

INDEX OF PLANS

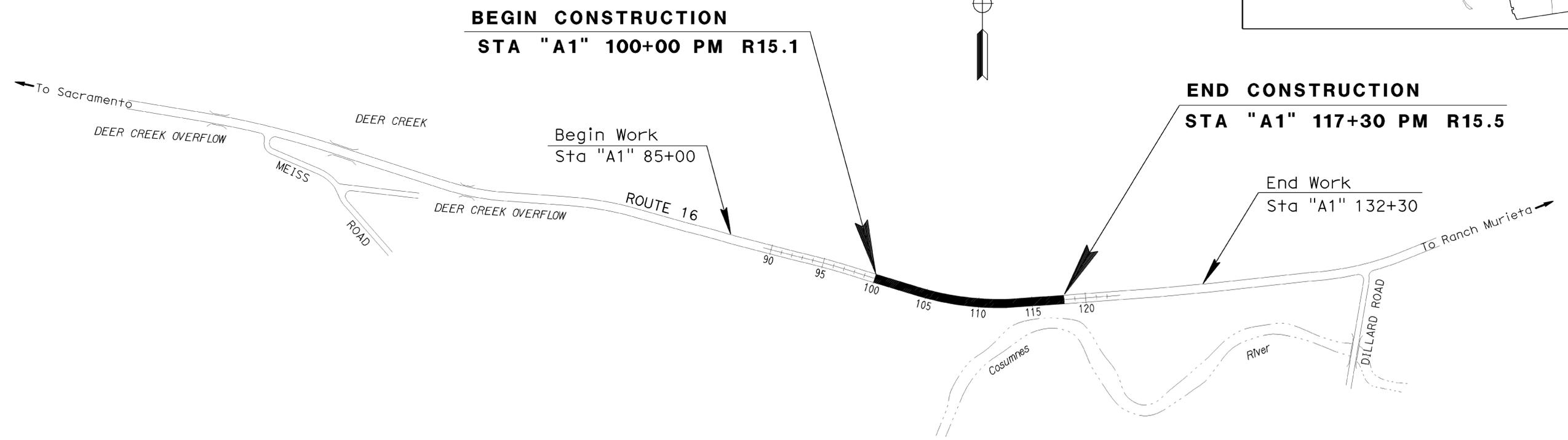
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3	LAYOUT
4	DRIVEWAY AND CONSTRUCTION DETAILS
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA HSSTP-P016(035)E  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SACRAMENTO COUNTY**  
**NEAR RANCHO MURIETA**  
**FROM 1.0 MILE EAST OF MEISS ROAD**  
**TO 0.6 MILE WEST OF DILLARD ROAD**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

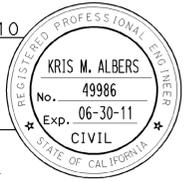
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	1	19



PROJECT MANAGER  
SERGIO ACEVES

DESIGN ENGINEER  
SHAUN RICE

*Kris M. Albers* 3-29-10  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
 March 29, 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.

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

CONTRACT No.	<b>03-4E2204</b>
PROJECT ID	<b>0300000687</b>





**NOTES:** 1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.  
 2. LOCATIONS OF UTILITY FACILITIES ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONSTRUCTOR.  
 3. LOCATION FOR TEMPORARY FENCE (TYPE ESA) WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

**ABBREVIATIONS**

HMA-A HOT MIX ASPHALT (TYPE A)  
 HMA-O HOT MIX ASPHALT (OPEN GRADED)

**LEGEND**

--- PERMIT TO ENTER  
 [Hatched Box] Dwy PAVING LIMITS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	3	19

*Kris M. Albers* 3-29-10  
 REGISTERED CIVIL ENGINEER DATE

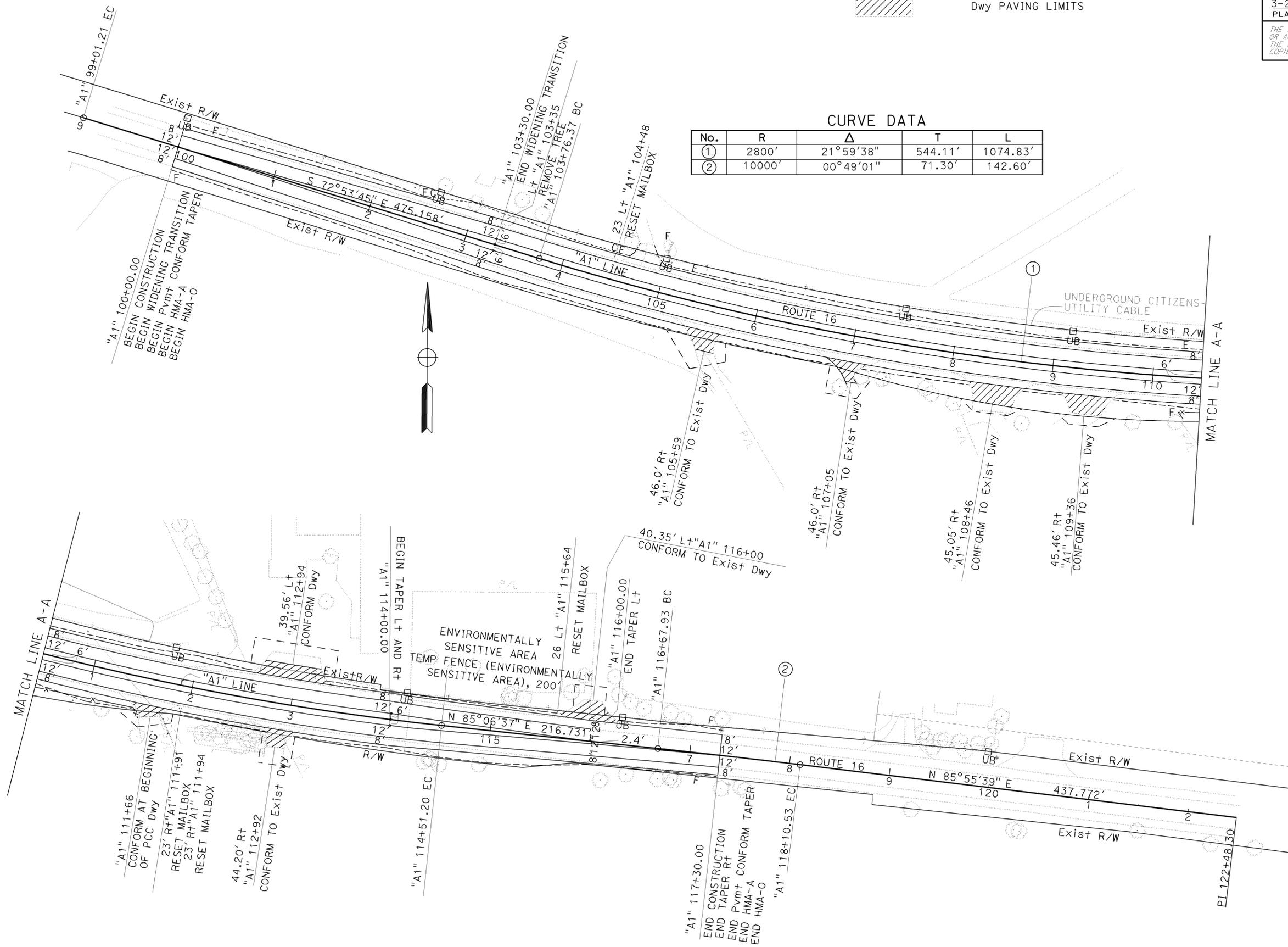
3-29-10  
 PLANS APPROVAL DATE

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**KRIS M. ALBERS**  
 No. 49986  
 Exp. 06-30-11  
 CIVIL

**CURVE DATA**

No.	R	Δ	T	L
①	2800'	21°59'38"	544.11'	1074.83'
②	10000'	00°49'01"	71.30'	142.60'



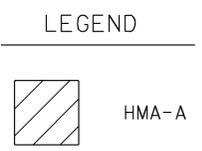
**LAYOUT**  
 Scale: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: SHAUN RICE  
 CALCULATED/DESIGNED BY: KRIS ALBERS  
 CHECKED BY: DEANN SPANGLER  
 REVISED BY: KRIS ALBERS  
 DATE REVISED: DEANN SPANGLER

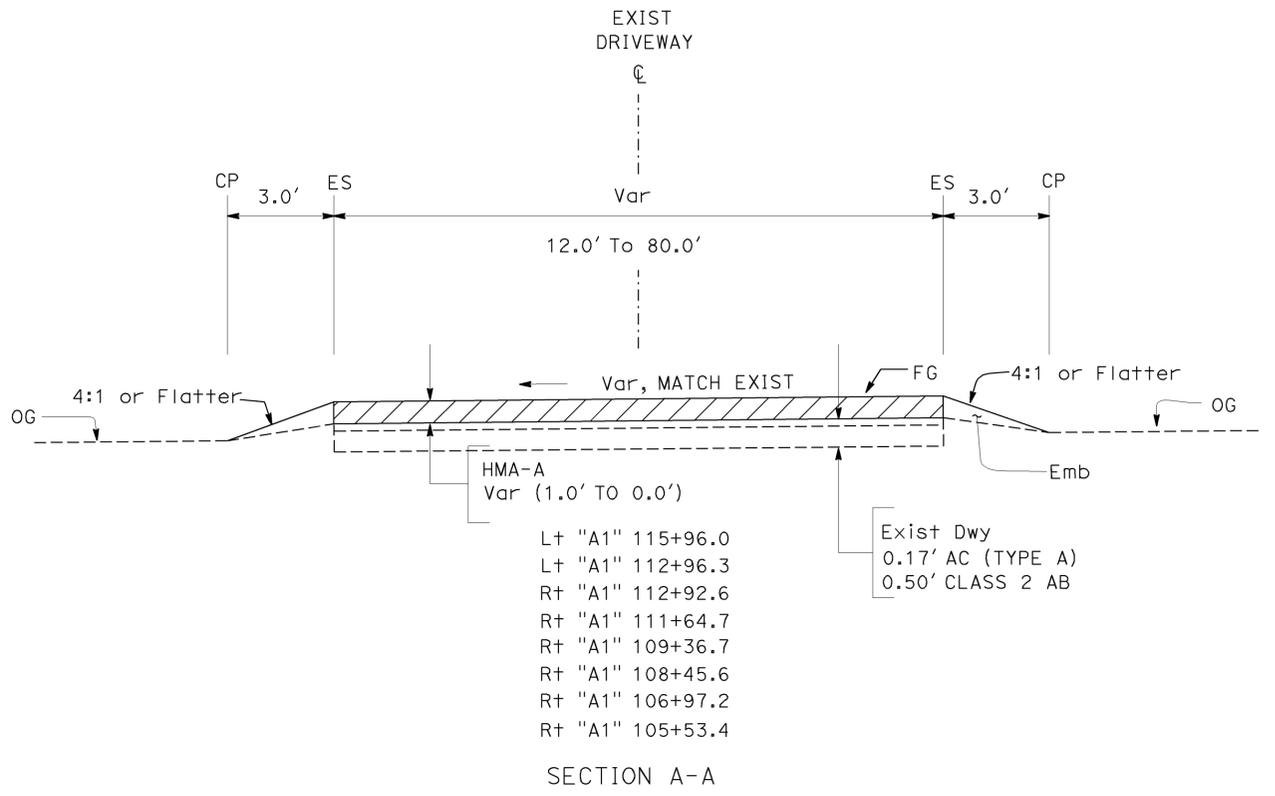
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	4	19

3-29-10  
 PLANS APPROVAL DATE  
 REGISTERED CIVIL ENGINEER DATE  
 KRIS M. ALBERS  
 No. 49986  
 Exp. 06-30-11  
 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.

