Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	1	38

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN LOS ANGELES COUNTY
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	LOCATIONS OF CONSTRUCTION
3-4	CONSTRUCTION AREA SIGNS
5-11	TRAFFIC HANDLING DETAILS
12	PAVEMENT DELINEATION DETAILS
13-16	PAVEMENT DELINEATION QUANTITIES
17-20	TRAFFIC CONTROL SYSTEM
21-23	REVISED STANDARD PLANS

STRUCTURE PLANS

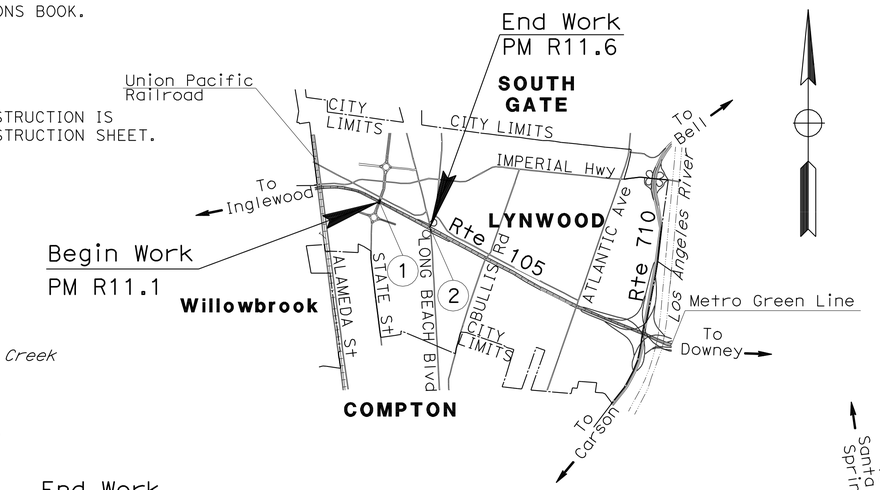
24-38	ROUTE 105, 405 & 605 BRIDGES

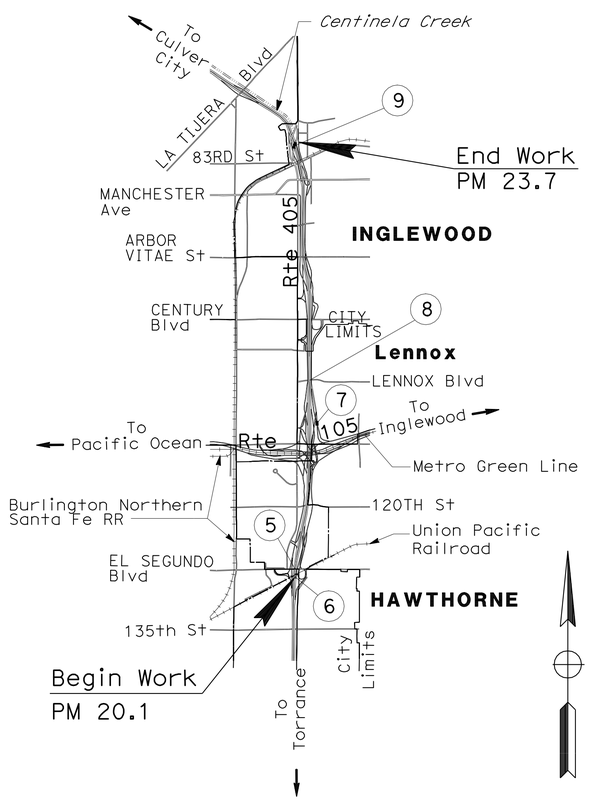
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

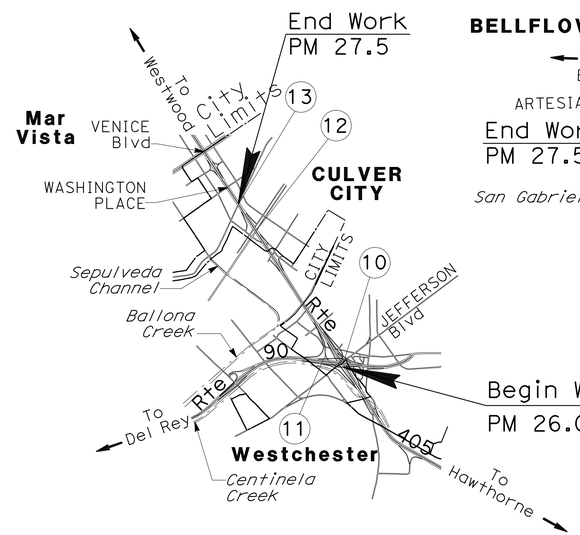
NOTE:

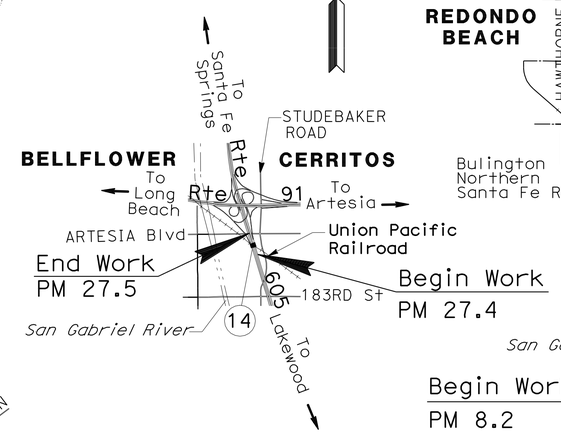
THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

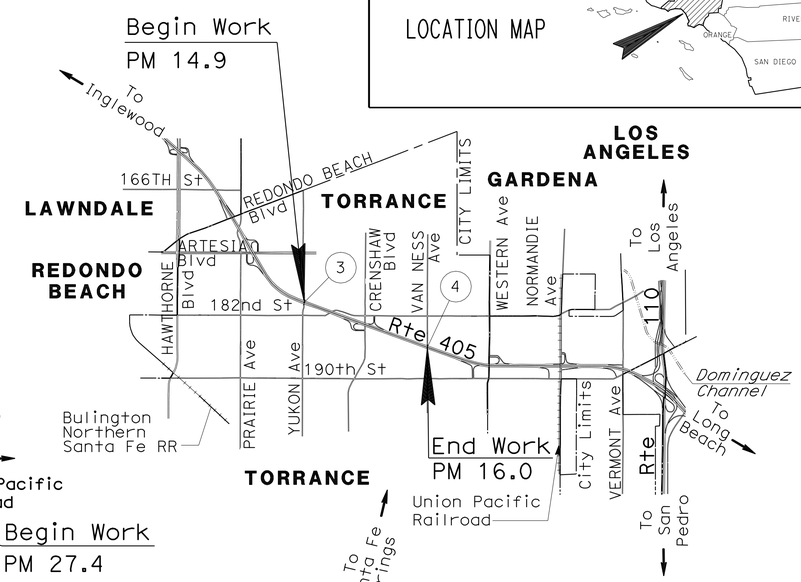
LOCATION MAP

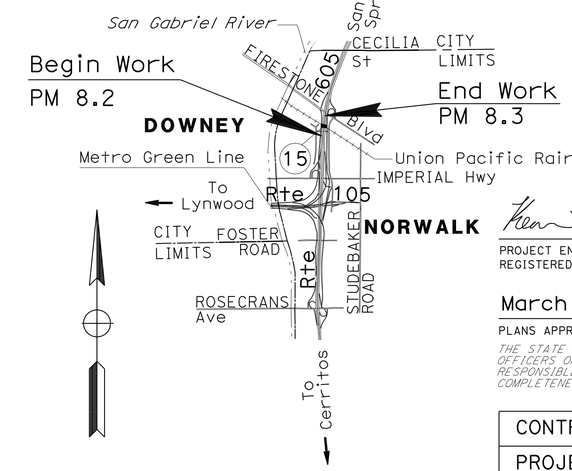












NO SCALE

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

PROJECT MANAGER CHRISTIAN SAM

DESIGN ENGINEER MD MUSA

PROJECT ENGINEER DATE 2-12-13
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

March 25, 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.	07-1W4004
PROJECT ID	0712000053

LAST REVISION 03-25-13 DATE PLOTTED => 27-MAR-2013 TIME PLOTTED => 13:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	2	38

REGISTERED CIVIL ENGINEER 2-12-13 DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 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.

LOCATIONS OF CONSTRUCTION

Loc No.	ROUTE	POST MILE	BRIDGE No.	DESCRIPTION
1	105	R11.10	53-2662	STATE STREET UC
2	105	R11.56	53-2493	LONG BEACH BOULEVARD UC
3	405	14.92	53-1174	VAN NESS AVENUE UC
4	405	15.98	53-1177	YUKON AVENUE UC
5	405	20.16	53-2387K	EL SEGUNDO OH
6	405	20.18	53-1238	129TH STREET OH
7	405	R21.32	53-2434T	IMPERIAL HIGHWAY ON-RAMP OC (CONNECTOR)
8	405	21.74	53-1242	LENNOX BOULEVARD UC
9	405	23.64	53-1249	LA CIENEGA BOULEVARD NB OC
10	405	25.99	53-1838G	N405-W90 CONNECTOR OC
11	405	26.10	53-1974F	S405-W90 CONNECTOR OC
12	405	27.20	53-1259	CULVER BOULEVARD UC
13	405	27.45	53-1260	WASHINGTON BOULEVARD UC
14	605	R4.71	53-1721	DAIRY VALLEY OH
15	605	R8.23	53-1652	HOXIE OH

REVISED BY | DATE REVISED

KEVIN KWAN | MD MUSA

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MD MUSA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LOCATIONS OF CONSTRUCTION

LC-1

LAST REVISION 03-25-13 | DATE PLOTTED => 27-MAR-2013 TIME PLOTTED => 13:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	3	38

REGISTERED CIVIL ENGINEER 2-12-13 DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

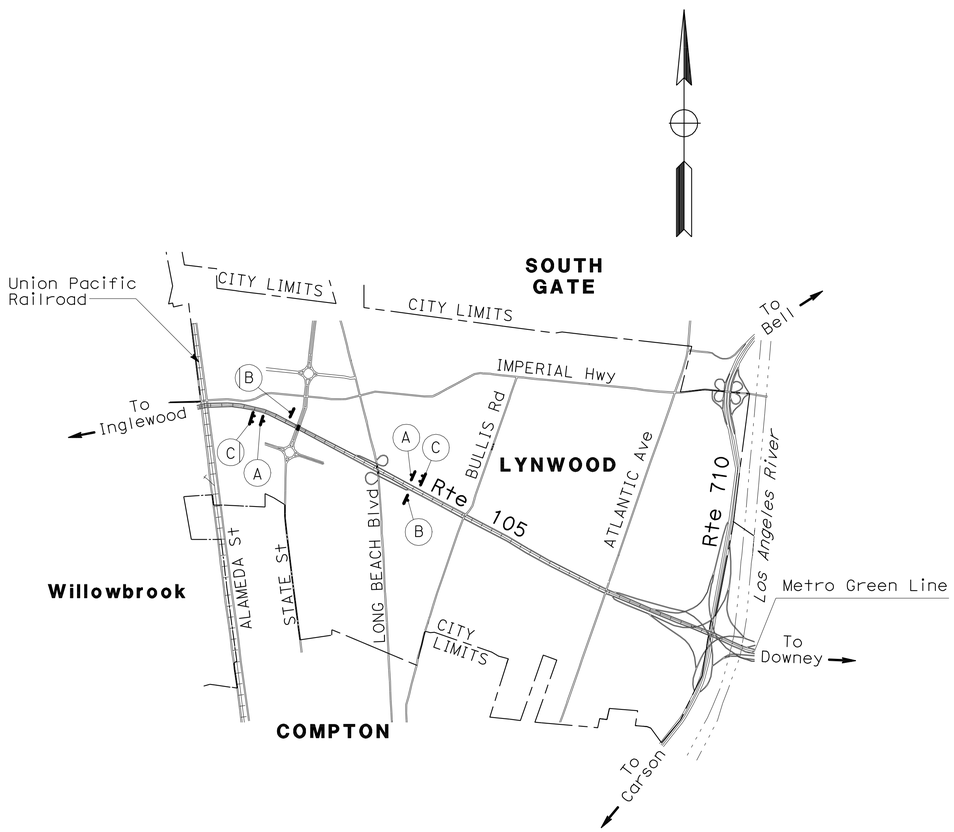
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

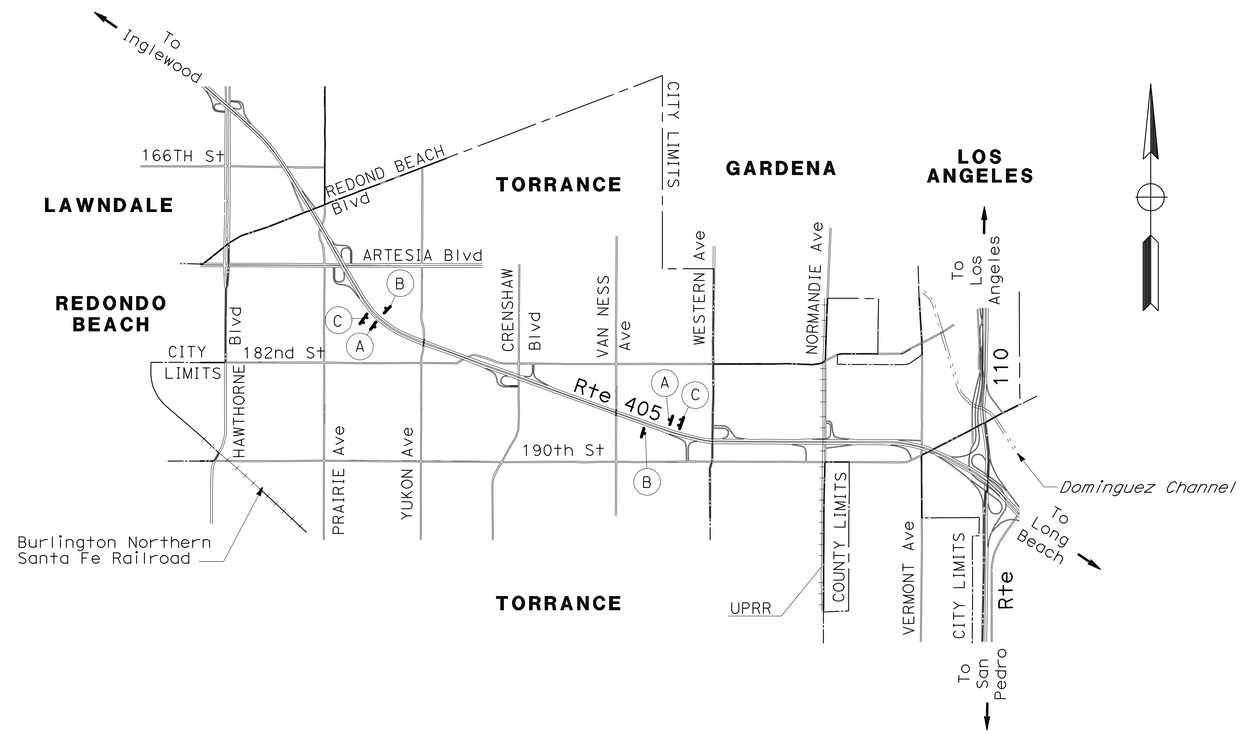
NOTES:

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

CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)

SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1	48" X 48"	ROAD WORK AHEAD	1-6" x 6"	18
B	G20-2	48" X 24"	END ROAD WORK	1-4" x 6"	15
C	C40 (CA)	144" X 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-6" x 6"	13





CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: MD MUSA
CALCULATED-DESIGNED BY: KEVIN KWAN
CHECKED BY: MD MUSA
REVISED BY
DATE REVISED

LAST REVISION 03-25-13
DATE PLOTTED => 27-MAR-2013
TIME PLOTTED => 13:34

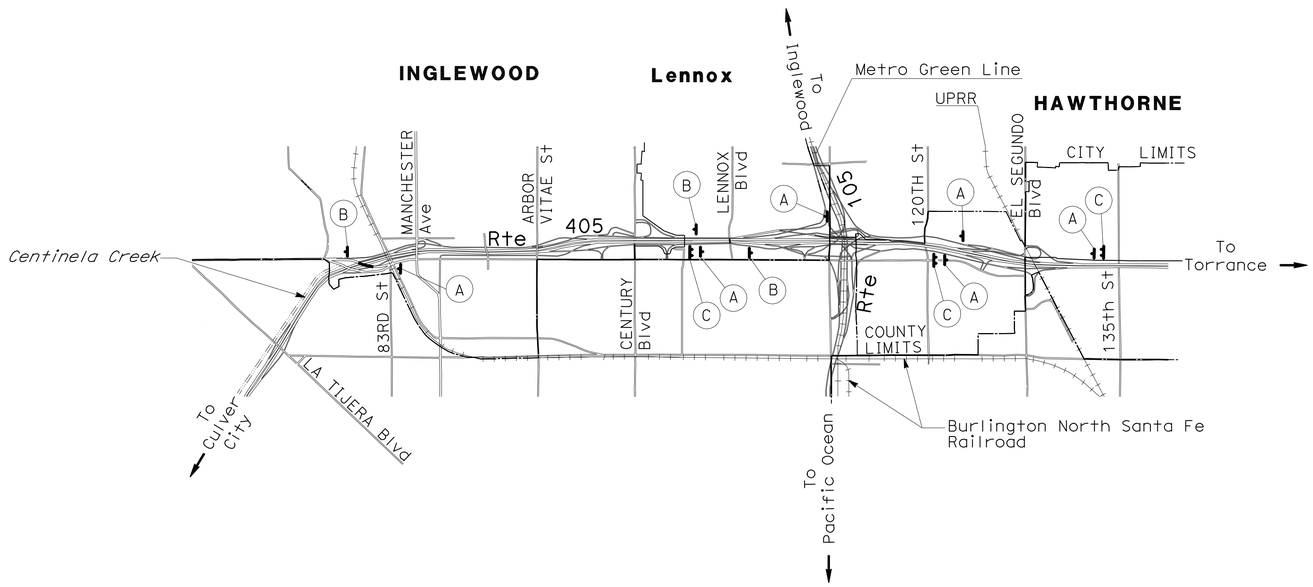
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	4	38

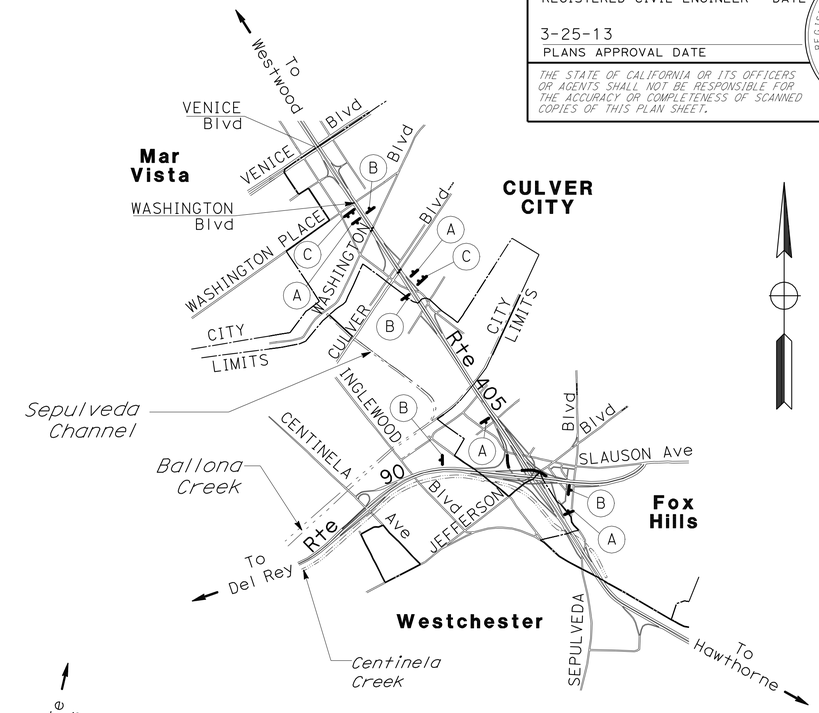
REGISTERED CIVIL ENGINEER 2-12-13 DATE

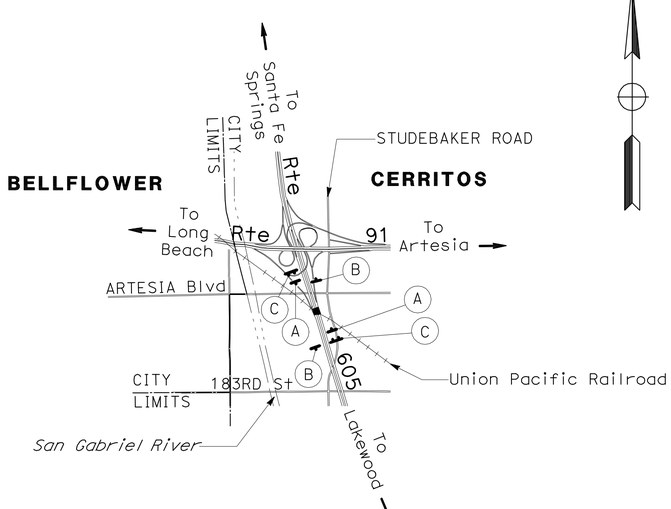
3-25-13
PLANS APPROVAL DATE

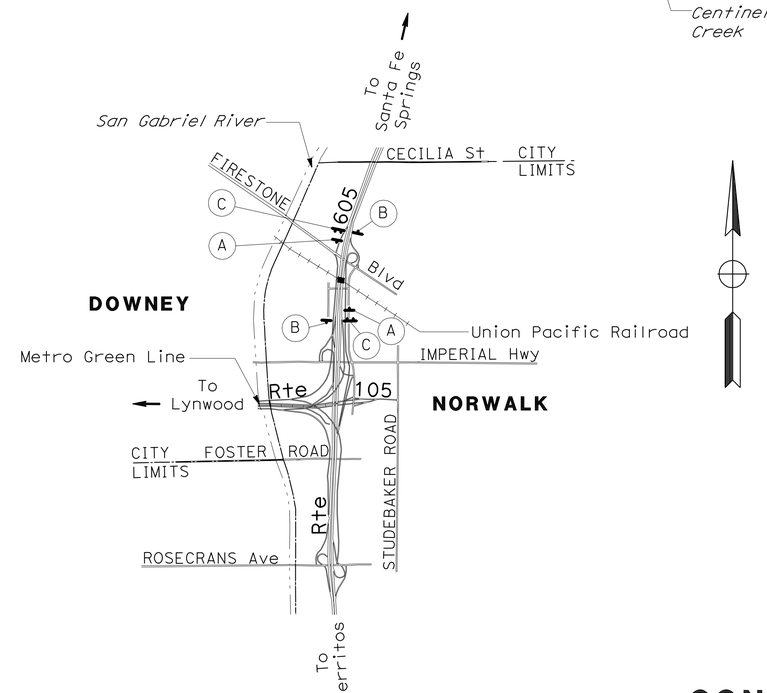
REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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.









