

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	TYPICAL CROSS SECTIONS
4-7	CONSTRUCTION DETAILS
8	CONSTRUCTION AREA SIGNS
9-10	PAVEMENT DELINEATION QUANTITIES
11-14	SUMMARY OF QUANTITIES
15-29	REVISED AND NEW STANDARD PLANS

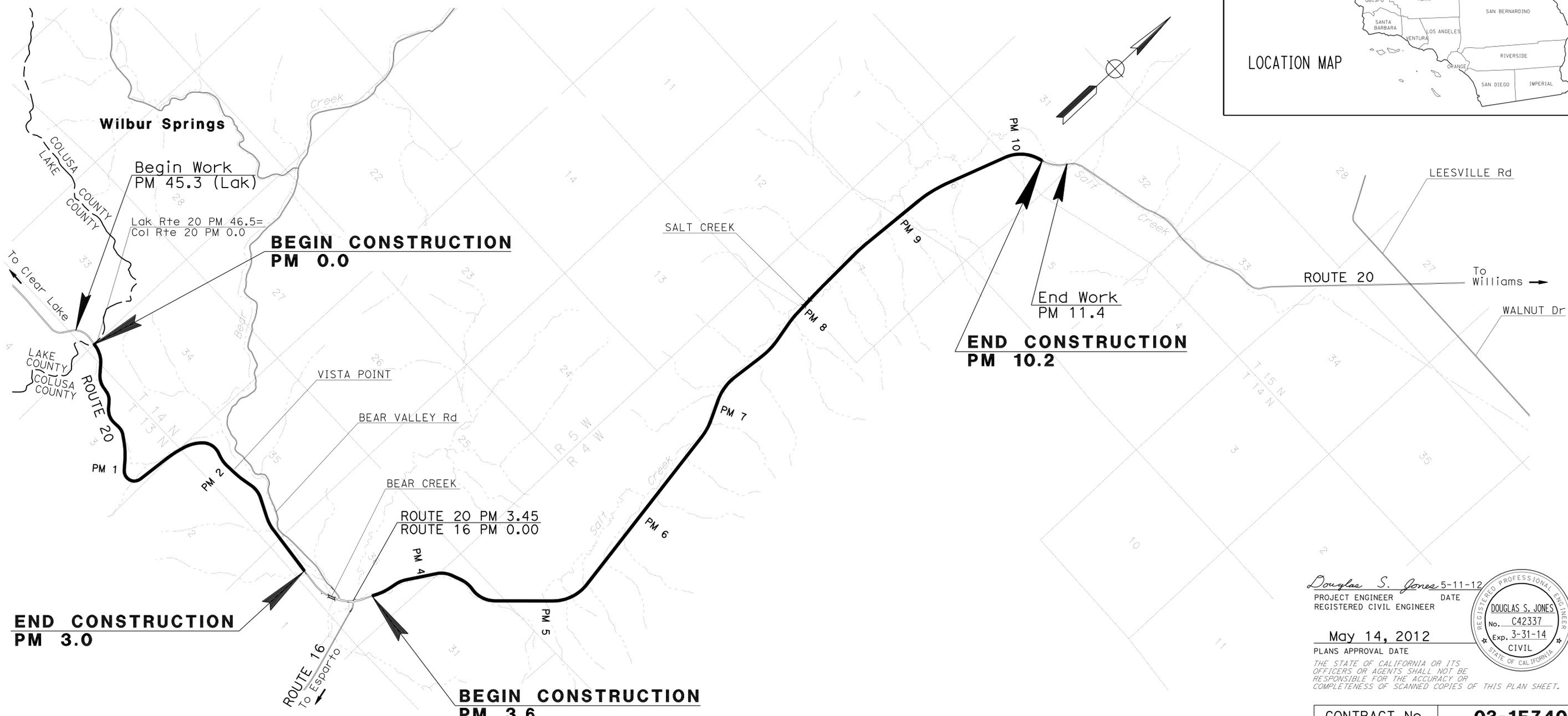
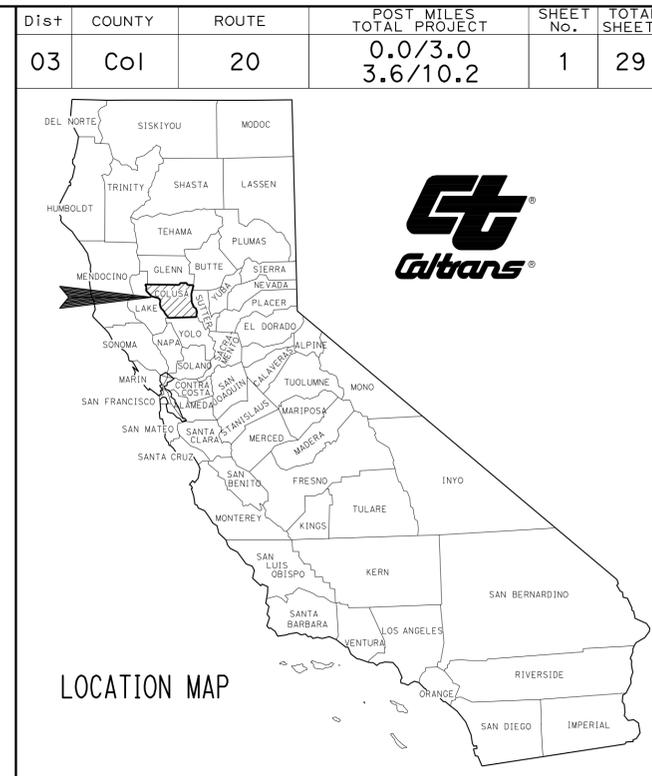
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ACNH-P020(166)

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN COLUSA COUNTY
ABOUT 20 MILES WEST OF WILLIAMS
FROM THE LAKE COUNTY LINE TO
0.5 MILE WEST OF ROUTE 16 AND FROM
0.1 MILE EAST OF ROUTE 16 TO 3.0 MILES WEST OF
WALNUT DRIVE/LEESVILLE ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



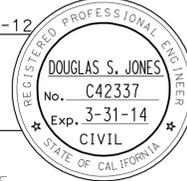
PROJECT MANAGER
RODNEY L. MURPHY

DESIGN ENGINEER
DOUGLAS S. JONES

Douglas S. Jones 5-11-12
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

May 14, 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.



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

NO SCALE

CONTRACT No.	03-1F7404
PROJECT ID	0300020125

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	2	29

Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE
 5-14-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DOUGLAS S. JONES
 No. C42337
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