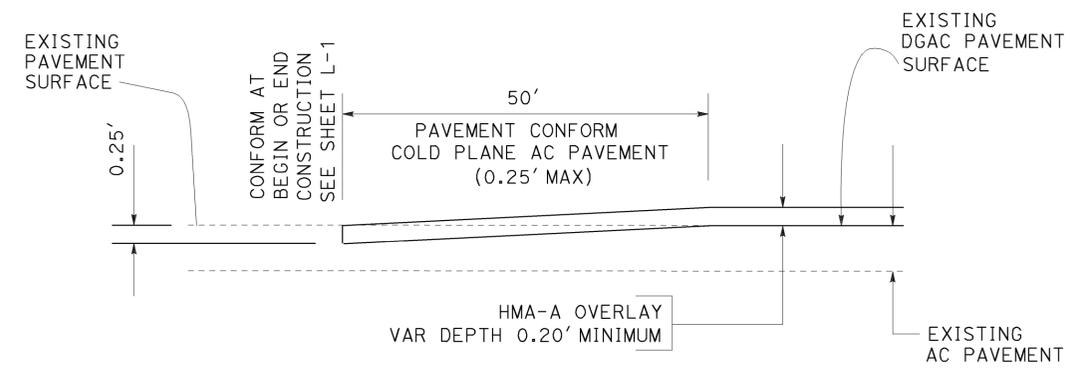
NOTES:  
 1. FOR Dwy CONFORM LIMITS, SEE SHEET L-1



ABBREVIATIONS  
 HMA-A HOT MIX ASPHALT (TYPEA)  
 HMA-O HOT MIX ASPHALT (TYPE O)  
 CP CATCH POINT

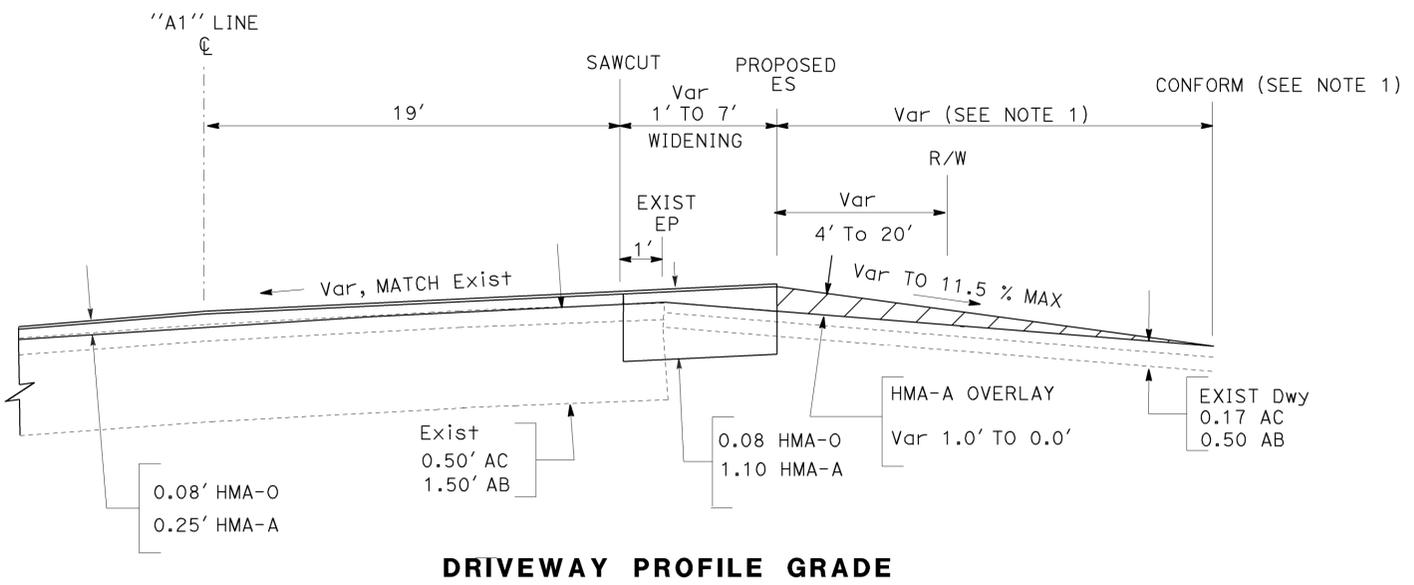


NOTE: STATION CALLOUT = DRIVEWAY



**PAVEMENT CONFORM DETAIL**

COLD PLANE AC Pvm+  
 NOTE: Exist OGAC NOT SHOWN



**DRIVEWAY PROFILE GRADE**

**DRIVEWAY DETAILS CONSTRUCTION DETAILS**

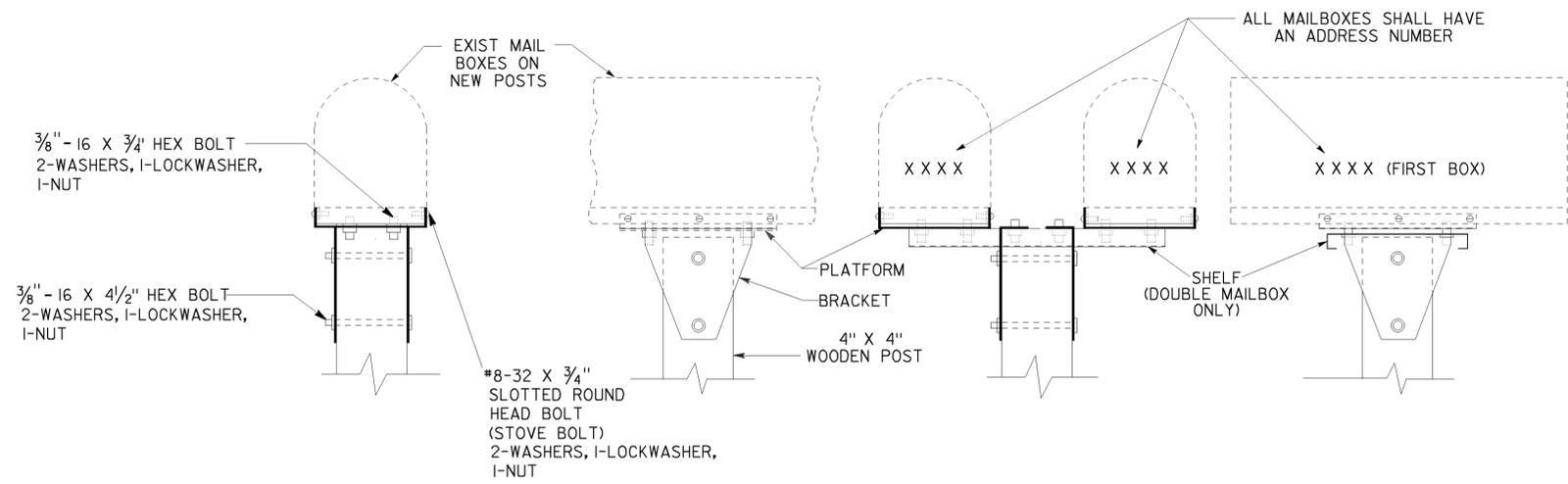
NO SCALE

**C-1**

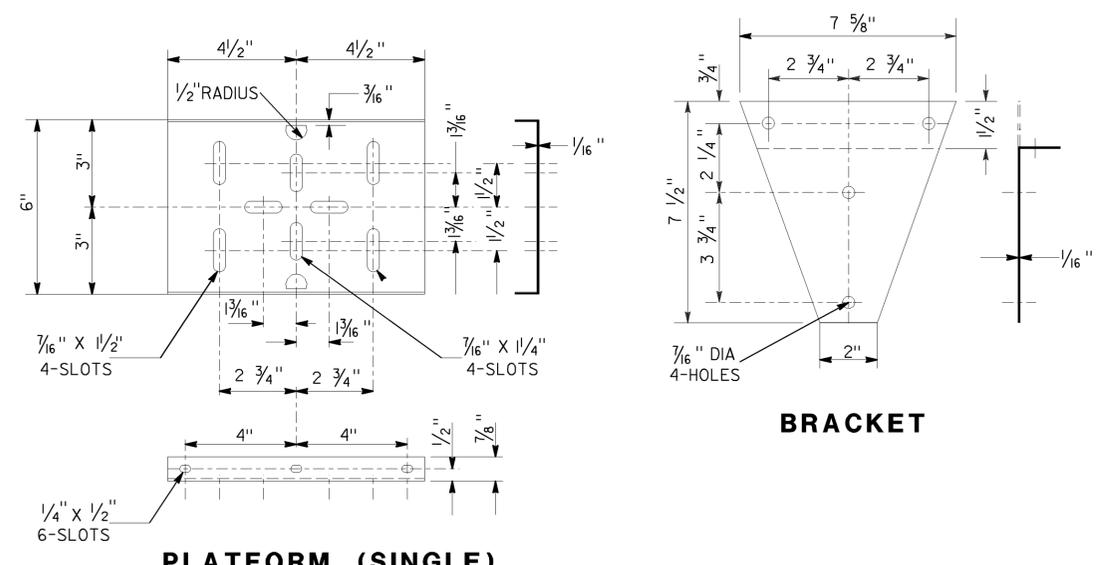
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	5	19

KRIS M. ALBERS 3-29-10  
 REGISTERED CIVIL ENGINEER DATE  
 3-29-10  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER
KRIS M. ALBERS
No. 49986
Exp. 06-30-11
CIVIL

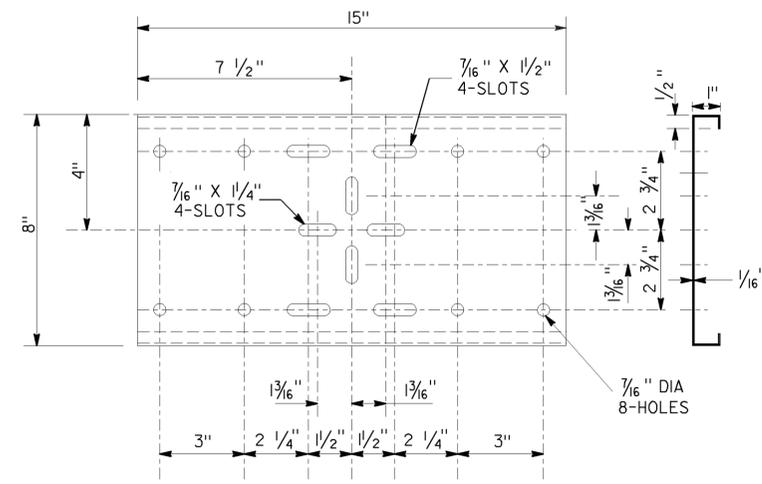


**SINGLE AND DOUBLE MAILBOX ASSEMBLIES**

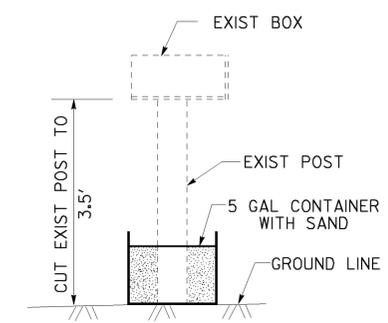


**BRACKET**

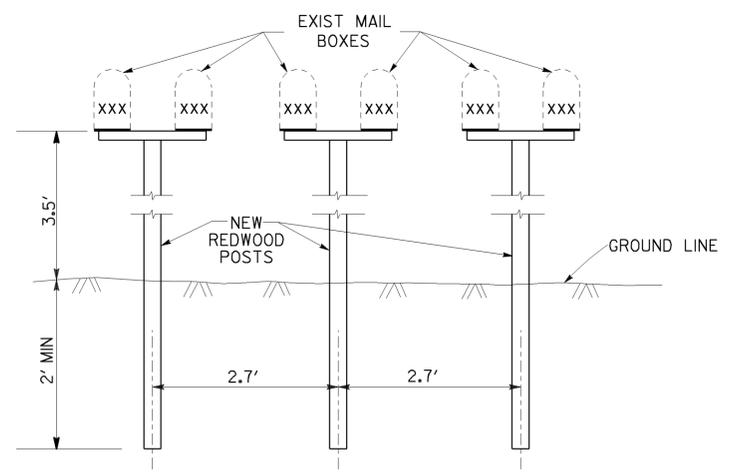
**PLATFORM (SINGLE)**



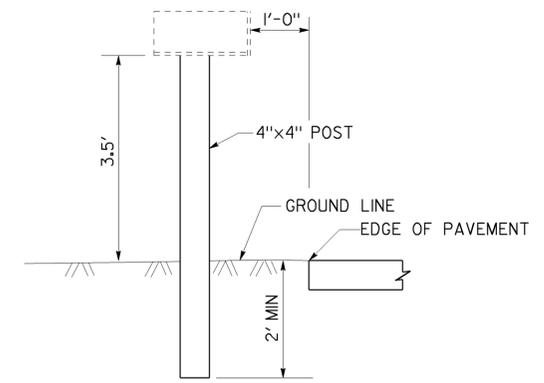
**SHELF (DOUBLE)**



**TEMPORARY MAILBOX DETAIL**



**RESET MAILBOX SETTING AND SPACING**



**RESET MAILBOX CONSTRUCTION DETAILS**

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 A.G. CHIN  
 K. ALBERS  
 A.G. CHIN  
 K. ALBERS  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 FUNCTIONAL SUPERVISOR  
 SHAUN RICE  
 DEPARTMENT OF TRANSPORTATION  
 TRAFFIC DESIGN  
 BORDER LAST REVISED 4/11/2008