CONSTRUCTION AREA SIGNS

NO SCALE

CS-2

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: MD MUSA
CALCULATED-DESIGNED BY: KEVIN KWAN
CHECKED BY: MD MUSA
REVISED BY
DATE REVISED

LAST REVISION 03-25-13
DATE PLOTTED => 27-MAR-2013
TIME PLOTTED => 13:34

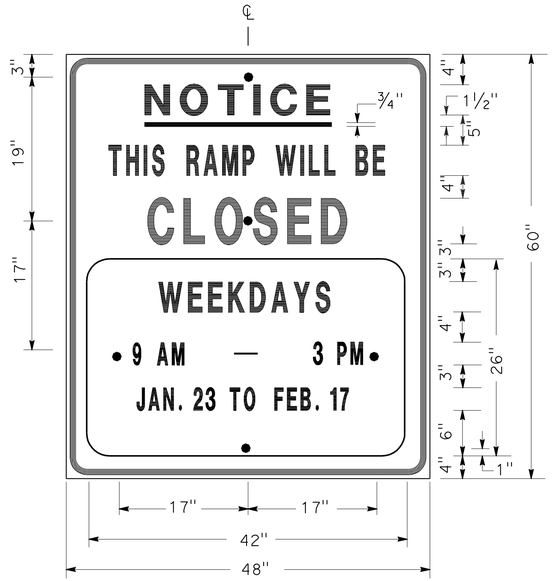
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405, 605	Var	5	38

Duke M Huynh 2-27-13
REGISTERED CIVIL ENGINEER DATE

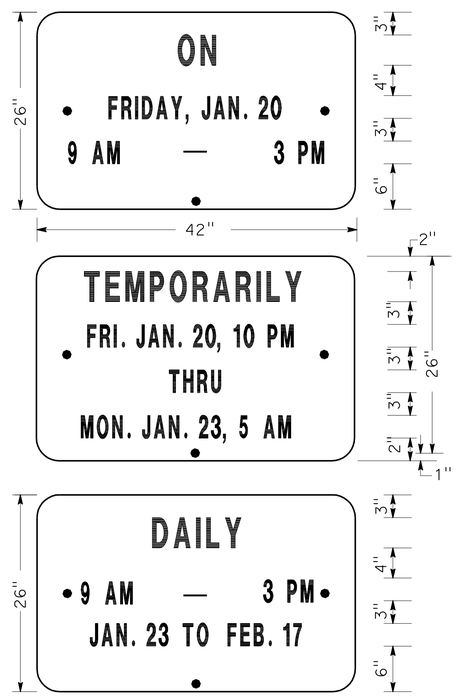
3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DUKE HUYNH No. 65591 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-1



ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN

NOTES: (SIGN SP-1)

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

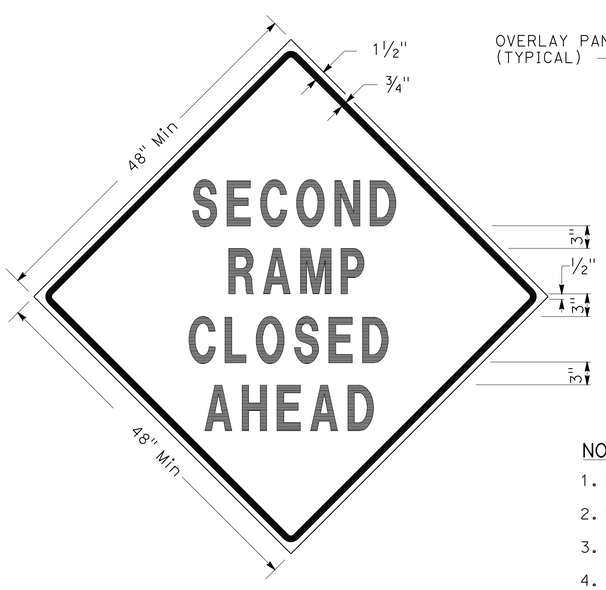
SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5,6 & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"
* CONDENSED SPACING IF NECESSARY								

SIGN SP-4

NOTES: (SIGN SP-4)

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

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 BORDERS - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
3. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
4. SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND.

SPECIAL SIGN FOR EXIT RAMP CLOSURES

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS AND MISCELLANEOUS DETAILS
SHEET 1 OF 2
NO SCALE

THD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: DENIS S KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 7/10

LAST REVISION 03-25-13 | DATE PLOTTED => 27-MAR-2013 | TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405, 605	Var	6	38

Duke M Huynh 2-27-13
REGISTERED CIVIL ENGINEER DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DUKE HUYNH
No. 65591
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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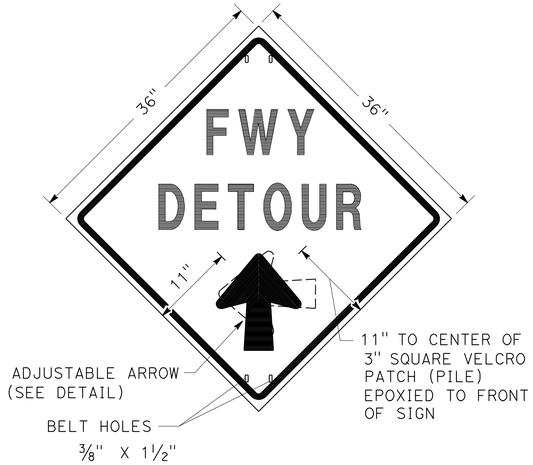
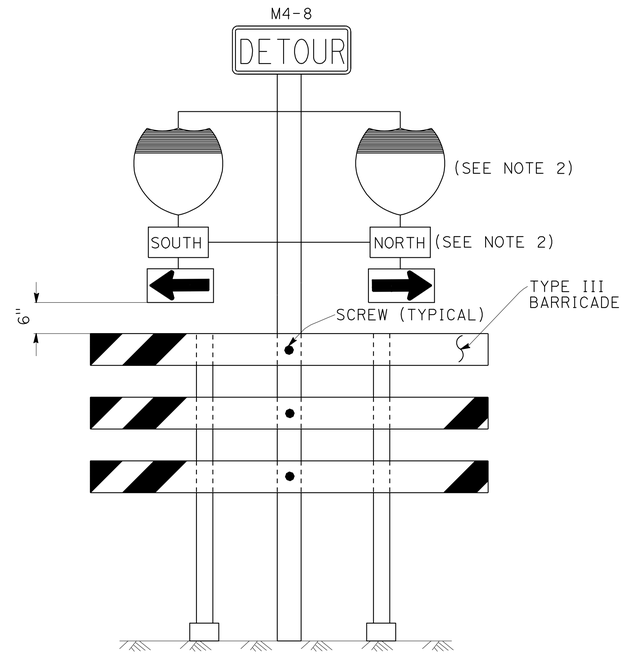
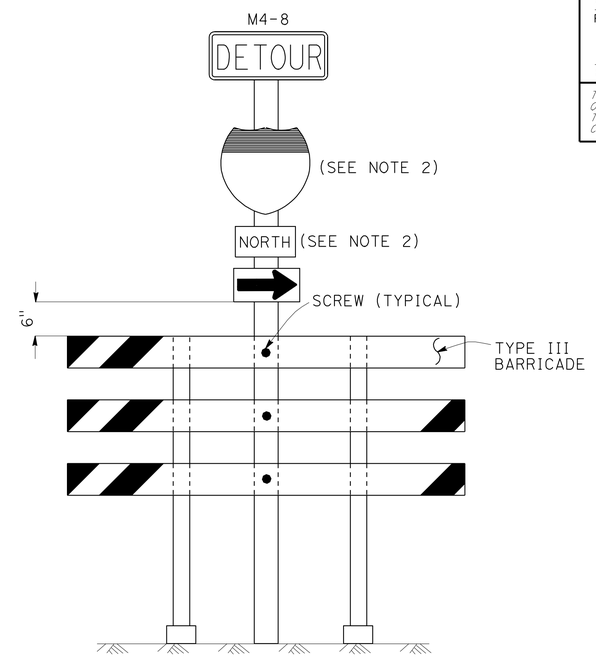


SIGN SP-2



SIGN SP-6 (SEE NOTE 1)



SIGN SP-7 (SEE NOTE 1)

NOTES: (SIGN SP-2)

1. LETTERS -6" SERIES E.
2. LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
3. BASE MATERIAL FOR SIGNS AND ARROWS 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 6' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

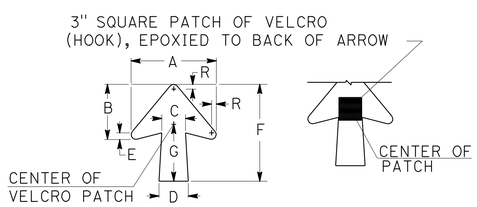
ABBREVIATION

(CA) CALIFORNIA CODE

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 SHIELD [G26-2(CA), G27-2(CA), G28-2(CA)] AND CARDINAL DIRECTION [NORTH (M3-1), SOUTH (M3-3), EAST (M3-2), WEST (M3-4)]

SPECIAL PORTABLE FREEWAY DETOUR SIGNS



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

SPECIAL PORTABLE FREEWAY DETOUR SIGN

ADJUSTABLE ARROW DETAIL

TRAFFIC HANDLING DETAILS

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

SHEET 2 OF 2

NO SCALE

THD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: DENIS S KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 7/10

LAST REVISION 03-25-13 | DATE PLOTTED => 27-MAR-2013 | TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405, 605	Var	7	38

Duke M Huynh 2-27-13
REGISTERED CIVIL ENGINEER DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DUKE HUYNH No. 65591 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:

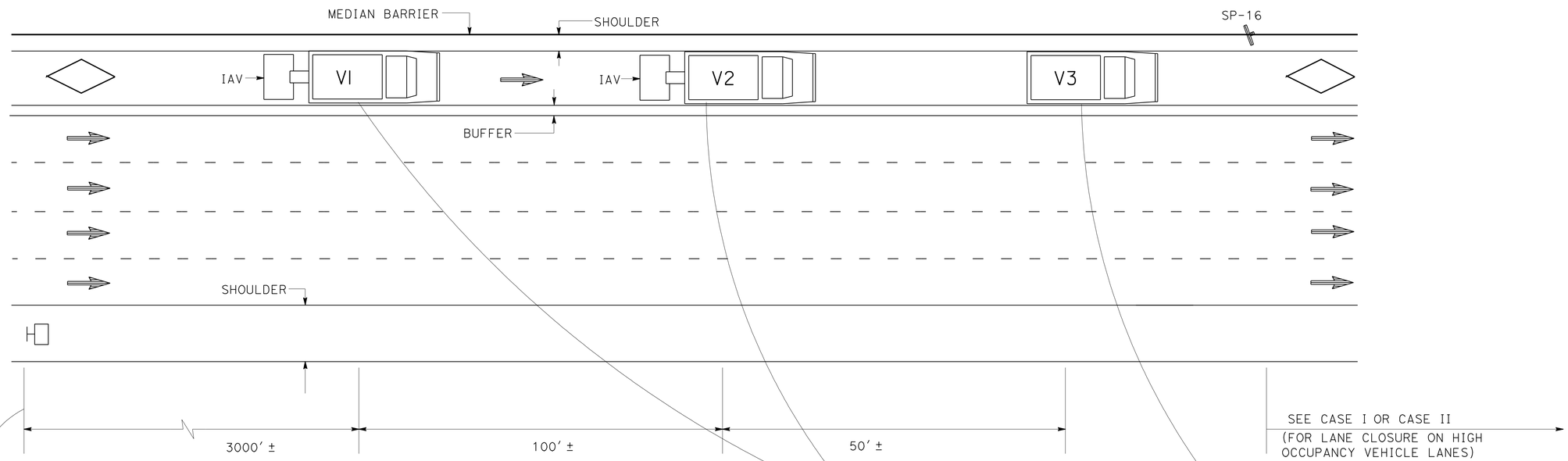
1. LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
2. PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE HOV LANE.
3. A MINIMUM SIGHT DISTANCE OF 1500′ SHALL BE PROVIDED IN ADVANCE OF PCMS.
4. VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED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

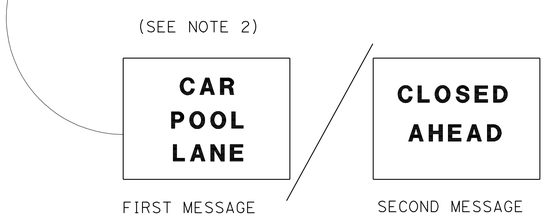
LEGEND

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

ABBREVIATIONS

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





PCMS/TRUCK MOUNTED CMS
(SEE NOTE 5)

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

NO SCALE

THD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans

FUNCTIONAL SUPERVISOR: DENIS S KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 7/10

LAST REVISION 03-25-13
DATE PLOTTED => 27-MAR-2013
TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405, 605	Var	8	38

Duke M Huynh 2-27-13
REGISTERED CIVIL ENGINEER DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DUKE HUYNH No. 65591 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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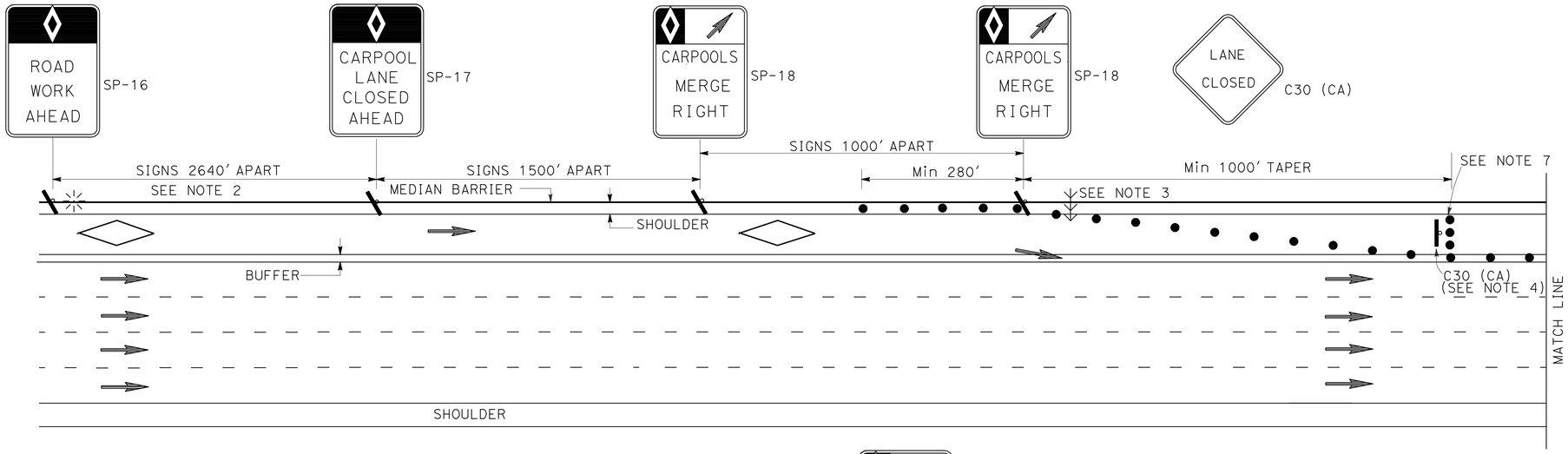

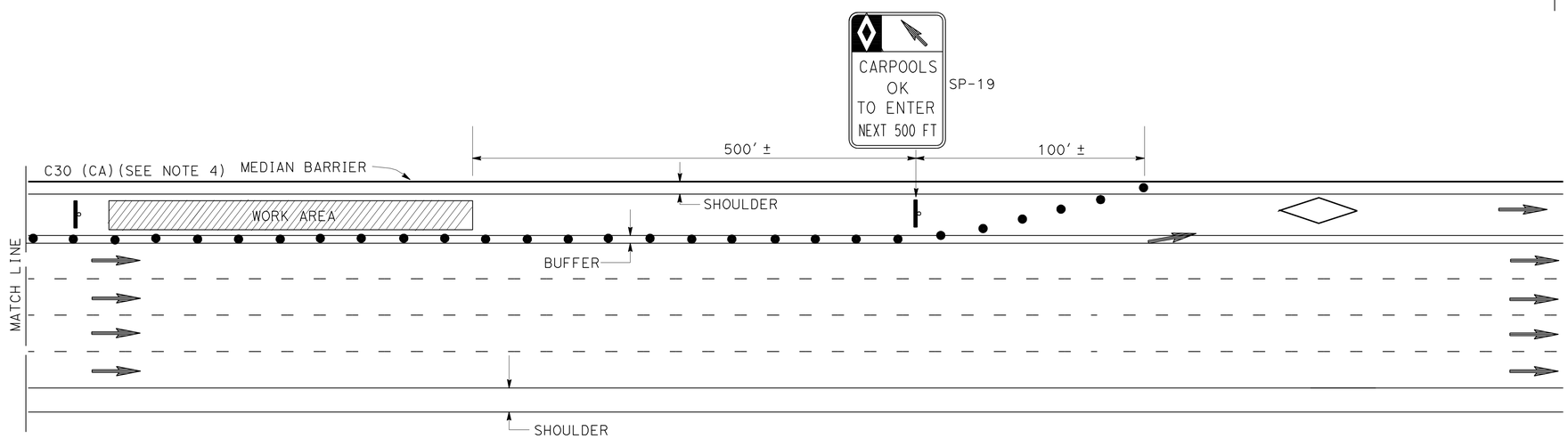

ABBREVIATIONS

(CA) CALIFORNIA CODE

HOV HIGH OCCUPANCY VEHICLE

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 SIGNS 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.

LEGEND

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

SIGN PANEL

SIZE (MIN)

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

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR HIGH OCCUPANCY VEHICLE LANES AT NON-INGRESS/EGRESS AREAS
CASE I
NO SCALE

THD-4

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
DENIS S KATAYAMA	ALBERT K YU / JOCELYN C CHIANG	JC	7/10

CHECKED BY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 03-25-13 | DATE PLOTTED => 27-MAR-2013 | TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405, 605	Var	9	38

Duke M Huynh 2-27-13
REGISTERED CIVIL ENGINEER DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DUKE HUYNH No. 65591 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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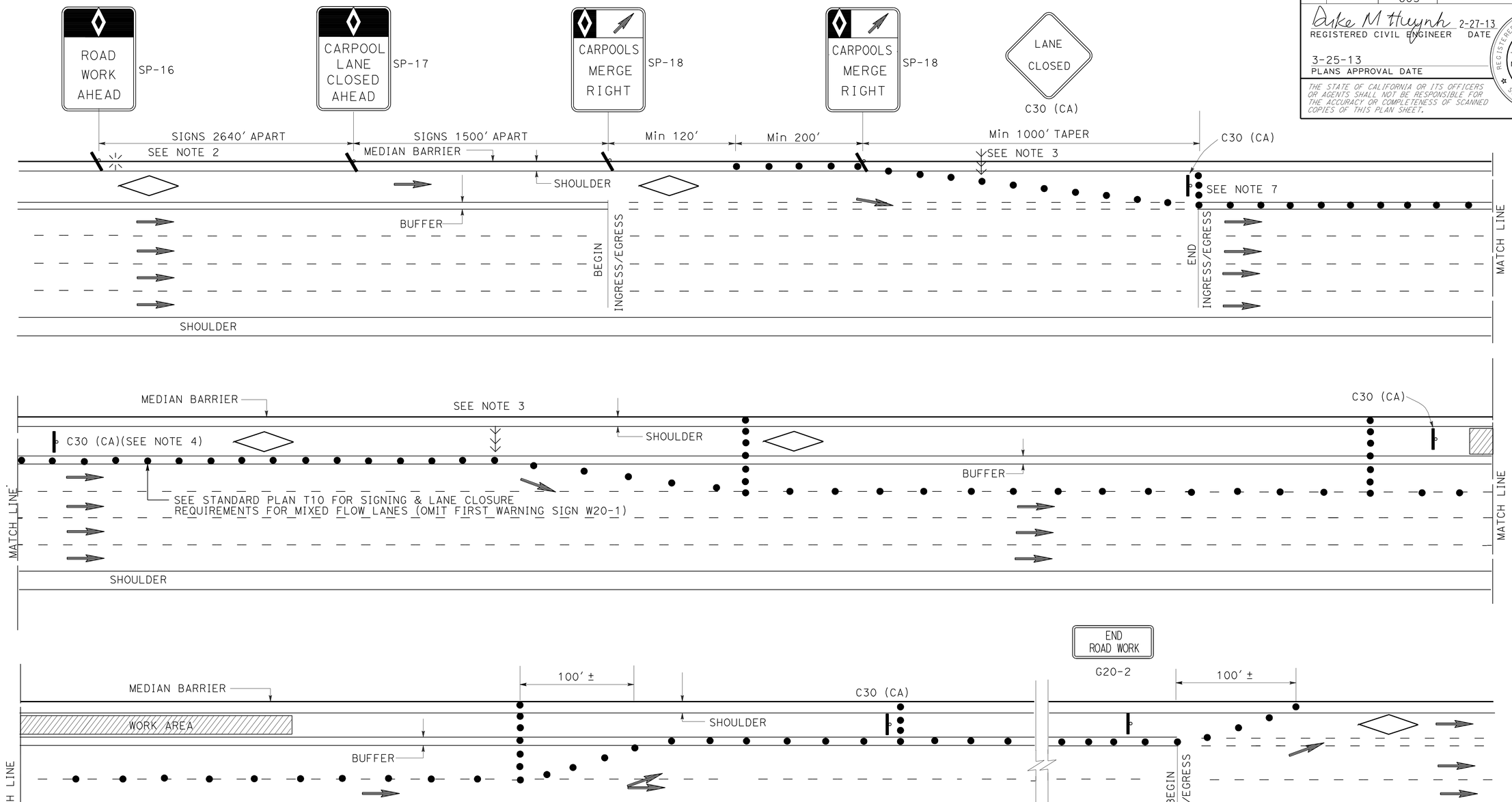

