Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	1	22

STP-S273(011)E

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN SHASTA COUNTY IN REDDING FROM CEDARS ROAD TO CANYON CREEK BRIDGE

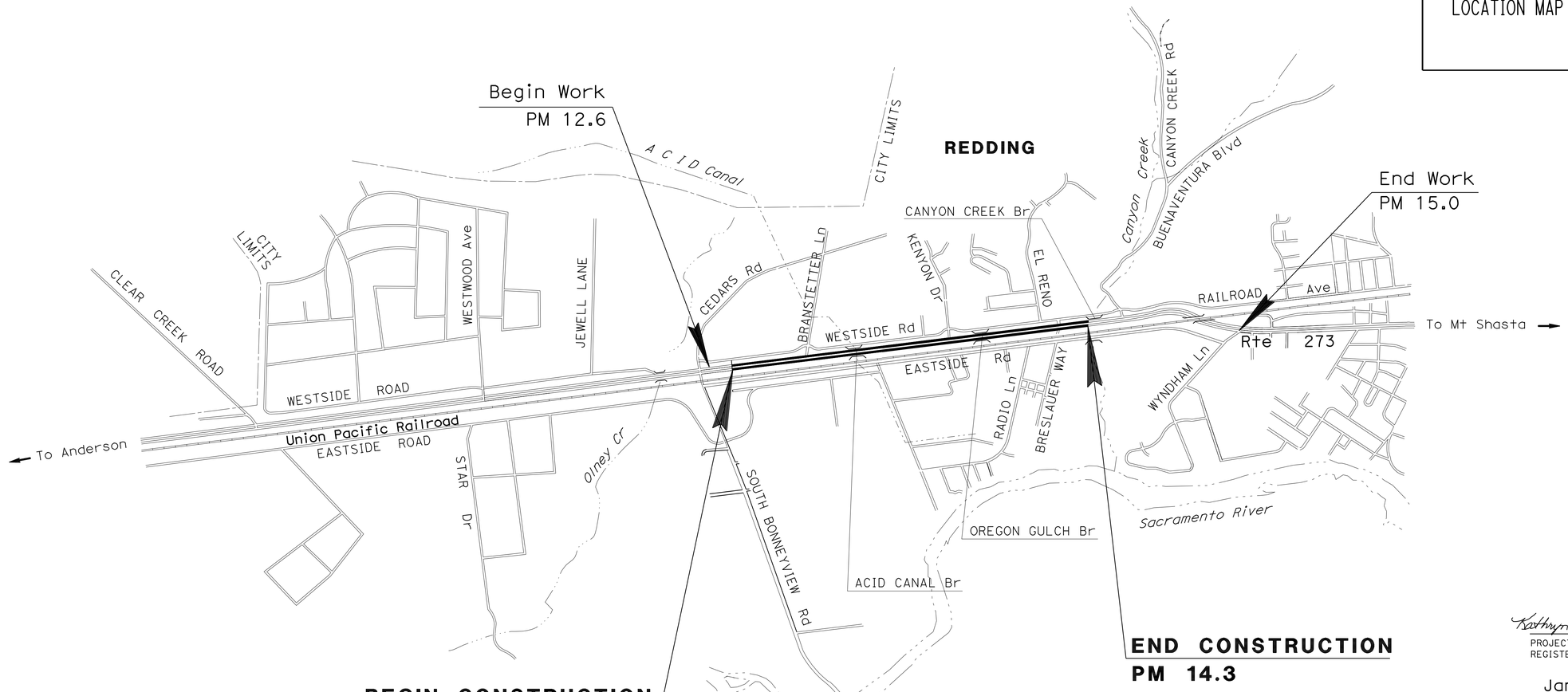
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3-5	CONSTRUCTION DETAILS
6	CONSTRUCTION AREA SIGNS
7-9	DETOUR PLANS
10	PAVEMENT DELINEATION DETAILS
11	PAVEMENT DELINEATION QUANTITIES
12	SUMMARY OF QUANTITIES
13-14	ELECTRICAL PLANS
15-22	REVISED AND NEW STANDARD PLANS

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

LOCATION MAP



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

NO SCALE

Kathryn B. Eckard 01-04-11
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

January 4, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.B. ECKARD No. 60268 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA

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

CONTRACT No.	02-2E8804
PROJECT ID	020000061

PROJECT MANAGER JULIE CASEY
DESIGN ENGINEER JULIE CASEY

P:\proj2\02\2E880_plans\pse\22e880ab001.dgn

LAST REVISION 01-04-11
DATE PLOTTED => 08-FEB-2011
TIME PLOTTED => 14:25

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	2	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

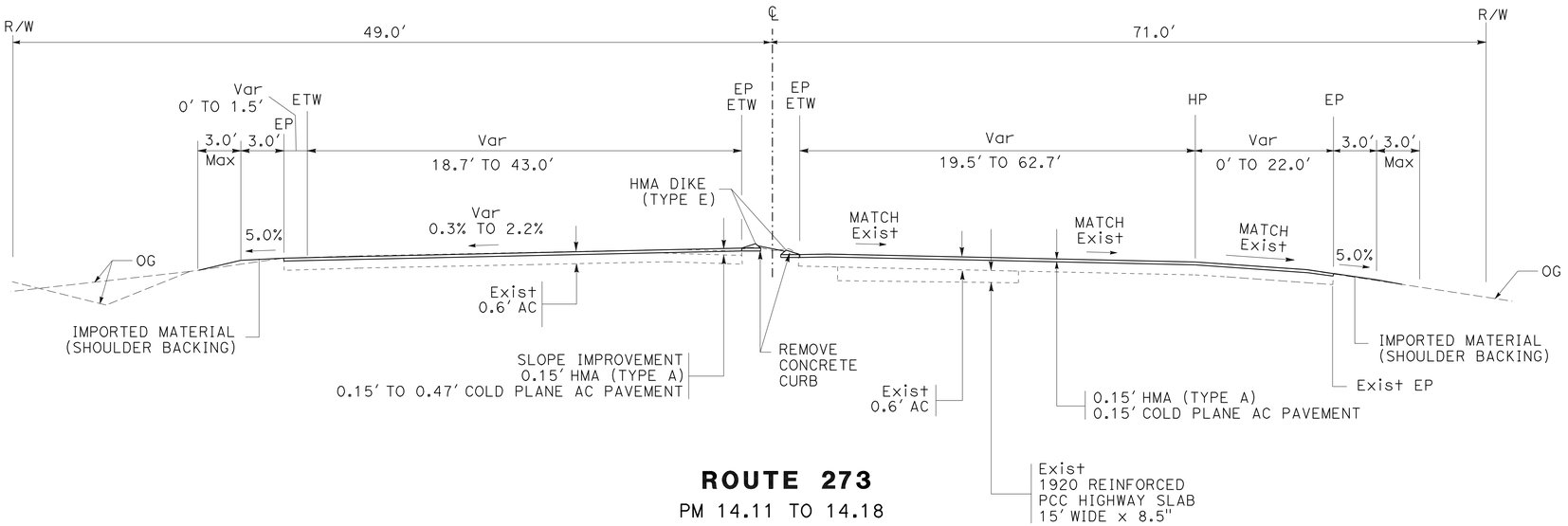
01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.B. ECKARD No. 60268 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA

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

NOTES:

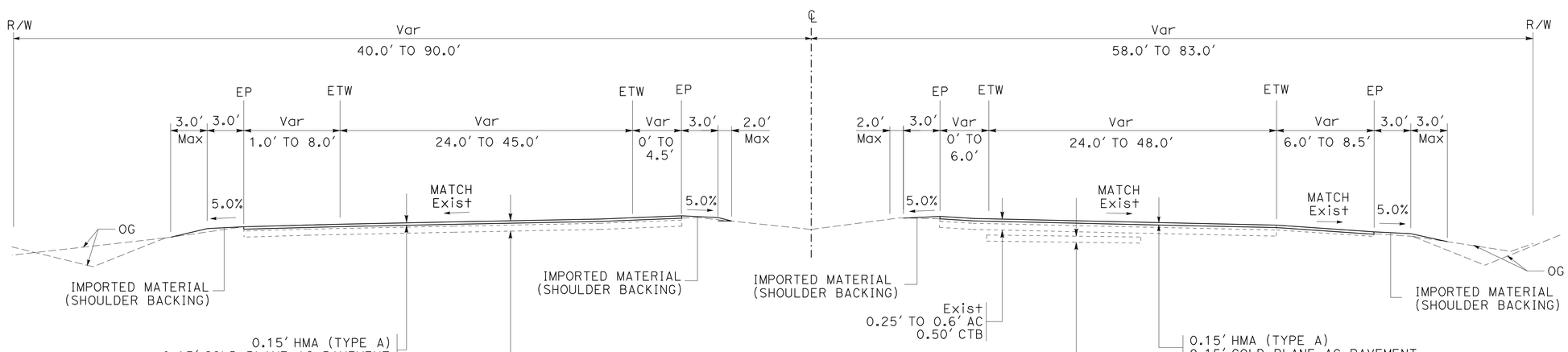
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS AS SHOWN OR AS DETERMINED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY IDENTIFIED.
4. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



ROUTE 273

PM 14.11 TO 14.18

"A1" 104+00 TO 107+67



ROUTE 273

PM 12.80 TO 14.11

TYPICAL CROSS SECTIONS

NO SCALE

X-1

REVISED BY	DATE REVISED
JASTEFFAN	09-03-10

CALCULATED-DESIGNED BY	CHECKED BY
JEANNIE STEFFAN	KATHY ECKARD

FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® **DESIGN**

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LAST REVISION 01-04-11 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:25

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	3	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.B. ECKARD No. 60268 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA

