Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	1	81

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	LOCATIONS OF CONSTRUCTION
3-22	CONSTRUCTION DETAILS
23	CONSTRUCTION AREA SIGNS
24-50	TRAFFIC HANDLING (DETOUR) PLANS AND QUANTITIES
51-52	PAVEMENT DELINEATION QUANTITIES
53	SIGN QUANTITIES
54	SUMMARY OF QUANTITIES
55-74	ELECTRICAL PLANS
75-81	REVISED STANDARD PLANS

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

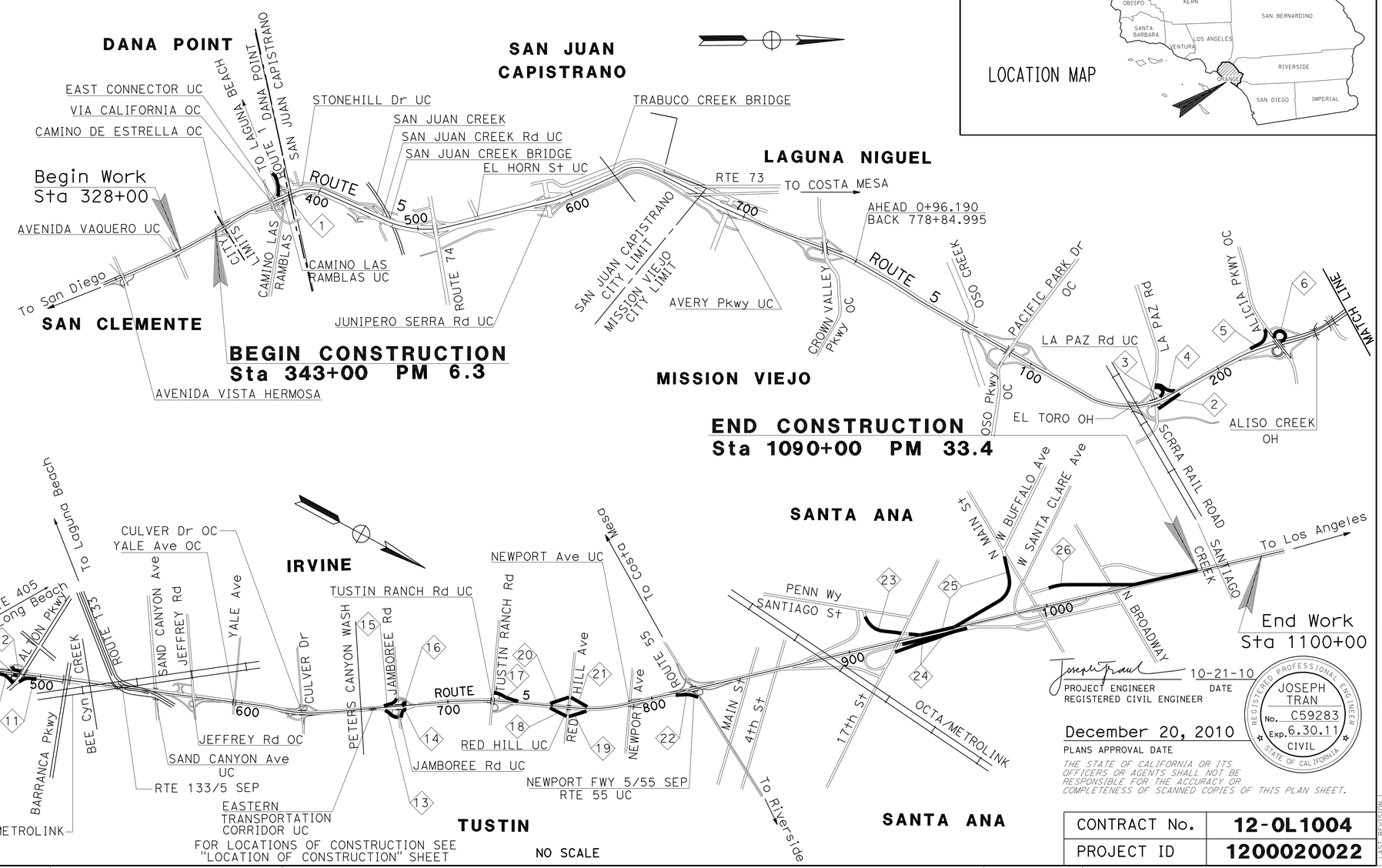
IN ORANGE COUNTY

IN DANA POINT, LAGUNA NIGUEL, MISSION VIEJO, LAGUNA HILLS, LAKE FOREST, IRVINE, TUSTIN AND SANTA ANA

FROM ROUTE 1 TO 0.3 MILE NORTH OF MAIN STREET OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

LOCATION MAP



FOR LOCATIONS OF CONSTRUCTION SEE "LOCATION OF CONSTRUCTION" SHEET

NO SCALE

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

PROJECT MANAGER: MASSOUD TAJIK

DESIGN ENGINEER: PHAT TRAN

Joseph Tran 10-21-10

PROJECT ENGINEER — DATE

REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — JOSEPH TRAN — No. C59283 — Exp. 6.30.11 — CIVIL — STATE OF CALIFORNIA

December 20, 2010

PLANS APPROVAL DATE

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

CONTRACT No.	12-0L1004
PROJECT ID	1200020022

LAST REVISION 00-00-00 — DATE PLOTTED => 22-DEC-2010 — TIME PLOTTED => 06:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	2	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.

RAMP LOCATIONS

LOCATION	PM	DIRECTION	DESCRIPTION
1	6.3	NB	NB ROUTE 5 TO NB ROUTE 1 Conn
2	16.6	NB	LA PAZ Rd ON-RAMP
3	16.5	SB	LA PAZ Rd LOOP ON-RAMP
4	16.8	SB	LA PAZ Rd OFF-RAMP
5	17.4	SB	ALICIA Pkwy ON-RAMP
6	17.5	SB	ALICIA Pkwy LOOP ON-RAMP
7	18.8	SB	EL TORO Rd ON-RAMP
8	19.0	SB	EL TORO Rd OFF-RAMP
9	22.0	NB	ALTON Pkwy OFF-RAMP
10	22.2	NB	ALTON Pkwy LOOP ON-RAMP
11	22.1	NB	ALTON Pkwy ON-RAMP
12	22.2	SB	ALTON Pkwy OFF-RAMP
13	27.3	NB	JAMBOREE Rd OFF-RAMP
14	27.6	NB	JAMBOREE Rd ON-RAMP
15	27.5	SB	JAMBOREE Rd ON-RAMP
16	27.6	SB	JAMBOREE Rd LOOP ON-RAMP
17	28.6	SB	TUSTIN RANCH Rd OFF-RAMP
18	28.9	NB	RED HILL Ave OFF-RAMP
19	29.1	NB	RED HILL Ave ON-RAMP
20	28.9	SB	RED HILL Ave ON-RAMP
21	29.4	SB	RED HILL Ave OFF-RAMP
22	30.1	NB	NB ROUTE 5 TO NB ROUTE 55 Conn
23	32.1	SB	17TH ST OFF-RAMP
24	32.2	NB	17TH ST ON-RAMP AND AUXILIARY LANE
25	32.8	SB	N MAIN St ON-RAMP AND AUXILIARY LANE TO 17TH St
26	33.4	SB	N MAIN STREET OFF-RAMP AND OUTSIDE LANE TO SANTIAGO CREEK BRIDGE

LOCATIONS OF CONSTRUCTION

LC-1

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® MAINTENANCE

LAST REVISION 00-00-00 | DATE PLOTTED => 21-DEC-2010 | TIME PLOTTED => 15:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	3	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.

LEGEND:

- 0.1′ COLD PLANE AC PAVEMENT 0.10′ RHMA-G
- OVERLAY 0.10′ RHMA-O
- 0.1′ COLD PLANE AC PAVEMENT 0.10′ RHMA-O
- ROADSIDE SIGN, 1-POST

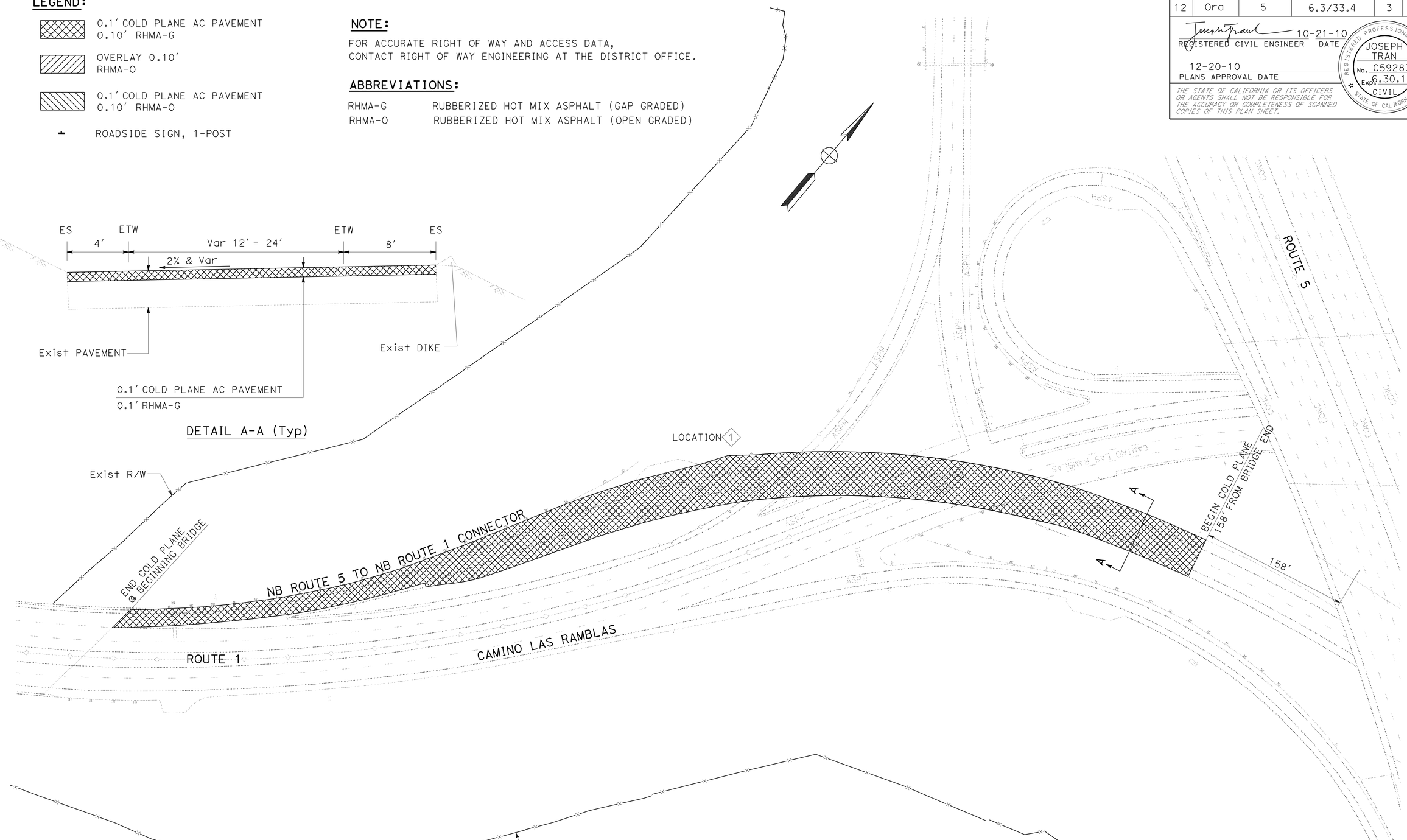
NOTE:

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

ABBREVIATIONS:

RHMA-G	RUBBERIZED HOT MIX ASPHALT (GAP GRADED)
RHMA-O	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)

DETAIL A-A (Typ)



CONSTRUCTION DETAILS

NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	4	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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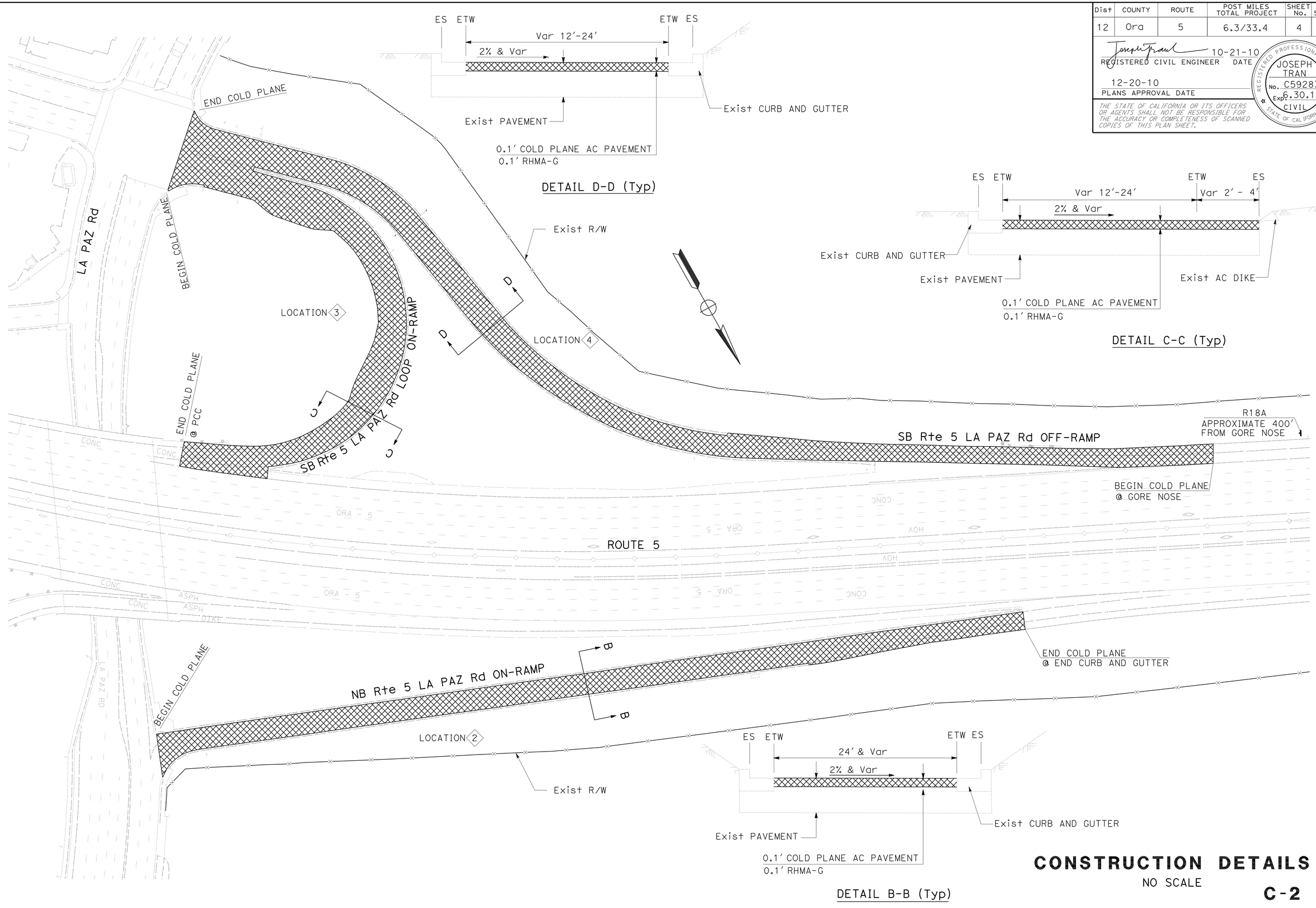

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
MAINTENANCE
Caltrans

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	5	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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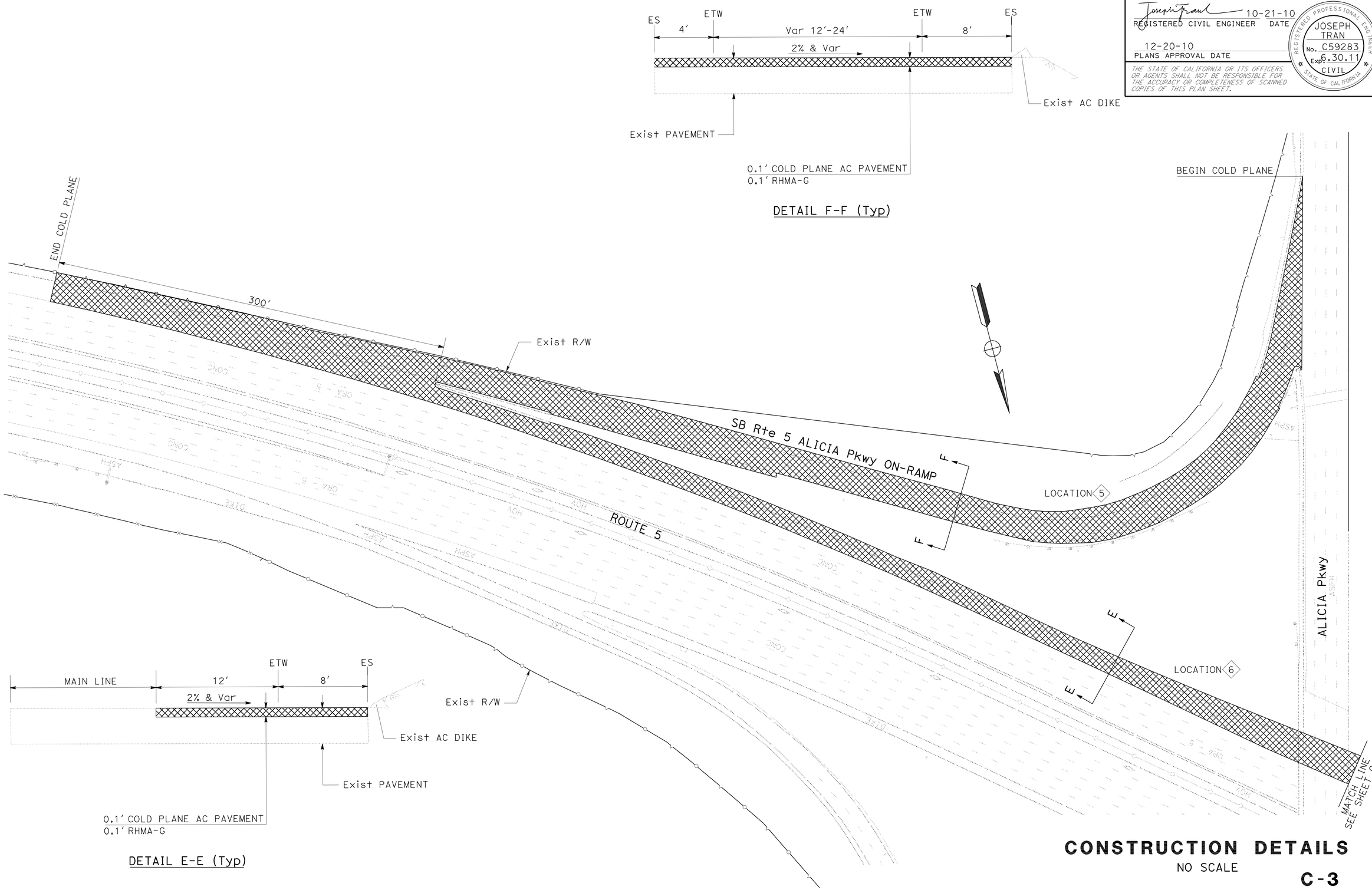


CONSTRUCTION DETAILS

NO SCALE

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN

CHECKED BY: P. TRAN

REVISED BY

DATE REVISED

LAST REVISION DATE PLOTTED => 24-DEC-2010
00-00-00 TIME PLOTTED => 07:20

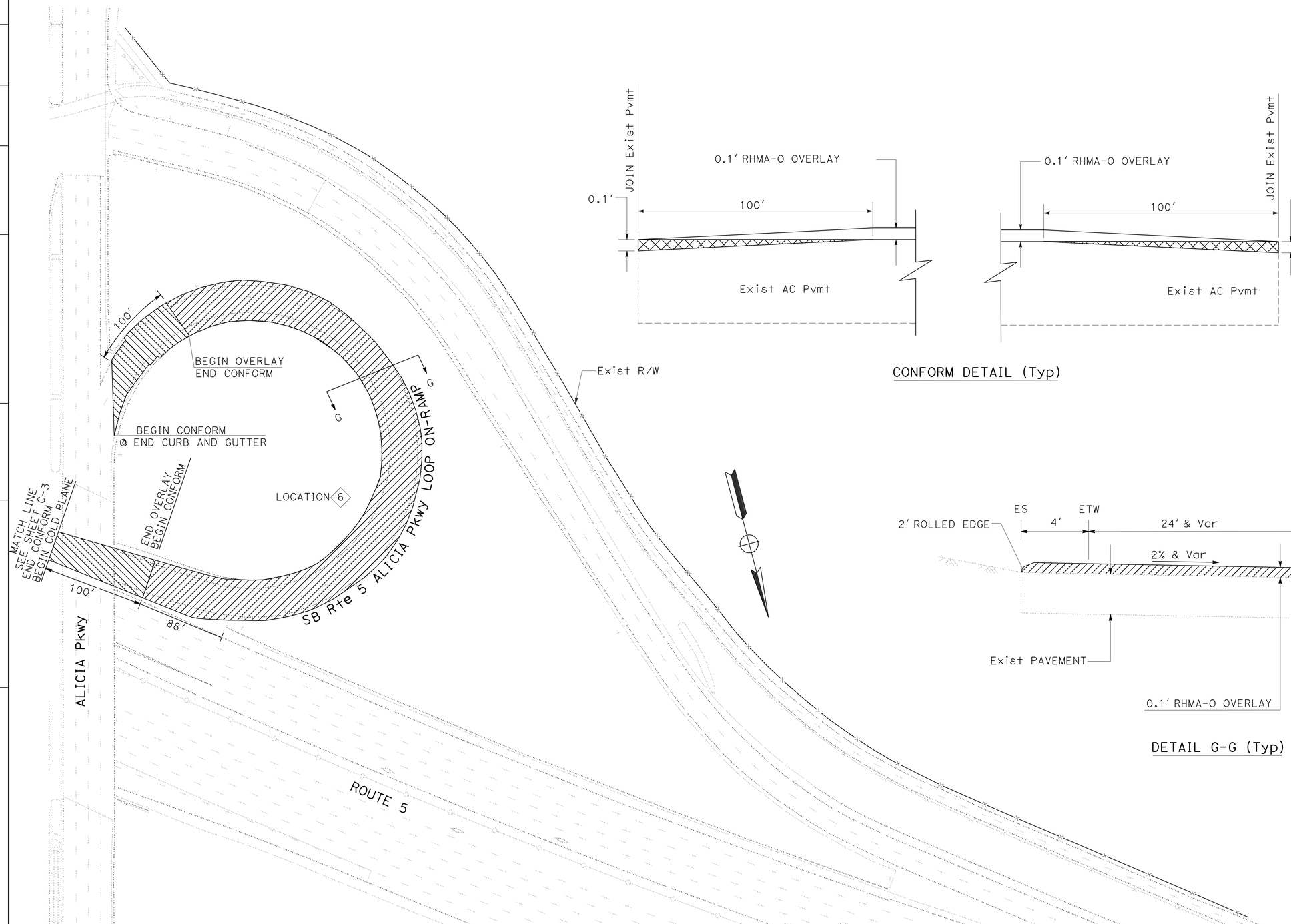
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	6	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.



CONSTRUCTION DETAILS

NO SCALE

C-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:21

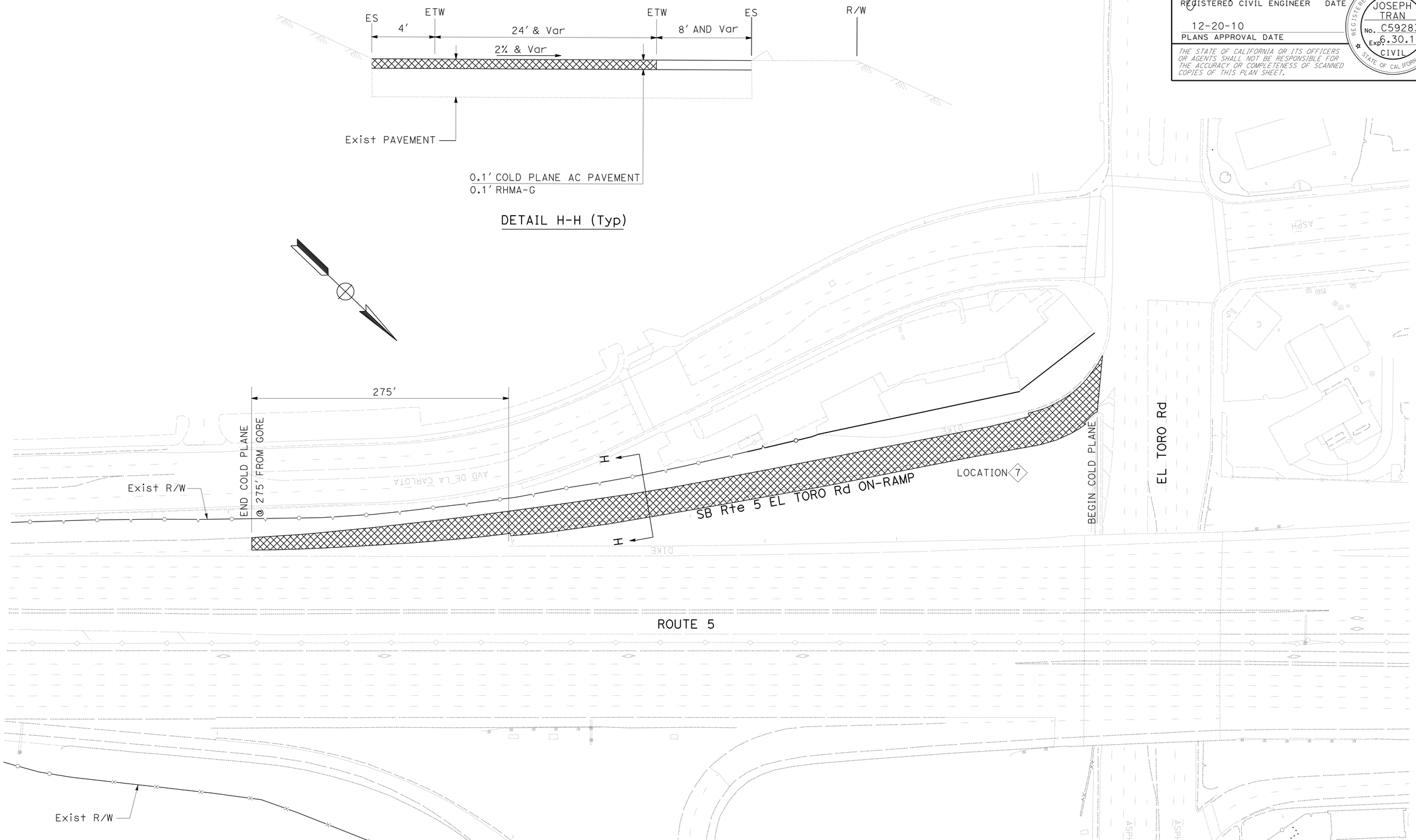
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	7	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.



CONSTRUCTION DETAILS

NO SCALE

C-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 24-DEC-2010 | TIME PLOTTED => 07:21

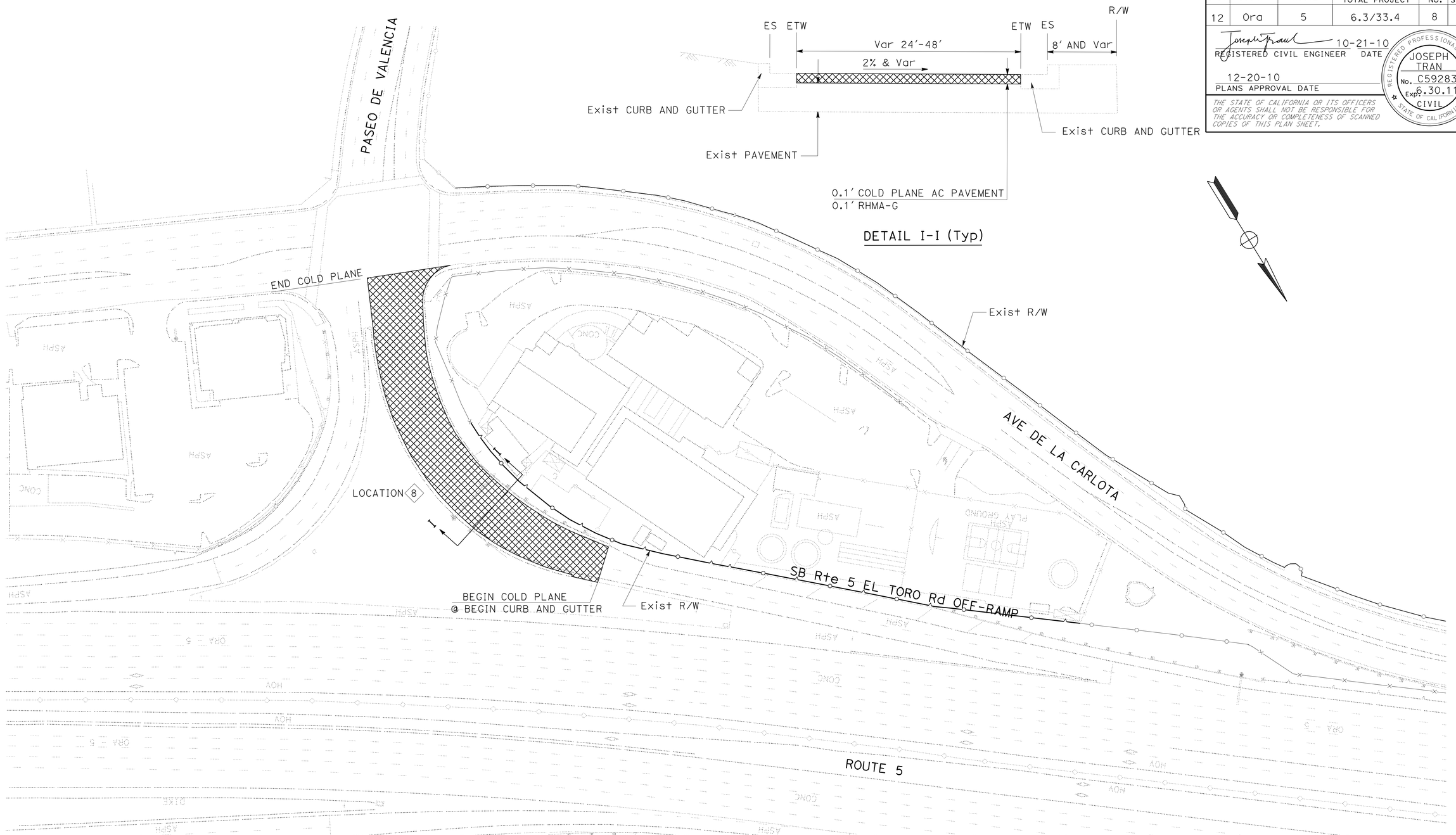
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	8	81

Joseph Tran 10-21-10
REGISTERED CIVIL ENGINEER DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.



CONSTRUCTION DETAILS

NO SCALE

C-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
MAINTENANCE
Caltrans

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	9	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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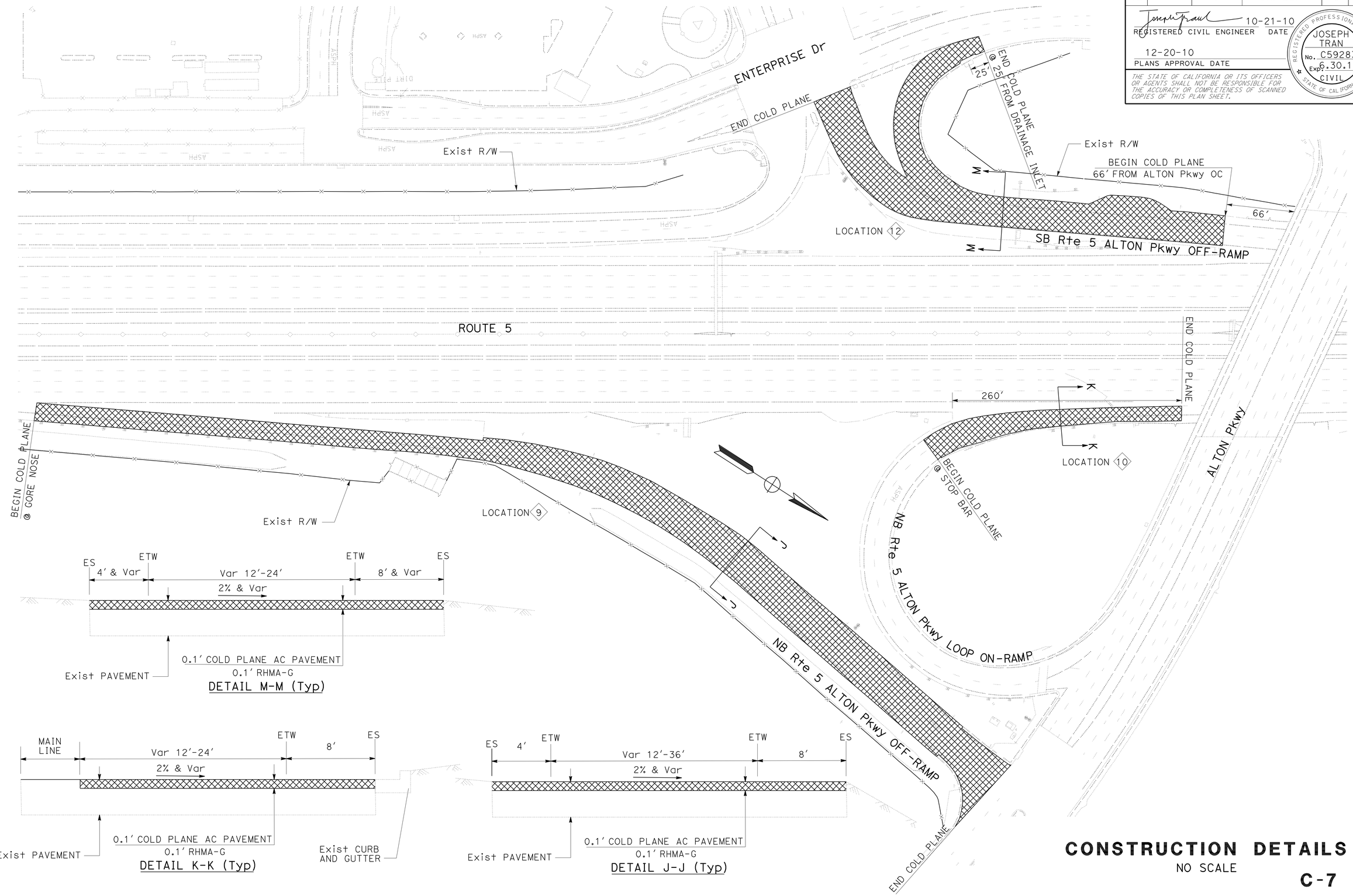


CONSTRUCTION DETAILS

NO SCALE

C-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 21-DEC-2010 | TIME PLOTTED => 14:46

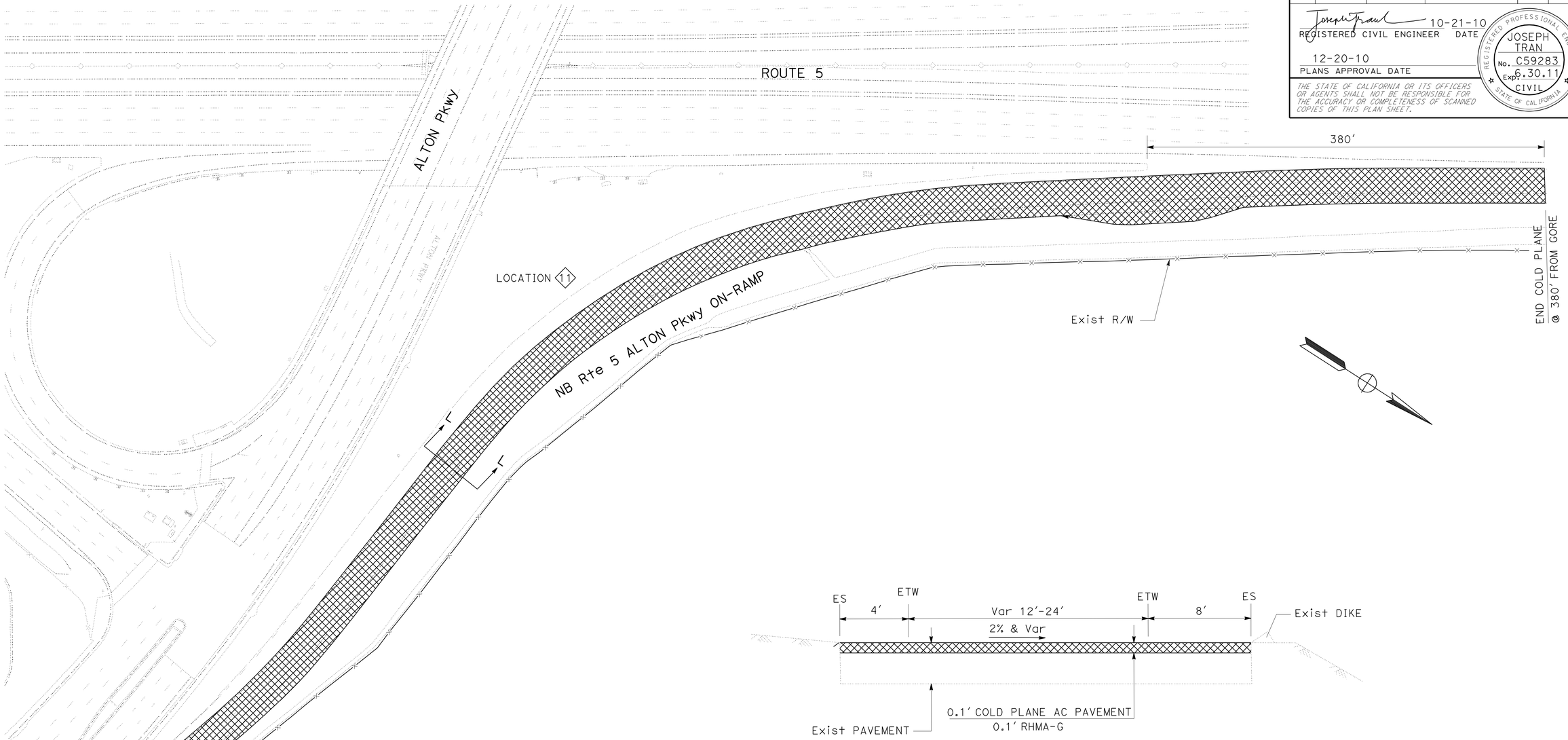
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	10	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
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.



DETAIL L-L (Typ)

CONSTRUCTION DETAILS

NO SCALE

C-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 21-DEC-2010 | TIME PLOTTED => 14:46

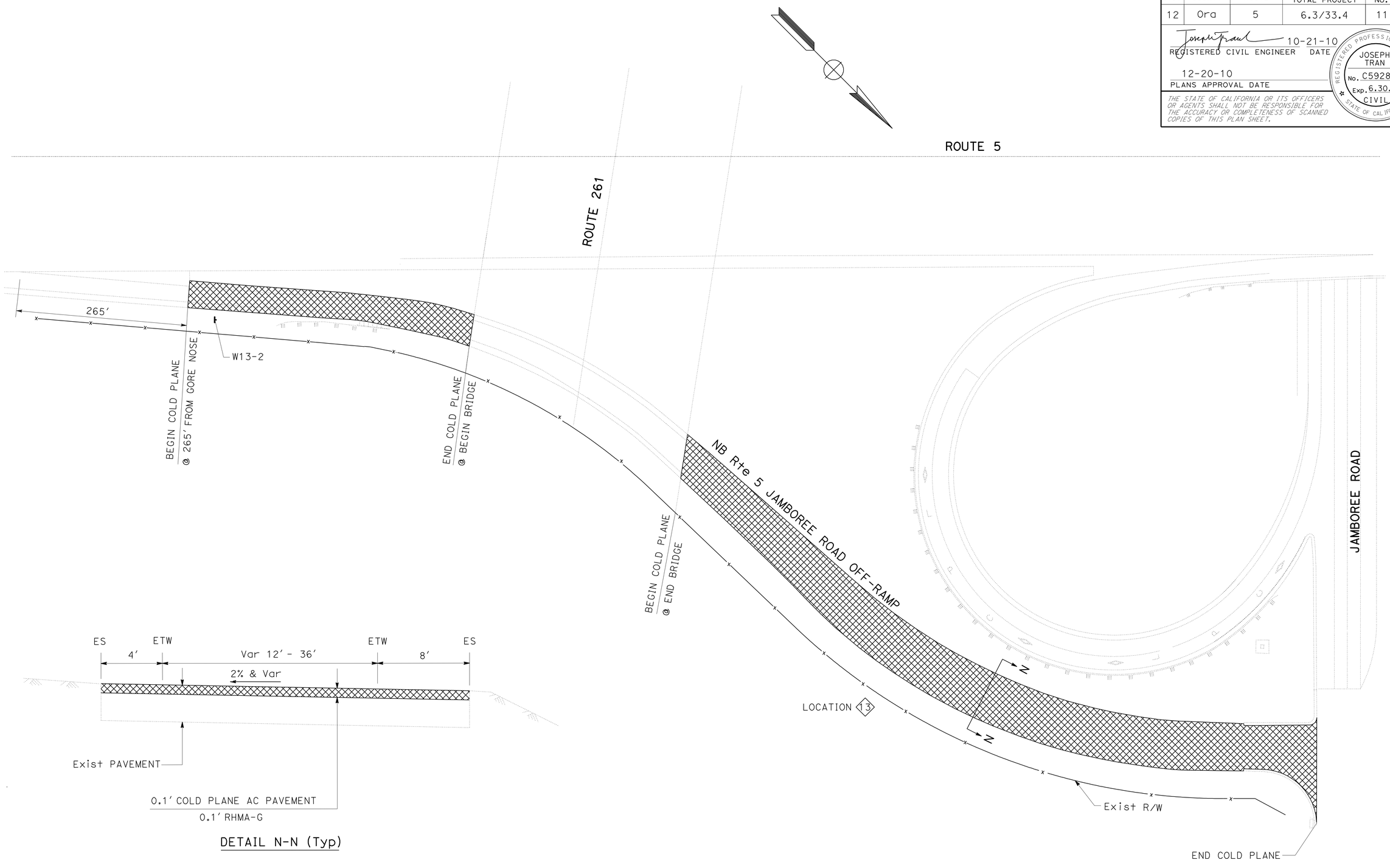
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	11	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
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.



