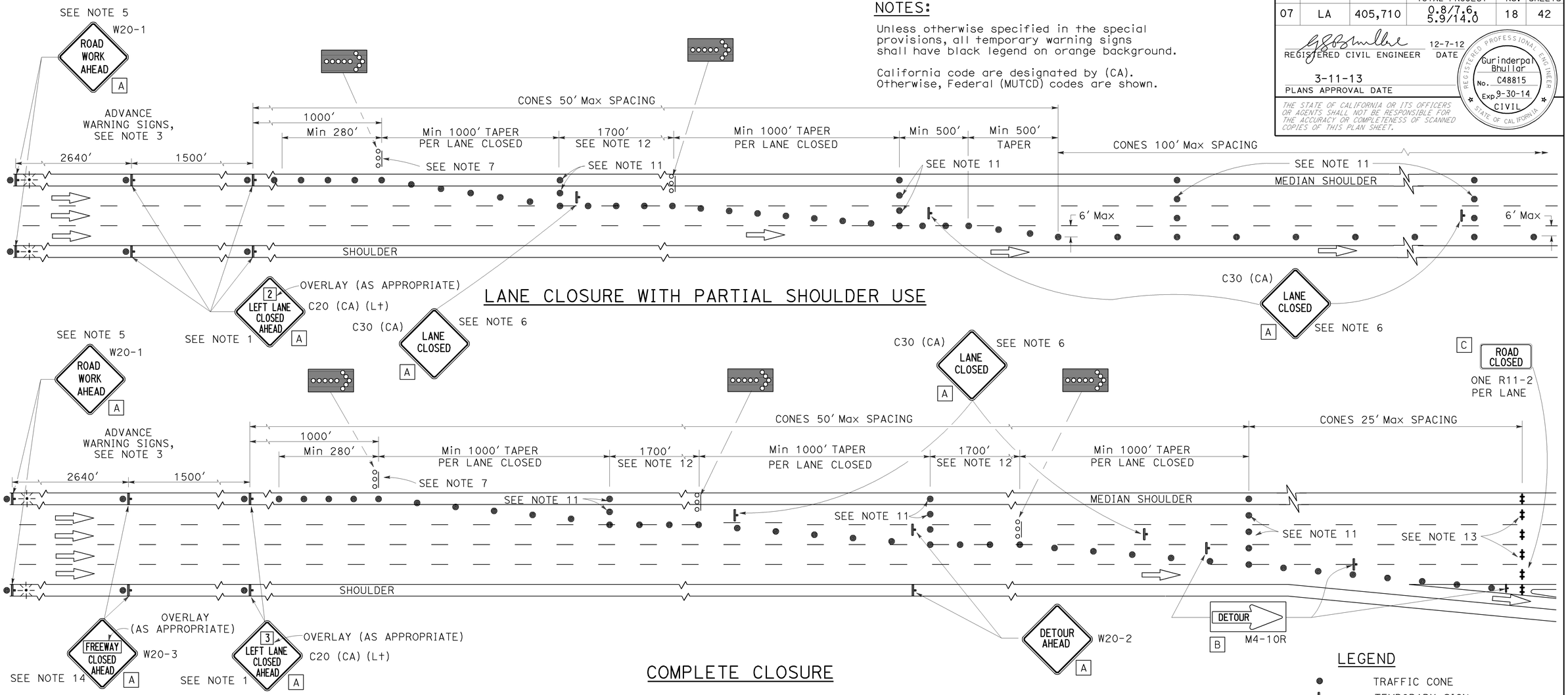
REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar No. C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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.

NOTES:

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

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



LANE CLOSURE WITH PARTIAL SHOULDER USE

COMPLETE CLOSURE

LEGEND

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

NOTES:

1. Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details for inside lane closure except that C20 (CA) (Rt) signs shall be used.
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 C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
5. If the W20-1 sign would follow within 2000′ of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT ___ MILES", use a C20 (CA) sign for the first advance warning sign.
6. Place a C30 (CA) sign every 2000′ throughout length of lane closure.
7. One flashing arrow sign for each lane closed. The first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
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 1700′ tangent shown along lane lines shall be used between the 1000′ tapers required for each closed traffic lane.
13. A minimum of Two Type II barricades shall be placed across each closed lane and shoulder at the location shown and every 2000′ within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
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" × 48"
B	48" × 18"
C	48" × 30"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

TCS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO

CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

LAST REVISION 02-29-13 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	19	42

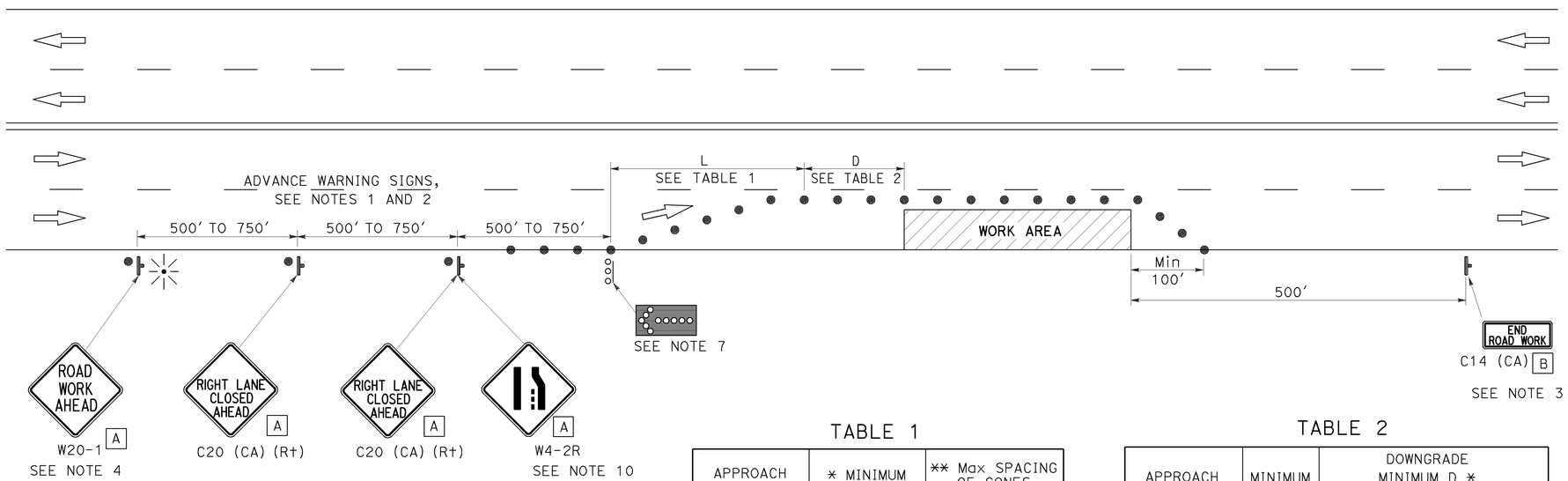
REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-11-13
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.

TYPICAL LANE CLOSURE



NOTES:

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

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

LEGEND

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

SIGN PANEL SIZE (Min)

A 36" x 36"

B 36" x 18"

TABLE 1

APPROACH SPEED	* MINIMUM L	** Max SPACING OF CONES ALONG TAPER
mph	ft	ft
20 AND BELOW	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
Over 50	SEE NOTE 9	

* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.
** SEE NOTE 8.

TABLE 2

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

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

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
2. 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.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
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 sign shall be either Type I or Type II.
8. The maximum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
9. 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.
10. When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-3

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: HECTOR OBESO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION 02-29-13 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	20	42

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-11-13
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.

LEGEND

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

TABLE 1

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

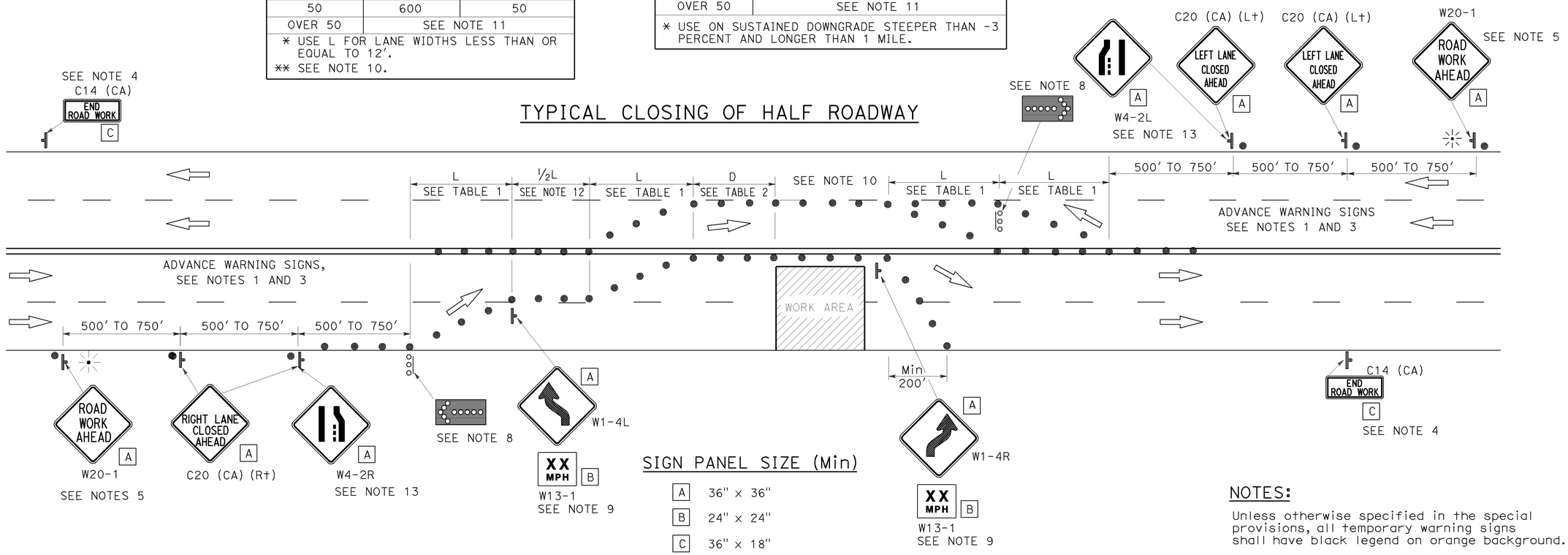
* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.
** SEE NOTE 10.

TABLE 2

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

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

TYPICAL CLOSING OF HALF ROADWAY



SIGN PANEL SIZE (Min)

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

NOTES:

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

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

NOTES:

1. Where Approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
2. 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.
3. 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.
4. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
5. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
6. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
7. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
8. Flashing arrow signs shall be either Type I or Type II.
9. Advisory speed will be determined by the Engineer. The W13-1 Sign will not be required when advisory speed is more than the posted or maximum speed limit.
10. The maximum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
11. 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.
12. Unless otherwise specified in the special provisions, the (½ L) shown between the two (L) lane closure tapers shall be used.
13. When specified in the special provisions, a W4-2 "Lane Ends" symbol sign is to be used in place of the C20 (CA) "RIGHT (LEFT) LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-4

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: HECTOR OBESO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION 02-29-13 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	21	42

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-11-13
PLANS APPROVAL DATE

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

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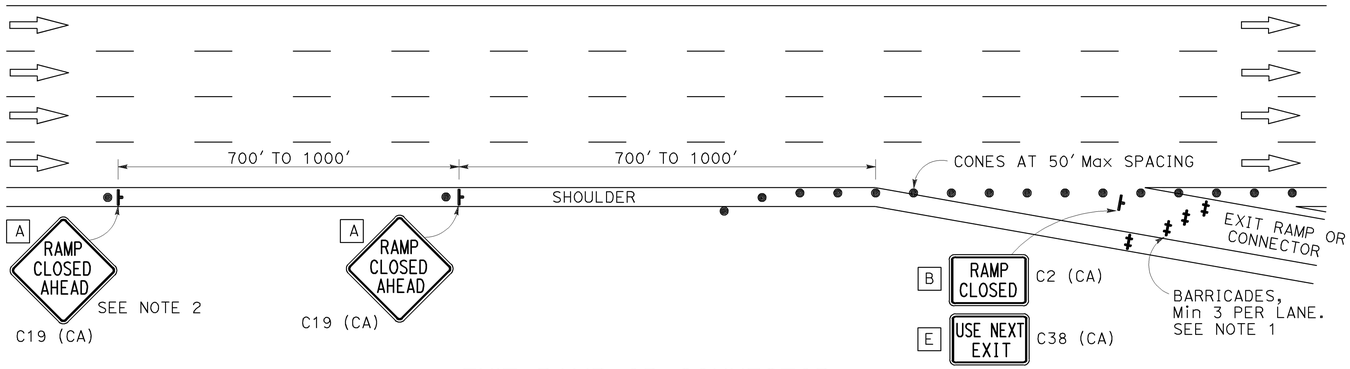
TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

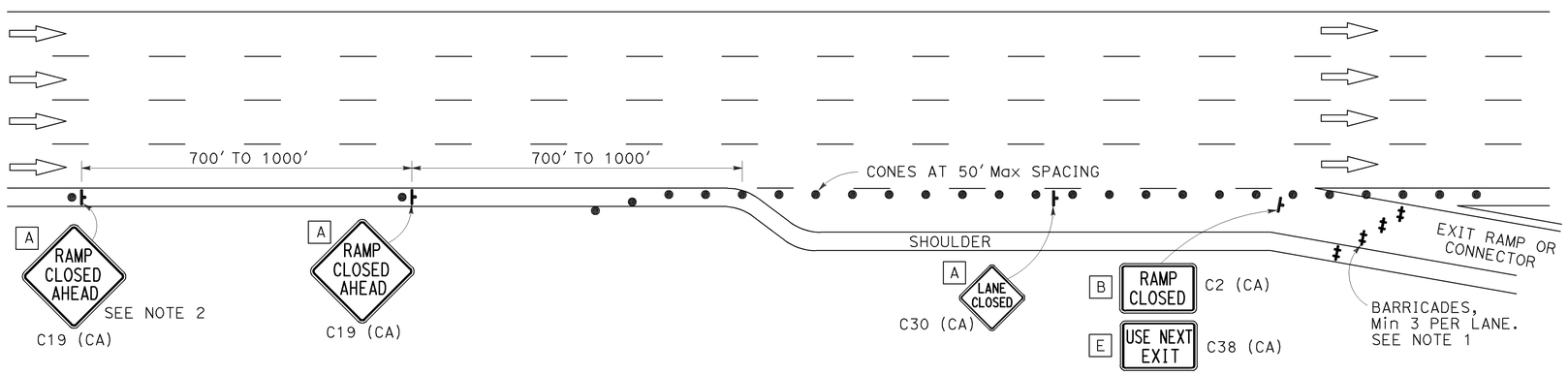
- A 48" x 48"
- B 48" x 30"
- C 30" x 30"
- D 48" x 48" - SPEED OF 50 mph OR MORE
  36" x 36" - SPEED LESS THAN 50 mph
- E 48" x 36"

LEGEND

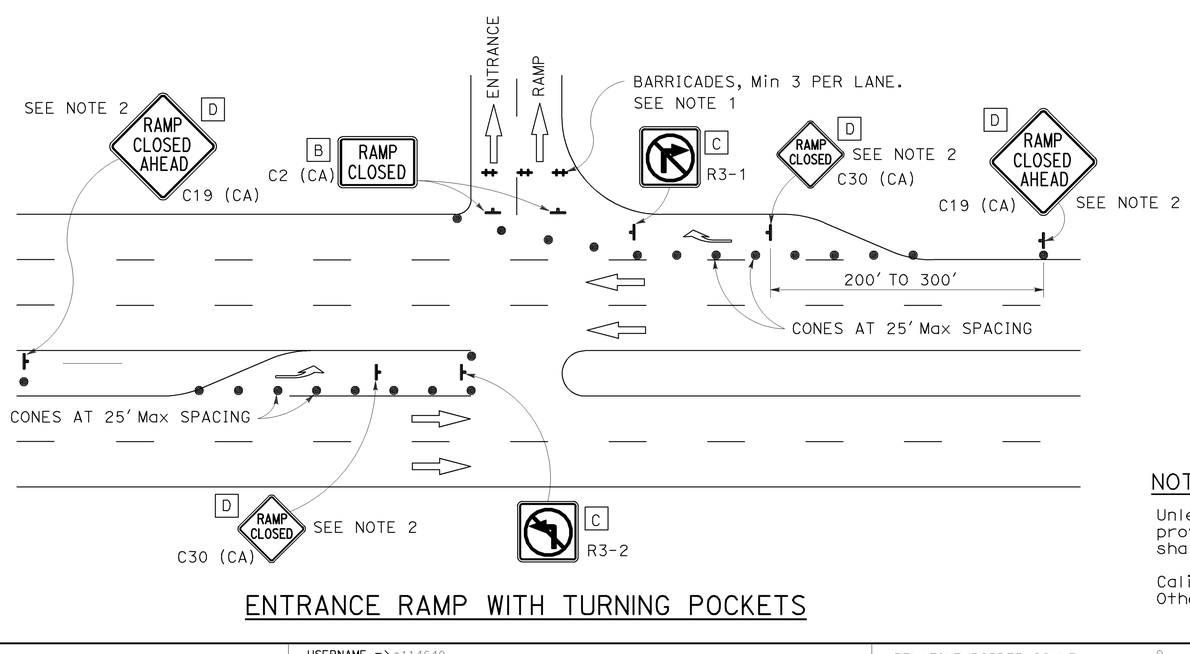
- TRAFFIC CONE
- TEMPORARY SIGN
- BARRICADES



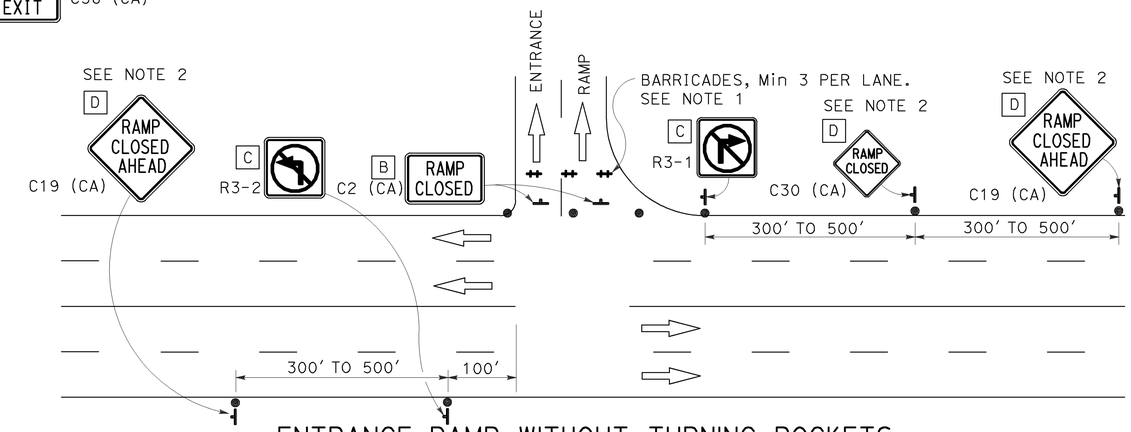
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

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" x 16" in size and shall be orange or fluorescent red-orange in color.
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" sign in the gore area shall be covered during ramp closures.