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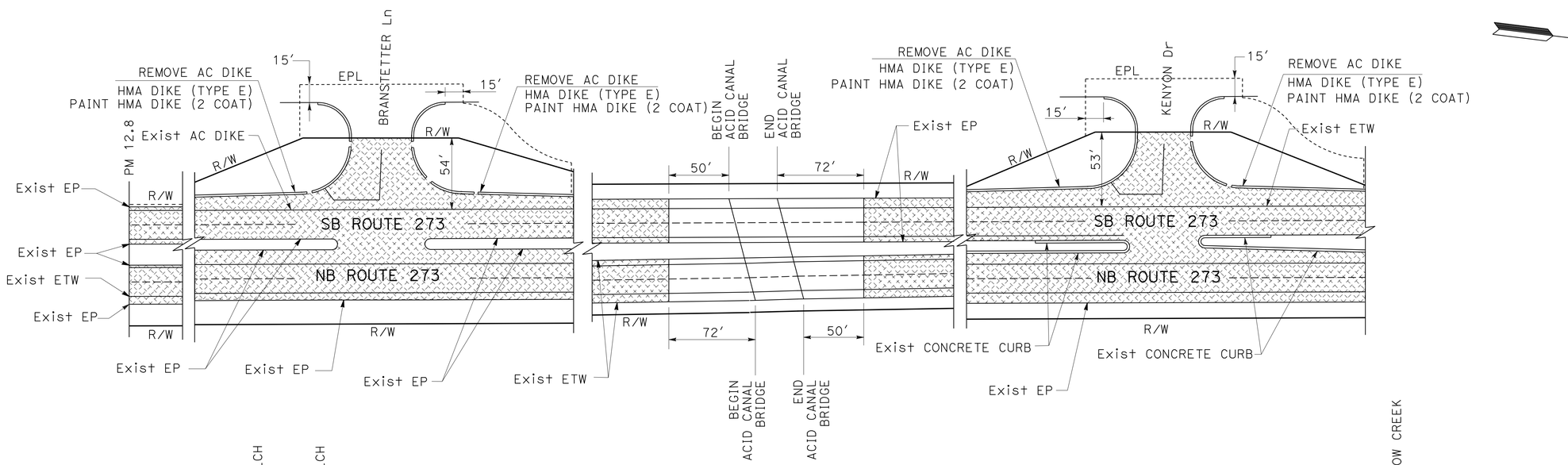
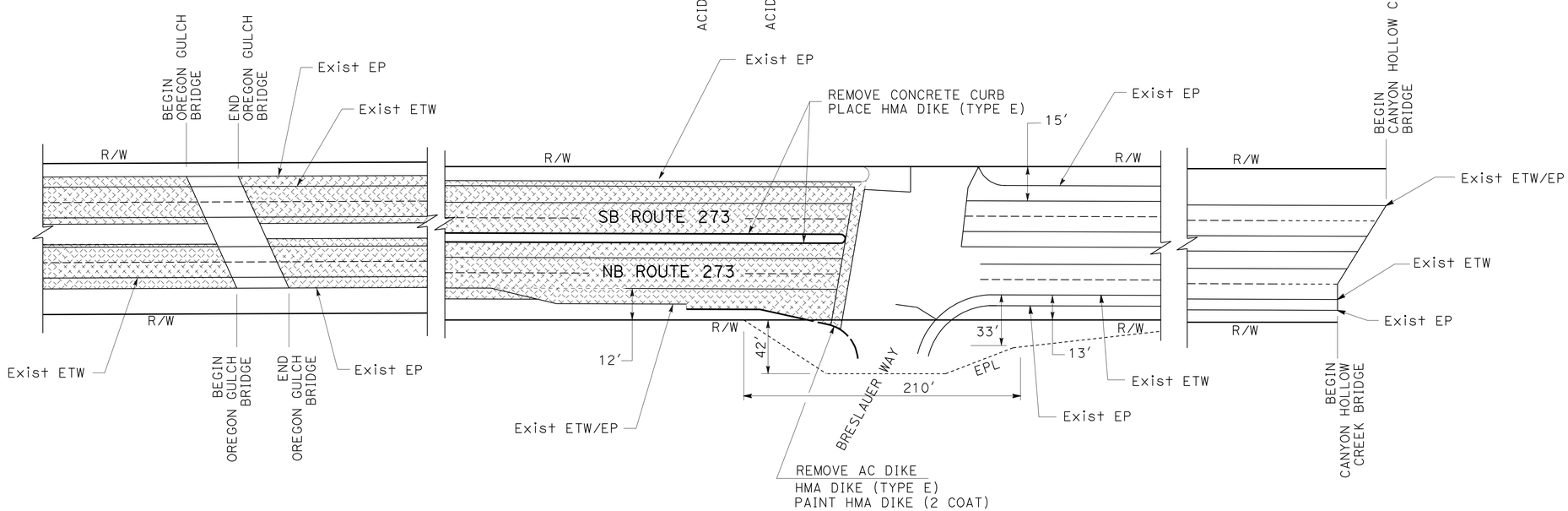
LEGEND:

- 0.15′ COLD PLANE AC PAVEMENT
  0.15′ HMA (TYPE A)
- LANE LINE
- ENCROACHMENT PERMIT LIMITS (EPL)
- R/W
- DRAINAGE SYSTEM No.

ABBREVIATIONS:

EPL ENCROACHMENT PERMIT LIMITS





LIMITS OF HMA AND COLD PLANE AC PAVEMENT

CONSTRUCTION DETAILS

NO SCALE

C-1

REVISED BY	JASTEFFAN
DATE REVISED	09-03-10
JEANNIE STEFFAN	
KATHY ECKARD	
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	
JULIE CASEY	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 01-04-11 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	4	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
K.B. ECKARD
No. 60268
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

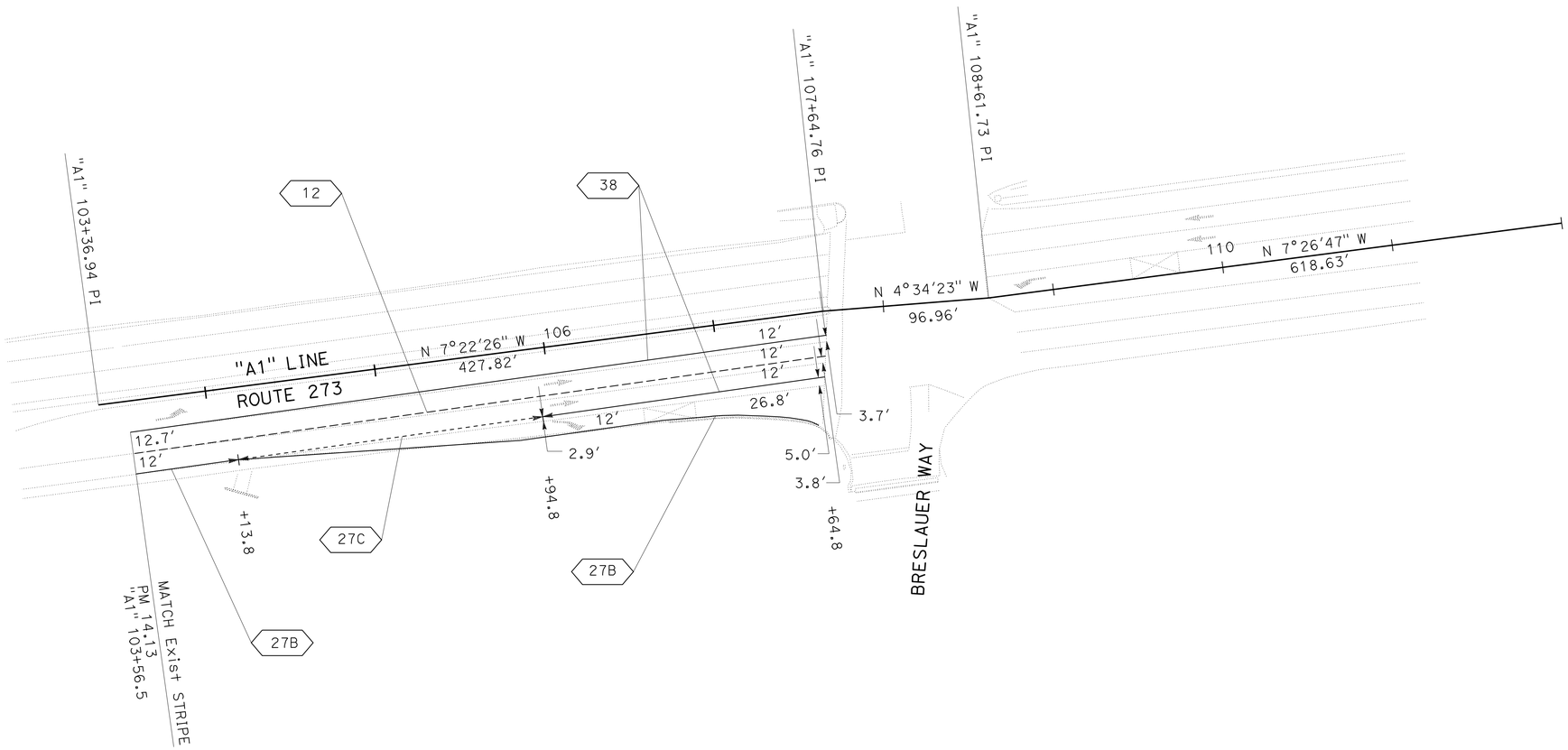
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

1. THIS SHEET IS FOR STRIPE RELOCATION PLACEMENT ONLY. QUANTITIES ARE INCLUDED IN THE PAVEMENT DELINEATION SHEETS.

LEGEND:

X — PAVEMENT DELINEATION STRIPE DETAIL No.



RELOCATE STRIPE LIMITS

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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FUNCTIONAL SUPERVISOR: JULIE CASEY
CALCULATED-DESIGNED BY: JEANNIE STEFFAN
CHECKED BY: KATHY ECKARD
REVISED BY: JASTEFFAN
DATE REVISED: 09-03-10

P:\proj2\02\2E880_plans\pse\22e880ga002.dgn

LAST REVISION 01-04-11
DATE PLOTTED => 08-FEB-2011
TIME PLOTTED => 14:26

BORDER LAST REVISED 7/2/2010
USERNAME => s115152
DGN FILE => 22e880ga002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0318
PROJECT NUMBER & PHASE 02000006111

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	5	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

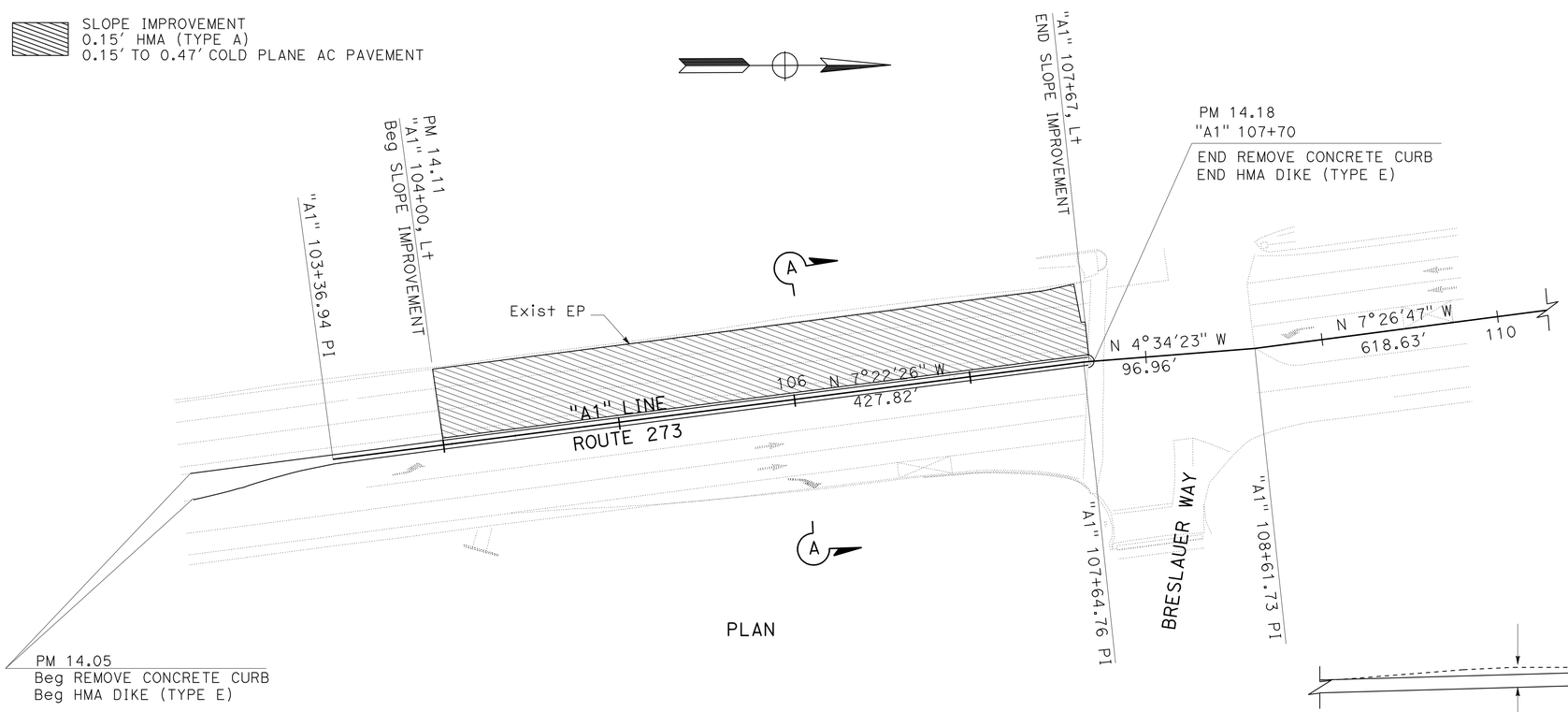
01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.B. ECKARD No. 60268 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA

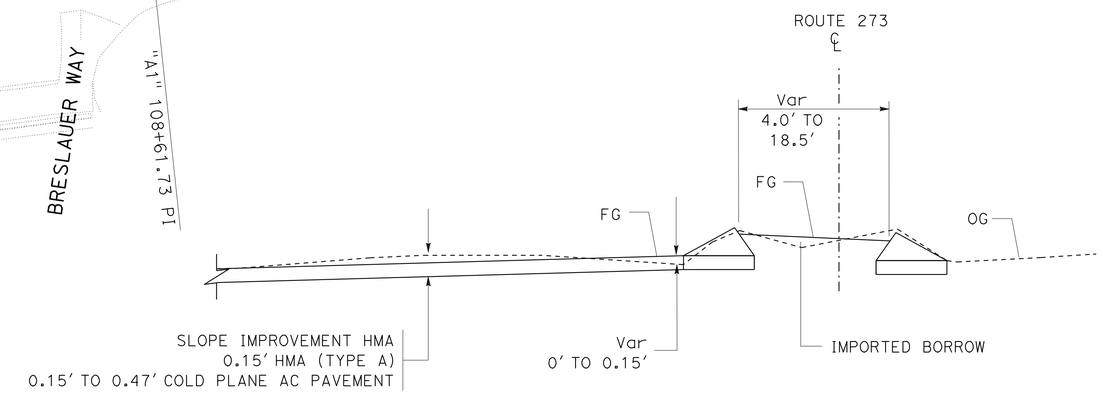
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

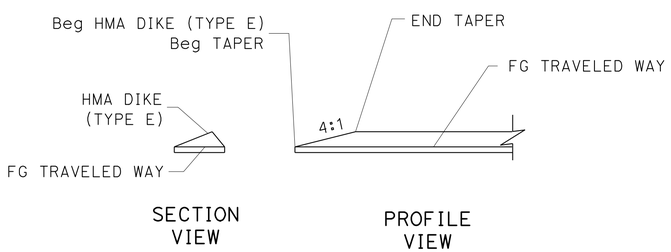
SLOPE IMPROVEMENT
0.15′ HMA (TYPE A)
0.15′ TO 0.47′ COLD PLANE AC PAVEMENT



PLAN

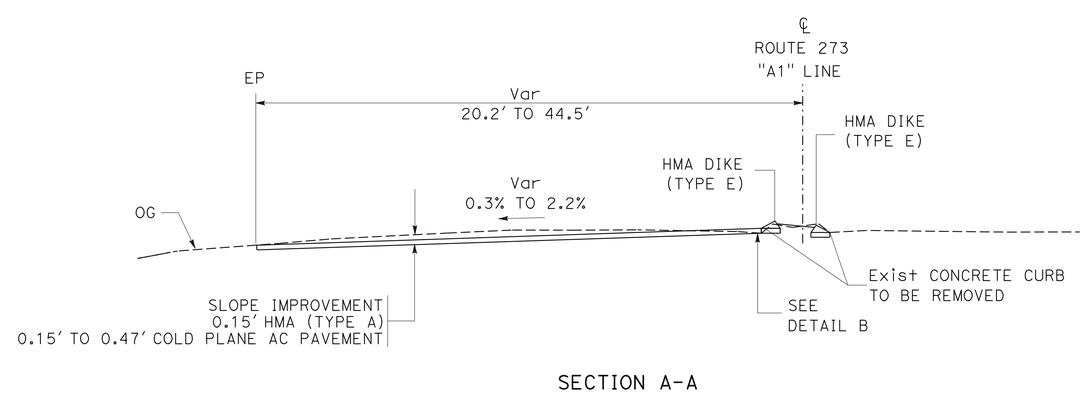


DETAIL B



DIKE END TAPER

NOTE: TAPER ALL BEGIN AND END OF
ALL PLACE HMA DIKE (TYPE E)



SECTION A-A

SLOPE IMPROVEMENT

CONSTRUCTION DETAILS

NO SCALE

C-3

REVISED BY	JASTEFFAN
DATE REVISED	09-03-10
CALCULATED-DESIGNED BY	JEANNIE STEFFAN
CHECKED BY	KATHY ECKARD
FUNCTIONAL SUPERVISOR	JULIE CASEY

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LAST REVISION 01-04-11
DATE PLOTTED => 08-FEB-2011
TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	6	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.B. ECKARD No. 60268 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA

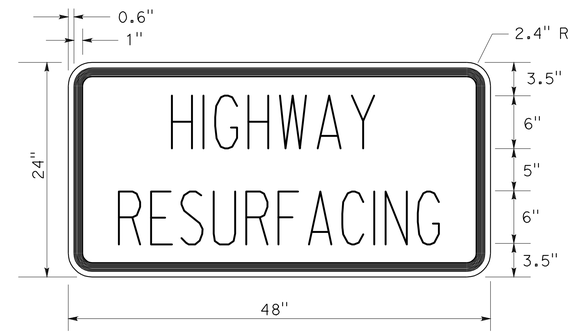
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

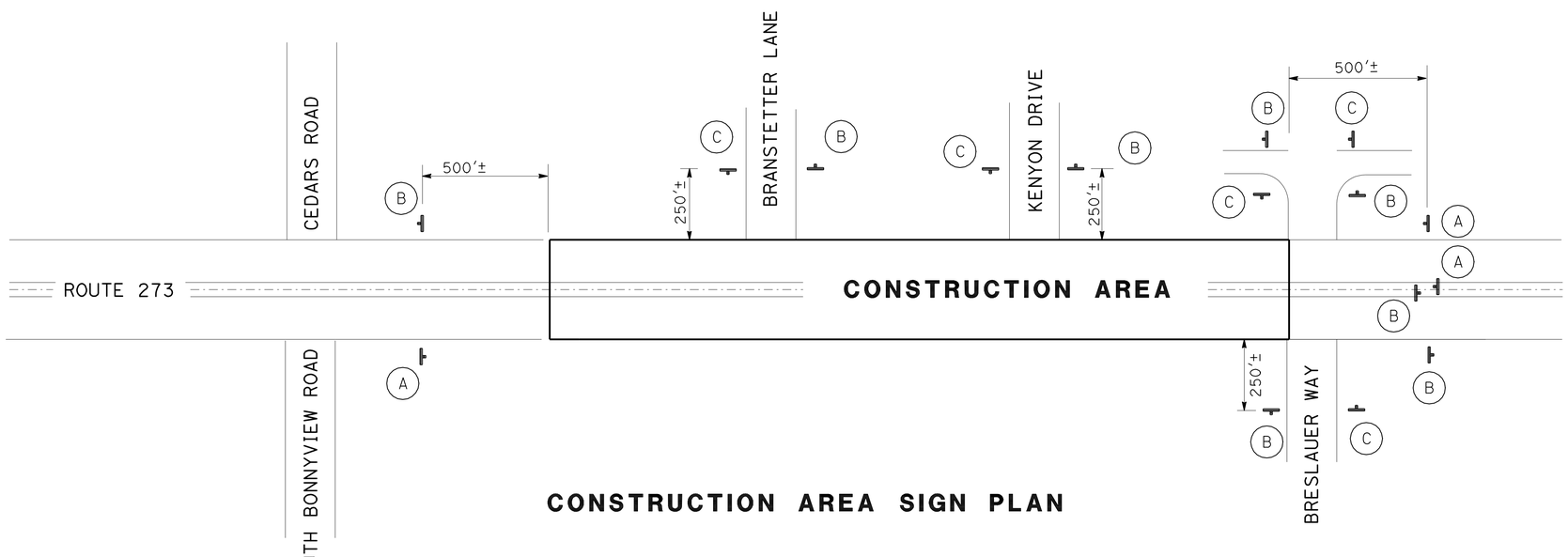
1. EXACT LOCATION OF ALL SIGNS TO BE DETERMINED BY THE ENGINEER.

CONSTRUCTION AREA SIGNS (PORTABLE MOUNTED)

TYPE	CODE	SIGN MESSAGE	PANEL SIZE	No. OF SIGNS	No. AND SIZE OF POSTS
A	W20-1 C23B	ROAD WORK AHEAD HIGHWAY RESURFACING	48" x 48' 48" x 24"	3	1 - 4" x 6"
B	G20-2	END ROAD WORK	36" x 18"	8	1 - 4" x 4"
C	W20-1	ROAD WORK AHEAD	48" x 48"	5	1 - 4" x 6"



C23B SIGN PANEL DETAIL



CONSTRUCTION AREA SIGN PLAN

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: JULIE CASEY
CALCULATED-DESIGNED BY: JEANNIE STEFFAN
CHECKED BY: KATHY ECKARD
REVISED BY: JASTEFFAN
DATE REVISED: 09-03-10