DETAIL N-N (Typ)

CONSTRUCTION DETAILS

NO SCALE

C-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 21-DEC-2010
TIME PLOTTED => 14:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	12	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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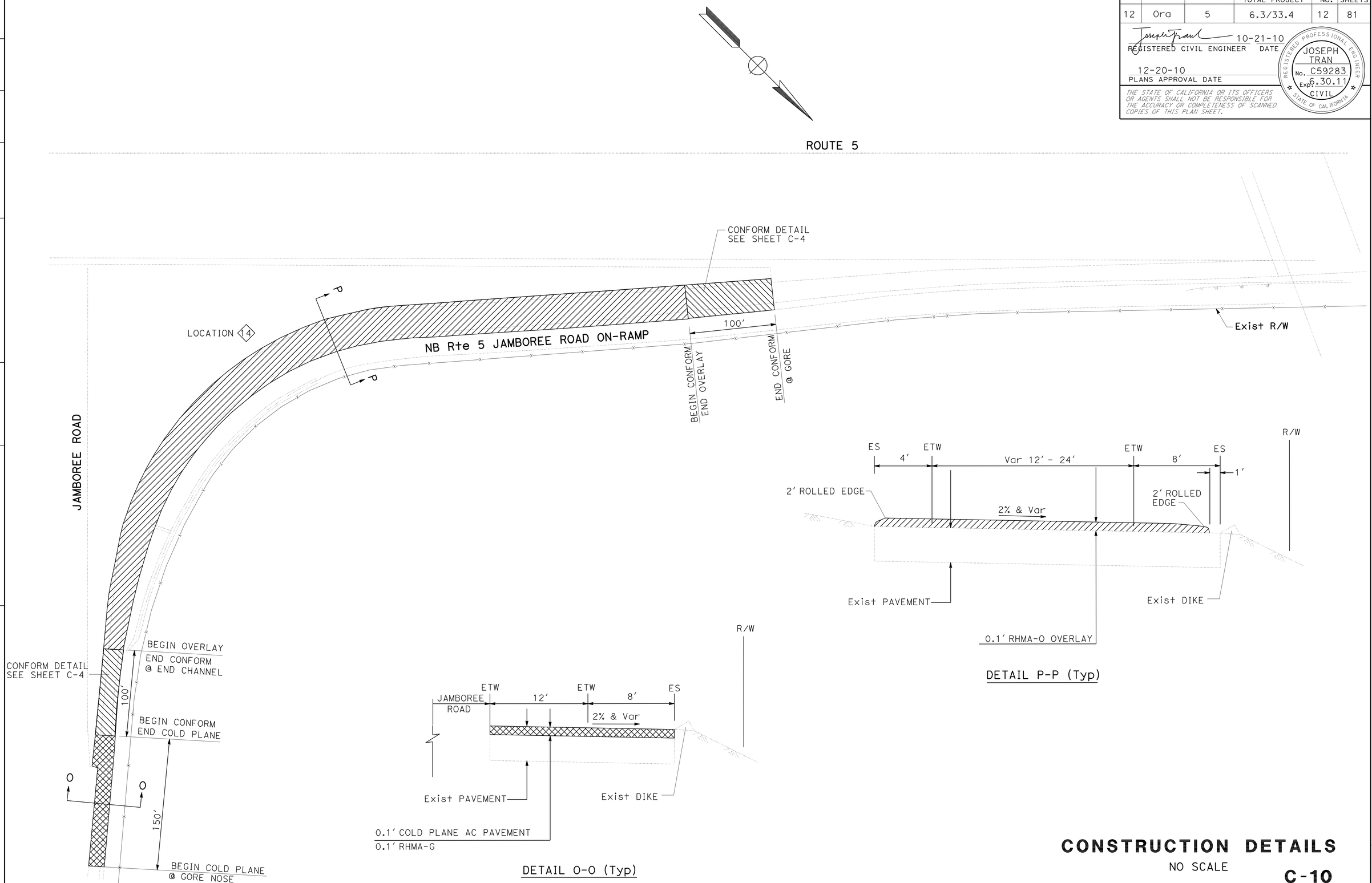

CONSTRUCTION DETAILS

NO SCALE

C-10

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
J. TRAN	P. TRAN

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® MAINTENANCE

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	13	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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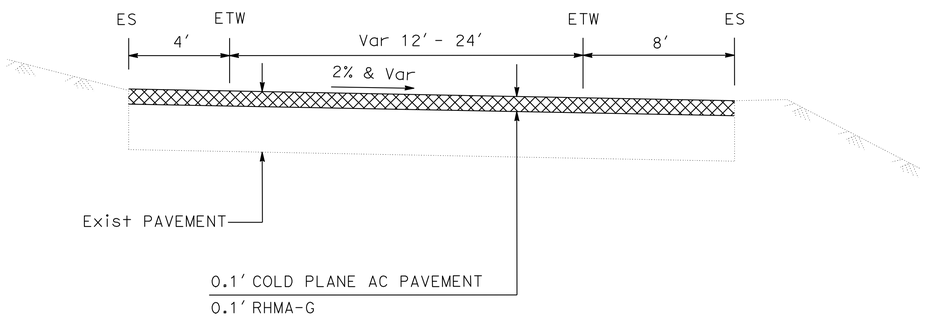
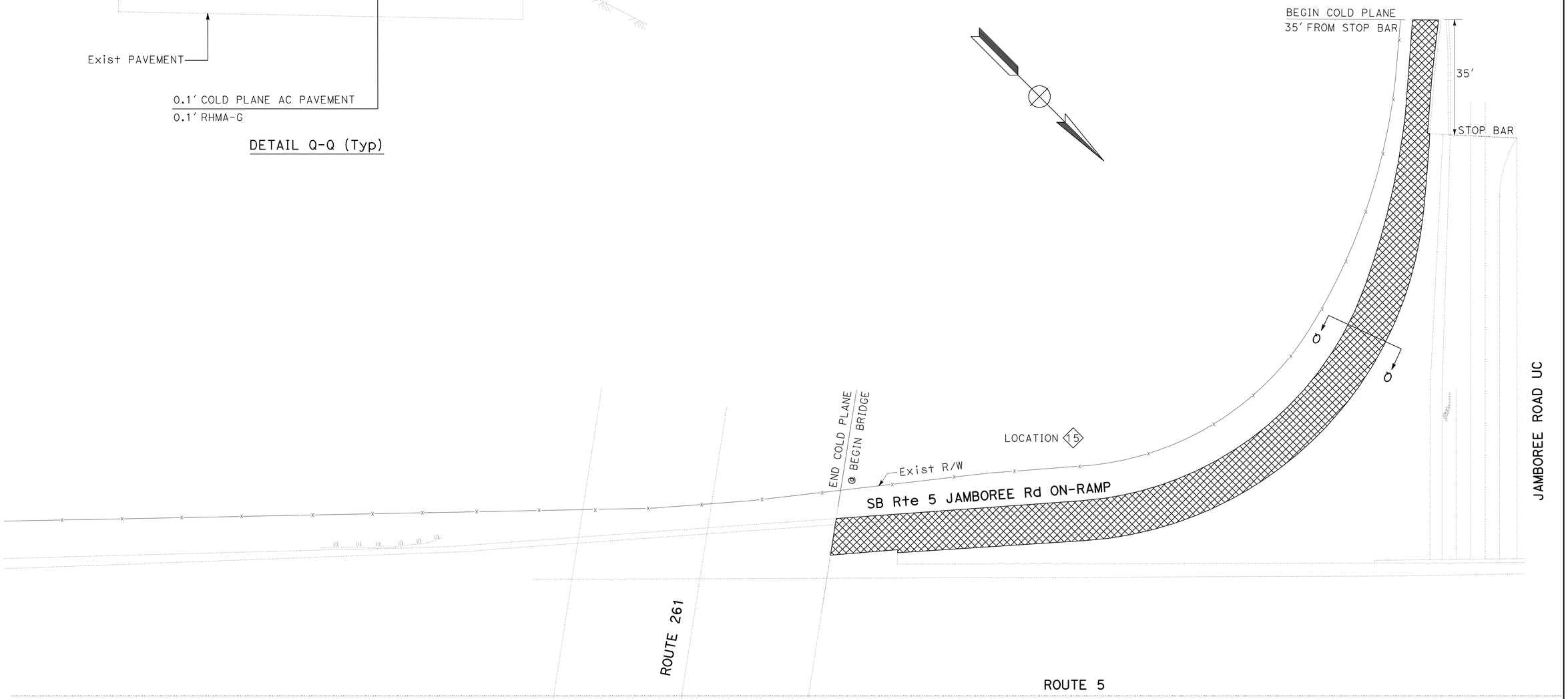


DETAIL Q-Q (Typ)



CONSTRUCTION DETAILS

NO SCALE

C-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:21

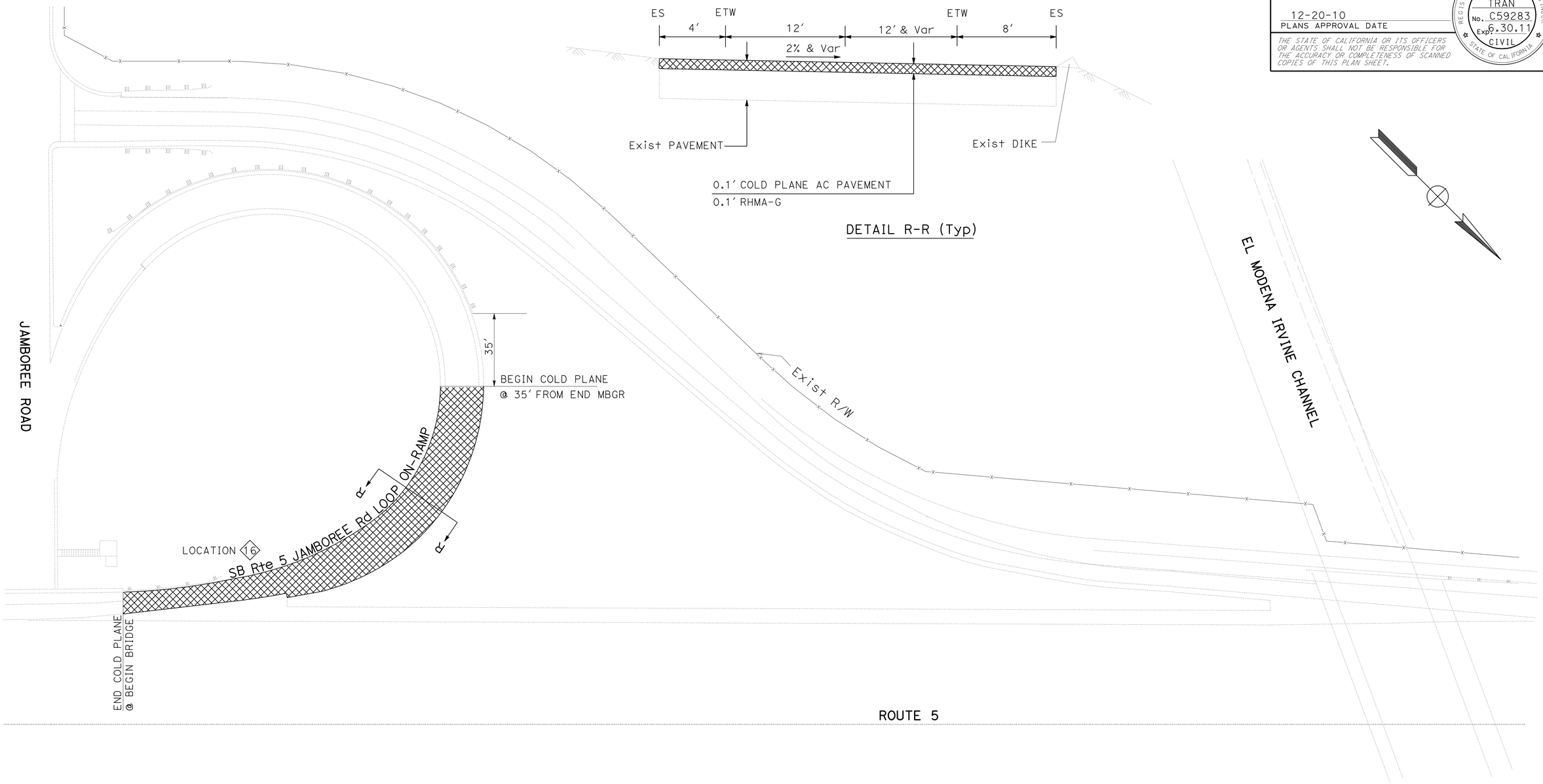
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	14	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.



CONSTRUCTION DETAILS

NO SCALE

C-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 07:26

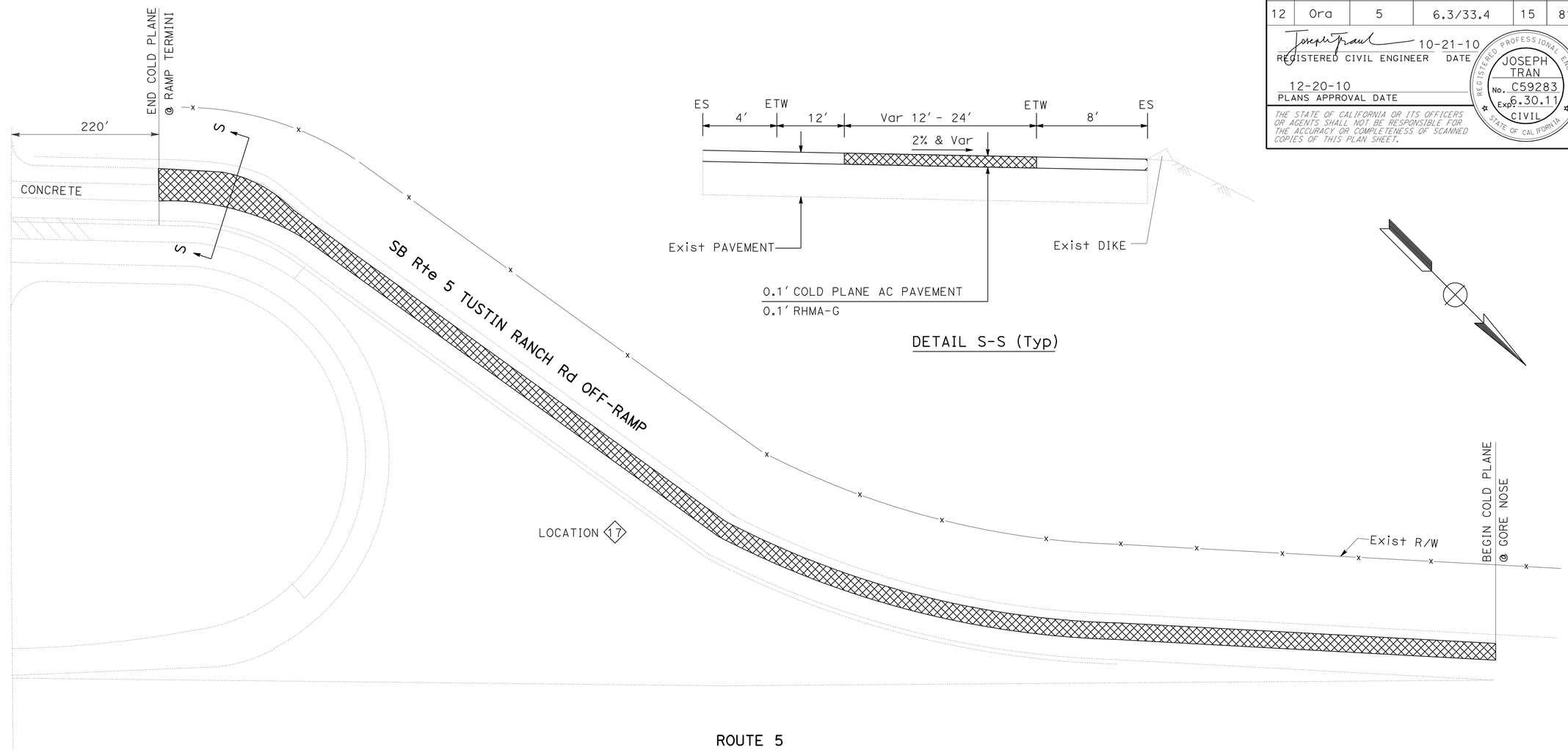
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	15	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
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.



DETAIL S-S (Typ)

CONSTRUCTION DETAILS

NO SCALE

C-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 07:40

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	16	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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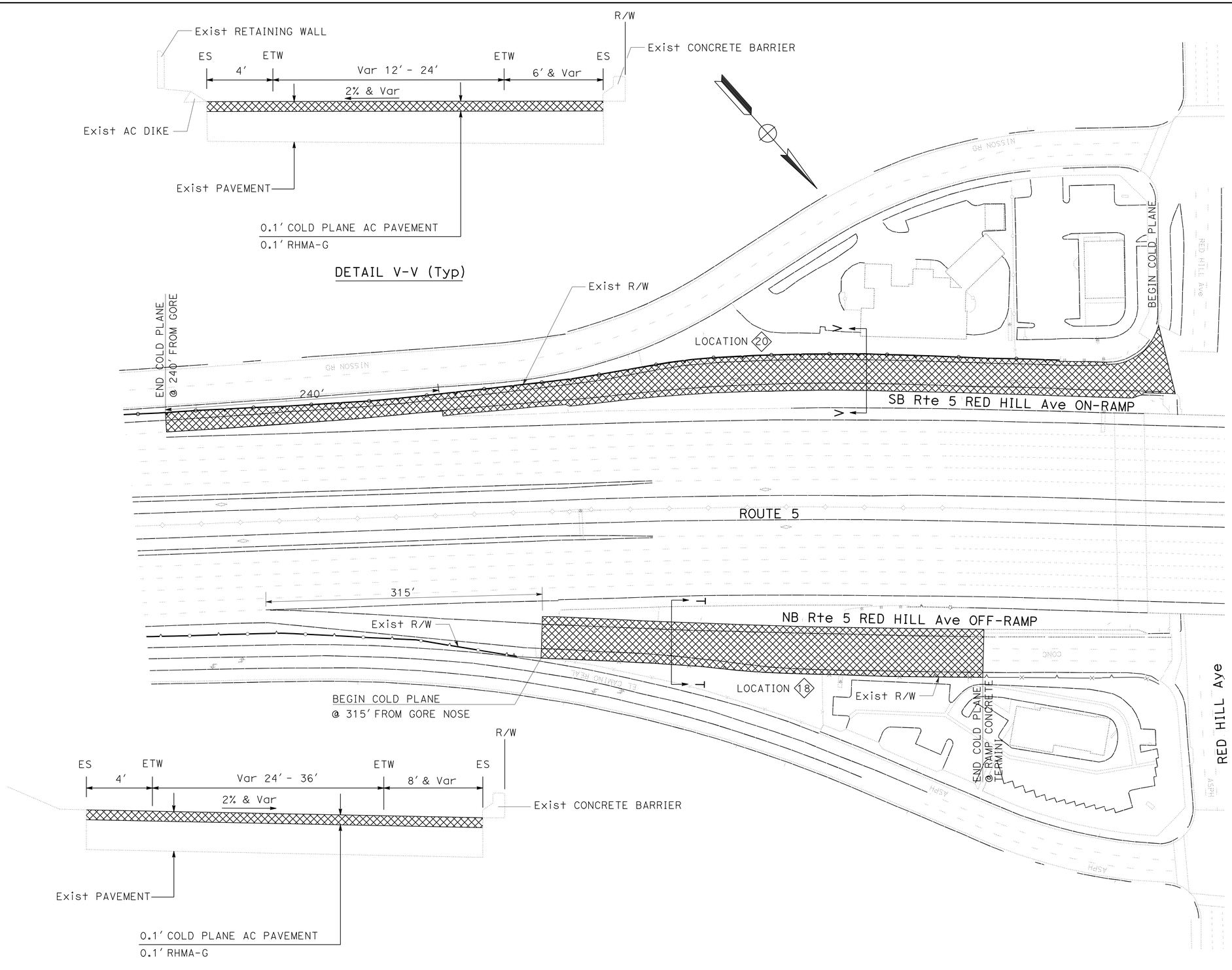

CONSTRUCTION DETAILS

NO SCALE

C-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
MAINTENANCE
Caltrans

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	17	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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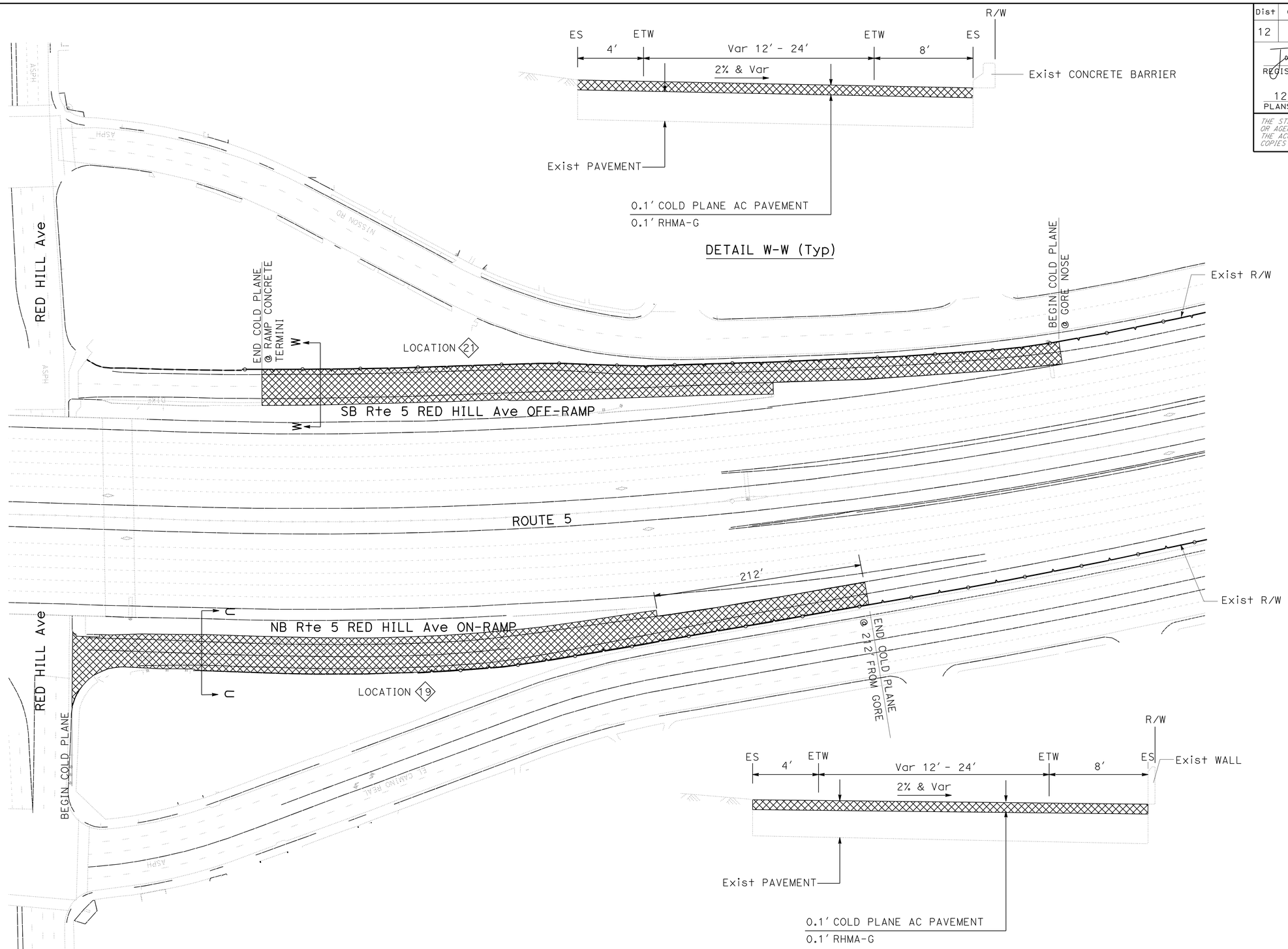

CONSTRUCTION DETAILS

NO SCALE

C-15

REVISED BY	DATE REVISED
J. TRAN	P. TRAN
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans MAINTENANCE

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 07:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	18	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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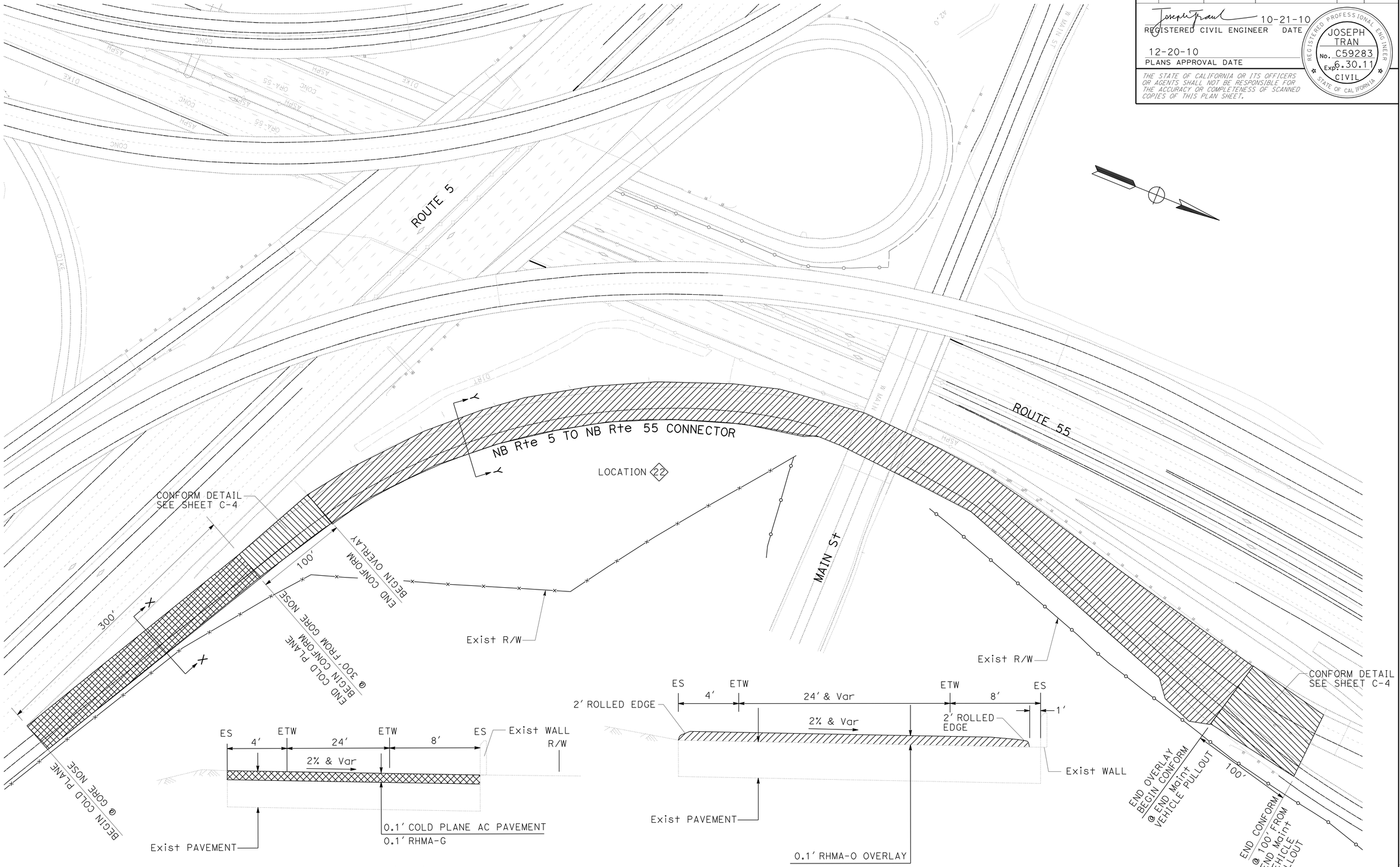

CONSTRUCTION DETAILS

NO SCALE

C-16

CALCULATED-DESIGNED BY	J. TRAN
CHECKED BY	P. TRAN
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK
REVISED BY	
DATE REVISED	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 00-00-00
DATE PLOTTED => 28-DEC-2010
TIME PLOTTED => 05:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	19	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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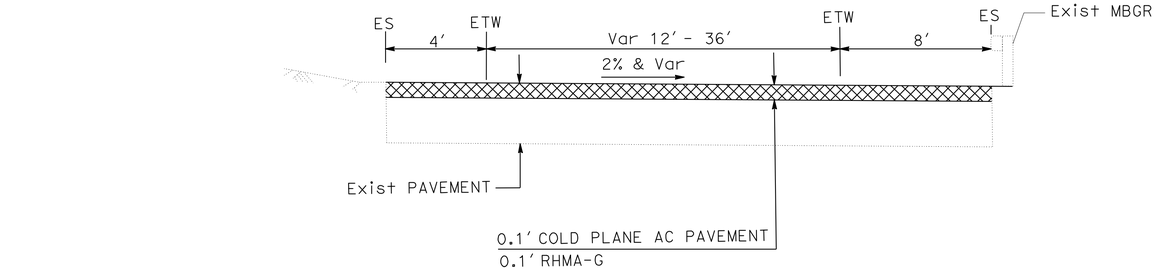

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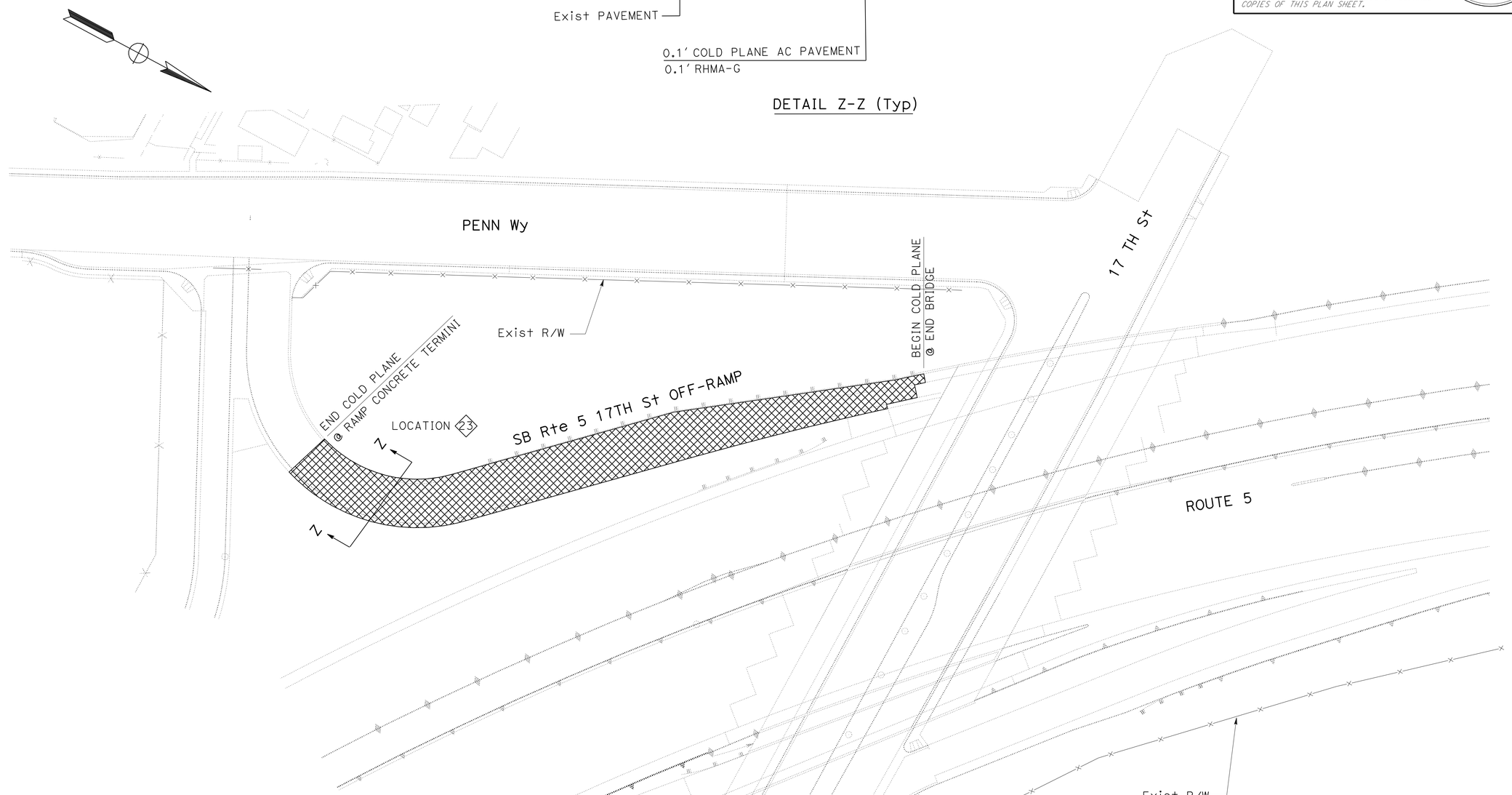

CONSTRUCTION DETAILS

NO SCALE

C-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 11:11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	20	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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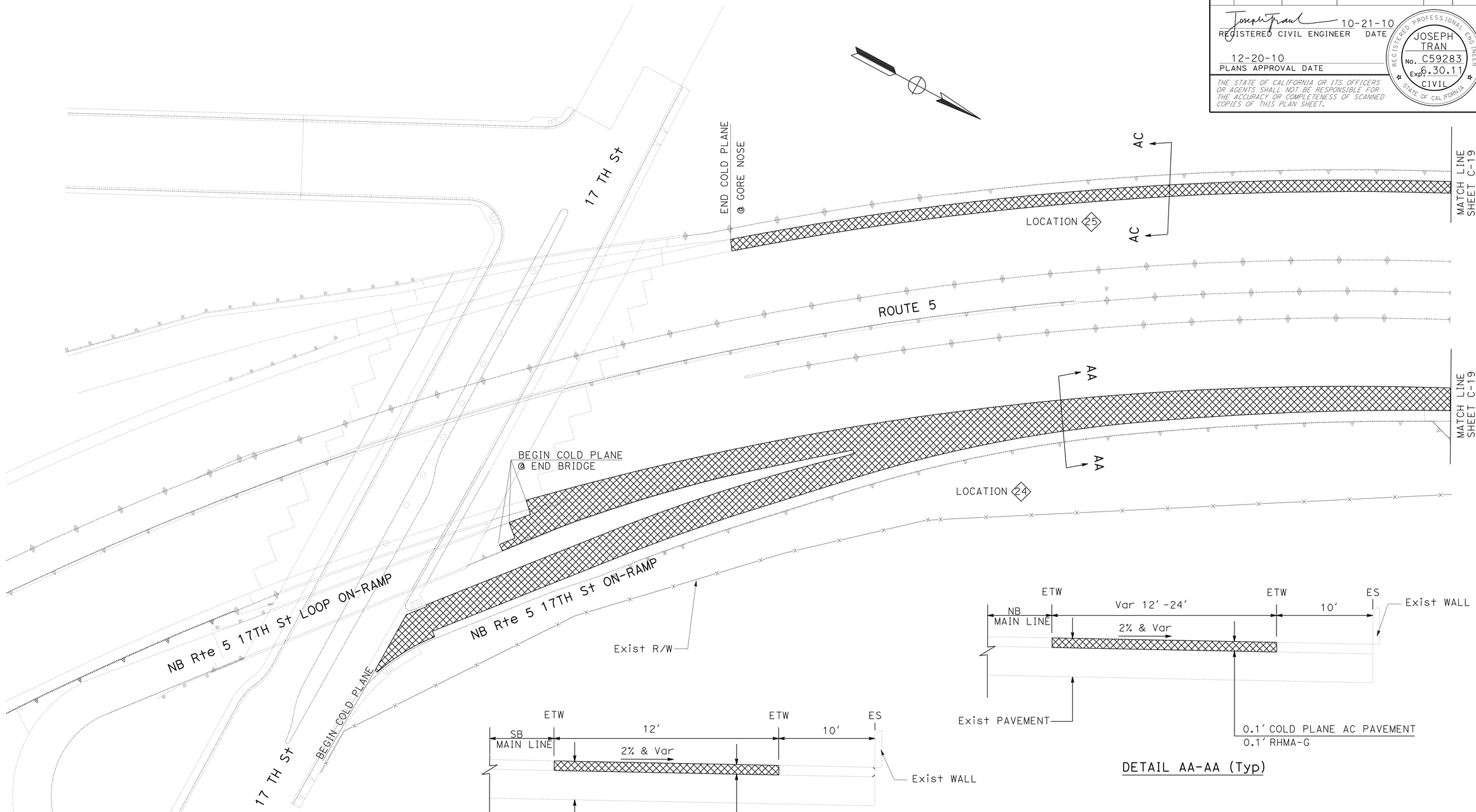