NOTES:

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

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR HIGH OCCUPANCY VEHICLE LANES AND ADJACENT FREEWAY LANES BETWEEN INGRESS/EGRESS AREAS
CASE II

NO SCALE

THD-5

REVISED BY	JC
DATE REVISED	7/10
CALCULATED-DESIGNED BY	ALBERT K YU
CHECKED BY	JOCELYN C CHIANG
FUNCTIONAL SUPERVISOR	DENIS S KATAYAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 03-25-13 | DATE PLOTTED => 27-MAR-2013 | TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405, 605	Var	10	38

Duke M Huynh 2-27-13
REGISTERED CIVIL ENGINEER DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DUKE HUYNH
No. 65591
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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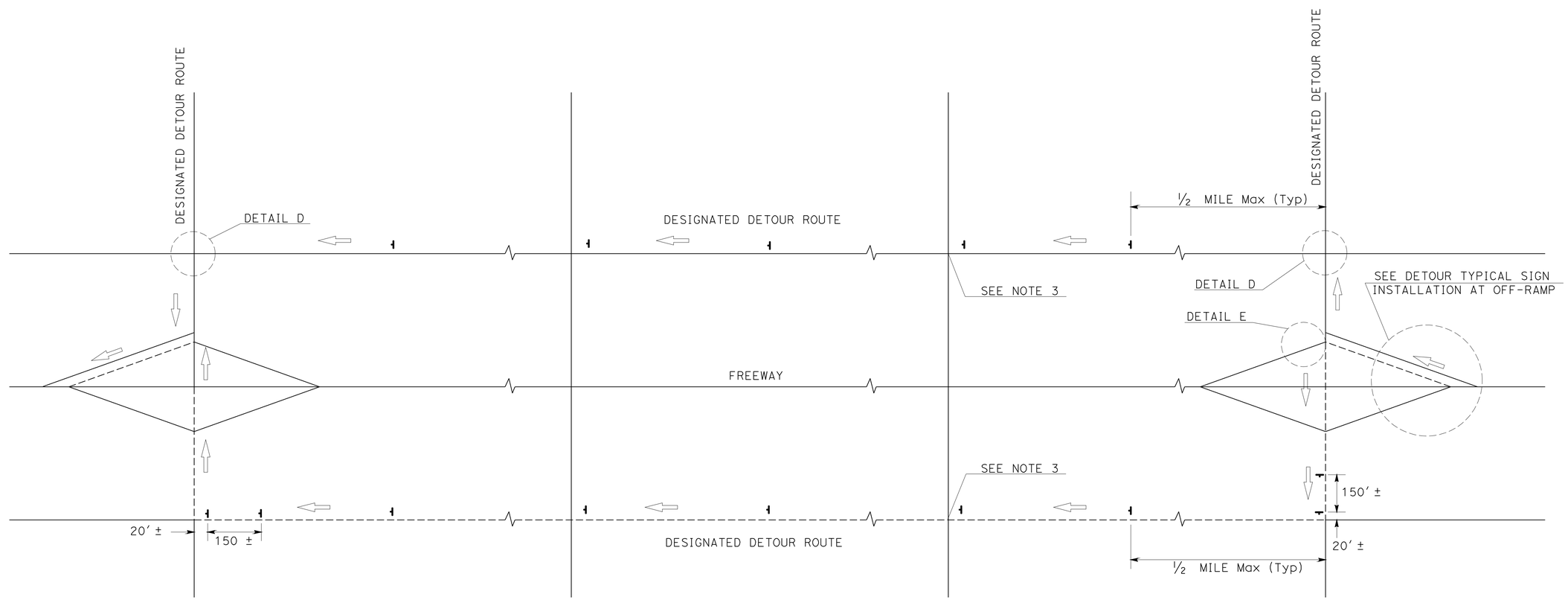

TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

LEGEND

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

NOTES:

1. SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
2. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
3. SP-2 SIGNS SHALL BE POSTED AT SIGNALIZED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE OR ½ MILE MAXIMUM APART.

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

SHEET 1 OF 2

NO SCALE

THD-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans

FUNCTIONAL SUPERVISOR: DENIS S KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 7/10

LAST REVISION 03-25-13 | DATE PLOTTED => 27-MAR-2013 | TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405, 605	Var	11	38

Duke M Huynh 2-27-13
REGISTERED CIVIL ENGINEER DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DUKE HUYNH
No. 65591
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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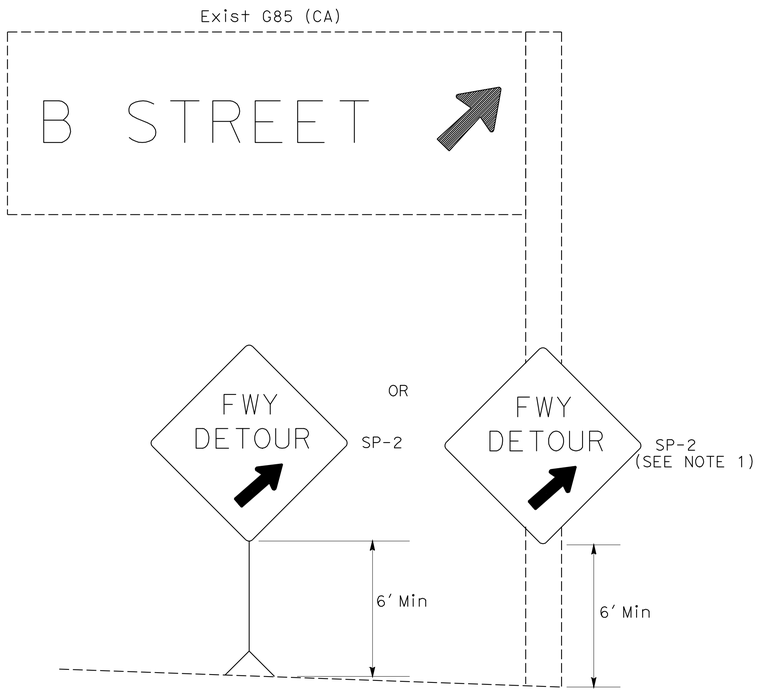
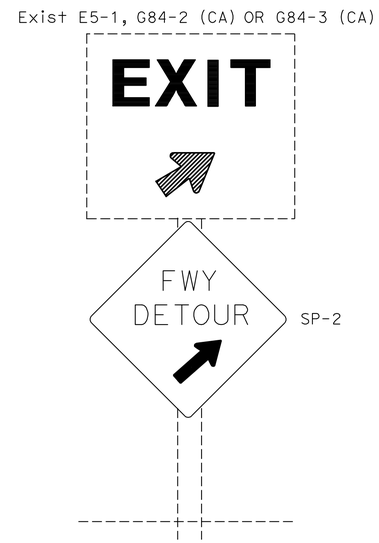
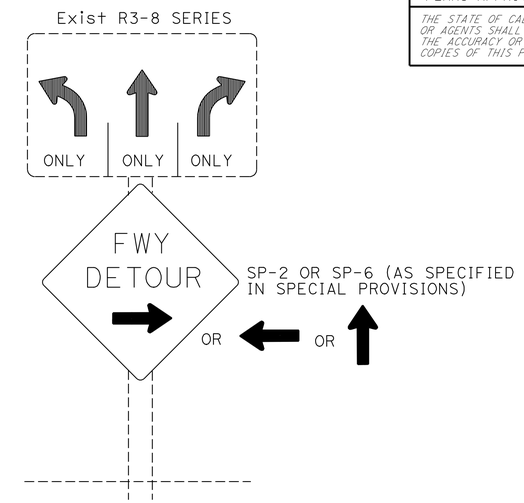


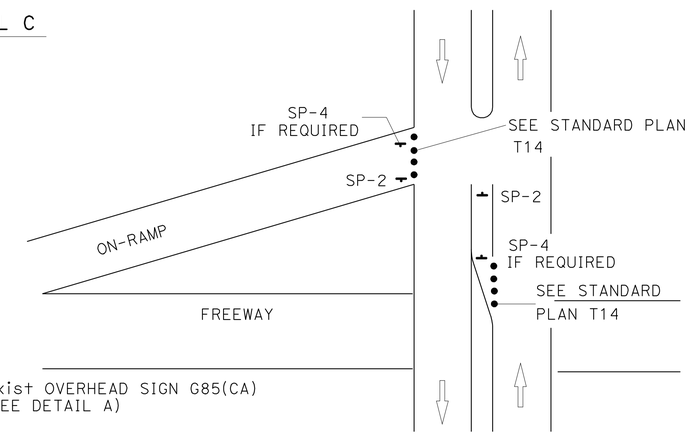
DETAIL A



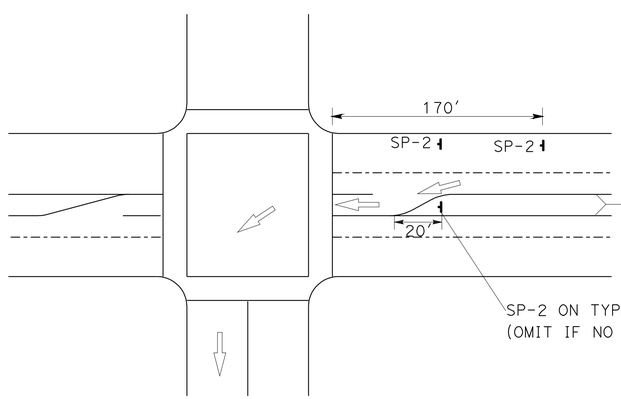
DETAIL B



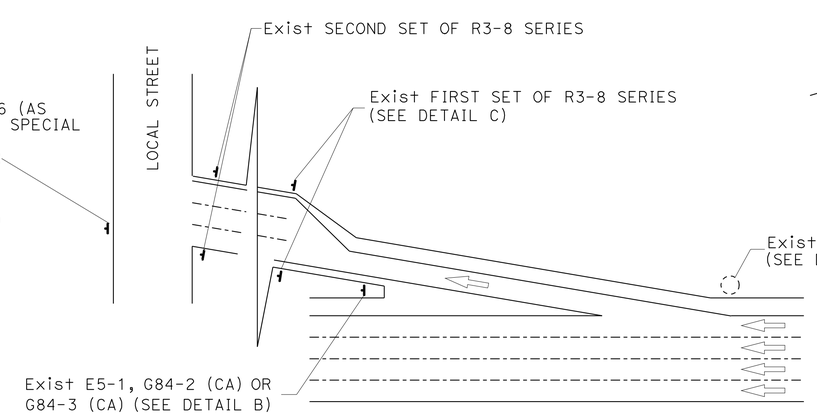
DETAIL C



DETAIL E



DETAIL D



TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP

NOTES:

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

ABBREVIATIONS

(CA) CALIFORNIA CODE

LEGENDS

- TRAFFIC CONE
- TEMPORARY SIGN
- DIRECTION OF TRAVEL
- EXISTING OVERHEAD SIGN

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

THD-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans®

FUNCTIONAL SUPERVISOR: DENIS S KATAYAMA
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 8/10

LAST REVISION 03-25-13
DATE PLOTTED => 27-MAR-2013
TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	12	38

REGISTERED CIVIL ENGINEER 2-12-13 DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

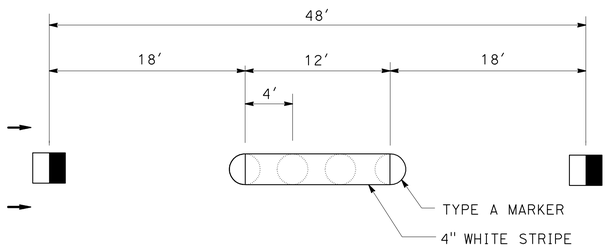
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

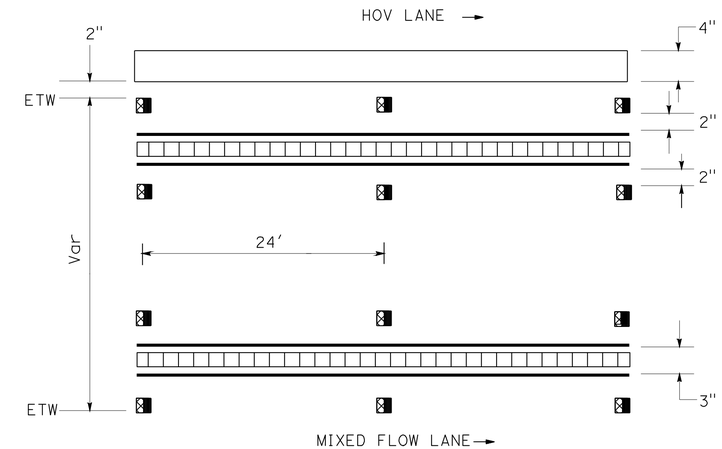
1. FOR DETAIL 13/14 (MODIFIED), APPLY 4" WIDE THERMOPLASTIC TRAFFIC STRIPE ON TOP OF TYPE A NON-REFLECTIVE MARKERS.

LEGEND:

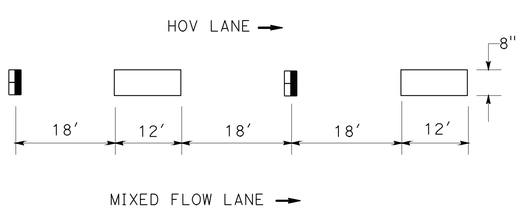
- TYPE C RED-CLEAR RETROREFLECTIVE MARKER OR TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKER
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE MARKER
- WHITE STRIPE (THERMOPLASTIC)
- 3" BLACK CONTRAST STRIPE (PAINT)
- 4" YELLOW STRIPE (THERMOPLASTIC)
- 2-TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKERS
- DIRECTION OF TRAVEL



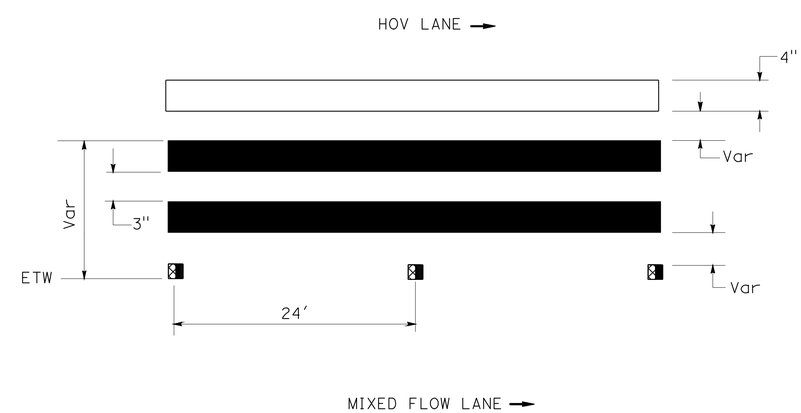
DETAIL 13/14 (MODIFIED)



HOV STRIPING DETAIL (DOUBLE DOUBLE YELLOW)



INGRESS/EGRESS STRIPING DETAIL



HOV STRIPING DETAIL (DOUBLE YELLOW)

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: MD MUSA
CALCULATED-DESIGNED BY: KEVIN KWAN
CHECKED BY: MD MUSA
REVISED BY
DATE REVISED

LAST REVISION 03-25-13
DATE PLOTTED => 27-MAR-2013
TIME PLOTTED => 13:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	13	38

REGISTERED CIVIL ENGINEER 2-12-13 DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 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.

NOTE:

1. SEE SHEET LC-1 FOR LOCATIONS OF CONSTRUCTION.

PAVEMENT DELINEATION QUANTITIES

LOCATION (No.)	ROUTE	POST MILE	DESCRIPTION	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)				REMOVE THERMOPLASTIC TRAFFIC STRIPE							REMOVE PAINTED TRAFFIC STRIPE
				Det 25	Det 25A	HOV STRIPING DETAIL		Det 13/14 (Mod)	Det 27B	Det 36	Det 36A	Det 38B	HOV STRIPING DETAIL		
				4" (YELLOW)	4" (YELLOW)	4" (DOUBLE DOUBLE YELLOW)	4" (DOUBLE YELLOW)	4" (BROKEN 36-12) (WHITE)	4" (WHITE)	8" (WHITE)	8" (WHITE)	8" (WHITE)	4" (WHITE)	8" (BROKEN 36-12) (WHITE)	3" PAINTED BLACK TRAFFIC STRIPE
				LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
1	105	R11.10	STATE STREET UC	340		1,360		850	340				340		680
2	105	R11.56	LONG BEACH BOULEVARD UC	1,166		2,332		2,332	1,166					292	1,166
5	405	20.16	EL SEGUNDO OH	234			468	702	234				334		
7	405	R21.32	IMPERIAL HIGHWAY ON-RAMP OC		327			100	327						
8	405	21.74	LENNOX BOULEVARD UC	290	145		580	1,450	435	290		145	290		
10	405	25.99	N405-W90 CONNECTOR OC		930			945	965						
11	405	26.10	S405-W90 CONNECTOR OC		169				169						
12	405	27.20	CULVER BOULEVARD UC	360		720		1,440	360				180	90	
13	405	27.45	WASHINGTON BOULEVARD UC	35		125							35		
14	605	R4.71	DAIRY VALLEY OH	104			208	312	208	104	52		104		104
15	605	R8.23	HOXIE OH	30			60						30		30
			SUBTOTAL	2,559	1,571	4,537	1,316	8,131	4,204	394	52	145	1,313	382	1,980
			TOTAL	9,983				14,621							1,980

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: MD MUSA
CALCULATED-DESIGNED BY: KEVIN KWAN
CHECKED BY: MD MUSA
REVISED BY
DATE REVISED

LAST REVISION 03-25-13 | DATE PLOTTED => 27-MAR-2013 | TIME PLOTTED => 13:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	14	38

REGISTERED CIVIL ENGINEER 2-12-13 DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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PAVEMENT DELINEATION QUANTITIES

LOCATION (No.)	ROUTE	POST MILE	DESCRIPTION	REMOVE PAVEMENT MARKER									REMOVE THERMOPLASTIC PAVEMENT MARKING						
				Det 13/14 (Mod)	Det 13/14 (Mod)	Det 25	Det 25A	Det 36	Det 38B	HOV STRIPING DETAIL									
				TYPE A (NON-REFLECTIVE)	TYPE G/C (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)	TYPE G (RETROREFLECTIVE)	TYPE G (RETROREFLECTIVE)	4" DOUBLE DOUBLE YELLOW TYPE H (RETROREFLECTIVE)	4" DOUBLE YELLOW TYPE H (RETROREFLECTIVE)	8" (BROKEN 36-12) TYPE G (RETROREFLECTIVE)	CAR	POOL	ONLY	◇ (DIAMOND SYMBOL)	TYPE VI ARROW	DIAGONAL	CHEVRON
				EA	EA	EA	EA	EA	EA	EA	EA	EA	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT
1	105	R11.10	STATE STREET UC	71	20	10				64							42		
2	105	R11.56	LONG BEACH BOULEVARD UC	194	50	26				101		26	17	23	22	33			
5	405	20.16	EL SEGUNDO OH	58	16	6					22								
7	405	R21.32	IMPERIAL HIGHWAY ON-RAMP OC	8	3		15												
8	405	21.74	LENNOX BOULEVARD UC	121	32	8	6	14	14		28								22
10	405	25.99	N405-W90 CONNECTOR OC	79	21		40											100	
11	405	26.10	S405-W90 CONNECTOR OC				8												
12	405	27.20	CULVER BOULEVARD UC	120	32	10				60		10	34	46	22	11			
13	405	27.45	WASHINGTON BOULEVARD UC			2				10									
14	605	R4.71	DAIRY VALLEY OH	26	8	4		6			12							25	
15	605	R8.23	HOXIE OH			2					3								
			SUBTOTAL	677	182	68	69	20	14	235	65	36	51	69	44	44	42	125	22
			TOTAL	1,366									397						

PAVEMENT DELINEATION QUANTITIES

PDQ-2

REVISED BY | DATE REVISED
KEVIN KWAN | MD MUSA
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MD MUSA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	15	38

REGISTERED CIVIL ENGINEER 2-12-13 DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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PAVEMENT DELINEATION QUANTITIES

LOCATION (No.)	ROUTE	POST MILE	DESCRIPTION	THERMOPLASTIC TRAFFIC STRIPE											PAINT TRAFFIC STRIPE (2-COAT)	THERMOPLASTIC PAVEMENT MARKING						
				Det 13/14 (Mod)	Det 25	Det 25A	Det 27B	HOV STRIPING DETAIL			Det 36	Det 36A	Det 38B	HOV STRIPING Det								
				4" (BROKEN 36-12) (WHITE)	4" (YELLOW)	4" (YELLOW)	4" (WHITE)	4" (DOUBLE DOUBLE YELLOW)	4" (DOUBLE YELLOW)	4" (WHITE)	8" (WHITE)	8" (WHITE)	8" (WHITE)	8" (BROKEN 36-12) (WHITE)	3" PAINTED BLACK TRAFFIC STRIPE	CAR	POOL	ONLY	(DIAMOND SYMBOL)	TYPE VI ARROW	DIAGONAL	CHEVRON
				LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT
1	105	R11.10	STATE STREET UC	850	340		340	1,360		340					680					42		
2	105	R11.56	LONG BEACH BOULEVARD UC	2,332	1,166		1,166	2,332						583	1,166	17	23	22	33			
5	405	20.16	EL SEGUNDO OH	702	234		234		468	334												
7	405	R21.32	IMPERIAL HIGHWAY ON-RAMP OC	100		327	327															
8	405	21.74	LENNOX BOULEVARD UC	1,450	290	145	435		580	290	290		145									22
10	405	25.99	N405-W90 CONNECTOR OC	945		930	965														100	
11	405	26.10	S405-W90 CONNECTOR OC			169	169															
12	405	27.20	CULVER BOULEVARD UC	1,440	360		360	720		180				180		34	46	22	11			
13	405	27.45	WASHINGTON BOULEVARD UC		35			125		35												
14	605	R4.71	DAIRY VALLEY OH	312	104		208		208	104	104	52			104						25	
15	605	R8.23	HOXIE OH		30				60	30					30							
			SUBTOTAL	8,131	2,559	1,571	4,204	4,537	1,316	1,313	394	52	145	763	1,980	51	69	44	44	42	125	22
			TOTAL	8,131	15,500						591			763	1,980	397						

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: MD MUSA
CALCULATED-DESIGNED BY: KEVIN KWAN
CHECKED BY: MD MUSA
REVISED BY
DATE REVISED

