

INDEX OF PLANS

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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  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN IMPERIAL COUNTY**  
**AT AND NEAR PALO VERDE FROM**  
**0.4 MILE NORTH OF MIDWAY WELL ROAD**  
**TO RIVERSIDE COUNTY LINE**

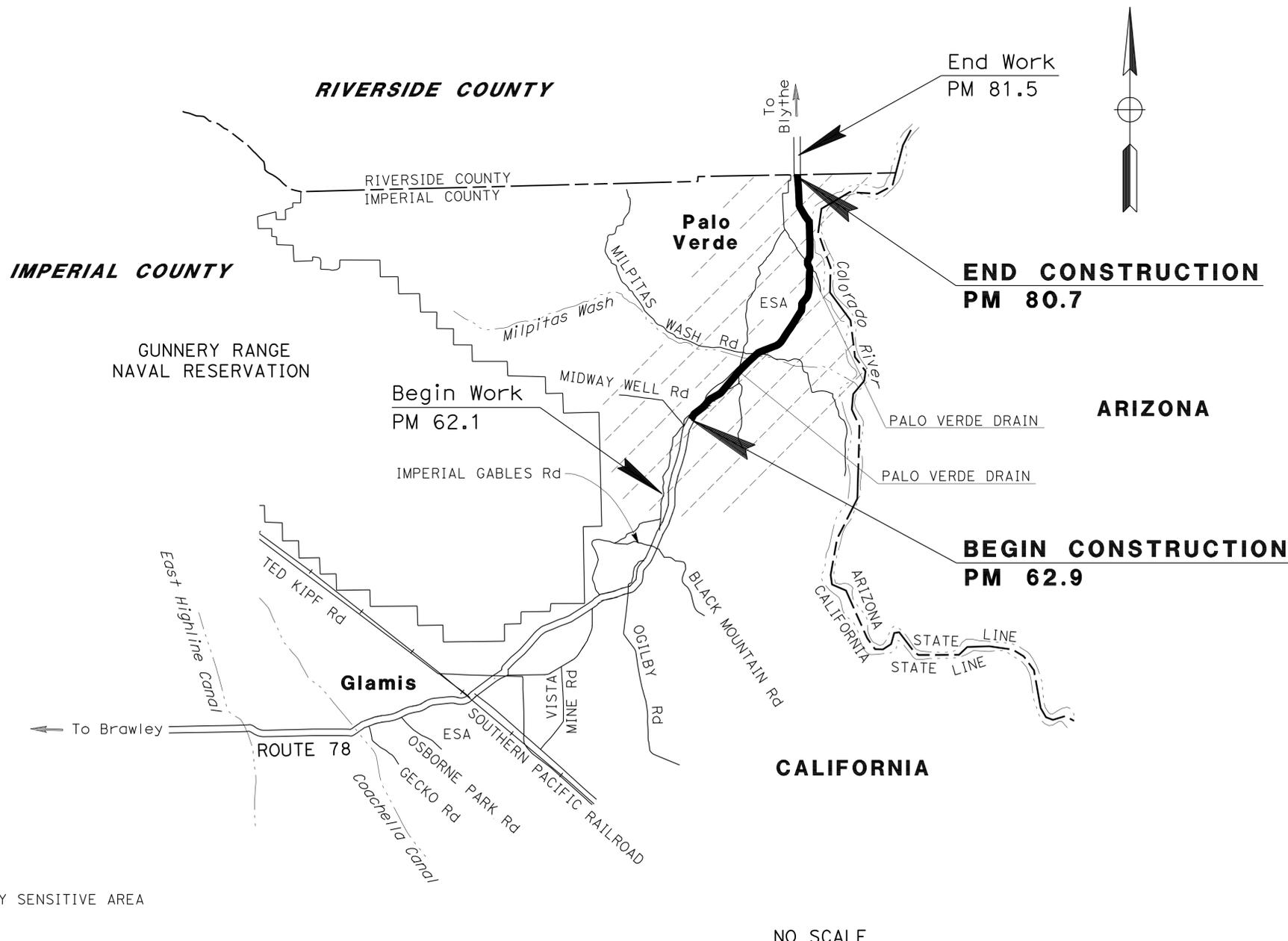
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	1	14





LOCATION MAP



 - ENVIRONMENTALLY SENSITIVE AREA

NO SCALE

PROJECT MANAGER  
**ALBERTO GAYON**  
 DESIGN ENGINEER  
**DARYOOSH SHIMI**

 03-08-12  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**March 5, 2012**  
 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.

DARYOOSH SHIMI

No. 42953  
Exp. 03-31-14  
CIVIL

CONTRACT No.	<b>11-2M2104</b>
PROJECT ID	<b>1100020406</b>

LAST REVISION 03-12-12 DATE PLOTTED => 12-MAR-2012 TIME PLOTTED => 1:5:56

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	2	14

<i>Daryoosh Shimi</i>		03-08-12
REGISTERED CIVIL ENGINEER	DATE	
03-05-12		
PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER	
DARYOOSH SHIMI	
No.	42953
Exp.	3-31-14
CIVIL	

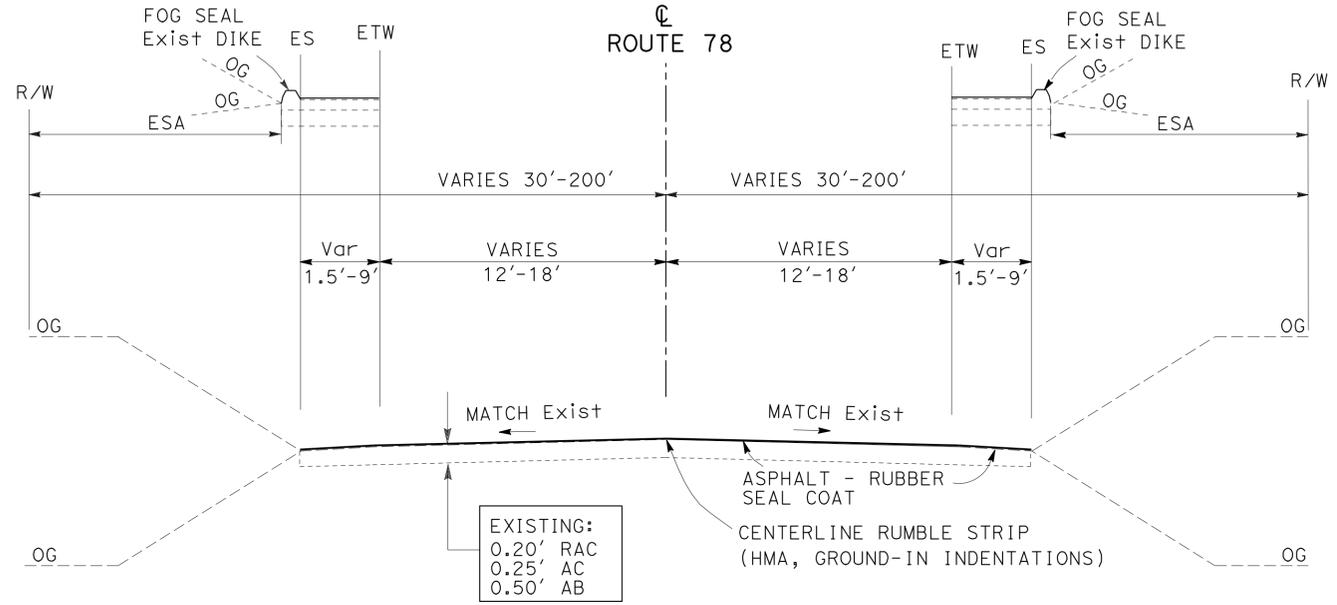
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTION) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- FOG SEAL COAT SHALL BE APPLIED TO ALL EXISTING DIKES. FOR DIKE LOCATIONS, SEE QUANTITIES SHEETS.

