

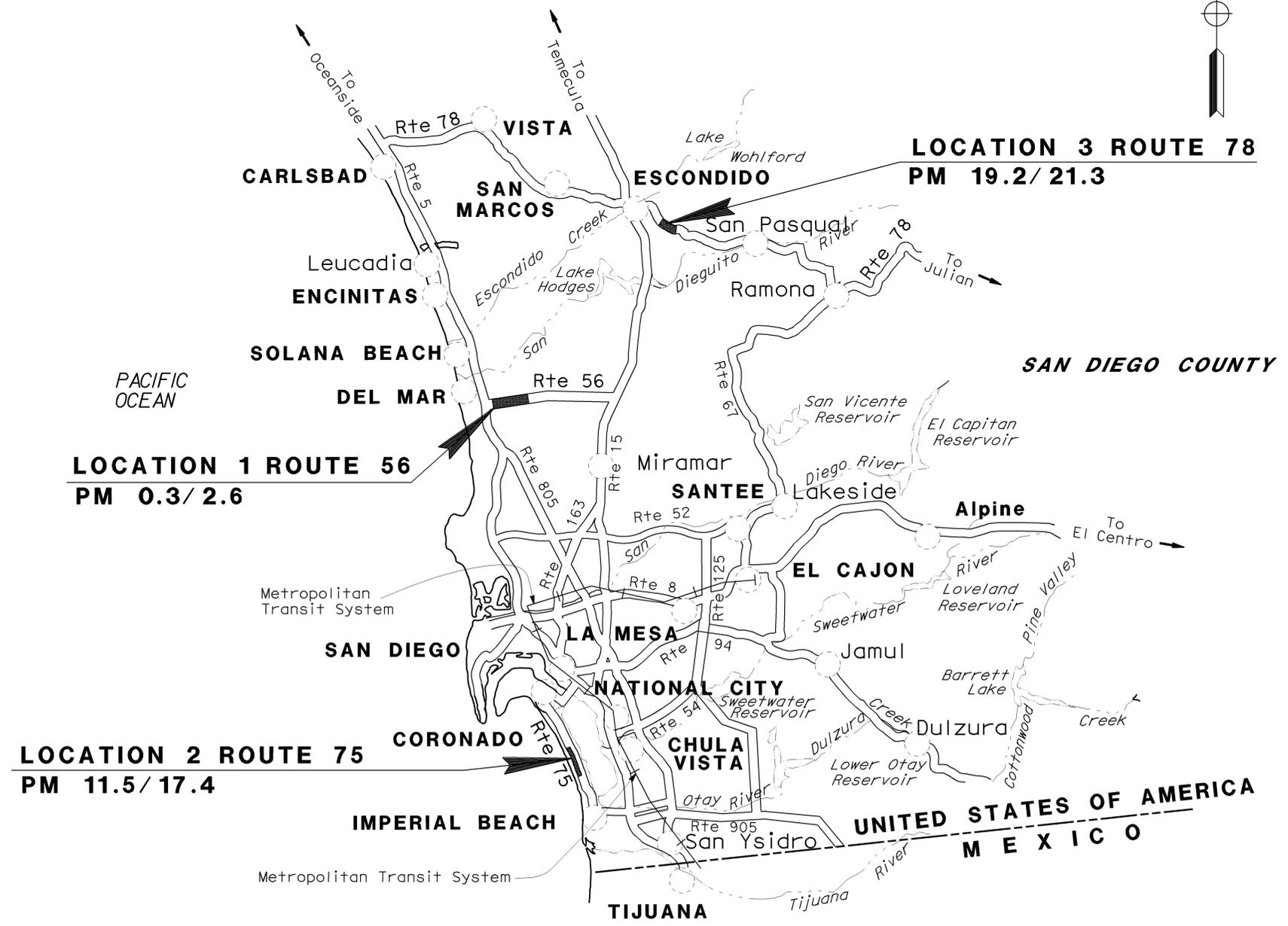
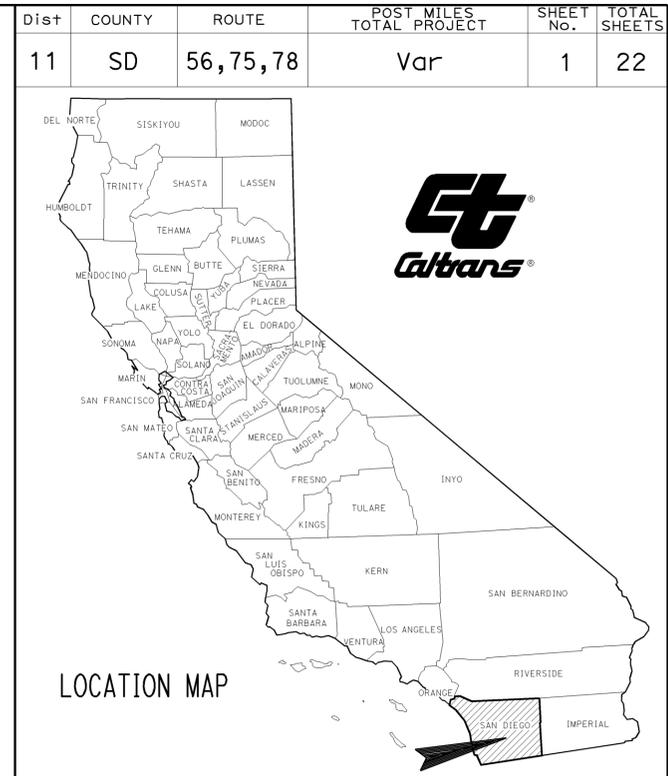
INDEX OF PLANS

Sheet No.	Description
1	Title and Location Map
2-3	Typical Cross Sections
4	Construction Details
5-7	Construction Area Signs
8-9	Traffic Handling Plans
10-13	Pavement Delineation Quantities
14	Summary of Quantities
15	Electrical Plans
16-22	Revised Standard Plans

STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SAN DIEGO COUNTY AT VARIOUS LOCATIONS**

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

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER  
DAVID M. POUND

DESIGN ENGINEER  
DAVID M. POUND

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

NO SCALE

Hamed S. Baha 03-08-10  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER

March 8, 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. **11-2M1204**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	2	22

<i>Hamed S. Baha</i> 03-08-10	
REGISTERED CIVIL ENGINEER	DATE
03-08-10	
PLANS APPROVAL DATE	

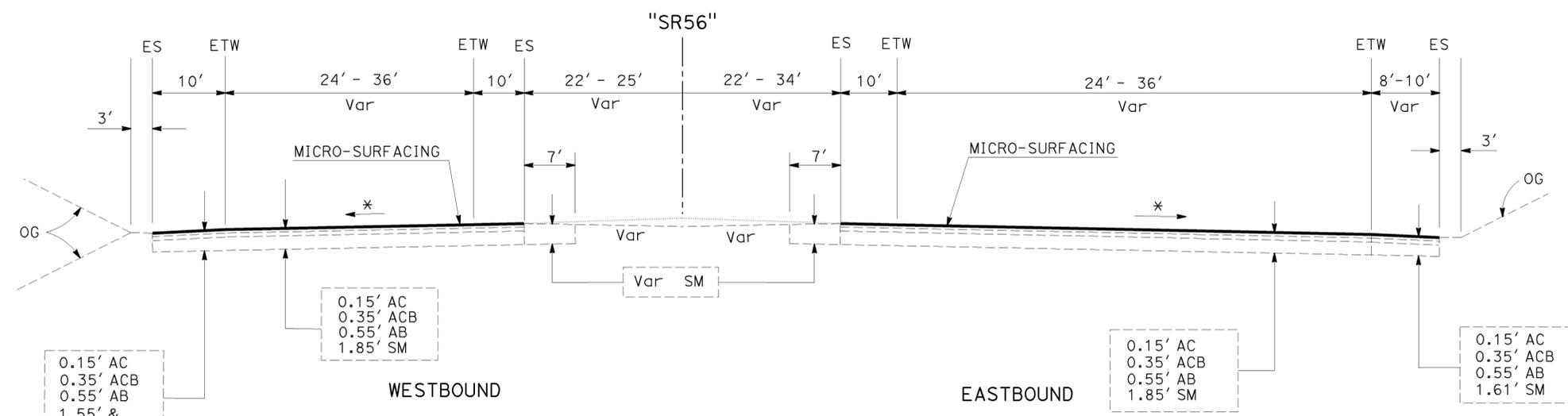
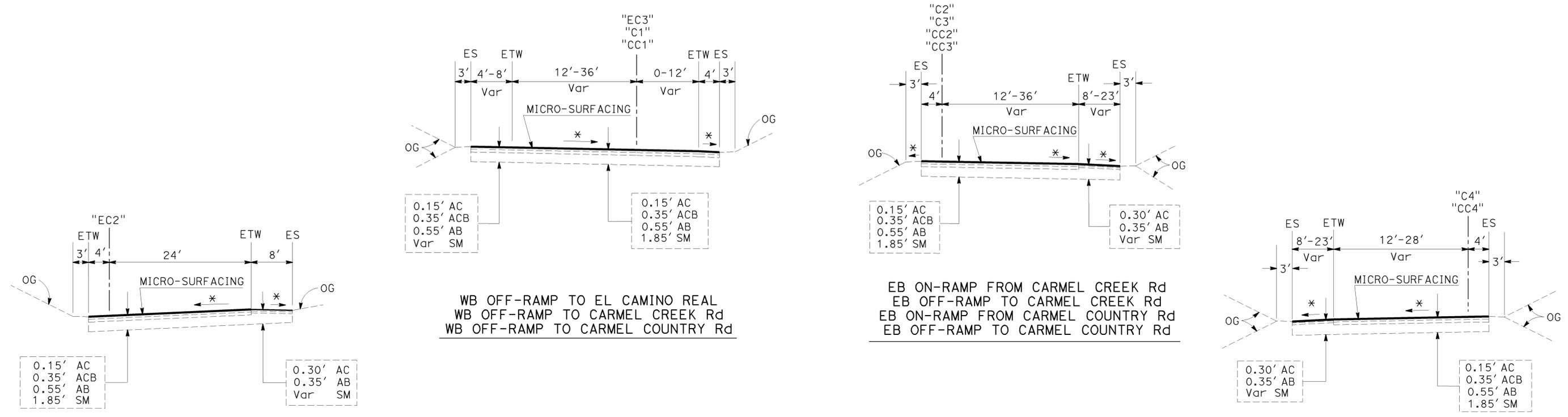
DESIGN DESIGNATION = ROUTE 56	
ADT - Exist = 91,000	PEAK-HR Exist = 8,000
ADT - 2018 = 145,000	TI - 2025 = 13.5
ADT - 2025 = 155,000	TI - 40-yr = 15.0
DHV - 2025 = 11,500	D - 2025 = 65%
	T = 4.5%

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.	
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- NOTES:**
- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
  - SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  - EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

REBECCA IGNACIO  
 HAMED S. BAHA  
 DAVID M. POUND  
 MAINTENANCE



**ROUTE 56**  
PM 0.3 TO PM 2.6

**LEGEND:**  
\* = MATCH Exist

**TYPICAL CROSS SECTIONS**  
NO SCALE  
**X-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	3	22

<i>Hamed S. Baha</i> 03-08-10	
REGISTERED CIVIL ENGINEER	DATE
03-08-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	
HAMED S. BAHA	
No. 74499	Exp. 12-31-11
CIVIL	

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.

