ACIM-580-1(057)E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	1	28

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE SHEET AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3 - 14	CONSTRUCTION AREA SIGNS
15	PAVEMENT DELINEATION QUANTITIES
16	SUMMARY OF QUANTITIES
17 - 20	ELECTRICAL PLANS
21 - 23	TRAFFIC CONTROL SYSTEM
24 - 28	REVISED STANDARD PLAN

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

STATE OF CALIFORNIA

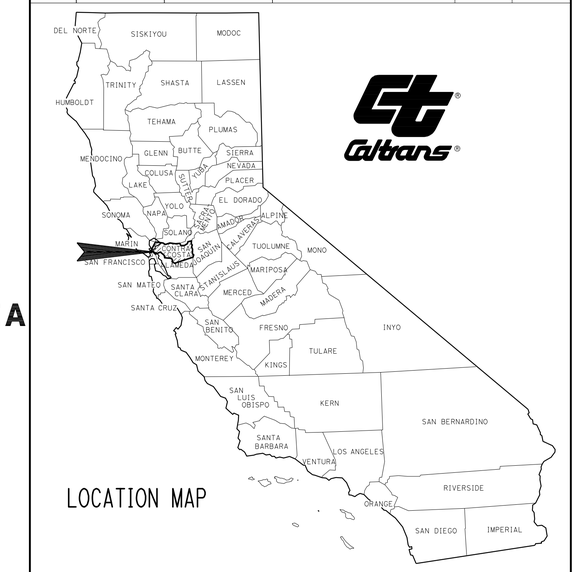
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

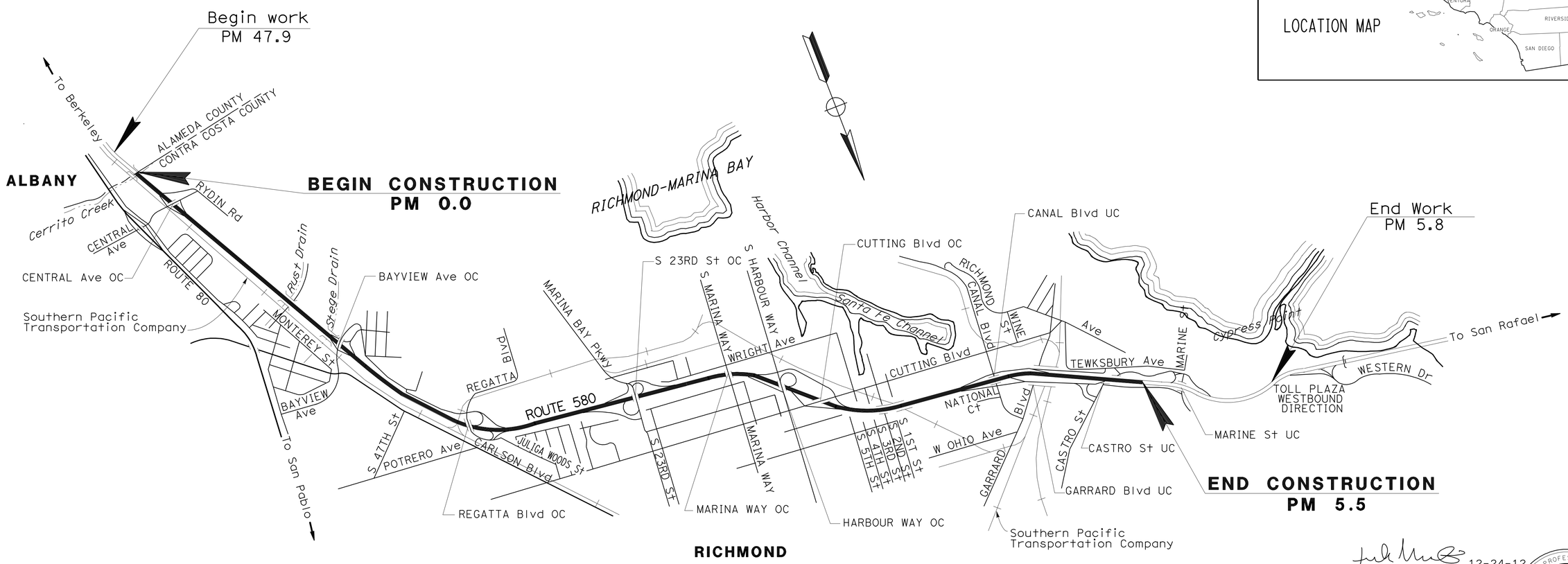
STATE HIGHWAY

IN CONTRA COSTA COUNTY
IN RICHMOND
FROM ALAMEDA COUNTY LINE
TO 0.6 MILE EAST OF RICHMOND-SAN RAFAEL BRIDGE TOLL PLAZA

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



LOCATION MAP



PROJECT MANAGER RAMSES SARGISS

DESIGN MANAGER RONNIE CHUA

12-24-12
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

February 25, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Terek Naward — No. 66808 — 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.

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

NO SCALE

CONTRACT No.	04-3E4404
PROJECT ID	0412000307

LAST REVISION 02-05-13 DATE PLOTTED => 14-MAR-2013 TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	2	28

REGISTERED CIVIL ENGINEER 12-24-12 DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Terek Naward No. 66808 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

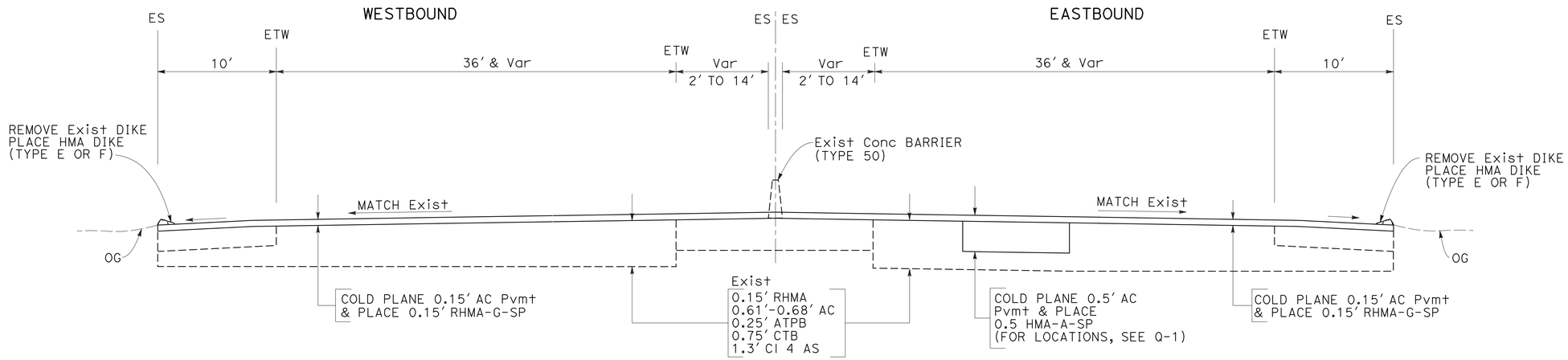
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

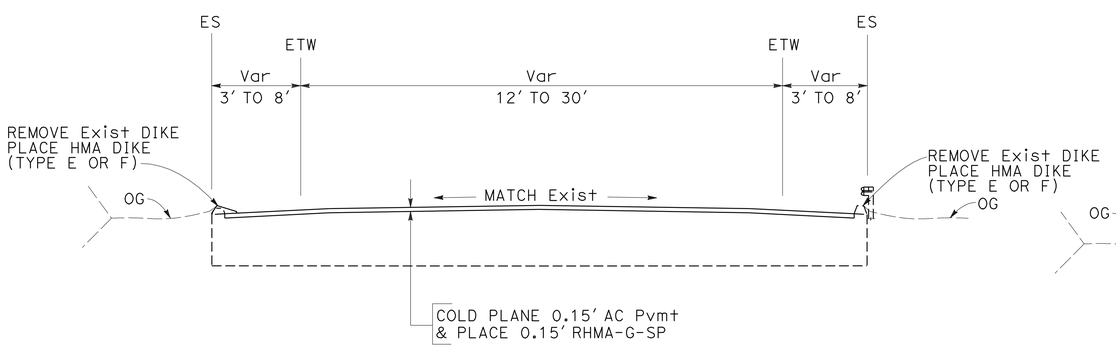
1. FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
3. Exist UTILITY FACILITIES ARE NOT PLOTTED ON THESE PLANS.
4. CONTRACTOR IS RESPONSIBLE TO PROVIDE POSITIVE DRAINAGE FROM ALL ROADWAY AREA AT ALL TIMES.
5. FOR LOCATIONS OF HMA DIKE & DIGOUT, SEE Q-SHEET.
6. USE TYPE F DIKE UNDER MBGR.

ABBREVIATIONS:

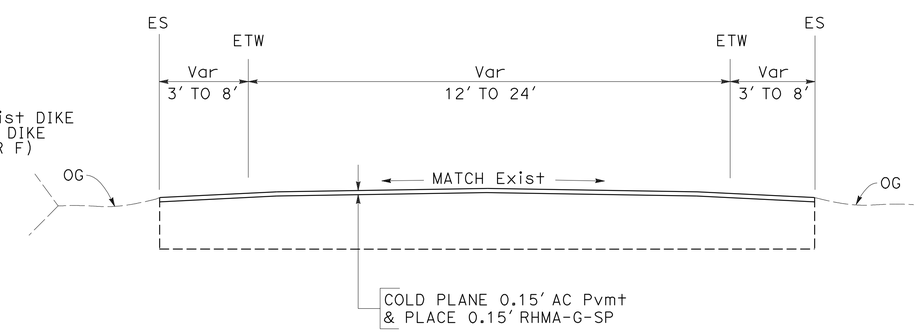
HMA-TYPE A-SP - HOT MIX ASPHALT (TYPE A) SUPERPAVE
RHMA-G-SP - RUBBERIZED HOT MIX ASPHALT (GAP GRADED) SUPERPAVE
w/ - WITH



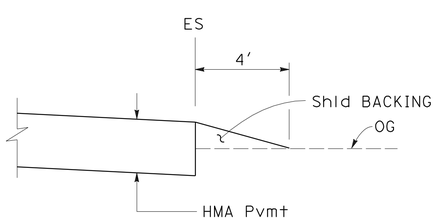
PM 0.00 TO 5.50



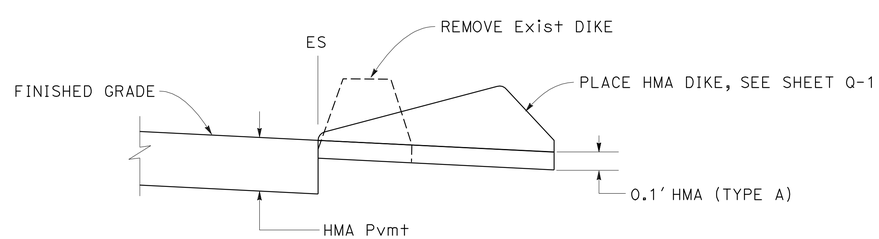
RAMPS WITH DIKE



RAMPS WITH NO DIKE AND GUARDRAIL



SHOULDER BACKING
PM 0.45 TO 0.70
PM 1.00 TO 1.21



PAVING AT DIKE

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN
FUNCTIONAL SUPERVISOR: RONNIE CHUA
CALCULATED-DESIGNED BY: TEREK NAWARD
CHECKED BY: RONNIE CHUA
REVISED BY: TN
DATE REVISED: 12/27/12

LAST REVISION 02-15-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	3	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Parwin W. Sarwary No. 79545 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.

ABBREVIATION:

Dia DIAGONAL

LEGEND:

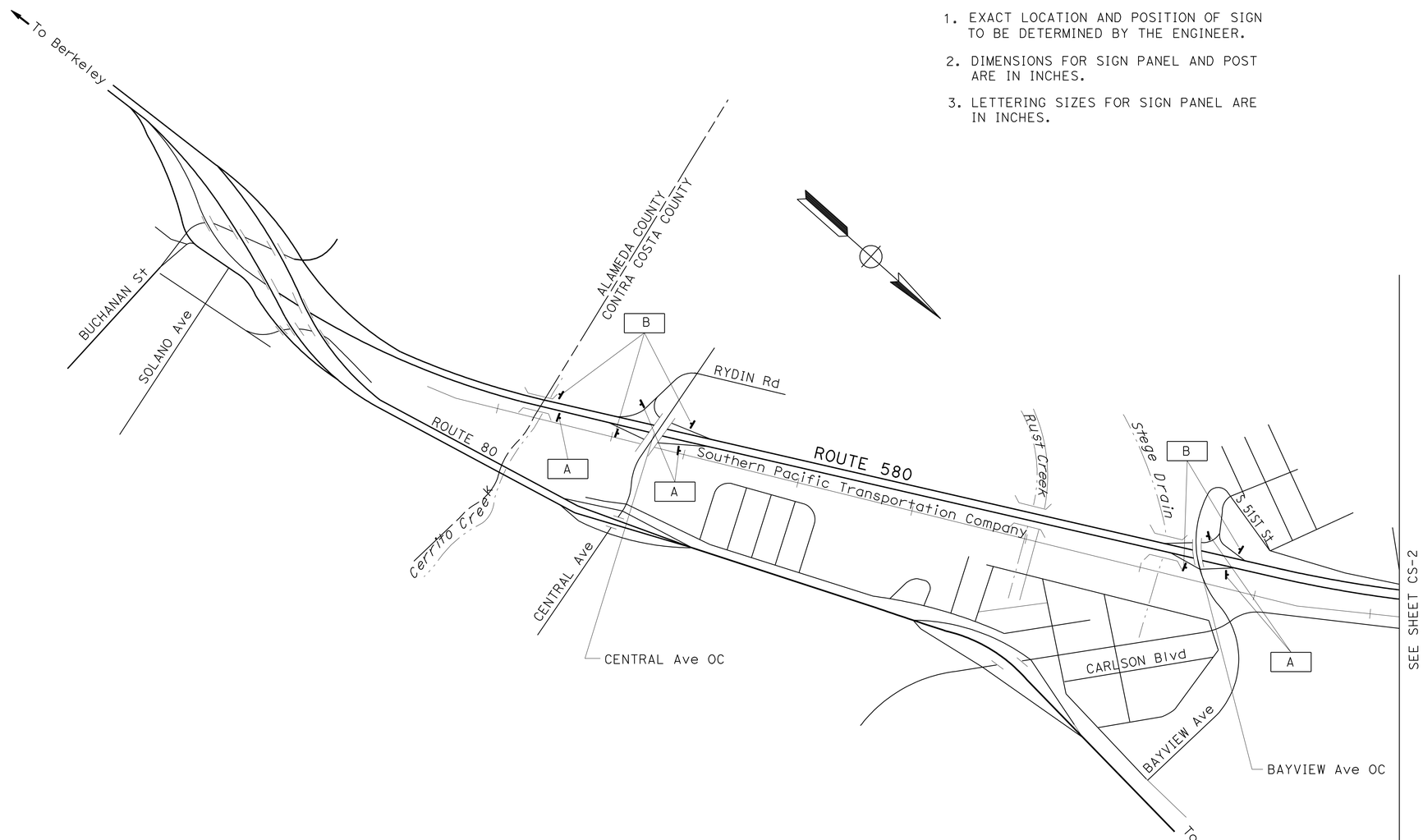
A CONSTRUCTION AREA SIGN

⇨ DIRECTION OF TRAFFIC

✕ RAMP OR CONNECTOR TO BE CLOSED

NOTES:

1. EXACT LOCATION AND POSITION OF SIGN TO BE DETERMINED BY THE ENGINEER.
2. DIMENSIONS FOR SIGN PANEL AND POST ARE IN INCHES.
3. LETTERING SIZES FOR SIGN PANEL ARE IN INCHES.



CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

CALCULATED-DESIGNED BY PARWIN SARWARY
CHECKED BY LOURDES DAVID
FUNCTIONAL SUPERVISOR LOURDES DAVID
REVISED BY PS
DATE REVISED 12/27/12

LAST REVISION 02-05-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	4	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Parwin W. Sarwary
No. 79545
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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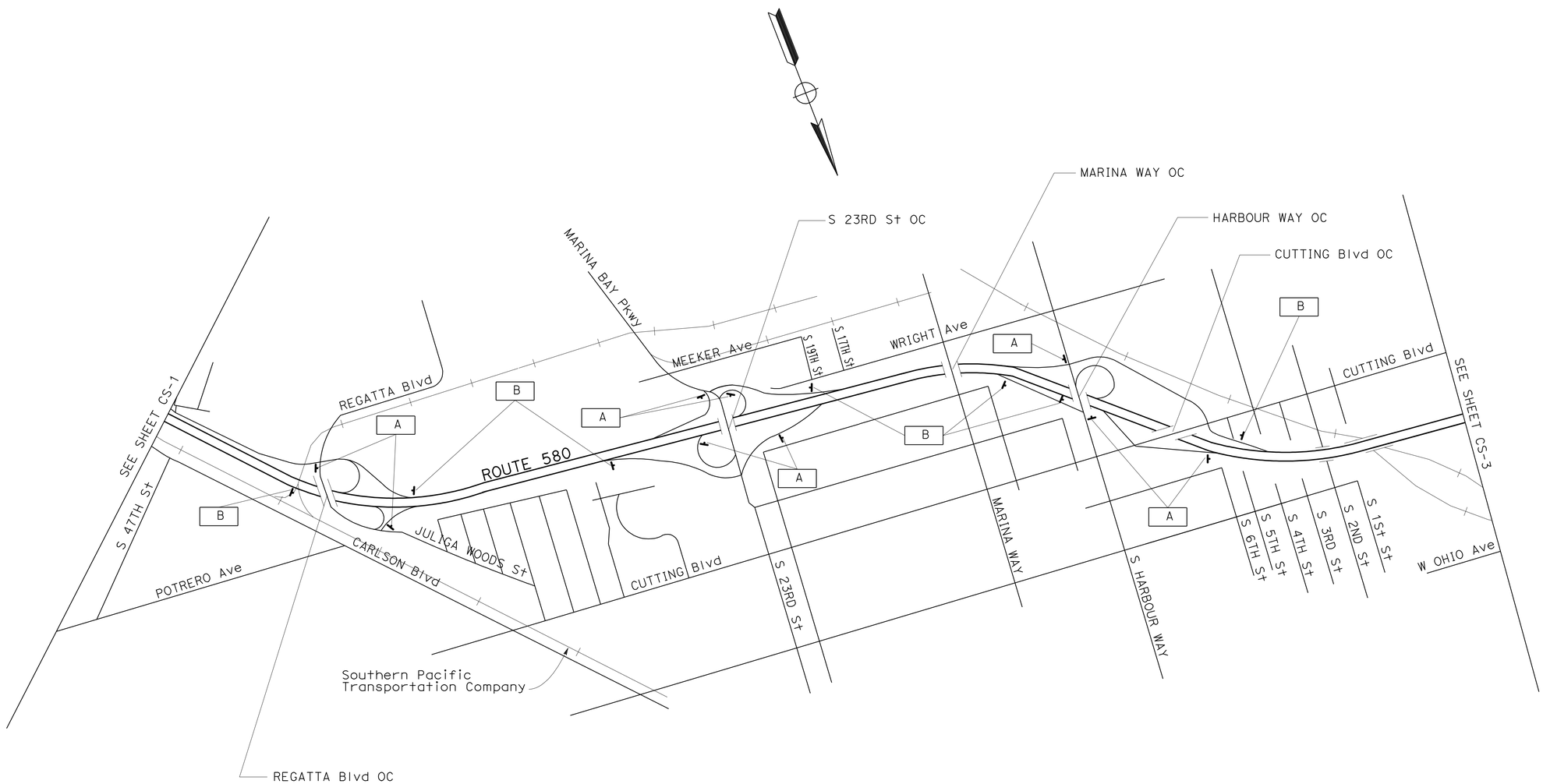

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

PARWIN SARWARY	REVISED BY	PS
LOURDES DAVID	DATE REVISED	12/27/12
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	
LOURDES DAVID	

