ACIM-105-3(035)E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	1	25

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

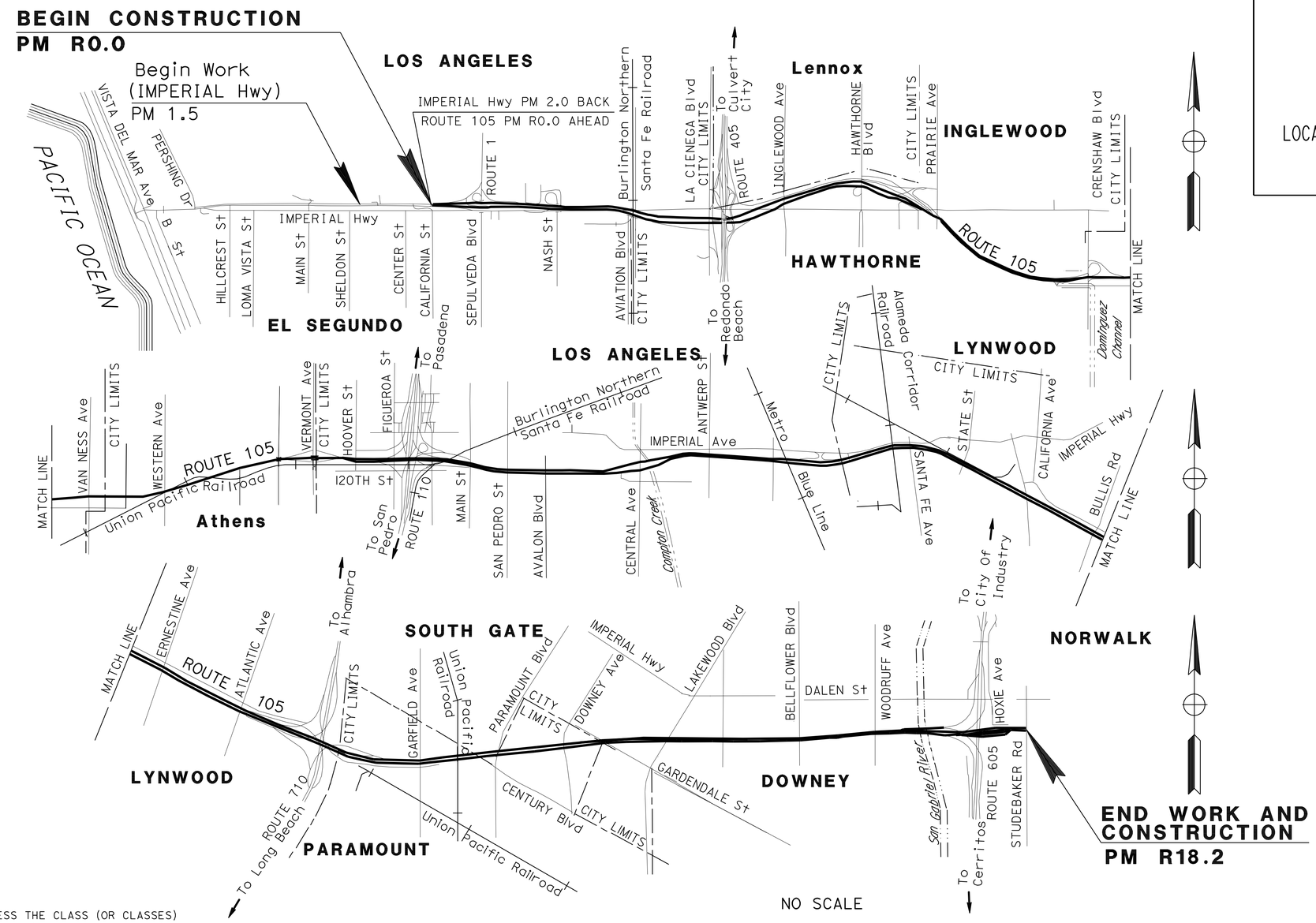
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
AT VARIOUS LOCATIONS
FROM CALIFORNIA STREET TO STUDEBAKER ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	TYPICAL CROSS SECTIONS
4-5	CONSTRUCTION DETAILS
6	CONSTRUCTION AREA SIGNS
7-13	TRAFFIC HANDLING DETAILS
14-16	PAVEMENT DELINEATION DETAILS
17-18	PAVEMENT DELINEATION QUANTITIES
19-20	SUMMARY OF QUANTITIES
21-25	REVISED STANDARD PLANS

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



Caltrans

Larry Wiering 12-15-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

February 14, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. C41247
Exp. 3-31-11
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.

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

PROJECT MANAGER: GARY KEVORKIAN
DESIGN ENGINEER: HECTOR OBESO

CONTRACT No.	07-4Y8604
PROJECT ID	0700020043

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:28

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	2	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
CIVIL
STATE OF CALIFORNIA

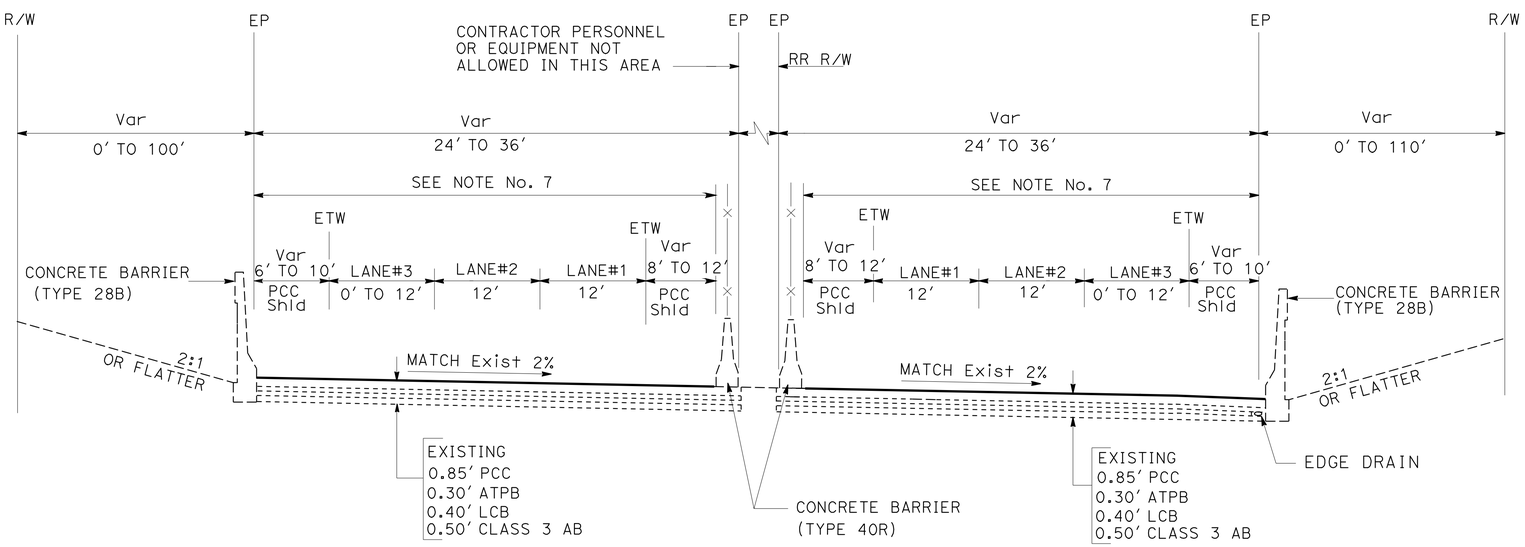
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIC IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
4. EXISTING DRAINAGE INLETS HAVE NOT BEEN PLOTTED ON THESE PLANS.
5. OMIT GRINDING ON AC PAVEMENT, BRIDGE DECKS, APPROACH AND DEPARTURE SLABS.
6. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
7. GRIND PCC PAVEMENT IN ALL LANES, INCLUDING LANE LINES AND SHOULDER. SEE SUMMARY OF QUANTITIES OF GRINDING EXISTING CONCRETE PAVEMENT.

LEGEND:

——— GRIND EXISTING CONCRETE PAVEMENT



PM R0.3 TO PM R1.2

TYPICAL CROSS SECTIONS

NO SCALE NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	3	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
CIVIL
STATE OF CALIFORNIA

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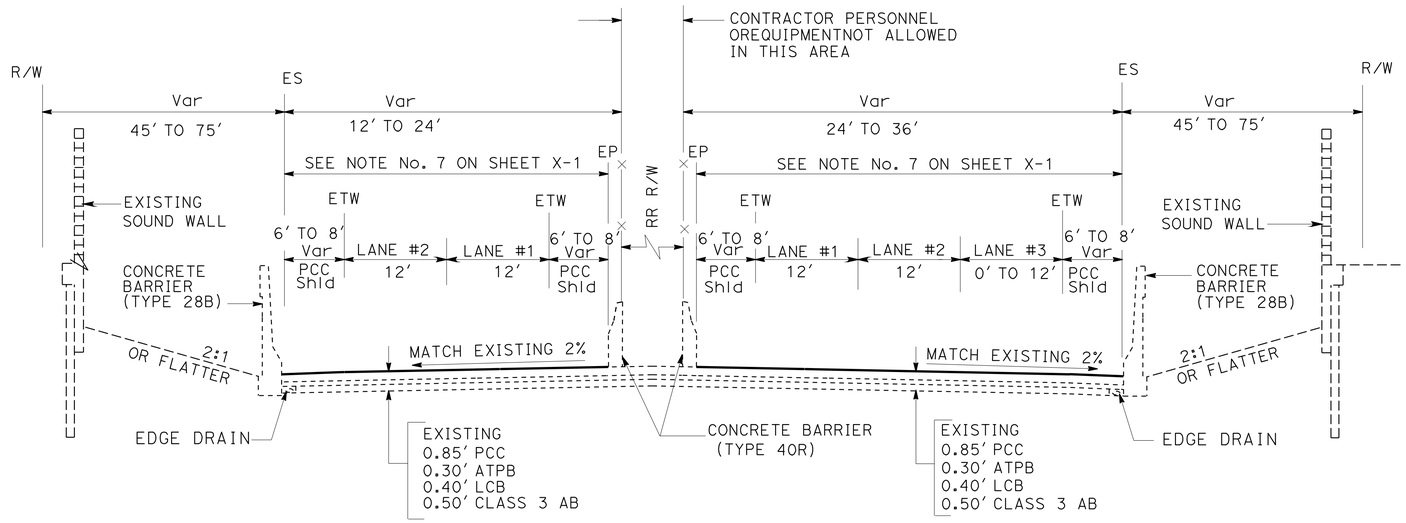
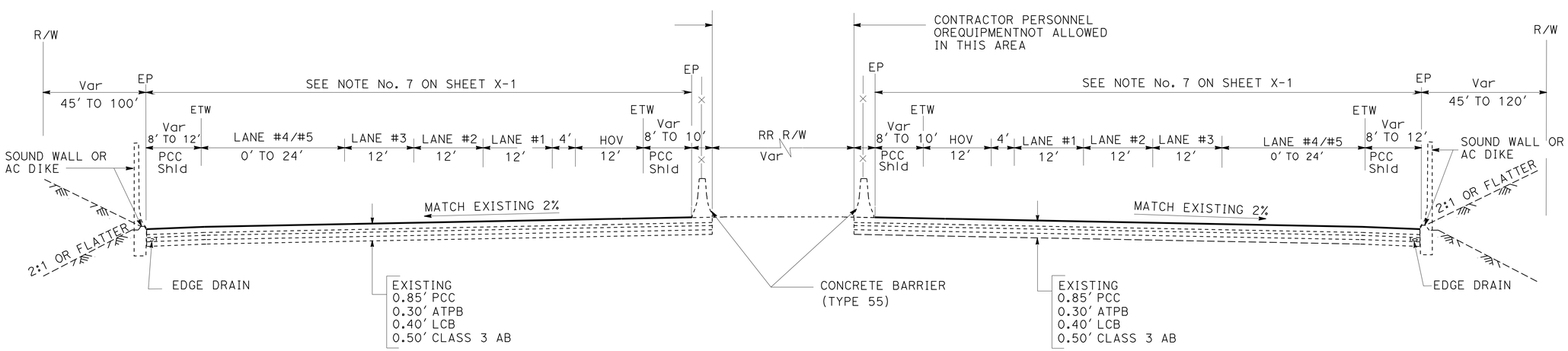


PM R17.4 TO PM R18.2



PM R1.2 TO PM R17.4

TYPICAL CROSS SECTIONS

NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	4	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
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.

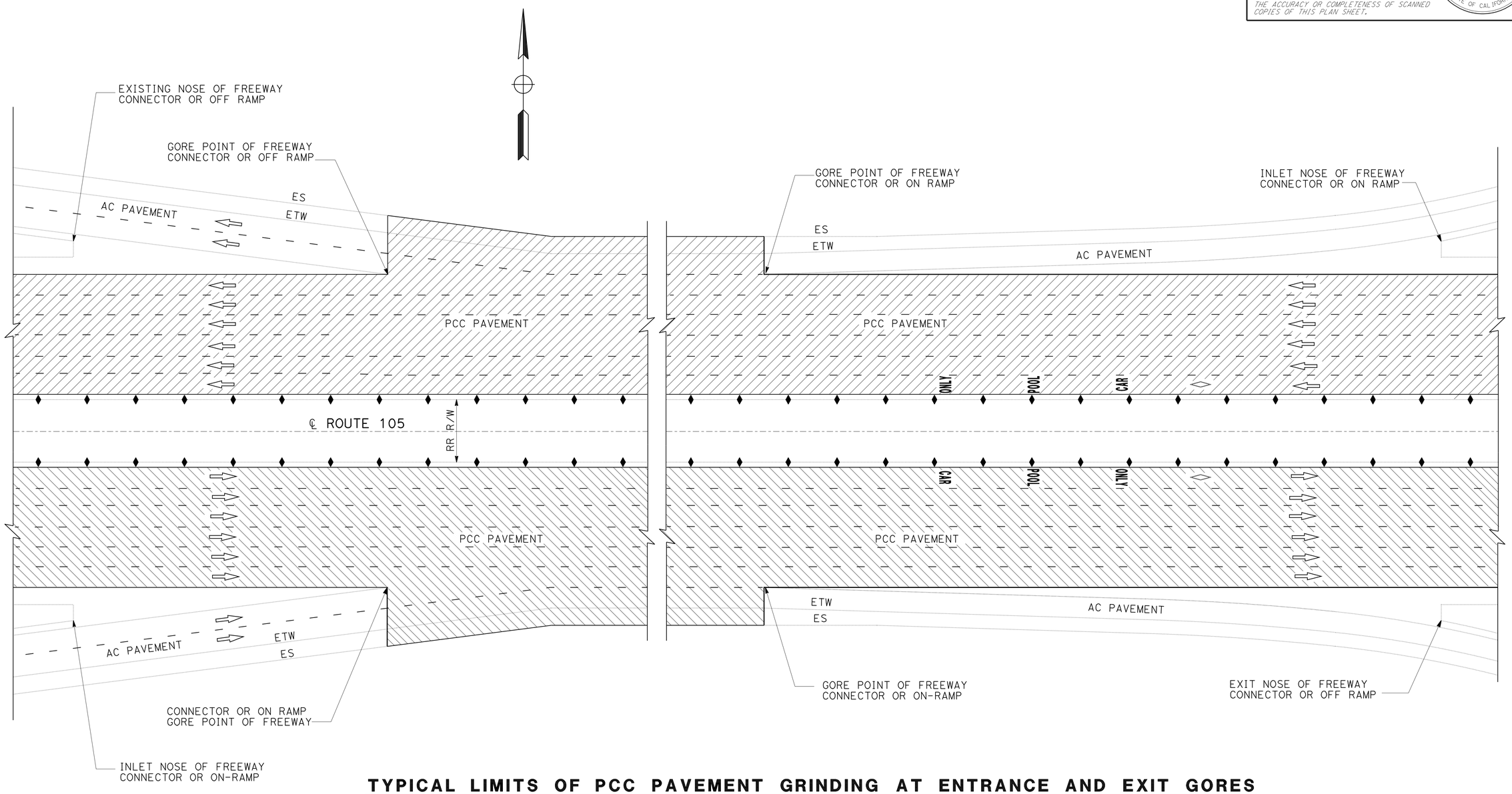
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING OFFICE.
2. EXACT PAVING LIMITS WILL BE DETERMINED BY THE ENGINEER.