USERNAME => s128033  
 DGN FILE => 34e220ga002.dgn

CU 03365

EA 4E2201

LAST REVISION | DATE PLOTTED => 13-APR-2010  
 03-23-10 | TIME PLOTTED => 1:3:57

NOTES: 1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND

-  TEMPORARY CONSTRUCTION EASEMENT (TCE)
-  PERMITS TO ENTER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	6	19

*James M. Philipp* 3-29-10  
 REGISTERED CIVIL ENGINEER DATE

3-29-10  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
**JAMES M. PHILIPP**  
 No. 59614  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA



Db1 6 INCH CSP (a)

CONC BACKFILL (CLASS IV) (b)

**1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 HYDRAULICS  
 FUNCTIONAL SUPERVISOR DENNIS R. JAGODA  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 JAMES PHILIPP  
 GURDEEP BHATTAL  
 REVISED BY  
 DATE REVISED

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

**DRAINAGE PLAN**  
 Scale: 1" = 10'  
**D-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	7	19

*James M. Philipp* 3-29-10  
 REGISTERED CIVIL ENGINEER DATE

3-29-10  
 PLANS APPROVAL DATE

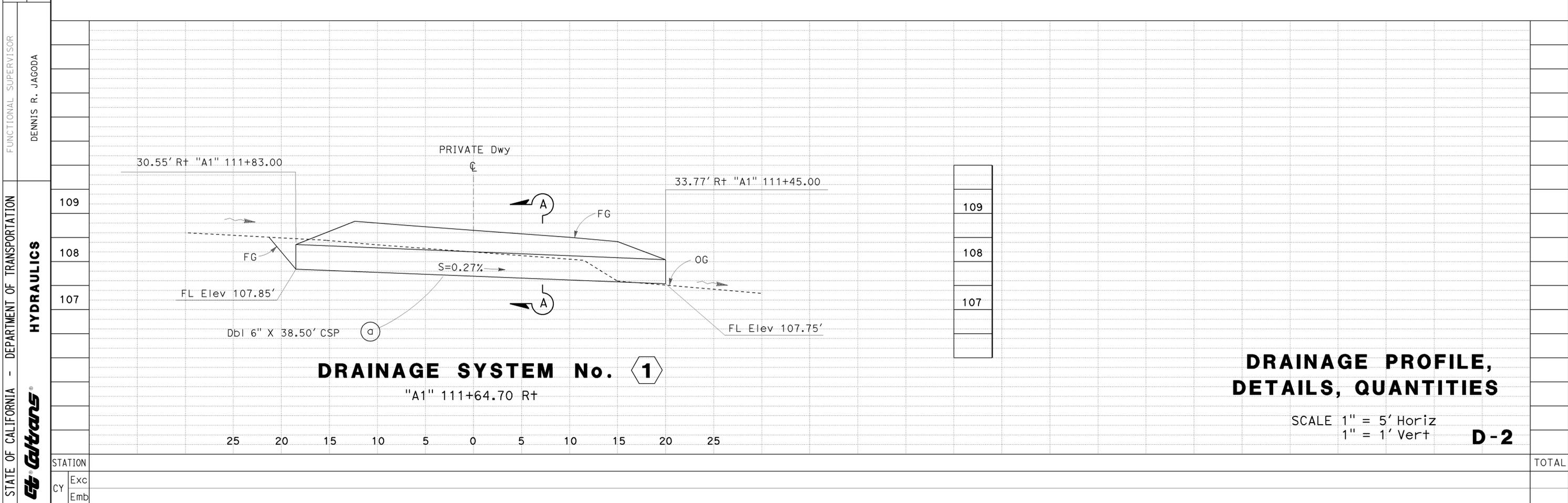
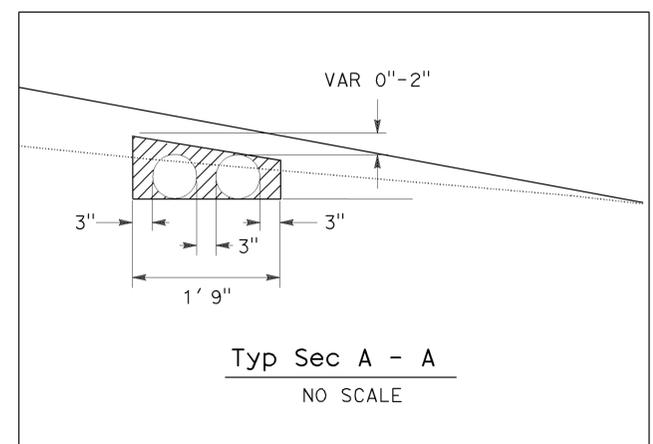
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REGISTERED PROFESSIONAL ENGINEER  
 JAMES M. PHILIPP  
 No. 59614  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA

### DRAINAGE QUANTITIES

DRAINAGE SYSTEM No.	DRAINAGE UNIT	CLASS IV CONC Bkf	(N)	DbI 6" CSP (0.064" THICK)	DESCRIPTION	LOCATION	DRAINAGE SYSTEM No.	DRAINAGE UNIT
					CY	Ft		
1	a		38.50		6" CSP CuIv	30.6 Rt "A1" 111+44.70/29.8 Rt "A1" 111+82.70	1	a
	b	0.89			CONC Bkf (CI-IV)	30.6 Rt "A1" 111+44.70/29.8 Rt "A1" 111+82.70		b
TOTAL		0.89	77.00					

N = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY



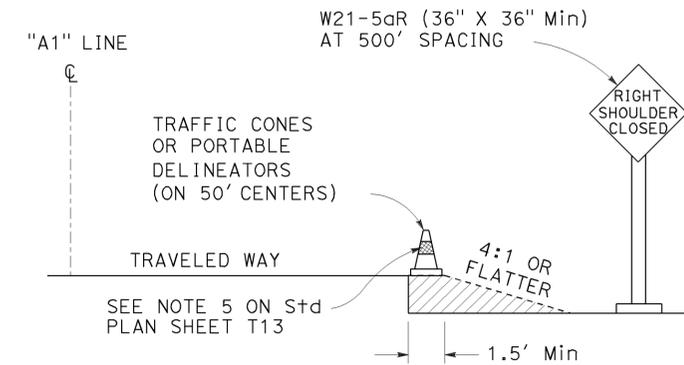
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 HYDRAULICS  
 FUNCTIONAL SUPERVISOR: DENNIS R. JAGODA  
 JAMES PHILIPP  
 GURDEEP BHATTAL  
 CALCULATED/DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVISED BY: \_\_\_\_\_  
 DATE REVISED: \_\_\_\_\_

LAST REVISION DATE PLOTTED => 14-APR-2010  
 03-23-10 TIME PLOTTED => 07:43

### STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

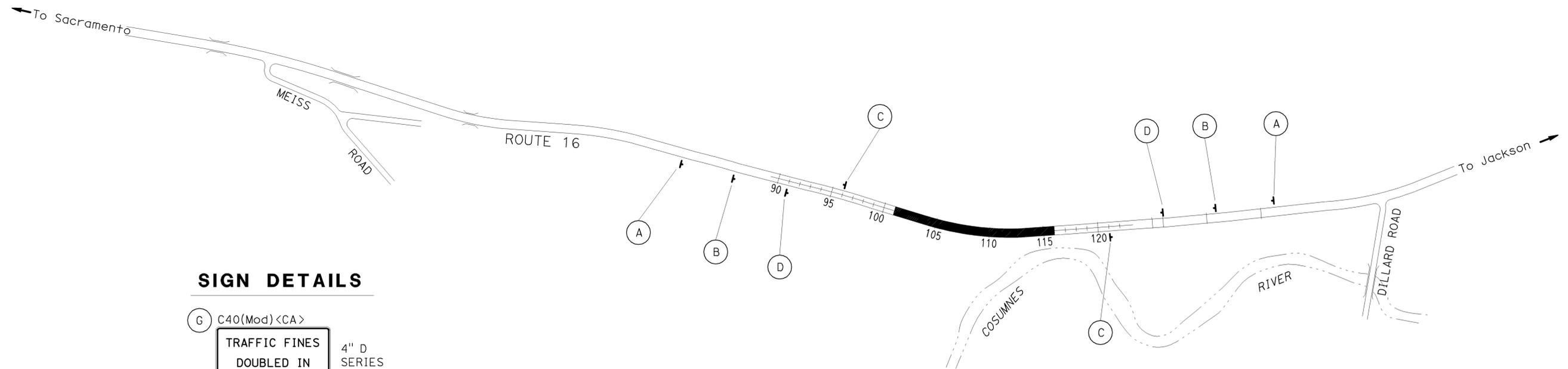
SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(A)	W20-1	C23	48" X 48"	ROAD WORK AHEAD	1 - 6" X 6"	2
(B)		C40(MOD)	48" X 36"	TRAFFIC FINES DOUBLED IN WORK ZONES	1 - 4" X 6"	2
(C)	G20-2	C14	36" X 18"	END ROAD WORK	1 - 4" X 4"	2
(D)	W21-5bR(1000)		36" X 36"	RIGHT SHOULDER CLOSED 1000 FT	1 - 4" X 6"	2

NOTE: EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.