LAST REVISION 02-05-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	5	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Parwin W. Sarwary
No. 79545
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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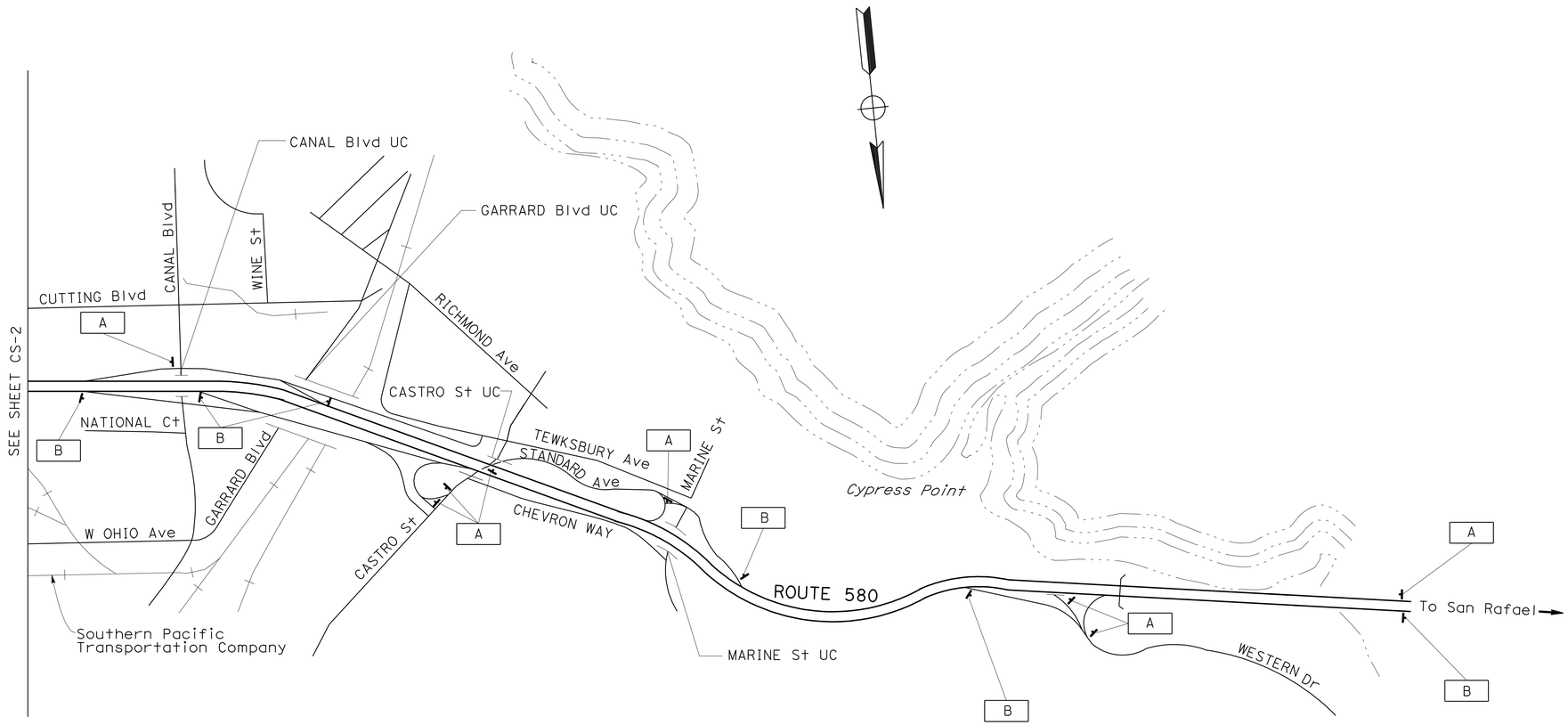

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
TRAFFIC

CALCULATED-DESIGNED BY	PARWIN SARWARY
CHECKED BY	LOURDES DAVID
FUNCTIONAL SUPERVISOR	LOURDES DAVID
REVISED BY	PS
DATE REVISED	12/27/12

LAST REVISION 02-05-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	6	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Parwin W. Sarwary
No. 79545
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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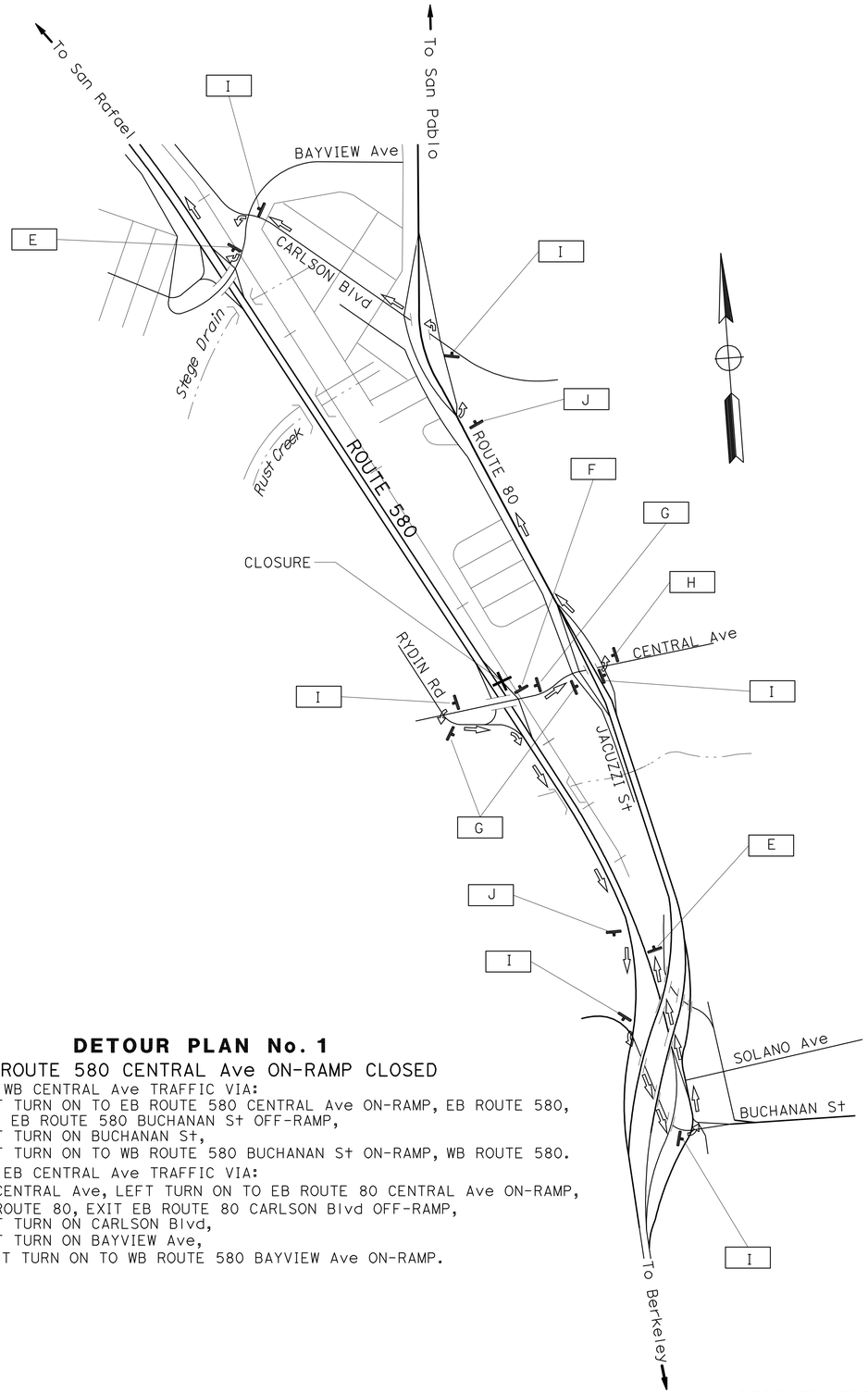
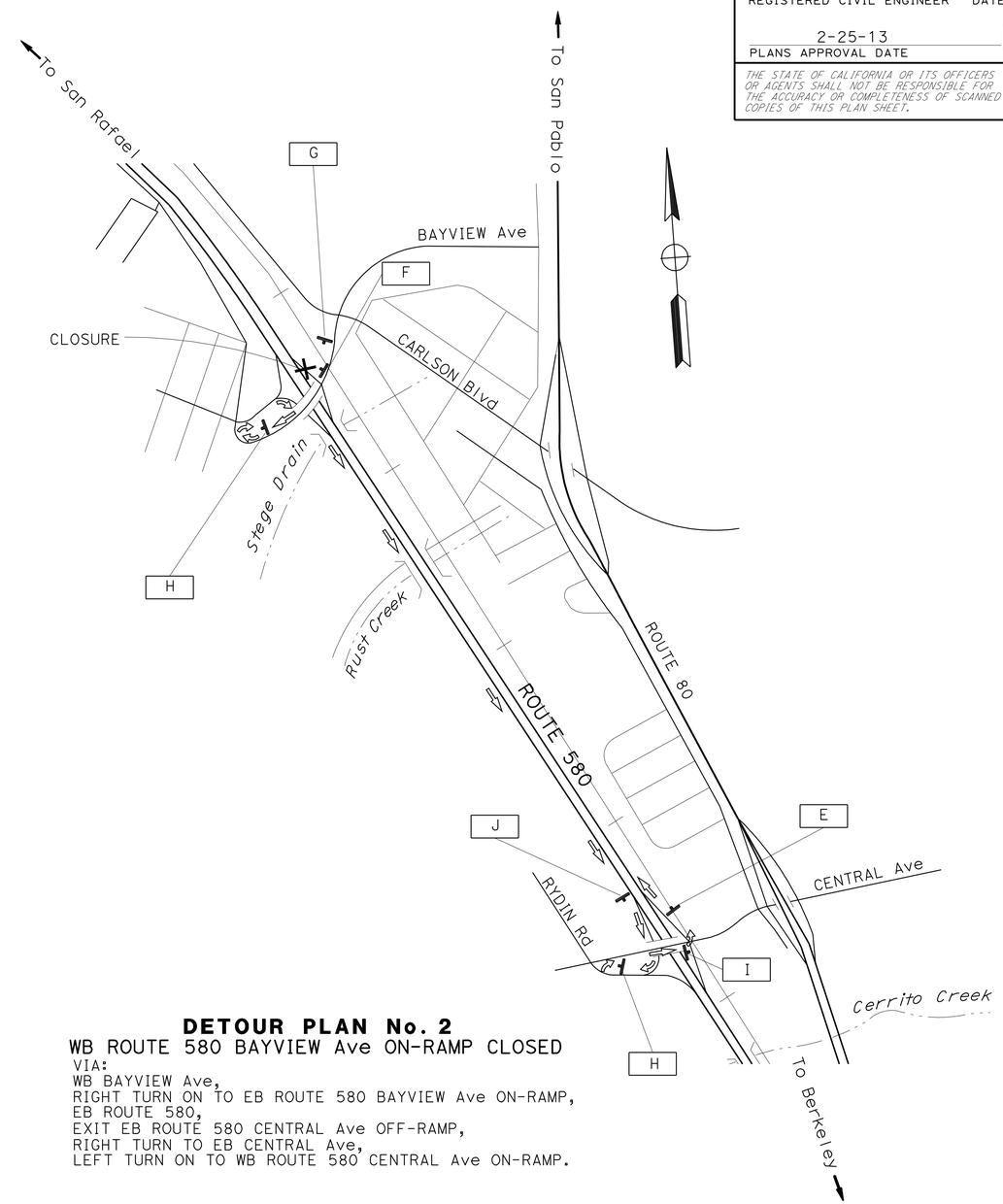


DETOUR PLAN No. 1

WB ROUTE 580 CENTRAL Ave ON-RAMP CLOSED

FOR WB CENTRAL Ave TRAFFIC VIA:
LEFT TURN ON TO EB ROUTE 580 CENTRAL Ave ON-RAMP, EB ROUTE 580,
EXIT EB ROUTE 580 BUCHANAN St OFF-RAMP,
LEFT TURN ON BUCHANAN St,
LEFT TURN ON TO WB ROUTE 580 BUCHANAN St ON-RAMP, WB ROUTE 580.

FOR EB CENTRAL Ave TRAFFIC VIA:
EB CENTRAL Ave, LEFT TURN ON TO EB ROUTE 80 CENTRAL Ave ON-RAMP,
EB ROUTE 80, EXIT EB ROUTE 80 CARLSON Blvd OFF-RAMP,
LEFT TURN ON CARLSON Blvd,
LEFT TURN ON BAYVIEW Ave,
RIGHT TURN ON TO WB ROUTE 580 BAYVIEW Ave ON-RAMP.



DETOUR PLAN No. 2

WB ROUTE 580 BAYVIEW Ave ON-RAMP CLOSED

VIA:
WB BAYVIEW Ave,
RIGHT TURN ON TO EB ROUTE 580 BAYVIEW Ave ON-RAMP,
EB ROUTE 580,
EXIT EB ROUTE 580 CENTRAL Ave OFF-RAMP,
RIGHT TURN TO EB CENTRAL Ave,
LEFT TURN ON TO WB ROUTE 580 CENTRAL Ave ON-RAMP.

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CONSTRUCTION AREA SIGNS

NO SCALE

CS-4

REVISED BY	DATE REVISED
PS	12/27/12

CALCULATED-DESIGNED BY: PARWIN SARWARY
CHECKED BY: LOURDES DAVID
FUNCTIONAL SUPERVISOR: LOURDES DAVID

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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TRAFFIC

LAST REVISION 02-14-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	7	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Parwin W. Sarwary
No. 79545
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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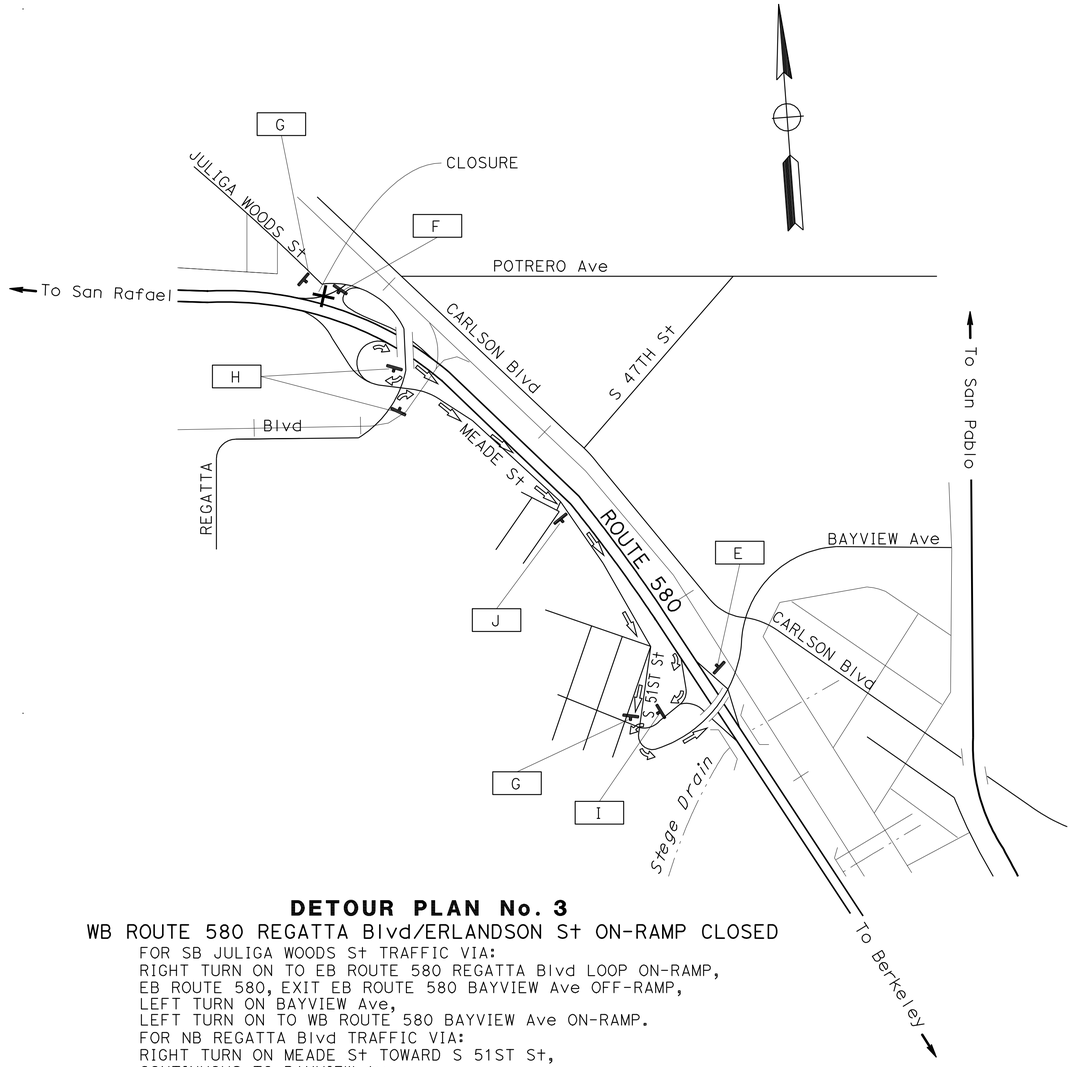
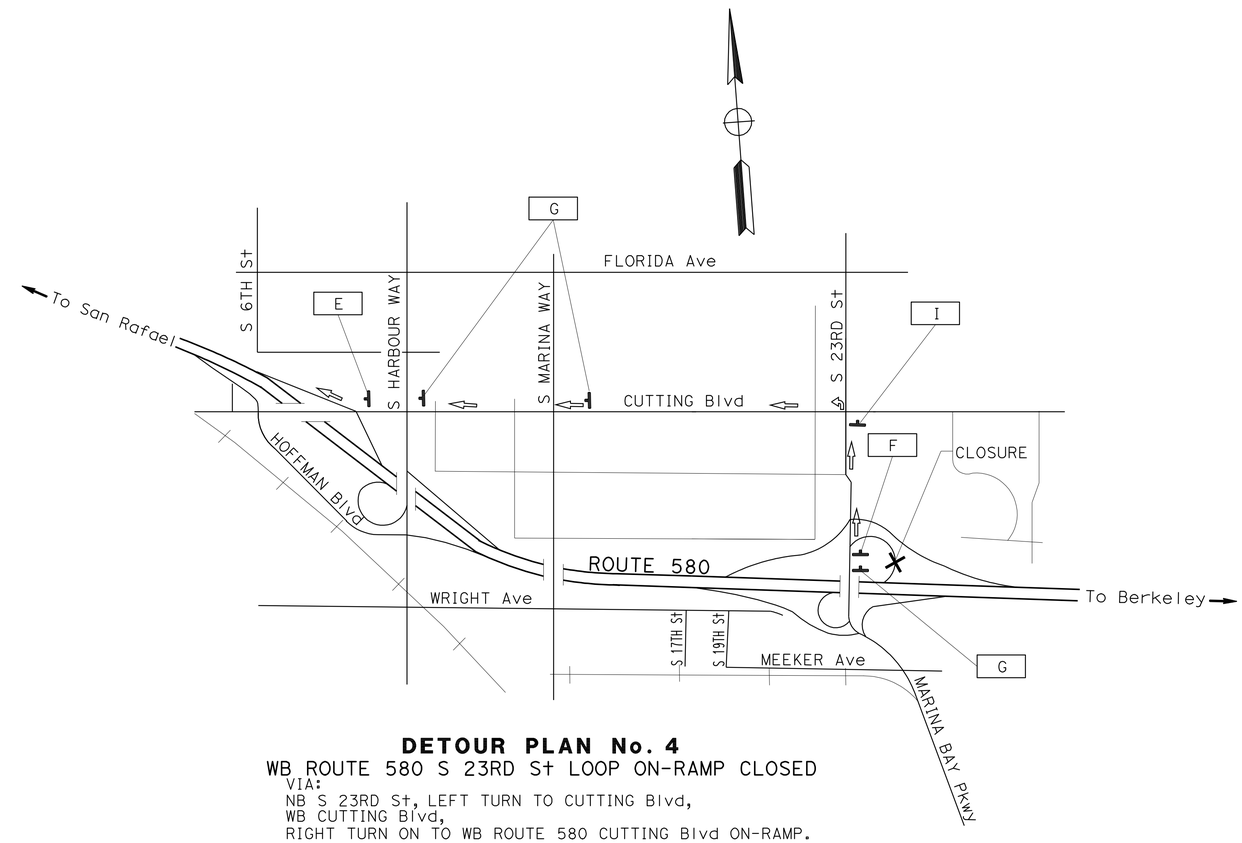


DETOUR PLAN No. 3

WB ROUTE 580 REGATTA Blvd/ERLANDSON St ON-RAMP CLOSED

FOR SB JULIGA WOODS St TRAFFIC VIA:
RIGHT TURN ON TO EB ROUTE 580 REGATTA Blvd LOOP ON-RAMP,
EB ROUTE 580, EXIT EB ROUTE 580 BAYVIEW Ave OFF-RAMP,
LEFT TURN ON BAYVIEW Ave,
LEFT TURN ON TO WB ROUTE 580 BAYVIEW Ave ON-RAMP.
FOR NB REGATTA Blvd TRAFFIC VIA:
RIGHT TURN ON MEADE St TOWARD S 51ST St,
CONTINUOUS TO BAYVIEW Ave,
LEFT TURN ON TO WB ROUTE 580 BAYVIEW Ave ON-RAMP.