**DESIGN DESIGNATION (ROUTE 78)**

2011 ADT = 2,200  
 2031 ADT = 5,500  
 T% = 12% OF ADT

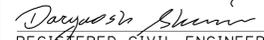
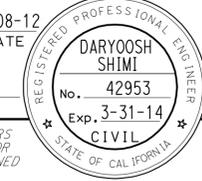


**ROUTE 78**  
 PM 62.9 TO 80.7

**ABBREVIATIONS:**  
 ESA - ENVIRONMENTALLY SENSITIVE AREA

HECTOR GRACIA	REVISOR
DARYOOSH SHIMI	DATE
ALBERTO GAYON	DATE
MAINTENANCE	DATE

03-12-12 15:56

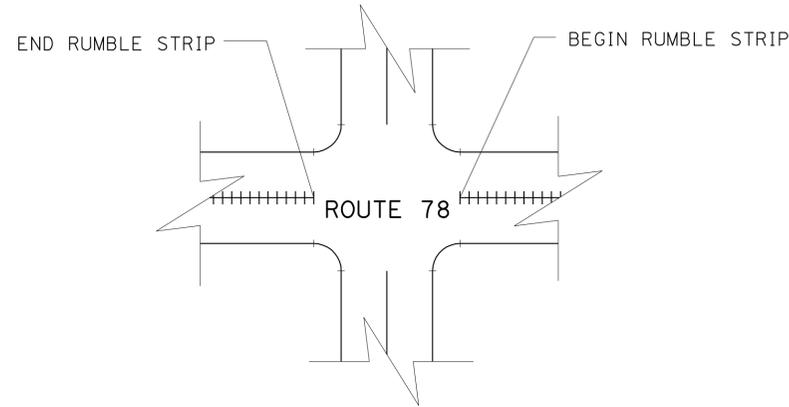
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	3	14
			03-08-12	DATE	
REGISTERED CIVIL ENGINEER			DATE		
03-05-12			PLANS APPROVAL DATE		
			<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

**NOTES:**

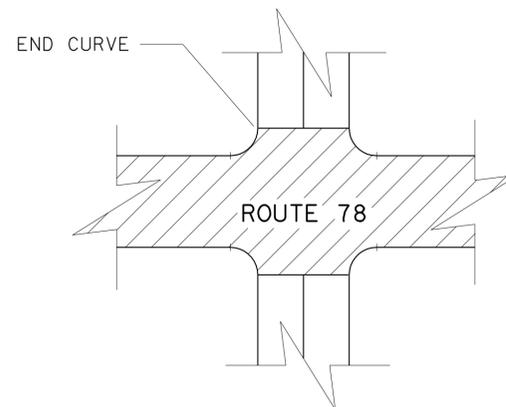
1. THERMOPLASTIC STRIPE SHALL BE PLACED OVER CENTERLINE RUMBLE STRIP (HMA, GROUND-IN INDENTATIONS).
2. SEE STANDARD PLAN A40B FOR RUMBLE STRIP (HMA, GROUND-IN INDENTATIONS).
3. CENTERLINE RUMBLE STRIP (HMA, GROUND-IN INDENTATIONS) SHALL NOT BE PLACED AT INTERSECTIONS, TURN LOCATIONS AND BRIDGES.
4. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND.
5. SEE QUANTITIES SHEET FOR LOCATIONS AND TYPES OF TRAFFIC LINE DETAILS.

**LEGEND:**

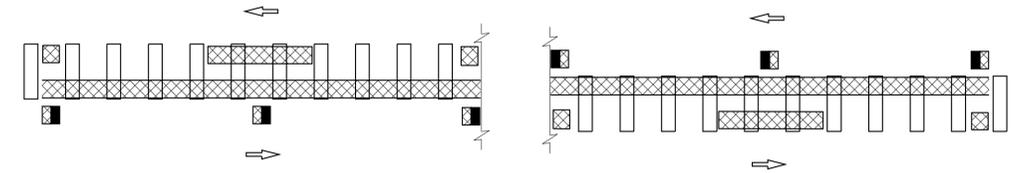
-  = ASPHALT - RUBBER SEAL COAT
-  = DIRECTION OF TRAVEL
-  = CENTERLINE RUMBLE STRIP (AC, GROUND-IN INDENTATIONS)
-  = PAVEMENT MARKER (TYPE D)
-  = PAVEMENT MARKER (TYPE H)
-  = 4" YELLOW THERMOPLASTIC TRAFFIC STRIPE



**TYPICAL RUMBLE STRIP PLACEMENT AT INTERSECTIONS**

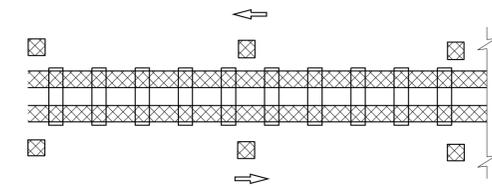


**TYPICAL LIMITS OF CONSTRUCTION AT INTERSECTIONS**



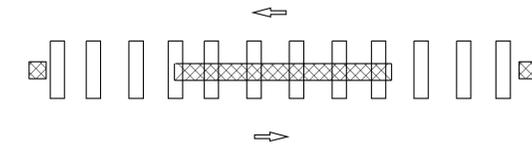
**DETAILS 19 WITH CENTERLINE RUMBLE STRIP**

PM 62.90-PM 80.15



**DETAIL 22 WITH CENTERLINE RUMBLE STRIP**

PM 62.90-PM 80.15



**DETAIL 6 WITH CENTERLINE RUMBLE STRIP**

PM 62.90-PM 80.15

**CONSTRUCTION DETAILS**

NO SCALE

**C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 Caltrans®  
 FUNCTIONAL SUPERVISOR: ALBERTO GAYON  
 CALCULATED/DESIGNED BY: ALBERTO GAYON  
 CHECKED BY: DARYOOSH SHIMI  
 REVISED BY: ALBERTO GAYON  
 DATE REVISED: DARYOOSH SHIMI

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	4	14

REGISTERED CIVIL ENGINEER DATE 03-07-12  
 03-05-12 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
**SHAHIN T. ADIBI**  
 No. 54839  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA

**NOTES:**

- EXACT LOCATION OF CONSTRUCTION AREA SIGNS WILL BE DETERMINED BY THE ENGINEER.
- FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA), INDICATING CALIFORNIA MUTCD.
- EXISTING UTILITIES ARE NOT SHOWN ON THESE PLAN SHEETS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND ADJUST THE FIELD LOCATION OF SIGN POSTS IN CONSULTATION WITH THE ENGINEER.