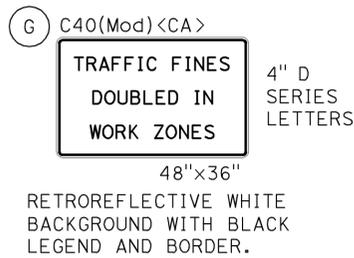


### TEMPORARY TAPER SIGNING AND MARKING

NO SCALE



### SIGN DETAILS



### CONSTRUCTION AREA SIGNS

NO SCALE

NOTE: THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

CS-1

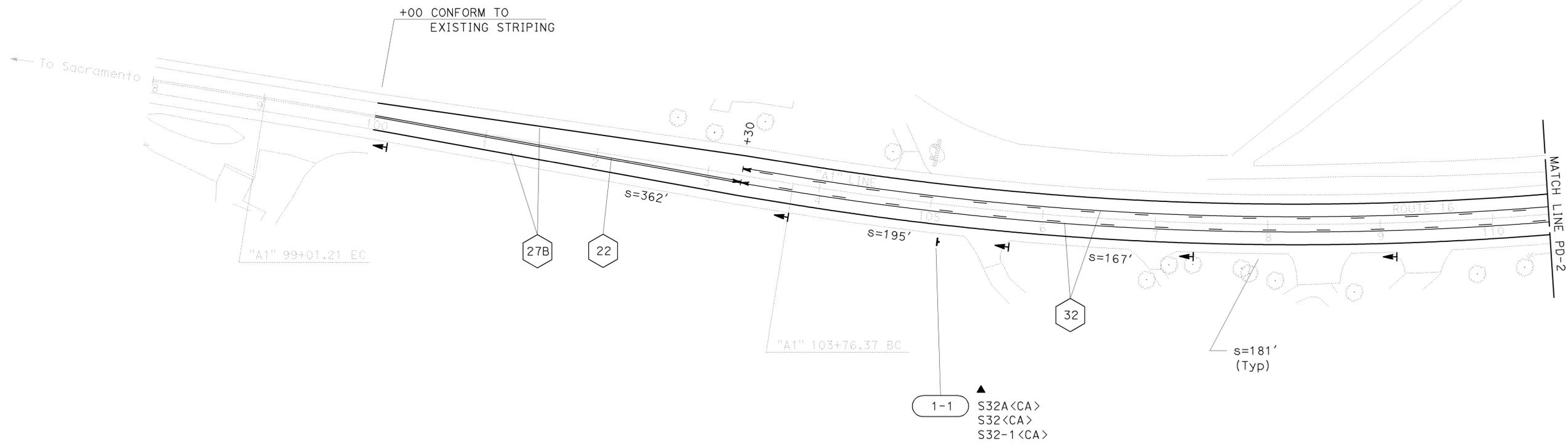
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	9	19

KRIS M. ALBERS 3-29-10  
 REGISTERED CIVIL ENGINEER DATE  
 3-29-10  
 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.

LEGEND

- ↑ LIMIT OF STRIPING PATTERN
- ↔ CHANGE IN STRIPING PATTERN
- ⬡ No. PAVEMENT DELINEATION DETAIL NUMBER
- ▽ DELINEATOR (CLASS 1)
- s= DELINEATOR SPACING
- (Sht-No.) ROADSIDE SIGN NUMBER
- <CA> CALIFORNIA SIGN CODE
- ↑ SIGN - SINGLE POST
- ▲ RESET ROADSIDE SIGN



NOTES:

1. ALL LANES SHALL BE 12' WIDE.
2. ALL DELINEATORS (CLASS 1) SHALL BE TYPE E-1.
3. ALL EXISTING SIGNS NOT SHOWN FOR RESETTING SHALL REMAIN IN PLACE.
4. ALL SIGN CODES SHOWN ARE CALIFORNIA SIGN CODES.
5. THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY.

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1"=50'

PD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans®  
 FUNCTIONAL SUPERVISOR: SHAUN A. RICE  
 CHUCK COOK / DEANN SPANGLER  
 REVISOR: CHUCK COOK / DEANN SPANGLER  
 CALCULATED/DESIGNED BY: CHUCK COOK / DEANN SPANGLER  
 CHECKED BY: CHUCK COOK / DEANN SPANGLER  
 TRAFFIC DESIGN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	10	19

*Kris M. Albers* 3-29-10  
REGISTERED CIVIL ENGINEER DATE

3-29-10  
PLANS APPROVAL DATE

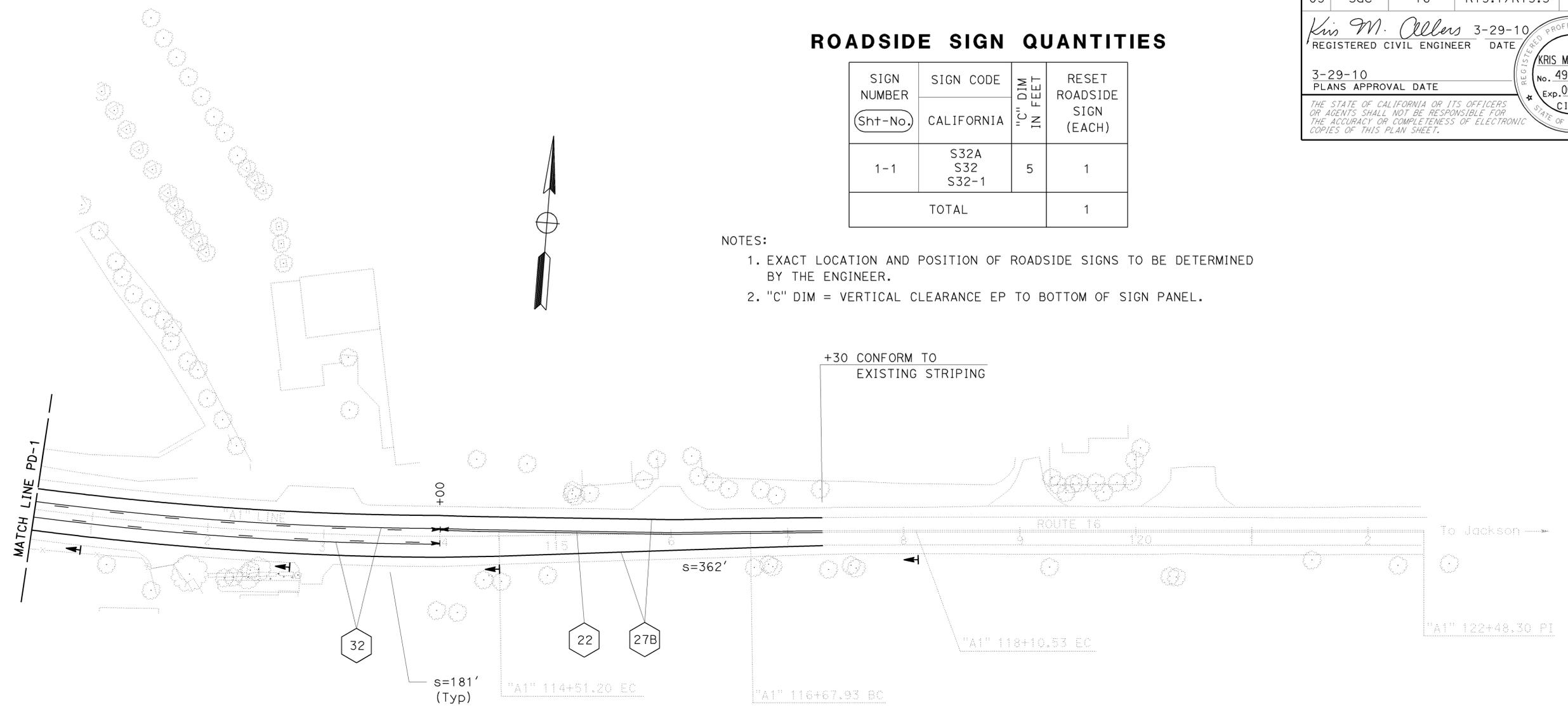
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**KRIS M. ALBERS**  
No. 49986  
Exp. 06-30-11  
CIVIL  
STATE OF CALIFORNIA

### ROADSIDE SIGN QUANTITIES

SIGN NUMBER	SIGN CODE	"C" DIM IN FEET	RESET ROADSIDE SIGN (EACH)
(Sht-No.)	CALIFORNIA		
1-1	S32A S32 S32-1	5	1
TOTAL			1

- NOTES:
- EXACT LOCATION AND POSITION OF ROADSIDE SIGNS TO BE DETERMINED BY THE ENGINEER.
  - "C" DIM = VERTICAL CLEARANCE EP TO BOTTOM OF SIGN PANEL.



### PAVEMENT MARKER

DETAIL NUMBER	RETROREFLECTIVE
	TYPE D (EACH)
22	58
32	230
TOTAL	288

### 4" THERMOPLASTIC TRAFFIC STRIPE

DETAIL NUMBER	LINEAR FEET
22	1,320
27B	3,460
32	4,280
TOTAL	9,060

### DELINEATOR

SHEET NUMBER	DELINEATOR (CLASS 1)
	TYPE E-1 (EACH)
PD-1	4
PD-2	4
TOTAL	8

## PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1"=50'

**PD-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: SHAUN A. RICE  
 CALCULATED/DESIGNED BY: CHUCK COOK  
 CHECKED BY: DEANN SPANGLER  
 REVISED BY: CHUCK COOK  
 DATE REVISED:

THIS SHEET ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY.



USERNAME => s128033  
 DGN FILE => 34e220na002.dgn

CU 03365

EA 4E2201

BORDER LAST REVISED 4/11/2008

LAST REVISION: 3-23-10  
 DATE PLOTTED => 13-APR-2010  
 TIME PLOTTED => 13:57

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	11	19

*Kris M. Albers* 3-29-10  
 REGISTERED CIVIL ENGINEER DATE

3-29-10  
 PLANS APPROVAL DATE

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**ROADWAY QUANTITIES**

LOCATION	HOT MIX ASPHALT (TYPE A)				HOT MIX ASPHALT (TYPE O)	ASPHALTIC EMULSION (FOG SEAL COAT AND PAINT BINDER)	COLD PLANE AC PAVEMENT	ROADWAY EXCAVATION	EMBANKMENT (N)	REMOVE TREE (N)
	WIDENING	OVERLAY	COLD PLANE AC PAVEMENT	DRIVEWAY	WIDENING AND OVERLAY		EXIST Pvmt			
	TON				TON	TON	SQYD	CY		EA
"A1" 100+00.00 TO "A1" 117+30.00	2000	1550	350	183	420	3.2	5500	600	170	
DRIVEWAYS									6	
29.1 Lt "A1" 103+35.00										1
<b>TOTAL</b>	<b>4083</b>				<b>420</b>	<b>3.2</b>	<b>5500</b>	<b>600</b>	<b>176</b>	<b>1</b>

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

**DRIVEWAY QUANTITIES**

LOCATION	HOT MIX ASPHALT (TYPE A)
	TON
R+ "A1" 105+59	16
R+ "A1" 107+05	11
R+ "A1" 108+46	22
R+ "A1" 109+36	10
R+ "A1" 111+66	45
R+ "A1" 112+92	49
L+ "A1" 112+94	17
L+ "A1" 116+00	13
<b>TOTAL</b>	<b>183</b>

**RESET MAILBOX**

LOCATION	EACH
23' Lt "A1" 104+48	1
23' Rt "A1" 111+91	1
23' Rt "A1" 111+94	1
26' Lt "A1" 116+00	1
<b>TOTAL</b>	<b>4</b>

NOTE : DRIVEWAY QUANTITIES ARE INCLUDED IN "ROADWAY QUANTITIES".

**SUMMARY OF QUANTITIES**

**Q-1**



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	12	19

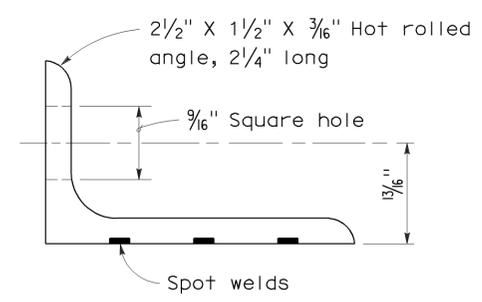
Raymond Don Tsztoo  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

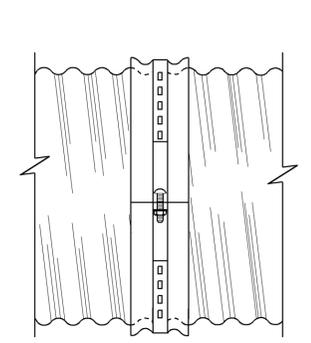
Raymond Don Tsztoo  
REGISTERED PROFESSIONAL ENGINEER  
No. C37332  
Exp. 6-30-08  
CIVIL  
STATE OF CALIFORNIA

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.