CONSTRUCTION DETAILS

NO SCALE

C-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 22-DEC-2010
00-00-00 TIME PLOTTED => 11:11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	21	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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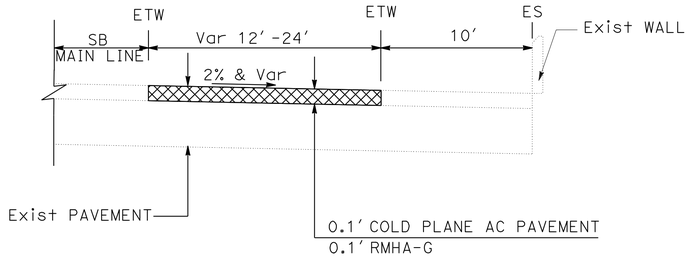
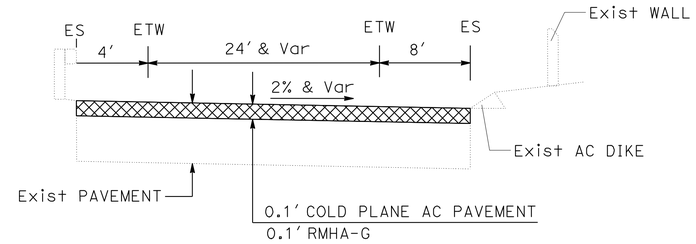
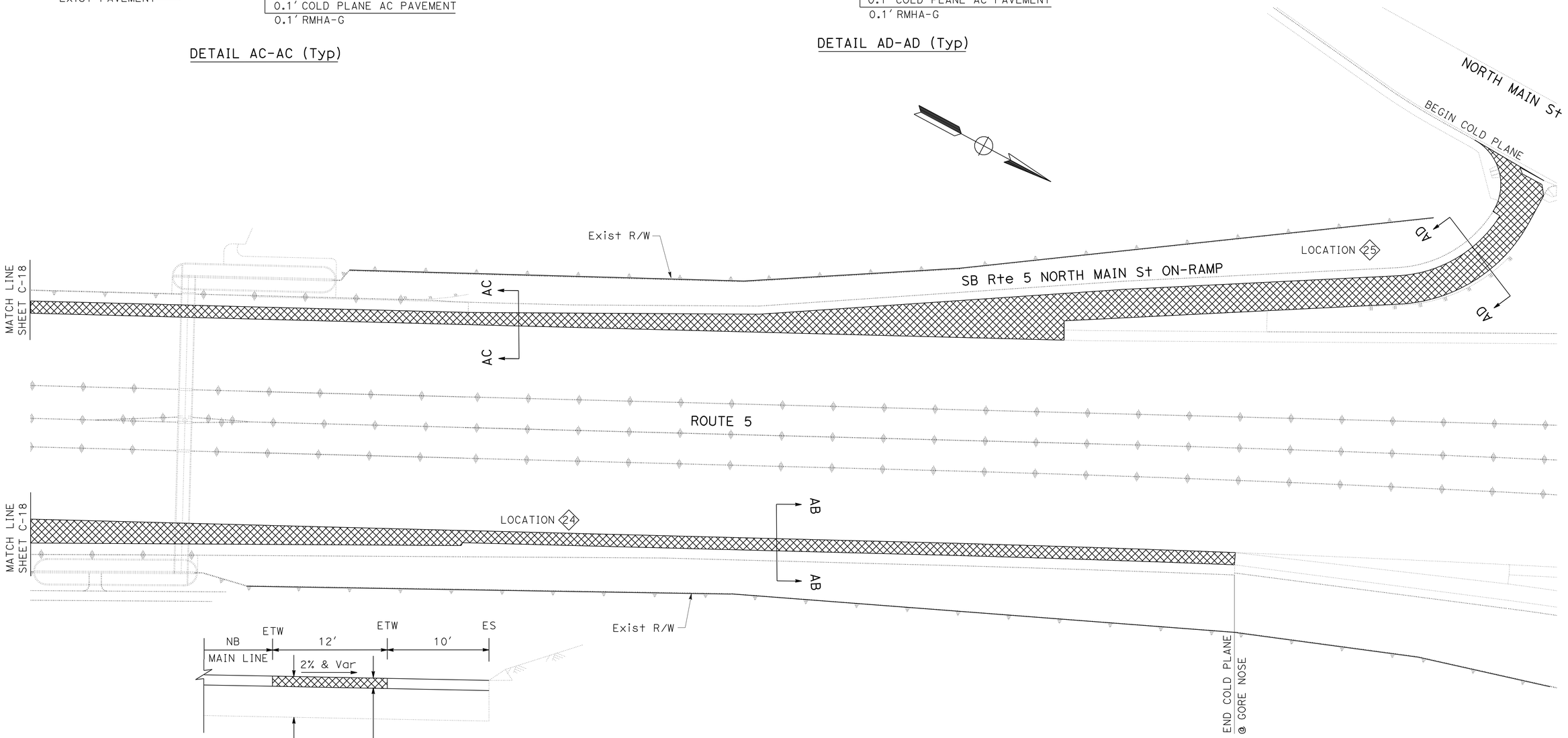


DETAIL AC-AC (Typ)



DETAIL AD-AD (Typ)



DETAIL AB-AB (Typ)

CONSTRUCTION DETAILS

NO SCALE

C-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: J. TRAN
CHECKED BY: P. TRAN

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 11:11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	22	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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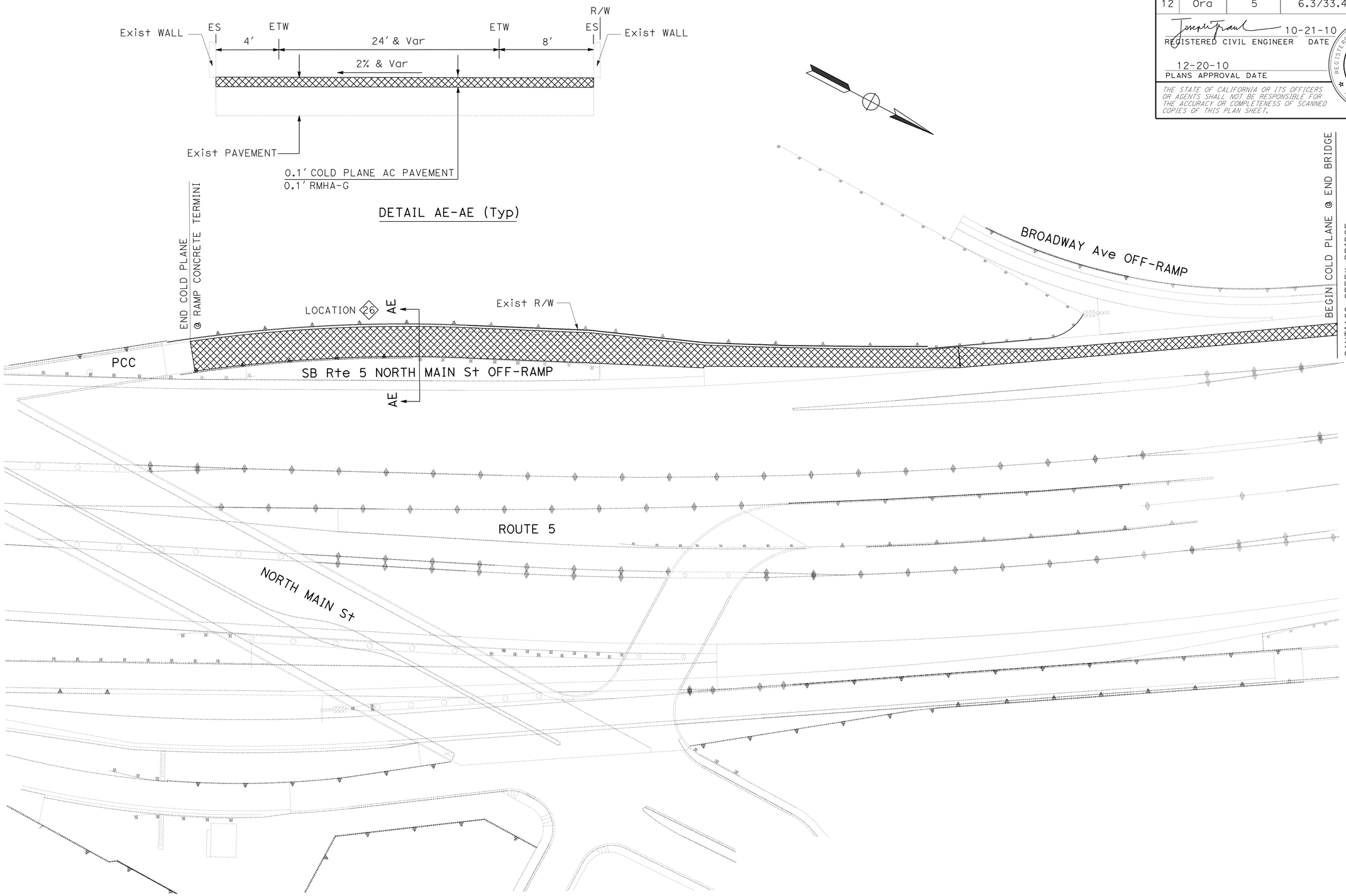

CONSTRUCTION DETAILS

NO SCALE

C-20

REVISED BY	DATE REVISED
J. TRAN	P. TRAN

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
MASSOUD TAJIK

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Caltrans
MAINTENANCE

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 11:11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	23	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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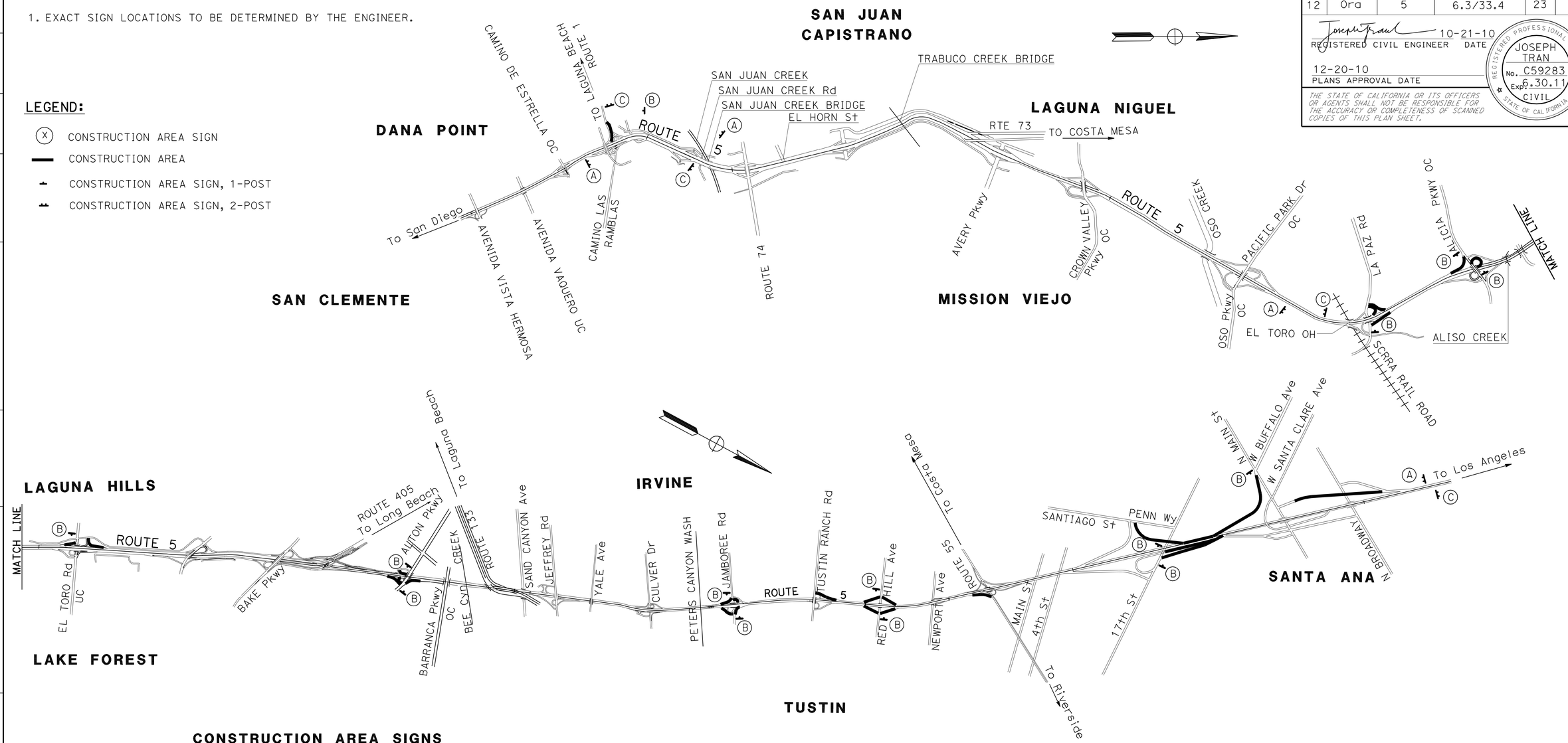
NOTE:

1. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

LEGEND:

- (X) CONSTRUCTION AREA SIGN
- CONSTRUCTION AREA
- CONSTRUCTION AREA SIGN, 1-POST
- CONSTRUCTION AREA SIGN, 2-POST



CONSTRUCTION AREA SIGNS

SIGN No.	TYPE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGN (EA)
(A)	W20-1	72" x 72"	ROAD WORK AHEAD	2 - 6" x 6"	4
(B)	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	14
(C)	G20-2	60" x 24"	END ROAD WORK	2 - 4" x 4"	4

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® MAINTENANCE

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 10:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	24	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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NOTES:

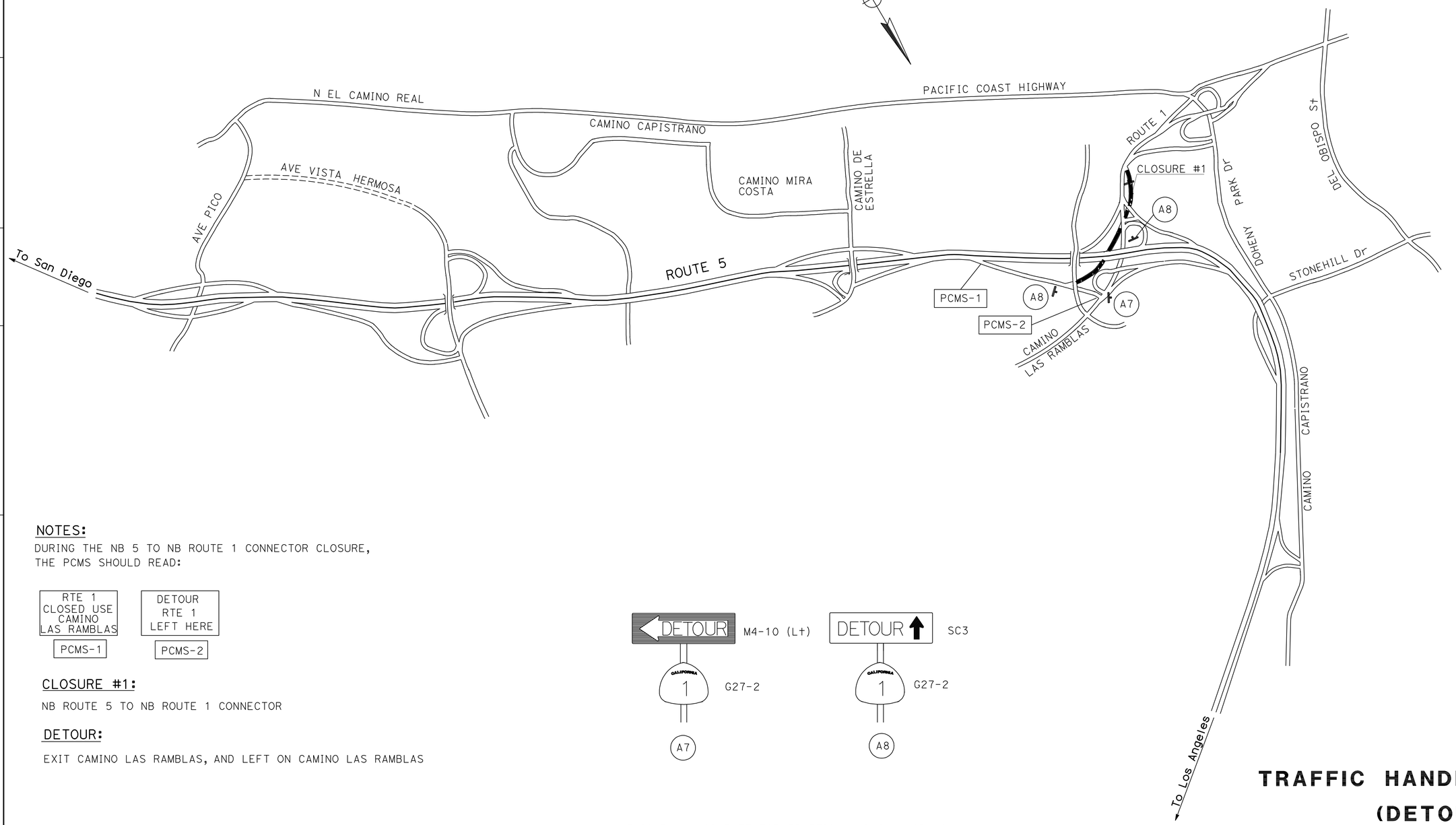
1. LOCATIONS OF CONSTRUCTION AREA SIGNS (DETOUR) AND PCMS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. EXACT MESSAGE TO BE DISPLAYED ON THE PCMS WILL BE DETERMINED BY THE ENGINEER IN COORDINATION WITH THE TRAFFIC MANAGEMENT PLAN.

LEGEND:

- DIRECTION OF TRAVEL THROUGH DETOUR
- CONSTRUCTION AREA SIGN (DETOUR), 1-POST
- PCMS-1 — PORTABLE CHANGEABLE MESSAGE SIGN
- (X) — CONSTRUCTION AREA SIGN (DETOUR)
- CONNECTORS OR RAMPS CLOSURE

ABBREVIATION:

PCMS : PORTABLE CHANGABLE MESSAGE SIGN



NOTES:

DURING THE NB 5 TO NB ROUTE 1 CONNECTOR CLOSURE, THE PCMS SHOULD READ:

RTE 1 CLOSED USE CAMINO LAS RAMBLAS	DETOUR RTE 1 LEFT HERE
PCMS-1	PCMS-2

CLOSURE #1:

NB ROUTE 5 TO NB ROUTE 1 CONNECTOR

DETOUR:

EXIT CAMINO LAS RAMBLAS, AND LEFT ON CAMINO LAS RAMBLAS

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	25	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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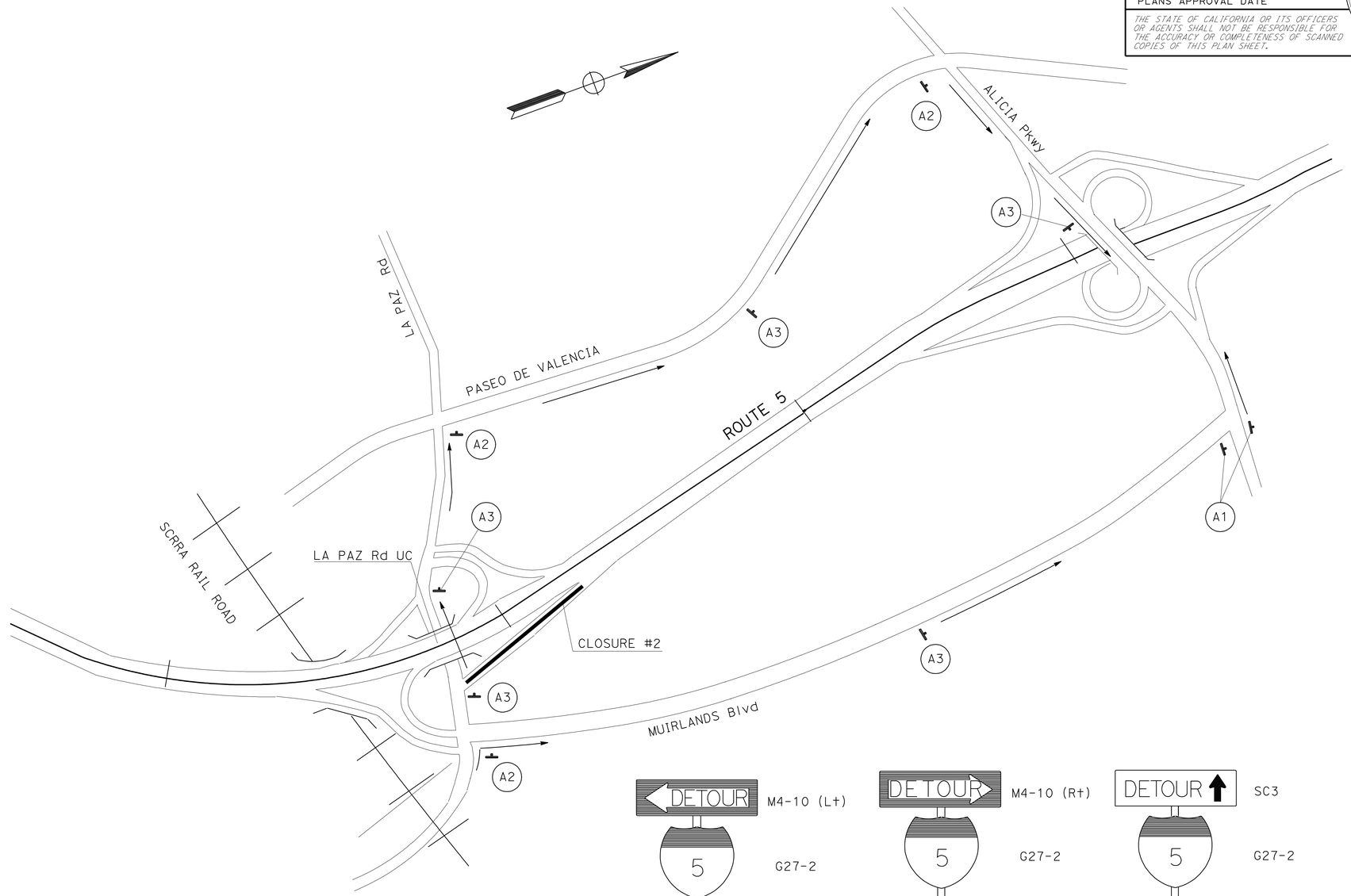

CLOSURE #2:

NB ROUTE 5 LA PAZ Rd ON-RAMP

DETOUR:

FROM LA PAZ Rd SOUTH, RIGHT ON MUIRLANDS Blvd, AND LEFT ON ALICIA Pkwy
OR RIGHT ON PASEO DE VALENCIA, AND RIGHT ON ALICIA Pkwy

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN
(DETOUR)

NO SCALE

TH-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	26	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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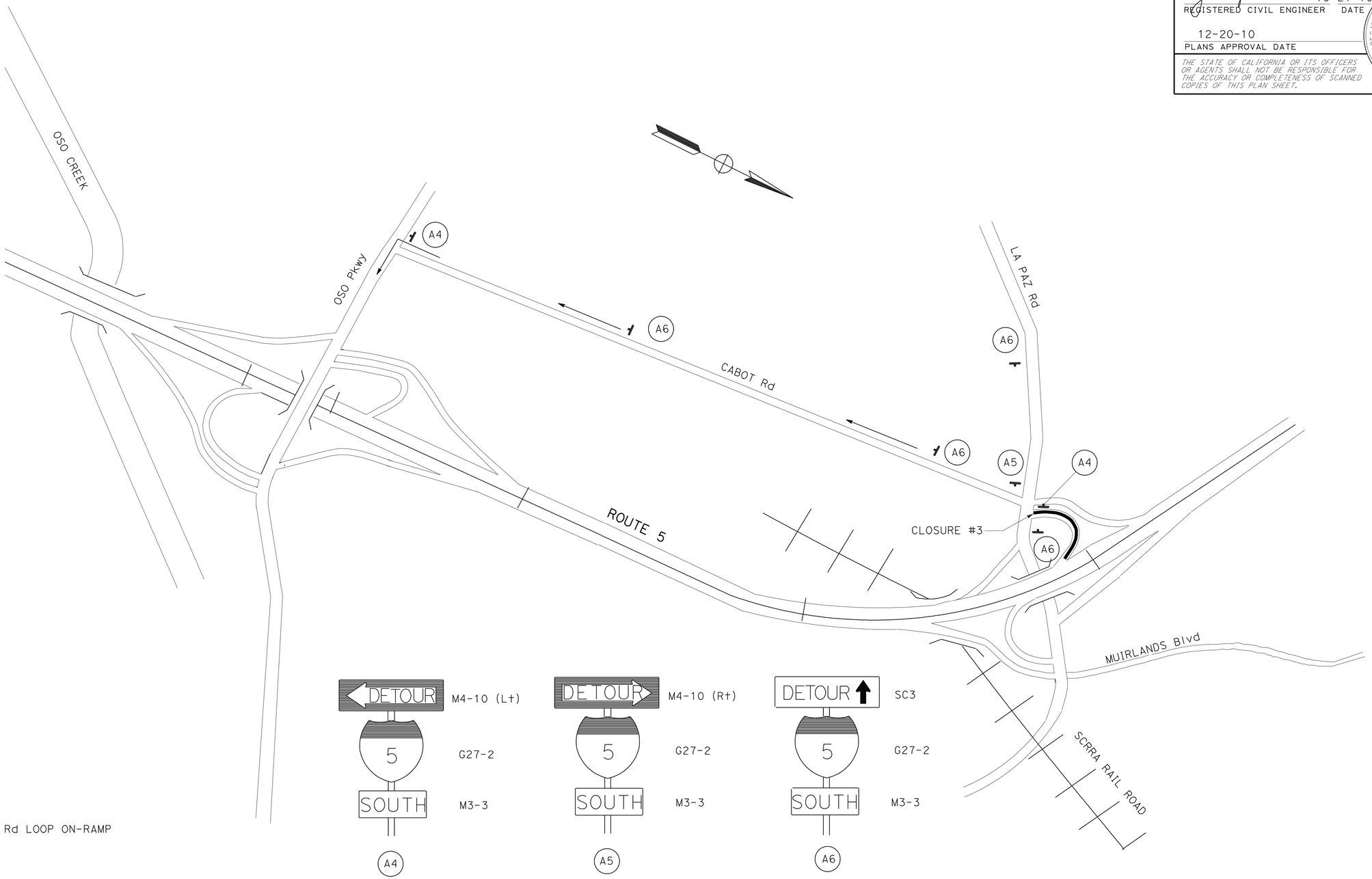

CLOSURE #3:

SB ROUTE 5 LA PAZ Rd LOOP ON-RAMP

DETOUR:

- FROM LA PAZ Rd SOUTH: LEFT ON CABOT Rd, AND LEFT ON OSO Pkwy
- FROM LA PAZ Rd NORTH: RIGHT ON CABOT Rd, AND LEFT ON OSO Pkwy

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	27	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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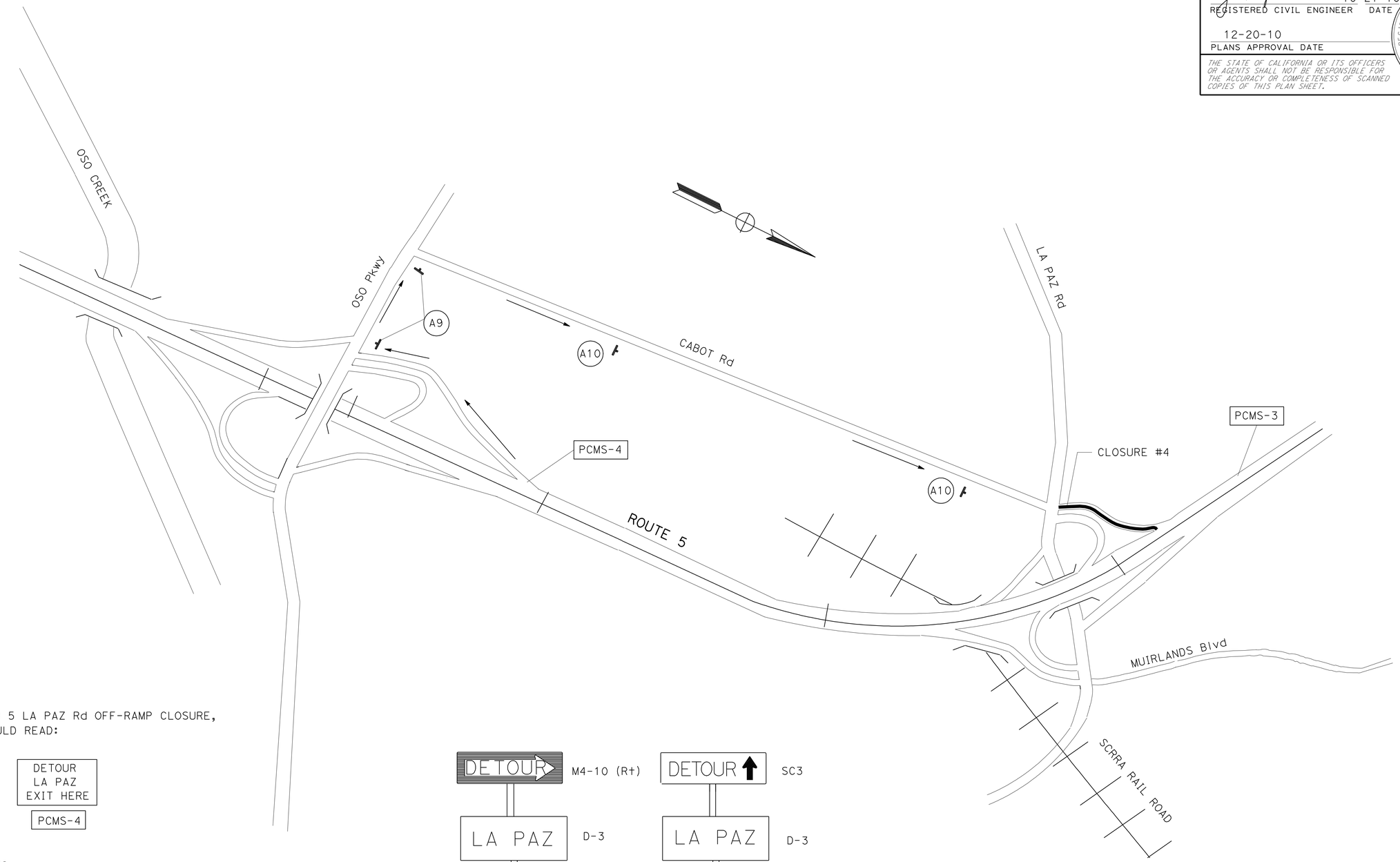


NOTES:

DURING THE SB 5 LA PAZ Rd OFF-RAMP CLOSURE, THE PCMS SHOULD READ:

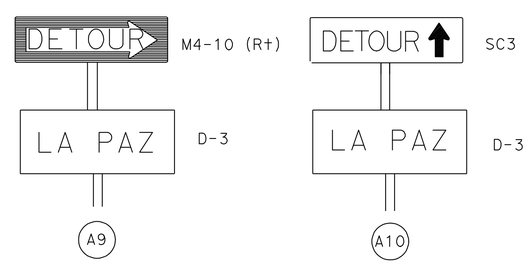
LA PAZ CLOSED USE OSO PKWY	DETOUR LA PAZ EXIT HERE
PCMS-3	PCMS-4

CLOSURE #4:

SB ROUTE 5 LA PAZ Rd OFF-RAMP

DETOUR:

EXIT OSO Pkwy, TURN RIGHT ON OSO Pkwy, AND RIGHT ON CABOT Rd



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-4

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

MAINTENANCE

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	28	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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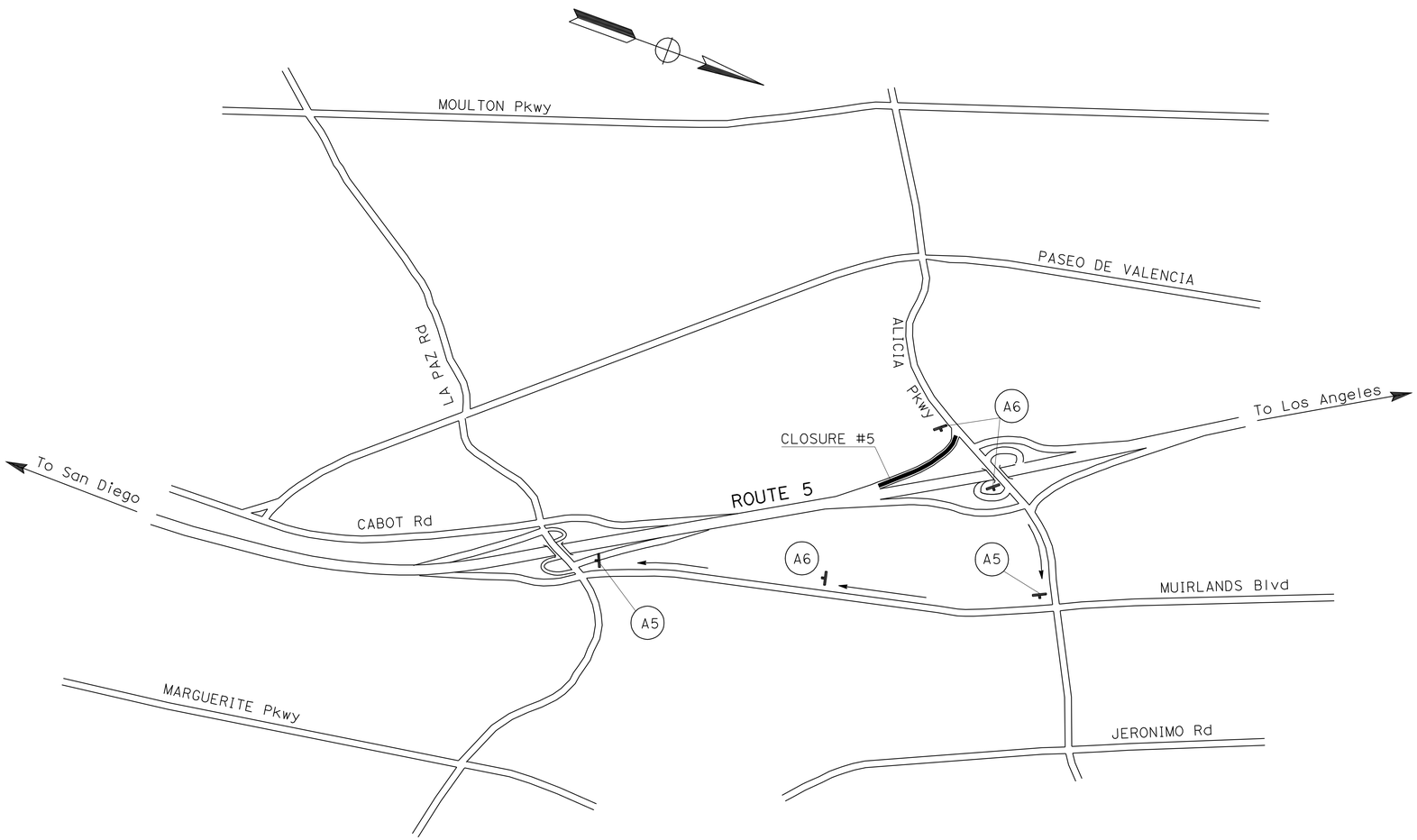

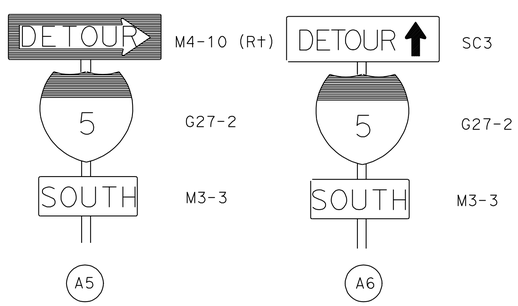

CLOSURE #5:

SB ROUTE 5 ALICIA Pkwy ON-RAMP

DETOUR:

FROM ALICIA Pkwy NORTH, RIGHT ON MUIRLANDS Blvd, AND RIGHT ON LA PAZ Rd

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	29	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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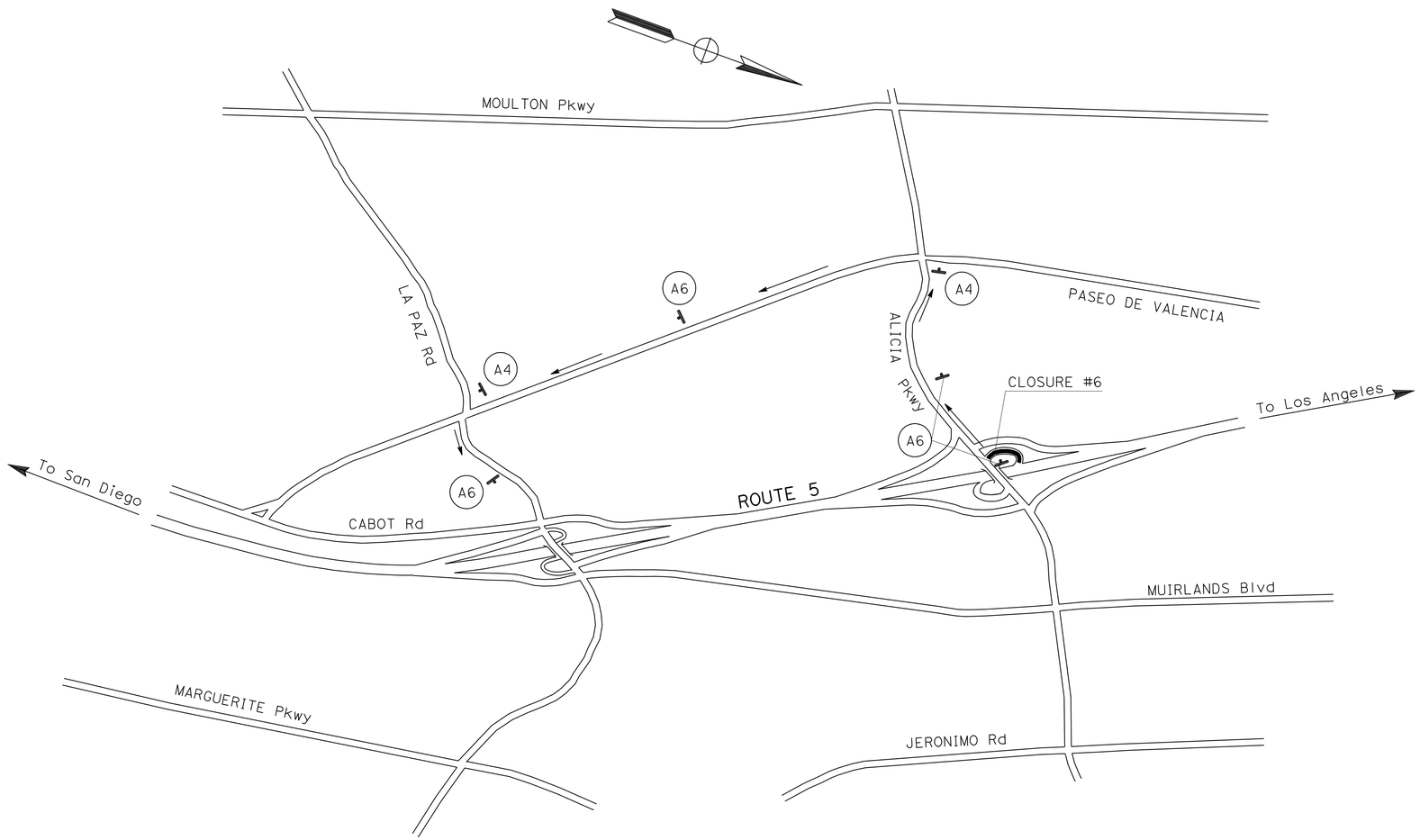

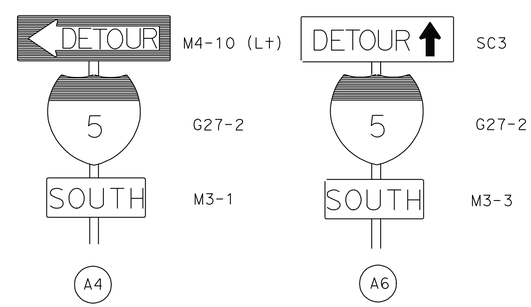

CLOSURE #6:

SB ROUTE 5 ALICIA Pkwy LOOP ON-RAMP

DETOUR:

FROM ALICIA Pkwy SOUTH, LEFT ON PASEO DE VALENCIA, AND LEFT ON LA PAZ Rd

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

TH-6

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 TIME PLOTTED => 08:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	30	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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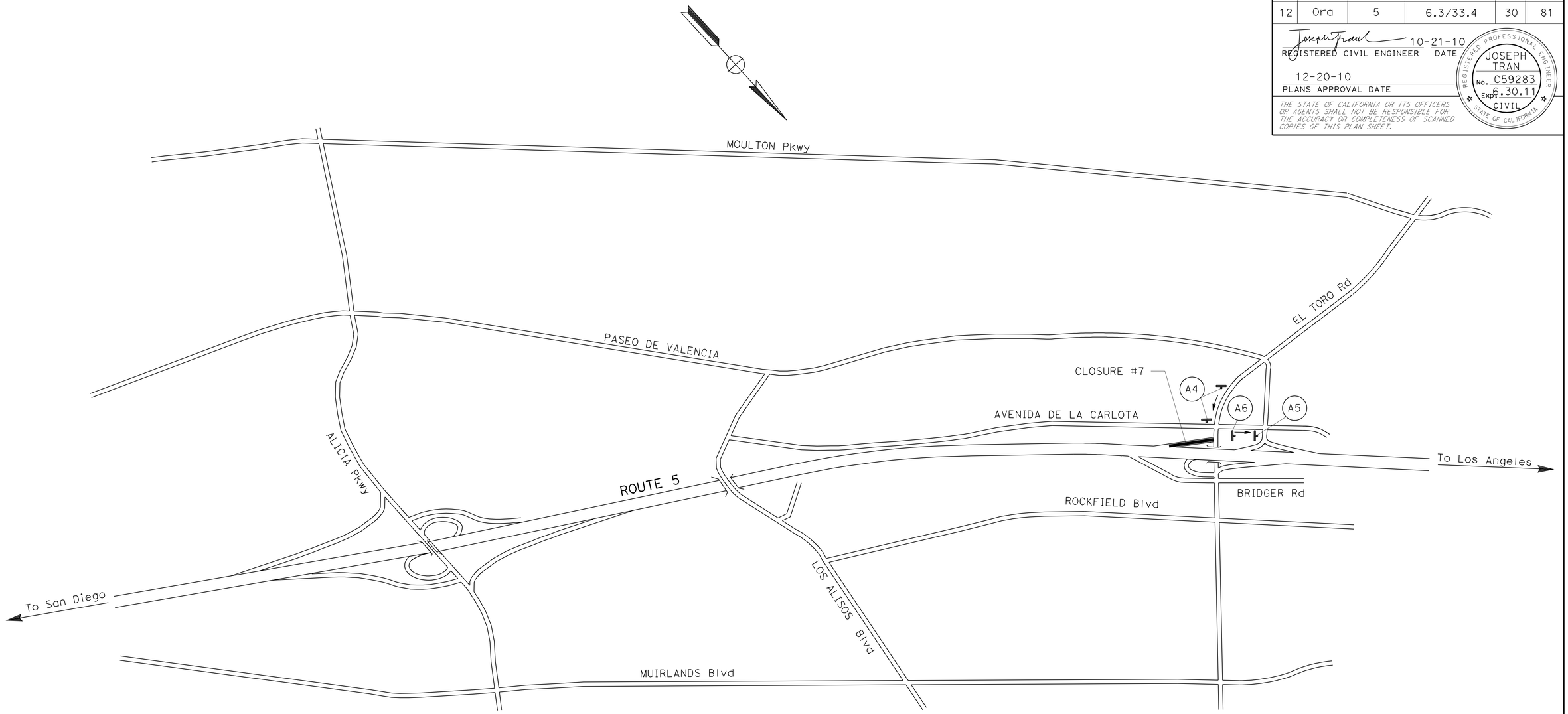