LEGEND:

GRIND EXISTING CONCRETE PAVEMENT

DIRECTION OF TRAVEL



TYPICAL LIMITS OF PCC PAVEMENT GRINDING AT ENTRANCE AND EXIT GORES

CONSTRUCTION DETAILS

NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	5	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

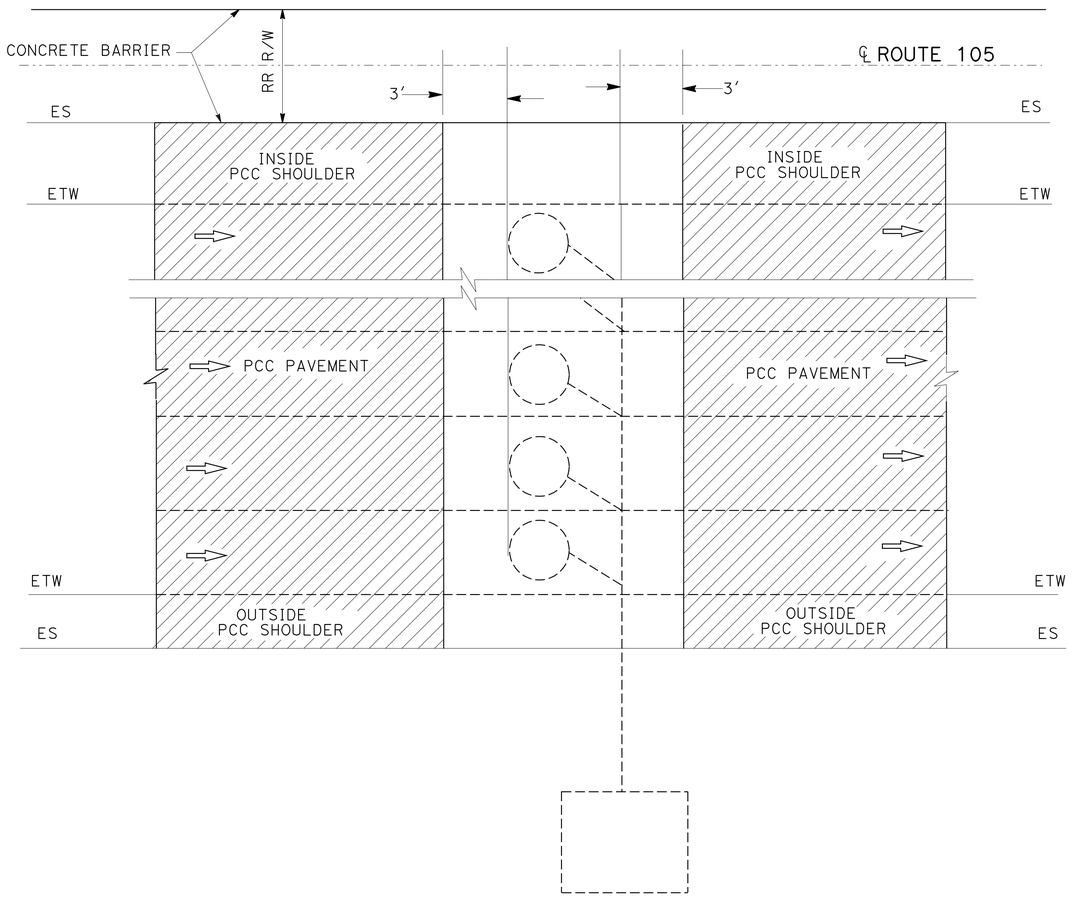
02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER LARRY WIERING No. 41247 Exp. 3-31-11 CIVIL STATE OF CALIFORNIA

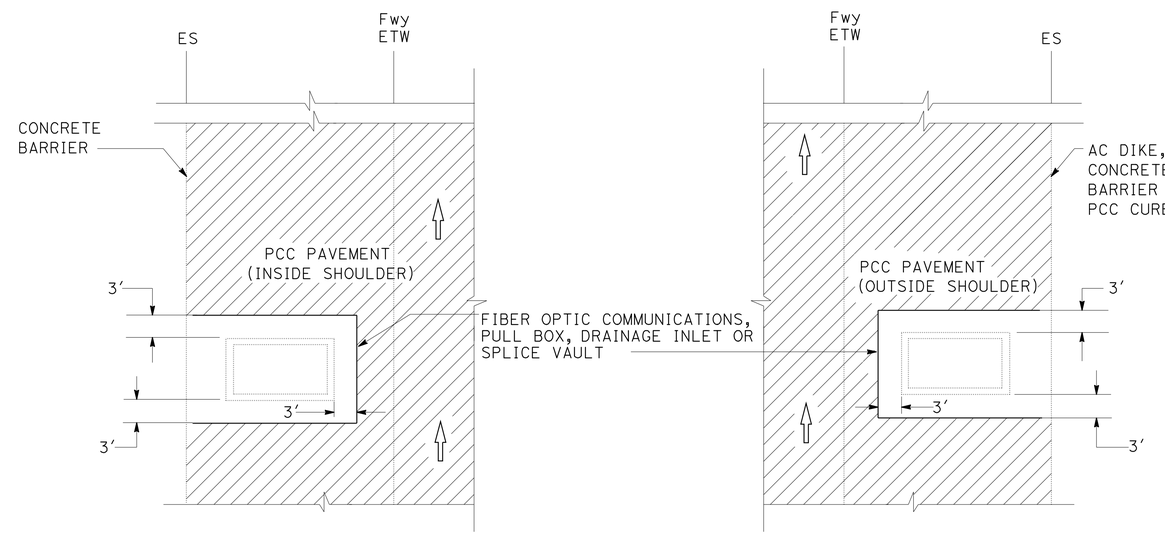
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL THE EXISTING INDUCTIVE LOOP DETECTORS, FIBER OPTIC COMMUNICATIONS, PULL BOXES, DRAINAGE INLETS AND SPLICE VAULTS.



TYPICAL WORK LIMIT AT ELECTRICAL CONDUIT (VARIOUS LOCATIONS)



TYPICAL WORK AT FIBER OPTIC COMMUNICATIONS, SPLICE VAULT, PULL BOX OR DRAINAGE INLET (VARIOUS LOCATIONS)

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	6	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER LARRY WIERING No. 41247 Exp. 3-31-11 CIVIL STATE OF CALIFORNIA

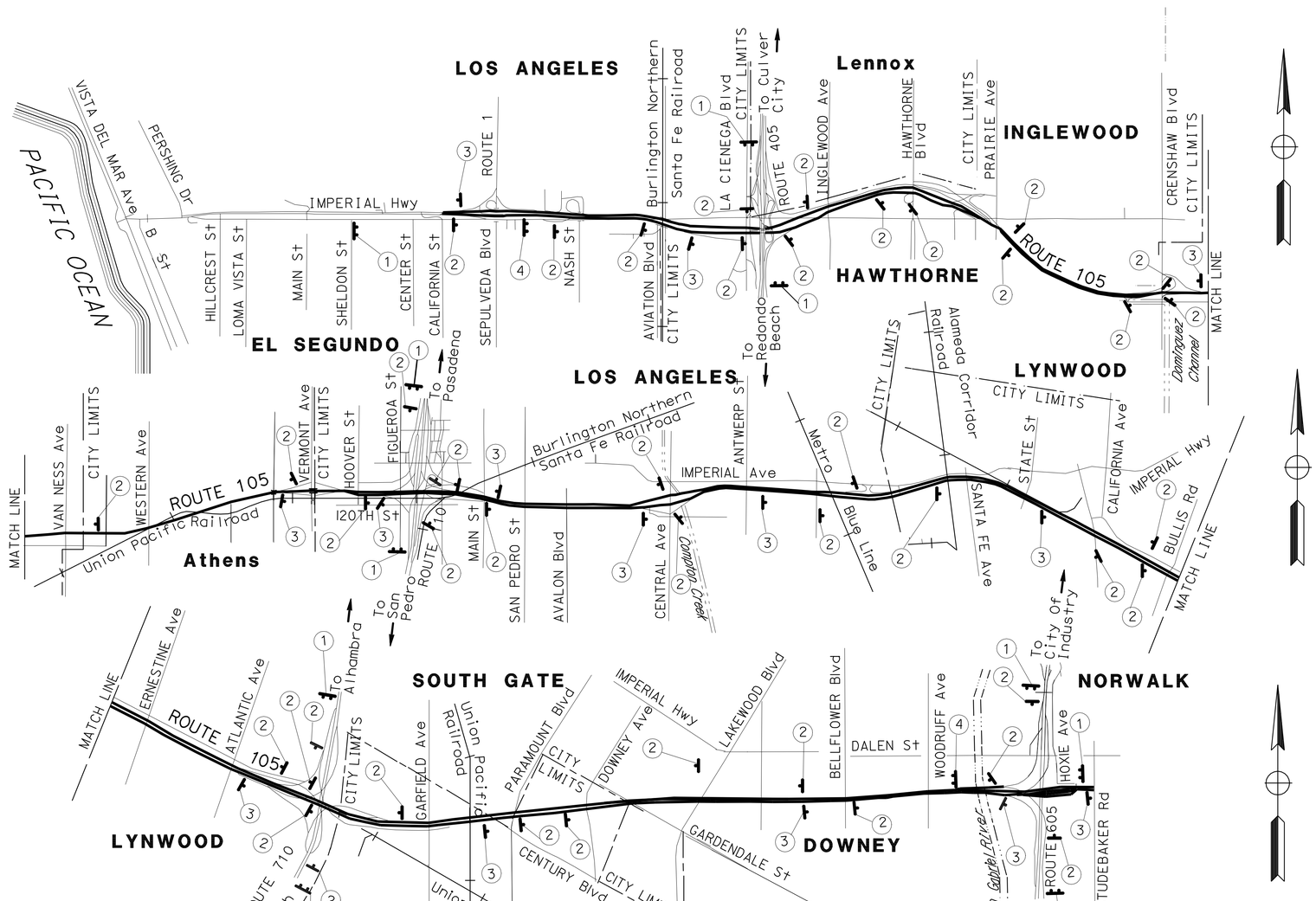
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.
2. "TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES" SIGN SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF "ROAD WORK AHEAD" SIGN OR AS DETERMINED BY THE ENGINEER.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
1	C40 (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-6" x 8"	10
2	W20-1	48" x 48"	ROAD WORK AHEAD	1-6" x 6"	44
3	G20-2	48" x 24"	END ROAD WORK	1-4" x 6"	14
4	SEE SPECIAL PROVISIONS	132" X 84"	SEE REVISED STANDARD PLAN RSP T7	2-6" x 8"	2



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	7	25

REGISTERED CIVIL ENGINEER 10-19-10 DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ALBERT K. YU No. C43220 Exp. 3-31-12 CIVIL STATE OF CALIFORNIA

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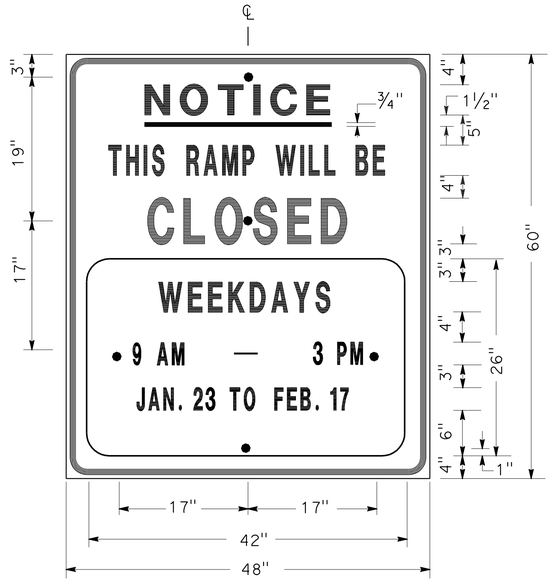
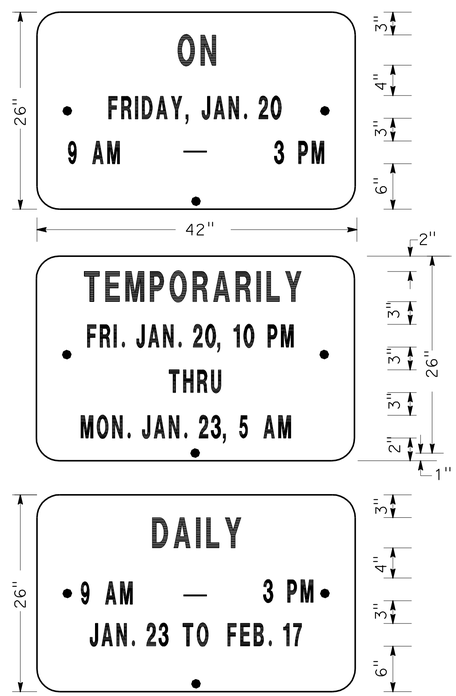


SIGN SP-1



ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN

NOTES: (SIGN SP-1)

1. 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.