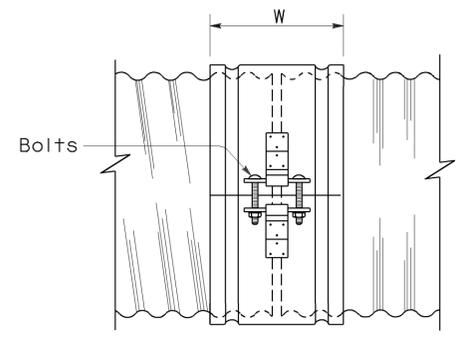
To accompany plans dated March 29, 2010



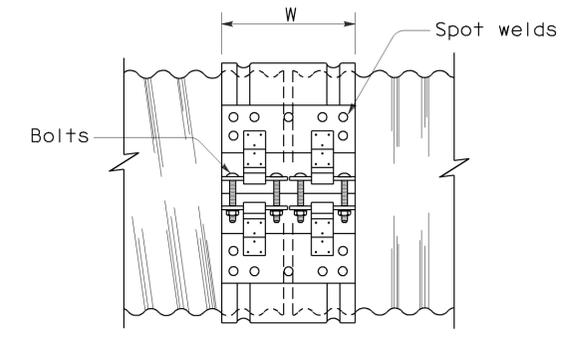
ANGLE



SIDE VIEW ANGLE



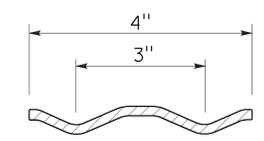
SIDE VIEW SINGLE BAR AND STRAP



SIDE VIEW DOUBLE BAR AND STRAP

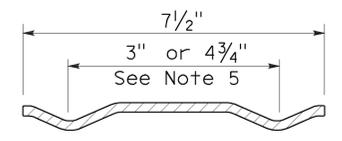
NOTES:

1. All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
2. Dimensions and thicknesses shown are minimum.
3. Spot welds shall develop minimum required strength of strap.
4. Fillet welds of equivalent strength may be substituted for spot welds or rivets.
5. Dimension depends upon whether end condition is lips up or lips down.



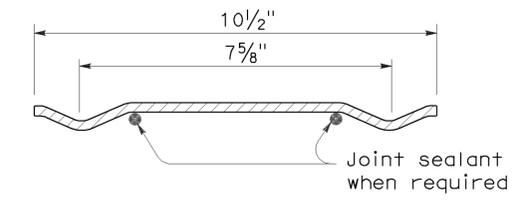
SECTION

H-4 HUGGER BAND



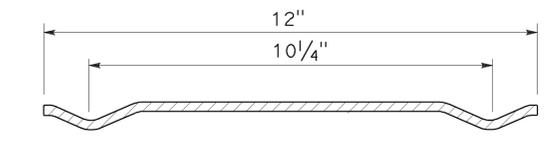
SECTION

H-7 HUGGER BAND



SECTION

H-10 HUGGER BAND



SECTION

H-12 HUGGER BAND

HUGGER COUPLING BANDS

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE  
COUPLING DETAILS No. 4  
HUGGER COUPLING BANDS**

NO SCALE

RSP D97D DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97D  
DATED MAY 1, 2006 - PAGE 186 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP D97D**

2006 REVISED STANDARD PLAN RSP D97D

ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAR AND STRAP (CSP ONLY)				ANGLE									
				CSP		CAP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND			
				CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP	CAP	CSP			
TWO PIECE INTEGRAL FLANGE	1 1/2' x 1/4"	6"-10"	7"	0.052"-0.079"	0.048"-0.060"	0.052"	0.060"							2-3/8"	2-3/8"						
				12"-18"	7"	0.052"-0.079"										2-1/2"					
				2 2/3" x 1/2"	12"-24"	7"	0.052"-0.079"	0.060"-0.105"	0.064"	0.060"							2-1/2"	2-1/2"			
UNIVERSAL	2 2/3" x 1/2"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	3-1/2"		
		42"-60"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"														
		THROUGH 72"	12"	0.052"-0.168"	0.164"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"			
		78"-84"	16 1/4"	0.168"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"			
ANNULAR	2 2/3" x 1/2"	THROUGH 36"	7"	0.064"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	2-1/2"	2-1/2"	3-3/8"	3-3/8"	3-1/2"			
		42"-72"	12"	0.064"-0.168"	0.075"-0.164"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"			
		78"-84"	12"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"			3-1/2"		3-3/8"	5-1/2"			
	3" x 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"			3-1/2"		3-3/8"		5-1/2"		
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"			3-1/2"		4-3/8"				
		42"-108"	14"		0.060"-0.135"		0.060"					2" x 2" x 3/16"		3-1/2"		3-3/8"					
HELICAL	2 2/3" x 1/2"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	3-1/2"			
		42"-72"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"			
		78"-84"	12"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"			3-1/2"		3-3/8"	5-1/2"			
	3" x 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"			3-1/2"		3-3/8"		5-1/2"		
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"			3-1/2"		4-3/8"				
		42"-108"	14"		0.060"-0.135"		0.060"					2" x 2" x 3/16"		3-1/2"		3-3/8"					
HUGGER	2 2/3" x 1/2"	REROLLED END	12"-54"	4"	0.052"-0.109"		0.052"						2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"				3-1/2"		
			60"-66"	4"	0.109"		0.064"							2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"				3-1/2"	
			36"-48"	4"	0.138"		0.064"							2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"				3-1/2"	
			THROUGH 72"	10 1/2"	0.052"-0.168"		0.052"		0.079"	1/2"	7/8"	32 ksi									
			78"-84"	10 1/2"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi									
	3" x 1"	REROLLED END	48"-90"	10 1/2"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi									
			96"-120"	10 1/2"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi									
	5" x 1"	REROLLED END	48"-66"	7 1/2"	0.064"-0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi	2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"					3-1/2"	
			72"-90"	7 1/2"	0.064"-0.079"		0.064"		0.079"	1/2"	7/8"	32 ksi	2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"					3-1/2"	
			48"-90"	7 1/2"	0.064"-0.138"		0.064"		0.079"	1/2"	7/8"	32 ksi									
48"-120"			12" SEE	0.064"-0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi										
48"-84"			12" NOTE	0.138"		0.064"		0.079"	1/2"	7/8"	32 ksi										
		90"-120"	12" 11	0.138"		0.064"		DOUBLE 0.079"	1/2"	7/8"	32 ksi										

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAR AND STRAP (SSRP ONLY)				ANGLE						
				SSRP		ASRP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND
				SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP
ANNULAR	2 2/3" x 1/2" * REROLLED END	24"-36"	12"	0.064"-0.109"	0.060"-0.105"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		42"-60"	12"	0.064"-0.109"	0.075"-0.105"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		66"-72"	12"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		78"-114"	12"	0.079"-0.109"		0.079"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
HUGGER	2 2/3" x 1/2" * REROLLED END	24"-72"	10 1/2"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi							
		78"-84"	10 1/2"	0.109"		0.079"		0.109"	1/2"	7/8"	45 ksi							

\* See Note 14.

14. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

- NOTES:** To accompany plans dated March 29, 2010
- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
  - For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
  - Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
  - Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
  - Band thickness shall not be less than:
    - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
    - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
  - Dimensions, thicknesses and strengths shown are minimum.
  - For pipe arches use same width band as for round pipe of equal periphery.
  - Fillet welds of equivalent strength may be substituted for spot welds or rivets.
  - Spot welds shall develop minimum required strength of strap.
  - Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
  - In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
  - Two piece bands are required for pipes greater than 42" diameter.
  - The 2 1/4" x 2" x 0.109" thick galvanized die-formed angle connector may be used in lieu of the 2" x 2" x 3/16" angle connector for standard joints only on pipes through 72" diameter.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE  
COUPLING DETAILS No. 5  
STANDARD JOINT**

NO SCALE

RSP D97E DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97E  
DATED MAY 1, 2006 - PAGE 187 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP D97E**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	13	19

Raymond Don Tsztou  
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  
Raymond Don Tsztou  
No. C37332  
Exp. 6-30-08  
CIVIL  
STATE OF CALIFORNIA

2006 REVISED STANDARD PLAN RSP D97E

ANNULAR AND HELICAL PROFILE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	14	19

Raymond Don Tsztou  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAR AND STRAP (CSP ONLY)				ANGLE							
				CSP		CAP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No. - Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP	CAP	CSP	
TWO PIECE INTEGRAL FLANGE	1 1/2" x 1/4"	6"-10"	7"	0.064"-0.079"	0.060"	0.064"	0.060"							2-3/8"	2-3/8"				
	2 2/3" x 1/2"	12"-24"	12"		0.060"-0.105"		0.060"								3-1/2"				
UNIVERSAL	2 2/3" x 1/2"	THROUGH 36"	12"	0.064"-0.138"	0.060"-0.135"	0.064"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		42"-60"	16 1/4"	0.064"-0.168"	0.060"-0.164"	0.064"	0.060"	DOUBLE 0.079"	1/2"	7/8"	32 ksi	2" x 2" x 1/4"	2" x 2" x 1/4"	4-1/2"	4-1/2"	5-3/8"	5-3/8"		
ANNULAR	2 2/3" x 1/2"	THROUGH 36"	12"	0.064"-0.138"	0.060"-0.135"	0.064"	0.060"					2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		42"-60"	12"	0.064"-0.079"		0.064"							2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"
		42"-60"	12"	0.109"-0.168"	0.135"-0.164"	0.064"	0.075"						2" x 2" x 1/4"	2" x 2" x 1/4"	3-1/2"	3-1/2"	5-3/8"	5-3/8"	
		66"-72"	24"		0.164"		0.105"						2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"		5-1/2"	
		66"-84"	24"	0.109"-0.168"		0.064"							2" x 2" x 1/4"		5-1/2"		7-3/8"		
		42"-54"	12"		0.060"-0.105"		0.060"							2" x 2" x 3/16"		3-1/2"		3-3/8"	
	3" x 1"	48"-60"	14"	0.064"-0.079"		0.064"							2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"
		48"-60"	14"	0.109"		0.064"							2" x 2" x 3/16"		3-1/2"		5-3/8"		
		66"-120"	25"	0.064"-0.109"		0.064"							2" x 2" x 3/16"		5-1/2"		9-3/8"		
		42"-60"	14"		0.060"-0.105"		0.060"						2" x 2" x 3/16"		3-1/2"			5-3/8"	
		42"-60"	14"		0.135"		0.075"						2" x 2" x 1/4"		3-1/2"			5-3/8"	
		66"-96"	25"		0.060"-0.135"		0.060"						2" x 2" x 1/4"		5-1/2"			7-3/8"	
		96"-108"	25"		0.135"		0.075"						2" x 2" x 1/4"		5-1/2"			7-3/8"	
														2" x 2" x 1/4"		5-1/2"			7-3/8"
HELICAL	2 2/3" x 1/2"	THROUGH 36"	12"	0.064"-0.138"	0.060"-0.135"	0.064"	0.060"					2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		42"-54"	12"		0.060"-0.105"		0.060"					2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
		42"-60"	12"	0.064"-0.079"		0.064"							2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"
		42"-60"	12"	0.109"-0.168"	0.135"-0.164"	0.064"	0.075"						2" x 2" x 1/4"	2" x 2" x 1/4"	3-1/2"	3-1/2"	5-3/8"	5-3/8"	
		66"-84"	24"	0.109"-0.168"		0.064"							2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"	7-3/8"	7-3/8"	
		66"-72"	24"		0.164"		0.105"						2" x 2" x 1/4"		5-1/2"			5-3/8"	
	3" x 1"	48"-60"	14"	0.064"-0.079"		0.064"							2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"
		48"-60"	14"	0.109"		0.064"							2" x 2" x 3/16"		3-1/2"		5-3/8"		
		66"-120"	25"	0.064"-0.109"		0.064"							2" x 2" x 3/16"		5-1/2"		9-3/8"		
		42"-60"	14"		0.060"-0.105"		0.060"						2" x 2" x 3/16"		3-1/2"			5-3/8"	
		42"-60"	14"		0.135"		0.075"						2" x 2" x 1/4"		3-1/2"			5-3/8"	
		66"-96"	25"		0.060"-0.135"		0.060"						2" x 2" x 1/4"		5-1/2"			7-3/8"	
		96"-108"	25"		0.135"		0.075"						2" x 2" x 1/4"		5-1/2"			7-3/8"	
														2" x 2" x 1/4"		5-1/2"			7-3/8"
HUGGER	2 2/3" x 1/2" REROLLED END	THROUGH 48"	10 1/2"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		54"-66"	10 1/2"	0.109"		0.064"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		THROUGH 54"	10 1/2"	0.064"-0.079"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		THROUGH 60"	10 1/2"	0.138"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		66"-72"	10 1/2"	0.138"		0.109"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
	3" x 1" REROLLED END	THROUGH 72"	10 1/2"	0.168"		0.109"		DOUBLE 0.109"	1/2"	7/8"	45 ksi								
		48"-84"	10 1/2"	0.109"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		48"-90"	10 1/2"	0.064"-0.079"		0.064"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		96"-102"	10 1/2"	0.079"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		90"-120"	10 1/2"	0.109"		0.109"		DOUBLE 0.109"	1/2"	7/8"	45 ksi								

To accompany plans dated March 29, 2010

NOTES:

- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 1/4" gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
  - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
  - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
- In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
- Two piece bands are required for pipes greater than 42" diameter.