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LAST REVISION 01-04-11
DATE PLOTTED => 08-FEB-2011
TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	7	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
K.B. ECKARD
No. 60268
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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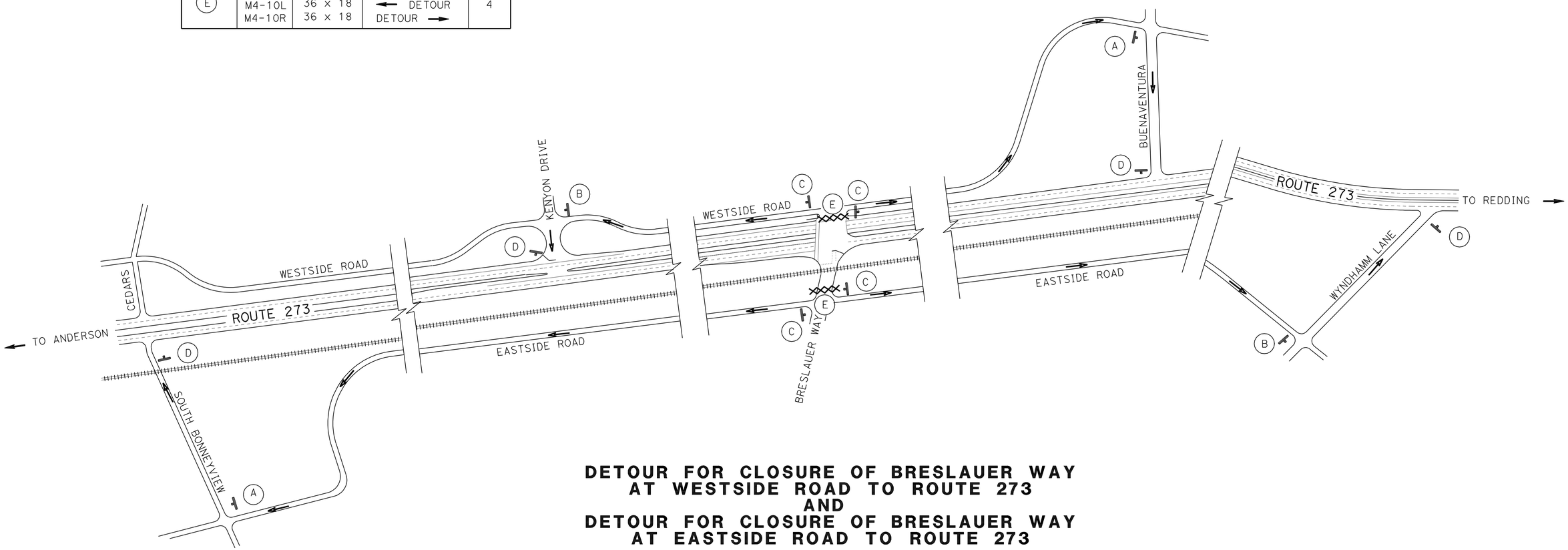
LEGEND:

ROAD CLOSURE

CONSTRUCTION AREA SIGNS (PORTABLE)

SIGN No.	CODE	PANEL SIZE (INCHES)	REMARKS	(EA)
A	M4-10R	48 x 18	DETOUR	4
B	M4-10L	48 x 18	← DETOUR	4
C	SC3(CA)	48 x 18	↑ DETOUR	8
D	M4-8A	24 x 18	END DETOUR	8
E	R11-2 M4-10L M4-10R	36 x 24 36 x 18 36 x 18	ROAD CLOSED ← DETOUR DETOUR →	4



DETOUR FOR CLOSURE OF BRESLAUER WAY AT WESTSIDE ROAD TO ROUTE 273 AND DETOUR FOR CLOSURE OF BRESLAUER WAY AT EASTSIDE ROAD TO ROUTE 273

DETOUR PLAN

NO SCALE **DP-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

FUNCTIONAL SUPERVISOR: JULIE CASEY
CALCULATED-DESIGNED BY: JEANNIE STEFFAN
CHECKED BY: KATHY ECKARD
REVISED BY: JASTEFFAN
DATE REVISED: 09-03-10

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LAST REVISION 01-04-11 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:26

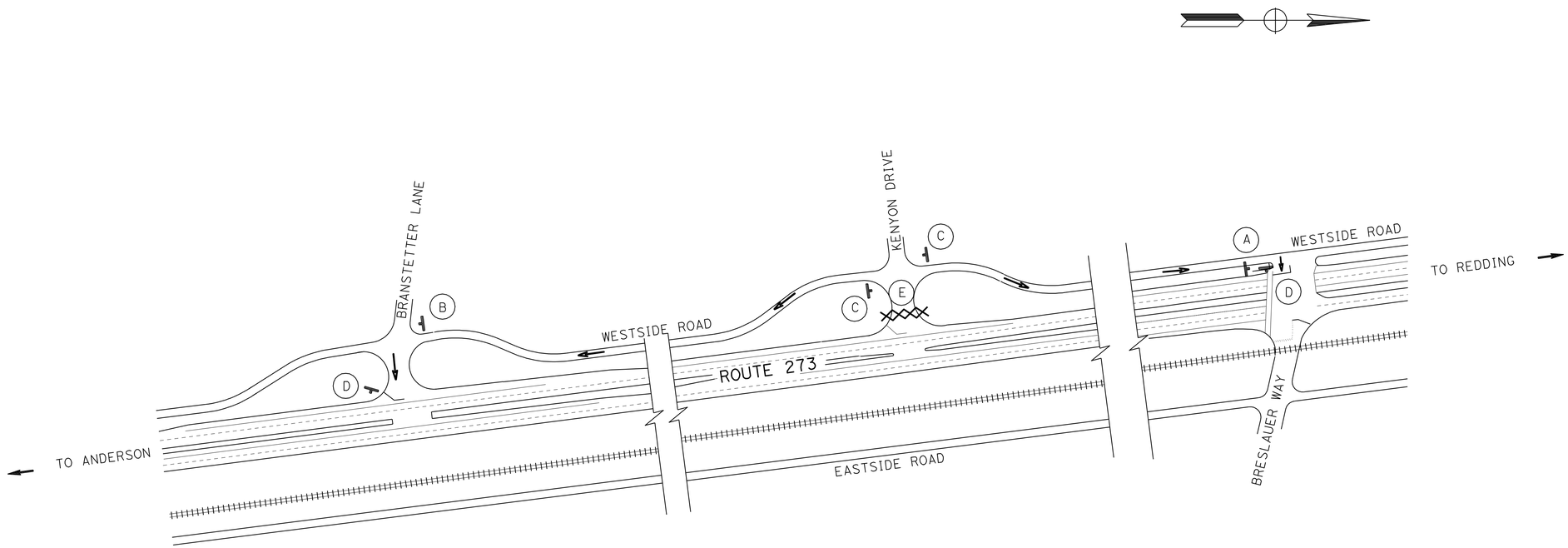
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	8	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
K.B. ECKARD
No. 60268
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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



DETOUR FOR CLOSURE OF KENYON DRIVE AT WESTSIDE ROAD TO ROUTE 273

DETOUR PLAN

NO SCALE

DP-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

FUNCTIONAL SUPERVISOR: JULIE CASEY
CALCULATED-DESIGNED BY: JEANNIE STEFFAN
CHECKED BY: KATHY ECKARD
REVISED BY: JASTEFFAN
DATE REVISED: 09-03-10

P:\proj2\02\2E880_plans\pse\22e880mg002.dgn

LAST REVISION 01-04-11
DATE PLOTTED => 08-FEB-2011
TIME PLOTTED => 14:26

BORDER LAST REVISED 7/2/2010
USERNAME => s115152
DGN FILE => 22e880mg002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0318
PROJECT NUMBER & PHASE 02000006111

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	9	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
K.B. ECKARD
No. 60268
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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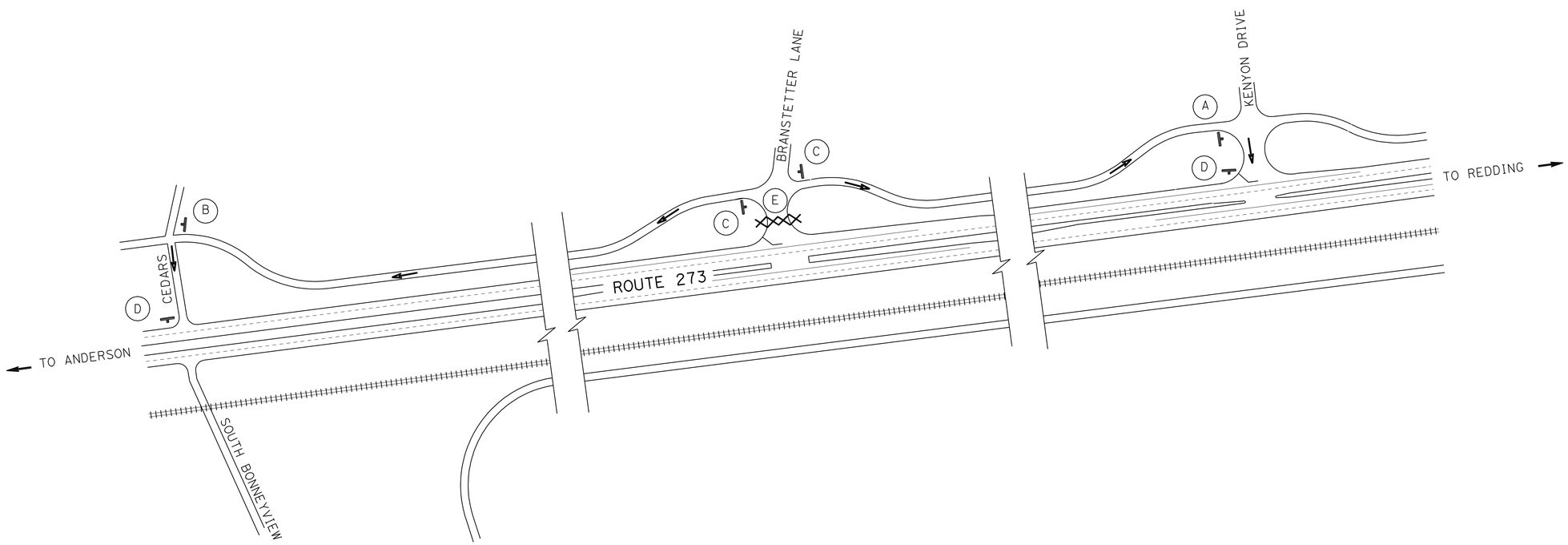

DETOUR FOR CLOSURE OF BRANSTETTER LANE AT WESTSIDE ROAD TO ROUTE 273

DETOUR PLAN
NO SCALE
DP-3

REVISED BY	DATE REVISED
JASTEFFAN	09-03-10

CALCULATED-DESIGNED BY: JEANNIE STEFFAN
CHECKED BY: KATHY ECKARD
FUNCTIONAL SUPERVISOR: JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 01-04-11
DATE PLOTTED => 08-FEB-2011
TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	10	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
K.B. ECKARD
No. 60268
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

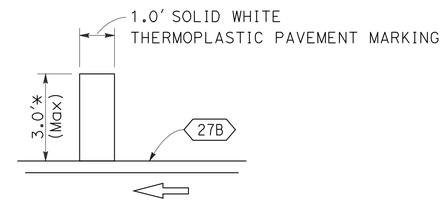
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