**DESIGN DESIGNATION = ROUTE 75**

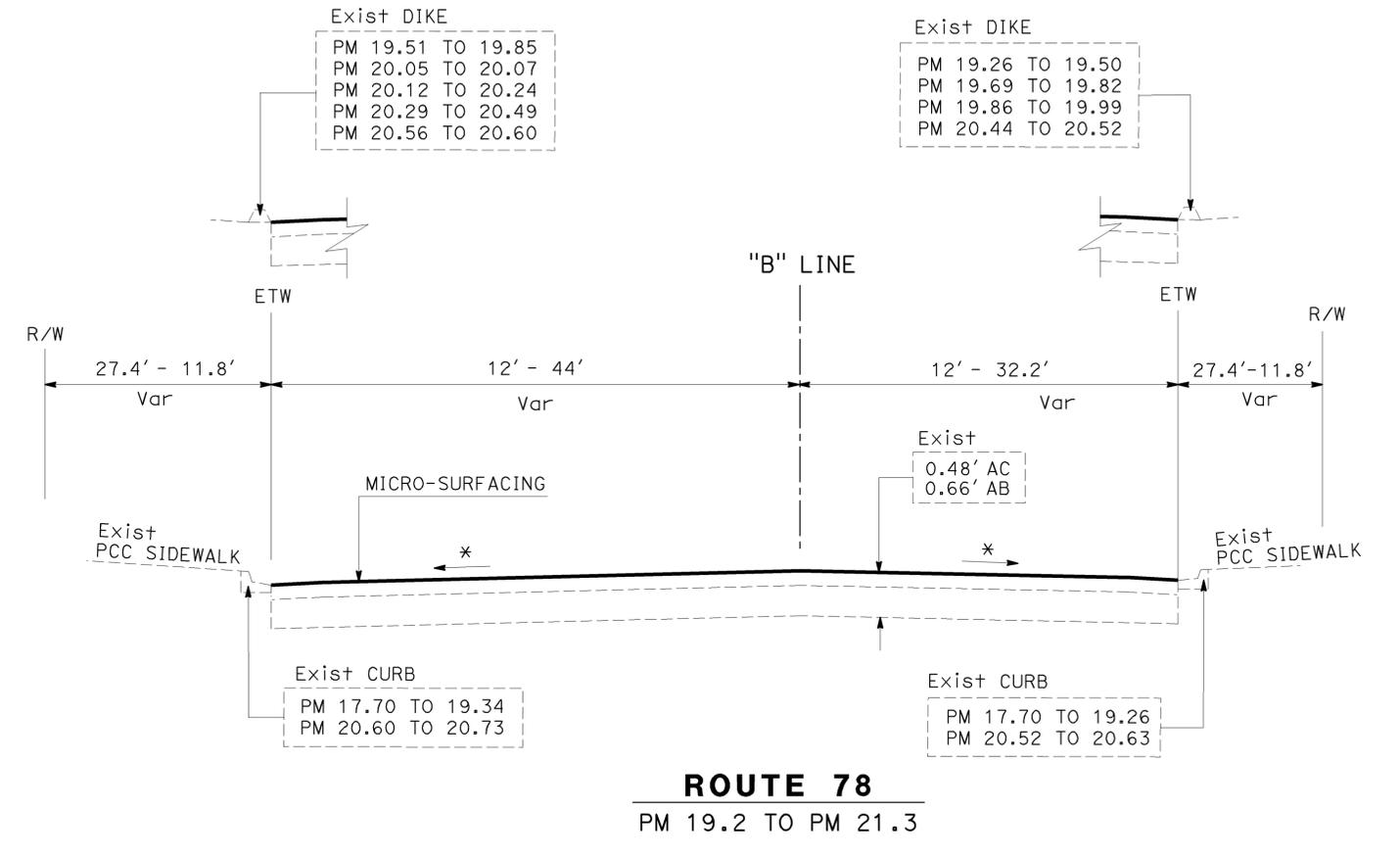
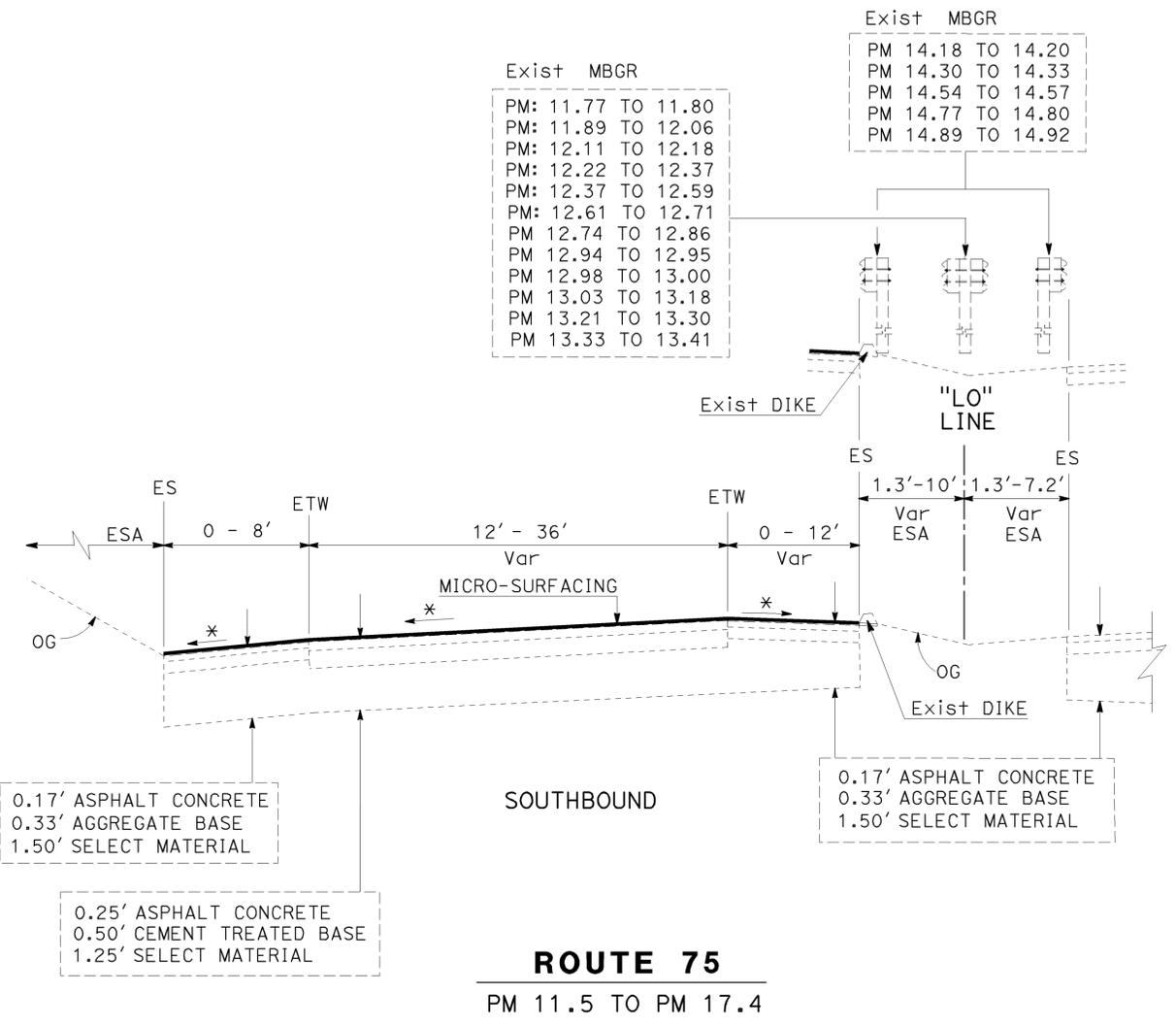
ADT - Exist = 33,000	PEAK-HR Exist = 3,000
ADT - 2018 = 37,000	TI - 2025 = 10.0
ADT - 2025 = 40,000	D = 75%
DHV - 2025 = 3,600	T = 3.0%

Exist MBGR  
 PM: 11.77 TO 11.80  
 PM: 11.89 TO 12.06  
 PM: 12.11 TO 12.18  
 PM: 12.22 TO 12.37  
 PM: 12.37 TO 12.59  
 PM: 12.61 TO 12.71  
 PM 12.74 TO 12.86  
 PM 12.94 TO 12.95  
 PM 12.98 TO 13.00  
 PM 13.03 TO 13.18  
 PM 13.21 TO 13.30  
 PM 13.33 TO 13.41

Exist MBGR  
 PM 14.18 TO 14.20  
 PM 14.30 TO 14.33  
 PM 14.54 TO 14.57  
 PM 14.77 TO 14.80  
 PM 14.89 TO 14.92

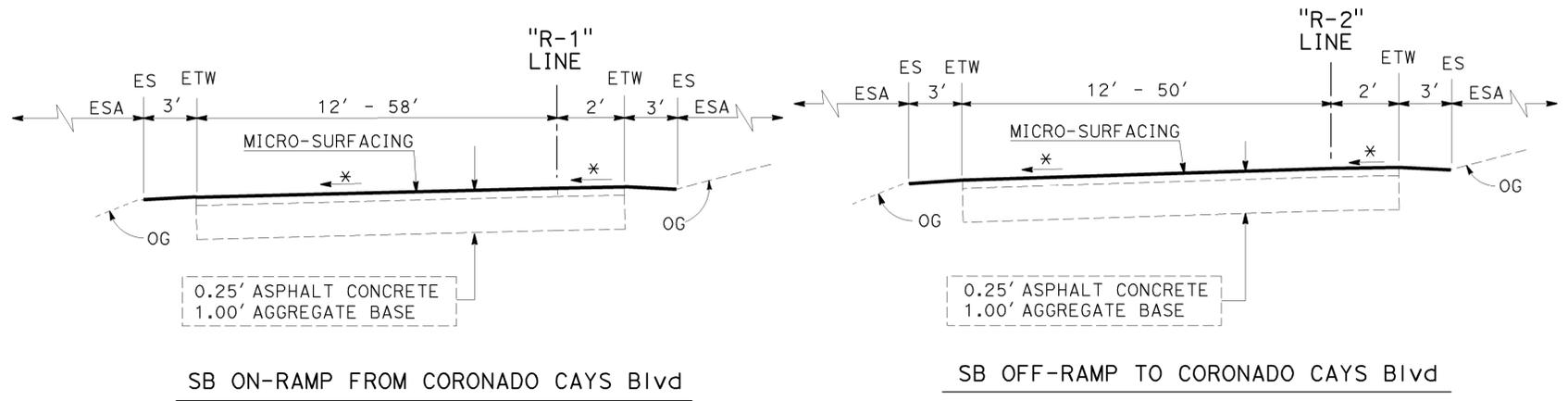
Exist DIKE  
 PM 19.51 TO 19.85  
 PM 20.05 TO 20.07  
 PM 20.12 TO 20.24  
 PM 20.29 TO 20.49  
 PM 20.56 TO 20.60

Exist DIKE  
 PM 19.26 TO 19.50  
 PM 19.69 TO 19.82  
 PM 19.86 TO 19.99  
 PM 20.44 TO 20.52



**DESIGN DESIGNATION = ROUTE 78**

ADT - Exist = 55,000	PEAK-HR Exist = 4,300
ADT - 2018 = 61,000	TI - 2025 = 11.5
ADT - 2025 = 66,000	D = 55%
DHV - 2025 = 5,000	T = 6.0%



**TYPICAL CROSS SECTIONS**  
NO SCALE  
**X-2**

REBECCA IGNACIO  
 HAMED S. BAHA  
 DAVID M. POUND  
 MAINTENANCE

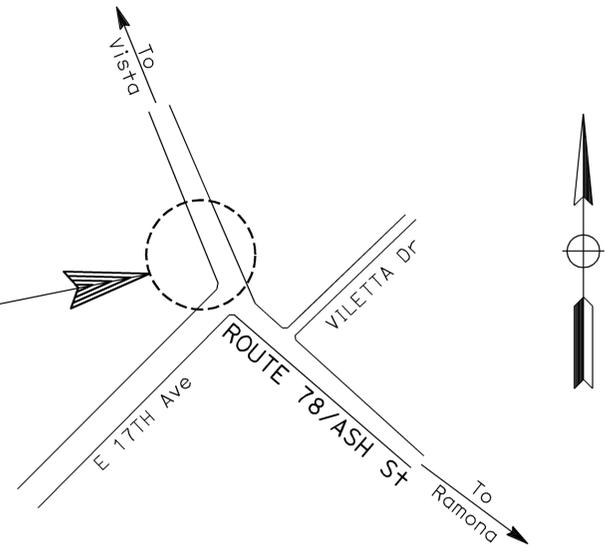
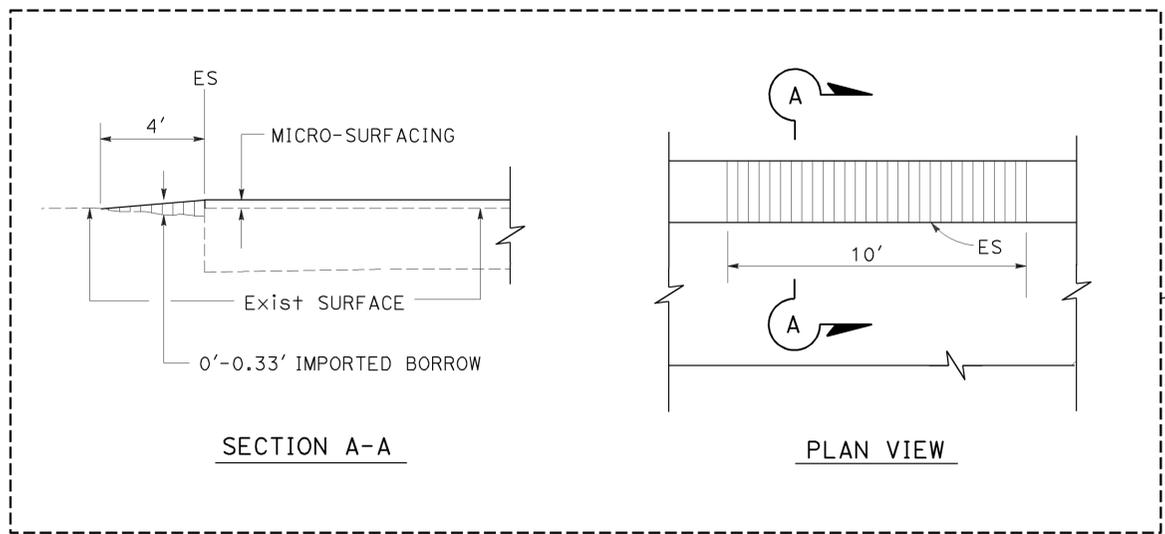
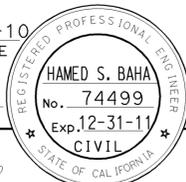
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	4	22