DETOUR PLAN No. 4

WB ROUTE 580 S 23RD St LOOP ON-RAMP CLOSED

VIA:
NB S 23RD St, LEFT TURN TO CUTTING Blvd,
WB CUTTING Blvd,
RIGHT TURN ON TO WB ROUTE 580 CUTTING Blvd ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-5

REVISED BY	DATE REVISED
PS	12/27/12

PARWIN SARWARY
LOURDES DAVID
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
LOURDES DAVID

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

LAST REVISION 02-05-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	8	28

REGISTERED CIVIL ENGINEER 1-8-13 DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Parwin W. Sarwary No. 79545 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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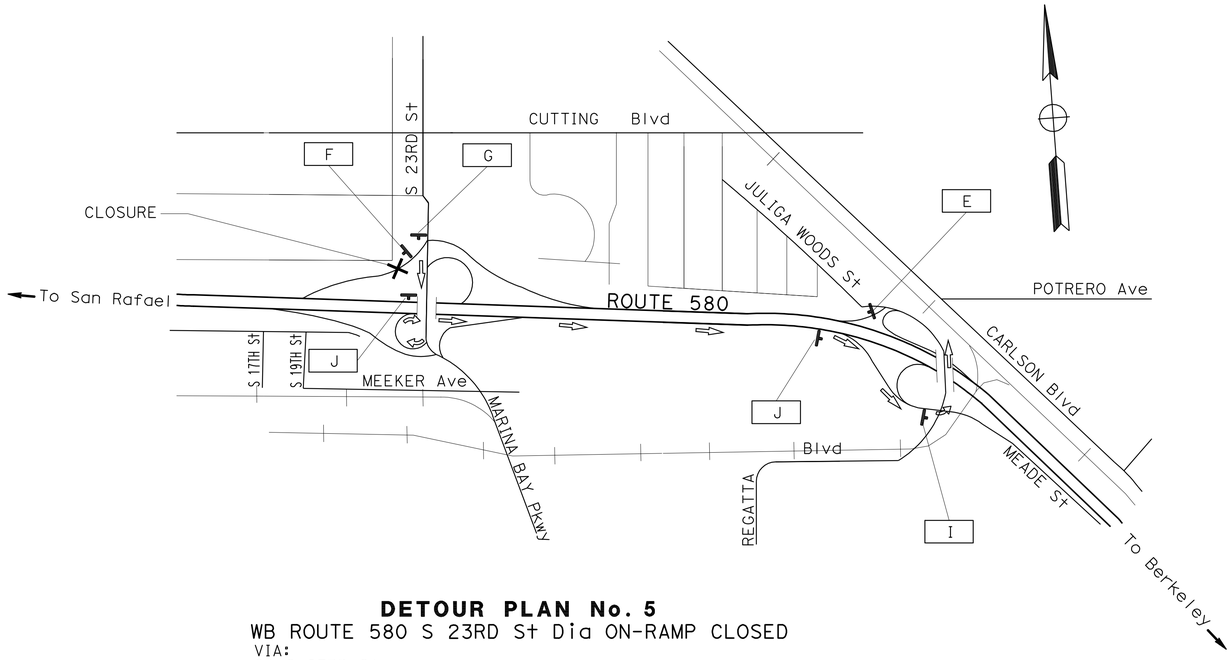
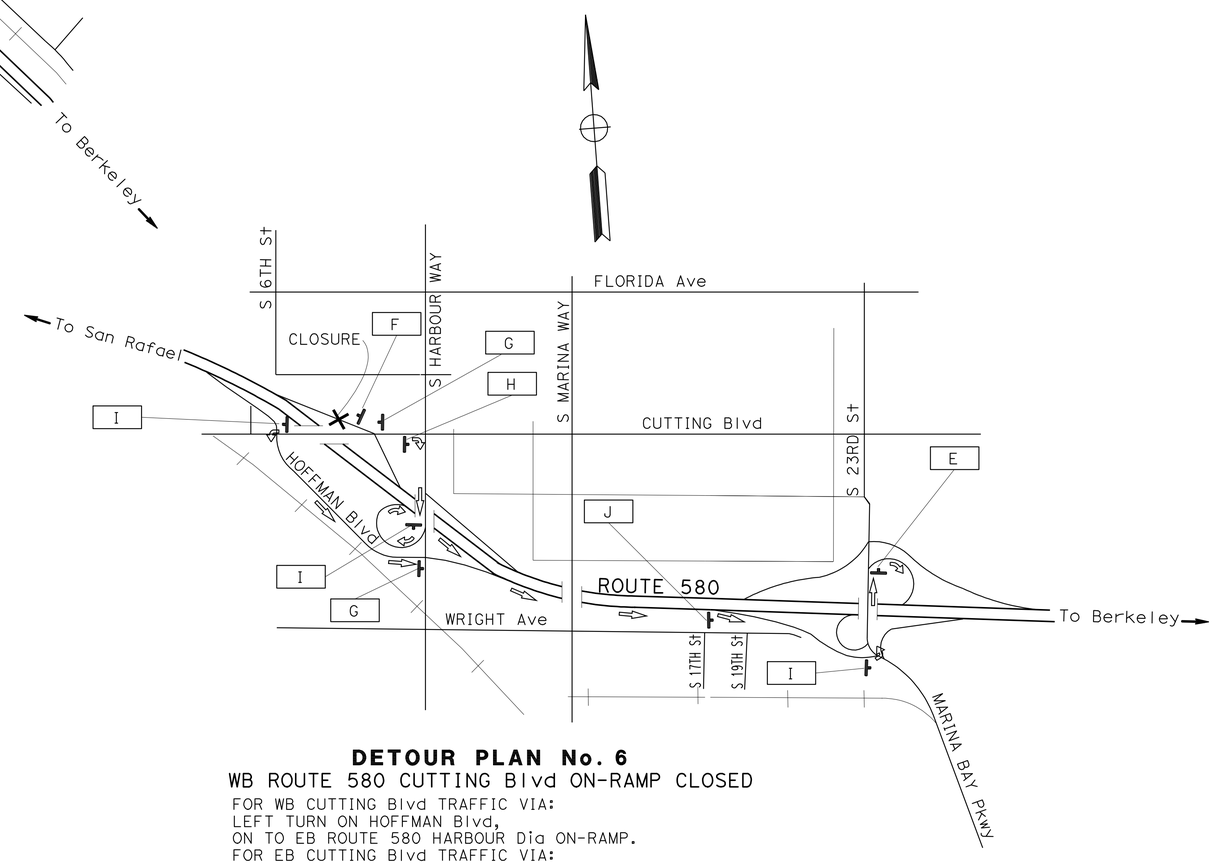


DETOUR PLAN No. 5

WB ROUTE 580 S 23RD St Dia ON-RAMP CLOSED

VIA:
SB S 23RD St,
RIGHT TURN ON TO EB ROUTE 580 S 23RD LOOP ON-RAMP,
EB ROUTE 580, EXIT EB ROUTE 580 REGATTA Blvd OFF-RAMP,
LEFT TURN ON REGATTA Blvd/JULIGA WOODS St,
LEFT TURN ON TO WB ROUTE 580 REGATTA Blvd/JULIGA WOODS St ON-RAMP.



DETOUR PLAN No. 6

WB ROUTE 580 CUTTING Blvd ON-RAMP CLOSED

FOR WB CUTTING Blvd TRAFFIC VIA:
LEFT TURN ON HOFFMAN Blvd,
ON TO EB ROUTE 580 HARBOUR Dia ON-RAMP.
FOR EB CUTTING Blvd TRAFFIC VIA:
RIGHT TURN ON S HARBOUR WAY,
RIGHT TURN ON EB ROUTE 580 HARBOUR WAY LOOP ON-RAMP,
THEN EB ROUTE 580,
EXIT EB ROUTE 580 S 23RD St/MARINA BAY Pkwy,
LEFT TURN ON MARINA BAY Pkwy,
RIGHT TURN ON TO WB ROUTE 580 S 23RD St/MARINA BAY Pkwy ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-6

PS	12/27/12
REVISED BY	DATE REVISED
PARWIN SARWARY	LOURDES DAVID
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	LOURDES DAVID

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

LAST REVISION | DATE PLOTTED => 14-MAR-2013
02-05-13 | TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	9	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Parwin W. Sarwary
No. 79545
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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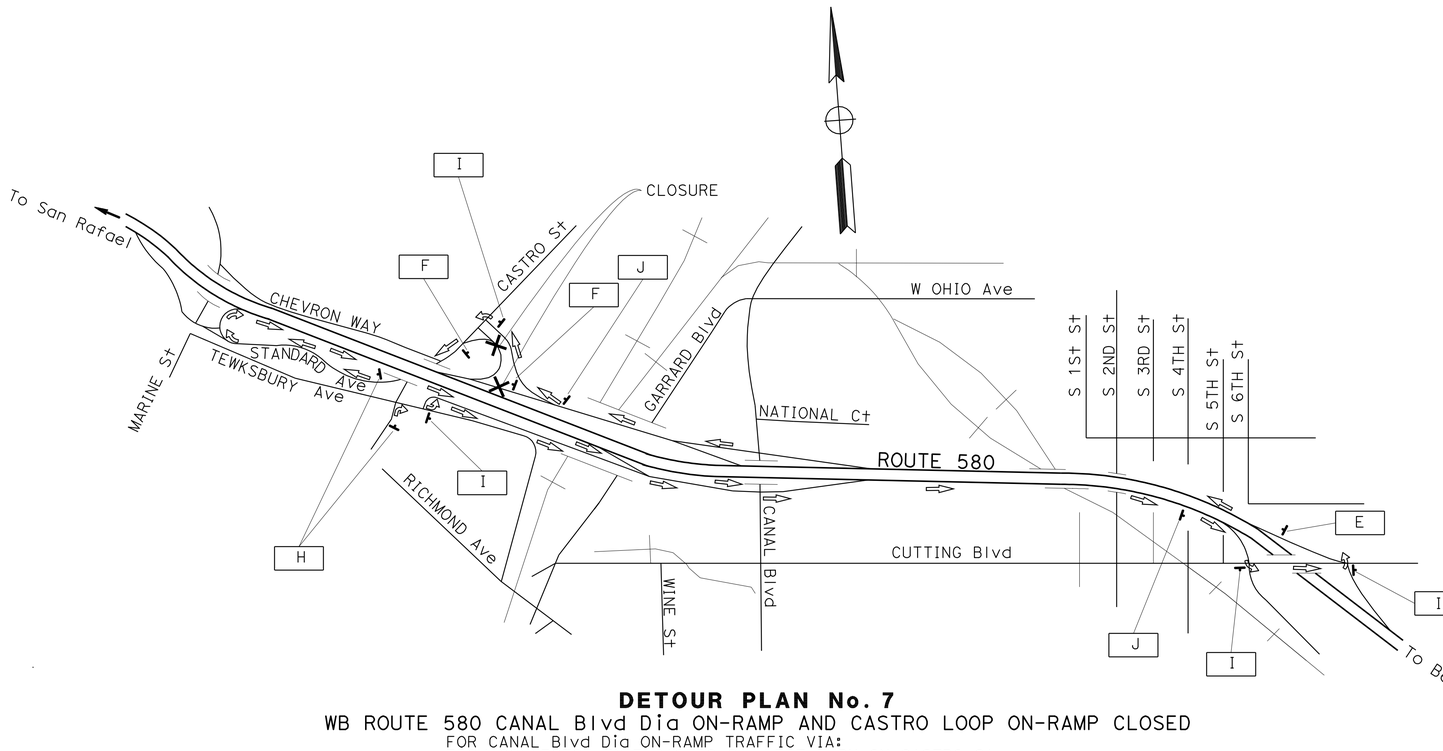
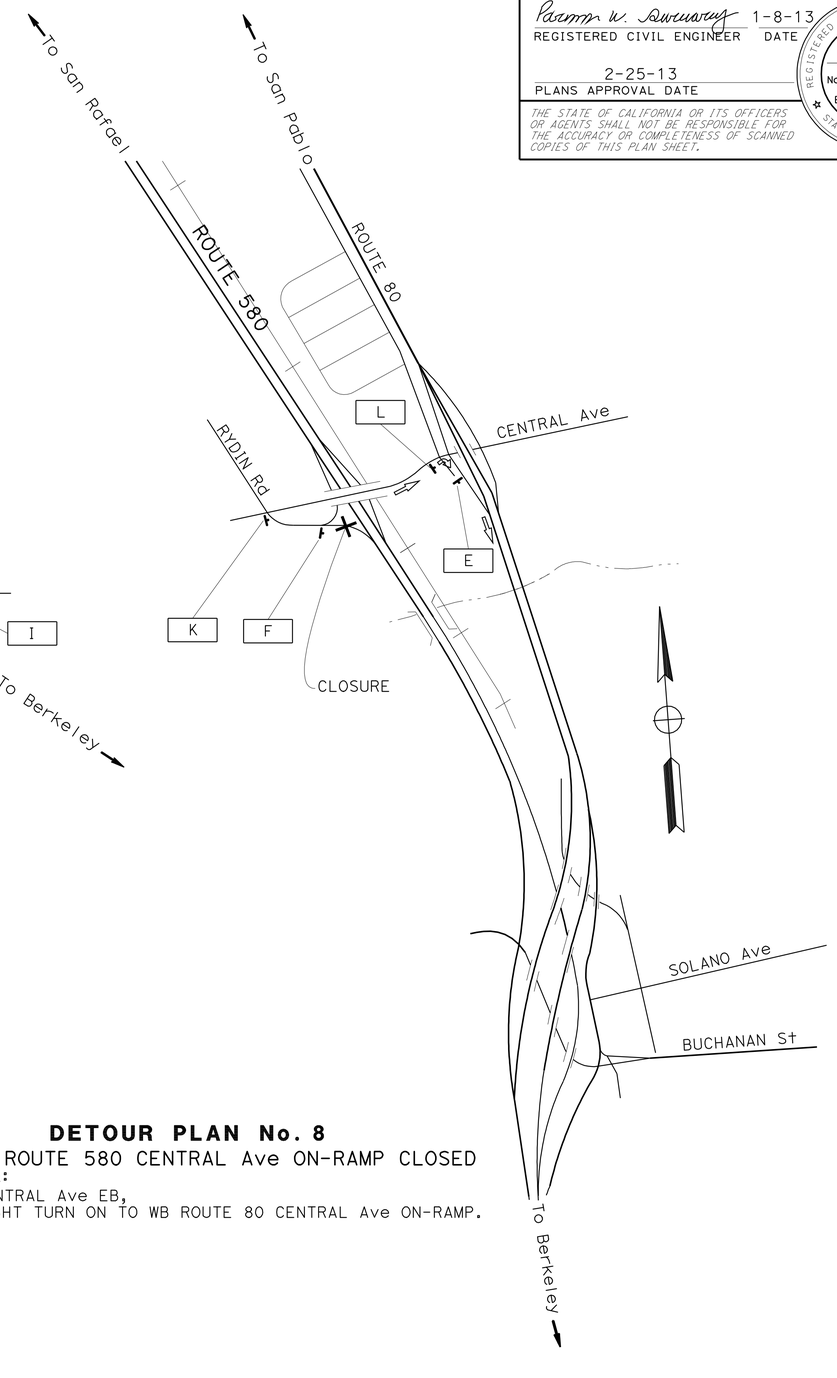


DETOUR PLAN No. 7

WB ROUTE 580 CANAL Blvd Dia ON-RAMP AND CASTRO LOOP ON-RAMP CLOSED

FOR CANAL Blvd Dia ON-RAMP TRAFFIC VIA:
FROM CONNECTOR EXIT CASTRO St, LEFT TURN ON CASTRO St,
RIGHT TURN ON STANDARD Ave AND ON TO EB ROUTE 580 ON-RAMP.
FOR CASTRO St LOOP ON-RAMP TRAFFIC VIA:
FROM NB CASTRO St, RIGHT TURN ON TEWKSBURY Ave,
LEFT TURN ON TO CONNECTOR, CROSS CANAL Blvd,
CONTINUOUS TO EB ROUTE 580 CANAL Blvd ON-RAMP,
THEN AT EB ROUTE 580, EXIT EB ROUTE 580 CUTTING Blvd OFF-RAMP,
LEFT TURN ON CUTTING Blvd,
LEFT TURN ON TO WB ROUTE 580 CUTTING Blvd ON-RAMP.



DETOUR PLAN No. 8

EB ROUTE 580 CENTRAL Ave ON-RAMP CLOSED
VIA:
CENTRAL Ave EB,
RIGHT TURN ON TO WB ROUTE 80 CENTRAL Ave ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

REVISED BY	PS
DATE REVISED	12/27/12
CALCULATED-DESIGNED BY	PARWIN SARWARY
CHECKED BY	LOURDES DAVID
FUNCTIONAL SUPERVISOR	LOURDES DAVID

LAST REVISION 02-05-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	10	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Parwin W. Sarwary No. 79545 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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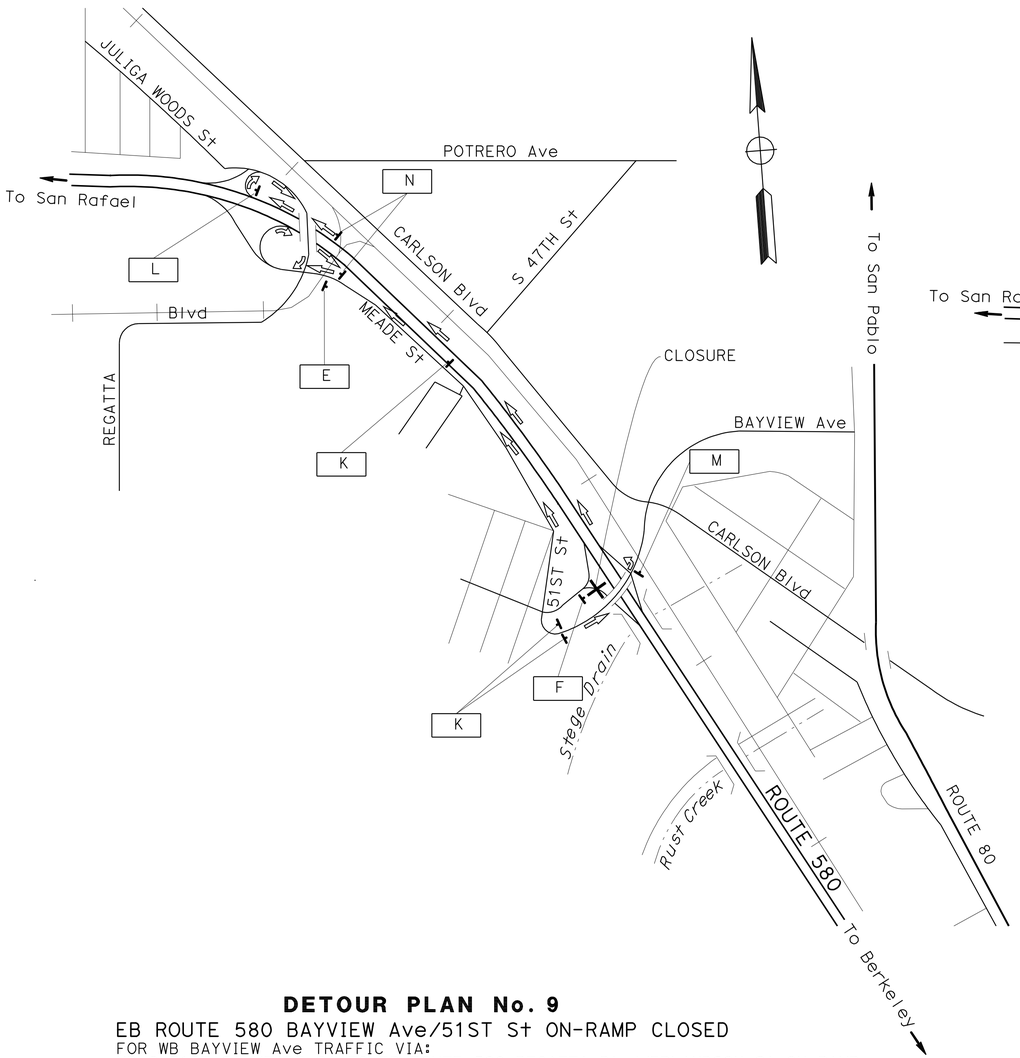
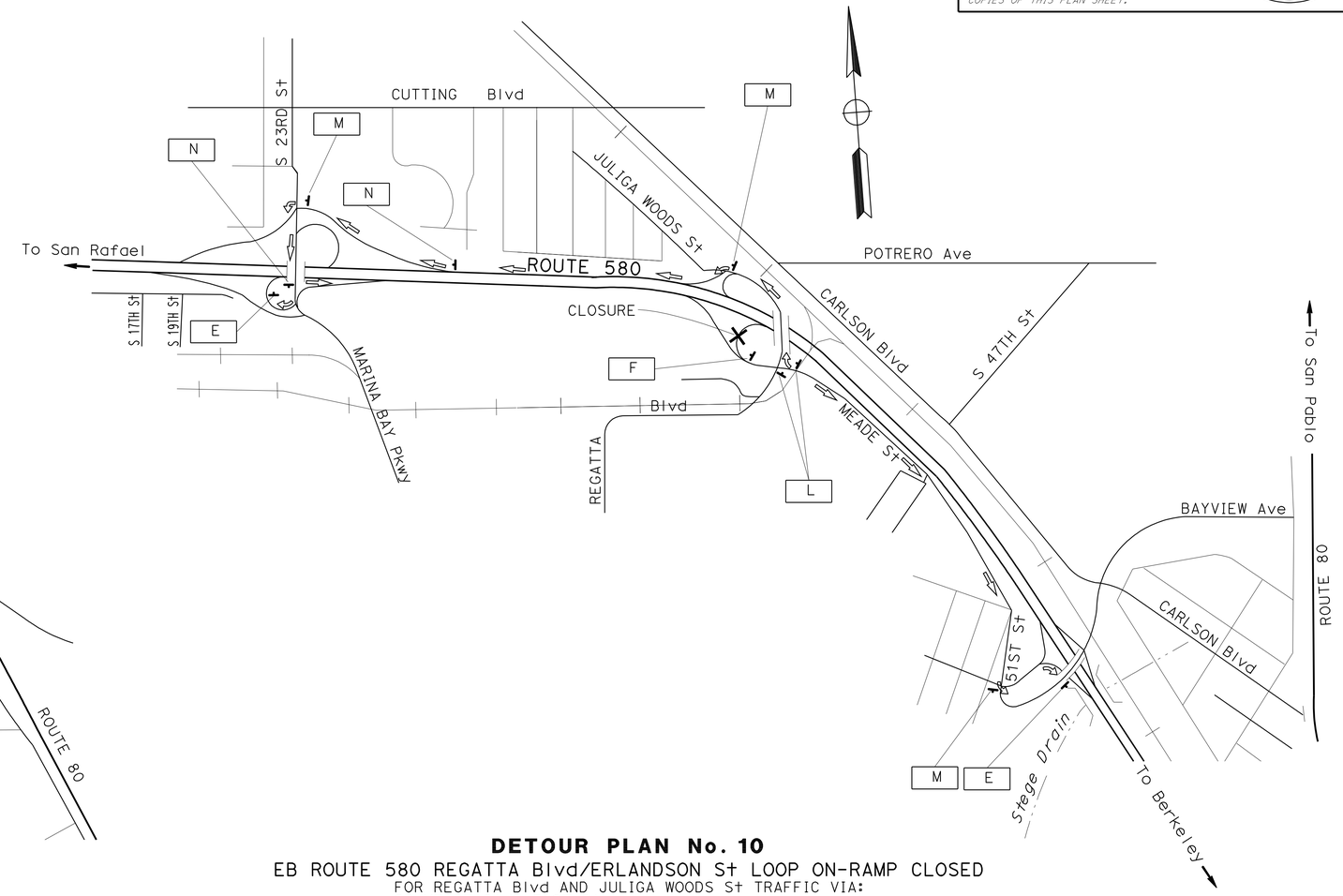


DETOUR PLAN No. 9

EB ROUTE 580 BAYVIEW Ave/51ST St ON-RAMP CLOSED
FOR WB BAYVIEW Ave TRAFFIC VIA:
NB S 51ST St/MEADE St TO EB ROUTE 580 REGATTA Blvd/ERLANDSON St ON-RAMP.
FOR SB S 51ST St/MEADE St TRAFFIC VIA:
EB BAYVIEW Ave, LEFT TURN TO WB ROUTE 580 BAYVIEW Ave ON-RAMP,
WB ROUTE 580, EXIT WB ROUTE 580 REGATTA Blvd OFF,
RIGHT TURN TO JULIGA WOODS St/REGATTA Blvd,
WB REGATTA Blvd, RIGHT TURN TO EB ROUTE 580 REGATTA Blvd ON-RAMP.