NOTES:

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

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

TCS-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO

CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

LAST REVISION 02-29-13 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	22	42

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

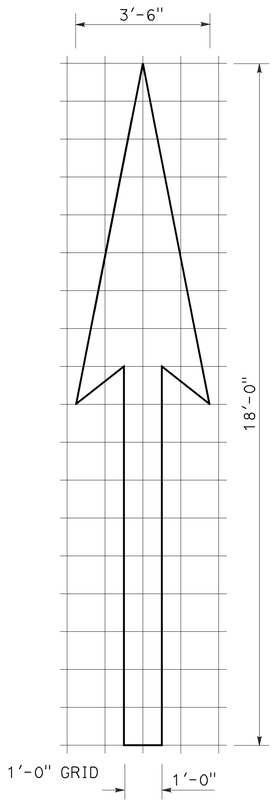
April 20, 2012
PLANS APPROVAL DATE

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.

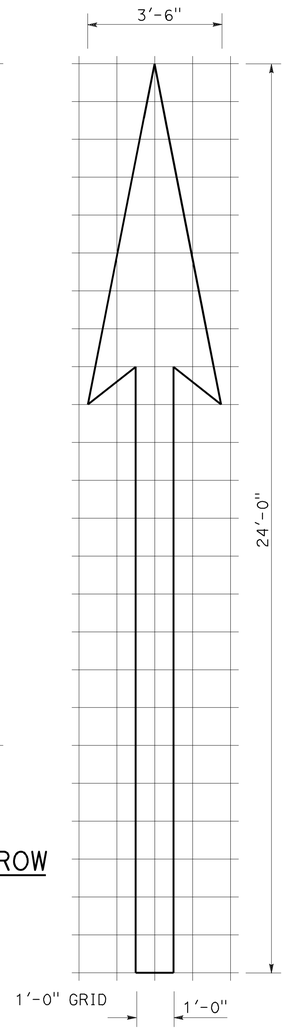
TO ACCOMPANY PLANS DATED 3-11-13

2010 REVISED STANDARD PLAN RSP A24A



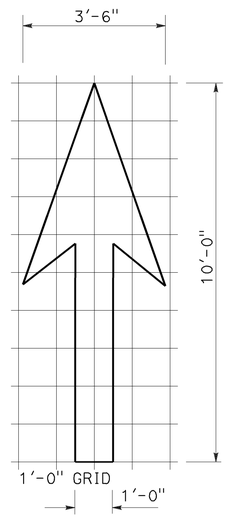
A=25 ft^2

TYPE I 18'-0" ARROW



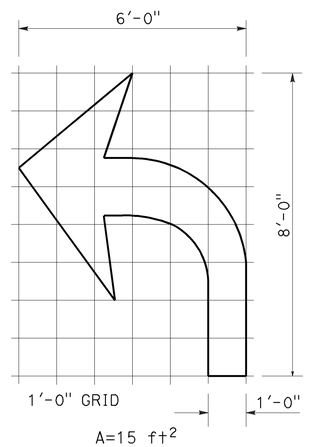
A=31 ft^2

TYPE I 24'-0" ARROW



A=14 ft^2

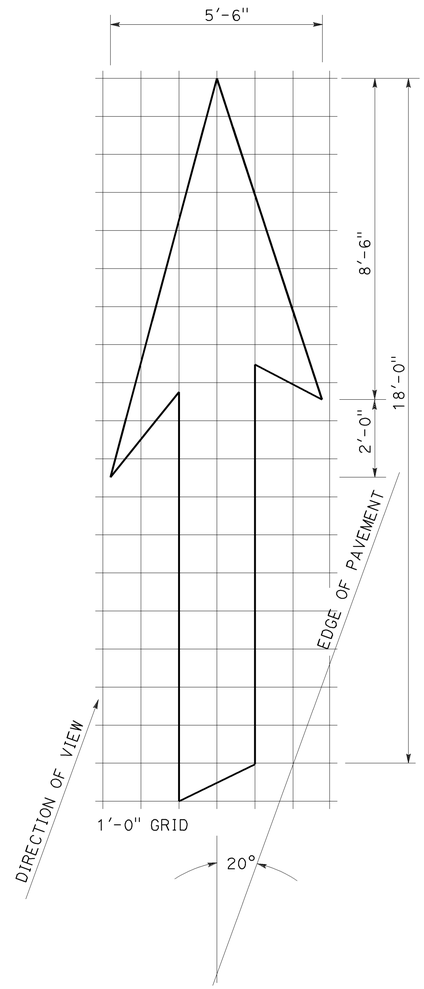
TYPE I 10'-0" ARROW



A=15 ft^2

TYPE IV (L) ARROW

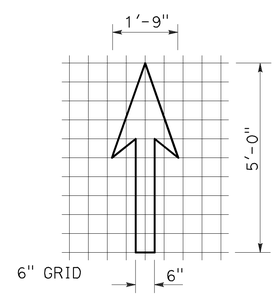
(For Type IV (R) arrow, use mirror image)



A=42 ft^2

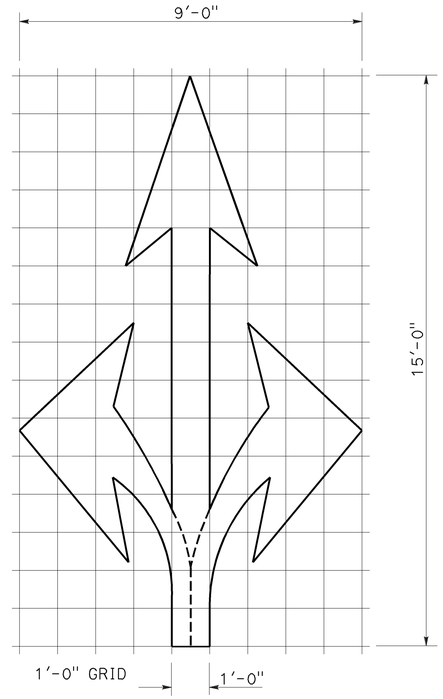
TYPE VI ARROW

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



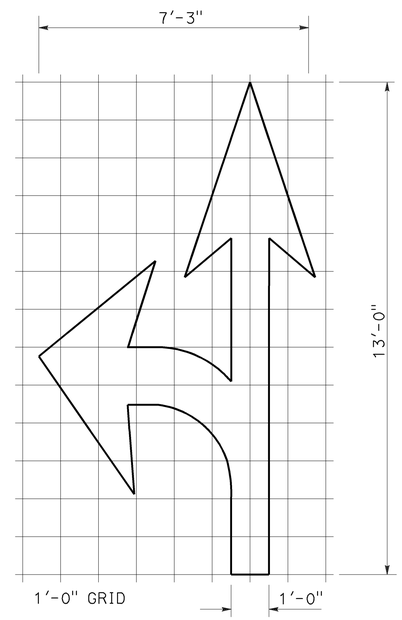
A=3.5 ft^2

BIKE LANE ARROW



A=36 ft^2

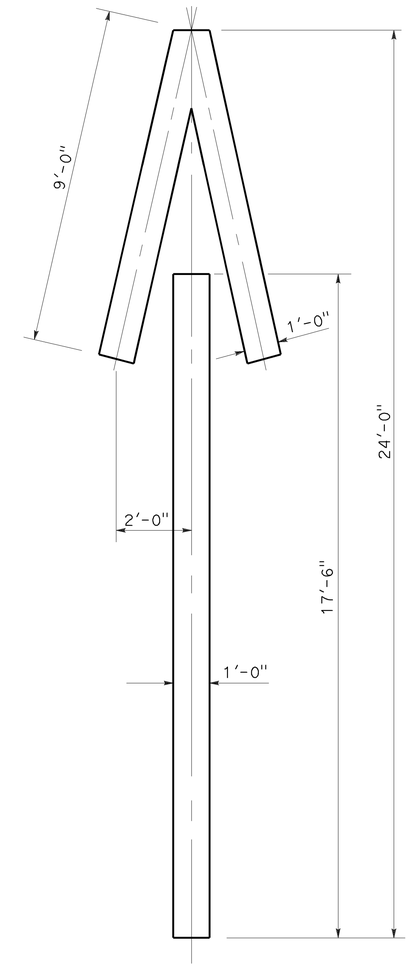
TYPE VIII ARROW



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	405,710	0.8/7.6, 5.9/14.0	23	42

REGISTERED CIVIL ENGINEER

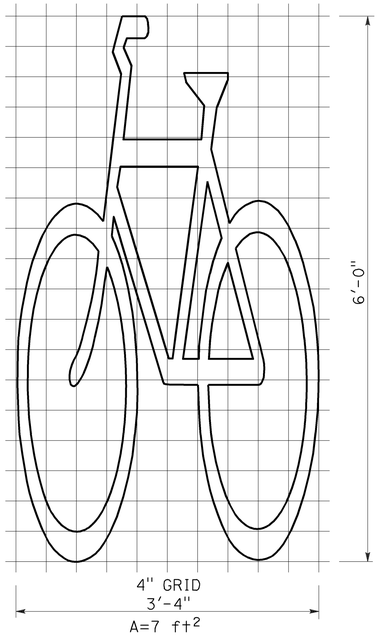
October 19, 2012
PLANS APPROVAL DATE

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

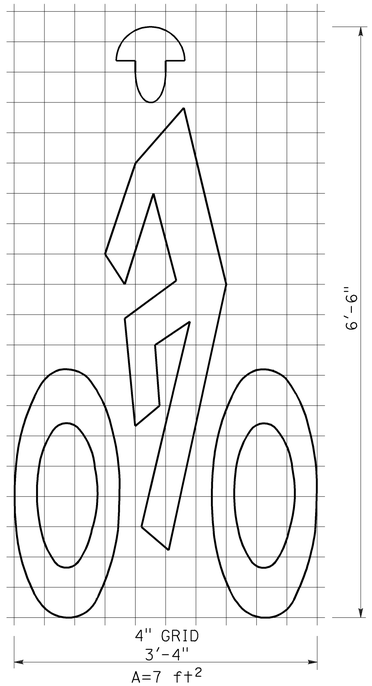
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE: TO ACCOMPANY PLANS DATED 3-11-13

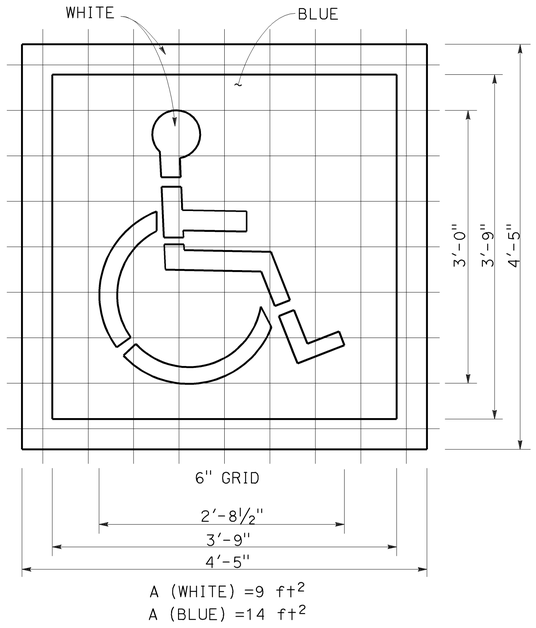
Minor variations in dimensions may be accepted by the Engineer.



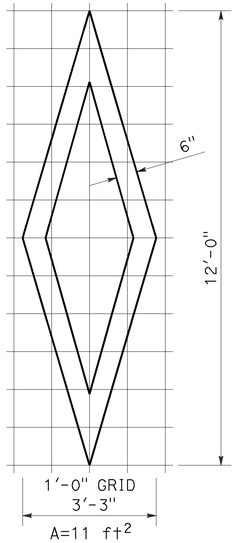
BIKE LANE SYMBOL WITHOUT PERSON



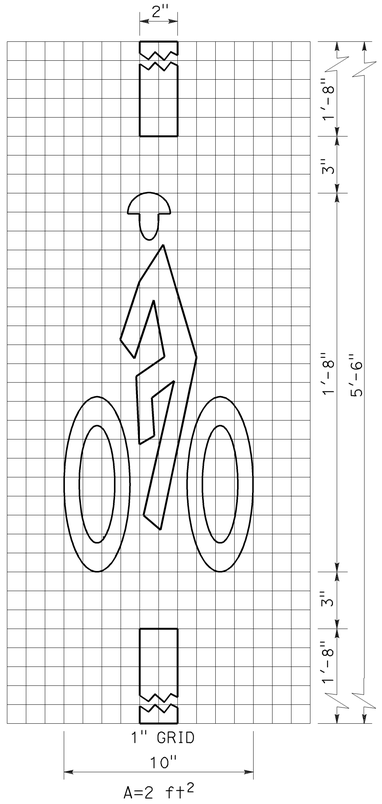
BIKE LANE SYMBOL WITH PERSON



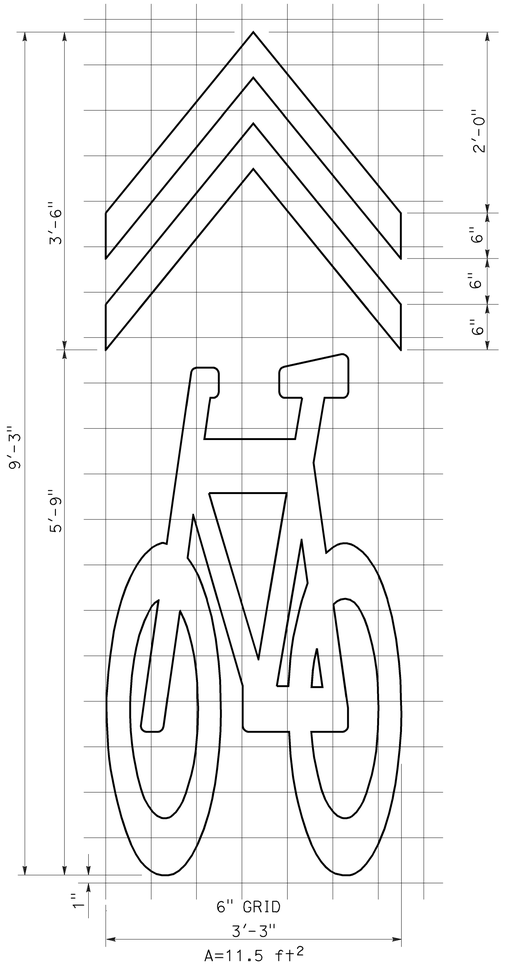
INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING



