

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	1	27

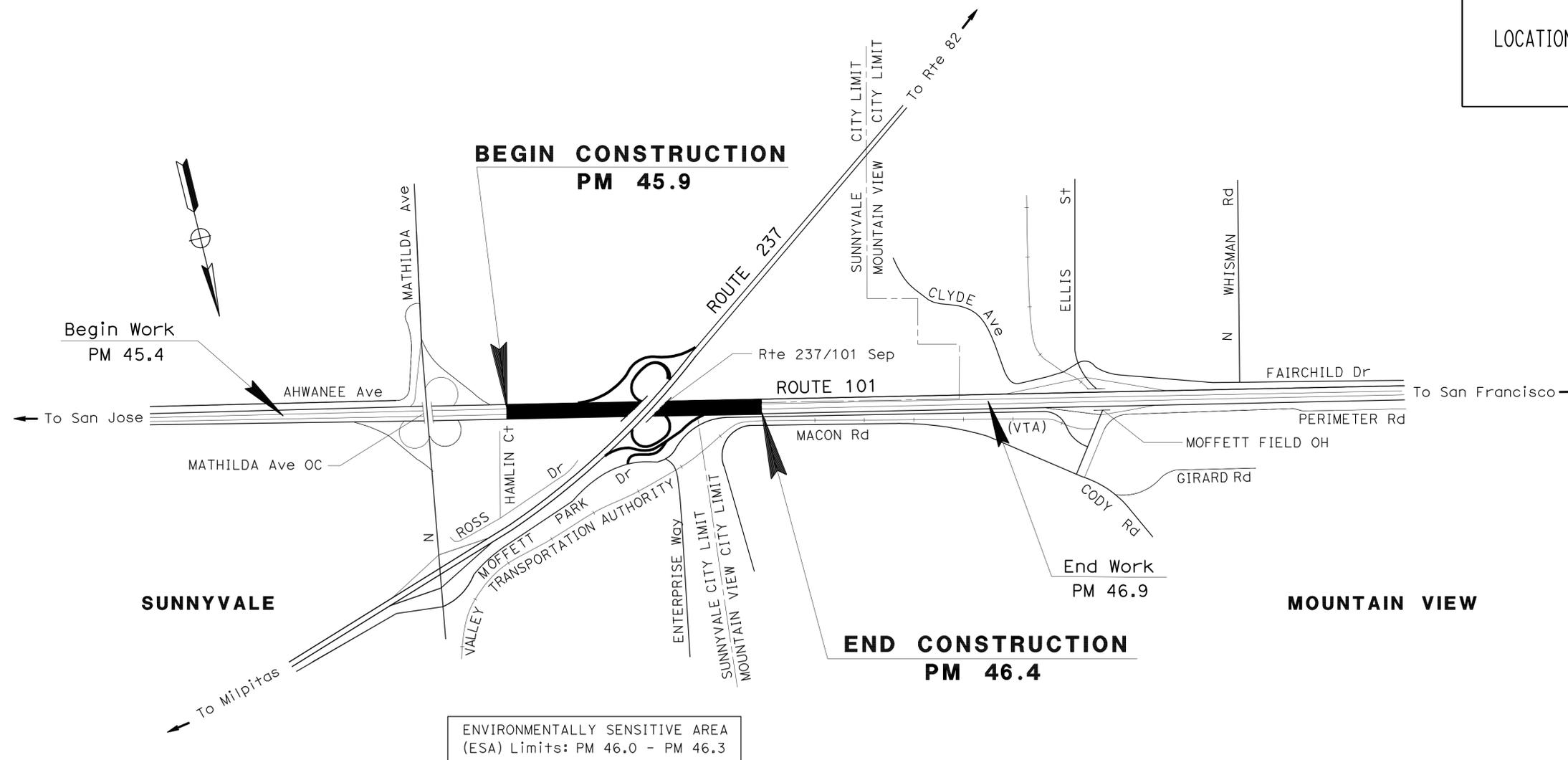
INDEX OF PLANS

SHEET No.	DESCRIPTION
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2	TYPICAL CROSS SECTIONS
3 - 8	CONSTRUCTION AREA SIGNS
9	PAVEMENT DELINEATION QUANTITIES
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STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY  
IN SANTA CLARA COUNTY  
IN AND NEAR SUNNYVALE  
FROM 0.2 MILE SOUTH  
TO 0.3 MILE NORTH OF ROUTE 237/101 SEPARATION

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



ENVIRONMENTALLY SENSITIVE AREA (ESA) Limits: PM 46.0 - PM 46.3

PROJECT ENGINEER: Sherry S. Huang  
REGISTERED CIVIL ENGINEER  
DATE: 3/8/11  
PLANS APPROVAL DATE: March 14, 2011  
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.

PROJECT MANAGER: RAMSES SARGISS  
DESIGN ENGINEER: SHERRY HUANG

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

NO SCALE

CONTRACT No.	04-3A9104
PROJECT ID	0400000968

DATE PLOTTED => 24-MAR-2011  
TIME PLOTTED => 14:26

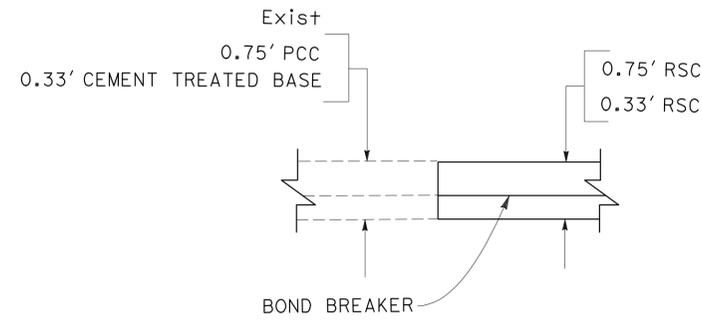
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	2	27
 REGISTERED CIVIL ENGINEER DATE 3/8/11					
3-14-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

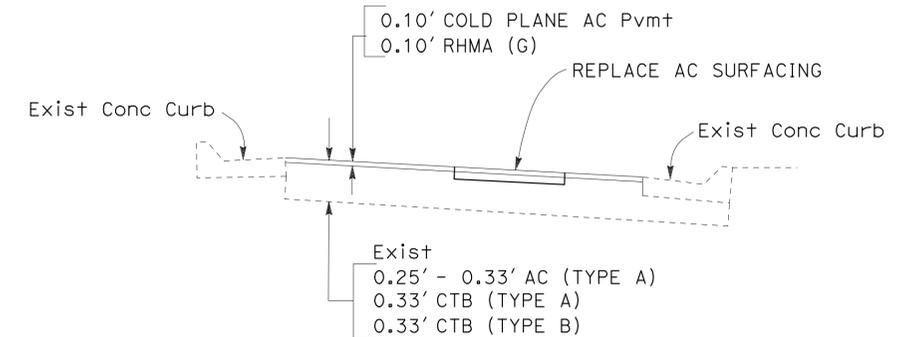
- EXISTING UTILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCE SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**ABBREVIATIONS:**

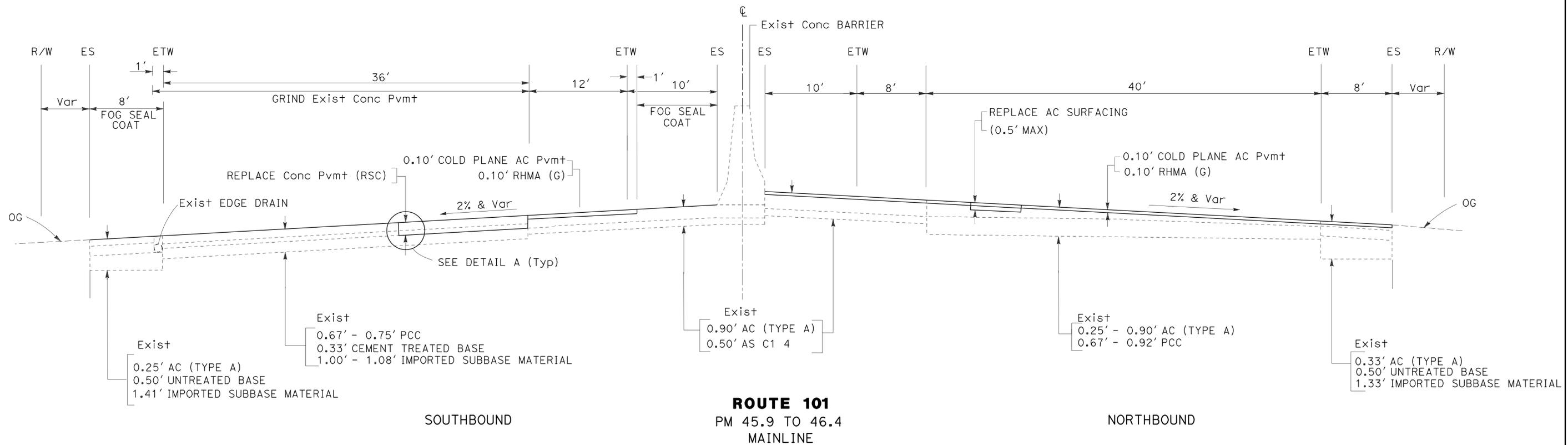
RHMA(G): RUBBERIZED HOT MIX ASPHALT (GAP GRADED)  
 RSC: RAPID STRENGTH CONCRETE



DETAIL A



RAMPS (TYPICAL)



**ROUTE 101**  
 PM 45.9 TO 46.4  
 MAINLINE

**TYPICAL CROSS SECTIONS**  
 NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 RAMSES SARGISS  
 SHERRY HUANG  
 ROBERT CAMARGO  
 REVISIONS: 03-08-11

**LEGEND:**

No. CONSTRUCTION AREA SIGN NUMBER

→ DIRECTION OF TRAFFIC

X RAMP CLOSURE

**NOTES:**

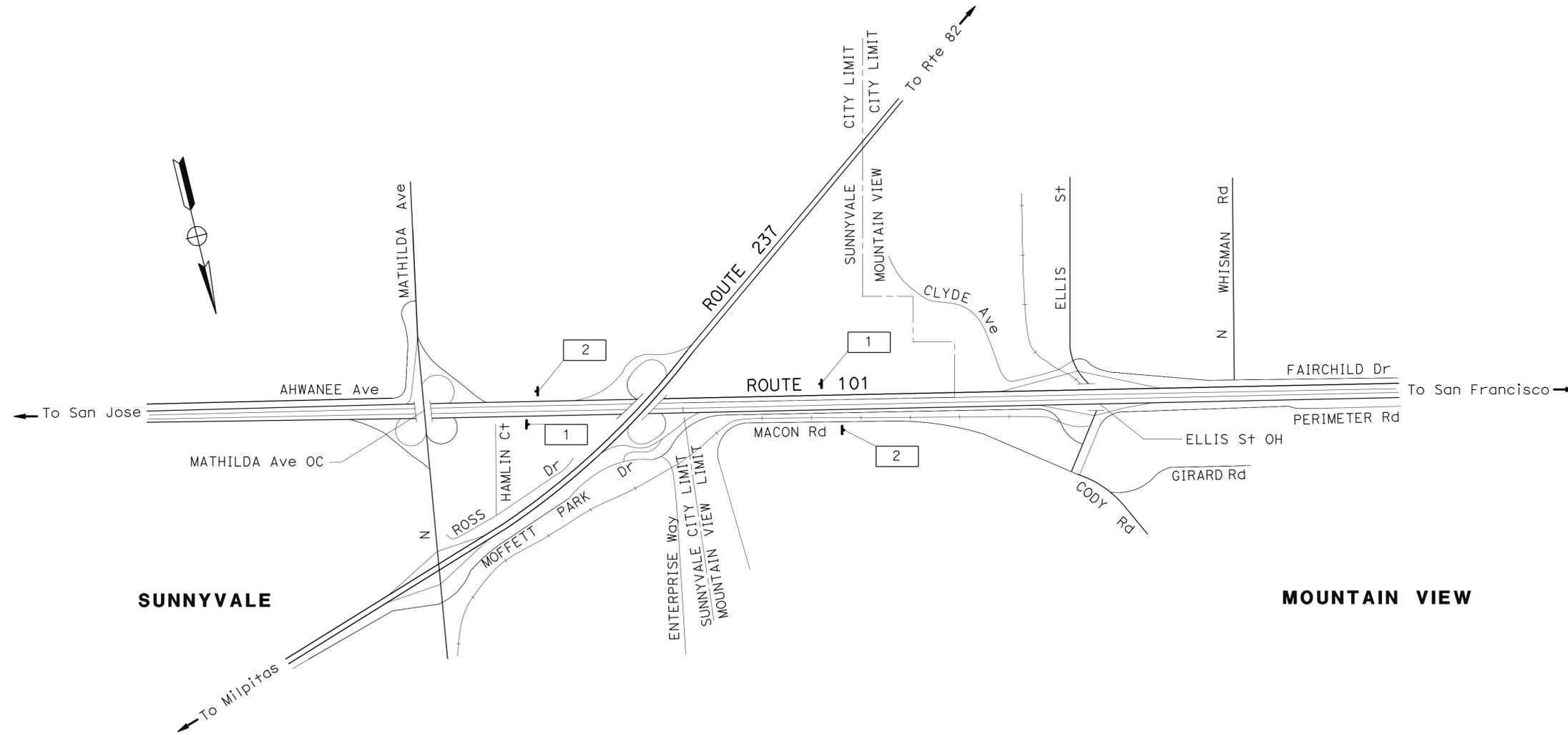
1. EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	3	27

*J. L. Struven* 3/7/11  
 REGISTERED CIVIL ENGINEER DATE  
 3-14-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Jerilyn L. Struven  
 No. 49964  
 Exp. 2-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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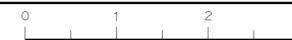
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR
<b>Caltrans</b>	ROLAND AU-YEUNG	SHARI TALAI	SHARI TALAI
<b>TRAFFIC</b>	CHECKED BY	JERILYN STRUVEN	DATE REVISION

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY



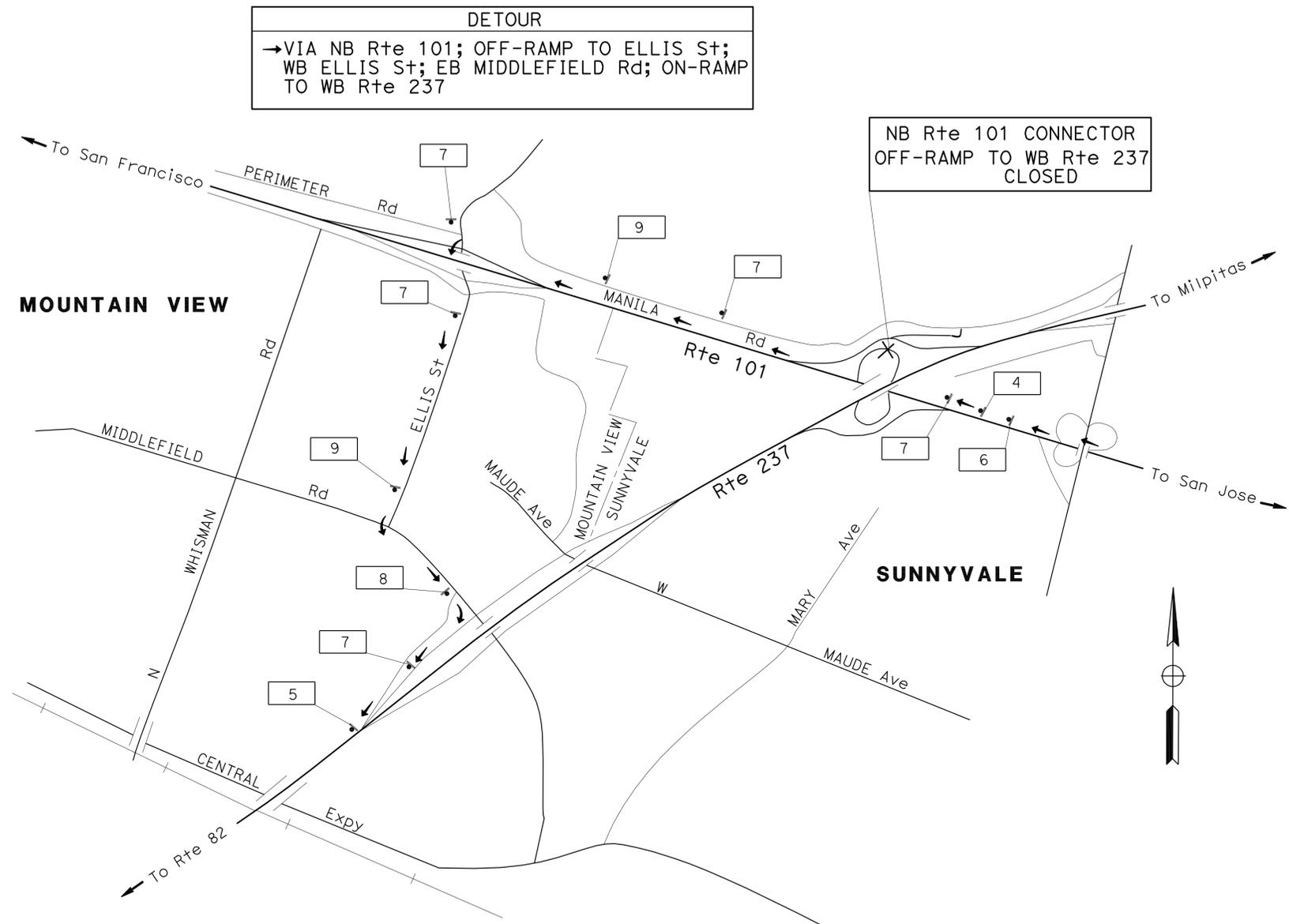
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	4	27

*J. L. Struven*  
 REGISTERED CIVIL ENGINEER DATE 3/7/11  
 3-14-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 49964  
 Exp. 12-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR
<b>Caltrans</b>	ROLAND AU-YEUNG	SHARI TALAI	SHARI TALAI
<b>TRAFFIC</b>	CHECKED BY	JERILYN STRUVEN	JERILYN STRUVEN
			DATE REVISION