DETOUR PLAN No. 10

EB ROUTE 580 REGATTA Blvd/ERLANDSON St LOOP ON-RAMP CLOSED
FOR REGATTA Blvd AND JULIGA WOODS St TRAFFIC VIA:
SB MEADE St/S 51ST St,
LEFT TURN ON TO EB ROUTE 580 BAYVIEW Ave ON-RAMP.
FOR NB MEADE St TRAFFIC VIA:
RIGHT TURN TO JULIGA WOODS St,
LEFT TURN ON TO WB ROUTE 580 REGATTA Blvd ON-RAMP,
EXIT WB ROUTE 580 S 23RD St OFF-RAMP,
LEFT TURN ON S 23RD St,
RIGHT TURN ON TO EB ROUTE 580 S 23RD St LOOP ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
TRAFFIC

CALCULATED-DESIGNED BY	PARWIN SARWARY	REVISED BY	PS
CHECKED BY	LOURDES DAVID	DATE REVISED	12/27/12
FUNCTIONAL SUPERVISOR	LOURDES DAVID		

LAST REVISION 02-05-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

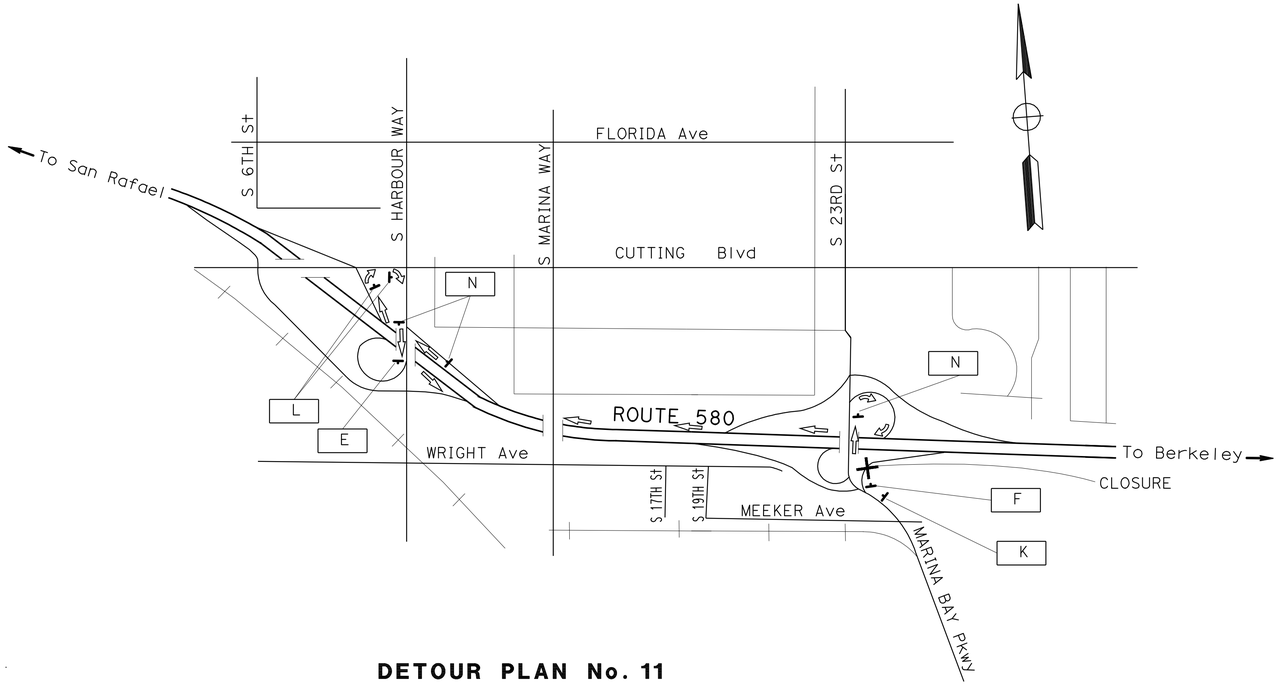
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	11	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Parwin W. Sarwary No. 79545 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

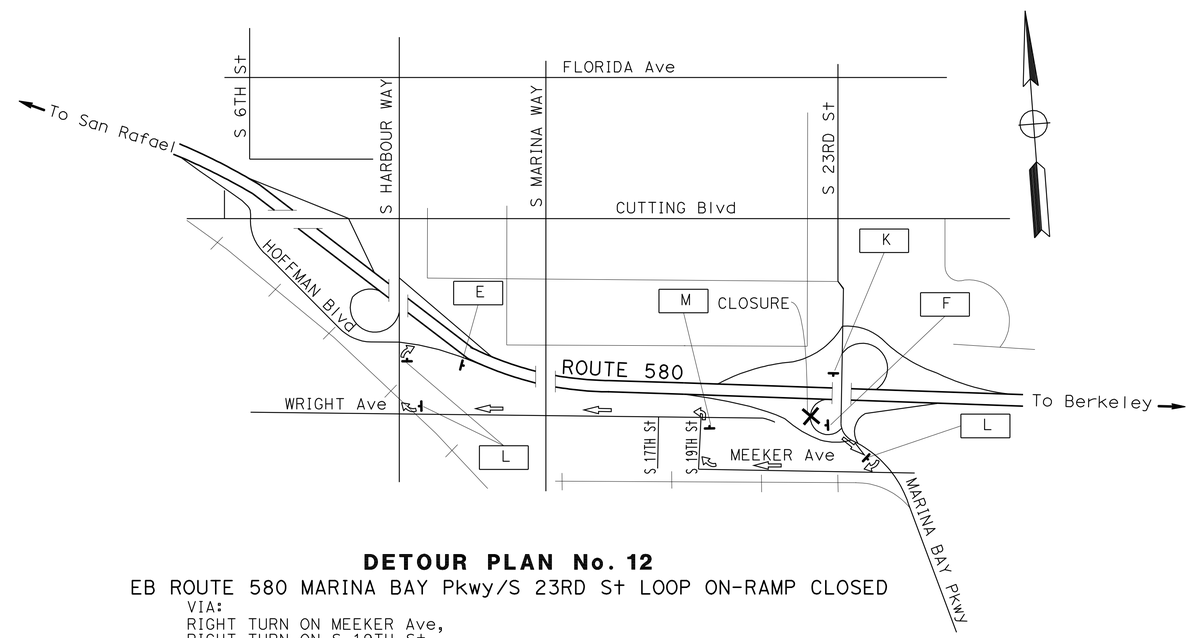
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



DETOUR PLAN No. 11

EB ROUTE 580 MARINA BAY Pkwy/S 23RD St Dia ON-RAMP CLOSED

VIA:
NB MARINA BAY Pkwy/S 23RD St,
RIGHT TURN ON TO WB ROUTE 580 S 23RD St ON-RAMP,
WB ROUTE 580, EXIT WB ROUTE 580 CUTTING Blvd OFF-RAMP,
RIGHT TURN ON CUTTING Blvd,
RIGHT TURN ON S HARBOUR WAY,
RIGHT TURN ON TO EB ROUTE 580 HARBOUR WAY LOOP ON-RAMP.



DETOUR PLAN No. 12

EB ROUTE 580 MARINA BAY Pkwy/S 23RD St LOOP ON-RAMP CLOSED

VIA:
RIGHT TURN ON MEEKER Ave,
RIGHT TURN ON S 19TH St,
LEFT TURN ON WRIGHT Ave,
WB WRIGHT Ave,
RIGHT TURN ON S HARBOUR WAY,
RIGHT TURN ON TO EB ROUTE 580 HARBOUR WAY S Dia ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

FUNCTIONAL SUPERVISOR: LOURDES DAVID
CALCULATED-DESIGNED BY: PARWIN SARWARY
CHECKED BY: LOURDES DAVID
REVISED BY: PS
DATE REVISED: 12/27/12

LAST REVISION 02-05-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

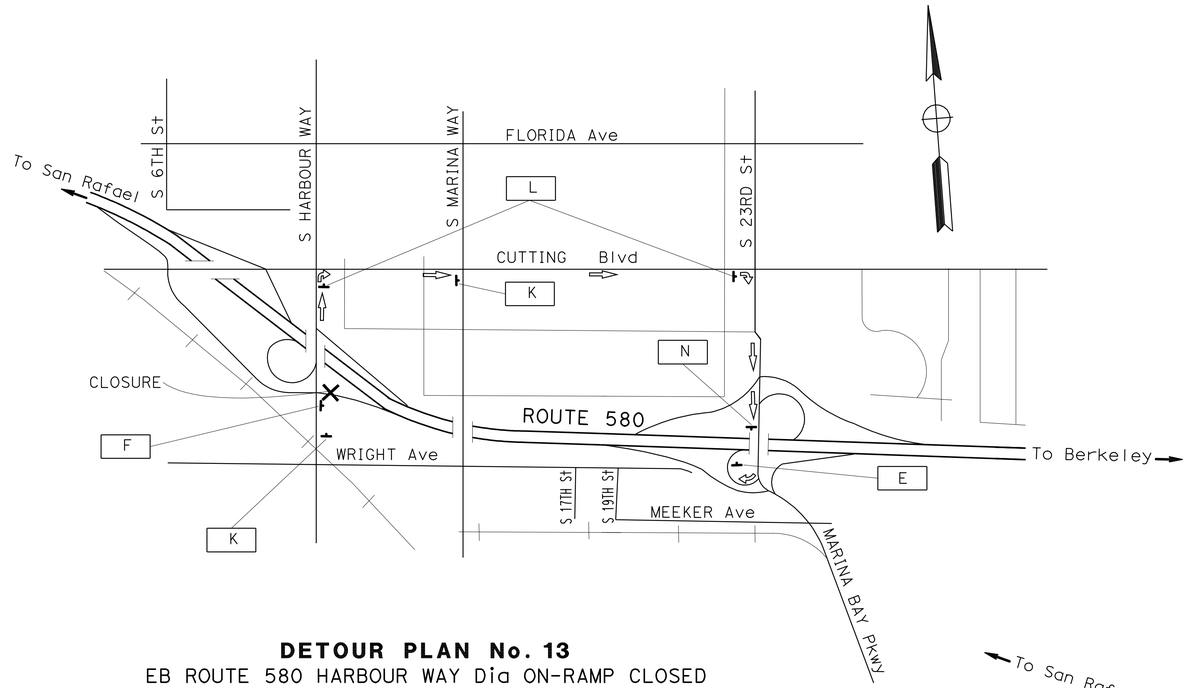
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	12	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

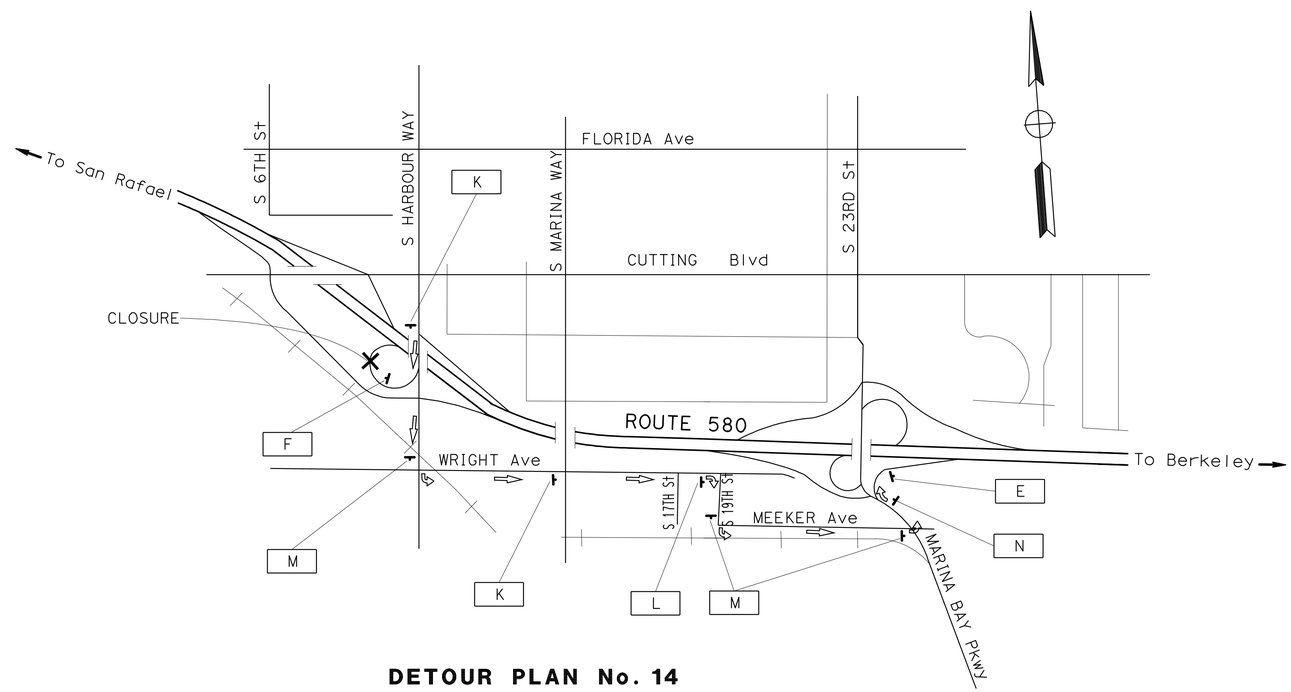
REGISTERED PROFESSIONAL ENGINEER Parwin W. Sarwary No. 79545 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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.



DETOUR PLAN No. 13

EB ROUTE 580 HARBOUR WAY Dia ON-RAMP CLOSED
VIA:
NB S HARBOUR WAY,
RIGHT TURN ON CUTTING Blvd,
EB CUTTING Blvd,
RIGHT TURN ON S 23RD St,
RIGHT TURN ON TO EB ROUTE 580 MARINA BAY Pkwy/S 23RD St ON-RAMP.



DETOUR PLAN No. 14

EB ROUTE 580 HARBOUR WAY LOOP ON-RAMP CLOSED
VIA:
SB S HARBOUR WAY,
LEFT TURN ON WRIGHT Ave,
EB WRIGHT Ave,
RIGHT TURN ON S 19TH St,
LEFT TURN ON MEEKER Ave,
LEFT TURN ON MARINA BAY Pkwy,
RIGHT TURN ON TO EB ROUTE 580 MARINA BAY Pkwy Dia ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-10

PS	12/27/12
REVISED BY	DATE REVISED
PARWIN SARWARY	LOURDES DAVID
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	LOURDES DAVID

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC

LAST REVISION 02-05-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

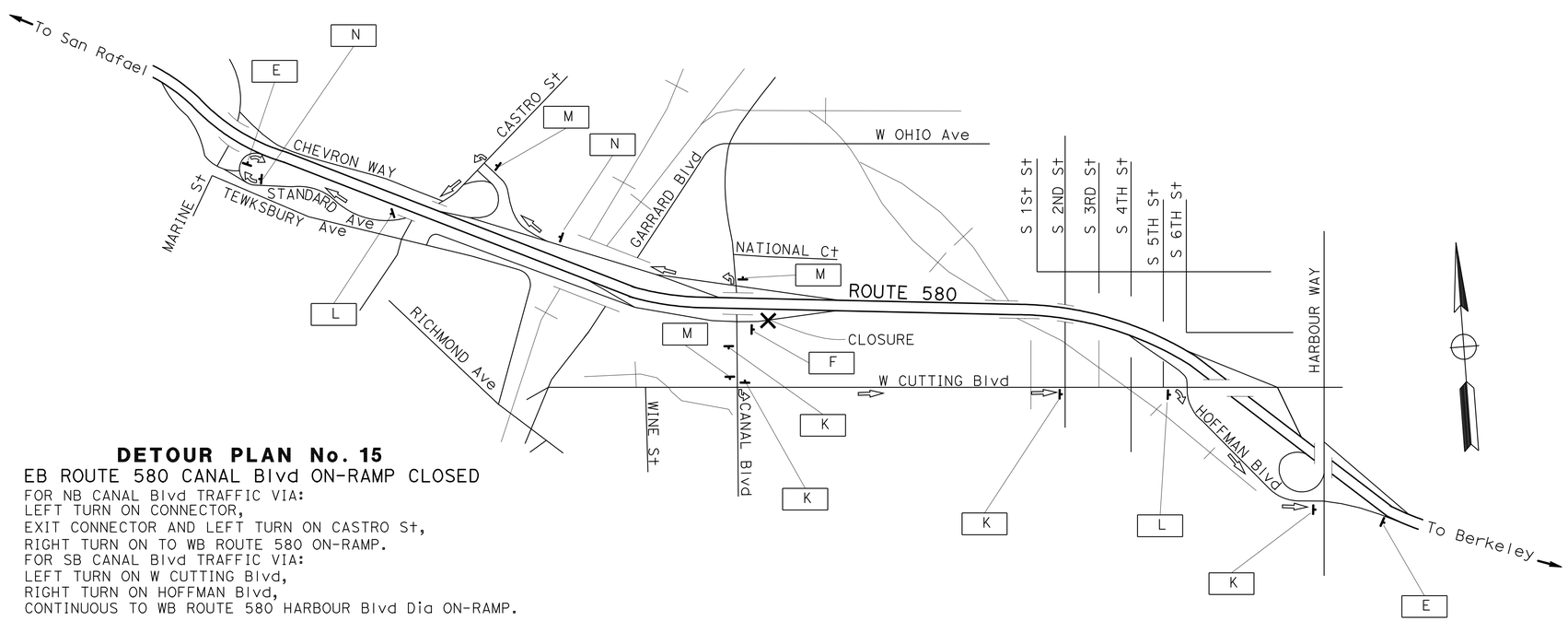
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	13	28

REGISTERED CIVIL ENGINEER 1-8-13 DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Parwin W. Sarwary No. 79545 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

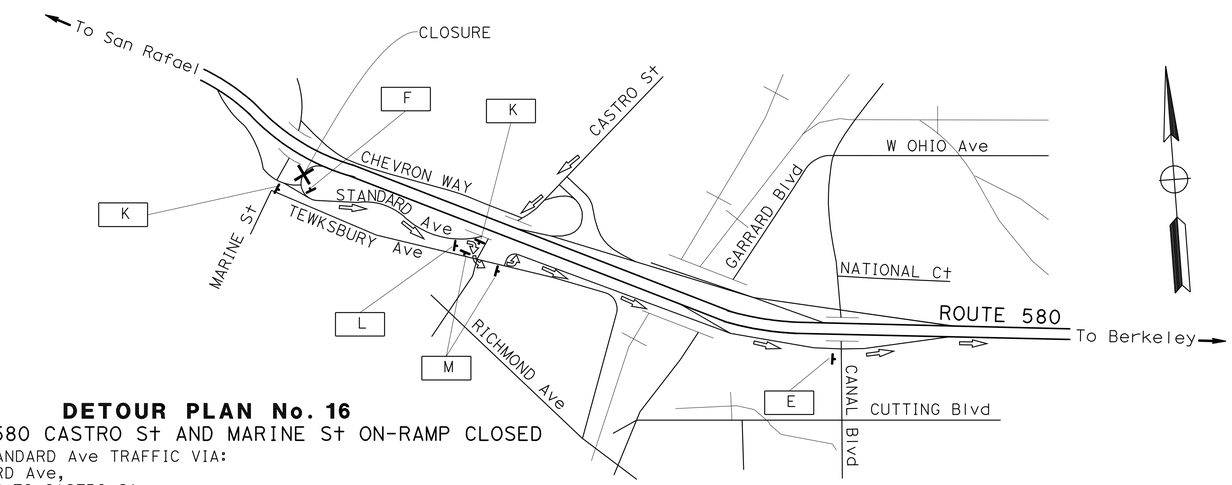
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



DETOUR PLAN No. 15

EB ROUTE 580 CANAL Blvd ON-RAMP CLOSED

FOR NB CANAL Blvd TRAFFIC VIA:
LEFT TURN ON CONNECTOR,
EXIT CONNECTOR AND LEFT TURN ON CASTRO St,
RIGHT TURN ON TO WB ROUTE 580 ON-RAMP.
FOR SB CANAL Blvd TRAFFIC VIA:
LEFT TURN ON W CUTTING Blvd,
RIGHT TURN ON HOFFMAN Blvd,
CONTINUOUS TO WB ROUTE 580 HARBOUR Blvd Dia ON-RAMP.