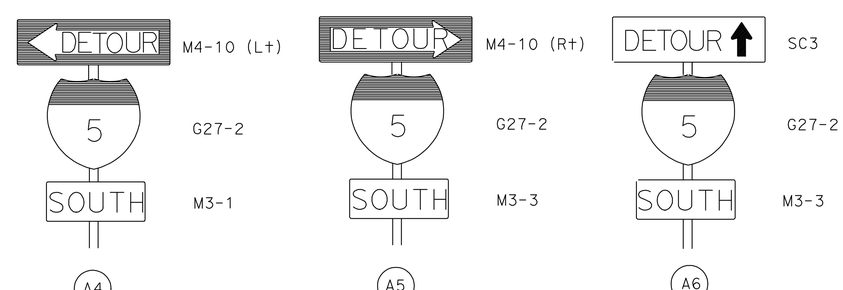

CLOSURE #7:

SB ROUTE 5 EL TORO Rd ON-RAMP

DETOUR:

FROM EL TORO Rd, TURN LEFT ON AVENIDA DE LA CARLOTA, AND RIGHT ON PASEO DE VALENCIA

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-7

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	31	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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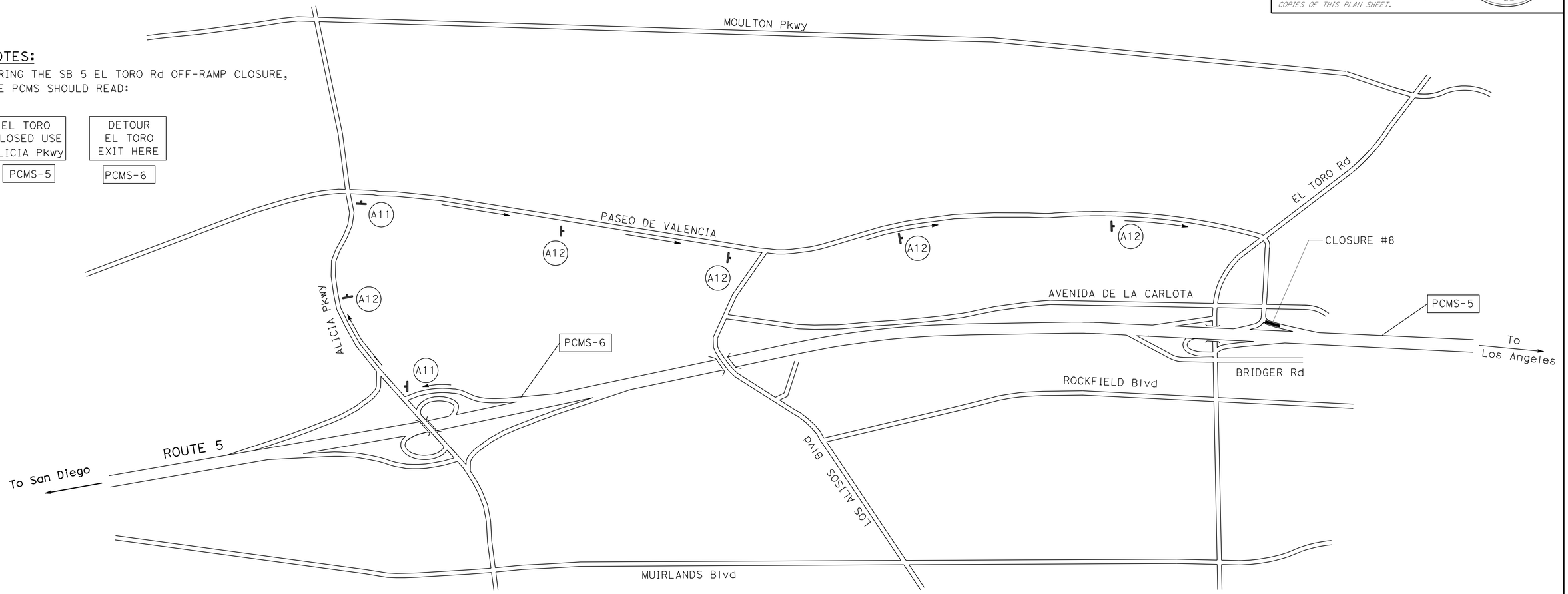
NOTES:

DURING THE SB 5 EL TORO Rd OFF-RAMP CLOSURE, THE PCMS SHOULD READ:

EL TORO CLOSED USE ALICIA Pkwy	DETOUR EL TORO EXIT HERE
PCMS-5	PCMS-6

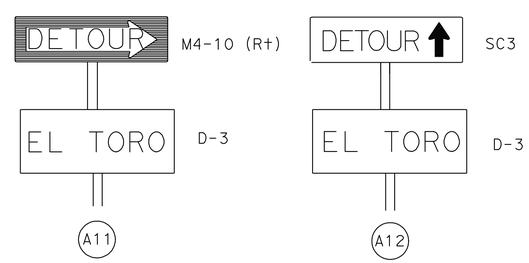


CLOSURE #8:

SB ROUTE 5 EL TORO Rd OFF-RAMP

DETOUR:

EXIT ALICIA Pkwy, RIGHT ON ALICIA Pkwy, AND RIGHT ON PASEO DE VALENCIA



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	32	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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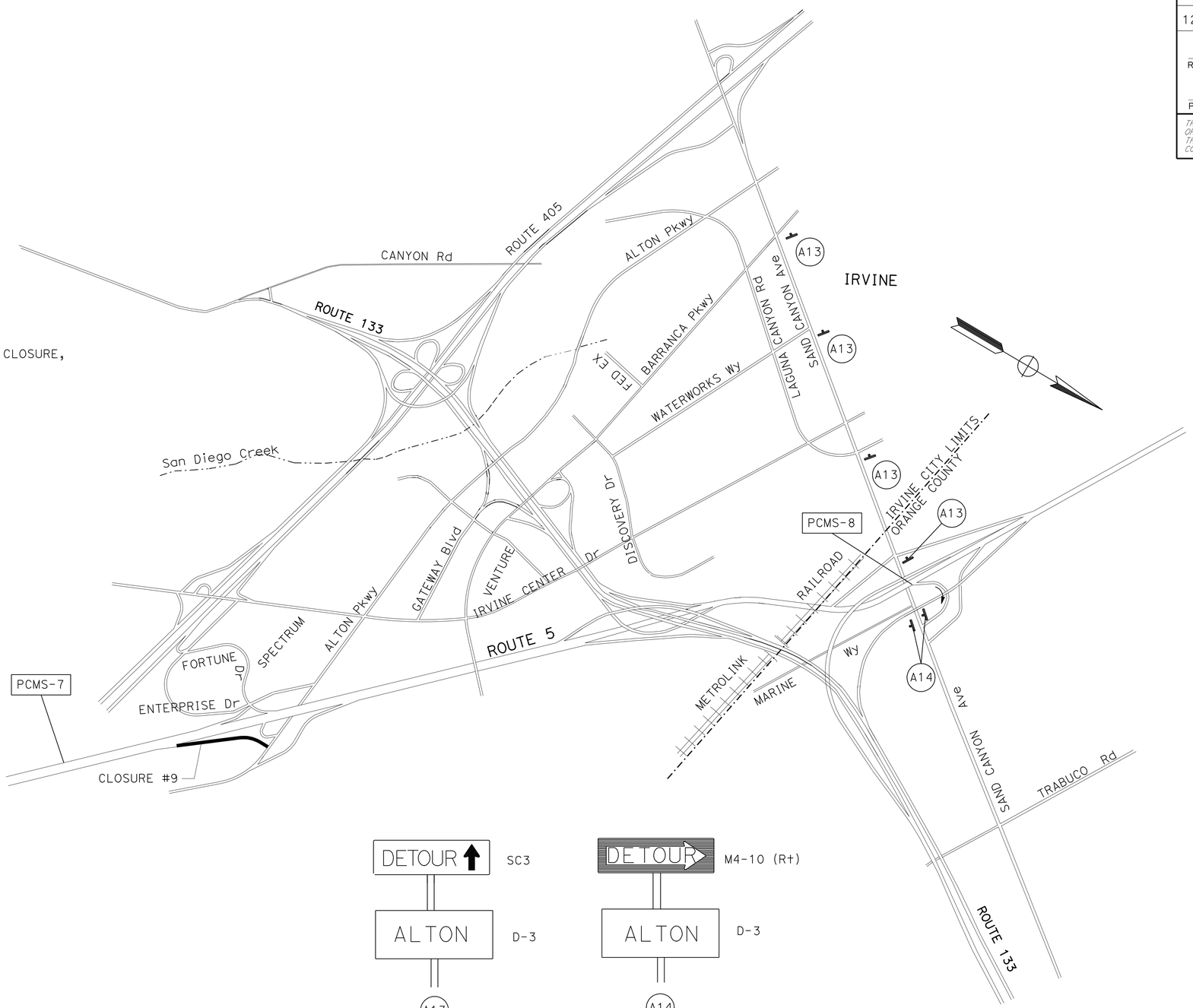
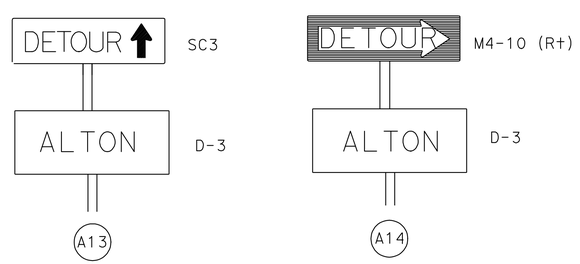
NOTES:

DURING THE NB 5 ALTON Pkwy OFF-RAMP CLOSURE, THE PCMS SHOULD READ:

ALTON CLOSED USE SAND CANYON	DETOUR ALTON EXIT HERE
PCMS-7	PCMS-8





CLOSURE #9:

NB ROUTE 5 ALTON Pkwy OFF-RAMP

DETOUR:

EXIT SAND CANYON Ave, RIGHT ON SAND CANYON Ave

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	33	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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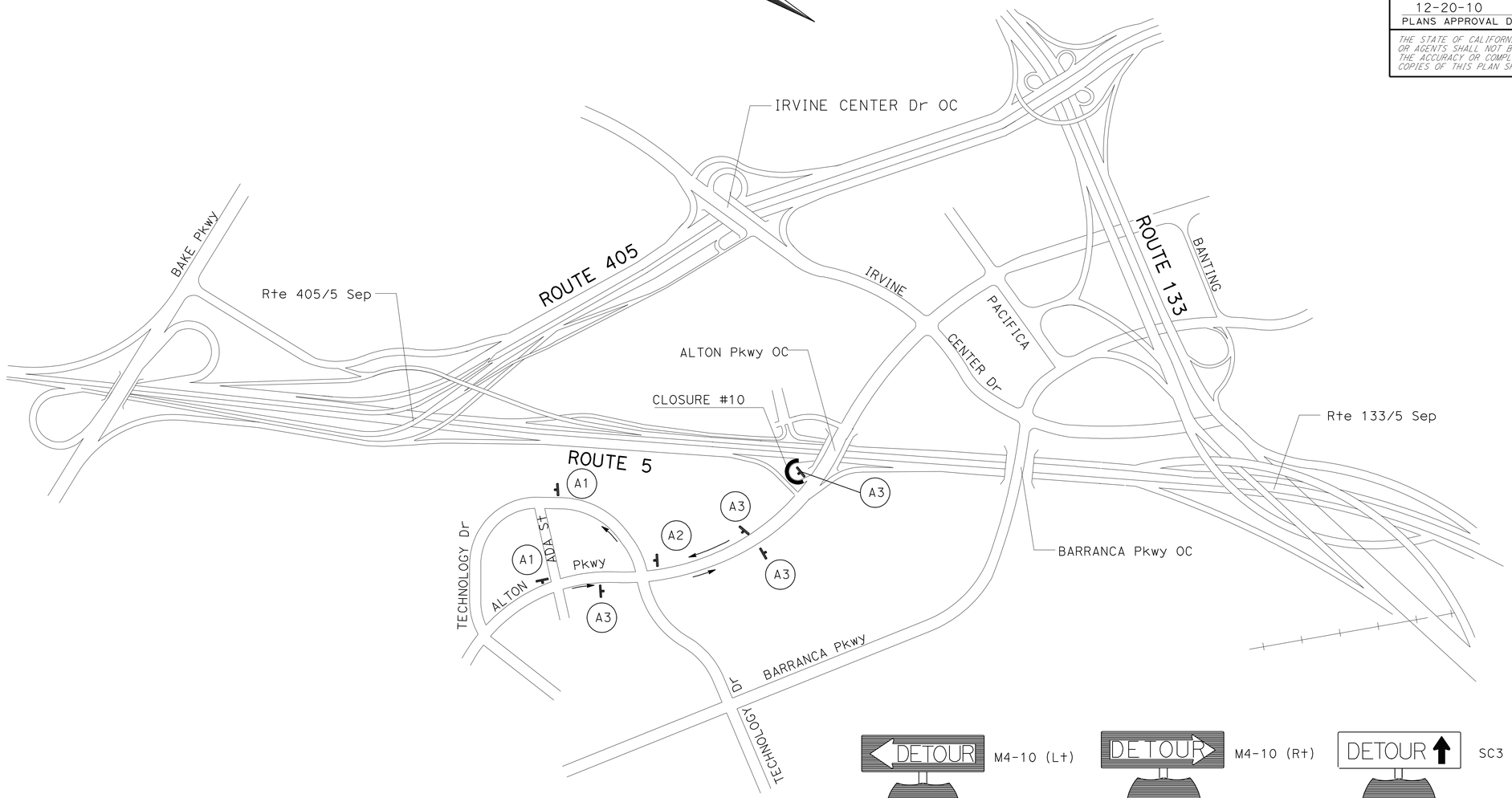

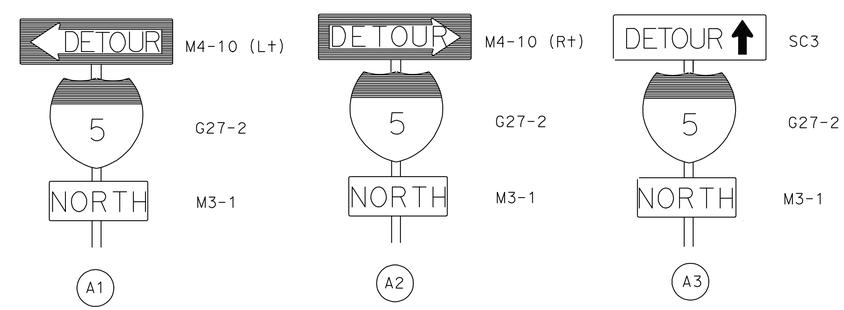

CLOSURE #10:

NB ROUTE 5 ALTON Pkwy LOOP ON-RAMP

DETOUR:

FROM ALTON Pkwy EAST, RIGHT ON TECHNOLOGY Dr, LEFT ON ADA St, AND LEFT ON ALTON Pkwy

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN
(DETOUR)
NO SCALE

TH-10

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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MAINTENANCE

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	34	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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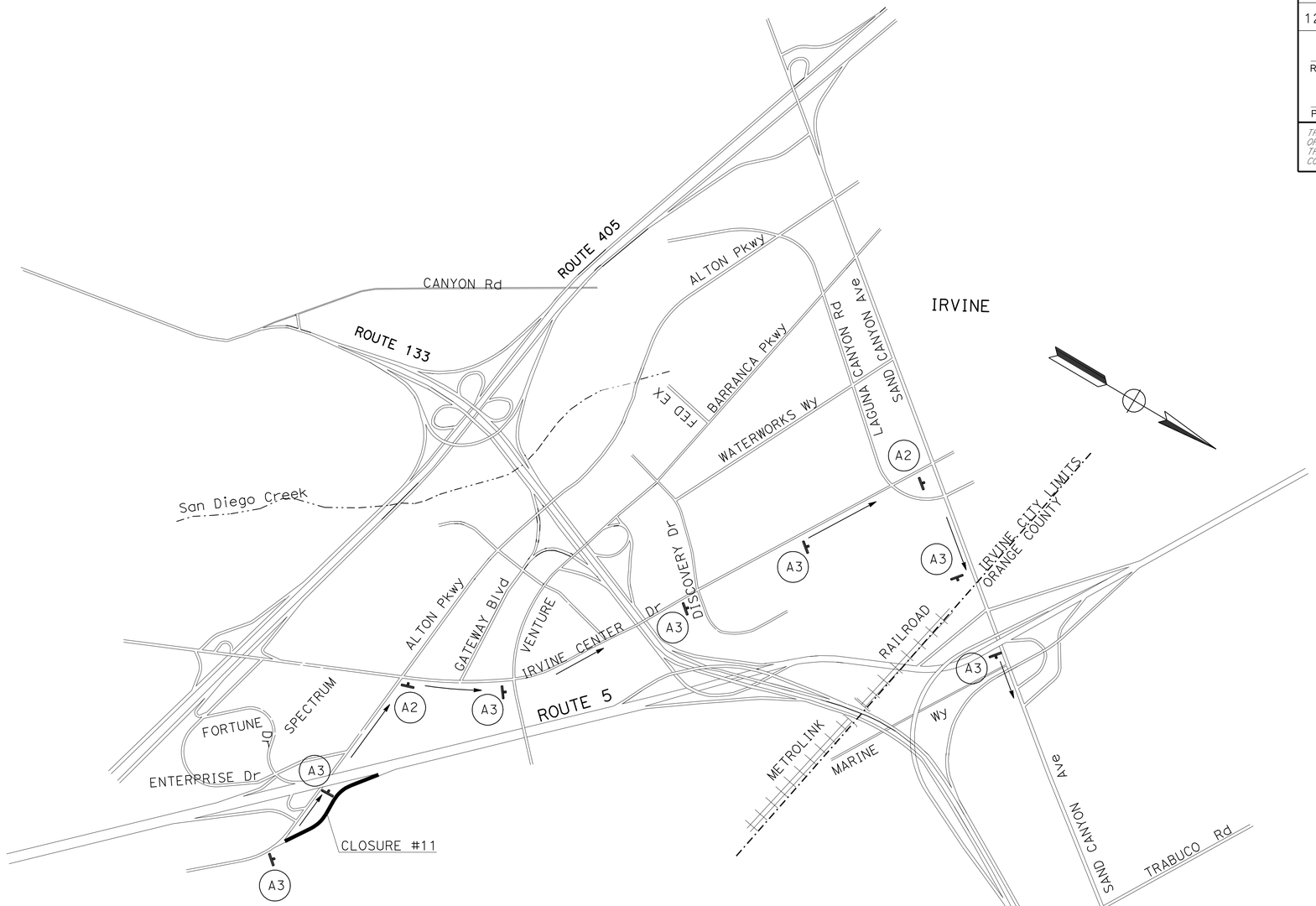

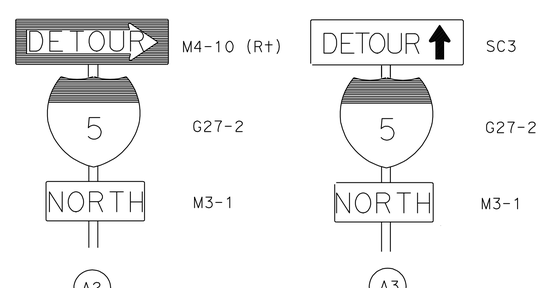

CLOSURE #11:

NB ROUTE 5 ALTON Pkwy ON-RAMP

DETOUR:

FROM ALTON Pkwy WEST, RIGHT ON IRVINE CENTER Dr, AND RIGHT ON SAND CANYON Ave

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN
(DETOUR)

NO SCALE

TH-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	35	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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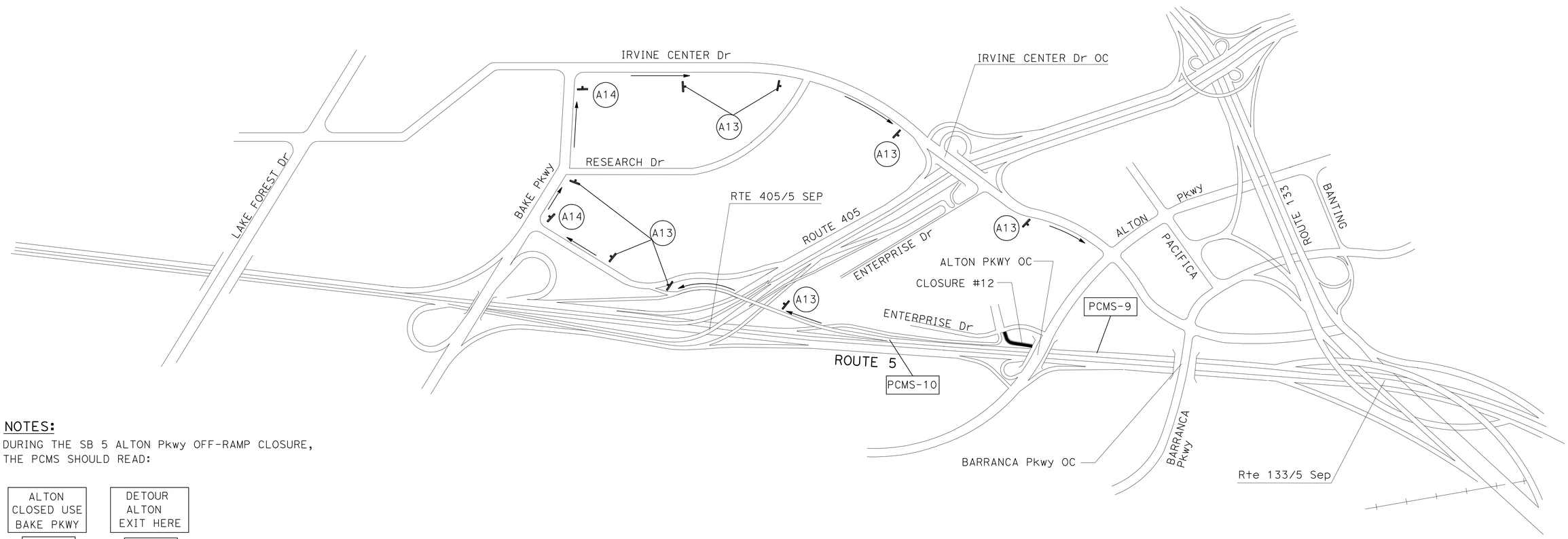
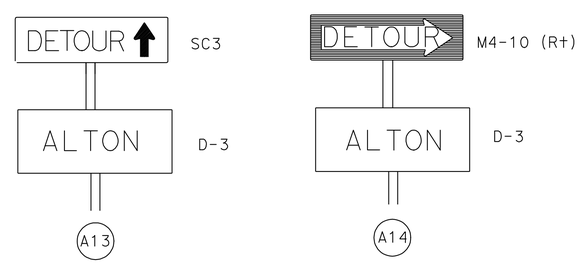


NOTES:

DURING THE SB 5 ALTON Pkwy OFF-RAMP CLOSURE, THE PCMS SHOULD READ:

ALTON CLOSED USE BAKE PKWY	DETOUR ALTON EXIT HERE
PCMS-9	PCMS-10



CLOSURE #12:

SB ROUTE 5 ALTON Pkwy OFF-RAMP

DETOUR:

EXIT BAKE Pkwy, RIGHT ON BAKE Pkwy, AND RIGHT ON IRVINE CENTER Dr

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	36	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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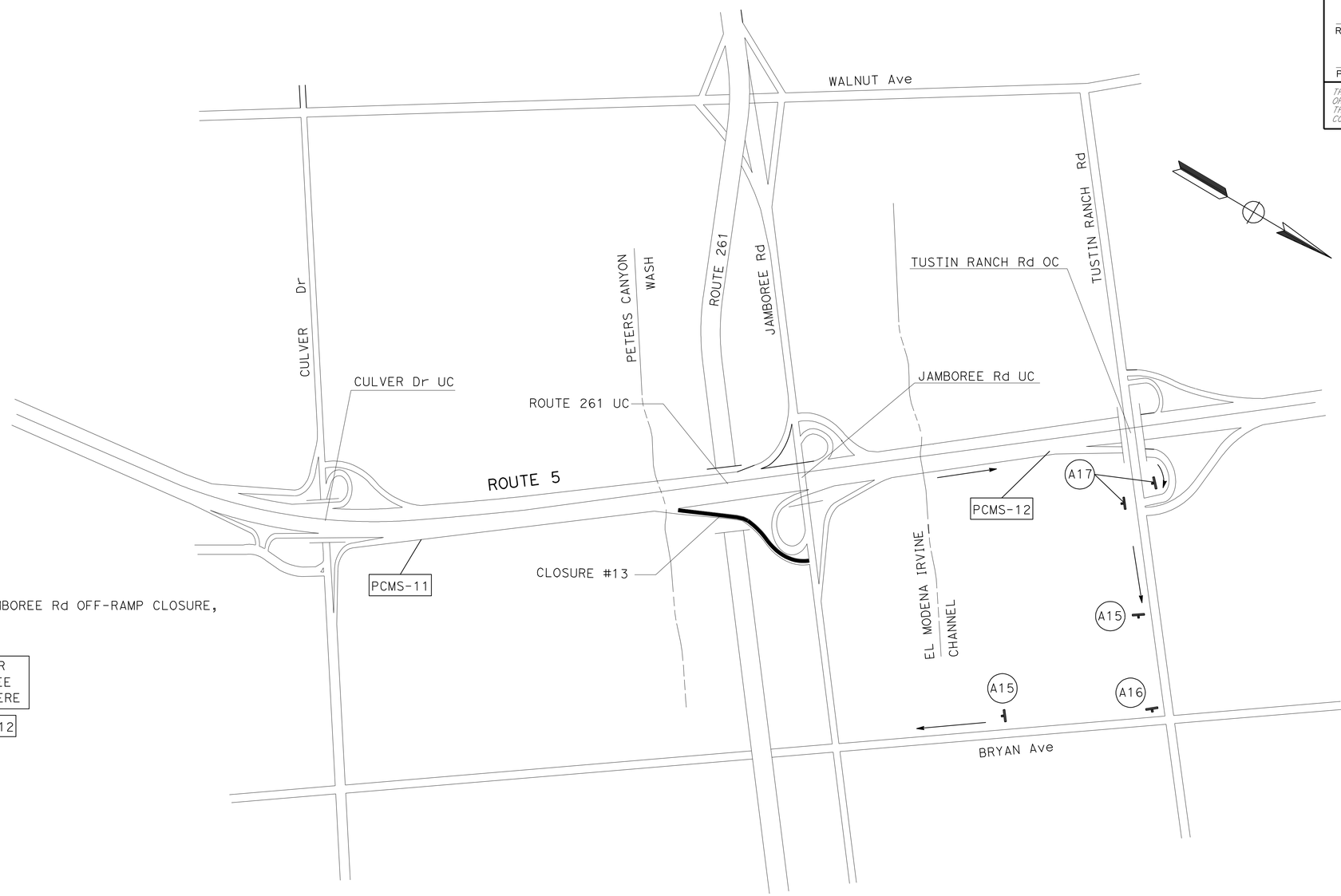


NOTES:

DURING THE NB Rte 5 JAMBOREE Rd OFF-RAMP CLOSURE, THE PCMS SHOULD READ:

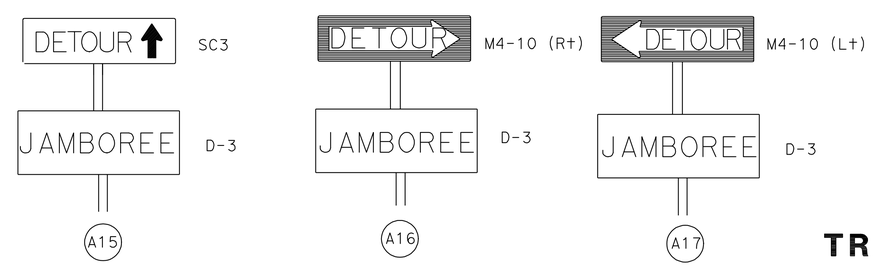
JAMBOREE CLOSED USE TUSTIN RANCH	DETOUR JAMBOREE EXIT HERE
PCMS-11	PCMS-12

CLOSURE #13:

NB Rte 5 JAMBOREE Rd OFF-RAMP

DETOUR:

EXIT TUSTIN RANCH Dr, LEFT ON TUSTIN RANCH Dr, AND RIGHT ON BRYAN Ave



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-13

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Caltrans
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FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	37	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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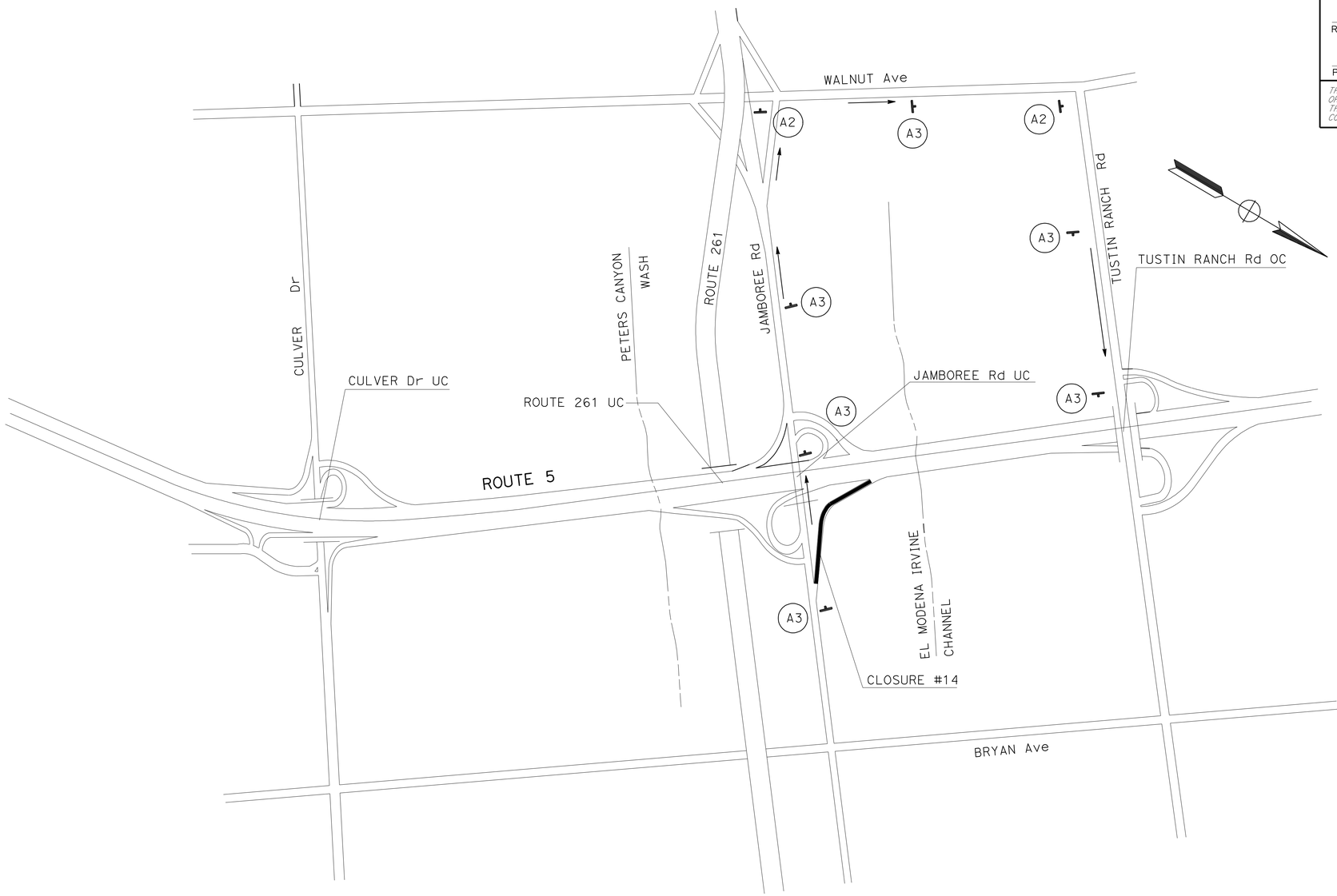
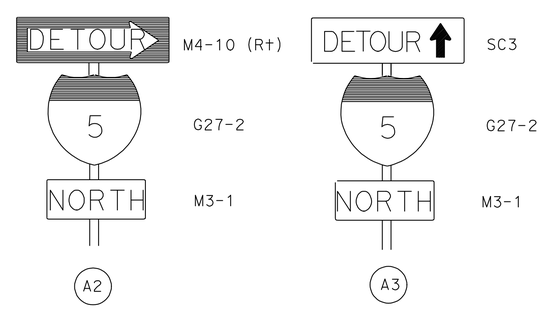


CLOSURE #14:

NB Rte 5 JAMBOREE Rd ON-RAMP

DETOUR:

FROM JAMBOREE Rd SOUTH, RIGHT ON WALNUT Ave, AND RIGHT ON TUSTIN RANCH Rd



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TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	38	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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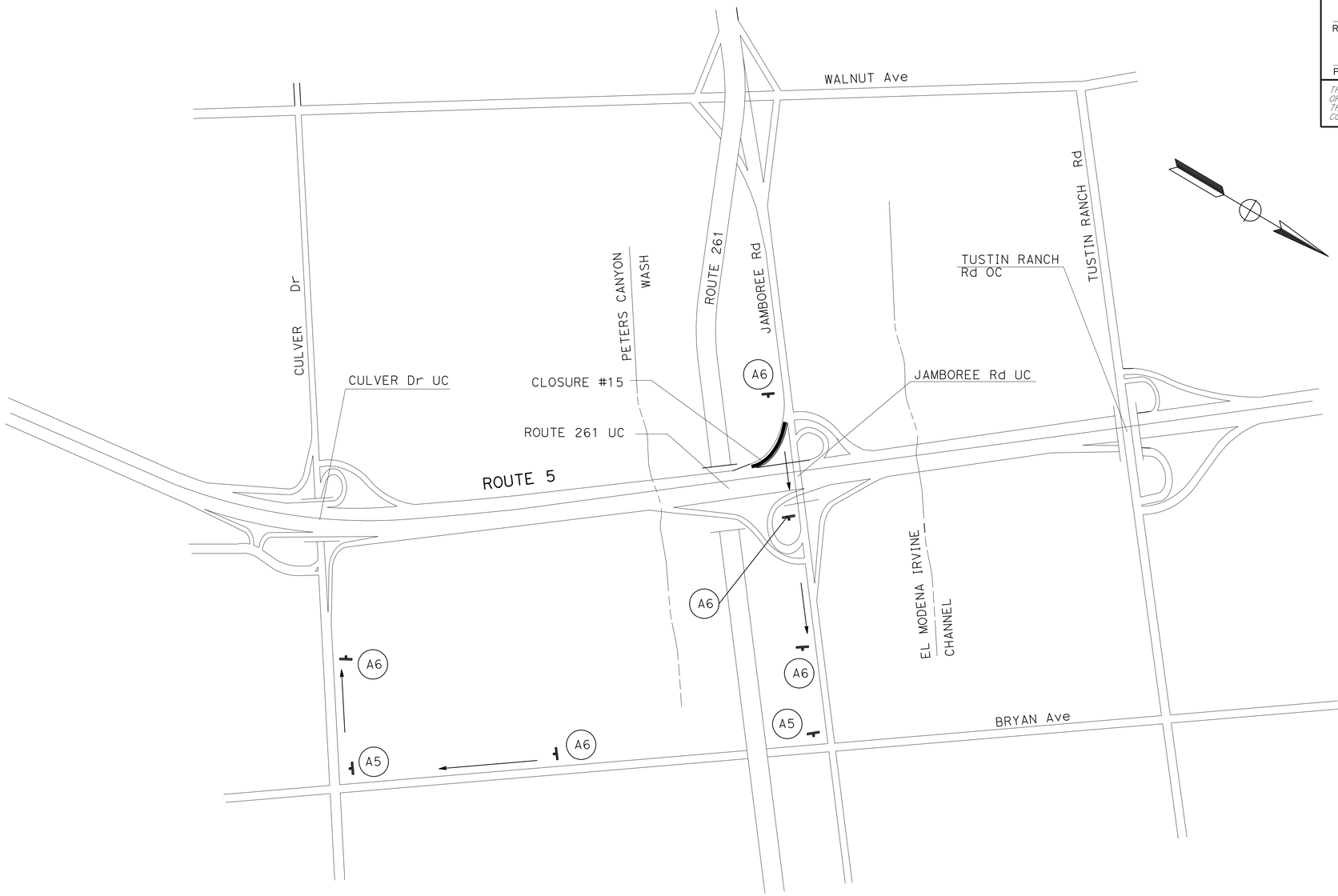
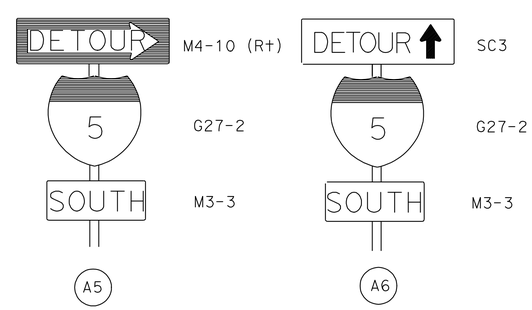


CLOSURE #15:

SB Rte 5 JAMBOREE Rd ON-RAMP

DETOUR:

FROM JAMBOREE Rd NORTH, RIGHT ON BRYAN Ave, AND RIGHT ON CULVER Dr



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	39	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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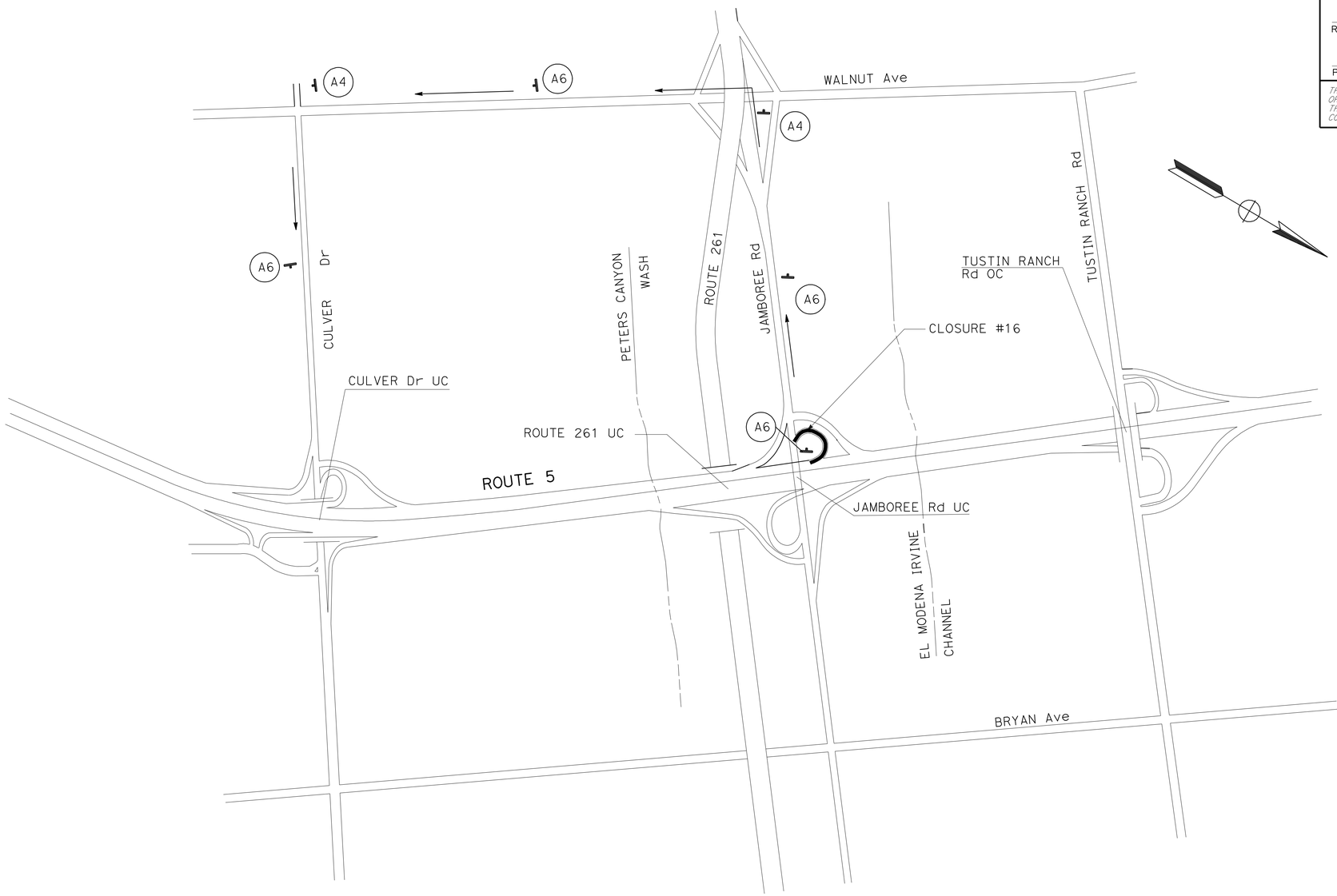
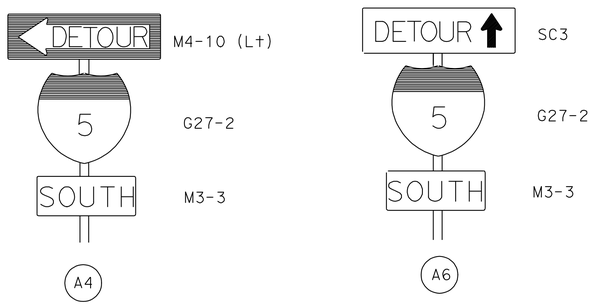