DIRECTION OF TRAFFIC

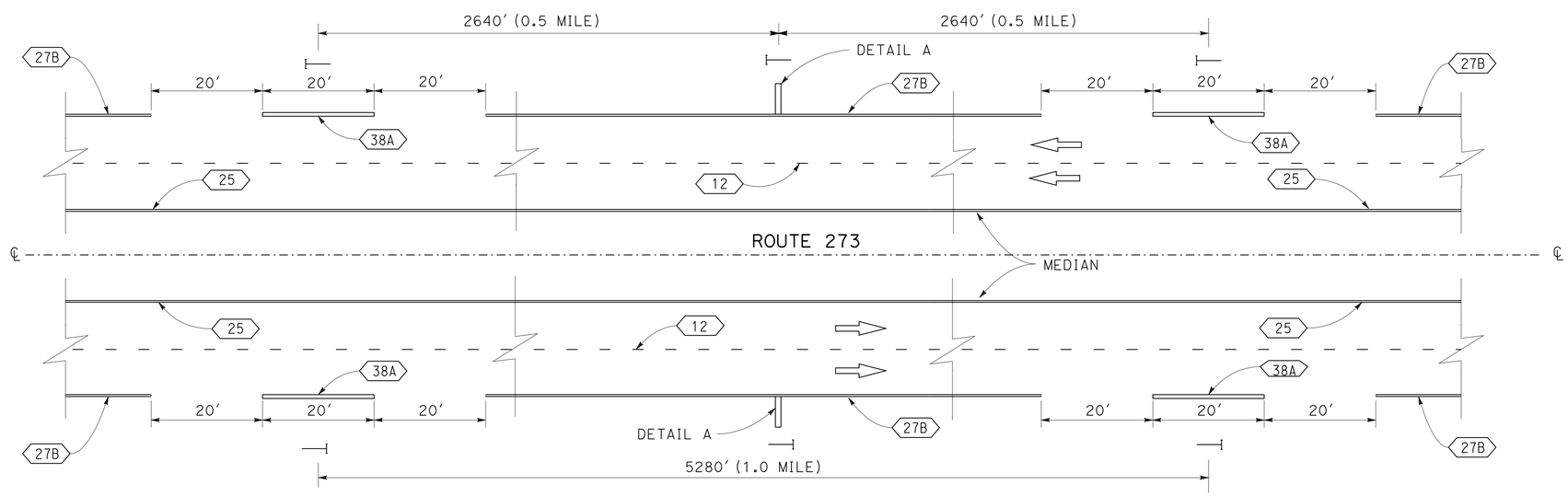
MILEPOST MARKER

X — PAVEMENT DELINEATION STRIPE DETAIL No.



DETAIL A

* ACTUAL LENGTH MAY VARY
DUE TO PAVEMENT WIDTH



TYPICAL HALF MILE AND MILE POST STRIPE

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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FUNCTIONAL SUPERVISOR: JULIE CASEY
CALCULATED-DESIGNED BY: JEANNIE STEFFAN
CHECKED BY: KATHY ECKARD
REVISED BY: JASTEFFAN
DATE REVISED: 09-03-10

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LAST REVISION 01-04-11 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	11	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
K.B. ECKARD
No. 60268
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

THERMOPLASTIC PAVEMENT MARKING

PM	NB/SB	EA	SQFT	REMARKS
13.08	NB	1	42.0	TYPE III (L) ARROW
13.09	NB	2	66.0	TYPE V ARROW
13.12	NB	2	66.0	TYPE V ARROW
13.13	SB	1	55.2	LIMIT LINE
13.13	SB	1	22.0	STOP
13.14	SB	2	66.0	TYPE V ARROW
13.17	SB	2	66.0	TYPE V ARROW
13.18	SB	1	42.0	TYPE III (R) ARROW
13.50	NB/SB	2	6.0	HALF MILE POST STRIPE (DETAIL A)
13.69	NB	1	42.0	TYPE III (L) ARROW
13.70	NB	2	66.0	TYPE V ARROW
13.72	NB	2	66.0	TYPE V ARROW
13.72	SB	1	53.7	LIMIT LINE
13.72	SB	1	22.0	STOP
13.73	SB	2	66.0	TYPE V ARROW
13.75	SB	2	66.0	TYPE V ARROW
13.76	SB	1	42.0	TYPE III (R) ARROW
14.11	NB	1	42.0	TYPE III (L) ARROW
14.15	NB	2	66.0	TYPE V ARROW
14.16	NB	1	42.0	TYPE III (R) ARROW
14.17	NB	1	118.0	RAILROAD CROSSING SYMBOL
14.18	NB/SB	1	240.0	CROSSWALK
TOTAL			1362.9	

MILEPOST MARKER

PM	EA
13.0	2
13.5	2
14.0	2
TOTAL	6

PAVEMENT DELINEATION QUANTITIES

POST MILE	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)										PAVEMENT MARKERS (RETROREFLECTIVE)					
	DETAIL 12	DETAIL 21	DETAIL 22	DETAIL 25	DETAIL 27	DETAIL 27B	DETAIL 27C	DETAIL 29	DETAIL 38	DETAIL 38A	TYPE G		TYPE H		TYPE D	
											DETAIL 12	DETAIL 38	DETAIL 25	DETAIL 27	DETAIL 22	DETAIL 29
12.8/14.2	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA
SUBTOTAL	15,199	150	768	14,087	770	14,910	1350	805	9497	54	3738	2296	3405	195	194	113
TOTAL	57,590										9941					

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: JULIE CASEY
CALCULATED-DESIGNED BY: JEANNIE STEFFAN
CHECKED BY: KATHY ECKARD
REVISED BY: JASTEFFAN
DATE REVISED: 09-03-10

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LAST REVISION 01-04-11 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	12	22

Kathryn B. Eckard 01-04-11
REGISTERED CIVIL ENGINEER DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.B. ECKARD No. 60268 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA

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

NOTE:

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

PLACE HMA DIKE (TYPE E)

LOCATION	POST MILE	SHOULDER	NB (LF)	SB (LF)
BRANSTETTER Ln	13.10 TO 13.13	R†		144
BRANSTETTER Ln	13.13 TO 13.17	R†		178
KENYON Dr	13.69 TO 13.72	R†		163
KENYON Dr	13.72 TO 13.76	R†		142
ROUTE 273	14.05 TO 14.18	MEDIAN	689	689
BRESLAUER Wy	14.16 TO 14.20	R†	100	
		SUBTOTAL	789	1316
		TOTAL	2105	

REMOVE AC DIKE

LOCATION	POST MILE	SHOULDER	NB (LF)	SB (LF)
BRANSTETTER Ln	13.10 TO 13.13	R†		144
BRANSTETTER Ln	13.13 TO 13.17	R†		178
KENYON Dr	13.69 TO 13.72	R†		163
KENYON Dr	13.72 TO 13.76	R†		142
BRESLAUER Wy	14.16 TO 14.20	R†	100	
		SUBTOTAL	100	627
		TOTAL	727	

PAINT HMA DIKE (2 COAT)

LOCATION	POST MILE	SHOULDER	NB (LF)	SB (LF)	REMARK	COLOR
BRANSTETTER Ln	13.10 TO 13.13	R†		144	DIKE	WHITE
BRANSTETTER Ln	13.13 TO 13.17	R†		178	DIKE	WHITE
KENYON Dr	13.69 TO 13.72	R†		163	DIKE	WHITE
KENYON Dr	13.72 TO 13.76	R†		142	DIKE	WHITE
BRESLAUER Wy	14.16 TO 14.20	R†	100		DIKE	WHITE
		SUBTOTAL	100	627		
		TOTAL	727			

EROSION CONTROL (HYDROSEED)

LOCATION	AREA (ACRE)	REMARKS
ROUTE 273	0.4	STAGING AREAS
TOTAL	0.4	

IMPORTED BORROW

LOCATION	POST MILE	LENGTH (LF)	(N) WIDTH (LF)	CY	REMARKS
ROUTE 273	14.11 TO 14.18	689	4.0 TO 18.5	25.0	MEDIAN
			TOTAL	25.0	

REMOVE CONCRETE CURB

LOCATION	POST MILE	RT/LT	NB (LF)	SB (LF)
ROUTE 273	14.05 TO 14.18	LT	689	689
		TOTAL	1378	

IMPORTED MATERIAL (SHOULDER BACKING)

LOCATION	POST MILE	(N) NB (LF)	(N) SB (LF)	(N) WIDTH (LF)	(N) DEPTH (LF)	TON
ROUTE 273	12.85 TO 14.31	7253	6646	3.0	0.15	507
					TOTAL	507

TACK COAT

LOCATION	POST MILE	(N) (SQFT)	MASS (TON)
ROUTE 273	12.80 TO 13.31	194,265	9.9
ROUTE 273	13.33 TO 13.89	213,993	10.9
ROUTE 273	13.90 TO 14.18	107,163	5.4
		TOTAL	26.2

HOT MIX ASPHALT (TYPE A)

LOCATION	POST MILE	(N) SB LANES (SQFT)	(N) NB LANES (SQFT)	(N) (SQFT)	(N) DEPTH (LF)	MASS (TON)	REMARKS
ROUTE 273	12.80 TO 13.11	54,978	55,335		0.15	1241.0	MAINLINE
BRANSTETTER Ln	13.11 TO 13.14			16,825	0.15	189.3	INTERSECTION
ROUTE 273	13.14 TO 13.31	34,432	32,694		0.15	755.2	MAINLINE
ROUTE 273	13.33 TO 13.69	66,086	67,370		0.15	1501.4	MAINLINE
KENYON Dr	13.69 TO 13.74			25,724	0.15	289.4	INTERSECTION
ROUTE 273	13.74 TO 13.89	26,545	28,269		0.15	616.7	MAINLINE
ROUTE 273	13.90 TO 14.18	50,600	56,566		0.15	1205.6	MAINLINE
ROUTE 273	14.11 TO 14.18					55.5	HMA DIKE
					TOTAL	5854.1	

COLD PLANE AC PAVEMENT

LOCATION	POST MILE	SB LANES (SQYD)	NB LANES (SQYD)	(SQYD)	(N) DEPTH (LF)	REMARKS
ROUTE 273	12.80 TO 13.11	6109	6148		0.15	MAINLINE
BRANSTETTER Ln	13.11 TO 13.14			1869	0.15	INTERSECTION
ROUTE 273	13.14 TO 13.31	3826	3633		0.15	MAINLINE
ROUTE 273	13.33 TO 13.69	7343	7486		0.15	MAINLINE
KENYON Dr	13.69 TO 13.74			2858	0.15	INTERSECTION
ROUTE 273	13.74 TO 13.89	2949	3141		0.15	MAINLINE
ROUTE 273	13.90 TO 14.18	5622	6285		0.15 TO 0.47	MAINLINE
	SUBTOTAL	25,849	26,693	4727		
	TOTAL	57,269				

SUMMARY OF QUANTITIES

Q-1

JASTEFFAN	09-03-10
REVISED BY	DATE REVISED
JEANNIE STEFFAN	KATHY ECKARD
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	JULIE CASEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

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LAST REVISION 01-04-11 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	13	22

REGISTERED ELECTRICAL ENGINEER 01-04-11 DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER J.M. HANNIGAN No. E13665 Exp. 6-30-11 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.

NOTE:

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

PROJECT NOTES:

1. VIDEO DETECTION ZONES WILL BE ADJUSTED BY STATE PERSONNEL.

2. REPLACE Exist TYPE A LOOP WITH NEW TYPE A LOOP.

3. REPLACE Exist TYPE A LOOP WITH NEW TYPE D LOOP. INSTALL NEW LOOP 1′ BEHIND LIMIT LINE.

4. REPLACE Exist TYPE C LOOP WITH NEW 25′ LONG TYPE C LOOP. INSTALL NEW LOOP 1′ BEHIND LIMIT LINE.

5. REPLACE Exist TYPE C LOOP WITH NEW TYPE D LOOP AND NEW 20′ LONG TYPE C LOOP. INSTALL NEW TYPE D LOOP 1′ BEHIND LIMIT LINE. INSTALL NEW TYPE C LOOP 6′ BEHIND THE NEW TYPE D LOOP.