**LEGEND:**

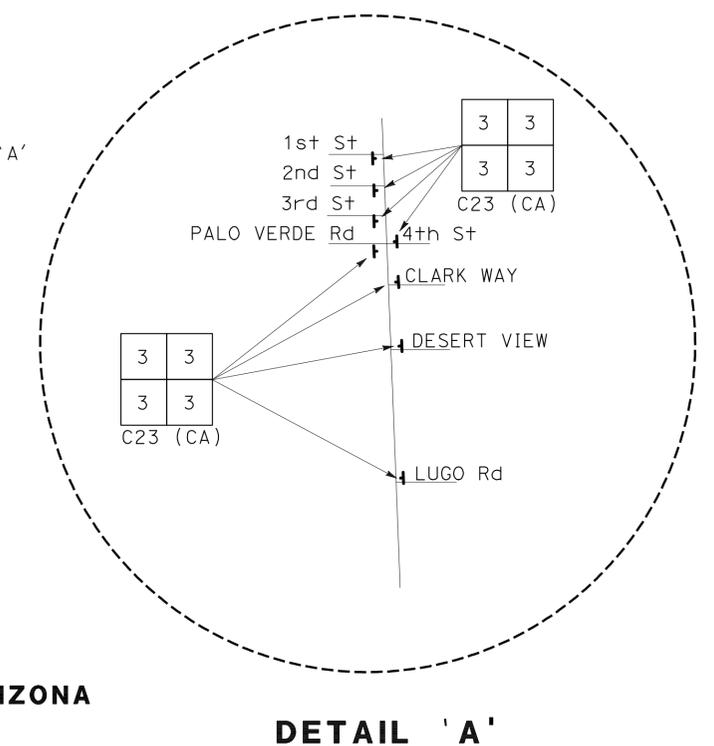
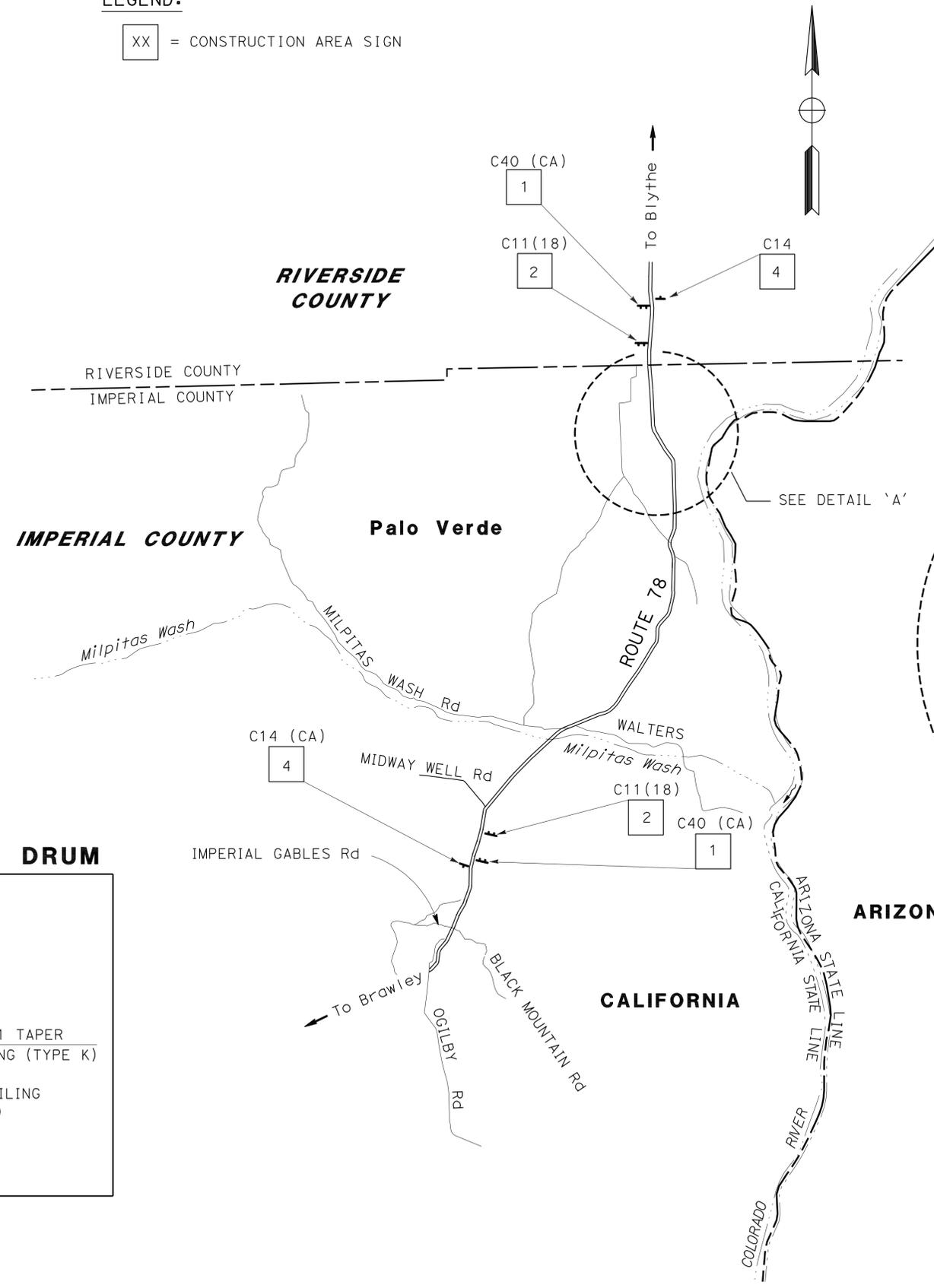
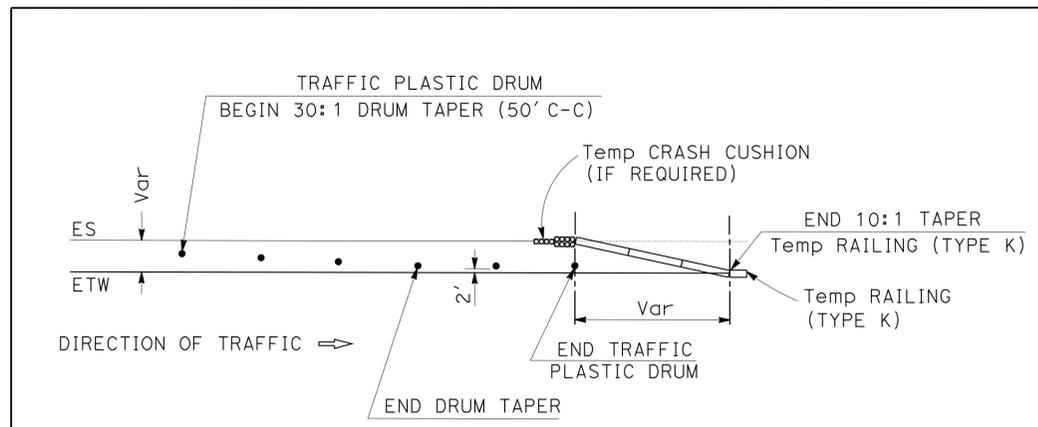
XX = CONSTRUCTION AREA SIGN

**CONSTRUCTION AREA SIGNS**

SIGN No.	CODE	PANEL SIZE (In)	No. OF POST AND SIZE (In)	No. OF SIGNS
1	C40 (CA)	72 X 36	2-4 X 6 (S)	2
2	C11(18) (CA)	60 X 36	2-4 X 4 (S)	2
3	C23 (CA)	48 X 48	1-4 X 6 (S)	8
4	C14 (CA)	48 X 24	1-4 X 4 (S)	2
TOTAL				14

(S) DENOTES STATIONARY MOUNTED SIGN

**TYPICAL PLACEMENT OF TRAFFIC PLASTIC DRUM**



**CONSTRUCTION AREA SIGNS**  
NO SCALE  
**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: CAMILLE ABOU FADEL  
 CALCULATED/DESIGNED BY: ROBERT EDEJER  
 CHECKED BY: SHAHIN ADIBI  
 REVISED BY: ROBERT EDEJER  
 DATE REVISED:

### PAVEMENT DELINEATION QUANTITIES

ROUTE	LOCATION	DETAIL No.	PAVEMENT MARKER SUMMARY		TRAFFIC STRIPE SUMMARY			REMARKS	
			RETROREFLECTIVE (EA)		PAINT LF 1-COAT	THERMOPLASTIC (LF)			
			TYPE D YELLOW	TYPE H YELLOW		4" (SOLID)	4" (BROKEN 36'-12')		8"
78 ↓	PM 62.9 TO PM 80.7	6	500			23,918		L = 23,918 LF	
		19	634	1,266		30,360	30,360		
		22	3,510			42,082	84,164		
		27B					180,470		
		29	64			1,480	2,960		
		32	246			4,646	4,646		4,646
		38A							
SUBTOTAL			4,954	1,266	78,568	302,600	58,924	886	
TOTAL			6,220		78,568	302,600	58,924	886	

ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS OTHERWISE NOTED.