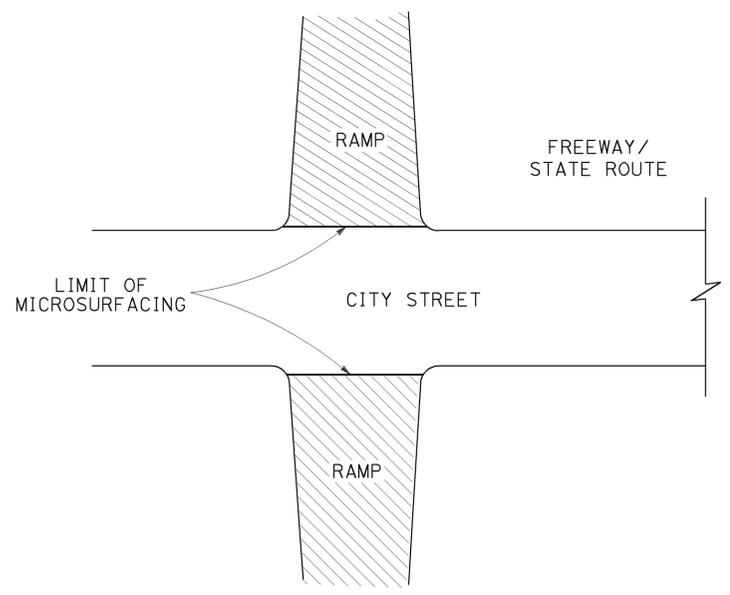
<i>Hamed S. Baha</i>	03-08-10
REGISTERED CIVIL ENGINEER	DATE
03-08-10	
PLANS APPROVAL DATE	

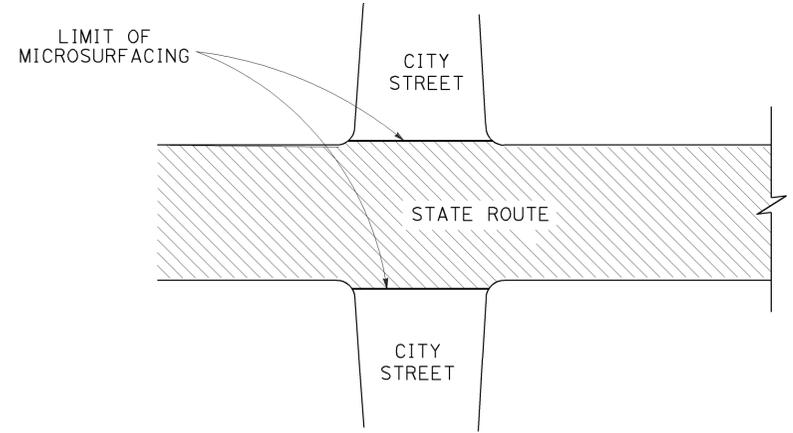
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**IMPORTED BORROW DETAIL**  
EB ROUTE 78 = PM 20.180 "B" LINE



**MICROSURFACING LIMIT ON RAMPS**  
TYPICAL



**MICROSURFACING LIMIT ON CITY STREET**  
TYPICAL

**LEGEND:**



**CONSTRUCTION DETAILS**  
NO SCALE **C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
*Caltrans*  
 FUNCTIONAL SUPERVISOR: DAVID M. POUND  
 REVISIONS: REBECCA IGNACIO (REVISED BY), HAMED S. BAHHA (DATE REVISED)  
 CALCULATED/DESIGNED BY: (blank), CHECKED BY: (blank)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	5	22

03-08-10  
 REGISTERED CIVIL ENGINEER DATE  
 03-08-10  
 PLANS APPROVAL DATE

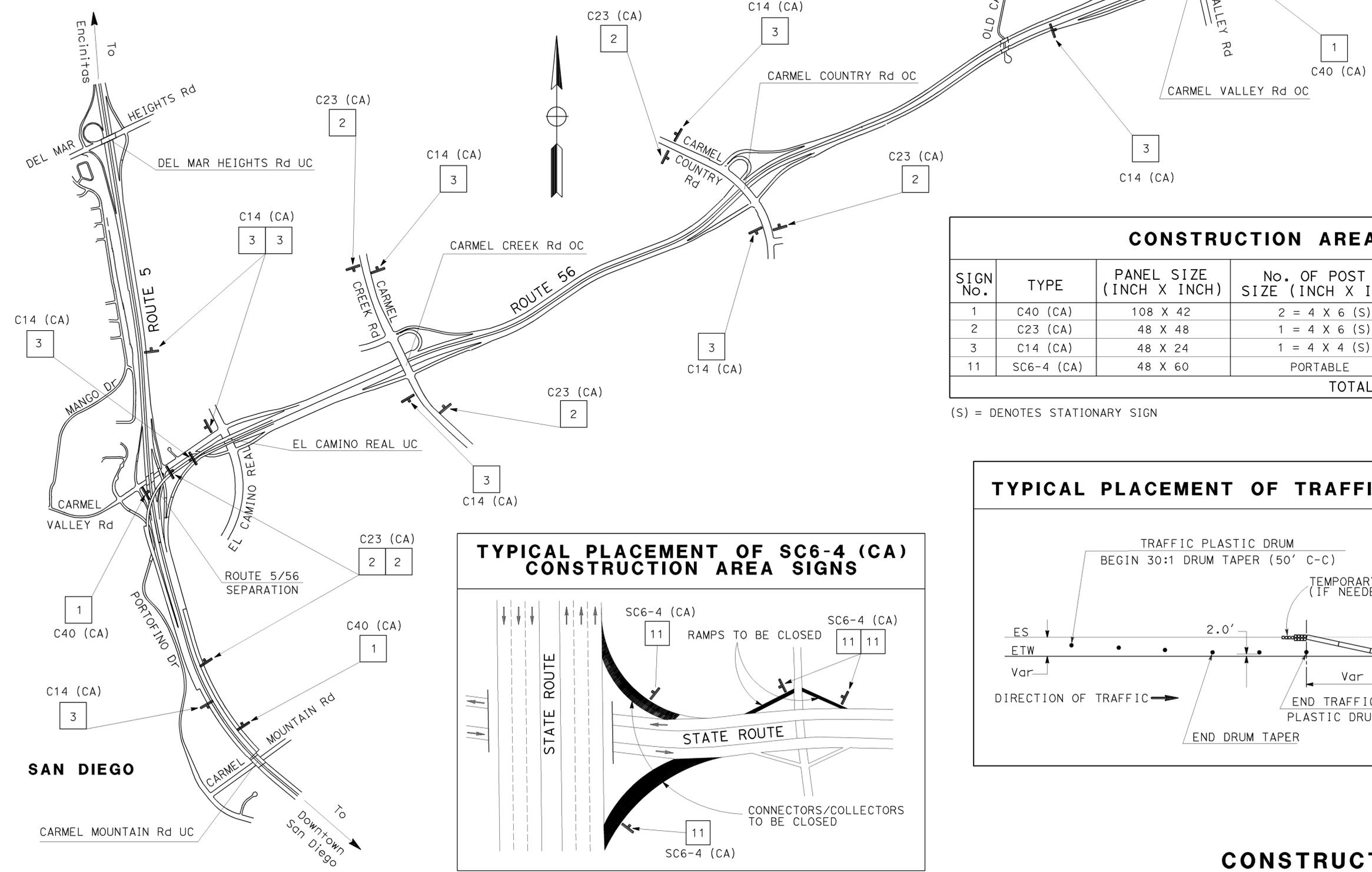
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 No. 54839  
 Exp. 06-30-10  
 CIVIL  
 STATE OF CALIFORNIA

- NOTES:**
- EXACT LOCATION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.
  - FEDERAL MUTCD SIGN CODES ARE SHOWN UNLESS DESIGNATED (CA) INDICATING STANDARD CALIFORNIA SIGN SPECIFICATIONS ARE USED.
  - EXISTING UTILITIES ARE NOT SHOWN ON THESE PLAN SHEETS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND ADJUST THE FIELD LOCATION OF SIGN POSTS IN CONSULTATION WITH THE ENGINEER.

**LEGEND:**

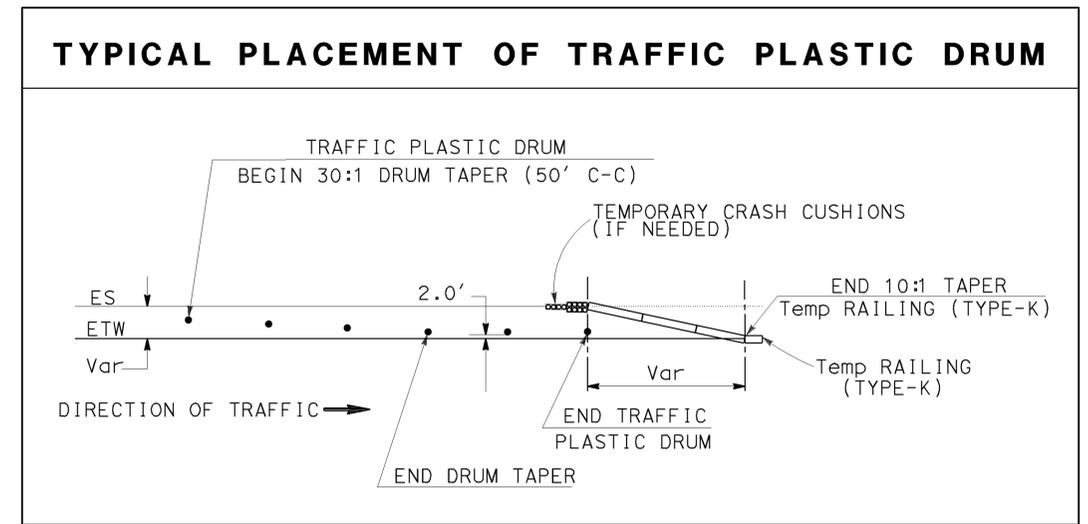
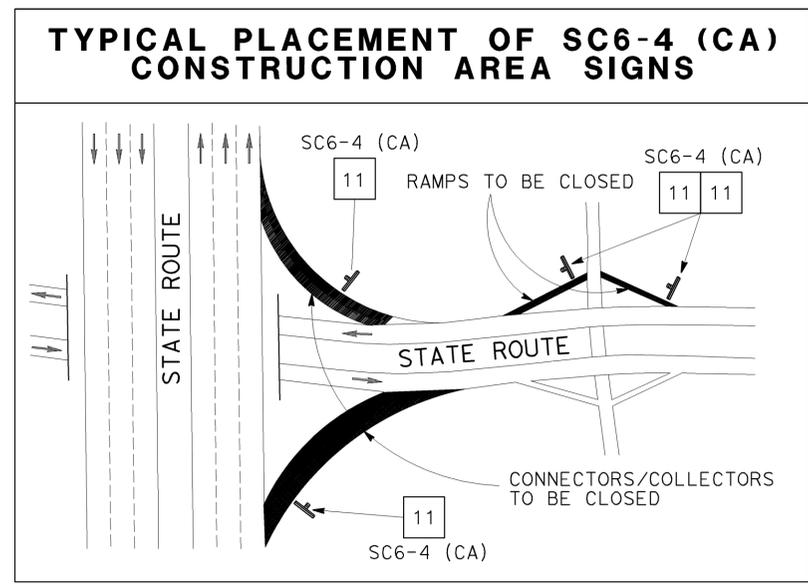
X = CONSTRUCTION AREA SIGN



**CONSTRUCTION AREA SIGNS**

SIGN No.	TYPE	PANEL SIZE (INCH X INCH)	No. OF POST & SIZE (INCH X INCH)	No. OF SIGNS(EA)	REMARKS
1	C40 (CA)	108 X 42	2 = 4 X 6 (S)	6	
2	C23 (CA)	48 X 48	1 = 4 X 6 (S)	32	
3	C14 (CA)	48 X 24	1 = 4 X 4 (S)	33	
11	SC6-4 (CA)	48 X 60	PORTABLE	12	
<b>TOTALS</b>				83	