6. INSTALL TYPE D LOOP 1′ BEHIND LIMIT LINE.

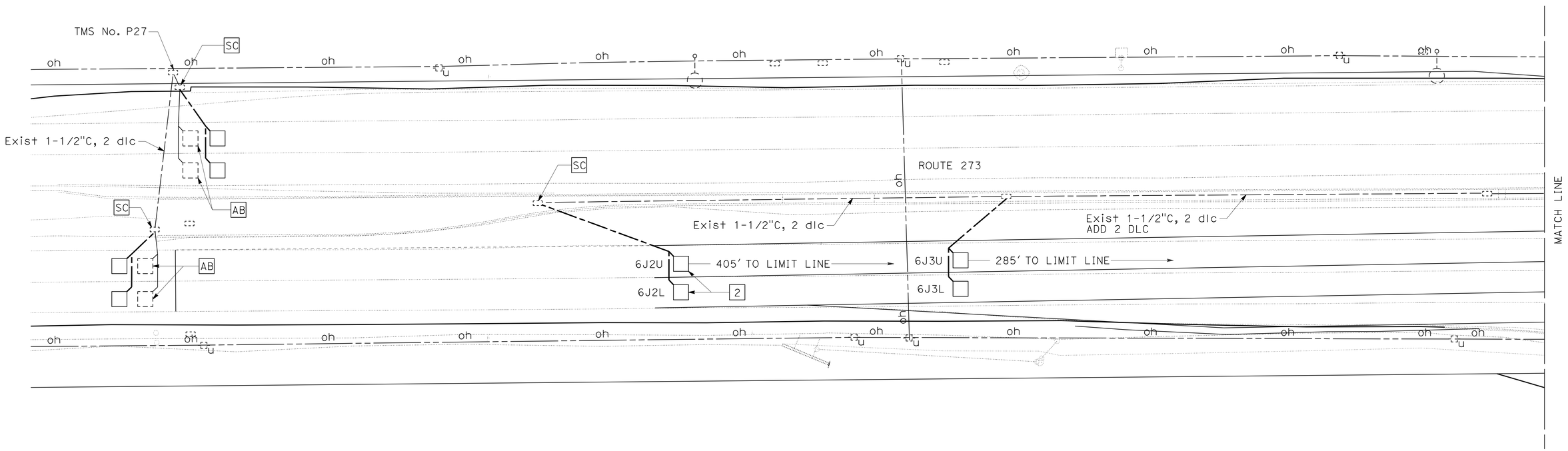
7. Exist 2"C, 1-12csc, 2 dlc, 1 vivds cable, ADD 1 DLC.

8. Exist 3"C, 2-12csc, 2 dlc, 1 vivds cable, ADD 1 DLC.

9. Exist 3-1/2"C, 4-12csc, 4#8, 4 dlc, 1 vivds cable, ADD 2 DLC.

10. Exist (2) 3-1/2"C, 2-3csc, 8-12csc, 4#8, 2#12, 9 dlc, 3 vivds cable, ADD 5 DLC.

11. Exist 4"C, 2-3csc, 8-12csc, 2#12, 9 dlc, 3 vivds cable, ADD 5 DLC.



MODIFY SIGNAL
MODIFY TRAFFIC MONITORING STATION

SCALE: 1" = 20′

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY | DATE REVISED
JAMES M. HANNIGAN | ROB STINGER
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

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LAST REVISION 08-26-10 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	273	12.7/14.3	14	22

REGISTERED ELECTRICAL ENGINEER 01-04-11 DATE

01-04-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER J.M. HANNIGAN No. E13665 Exp. 6-30-11 ELECTRICAL STATE OF CALIFORNIA

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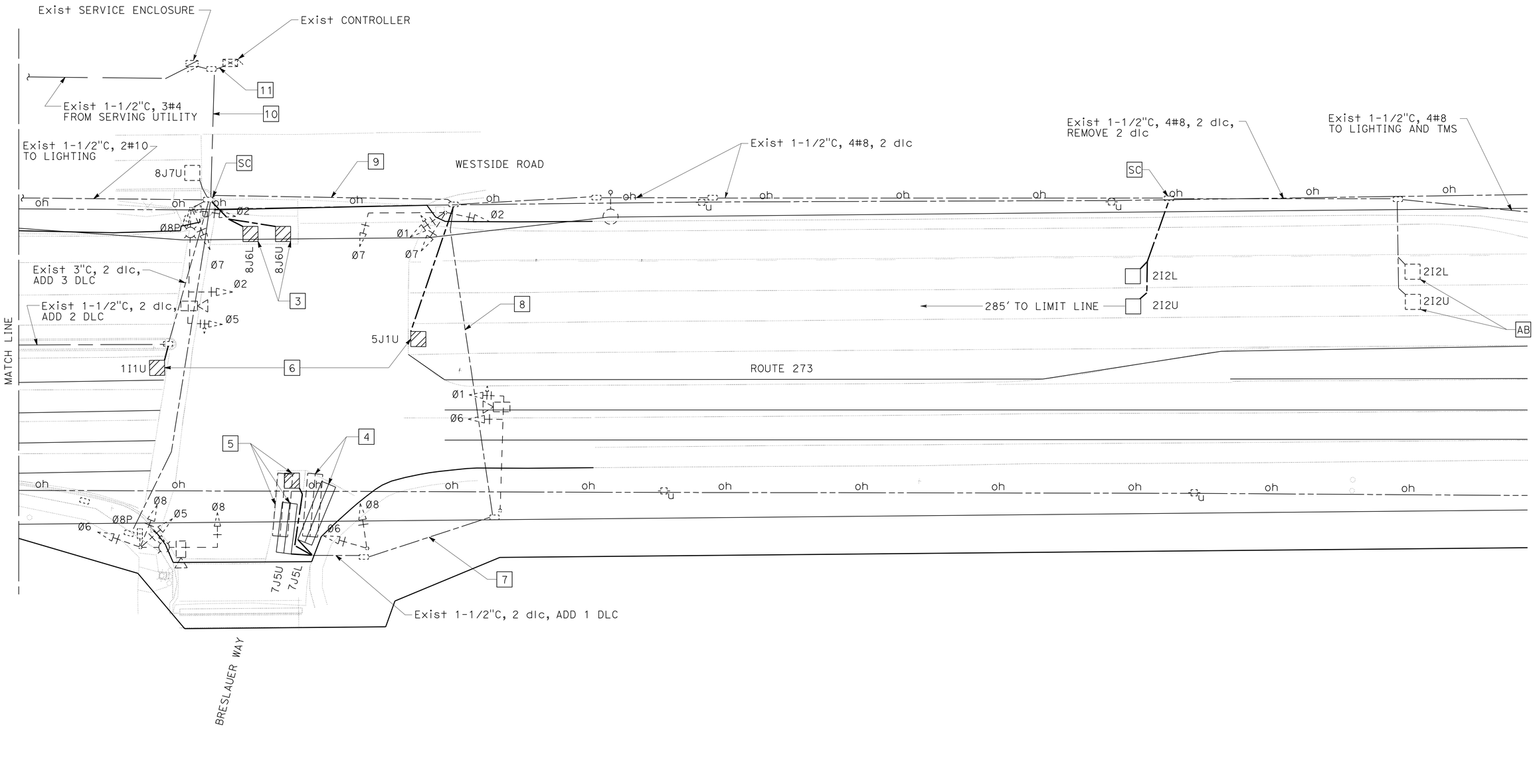

MODIFY SIGNAL

SCALE: 1" = 20'

E-2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY	DATE REVISED
JAMES M. HANNIGAN	ROB STINGER
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® ELECTRICAL DESIGN

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LAST REVISION 08-26-10 | DATE PLOTTED => 08-FEB-2011 | TIME PLOTTED => 14:26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	15	22

REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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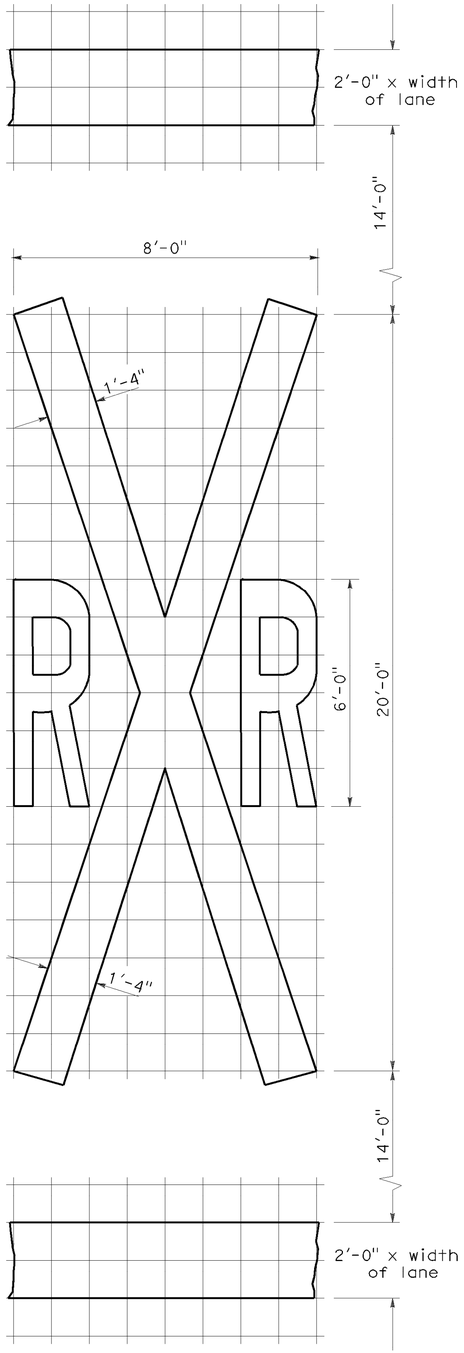
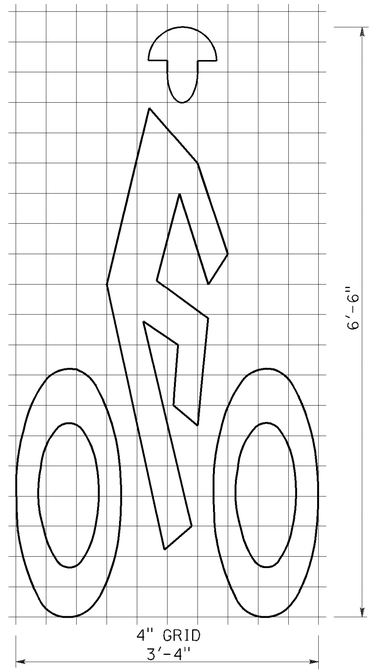
To accompany plans dated 01-04-11