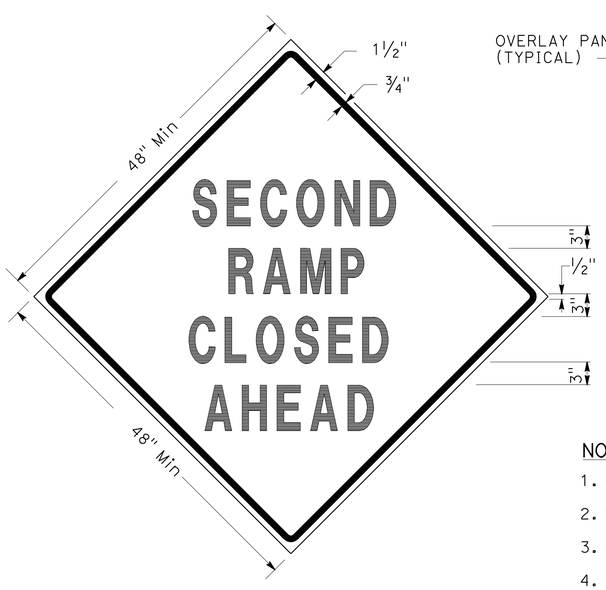
SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5,6 & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"
* CONDENSED SPACING IF NECESSARY								

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 STANDARD PLAN T14.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES



SIGN SP-3

SIGN SP-5

NOTES: (SIGNS SP-3 & SP-5)

1. LETTERS - 6" SERIES D.
2. LETTERS AND 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: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 7/10

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	8	25

REGISTERED CIVIL ENGINEER 10-19-10 DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ALBERT K. YU No. C43220 Exp. 3-31-12 CIVIL STATE OF CALIFORNIA

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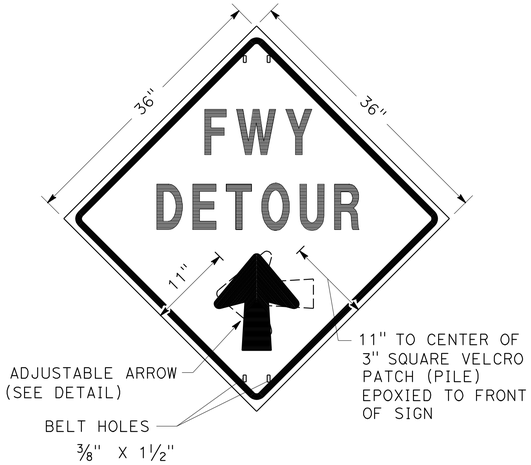
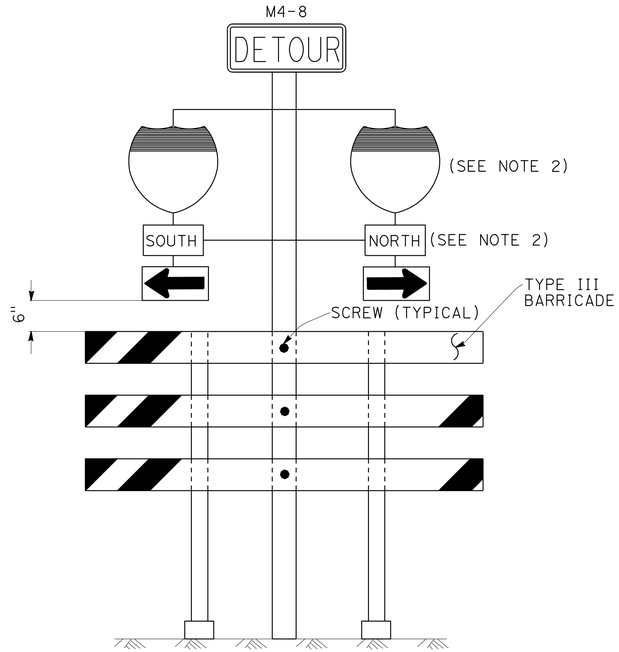
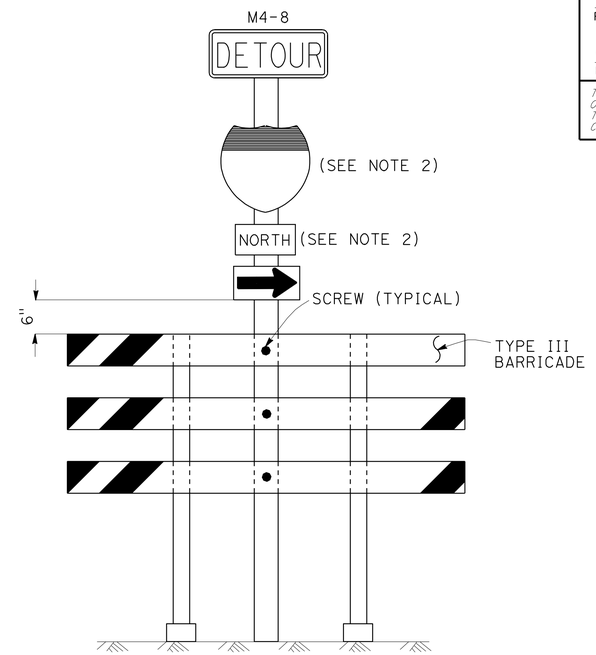


SIGN SP-2



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.

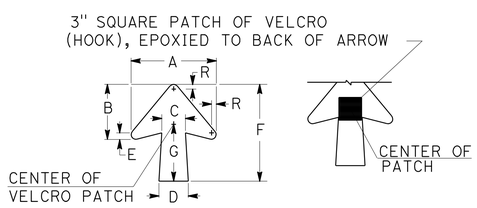
ABBREVIATION

(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: JOHN YANG
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 7/10

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:31

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	9	25

REGISTERED CIVIL ENGINEER 10-19-10 DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ALBERT K. YU No. C43220 Exp. 3-31-12 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:

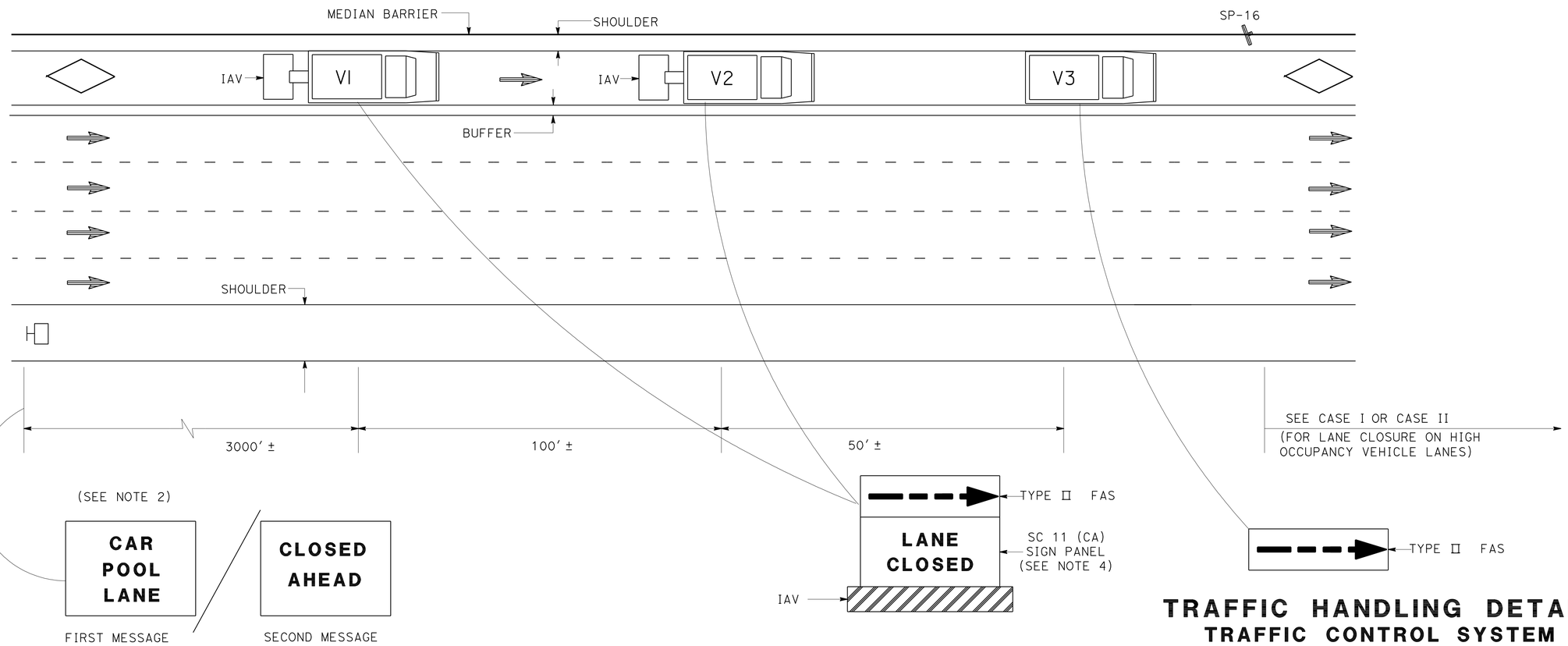
1. LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
2. PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE HOV LANE.
3. A MINIMUM SIGHT DISTANCE OF 1500′ SHALL BE PROVIDED IN ADVANCE OF PCMS.
4. VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED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

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

LAST REVISION 02-14-11
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	10	25

REGISTERED CIVIL ENGINEER 10-19-10 DATE

02-14-11
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REGISTERED PROFESSIONAL ENGINEER ALBERT K. YU No. C43220 Exp. 3-31-12 CIVIL STATE OF CALIFORNIA

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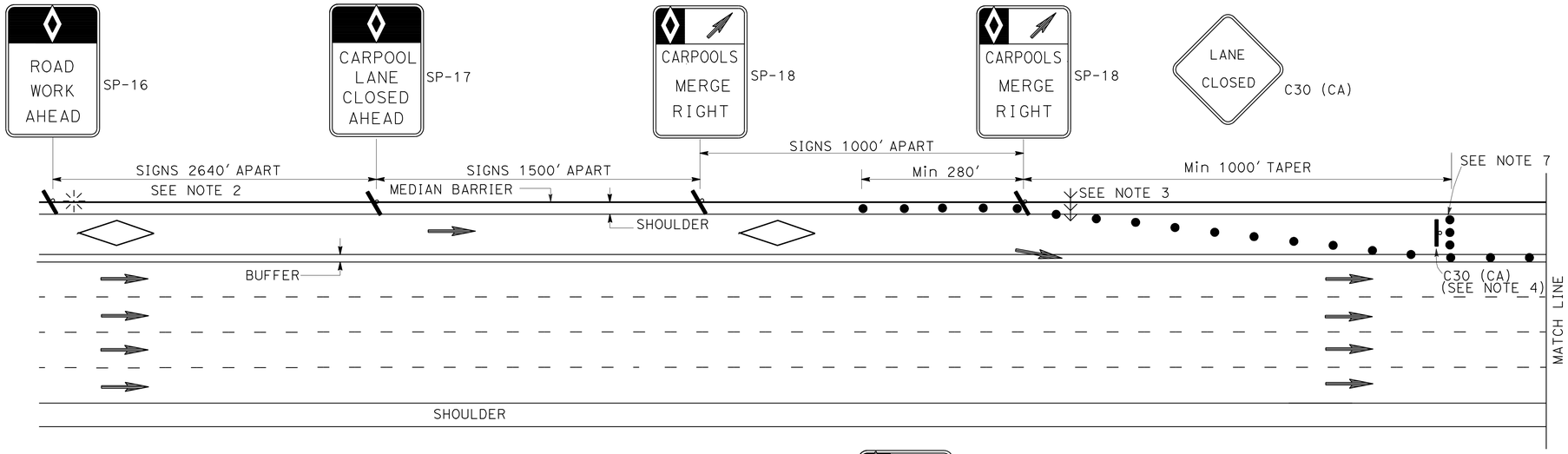

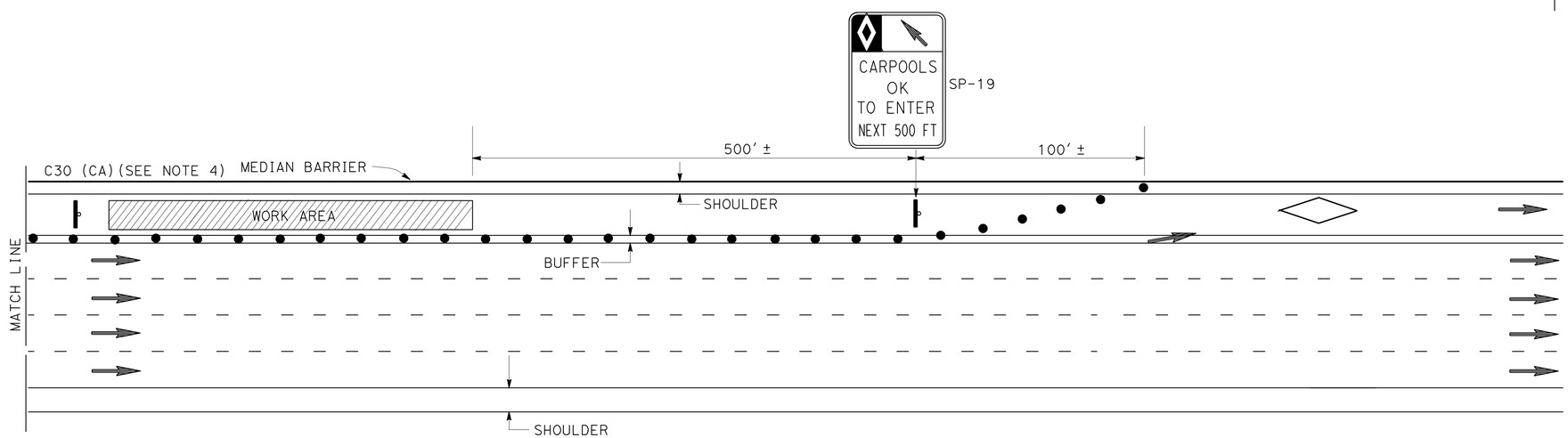

ABBREVIATIONS

(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	CHECKED BY	REVISED BY	DATE REVISED
JOHN YANG	ALBERT K YU	JOCELYN C CHIANG	JC	7/10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 02-14-11 | DATE PLOTTED => 09-FEB-2011 | TIME PLOTTED => 12:31

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	11	25

REGISTERED CIVIL ENGINEER 10-19-10 DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ALBERT K. YU No. C43220 Exp. 3-31-12 CIVIL STATE OF CALIFORNIA