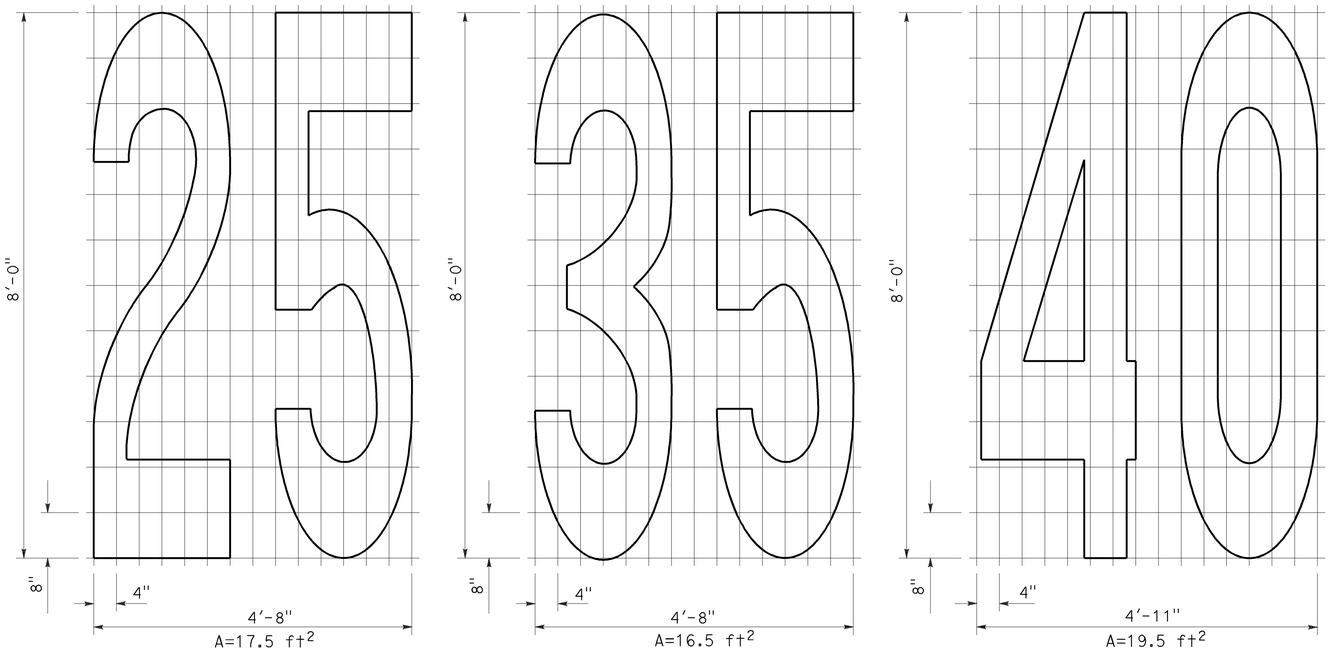
DIAMOND SYMBOL



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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	24	42

Roberta L. McLaughlin
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

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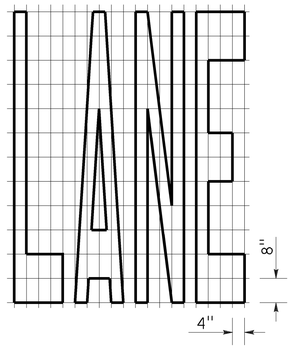
TO ACCOMPANY PLANS DATED 3-11-13



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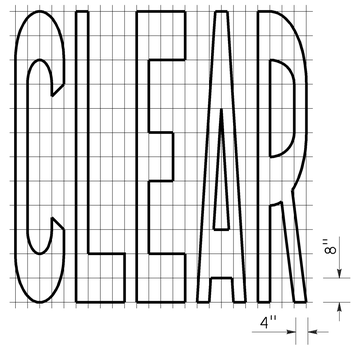

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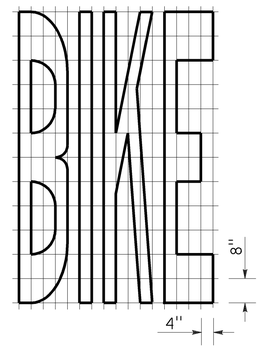

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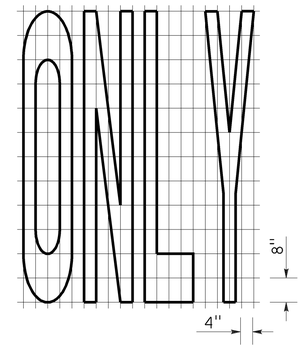
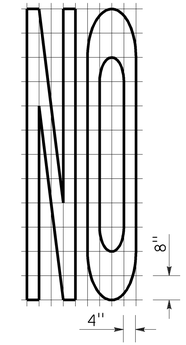
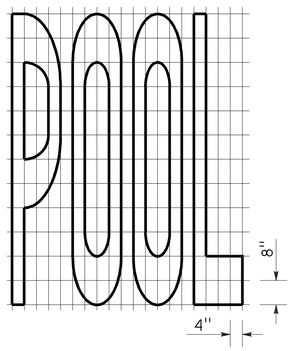


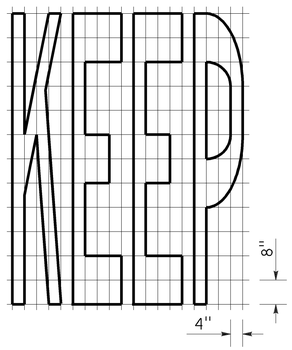
A=22 ft^2



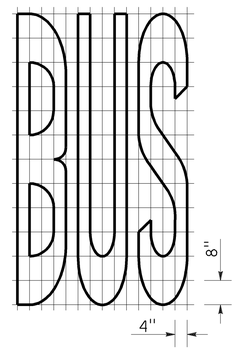
A=14 ft^2



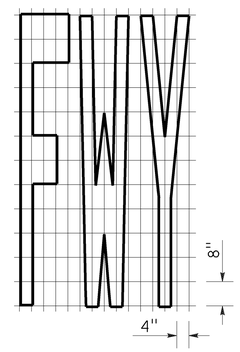
A=23 ft^2



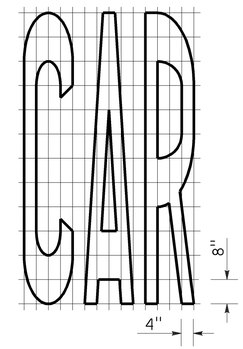
A=24 ft^2



A=20 ft^2

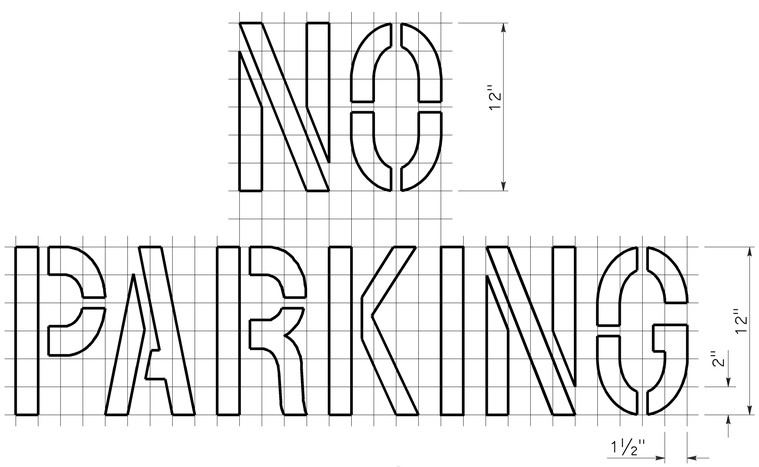


A=16 ft^2

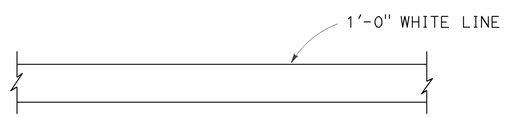


A=17 ft^2

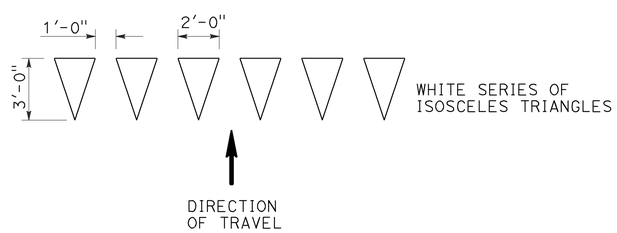
WORD MARKINGS			
ITEM	ft^2	ITEM	ft^2
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft^2
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	405,710	0.8/7.6, 5.9/14.0	25	42

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

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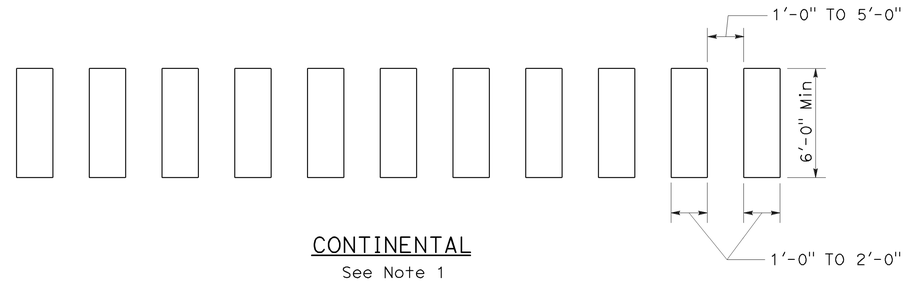
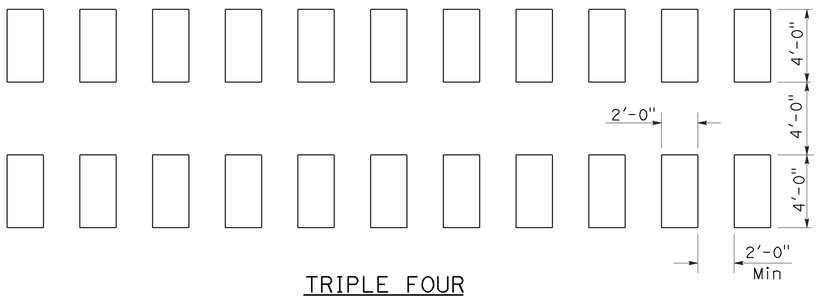
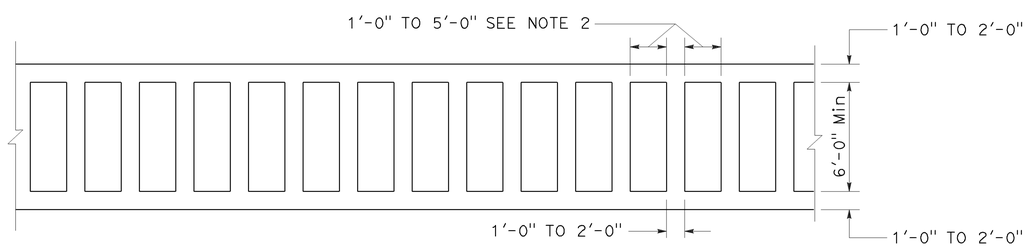
TO ACCOMPANY PLANS DATED 3-11-13



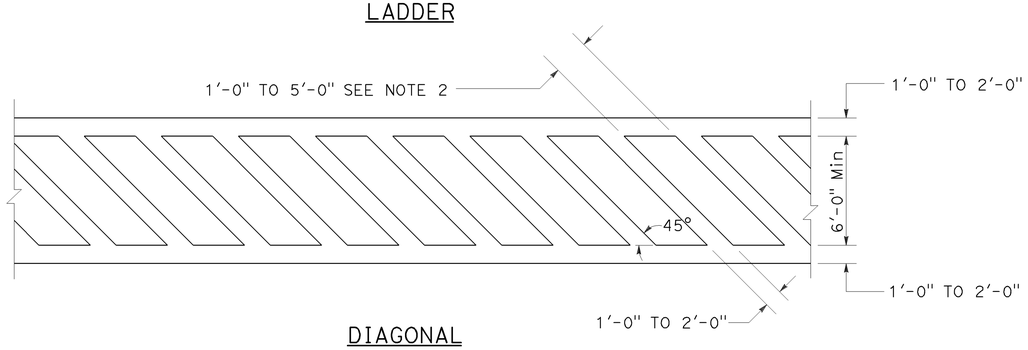
CONTINENTAL
See Note 1



TRIPLE FOUR
See Note 1



LADDER

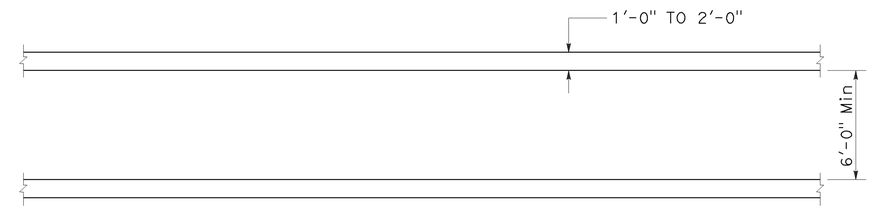


DIAGONAL

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	405,710	0.8/7.6, 5.9/14.0	26	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

LEGEND:

Indicates existing.

Indicates direction of traffic.

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

NOTE:

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

STANDARD PLANS DATED MAY 2010

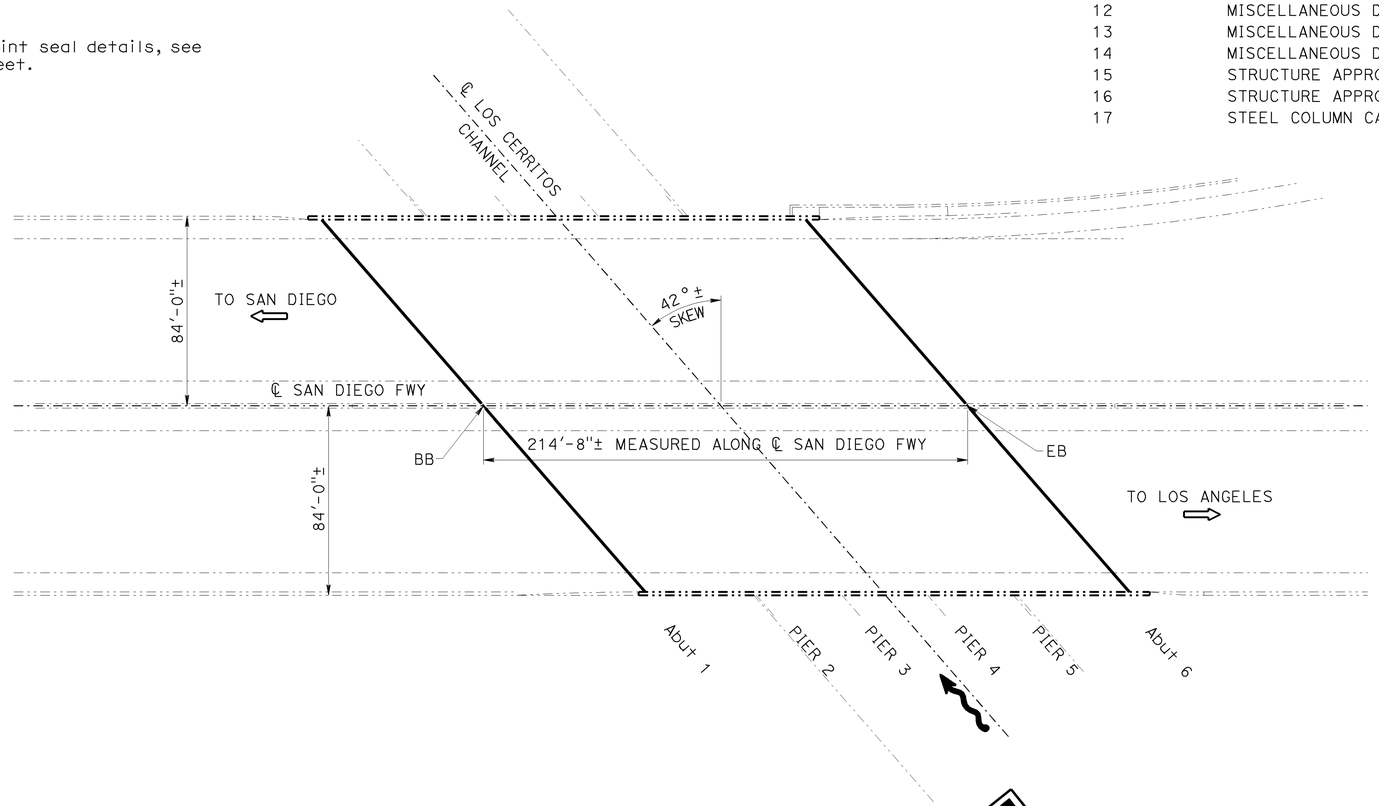
SHEET NO.	TITLE
A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")

STANDARD PLAN SHEET NO.

DETAIL NO.