CLOSURE #16:

SB Rte 5 JAMBOREE Rd LOOP ON-RAMP

DETOUR:

FROM JAMBOREE Rd SOUTH, LEFT ON WALNUT Ave, AND LEFT ON CULVER Dr



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-16

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LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	40	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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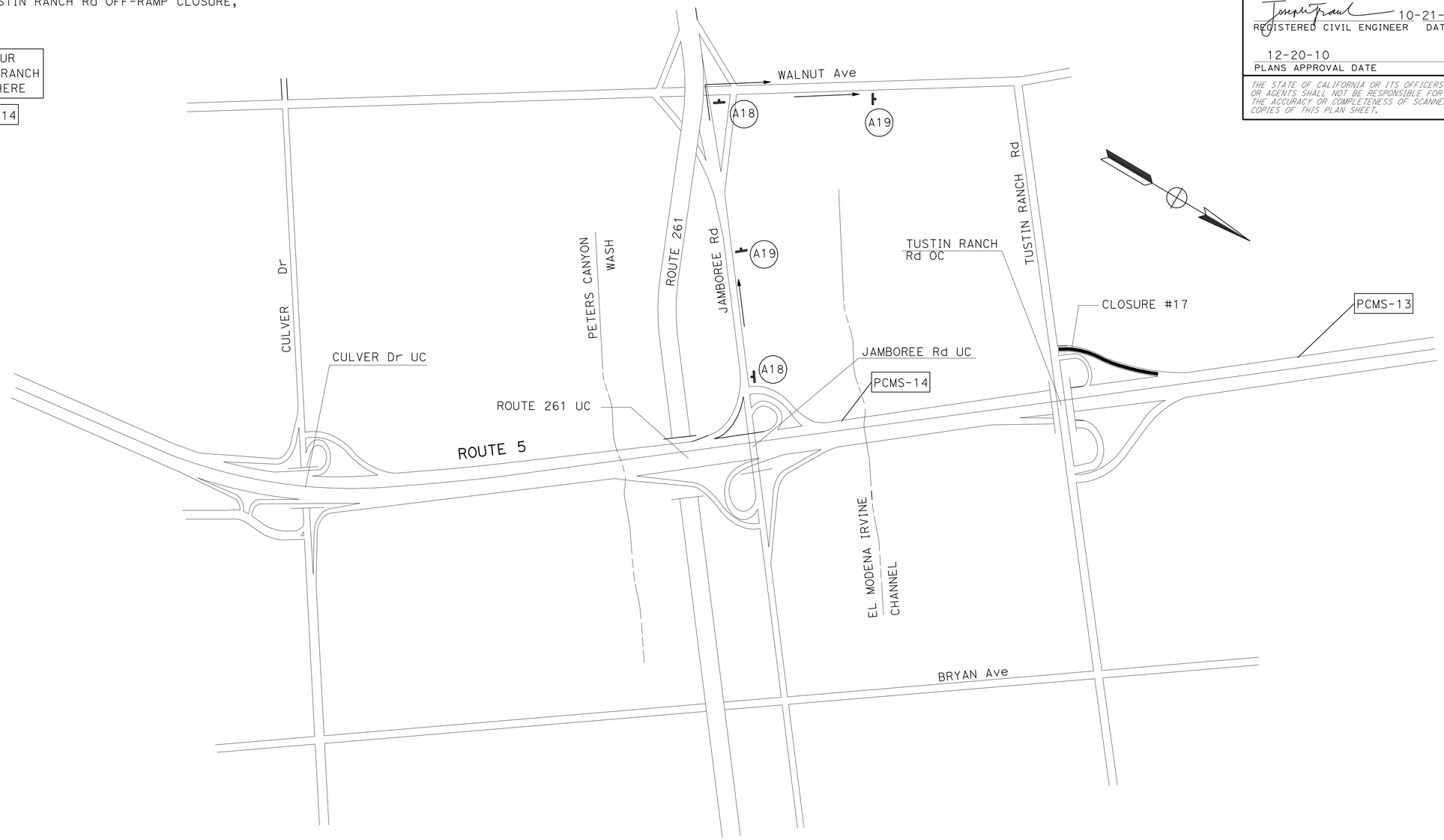
NOTES:

DURING THE SB Rte 5 TUSTIN RANCH Rd OFF-RAMP CLOSURE, THE PCMS SHOULD READ:

TUSTIN RANCH CLOSED USE JAMBOREE	DETOUR TUSTIN RANCH EXIT HERE
PCMS-13	PCMS-14

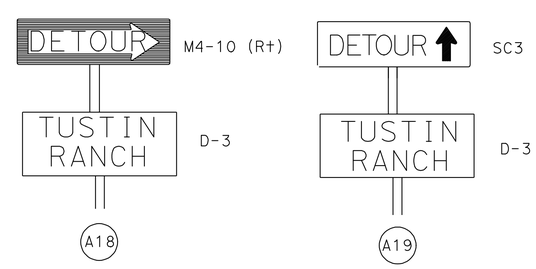


CLOSURE #17:

SB Rte 5 TUSTIN RANCH Rd OFF-RAMP

DETOUR:

EXIT JAMBOREE Rd, RIGHT ON JAMBOREE Rd, AND RIGHT ON WALNUT Ave



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 08:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	41	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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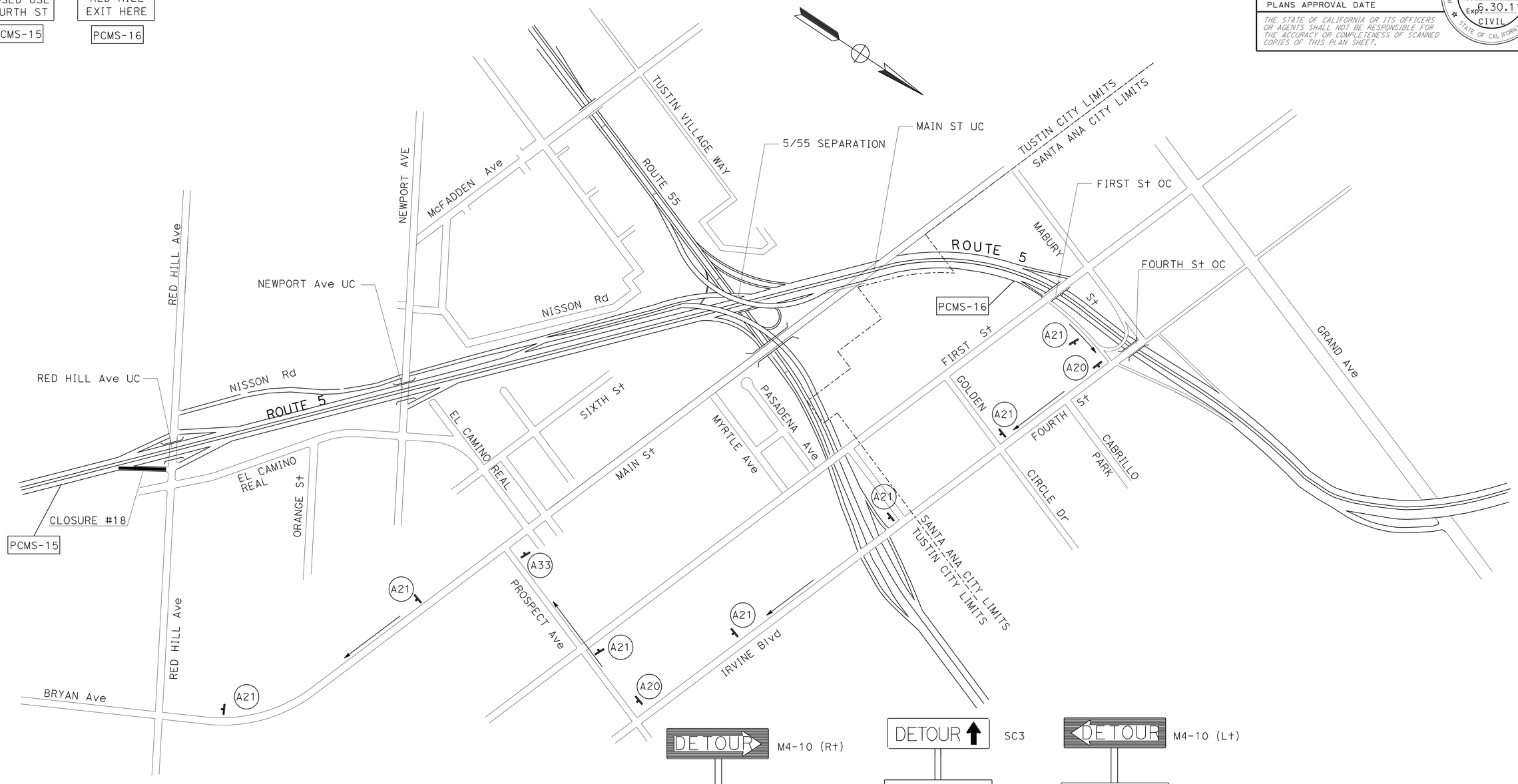
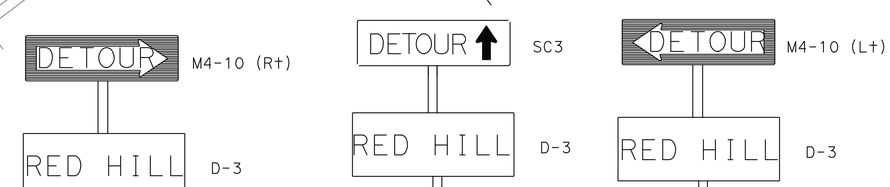
NOTES:

DURING THE NB RTE 5 RED HILL Ave OFF-RAMP CLOSURE, THE PCMS SHOULD READ:

RED HILL CLOSED USE FOURTH ST	DETOUR RED HILL EXIT HERE
PCMS-15	PCMS-16





CLOSURE #18:

NB ROUTE 5 RED HILL Ave OFF-RAMP

DETOUR:

EXIT FOURTH St, RIGHT ON FOURTH St/IRVINE Blvd, RIGHT ON PROSPECT Ave, AND RIGHT ON MAIN St

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
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LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	42	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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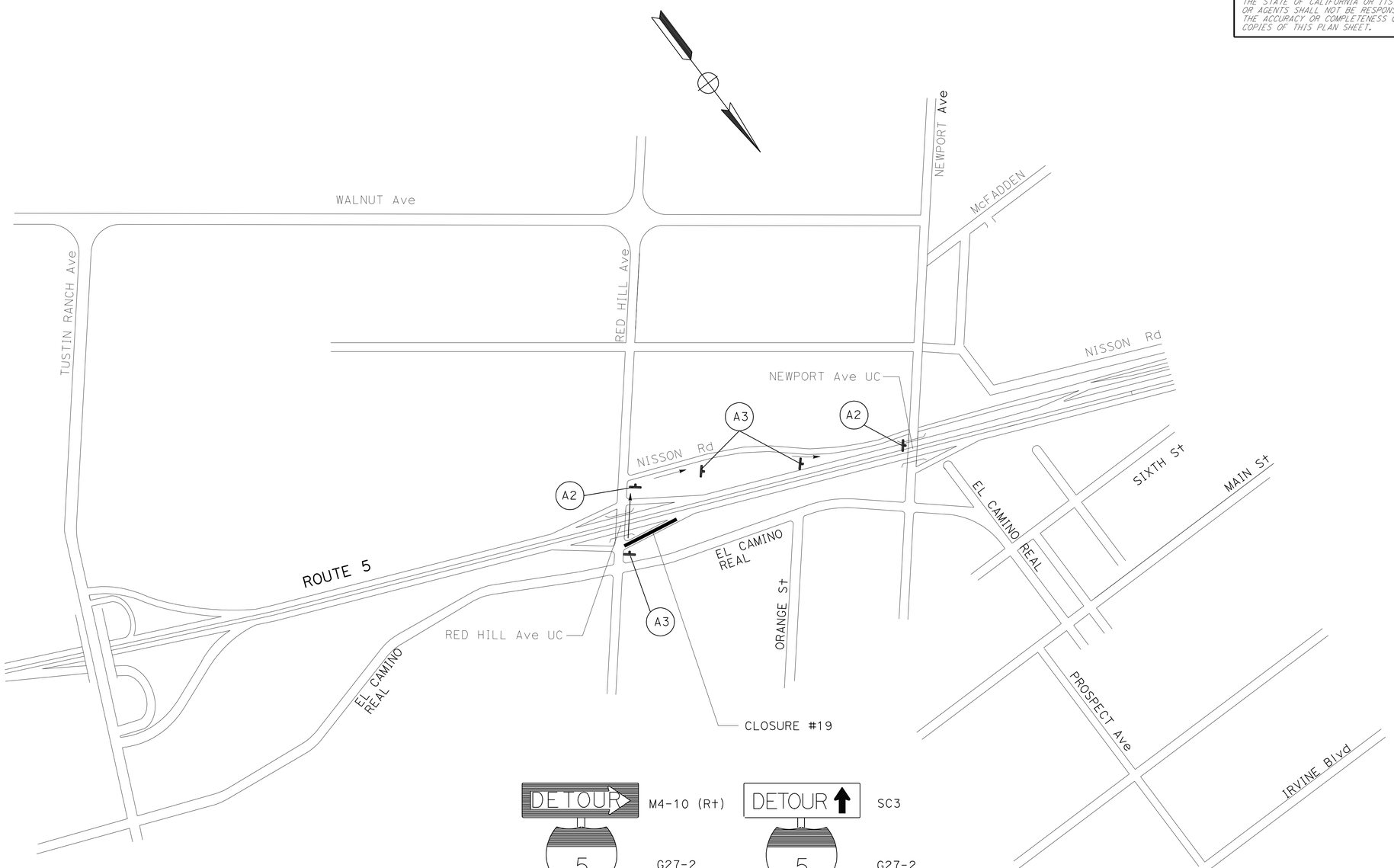

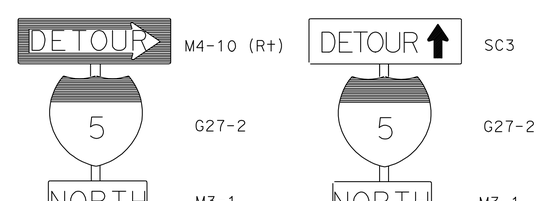

CLOSURE #19:

NB ROUTE 5 RED HILL Ave ON-RAMP

DETOUR:

FROM RED HILL Ave SOUTH, RIGHT ON NISSON Ave, AND RIGHT ON NEWPORT Ave

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY
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DATE REVISED

LAST REVISION 00-00-00 DATE PLOTTED => 24-DEC-2010 TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	43	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH TRAN
No. C59283
Exp. 6.30.11
CIVIL
STATE OF CALIFORNIA

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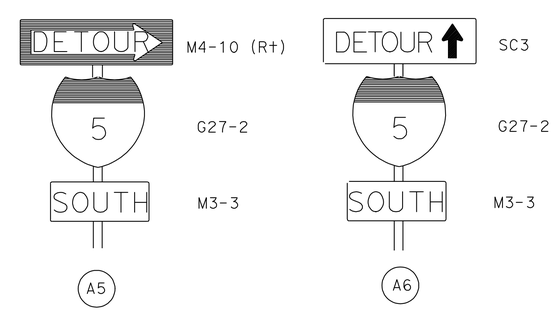
CLOSURE #20:

SB ROUTE 5 RED HILL Ave ON-RAMP

DETOUR:

FROM RED HILL Ave NORTH, RIGHT ON BRYAN Ave, AND RIGHT ON TUSTIN RANCH Rd



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-20

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Caltrans®
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	44	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

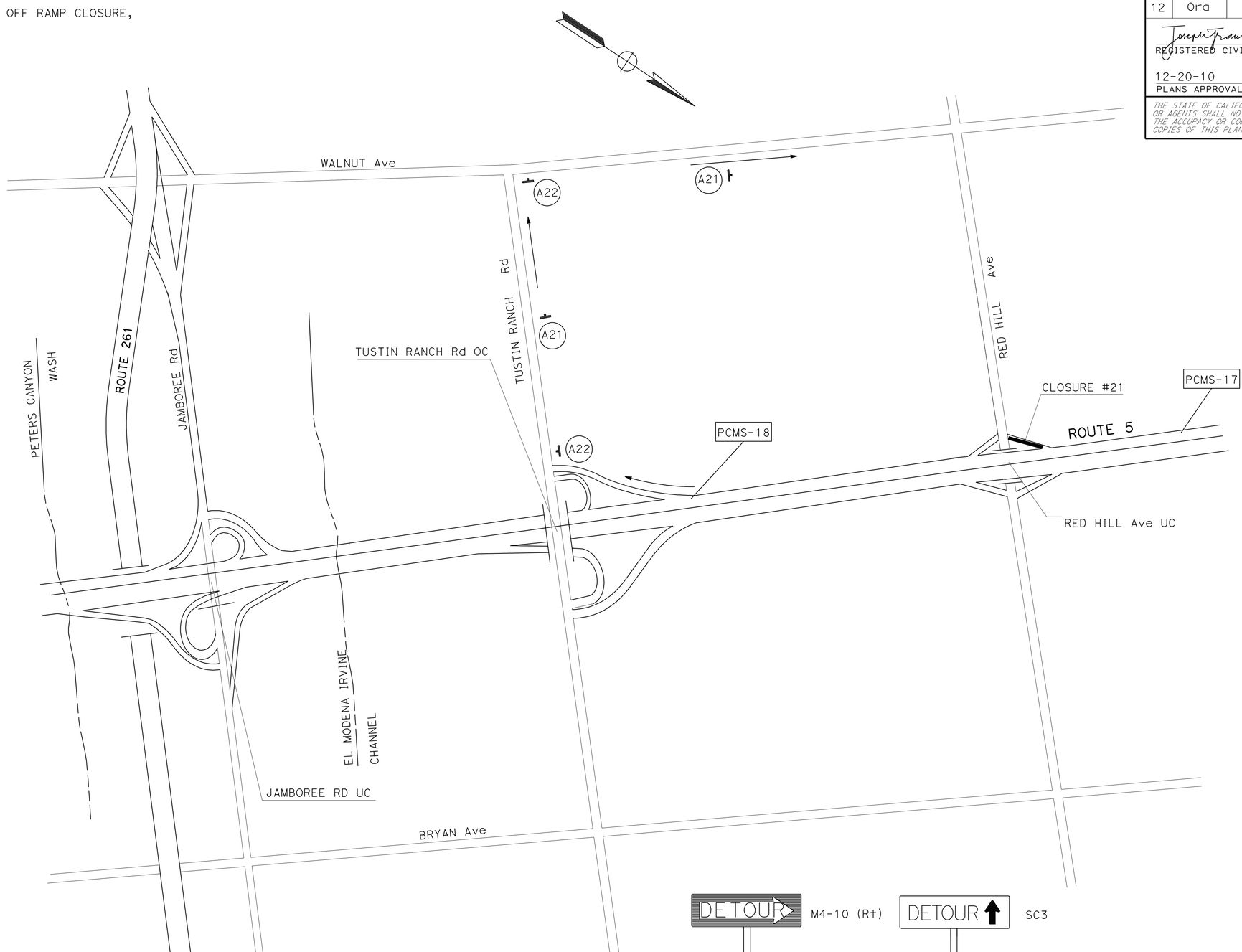
REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

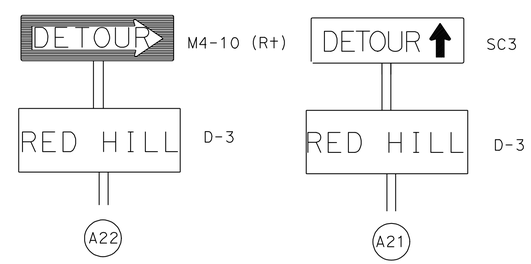
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

DURING THE SB RTE 5 RED HILL Ave OFF RAMP CLOSURE, THE PCMS SHOULD READ:

RED HILL CLOSED USE TUSTIN RANCH	DETOUR RED HILL EXIT HERE
PCMS-17	PCMS-18





CLOSURE #21:

SB ROUTE 5 RED HILL Ave OFF-RAMP

DETOUR:

EXIT TUSTIN RANCH Ave, RIGHT ON TUSTIN RANCH Ave, AND RIGHT ON WALNUT Ave

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-21

J TRAN	8/1/10
REVISED BY	DATE REVISED
PHAT TRAN	JOSEPH TRAN
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 07-07-10
DATE PLOTTED => 24-DEC-2010
TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	45	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

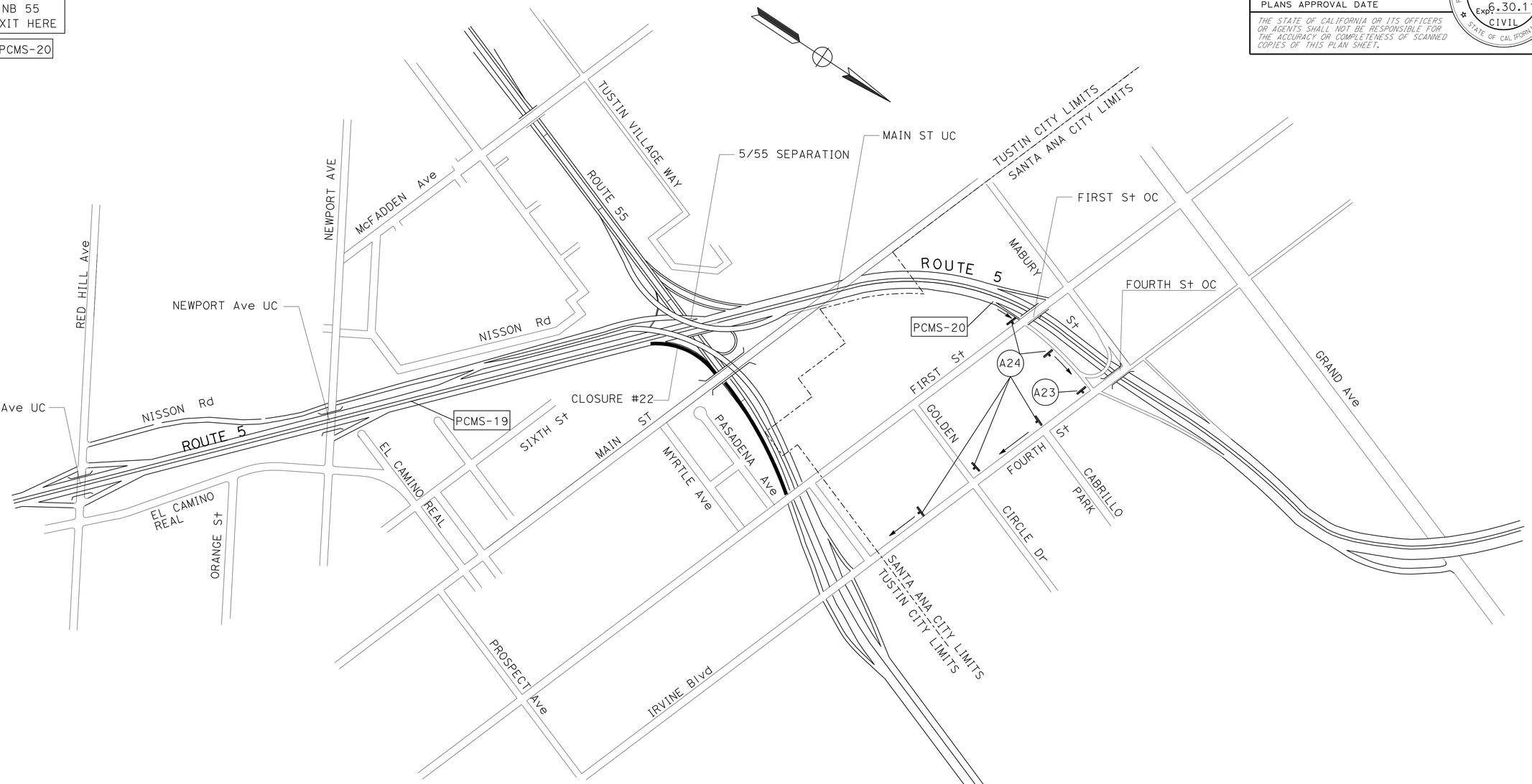
REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

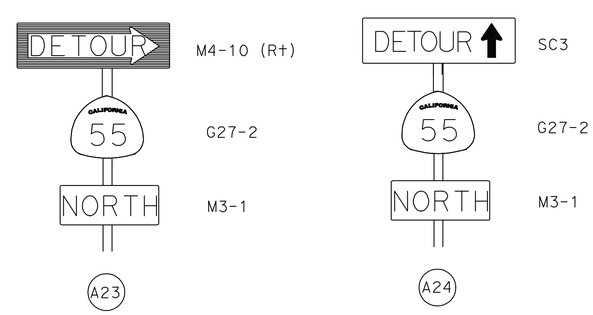
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

DURING THE NB RTE 5 TO NB RTE 55 CONNECTOR CLOSURE, THE PCMS SHOULD READ:

NB 55 CONNECTOR CLOSED	DETOUR NB 55 EXIT HERE
PCMS-19	PCMS-20





CLOSURE #22:

NB ROUTE 5 TO NB ROUTE 55 CONNECTOR

DETOUR:

EXIT 4TH St, AND RIGHT ON 4TH St

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

TH-22

J TRAN	8/1/10	REVISED BY	DATE REVISED
PHAT TRAN	JOSEPH TRAN	CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 07-07-10 | DATE PLOTTED => 24-DEC-2010 | TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	46	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-20
PLANS APPROVAL DATE

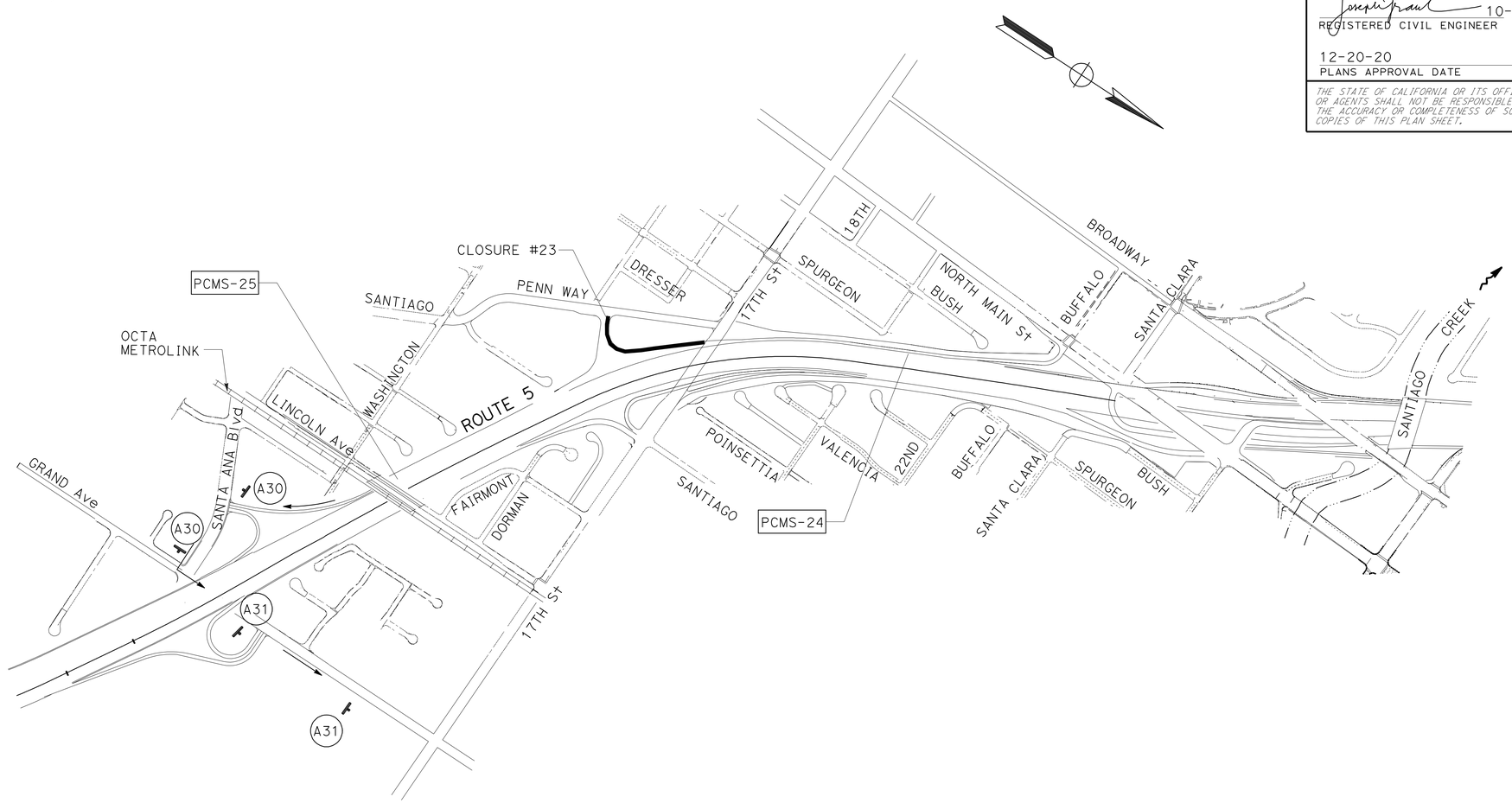
REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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:

DURING THE SB RTE 5 17TH St OFF RAMP CLOSURE,
THE PCMS SHOULD READ:

17TH CLOSED	DETOUR 17TH EXIT HERE
PCMS-24	PCMS-25

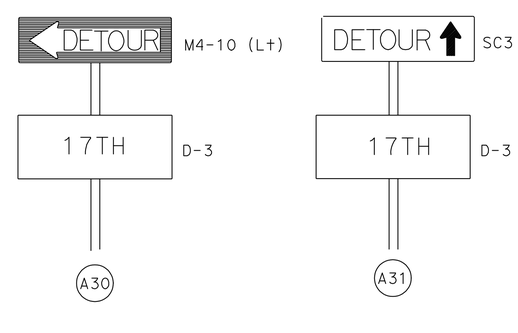


CLOSURE #23:

SB Rte 5 17TH St OFF-RAMP

DETOUR:

Exit SANTA ANA Blvd, LEFT ON SANTA ANA Blvd, AND LEFT ON GRAND Ave



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-23

J TRAN	8/1/10	REVISED BY	DATE REVISED
PHAT TRAN	JOSEPH TRAN	CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE

LAST REVISION 07-07-10 | DATE PLOTTED => 24-DEC-2010 | TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	47	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

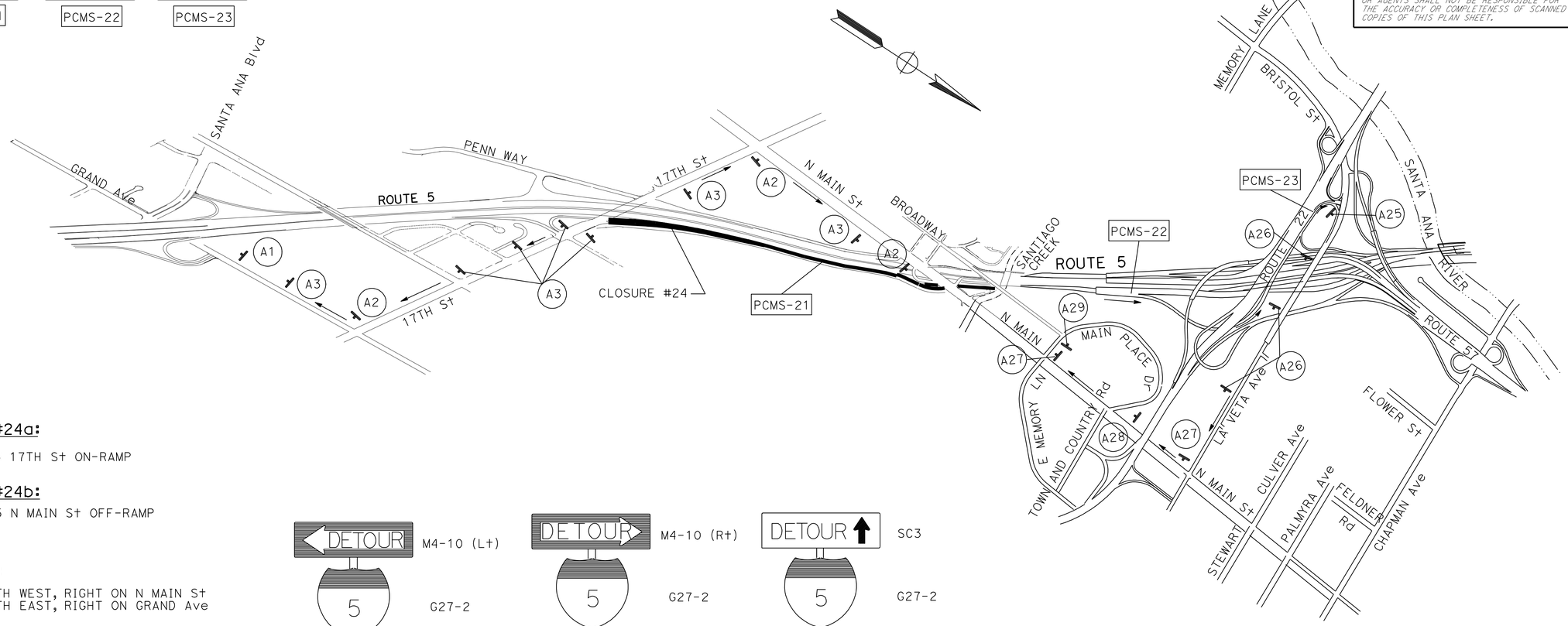
REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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:

DURING THE NB RTE 5 MAIN St AND BROADWAY OFF RAMPS CLOSURE, THE PCMS SHOULD READ:

MAIN/ BROADWAY CLOSED	DETOUR MAIN/ BROADWAY TAKE W 22	DETOUR MAIN/ BROADWAY EXIT HERE
PCMS-21	PCMS-22	PCMS-23



CLOSURE #24a:

1- NB Rte 5 17TH St ON-RAMP

CLOSURE #24b:

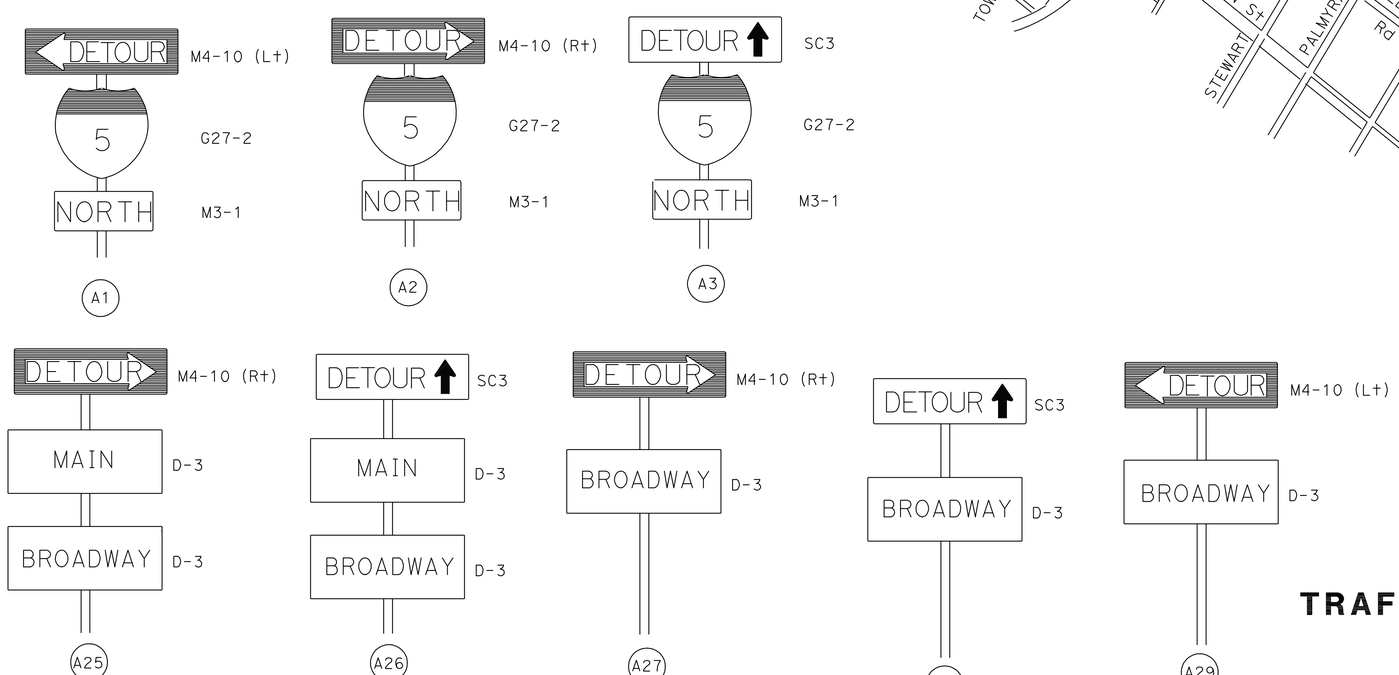
2- NB Rte 5 N MAIN St OFF-RAMP

DETOUR a:

1- FROM 17TH WEST, RIGHT ON N MAIN St
 - FROM 17TH EAST, RIGHT ON GRAND Ave

DETOUR b:

2- NB ROUTE 5 TO WB ROUTE 22,
EXIT WB ROUTE 22 LA VETA Ave OFF-RAMP,
RIGHT ON LA VETA Ave



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-24

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	MAINTENANCE	FUNCTIONAL SUPERVISOR	MASSOUD TAJIK
CALCULATED-DESIGNED BY	PHAT TRAN	REVISED BY	J TRAN
CHECKED BY	JOSEPH TRAN	DATE REVISED	8/1/10

LAST REVISION 07-07-10 | DATE PLOTTED => 24-DEC-2010 | TIME PLOTTED => 07:21

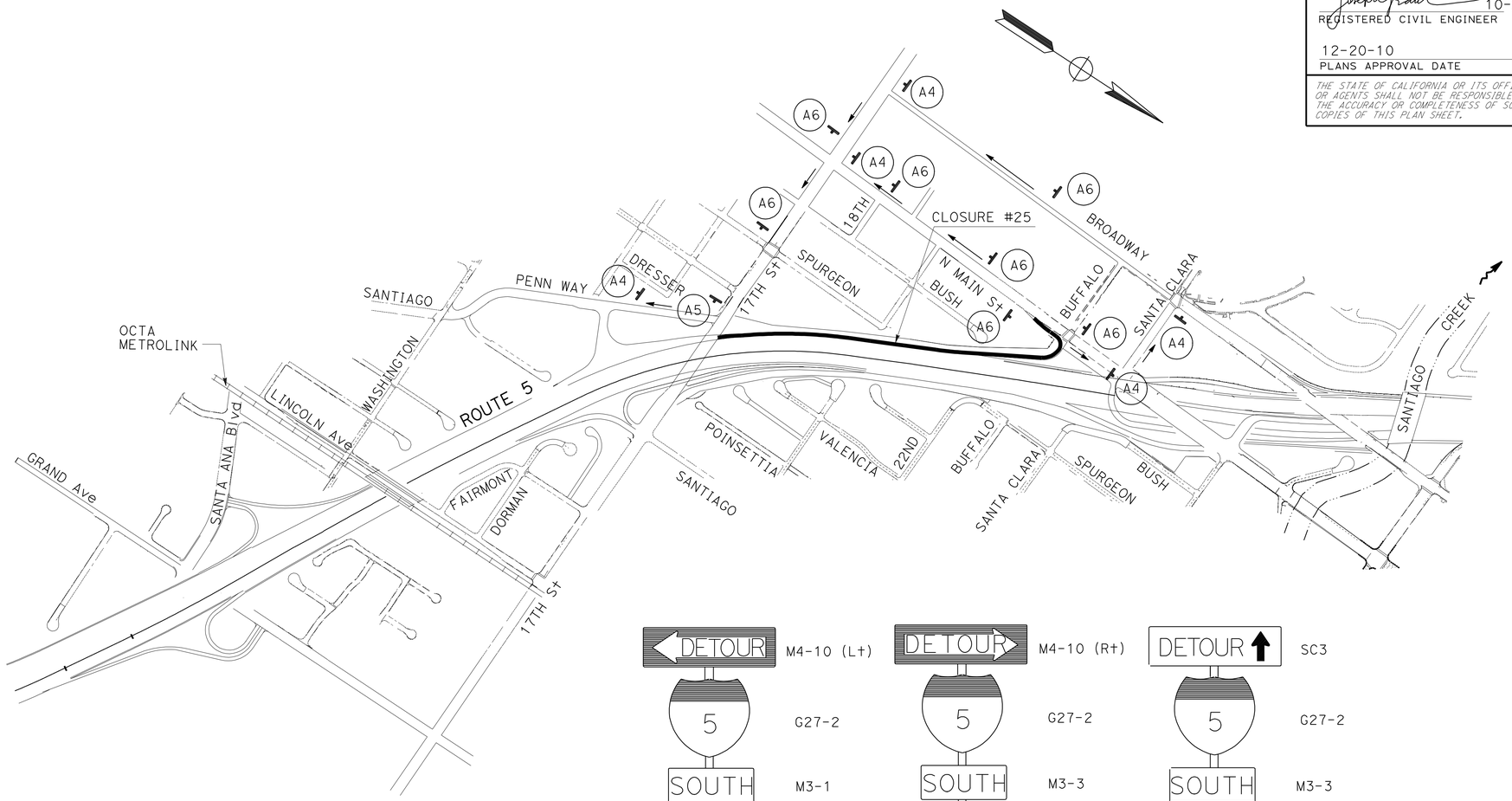
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	48	81

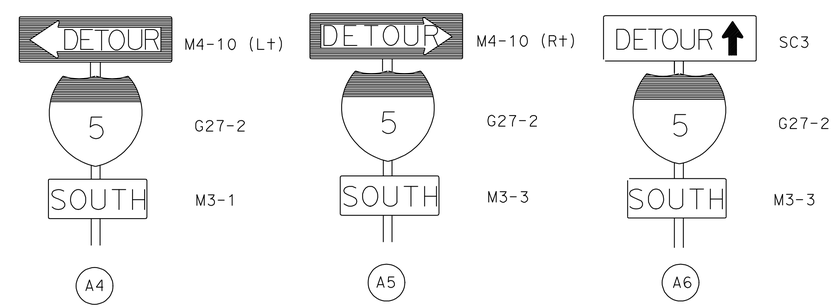
REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.