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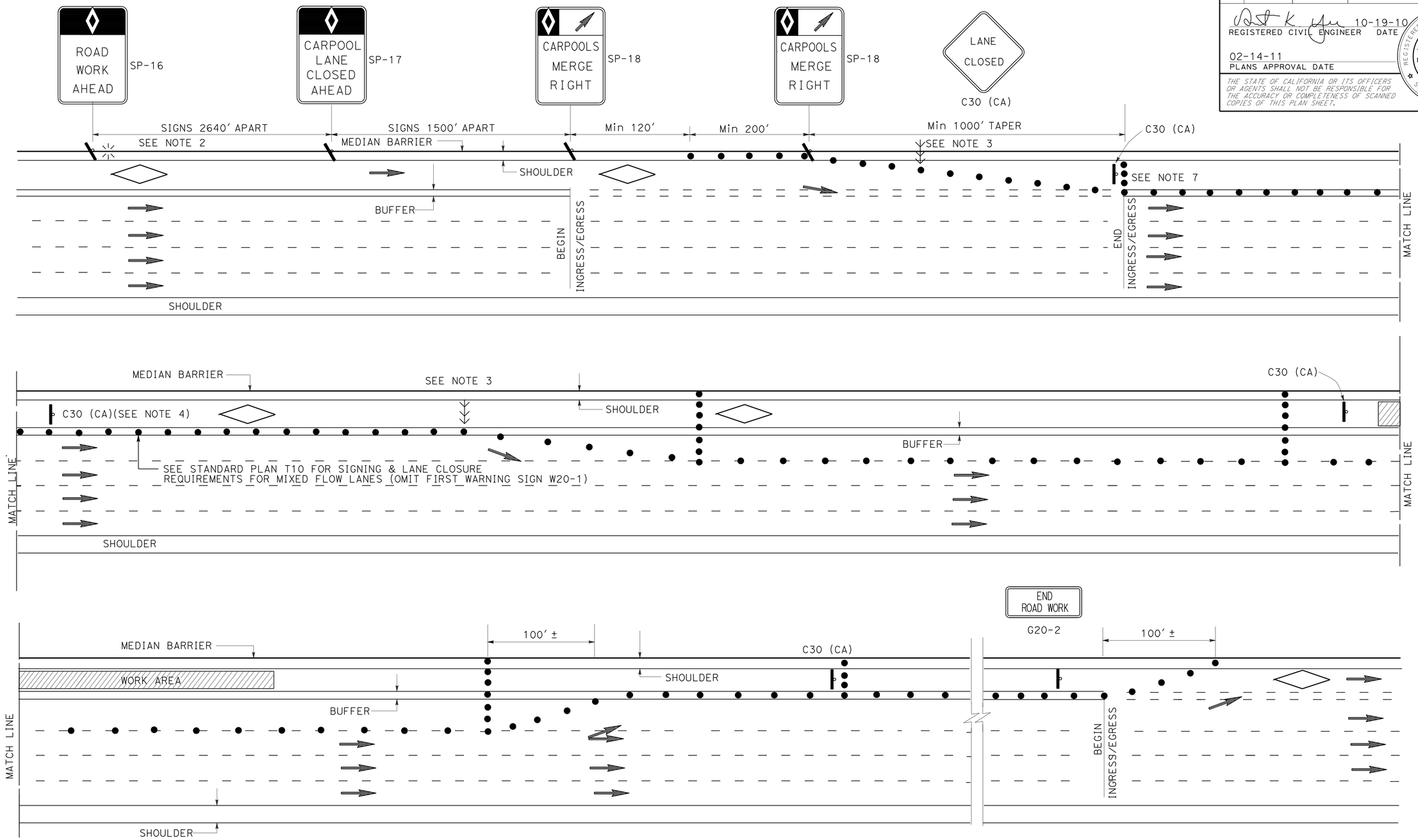

NOTES:

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

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

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	12	25

REGISTERED CIVIL ENGINEER 10-19-10 DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ALBERT K. YU No. C43220 Exp. 3-31-12 CIVIL STATE OF CALIFORNIA

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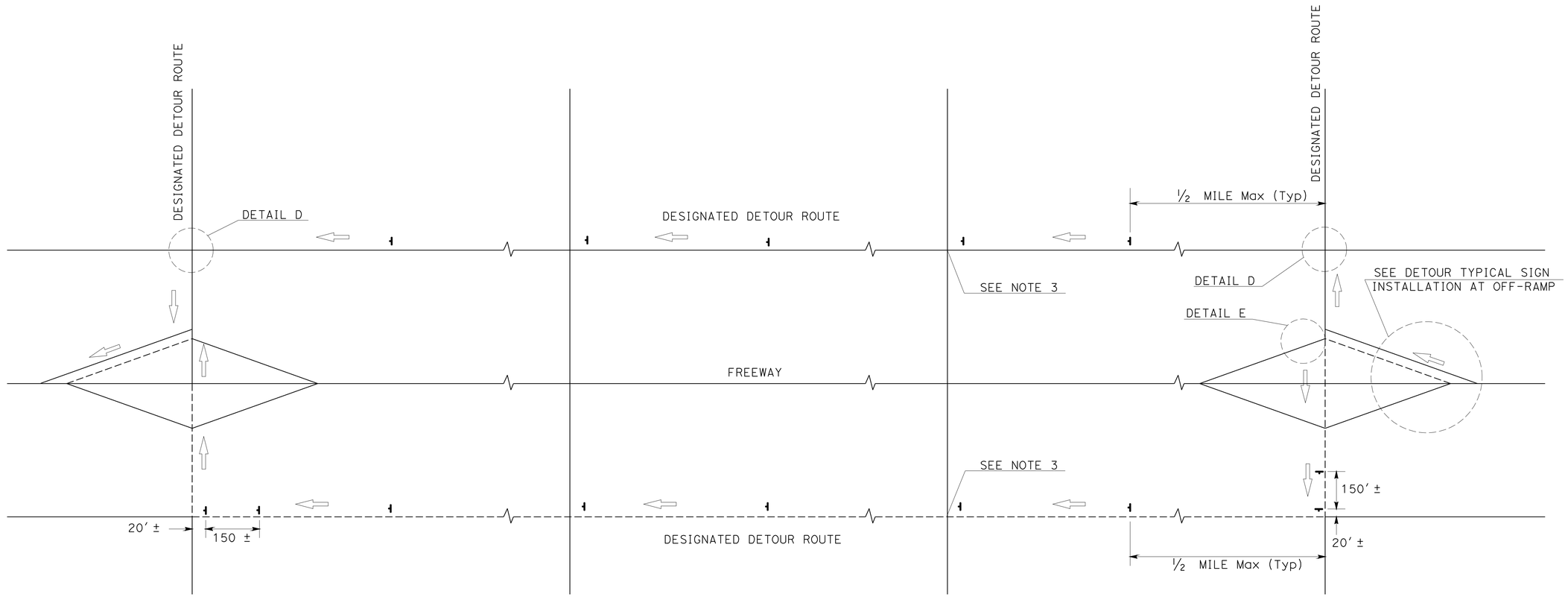

TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

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
Caltrans DTM

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

LAST REVISION 02-14-11 | DATE PLOTTED => 09-FEB-2011 | TIME PLOTTED => 12:32

BORDER LAST REVISED 7/2/2010 | USERNAME => s122436 | DGN FILE => 07000020043me006.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1863 | PROJECT NUMBER & PHASE 07000200431

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	13	25

REGISTERED CIVIL ENGINEER 10-19-10 DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ALBERT K. YU No. C43220 Exp. 3-31-12 CIVIL STATE OF CALIFORNIA

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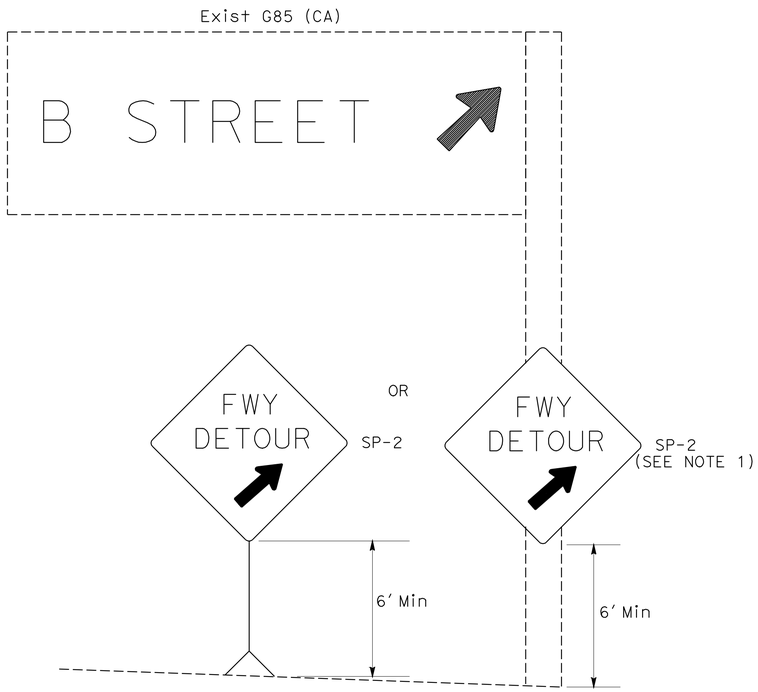
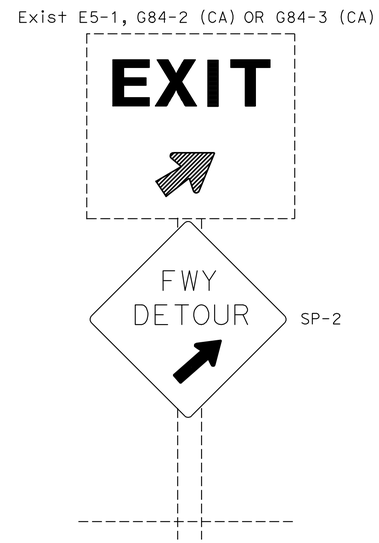
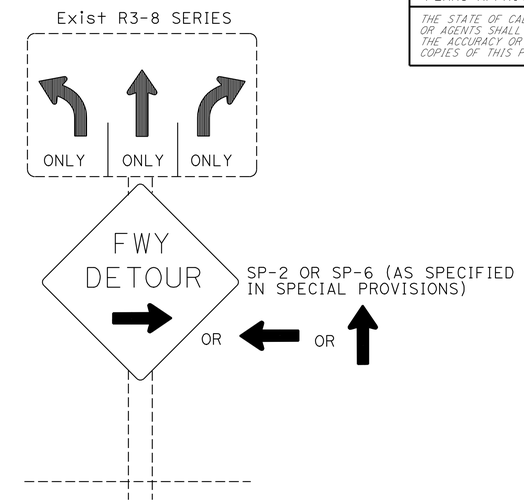


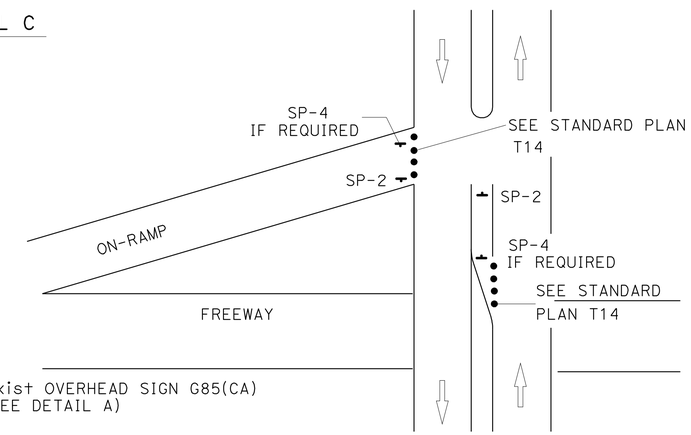
DETAIL A



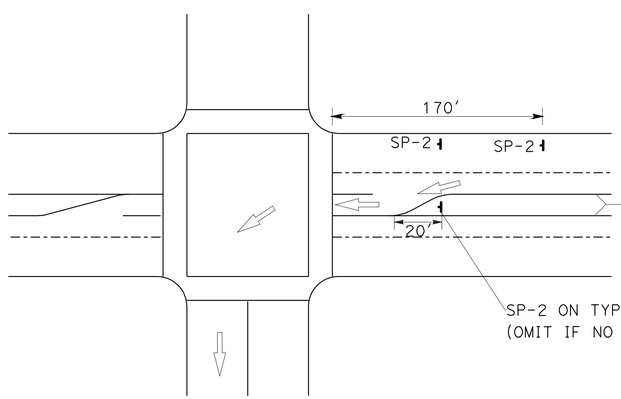
DETAIL B



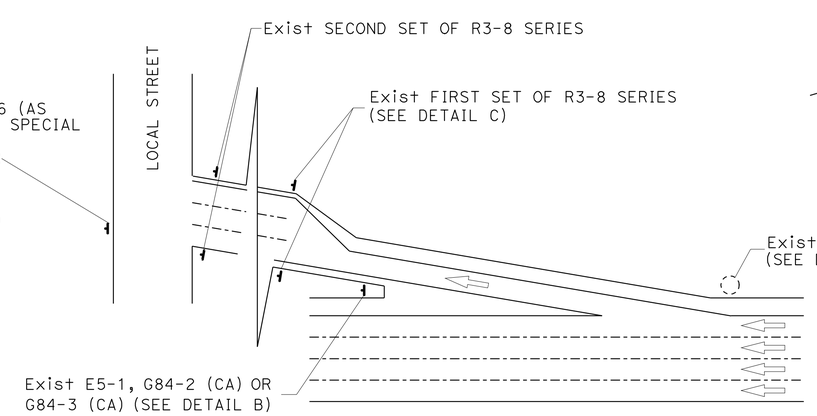
DETAIL C



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
Caltrans DTM

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

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	14	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
CIVIL
STATE OF CALIFORNIA

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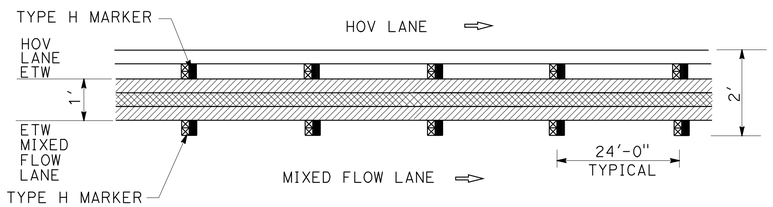
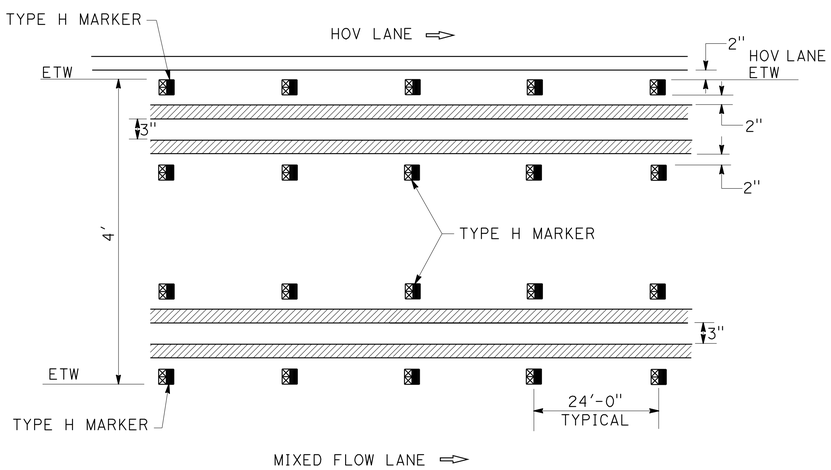
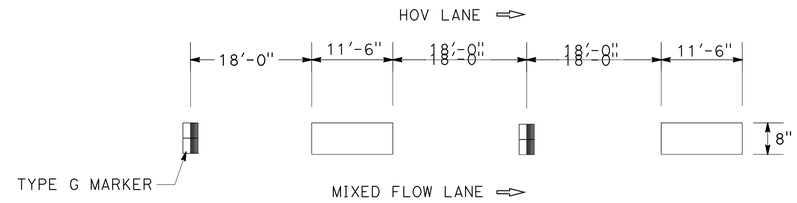