PAVEMENT DELINEATION QUANTITIES

PDQ-3

LAST REVISION 03-25-13
DATE PLOTTED => 27-MAR-2013
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	16	38

REGISTERED CIVIL ENGINEER 2-12-13 DATE

3-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN KWAN No. 68219 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

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PAVEMENT DELINEATION QUANTITIES

LOCATION (No.)	ROUTE	POST MILE	DESCRIPTION	PAVEMENT MARKER								
				NON-REFLECTIVE	RETROREFLECTIVE							
				Det 13/14 (Mod)	Det 13/14 (Mod)	Det 25	Det 25A	Det 36	Det 38B	HOV STRIPING DETAIL		
				TYPE A	TYPE G/C (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)	TYPE H (RETROREFLECTIVE)	TYPE G (RETROREFLECTIVE)	TYPE G (RETROREFLECTIVE)	4" DOUBLE DOUBLE YELLOW TYPE H (RETROREFLECTIVE)	4" DOUBLE YELLOW TYPE H (RETROREFLECTIVE)	8" (BROKEN 36-12) TYPE G (RETROREFLECTIVE)
				EA	EA	EA	EA	EA	EA	EA	EA	EA
1	105	R11.10	STATE STREET UC	71	20	10				64		
2	105	R11.56	LONG BEACH BOULEVARD UC	194	50	26				101		26
5	405	20.16	EL SEGUNDO OH	58	16	6					22	
7	405	R21.32	IMPERIAL HIGHWAY ON-RAMP OC	8	3		15					
8	405	21.74	LENNOX BOULEVARD UC	121	32	8	6	14	14		28	
10	405	25.99	N405-W90 CONNECTOR OC	79	21		40					
11	405	26.10	S405-W90 CONNECTOR OC				8					
12	405	27.20	CULVER BOULEVARD UC	120	32	10				60		10
13	405	27.45	WASHINGTON BOULEVARD UC			2				10		
14	605	R4.71	DAIRY VALLEY OH	26	8	4		6			12	
15	605	R8.23	HOXIE OH			2					3	
			SUBTOTAL	677	182	68	69	20	14	235	65	36
			TOTAL	677	689							

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: MD MUSA
CALCULATED-DESIGNED BY: KEVIN KWAN
CHECKED BY: MD MUSA
REVISED BY
DATE REVISED

PAVEMENT DELINEATION QUANTITIES

PDQ-4

LAST REVISION 03-25-13
DATE PLOTTED => 27-MAR-2013
TIME PLOTTED => 13:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	17	38

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-25-13
PLANS APPROVAL DATE

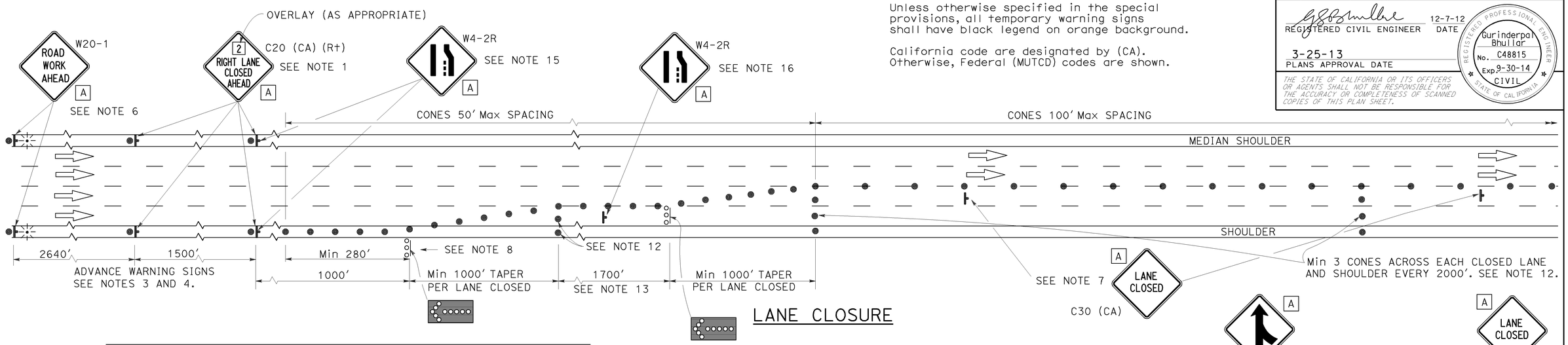
REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar No. C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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.

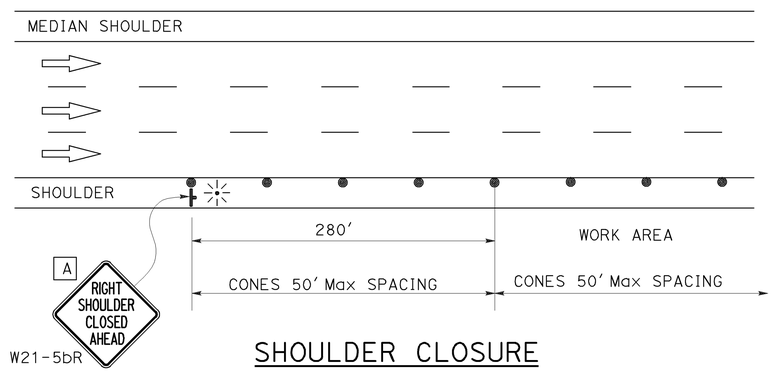
NOTES:

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

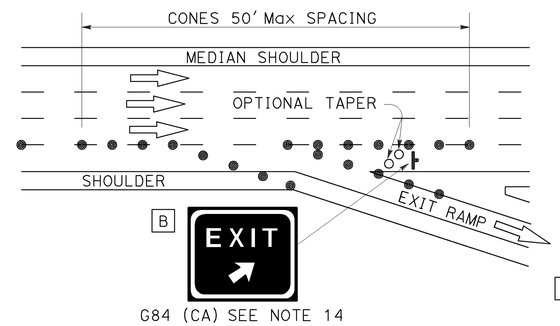
California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



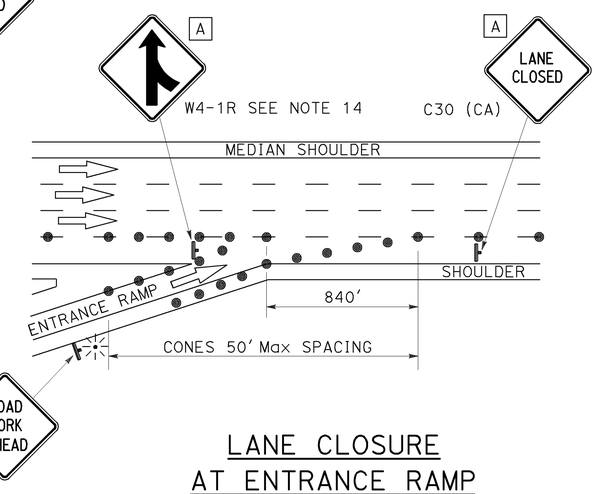
LANE CLOSURE



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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	18	38

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-25-13
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.

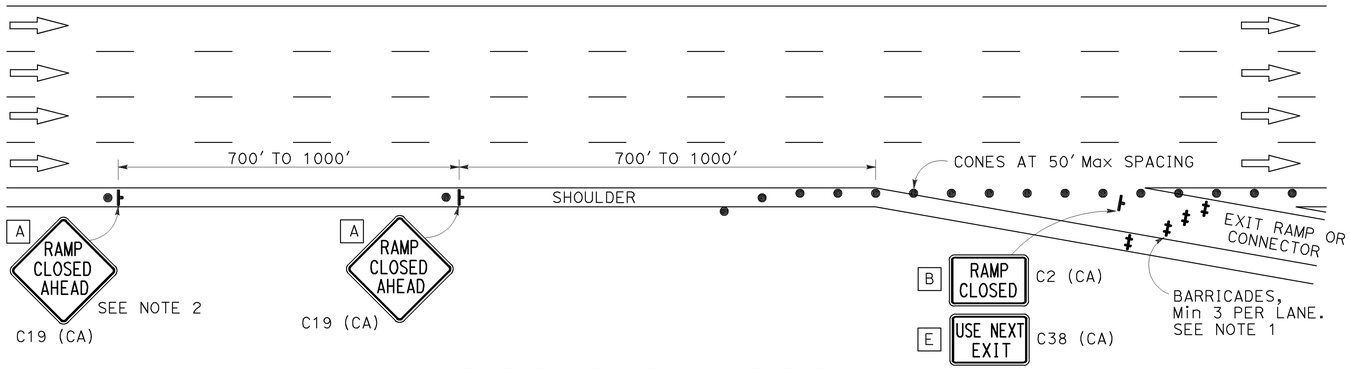
TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

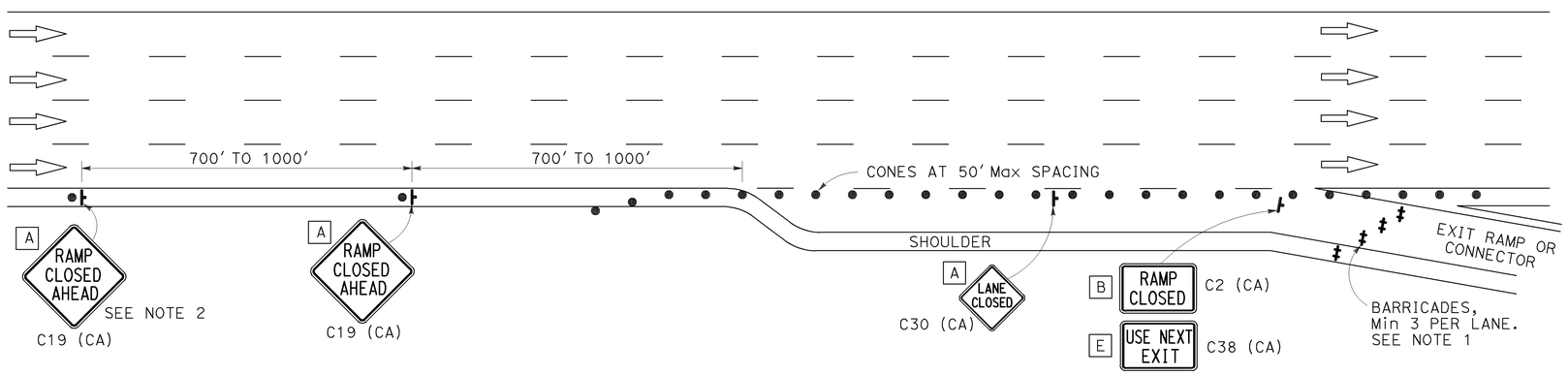
- A 48" x 48"
- B 48" x 30"
- C 30" x 30"
- D 48" x 48" - SPEED OF 50 mph OR MORE
  36" x 36" - SPEED LESS THAN 50 mph
- E 48" x 36"

LEGEND

- TRAFFIC CONE
- TEMPORARY SIGN
- BARRICADES



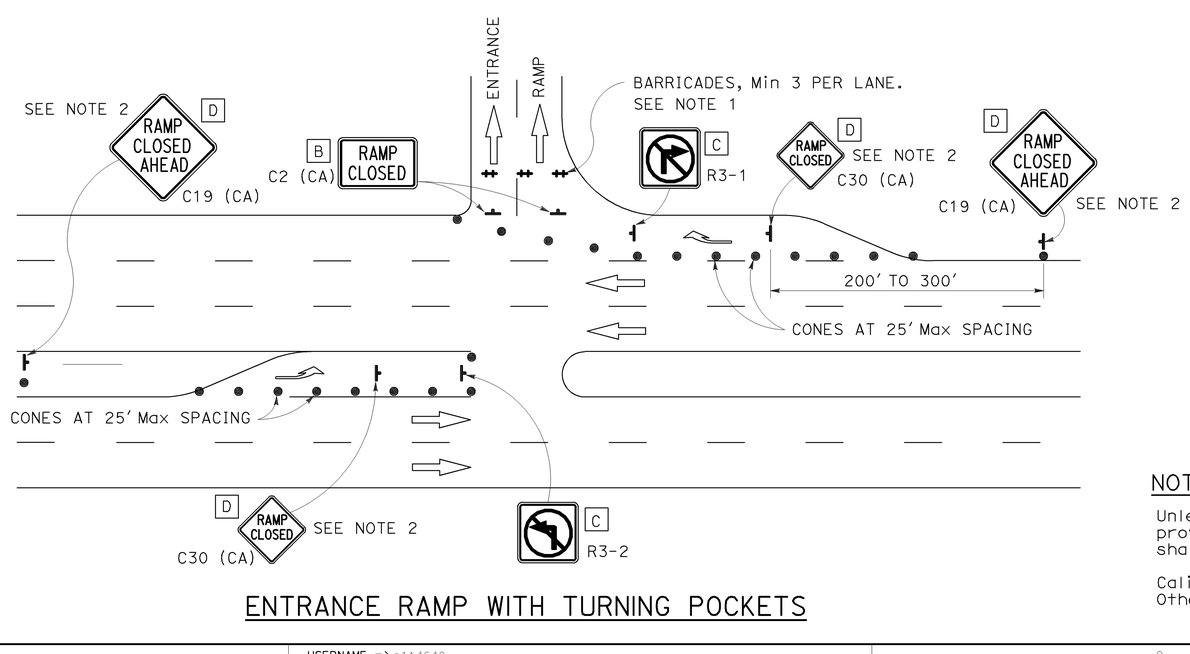
EXIT RAMP OR CONNECTOR



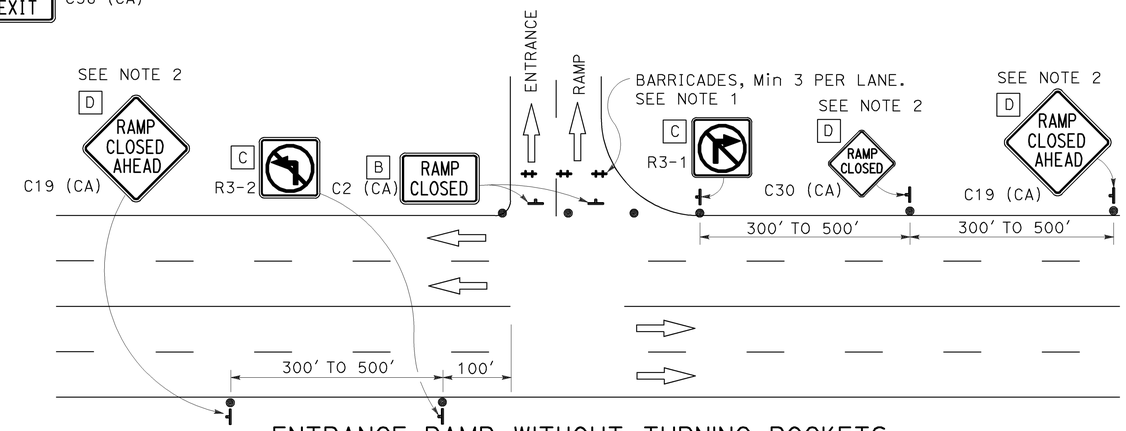
EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE

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.



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

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

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

TCS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

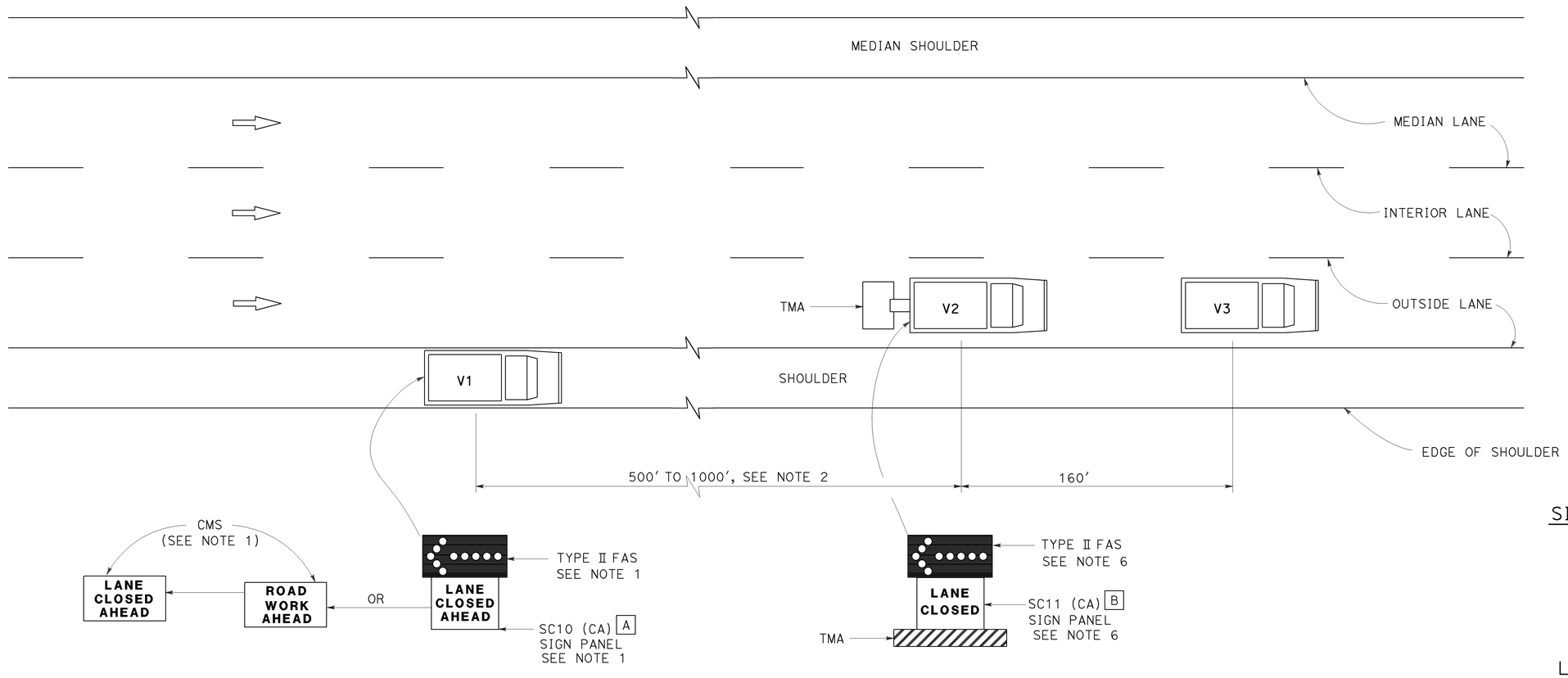
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	19	38

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-25-13
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.



SIGN PANEL SIZE (Min)

A 66" x 36"

B 54" x 42"

LEGEND

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

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

NOTES:

1. Either a changeable message sign or a SC10 (CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. A Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1 and used with the SC10 (CA) sign panel. A Type II flashing arrow sign will not be required with the changeable message sign provided the flashing arrow sign symbol is displayed on the changeable message sign board. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "LANE CLOSED AHEAD" message and then the flashing arrow sign symbol. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right.

2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.

3. A minimum sight distance of 1500′ should be provided in advance of sign vehicle V1.

4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500′.

5. Vehicle-mounted sign panels shall be Type III, IV, VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.

6. Gross Vehicle Weight of shadow vehicle V2 shall be a minimum of 20,000 pounds and shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.

7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.

9. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable. Both V1 and V2 shall be equipped with a truck-mounted attenuator. The Gross Vehicle Weight of V1 and V2 shall be at least 20,000 pounds, respectively.

10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required, and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS (OUTSIDE AND MEDIAN LANES)

NO SCALE

TCS-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	20	38

REGISTERED CIVIL ENGINEER 12-7-12 DATE

3-25-13
PLANS APPROVAL DATE

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

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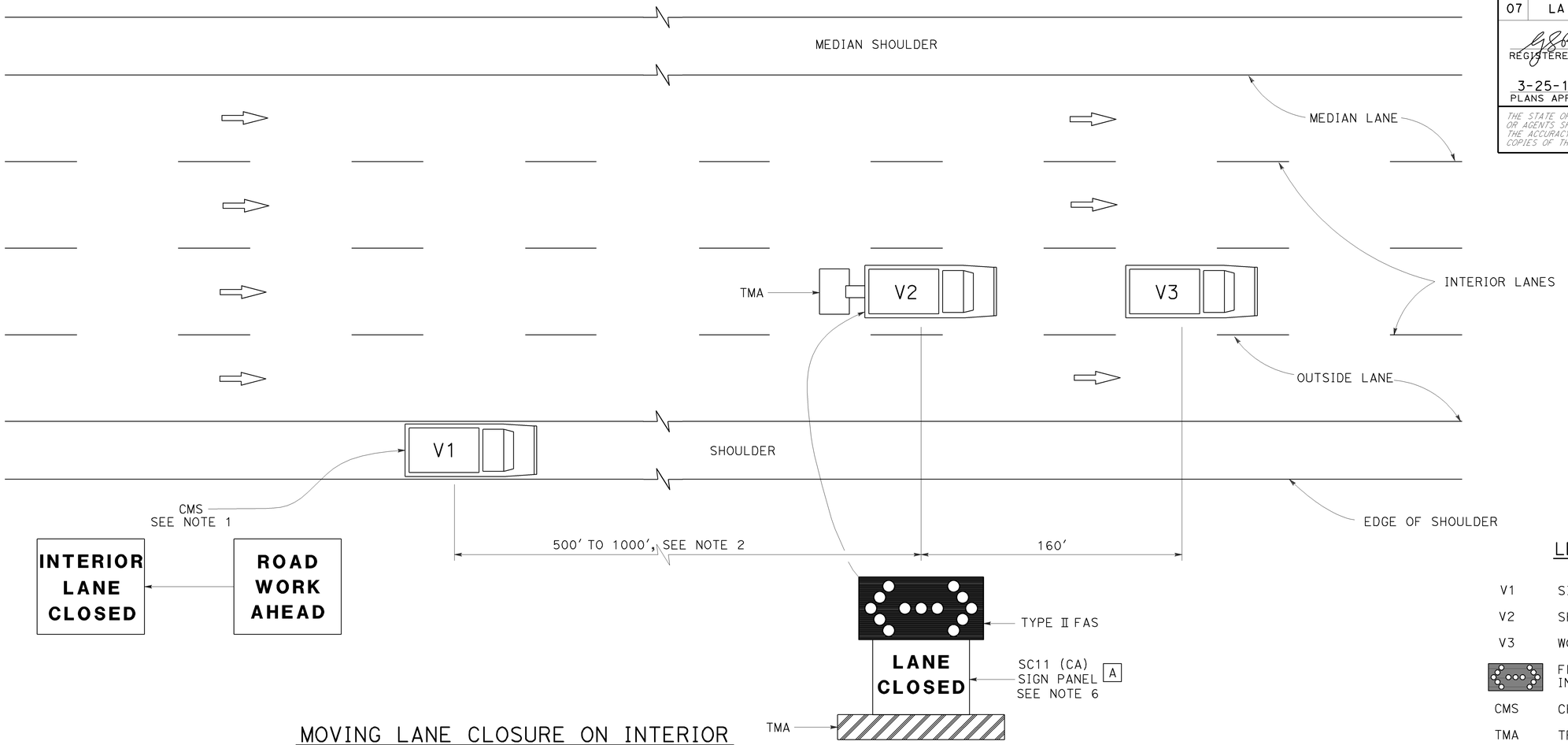


MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

LEGEND

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

NOTES:

1. A changeable message sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "INTERIOR LANE CLOSED" message. The message "CENTER LANE CLOSED" may be used in place of the "INTERIOR LANE CLOSED" message.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. Vehicle-mounted sign panels shall be Type III, IV, VII, VIII, or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Gross Vehicle Weight of shadow vehicle V2 shall be a minimum of 20,000 pounds and shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable. Both V1 and V2 shall be equipped with a truck-mounted attenuator. The Gross Vehicle Weight of V1 and V2 shall be at least 20,000 pounds, respectively.
10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required, and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS (INTERIOR LANES)

NO SCALE

TCS-4

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	21	38

REGISTERED CIVIL ENGINEER

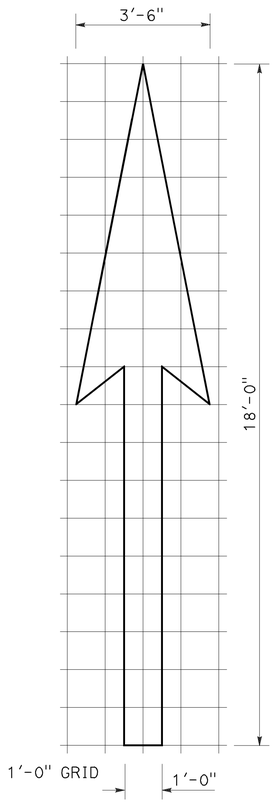
April 20, 2012
PLANS APPROVAL DATE

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.