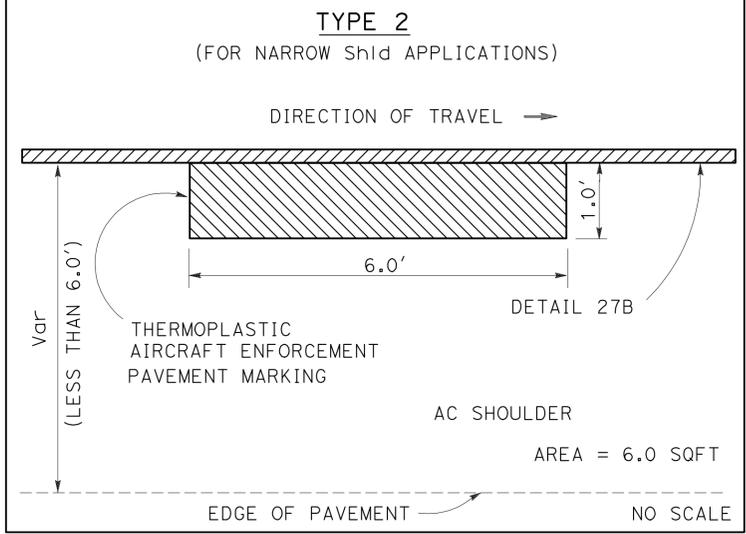
### REMOVE PAINTED TRAFFIC STRIPE

LOCATION (PM)	REMOVE TRAFFIC STRIPE (LF)	REMARKS
62.9 TO 80.7	317,331	DETAILS 6, 19, 22, 27B, 29, 32
TOTAL	317,331	

### MILEPOST MARKER

ROUTE	(EA)	LOCATION
78 EB	1	PM 67.0
	1	PM 68.0
	1	PM 69.0
	1	PM 74.0
	1	PM 80.0
78 WB	1	PM 68.5
	1	PM 77.5
	1	PM 80.5
TOTAL	8	

### AIRCRAFT ENFORCEMENT MARKING



### THERMOPLASTIC PAVEMENT MARKING

ROUTE	LOCATION (PM)	AIRCRAFT* ENFORCEMENT MARKING (TYPE 2) SQFT	REMARKS
78	62.9 TO 80.7	102	17 LOCATIONS
TOTAL		102	

\* - SEE DETAIL ON THIS SHEET.

### REMOVE THERMOPLASTIC TRAFFIC STRIPE

LOCATION (PM)	REMOVE THERMOPLASTIC TRAFFIC STRIPE (LF)	REMARKS
62.9 TO 80.7	1,772	DETAIL 38A
TOTAL	1,772	

### REMOVE PAVEMENT MARKER (N)

ROUTE	LOCATION	TYPE		REMARKS
		D	H	
78	PM 62.9 TO PM 80.7	4,954	1,266	
TOTAL		6,220		

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: CAMILLE ABOU FADEL  
 CALCULATED/DESIGNED BY: SHAHIN ADIBI  
 CHECKED BY: MARY BETH HAYES  
 REVISIONS: 03-07-12, 03-05-12  
 REVISOR: MARY BETH HAYES, DATE: 03-07-12  
 REVISOR: MARY BETH HAYES, DATE: 03-05-12

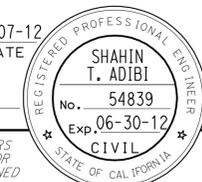
LAST REVISION: 03-12-12 DATE PLOTTED => 12-MAR-2012 TIME PLOTTED => 1:56

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	6	14

 03-07-12  
 REGISTERED CIVIL ENGINEER DATE

03-05-12  
 PLANS APPROVAL DATE

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**LEGEND:**

U/L = UPPER/LOWER CASE LETTERING  
 Caps = CAPITAL LETTERING  
 Num = NUMERAL SIZE  
 Deg = DEGREE

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

FUNCTIONAL SUPERVISOR: CAMILLE ABOU FADEL

CALCULATED/DESIGNED BY: MARY BETH HAYES  
 CHECKED BY: SHAHIN ADIBI

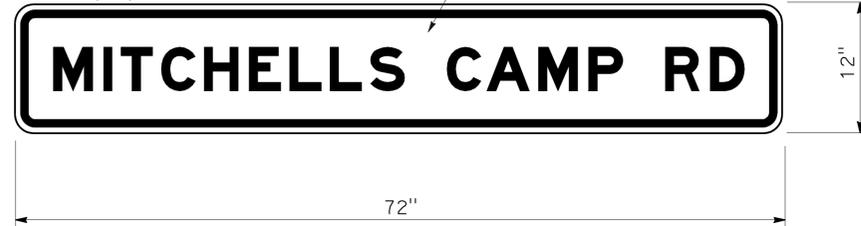
REVISED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

SIGN #13  
 G8 (CA)



LEGEND				ARROW	
LINE No.	U/L	Caps	Num	Deg	LENGTH
1	6E(M)/4.5E(M)				
2	6E(M)/4.5E(M)			180	10

SIGN #14  
 G7-2 (CA)

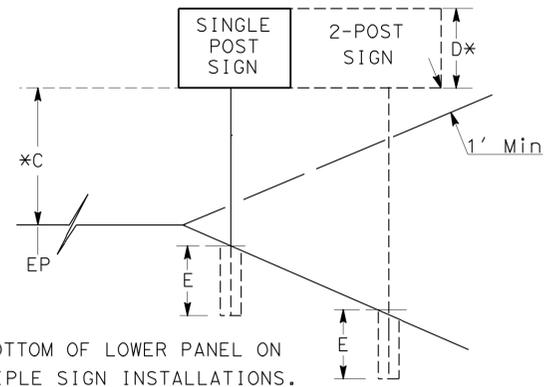


LEGEND				ARROW	
LINE No.	U/L	Caps	Num	Deg	LENGTH
1		4E(M)			

**SIGN DETAILS**  
 NO SCALE **SD-1**

**NOTES:**

- FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA), INDICATING CALIFORNIA MUTCD.
- EXACT LOCATION OF SIGNS AND POSTS TO BE DETERMINED BY THE ENGINEER.
- MINIMUM POST LENGTHS WERE CALCULATED ASSUMING LEVEL GROUND SURFACE FROM THE EP. ENSURE "C" DIMENSIONS ARE MET. POST LENGTHS MAY VARY DUE TO SITE CONDITIONS.
- REFER TO "FURNISH ROADSIDE SIGN PANEL" CHART FOR FURTHER INFORMATION.