DETOUR PLAN No. 16

EB ROUTE 580 CASTRO St AND MARINE St ON-RAMP CLOSED

FOR EB STANDARD Ave TRAFFIC VIA:
EB STANDARD Ave,
RIGHT TURN TO CASTRO St,
LEFT TURN TO TEWKSBURY Ave
FOR SB CASTRO St TRAFFIC VIA:
LEFT TURN TO TEWKSBURY Ave,
THEN FROM EB TEWKSBURY Ave,
LEFT TURN TO CONNECTOR TOWARD CANAL Blvd,
CROSS CANAL Blvd AND ON TO EB ROUTE 580 CANAL Blvd ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

CS-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

FUNCTIONAL SUPERVISOR: LOURDES DAVID
CALCULATED-DESIGNED BY: PARWIN SARWARY
CHECKED BY: LOURDES DAVID
REVISED BY: PS
DATE REVISED: 12/27/12

LAST REVISION 02-05-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	14	28

Parwin W. Sarwary 1-8-13
REGISTERED CIVIL ENGINEER DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Parwin W. Sarwary No. 79545 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.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE	MESSAGE	PANEL SIZE (INCHES x INCHES)	No. OF POSTS & SIZE (EA - INCHES x INCHES)	No. OF SIGNS
A	W20-1	ROAD WORK AHEAD	60 x 60	2 - 4 x 6	22
B	G20-2	END ROAD WORK	36 x 18	1 - 4 x 4	18
C		NOT USED			
D		NOT USED			
E	M4-8A	END DETOUR	24 x 18	1 - 4 x 4	19
F	SC6-4(CA)	RAMP CLOSED DATES TIMES	48 x 60	1 - 6 x 6	17
G	M4-8	DETOUR	30 x 15	1 - 6 x 6	12
	G27-2(580) (CA)	ROUTE SHIELD	24 x 25		
	M3-4	WEST	30 x 15		
	M6-3(↑)	STRAIGHT ARROW	21 x 15		
H	M4-8	DETOUR	30 x 15	1 - 6 x 6	8
	G27-2(580)(CA)	ROUTE SHIELD	24 x 25		
	M3-4	WEST	30 x 15		
	M6-1(→)	RIGHT ARROW	21 x 15		
I	M4-8	DETOUR	30 x 15	1 - 6 x 6	17
	G27-2(580)(CA)	ROUTE SHIELD	24 x 25		
	M3-4	WEST	30 x 15		
	M6-1(←)	LEFT ARROW	21 x 15		
J	M4-8	DETOUR	30 x 15	1 - 6 x 6	9
	G27-2(580)(CA)	ROUTE SHIELD	24 x 25		
	M3-4	WEST	30 x 15		
	M6-2(↗)	UP RIGHT ARROW	21 x 15		
K	M4-8	DETOUR	30 x 15	1 - 6 x 6	16
	G27-2(580) (CA)	ROUTE SHIELD	24 x 25		
	M3-2	EAST	30 x 15		
	M6-3(↑)	STRAIGHT ARROW	21 x 15		
L	M4-8	DETOUR	30 x 15	1 - 6 x 6	15
	G27-2(580)(CA)	ROUTE SHIELD	24 x 25		
	M3-2	EAST	30 x 15		
	M6-1(→)	RIGHT ARROW	21 x 15		
M	M4-8	DETOUR	30 x 15	1 - 6 x 6	13
	G27-2(580)(CA)	ROUTE SHIELD	24 x 25		
	M3-2	EAST	30 x 15		
	M6-1(←)	LEFT ARROW	21 x 15		
N	M4-8	DETOUR	30 x 15	1 - 6 x 6	11
	G27-2(580)(CA)	ROUTE SHIELD	24 x 25		
	M3-2	EAST	30 x 15		
	M6-2(↗)	UP RIGHT ARROW	21 x 15		

CONSTRUCTION AREA SIGNS

CS-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

FUNCTIONAL SUPERVISOR: LOURDES DAVID
CALCULATED-DESIGNED BY: PARWIN SARWARY
CHECKED BY: LOURDES DAVID
REVISED BY: PS
DATE REVISED: 12/27/12

LAST REVISION 02-15-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

TRAFFIC STRIPES, PAVEMENT MARKINGS AND PAVEMENT MARKERS

PM	DETAIL No. OR PAVEMENT MARKING	THERMOPLASTIC TRAFFIC STRIPE						PAVEMENT MARKER (NON-RETROREFLECTIVE)	PAVEMENT MARKER (RETROREFLECTIVE)			THERMOPLASTIC PAVEMENT MARKING	
		4" WHITE	4" YELLOW	8" WHITE	4" WHITE (BROKEN 36'-12')	4" WHITE (BROKEN 34'-14')	4" WHITE (BROKEN 17'-7')	TYPE A	TYPE C	TYPE G	TYPE H	ARROWS	WORDS
		LF						EA				SQFT	
0.0 TO 1.1	27B	13769											
	25		11616								244		
	25A		2197								94		
	13M					21255		1823		456			
	14M					432		36	12				
	36			1468						67			
	36A			802						35			
	8						169						
	38A			253									
	12				210					5			
	LIMIT LINE			294									
	PAVEMENT MARKING											357	44
1.1 TO 4.0	27B	42815											
	25		30624								640		
	25A		12500								542		
	13M					59139		5066		1266			
	14M					1152		96	32				
	36			5167						231			
	36A			2383						110			
	36B			285						13			
	38A			15807									
	8						582						
	12				1737					43			
	LIMIT LINE			975									
	PAVEMENT MARKING			86								2239	110
4.15 TO 4.8	27B	12123											
	25		8596								184		
	25A		3073								133		
	13M					12282		1072		268			
	14M					288		24	8				
	36			1388						62			
	36A			561						24			
	38A			2968									
	8						828						
	12				1069					26			
	LIMIT LINE			275									
	PAVEMENT MARKING											677	44
4.92 TO 5.11	27B	6676											
	25		3942								87		
	25A		2895								126		
	13M					2519		72		57			
	38A			1613									
	8						480						
	12				453					11			
	LIMIT LINE			257									
	PAVEMENT MARKING											466	
5.15 TO 5.5	27B	3696											
	25		3696								79		
	13M					8820		254		189			
	36A			303						15			
	8						572						
SUBTOTAL		79079	79139	34883	3469	105887	2631	8443	52	2878	2129	3739	198
TOTAL		158218		34885	3469	105887	2631	8443	5059			3937	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	15	28

REGISTERED CIVIL ENGINEER 12-24-12 DATE

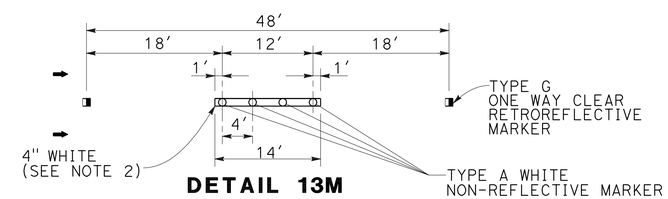
2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Terek Naward No. 66808 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

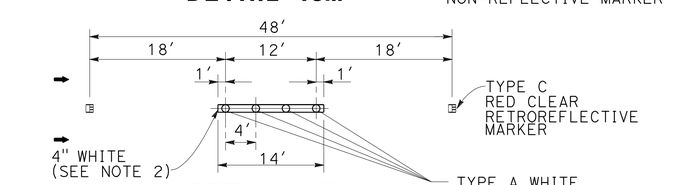
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. ALL EXISTING PAVEMENT DELINEATION SHALL BE REFERENCED AND REPLACED IN THE SAME LOCATION AS EXISTING.
2. APPLY 4" WHITE THERMOPLASTIC STRIPE AFTER INSTALLING PAVEMENT MARKERS.



DETAIL 13M



DETAIL 14M

PAVEMENT DELINEATION QUANTITIES
PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN
FUNCTIONAL SUPERVISOR: RONNIE CHUA
CALCULATED-DESIGNED BY: TEREK NAWARD
CHECKED BY: RONNIE CHUA
REVISED BY: TN
DATE REVISED: 12/27/12

LAST REVISION: 02-20-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	16	28

REGISTERED CIVIL ENGINEER 12-24-12 DATE

2-25-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Terek Naward No. 66808 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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HOT MIX ASPHALT DIKE

PM/LOCATION	DIRECTION	REMOVE AC DIKE	PLACE HMA DIKE (TYPE E)	PLACE HMA DIKE (TYPE F)	HMA (TYPE A) SUPERPAVE
		LF			TON
OFF-RAMP TO CENTRAL Ave FROM EB-580	EB	300	300		8
1.788 TO 2.295	EB	2500	2500		66
ON-RAMP TO REGATTA Blvd FROM EB-580	EB	420	420		11
OFF-RAMP TO REGATTA Blvd FROM EB-580	EB	950	950		25
2.120 TO 2.295	WB	660	660		17
2.295 TO 2.760	EB	2490	2490		66
2.400 TO 2.760	WB	1820	1820		48
OFF-RAMP TO S 23RD St FROM WB-580	WB	930	930		24
ON-RAMP FROM S 23RD St TO EB-580	EB	740	740		19
OFF-RAMP TO S 23RD St FROM EB-580	EB	960	960		25
2.760 TO 3.940	EB	6700	6700		176
ON-RAMP FROM S 23RD St TO WB-580	WB	695	695		18
3.000 TO 3.400	WB	2070	2070		54
OFF-RAMP TO S HARBOUR WAY FROM WB-580	WB	940	940		25
ON-RAMP FROM S HARBOUR WAY TO EB-580	EB	500	500		13
OFF-RAMP TO CUTTING Blvd FROM WB-580	WB	390	390		10
3.400 TO 3.810	WB	2290	2290		60
3.930 TO 4.015	EB	860		860	11
4.115 TO 4.610	EB	2455		2455	26
4.200 TO 4.620	WB	1980		1980	26
4.520 TO 4.570	WB/EB	640	640		17
OFF-RAMP TO CANAL Blvd FROM WB-580	WB	160	160		7
4.760 TO 4.800	WB	330	330		9
4.990 TO 5.000	WB	390	390		10
5.195 TO 5.295	WB	690		690	9
SUBTOTAL		32860	26875	5985	780
TOTAL		32860	26875	5985	780*

* SEE ROADWAY QUANTITIES TABLE.

CRACK TREATMENT

PM	LANE MILE
0.0 TO 5.5	30

ASPHALT CONCRETE DIGOUT

PM	DIRECTION	LANE # 2 (N)	LANE # 3 (N)	COLD PLANE ASPHALT CONCRETE PAVEMENT (0.5')	HOT MIX ASPHALT (TYPE A) SUPERPAVE	TACK COAT
		WIDTH (Ft) x LENGTH (Ft)		SQYD	TON	
0.579 TO 0.590	EB		12 x 60	80	27	0.03
0.679 TO 0.690	EB		12 x 60	80	27	0.03
0.682 TO 0.690	EB	12 x 40		53	18	0.02
0.760 TO 0.775	EB		12 x 80	107	36	0.04
0.950 TO 0.963	EB		12 x 70	93	32	0.04
TOTAL				413*	140*	0.16*

(N) NOT A SEPARATE PAYMENT, FOR INFORMATION ONLY.
* SEE ROADWAY QUANTITIES SUMMARY TABLE.

ROADWAY QUANTITIES SUMMARY

PM/LOCATION	DIRECTION	RUBBERIZED HOT MIX ASPHALT-G-SUPERPAVE	HOT MIX ASPHALT (TYPE A) SUPERPAVE	TACK COAT	SHOULDER BACKING	COLD PLANE ASPHALT CONCRET PAVEMENT (0.15')	COLD PLANE ASPHALT CONCRET PAVEMENT (0.5')
		TON				SQYD	
0.0 TO 5.5	EB/WB (MAINLINE)	40500		151	140	399000	
ON/OFF-RAMPS	EB/WB	8400		32			
AC DIGOUT	EB		140	0.16			413
HMA DIKE	EB/WB		780				
TOTAL		48900	920	183.16	140	399413	

SUMMARY OF QUANTITIES

Q-1

REVISED BY	DATE REVISED
TN	1/30/13

TEREK NAWARD — RONNIE CHUA
CALCULATED-DESIGNED BY — CHECKED BY
FUNCTIONAL SUPERVISOR — RONNIE CHUA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 02-20-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	17	28

REGISTERED ELECTRICAL ENGINEER — DATE: 1-9-13

PLANS APPROVAL DATE: 2-25-13

REGISTERED PROFESSIONAL ENGINEER — Mahmood Noii — No. 13717 — Exp. 6-30-13 — ELECT — 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.

GENERAL NOTES:

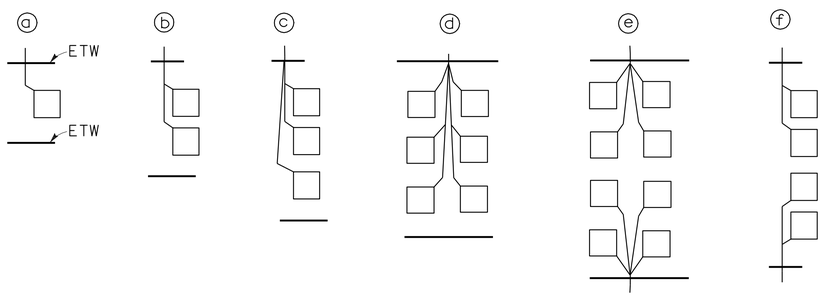
1. THE FIRST ORDER OF WORK SHALL BE FOR THE CONTRACTOR TO VERIFY THE EXACT LOCATION OF EACH EXISTING LOOP DETECTOR, PULL BOX AND DETECTOR HANDHOLE TO BE REPLACED PRIOR TO PAVING.
2. ABANDON THE EXISTING DETECTORS AS INDICATED IN THE CHARTS SHOWN ON E-2 AND E-3. INSTALL NEW DETECTORS IN KIND.
3. AB THE EXISTING DETECTOR TERMINATION CONDUITS AT THE LOCATION SHOWN IN THE CHART ON E-2 AND INSTALL NEW DETECTOR TERMINATION CONDUITS.
4. RC THE EXISTING PULL BOXES AND DETECTOR HANDHOLES INDICATED IN THE CHARTS SHOWN ON E-2 AND E-3. INSTALL NEW PULL BOXES AND DETECTOR HANDHOLES AS INDICATED.
5. SPLICE NEW LOOP CONDUCTORS TO CORRESPONDING DLC IN TERMINATION PULL BOX. VERIFY IDENTIFICATION OF EXISTING DLC BEFORE CONNECTING TO THE CORRESPONDING LOOP DETECTORS.
6. ALL TRAFFIC SIGNAL LOOP DETECTORS AT EACH LOCATION SHALL BE REPLACED AND TESTED WITHIN THE TIME ALLOTTED FOR TRAFFIC SIGNAL SYSTEM SHUTDOWN AT THAT LOCATION.
7. THE CONTRACTOR SHALL PROVIDE TWO REPORTS PER LOCATION ON THE STATUS OF EACH LOOP DETECTOR REPLACEMENT SHOWING CONTINUITY AND INSULATION RESISTANCE READINGS. THE REPORT SHALL BE SUBMITTED TO THE ENGINEER, ONE HOUR BEFORE STARTING WORK AND ANOTHER AFTER WORK HAS BEEN COMPLETED AT EACH LOCATION.

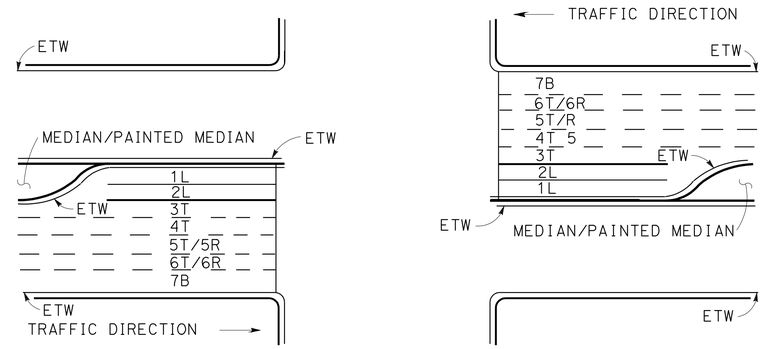
ELECTRICAL INDEX:

E-1 LOOP DETECTOR REPLACEMENT (ELECTRICAL INDEX, NOTES AND LEGEND)
E-2 LOOP DETECTOR REPLACEMENT (TRAFFIC MONITORING STATION)
E-3 LOOP DETECTOR REPLACEMENT (TRAFFIC SIGNAL)
E-4 ELECTRICAL DETAILS

LEGEND:

ETW EDGE OF TRAVELED WAY





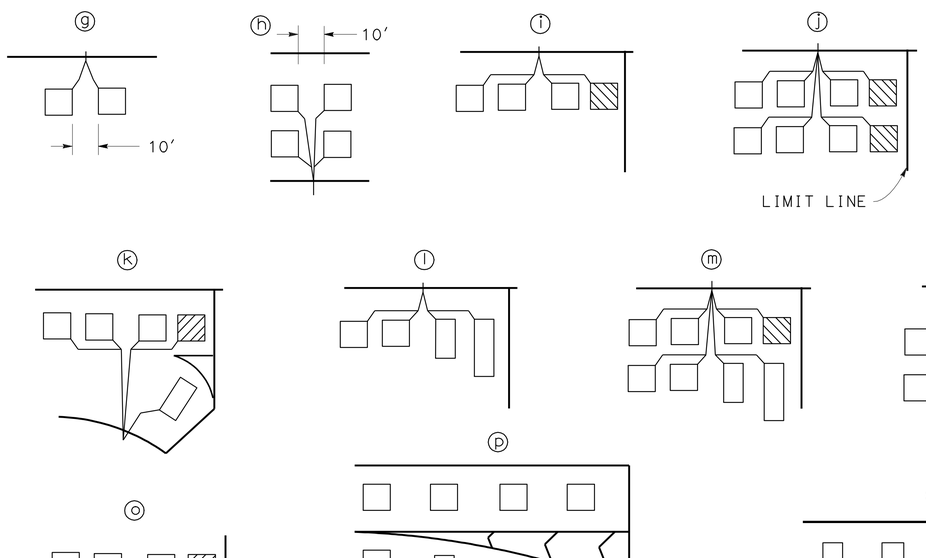
TRAFFIC SIGNAL

LANE CONFIGURATION (TYPICAL)

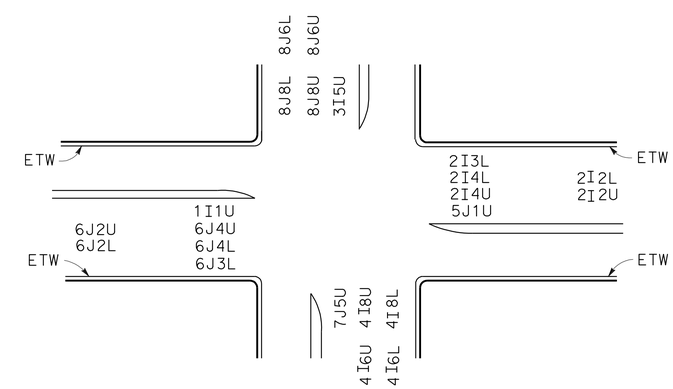
LANE DESCRIPTION:

NUMBER OF LANE FROM LEFT WITH RESPECT TO TRAFFIC DIRECTION

1= FIRST LANE FROM LEFT
2= SECOND LANE FROM LEFT
3= THIRD LANE FROM LEFT
4= FOURTH LANE FROM LEFT
5= FIFTH LANE FROM LEFT
6= SIXTH LANE FROM LEFT
7= SEVENTH LANE FROM LEFT
T=THROUGH TRAFFIC MOVEMENT
L=LEFT TURN TRAFFIC MOVEMENT
R=RIGHT TURN TRAFFIC MOVEMENT
B= BICYCLE LANE



TYPICAL DETECTOR CONFIGURATIONS
DETAIL A



DETECTOR IDENTIFICATION (TYPICAL)

LOOP DETECTOR REPLACEMENT
(ELECTRICAL INDEX, NOTES AND LEGEND)

NO SCALE

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL
FUNCTIONAL SUPERVISOR: LAI HONG CHIU
CALCULATED-DESIGNED BY: PIERRE LASSALLE
CHECKED BY: MAHMOOD NOII
REVISED BY: PL
DATE REVISED: 1/7/13

LAST REVISION 01-11-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	18	28

REGISTERED ELECTRICAL ENGINEER — DATE: 1-9-13

PLANS APPROVAL DATE: 2-25-13

REGISTERED PROFESSIONAL ENGINEER — Mahmood Noii — No. 13717 — Exp. 6-30-13 ELECT — 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.