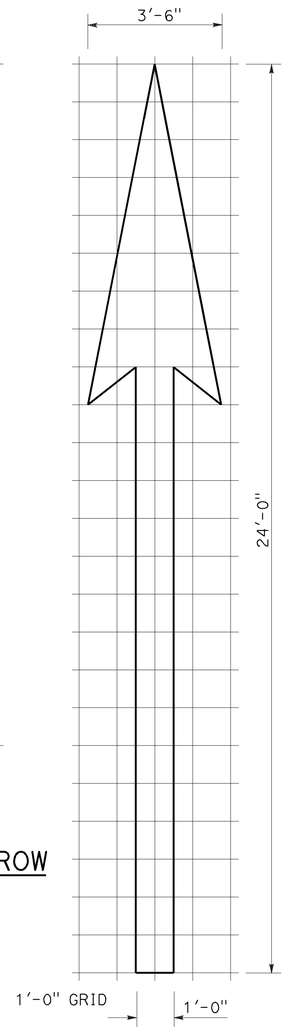
TO ACCOMPANY PLANS DATED 3-25-13

2010 REVISED STANDARD PLAN RSP A24A



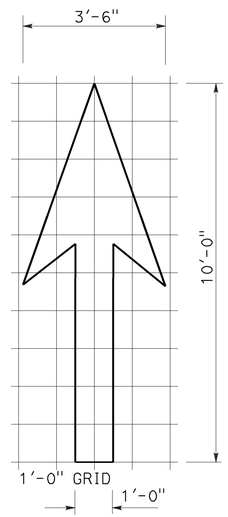
A=25 ft^2

TYPE I 18'-0" ARROW



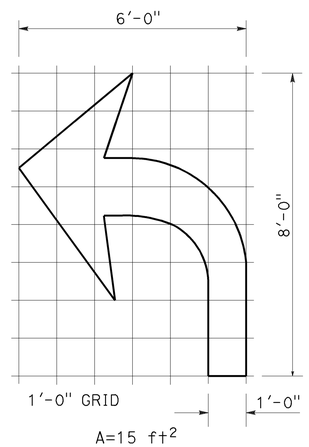
A=31 ft^2

TYPE I 24'-0" ARROW



A=14 ft^2

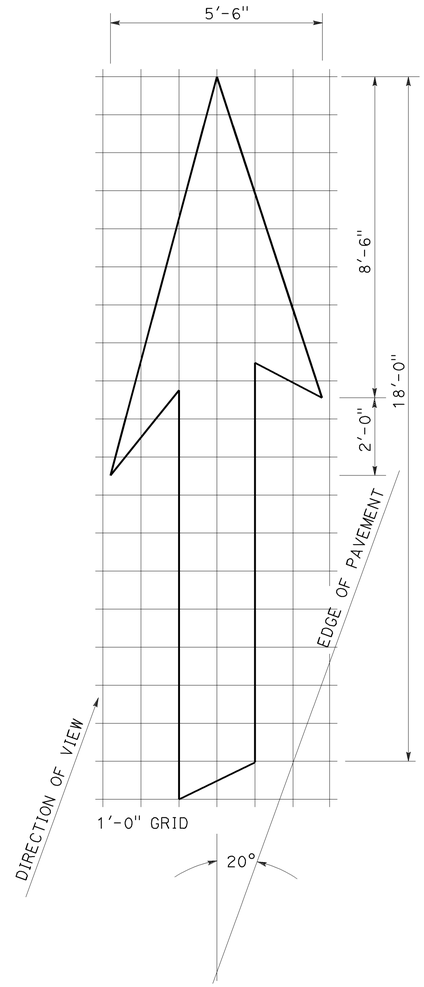
TYPE I 10'-0" ARROW



A=15 ft^2

TYPE IV (L) ARROW

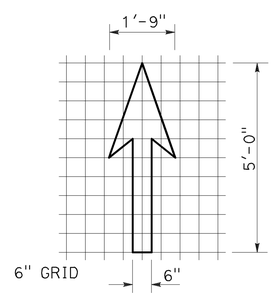
(For Type IV (R) arrow, use mirror image)



A=42 ft^2

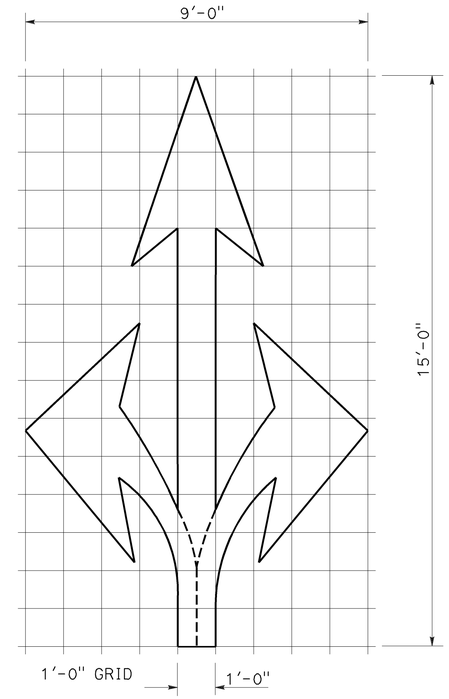
TYPE VI ARROW

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



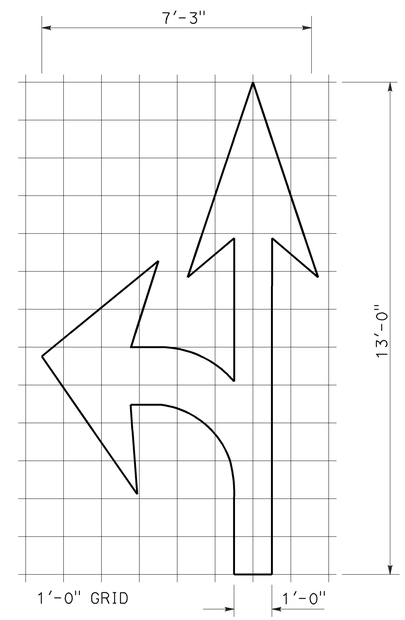
A=3.5 ft^2

BIKE LANE ARROW



A=36 ft^2

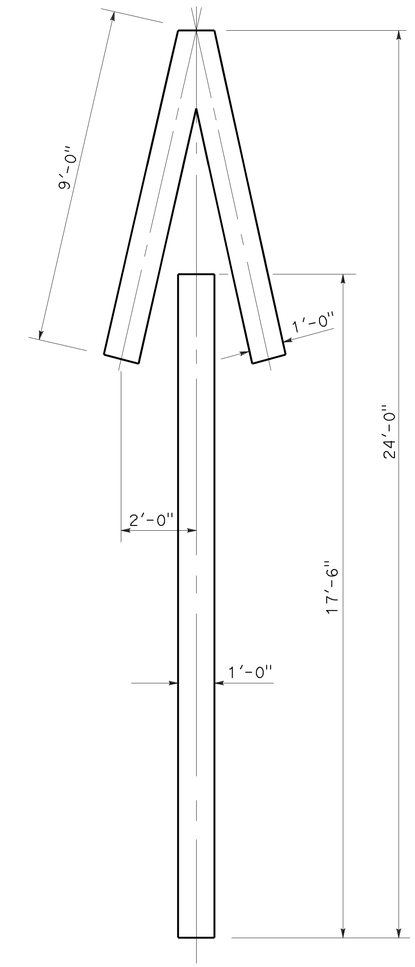
TYPE VIII ARROW



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

3-14-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	22	38

REGISTERED CIVIL ENGINEER

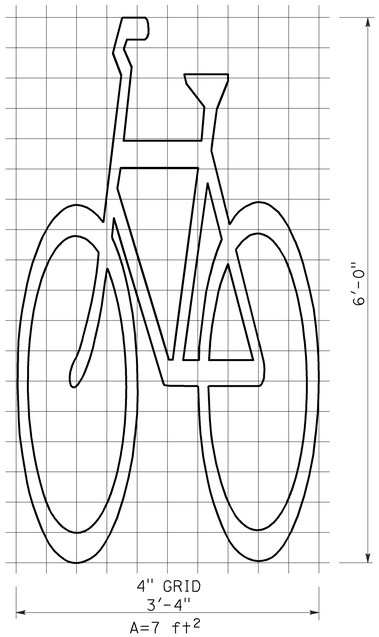
October 19, 2012
PLANS APPROVAL DATE

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

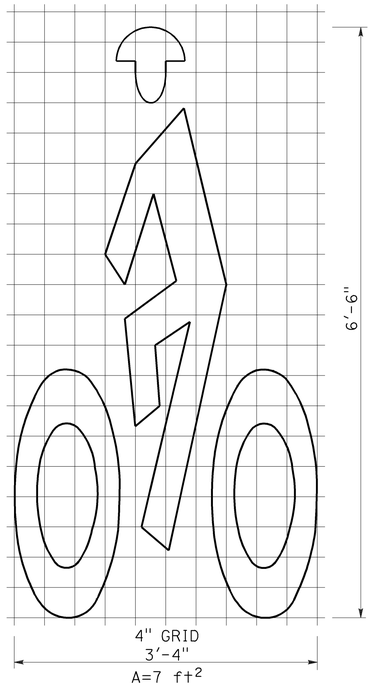
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE: TO ACCOMPANY PLANS DATED 3-25-13

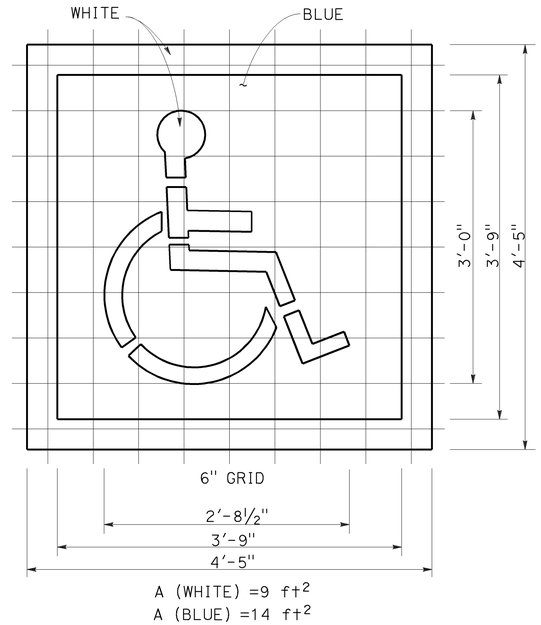
Minor variations in dimensions may be accepted by the Engineer.



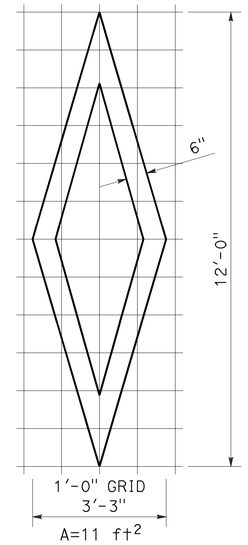
BIKE LANE SYMBOL WITHOUT PERSON



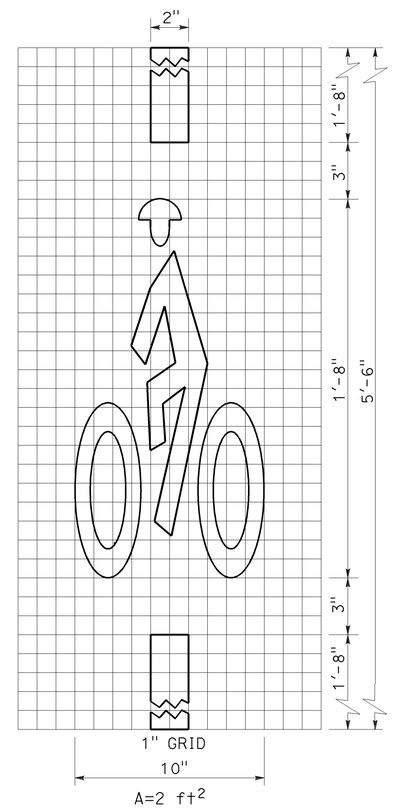
BIKE LANE SYMBOL WITH PERSON



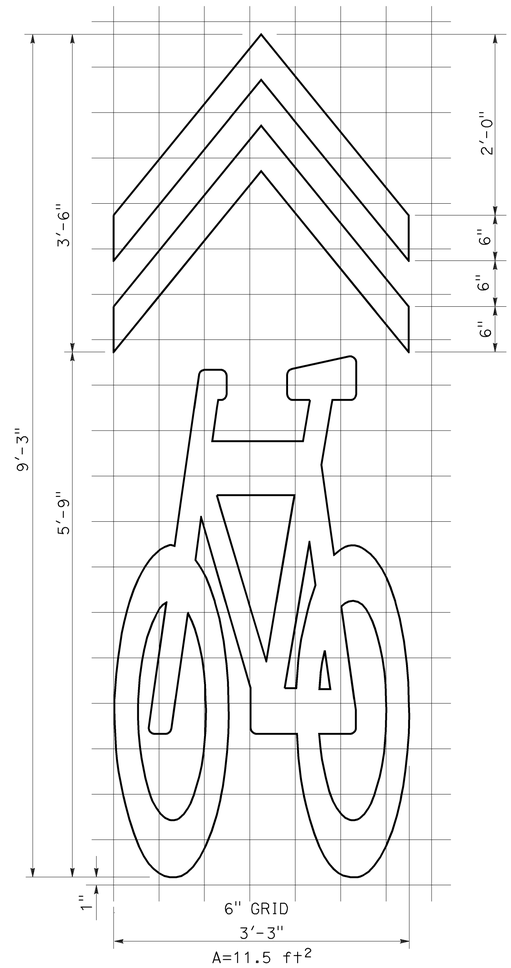
INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING



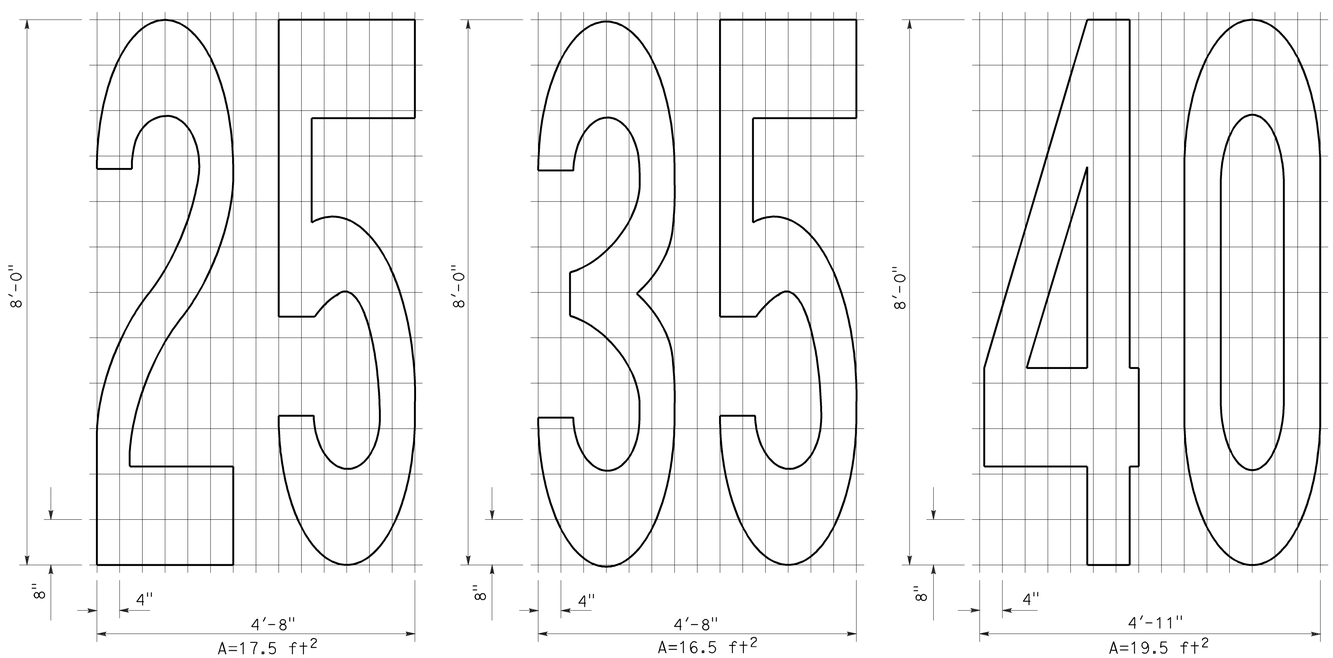
DIAMOND SYMBOL



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

6-28-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	23	38

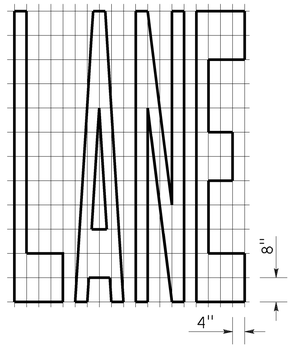
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 3-25-13



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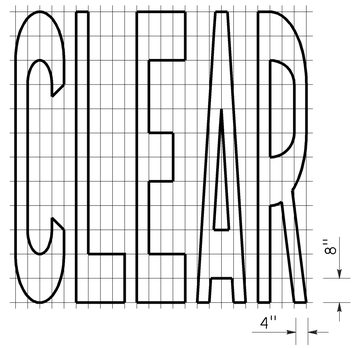

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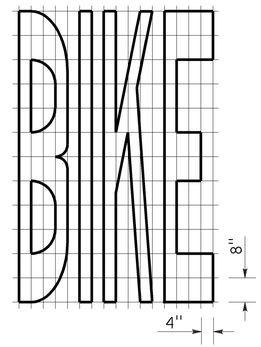

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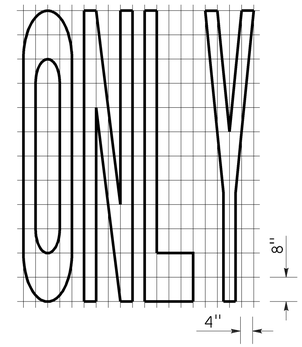

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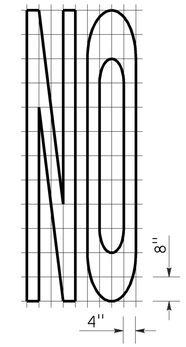

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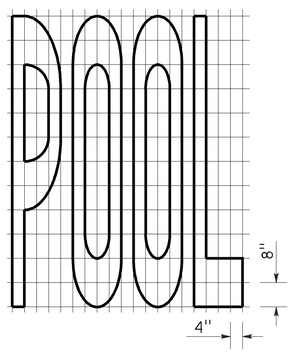

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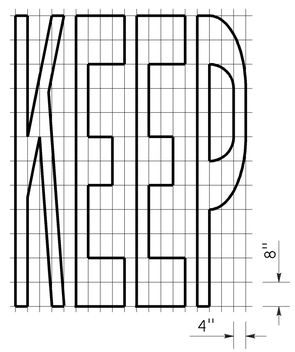

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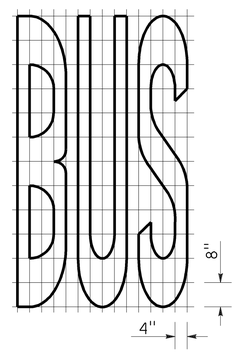

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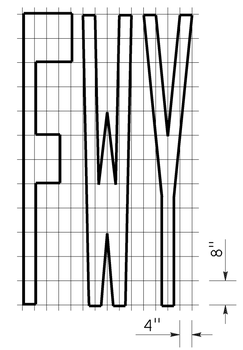

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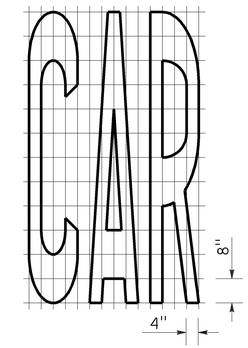
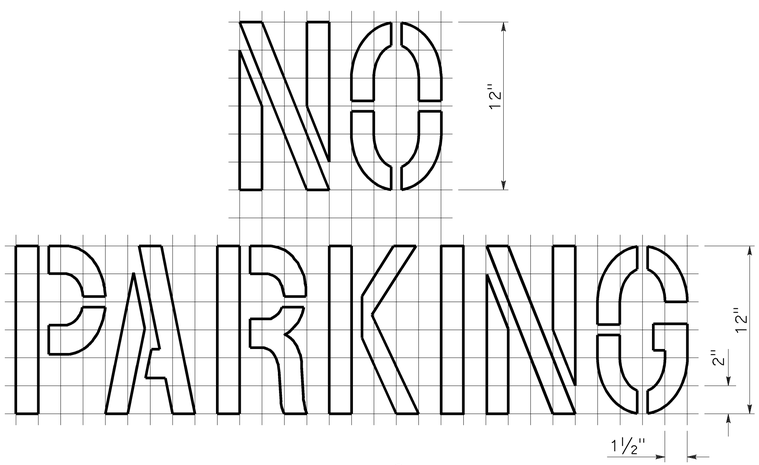
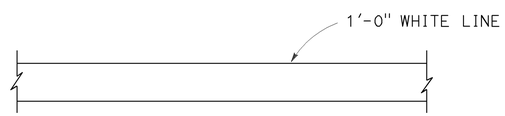


A=17 ft²

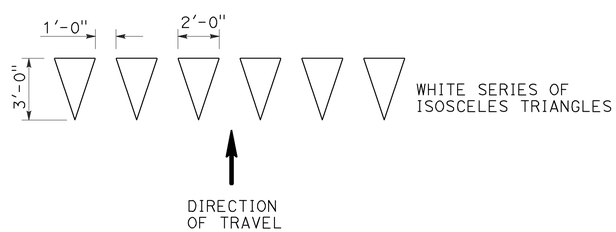
WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS WORDS, LIMIT AND YIELD LINES

NO SCALE

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

REVISED STANDARD PLAN RSP A24E

2010 REVISED STANDARD PLAN RSP A24E

6-12-12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	24	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
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 concrete bridge deck surface, furnish and place new ¾" thick min polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. Polyester concrete shall be placed in one lift. Survey grades of the existing bridge deck surface shall be provided prior to placing the polyester concrete overlay.