CLOSURE #25:

SB Rte 5 N MAIN St ON-RAMP

DETOUR:

1a- FROM N MAIN St NORTH, LEFT ON SANTA CLARA, LEFT ON BROADWAY, LEFT ON 17TH St, AND RIGHT ON PENN Wy
1b- FROM N MAIN St SOUTH, LEFT ON 17TH St, AND RIGHT ON PENN Wy

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: JOSEPH TRAN
REVISED BY: J TRAN
DATE REVISED: 8/1/10

LAST REVISION 07-07-10 | DATE PLOTTED => 24-DEC-2010 | TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	49	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

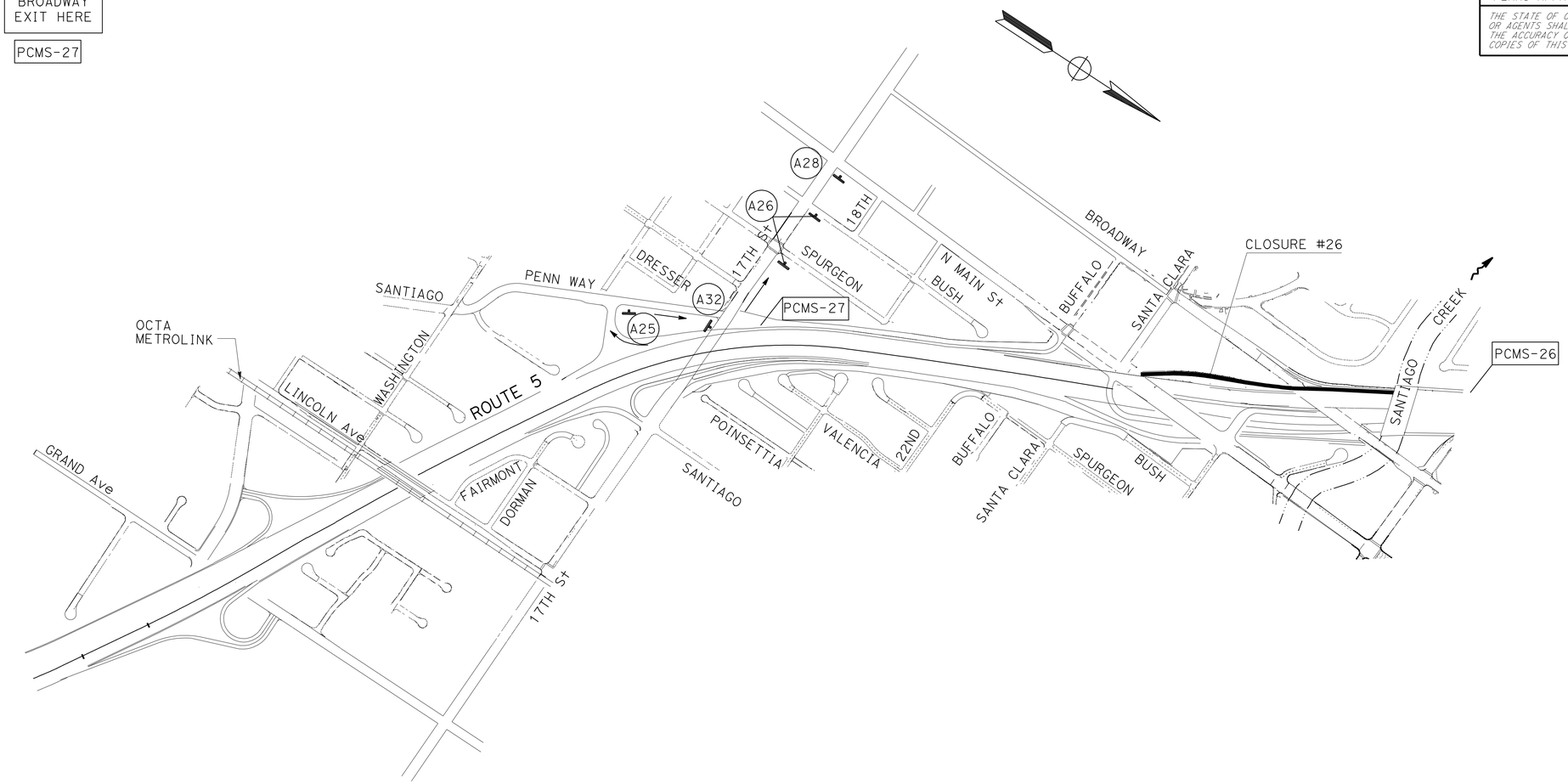
REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

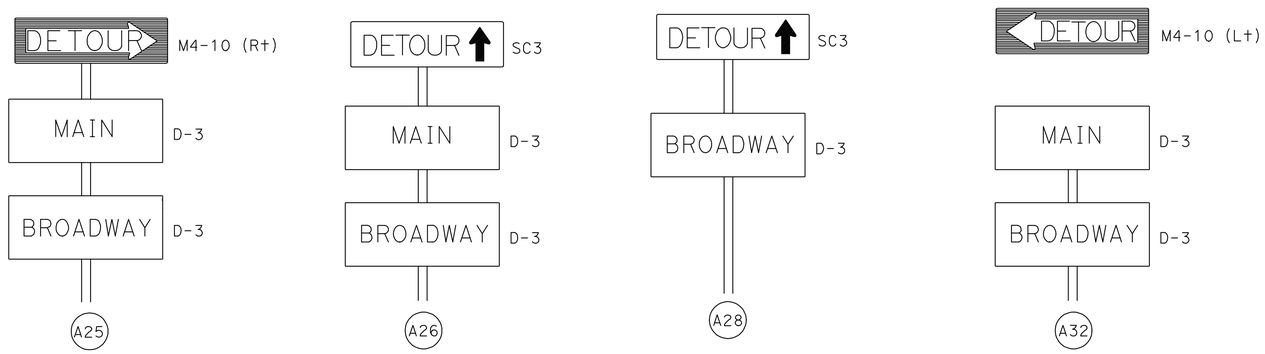
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

DURING THE SB RTE 5 MAIN St and BROADWAY Ave OFF-RAMPS CLOSURE, THE PCMS SHOULD READ:

MAIN/ BROADWAY CLOSED	MAIN/ BROADWAY EXIT HERE
PCMS-26	PCMS-27





CLOSURE #26:

SB Rte 5 N MAIN St OFF-RAMP

DETOUR:

EXIT SB ROUTE 5 17TH STREET OFF-RAMP, RIGHT ON PENN WAY AND LEFT ON 17TH STREET.

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-26

REVISED BY	DATE REVISED
J TRAN	8/1/10

PHAT TRAN — JOSEPH TRAN

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR — MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — MAINTENANCE

Caltrans

LAST REVISION 07-07-10 | DATE PLOTTED => 24-DEC-2010 | TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	50	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

PLANS APPROVAL DATE 12-20-10

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.

SHEET No.	DETOUR SIGN TYPE	POST SIZE	No. OF SIGNS (EA)	No. OF POSTS	REMARKS
TH-1	A7	4" x 6"	1	1	(S)
	A8	4" x 6"	2	2	(S)
TH-2	A1	4" x 6"	2	2	(S)
	A2	4" x 6"	3	3	(S)
	A3	4" x 6"	5	5	(S)
TH-3	A4	4" x 6"	2	2	(S)
	A5	4" x 6"	1	1	(S)
	A6	4" x 6"	4	4	(S)
TH-4	A9	4" x 6"	2	2	(S)
	A10	4" x 6"	2	2	(S)
TH-5	A5	4" x 6"	2	2	(S)
	A6	4" x 6"	3	3	(S)
TH-6	A4	4" x 6"	2	2	(S)
	A6	4" x 6"	4	4	(S)
TH-7	A4	4" x 6"	2	2	(S)
	A5	4" x 6"	1	1	(S)
	A6	4" x 6"	1	1	(S)
TH-8	A11	4" x 6"	2	2	(S)
	A12	4" x 6"	5	5	(S)
TH-9	A13	4" x 6"	4	4	(S)
	A14	4" x 6"	2	2	(S)
TH-10	A1	4" x 6"	2	2	(S)
	A2	4" x 6"	1	1	(S)
	A3	4" x 6"	4	4	(S)
TH-11	A2	4" x 6"	2	2	(S)
	A3	4" x 6"	7	7	(S)
TH-12	A13	4" x 6"	8	8	(S)
	A14	4" x 6"	2	2	(S)
TH-13	A15	4" x 6"	2	2	(S)
	A16	4" x 6"	1	1	(S)
	A17	4" x 6"	2	2	(S)
TH-14	A2	4" x 6"	2	2	(S)
	A3	4" x 6"	6	6	(S)
SUBTOTAL (1)			91		

(S) DENOTES STATIONARY MOUNTED SIGN.

SHEET No.	DETOUR SIGN TYPE	POST SIZE	No. OF SIGNS (EA)	No. OF POSTS	REMARKS
TH-15	A5	4" x 6"	2	2	(S)
	A6	4" x 6"	5	5	(S)
TH-16	A4	4" x 6"	2	2	(S)
	A6	4" x 6"	4	4	(S)
TH-17	A18	4" x 6"	2	2	(S)
	A19	4" x 6"	2	2	(S)
TH-18	A20	4" x 6"	2	2	(S)
	A21	4" x 6"	7	7	(S)
	A33	4" x 6"	1	1	(S)
TH-19	A2	4" x 6"	2	2	(S)
	A3	4" x 6"	3	3	(S)
TH-20	A5	4" x 6"	2	2	(S)
	A6	4" x 6"	4	4	(S)
TH-21	A21	4" x 6"	2	2	(S)
	A22	4" x 6"	2	2	(S)
TH-22	A23	4" x 6"	1	1	(S)
	A24	4" x 6"	5	5	(S)
TH-23	A30	4" x 6"	2	2	(S)
	A31	4" x 6"	2	2	(S)
TH-24	A1	4" x 6"	1	1	(S)
	A2	4" x 6"	3	3	(S)
	A3	4" x 6"	7	7	(S)
	A25	4" x 6"	1	1	(S)
	A26	4" x 6"	3	3	(S)
	A27	4" x 6"	2	2	(S)
	A28	4" x 6"	1	1	(S)
	A29	4" x 6"	1	1	(S)
TH-25	A4	4" x 6"	5	5	(S)
	A5	4" x 6"	1	1	(S)
	A6	4" x 6"	7	7	(S)
TH-26	A25	4" x 6"	1	1	(S)
	A26	4" x 6"	2	2	(S)
	A28	4" x 6"	1	1	(S)
	A32	4" x 6"	1	1	(S)
SUBTOTAL (2)			89		
SUBTOTAL (1)			91		
TOTAL			180		

NOTES:

1. ALL SIGNS ARE STATIONARY MOUNTED. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL QUANTITIES OF CONSTRUCTION AREA SIGNS, SEE SHEET CS-1.
3. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) MAY BE REUSED IN DIFFERENT STAGES.

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

TYPE	No. OF SIGNS	MESSAGE
PCMS	27	TO BE DETERMINED BY ENGINEER

TRAFFIC HANDLING QUANTITIES

THQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: PHAT TRAN

CHECKED BY: JOSEPH TRAN

REVISED BY: J TRAN

DATE REVISED: 8/1/10

LAST REVISION 07-07-10

DATE PLOTTED => 22-DEC-2010

TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	51	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

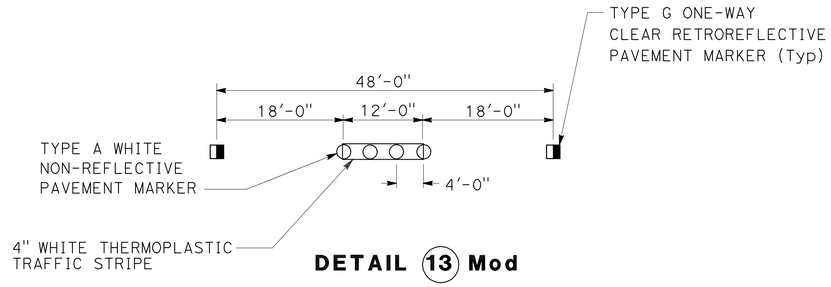
12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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. NEW PAVEMENT DELINEATION SHALL REPLACE OBLITERATED PAVEMENT AT THE SAME LOCATION.
2. EXISTING PAVEMENT DELINEATION ON CONCRETE PAVEMENT SHALL BE REMOVED AND REPLACED AT THE SAME LOCATION.
3. RESTRIPE ENTIRE RAMP.



DETAIL 13 Mod
NO SCALE

LOCATION	DESCRIPTION	THERMOPLASTIC TRAFFIC STRIPE 4" (BROKEN 36-12) DETAIL 13 Mod	4" (BROKEN 17-7) DETAIL 8	4" (BROKEN 17-7) DETAIL 9	4" SOLID WHITE	4" SOLID YELLOW DETAIL 25, 25A	4" SOLID WHITE DETAIL 27B	8" SOLID WHITE DETAIL 36,36A	8" SOLID WHITE DETAIL38B	8" (BROKEN 12-3) DETAIL 37	PAVEMENT MARKER NON REFLECTIVE TYPE A	RETROREFLECTIVE TYPE C	RETROREFLECTIVE TYPE G	RETROREFLECTIVE TYPE H	THERMOPLASTIC PAVEMENT MARKING ARROWS, HOV	CHEVRON, CROSS WALK	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE THERMOPLASTIC PAVEMENT MARKING
		LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	SQFT	SQFT	LF	LF	SQFT
1	NB ROUTE 5 TO NB ROUTE 1 CONNECTOR					1210	1210		190				8	50	42				
2	NB LA PAZ ROAD ON-RAMP	750		645		1010	1010		210		63		38	42	50	149			
3	SB LA PAZ ROAD LOOP ON-RAMP					705	705		500				21	29	148	12			
4	SB LA PAZ ROAD OFF-RAMP			335	303	910	1300	390					23	38	294	270			
5	SB ALICIA PARKWAY ON-RAMP		130			1450	1660	440	800				52	60	200	182			
6	SB ALICIA PARKWAY LOOP ON-RAMP		250	585		680	2120	190	1300	1110		74	74	28	62	29	680	680	29
7	SB EL TORO ROAD ON-RAMP					640	910	270	600				36	27	230	122			
8	SB EL TORO ROAD OFF-RAMP			560	1000	680	1110	500	970				73	28	440	210	300	723	126
9	NB ALTON PARKWAY OFF-RAMP			667		1230	1230	530					36	51	407	114			
10	NB ALTON PARKWAY LOOP ON-RAMP			410		440	440						9	18		98	440	440	98
11	NB ALTON PARKWAY ON-RAMP			1750		1360	1750	390					53	57	62	94			
12	SB ALTON PARKWAY OFF-RAMP			480	385	670	595	507	230				41	28	230	168	290	620	66
13	NB JAMBOREE ROAD OFF-RAMP			955	100	1170	1170	632					46	49	429	120			
14	NB JAMBOREE ROAD ON-RAMP		166			890	1050	190	896				45	37	86	12	890	3285	98
15	SB JAMBOREE ROAD ON-RAMP		159			680	780	797	450				52	28		86			
SUB TOTAL		750	705	6387	1788	13725	17040	4836	6146	1110	63	74	607	570	2680	1666	2600	5748	417
SHEET TOTAL		750	7092		32553			10982		1110	63	1251			4346		2600	5748	417

PAVEMENT DELINEATION QUANTITIES
PDQ-1

J TRAN	8/1/10	REVISED BY / DATE REVISED
PHAT TRAN	JOSEPH TRAN	CALCULATED-DESIGNED BY / CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 07-07-10 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 12:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	52	81

REGISTERED CIVIL ENGINEER DATE 10-21-10

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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.

LOCATION	DESCRIPTION	THERMOPLASTIC TRAFFIC STRIPE 4" (BROKEN 36-12) DETAIL 13 Mod	(BROKEN 17-7) DETAIL 8	(BROKEN 17-7) DETAIL 9	SOLID WHITE	SOLID YELLOW DETAIL 25, 25A	SOLID WHITE DETAIL 27B	8" SOLID WHITE DETAIL 36,36A	SOLID WHITE DETAIL38B	(BROKEN 12-3) DETAIL 37	PAVEMENT MARKER NON REFLECTIVE TYPE A	RETROREFLECTIVE TYPE C	TYPE G	TYPE H	THERMOPLASTIC PAVEMENT MARKING ARROWS, HOV	CHEVRON, CROSS WALK	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE THERMOPLASTIC PAVEMENT MARKING
		LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	SQFT	SQFT	LF	LF	SQFT
16	SB JAMBOREE ROAD LOOP ON-RAMP					730	910		722				30	30	172	201	640	2084	373
17	SB TUSTIN RANCH ROAD OFF-RAMP			1500		1025	1390	365	420				64	43	453	50			
18	NB RED HILL AVENUE OFF-RAMP			160	210	418	692	268	360				30	26	407	120	418	2051	249
19	NB RED HILL AVENUE ON-RAMP					570	810	280	410				29	24		120			
20	SB RED HILL AVENUE ON-RAMP					1020	1020		440				18	43	62	144			
21	SB RED HILL AVENUE OFF-RAMP					690	1011	329	430				32	29	219	90	175	420	42
22	NB ROUTE 5 TO NB ROUTE 55 CONNECTOR	1660				1660	1660	250			138		45	69			1660	2575	
23	SB 17TH STREET OFF-RAMP			1000		765	765	380					37	32	345	90	110	220	207
24	NB 17TH STREET ON-RAMP AND AUXILIARY LANE	990			60	1320	3700	840	358	1600	82	131	56	55	144	300			
25	SB N MAIN STREET ON-RAMP AND AUXILIARY LANE	450				513	2300	340	290	1230	38	82	36	21		120			
26	SB N MAIN STREET OFF-RAMP AND OUTSIDE LANE TO SANTIAGO CREEK BRIDGE	430				430	815	385			36		25	18	62				
	SUB TOTAL	3530		2660	270	9141	15073	3437	3430	2830	294	213	402	390	1864	1235	3003	7350	871
	SHEET TOTAL	3530	2660			24484		6867		2830	294	1005			3099		3003	7350	871
	SHEET PDQ-1 TOTAL	750	7092			32553		10982		1110	63	1251			4346		2600	5748	417
	TOTAL	4280	9752			57037		17849		3940	357	2256			7445		5603	13098	1288

PAVEMENT DELINEATION QUANTITIES

PDQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: JOSEPH TRAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	53	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 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:

NEW ROADSIDE SIGN PANELS SHALL REPLACE EXISTING ROADSIDE SIGN PANELS AT THE SAME LOCATIONS.

ABBREVIATIONS:

BL - BLACK
W - WHITE
Y - YELLOW

ROADSIDE SIGN QUANTITIES

DIRECTION	SIGN CODE	PANEL SIZE W x D	SIGN AREA	REMOVE ROADSIDE SIGN	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	SIGN LOCATION
		INCH x INCH	SQFT	EA	EA	
NORTHBOUND	W13-2	48 x 60	20	1	1	JAMBOREE Rd OFF-RAMP (SEE SHEET C-9)
SOUTHBOUND	R18A	48 x 66	22	1	1	LA PAZ Rd OFF-RAMP (SEE SHEET C-2)
TOTAL				2	2	

MATERIAL SUMMARY - CONTRACTOR FURNISHED SIGN QUANTITIES

DIRECTION	SIGN CODE	PANEL SIZE W x D	SIGN AREA	SINGLE FACED	BACKGROUND		LEGEND		GRAFFITI FILM		SINGLE SHEET ALUMINUM SIGN UNFRAMED 0.063"	SIGN LOCATION
					SHEETING COLOR	RETRO-REFLECTIVE	SHEETING COLOR	RETRO-REFLECTIVE	STANDARD	PREMIUM		
		INCH x INCH	SQFT								SQFT	
NORTHBOUND	W13-2	48 x 60	20	X	Y	IX	BL	X		X	20	JAMBOREE Rd OFF-RAMP (SEE SHEET C-9)
SOUTHBOUND	R18A	48 x 66	22	X	W	III	BL	X	X	X	22	LA PAZ Rd OFF-RAMP (SEE SHEET C-2)
TOTAL											42	

SIGN QUANTITIES

SQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: JOSEPH TRAN
REVISED BY: J TRAN
DATE REVISED: 8/1/10

LAST REVISION 07-07-10
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:48

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	54	81

REGISTERED CIVIL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH TRAN No. C59283 Exp. 6.30.11 CIVIL STATE OF CALIFORNIA

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PAVEMENT QUANTITIES

LOCATION	DESCRIPTION	APPROXIMATE LENGTH	COLD PLANE AREA	COLD PLANE AC PAVEMENT (0.1')	RUBBERIZED HOT MIX ASPHALT (GAP GRADED)	TACK COAT	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)
		FT	SQFT	SQYD	TON	TON	TON
1	NB ROUTE 5 TO NB ROUTE 1 CONNECTOR	1210	45790	5087	343	1.4	
2	NB LA PAZ ROAD ON-RAMP	1010	24410	2712	183	0.7	
3	SB LA PAZ ROAD LOOP ON-RAMP	715	22730	2525	170	0.7	
4	SB LA PAZ ROAD OFF-RAMP	1310	33710	3745	253	1.0	
5	SB ALICIA PARKWAY ON-RAMP	2380	82960	9217	622	2.5	
6	SB ALICIA PARKWAY LOOP ON-RAMP	850	10100	1122		1.3	237
7	SB EL TORO ROAD ON-RAMP	910	23682	2631	178	0.7	
8	SB EL TORO ROAD OFF-RAMP	980	20768	2307	156	0.6	
9	NB ALTON PARKWAY OFF-RAMP	1230	40100	4455	301	1.2	
10	NB ALTON PARKWAY LOOP ON-RAMP	300	6000	667	45	0.6	
11	NB ALTON PARKWAY ON-RAMP	1770	60510	6723	454	1.9	
12	SB ALTON PARKWAY OFF-RAMP	595	25660	2851	192	0.8	
13	NB JAMBOREE ROAD OFF-RAMP	890	33320	3702	250	1.0	
14	NB JAMBOREE ROAD ON-RAMP	1050	8000	889	23	1.2	284
15	SB JAMBOREE ROAD ON-RAMP	780	26520	2946	199	0.8	
16	SB JAMBOREE ROAD LOOP ON-RAMP	300	16000	1778	120	0.5	
17	SB TUSTIN RANCH ROAD OFF-RAMP	1180	20000	2222	150	0.6	
18	NB RED HILL AVENUE OFF-RAMP	450	20420	2269	153	0.6	
19	NB RED HILL AVENUE ON-RAMP	810	26200	2911	197	0.8	
20	SB RED HILL AVENUE ON-RAMP	1020	29630	3292	222	0.9	
21	SB RED HILL AVENUE OFF-RAMP	750	23330	2592	175	0.7	
22	NB ROUTE 5 TO NB ROUTE 55 CONNECTOR	1660	22000	2444	77	2.3	507
23	SB 17TH STREET OFF-RAMP	610	22810	2534	171	0.7	
24	NB 17TH STREET ON-RAMP AND AUXILIARY LANE	2350	62000	6888	465	1.9	
25	SB NORTH MAIN STREET ON-RAMP AND AUXILIARY LANE	2300	47000	5222	353	1.4	
26	SB N MAIN STREET OFF-RAMP AND OUTSIDE LANE TO SANTIAGO CREEK BRIDGE	1515	31000	3444	233	1.0	
	TOTAL			87175	5685	28	1028

SUMMARY OF QUANTITIES
Q-1

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 00-00-00 | DATE PLOTTED => 22-DEC-2010 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	55	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

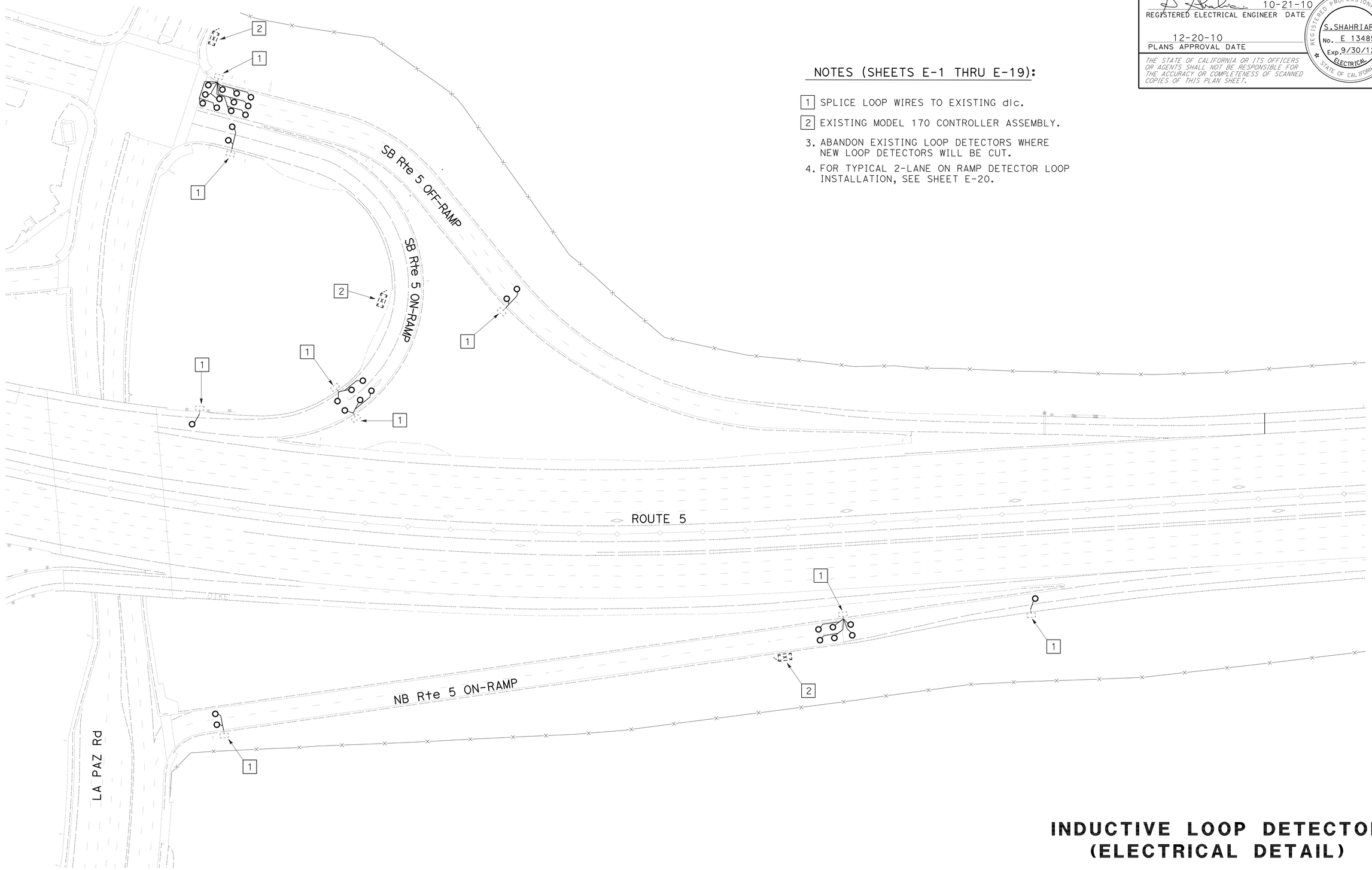
12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER S.SHAHRIARI No. E 13485 Exp.9/30/12 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.

NOTES (SHEETS E-1 THRU E-19):

1. SPLICE LOOP WIRES TO EXISTING dlc.
2. EXISTING MODEL 170 CONTROLLER ASSEMBLY.
3. ABANDON EXISTING LOOP DETECTORS WHERE NEW LOOP DETECTORS WILL BE CUT.
4. FOR TYPICAL 2-LANE ON RAMP DETECTOR LOOP INSTALLATION, SEE SHEET E-20.



INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **ELECTRICAL DESIGN**

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 10-18-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 09:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	56	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S.SHAHRIARI
No. E 13485
Exp.9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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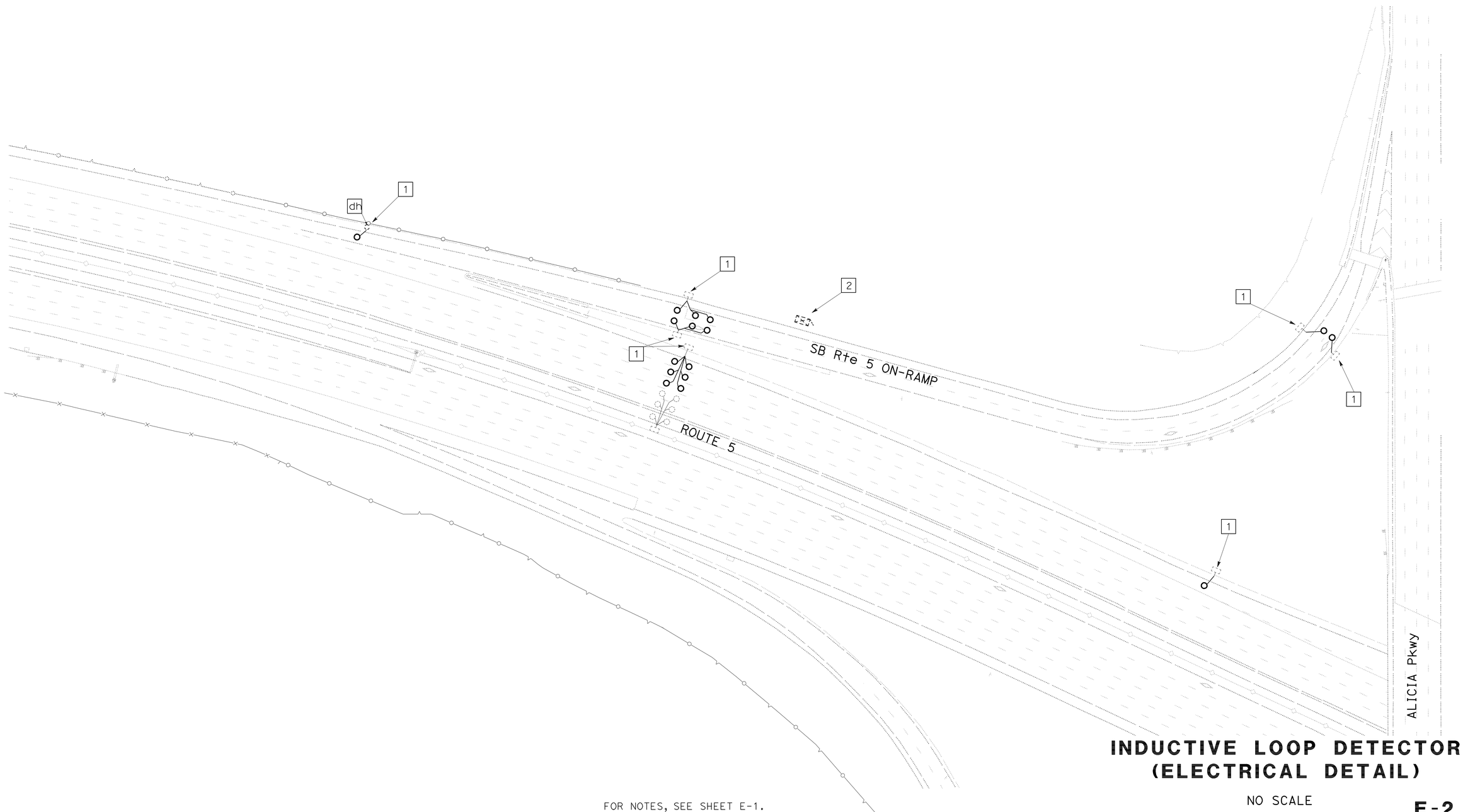

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-2

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY	ANTHONY C FERNANDEZ
DATE REVISED	10-18-10
CALCULATED-DESIGNED BY	VANESSA TRUONG
CHECKED BY	
FUNCTIONAL SUPERVISOR	SHAHRAM SHAHRIARI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 09:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	57	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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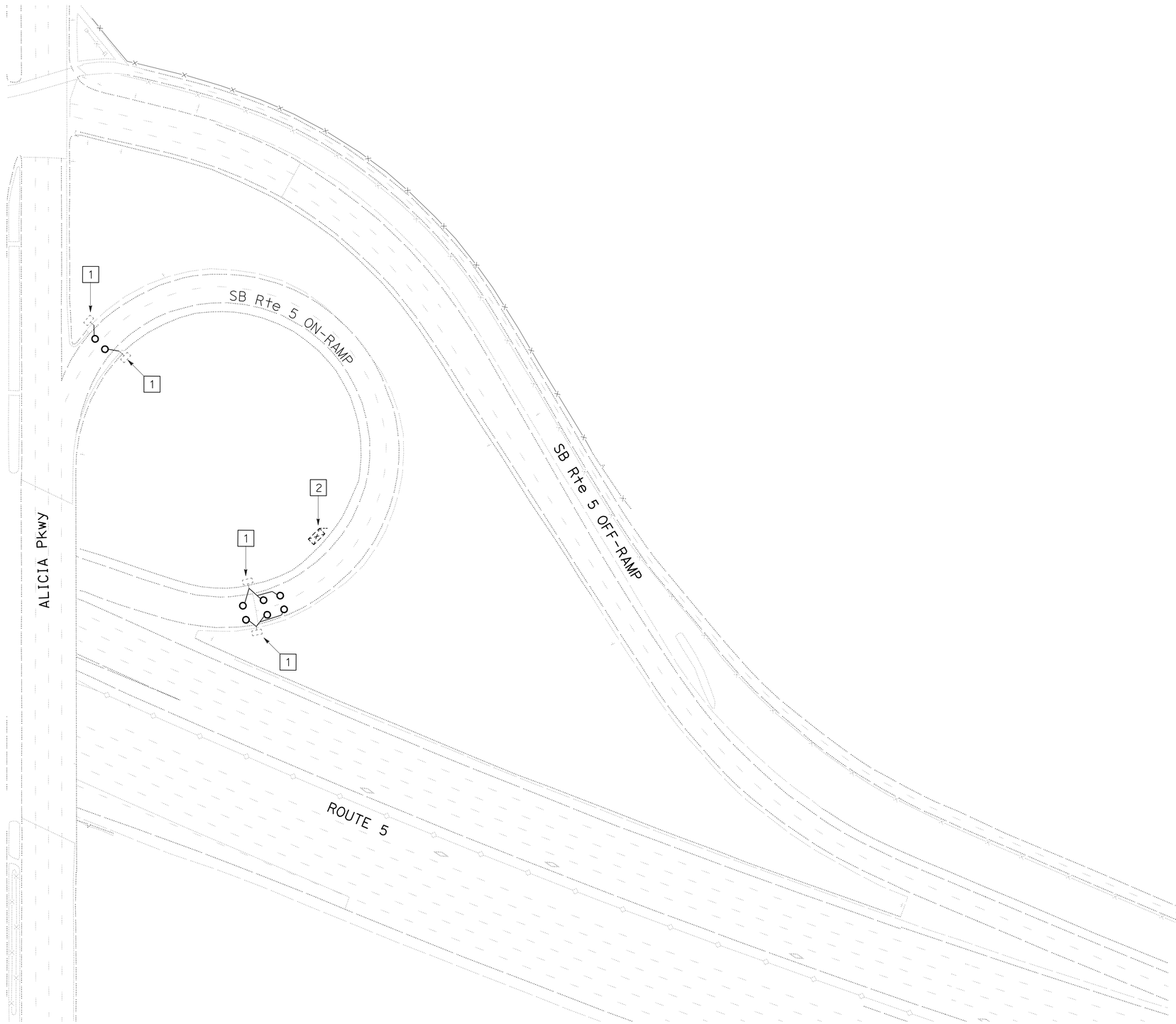

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-3

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 09:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	58	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