**ROADSIDE SIGN QUANTITIES**

SIGN No.	CODE	POST MILE	PANEL SIZE		D	C	E	Min POST LENGTH	POST SIZE				ROADSIDE SIGN		REMOVE ROADSIDE SIGN	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	REMARKS
			Horiz	Vert					4X4	4X6	6X6	6X8	ONE POST	TWO POST			
			INCHES X INCHES	F+													
1	R2-1 (65)	65.3 E/B	48 X 60			6.0									1		
2	R6-1 (55) (CA)	65.5 E/B											1				
3	R6-3 (55) (CA)	65.5 E/B	48 X 60		5.0	6.0	4.5	15.5		X			1				
4	R6-4 (55) (CA)	65.7 E/B	48 X 60		5.0	6.0	4.5	15.5		X			1				
5	R2-1 (65)	65.1 W/B	48 X 60			6.0									1		
6	R6-1 (55) (CA)	64.9 W/B											1				
7	R6-3 (55) (CA)	64.9 W/B	48 X 60		5.0	6.0	4.5	15.5		X			1				
8	R6-4 (55) (CA)	64.7 W/B	48 X 60		5.0	6.0	4.5	15.5		X			1				
9	R2-1 (65)	79.6 W/B	48 X 60			6.0									1		
10	R6-1 (55) (CA)	79.5 W/B											1				
11	R6-3 (55) (CA)	79.5 W/B	48 X 60		5.0	6.0	4.5	15.5		X			1				
12	R6-4 (55) (CA)	79.4 W/B	48 X 60		5.0	6.0	4.5	15.5		X			1				
13	G8 (CA)	68.6 E/B	78 X 36		3.0	6.0	4.5	13.5		X				1			
14	G7-2 (CA)	71.5 E/B	72 X 12												1	INSTALL UNDER EXISTING W2-2	
<b>TOTAL</b>												6	1	3	4		

**SIGN QUANTITIES  
SQ-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	8	14

 03-07-12  
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03-05-12  
 PLANS APPROVAL DATE

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**NOTES:**

1. GREEN-Grn, WHITE-Wht, BLACK-BIk, BLUE-Blu, YELLOW-Ylw, BROWN-Brn, RED-Red, ORANGE-Org, CREAM-Crm.
2. REFER TO "ROADSIDE SIGN QUANTITIES" CHART FOR FURTHER INFORMATION.
3. FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA), INDICATING CALIFORNIA MUTCD.

**FURNISH ROADSIDE SIGN PANEL**

SIGN No.	CODE	PANEL SIZE Horiz X Vert (INCHES)	BACKGROUND		LEGEND			SIGN PANEL				
			SHEETING COLOR	RETRO- REFLECTIVE ASTM TYPE	SHEETING COLOR	REFLECTIVE ASTM TYPE	BLACK(NON- REFLECTIVE)	SINGLE SHEET ALUMINUM (SQFT) UNFRAMED		SINGLE SHEET ALUMINUM (SQFT) FRAMED		PROTECTIVE OVERLAY PREMIUM FILM
								0.063"	0.080"	0.063"	0.080"	
1	R2-1 (65)	48 X 60	Wht	IV	Blk		X		20.0			X
3	R6-3 (55) (CA)	48 X 60	Wht	IV	Blk		X		20.0			X
4	R6-4 (55) (CA)	48 X 60	Wht	IV	Blk		X		20.0			X
5	R2-1 (65)	48 X 60	Wht	IV	Blk		X		20.0			X
7	R6-3 (55) (CA)	48 X 60	Wht	IV	Blk		X		20.0			X
8	R6-4 (55) (CA)	48 X 60	Wht	IV	Blk		X		20.0			X
9	R2-1 (65)	48 X 60	Wht	IV	Blk		X		20.0			X
11	R6-3 (55) (CA)	48 X 60	Wht	IV	Blk		X		20.0			X
12	R6-4 (55) (CA)	48 X 60	Wht	IV	Blk		X		20.0			X
13	G8 (CA)	78 X 36	Grn	IV	Wht	IV				19.5		X
14	G7-2 (CA)	72 X 12	Ylw	IV	Blk		X			6.0		X
<b>TOTAL</b>									180.0	25.5		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: CAMILLE ABOU FADEL  
 CALCULATED/DESIGNED BY: MARY BETH HAYES  
 CHECKED BY: SHAHIN ADIBI  
 REVISED BY: MARY BETH HAYES  
 DATE REVISED:

**SIGN QUANTITIES  
SQ-2**

LAST REVISION: DATE PLOTTED => 12-MAR-2012  
 03-12-12 TIME PLOTTED => 15:56

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	9	14

*Daryoosh Shimi* 03-08-12  
 REGISTERED CIVIL ENGINEER DATE

03-05-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**DARYOOSH SHIMI**  
 No. 42953  
 Exp. 3-31-14  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 Caltrans®  
 FUNCTIONAL SUPERVISOR: ALBERTO GAYON  
 CALCULATED/DESIGNED BY: HECTOR GRACIA  
 CHECKED BY: DARYOOSH SHIMI  
 REVISIONS: REVISOR: DATE  
 REVISOR: DATE

**ROADWAY QUANTITIES**

LOCATION		ASPHALT-RUBBER SEAL COAT								DESCRIPTION
		DIRECTION	LENGTH (N) FT	TRAVELED WAY WIDTH (N) FT	SHOULDER WIDTH (N) FT	ASPHALT-RUBBER BINDER TON	SCREENINGS (HOT-APPLIED) TON	ASPHALTIC EMULSION (FOG SEAL COAT) TON	SAND COVER (SEAL) TON	
PM	PM									
62.90	63.70	EB	4,224.0	12	1.5	15.83	101.38	1.40	12.67	
63.70	65.50		9,504.0	12	2.0	36.94	236.54	3.26	29.57	
65.50	65.60		528.0	12	7.0	2.79	17.83	0.25	2.23	
65.60	74.00		44,352.0	12	2.0	172.41	1,103.87	15.23	137.98	
74.00	75.57		8,289.6	12	3.5	35.68	228.42	3.15	28.55	
75.57	75.60									BRIDGE
75.60	77.60		10,560.0	12	5.5	51.31	328.53	4.53	41.07	
77.60	77.90		1,584.0	12	9.0	9.24	59.14	0.82	7.39	
77.90	79.19		6,811.2	12	5.5	33.10	211.90	2.92	26.49	
79.19	79.23									BRIDGE
79.23	80.16		4,910.4	12	5.5	23.86	152.77	2.11	19.10	
80.16	80.70	↓	2,851.2	24	5.5	23.35	149.53	2.06	18.69	
62.90	73.10	WB	53,856.0	12	2.0	209.35	1,340.42	18.49	167.55	
73.10	73.60		2,640.0	12	4.0	11.73	75.09	1.04	9.39	
73.60	75.57		10,401.6	12	1.5	38.99	249.64	3.44	31.20	
75.57	75.60									BRIDGE
75.60	77.80		11,616.0	12	4.5	53.22	340.74	4.70	42.59	
77.80	78.00		1,056.0	12	9.0	6.16	39.42	0.54	4.93	
78.00	79.19		6,283.2	12	4.5	28.79	184.31	2.54	23.04	
79.19	79.23									BRIDGE
79.23	80.70	↓	7,761.6	12	4.5	35.56	227.67	3.14	28.46	
SUBTOTAL						788.31	5,047.20	69.62	630.90	
TURN-OUTS						9.80	62.82	0.86	7.85	
DIKES								0.56		
TOTAL						798.11	5,110.02	71.04	638.75	

**TURN OUTS**

LOCATION		ASPHALT-RUBBER SEAL COAT					
		DIRECTION	LENGTH (N) FT	WIDTH (N) FT	ASPHALT-RUBBER BINDER TON	SCREENINGS (HOT-APPLIED) TON	ASPHALTIC EMULSION (FOG SEAL COAT) TON
PM							
63.6	EB	800	16	3.55	22.76	0.31	2.84
64.1		63	14	0.24	1.57	0.02	0.20
65.5		60	12	0.20	1.28	0.02	0.16
70.7		200	10	0.56	3.56	0.05	0.44
71.5		222	12	0.74	4.74	0.07	0.59
71.9		380	11	1.16	7.43	0.10	0.93
74.1		126	7	0.24	1.57	0.02	0.20
80.6	↓	800	14	3.11	19.91	0.27	2.49
TOTAL				9.80	62.82	0.86	7.85

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

**SUMMARY OF QUANTITIES Q-1**

LAST REVISION | DATE PLOTTED => 12-MAR-2012 03-12-12 | TIME PLOTTED => 15:56

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	10	14

*Daryoosh Shimi* 03-08-12  
 REGISTERED CIVIL ENGINEER DATE

03-05-12  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
**DARYOOSH SHIMI**  
 No. 42953  
 Exp. 3-31-14  
 CIVIL  
 STATE OF CALIFORNIA