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	MISCELLANEOUS DETAILS NO. 1
13	MISCELLANEOUS DETAILS NO. 2
14	MISCELLANEOUS DETAILS NO. 3
15	STRUCTURE APPROACH TYPE R(30S)
16	STRUCTURE APPROACH TYPE R(30D)
17	STEEL COLUMN CASING DETAILS



LOS CERRITOS CHANNEL

Br No. 53-1188, Rte 405, PM 0.78
Scale 1"=30'

LOS CERRITOS CHANNEL #53-1188

QUANTITIES

CLEAN EXPANSION JOINT	455 LF
JOINT SEAL (MR 1")	455 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

	BY	CHECKED
LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
LAYOUT	Clayton Tom	Gerald Joo
SPECIFICATIONS	James Choi	PLANS AND SPECS COMPARED James Choi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-15-13 01-16-13

SHEET 01 OF 17

FILE => 07-1w3101-a-gp01.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	27	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

LEGEND:

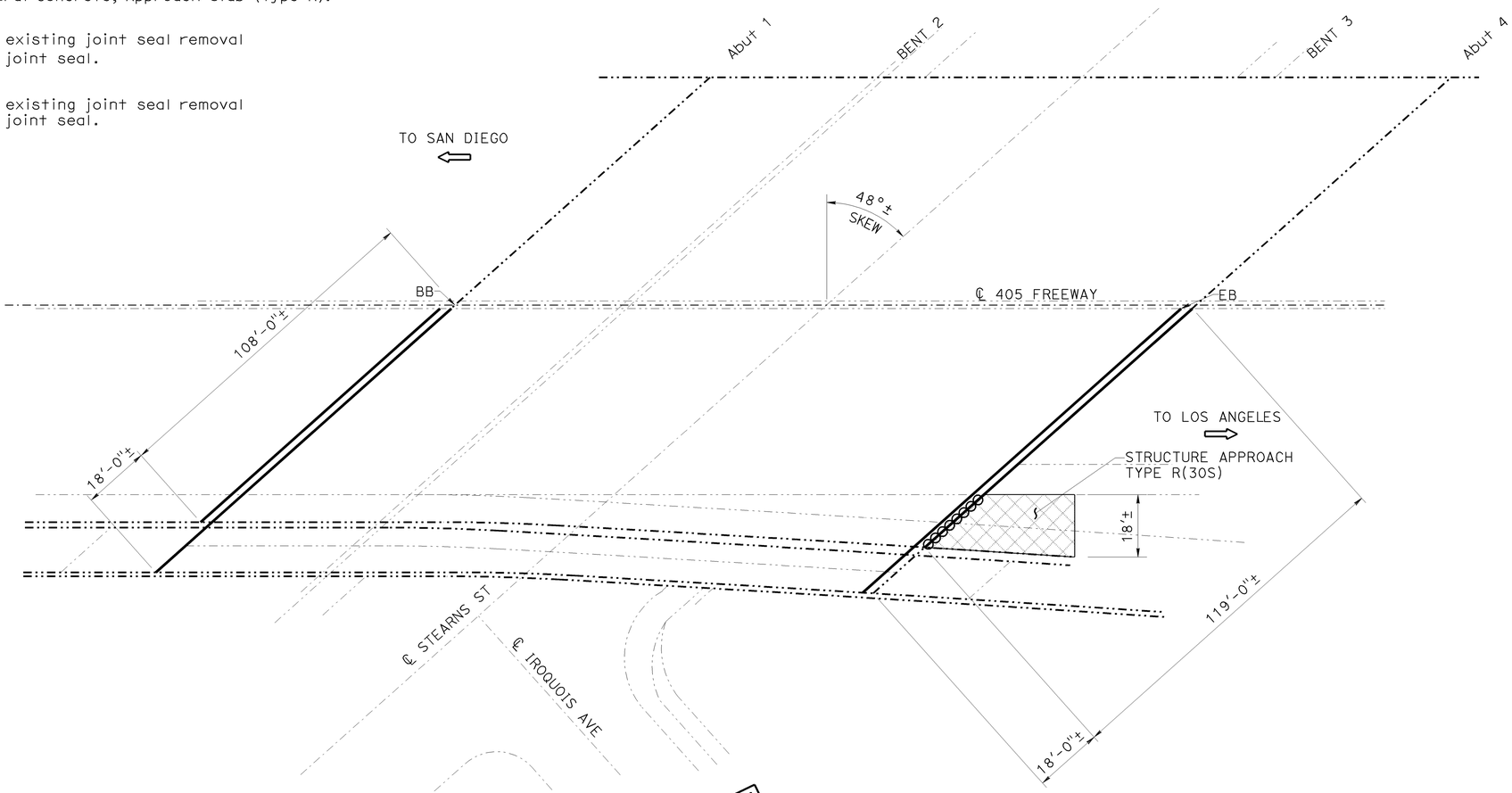
Indicates existing.

Indicates direction of traffic.

Indicates limIndicates limits of remove existing approach and place new Structural Concrete, Approach Slab (Type R).

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

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



STEARNS STREET UC

Br No. 53-1189, Rte 405, PM 0.96
No Scale

STEARNS STREET UC 53-1189

QUANTITIES

STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	31 CY
CLEAN EXPANSION JOINT	490 LF
JOINT SEAL (MR 1")	490 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		
LAYOUT	BY Clayton Tom	CHECKED Gerald Joo	
SPECIFICATIONS	BY James Choi	PLANS AND SPECS COMPARED James Choi	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-15-13 01-16-13

SHEET 02 OF 17

FILE => 07-1w3101-a-gp02.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	28	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

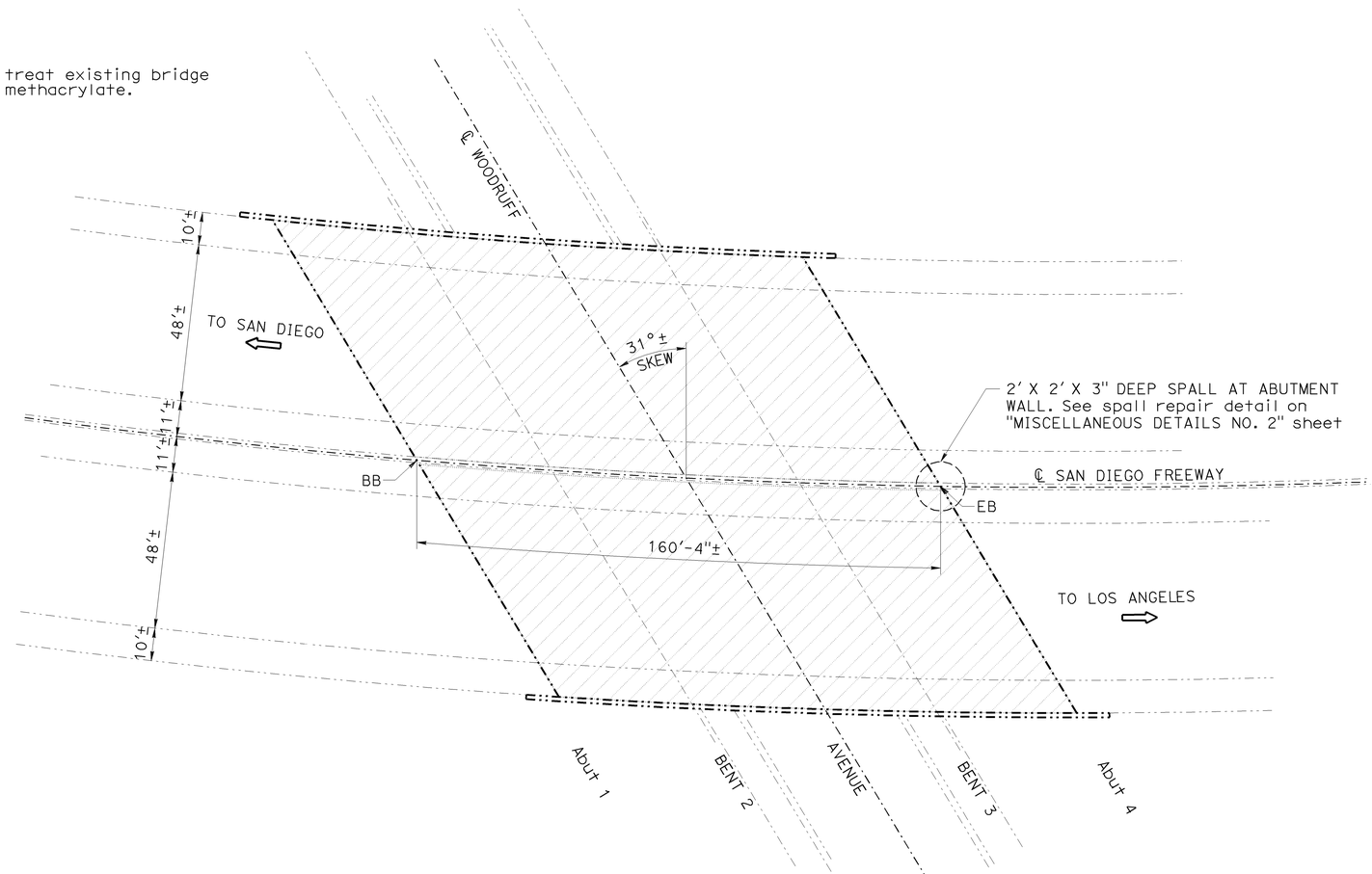
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND:

Indicates existing.

Indicates direction of traffic.

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



WOODRUFF AVENUE UC

Br No. 53-1191, Rte 405, PM 1.64
Scale 1"=20'

WOODRUFF AVENUE UC #53-1191

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
REPAIR SPALLED SURFACE AREA	4 SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	22,200 SQFT
TREAT BRIDGE DECK	22,200 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	280 GAL

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Gerald Joo	LAYOUT	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran	SPECIFICATIONS	James Choi	PLANS AND SPECS COMPARED James Choi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Various

ROUTES 405 & 710 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-18-13 01-16-13

SHEET 03 OF 17

FILE => 07-1w3101-a-gp03.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	29	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

LEGEND:

- Indicates existing.
- Indicates direction of traffic.
- Indicates limits of prepare and treat existing bridge bridge deck with high molecular weight methacrylate.
- Indicates limits of remove existing approach and place new Structural Concrete, Approach Slab (Type R). For details see "STRUCTURE APPROACH TYPE R(30S)" sheet.
- Indicates location of existing joint seal removal and placement of new joint seal.
- Indicates location of existing joint seal removal and placement of new joint seal.

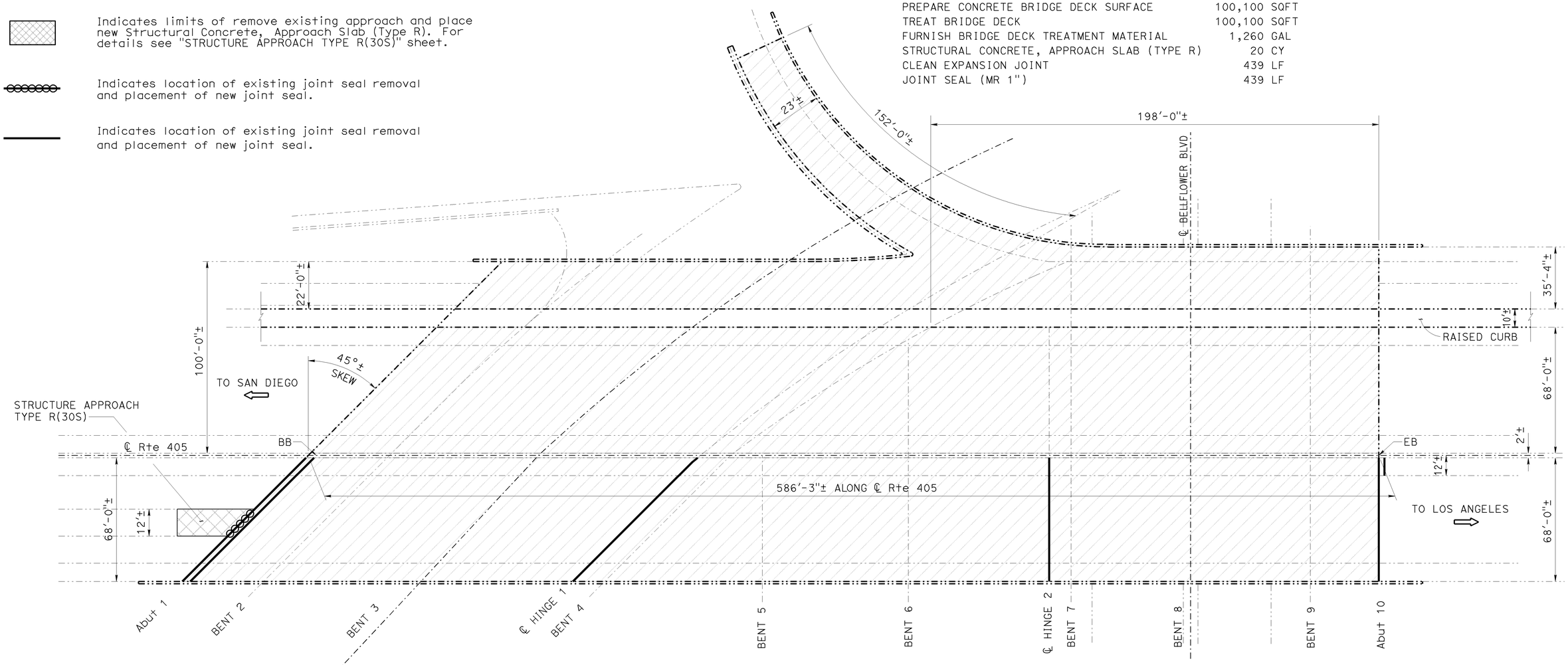
NOTES:

1. For clean expansion joint and joint seal details, see "Miscellaneous Details No.1" sheet.
2. For Approach slab details, see "Structure Approach Type R(30D)" sheet.

BELLFLOWER UC #53-1194

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	100,100 SQFT
TREAT BRIDGE DECK	100,100 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	1,260 GAL
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	20 CY
CLEAN EXPANSION JOINT	439 LF
JOINT SEAL (MR 1")	439 LF



BELLFLOWER UC

Br No. 53-1194, Rte 405, PM 2.18
No Scale

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

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

	BY	CHECKED
LAYOUT	Clayton Tom	Gerald Joo
SPECIFICATIONS	James Choi	PLANS AND SPECS COMPARED James Choi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 05-01-12 06-01-12 01-15-13 01-16-13

SHEET 04 OF 17

FILE => 07-1w3101-a-gp04.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:09

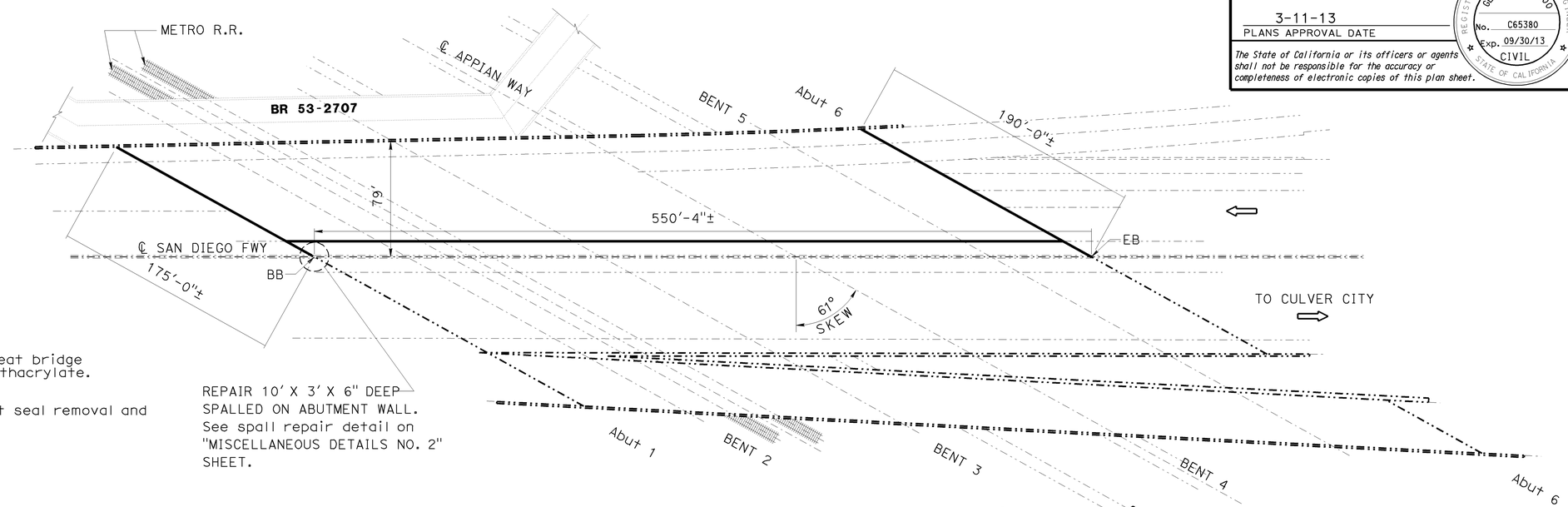
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	30	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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



BIXBY OH

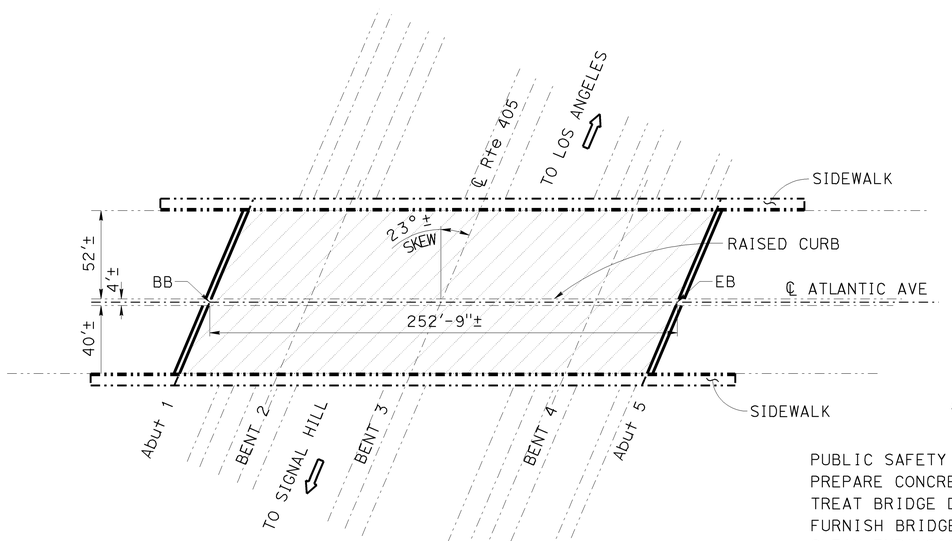
Br No. 53-1208, Rte 405, PM 6.98
Scale 1"=40'

BIXBY OH #53-1208
QUANTITIES

REPAIR SPALLED SURFACE AREA	30 SQFT
CLEAN EXPANSION JOINT	916 LF
JOINT SEAL (MR 1½")	365 LF
JOINT SEAL (TYPE AL)	551 LF

LEGEND:

- Indicates existing.
- Indicates direction of traffic.
- Indicates limits of prepare and treat bridge deck with high molecular weight methacrylate.
- Indicates location of existing joint seal removal and placement of new joint seal.