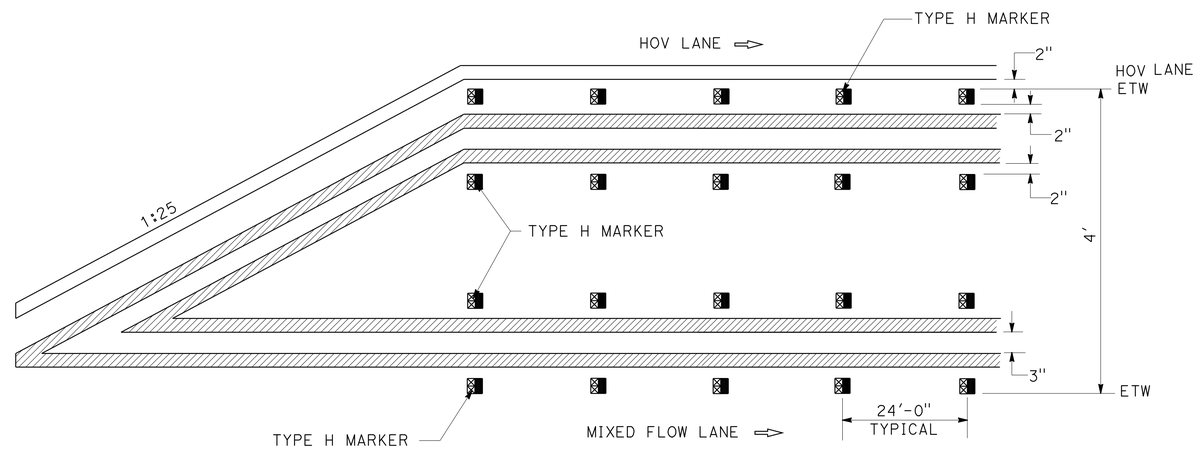
DETAIL A - HOV BUFFER STRIPING



DETAIL B HOV BUFFER STRIPING

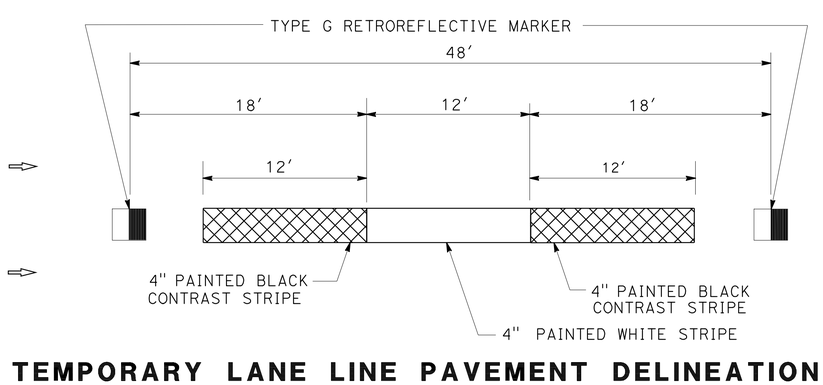


DETAIL M-10 - INGRESS/EGRESS STRIPING



DETAIL B HOV BUFFER STRIPING

BUFFER WIDTH-4 FEET



TEMPORARY LANE LINE PAVEMENT DELINEATION

NOTES:

1. SEE PAVEMENT DELINEATION QUANTITIES FOR LOCATION AND TYPES OF TRAFFIC STRIPES AND PAVEMENT MARKINGS TO BE PLACED.
2. CONFLICT STRIPING SHALL BE REMOVED.
3. USE TYPE C RED-CLEAR RETROREFLECTIVE MARKERS ON DETAIL M-10 AT SEGMENTS WITHIN LIMITS OF DETAIL 14 MODIFIED.
4. USE TYPE HR RED-YELLOW RETROREFLECTIVE MARKERS ON BUFFER STRIPES AT SEGMENTS WITHIN LIMITS OF DETAILS 14 MODIFIED.

LEGEND:

- 4" WHITE THERMOPLASTIC STRIPE
- 8" WHITE THERMOPLASTIC STRIPE
- 4" PAINTED BLACK CONTRAST STRIPE (N)
- 4" YELLOW THERMOPLASTIC STRIPE
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE MARKER
- TYPE C RED-CLEAR RETROREFLECTIVE MARKER
- 2-TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKERS
- DIRECTION OF TRAFFIC
- (N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	15	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
CIVIL
STATE OF CALIFORNIA

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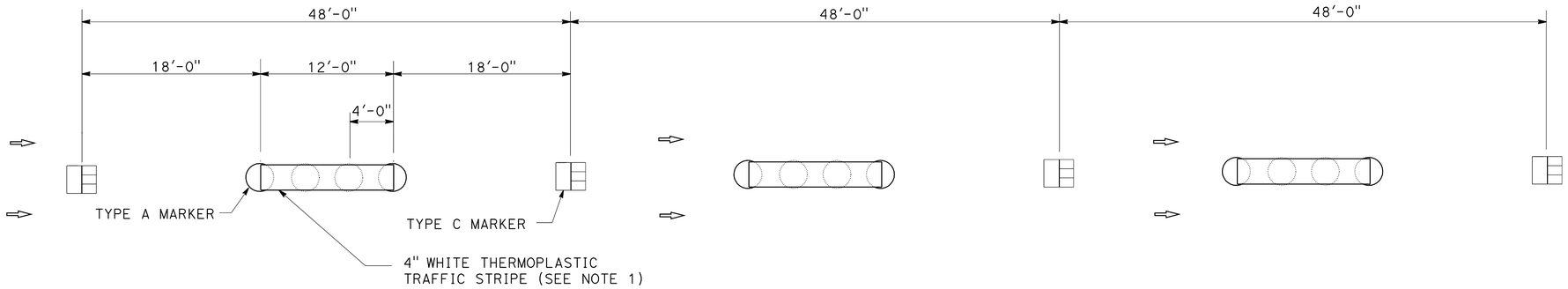
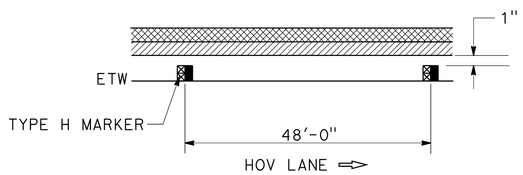


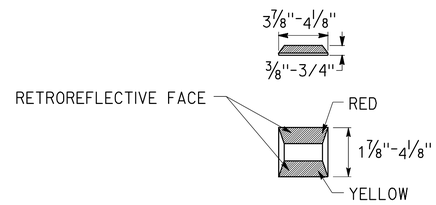
NOTE:

1. APPLY 4" WIDE THERMOPLASTIC TRAFFIC STRIPE ON TOP OF TYPE A NON-REFLECTIVE MARKERS.

DETAIL 14 (MODIFIED)

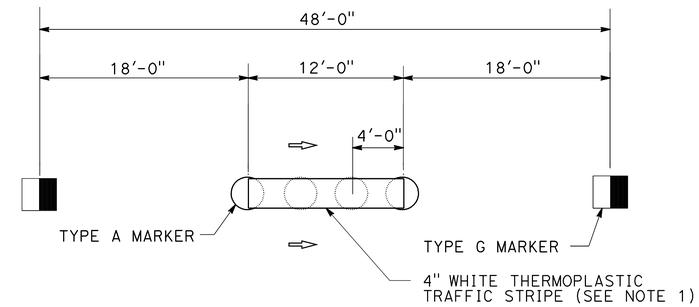


DETAIL 25 (MODIFIED)

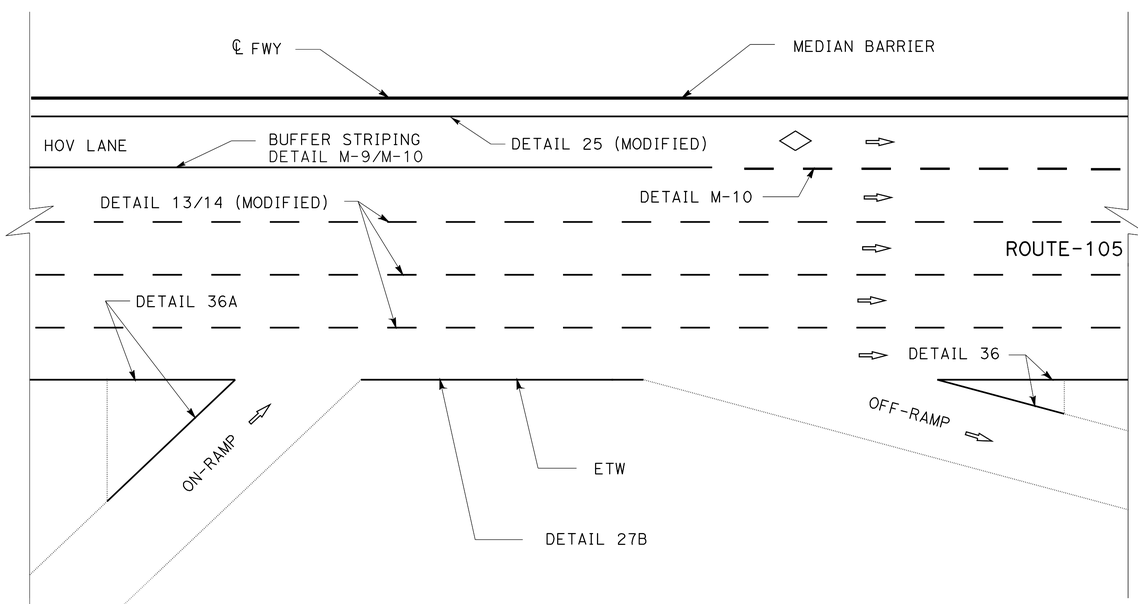


TYPE HR

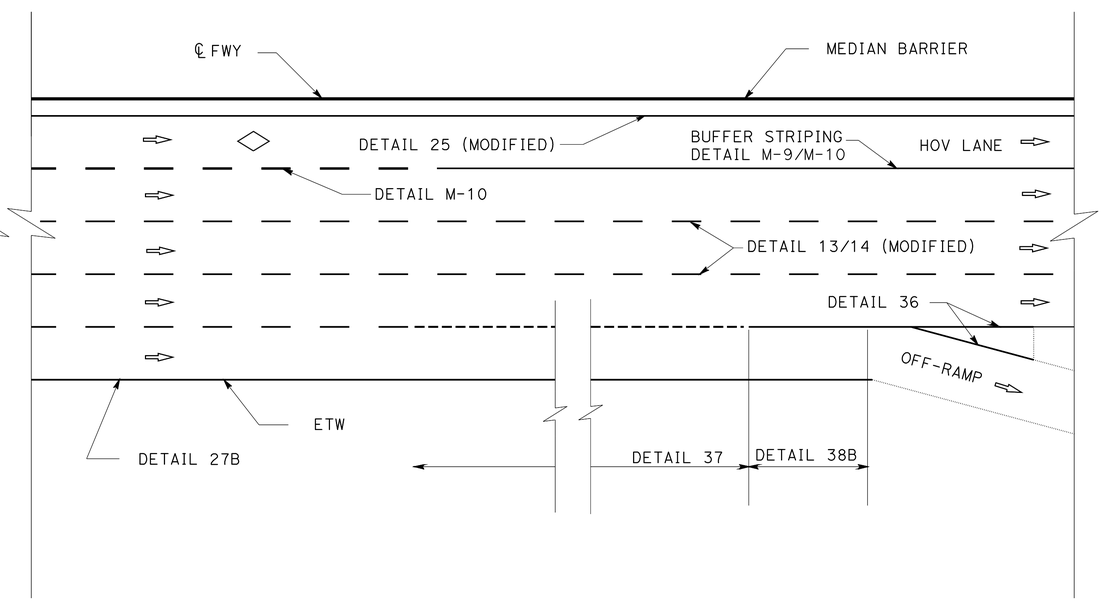
RED-YELLOW RETROREFLECTIVE MARKER



DETAIL 13 (MODIFIED)



RAMPS



MAINLINE LANE DROP TO A ONE LANE EXIT

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	16	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
CIVIL
STATE OF CALIFORNIA

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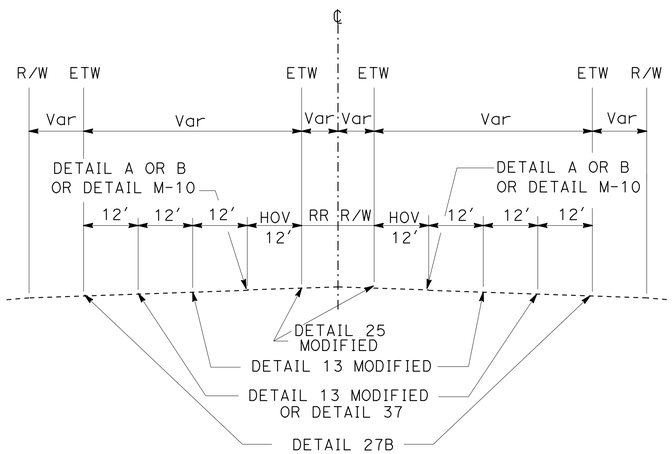
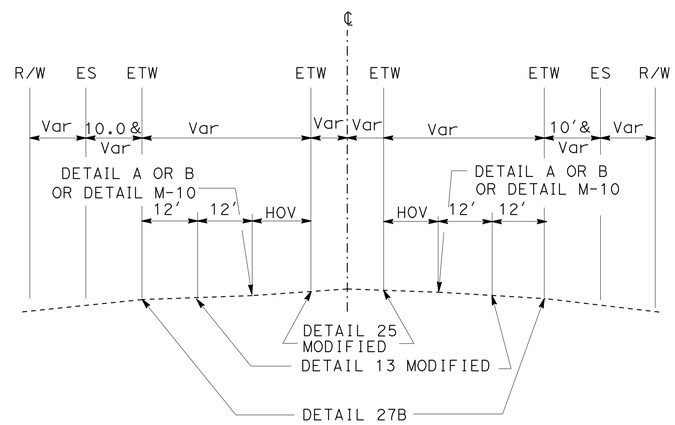
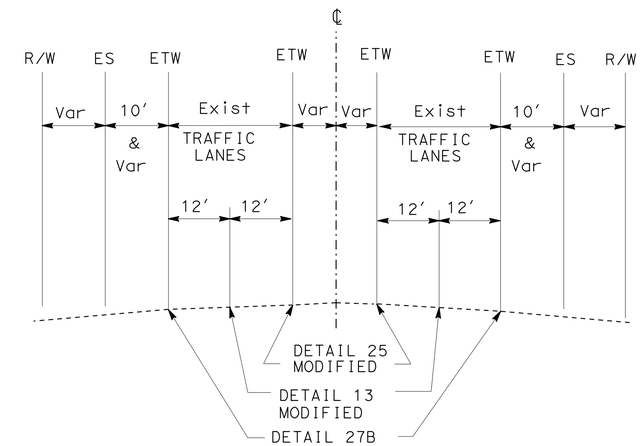