PLANS APPROVAL DATE 12-20-10

REGISTERED PROFESSIONAL ENGINEER S.SHAHRIARI No. E 13485 Exp.9/30/12 ELECTRICAL STATE OF CALIFORNIA

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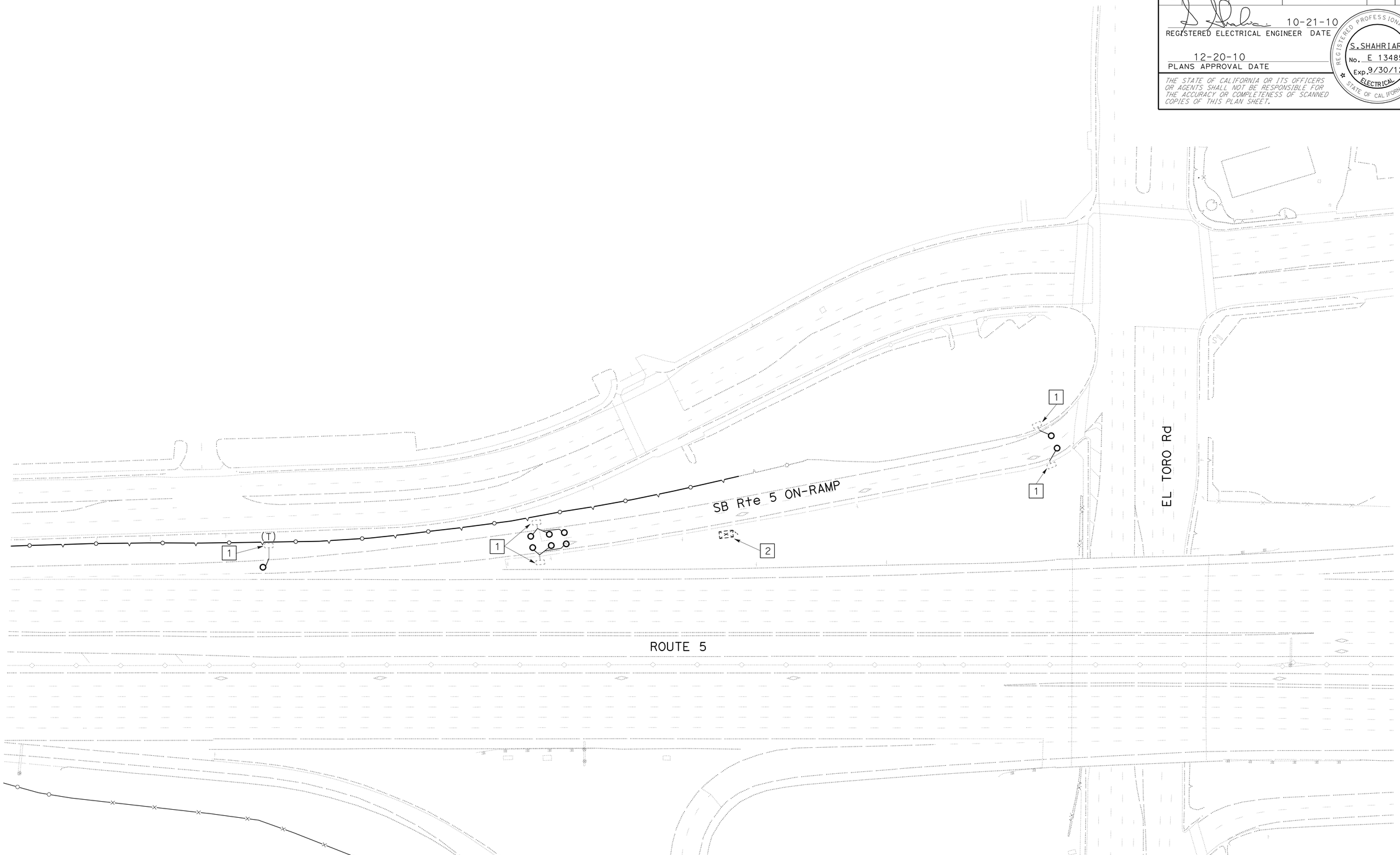

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-4

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:51

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	59	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

PLANS APPROVAL DATE 12-20-10

REGISTERED PROFESSIONAL ENGINEER S. SHAHRIARI No. E 13485 Exp. 9/30/12 ELECTRICAL STATE OF CALIFORNIA

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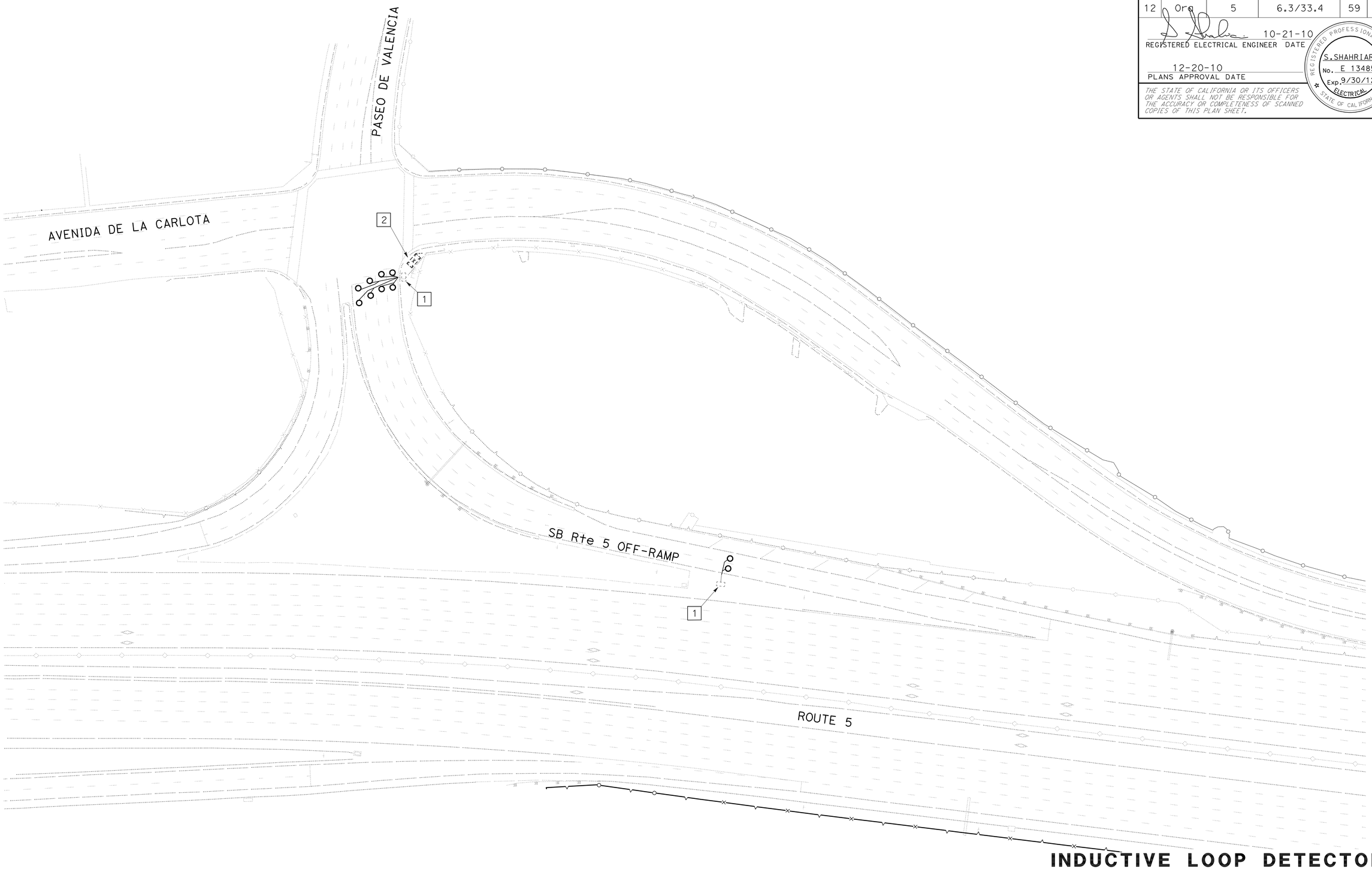

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-5

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 09:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	60	81

10-21-10
REGISTERED ELECTRICAL ENGINEER DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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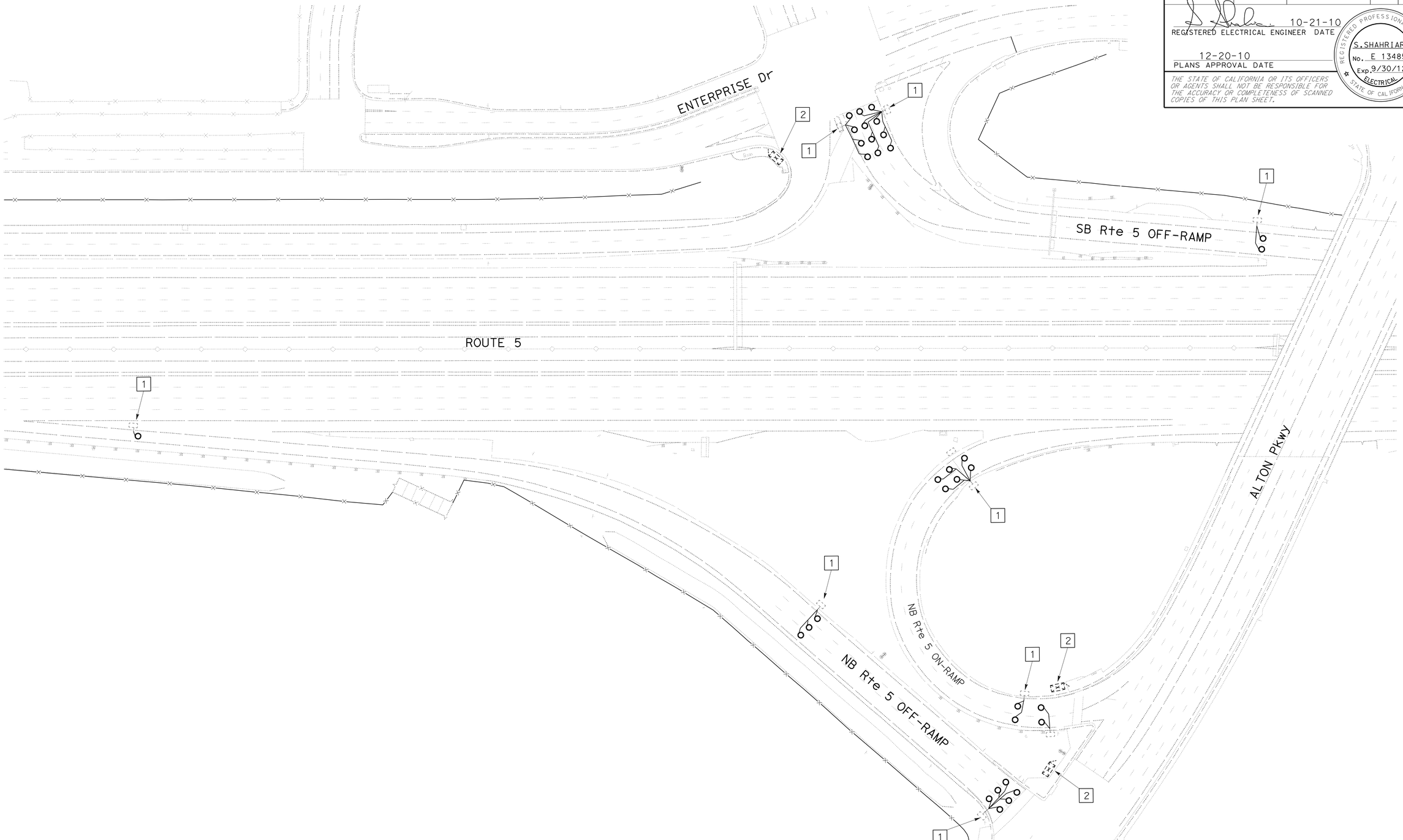

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-6

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 09:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	61	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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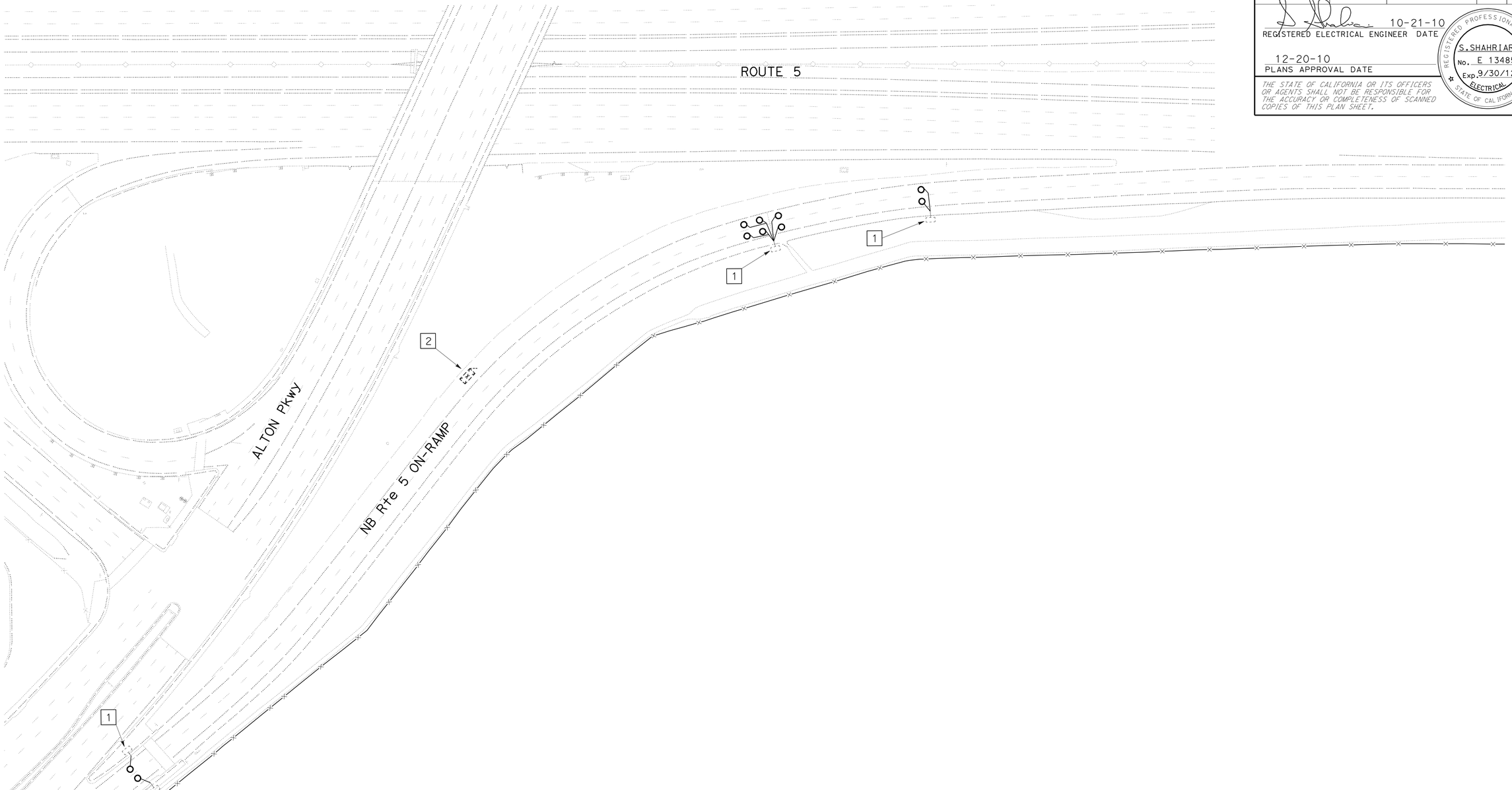

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	62	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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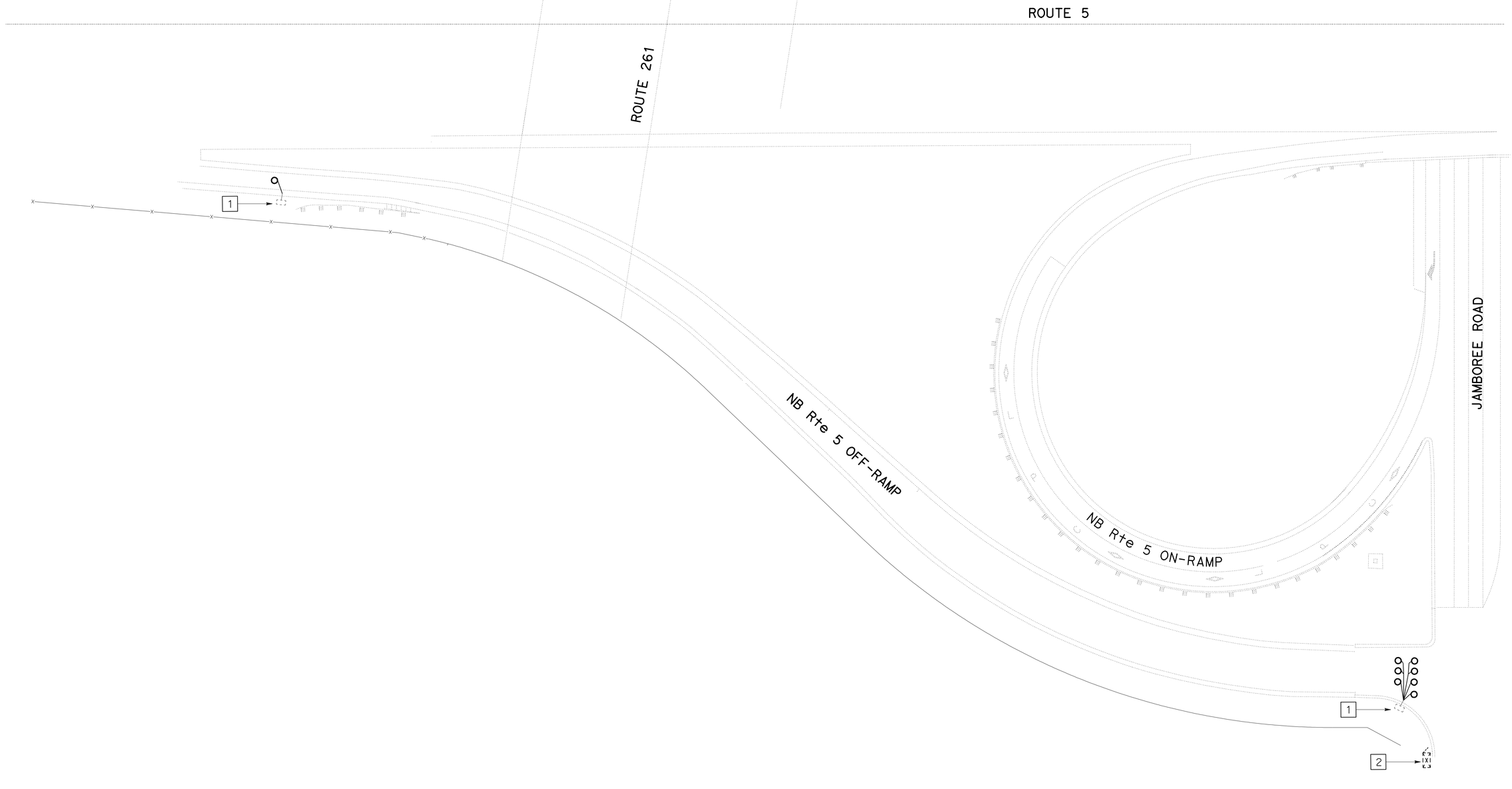

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-8

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY	ANTHONY C FERNANDEZ
DATE REVISED	10-14-10
CALCULATED-DESIGNED BY	ANTHONY C FERNANDEZ
CHECKED BY	VANESSA TRUONG
FUNCTIONAL SUPERVISOR	SHAHRAM SHAHRIARI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	63	81

10-21-10
REGISTERED ELECTRICAL ENGINEER DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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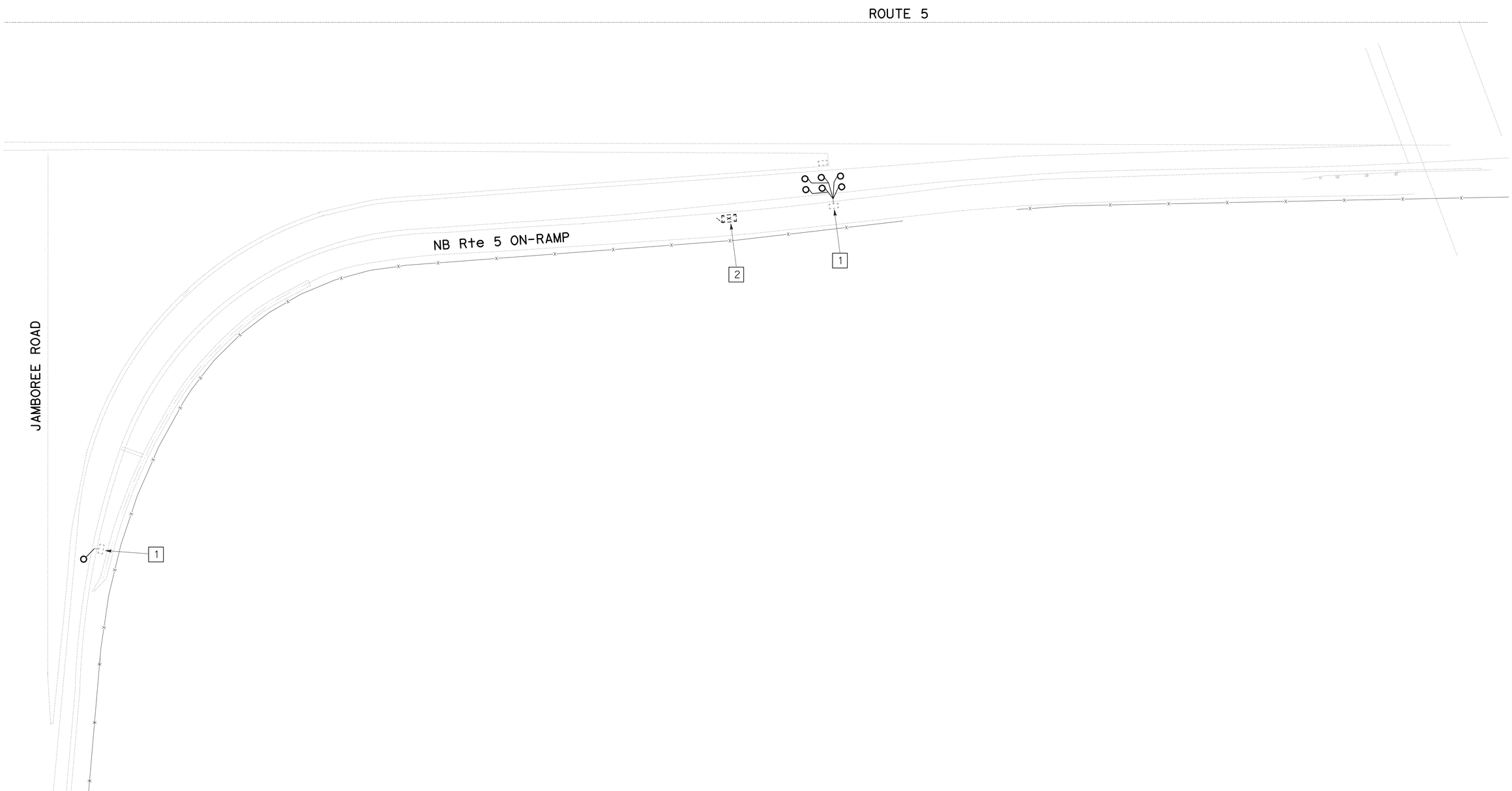

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	64	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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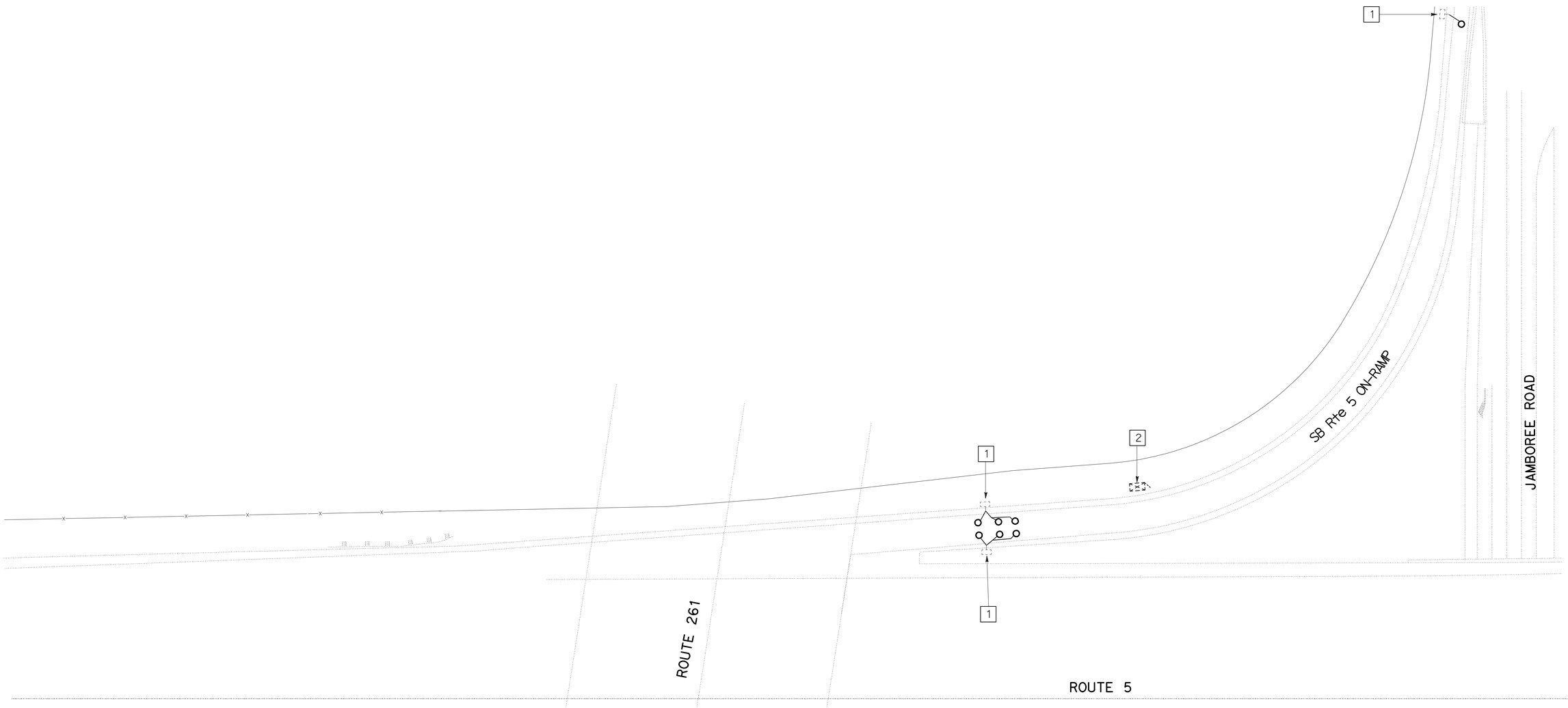

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-10

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	65	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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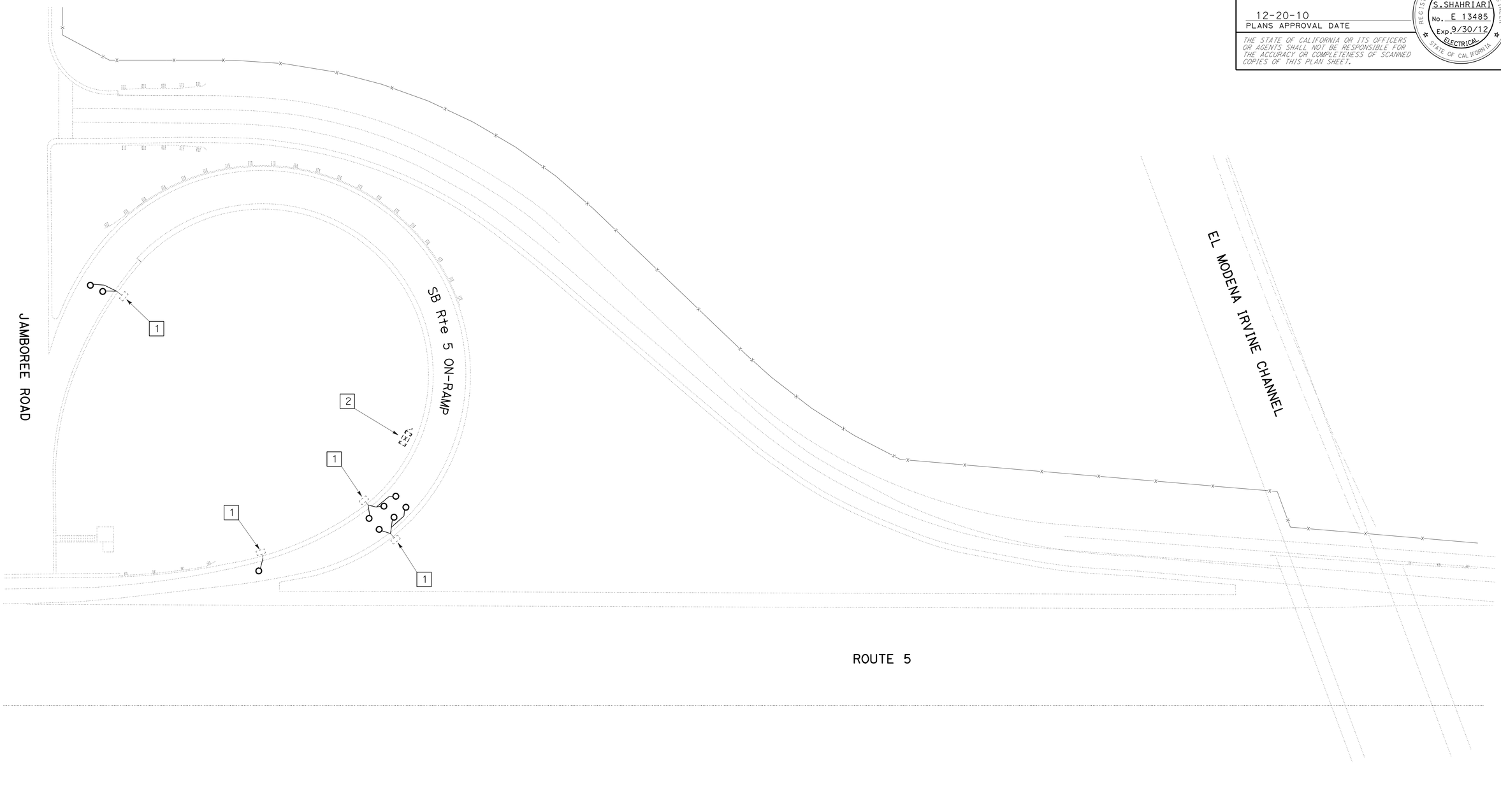

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-11

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **ELECTRICAL DESIGN**

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	66	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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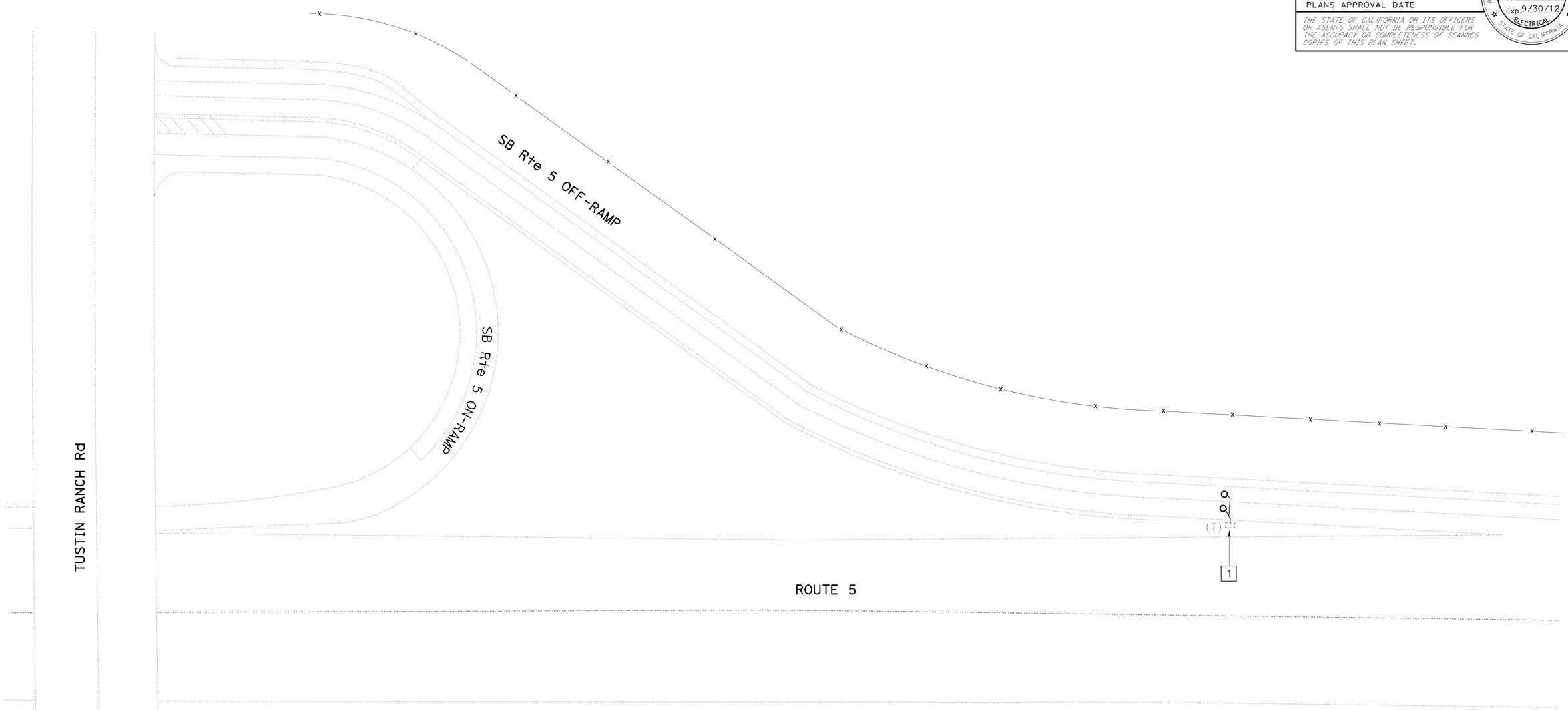

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAILS)

NO SCALE

E-12

CALCULATED-DESIGNED BY	ANTHONY C FERNANDEZ
CHECKED BY	VANESSA TRUONG
REVISED BY	
DATE REVISED	09-02-10
FUNCTIONAL SUPERVISOR	SHAHRAM SHAHRIARI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 29-DEC-2010
TIME PLOTTED => 08:46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	67	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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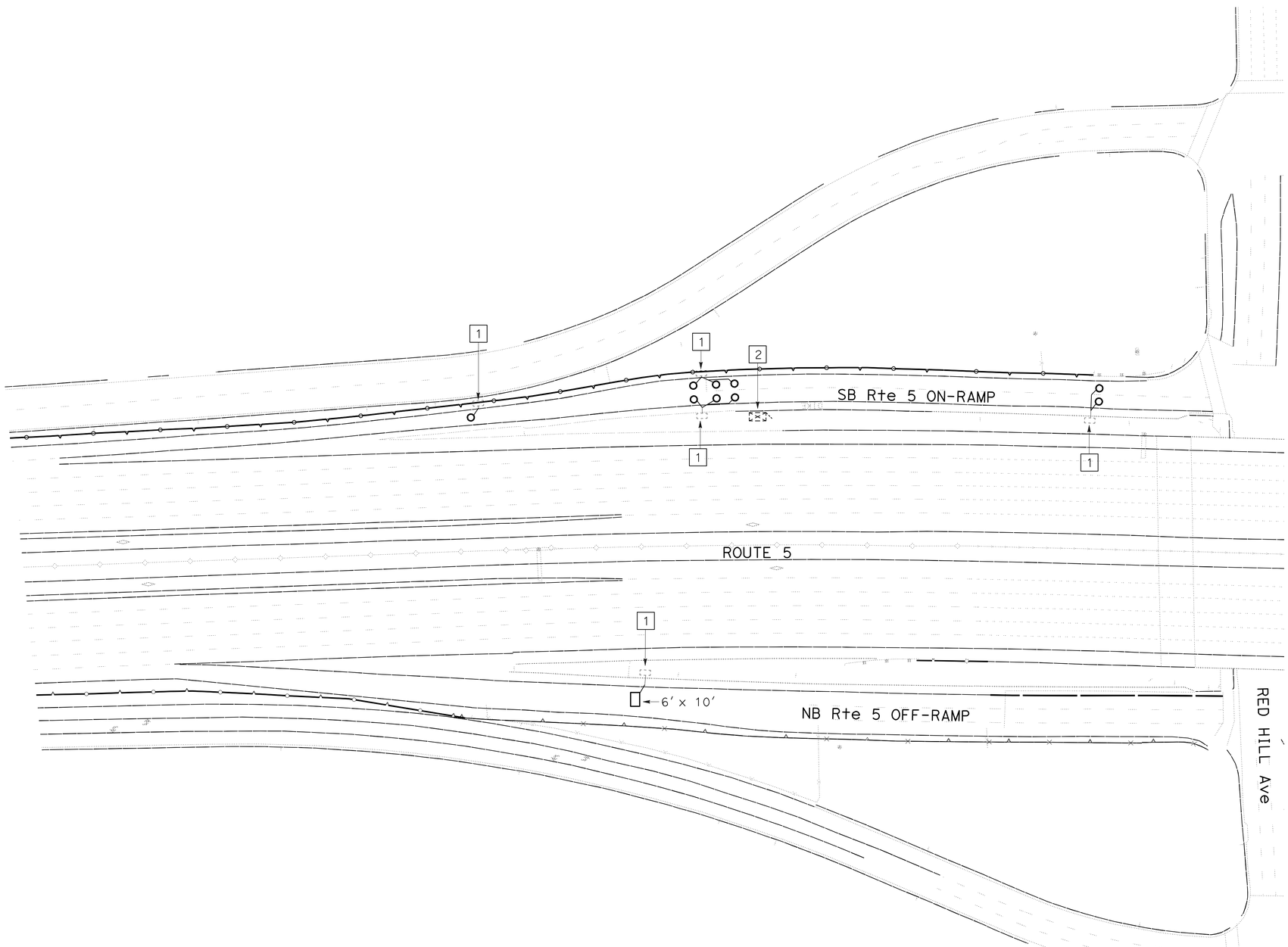

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-13

FOR NOTES, SEE SHEET E-1.
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED: 10-18-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:59

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	68	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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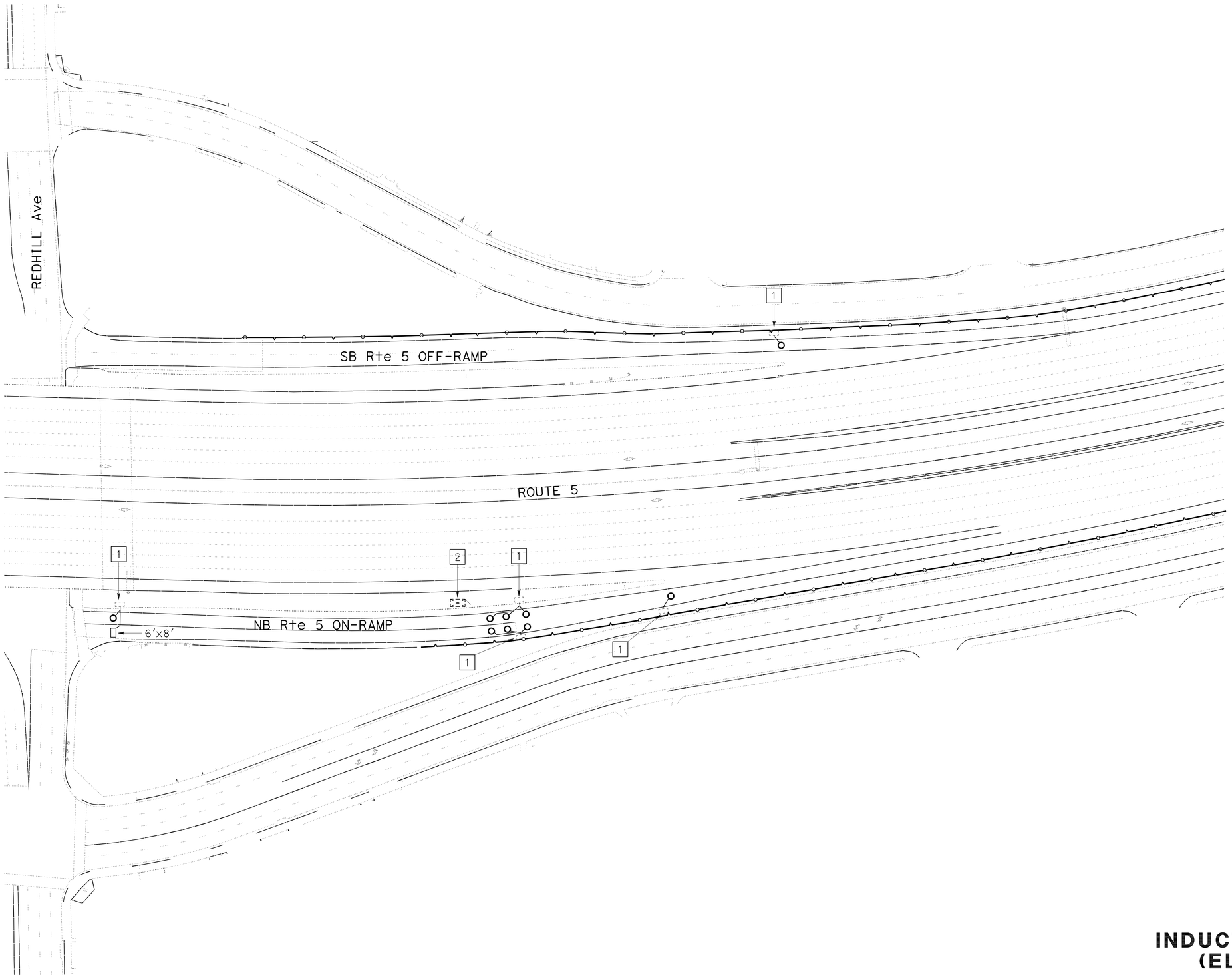