ATLANTIC AVENUE OC

Br No. 53-1204, Rte 405, PM 6.08
Scale 1"=20'

ATLANTIC AVENUE OC #53-1204
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	23,300 SQFT
TREAT BRIDGE DECK	23,300 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	300 GAL
CLEAN EXPANSION JOINT	400 LF
JOINT SEAL (MR 1")	400 LF

NOTES:

1. For clean expansion joint and joint seal details, see "Miscellaneous Details No.1" sheet.
2. For Approach slab details, see "Structure No. 1"sheet.
3. For spall repair detail, see "MISCELLANEOUS DETAILS No. 2" sheet.

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Gerald Joo	LAYOUT	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran	SPECIFICATIONS	James Choi	PLANS AND SPECS COMPARED James Choi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-02-12 06-01-12 01-15-13 01-16-13

SHEET 05 OF 17

FILE => 07-1w3101-a-gp05.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	31	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

LEGEND:

Indicates existing.

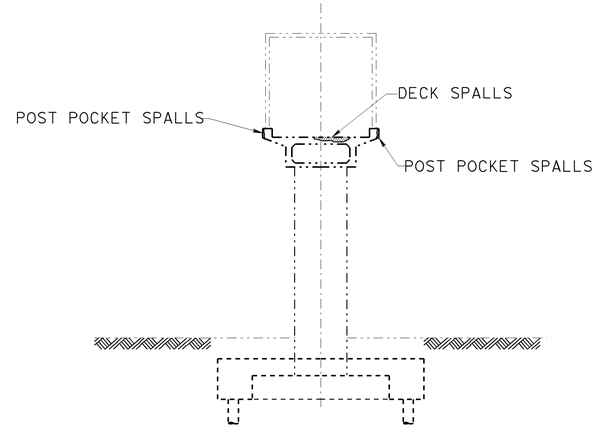
Indicates direction of traffic.

Indicates limits of repair spalled surface area.

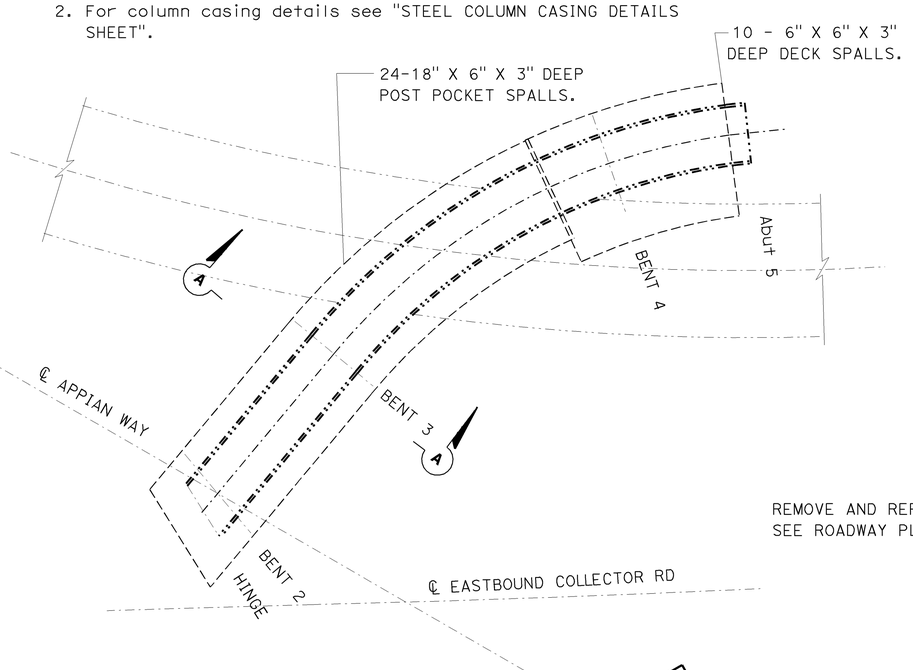
BXCX — Indicates location of column spalls and place steel casing.

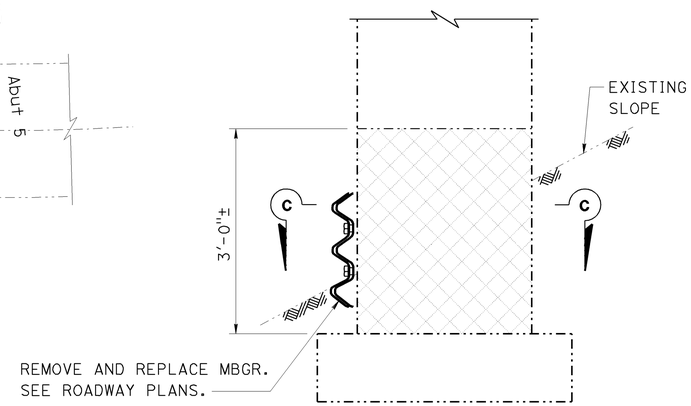
NOTE:

1. For deck damage repair detail and spall repair detail, see "Miscellaneous details No. 2" sheet.
2. For column casing details see "STEEL COLUMN CASING DETAILS SHEET".

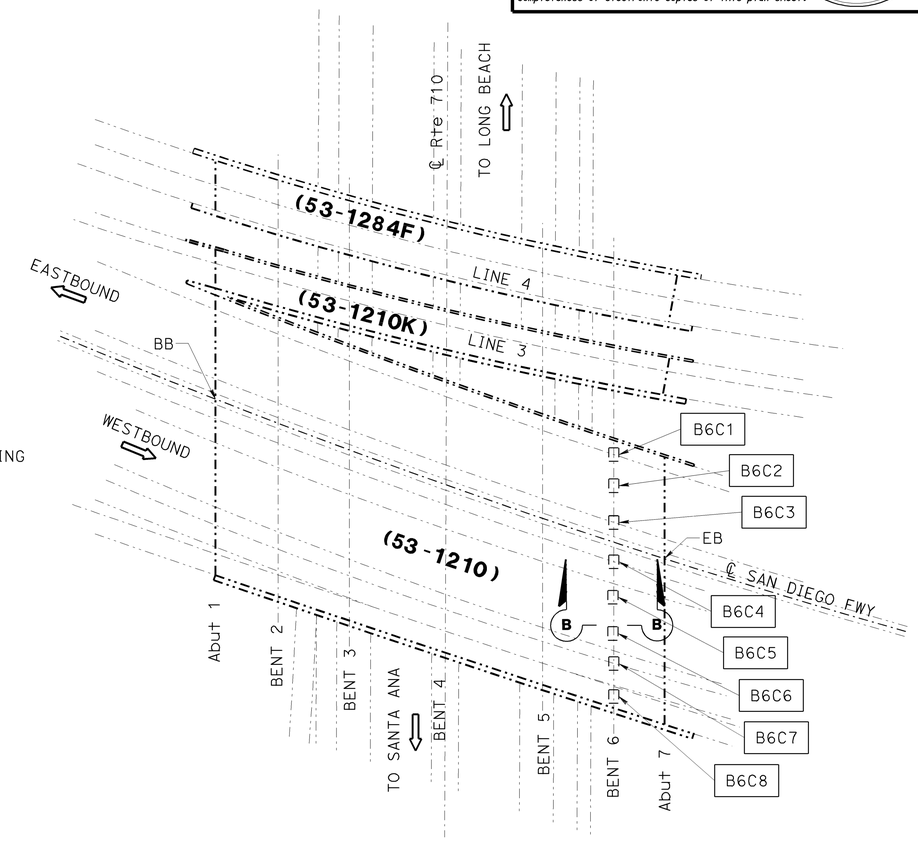


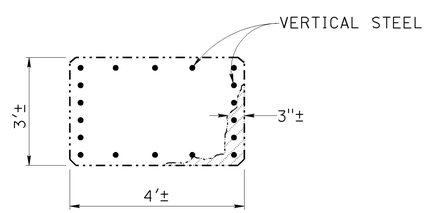
SECTION A-A
No Scale





BENT 6
SECTION B-B
No Scale





SECTION C-C
No Scale

BIXBY POC RAMP

Br No. 53-2707, Rte 405, PM R6.98
Scale 1"=20'

BIXBY POC RAMP #53-2707

QUANTITIES

RAPID SETTING CONCRETE (PATCH)	1 CF
REPAIR SPALLED SURFACE AREA	18 SQFT
REMOVE UNSOUND CONCRETE	1 CF

ROUTE 405/710 SEPARATION

Br No. 53-1210, Rte 405, PM 7.57
Scale 1"=40'

ROUTE 405/710 SEPARATION #53-1210

QUANTITIES

REPAIR SPALLED SURFACE AREA	340 SQFT
STRUCTURE EXCAVATION (BRIDGE)	41 CY
STRUCTURE BACKFILL (BRIDGE)	41 CY
ASPHALT MEMBRANE WATERPROOFING	1,500 SQFT
COLUMN CASING	8,000 LB

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Gerald Joo	LAYOUT	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran	SPECIFICATIONS	James Choi	PLANS AND SPECS COMPARED James Choi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Various

ROUTES 405 & 710 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-15-13 01-16-13

SHEET 06 OF 17

FILE => 07-1w3101-a-gp06.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	32	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

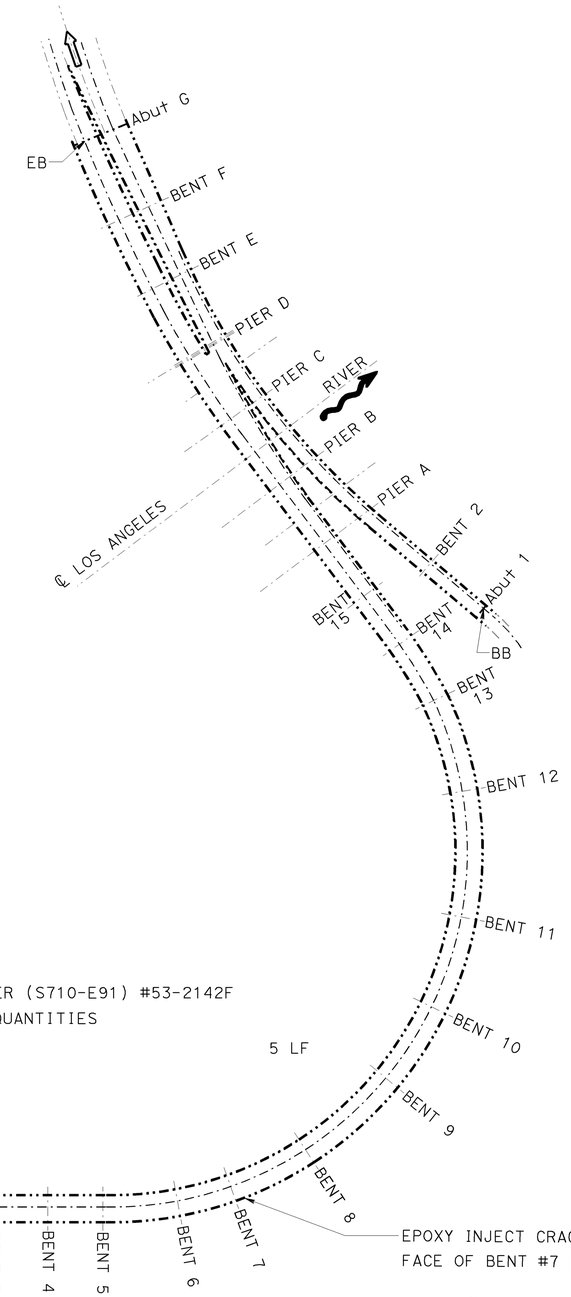
REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

LEGEND:

Indicates existing.

Indicates direction of traffic.



LOS ANGELES RIVER (S710-E91) #53-2142F

QUANTITIES

INJECT CRACK (EPOXY) 5 LF

LOS ANGELES RIVER (S710-E91)

Br No. 53-2142F, Rte 710, PM 13.03

No Scale

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		
LAYOUT	BY Clayton Tom	CHECKED Gerald Joo	
SPECIFICATIONS	BY James Choi	PLANS AND SPECS COMPARED James Choi	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-25-13 01-16-13

SHEET 07 OF 17

FILE => 07-1w3101-a-gp07.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	33	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

LEGEND:

Indicates existing.

Indicates direction of traffic.

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

Indicates limits of remove existing approach and place new Structural Concrete, Approach Slab (Type R).