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAND THICKNESS				BAR AND STRAP (SSRP ONLY)				ANGLE			
				SSRP		ASRP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP	
ANNULAR	2 2/3" x 1/2" * REROLLED END	24"-36"	12"	0.064"-0.109"	0.060"-0.105"	0.064"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		42"-60"	12"	0.064"-0.079"	0.075"-0.105"	0.064"	0.075"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		42"-60"	12"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 1/4"		3-1/2"		5-3/8"			
		66"-84"	24"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 1/4"		5-1/2"		7-3/8"			
HUGGER	2 2/3" x 1/2" * REROLLED END	24"-54"	10 1/2"	0.064"-0.079"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		24"-48"	10 1/2"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		54"-66"	10 1/2"	0.109"		0.064"		Double 0.079"	1/2"	7/8"	32 ksi								

\* See Note 13.

13. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

**CORRUGATED METAL PIPE COUPLING DETAILS No. 6 POSITIVE JOINT**

NO SCALE

RSP D97F DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97F DATED MAY 1, 2006 - PAGE 188 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP D97F**

2006 REVISED STANDARD PLAN RSP D97F

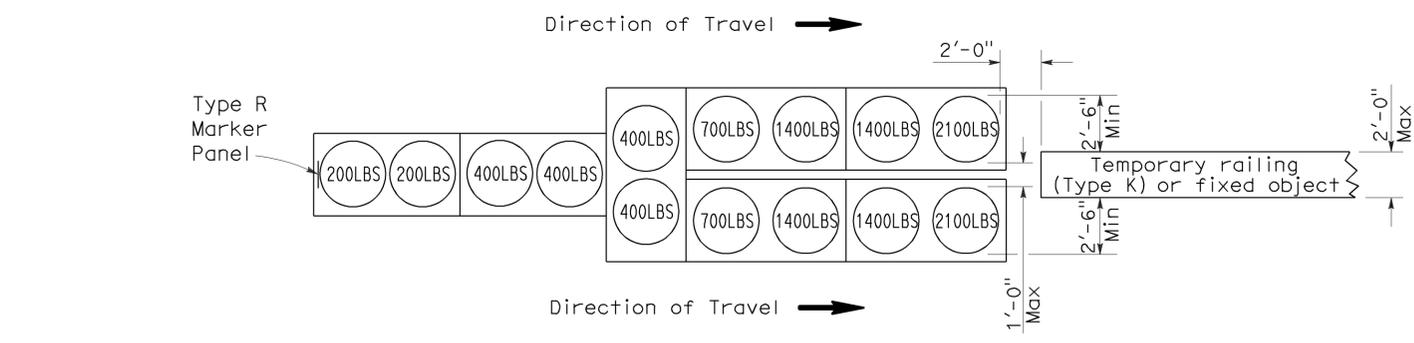
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Soc	16	R15.1/R15.5	15	19

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

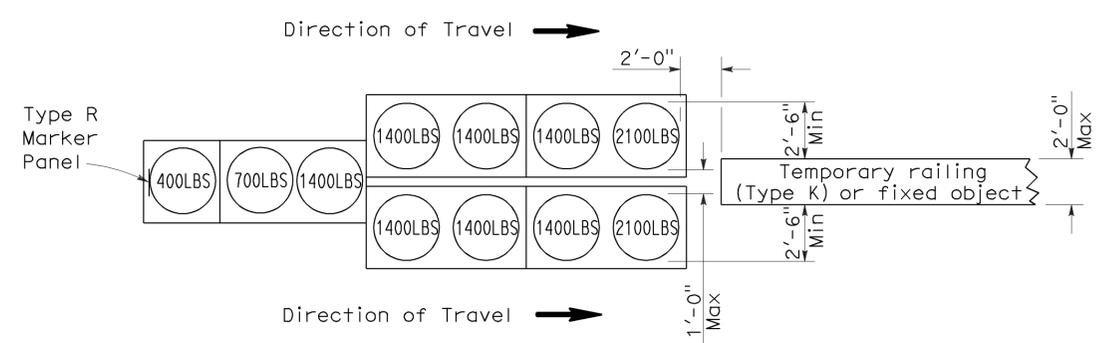
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

To accompany plans dated March 29, 2010



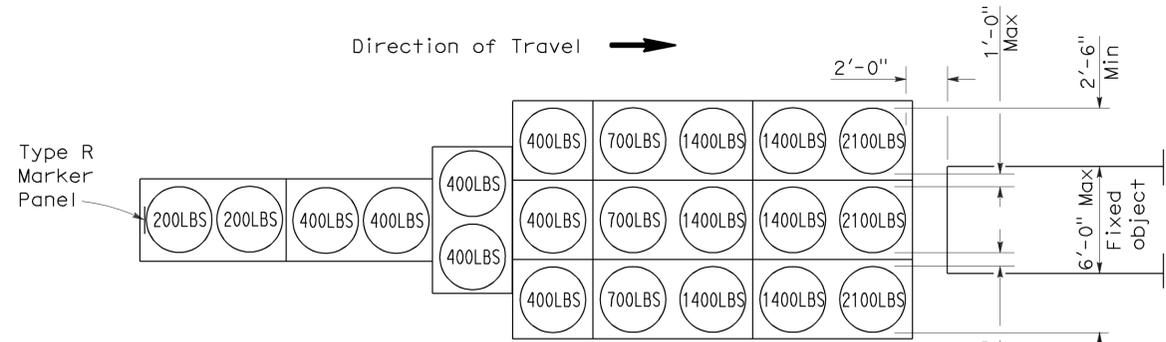
**ARRAY 'TU14'**

Approach speed 45 mph or more



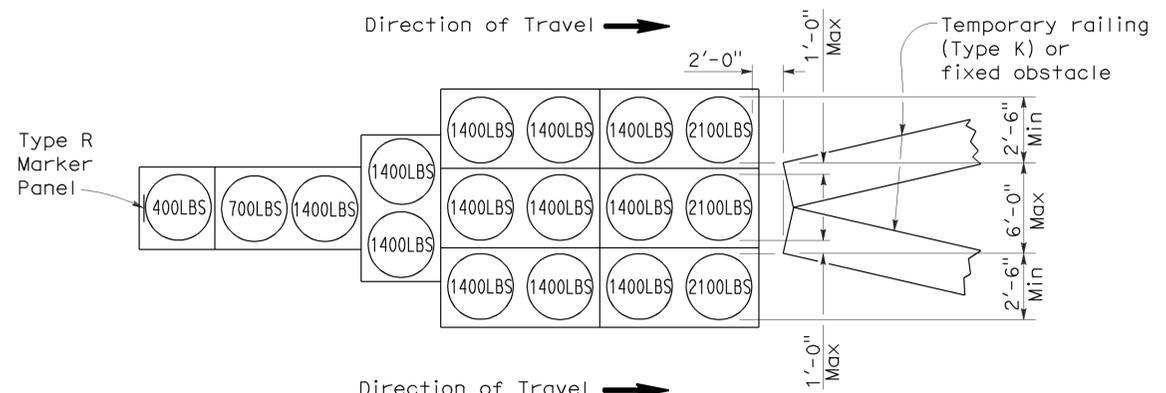
**ARRAY 'TU11'**

Approach speed less than 45 mph



**ARRAY 'TU21'**

Approach speed 45 mph or more

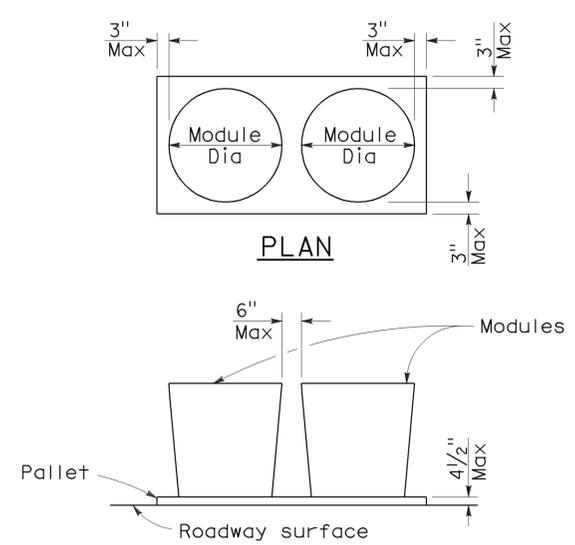


**ARRAY 'TU17'**

Approach speed less than 45 mph

**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.



**CRASH CUSHION PALLET DETAIL**

See Note 7

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
03	Sac	16	R15.1/R15.5	16	19

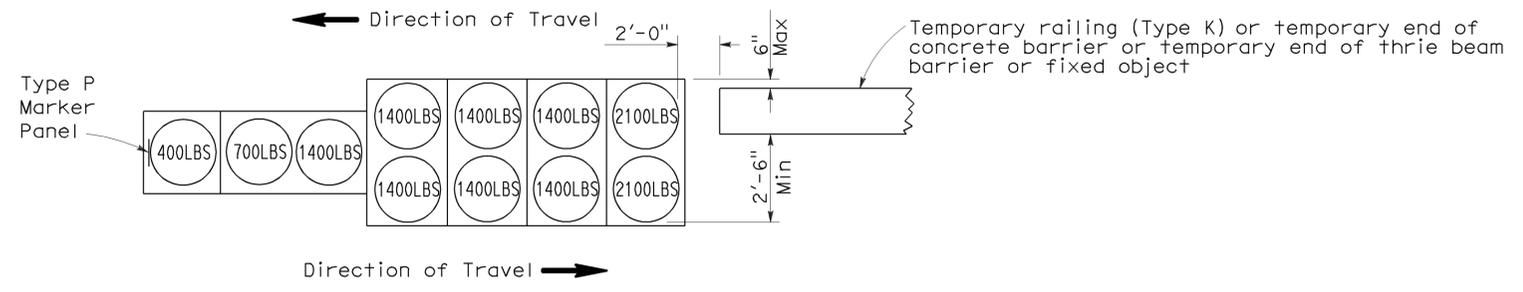
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