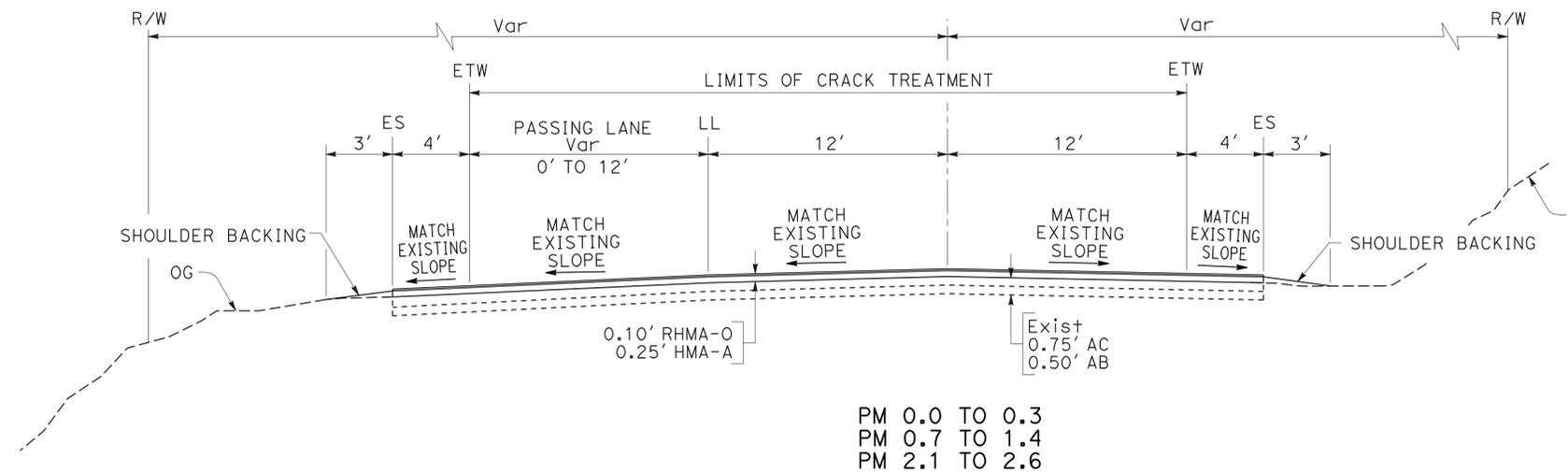
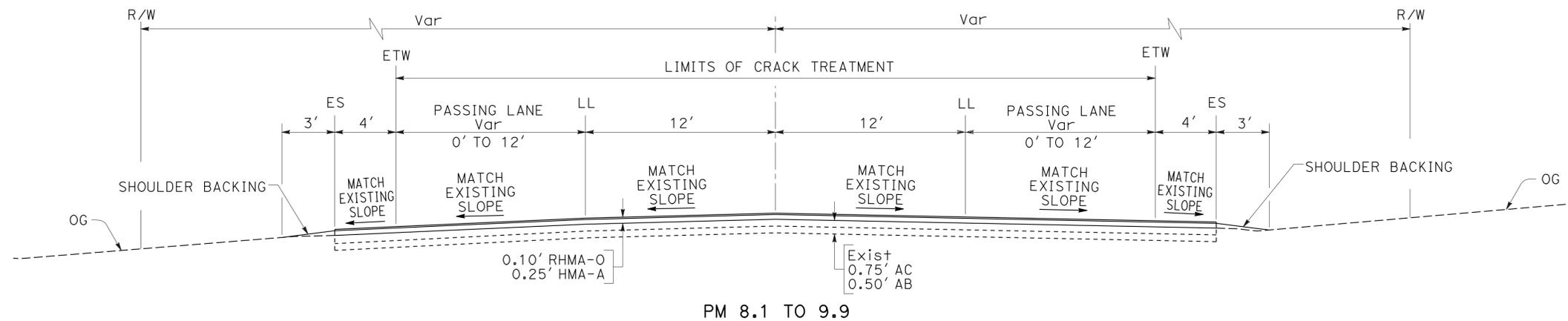
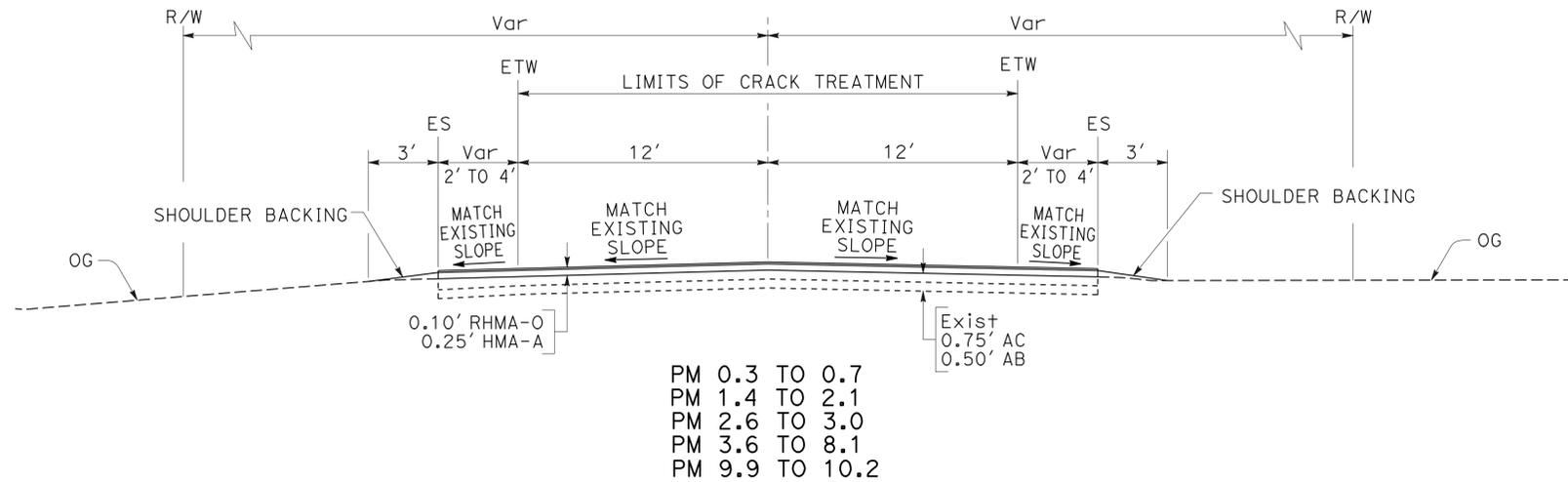
THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
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 COPIES OF THIS PLAN SHEET.

NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- MBGR NOT SHOWN, FOR LOCATIONS SEE SHEETS X-2 AND Q-1.
- FOR LOCATIONS OF "REPLACE ASPHALT CONCRETE SURFACING" SEE SHEET Q-4.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

ABBREVIATIONS:

- LL LANE LINE
 HMA-A HOT MIX ASPHALT (TYPE A)
 RHMA-O RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)



ROUTE 20

TYPICAL CROSS SECTIONS
NO SCALE

X-1

REVISIONS:
 REVISION NO. | DATE | BY | DESCRIPTION
 1 | 05-11-12 | DOUGLAS S. JONES | INITIAL DESIGN
 2 | 05-14-12 | DOUGLAS S. JONES | REVISED PER COMMENTS

KAO THAO
 ROBIN CHEN
 DOUGLAS S. JONES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	3	29

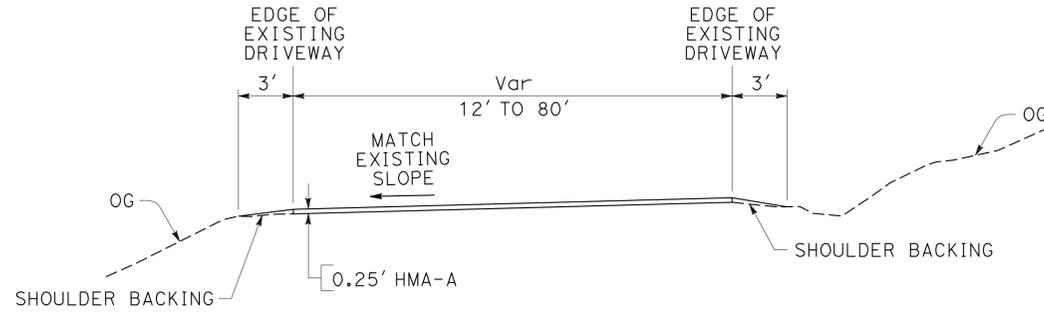
<i>Douglas S. Jones</i>	5-11-12
REGISTERED CIVIL ENGINEER	DATE
5-14-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
DOUGLAS S. JONES
No. C42337
Exp. 3-31-14
CIVIL