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

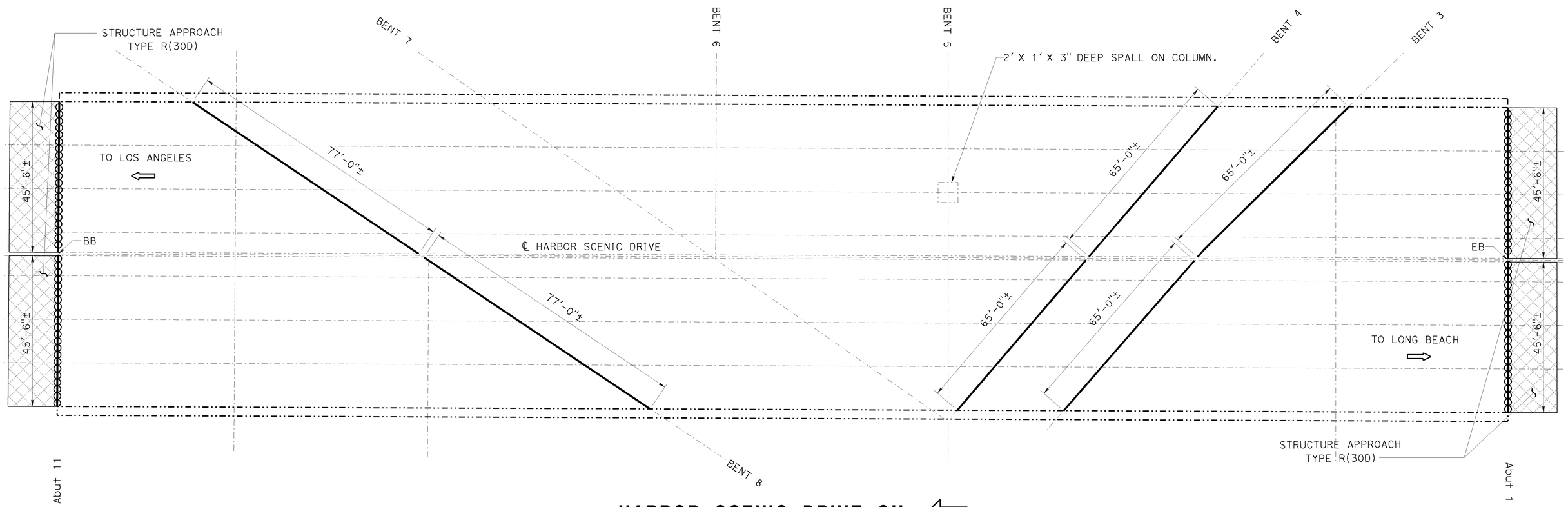
NOTE:

1. For clean expansion joint and joint seal details, see "Miscellaneous Details No.1" sheet.

HARBOR SCENIC DRIVE OH #53-2934

QUANTITIES

STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	250 CY
PAVING NOTCH EXTENSION	7 CF
CLEAN EXPANSION JOINT	596 LF
JOINT SEAL (MR 1½")	596 LF



NOTE:
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HARBOR SCENIC DRIVE OH

Br No. 53-2934, Rte 710, PM M5.95
No Scale

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT — BY Clayton Tom — CHECKED Gerald Joo
SPECIFICATIONS — BY James Choi — PLANS AND SPECS COMPARED CHECKED James Choi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-08-12 06-01-12 01-25-13 01-16-13 — SHEET 08 OF 17

FILE => 07-1w3101-a-gp08.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	34	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

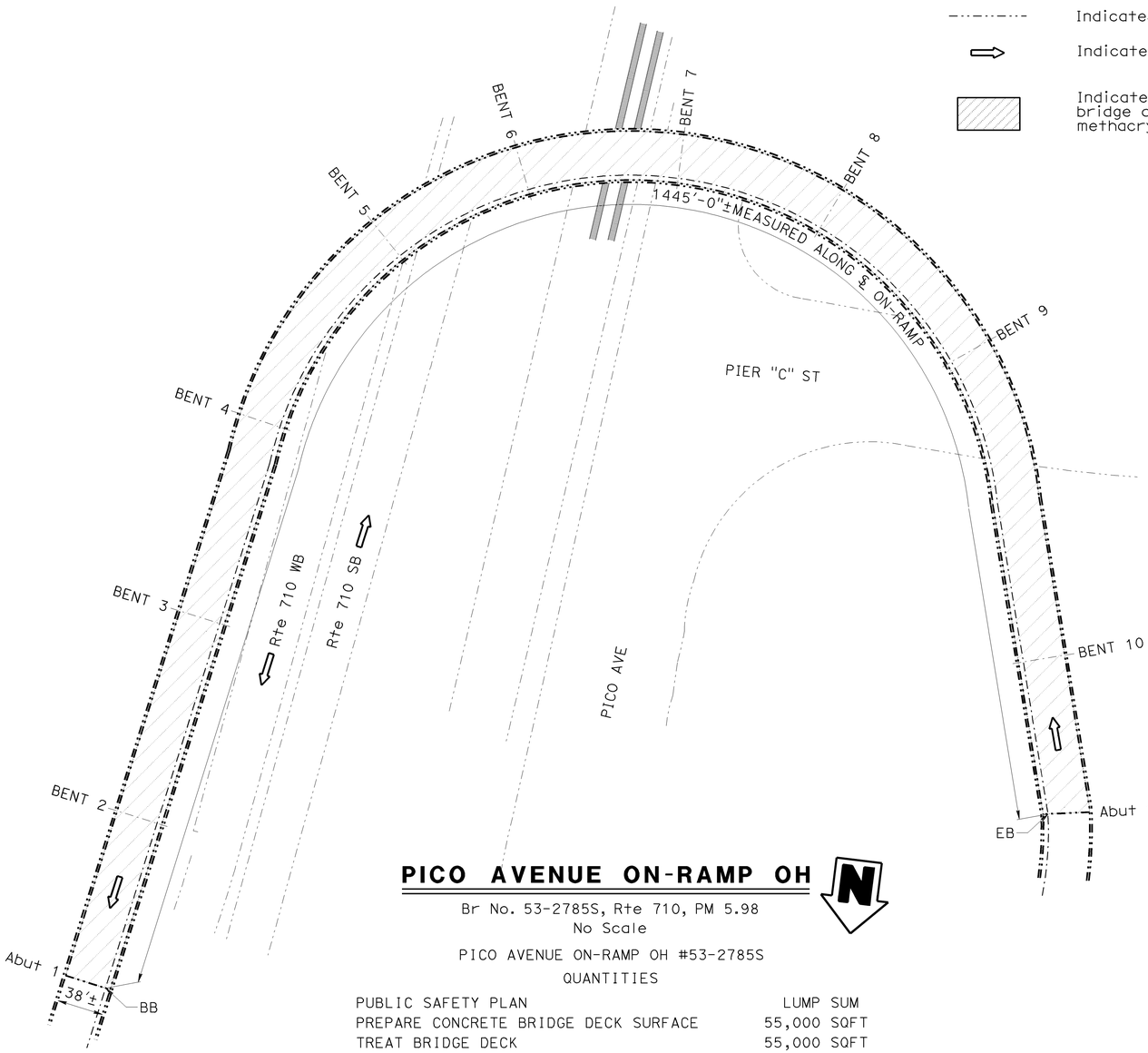
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND:

Indicates existing.

Indicates direction of traffic.

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



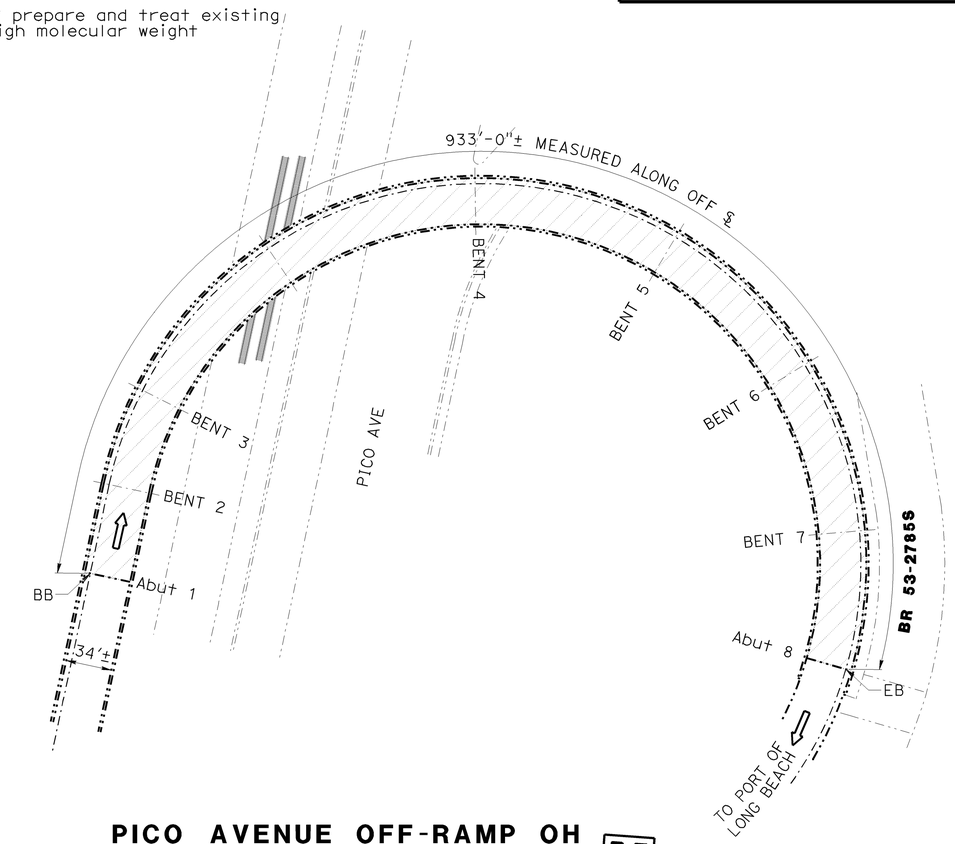
PICO AVENUE ON-RAMP OH

Br No. 53-2785S, Rte 710, PM 5.98
No Scale

PICO AVENUE ON-RAMP OH #53-2785S

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	55,000 SQFT
TREAT BRIDGE DECK	55,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	700 GAL



PICO AVENUE OFF-RAMP OH

Br No. 53-2786K, Rte 710, PM 6.00
Scale 1"=50'

PICO AVENUE OFF-RAMP OH #53-2786K

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	31,800 SQFT
TREAT BRIDGE DECK	31,800 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	400 GAL

NOTE:
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TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Gerald Joo	LAYOUT	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran	SPECIFICATIONS	James Choi	PLANS AND SPECS COMPARED James Choi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-06-12 06-01-12 01-15-13 01-16-13

SHEET 09 OF 17

FILE => 07-1w3101-a-gp09.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	35	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

LEGEND:

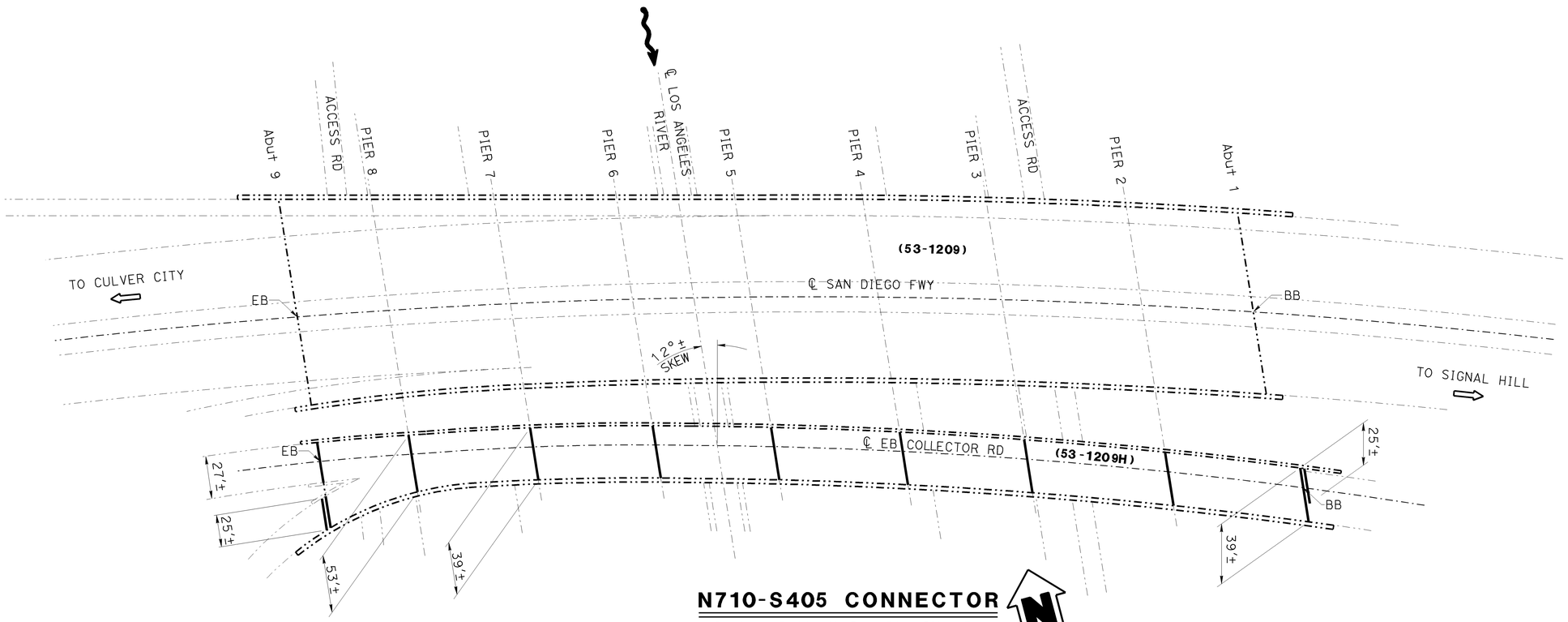
Indicates existing.

Indicates direction of traffic.

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

NOTE:

1. For clean expansion joint and joint seal details, see "Miscellaneous Details No.1" sheet.



N710-S405 CONNECTOR

Br No. 53-1209H, Rte 710, PM 9.30
Scale 1"=40'

N710-S405 CONNECTOR #53-1209H
QUANTITIES

CLEAN EXPANSION JOINT	428 LF
JOINT SEAL (MR 1")	428 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Hong Tien Tran	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Gerald Joo	LAYOUT	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran	SPECIFICATIONS	James Choi	James Choi (PLANS AND SPECS COMPARED)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
GENERAL PLAN NO. 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-15-13 01-16-13

SHEET 10 OF 17

FILE => 07-1w3101-a-gp10.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	36	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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LEGEND:

Indicates existing.

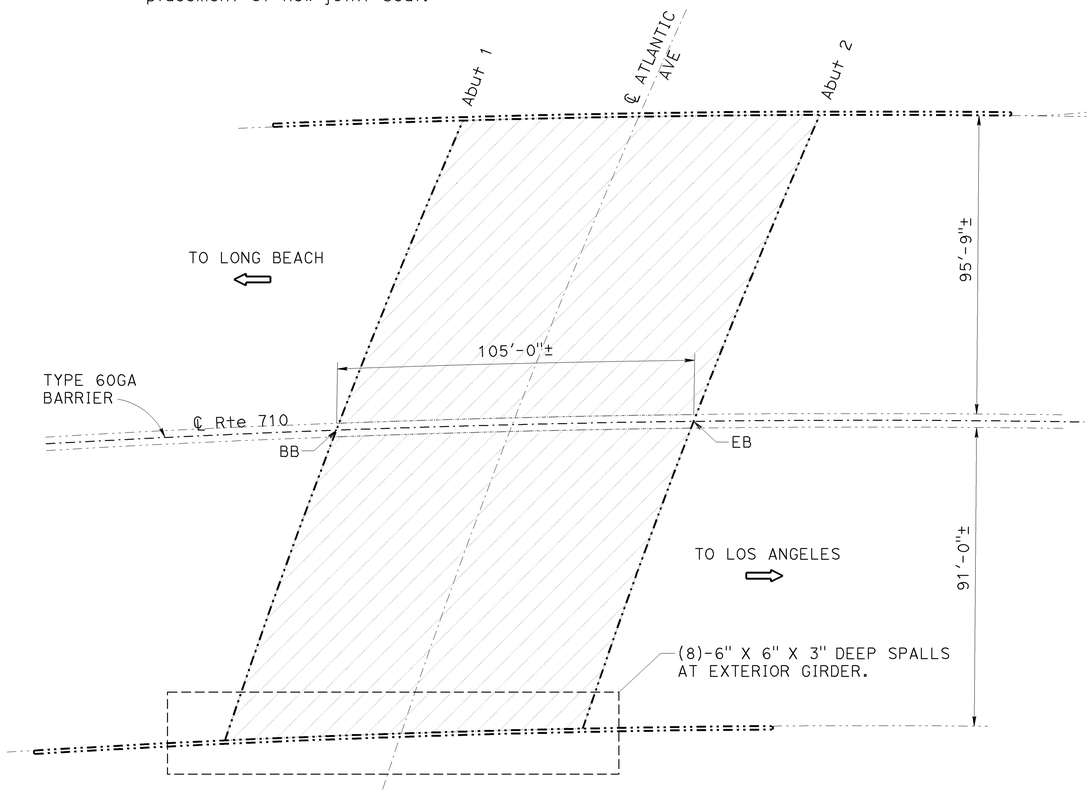
Indicates direction of traffic.