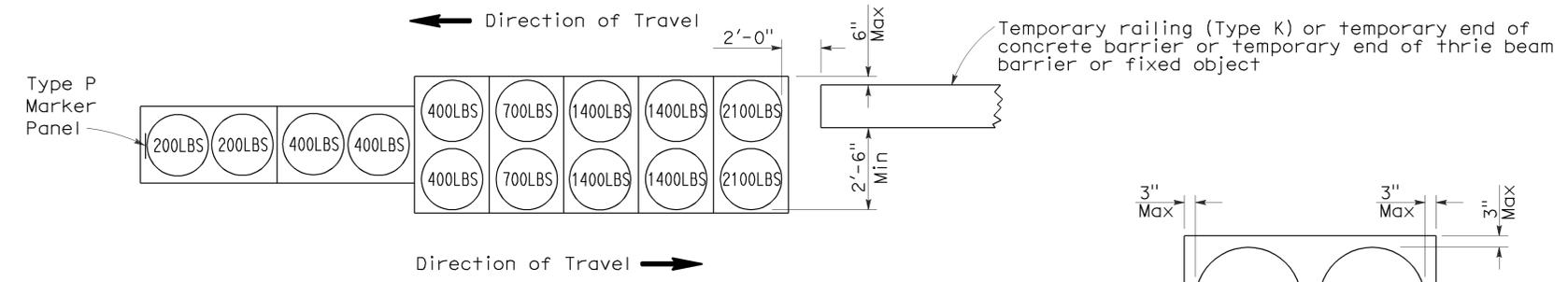
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To accompany plans dated March 29, 2010



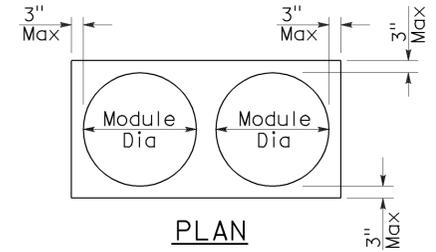
**ARRAY 'TB11'**

Approach speed less than 45 mph

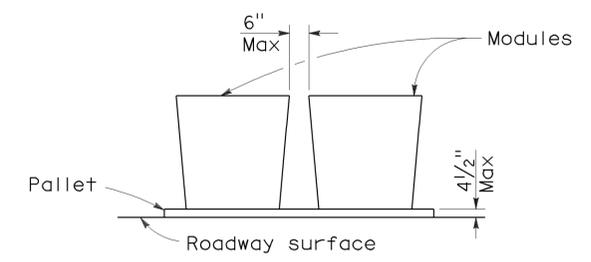


**ARRAY 'TB14'**

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

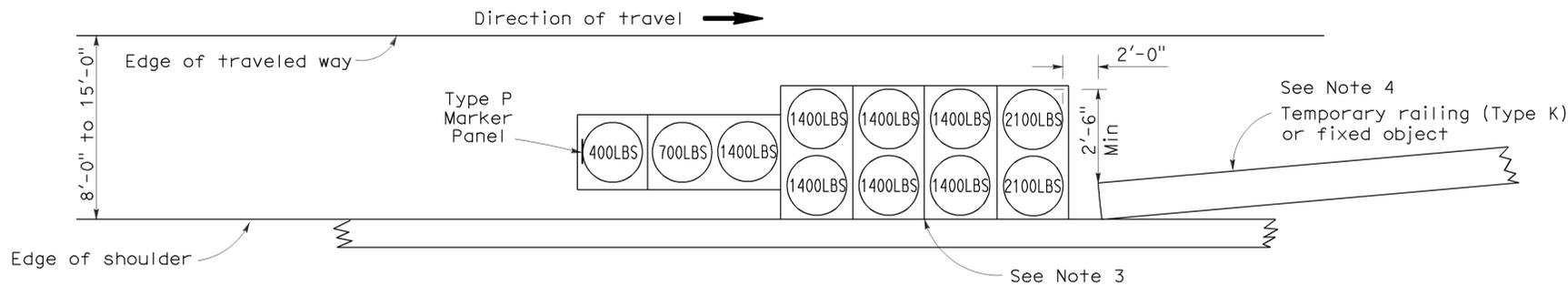
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	17	19

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

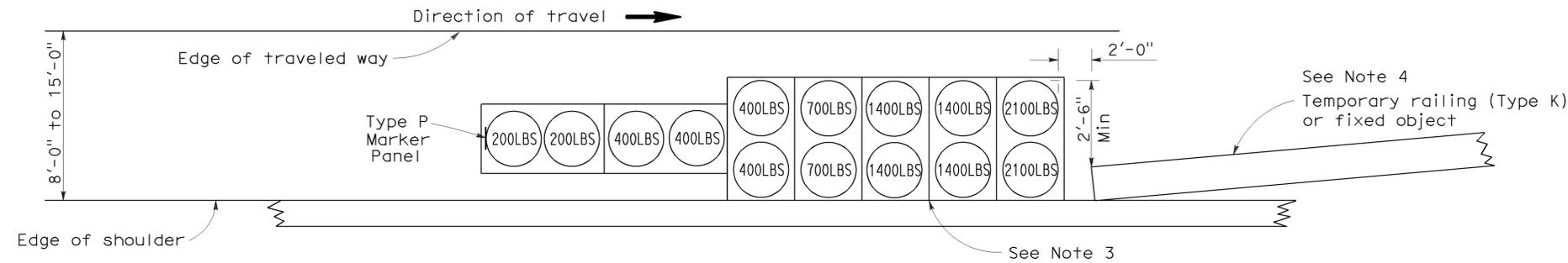
June 6, 2008  
PLANS APPROVAL DATE

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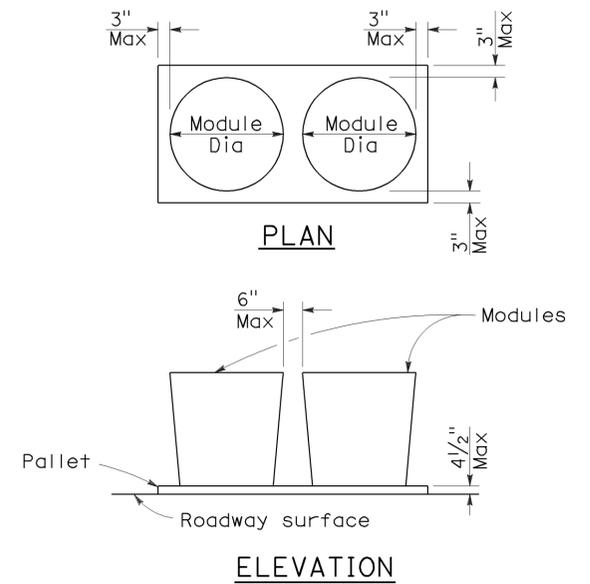
To accompany plans dated March 29, 2010



**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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	18	19

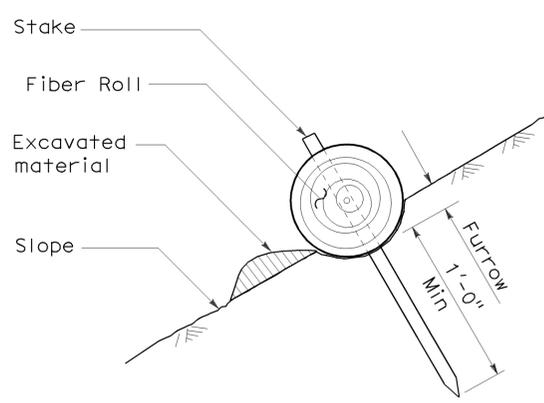
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT

April 3, 2009  
 PLANS APPROVAL DATE

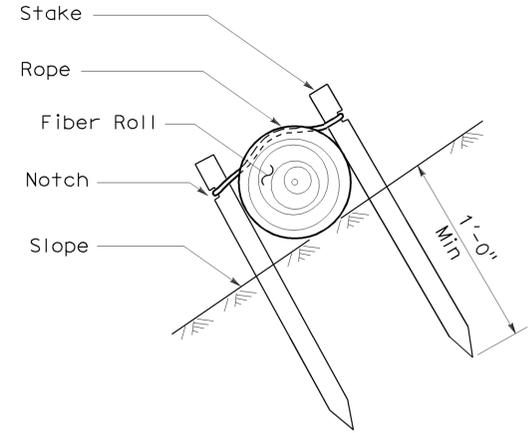
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 11-30-10  
 2-25-09  
 STATE OF CALIFORNIA

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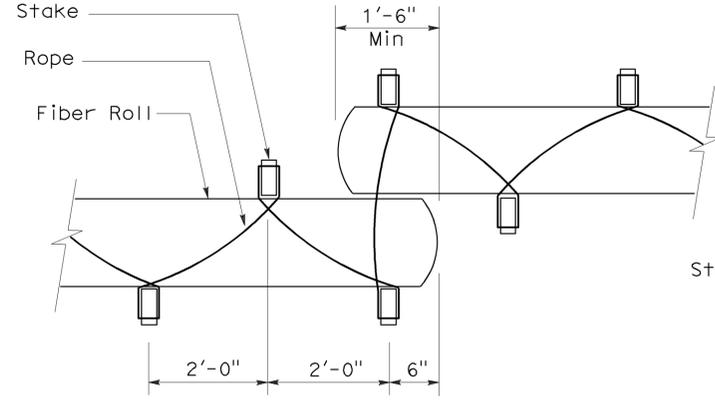
To accompany plans dated March 29, 2010



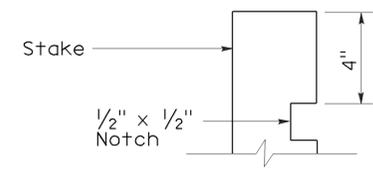
**SECTION**  
**TEMPORARY FIBER ROLL**  
**(TYPE 1)**