	CENTRAL Ave						RUST DRAIN CREEK BRIDGE			BAYVIEW Ave						2500' WEST OF LOCATION 3				REGATTA Blvd/ ERLANDSON St						MARINA BAY Pkwy/ S 23RD St							
	(LOCATION 1) PM 0.2						(LOCATION 2) PM 0.7			(LOCATION 3) PM 1.3						(LOCATION 4) PM 1.6				(LOCATION 5) PM 2.0						(LOCATION 6) PM 2.8							
DETECTORS: A = TMS-MAINLINE, B = ON RAMP, C = OFF RAMP, D = COUNT STATION (A, B, C, D)	B	B	C	C	A	A		A	A		B	B	C	C	A	A		A	A			B	B	C	C	A	A		B	B	C	C	A	A		
NUMBER OF LANES/ DIRECTION OF TRAFFIC (#/NB, #/SB, #/EB, #/WB)	1EB	1WB	1EB	1WB	3EB	3WB		3WB	3EB		1EB	1WB	1EB	1WB	3EB	3WB		4WB	4EB			1EB	1WB	1EB	1WB	3EB	3WB		1EB	1WB	1EB	2WB	3EB	3WB		
DETECTOR CONFIGURATION: a,b,... (SEE DETAIL A ON E-1)	a	a	a	a	d	d		d	d		a	a	a	a	d	d		e	e			a	a	a	a	d	d		a	a	a	b	d	d		
PULL BOX LOCATION: A = LEFT SHOULDER, B = RIGHT SHOULDER, C = MEDIAN (A, B, C)	A	A	A	A	B	B		B	B		A	A	A	A	B	B		B,C	B,C			A	B	A	B	B	B		A	B	A	A	B	B		
PULL BOX REPLACEMENT (Y=YES, N=NO, 5=No. 5(T), 6=No. 6(T))	N	N	N	N	N	N		N	N		N	N	N	N	N	N		N,N	N,N			N	N	N	N	N	N		N	N	N	N	N	N		
LOOP DETECTOR TOTAL	1	1	1	1	6	6		6	6		1	1	1	1	6	6		8	8			1	1	1	1	6	6		1	1	1	2	6	6		
COMMENTS																																				

SUBTOTAL — TYPE A DETECTOR: 93

	S HARBOUR WAY						CUTTING Blvd			CANAL Blvd										NORTH OF CERRITO Crk Br				2600' EAST OF 23RD St OC											
	(LOCATION 7) PM 3.6						(LOCATION 8) PM 3.8			(LOCATION 9) PM 4.6										(LOCATION 10) PM 0.0				(LOCATION 11) PM 2.4											
DETECTORS: A = TMS-MAINLINE, B = ON RAMP, C = OFF RAMP, D = COUNT STATION (A, B, C, D)	C	C	B	B	A		B	C	A		B	C	A	A						D	D	D(B)		D	D											
NUMBER OF LANES/ DIRECTION OF TRAFFIC (#/NB, #/SB, #/EB, #/WB)	1WB	1WB	1EB	1EB	3EB		1WB	1EB	3WB		1EB	1WB	3EB	3WB						3WB	3EB	1EB		4WB	4EB											
DETECTOR CONFIGURATION: a,b,... (SEE DETAIL A ON E-1)	a	a	a	a	d		a	a	d		a	a	d	d						c	c	a		f	f											
PULL BOX LOCATION: A = LEFT SHOULDER, B = RIGHT SHOULDER, C = MEDIAN (A, B, C)	A	B	B	A	B		A	A	B		A	A	B	B						B	B	A		B,C	B,C											
PULL BOX REPLACEMENT (Y=YES, N=NO, 5=No. 5(T), 6=No. 6(T))	N	N	N	N	N		N	N	N		N	N	N	N						N	N	N		N,N	N,N											
LOOP DETECTOR TOTAL	1	1	1	1	6		1	1	6		1	1	6	6						3	4	1		4	4											
COMMENTS																																				

SUBTOTAL — TYPE A DETECTOR: 48

TOTAL — TYPE A DETECTOR: 141

LOOP DETECTOR REPLACEMENT
(TRAFFIC MONITORING STATION)
NO SCALE

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — ELECTRICAL

FUNCTIONAL SUPERVISOR: LAI HONG CHIU

CALCULATED-DESIGNED BY: PIERRE LASSALLE — CHECKED BY: MAHMOOD NOII

REVISED BY: PL — DATE REVISED: 1/7/13

LAST REVISION 02-15-13 — DATE PLOTTED => 14-MAR-2013 — TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	19	28

REGISTERED ELECTRICAL ENGINEER — DATE 1-9-13

PLANS APPROVAL DATE 2-25-13

REGISTERED PROFESSIONAL ENGINEER Mahmood Noii No. 13717 Exp. 6-30-13 ELECT 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.

	REGATTA Blvd IC Rte 580 EB OFF-RAMP						S 23RD IC Rte 580 EB OFF-RAMP					
	(LOCATION 1) PM 2.0						(LOCATION 2) PM 2.8					
	ADVANCE DETECTOR	INTERSECTION DETECTOR					ADVANCE DETECTOR		QUEUE DETECTOR		INTERSECTION DETECTOR	
LANE NUMBER (FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC. SEE E-1 FOR LANE DESCRIPTION)	1T	1L	2T	3R			1L	2R	1T	2T	1L	2R
DISTANCE FROM LIMIT LINE (FEET)	230	-	-	-			200	200	500	500	-	-
DETECTORS A. FRONT DETECTOR B. BICYCLE DETECTOR C. ADVANCE DETECTOR D. QUEUE DETECTOR	C	A	A	A			C	C	D	D	A	A
PULL BOX LOCATION: A. RIGHT SHOULDER B. RIGHT SIDEWALK C. MEDIAN D. LEFT SHOULDER E. LEFT SIDEWALK	A	C	A				D		D		D	
HANDHOLE LOCATION: A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. PAINTED MEDIAN	A	C	A				B		-		B	
DETECTOR TYPE & QUANTITY — TYPE A LOOP DETECTOR	1	3	3	*1			1	1	1	1	3	*4
TYPE B LOOP DETECTOR												
TYPE C LOOP DETECTOR												
TYPE D LOOP DETECTOR		1	1								1	
DETECTOR CONFIGURATION (SEE DETAIL A ON E-1) a...	a	i	k				b		g		m	
PULL BOX REPLACEMENT (Y=YES N=NO)	N	N	N				N		N		N	
HANDHOLE REPLACEMENT (Y=YES N=NO)	Y	Y	Y				Y		-		Y	
LOOP DETECTOR TOTAL	1	4	4	1			1	1	1	1	4	4
COMMENTS	*6' x 12' LOOP						* 6'x18', 6'x10', 2-6'x6' LOOPS					

	S 23RD IC Rte 580 WB OFF-RAMP								CUTTING Blvd IC Rte 580 WB OFF-RAMP						
	(LOCATION 3) PM 2.8								(LOCATION 4) PM 3.8						
	ADVANCE DETECTOR			QUEUE DETECTOR		INTERSECTION DETECTOR			ADVANCE DETECTOR		QUEUE DETECTOR		INTERSECTION DETECTOR		
LANE NUMBER (FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC. SEE E-1 FOR LANE DESCRIPTION)	1T	2T	3T	1T	2T	1L	2T	3R	1L	2R	1L	2R	1L	2R	
DISTANCE FROM LIMIT LINE (FEET)	220	220	220	500	500	-	-	-	210	210	500	500	-	-	
DETECTORS A. FRONT DETECTOR B. BICYCLE DETECTOR C. ADVANCE DETECTOR D. QUEUE DETECTOR	C	C	C	D	D	A	A	A	C	C	D	D	A	A	
PULL BOX LOCATION: A. RIGHT SHOULDER B. RIGHT SIDEWALK C. MEDIAN D. LEFT SHOULDER E. LEFT SIDEWALK	D			D		D		A	A		A		A		
HANDHOLE LOCATION: A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. PAINTED MEDIAN	B			B		B		A	A		A		A		
DETECTOR TYPE & QUANTITY — TYPE A LOOP DETECTOR	1	1	1	2	2	3	3	*4	*1	*1	*2	*2	**4	**4	
TYPE B LOOP DETECTOR															
TYPE C LOOP DETECTOR															
TYPE D LOOP DETECTOR						1	1								
DETECTOR CONFIGURATION (SEE DETAIL A ON E-1) a...	c			h		j		l	b		h		p		
PULL BOX REPLACEMENT (Y=YES N=NO)	N			N		N		N	N		N		N		
HANDHOLE REPLACEMENT (Y=YES N=NO)	Y			Y		Y		Y	Y		Y		Y		
LOOP DETECTOR TOTAL	1	1	1	2	2	4	4	4	1	1	2	2	4	4	
COMMENTS	* 6'x20', 6'x10', 2-6'x6' LOOPS								* 6'x 12' LOOPS **SEE E-1 FOR SIZES						

SUBTOTAL

TYPE A DETECTOR	TYPE D DETECTOR	DH	PULL BOX
50	5	12	0

	CUTTING Blvd IC Rte 580 EB OFF-RAMP						CANAL Blvd IC Rte 580 WB OFF-RAMP						CANAL Blvd IC Rte 580 EB OFF-RAMP						CASTRO St IC Rte 580 WB OFF-RAMP						CUTTING Blvd IC Rte 580 WB ON-RAMP					
	(LOCATION 5) PM 3.8						(LOCATION 6) PM 4.6						(LOCATION 7) PM 4.6						(LOCATION 8) PM 5.1						(LOCATION 9) PM 3.8					
	ADVANCE DETECTOR			INTERSECTION DETECTOR			ADVANCE DETECTOR		INTERSECTION DETECTOR				ADVANCE DETECTOR			INTERSECTION DETECTOR			INTERSECTION DETECTOR						PULL BOX					
LANE NUMBER (FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC. SEE E-1 FOR LANE DESCRIPTION)	1L	2T	3T	1L	2L	3R	1T	2T	1L	2R			1T	2T	3T	1L	2T	3R	1L	2T	3R	4R								
DISTANCE FROM LIMIT LINE (FEET)	200	200	200	-	-	-	200	200	-	-			200	200	200	-	-	-	-	-	-	-								
DETECTORS: A. FRONT DETECTOR B. BICYCLE DETECTOR C. ADVANCE DETECTOR D. COUNT DETECTOR	C	C	C	A	A	A	C	C	A	A			C	C	C	A	A	A	A	A	A	A								
PULL BOX LOCATION: A. RIGHT SHOULDER B. RIGHT SIDEWALK C. MEDIAN D. LEFT SHOULDER E. LEFT SIDEWALK	A			D		A	A		A				A			D		A	C		B				A	A			
HANDHOLE LOCATION: A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. PAINTED MEDIAN	A			B		A	A		A				A			B		A	C		A									
DETECTOR TYPE & QUANTITY — TYPE A LOOP DETECTOR	1	1	1	3	3	**4	1	1	3	*4			1	1	1	3	3	*4	3	3	3	*4								
TYPE B LOOP DETECTOR																														
TYPE C LOOP DETECTOR																														
TYPE D LOOP DETECTOR				1	1				1							1	1		1	1	1									
DETECTOR CONFIGURATION (SEE DETAIL A ON E-1) a ...	c			j		q	b		m				c			j		l	n		o									
PULL BOX REPLACEMENT (Y=YES N=NO)	N			N		N	N		N				N			N		N	N		N				*Y	*Y				
HANDHOLE REPLACEMENT (Y=YES N=NO)	Y			Y		Y	Y		Y				Y			Y		Y	Y		Y									
LOOP DETECTOR TOTAL	1	1	1	4	4	4	1	1	4	4			1	1	1	4	4	4	4	4	4	4								
COMMENTS	* * SEE E-1 FOR SIZES						* 6'x 10', 3-6'x 6' LOOPS						* 6'x 12', 3-6'x 6' LOOPS						*1-6'x 10', 3-6'x 6' LOOPS						* No. 5(T)					

TOTAL

TYPE A DETECTOR	TYPE D DETECTOR	DH	PULL BOX No. 5 (T)
98	13	22	2

SUBTOTAL

TYPE A DETECTOR	TYPE D DETECTOR	DH	PULL BOX No. 5 (T)
48	8	10	2

LOOP DETECTOR REPLACEMENT
(TRAFFIC SIGNAL)

NO SCALE

E-3

REVISED BY	DATE REVISED
PL	1/7/13

CALCULATED-DESIGNED BY: PIERRE LASSALLE
CHECKED BY: MAHMOOD NOII
FUNCTIONAL SUPERVISOR: LAI HONG CHIU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL

LAST REVISION 02-15-13
DATE PLOTTED => 14-MAR-2013
TIME PLOTTED => 10:20

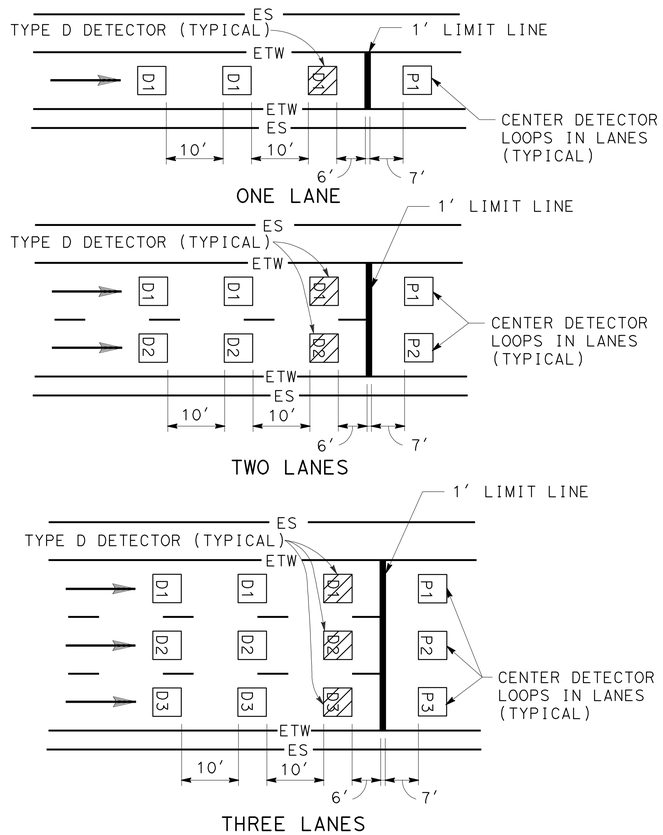
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	20	28

REGISTERED ELECTRICAL ENGINEER — DATE 1-9-13

PLANS APPROVAL DATE 2-25-13

REGISTERED PROFESSIONAL ENGINEER Ray C. Duschane No. 14758 6-30-13 ELECT STATE OF CALIFORNIA

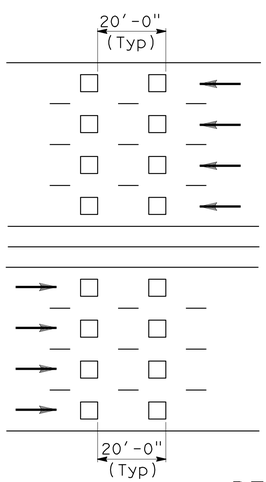
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



DETAIL "RM"
RAMP METERING STATION

RAMP METERING STATION NOTES:

1. SEE ES-5A, ES-5B, AND ES-13A FOR ADDITIONAL DETAILS.
2. DLC CONDUCTORS SHALL BE SPLICED TO THE LOOP CONDUCTORS IN THE NEAREST PULLBOX.
3. ALL SPLICES SHALL BE TYPE "S" OR TYPE "ST" AS REQUIRED.
4. LOCATION OF TYPE 1 STANDARDS SHOULD BE APPROXIMATELY 3 FEET FROM THE EDGE OF SHOULDER AND 12 INCHES DOWNSTREAM OF THE LIMIT LINE.



TRAFFIC MONITORING STATION NOTES:

FREEWAY MAINLINE DETECTOR DESIGNATION:

N=NORTHBOUND LANES (NB)
S=SOUTHBOUND LANES (SB)
E=EASTBOUND LANES (EB)
W=WESTBOUND LANES (WB)

NUMBER OF LANES FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC:

1=FIRST LANE FROM LEFT
2=SECOND LANE FROM LEFT
3=THIRD LANE FROM LEFT
4=FOURTH LANE FROM LEFT

NUMBER OF DETECTOR IN THE SAME LANE:

1=ENTERING DETECTOR
2=LEAVING DETECTOR

N 3-2

DETAIL "TM"
TRAFFIC MONITORING STATION

RAMP DETECTOR DESIGNATION:

D=DEMAND DETECTOR
P=PASSAGE DETECTOR
Q=QUEUE DETECTOR
F=OFF-RAMP DETECTOR

1=FIRST LANE FROM LEFT
2=SECOND LANE FROM LEFT

D-2

ELECTRICAL DETAILS
(RAMP METERING AND TRAFFIC MONITORING DETECTOR SPACING AND DESIGNATION)

NO SCALE

E-4

RAY DUSCHANE	RD	REVISED BY	1/7/13 DATE REVISED
CHARLES PRICE		CALCULATED-DESIGNED BY	CHECKED BY
CHARLES PRICE		FUNCTIONAL SUPERVISOR	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL

LAST REVISION 01-11-13 | DATE PLOTTED => 14-MAR-2013 | TIME PLOTTED => 10:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	21	28

REGISTERED CIVIL ENGINEER 12-7-12 DATE

2-25-13
PLANS APPROVAL DATE

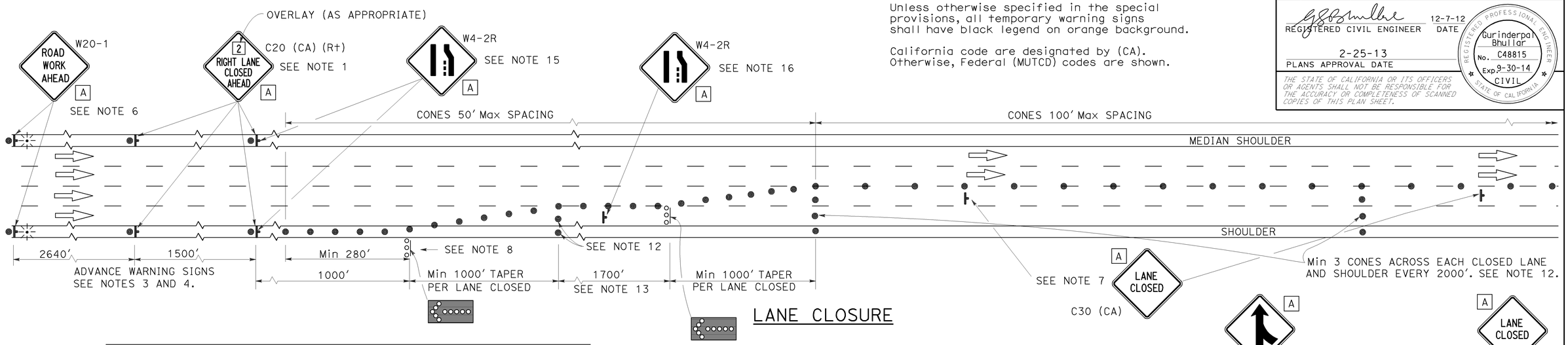
REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar No. C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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.