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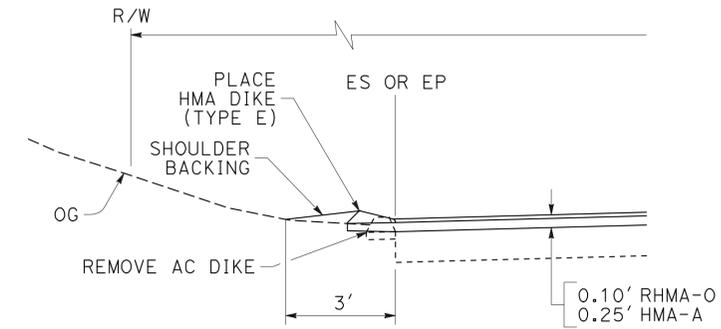
NOTES:

1. ADJUST MBGR PER LOCATIONS ON SHEET Q-1.
2. REMOVE MBGR PER LOCATIONS ON SHEET Q-1.
3. MBGR (7' STEEL POST) PER LOCATIONS ON SHEET Q-1.
4. FOR LOCATIONS OF HMA DIKES, SEE SHEET Q-2 "PLACE HOT MIX ASPHALT DIKE."

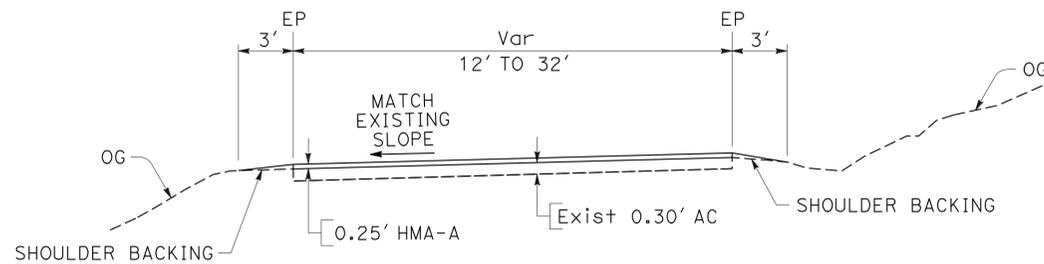


**DRIVEWAYS
(EXISTING UNPAVED)**

PM 1.14 RIGHT, PM 4.15 LEFT, PM 5.12 LEFT, PM 5.66 RIGHT

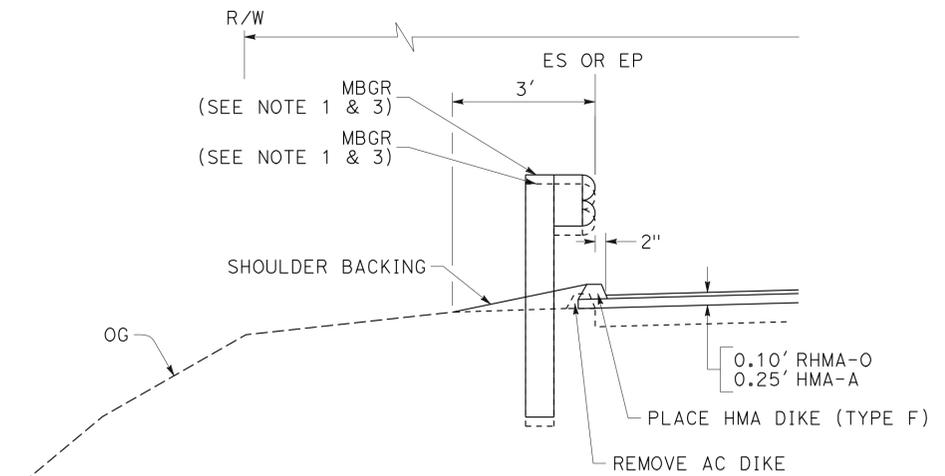


HMA MOUNTABLE DIKE



**DRIVEWAYS
(EXISTING PAVED)**

PM 2.03 LEFT, PM 2.10 LEFT, PM 5.11 RIGHT, PM 6.87 RIGHT,, PM 8.21 RIGHT
PM 8.88 LEFT, PM 8.88 RIGHT, PM 9.45 LEFT, PM 9.60 LEFT, PM 9.60 RIGHT



MBGR WITH HMA DIKE

**TYPICAL CROSS SECTIONS
NO SCALE**

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	REVISOR	DATE
Caltrans DIVISION OF ENGINEERING	DOUGLAS S. JONES	KAO THAO	ROBIN CHEN		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	4	29

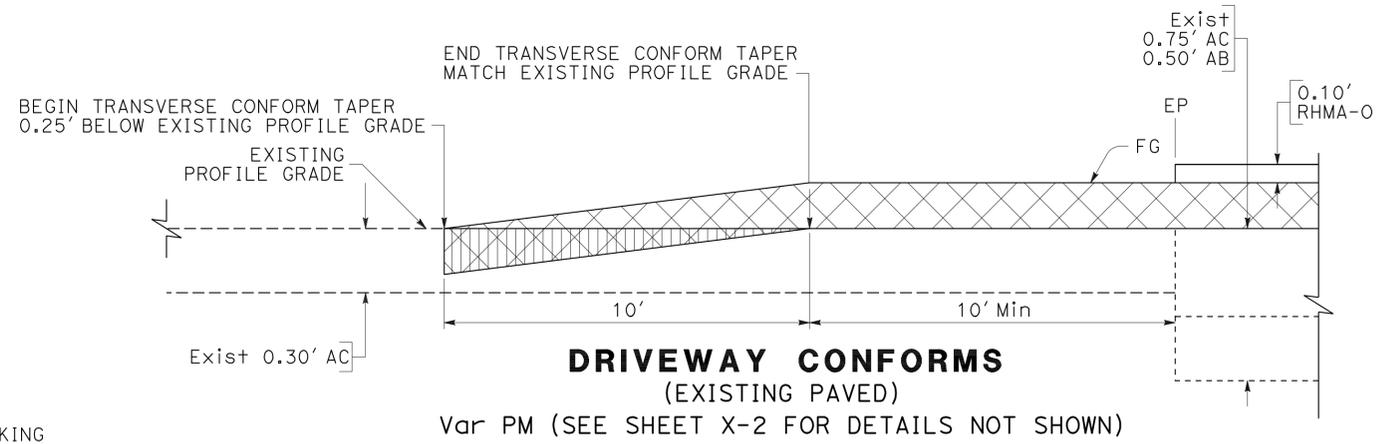
Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE
 5-14-12
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