**DETOUR**  
 → VIA NB Rte 101; OFF-RAMP TO ELLIS St;  
 WB ELLIS St; EB MIDDLEFIELD Rd; ON-RAMP  
 TO WB Rte 237

NB Rte 101 CONNECTOR  
 OFF-RAMP TO WB Rte 237  
 CLOSED

**DETOUR PLAN #1**  
 NB Rte 101 CONNECTOR  
 OFF-RAMP TO WB Rte 237  
 CLOSURE

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

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

THIS PLAN ACCURATE FOR  
 CONSTRUCTION AREA SIGN WORK ONLY

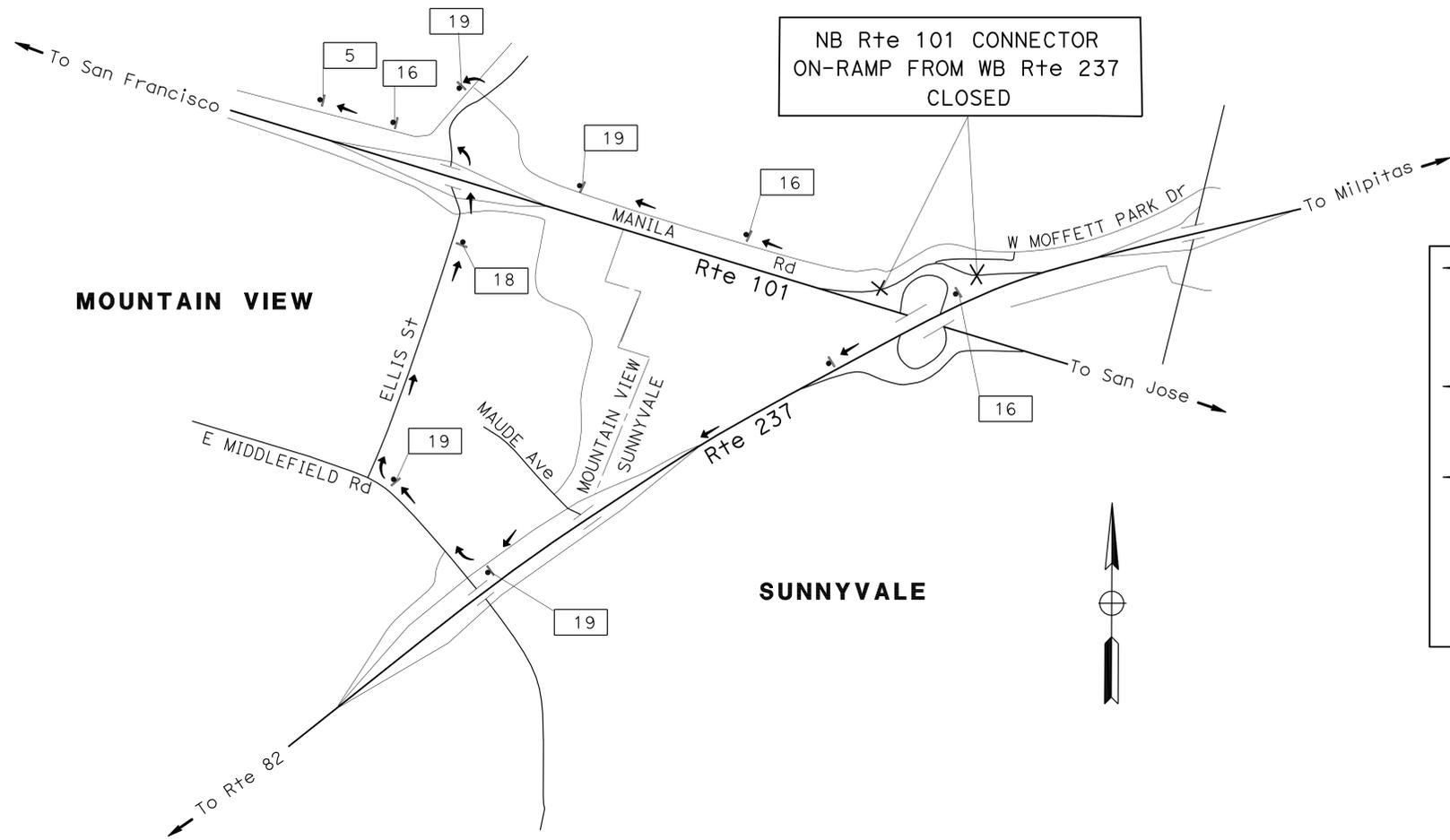
LAST REVISION   
 DATE PLOTTED => 24-MAR-2011   
 TIME PLOTTED => 14:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	5	27

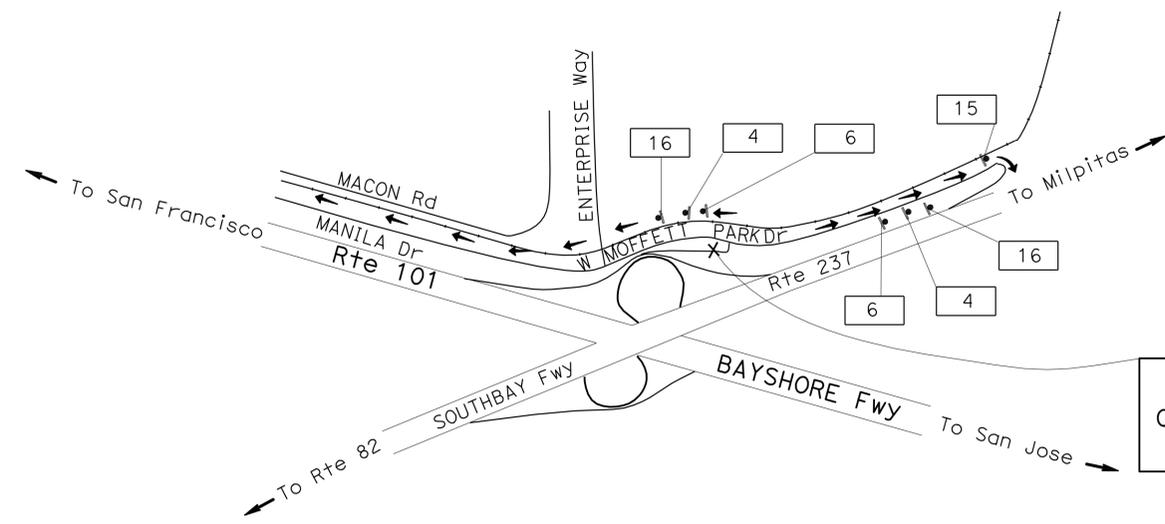
*J. L. Struven* 3/7/11  
 REGISTERED CIVIL ENGINEER DATE  
 3-14-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Jerilyn L. Struven  
 No. 49964  
 Exp. 12-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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- VIA WB Rte 237; OFF-RAMP TO WB MIDDLEFIELD Rd; NB ELLIS St TO NB Rte 101 ON-RAMP.
- VIA NB MOFFETT PARK Dr; NB MANILA Rd; SB ELLIS St TO NB Rte 101 ON-RAMP.
- VIA SB MOFFETT PARK Dr; SB MATHILDA Ave TO Rte 237 ON-RAMP; WB Rte 237; OFF-RAMP TO WB MIDDLEFIELD Rd; NB ELLIS St TO NB Rte 101 ON-RAMP.



DETOUR PLAN #2  
 NB Rte 101 CONNECTOR ON-RAMP CLOSURE

NB Rte 101 CONNECTOR ON-RAMP FROM W MOFFETT PARK Dr CLOSED

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-3**

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

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b>	ROLAND AU-YEUNG	SHARI TALAI	
<b>TRAFFIC</b>		JERILYN STRUVEN	
	CHECKED BY	DESIGNED BY	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	6	27

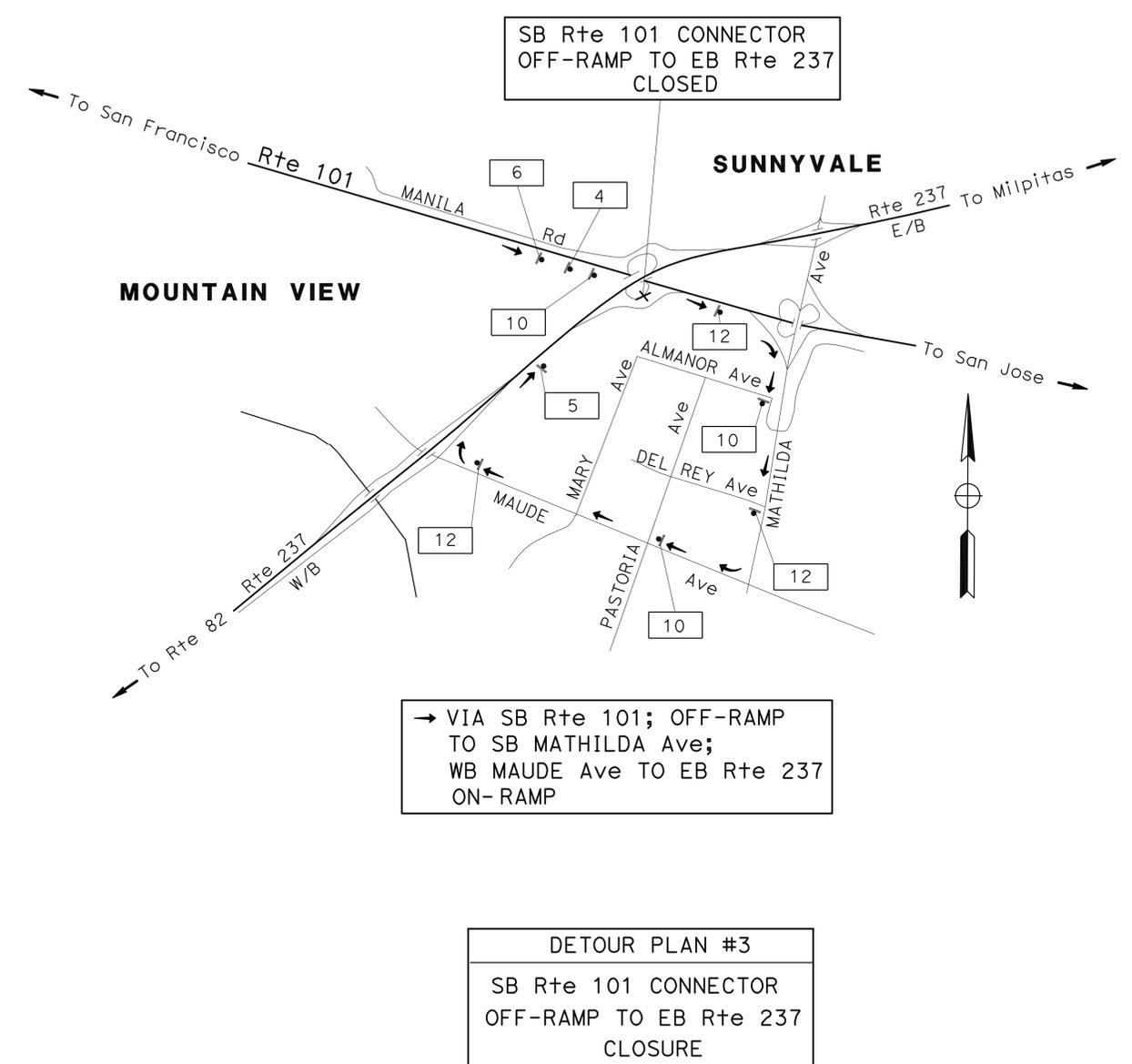
  

<i>J. L. Struven</i>	3/7/11
REGISTERED CIVIL ENGINEER	DATE
3-14-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
Jerilyn L. Struven
No. 49964
Exp. 12-31-12
CIVIL

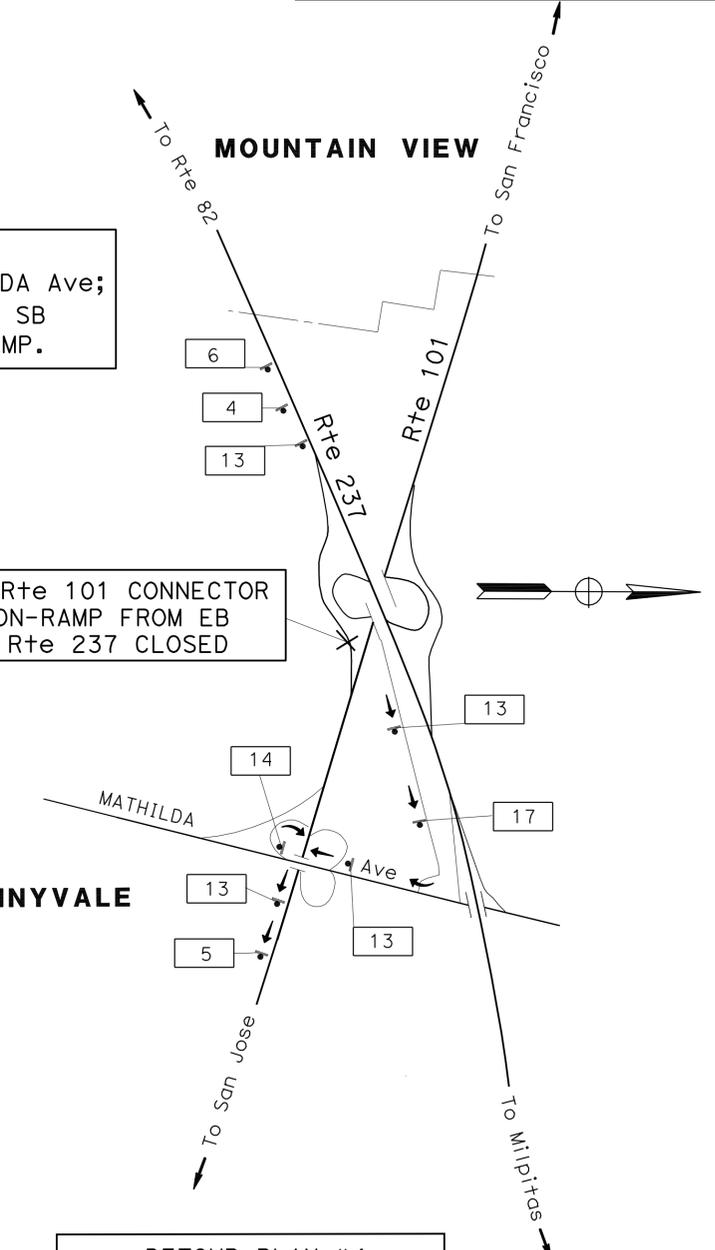
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→ VIA EB Rte 237;  
OFF-RAMP TO MATHILDA Ave;  
SB MATHILDA Ave TO SB Rte 101 LOOP ON-RAMP.

SB Rte 101 CONNECTOR  
ON-RAMP FROM EB Rte 237 CLOSED

DETOUR PLAN #4  
SB Rte 101 CONNECTOR  
ON-RAMP FROM EB Rte 237 CLOSURE



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
Caltrans®  
FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG  
DESIGNED BY: SHARI TALAI  
CHECKED BY: JERILYN STRUVEN  
REVISOR: SHARI TALAI  
DATE: 7/2/2010  
REVISION: 03-07-11

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

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

**CONSTRUCTION AREA SIGNS**  
NO SCALE

**CS-4**

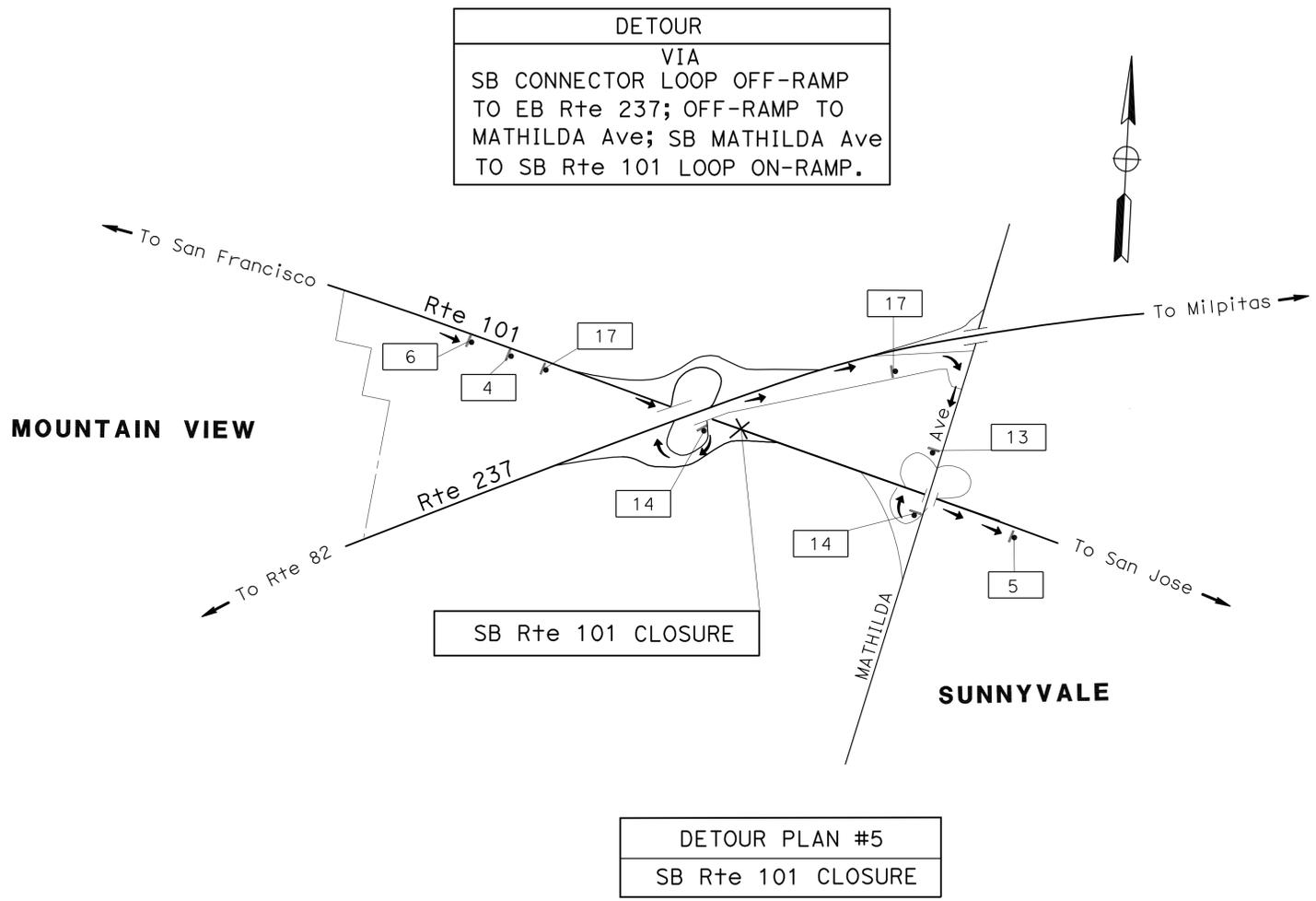
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	7	27