### DIKES

ROUTE	LOCATION		DIRECTION	Exist+ HMA DIKE LENGTH (N)	ASPHALTIC EMULSION (FOG SEAL COAT)
	(PM)	(PM)		(FT)	(TON)
78	62.900	62.921	EB	111	0.01
	63.159	63.235		401	0.04
	63.388	63.483		502	0.05
	64.440	64.472		169	0.02
	66.603	66.680		407	0.04
	67.935	68.069		708	0.07
	70.702	70.712		53	0.00 **
	71.334	71.336		11	0.00 **
	74.071	74.081		53	0.00 **
	74.081	74.132		269	0.02
	74.132	74.192		317	0.03
	74.472	74.553		428	0.04
	75.606	75.615		48	0.00 **
	79.166	79.176	↓	53	0.00 **
	62.900	63.132	WB	1225	0.11
	66.443	66.503		317	0.03
	69.794	69.795		5	0.00
	69.910	69.995		449	0.04
	71.333	71.335		11	0.00 **
	73.096	73.176		422	0.04
	73.587	73.597		53	0.00 **
	73.967	73.987		106	0.01
	74.487	74.497		53	0.00 **
	74.527	74.537		53	0.00 **
	74.687	74.697		53	0.00 **
	74.727	74.737		53	0.00 **
	74.977	75.007		158	0.01
	75.558	75.568		53	0.00 **
	75.608	75.618		53	0.00 **
	79.169	79.179		53	0.00 **
	79.229	79.239	↓	53	0.00 **
				<b>TOTAL</b>	<b>0.56</b>

(N) NOT A SEPARATE PAY ITEM. FOR INFORMATION ONLY.  
 \*\* QUANTITY IS LESS THAN 0.01 TON.

### CENTERLINE RUMBLE STRIP (HMA, GROUND-IN INDENTATIONS)

LOCATION (PM)	LENGTH (S+α)
62.90 TO 80.15	910.8
<b>TOTAL</b>	<b>910.8</b>

## SUMMARY OF QUANTITIES Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE  
 FUNCTIONAL SUPERVISOR: ALBERTO GAYON  
 CALCULATED/DESIGNED BY: HECTOR GRACIA  
 CHECKED BY: DARYOOSH SHIMI  
 REVISED BY: DATE  
 REVISIONS:

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	78	62.9/80.7	11	14

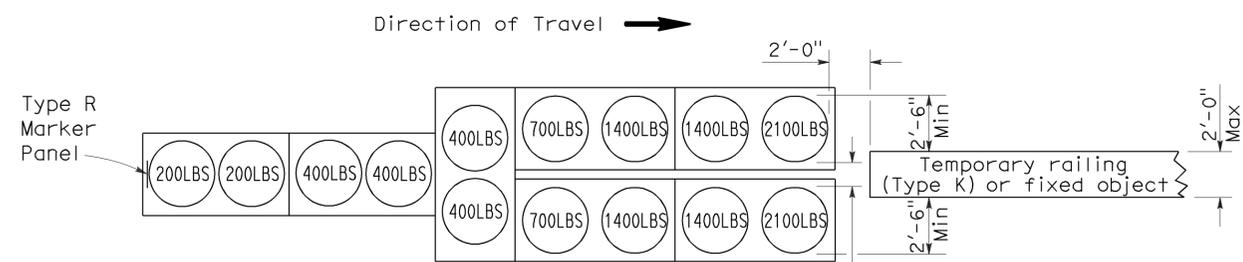
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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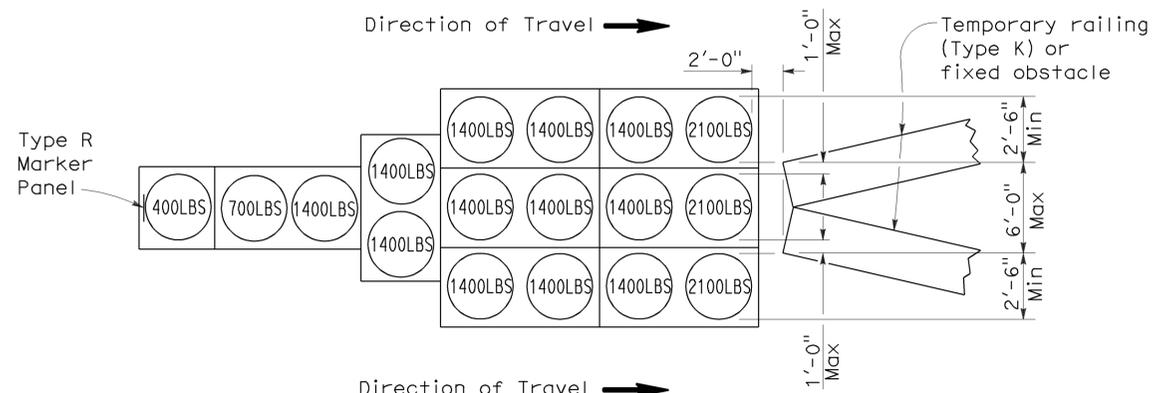
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 03-05-12