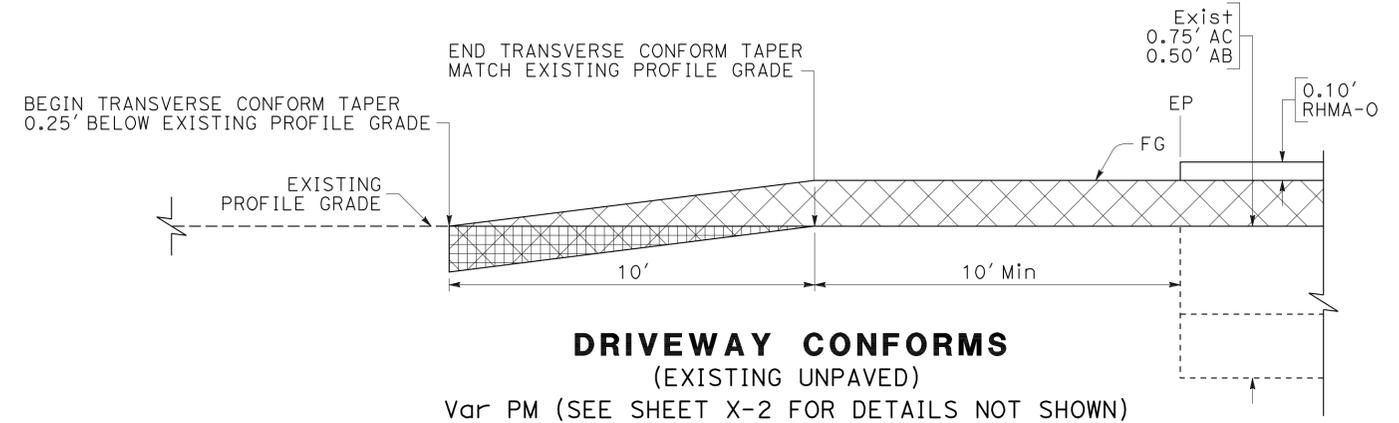
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

LEGEND:

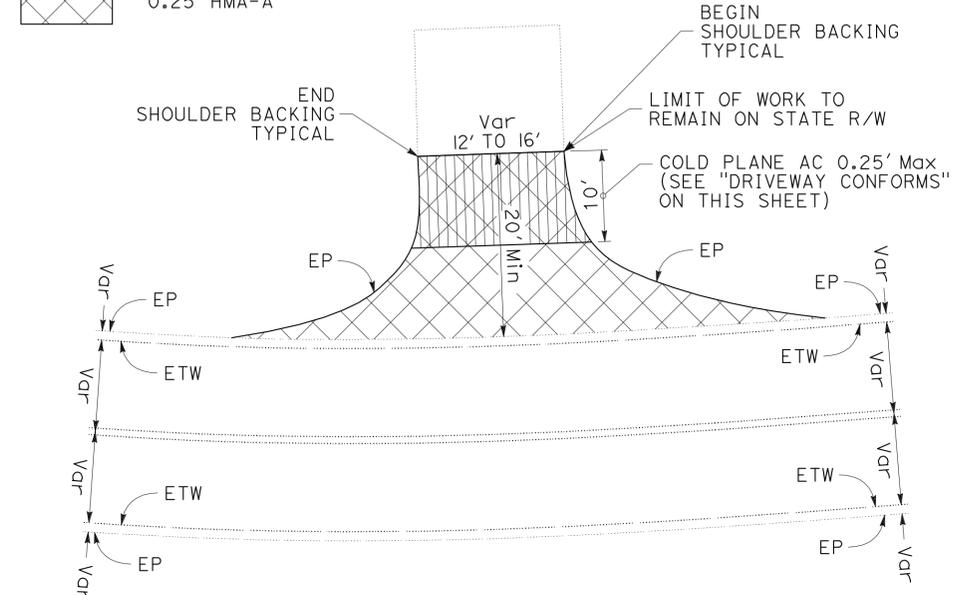
- COLD PLANE AC Pvm+ (0.25' Max) AND 0.25' HMA-A
- ROADWAY EXCAVATION (0.25' Max) AND 0.25' HMA-A
- 0.25' HMA-A



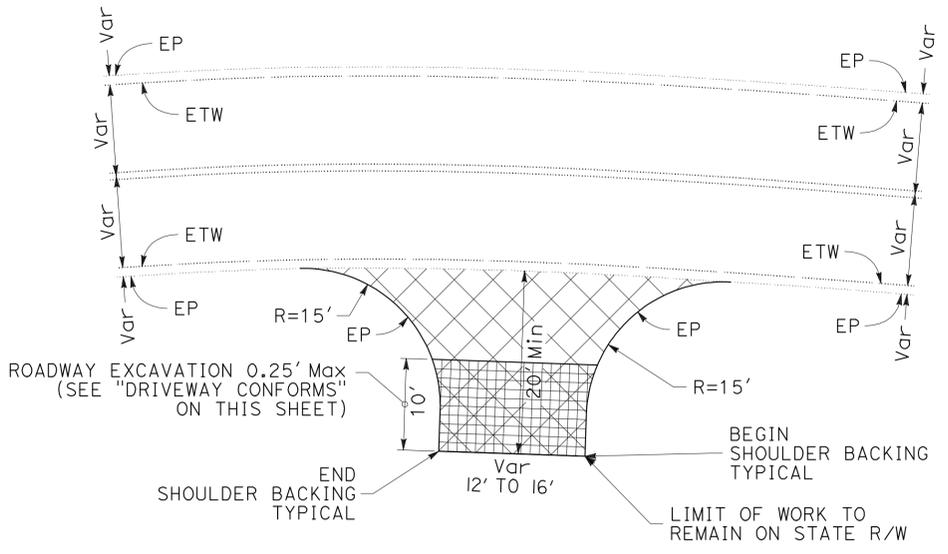
DRIVEWAY CONFORMS (EXISTING PAVED)
Var PM (SEE SHEET X-2 FOR DETAILS NOT SHOWN)



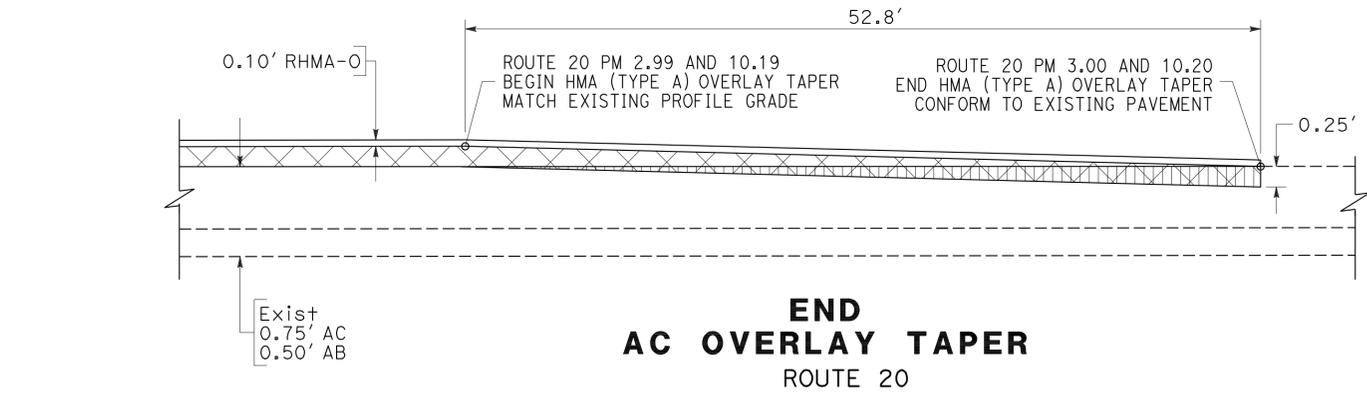
DRIVEWAY CONFORMS (EXISTING UNPAVED)
Var PM (SEE SHEET X-2 FOR DETAILS NOT SHOWN)