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

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

NOTE:

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

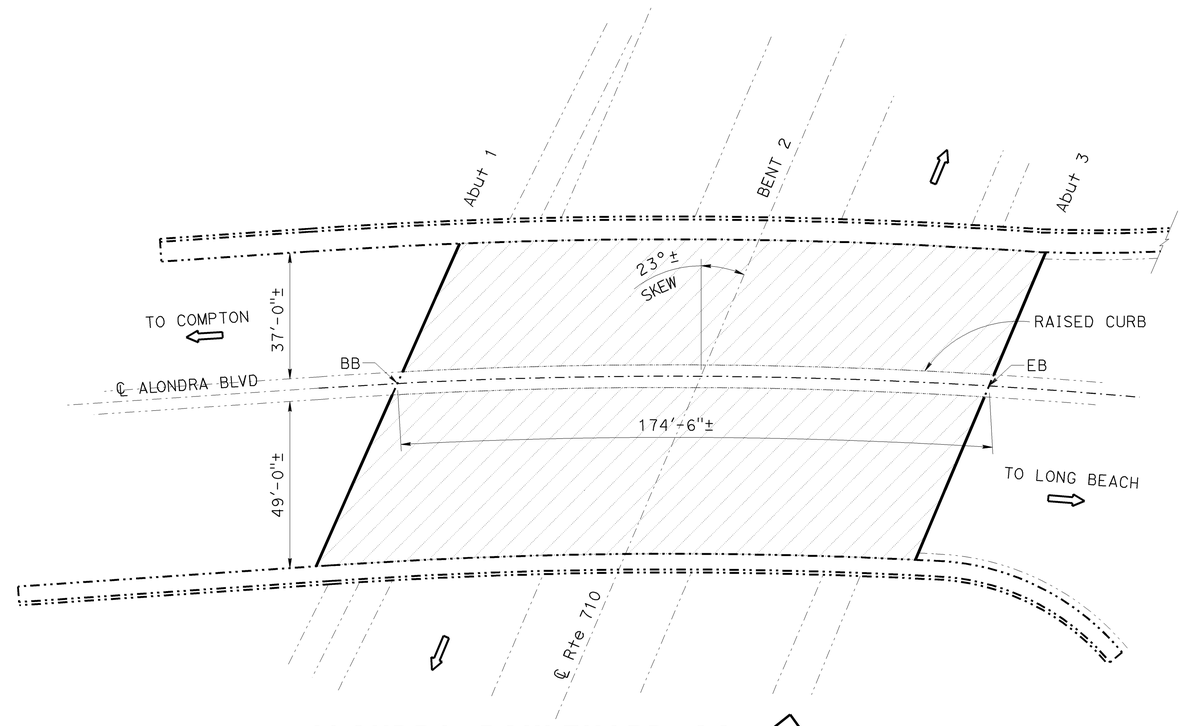


ATLANTIC AVENUE UC

Br No. 53-0821, Rte 710, PM 13.62
Scale 1"=20'

ATLANTIC AVENUE UC #53-0821
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
REPAIR SPALLED SURFACE AREA	2 SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	19,700 SQFT
TREAT BRIDGE DECK	19,700 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	250 GAL



ALONDRA BOULEVARD OC

Br No. 53-0822, Rte 710, PM 13.95
Scale 1"=20'

ALONDRA BOULEVARD OC #53-0822
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	15,000 SQFT
TREAT BRIDGE DECK	15,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	190 GAL
CLEAN EXPANSION JOINT	188 LF
JOINT SEAL (MR 1")	188 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		
LAYOUT	BY Clayton Tom	CHECKED Gerald Joo	
SPECIFICATIONS	BY James Choi	PLANS AND SPECS COMPARED James Choi	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Various

ROUTES 405 & 710 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-15-13 01-16-13

SHEET 11 OF 17

FILE => 07-1w3101-a-gp11.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	37	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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

JOINT SEAL TABLE

BRIDGE NAME	BRIDGE NUMBER	JOINT SEAL LOCATION		MINIMUM "MR" (INCHES)	APPROX JOINT LENGTH (FT)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)
LOS CERRITOS CHANNEL	53-1188	Abut 1	PN	1	168	NO	12
		Abut 6	PN	1	168	NO	12
ALONDRA BLVD OC	53-0822	Abut 1	BW	1	94	YES	12
		Abut 3	BW	1	94	YES	12
STEARNS ST UC	53-1189	Abut 1	PN	1	108	NO	12
		Abut 1	BW	1	126	YES	12
		Abut 4	PN	1	119	NO	12
		Abut 4	BW	1	137	YES	12
BELLFLOWER UC	53-1194	Abut 1	PN	1	97	NO	12
		Abut 1	BW	1	97	YES	12
		HINGE 1	-	1	97	YES	12
		HINGE 2	-	1	68	YES	12
		Abut 10	PN	1	12	NO	12
		Abut 10	BW	1	68	YES	12
ATLANTIC AVENUE OC	53-1204	Abut 1	PN	1	100	NO	12
		Abut 1	BW	1	100	YES	12
		Abut 5	PN	1	100	NO	12
		Abut 5	BW	1	100	YES	12
BIXBY OH	53-1208	Abut 1	PN	1 1/2	175	NO	12
		-	DJ	AL	551	NO	12
		Abut 6	PN	1 1/2	190	NO	12
HARBOR SCENIC DRIVE OH	53-2934	Abut 1	PN	1 1/2	91	NO	12
		Abut 3	DJ	1 1/2	130	NO	12
		Abut 4	DJ	1 1/2	130	NO	12
		Abut 8	DJ	1 1/2	154	NO	12
		Abut 11	PN	1 1/2	91	NO	12
N710-S405 CONNECTOR	53-1209H	Abut 1	PN	1	25	NO	12
		Abut 1	BW	1	39	YES	12
		PIER 2	DJ	1	39	NO	12
		PIER 2	DJ	1	39	NO	12
		PIER 3	DJ	1	39	NO	12
		PIER 4	DJ	1	39	NO	12
		PIER 5	DJ	1	39	NO	12
		PIER 7	DJ	1	39	NO	12
		PIER 8	DJ	1	53	NO	12
		Abut 9	PN	1	25	NO	12
		Abut 9	BW	1	52	YES	12

NOTES:

PN = PAVING NOTCH
BW = BACKWALL
DJ = DECK JOINT

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.

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
MISCELANEOUS 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-18-13 01-16-12

SHEET 12 OF 17

FILE => 07-1w3101-u-miscdt01.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:04

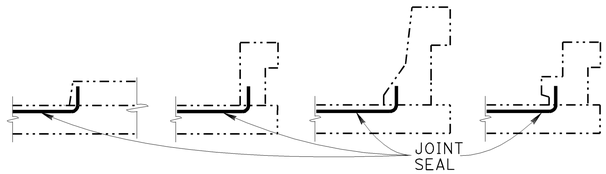
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	38	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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



BARRIER RAIL

JOINT SEAL AT LOW SIDE OF DECK

Note: Details shown for illustration purposes only.

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

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:

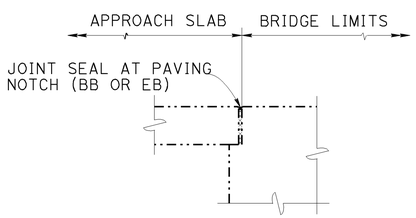
1) Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.

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.

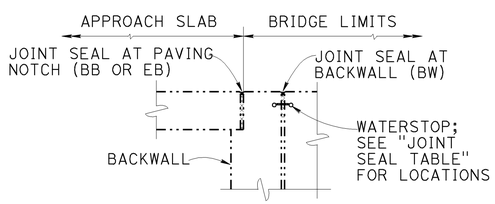
3) W1 shall be the smaller of the values determined as follows:
   A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
   B) The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3.0 PSI.

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.

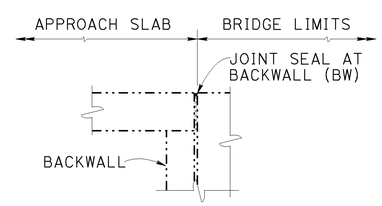
For details not shown see Standard Plan B6-21.



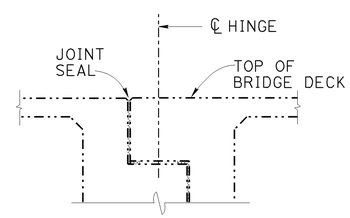
DIAPHRAGM ABUTMENT



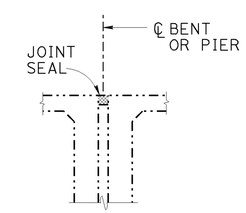
ABUTMENT WITH BACKWALL AND PAVING NOTCH



ABUTMENT WITH BACKWALL



HINGE



BENT OR PIER

JOINT SEAL LOCATION

NO SCALE

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

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.: Various
POST MILE: Varies

ROUTES 405 & 710 BRIDGES
MISCELANEOUS 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-01-12 01-15-13 01-16-13

SHEET 13 OF 17

FILE => 07-1w3101-u-miscdt02.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:04

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	39	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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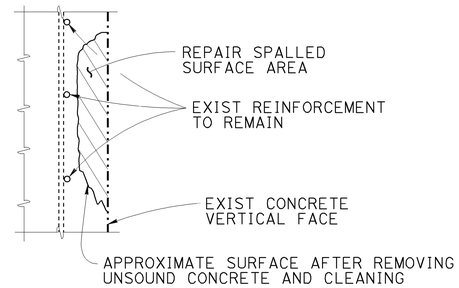
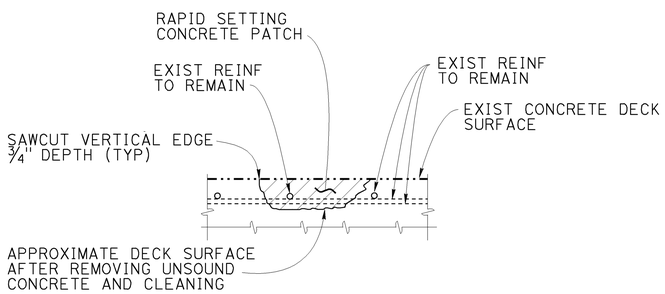
DECK REPAIR NOTES:

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 shall 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.

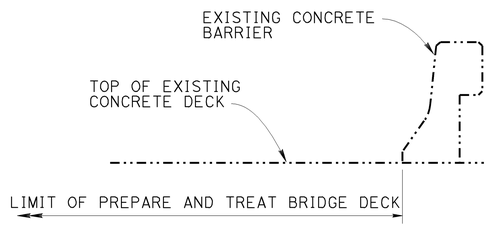


SPALL REPAIR DETAIL

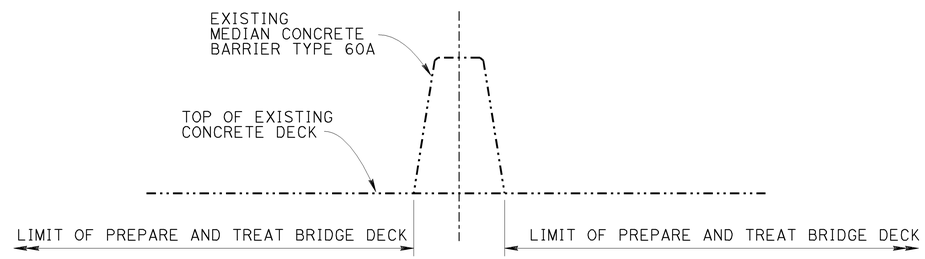


DECK DAMAGE REPAIR DETAIL

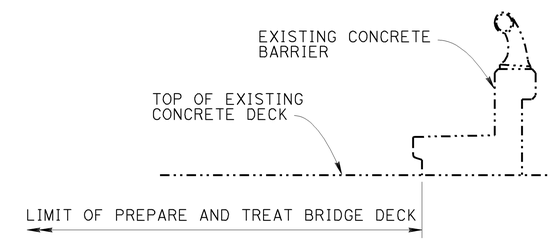
Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.



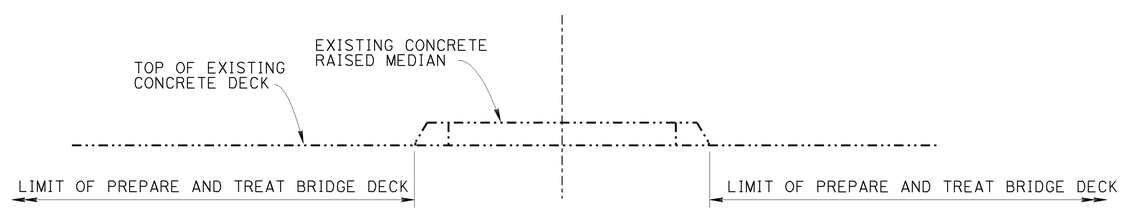
EOD BARRIER



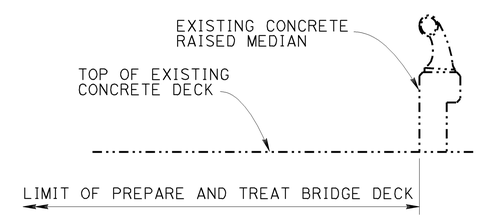
MEDIAN BARRIER



SIDEWALK BARRIER TYPE 2



RAISED MEDIAN



SIDEWALK BARRIER TYPE 1

NOTE:
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TYPICAL LIMITS OF DECK WORK

NO SCALE

	BY	CHECKED
DESIGN	Gerald Joo	Hong Tien Tran
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Hong Tien Tran

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
MISCELANEOUS 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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-01-12 06-01-12 01-15-13 01-16-13

SHEET 14 OF 17

FILE => 07-1w3101-u-miscdt03.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	40	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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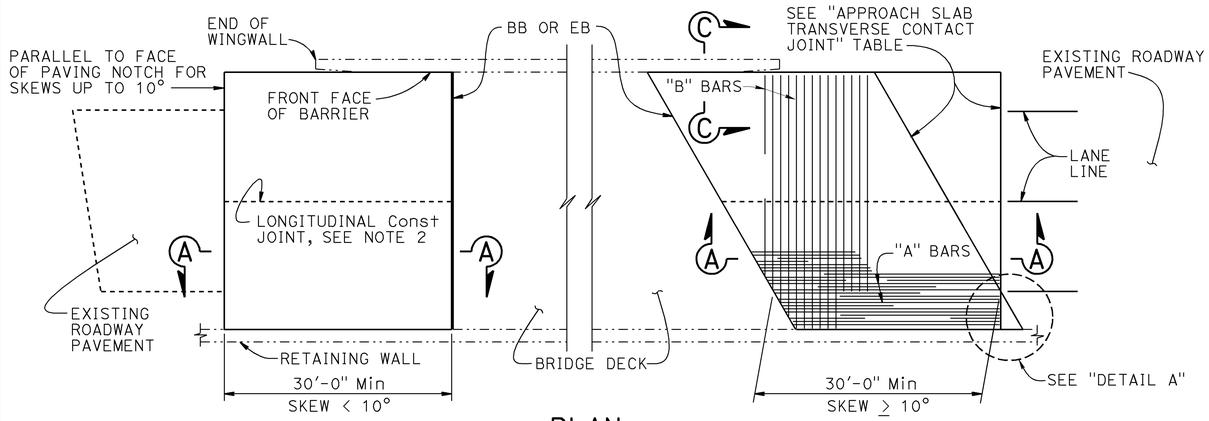
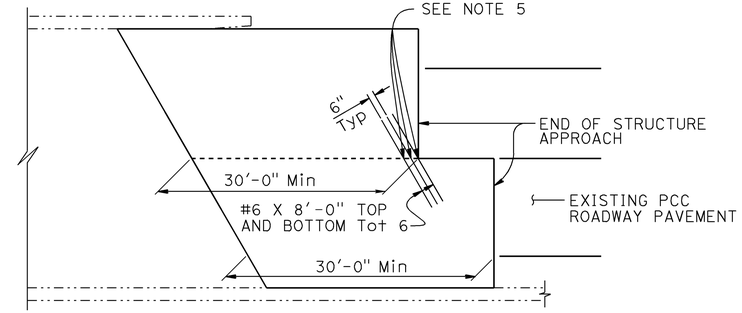
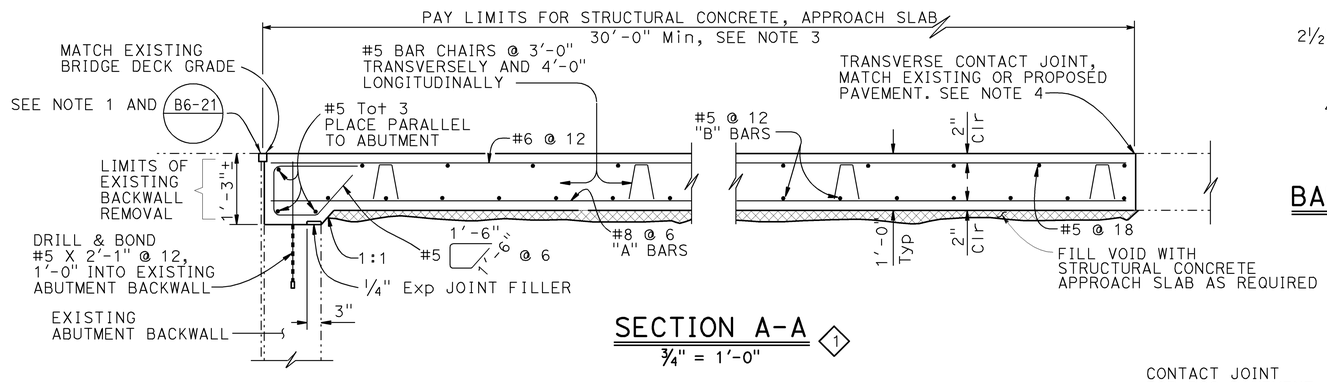


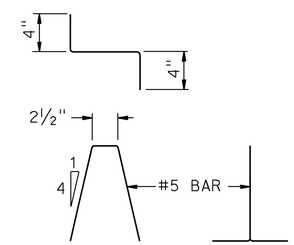
PLAN
1" = 10'



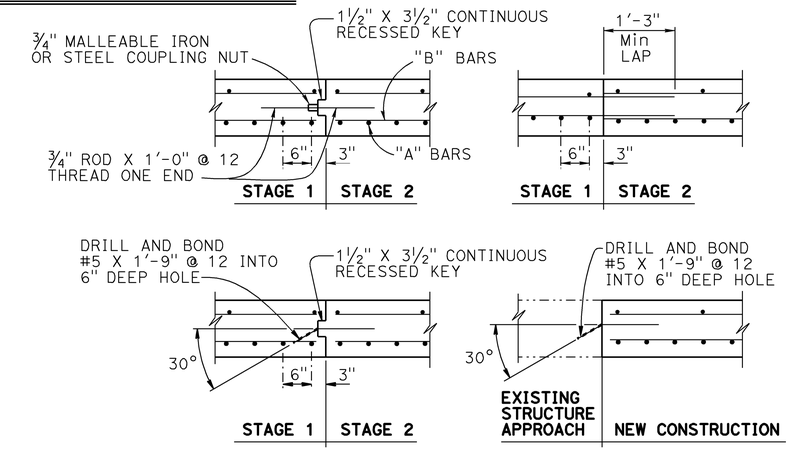
STRUCTURE APPROACH - END STAGGER DETAIL
NO SCALE