NOTE:

For deck repair and spall repair detail, see "MISCELLANEOUS DETAILS NO. 2" sheet.

STANDARD PLANS DATED 2010

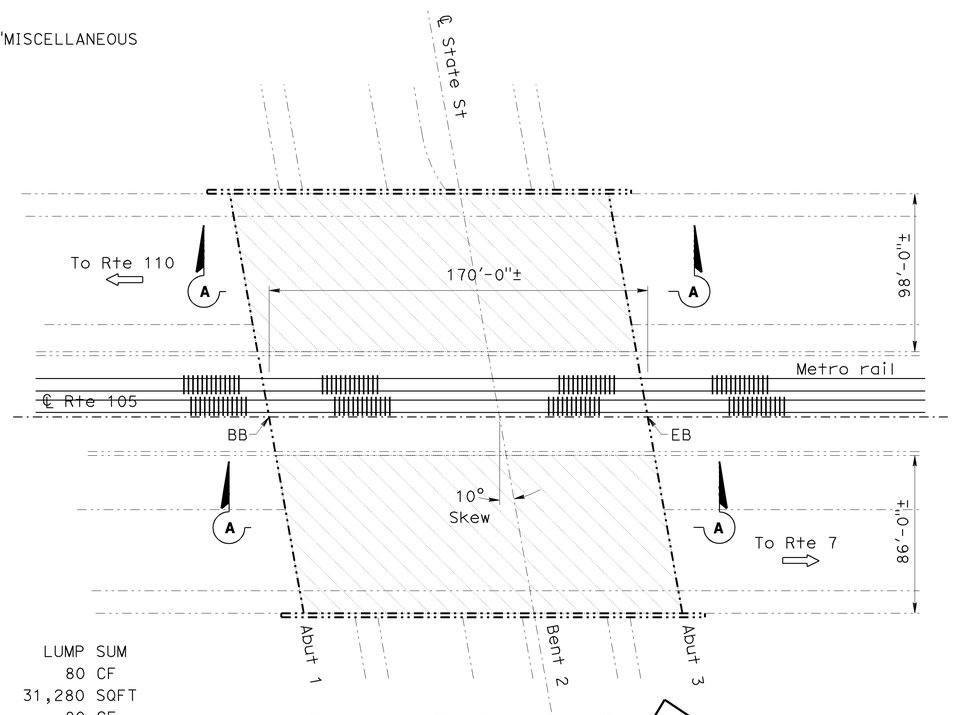
SHEET NO.	TITLE
A10A	ABBREVIATIONS (SHEET 1 OF 3)
A10B	ABBREVIATIONS (SHEET 2 OF 3)
A10C	LISTED SYMBOLS (SHEET 1 OF 2)
A10D	LISTED SYMBOLS (SHEET 2 OF 2)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")

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	GENERAL PLAN NO. 12
13	MISCELLANEOUS DETAILS NO. 1
14	MISCELLANEOUS DETAILS NO. 2
15	STRUCTURE APPROACH TYPE R(30D)



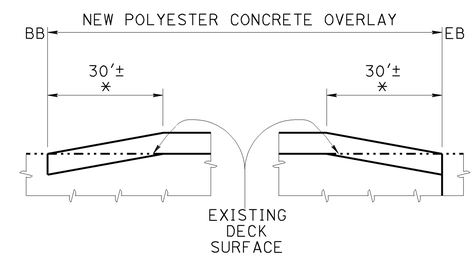
STATE STREET UC #53-2662

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	80 CF
REMOVE CONCRETE DECK SURFACE	31,280 SQFT
REMOVE UNSOUND CONCRETE	80 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	31,500 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	2,000 CF
PLACE POLYESTER CONCRETE OVERLAY	31,500 SQFT

STATE STREET UC

Br No. 53-2662, Rte 105, PM R11.10
Scale: 1"=30'



SECTION A-A

NO SCALE

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

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	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

	BY	CHECKED
LAYOUT	Clayton Tom	Gerald Joo
SPECIFICATIONS	Steven Seifert	PLANS AND SPECS COMPARED Steven Seifert

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 1

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 07-25-12 11-28-12 01-28-13 02-20-13

SHEET 01 OF 15

FILE => 07-1w4001-a-gp01.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	25	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
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 concrete bridge deck surface, furnish and place new 3/4" thick min polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. Polyester concrete shall be placed in one lift. Survey grades of the existing bridge deck surface shall be provided prior to placing the polyester concrete overlay.

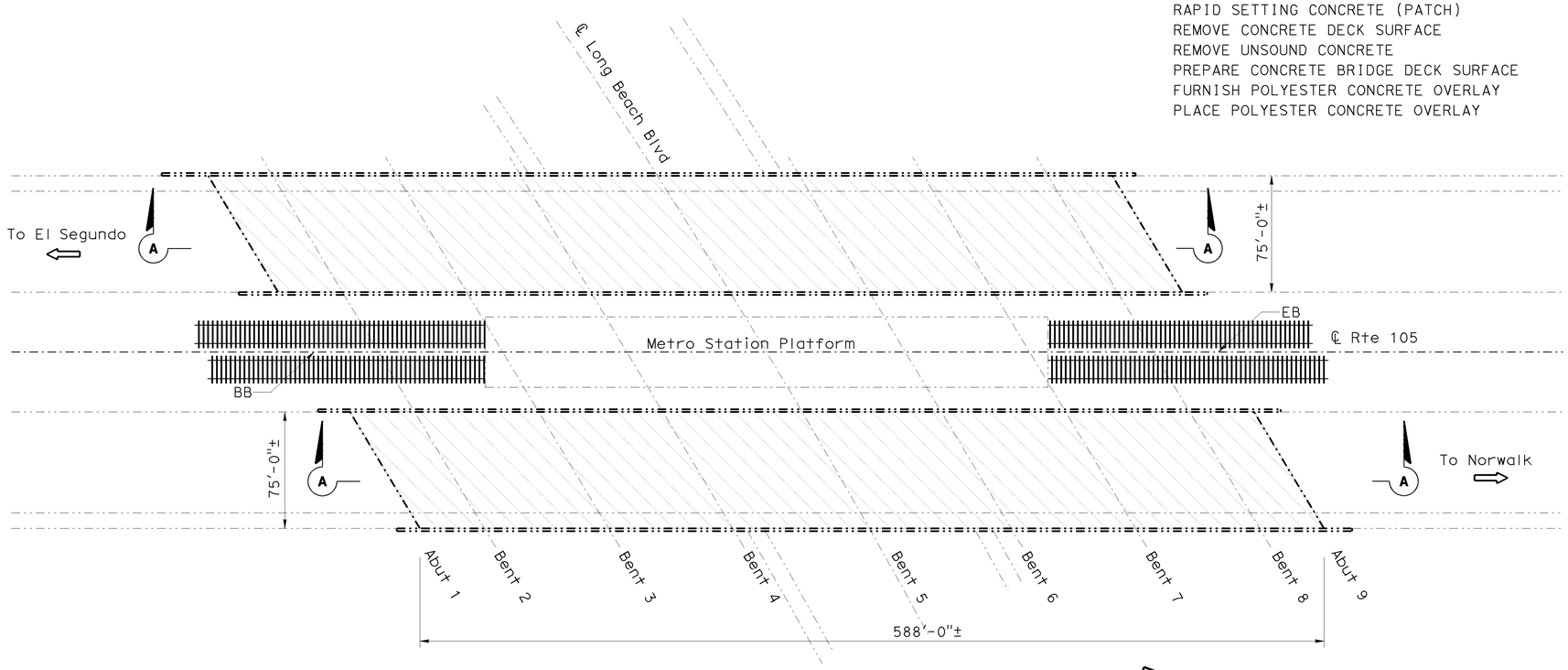
NOTE:

For deck damage repair and spall repair detail, see "MISCELLANEOUS DETAILS NO. 2" sheet.

LONG BEACH BOULEVARD UC #53-2493

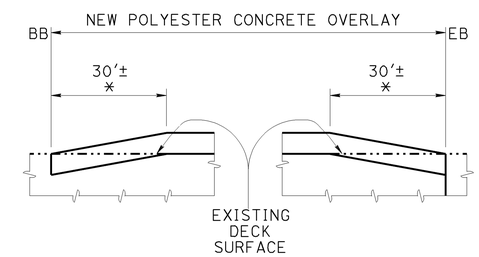
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	225 CF
REMOVE CONCRETE DECK SURFACE	88,200 SQFT
REMOVE UNSOUND CONCRETE	225 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	88,500 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	5,500 CF
PLACE POLYESTER CONCRETE OVERLAY	88,500 SQFT



LONG BEACH BOULEVARD UC

Br No. 53-2493, Rte 105, PM R11.56
Scale 1"=40'



SECTION A-A

NO SCALE

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

NOTE:

For deck repair detail overlay 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	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 2

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 01-25-12 11-20-12 01-28-13 02-20-13

SHEET 02 OF 15

FILE => 07-1w4001-a-gp02.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	26	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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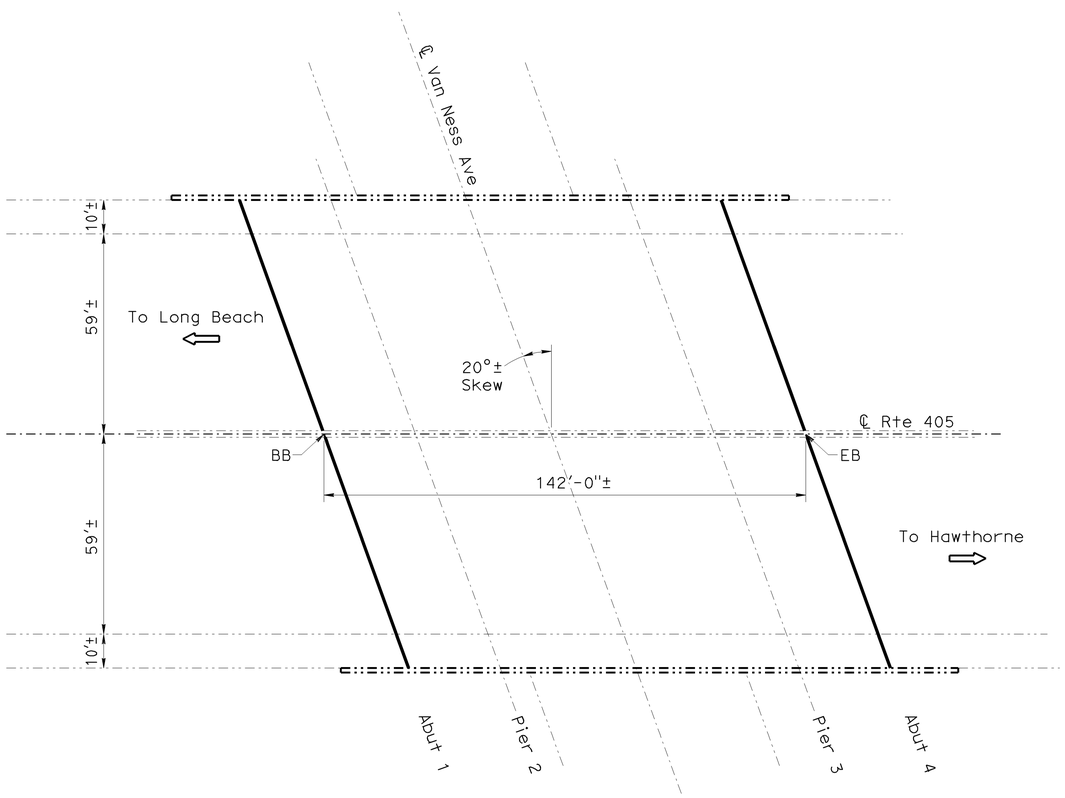
LEGEND:

Indicates existing.

Indicates direction of traffic.

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

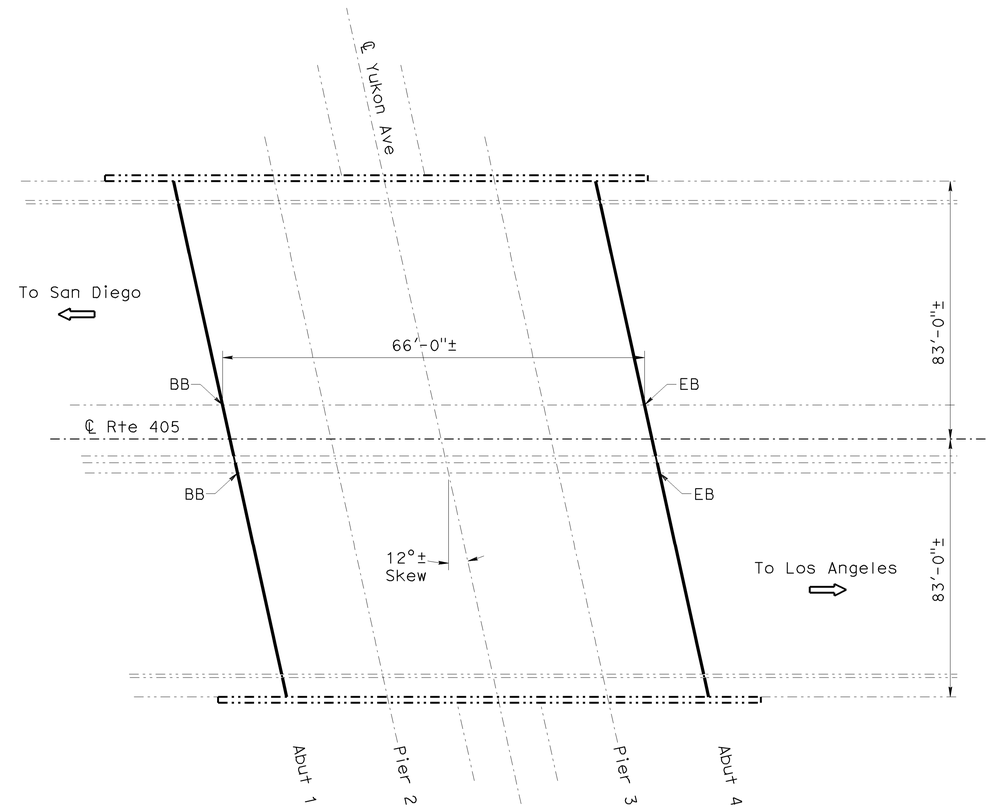


VAN NESS AVENUE UC

Br No. 53-1174, Rte 405, PM 14.92
Scale 1"=20'

VAN NESS AVENUE UC #53-1174
QUANTITIES

CLEAN EXPANSION JOINT	294 LF
JOINT SEAL (MR 1")	294 LF



YUKON AVENUE UC

Br No. 53-1177, Rte 405, PM 15.98
Scale 1"=20'

YUKON AVENUE UC #53-1177
QUANTITIES

CLEAN EXPANSION JOINT	340 LF
JOINT SEAL (MR ½")	340 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	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

	BY	CHECKED
LAYOUT	Clayton Tom	Gerald Joo
SPECIFICATIONS	Steven Seifert	PLANS AND SPECS COMPARED Steven Seifert

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 3

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 07-26-12 11-26-12 01-28-13 02-20-13

SHEET 03 OF 15

FILE => 07-1w4001-a-gp03.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	27	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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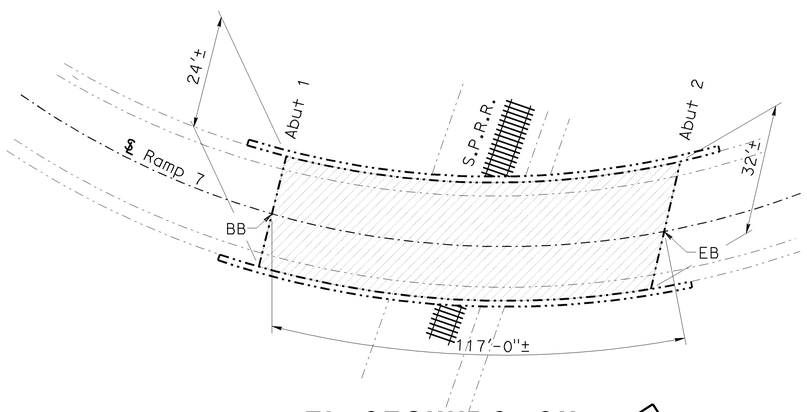
LEGEND:

Indicates existing.

Indicates direction of traffic.

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

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

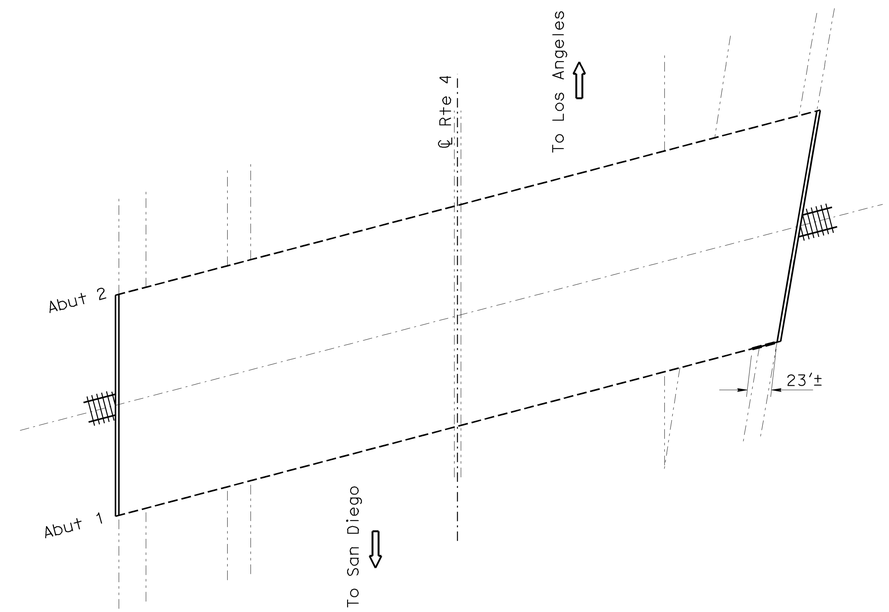


EL SEGUNDO OH

Br No. 53-2387K, Rte 405, PM 20.16
Scale 1"=20'

EL SEGUNDO OH #53-2387K
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	3,500 SQFT
TREAT BRIDGE DECK	3,500 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	45 GAL



129TH STREET OH

Br No. 53-1238, Rte 405, PM 20.18
No Scale

129TH STREET OH #53-1238
QUANTITIES

CLEAN EXPANSION JOINT	23 LF
JOINT SEAL (MR ½")	23 LF

NOTE:
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TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Ramesh Patel	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Clayton Tom	Gerald Joo	LAYOUT	BY Clayton Tom	CHECKED Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel	SPECIFICATIONS	BY Steven Seifert	PLANS AND SPECS COMPARED Steven Seifert

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105,405&605 BRIDGES
GENERAL PLAN NO. 4

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 07-25-12 11-28-12 01-28-13 02-20-13

SHEET 04 OF 15

FILE => 07-1w4001-a-gp04.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	28	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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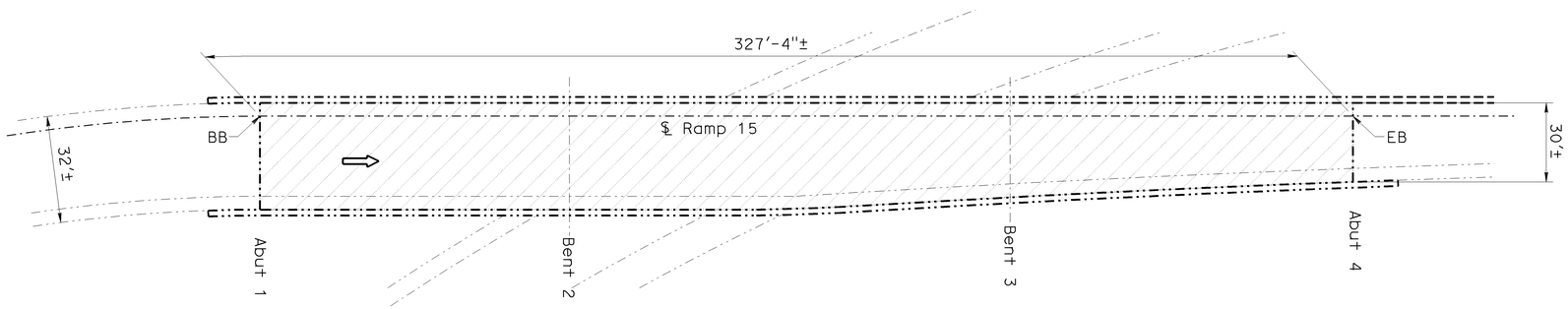
LEGEND:

Indicates existing.