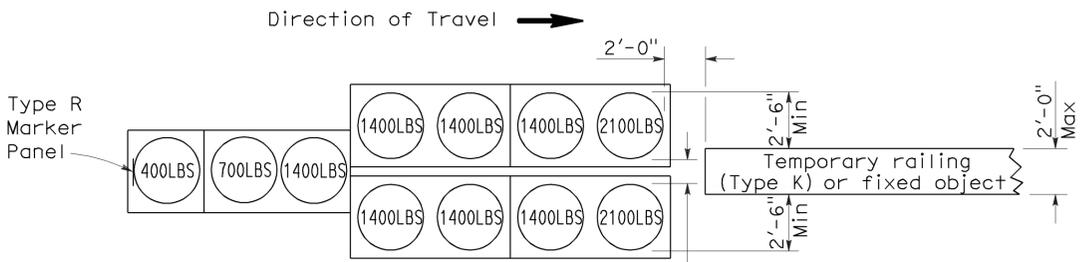
**ARRAY 'TU14'**

Approach speed 45 mph or more



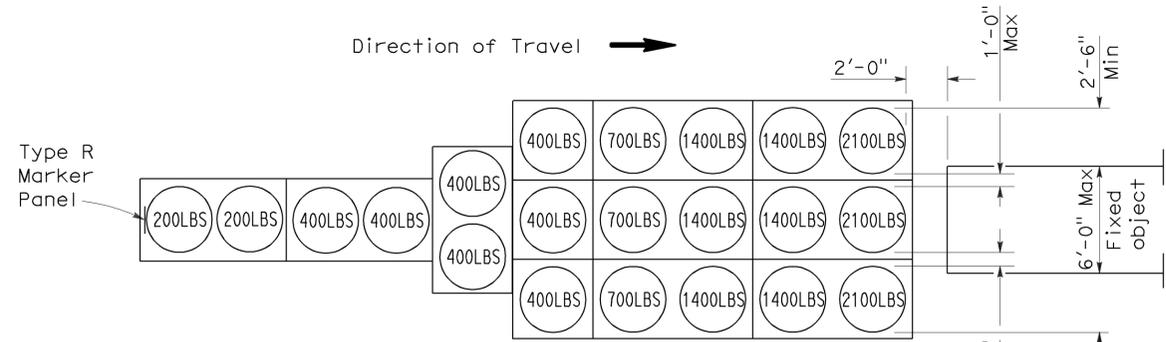
**ARRAY 'TU17'**

Approach speed less than 45 mph



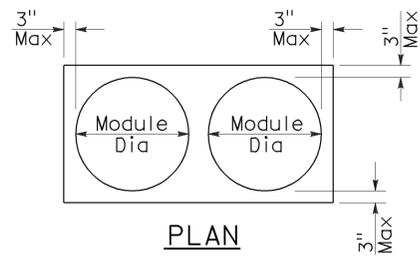
**ARRAY 'TU11'**

Approach speed less than 45 mph

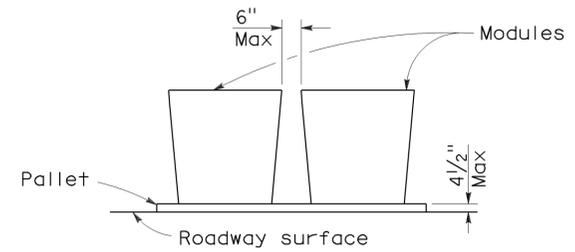


**ARRAY 'TU21'**

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

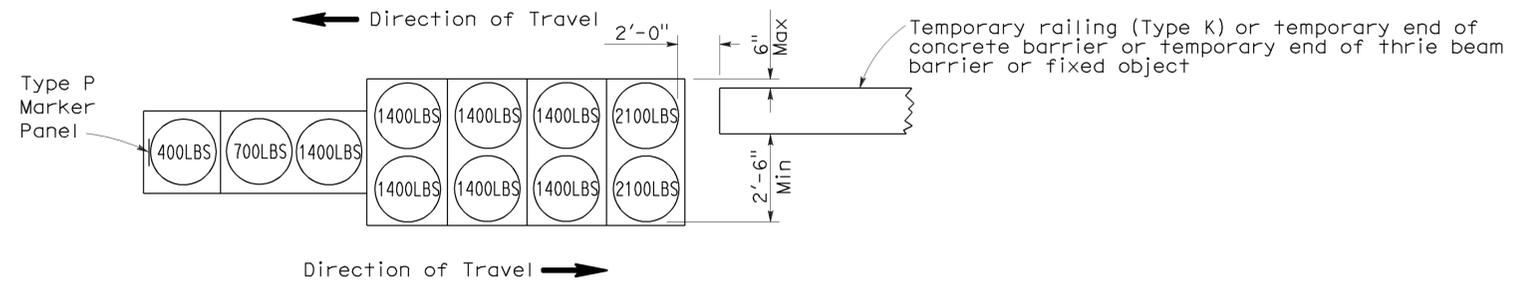
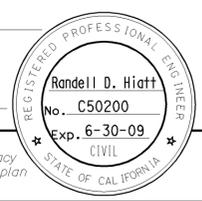
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	78	62.9/80.7	12	14

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

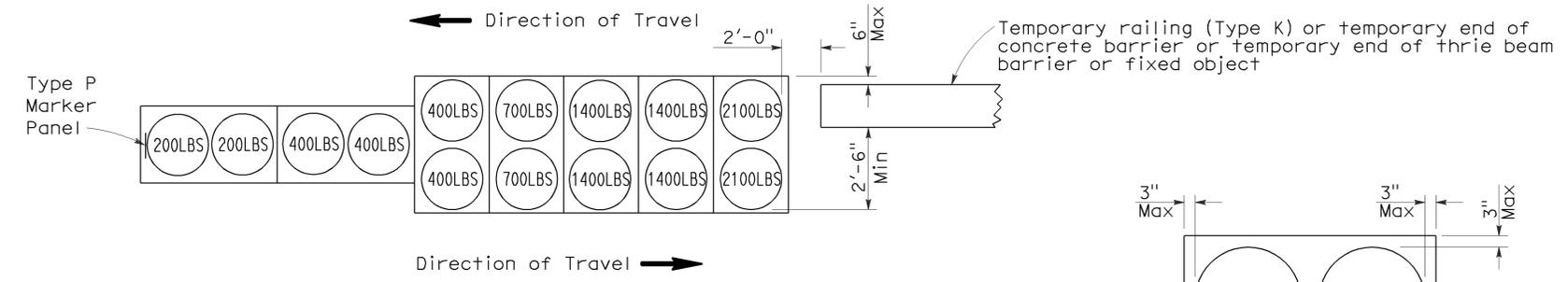
June 6, 2008  
PLANS APPROVAL DATE

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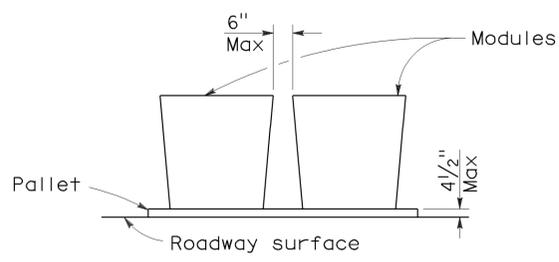
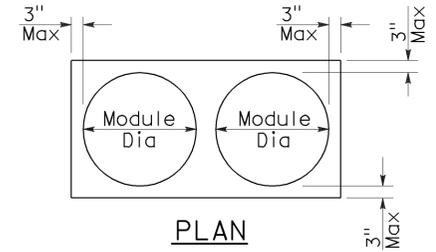
To accompany plans dated 03-05-12



**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

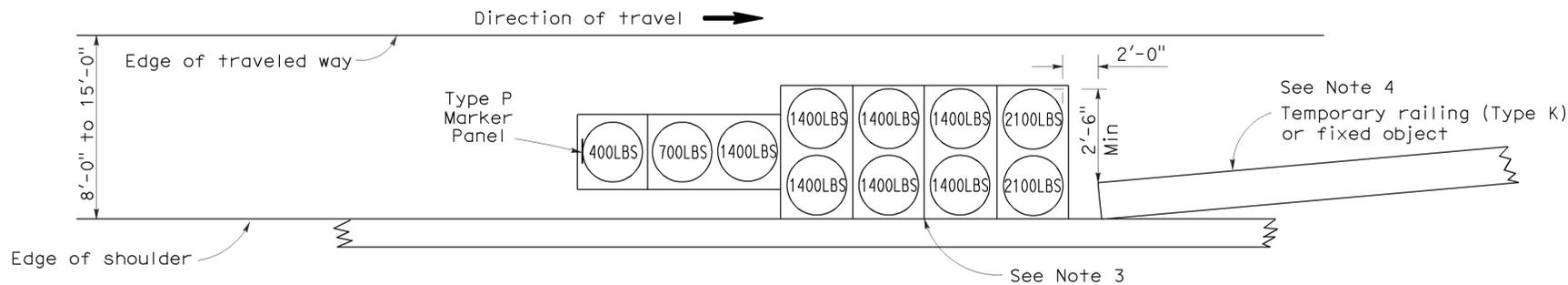
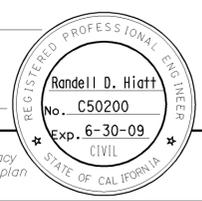
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	78	62.9/80.7	13	14

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

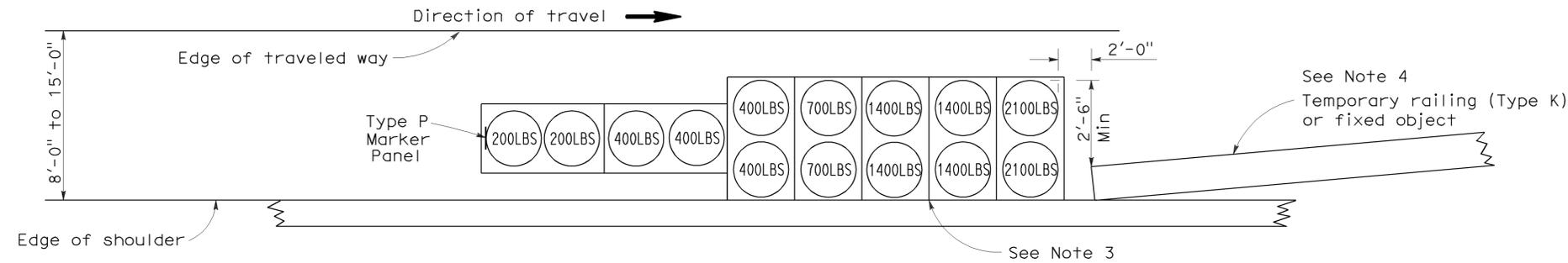
June 6, 2008  
PLANS APPROVAL DATE

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To accompany plans dated 03-05-12