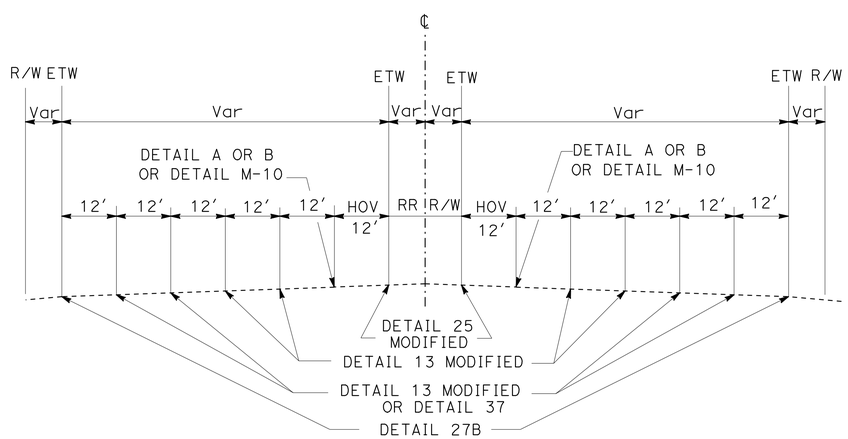
FOUR-LANE FREEWAY SEGMENT



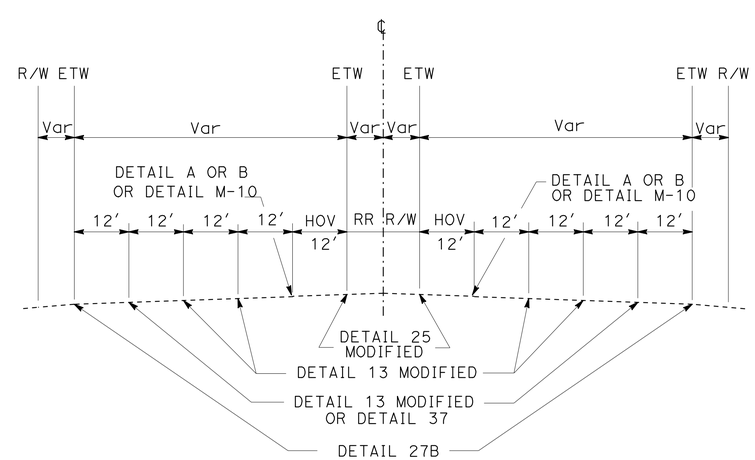
THREE-LANE FREEWAY SEGMENT



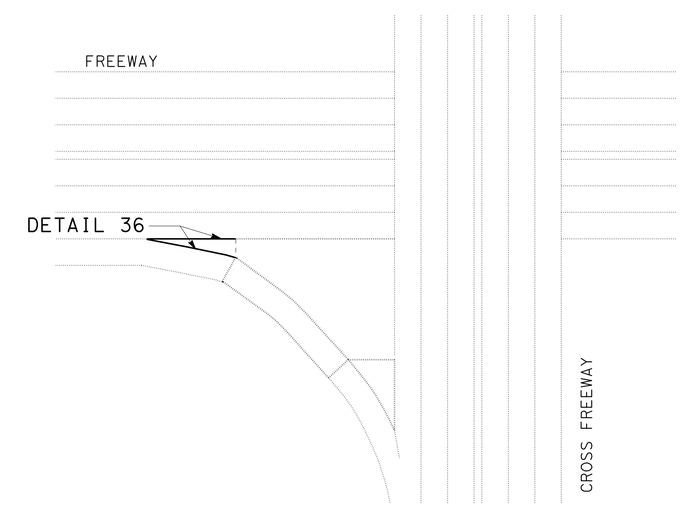
TWO-LANE FREEWAY SEGMENT



SIX-LANE FREEWAY SEGMENT



FIVE-LANE FREEWAY SEGMENT



ON CROSS FREEWAY

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	17	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER LARRY WIERING No. 41247 Exp. 3-31-11 CIVIL STATE OF CALIFORNIA

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PAVEMENT DELINEATION QUANTITIES (EASTBOUND)

DIRECTION	DESCRIPTION	THERMOPLASTIC TRAFFIC STRIPE													THERMOPLASTIC PAVEMENT MARKING (DIAGONALS, SYMBOLS, WORDS, CHEVRON)	PAVEMENT MARKER				REMOVE PAVEMENT MARKER
		HOV DETAIL				DETAIL										RETROREFLECTIVE			NON-REFLECTIVE	
		DETAIL A		DETAIL B		DETAIL 27B	DETAIL 25 (MODIFIED)	DETAIL M-10	DETAIL 13/14 (MODIFIED)	DETAIL 36	DETAIL 36A	DETAIL 38B	DETAIL 37	DETAIL 37B						
		4" WHITE STRIPE	4" YELLOW STRIPE	4" WHITE STRIPE	4" YELLOW STRIPE	4" WHITE STRIPE	4" YELLOW STRIPE	8" WHITE STRIPE BROKEN (36-11.5)	4" WHITE STRIPE BROKEN (36-12)	8" WHITE STRIPE			8" WHITE STRIPE BROKEN (12-3)			TYPE C	TYPE G	TYPE H	TYPE A	
		LF						LF	LF	LF			LF		SQFT	EA			EA	EA
EB	PM R0.0 TO PM R1.2					4,752	4,752		7,128		328	460			126		436	214	686	1,336
EB	PM R1.2 TO PM R1.7					2,640	2,640		5,000	262	656			896	273		720	164	650	1,534
EB	PM R1.7 TO PM 5.0			12,250	49,000	17,600	17,600	6,000	43,560	984	1,893	394	2,213	907	1,575	209	2,254	5,373	2,460	10,296
EB	PM R5.0 TO PM R7.0			9,500	38,000	10,600	10,600	1,600	42,240	473	913	633	2,316	2,683	1,176	219	1,470	3,129	2,142	6,960
EB	PM R7.0 TO PM R13.7	12,144	24,288	21,000	84,000	35,376	35,376	2,640	114,972	1,986	3,105	2,793	6,317	2,000	3,906	689	5,275	12,646	6,198	24,808
EB	PM R13.7 TO PM R14.7			5,280	21,120	5,280	5,280		10,560		420				580		705	1,832	1,327	3,864
EB	PM R14.7 TO PM R17.4			10,560	42,240	14,256	14,256	3,700	39,916	525	328	315		1,640	1,110	229	2,000	4,568	2,410	9,207
EB	PM R17.4 TO PM R18.2					4,224	4,224		5,016	590	295	197			855		359	203	1,180	1,742
	SUB TOTAL	12,144	24,288	58,590	234,360	94,728	94,728	13,940	268,392	4,820	7,938	4,792	10,846	8,126	9,601	1,346	13,219	28,129	17,053	59,747
	SHEET TOTAL	518,838						13,940	268,392	17,550			18,972		9,601	42,694			17,053	59,747

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
GEHAN ATTALAH — REVISED BY
LARRY WIERING — DATE REVISED
CALCULATED-DESIGNED BY
CHECKED BY

LAST REVISION 02-14-11 | DATE PLOTTED => 09-FEB-2011 | TIME PLOTTED => 12:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	18	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER LARRY WIERING No. 41247 Exp. 3-31-11 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.

PAVEMENT DELINEATION QUANTITIES (WESTBOUND)

DIRECTION	DESCRIPTION	THERMOPLASTIC TRAFFIC STRIPE													THERMOPLASTIC PAVEMENT MARKING (DIAGONALS, SYMBOLS, WORDS, CHEVRON)	PAVEMENT MARKER				REMOVE PAVEMENT MARKER
		HOV DETAIL				DETAIL										RETROREFLECTIVE			NON-REFLECTIVE	
		DETAIL A		DETAIL B		DETAIL 27B	DETAIL 25 (MODIFIED)	DETAIL M-10	DETAIL13/14 (MODIFIED)	DETAIL 36	DETAIL 36A	DETAIL 38B	DETAIL 37	DETAIL 37B						
		4" WHITE STRIPE	4" YELLOW STRIPE	4" WHITE STRIPE	4" YELLOW STRIPE	4" WHITE STRIPE	4" YELLOW STRIPE	8" WHITE STRIPE BROKEN (36-11.5)	4" WHITE STRIPE BROKEN (36-12)	8" WHITE STRIPE			8" WHITE STRIPE BROKEN (12-3)			TYPE G	TYPE C	TYPE H	TYPE A	
		LF						LF	LF	LF			LF		SQFT	EA			EA	EA
WB	PM R0.0 TO PM R1.2					4,752	4,752		9,504	794				200		592		184	436	1,212
WB	PM R1.2 TO PM R1.7					2,640	2,640		9,240	420		315	900		126	400		112	343	855
WB	PM R1.7 TO PM 5.0			12,144	48,576	17,424	17,424	4,800	56,628	2,746	1,424	1,040		3,772	504	3,138		3,950	3,264	10,352
WB	PM R5.0 TO PM R7.0			9,240	36,960	10,560	10,560	1,600	26,640	437	1,847	650	2,060		588	1,549	194	2,484	1,536	2,763
WB	PM R7.0 TO PM R13.7			32,472	129,888	35,376	35,376	2,920	80,910	1,367	2,625	5,327	2,411	3,320	1,722	4,484	184	10,674	5,195	20,537
WB	PM R13.7 TO PM R14.7			5,280	21,120	5,280	5,280		14,587	1,510	578	368	368	3,838	252	1,202		1,684	536	3,422
WB	PM R14.7 TO PM R17.4			12,672	50,688	14,256	14,256	1,600	29,691	1,186	1,969			2,525	868	1,904		2,778	1,786	6,468
WB	PM R17.4 TO PM R18.2	528	1,056			4,224	4,224	1,850	1,585		446				878	204		310	140	654
	SUB TOTAL	528	1,056	71,808	287,232	94,512	94,512	12,770	229,185	8,460	8,889	7,700	5,739	13,655	4,938	13,473	378	22,176	13,476	49,957
SHEET TOTAL		549,648						12,770	228,785	25,094			19,394		4,938	36,481			13,236	49,263
SHEET TOTAL FROM PDQ-1		518,838						13,940	268,392	17,550			18,972		9,601	42,694			17,053	59,747
GRAND TOTAL		1,068,486						26,710	497,177	44,436			38,988		14,539	79,525			30,618	110,143

PAVEMENT DELINEATION QUANTITIES

PDQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11 | DATE PLOTTED => 09-FEB-2011 | TIME PLOTTED => 12:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	19	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
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.

ABBREVIATION:

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

GRIND EXISTING CONCRETE PAVEMENT

TABLE (1)

EASTBOUND LANES				WESTBOUND LANES			
LIMITS			GRIND EXISTING CONCRETE PAVEMENT	LIMITS			GRIND EXISTING CONCRETE PAVEMENT
FROM PM	TO PM	LANES (N)	SQYD	FROM PM	TO PM	LANES (N)	SQYD
0.0	1.7	1, 2, 3	29,568	0.0	0.3	1, 2, 3	0.000
1.7	2.6	HOV 1, 2, 3	26,611	0.3	0.4	1, 2	1,408
2.6	3.2	HOV 1, 2, 3, 4	22,176	0.4	0.6	1, 2	2,816
3.2	3.8	HOV 1, 2, 3	17,740	0.6	1.1	HOV 1, 2	10,560
3.8	4.3	HOV 1, 2, 3, 4	18,480	1.1	1.5	HOV 1, 2, 3, 4	14,080
4.3	4.7	HOV 1, 2, 3	11,827	1.5	1.6	HOV 1, 2, 3, 4, 5	4,224
4.7	5.0	HOV 1, 2, 3, 4	11,088	1.6	2.1	HOV 1, 2, 3, 4	17,600
5.0	7.0	HOV 1, 2, 3, 4, 5	88,704	2.1	2.5	HOV 1, 2, 3	11,264
7.0	7.3	HOV 1, 2, 3	8,870	2.5	3.6	HOV 1, 2, 3	32,524
7.3	7.4	HOV 1, 2, 3, 4	3,696	3.6	4.6	HOV 1, 2, 3, 4, 5	44,352
7.4	7.9	HOV 1, 2, 3	14,784	4.6	5.0	HOV 1, 2, 3	11,827
7.9	8.7	HOV 1, 2, 3, 4	29,568	5.0	6.4	HOV 1, 2, 3, 4	51,744
8.7	9.2	HOV 1, 2, 3	14,784	6.4	7.0	HOV 1, 2, 3, 4	22,176
9.2	9.6	HOV 1, 2, 3, 4	14,784	7.0	7.5	HOV 1, 2, 3, 4	18,480
9.6	11.9	HOV 1, 2, 3	68,006	7.5	7.7	HOV 1, 2, 3	5,913
11.9	12.5	HOV 1, 2, 3, 4	22,176	7.7	8.4	HOV 1, 2, 3, 4, 5	31,046
SUB TOTAL			402,862	SUB TOTAL			280,014
TOTAL TABLE (1)			682,876				

GRIND EXISTING CONCRETE PAVEMENT

TABLE (2)

EASTBOUND LANES				WESTBOUND LANES			
LIMITS			GRIND EXISTING CONCRETE PAVEMENT	LIMITS			GRIND EXISTING CONCRETE PAVEMENT
FROM PM	TO PM	LANES (N)	SQYD	FROM PM	TO PM	LANES (N)	SQYD
12.5	13.0	HOV 1, 2, 3, 4	18,480	8.4	10.2	HOV 1, 2, 3, 4	63,360
13.0	13.4	HOV 1, 2, 3	11,827	10.2	11.2	HOV 1, 2, 3	29,568
13.4	13.7	HOV 1, 2, 3, 4	11,088	11.2	12.0	HOV 1, 2, 3, 4	28,160
13.7	13.9	HOV 1, 2, 3, 4, 5	8,870	12.0	12.5	HOV 1, 2, 3	14,784
13.9	14.7	HOV 1, 2, 3, 4, 5	35,482	12.5	13.2	HOV 1, 2, 3, 4, 5	29,568
14.7	14.9	HOV 1, 2, 3	5,913	13.2	13.5	HOV 1, 2, 3	8,870
14.9	15.2	HOV 1, 2, 3, 4	11,088	13.5	13.9	HOV 1, 2, 3, 4	14,784
15.2	15.5	HOV 1, 2, 3	8,870	13.9	14.1	HOV 1, 2, 3	5,913
15.5	15.7	HOV 1, 2, 3, 4	7,392	14.1	15.1	HOV 1, 2, 3, 4	35,200
15.7	15.9	HOV 1, 2, 3	5,913	15.1	16.1	HOV 1, 2, 3	28,160
15.9	16.5	HOV 1, 2, 3, 4	22,176	16.1	16.6	HOV 1, 2, 3, 4	18,480
16.5	16.9	HOV 1, 2, 3	11,827	16.6	17.5	HOV 1, 2, 3, 4	31,680
16.9	17.4	HOV 1, 2, 3, 4	18,480	17.5	17.8	1, 2	4,224
17.4	18.2	1, 2, 3	17,740	17.8	18.2	1, 2	5,632
SUB TOTAL			195,146	SUB TOTAL			318,383
TOTAL TABLE (1)			682,876				
TOTAL TABLE (2)			513,529				
GRAND TOTAL			1,196,405				

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	20	25

Larry Wiering 12-2-10
REGISTERED CIVIL ENGINEER DATE

02-14-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LARRY WIERING
No. 41247
Exp. 3-31-11
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.