*J. L. Struven* 3/7/11  
 REGISTERED CIVIL ENGINEER DATE  
 3-14-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 49964  
 Exp. 12-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b>	ROLAND AU-YEUNG	SHARI TALAI	SHARI TALAI
<b>TRAFFIC</b>		JERILYN STRUVEN	JERILYN STRUVEN
		CHECKED BY	DATE REVISED



DETOUR PLAN #5  
SB Rte 101 CLOSURE

**CONSTRUCTION AREA SIGNS**  
NO SCALE

**CS-5**

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

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	8	27

*J. L. Struven*  
 REGISTERED CIVIL ENGINEER DATE 3/7/11  
 3-14-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Jerilyn L. Struven  
 No. 49964  
 Exp. 2-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No.	MUTCD CODE	MESSAGE	PANEL SIZE	NUMBER OF POST AND SIZE	QUANTITY EA
1	W20-1	ROAD WORK AHEAD	48'' x 48''	(ONE) 4'' x 4''	2
2	G20-2	END ROAD WORK	48'' x 48''	(ONE) 4'' x 4''	2
4	W20-2	DETOUR AHEAD	48'' x 48''	(ONE) 4'' x 4''	6
5	M4-8A	END DETOUR	30'' x 18''	(ONE) 4'' x 4''	5
6	SC6-4(CA)	RAMP CLOSED	60'' x 48''	(TWO) 4'' x 4''	6
7	SC3(↑)	DETOUR (STRAIGHT ARROW)	48'' x 18''	(ONE) 4'' x 4''	5
	M3-4	WEST	21'' x 9''		
	G28-2(237)CA	ROUTE SHIELD	28'' x 24''		
8	M4-10(R+)	DETOUR (RIGHT)	48'' x 18''	(ONE) 4'' x 4''	1
	M3-4	WEST	21'' x 9''		
	G28-2(237)CA	ROUTE SHIELD	28'' x 24''		
9	M4-10(L+)	DETOUR (LEFT)	48'' x 18''	(ONE) 4'' x 4''	2
	M3-4	WEST	21'' x 9''		
	G28-2(237)CA	ROUTE SHIELD	28'' x 24''		
10	SC3(↑)	DETOUR (STRAIGHT ARROW)	48'' x 18''	(ONE) 4'' x 4''	3
	M3-2	EAST	21'' x 9''		
	G26-2(237)CA	ROUTE SHIELD	28'' x 24''		
12	M4-10(R+)	DETOUR (RIGHT)	48'' x 18''	(ONE) 4'' x 4''	3
	M3-2	EAST	21'' x 9''		
	G26-2(237)CA	ROUTE SHIELD	28'' x 24''		
13	SC3(↑)	DETOUR (STRAIGHT ARROW)	48'' x 18''	(ONE) 4'' x 4''	5
	M3-3	SOUTH	21'' x 9''		
14	G26-2(101)CA	ROUTE SHIELD	28'' x 24''	(ONE) 4'' x 4''	3
	M3-8	DETOUR	25'' x 24''		
	M3-3	SOUTH	21'' x 9''		
	G26-2(101)CA	ROUTE SHIELD	28'' x 24''		
	M6-2(↘)	DETOUR (DIAGONAL ARROW)	21'' x 15''		

NOTE: 3 AND 11 NOT USED

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No.	MUTCD CODE	MESSAGE	PANEL SIZE	NUMBER OF POST AND SIZE	QUANTITY EA
15	M3-8	DETOUR	25'' x 24''	(ONE) 4'' x 4''	1
	M3-3	NORTH	21'' x 9''		
	G26-2(101)CA	ROUTE SHIELD	28'' x 24''		
16	M6-2(↘)	DETOUR (DIAGONAL ARROW)	21'' x 15''	(ONE) 4'' x 4''	5
	SC3(↑)	DETOUR (STRAIGHT ARROW)	48'' x 18''		
	M3-1	NORTH	21'' x 9''		
17	G26-2(101)CA	ROUTE SHIELD	28'' x 24''	(ONE) 4'' x 4''	3
	M4-10(R+)	DETOUR (RIGHT)	48'' x 18''		
	M3-3	SOUTH	21'' x 9''		
18	G26-2(101)CA	ROUTE SHIELD	28'' x 24''	(ONE) 4'' x 4''	1
	M4-10(L+)	DETOUR (LEFT)	48'' x 18''		
	M3-1	NORTH	21'' x 9''		
19	G26-2(101)CA	ROUTE SHIELD	28'' x 24''	(ONE) 4'' x 4''	4
	M4-10(R+)	DETOUR (STRAIGHT ARROW)	48'' x 18''		
	M3-1	WEST	21'' x 9''		
	G26-2(101)CA	ROUTE SHIELD	28'' x 24''		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 TRAFFIC  
 FUNCTIONAL SUPERVISOR ROLAND AU-YEUNG  
 CALCULATED/DESIGNED BY SHARI TALAI  
 CHECKED BY JERILYN STRUVEN  
 REVISED BY DATE  
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

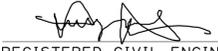
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

**CONSTRUCTION AREA SIGNS**  
NO SCALE

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

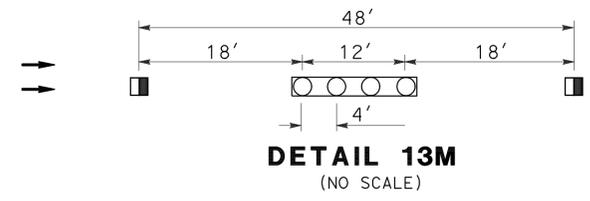
**CS-6**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	9	27

 3/8/11  
 REGISTERED CIVIL ENGINEER DATE  
 3-14-11  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
 Sherry S. Huang  
 No. 75529  
 Exp 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA



- LEGEND:**
-  -TYPE A WHITE NON-REFLECTIVE MARKER
  -  -TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKER
  -  -DIRECTION OF TRAVEL
  -  -4" WHITE TRAFFIC STRIPE

**TRAFFIC STRIPES, PAVEMENT MARKINGS AND PAVEMENT MARKERS**

DIRECTION	LOCATION	DETAIL No.	REMOVE PAVEMENT MARKER	THERMOPLASTIC TRAFFIC STRIPE					PAVEMENT MARKER				THERMOPLASTIC PAVEMENT MARKINGS	
				4" WHITE	4" YELLOW	4" WHITE (BROKEN 17-7)	4" WHITE (BROKEN 35-13)	8" WHITE	8" WHITE (BROKEN 12-3)	NON-REFLECTIVE	RETROREFLECTIVE			
				EA	LF					EA	TYPE A	TYPE C		TYPE G
NB	MAINLINE	13M	828				7920			660		168		
		25	56		2640								56	
		27B		2640										
		DIAMOND SYMBOL (5 EA)												55
	RAMPS	25A	134		3150								134	
		27B		3150										
		36	14					260				14		
		36A	5			100		100				5		
SUBTOTAL FOR NB			1037	11580		100	7920	360		660		377		55
SB	MAINLINE	13M	828				7920			660		168		
		25	56		2640								56	
		27B		2640										
		DIAMOND SYMBOL (5 EA)												55
	RAMPS	25A	97		2250								97	
		27B		2250										
		36	14					260				14		
		36A	8					170				8		
		37	62					770		56	6			
SUBTOTAL FOR SB			1065	9780			7920	430	770	660		405		55
TOTAL			2102	21360		100	15840	790	770	1320		782		110

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: RAMSES SARGISS  
 CALCULATED/DESIGNED BY: SHERRY HUANG  
 CHECKED BY: ROBERT CAMARGO  
 REVISED BY: SHERRY HUANG  
 DATE REVISED:

**PAVEMENT DELINEATION QUANTITIES**  
**PDQ-1**

LAST REVISION: 03-07-11    DATE PLOTTED => 24-MAR-2011    TIME PLOTTED => 14:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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 Sherry S. Huang  
 No. 75529  
 Exp 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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**ABBREVIATION:**  
 RHMA(G): RUBBERIZED HOT MIX ASPHALT (GAP GRADED)

**REPLACE CONCRETE PAVEMENT (RSC)**

DIRECTION	PM	LANE No.2 (N)			LANE No.3 (N)			LANE No.4 (N)			CY	
		LENGTH	WIDTH	No. OF SLABS	LENGTH	WIDTH	No. OF SLABS	LENGTH	WIDTH	No. OF SLABS		
		FT			FT			FT				
SB	45.95				15	12	1	15	12	1	14.4	
	45.97	15	12	1							7.2	
	46.05				15	12	1				7.2	
	46.06				15	12	2				14.4	
	46.07				15	12	1				7.2	
	46.26	15	12	1				15	12	6	50.4	
	46.29	15	12	1				15	12	11	86.4	
	46.31							15	12	2	14.4	
	46.32							15	12	2	14.4	
	46.33							15	12	1	7.2	
	46.34							15	12	1	7.2	
	46.35							15	12	2	14.4	
	46.36							15	12	2	14.4	
	TOTAL											259.2

NOTE: EXACT LIMITS AND LOCATIONS OF REPLACE CONCRETE PAVEMENT TO BE DETERMINED BY THE ENGINEER.  
 (N): NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

**GRIND EXISTING CONCRETE PAVEMENT**

DIRECTION	LENGTH	WIDTH	SQYD
	FT		
SB	2640	37	10853
TOTAL			10853

**ROADWAY QUANTITIES**

DIRECTION	LOCATION	COLD PLANE AC PAVEMENT	RHMA(G)	TACK COAT	ASPHALTIC EMULSION (FOG SEAL COAT)
		SQYD	TON		
NB	MAINLINE	19360	1263	8.1	
	ON-RAMP	5038	329	2.1	
	OFF-RAMP	2080	136	0.9	
SUBTOTAL FOR NB		26478	1728	11.1	
SB	MAINLINE	3813	249	1.6	2.1
	ON-RAMP	2667	174	1.1	
	OFF-RAMP	1867	122	0.8	
SUBTOTAL FOR SB		8347	545	3.5	2.1
TOTAL		34824	2272	14.6	2.1

**REPAIR SPALLED JOINTS (POLYESTER GROUT)**

DIRECTION	LOCATION	SQYD
SB	MAINLINE (Ln Nos. 2,3,4)	18.1
TOTAL		18.1

**SUMMARY OF QUANTITIES**

**Q-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
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 REGISTERED CIVIL ENGINEER  
 No. 75529  
 Exp 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA  
 REVISIONS: 03-07-11  
 DATE PLOTTED => 24-MAR-2011  
 TIME PLOTTED => 14:27

## REPLACE AC SURFACING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	11	27

3/8/11  
 REGISTERED CIVIL ENGINEER DATE

3-14-11  
 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.

DIRECTION	LOCATION	PM	LANE No.1 (N)			LANE No.2 (N)			LANE No.3 (N)			LANE No.4 (N)			RAMP (N)			CY
			LENGTH	WIDTH	DEPTH	LENGTH	WIDTH	DEPTH	LENGTH	WIDTH	DEPTH	LENGTH	WIDTH	DEPTH	LENGTH	WIDTH	DEPTH	
			FT															
NB	MAINLINE	45.92				100	12	0.5										22.2
		45.95				20	12	0.5										4.4
		46.01				15	12	0.5										3.3
		46.05	20	12	0.5													4.4
		46.09	15	12	0.5				75	12	0.3							13.3
		46.10				25	12	0.5										5.6
		46.11							20	8	0.3							1.8
		46.18										30	6	0.25				1.7
		46.19							55	12	0.3							7.3
		46.20	25	12	0.5	150	6	0.5										22.2
		46.23				20	12	0.5										4.4
		46.25	45	12	0.5	70	12	0.5										25.6
		46.29				40	12	0.5	110	12	0.3							23.6
		46.32				10	12	0.5	150	12	0.3							22.2
	46.34	50	12	0.5				100	12	0.3							24.4	
	46.36				35	12	0.5	35	12	0.3							12.4	
		ON-RAMP													45	4	0.3	2.0
															120	12	0.3	16.0
														3	12	0.3	0.4	
	OFF-RAMP													20	4	0.3	0.9	
														4	13	0.3	0.6	
														50	13	0.3	7.2	
														25	6	0.3	1.7	
	SUBTOTAL FOR NB																227.8	
SB	MAINLINE	46.13	30	12	0.5													6.7
		46.19	15	12	0.5													3.3
		46.20	20	12	0.5													4.4
		46.32	15	6	0.5													1.7
		ON-RAMP (GORE AREA)													305	12	0.3	40.7
		OFF-RAMP	RIGHT SHOULDER BEFORE BRIDGE												200	4	0.3	8.9
			TRAFFIC LANE AFTER BRIDGE												30	12	0.3	4.0
			RIGHT SHOULDER AFTER BRIDGE												90	4	0.3	4.0
	SUBTOTAL FOR SB																73.7	
	TOTAL																301.4	

NOTE: EXACT LIMITS AND LOCATIONS OF REPLACE AC SURFACING TO BE DETERMINED BY THE ENGINEER.  
 (N): NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

## SUMMARY OF QUANTITIES

### Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

**Caltrans** DESIGN

FUNCTIONAL SUPERVISOR: RAMSES SARGISS

DESIGNED BY: SHERRY HUANG, CHECKED BY: ROBERT CAMARGO

REVISOR: SHERRY HUANG, DATE: 7/2/2010

LAST REVISION: DATE PLOTTED => 24-MAR-2011  
 03-07-11 TIME PLOTTED => 14:28



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	13	27

<i>dm</i>	3/09/11
REGISTERED ELECT ENGINEER	DATE
Lindy F. Cabugao	
No. 17232	
Exp. 6-30-12	
ELECT	

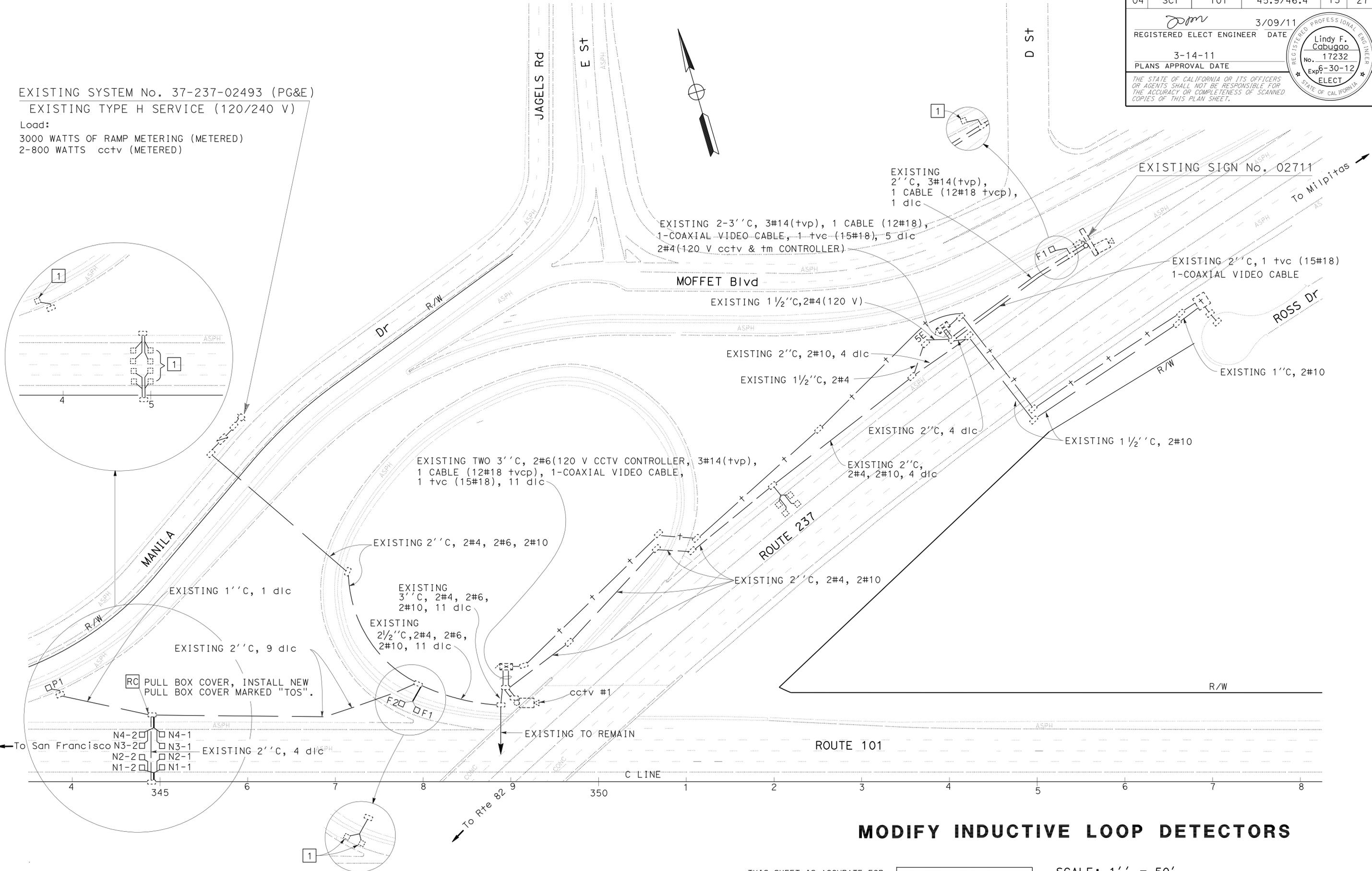
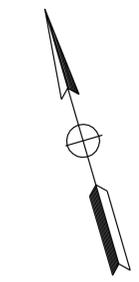
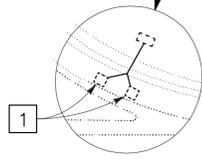
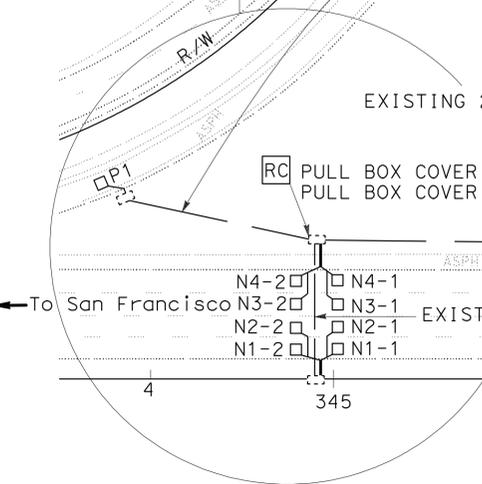
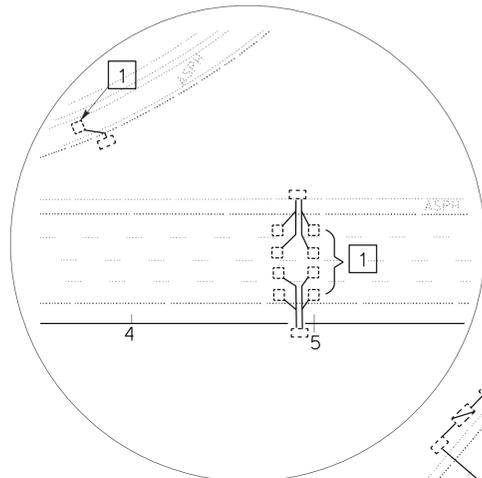
3-14-11  
PLANS APPROVAL DATE

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.