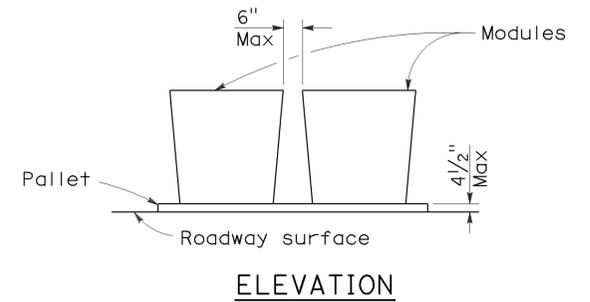
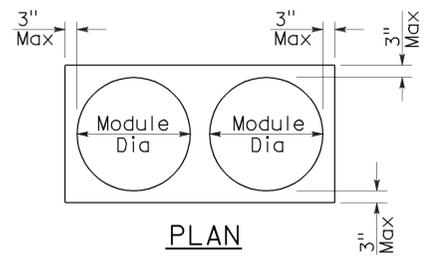
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



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

**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.



**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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	62.9/80.7	14	14

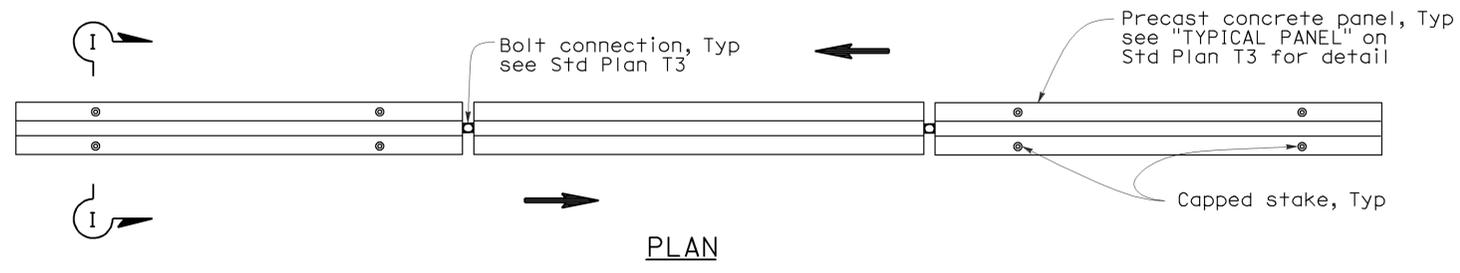
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

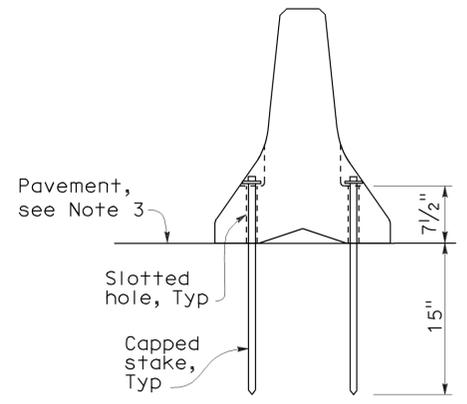
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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 03-05-12

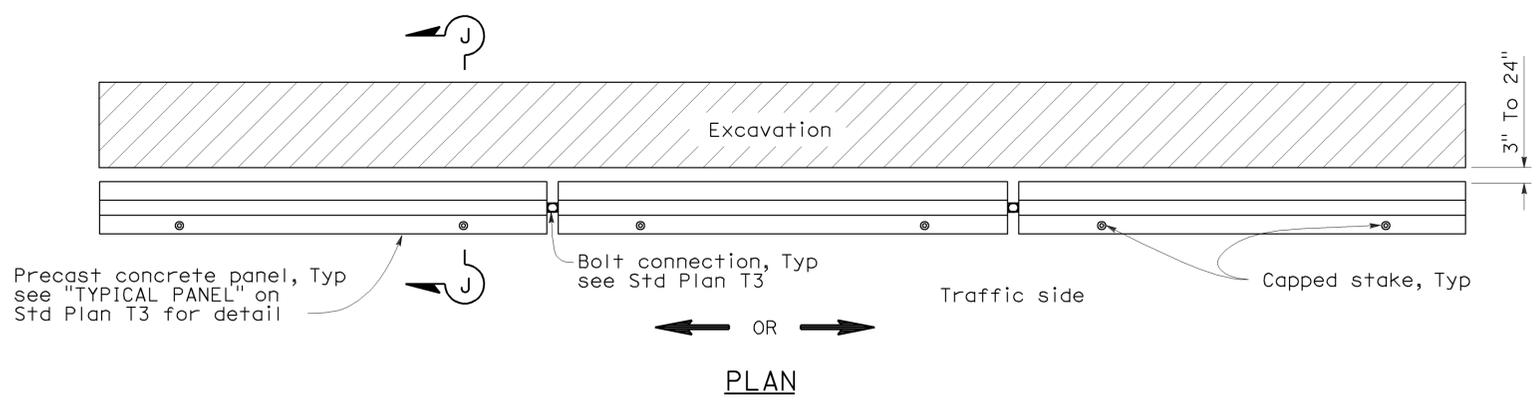


**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1

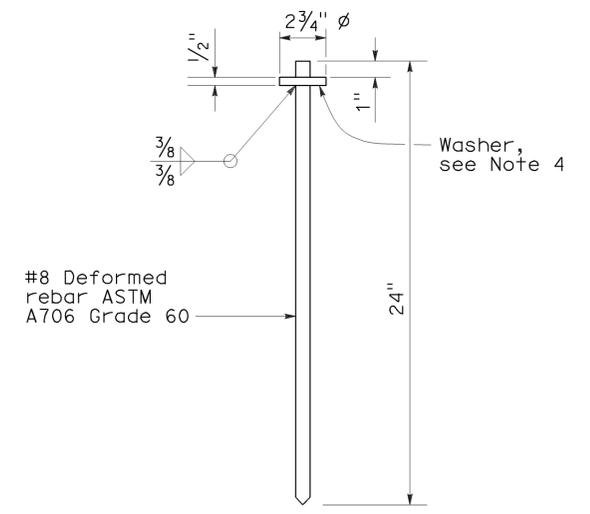
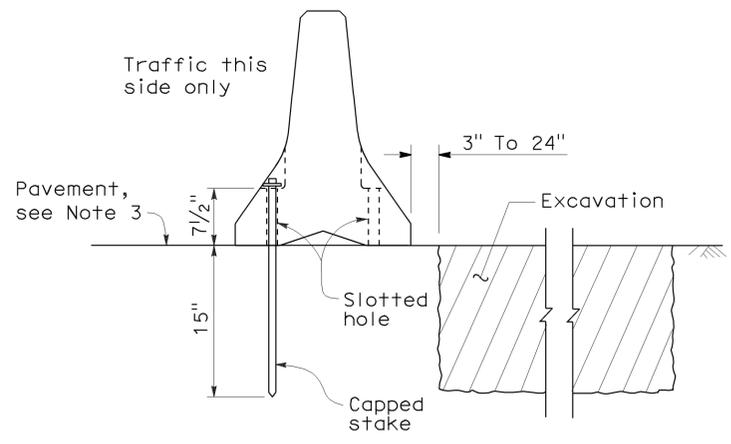


**NOTES:**

1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by  $\Rightarrow$ .



**RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION**  
See Note 2



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING  
(TYPE K)**

NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A