(S) = DENOTES STATIONARY SIGN



**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

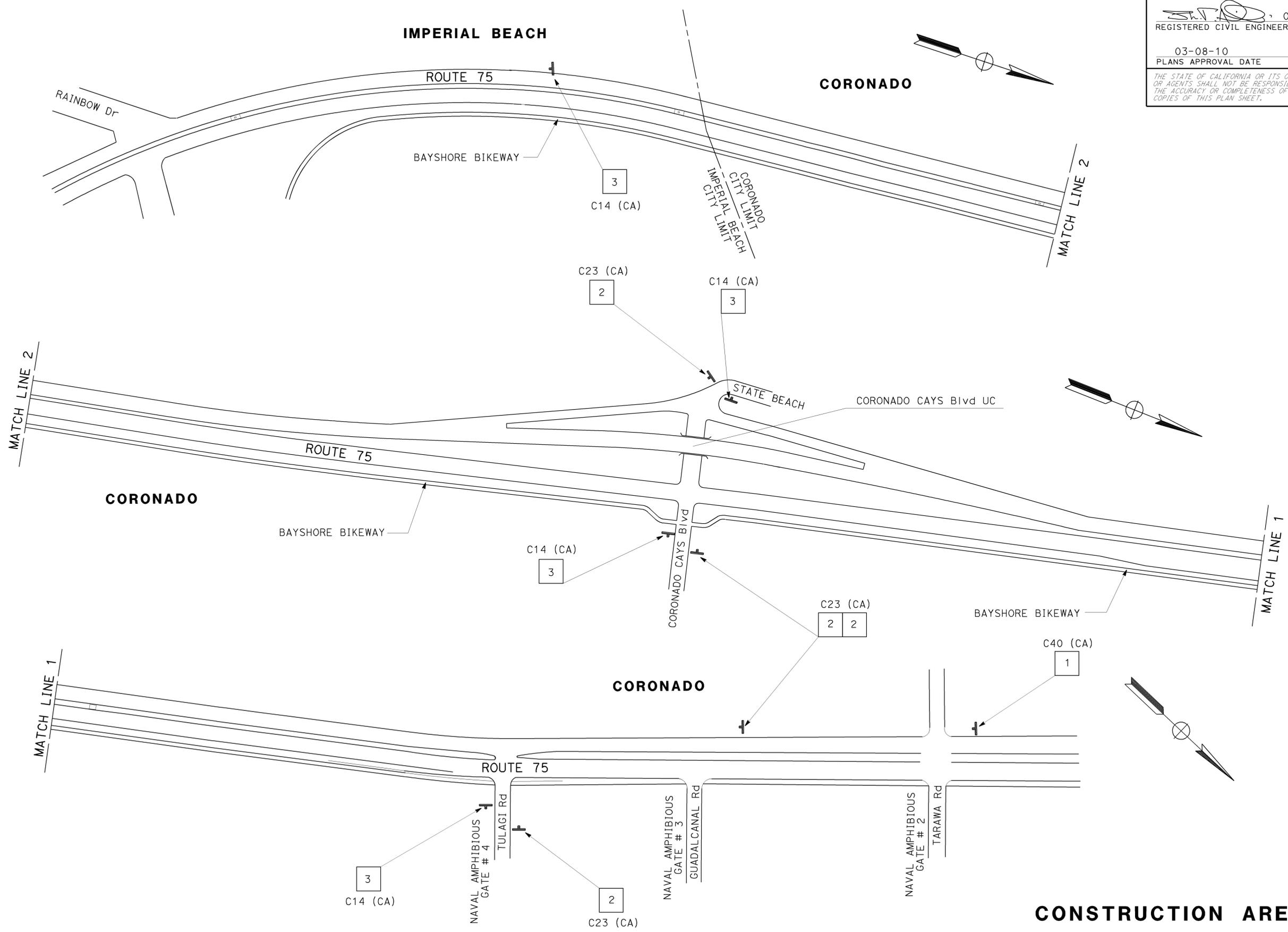
THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 REBECCA IGNACIO  
 RYAN CHAO  
 CAMILLE ABOU-FADEL  
 TRAFFIC DESIGN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	6	22

03-08-10  
 REGISTERED CIVIL ENGINEER DATE  
 03-08-10  
 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.

REGISTERED PROFESSIONAL ENGINEER  
 SHAHIN ADIBI  
 No. 54839  
 Exp. 06-30-10  
 CIVIL  
 STATE OF CALIFORNIA



**CONSTRUCTION AREA SIGNS**  
NO SCALE  
**CS-2**

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** **TRAFFIC DESIGN**  
 FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL  
 REVISIONS: REBECCA IGNACIO, RYAN CHAO  
 REVISIONS: REBECCA IGNACIO, RYAN CHAO  
 REVISIONS: REBECCA IGNACIO, RYAN CHAO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR  
 CAMILLE ABOU-FADEL

DESIGNED BY  
 REBECCA IGNACIO

CHECKED BY  
 RYAN CHAO

REVISIONS  
 REVISED BY DATE REVISION  
 REBECCA IGNACIO  
 RYAN CHAO

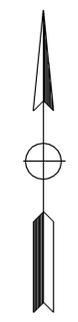
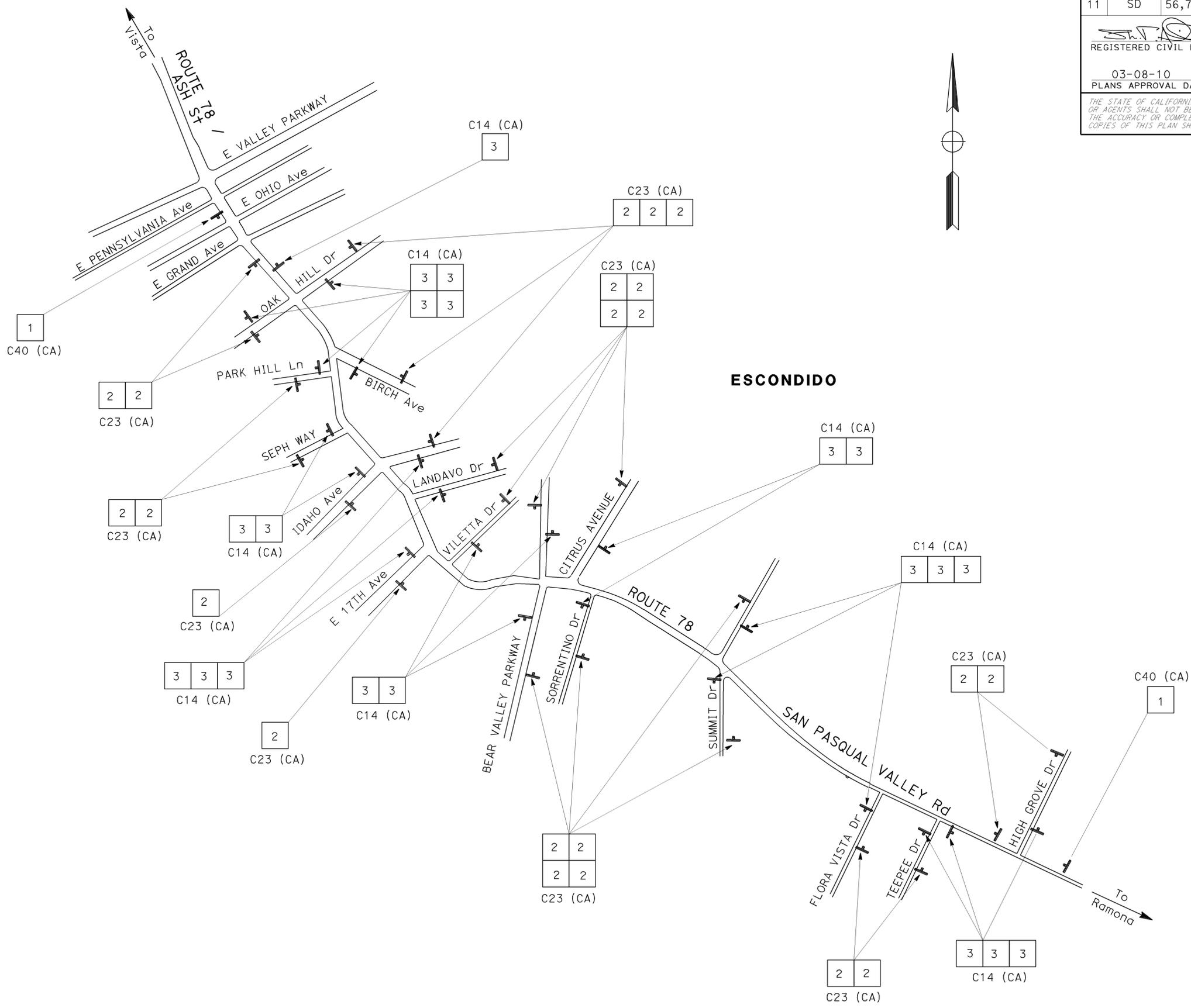
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	7	22

03-08-10  
 REGISTERED CIVIL ENGINEER DATE

03-08-10  
 PLANS APPROVAL DATE

SHAHIN ADIBI  
 No. 54839  
 Exp. 06-30-10  
 CIVIL

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



**CONSTRUCTION AREA SIGNS**  
 NO SCALE  
**CS-3**

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY



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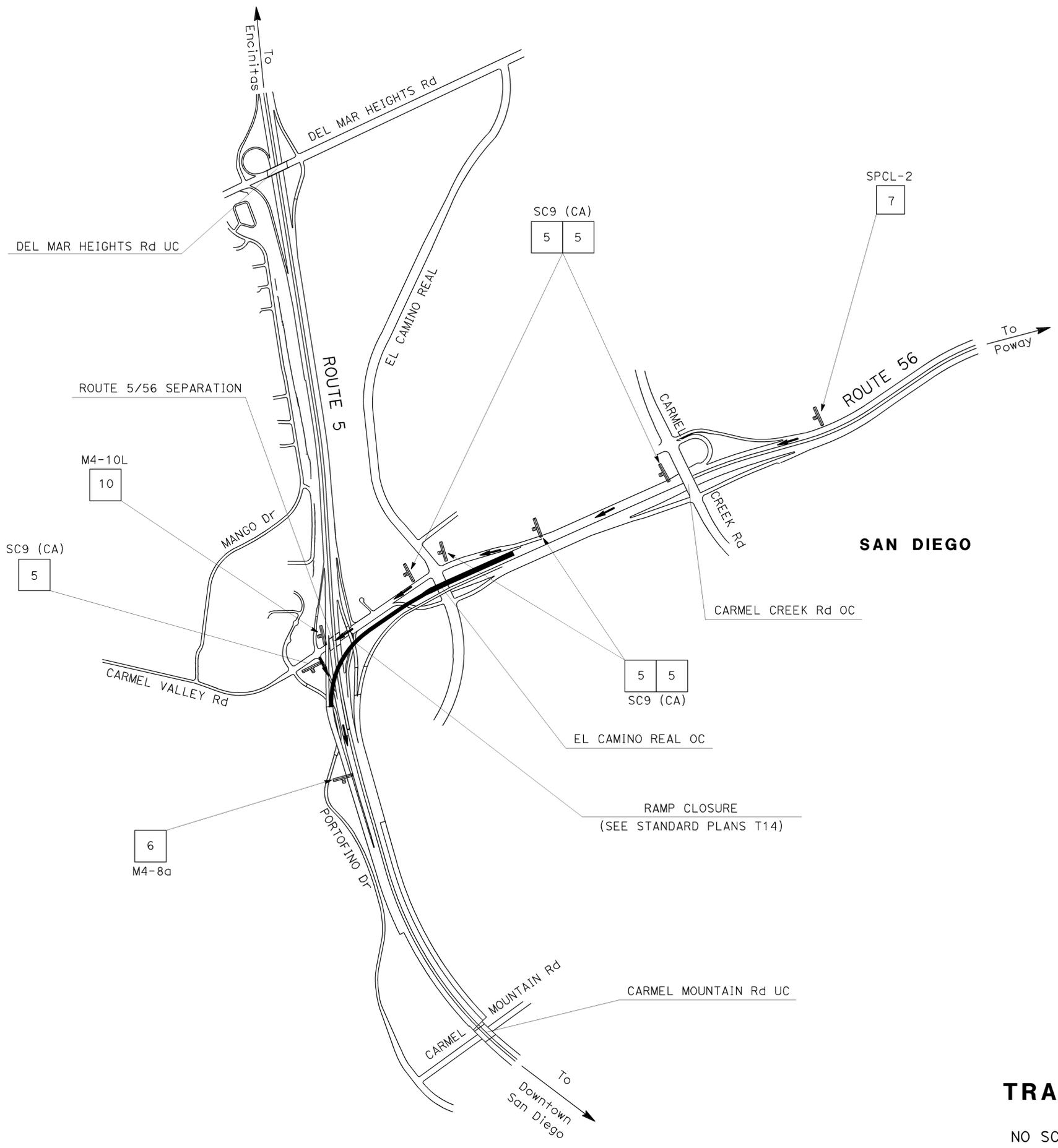
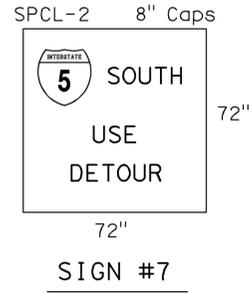
CU 11235

EA 2M1201



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR	CAMILLE ABOU-FADEL
CALCULATED-DESIGNED BY	CHECKED BY
REBECCA IGNACIO	RYAN CHAO
REVISED BY	DATE REVISED



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	9	22

03-08-10  
REGISTERED CIVIL ENGINEER DATE

03-08-10  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**SHAHIN ADIBI**  
No. 54839  
Exp. 06-30-10  
CIVIL  
STATE OF CALIFORNIA

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



**TRAFFIC HANDLING PLAN**  
NO SCALE  
**TH-2**

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	10	22

03-08-10  
REGISTERED CIVIL ENGINEER DATE

03-08-10  
PLANS APPROVAL DATE

SHAHIN ADIBI  
No. 54839  
Exp. 06-30-10  
CIVIL

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**NOTE:** 1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS INDICATED OTHERWISE.