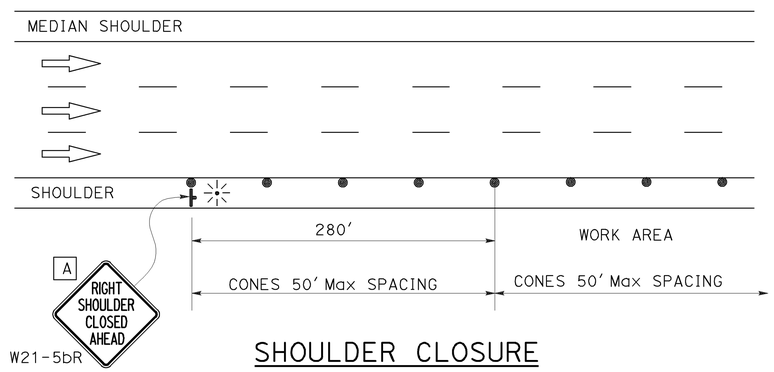
NOTES:

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

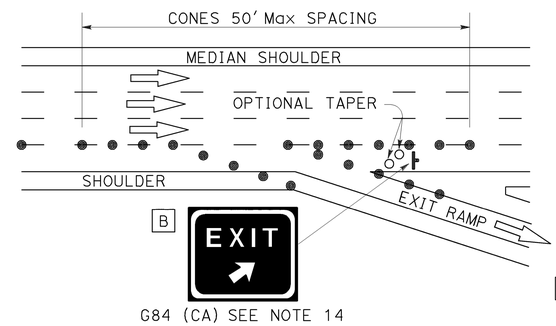
California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



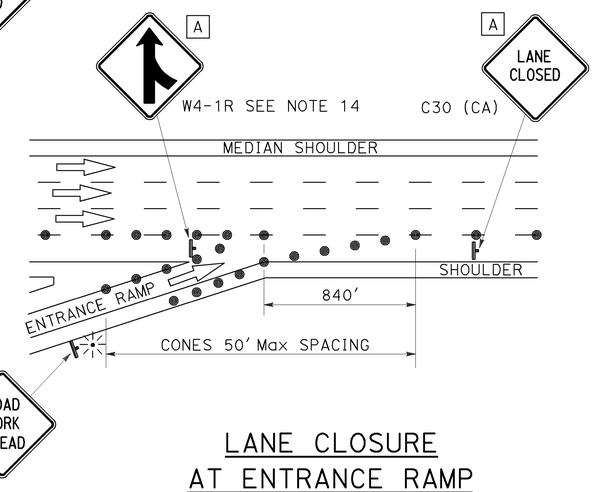
LANE CLOSURE



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

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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
04	CC	580	0.0/5.5	22	28

REGISTERED CIVIL ENGINEER 12-7-12 DATE

2-25-13
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.

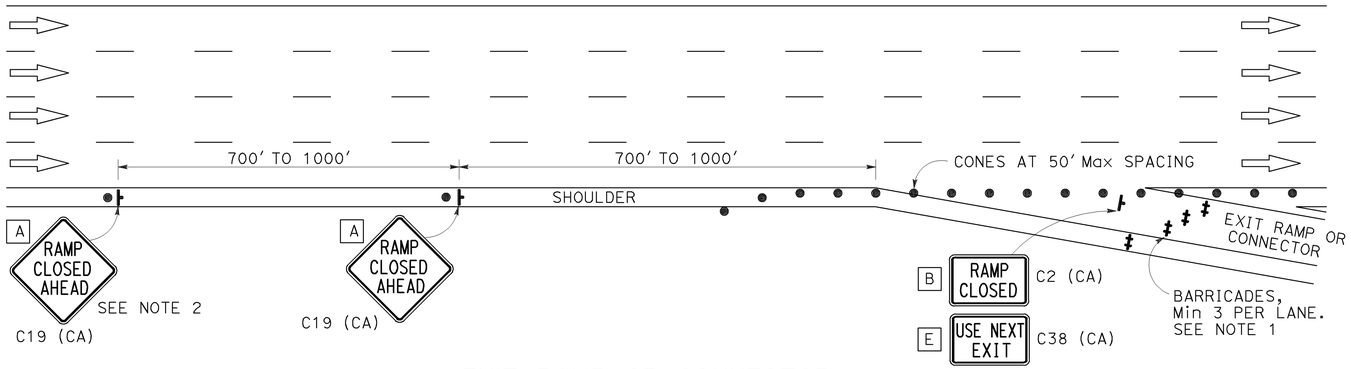
TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

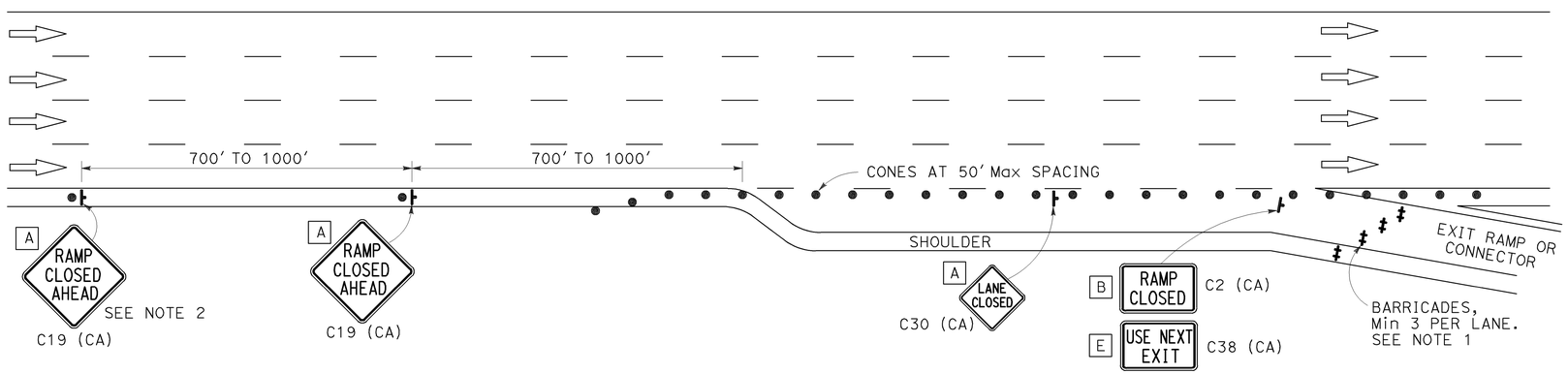
- A 48" x 48"
- B 48" x 30"
- C 30" x 30"
- D 48" x 48" - SPEED OF 50 mph OR MORE
  36" x 36" - SPEED LESS THAN 50 mph
- E 48" x 36"

LEGEND

- TRAFFIC CONE
- TEMPORARY SIGN
- BARRICADES



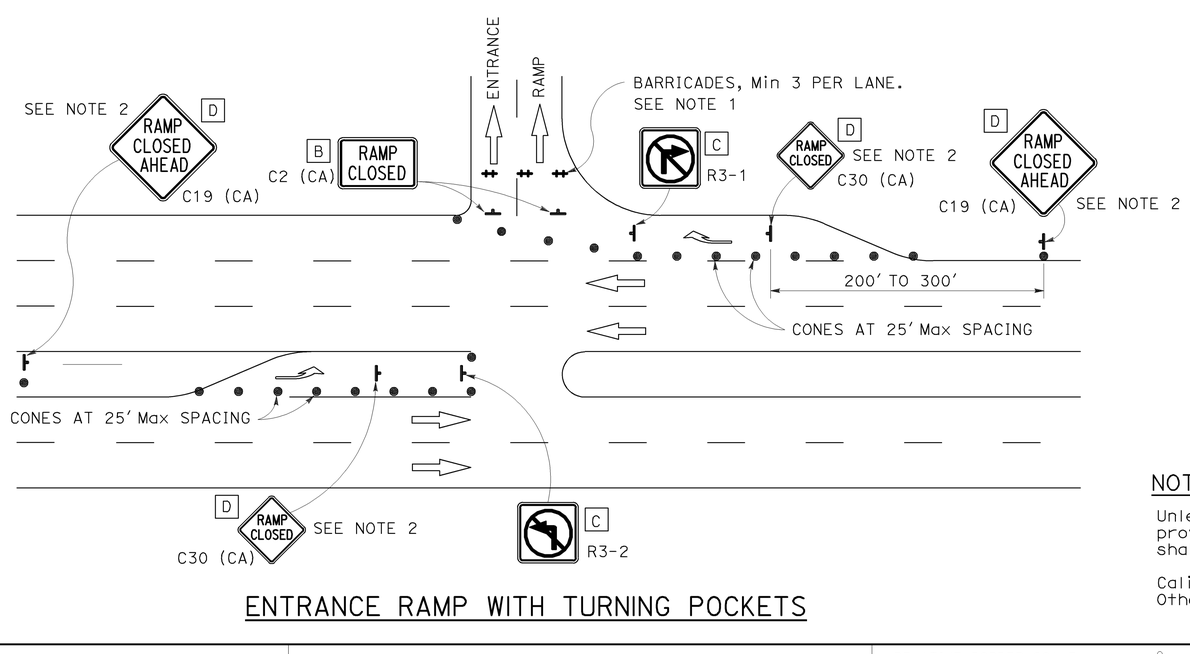
EXIT RAMP OR CONNECTOR



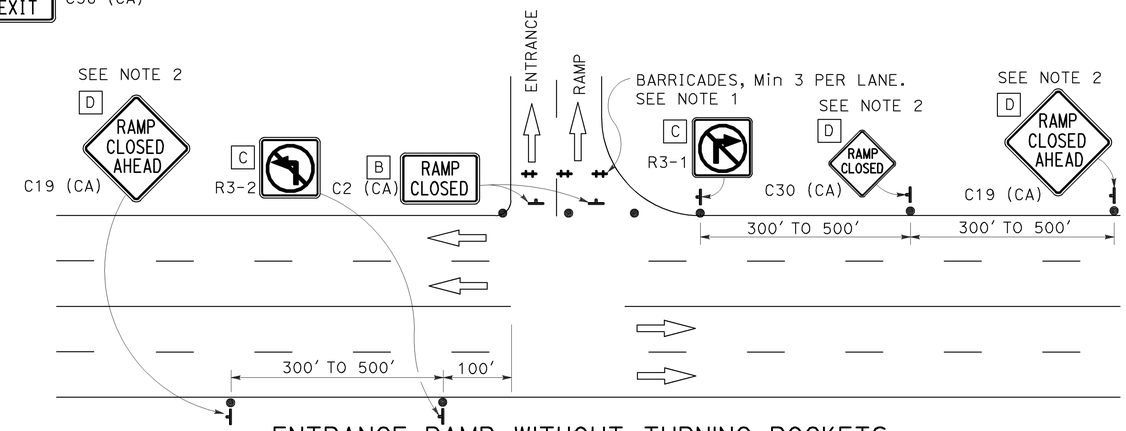
EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE

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

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
04	CC	580	0.0/5.5	23	28

REGISTERED CIVIL ENGINEER 12-7-12 DATE

2-25-13
PLANS APPROVAL DATE

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

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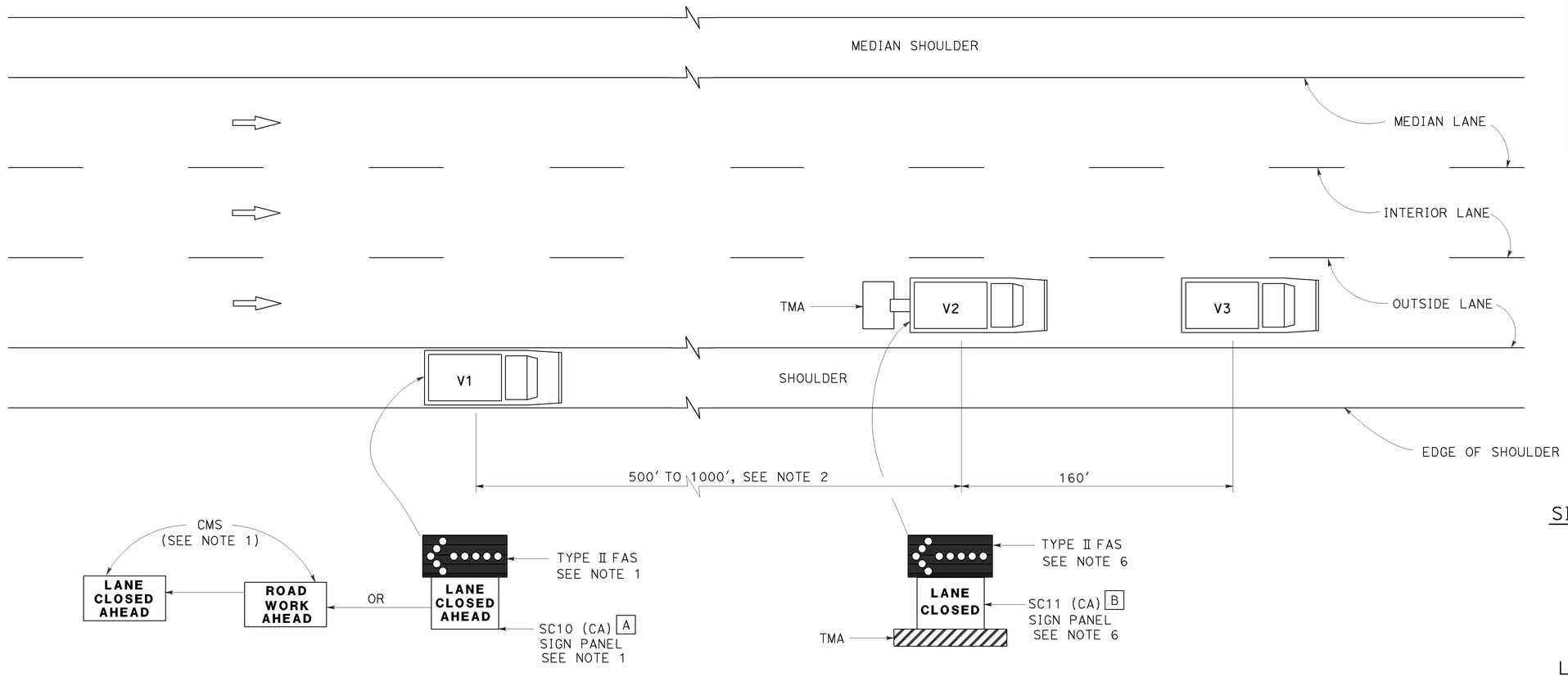

SIGN PANEL SIZE (Min)

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

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
04	CC	580	0.0/5.5	24	28

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

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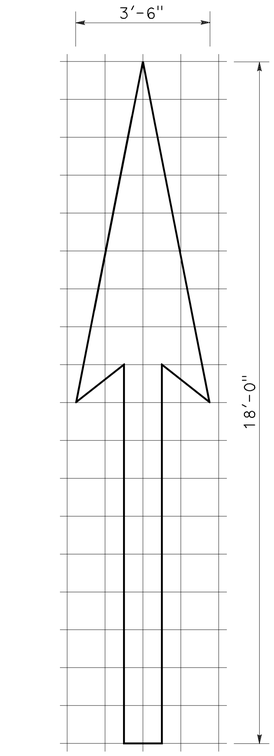
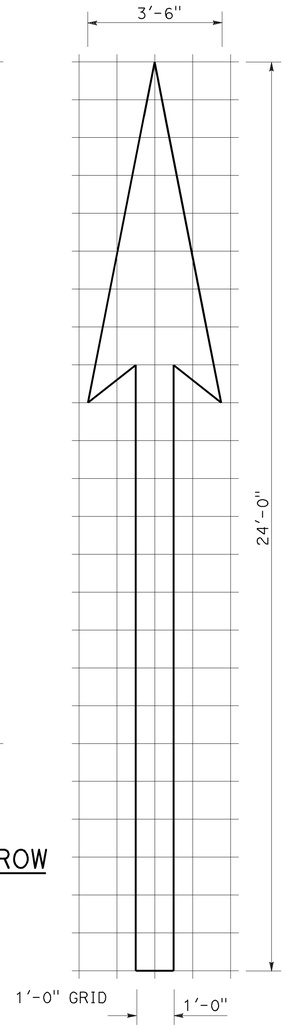
To accompany plans dated 2-25-13



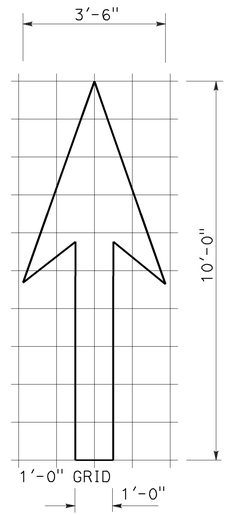
A=25 sq ft

TYPE I 18'-0" ARROW



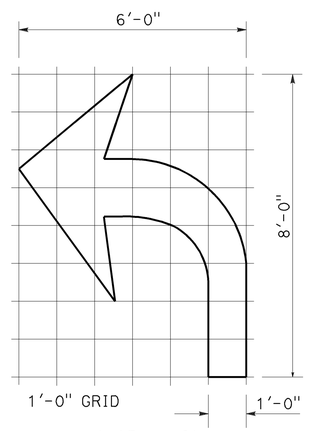
A=31 sq ft

TYPE I 24'-0" ARROW



A=14 sq ft

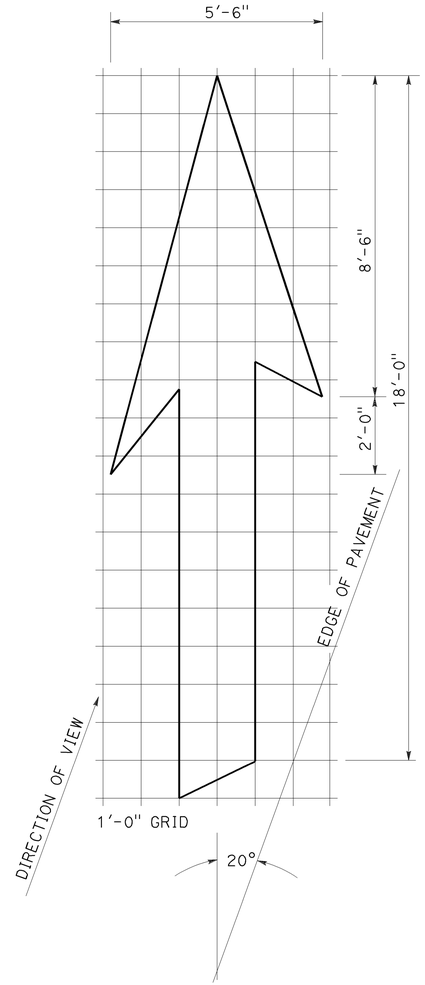
TYPE I 10'-0" ARROW



A=15 sq ft

TYPE IV (L) ARROW

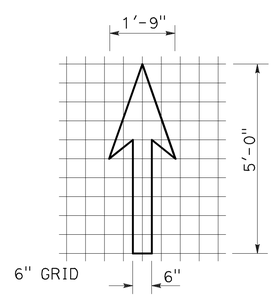
(FOR TYPE IV (R) ARROW, USE MIRROR IMAGE)



A=42 sq ft

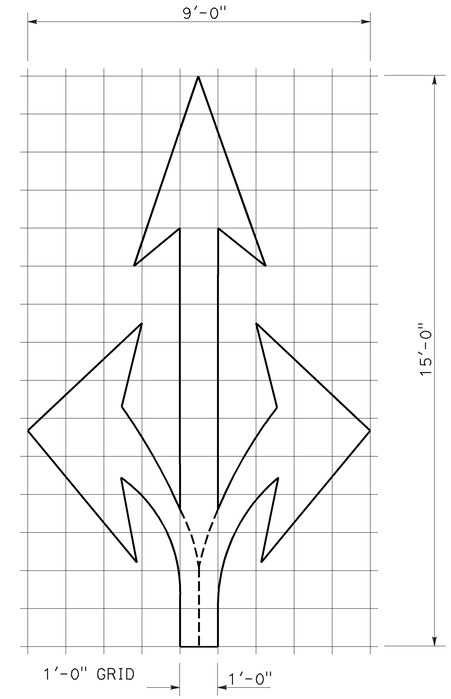
TYPE VI ARROW

RIGHT LANE DROP ARROW (FOR LEFT LANE, USE MIRROR IMAGE)



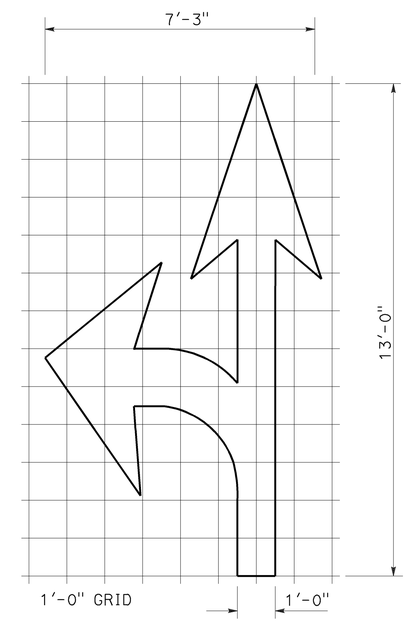
A=3.5 sq ft

BIKE LANE ARROW



A=36 sq ft

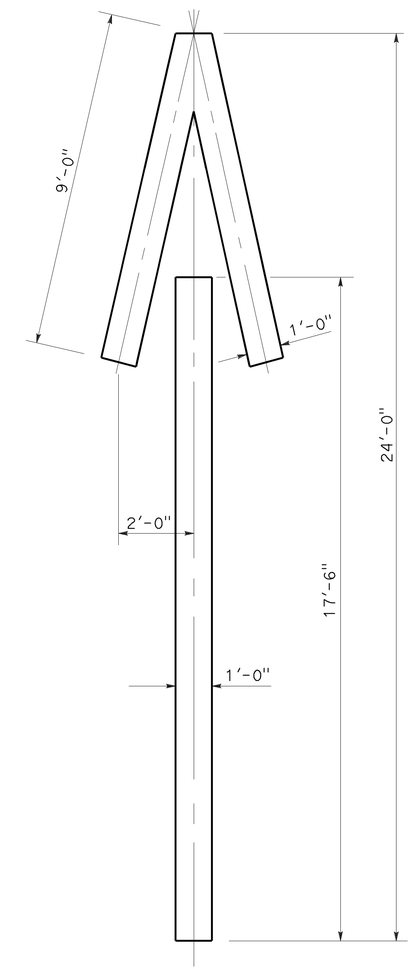
TYPE VIII ARROW



A=27 sq ft

TYPE VII (L) ARROW

(FOR TYPE VII (R) ARROW, USE MIRROR IMAGE)