Indicates direction of traffic.

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



IMPERIAL HIGHWAY ON-RAMP OC (CONNECTOR)

Br No. 53-2434T, Rte 405, PM R21.32
Scale 1"=20'

IMPERIAL HIGHWAY ON-RAMP OC (CONNECTOR)
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	10,500 SQFT
TREAT BRIDGE DECK	10,500 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	135 GAL

NOTE:
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TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Ramesh Patel	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	Ramesh Patel	SPECIFICATIONS	Steven Seifert	PLANS AND SPECS COMPARED Steven Seifert

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105,405&605 BRIDGES
GENERAL PLAN NO. 5

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 07-26-12 11-26-12 01-28-13 02-20-13

SHEET 05 OF 15

FILE => 07-1w4001-a-gp05.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	29	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

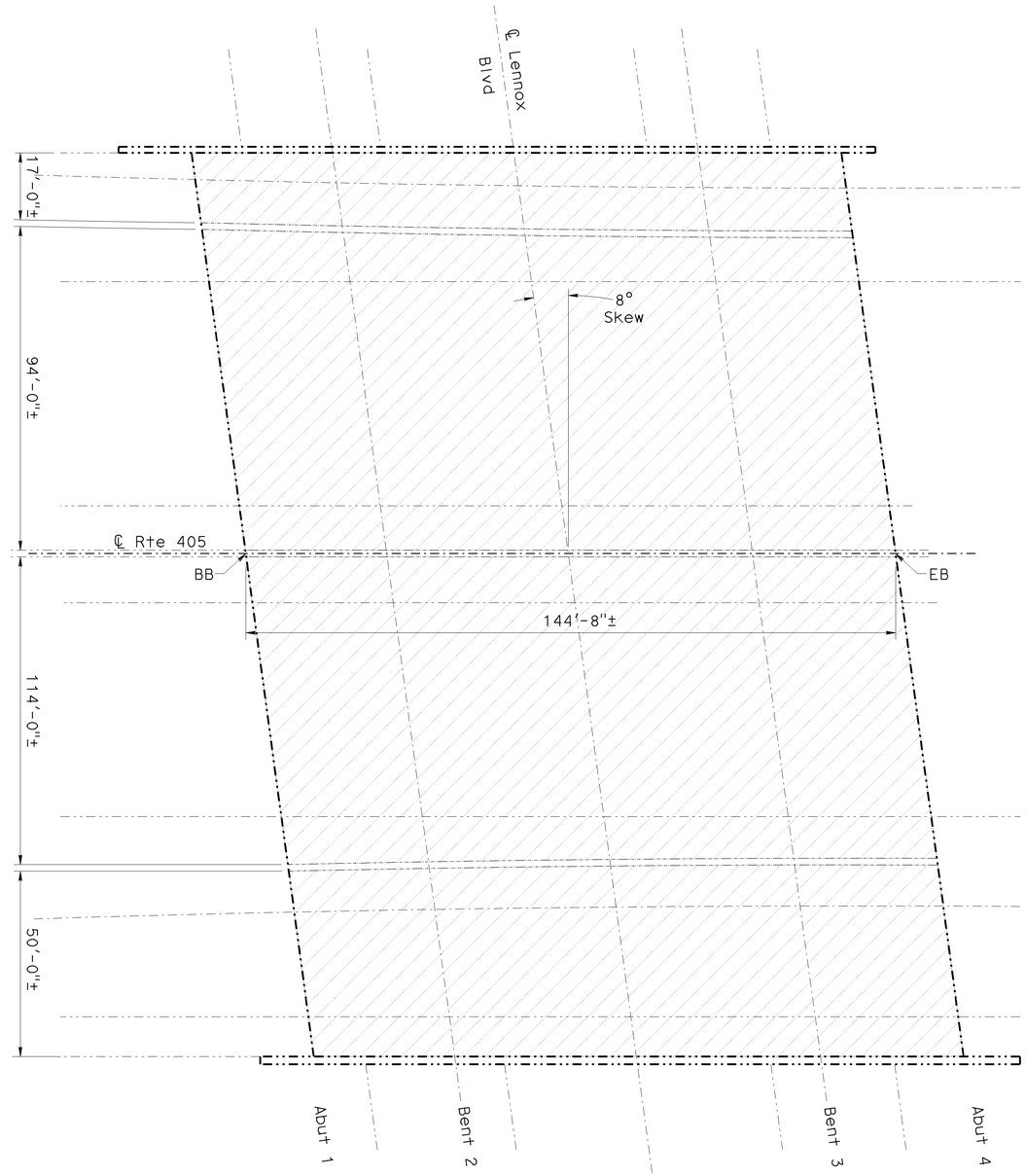
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND:

Indicates existing.

Indicates direction of traffic.

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



LENNOX BOULEVARD UC #53-1242
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	40,000 SQFT
TREAT BRIDGE DECK	40,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	500 GAL

LENNOX BOULEVARD UC

Br No. 53-1242, Rte 405, PM 21.74
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	Ramesh patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 6

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 04-08-10 11-28-12 01-28-13 02-20-13

SHEET 06 OF 15

FILE => 07-1w4001-a-gp06.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	30	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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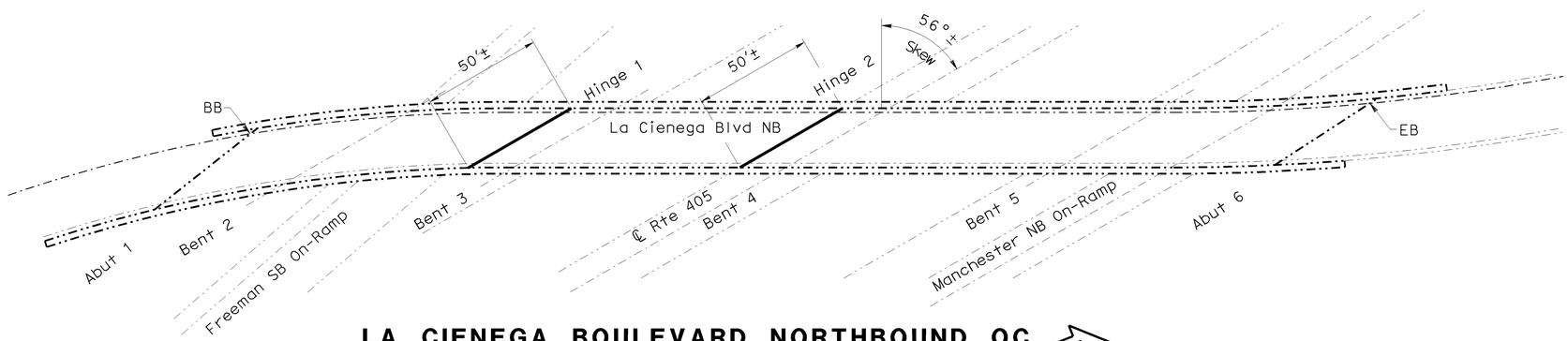
LEGEND:

Indicates existing.

Indicates direction of traffic.

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



LA CIENEGA BOULEVARD NORTHBOUND OC

Br No. 53-1249, Rte 405, PM 23.64
Scale: 1"=30'

LA CIENEGA BOULEVARD NORTHBOUND OC #53-1249

QUANTITIES

CLEAN EXPANSION JOINT	100 LF
JOINT SEAL (MR 1")	100 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	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 7

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 07-25-12 11-26-12 01-28-13 02-20-13

SHEET 07 OF 15

FILE => 07-1w4001-a-gp07.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	31	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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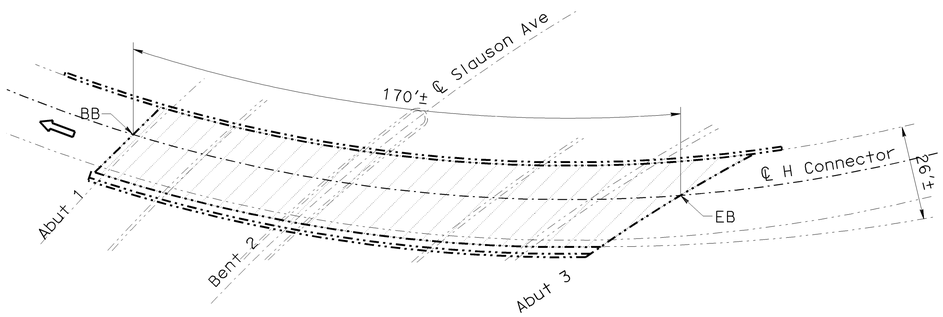
LEGEND:

Indicates existing.

Indicates direction of traffic.

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

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

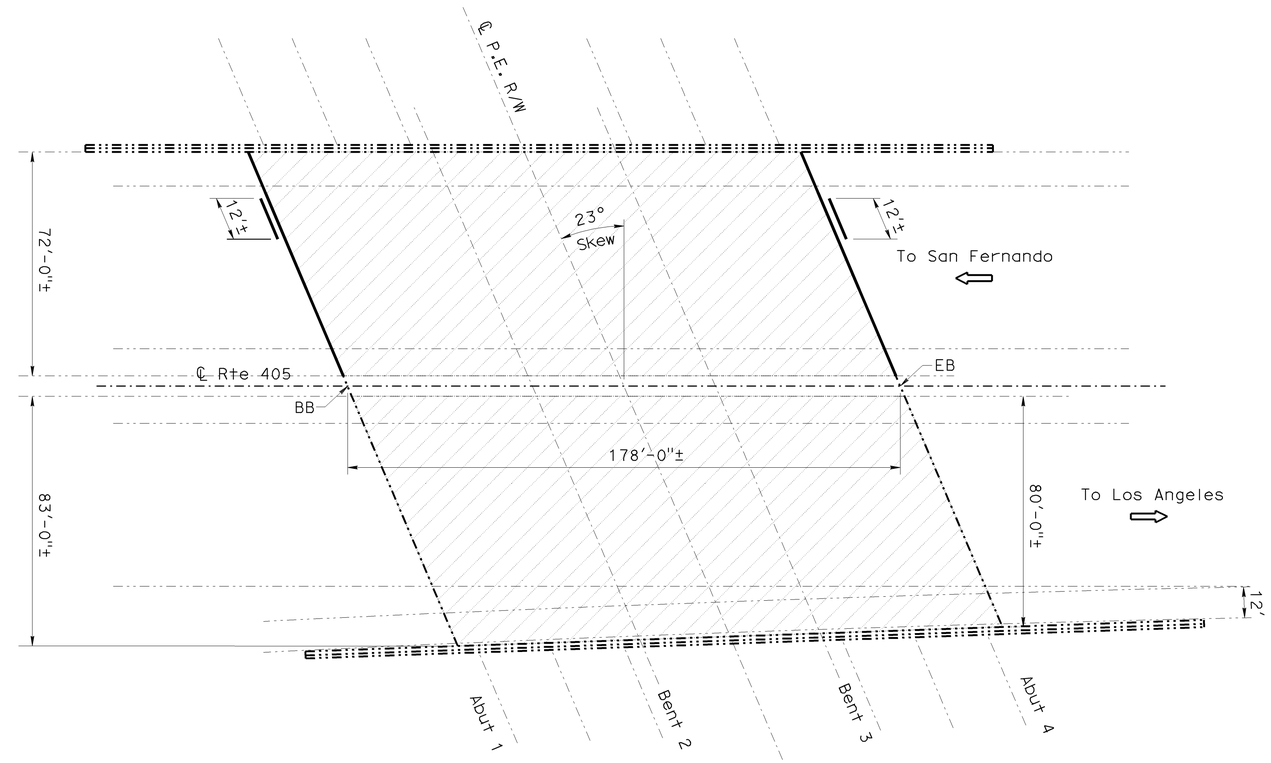


S405-W90 CONNECTOR OC

Br No. 53-1974F, Rte 405, PM 26.10
Scale 1"=20'

S405-W90 CONNECTOR OC #53-1974F
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	5,000 SQFT
TREAT BRIDGE DECK	5,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	65 GAL



CULVER BOULEVARD UC

Br No. 53-1259, Rte 405, PM 27.20
Scale 1"=20'

CULVER BOULEVARD UC #53-1259
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	28,000 SQFT
TREAT BRIDGE DECK	28,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	350 GAL
CLEAN EXPANSION JOINT	180 LF
JOINT SEAL (MR 2")	180 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	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105,405& 605 BRIDGES
GENERAL PLAN NO. 8

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 01-25-12 11-28-12 01-28-13 02-20-13

SHEET 08 OF 15

FILE => 07-1w4001-a-gp08.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	32	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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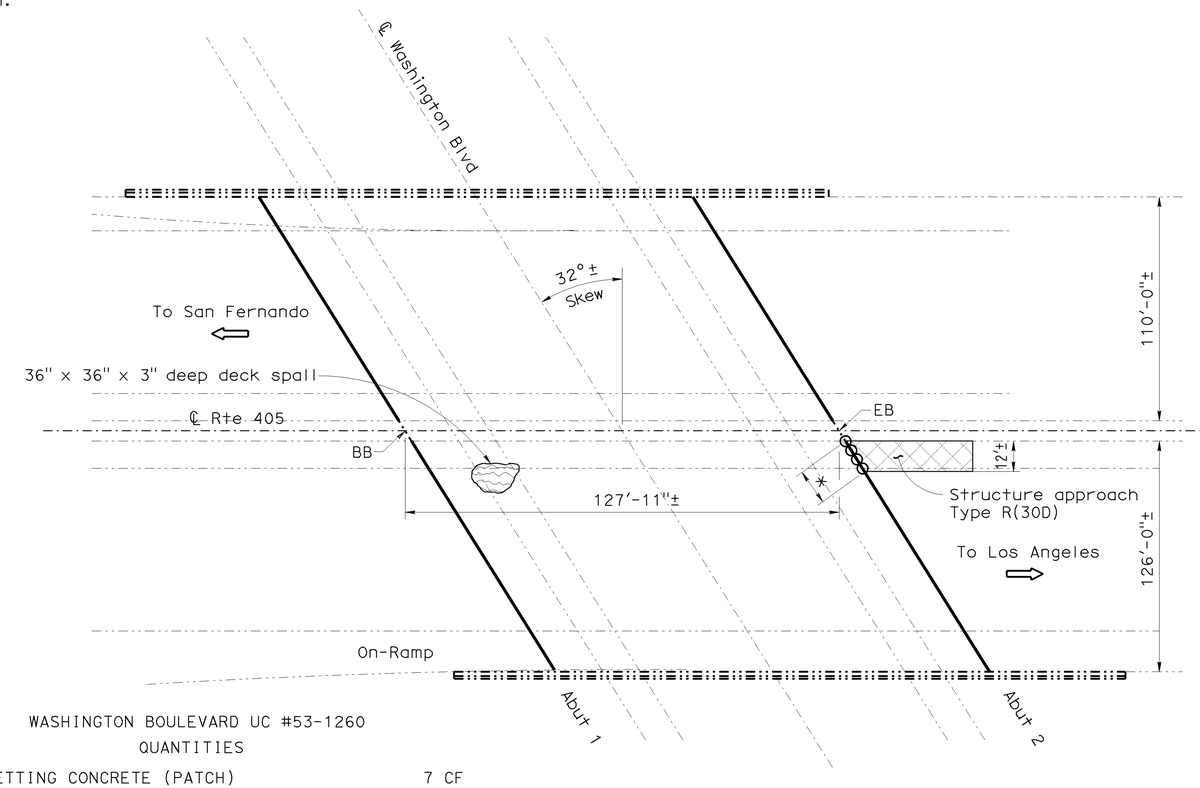
LEGEND:

- Indicates existing.
- Indicates direction of traffic.
- Indicates limits of clean expansion joint and placement of new joint seal.
- Indicates limits of placement of new joint seal.
- * Indicates limits of paving notch extension.

NOTES:

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



WASHINGTON BOULEVARD UC #53-1260

QUANTITIES

RAPID SETTING CONCRETE (PATCH)	7 CF
REMOVE UNSOUND CONCRETE	7 CF
AGGREGATE BASE (APPROACH SLAB)	2 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	20 CY
PAVING NOTCH EXTENSION	11 CF
CLEAN EXPANSION JOINT	542 LF
JOINT SEAL (MR 1")	556 LF

WASHINGTON BOULEVARD UC

Br No. 53-1260, Rte 405, PM 27.45
Scale 1"=20'

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED
DESIGN	Gerald Joo	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 9

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 07-20-12 11-20-12 01-28-13 02-20-13

SHEET 09 OF 15

FILE => 07-1w4001-a-gp09.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	33	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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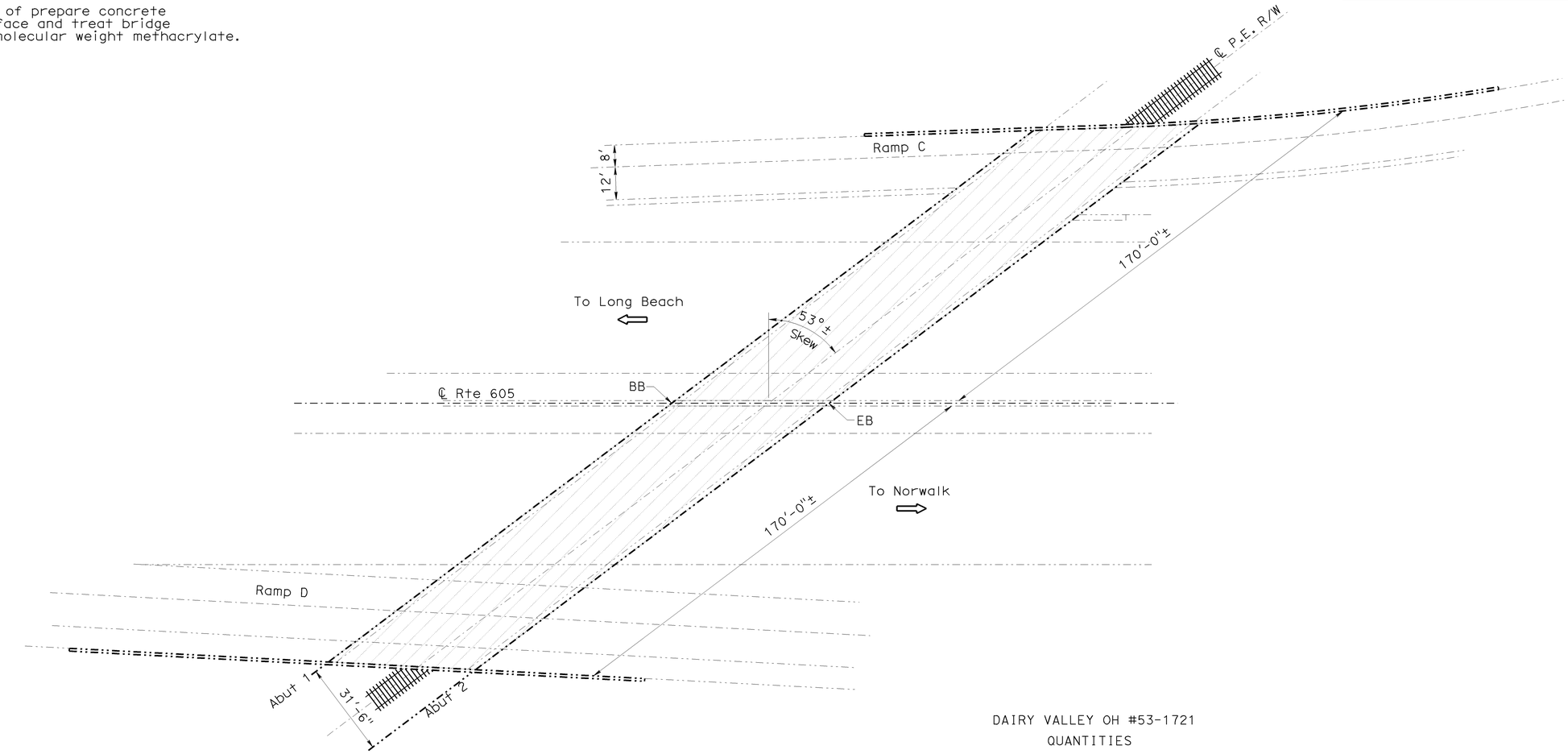
LEGEND:

Indicates existing.

Indicates direction of traffic.

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



DAIRY VALLEY OH

Br No. 53-1721, Rte 605, PM R4.71
Scale 1"=20'

DAIRY VALLEY OH #53-1721
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	11,000 SQFT
TREAT BRIDGE DECK	11,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	140 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	Ramesh Patel	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	Ramesh Patel	SPECIFICATIONS	Steven Seifert	PLANS AND SPECS COMPARED Steven Seifert

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105,405&605 BRIDGES
GENERAL PLAN NO. 10

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 07-26-12 11-26-12 01-28-13 02-20-13

SHEET 10 OF 15

FILE => 07-1w4001-a-gp10.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	RIV	105, 405, 605	Var	34	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
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 location of existing joint seal removal and replacement of new joint seal.

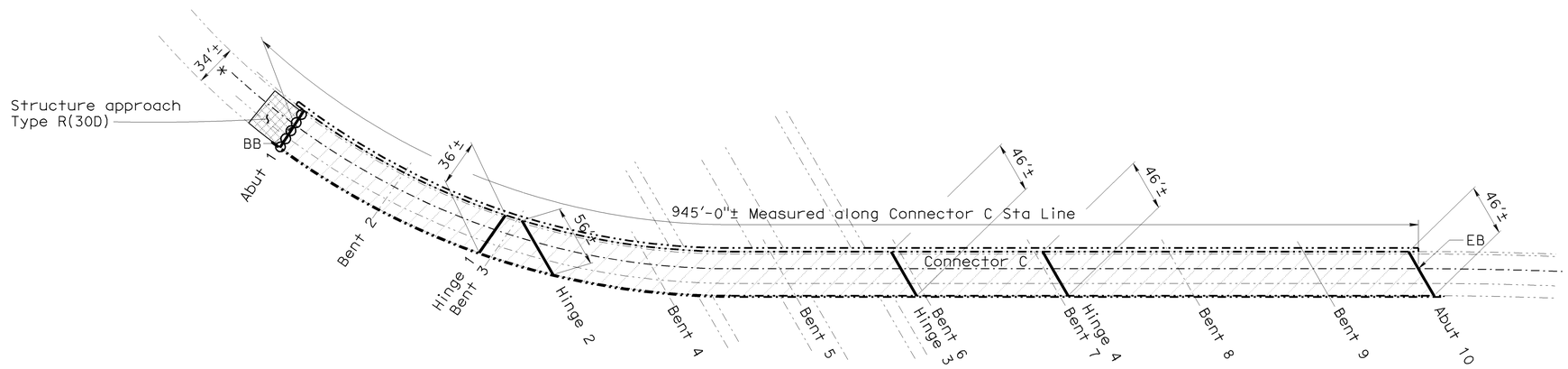
Indicates limits of prepare concrete bridge deck surface and treat bridge deck with methacrylate.