EXISTING SYSTEM No. 37-237-02493 (PG&E)

EXISTING TYPE H SERVICE (120/240 V)

Load:  
3000 WATTS OF RAMP METERING (METERED)  
2-800 WATTS cctv (METERED)



**MODIFY INDUCTIVE LOOP DETECTORS**

THIS SHEET IS ACCURATE FOR ELECTRICAL WORK ONLY

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

SCALE: 1'' = 50'

**E-2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	14	27

<i>dm</i>	3/09/11
REGISTERED ELECT ENGINEER	DATE
Lindy F. Cabugao	No. 17232
3-14-11	Exp. 6-30-12
PLANS APPROVAL DATE	ELECT

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.

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

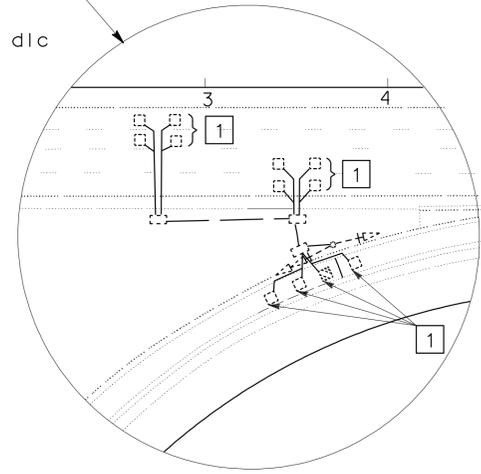
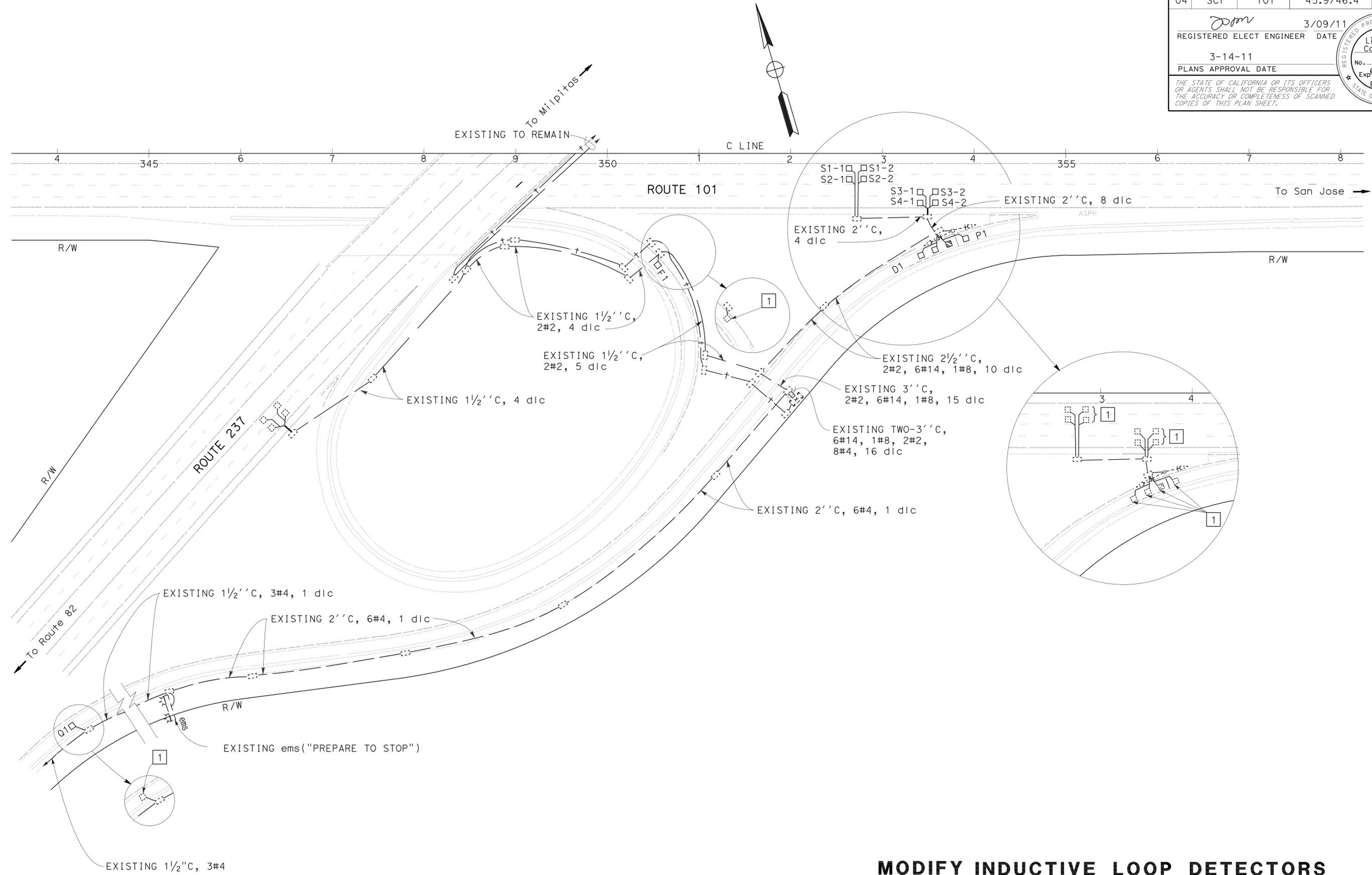
FUNCTIONAL SUPERVISOR  
LAI HONG CHIU

CALCULATED/DESIGNED BY  
KENNETH Y. XU

CHECKED BY

REVISOR BY  
LINDY CABUGAO

DATE REVISED



### MODIFY INDUCTIVE LOOP DETECTORS

THIS SHEET IS ACCURATE FOR ELECTRICAL WORK ONLY

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

SCALE: 1" = 50'

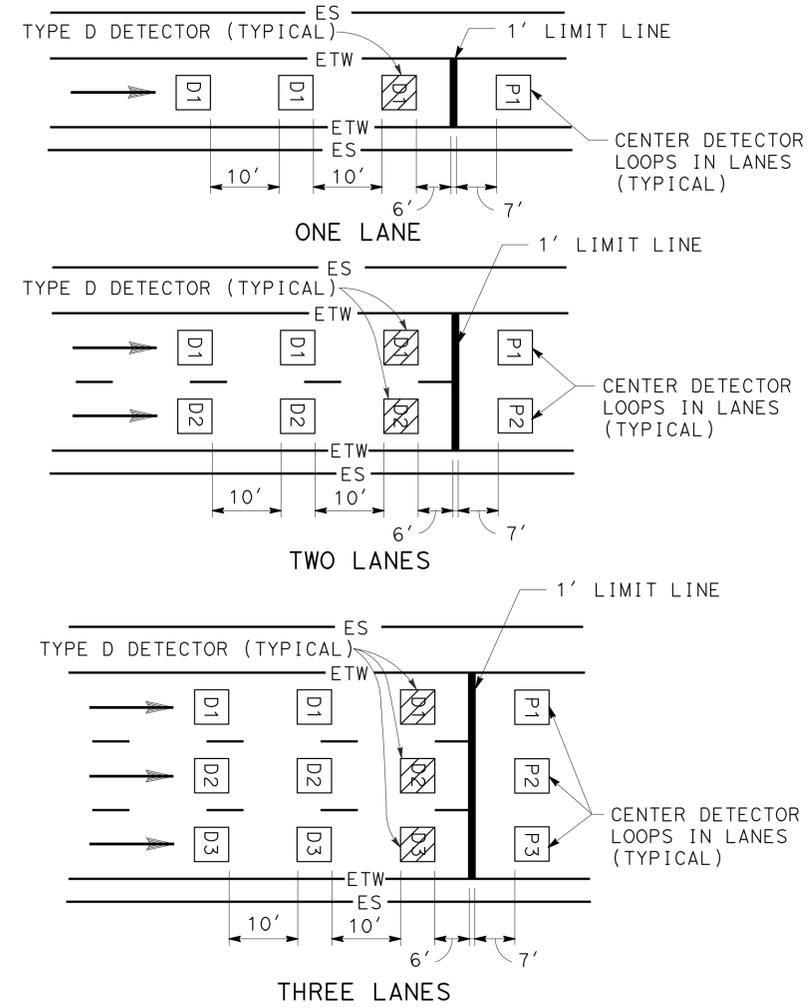
E-3

LAST REVISION DATE PLOTTED => 24-MAR-2011 03-07-11 TIME PLOTTED => 14:28

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	101	45.9/46.4	15	27

REGISTERED CIVIL ENGINEER DATE 3/10/11  
 Ray C. Duschane  
 No. 14758  
 Exp. 6-30-11  
 ELECT  
 STATE OF CALIFORNIA

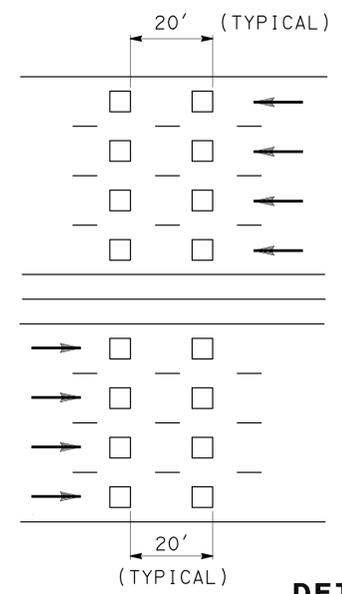
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**RAMP METERING STATION NOTES**

- SEE RSP ES-5A, ES-5B, AND ES-13A FOR ADDITIONAL DETAILS.
- DLC CONDUCTORS SHALL BE SPLICED TO THE LOOP CONDUCTORS IN THE NEAREST PULLBOX.
- ALL SPLICES SHALL BE TYPE "S" OR TYPE "ST" AS REQUIRED.

**DETAIL "RM"  
RAMP METERING STATION**



**TRAFFIC MONITORING STATION NOTES**

FREEWAY MAINLINE DETECTOR DESIGNATION:

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

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

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

NUMBER OF DETECTOR IN THE SAME LANE:

- 1=ENTERING DETECTOR
- 2=LEAVING DETECTOR

**RAMP DETECTOR DESIGNATION:**

- D=DEMAND DETECTOR
- P=PASSAGE DETECTOR
- Q=QUEUE DETECTOR
- F=OFFRAMP DETECTOR

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



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

THIS SHEET IS ACCURATE FOR ELECTRICAL WORK ONLY

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET E-1

NO SCALE

**E-4**

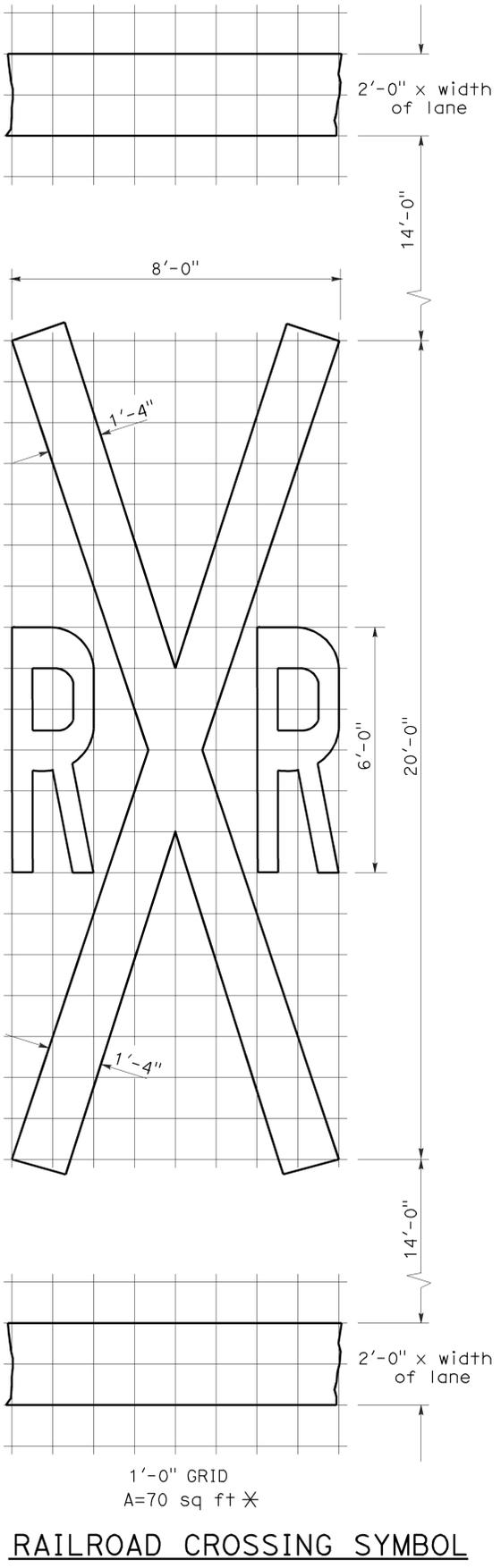
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 ELECTRICAL  
 FUNCTIONAL SUPERVISOR: LAI HONG CHIU  
 CALCULATED/DESIGNED BY: LINDY CABUGAO  
 CHECKED BY: KENNETH Y. XU  
 REVISED BY: DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	16	27

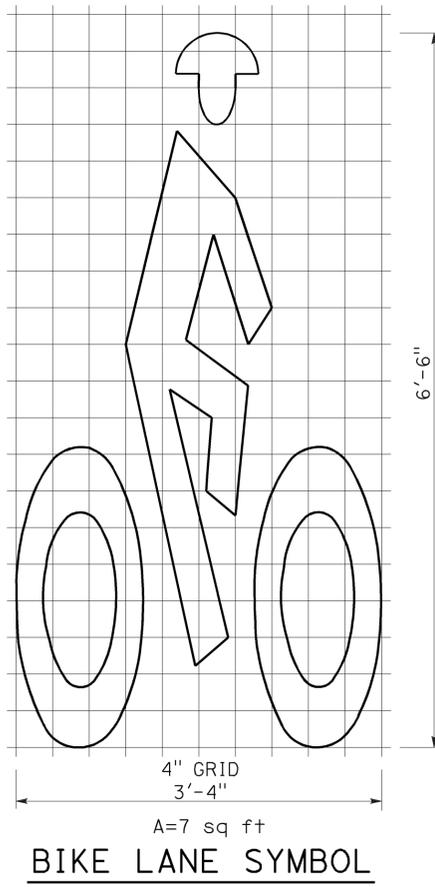
Donald E. Howe  
 REGISTERED CIVIL ENGINEER  
 June 6, 2008  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

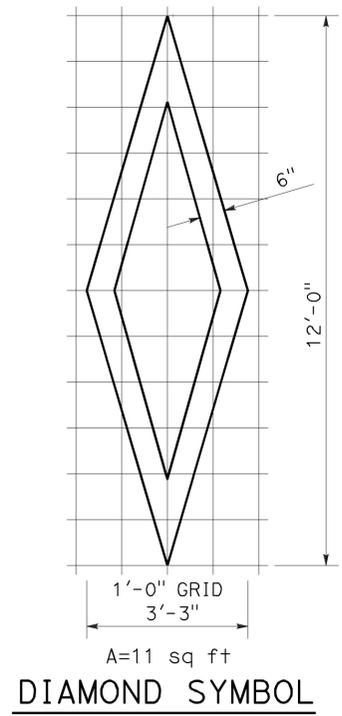
To accompany plans dated 03-14-11



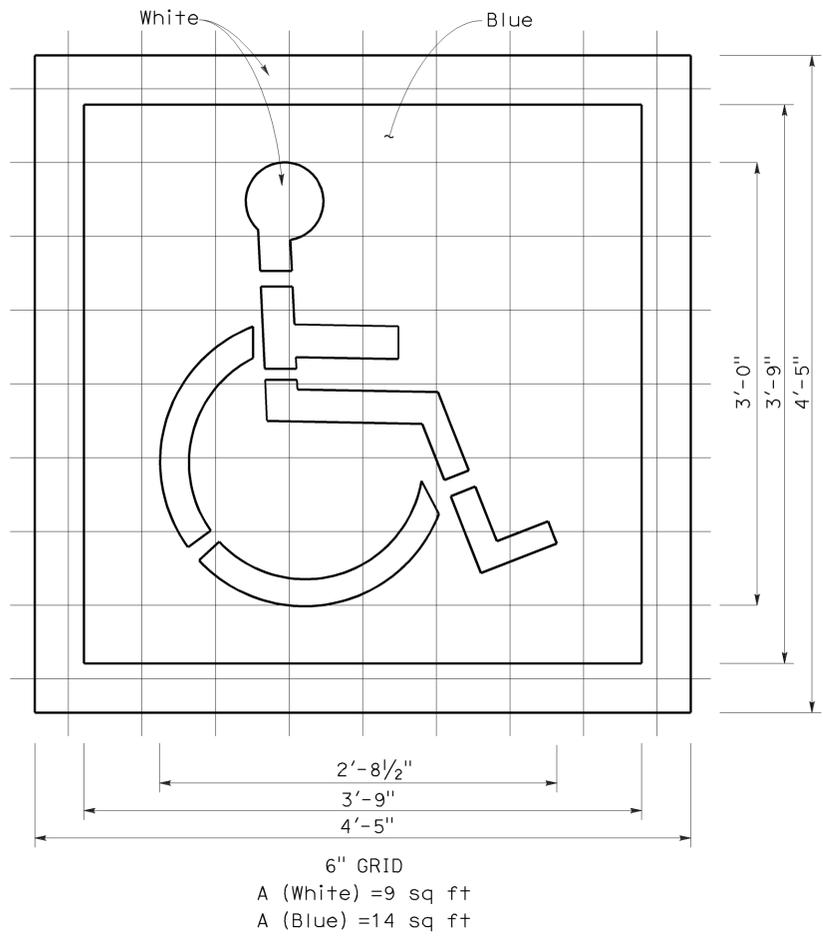
**RAILROAD CROSSING SYMBOL**  
 1'-0" GRID  
 A=70 sq ft ✕  
 ✕70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