MILEPOST MARKER			
ROUTE	DIRECTION	POSTMILES	Qty (EA)
56	EB	2.5	1
	WB	2.5	1
75	NB	11.5; 13.0; 13.5; 14.0; 14.5; 15.0; 16.0; 16.5; 17.0	9
	SB	11.5; 12.0; 12.5; 13.0; 13.5; 14.0; 14.5; 15.5; 16.0; 16.5; 17.0	11
78	EB	T19.5; 20.0; R21.0	3
	WB	20.5	1
TOTAL			26

NOTE: THE EXCAVATION REQUIRED FOR THE INSTALLATION OF THE MILEPOST MARKERS SHALL BE DONE BY HAND.

REMOVE YELLOW PAINTED TRAFFIC STRIPE				
ROUTE	POSTMILE		DETAIL	LF
	BEGIN	END		
56	0.309	2.600	25A	32,793
75	11.500	17.400	25	32,312
78	19.221	21.295	22, 29, 32	10,912
TOTAL				76,017

REMOVE PAINTED TRAFFIC STRIPE				
ROUTE	POSTMILE		DETAIL/TYPE	LF
	BEGIN	END		
56	0.309	2.600	8, 27B, 36, 36A,37, 38B	44,608
75	11.500	17.400	8, 11, 27B, 36, 38, 38B	67,094
78	19.221	21.295	9, 27B, 38	24,345
TOTAL				136,047

REMOVE PAVEMENT MARKER (EA) (N)								
ROUTE	POSTMILE		TYPE					REMARKS
	BEGIN	END	A	C	D	G	H	
56	0.309	2.600	3328	390		1279	1404	
75	11.500	17.400	2596			799	677	
78	19.221	21.295			834	94		

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

REMOVE THERMOPLASTIC PAVEMENT MARKING				
ROUTE	POSTMILE		DETAIL/TYPE	SQFT
	BEGIN	END		
56	0.309	2.600	ARROWS (TYPE I-18", II (L), II (R), III (L), III (R), V); SIGNAL; AHEAD; 12" LIMIT LINE	3,381
75	11.500	17.400	ARROWS (TYPE III (L), V, VI); STOP; AHEAD; 12" LIMIT LINE	1,403
78	19.221	21.295	ARROWS (TYPE III (L), III (R), V, VI); SIGNAL; STOP; AHEAD; 12" LIMIT LINE	2,506
TOTAL				7,290

IRRIGATION CROSSOVER					
ROUTE	DIRECTION	LOCATION	POSTMILE	PAVEMENT MARKER NON-REFLECTIVE TYPE A (WHITE)(EA)	REMARKS
56	EB/WB	MAIN LANE	0.358	1	
	EB	EB ON-RAMP - EL CAMINO REAL	0.343	1	
	WB	WB OFF-RAMP - EL CAMINO REAL	0.349	1	
	EB/WB	MAIN LANE	0.588	1	
			0.702	1	
	EB	EB OFF-RAMP - CARMEL CREEK Rd	0.756	1	
	EB/WB	MAIN LANE	0.796	1	
	WB	WB OFF-RAMP - CARMEL CREEK Rd	0.841	1	
			0.916	1	
			1.012	1	
	EB	EB ON-RAMP - CARMEL CREEK Rd	0.851	1	
			0.985	1	
	WB	WB ON-RAMP - CARMEL CREEK Rd	0.891	1	
	EB/WB	MAIN LANE	0.890	1	
			0.985	1	
			1.080	1	
			1.175	1	
			1.270	1	
			1.364	1	
			1.459	1	
			1.554	1	
	EB	EB OFF-RAMP - CARMEL COUNTRY Rd	1.737	1	
	EB/WB	MAIN LANE	1.781	1	
	WB	WB OFF-RAMP - CARMEL COUNTRY Rd	1.843	1	
			1.975	1	
	WB	WB ON-RAMP - CARMEL COUNTRY Rd	1.857	1	
	EB	EB ON-RAMP - CARMEL COUNTRY Rd	1.927	1	
	EB/WB	MAIN LANE	1.933	1	
			2.027	1	
			2.121	1	
			2.153	1	
			2.350	1	
			2.508	1	
75	SB	MAIN LANE	14.670	1	
		MAIN LANE	15.026	1	
		MAIN LANE	15.416	1	
		MAIN LANE	15.890	1	
		MAIN LANE	17.356	1	
TOTAL				38 *	

\* SEE PAVEMENT MARKER SUMMARY FOR TOTAL

**PAVEMENT DELINEATION QUANTITIES**

**PDQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 REBECCA IGNACIO  
 RYAN CHAO  
 CALICULATED-DESIGNED BY  
 CHECKED BY  
 FUNCTIONAL SUPERVISOR  
 CAMILLE ABOU-FADEL  
 TRAFFIC DESIGN



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	12	22

 03-08-10  
 REGISTERED CIVIL ENGINEER DATE  
 03-08-10  
 PLANS APPROVAL DATE

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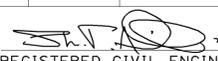
REGISTERED PROFESSIONAL ENGINEER  
 No. 54839  
 Exp. 06-30-10  
 CIVIL  
 STATE OF CALIFORNIA

**NOTE:** 1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS INDICATED OTHERWISE.  
 2. (N) = NOT A PAY ITEM, FOR INFORMATION ONLY.

ROUTE	DESCRIPTION	POSTMILE	DETAIL	LENGTH LF (N)	PAVEMENT MARKER SUMMARY					TRAFFIC STRIPE SUMMARY			REMARKS				
					NON-REFLECTIVE (EA)	RETROREFLECTIVE (EA)				PAINT (LF)		THERMOPLASTIC (LF)					
					TYPE A	TYPE C	TYPE D	TYPE G	TYPE H	(2-COAT)		4"		8"	8"		
WHITE	RED-CLEAR	YELLOW	CLEAR	YELLOW	WHITE	YELLOW	BROKEN	SOLID	BROKEN								
56	EB - MAIN LANE	0.309/2.600	8	460													
			11/13	19,310	1,608		403			19,310							
			25A	13,730				573			13,100	13,730					
			27B	13,100													
			36	440					19					440			
	WB - MAIN LANE	0.309/2.600	8	510													
			11/13	11,877	988		248			11,877			510				
			25A	11,880				496			11,880						
			27B	10,520							10,520						
			37	3,560					24	219						3560	
	NB Rte 5 OFF TO EB Rte 56 EB ON - EL CAMINO REAL	32.767 0.740	38B	1,028											1028		
			36	520											520		
	WB OFF - EL CAMINO REAL	0.488	11/13	2255	188												
			25A	695													
			27B	990													
EB OFF - CARMEL CREEK Rd	0.390	36	588														
		38	700														
		11/13	1160	96													
WB ON - CARMEL CREEK Rd	0.864	25A	605														
		27B	860														
		36	500														
EB ON - CARMEL CREEK Rd	1.024	38	200														
		11/13	670	56													
		25A	370														
WB OFF - CARMEL CREEK Rd	1.010	27	230														
		27B	780														
		36A	286														
EB OFF - CARMEL COUNTRY Rd	1.612	11/13	870	72													
		25A	995														
		27B	1260														
			36	590													
			38	210													
SUB-TOTAL 1					3,132	40	0	1,499	1,291	68,717	30,520	970	6,600	5,668			

**PAVEMENT DELINEATION QUANTITIES  
PDQ-3**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	13	22

 03-08-10  
 REGISTERED CIVIL ENGINEER DATE

03-08-10  
 PLANS APPROVAL DATE

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**NOTE:** 1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS INDICATED OTHERWISE.  
 2. (N) = NOT A PAY ITEM, FOR INFORMATION ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR  
 CAMILLE ABOU-FADEL  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 REBECCA IGNACIO  
 RYAN CHAO  
 REVISED BY  
 DATE REVISED

ROUTE	DESCRIPTION	POSTMILE	DETAIL	LENGTH LF (N)	PAVEMENT MARKER SUMMARY					TRAFFIC STRIPE SUMMARY			REMARKS		
					NON-REFLECTIVE (EA)	RETROREFLECTIVE (EA)				PAINT (LF)		THERMOPLASTIC (LF)			
					TYPE A	TYPE C	TYPE D	TYPE G	TYPE H	(2-COAT)		4"		8"	8"
					WHITE	RED-CLEAR	YELLOW	CLEAR	YELLOW	WHITE	YELLOW	BROKEN	SOLID	BROKEN	
56	WB ON - CARMEL COUNTRY Rd	1.812	11/13	500	40			11			500				
			25A	370					16			370			
			27	230					6		230				
			27B	890							890				
			36A	290				13					290		
	EB ON - CARMEL COUNTRY Rd	2.014	11/13	790	64			17			790				
			25A	968					41			968			
			27B	1330							1,330				
			36A	376				17					376		
	WB OFF - CARMEL COUNTRY Rd	1.996	11/13	596	48			13			596				
			25A	935					40			935			
			27	225					6		225				
			27B	1440							1,440				
			36	500				22					500		
			38	104				5					104		
Rte 56 = SUB-TOTAL					152	0	0	98	109	6,001	2,273	0	1,270	0	
75	SB - MAIN LANE	11.500/17.400	11/13	31,152	2,596			649		31,152		31,152			
			25	31,152					650			31,152			
			27B	31,152											
	AT HOPPER Blvd	12.850	38	92				5					92		
	AT DELA PORT Way	13.190	38	165				8					165		
	SB ON - CORONADO CAYS Blvd	13.875	8	317					14			317			
			25	600											
			27B	740							740				
			36A	135				7					135		
			38	112				6					112		
	SB OFF - CORONADO CAYS Blvd	14.109	25	560					13			560			
			27B	560							560				
			36	465				20					465		
	AT CORONADO BAY Rd	14.319	36	1,086				46					1,086		
			38B	90				10					90		
	AT LEYTE Rd	15.725	8	270								270			
			36	808				35					808		
	AT FIDDLER'S COVE	16.015	38	280				13					280		
Rte 75 = SUB-TOTAL					2,596	0	0	799	677	63,604	32,312	587	3,233	0	
78	5TH Ave/OAK HILL Dr TO BIRCH Ave	19.221/19.438	9	500				11		500					
			22	290					28			290			
			27B	2,290							2,290				
			32	800					86			1,600			
			38	170				8					170		
	BIRCH Ave TO FLORA VISTA	19.438/21.295	22	8,102					678			8,102			
			27B	19,610							19,610				
			29	460					42			920			
			38	1,775				75					1,775		
Rte 78 = SUB-TOTAL					0	0	834	94	0	22,400	10,912	0	1,945	0	
SUB-TOTAL 1					3,132	40	0	1,499	1,291	68,717	30,520	970	6,600	5,668	
IRRIGATION CROSSOVER = SUB-TOTAL					38 *										
TOTAL					5,918			5,441		236,739		1,557	13,048	5,668	

\* FROM IRRIGATION CROSSOVER TABLE IN SHEET PDQ-1.

## PAVEMENT DELINEATION QUANTITIES PDQ-4

LAST REVISION | DATE PLOTTED => 15-MAR-2010  
 03-08-10 TIME PLOTTED => 11:47

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	56,75,78	Var	14	22

Hamed S. Baha 03-08-10  
 REGISTERED CIVIL ENGINEER DATE

03-08-10  
 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.