REPLACE JOINT SEAL (EXISTING CONCRETE PAVEMENT)

	LOCATION	LONGITUDINAL	TRANSVERSE
		REPLACE JOINT SEAL (EXISTING CONCRETE PAVEMENT)	
		LF	
EASTBOUND AND WESTBOUND DIRECTION	PM R0.0 TO PM R1.2	28,512	83,688
	PM R1.2 TO PM R1.7	26,400	25,488
	PM R1.7 TO PM 5.0	174,240	167,414
	PM R5.0 TO PM R7.0	152,064	162,432
	PM R7.0 TO PM R13.7	406,824	390,716
	PM R13.7 TO PM R14.7	72,864	68,199
	PM R14.7 TO PM R17.4	171,072	137,001
	PM R17.4 TO PM R18.2	8,448	24,868
	SUB TOTAL	1,040,424	1,059,806
	GRAND TOTAL	2,100,230	

SUMMARY OF QUANTITIES

Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HECTOR OBESO
CALCULATED-DESIGNED BY: GEHAN ATTALAH
CHECKED BY: LARRY WIERING
REVISED BY
DATE REVISED

LAST REVISION 02-14-11
DATE PLOTTED => 09-FEB-2011
TIME PLOTTED => 12:34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	21	25

REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Donald E. Howe No. C46402 Exp. 3-31-09 CIVIL STATE OF CALIFORNIA

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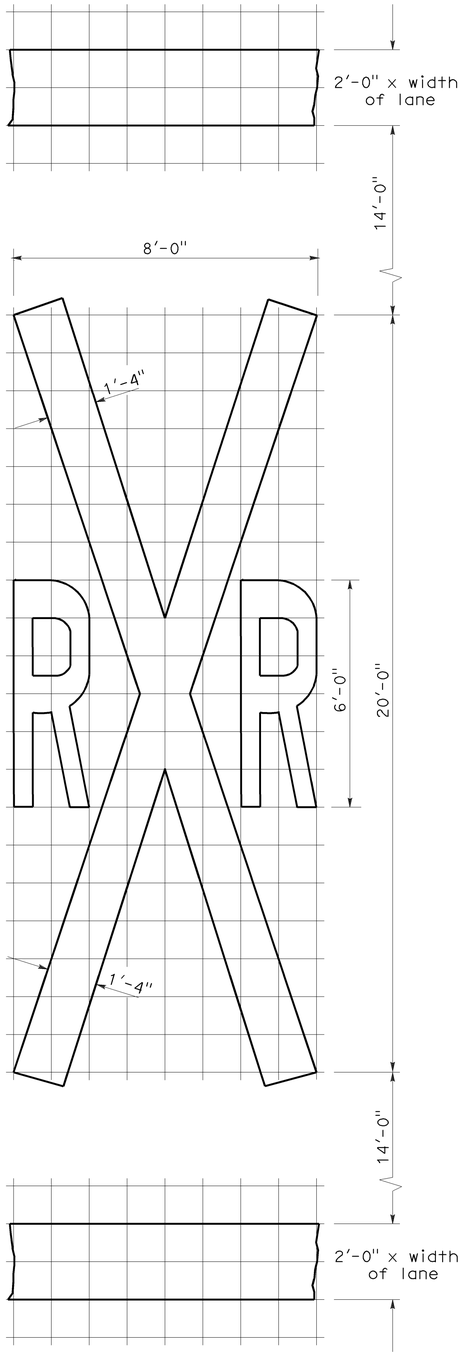
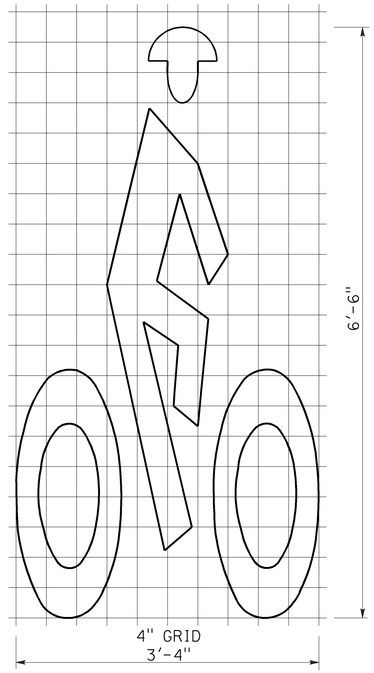
To accompany plans dated 02-14-11

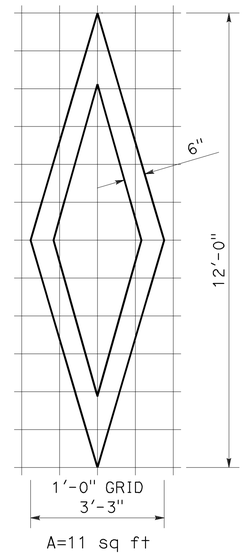


RAILROAD CROSSING SYMBOL

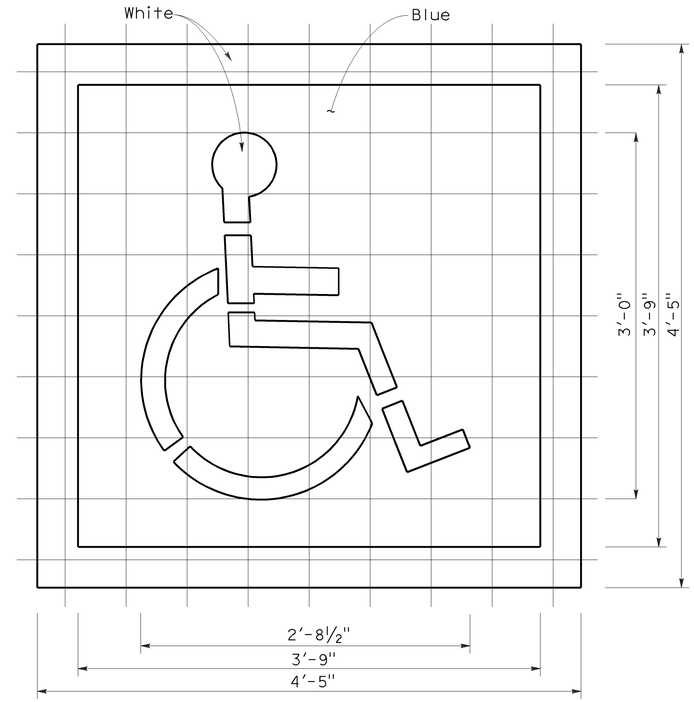
✳70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



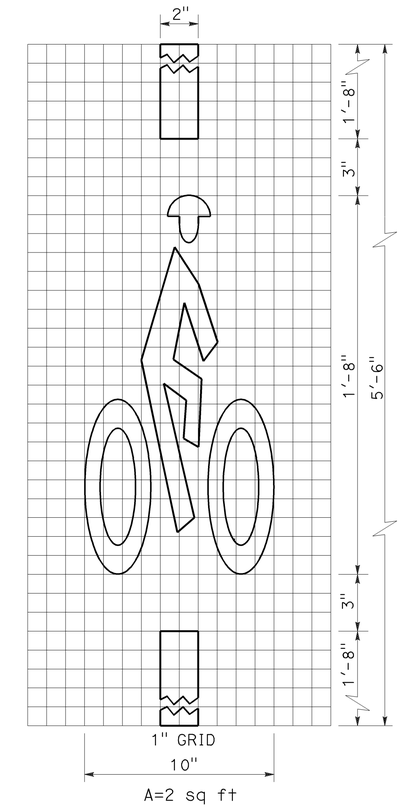
BIKE LANE SYMBOL



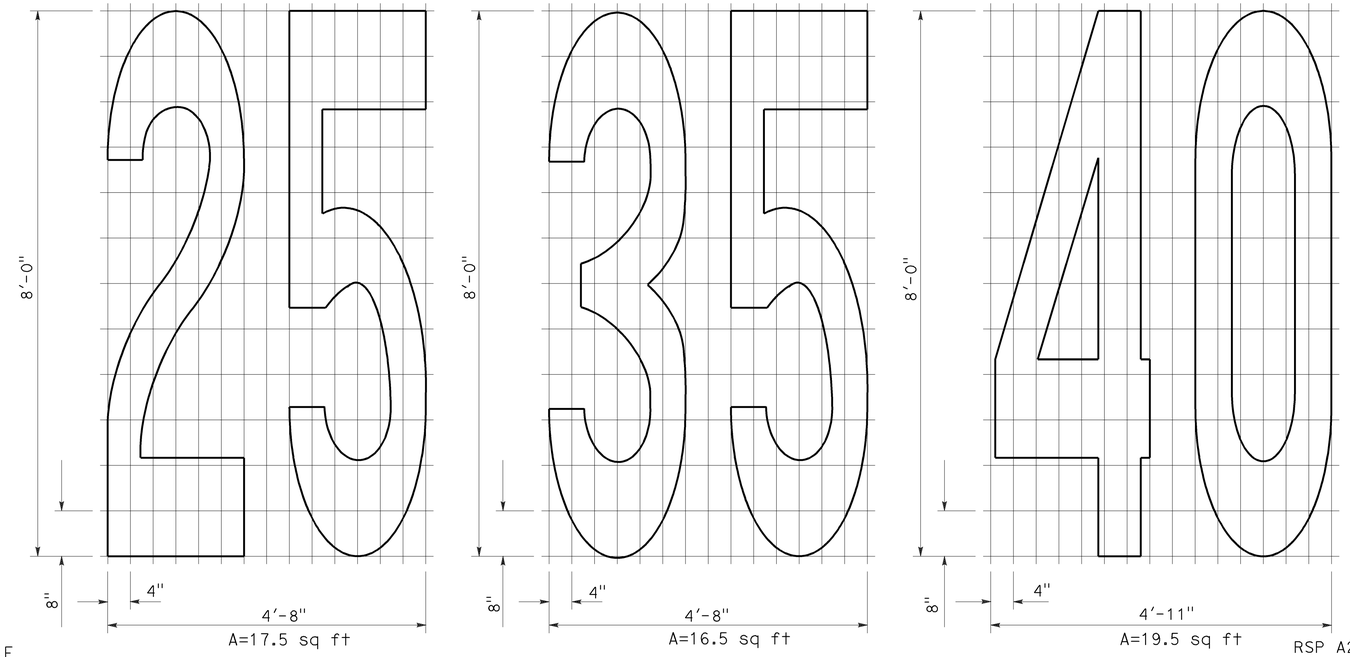
DIAMOND SYMBOL



INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



BICYCLE LOOP DETECTOR SYMBOL



NUMERALS

NOTE:

1. Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

RSP A24C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A24C DATED MAY 1, 2006 - PAGE 11 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A24C

2006 REVISED STANDARD PLAN RSP A24C

5-27-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	22	25

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

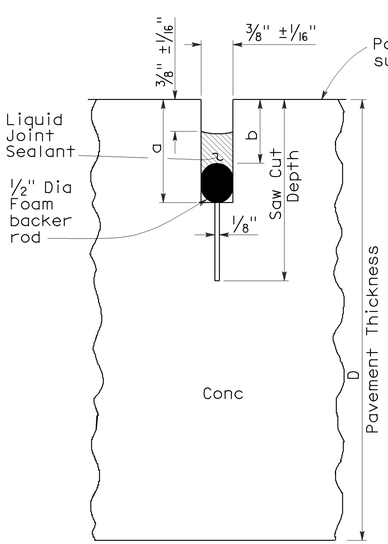
REGISTERED PROFESSIONAL ENGINEER
William K. Farnbach
No. C49042
Exp. 9-30-10
CIVIL
STATE OF CALIFORNIA

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.

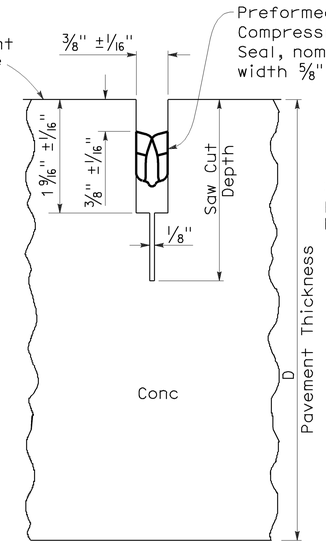
To accompany plans dated 02-14-11

NOTE:

1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.