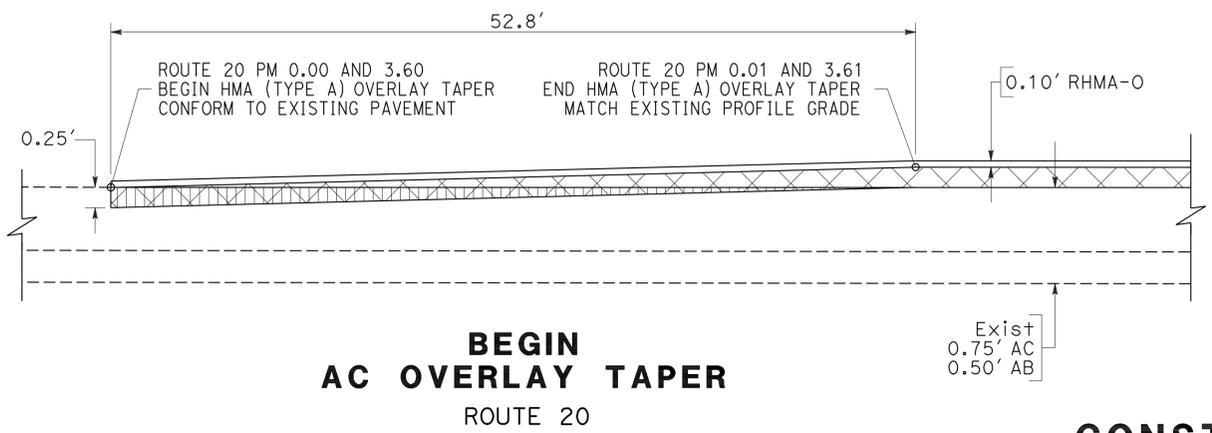
TYPICAL DRIVEWAY INTERSECTION (EXISTING PAVED)
MAIN LINE OVERLAY NOT SHOWN FOR CLARITY



TYPICAL DRIVEWAY INTERSECTION (EXISTING UNPAVED)
MAIN LINE OVERLAY NOT SHOWN FOR CLARITY



END AC OVERLAY TAPER ROUTE 20



BEGIN AC OVERLAY TAPER ROUTE 20

CONSTRUCTION DETAILS
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING
 FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
 CALCULATED/DESIGNED BY: [blank] CHECKED BY: [blank]
 REVISIONS: [blank]
 KAO THAO
 ROBIN CHEN
 REVISIONS: [blank]

LAST REVISION | DATE PLOTTED => 16-MAY-2012
 05-11-12 | TIME PLOTTED => 13:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	5	29

Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE
 5-14-12
 PLANS APPROVAL DATE
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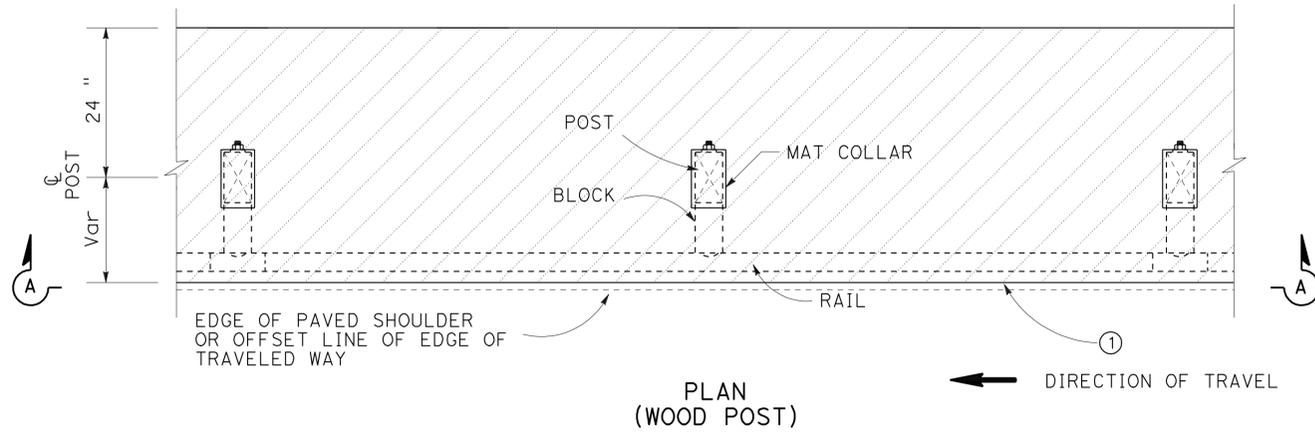
REGISTERED PROFESSIONAL ENGINEER
 DOUGLAS S. JONES
 No. C42337
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

NOTES:

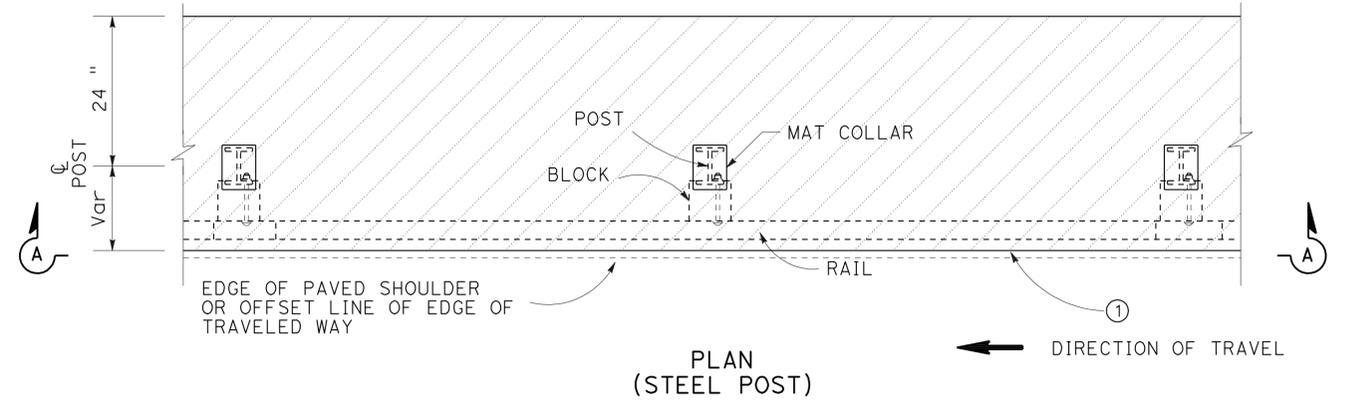
1. TRIM WEED CONTROL MAT 2" LAP WITH EDGE OF SHOULDER, OR PAVEMENT.
2. SEE STANDARD PLANS FOR CORRESPONDING POST OFFSET DIMENSIONS FOR TERMINAL SYSTEM.
3. DIMENSION: 3'-0" OR GREATER. ALIGN WITH RAIL AT END SECTION.
4. FOR LOCATIONS SEE SUMMARY OF QUANTITIES SHEET Q-1.
5. POST SPACING AND OTHER DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
6. ADD SHOULDER BACKING FOR SMOOTH GRADE AS NECESSARY.
7. INCLUDED THE AREAS FOR TRANSITION RAILING AND END ANCHOR ASSEMBLY INSTALLION.