A=33 sq ft

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 1, 2006 - PAGE 9 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A24A

2006 REVISED STANDARD PLAN RSP A24A

3-14-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	25	28

REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

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

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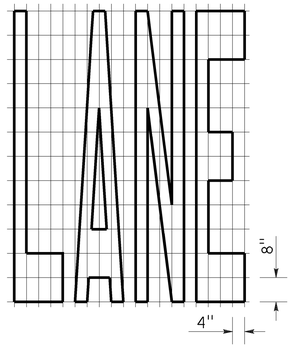
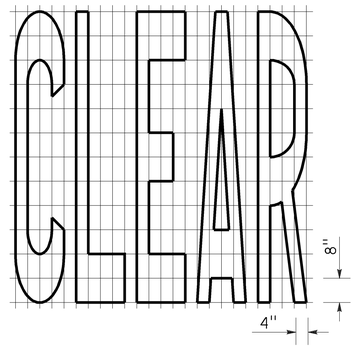
TO ACCOMPANY PLANS DATED 2-25-13

2010 REVISED STANDARD PLAN RSP A24E



A=24 ft^2



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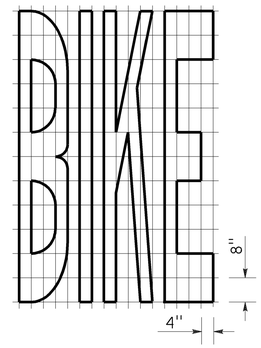
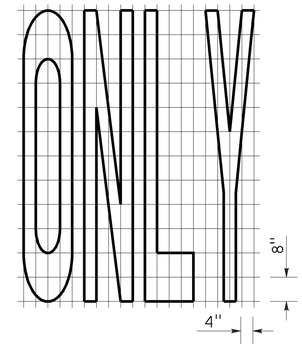
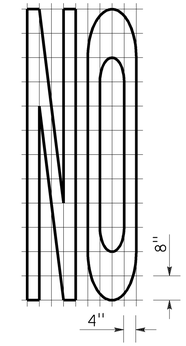


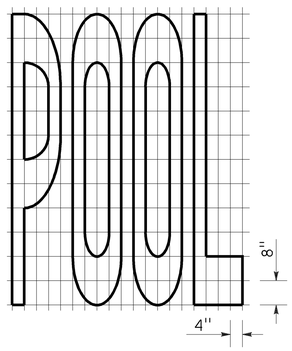
A=21 ft^2



A=22 ft^2



A=14 ft^2



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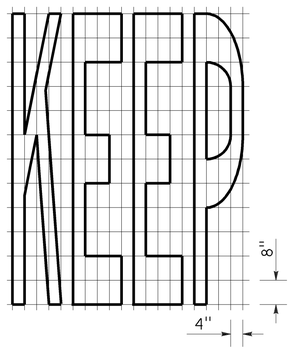
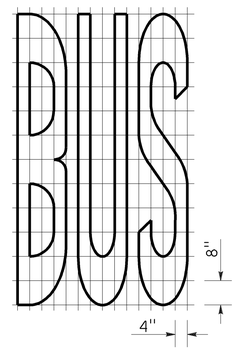
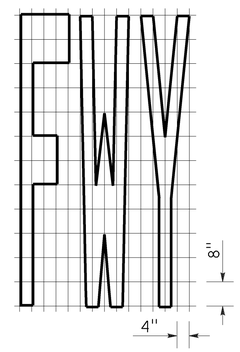


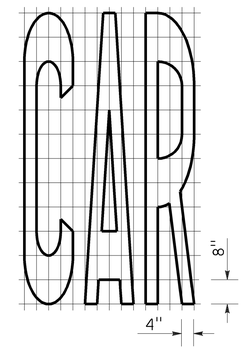
A=24 ft^2



A=20 ft^2

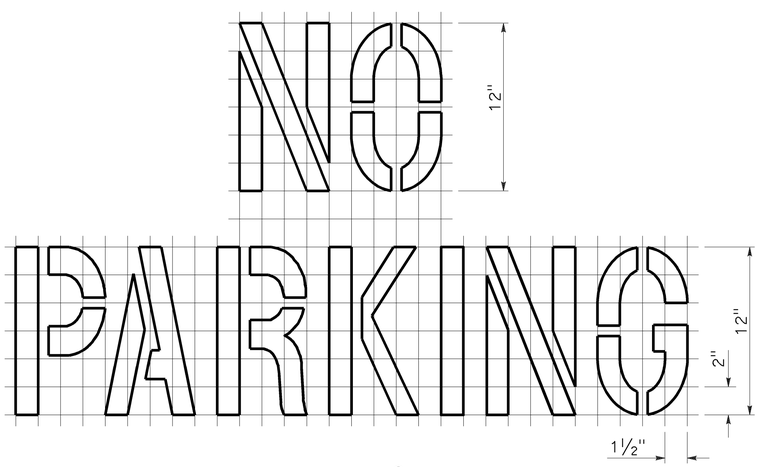


A=16 ft^2

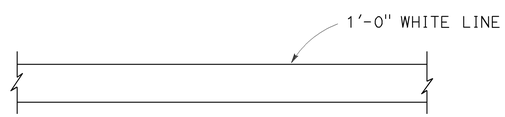


A=17 ft^2

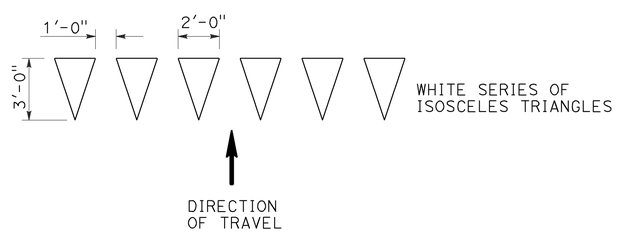
WORD MARKINGS			
ITEM	ft^2	ITEM	ft^2
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft^2
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES

NO SCALE

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

REVISED STANDARD PLAN RSP A24E

6-12-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	580	0.0/5.5	26	28

REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

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

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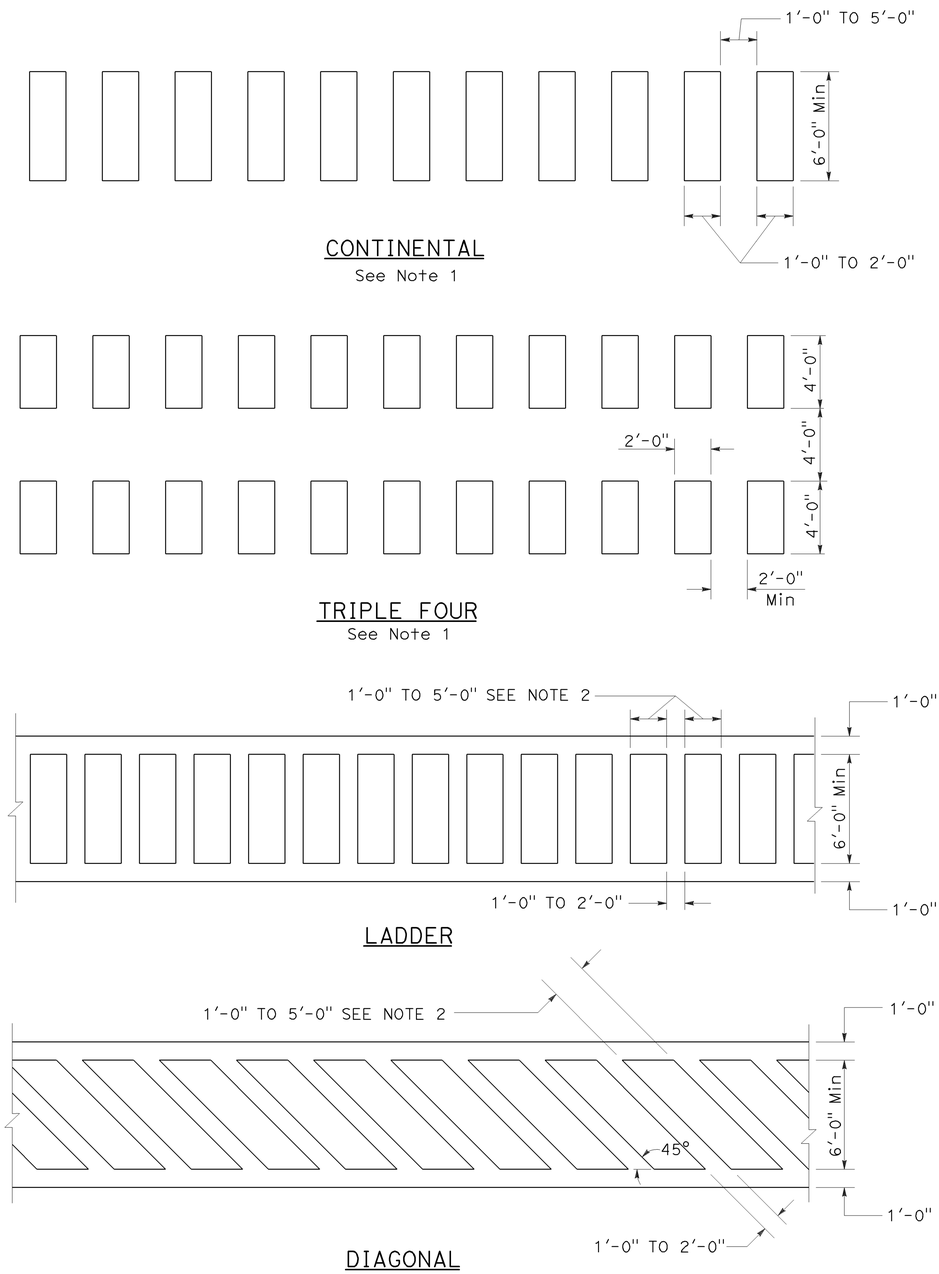
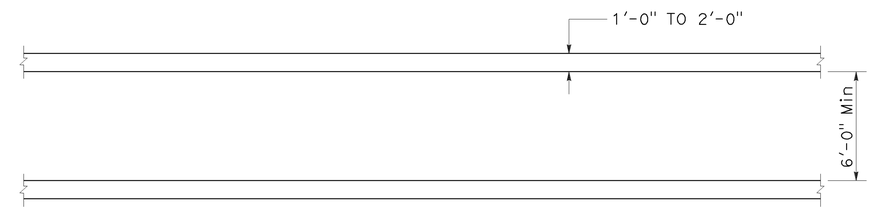
TO ACCOMPANY PLANS DATED 2-25-13



HIGHER VISIBILITY CROSSWALKS

NOTES:

1. Spaces between markings should be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except for those near schools must be yellow.



BASIC

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS CROSSWALKS

NO SCALE

RSP A24F DATED JULY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24F

2010 REVISED STANDARD PLAN RSP A24F

6-28-12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	580	0.0/5.5	27	28

REGISTERED ELECTRICAL ENGINEER

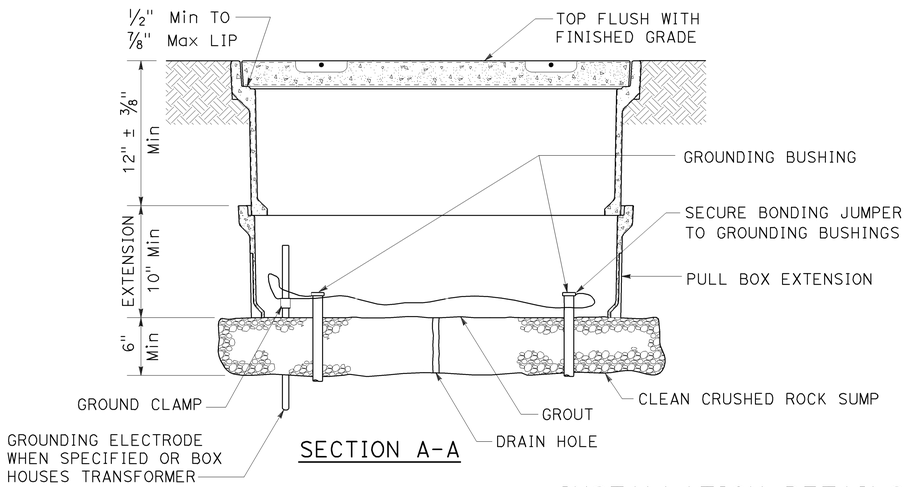
January 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-12
ELECTRICAL
STATE OF CALIFORNIA

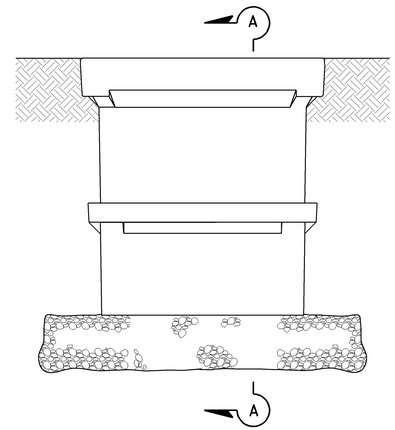
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 2-25-13

2010 REVISED STANDARD PLAN RSP ES-8A



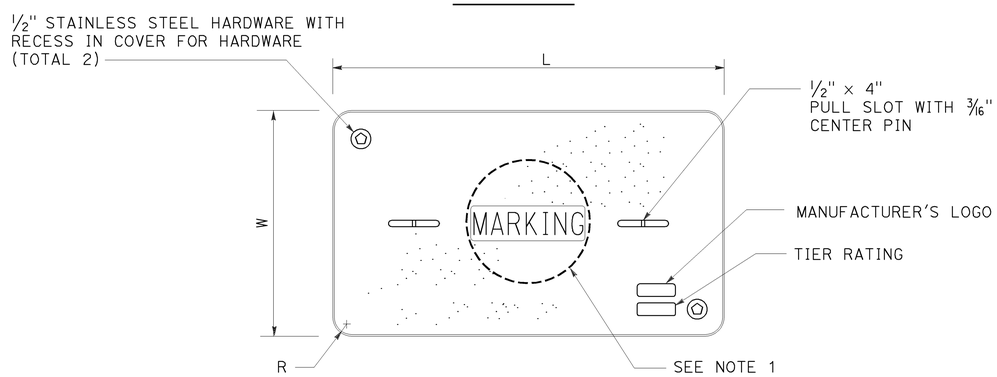
SECTION A-A



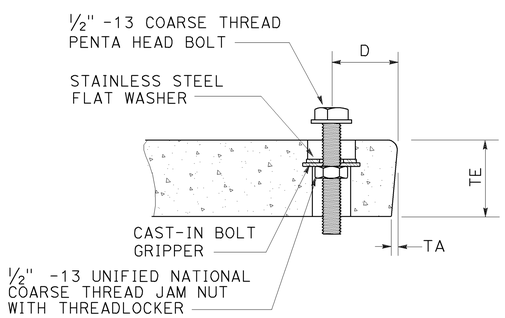
SIDE VIEW

INSTALLATION DETAILS

DETAIL A

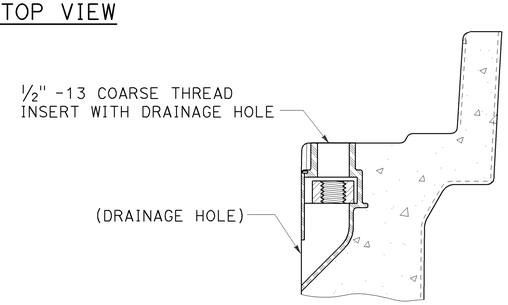


COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT

OR SIMILAR



TYPICAL THREADED INSERT

OR SIMILAR

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

NOTES ON PULL BOXES:

1. Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;

   A) No. 3 1/2 pull box.
      1) "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
      2) "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.

   B) No. 5, 6, 9 or 9A pull box.
      1) "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
      2) "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
      3) "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
      4) "IRRIGATION" - Circuits to irrigation controller 120 V or more.
      5) "RAMP METER" - Ramp meter circuits.
      6) "COUNT STATION" - Count or speed monitor circuits.
      7) "COMMUNICATIONS" - Communication circuits.
      8) "TOS COMMUNICATIONS" - TOS communication line.
      9) "TOS POWER" - TOS power.
      10) "TDC POWER" - Telephone demarcation cabinet power.
      11) "CCTV" - Closed circuit television circuits.
      12) "TMS" - Traffic monitoring station circuits.
      13) "CMS" - Changeable message sign circuits.
      14) "HAR" - Highway advisory radio circuits.

2. The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions (L and W) plus 1/8" or greater.

3. Covers and boxes must be interchangeable with California Standard. When interchanged with a standard, the top surfaces must be flush within 1/8". Top outside radius of covers and pull boxes must have a 1/8" radius.

4. Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (PULL BOX)

NO SCALE

RSP ES-8A DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	580	0.0/5.5	28	28

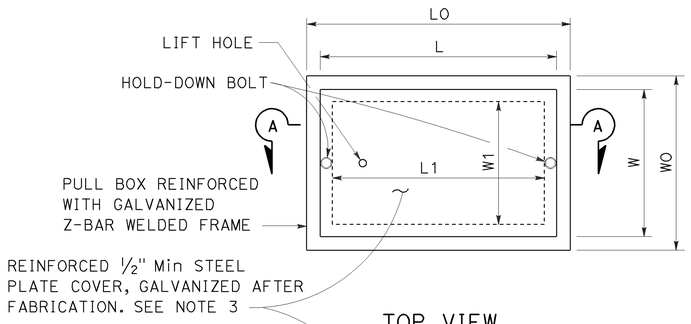
REGISTERED ELECTRICAL ENGINEER

January 20, 2012
PLANS APPROVAL DATE

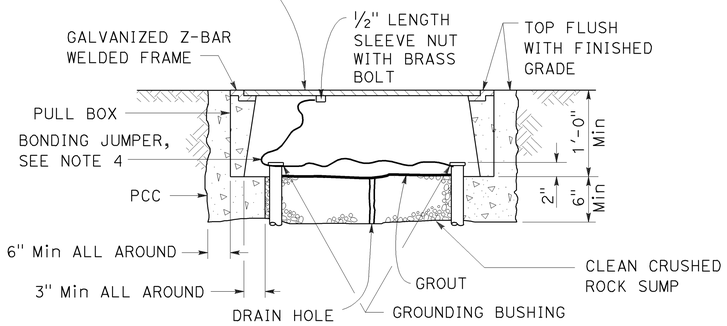
REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-12
ELECTRICAL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 2-25-13



TOP VIEW



SECTION A-A

No. 3½(T), No. 5(T) AND No. 6(T) TRAFFIC PULL BOX

NOTES ON PULL BOXES:

1. Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
2. Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
3. Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
   A) No. 3½(T) pull box.
      1) "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
      2) "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
   B) No. 5(T) or 6(T) pull box.
      1) "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
      2) "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
      3) "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
      4) "IRRIGATION" - Circuits to irrigation controller 120 V or more.
      5) "RAMP METER" - Ramp meter circuits.
      6) "COUNT STATION" - Count or speed monitor circuits.
      7) "COMMUNICATION" - Communication circuits.
      8) "TOS COMMUNICATIONS" - TOS communications line.
      9) "TOS POWER" - TOS power.
      10) "TDC POWER" - Telephone demarcation cabinet power.
      11) "CCTV" - Closed circuit television circuits.
      12) "TMS" - Traffic monitoring station circuits.
      13) "CMS" - Changeable message sign circuits.
      14) "HAR" - Highway advisory radio circuits.
4. Bonding jumper for metal covers shall be 3' long, minimum.
5. The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions except the length and width dimensions shall be ⅛" greater.
6. Covers and boxes must be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces must be flush within ⅛".

DIMENSION TABLE

PULL BOX	BOX						COVER				
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	WO	LO	L1	W1	L **	W **	R	EDGE THICKNESS	EDGE TAPER
No. 3½(T)	1½"	1'-0"	1'-5"± 1"	1'-8⅞"±	1'-2½"±	10⅝"± 1"	1'-8"±	1'-1¾"±	0"	½"	NONE
No. 5(T)	1¾"	1'-0"	1'-11½"± 1"	2'-5½"±	1'-7"±	1'-1"± 1"	2'-3"±	1'-4"±	0"	½"	NONE
No. 6(T)	2"	1'-0"	2'-6"± 1"	2'-11½"±	1'-11½"±	1'-5"± 1"	2'-9"±	1'-8"±	0"	½"	NONE

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (TRAFFIC RATED PULL BOX)

NO SCALE

RSP ES-8B DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8B

2010 REVISED STANDARD PLAN RSP ES-8B