**SECTION**  
**TEMPORARY FIBER ROLL**  
**(TYPE 2)**

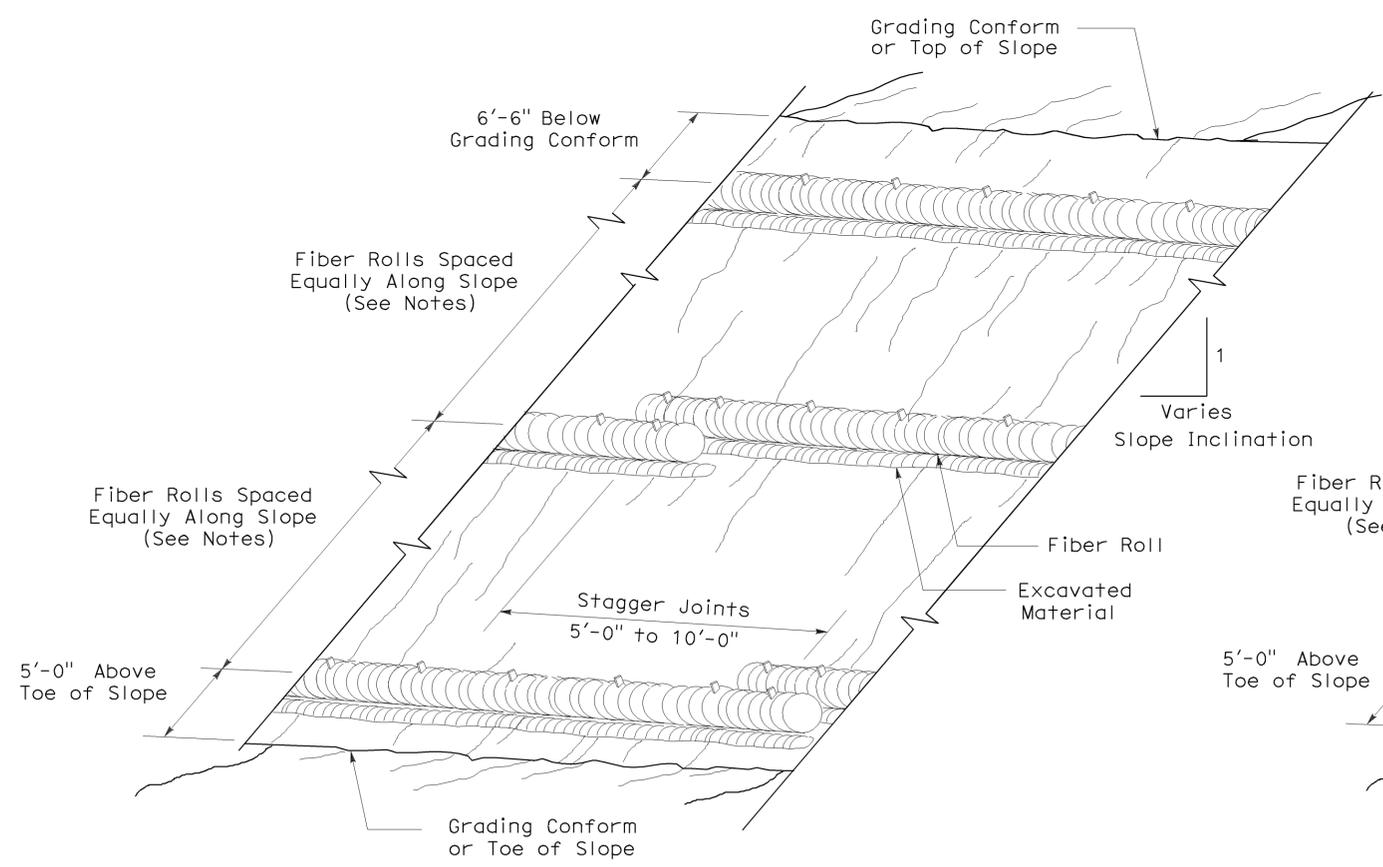


**PLAN**

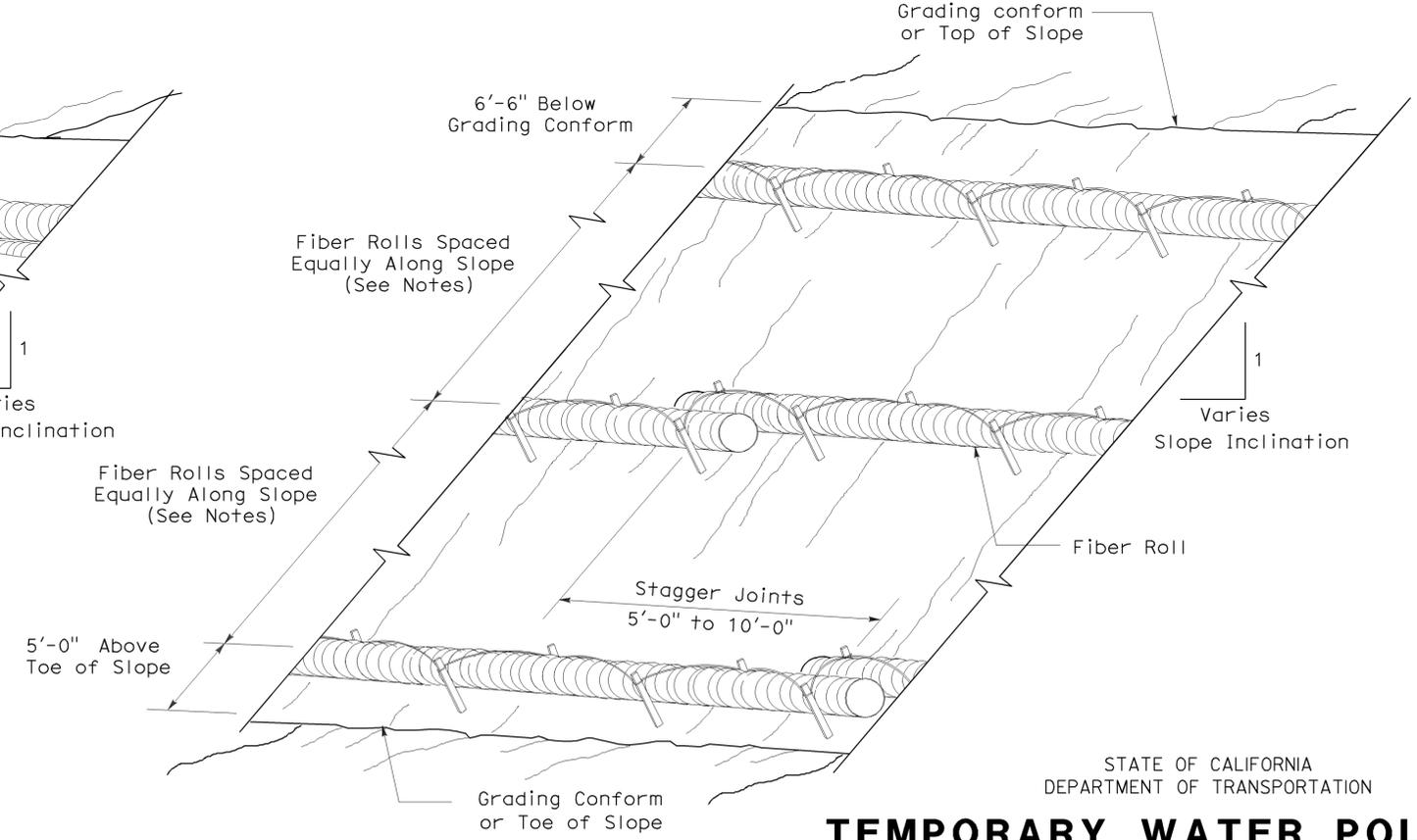


**ELEVATION**  
**STAKE NOTCH DETAIL**

- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
  2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 1)**



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 2)**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**(TEMPORARY FIBER ROLL)**

NO SCALE

RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56  
 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

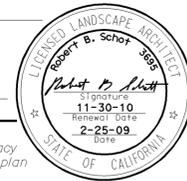
**REVISED STANDARD PLAN RSP T56**

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2006 REVISED STANDARD PLAN RSP T56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Sac	16	R15.1/R15.5	19	19

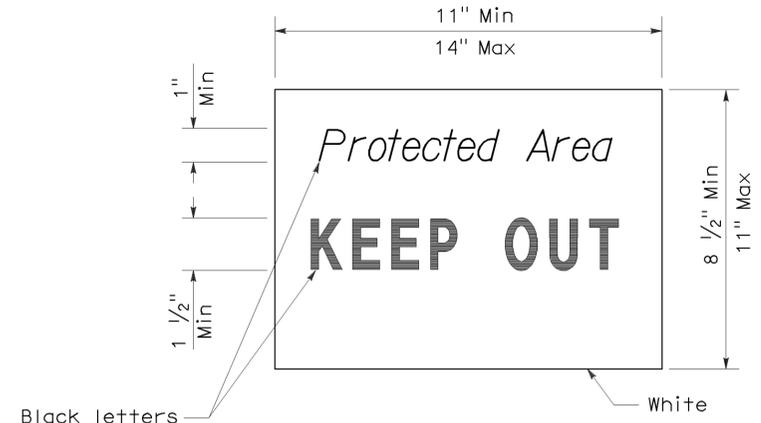
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



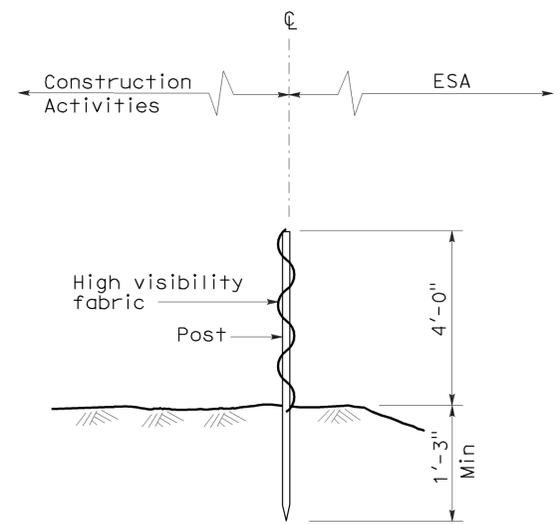
To accompany plans dated March 29, 2010

**NOTE:**

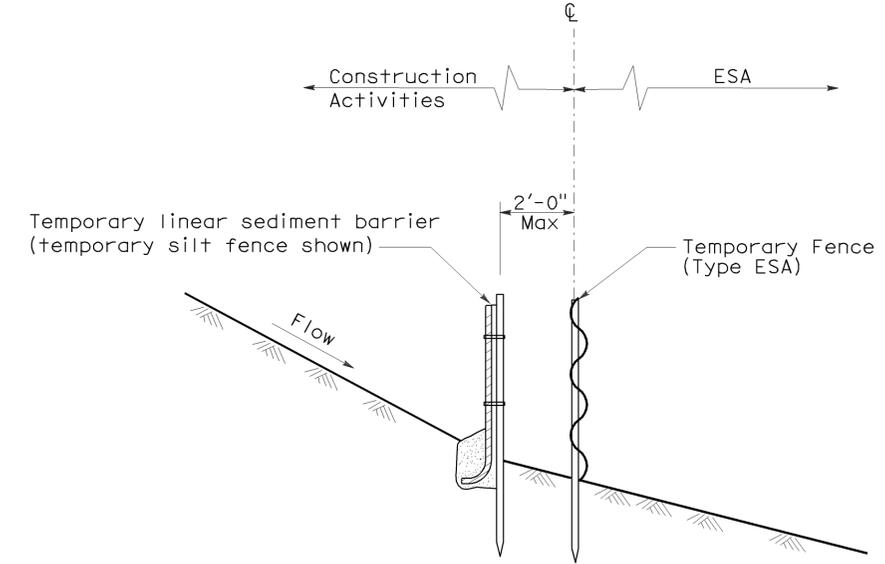
1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.



**SIGN DETAIL**

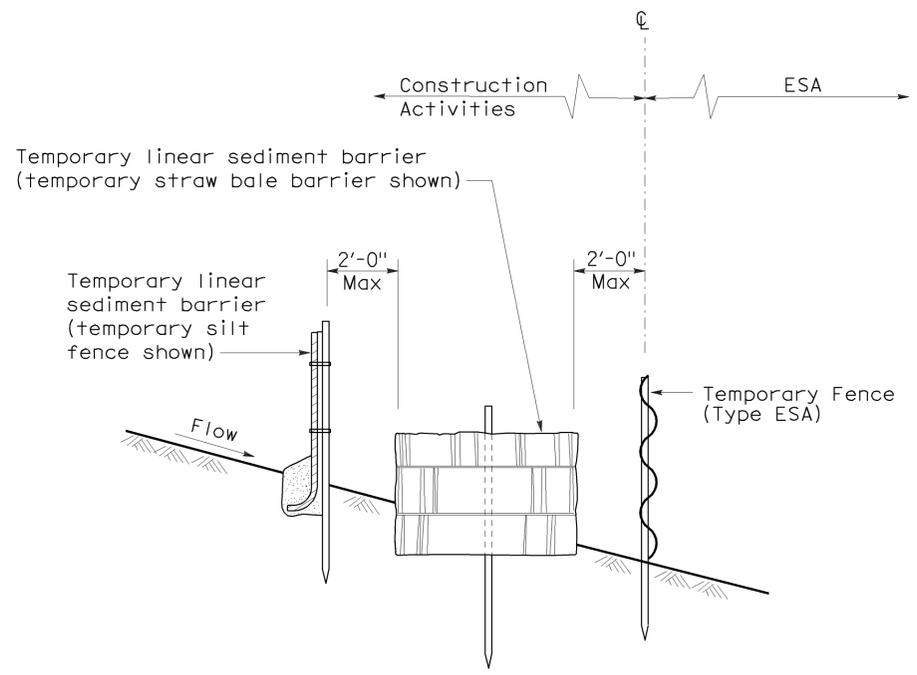


**SECTION TEMPORARY FENCE (TYPE ESA)**



**SECTION PLACEMENT DETAIL FOR TEMPORARY LINEAR SEDIMENT BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)**

(See Note 1 )



**SECTION PLACEMENT DETAIL FOR TEMPORARY SILT FENCE AND TEMPORARY STRAW BALE BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)**

(See Note 1 )

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**[TEMPORARY FENCE (TYPE ESA)]**  
 NO SCALE

NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS  
 THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP T65**

2006 NEW STANDARD PLAN NSP T65