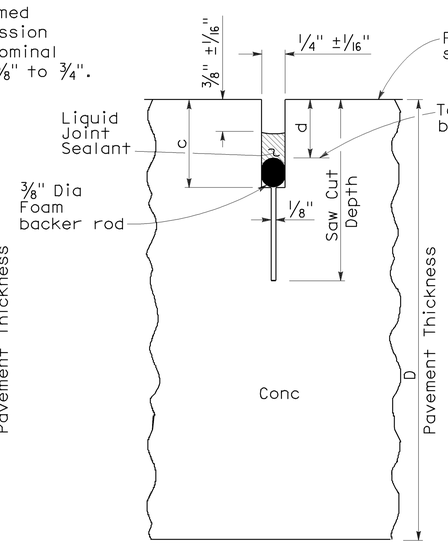
LIQUID SEALANT



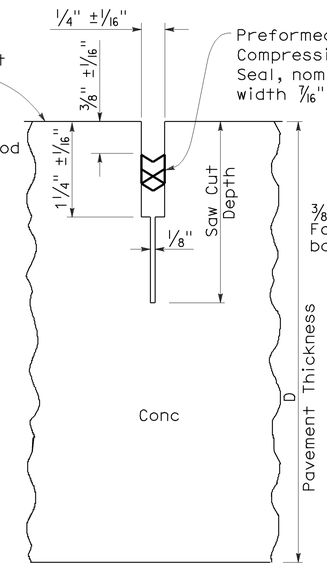
COMPRESSION SEAL

TYPE A1

Transverse Contraction Joints



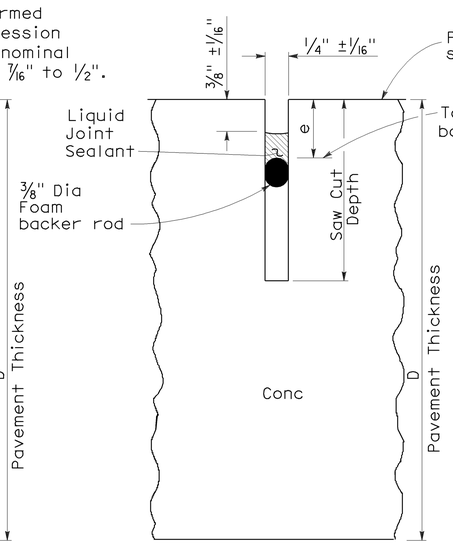
LIQUID SEALANT



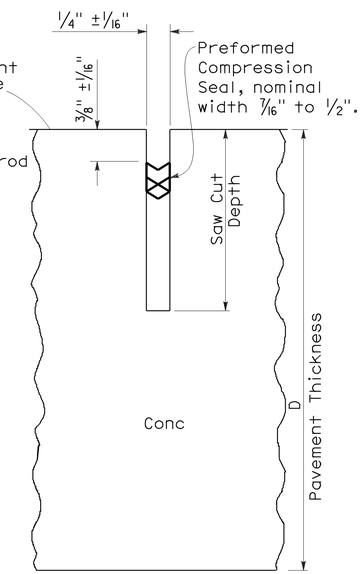
COMPRESSION SEAL

TYPE A2

Longitudinal Contraction Joints



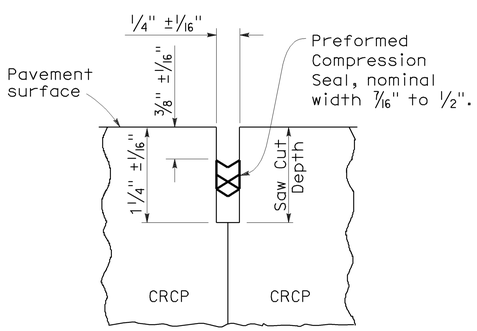
LIQUID SEALANT



COMPRESSION SEAL

TYPE B

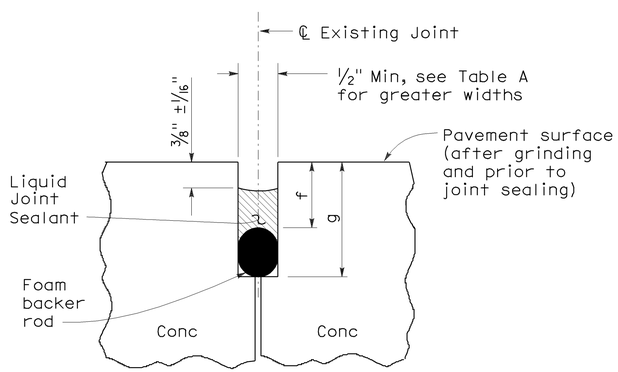
Longitudinal or Transverse Contraction Joint



COMPRESSION SEAL

TYPE C

Transverse and Longitudinal Construction Joints (For CRCP)



LIQUID SEALANT

TYPE R

Retrofit Transverse and Longitudinal Joints

LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILCONE	1" ±1/16"	5/8" ±1/16"	15/16" ±1/16"	9/16" ±1/16"	9/16" ±1/16"
ASPHALT RUBBER	1 3/16" ±1/16"	3/4" ±1/16"	1 1/16" ±1/16"	11/16" ±1/16"	11/16" ±1/16"

TABLE A (TYPE R JOINT)

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-JOINT DETAILS

NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20
DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P20

2006 REVISED STANDARD PLAN RSP P20

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	23	25

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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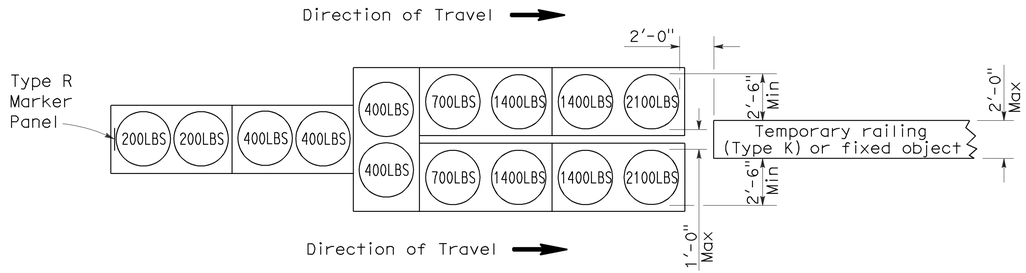
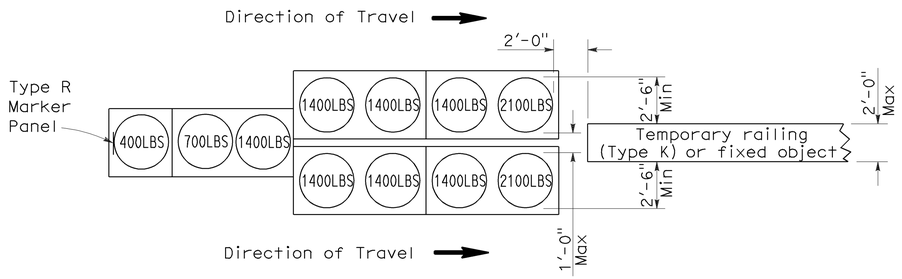
To accompany plans dated 02-14-11



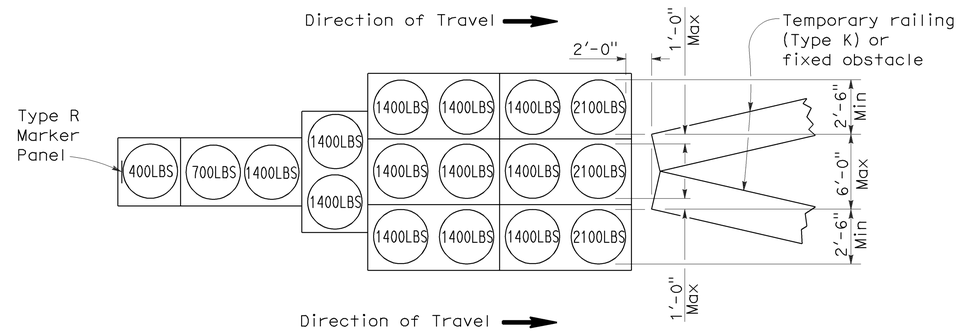
ARRAY 'TU14'

Approach speed 45 mph or more



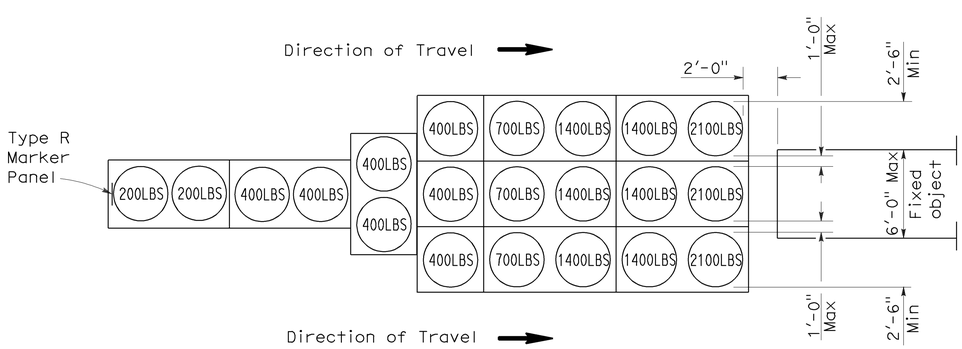
ARRAY 'TU11'

Approach speed less than 45 mph



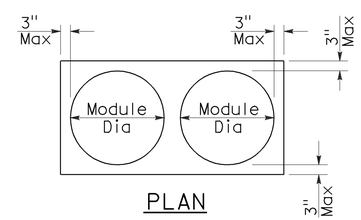
ARRAY 'TU17'

Approach speed less than 45 mph

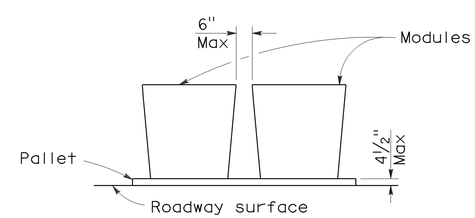


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	24	25

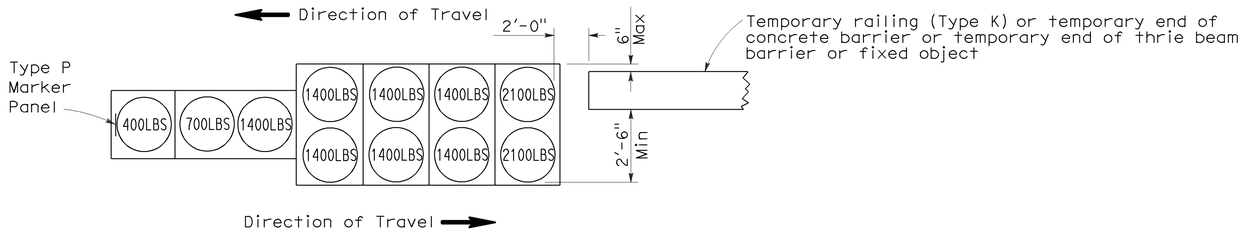
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

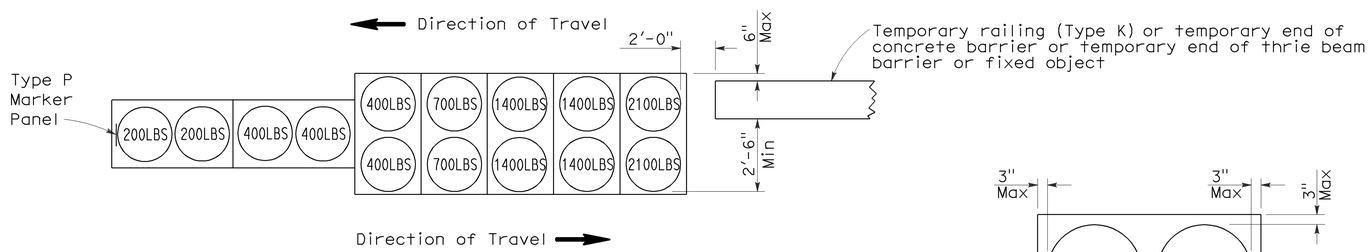
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 02-14-11



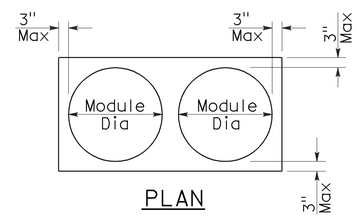
ARRAY 'TB11'

Approach speed less than 45 mph

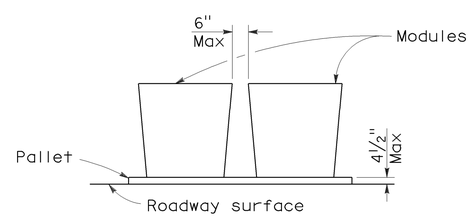


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	R0.0/R18.2	25	25

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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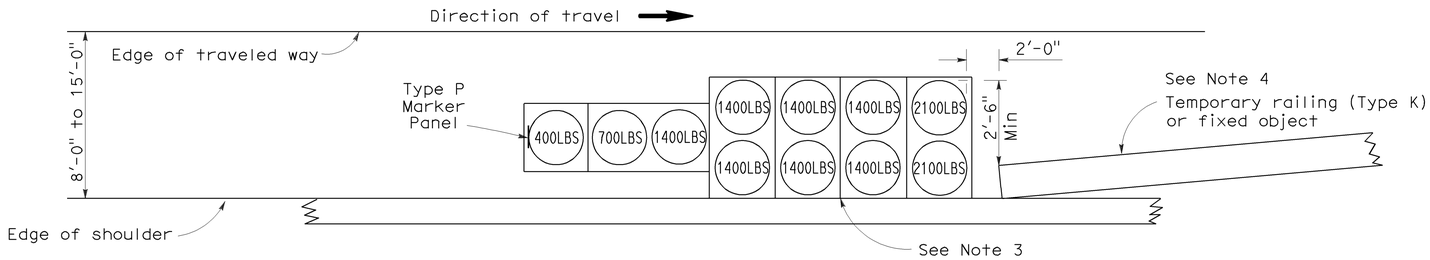
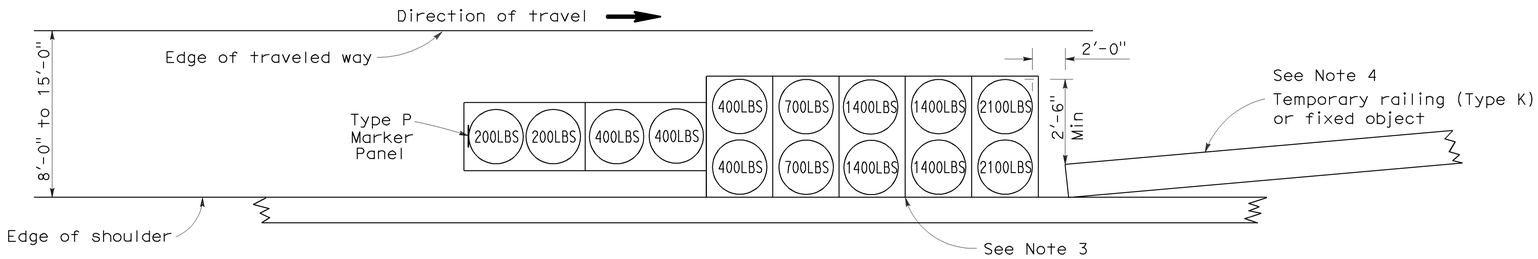
To accompany plans dated 02-14-11



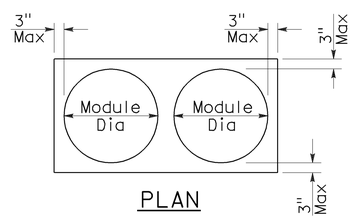
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

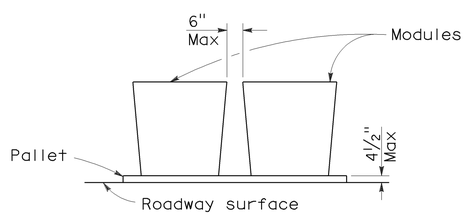


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

5-15-08