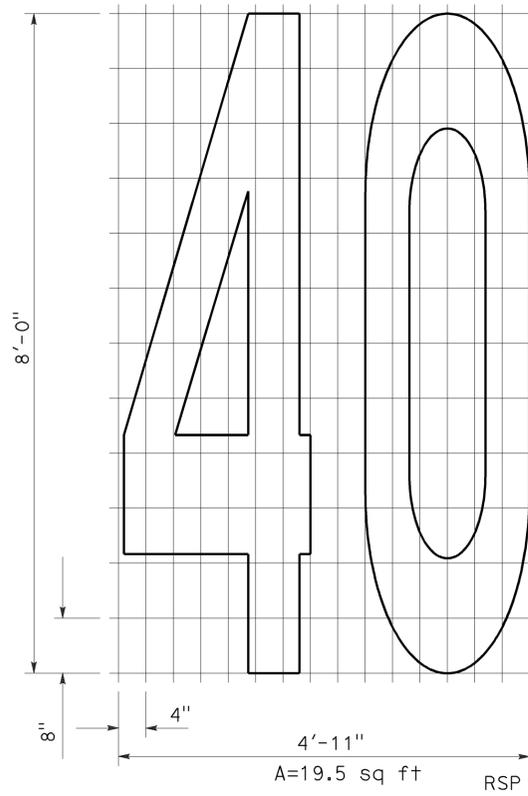
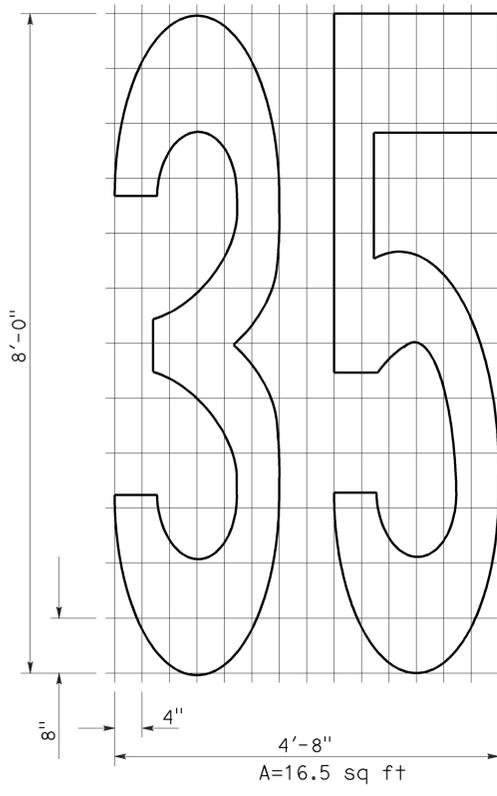
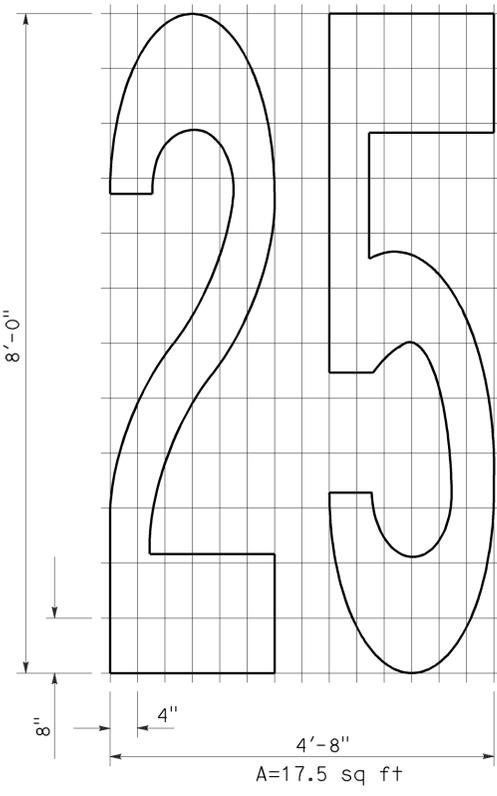
**BIKE LANE SYMBOL**



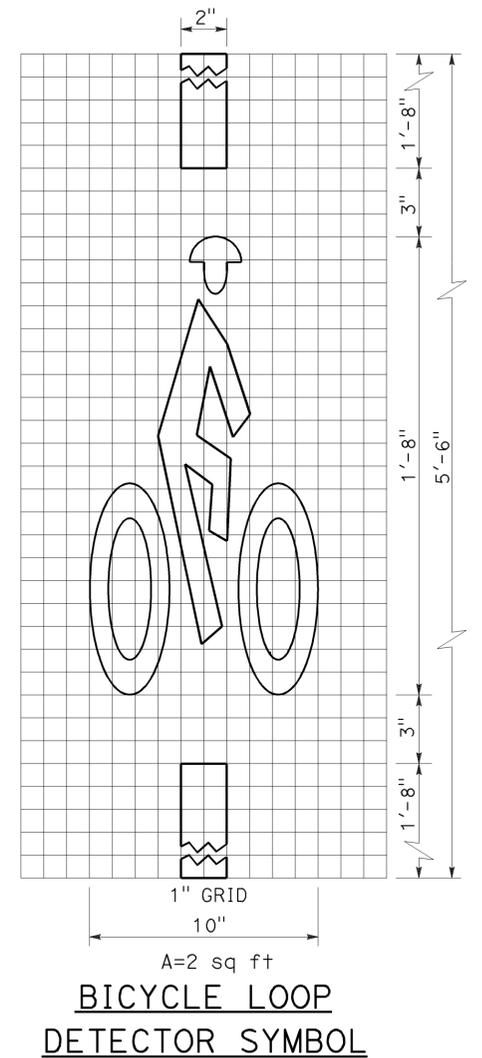
**DIAMOND SYMBOL**



**INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING**



**NUMERALS**



**BICYCLE LOOP DETECTOR SYMBOL**

**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

**REVISED STANDARD PLAN RSP A24C**

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

2006 REVISED STANDARD PLAN RSP A24C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	17	27

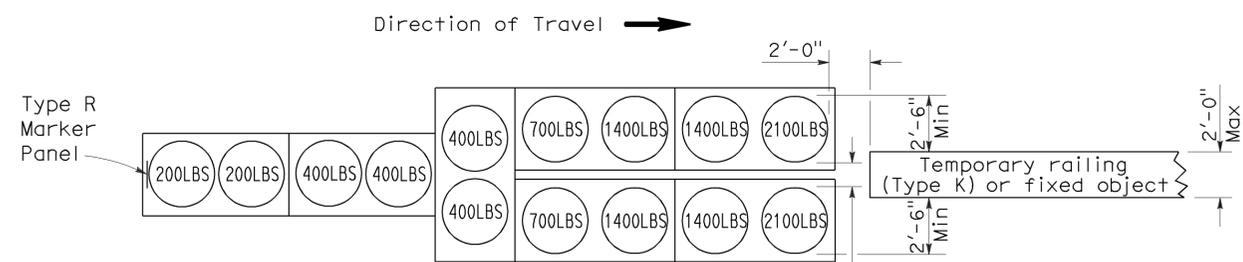
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
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.*

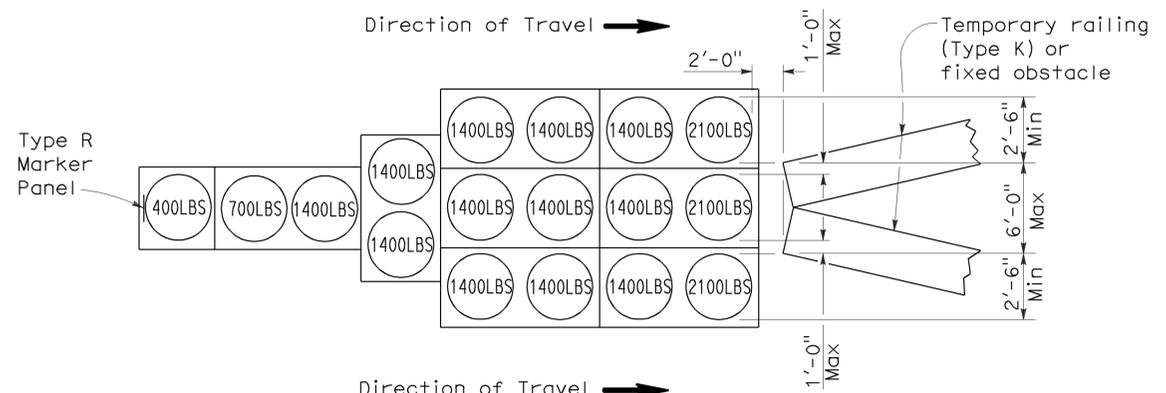
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 03-14-11



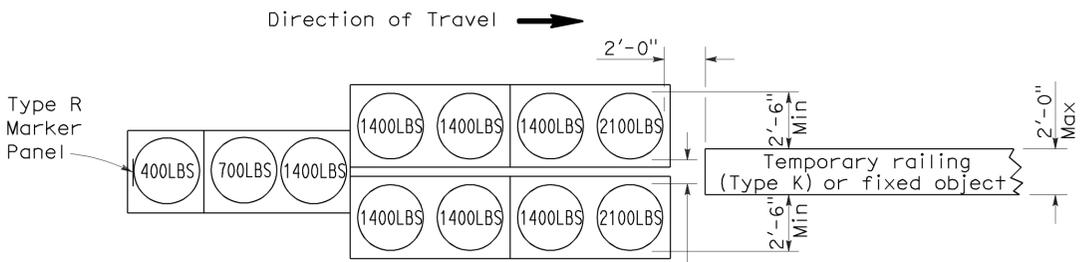
**ARRAY 'TU14'**

Approach speed 45 mph or more



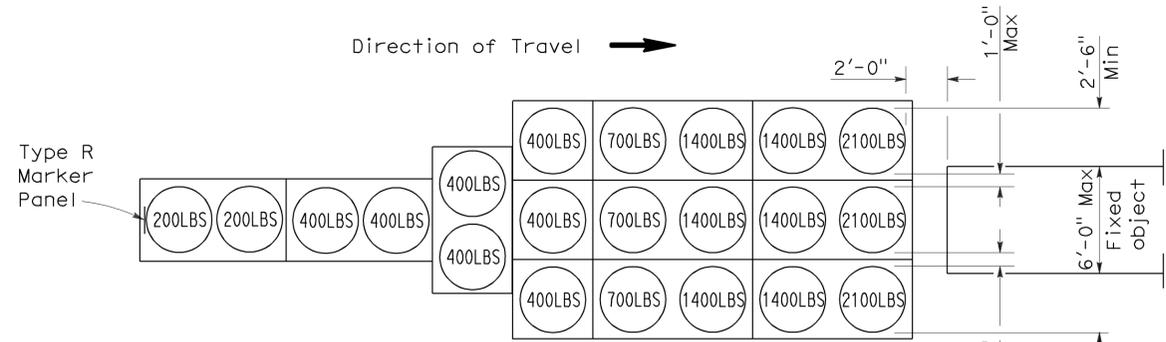
**ARRAY 'TU17'**

Approach speed less than 45 mph



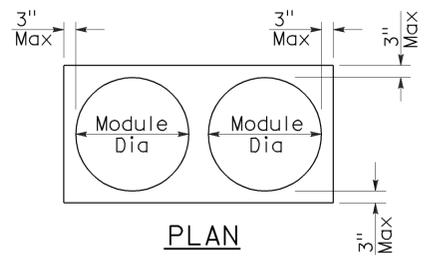
**ARRAY 'TU11'**

Approach speed less than 45 mph

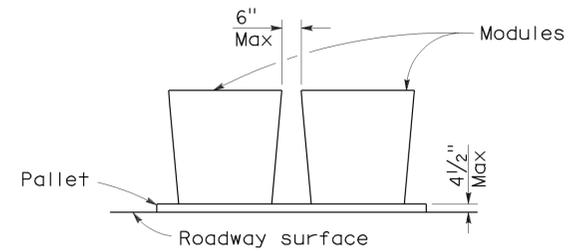


**ARRAY 'TU21'**

Approach speed 45 mph or more



**PLAN**



**ELEVATION**

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(UNIDIRECTIONAL)**

NO SCALE

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

**REVISED STANDARD PLAN RSP T1A**

2006 REVISED STANDARD PLAN RSP T1A

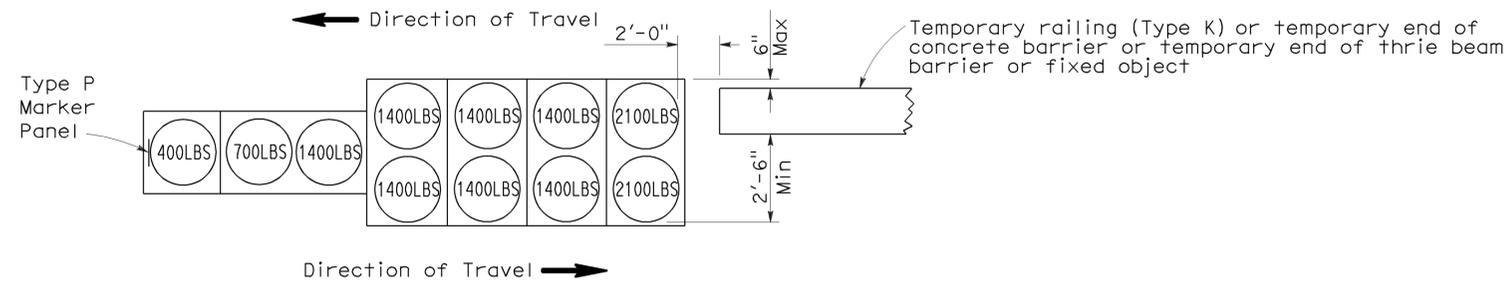
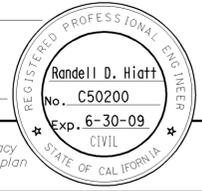
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	18	27

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

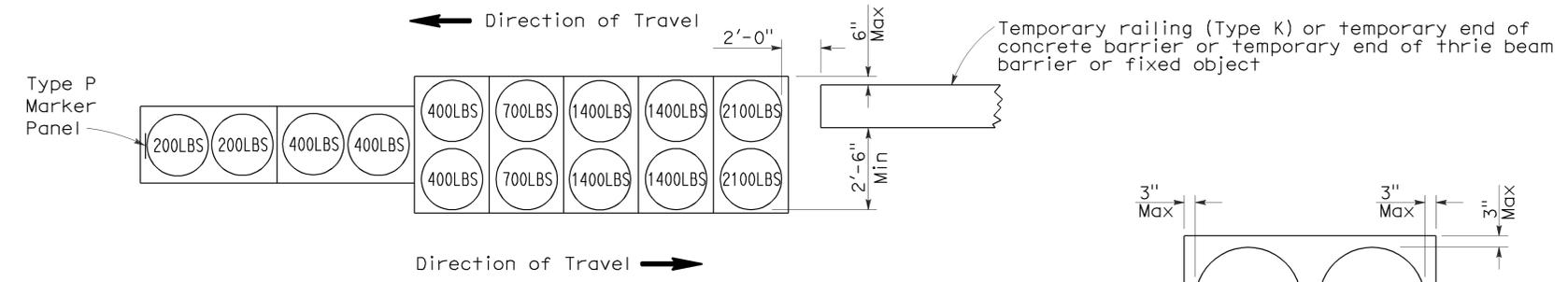
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 03-14-11



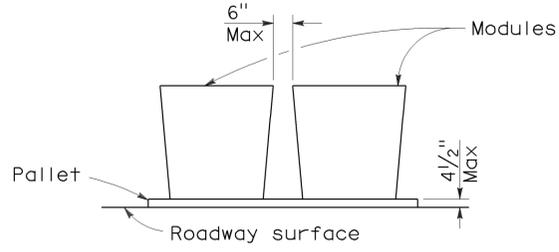
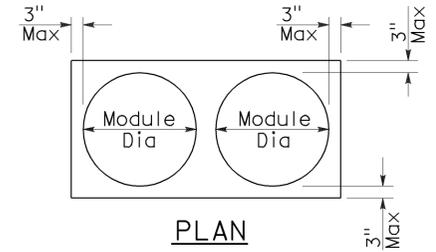
**ARRAY 'TB11'**