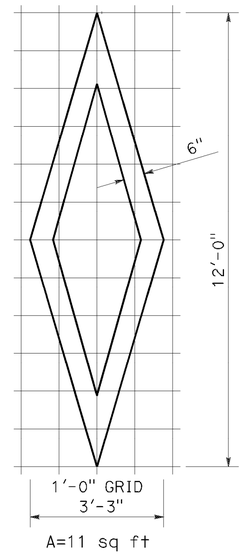


RAILROAD CROSSING SYMBOL

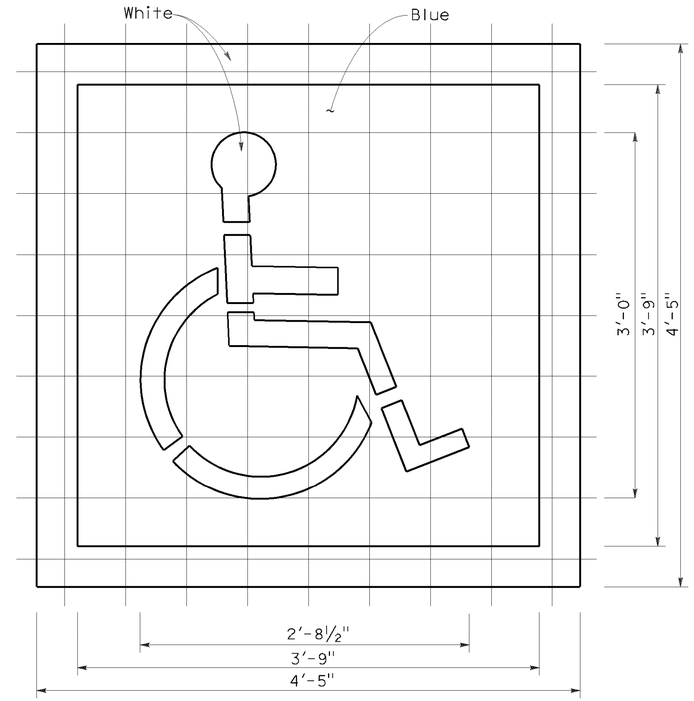
✳70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



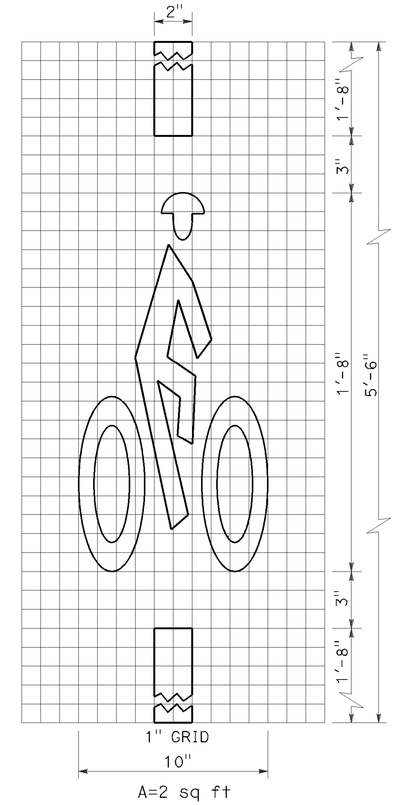
BIKE LANE SYMBOL



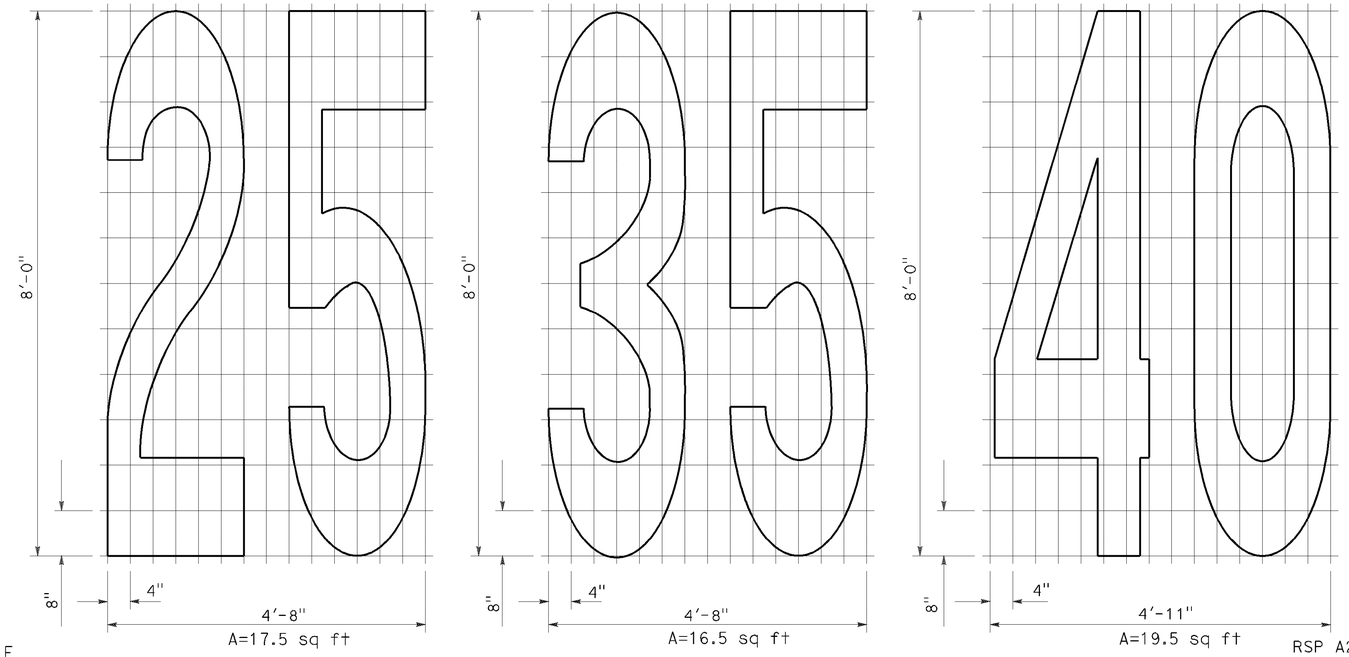
DIAMOND SYMBOL



INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



BICYCLE LOOP DETECTOR SYMBOL



NUMERALS

NOTE:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

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

REVISED STANDARD PLAN RSP A24C

2006 REVISED STANDARD PLAN RSP A24C

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5-27-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	16	22

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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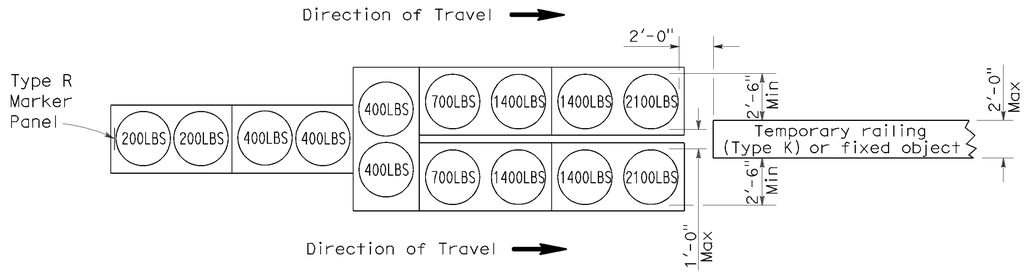
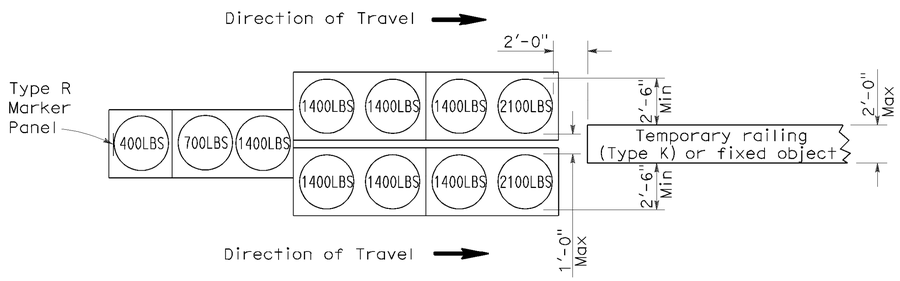
To accompany plans dated 01-04-11



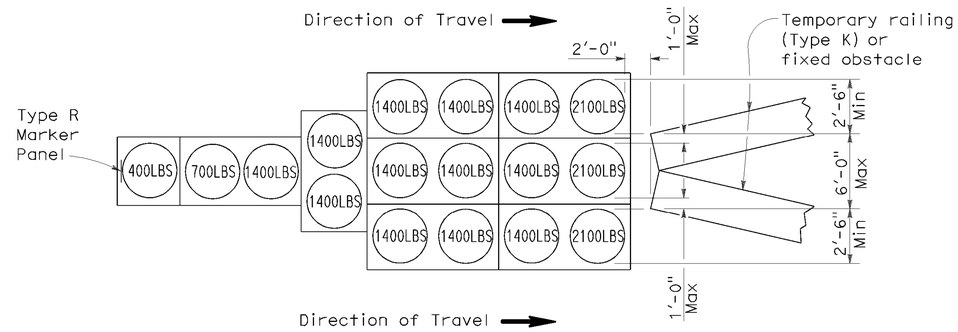
ARRAY 'TU14'

Approach speed 45 mph or more



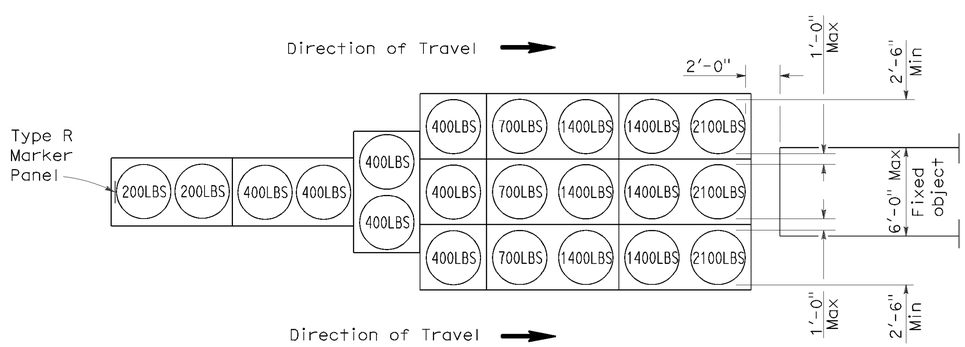
ARRAY 'TU11'

Approach speed less than 45 mph



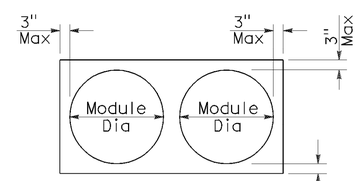
ARRAY 'TU17'

Approach speed less than 45 mph

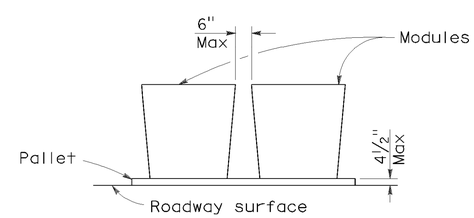


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

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5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	17	22