Indicates limits of placement of new joint seal.

* Indicates limits of paving notch extension.

NOTE:

1. For approach slab details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.



N405-W90 CONNECTOR OC

Br No. 53-1838G, Rte 405, PM 25.99
No Scale

N405-W90 CONNECTOR OC #53-1838G
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	33,000 SQFT
TREAT BRIDGE DECK	33,000 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	415 GAL
AGGREGATE BASE (APPROACH SLAB)	5 CY
STRUCTURAL CONCRETE APPROACH SLAB (TYPE R)	46 CY
PAVING NOTCH EXTENSION	26 CF
CLEAN EXPANSION JOINT	230 LF
JOINT SEAL (MR 1")	80 LF
JOINT SEAL (MR 2")	184 LF

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

TONY D. BRAKE
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	Gerald Joo	Ramesh Patel	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	Ramesh Patel	SPECIFICATIONS	Steven Seifert	PLANS AND SPECS COMPARED Steven Seifert

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTE 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 11

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 07-20-12 11-28-12 01-28-13 02-20-13

SHEET 11 OF 15

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	35	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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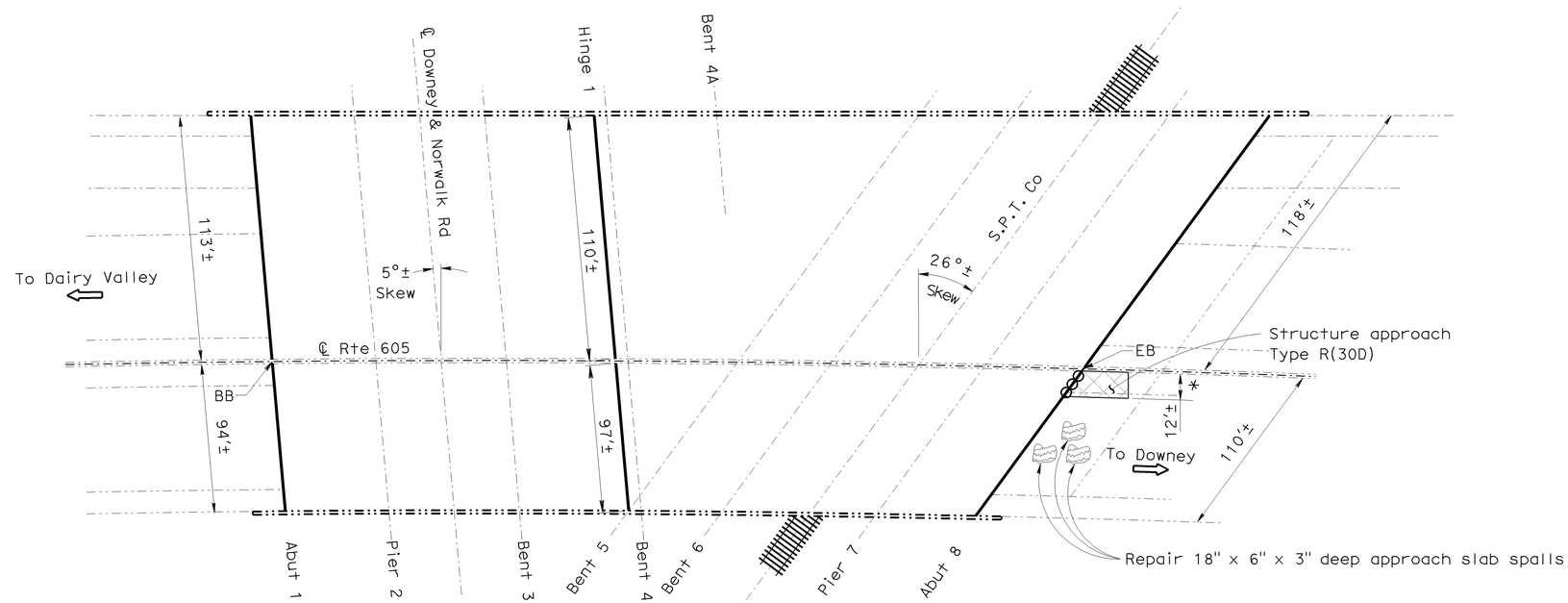
LEGEND:

- Indicates existing.
- Indicates direction of traffic.
- Indicates limits of clean expansion joint and placement of new joint seal.
- Indicates limits of placement of new joint seal.
- * Indicates limits of paving notch extension.

NOTES:

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



HOXIE OH

Br No. 53-1652, Rte 605, PM R8.23
Scale: 1"=30'

HOXIE OH #53-1652
QUANTITIES

RAPID SETTING CONCRETE (PATCH)	4 CF
REMOVE UNSOUND CONCRETE	4 CF
AGGREGATE BASE (APPROACH SLAB)	2 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	20 CY
PAVING NOTCH EXTENSION	10 CF
CLEAN EXPANSION JOINT	630 LF
JOINT SEAL (MR 1")	435 LF
JOINT SEAL (MR 2")	207 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	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105, 405 & 605 BRIDGES
GENERAL PLAN NO. 12

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 01-25-12 11-20-12 01-28-13 02-20-13

SHEET 12 OF 15

FILE => 07-1w4001-a-gp12.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	36	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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JOINT SEAL TABLE

BRIDGE NAME	BRIDGE NUMBER	JOINT SEAL LOCATION		MINIMUM "MR" (INCHES)	APPROX LENGTH (FT)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN (INCHES)
Van Ness Ave UC	53-1174	Abut 1	PN	1	147	No	12
		Abut 4	PN	1	147	No	12
Yukon Ave UC	53-1177	Abut 1	PN	½	170	No	12
		Abut 4	PN	½	170	No	12
129TH Street OH	53-1238	Abut 1	PN	½	23	No	12
La Cienega Blvd NB OC	53-1249	Hinge 1	DJ	1	50	Yes	12
		Hinge 2	DJ	1	50	Yes	12
Culver Blvd UC	53-1259	Abut 1	PN	2	90	No	12
		Abut 4	PN	2	90	No	12
Washington Blvd UC	53-1260	Abut 1	PN	1	278	No	12
		Abut 2	PN	1	278	No	12
N405-W90 Conn OC	53-1838G	Abut 1	PN	1	34	No	12
		Hinge 1	DJ	2	36	Yes	12
		Hinge 2	DJ	2	56	Yes	12
		Hinge 3	DJ	2	46	Yes	12
		Hinge 4	DJ	2	46	Yes	12
		Abut 10	PN	1	46	No	12
Hoxie OH	53-1652	Abut 1	PN	1	207	No	12
		Hinge 1	DJ	2	207	Yes	12
		Abut 8	PN	1	228	No	12

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 PLANB6-21.

The following notes apply to JOINT SEAL TYPE B:

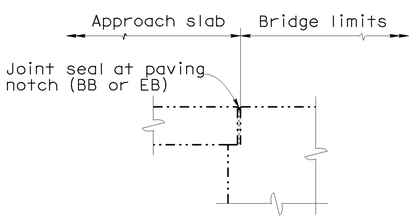
1) Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.

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.

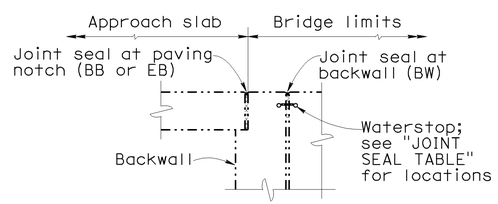
3) W1 shall be the smaller of the values determined as follows:
   A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
   B) The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3.0 PSI.

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.

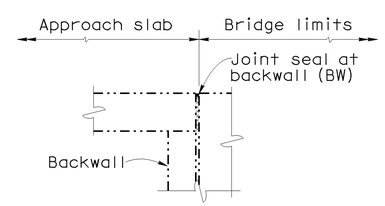
For details not shown see STANDARD PLAN B6-21.



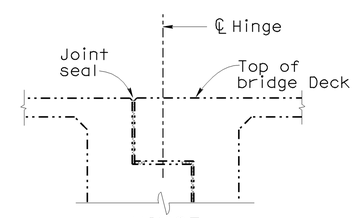
DIAPHRAGM ABUTMENT



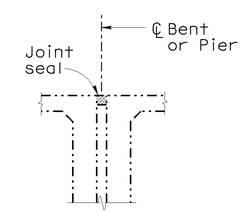
ABUTMENT WITH BACKWALL AND PAVING NOTCH



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	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.: Various
POST MILE: Varies

ROUTES 105, 405 & 605 BRIDGES
MISCELLANEOUS DETAILS NO. 1

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 07-26-12 11-26-12 01-28-13 02-20-13

SHEET 13 OF 15

FILE => 07-1w4001-u-miscdt01.dgn

USERNAME => s117263 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	37	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

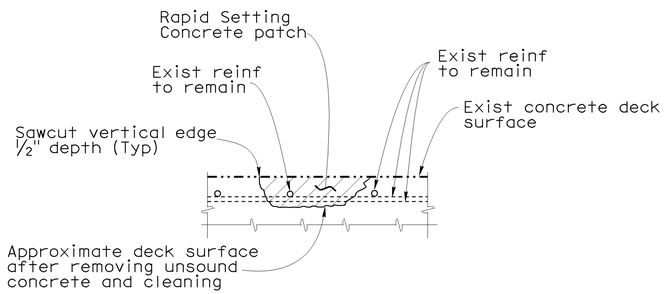
3-25-13
PLANS APPROVAL DATE

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.

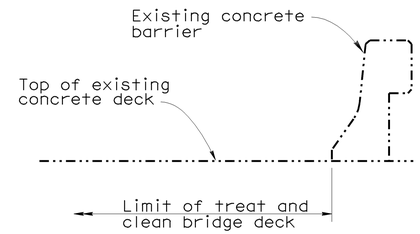
DECK REPAIR NOTES:

1. Existing reinforcement shall be protected in place during unsound concrete removal and patching operations.
2. It is responsibility of the Contractor to repair any reinforcement that is accidently cut by saw cutting operations.
3. When existing transverse reinforcement is exposed in the deck surface, saw cutting may be waived with the approval of the Engineer.
4. The saw cut depth shall not exceed 3/4 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.

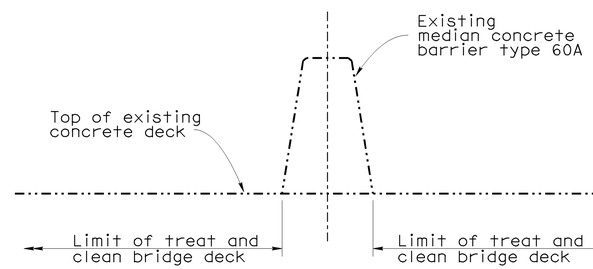


DECK DAMAGE REPAIR DETAIL

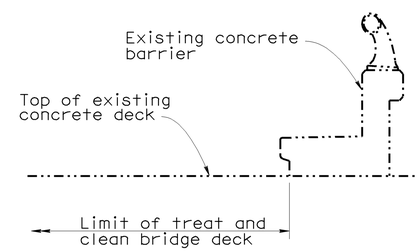
Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.



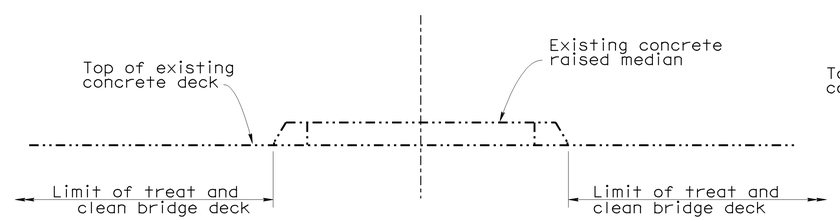
EOD BARRIER



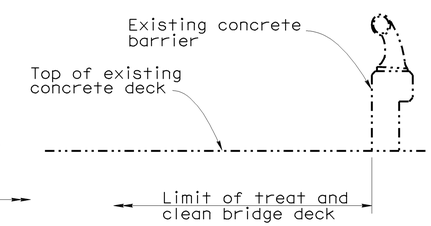
MEDIAN BARRIER



SIDEWALK BARRIER TYPE 2



RAISED MEDIAN



SIDEWALK BARRIER TYPE 1

TYPICAL LIMITS OF DECK WORK

NO SCALE

NOTE:
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	BY	CHECKED
DESIGN	Gerald Joo	Ramesh Patel
DETAILS	Clayton Tom	Gerald Joo
QUANTITIES	Gerald Joo	Ramesh Patel

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various
POST MILE Varies

ROUTES 105,405& 605 BRIDGES
MISCELLANEOUS DETAILS NO. 2

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1 CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 07-25-12 11-26-12 01-28-13 02-20-13

SHEET 14 OF 15

FILE => 07-1w4001-u-miscdt02.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105, 405, 605	Var	38	38

REGISTERED CIVIL ENGINEER 02-20-13 DATE

3-25-13
PLANS APPROVAL DATE

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

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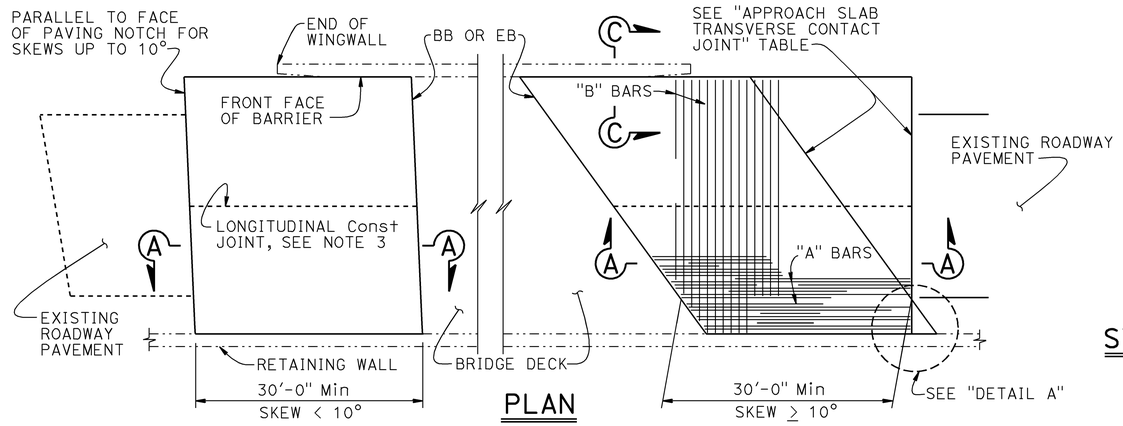
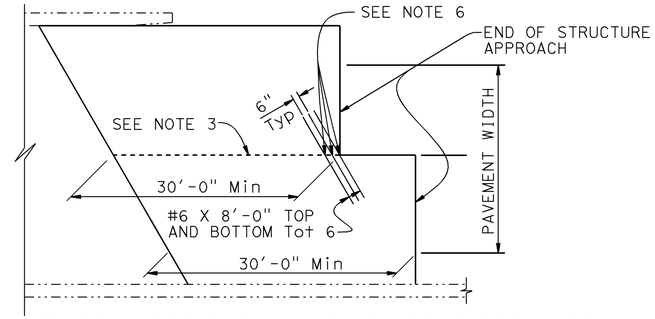
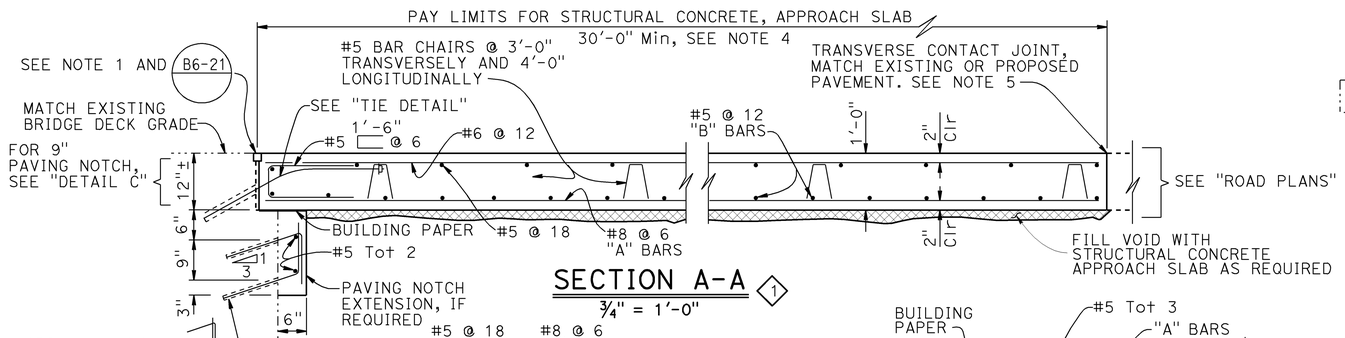


PLAN
1" = 10'

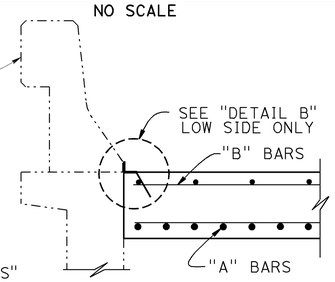


STRUCTURE APPROACH - END STAGGER DETAIL
NO SCALE

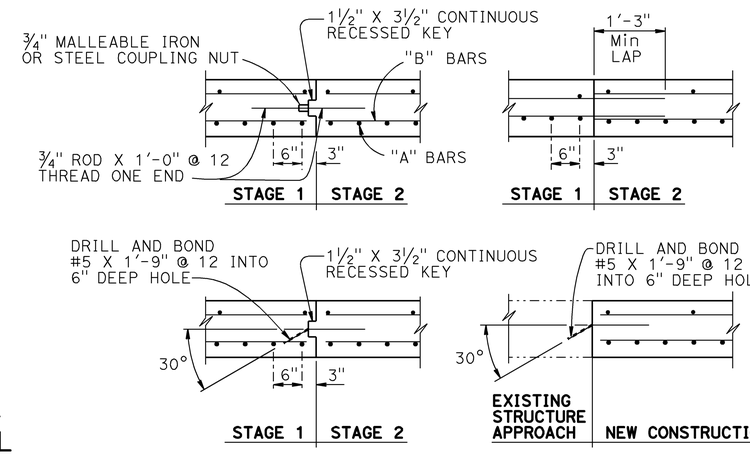
APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT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



SECTION A-A ⟨1⟩
¾" = 1'-0"

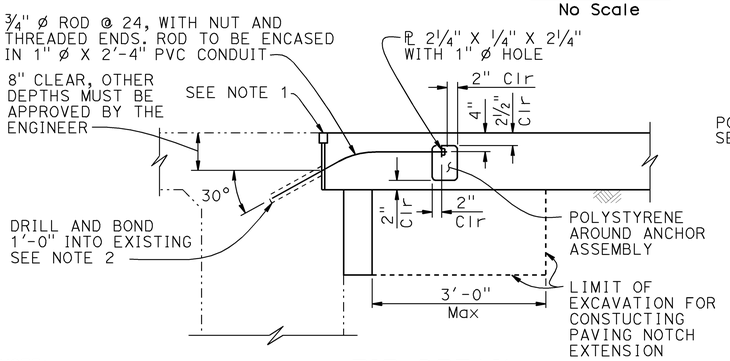


SECTION C-C
¾" = 1'-0"

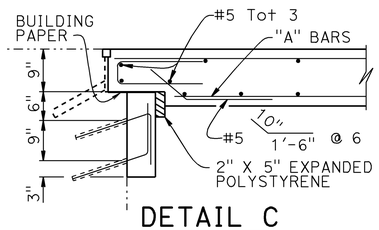


LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES
¾" = 1'-0"

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



DETAIL A
No Scale



BAR CHAIR DETAIL
1½" = 1'-0"

DETAIL C
¾" = 1'-0"

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

TIE DETAIL
¾" = 1'-0"

NOTE:
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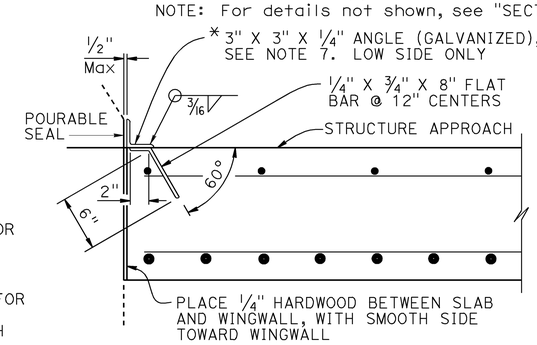
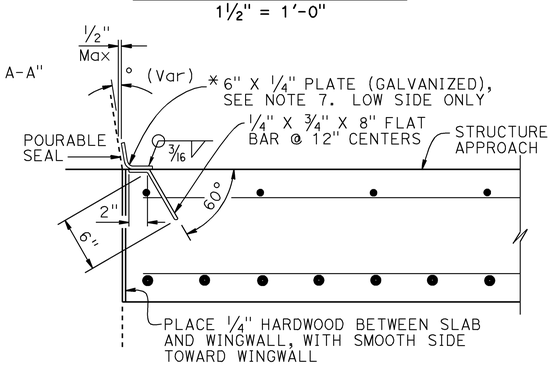


*(TO BE USED WITH CONCRETE BARRIER WITH VERTICAL FACE)

DETAIL B
1½" = 1'-0"



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

REVISED STANDARD DRAWING

FILE NO. xs3-150

APPROVAL DATE July 2011

⟨1⟩ REVISED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. Various
POST MILE Varies

SPECIAL DETAILS
ROUTE 105, 405 & 605 BRIDGES
STRUCTURE APPROACH TYPE R(30D)

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3489
PROJECT NUMBER & PHASE: 0712000053 1
CONTRACT NO.: 07-1W4004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-11-12 Revised

SHEET 15 OF 15

FILE => 07-1w4001-v-sa01.dgn

USERNAME => s117283 DATE PLOTTED => 01-MAR-2013 TIME PLOTTED => 06:07