Approach speed less than 45 mph



**ARRAY 'TB14'**

Approach speed 45 mph or more



**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

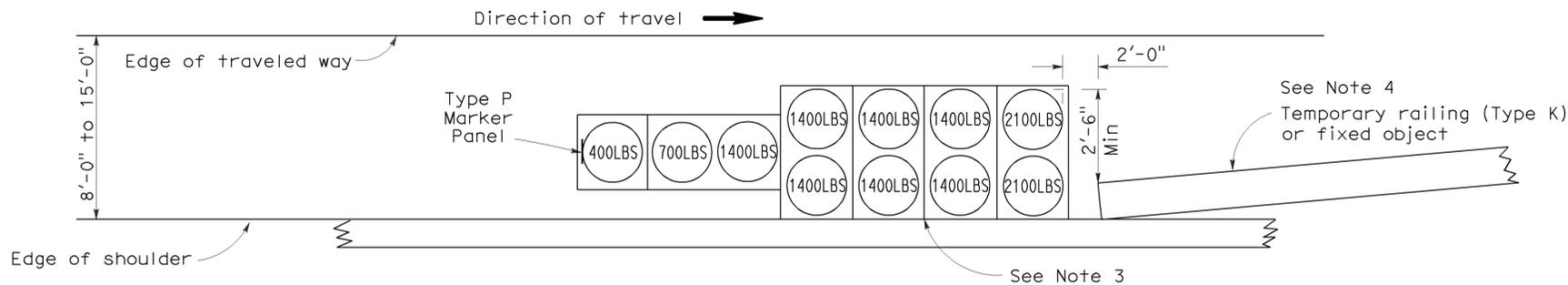
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	19	27

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

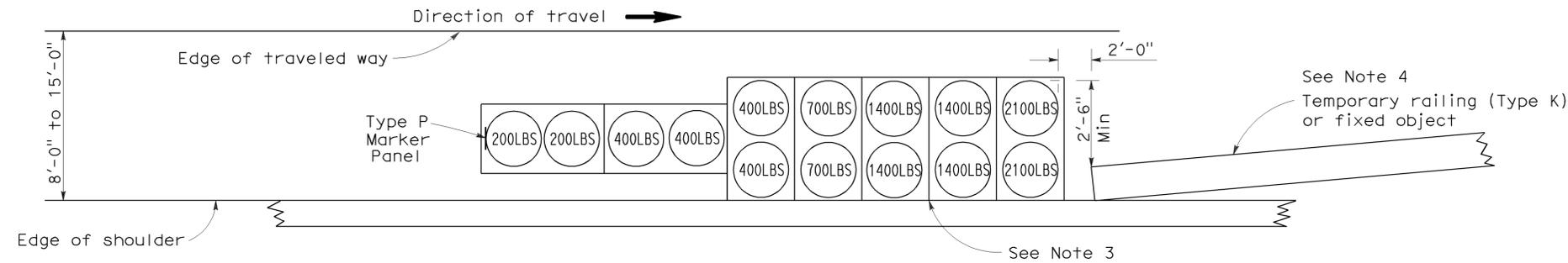
June 6, 2008  
PLANS APPROVAL DATE

*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.*

To accompany plans dated 03-14-11



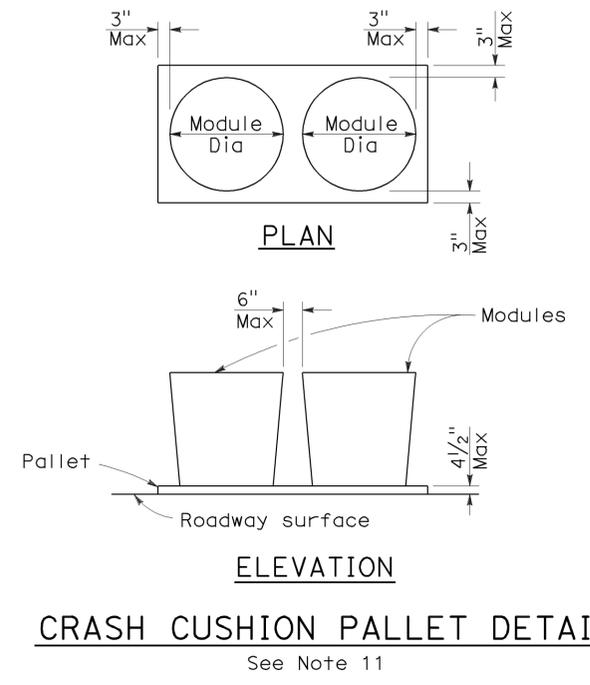
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



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

**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.



**CRASH CUSHION PALLET DETAIL**  
See Note 11

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

# 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
04	SCI	101	45.9/46.4	20	27

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

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

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To accompany plans dated 03-14-11

## 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
04	SCI	101	45.9/46.4	21	27

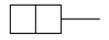
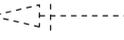
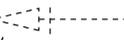
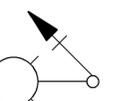
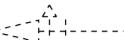
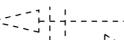
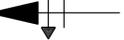
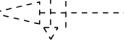
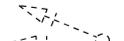
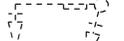
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 Jeffrey G. McRae  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

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### 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 
		Conduit riser in/on structure or service pole

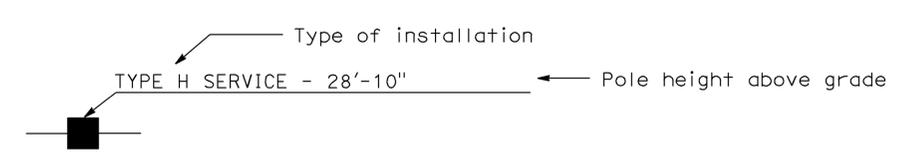
### SIGNAL EQUIPMENT

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

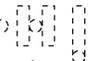
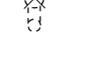
### SERVICE EQUIPMENT

PROPOSED	EXISTING	
---OH---	---oh---	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

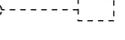
### POLE-MOUNTED SERVICE DESIGNATION



### 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:

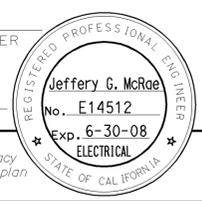
- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

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**

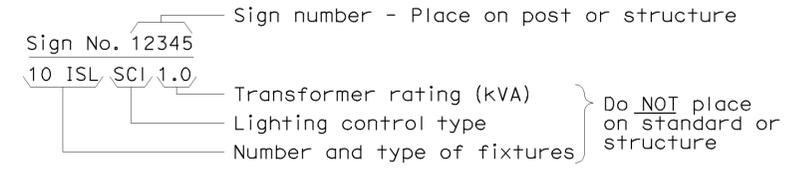
2006 REVISED STANDARD PLAN RSP ES-1B



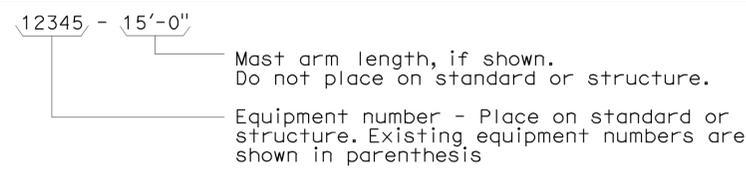
To accompany plans dated 03-14-11

### EQUIPMENT IDENTIFICATION

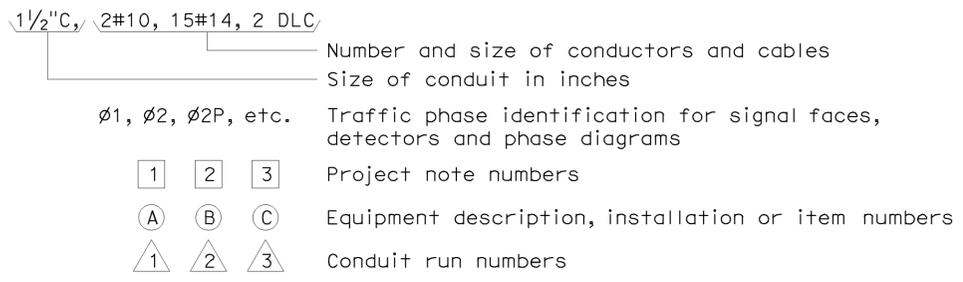
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



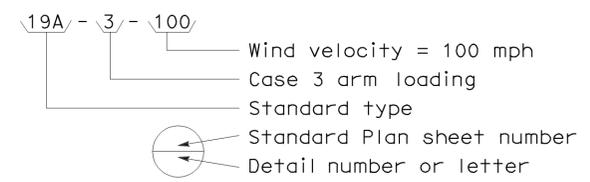
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



#### 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

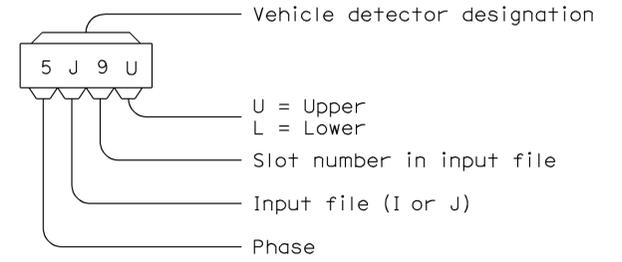
### WIRING DIAGRAM LEGEND

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

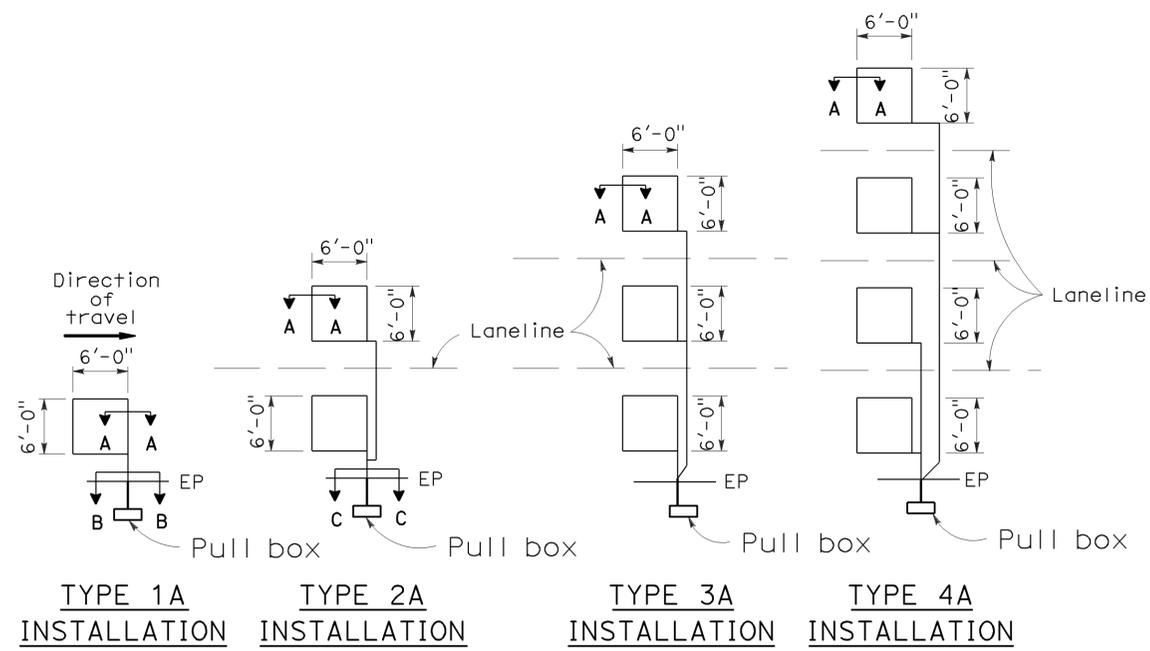
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	23	27

*Jeffery 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.

To accompany plans dated 03-14-11

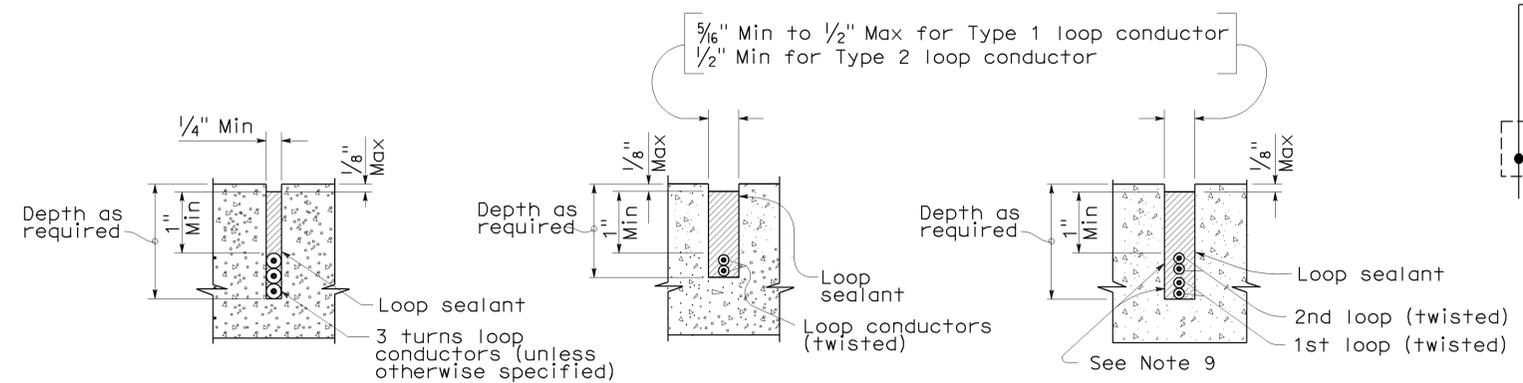
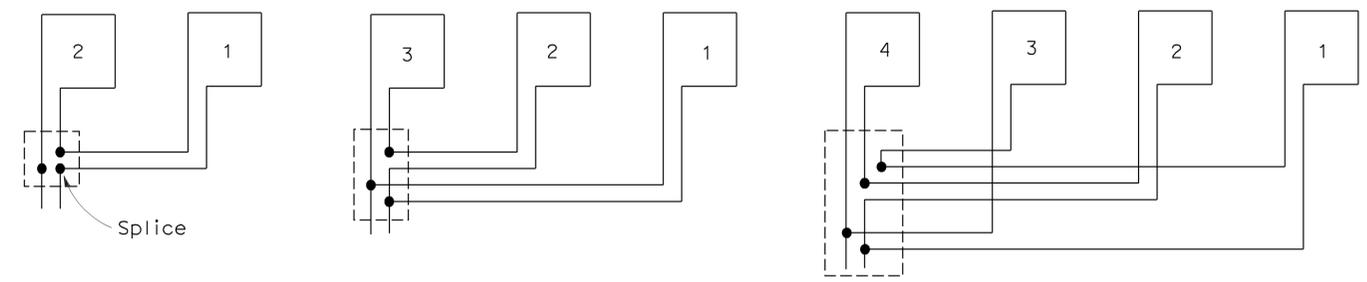
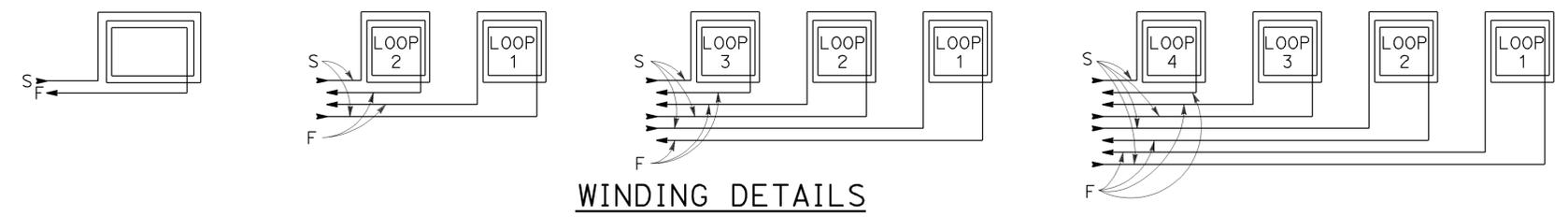
## LOOP INSTALLATION PROCEDURE

- 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.



### 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)



## 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**

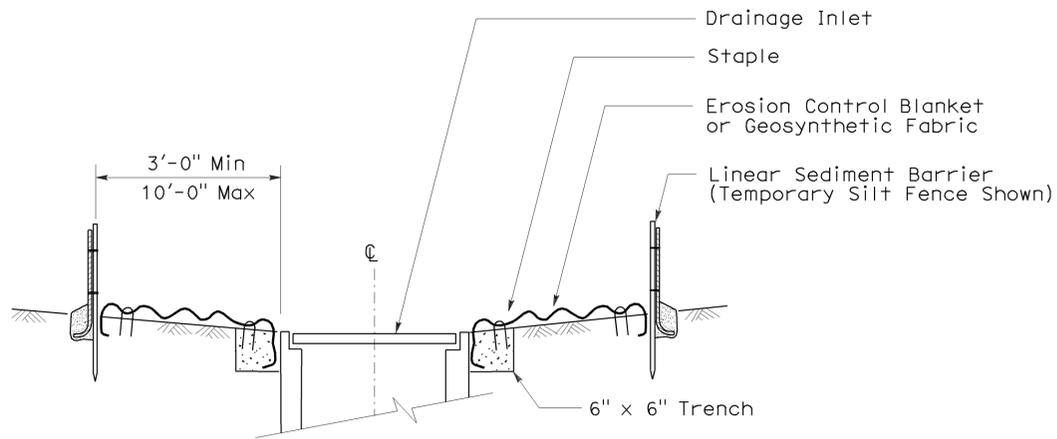
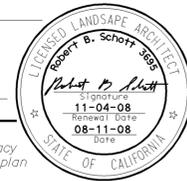
2006 REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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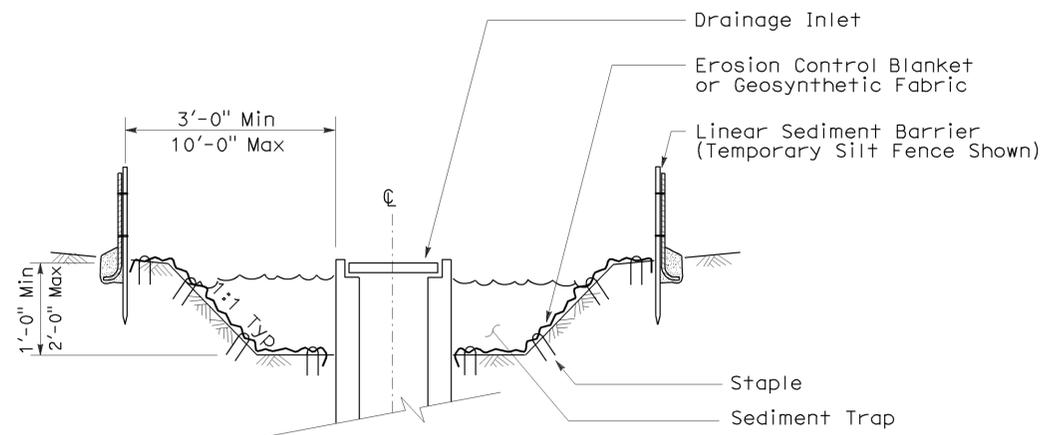
Robert B. Schott  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS Approval DATE