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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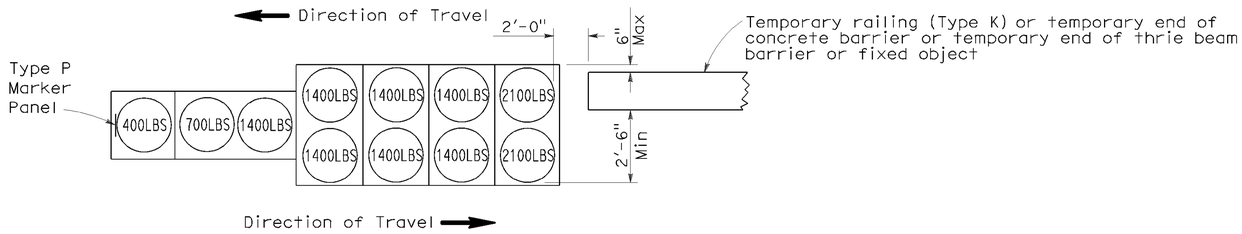
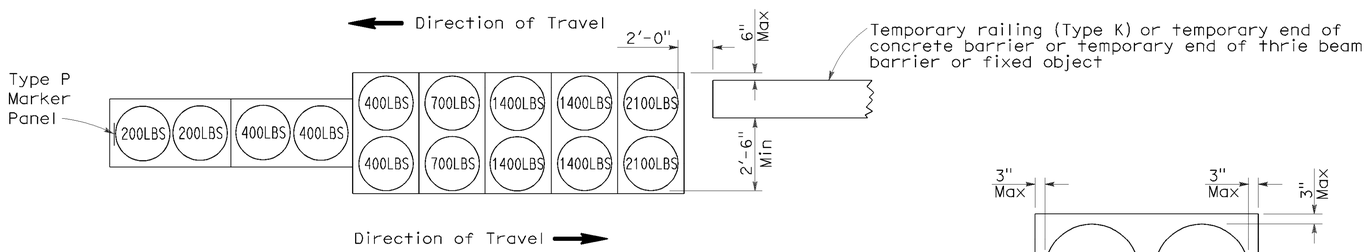
To accompany plans dated 01-04-11



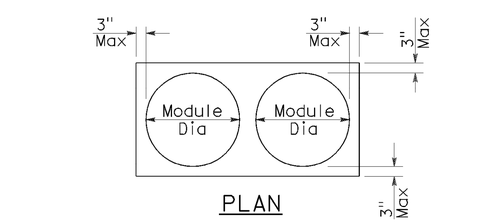
ARRAY 'TB11'

Approach speed less than 45 mph

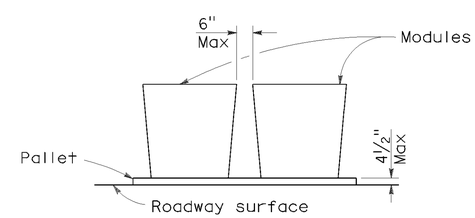


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

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5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	18	22

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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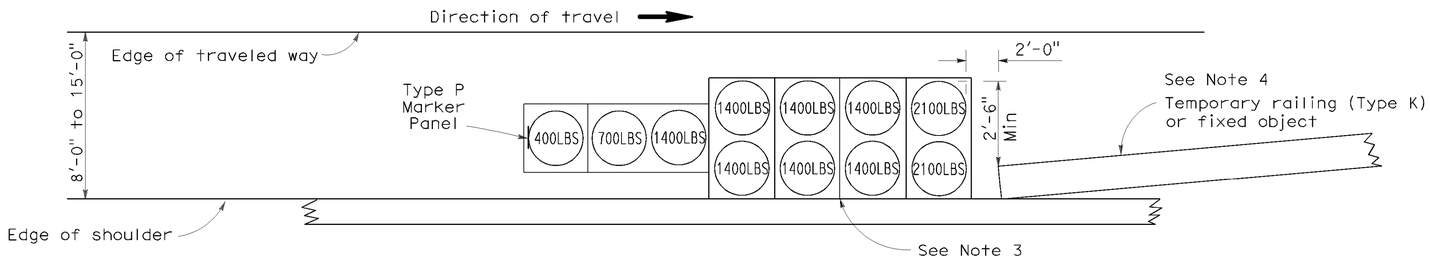
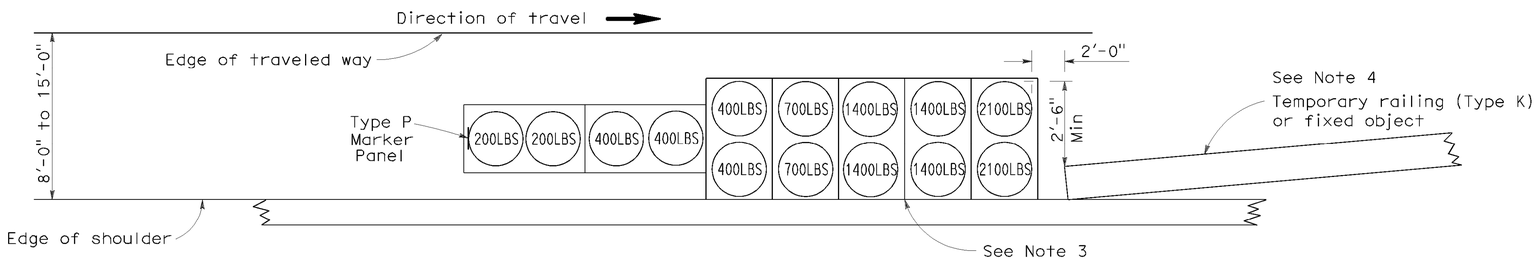
To accompany plans dated 01-04-11



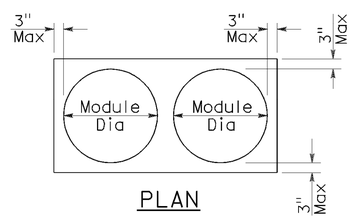
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

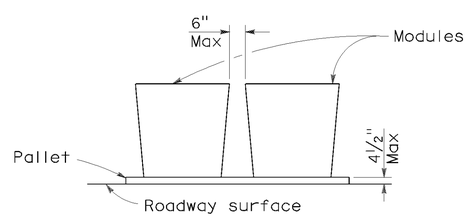


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

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5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	19	22

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 01-04-11

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

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7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	20	22

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 01-04-11

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

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7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	21	22

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 01-04-11

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345

10 ISL SCI 1.0

- Sign number - Place on post or structure
- Transformer rating (kVA)
- Lighting control type
- Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- Mast arm length, if shown. Do not place on standard or structure.
- 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

- Number and size of conductors and cables
- 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

- Wind velocity = 100 mph
- Case 3 arm loading
- 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 = Upper
- L = Lower
- Slot number in input file
- Input file (I or J)
- 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

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7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	273	12.7/14.3	22	22

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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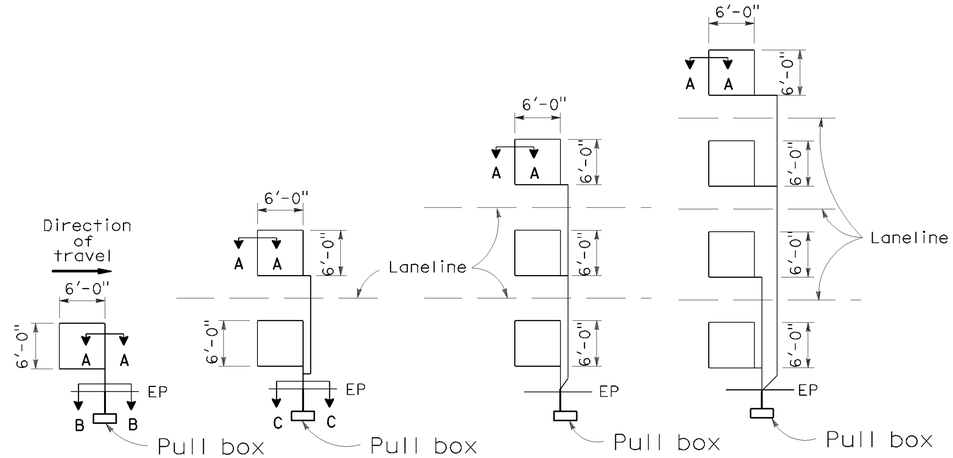
To accompany plans dated 01-04-11

2006 REVISED STANDARD PLAN RSP ES-5A

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.

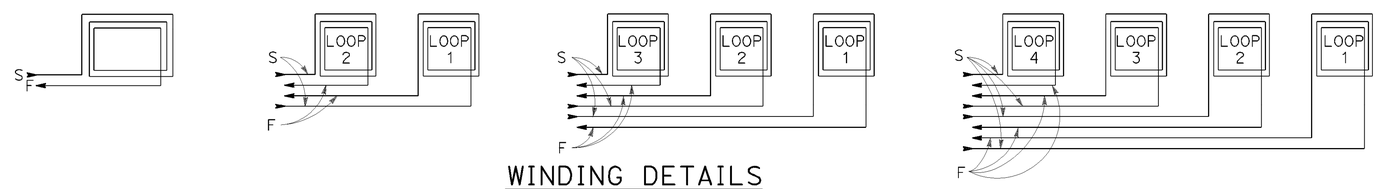


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

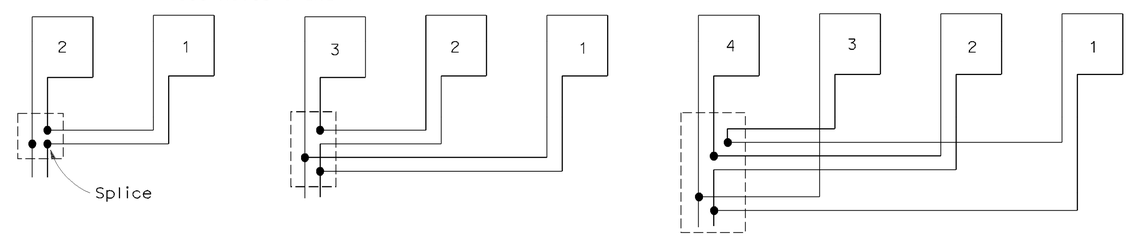
(Type A loop detector configurations illustrated)

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)



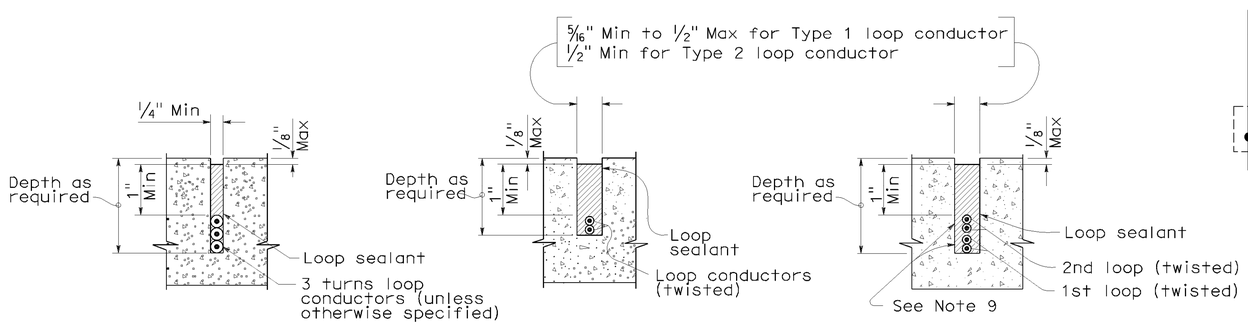
WINDING DETAILS

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

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