IMPORTED BORROW						
ROUTE	POSTMILE	LENGTH (LF) (N)	WIDTH (LF) (N)	DEPTH (LF) (N)	QUANTITY (TON)	REMARKS
78	20.180	10.0	4.0	0.33	0.86	EB = RIGHT SHOULDER

ROADWAY QUANTITIES											
ROUTE	DESCRIPTION	POSTMILE	DIRECTION	LENGTH LF (N)	TRAVELED WAY		SHOULDER WIDTH		SHOULDER AREA	MICRO-SURFACING (TYPE III)	REMARKS
					WIDTH	AREA	INSIDE	OUTSIDE			
					LF (N)	SQFT (N)	LF (N)	LF (N)	SQFT (N)	TON	
56	EB - MAIN LANE	0.350/0.820	EB	2,482	24	64,754	10	10	53,962	237.43	
	AUXILIARY LANE	0.350/0.695	EB	1,822	36	73,371	8	8	32,609	211.96	
	EB - MAIN LANE	0.820/1.085	EB	1,399	36	50,371	10	8	25,186	151.11	
	AUXILIARY LANE	0.695/0.820	EB	660	12-24	11,880	4	0	2,640	29.04	
	EB - MAIN LANE	1.085/1.244	EB	840	36	30,223	10	10	16,790	94.03	
	AUXILIARY LANE	1.244/1.612	EB	1,943	12	23,316	0	0	-	46.63	
	WB - MAIN LANE	1.244/2.083	WB	4,430	24	106,318	10	10	88,598	389.83	
	AUXILIARY LANE	2.083/2.378	EB	1,558	24-36	65,419	10	10	31,152	193.14	
	WB - MAIN LANE	2.378/2.600	WB	1,172	24	28,132	10	10	23,443	103.15	
	AUXILIARY LANE	0.350/2.600	EB	11,880	24	290,316	5	11	193,544	967.72	
	WB - MAIN LANE	1.010/1.812	WB	4,235	12	50,815	0	0	-	101.63	
	AUXILIARY LANE	1.996/2.195	EB	1,051	12	12,609	0	0	-	25.22	
	EB ON - NB Rte 5	0.350/0.459	EB	600	12	7,200	8	8	9,600	33.60	
	EB ON-RAMP - EL CAMINO REAL	0.350/0.459	EB	600	24	14,400	4	8	7,200	43.20	
	WB OFF-RAMP - EL CAMINO REAL	0.488	WB	1,010	24-72	50,500	4	6	10,100	121.20	
	EB OFF-RAMP - CARMEL CREEK Rd	0.695	EB	870	24-36	26,100	4	8	10,440	73.08	
	WB ON-RAMP - CARMEL CREEK Rd	0.864	WB	780	12-24	14,040	4	8-23	12,090	52.26	
	EB ON-RAMP - CARMEL CREEK Rd	1.024	EB	1,280	12-24	23,040	4	8-23	19,840	85.76	
	WB OFF-RAMP - CARMEL CREEK Rd	1.010	WB	1,360	12-24	24,480	4	8	16,320	81.60	
	EB OFF-RAMP - CARMEL COUNTRY Rd	1.612	EB	1,260	12-36	30,240	4	4-8	11,340	83.16	
WB ON-RAMP - CARMEL COUNTRY Rd	1.812	WB	950	12-24	17,100	4	8-23	14,725	63.65		
EB ON-RAMP - CARMEL COUNTRY Rd	2.014	EB	1,360	12-24	24,480	4	8	16,320	81.60		
WB OFF-RAMP - CARMEL COUNTRY Rd	1.996	WB	1,140	12-36	27,360	4	4-8	11,400	77.52		
75	SB - MAIN LANE	11.255/12.853	SB	8,437	24	202,499	0-12	0-8	84,374	573.75	
		12.853/13.288	SB	2,297	24-32	93,020	0-12	0-8	22,968	231.98	
		13.288/14.034	SB	3,939	24	94,533	0-12	0-8	39,389	267.84	
		14.034/14.449	SB	2,191	24-36	97,508	0-12	0-8	21,912	238.84	
		14.449/15.816	SB	7,218	24-36	313,973	0-12	0-8	72,178	772.30	
		15.816/17.452	SB	8,638	36	310,971	0-12	0-8	86,381	794.70	
	SB ON-RAMP - CORONADO CAYS Blvd	13.818/13.875	SB	300	12	3,600	0	8	2,400	12.00	
		13.875/13.968	SB	490	12-50	15,190	0	0	-	30.38	
	SB OFF-RAMP - CORONADO CAYS Blvd	14.084/14.109	SB	430	12	5,160	0	0	-	10.32	
		14.109/14.221	SB	390	12-58	7,020	0	8	3,120	20.28	
78	OAK HILL Dr TO BIRCH Ave	19.230/19.438	EB/WB	1,098	36-76.2	64,277	0	0	-	128.55	
	BIRCH Ave TO PARK HILL Ln	19.438/19.546	EB/WB	570	24-65	25,376	0	8	4,562	59.88	
	PARK HILL Ln TO SEPH WAY	19.546/19.713	EB/WB	882	24	21,162	8	8	14,108	70.54	
	SEPH WAY TO VILETTA Dr	19.713/20.227	EB/WB	2,714	24-36	81,418	8	8	43,423	249.68	
	VILLETTA Dr TO BEAR VALLEY Pkwy	20.227/20.640	EB/WB	2,181	24-76.2	109,250	0-8	0-8	17,445	253.39	
	BEAR VALLEY Pkwy TO SORRENTINO Dr	20.640/20.754	EB/WB	602	36-76.2	33,768	0-8	8	7,223	81.98	
	SORRENTINO Dr TO SUMMIT Dr	20.754/20.947	EB/WB	1,016	24-36	30,486	8	4	12,194	85.36	
SUMMIT Dr TO FLORA VISTA Dr	20.947/21.304	EB/WB	1,887	24	45,292	8	4	22,646	135.88		
<b>TOTAL</b>										7365.18	

## SUMMARY OF QUANTITIES

### Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 REBECCA IGNACIO  
 HAMED S. BAHHA  
 DAVID M. POUND

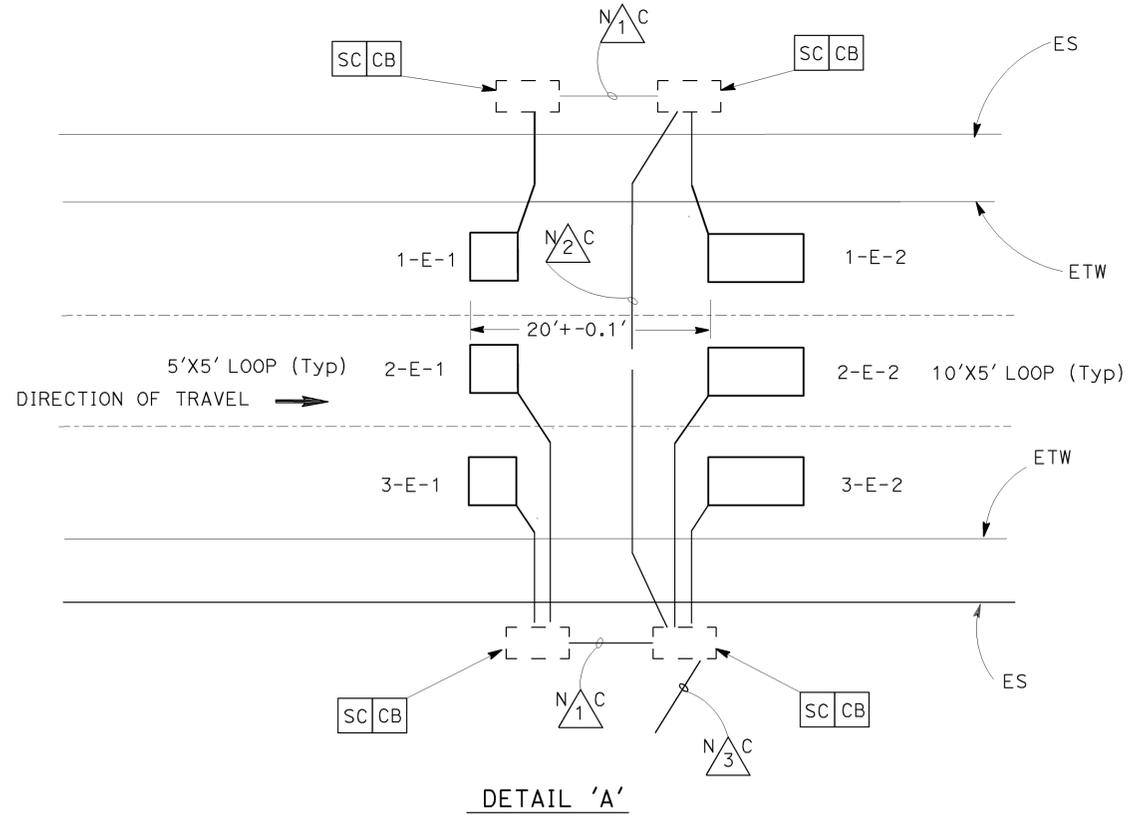
LAST REVISION | DATE PLOTTED => 15-MAR-2010  
 03-08-10 TIME PLOTTED => 11:47

INDUCTIVE LOOP DETECTOR									
ROUTE	PM	EXISTING FACILITIES	INTERSECTIONS	DIRECTIONS	1 LOCATION AND QUANTITY OF LOOP DETECTORS (N)			INDUCTIVE LOOP DETECTOR (EA)	REMARKS
					MAIN LANES				
					#1	#2	#3		
56	0.82	TMS # Z0.853	CARMEL CREEK Rd OC	EB	2-R+	2-L+	2-L+	6	SEE DETAIL 'A'
TOTAL								6	

NUMBER OF LOOPS  
 2-R+  
 PB LOCATED OF RIGHT SIDE (R+) OR LEFT SIDE (L+) OF FREEWAY LANE, IN EAST BOUND DIRECTION OF TRAVEL

(N) = NOT A PAY ITEM, FOR INFORMATON ONLY.

- CONDUIT NOTE:**
- N<sub>1</sub>C - EXISTING 1/2"C, 2 dlc.
  - N<sub>2</sub>C - EXISTING 1/2"C, 4 dlc.
  - N<sub>3</sub>C - EXISTING 1/2"C, 8 dlc.



- LEGEND:**
- N<sub>1</sub>C - EXISTING CONDUIT, NO CHANGE.
- NOTE:**
- 1 - AB EXISTING LOOPS.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC ELECTRICAL  
 FUNCTIONAL SUPERVISOR DALE WILSON  
 CALCULATED-DESIGNED BY CHECKED BY  
 MAHENDRA NIRMAL ENRIQUE BERNAL  
 REVISED BY DATE REVISION  
 X  
 X  
 X  
 X  
 X

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**INDUCTIVE LOOP DETECTOR**  
 NO SCALE  
**E-1**

# ELECTROLIERS

STANDARD TYPES		
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		
32		
35		
36-20A		

**NOTES:**

- 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.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- 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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	56, 75, 78	Var	16	22

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

*Jeffery G. McRae*  
REGISTERED PROFESSIONAL ENGINEER  
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 03-08-10

## 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
11	SD	56,75,78	Var	17	22

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

October 5, 2007  
 PLANS APPROVAL DATE

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### CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or service pole

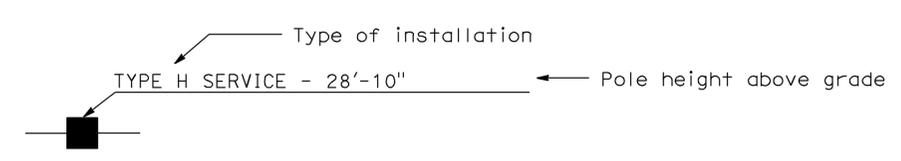
### SIGNAL EQUIPMENT

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
		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
		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

### SERVICE EQUIPMENT

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

### POLE-MOUNTED SERVICE DESIGNATION



### ILLUMINATED OVERHEAD SIGN

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

### SIGNAL EQUIPMENT Cont

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

### NOTES:

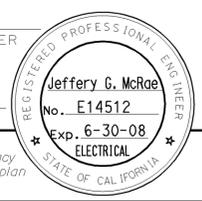
- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

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**

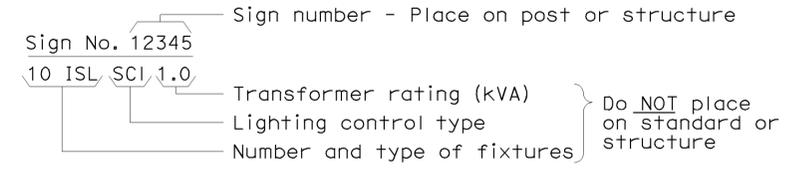
2006 REVISED STANDARD PLAN RSP ES-1B



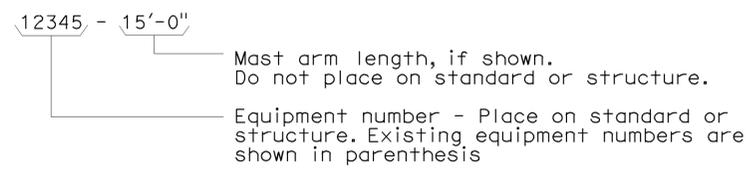
To accompany plans dated 03-08-10

### EQUIPMENT IDENTIFICATION

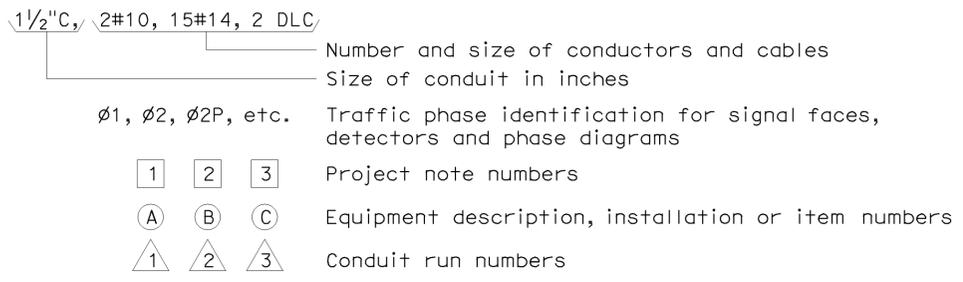
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