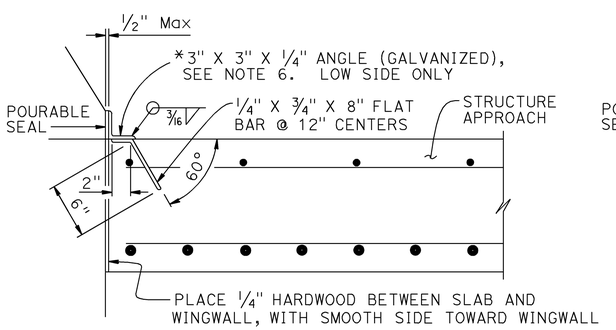
SECTION A-A (1)
3/4" = 1'-0"



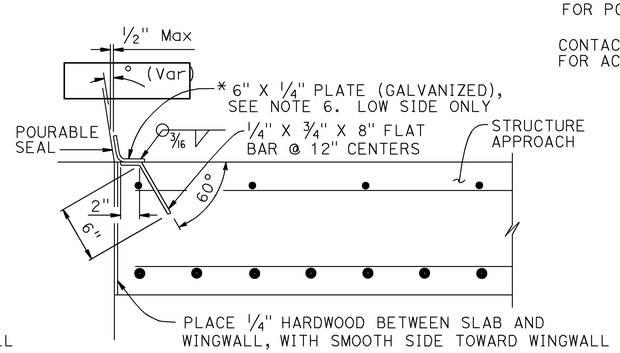
BAR CHAIR DETAIL
1 1/2" = 1'-0"



LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES
3/4" = 1'-0"

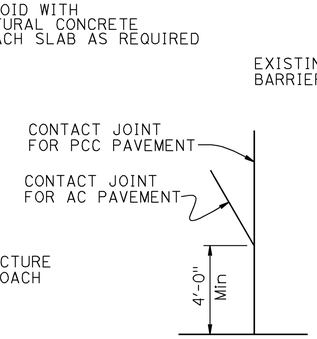


*(TO BE USED WITH CONCRETE BARRIER WITH VERTICAL FACE)

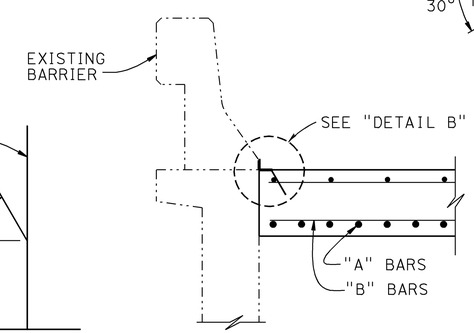


*(TO BE USED WITH CONCRETE BARRIER WITH SLOPING FACE)

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



DETAIL A
No Scale



SECTION C-C
3/4" = 1'-0"

NOTES:

1. Sealed joint,for MR see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required
2. Longitudinal construction joints, when permitted by Engineer, shall be located on lane lines
3. Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint
4. For transverse contact joint with new PCC paving, refer to Standard Plan P10
5. Couplers are required for stage construction
6. End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable

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 PN
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

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

REVISED STANDARD DRAWING

FILE NO. xs3-130

APPROVAL DATE July 2011

(1) REVISED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. Various
POST MILE Varies

SPECIAL DETAILS
ROUTES 405 & 710 BRIDGES
STRUCTURE APPROACH TYPE R(30S)

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: X
PROJECT NUMBER & PHASE: 0700021234 1
CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-11-12 Revised

SHEET 15 OF 17

FILE => 07-1w3101-v-sa.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	41	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

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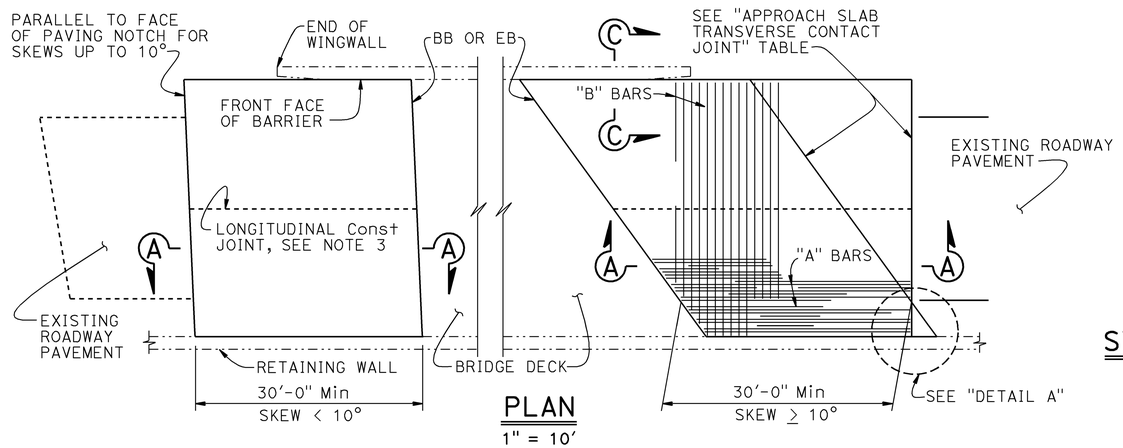
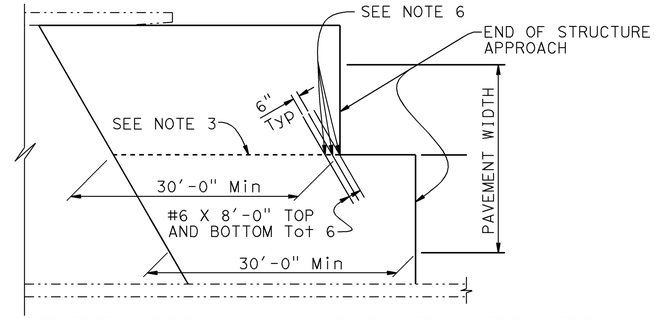
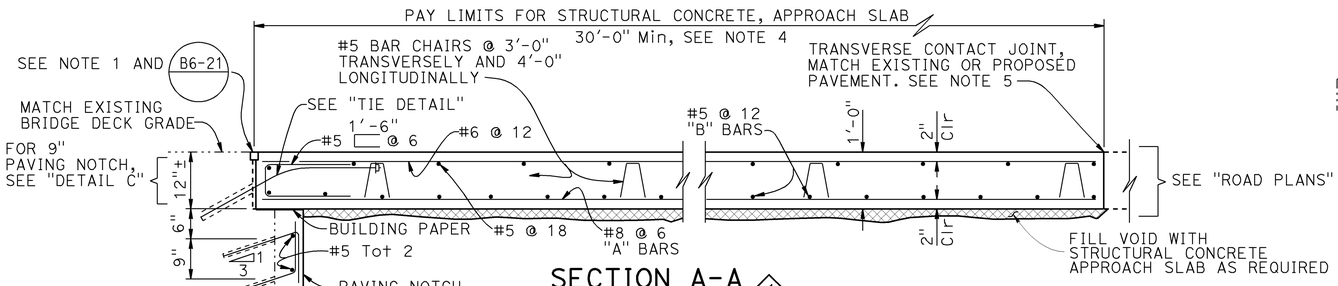


PLAN
1" = 10'

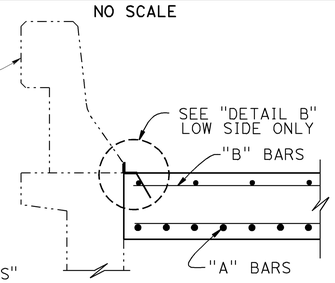


STRUCTURE APPROACH - END STAGGER DETAIL
NO SCALE

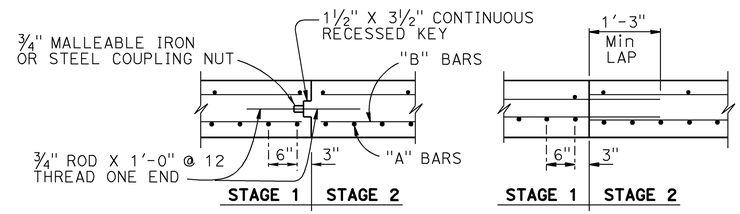
APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT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



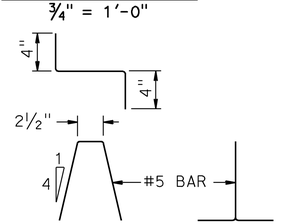
SECTION A-A ⟨1⟩
¾" = 1'-0"



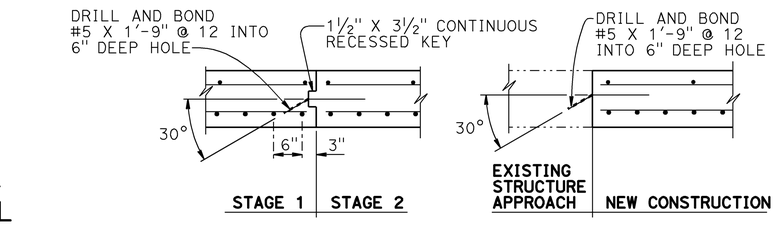
SECTION C-C
¾" = 1'-0"



DETAIL C
¾" = 1'-0"

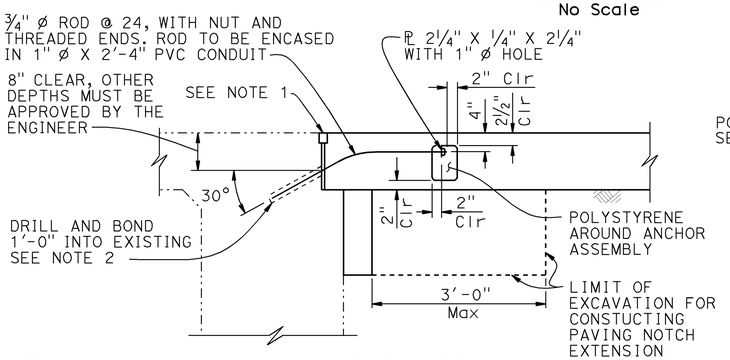


BAR CHAIR DETAIL
1½" = 1'-0"



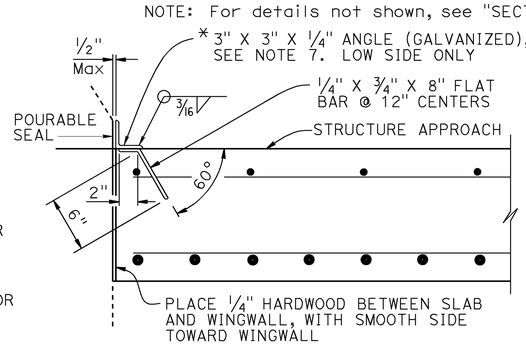
LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES
¾" = 1'-0"

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



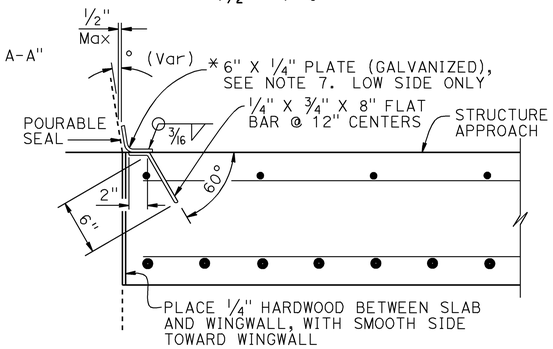
TIE DETAIL
¾" = 1'-0"

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



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

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



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

DETAIL A
No Scale

DETAIL B
1½" = 1'-0"

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
ROUTES 405 & 710 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: 0700021234 1
CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-11-12 Revised

SHEET 16 OF 17

FILE => 07-1w3101-v-sa01.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:02

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	405,710	0.8/7.6, 5.9/14.0	42	42

REGISTERED CIVIL ENGINEER 01-16-13 DATE

3-11-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER GERALD D. JOO No. C65380 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA

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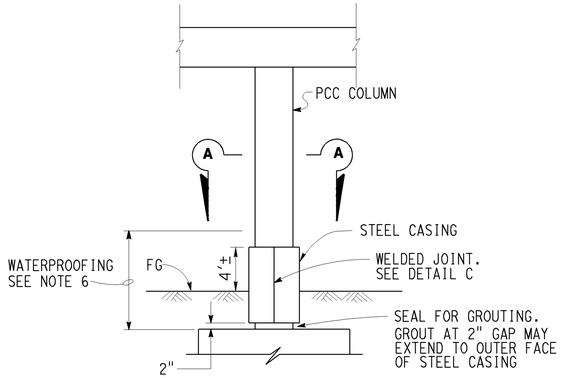
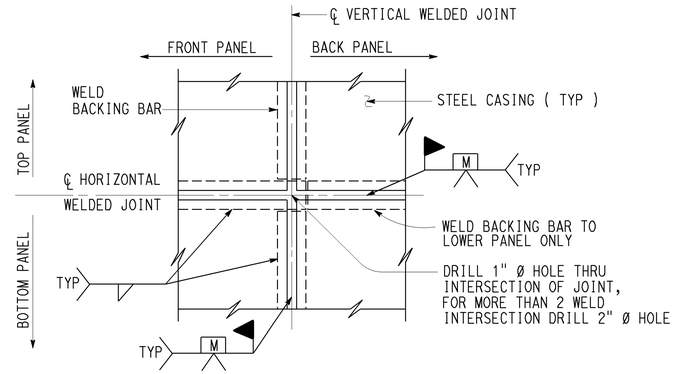


TYPICAL COLUMN

No Scale



(TWO WELDED INTERSECTION JOINT)

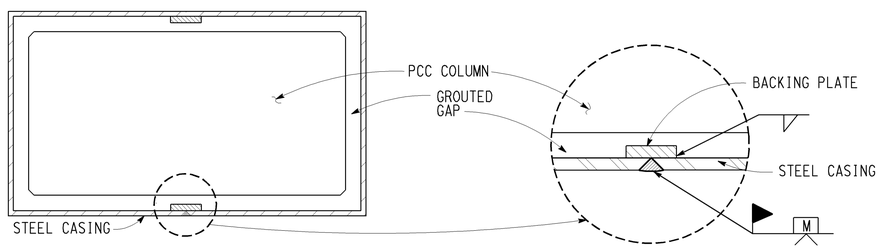
DETAIL C

LEGEND:

Indicates existing.

Indicates limits of Structure Excavation (Bridge).

Indicates limits of Structure Backfill (Bridge).

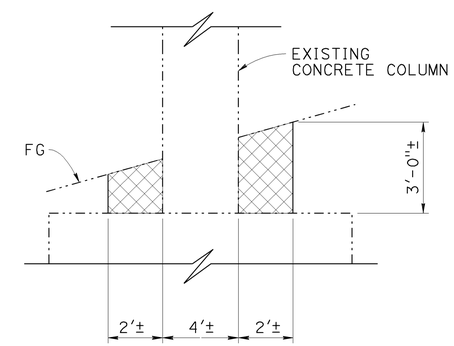


SECTION A-A
RECTANGULAR COLUMN

No Scale

NOTES:

1) For varying thickness steel casing inside surface to remain flush. Minimum clearance from PCC column to casing shall be maintained.
2) Appropriate injection nozzles to be provided on casing, but removed and ground flush following completion of grouting operation.
3) All voids between steel casing and PCC column (Class F) to be filled with grout.
4) Location and number of vertical and horizontal welds to be determined by the Contractor, and subject to the approval of the Engineer. The location of casing welds are for illustration. No skip welds allowed.
5) Steel casing to be ¼" thick minimum. Backing plates to be the same thickness as casing up to maximum ½" thick.
6) Waterproof steel casing to 10' above finished grade.
7) Steel Fy = 60 ksi



LIMITS OF STRUCTURE EXCAVATION & BACKFILL

SEQUENCE OF REPAIR COLUMNS SPALLED SURFACE AREA

GROUP NO.	COLUMN LOCATION
1	B6C1, B6C5, B6C8
2	B6C2, B6C4, B6C7
3	B6C3, B6C6

NOTES:

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

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.

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 405 & 710 BRIDGES
STEEL COLUMN CASINGS DETAILS

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: 0700021234 1 CONTRACT NO.: 07-1W3101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-02-12 06-15-12 01-15-13 01-16-13

SHEET 17 OF 17

FILE => 07-1w3101-v-scc.dgn

USERNAME => s117283 DATE PLOTTED => 17-JAN-2013 TIME PLOTTED => 08:01