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To accompany plans dated 03-14-11



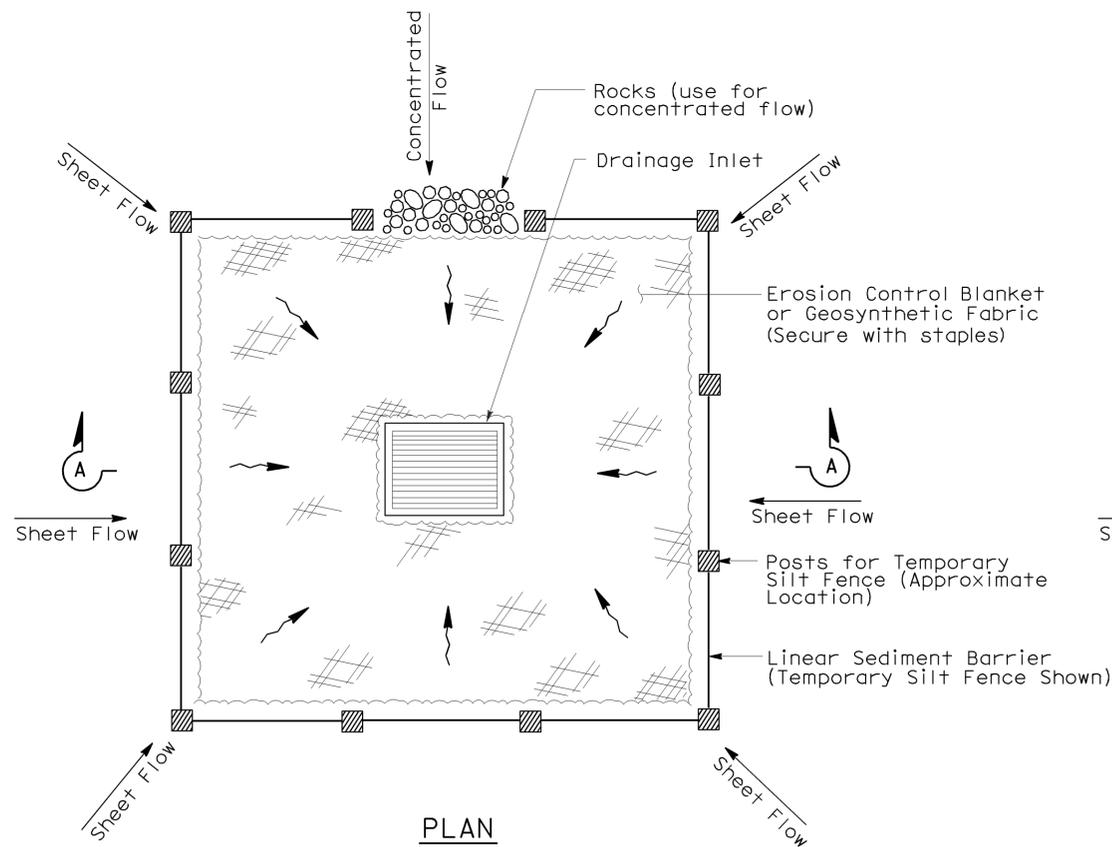
SECTION A-A



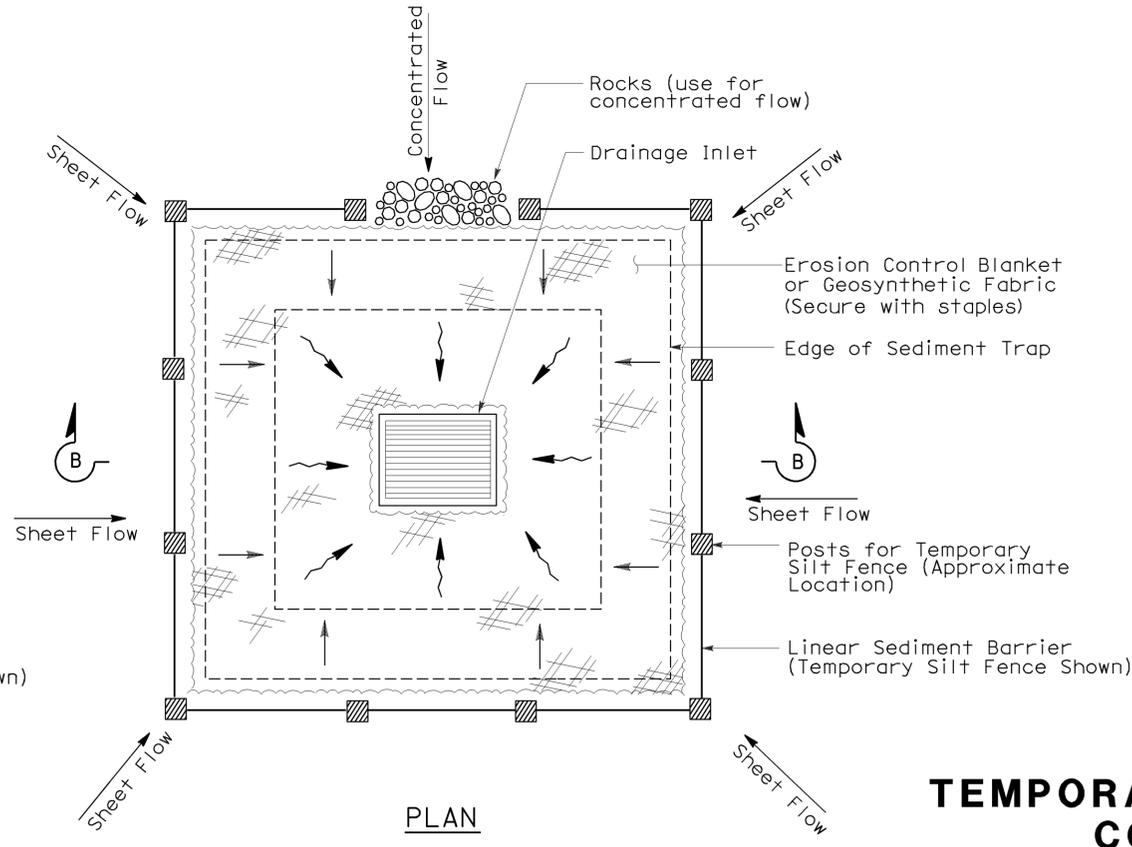
SECTION B-B

**NOTES:**

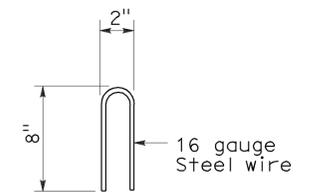
1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**(TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE

Nsp t61 dated august 15, 2008 supplements the standard plans book dated may 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	25	27

Robert B. Schott  
LICENSED LANDSCAPE ARCHITECT

August 15, 2008  
PLANS APPROVAL DATE

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To accompany plans dated 03-14-11

03-14-11

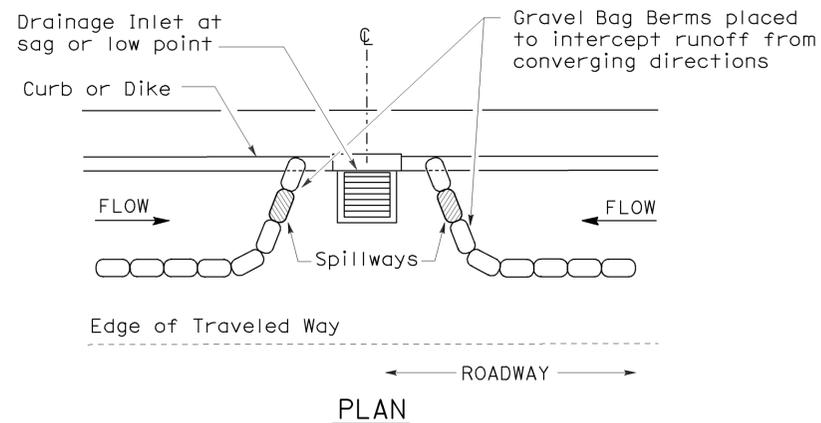
11-04-08  
08-11-08

STATE OF CALIFORNIA

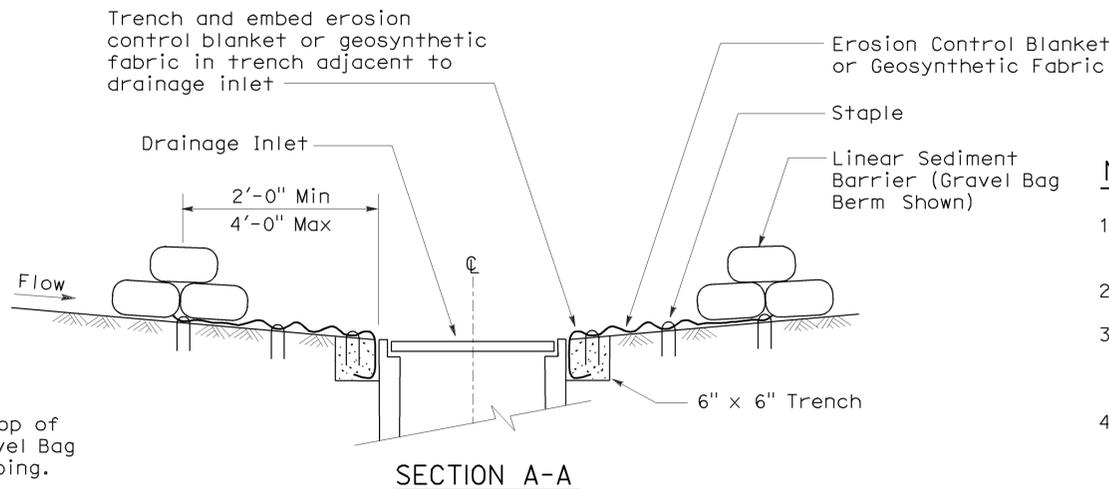
### GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent

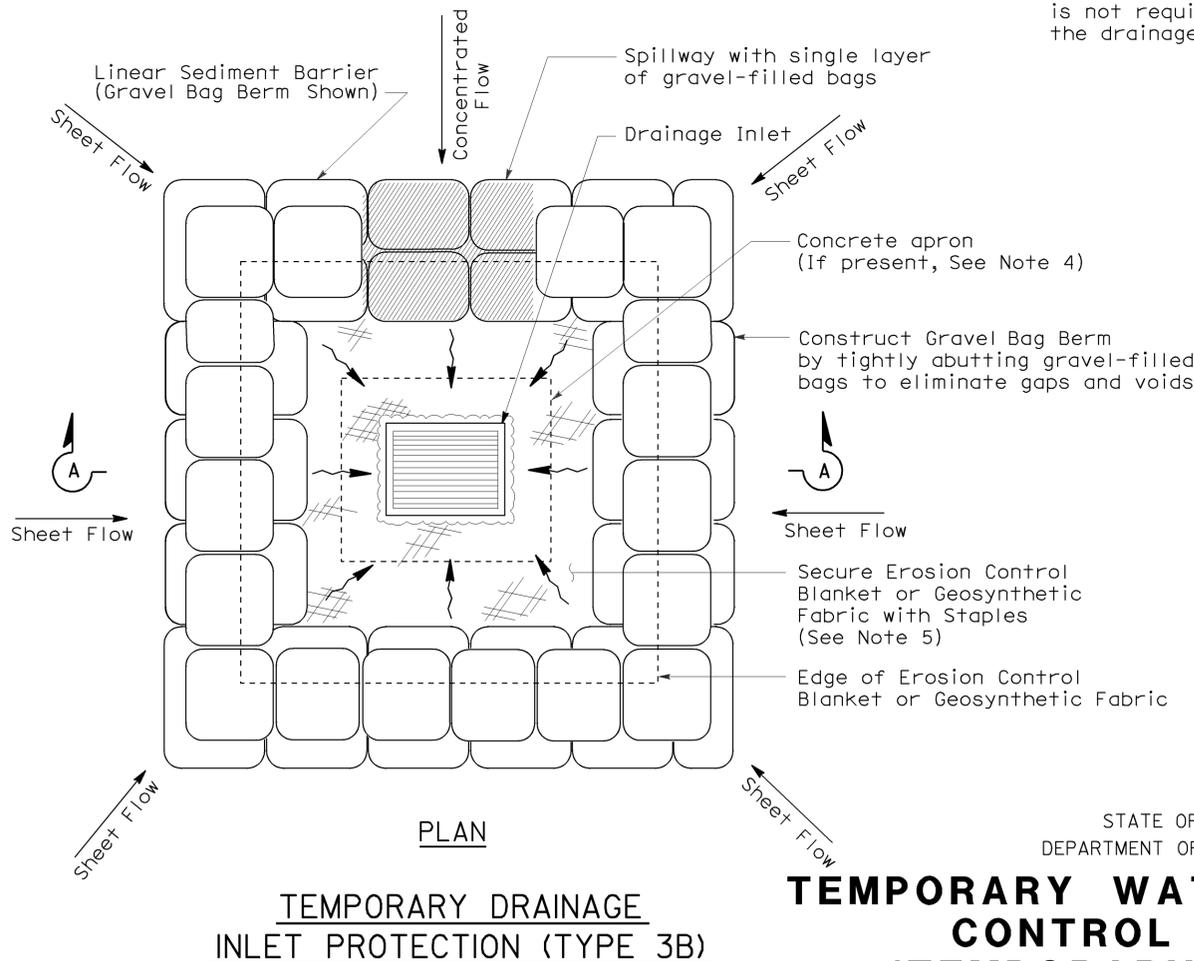
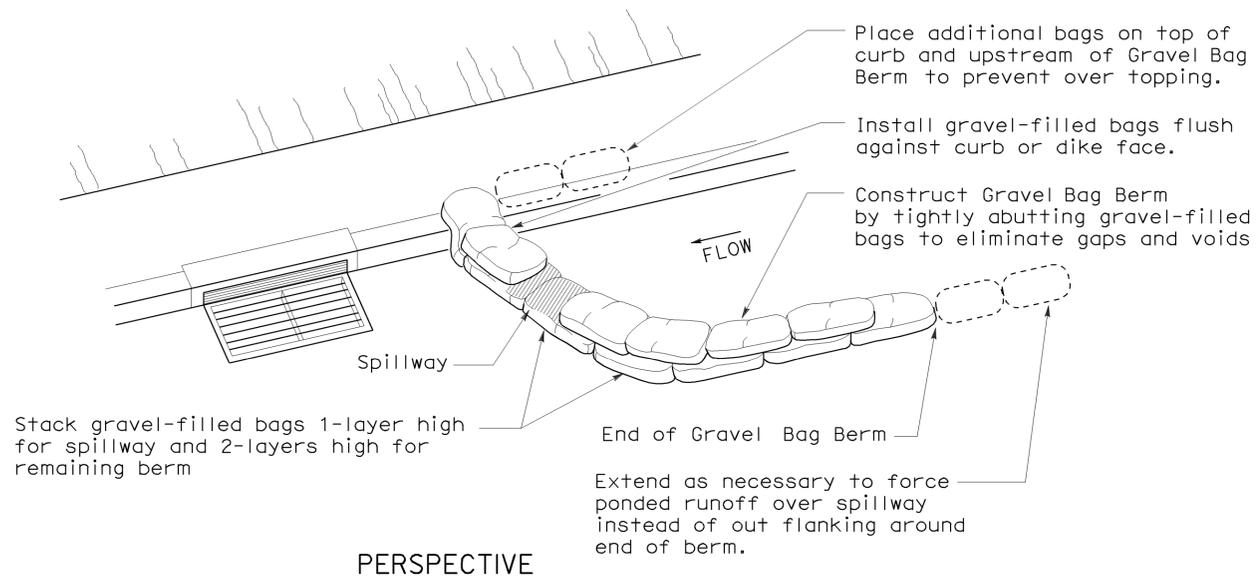


**CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)**

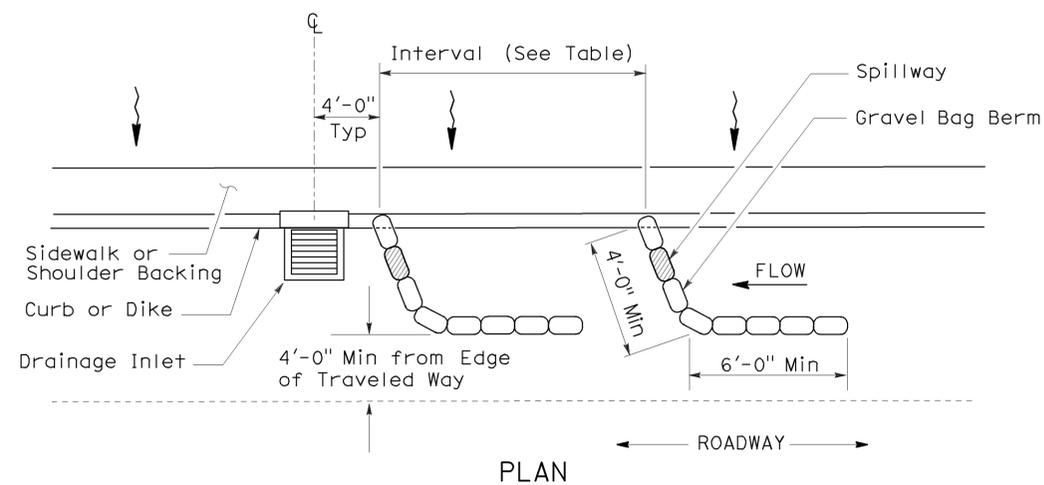
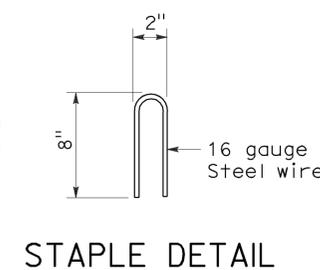