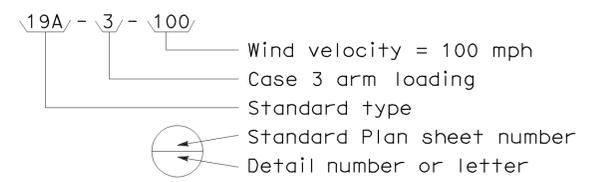
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



#### CONDUIT AND CONDUCTOR IDENTIFICATION:



#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



### MISCELLANEOUS EQUIPMENT

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

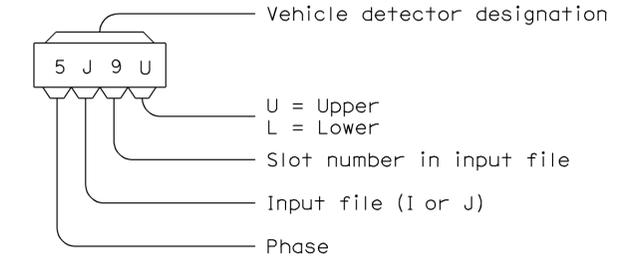
### WIRING DIAGRAM LEGEND

P Pole	External conductor
CB Circuit breaker	Conductor or bus
A Ampere	Tie point
V Volt	Contactor coil
M Metered	Contactor, Contact NO
UM Unmetered	Terminal blocks
NB Neutral bus	Contactor, Contact NC
GB Ground bus	Enclosure bond
G Equipment grounding conductor	Grounding electrode
N Grounded conductor (Neutral)	Circuit breaker
	Receptacle

### PULL BOXES

PROPOSED	EXISTING	
		Pull box-No. 5 unless otherwise indicated or noted.
		Pull box-Additional designations or descriptions
3 = No. 3 1/2 pull box		(C) = Communications pull box
5 = No. 5 pull box		(E) = Pull box with extension
6 = No. 6 pull box		(S) = Sprinkler control pull box
7 = No. 7 (Ceiling pull box)		(21) = Anchor bolts and conduit for future installation of Type 21 Standard
8 = No. 8 (Pendant soffit pull box)		(T) = Traffic pull box
9 = No. 9 pull box		
9A = No. 9A pull box		

### VEHICLE DETECTORS



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
		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.

2006 REVISED STANDARD PLAN RSP ES-1C

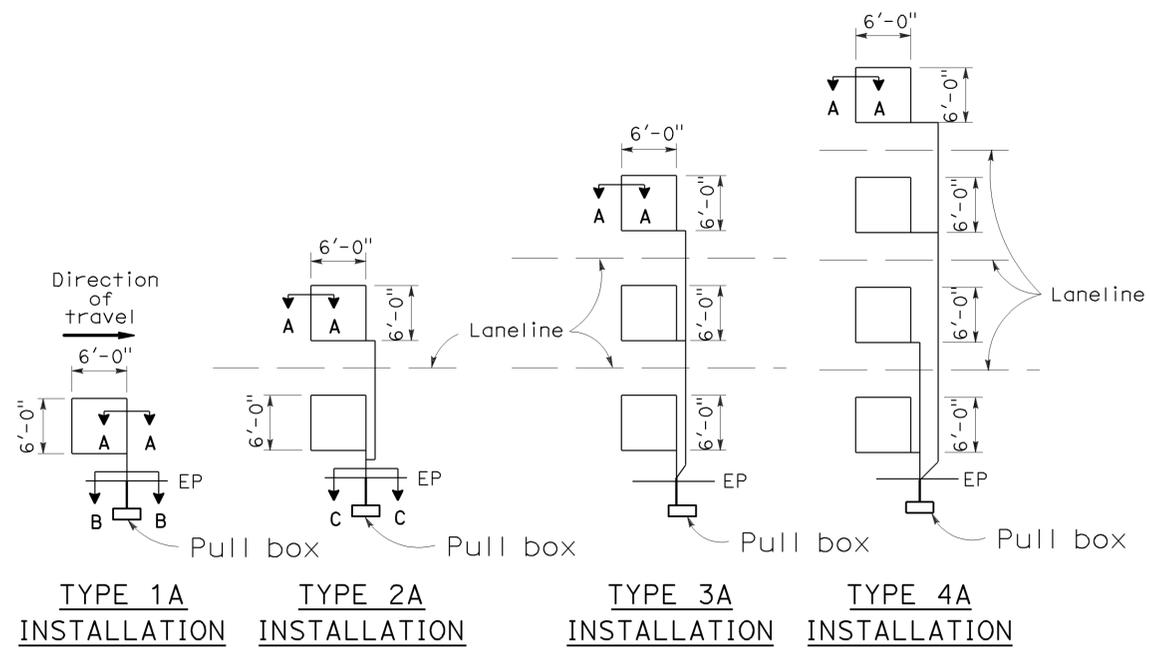
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	56, 75, 78	Var	19	22

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 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.

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

## LOOP INSTALLATION PROCEDURE

- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- 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.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- 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.
- 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.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- 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.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- 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.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- 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

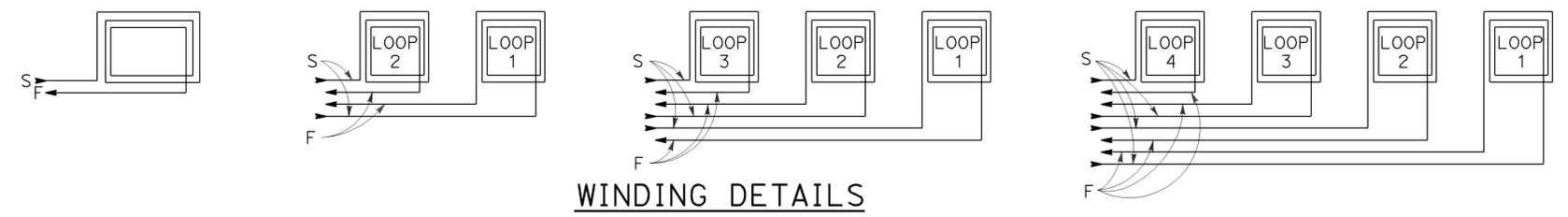
### SAWCUT DETAILS

(Type A loop detector configurations illustrated)

- 1A thru 4A = 1 Type A loop configuration in each lane.
  - 1B thru 4B = 1 Type B loop configuration in each lane.
  - 1C = 1 Type C loop configuration entering lanes as required.
  - 1D thru 4D = 1 Type D loop configuration in each lane.
  - 1E thru 4E = 1 Type E loop configuration in each lane.
  - 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)

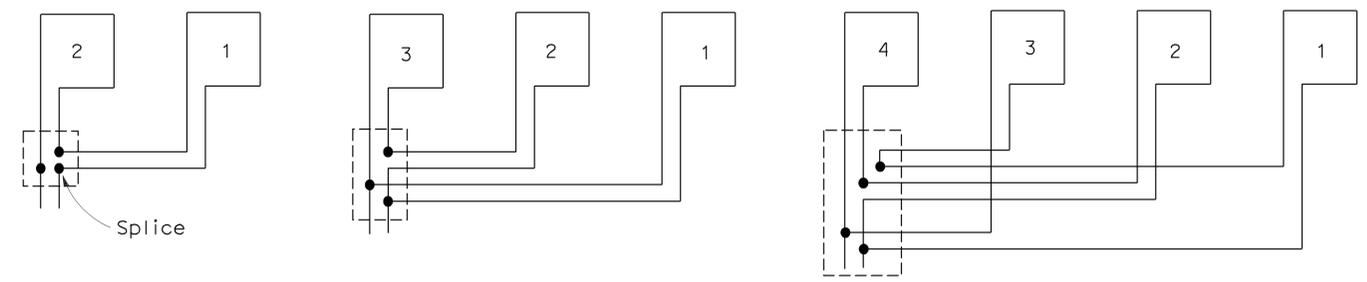
To accompany plans dated 03-08-10

2006 REVISED STANDARD PLAN RSP ES-5A



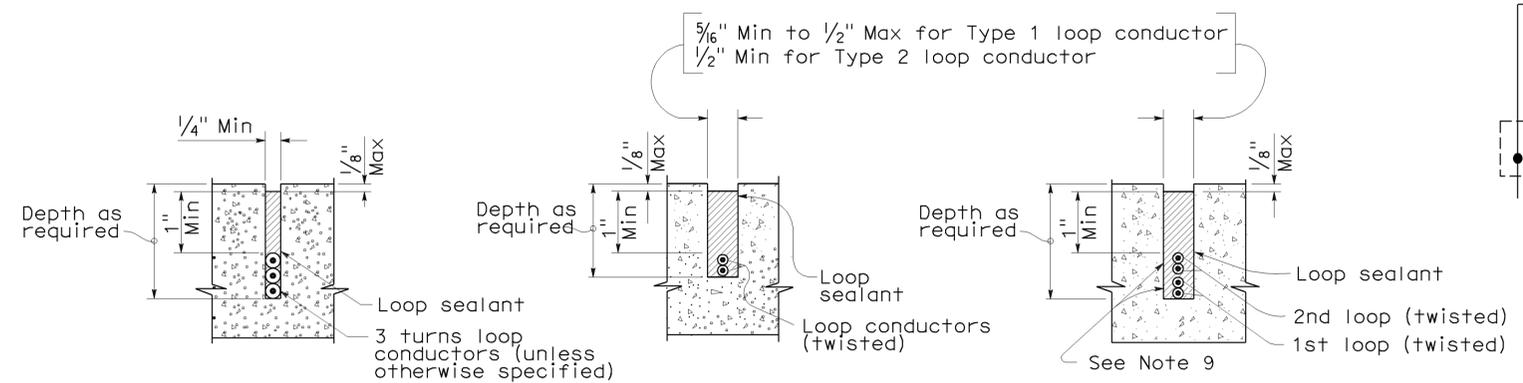
### WINDING DETAILS

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

## ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	56, 75, 78	Var	20	22

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

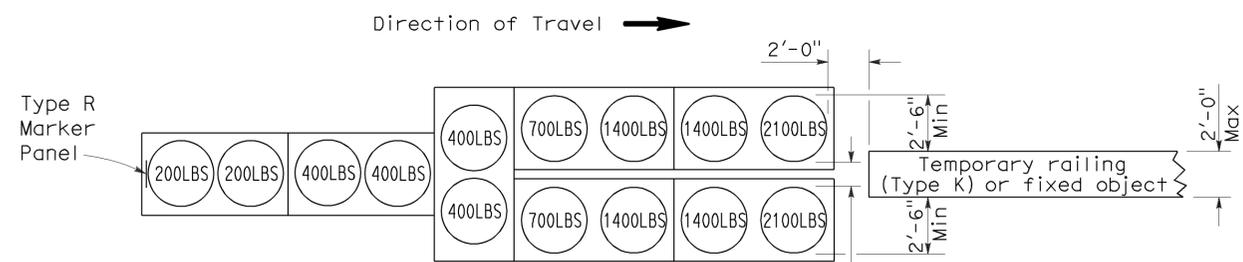
June 6, 2008  
PLANS APPROVAL DATE

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

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To accompany plans dated 03-08-10