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-14

FOR NOTES, SEE SHEET E-1.
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 12:59

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	69	81

10-21-10
REGISTERED ELECTRICAL ENGINEER DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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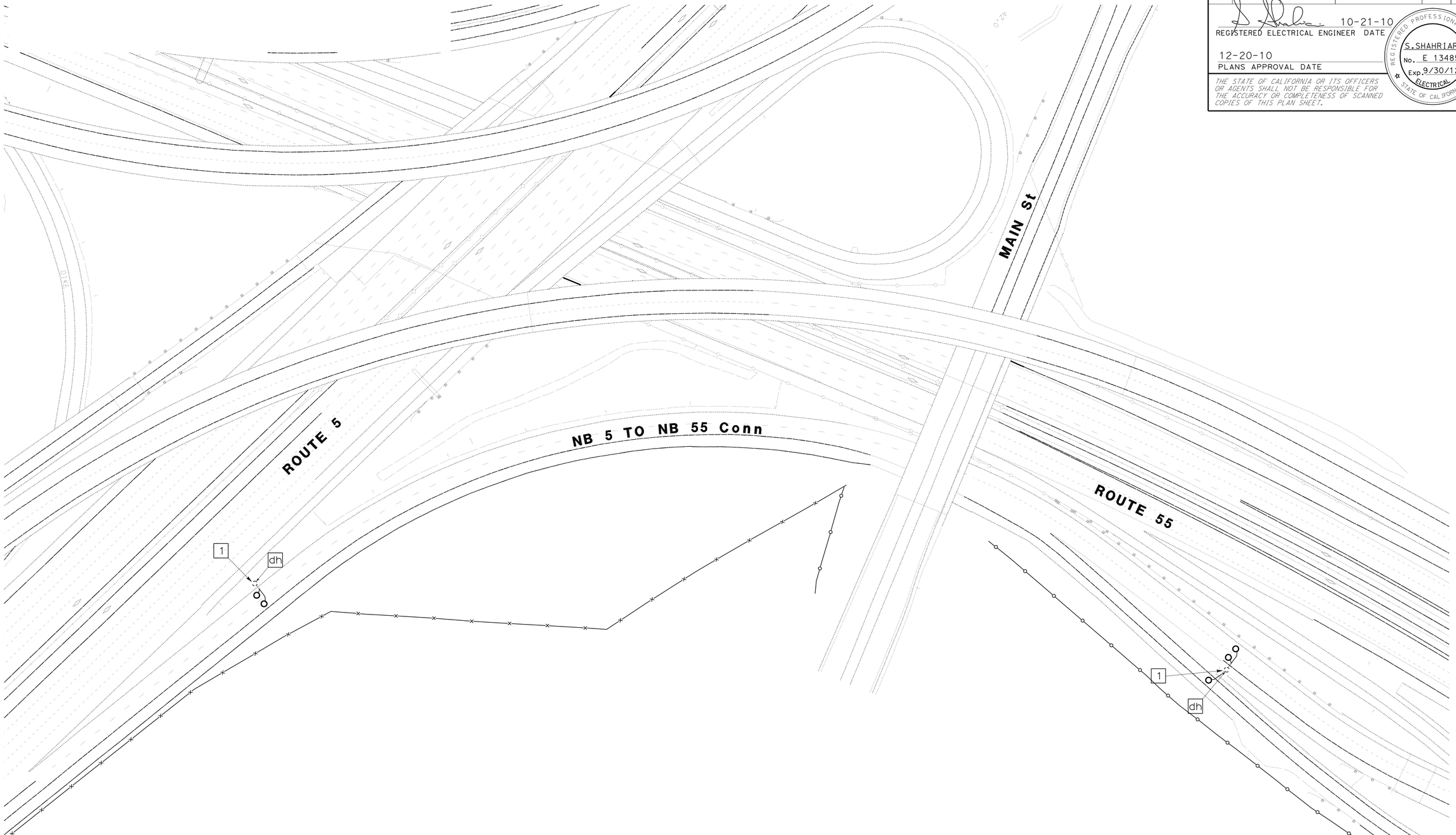

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-15

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

CALCULATED-DESIGNED BY	ANTHONY C FERNANDEZ
CHECKED BY	VANESSA TRUONG
REVISED BY	
DATE REVISED	10-14-10
FUNCTIONAL SUPERVISOR	SHAHRAM SHAHRIARI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	70	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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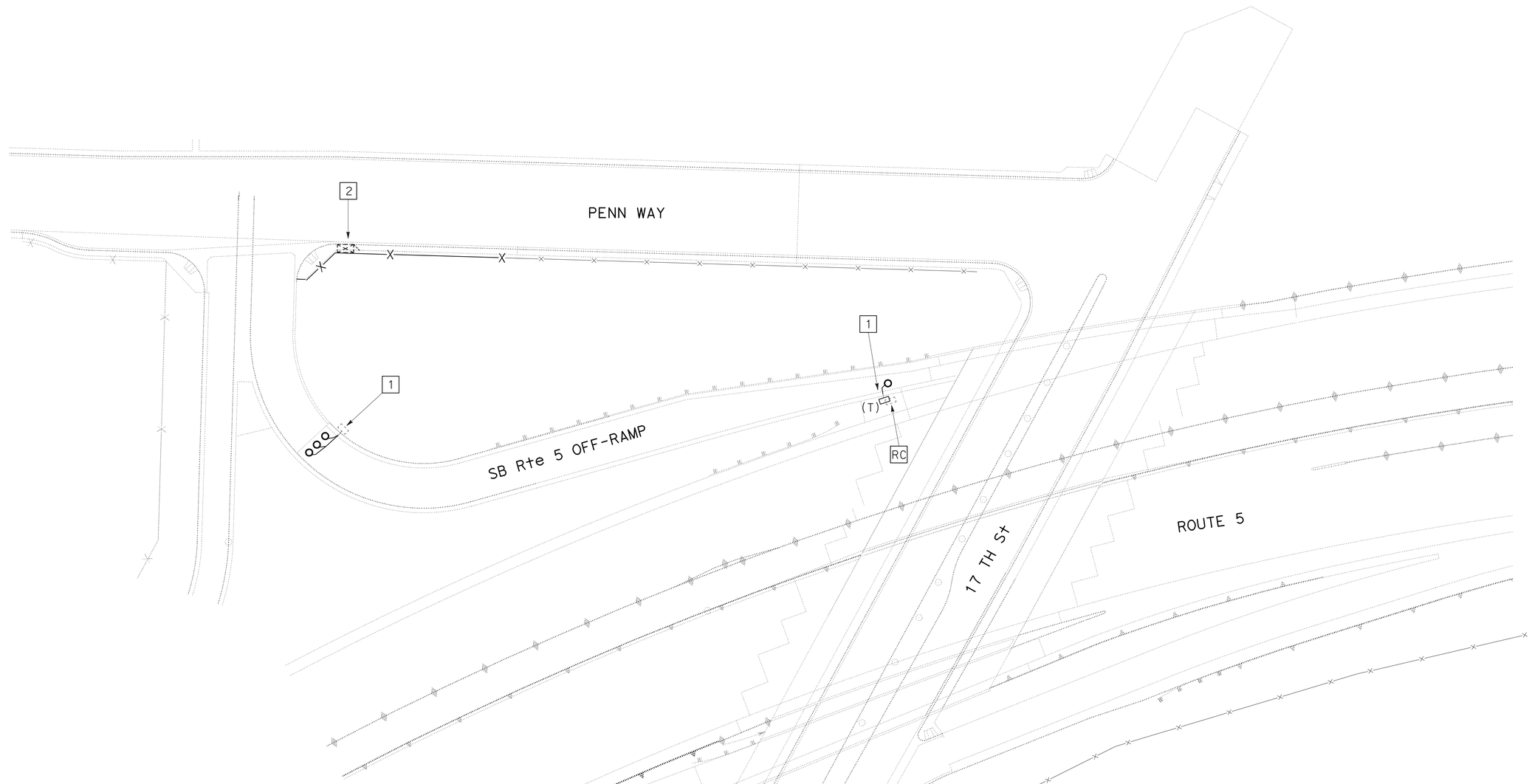

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-16

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 29-DEC-2010
TIME PLOTTED => 08:46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	71	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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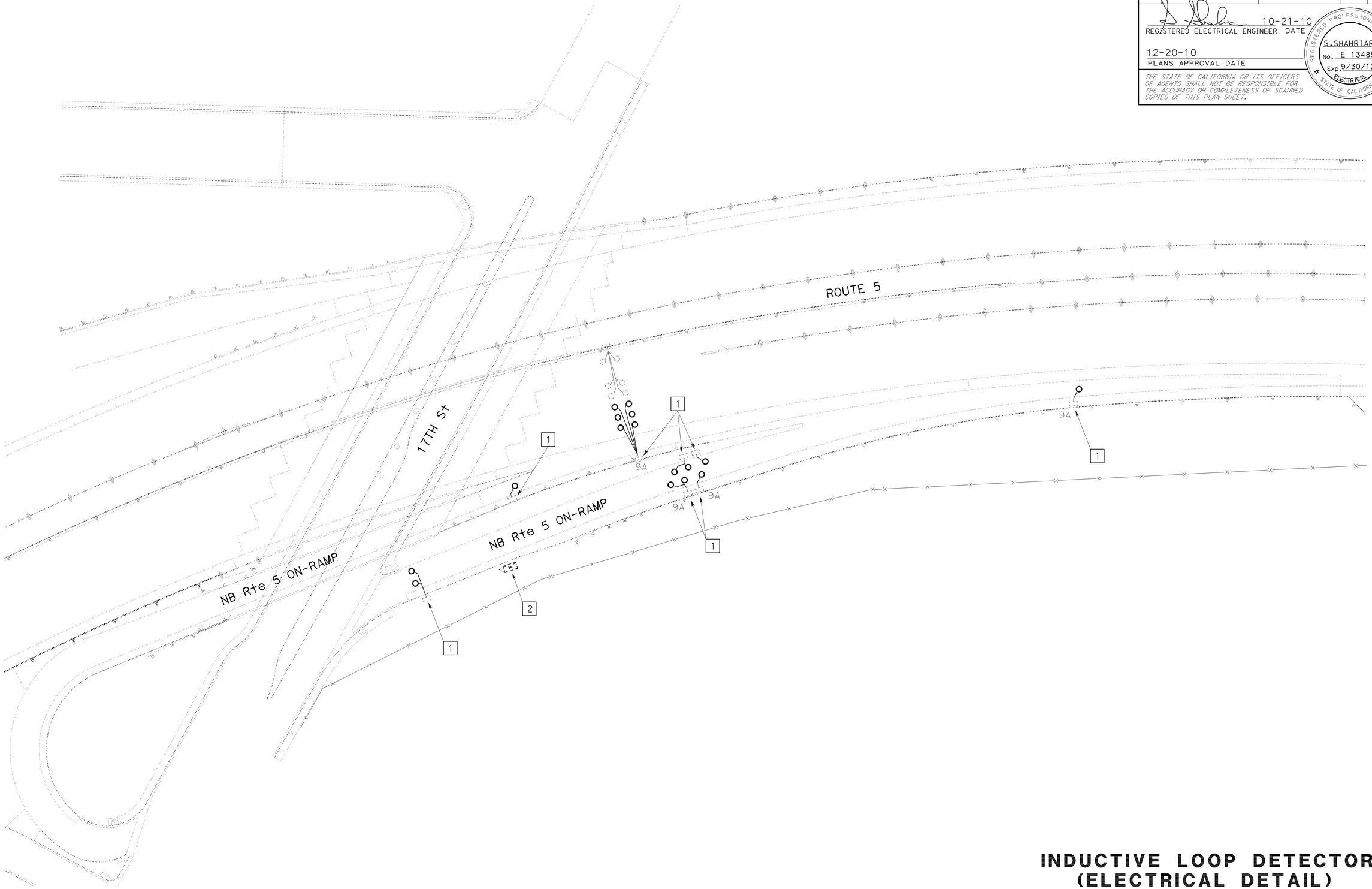

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-17

FOR NOTES, SEE SHEET E-1.
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 10-18-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:26

BORDER LAST REVISED 7/2/2010
USERNAME => trlenard
DGN FILE => c0L100ua017.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 3024
PROJECT NUMBER & PHASE 12000200221

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	72	81

10-21-10
REGISTERED ELECTRICAL ENGINEER DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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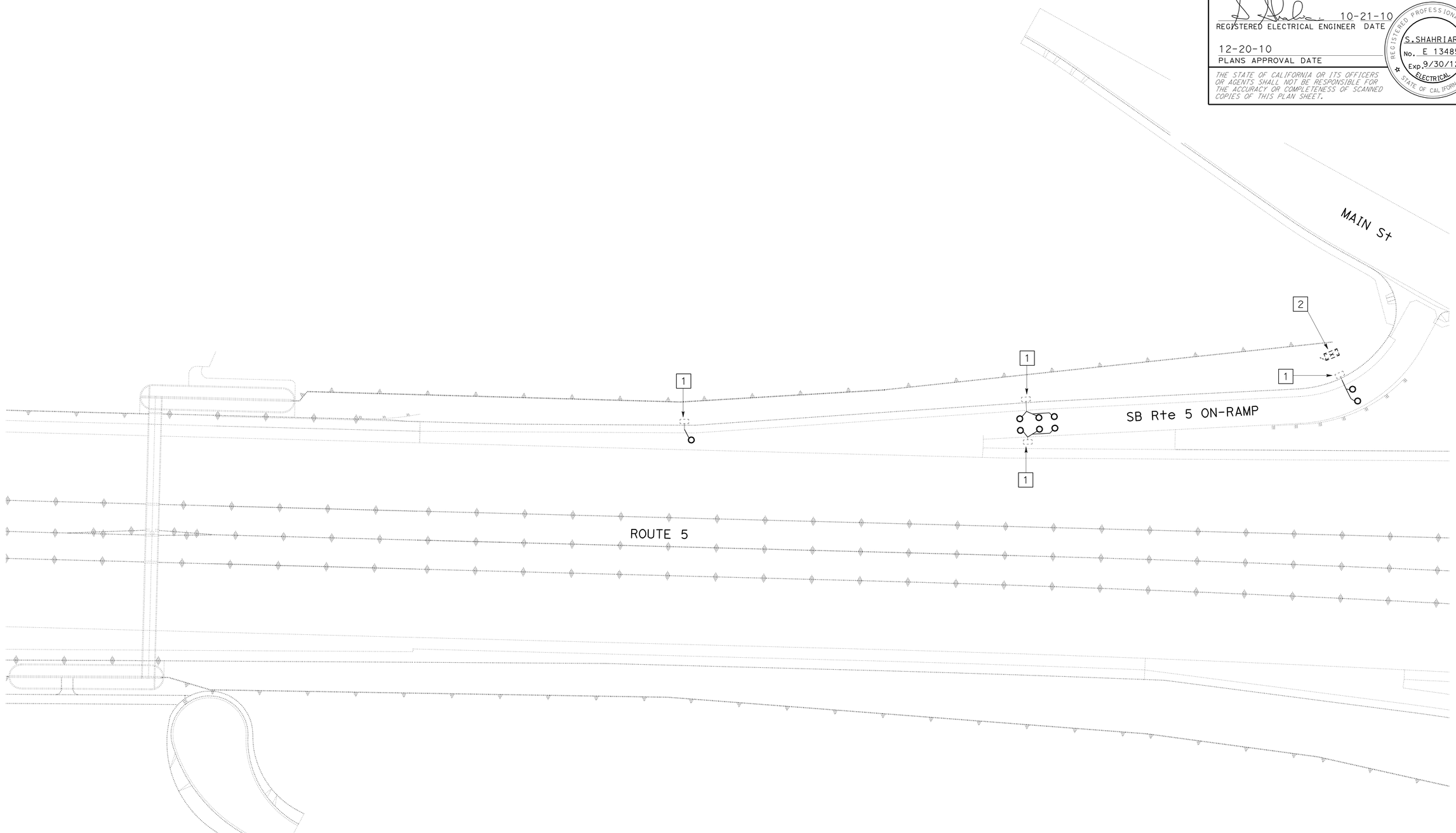

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-18

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	73	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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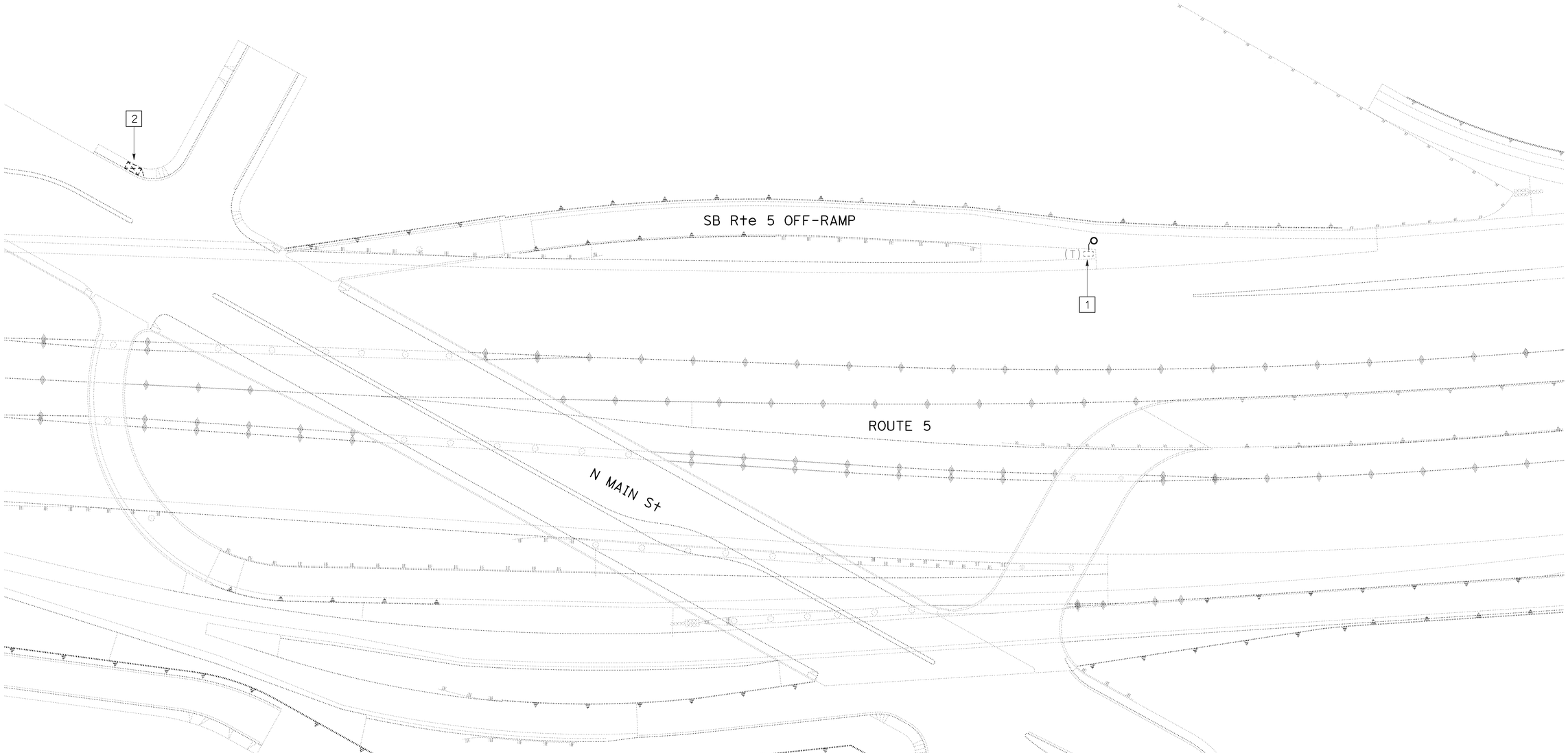

INDUCTIVE LOOP DETECTOR (ELECTRICAL DETAIL)

NO SCALE

E-19

FOR NOTES, SEE SHEET E-1.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY:
DATE REVISED: 09-02-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.3/33.4	74	81

REGISTERED ELECTRICAL ENGINEER 10-21-10 DATE

12-20-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER S.SHAHRIARI No. E 13485 Exp. 9/30/12 ELECTRICAL STATE OF CALIFORNIA

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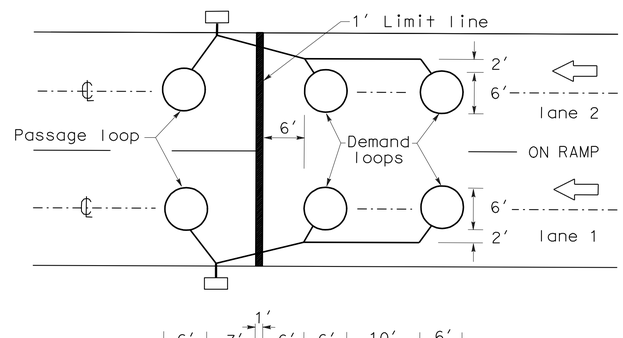

TYPICAL 2-LANE RAMP
DETECTOR LOOP INSTALLATION

INDUCTIVE LOOP DETECTOR (DETAIL)

NO SCALE

E-20

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: ANTHONY C FERNANDEZ
CHECKED BY: VANESSA TRUONG
REVISED BY
DATE REVISED 10-13-10

LAST REVISION 00-00-00
DATE PLOTTED => 22-DEC-2010
TIME PLOTTED => 08:27

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	6.3/33.4	75	81

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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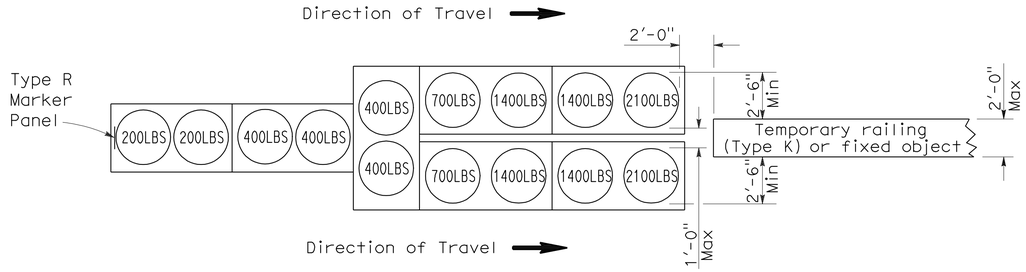
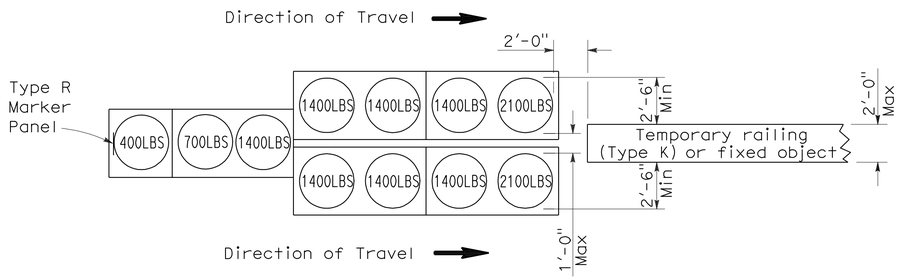
To accompany plans dated 12-20-10



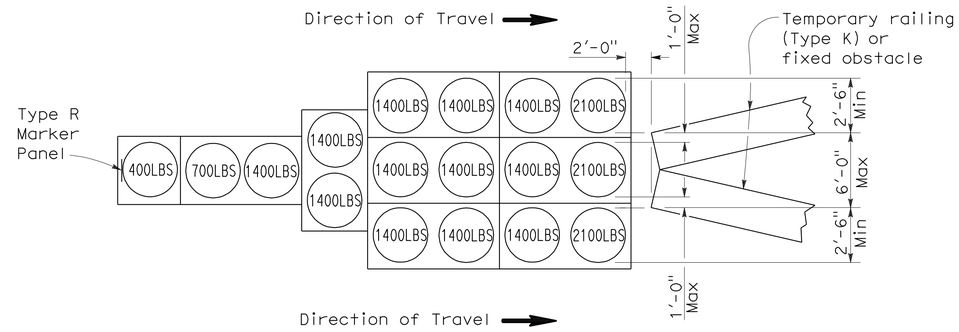
ARRAY 'TU14'

Approach speed 45 mph or more



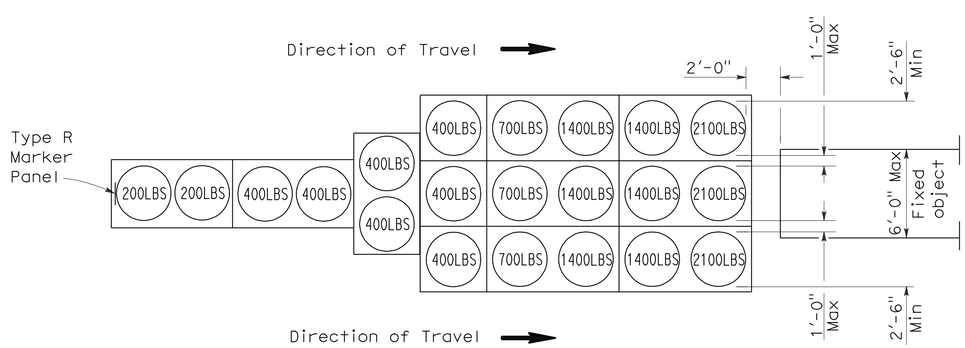
ARRAY 'TU11'

Approach speed less than 45 mph



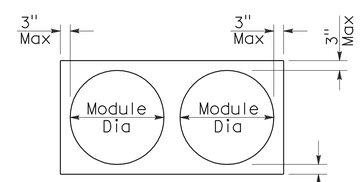
ARRAY 'TU17'

Approach speed less than 45 mph

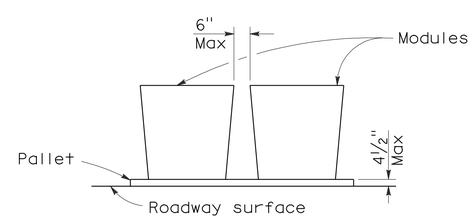


ARRAY 'TU21'

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
12	Ora	5	6.3/33.4	76	81

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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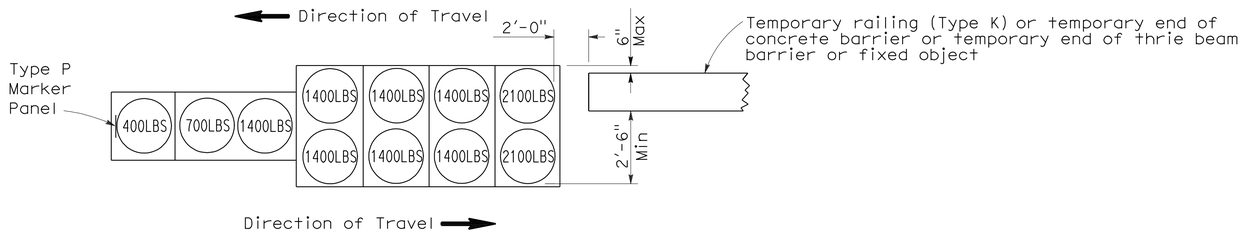
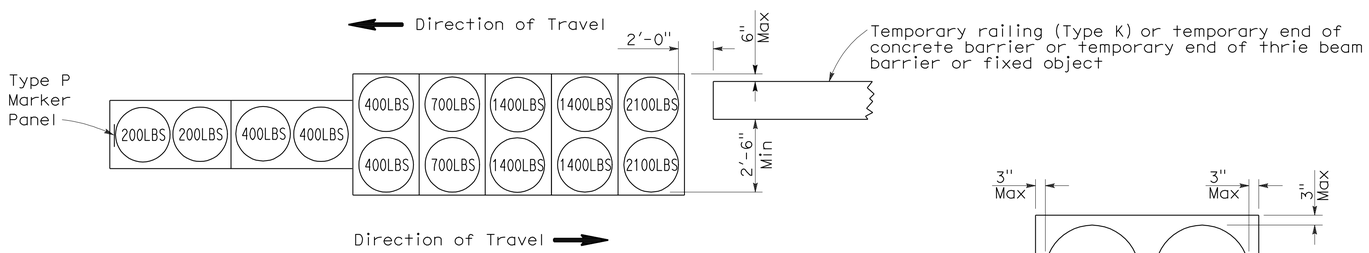
To accompany plans dated 12-20-10



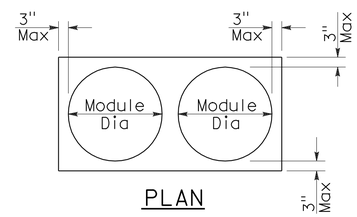
ARRAY 'TB11'

Approach speed less than 45 mph

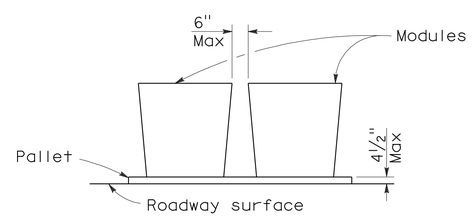


ARRAY 'TB14'

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	6.3/33.4	77	81

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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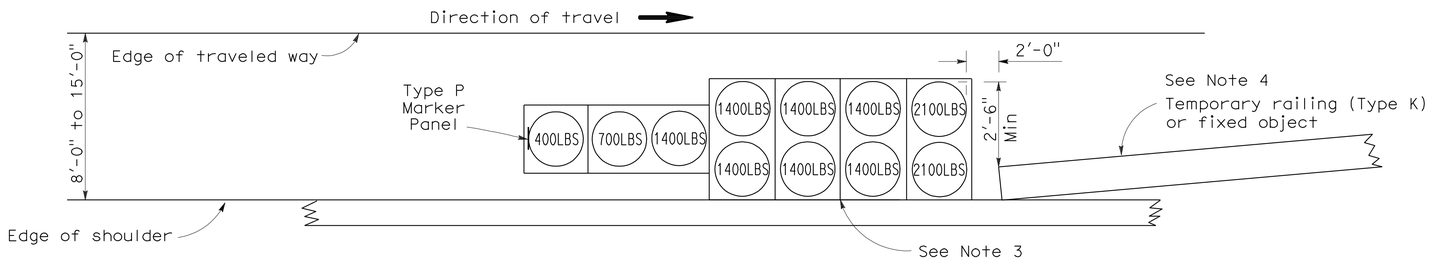
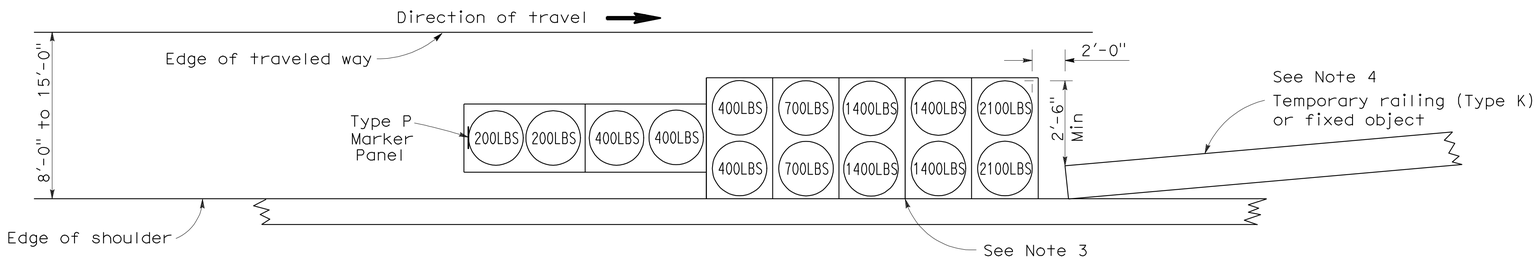
To accompany plans dated 12-20-10



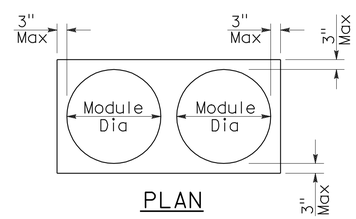
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

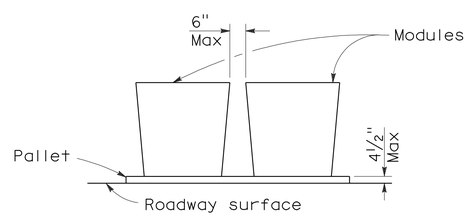


ARRAY 'TS14'

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	6.3/33.4	78	81

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
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 12-20-10

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
2. Luminaires shall be the cutoff type, ANSI Type Ⅲ medium cutoff lighting distribution, unless otherwise specified.
3. Variations noted adjacent to symbol on project plans.

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

- AB — Abandon. If applied to conduit, remove conductors.
- BC — Install pull box in existing conduit run.
- BP — Pedestrian barricade, type as indicated on plan.
- CB — Install conduit into existing pull box.
- CC — Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF — Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH — Detector handhole.
- FA — Foundation to be abandoned.
- IS — Install sign on signal mast arm.
- NS — No slip base on standard.
- PEC — Photoelectric control.
- PEU — Photoelectric unit.
- RC — Equipment or material to be removed and become the property of the Contractor.
- RE — Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL — Relocate equipment.
- RR — Remove and reuse equipment.
- RS — Remove and salvage equipment.
- SC — Splice new to existing conductors.
- SD — Service disconnect.
- SF — Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP — Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED	EXISTING	
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type Ⅰ, Ⅱ, Ⅲ, Ⅳ or Ⅴ as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

SOFFIT AND WALL MOUNTED LUMINAIRES

Pendant, 70 W HPS unless otherwise specified.

Flush, 70 W HPS unless otherwise specified.

Wall surface, 70 W HPS unless otherwise specified.

Existing soffit or wall luminaire to remain unmodified.

Existing soffit or wall luminaire to be modified as specified.

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A
DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	6.3/33.4	79	81

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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To accompany plans dated 12-20-10

CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
C	c	Communication conduit
T	t	Telephone conduit
F	f	Fire alarm conduit
FO	fo	Fiber optic conduit
		Conduit termination (RSP ES-9A C)
R	r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
OH	oh	Overhead lines
U	U	Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
III		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
T	t	Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION

Type of installation

TYPE H SERVICE - 28'-10" ← Pole height above grade

ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
PV	PV	Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
R	Y	Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

2006 REVISED STANDARD PLAN RSP ES-1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	6.3/33.4	80	81

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jeffery G. McRae No. E14512 Exp. 6-30-08 ELECTRICAL STATE OF CALIFORNIA

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To accompany plans dated 12-20-10

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345 — Sign number - Place on post or structure

10 ISL SCI 1.0

- 1.0 — Transformer rating (kVA)
- SCI — Lighting control type
- ISL — Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- 15'-0" — Mast arm length, if shown. Do not place on standard or structure.
- 12345 — Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC

- 2#10, 15#14, 2 DLC — Number and size of conductors and cables
- 1½"C — Size of conduit in inches

Ø1, Ø2, Ø2P, etc.	Traffic phase identification for signal faces, detectors and phase diagrams
1 2 3	Project note numbers
A B C	Equipment description, installation or item numbers
1 2 3	Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

- 100 — Wind velocity = 100 mph
- 3 — Case 3 arm loading
- 19A — Standard type
- Standard Plan sheet number
- Detail number or letter

MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
CMS	cms	Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
EMS	ems	Extinguishable message sign
M V	m v	Detection device M = Microwave sensor V = Video image sensor

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED EXISTING

Pull box-No. 5 unless otherwise indicated or noted.

3 — 9A(21)

Pull box-Additional designations or descriptions

3 = No. 3½ pull box
5 = No. 5 pull box
6 = No. 6 pull box
7 = No. 7 (Ceiling pull box)
8 = No. 8 (Pendant soffit pull box)
9 = No. 9 pull box
9A = No. 9A pull box

(C) = Communications pull box
(E) = Pull box with extension
(S) = Sprinkler control pull box
(21) = Anchor bolts and conduit for future installation of Type 21 Standard
(T) = Traffic pull box

VEHICLE DETECTORS

5 J 9 U

- U — U = Upper, L = Lower
- 9 — Slot number in input file
- J — Input file (I or J)
- 5 — Phase

PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
DH	dh	Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	6.3/33.4	81	81

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jeffery G. McRae No. E14512 Exp. 6-30-08 ELECTRICAL STATE OF CALIFORNIA

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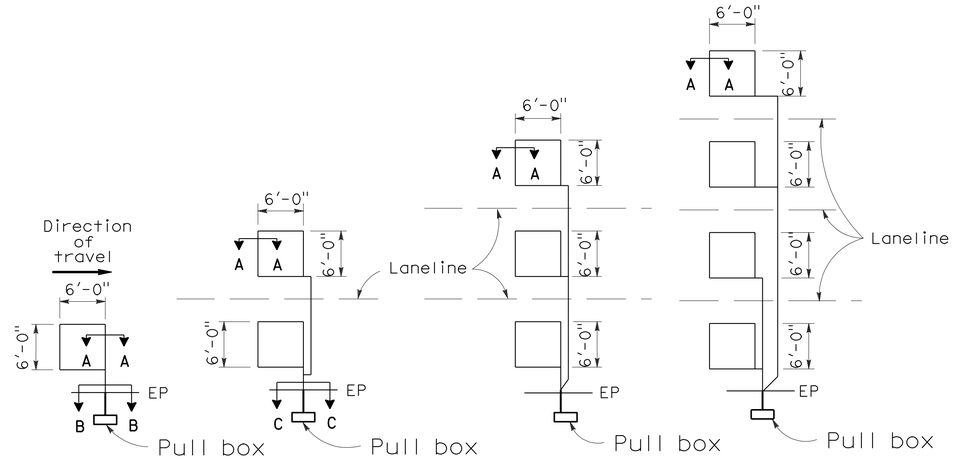
To accompany plans dated 12-20-10

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

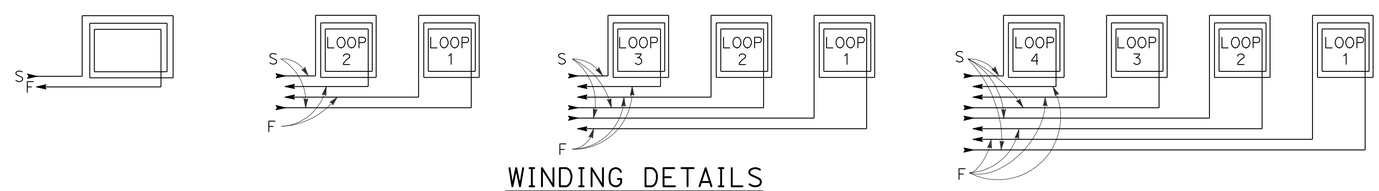


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

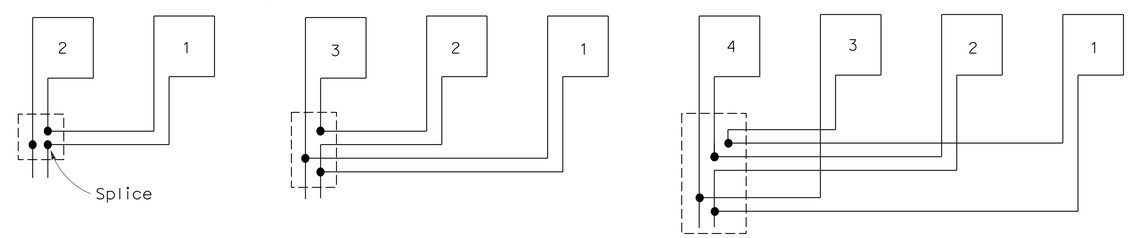
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 1Q thru 4Q = 1 Type Q loop configuration in each lane. (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



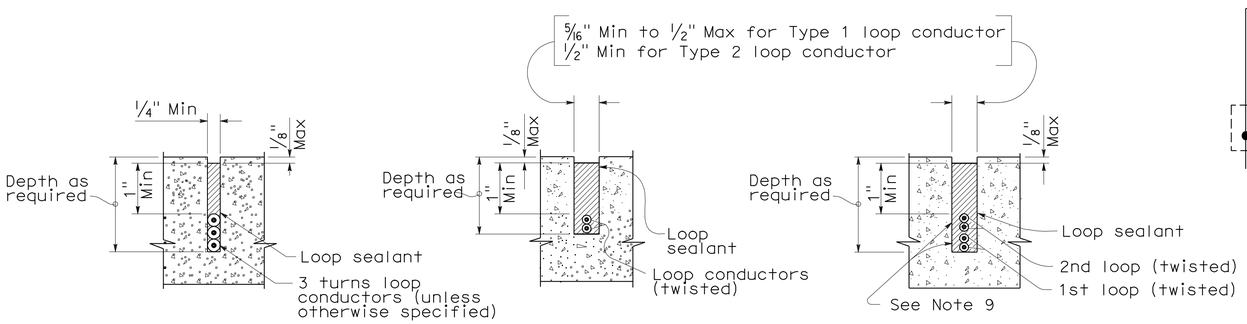
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A | SECTION B-B | SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A