**NOTES:**

1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)**



**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE  
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'

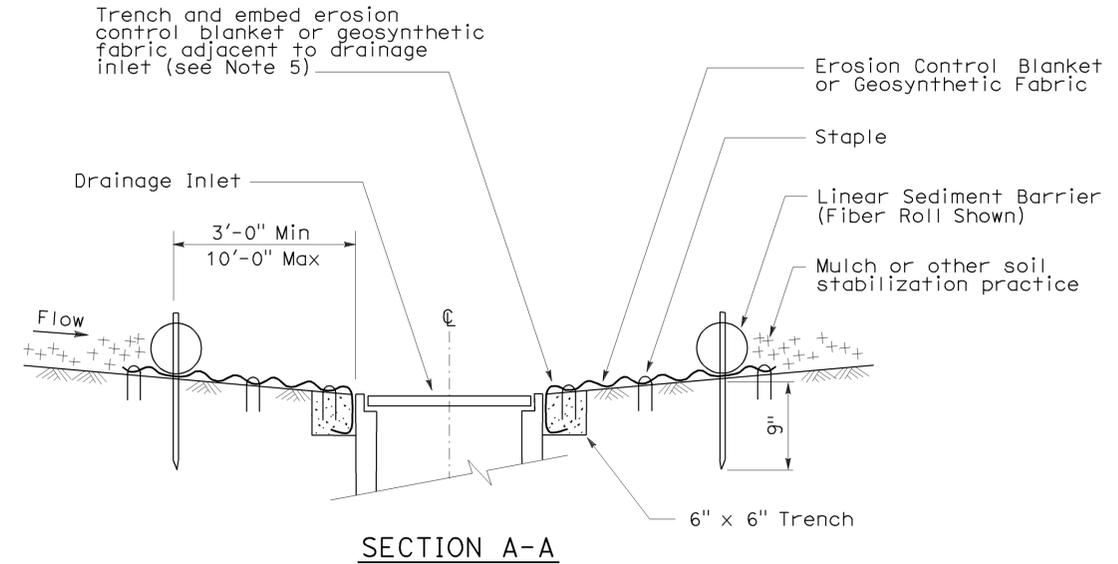
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	26	27

Robert B. Schott  
 LICENSED LANDSCAPE ARCHITECT

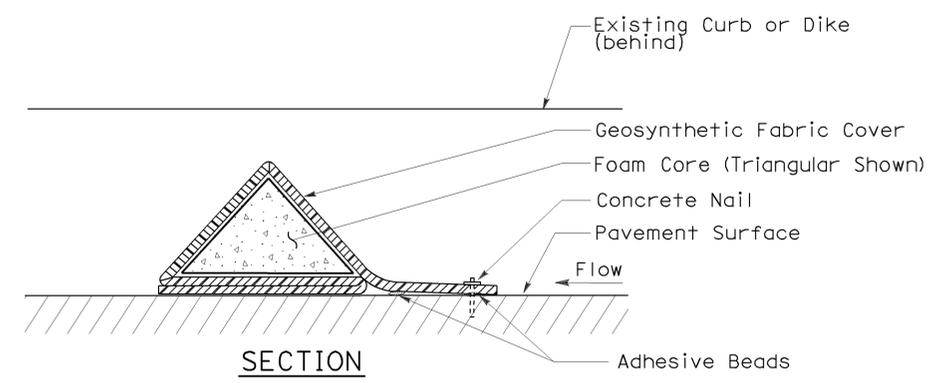
August 15, 2008  
 PLANS APPROVAL DATE

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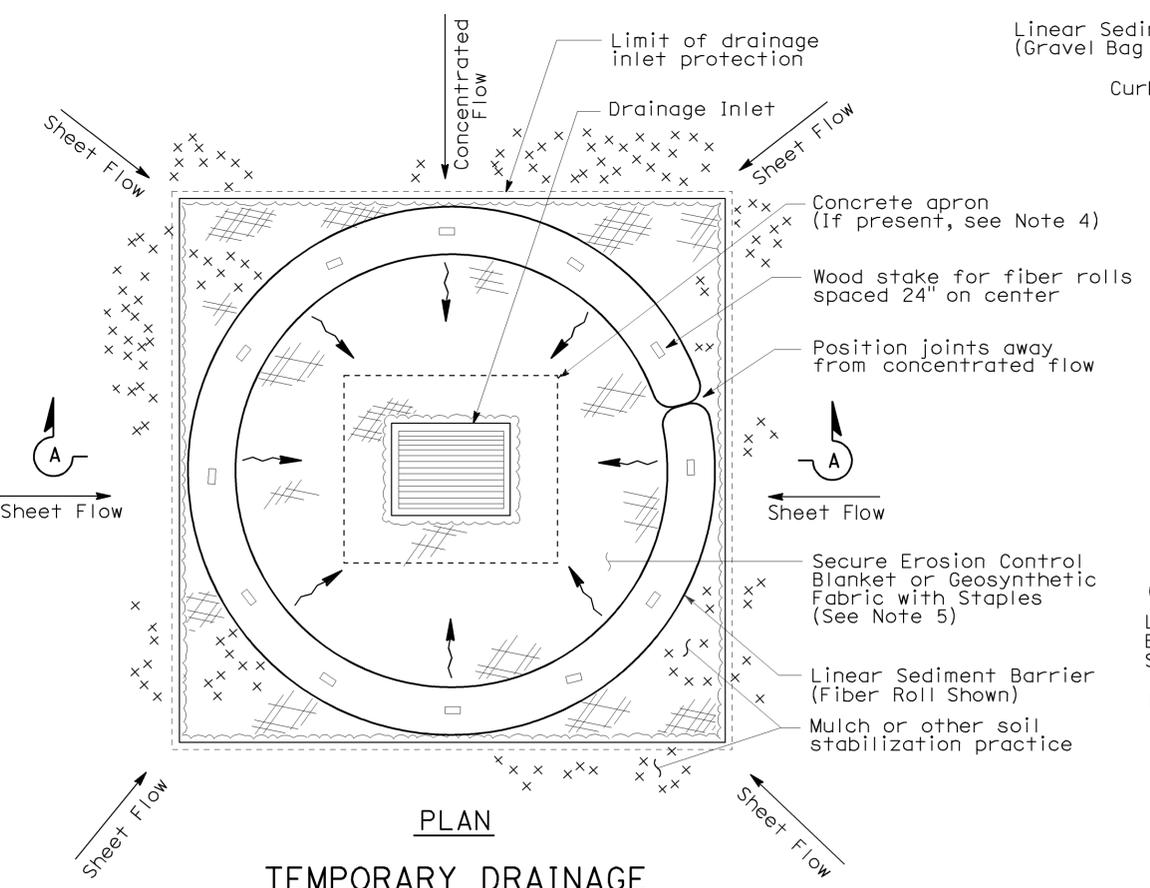
To accompany plans dated 03-14-11



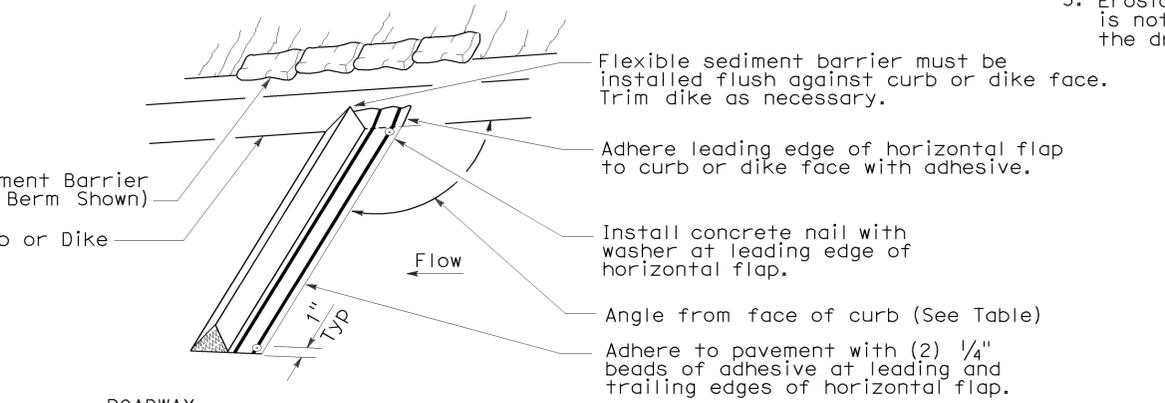
SECTION A-A



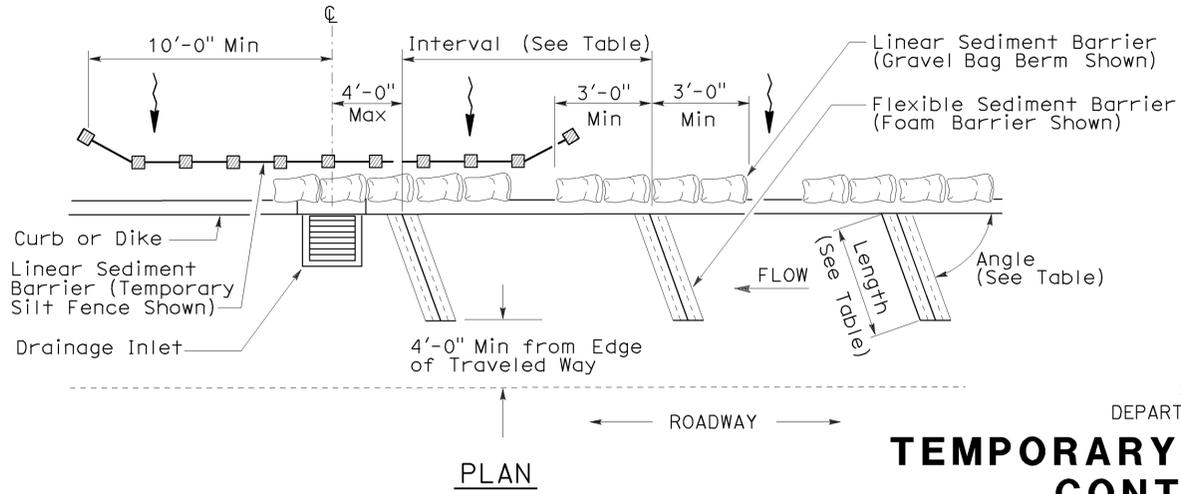
SECTION  
 FLEXIBLE SEDIMENT BARRIER DETAIL  
 (FOAM BARRIER SHOWN)



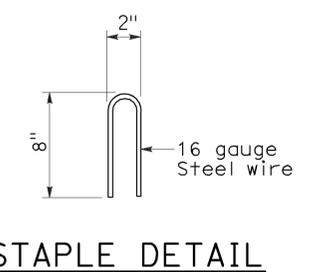
PLAN  
 TEMPORARY DRAINAGE  
 INLET PROTECTION (TYPE 4A)



PERSPECTIVE



PLAN  
 TEMPORARY DRAINAGE  
 INLET PROTECTION (TYPE 4B)  
 FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

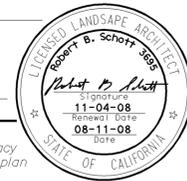
**TEMPORARY WATER POLLUTION  
 CONTROL DETAILS  
 (TEMPORARY DRAINAGE  
 INLET PROTECTION)**

NO SCALE  
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS  
 THE STANDARD PLANS BOOK DATED MAY 2006.

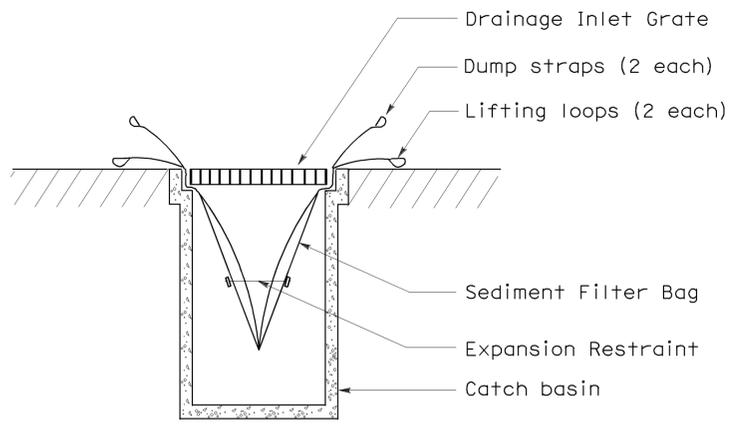
2006 NEW STANDARD PLAN NSP T63

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	101	45.9/46.4	27	27

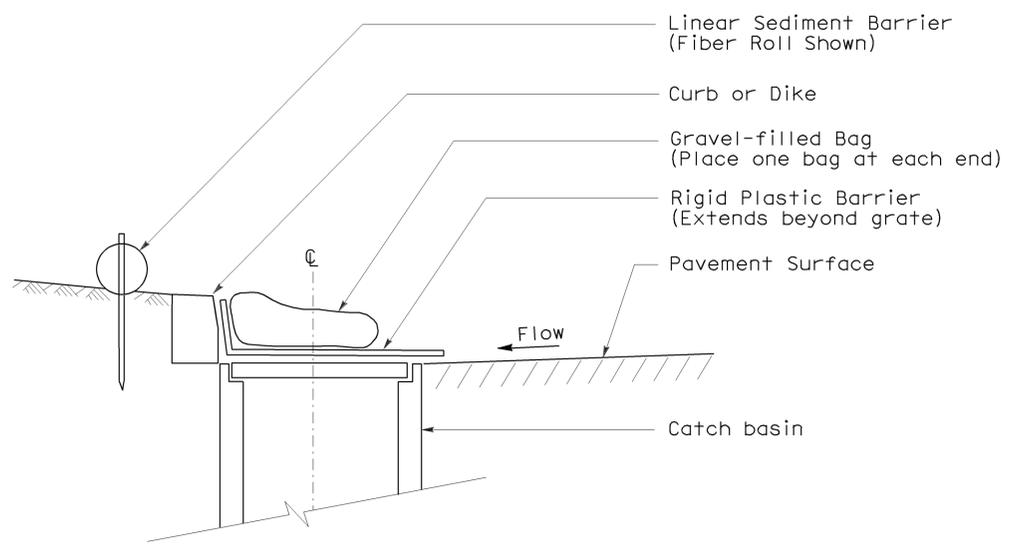
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



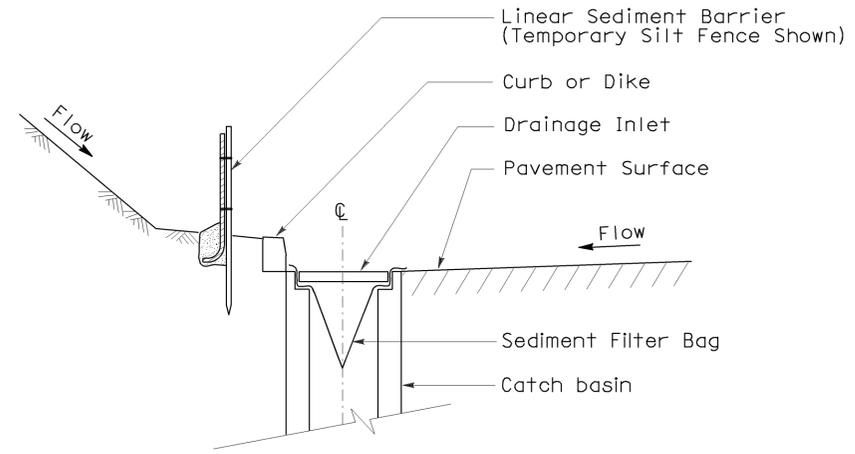
To accompany plans dated 03-14-11



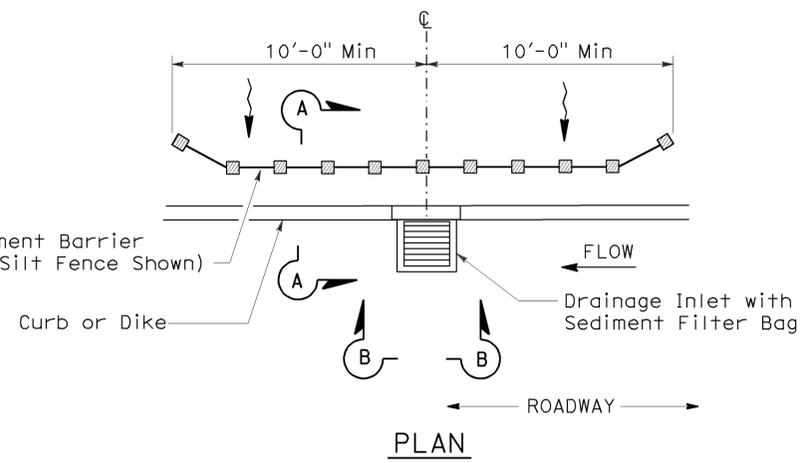
**SECTION B-B**  
**SEDIMENT FILTER BAG DETAIL**



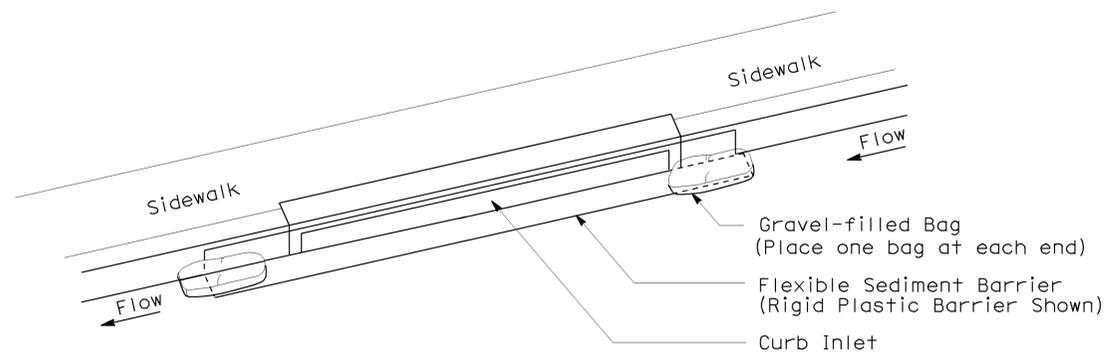
**SECTION**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A)**  
**(CATCH BASIN WITH GRATE)**



**SECTION A-A**



**PLAN**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 5)**  
**(SEDIMENT FILTER BAG)**



**PERSPECTIVE**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6B)**  
**(CURB INLET WITHOUT GRATE)**

**NOTES:**

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP T64**

2006 NEW STANDARD PLAN NSP T64