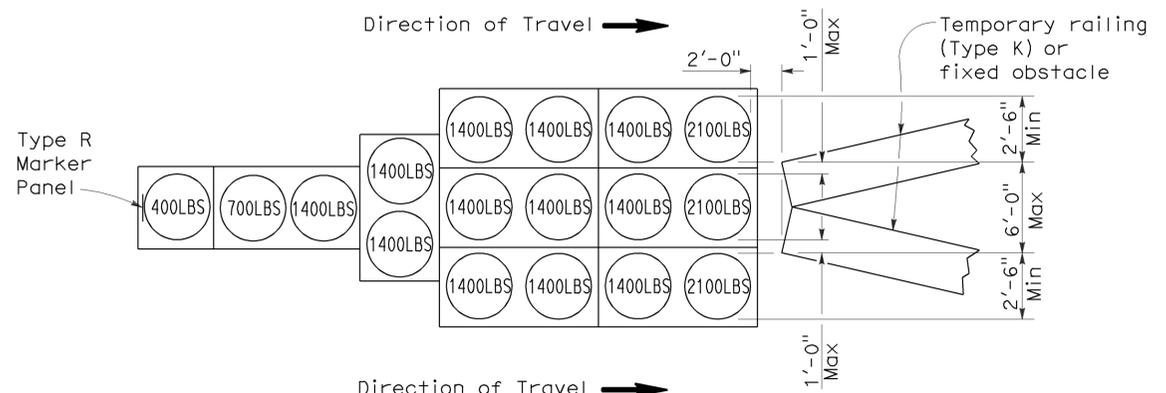
2006 REVISED STANDARD PLAN RSP T1A



Direction of Travel →

**ARRAY 'TU14'**

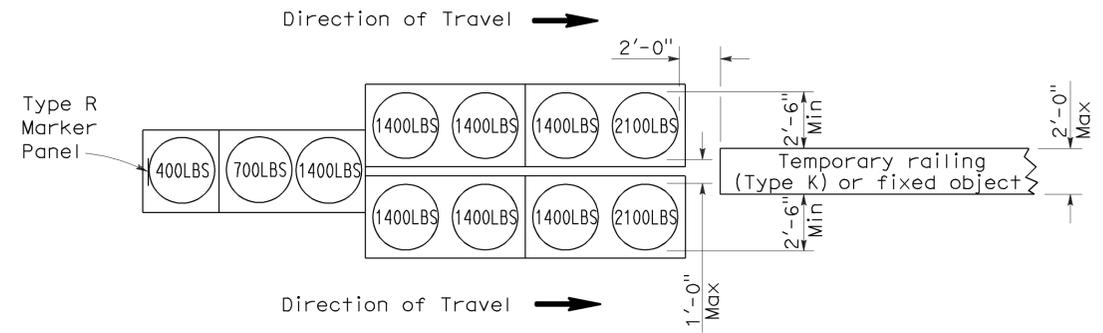
Approach speed 45 mph or more



Direction of Travel →

**ARRAY 'TU17'**

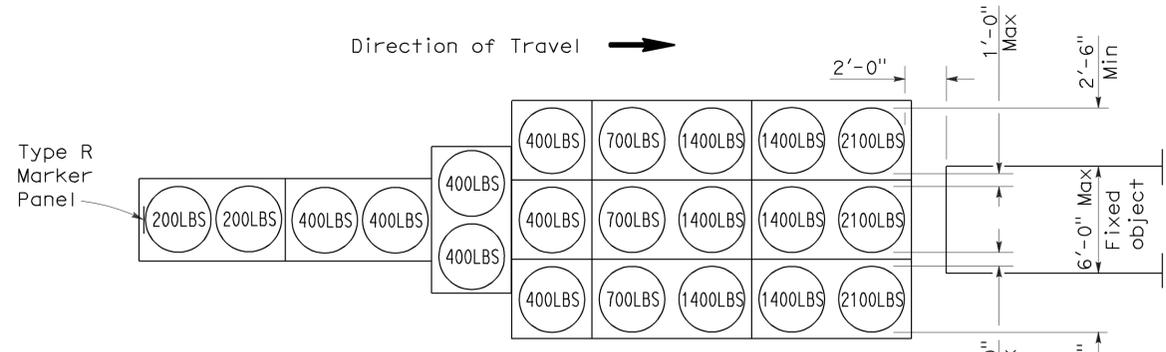
Approach speed less than 45 mph



Direction of Travel →

**ARRAY 'TU11'**

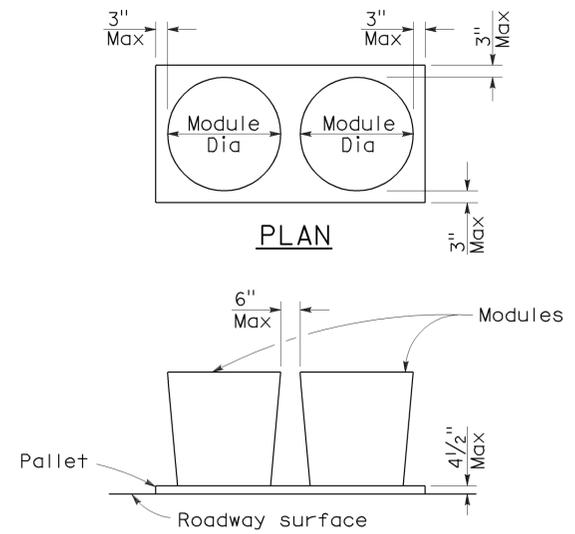
Approach speed less than 45 mph



Direction of Travel →

**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**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	56, 75, 78	Var	21	22

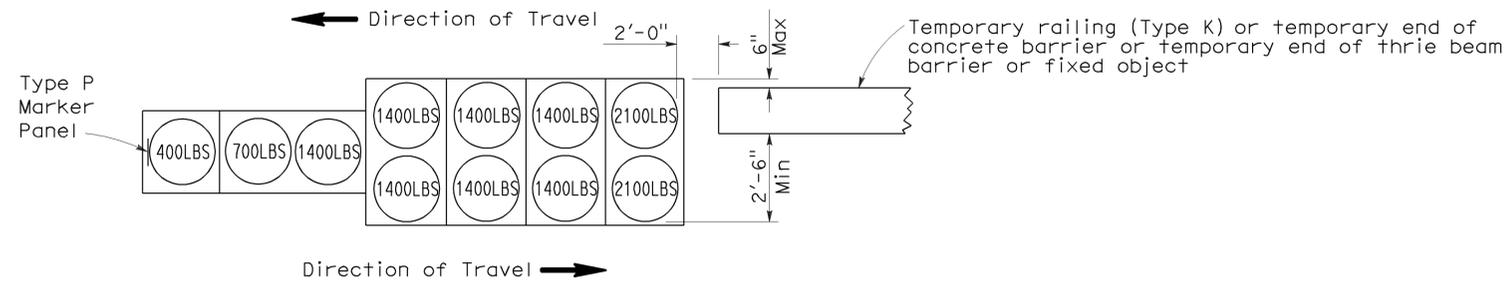
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

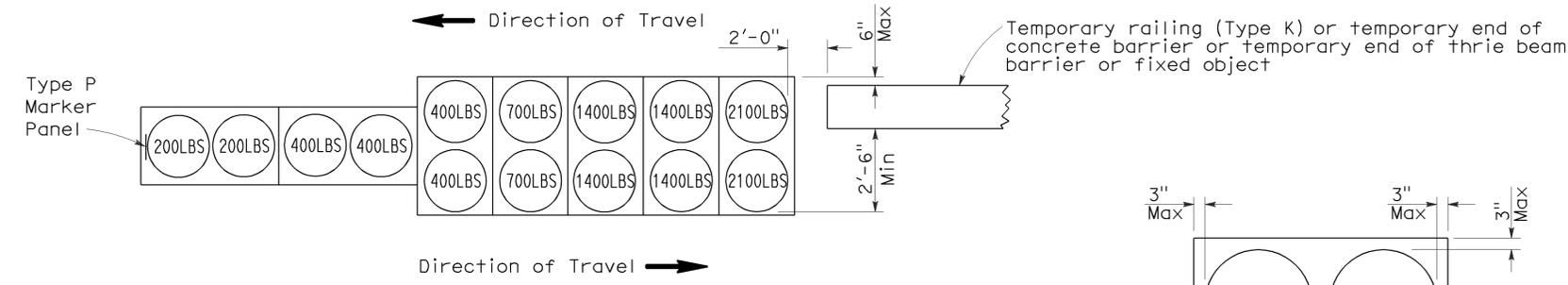
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To accompany plans dated 03-08-10



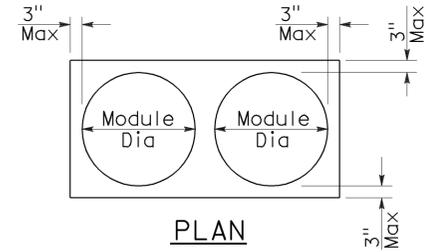
**ARRAY 'TB11'**

Approach speed less than 45 mph

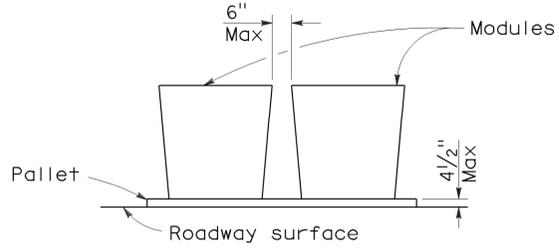


**ARRAY 'TB14'**

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
11	SD	56, 75, 78	Var	22	22

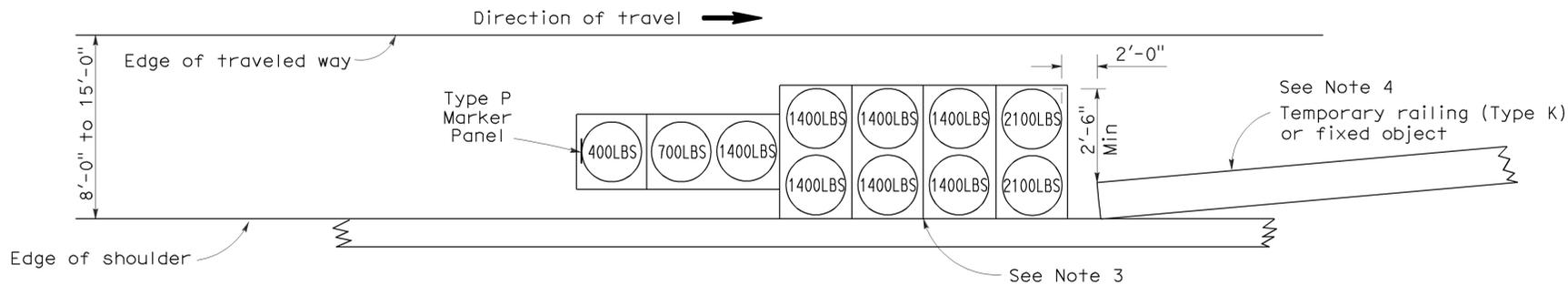
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

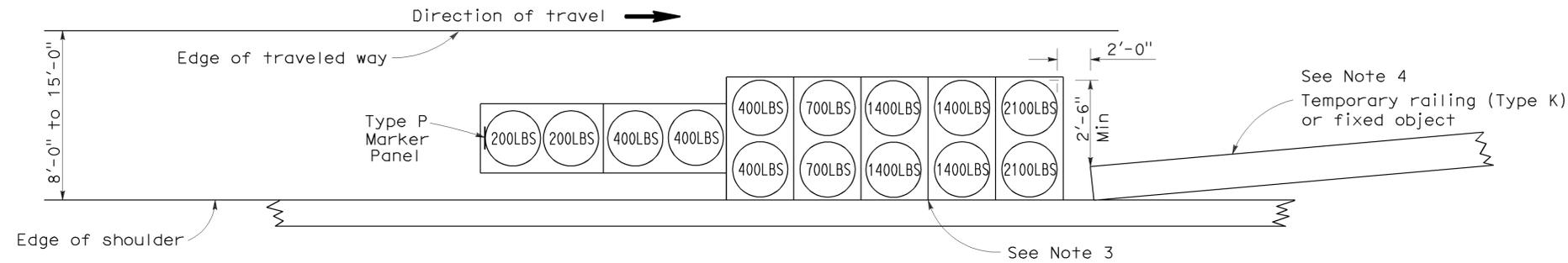
*Randell D. Hiatt*  
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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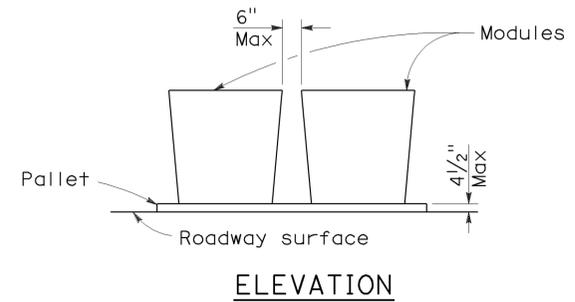
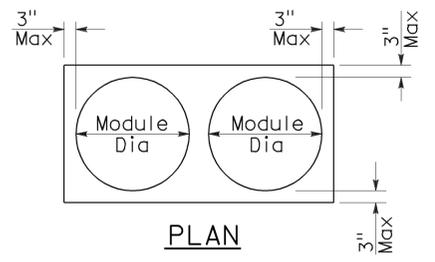
To accompany plans dated 03-08-10



**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**ARRAY 'TS14'**  
Approach speed 45 mph or more  
See Note 9



**CRASH CUSHION PALLET DETAIL**  
See Note 11

**NOTES:**

- (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.
- All sand weights are nominal.
- 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.
- 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.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- 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.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- 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