LEGEND:

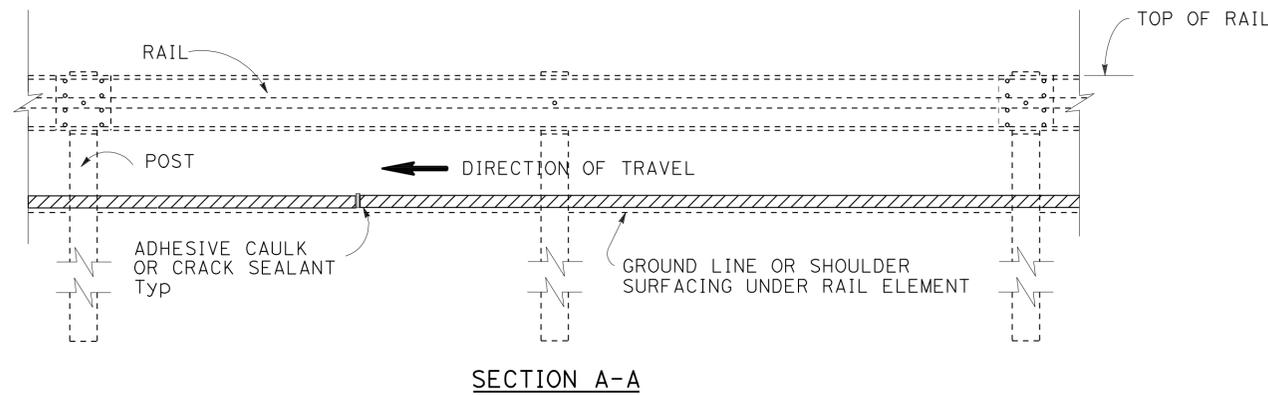
- WEED CONTROL MAT (FIBER)
- ⊕ NOTE No.



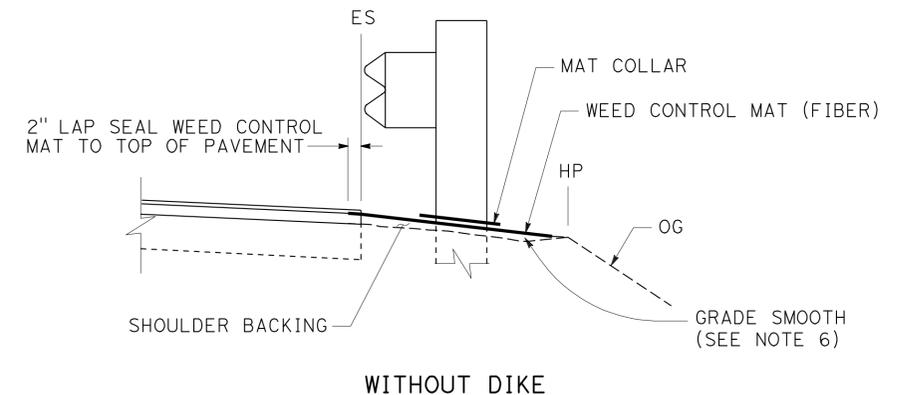
WEED CONTROL MAT (FIBER) UNDER MBGR



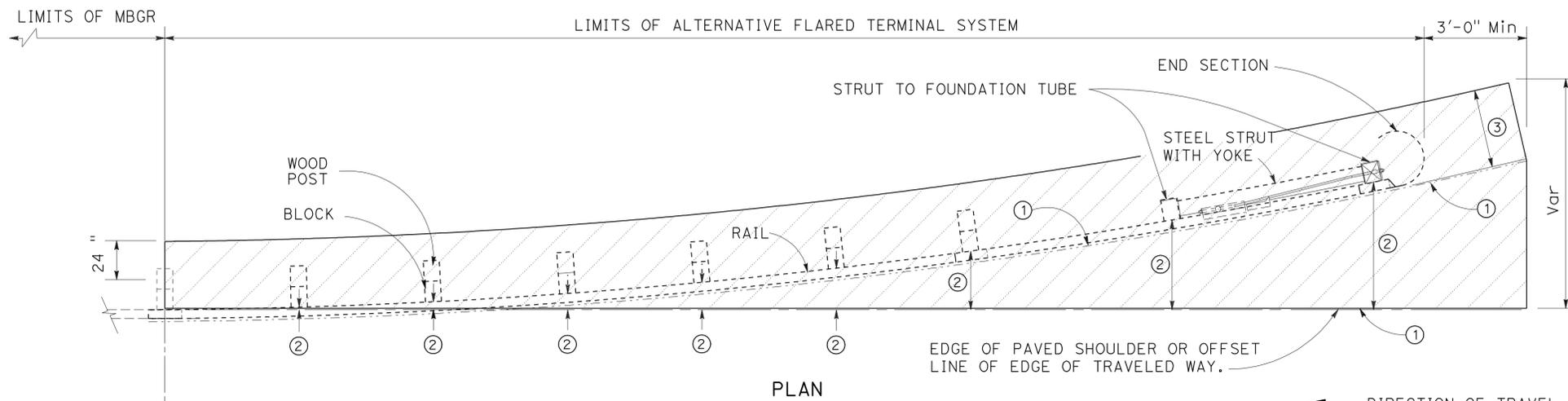
WEED CONTROL MAT (FIBER) UNDER MBGR



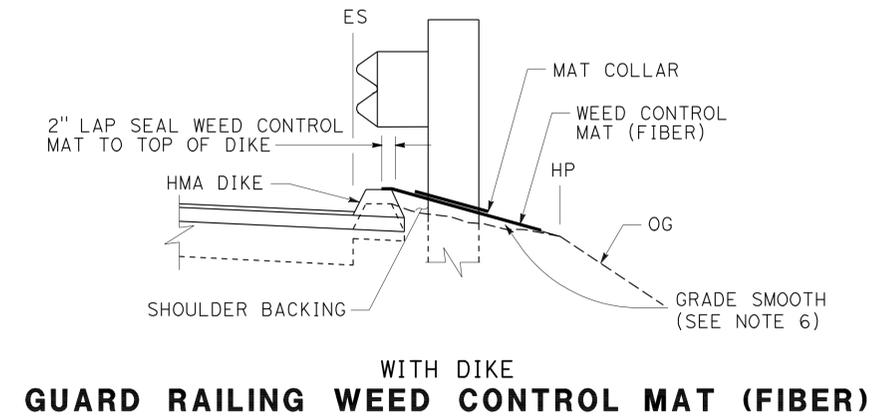
WEED CONTROL MAT (FIBER) UNDER MBGR



GUARD RAILING WEED CONTROL MAT (FIBER)



WEED CONTROL MAT (FIBER) AT MBGR TERMINAL SYSTEM



GUARD RAILING WEED CONTROL MAT (FIBER)

CONSTRUCTION DETAILS
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING
 FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
 CALCULATED/DESIGNED BY: KAO THAO
 CHECKED BY: ROBIN CHEN
 REVISED BY: DATE REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	6	29

Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE
 5-14-12
 PLANS APPROVAL DATE
 No. C42337
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

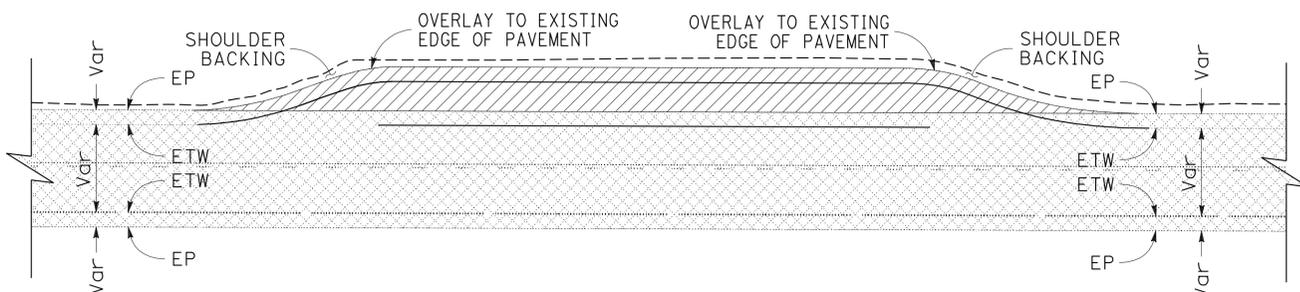
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NOTES:

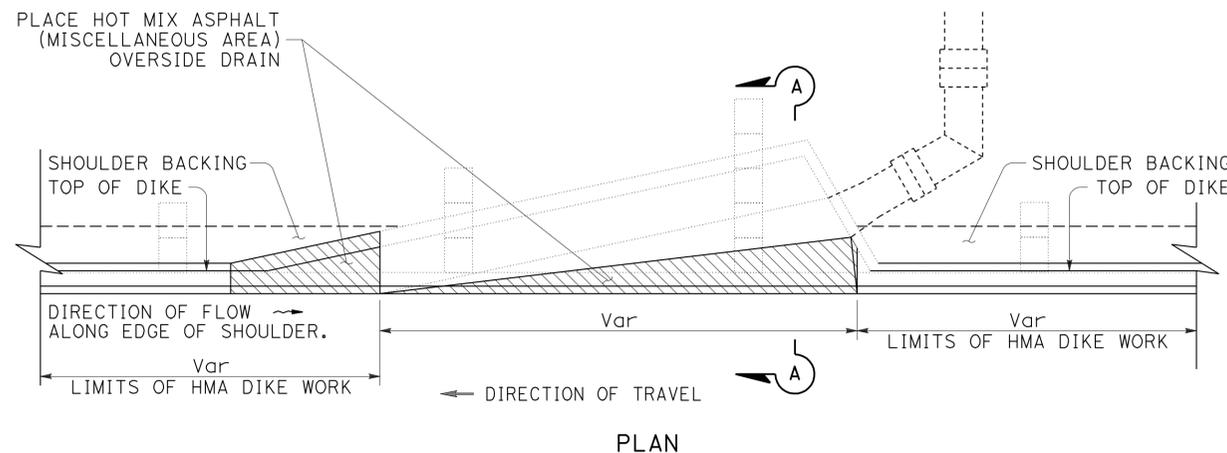
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- NO CONSTRUCTION OR STAGING OF EQUIPMENT OR MATERIALS SHALL VENTURE OUTSIDE THE EDGE OF SHOULDER BACKING OR PULLOUT AREAS.

LEGEND:

-  LIMIT OF HMA-A WITH RHMA-O OVERLAY
-  LIMIT OF HMA-A OVERLAY
-  LIMIT OF PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)

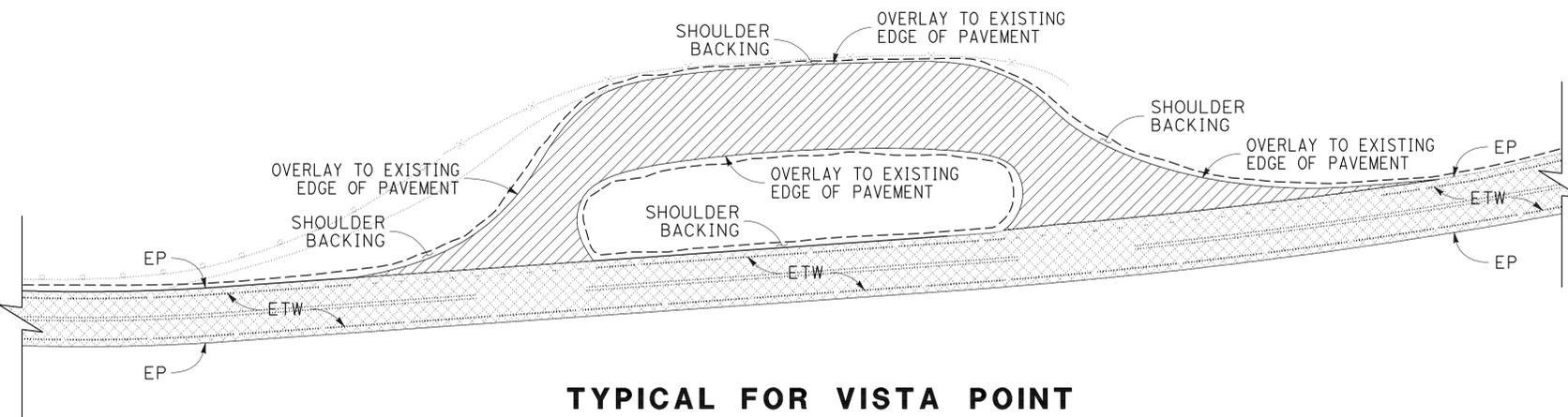


TYPICAL PULLOUT
(Var PM)

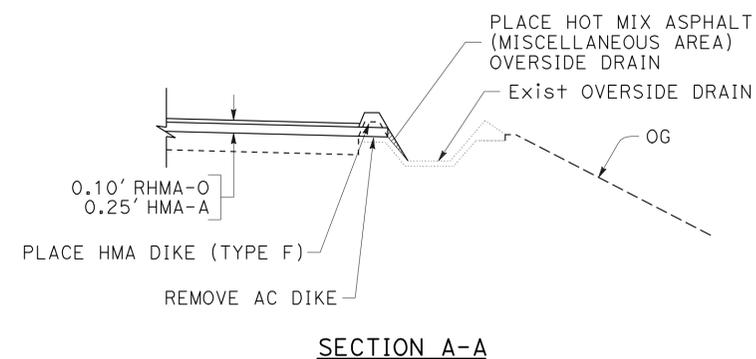


OVERSIDE DRAIN & DOWNDRAIN

PM 2.57 LEFT, PM 3.63 LEFT, PM 4.17 RIGHT, PM 4.69 RIGHT,
 PM 4.79 LEFT, PM 5.31 LEFT, PM 5.79 LEFT, PM 5.71 RIGHT,
 PM 5.79 RIGHT, PM 5.93 RIGHT, PM 6.04 RIGHT, PM 6.26 LEFT
 MAIN LINE OVERLAY NOT SHOWN FOR CLARITY



TYPICAL FOR VISTA POINT
(PM 2.03 - PM 2.10)



SECTION A-A

CONSTRUCTION DETAILS
NO SCALE

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING
 KAO THAO
 ROBIN CHEN
 DOUGLAS S. JONES
 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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	7	29

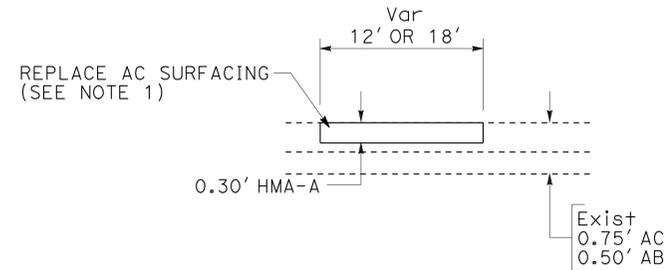
Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE
 5-14-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DOUGLAS S. JONES
 No. C42337
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

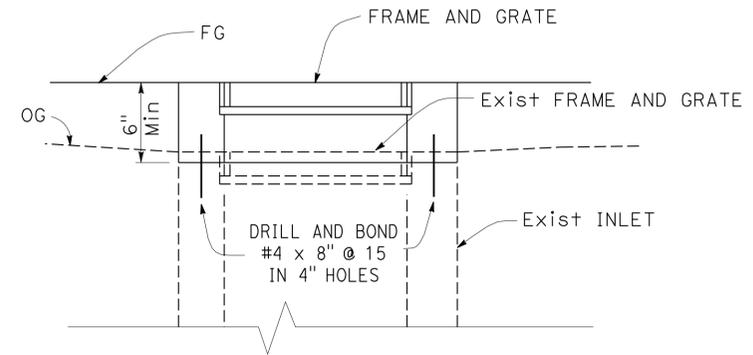
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NOTES:

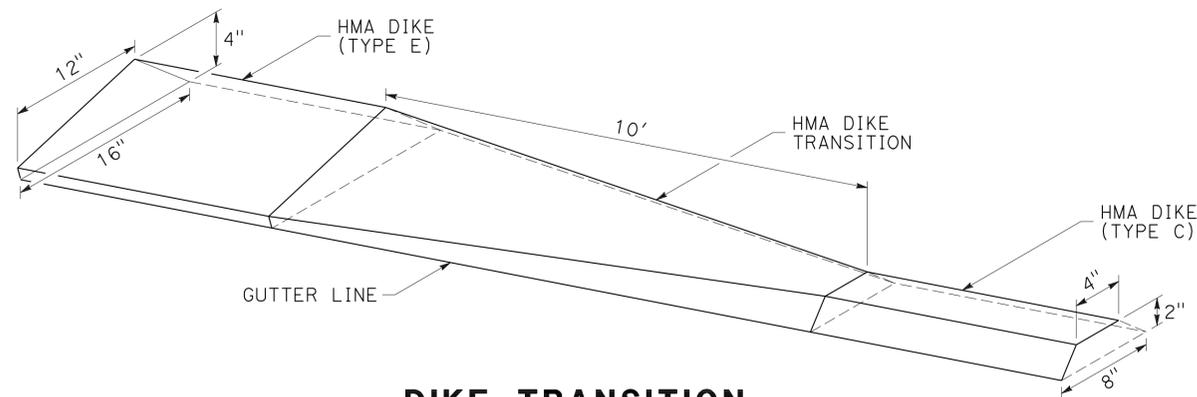
- FOR LOCATIONS OF "REPLACE ASPHALT CONCRETE SURFACING," SEE SHEET Q-4.
- SEE SHEET Q-3 FOR ADJUST FRAME AND GRATE TO GRADE LOCATIONS.



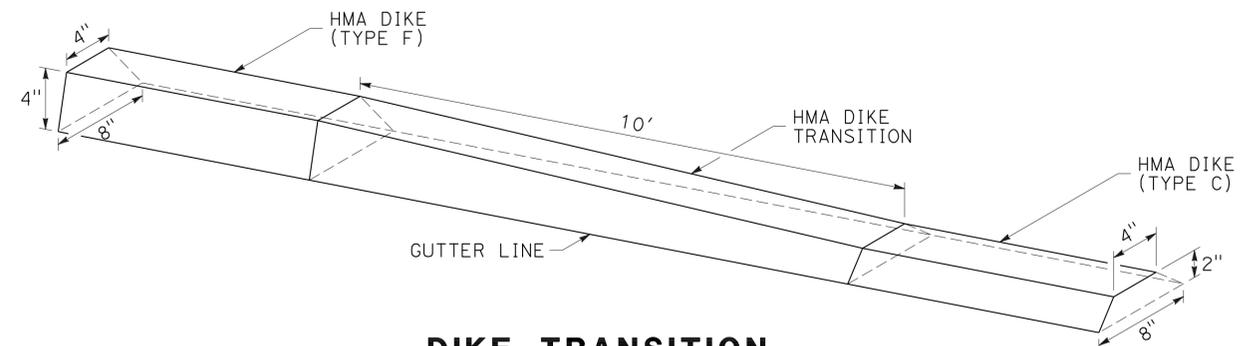
REPLACE ASPHALT CONCRETE SURFACING
TRAVELED WAY - SECTION VIEW



ADJUST FRAME AND GRATE TO GRADE
(SEE NOTE 2)



**DIKE TRANSITION
TYPE E TO TYPE C**
(FOR LOCATION SEE QUANTITY SHEET Q-2.
FOR DETAILS NOT SHOWN, SEE STANDARD PLAN A87B)



**DIKE TRANSITION
TYPE F TO TYPE C**
(FOR LOCATION SEE QUANTITY SHEET Q-2.
FOR DETAILS NOT SHOWN, SEE STANDARD PLAN A87B)

CONSTRUCTION DETAILS
NO SCALE

C-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING
 FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
 CALCULATED/DESIGNED BY: KAO THAO
 CHECKED BY: ROBIN CHEN
 REVISED BY: DATE
 REVISIONS:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	8	29

Joyce K. Loftus 5-11-12
 REGISTERED CIVIL ENGINEER DATE

5-14-12
 PLANS APPROVAL DATE

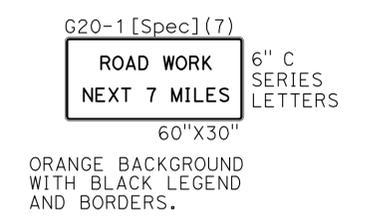
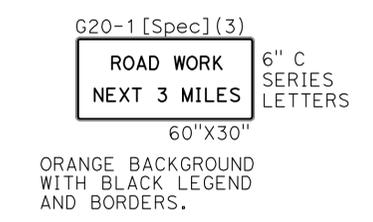
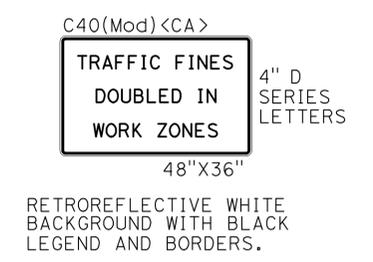
REGISTERED PROFESSIONAL ENGINEER
 No. 38426
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

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

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LOCATION DESCRIPTION	FACING TRAFFIC		SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	EB	WB	FEDERAL	CALIFORNIA				
	PM Lak 46.4	1		G20-1 [Spec] (3)				
PM Lak 46.45	1			C40(Mod)	48" x 36"	TRAFFIC FINES DOUBLED IN WORK ZONES	1 - 4" x 6"	1
PM Lak 46.45		1	G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	1
PM Col 3.09		1	G20-1 [Spec] (3)		60" x 30"	ROAD WORK NEXT 3 MILES	2 - 4" x 6"	1
PM Col 3.05		1		C40(Mod)	48" x 36"	TRAFFIC FINES DOUBLED IN WORK ZONES	1 - 4" x 6"	1
PM Col 3.05	1		G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	1
PM Col 3.50	1		G20-1 [Spec] (7)		60" x 30"	ROAD WORK NEXT 7 MILES	2 - 4" x 6"	1
PM Col 3.55	1			C40(Mod)	48" x 36"	TRAFFIC FINES DOUBLED IN WORK ZONES	1 - 4" x 6"	1
PM Col 3.55	1		G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	1
PM Col 10.30		1	G20-1 [Spec] (7)		60" x 30"	ROAD WORK NEXT 7 MILES	2 - 4" x 6"	1
PM Col 10.25		1		C40(Mod)	48" x 36"	TRAFFIC FINES DOUBLED IN WORK ZONES	1 - 4" x 6"	1
PM Col 10.25	1		G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	1

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



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	9	29

Joyce K. Loftus 5-11-12
 REGISTERED CIVIL ENGINEER DATE
 5-14-12
 PLANS APPROVAL DATE

No. 38426
 Exp. 3-31-13
 CIVIL

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 COPIES OF THIS PLAN SHEET.

THERMOPLASTIC TRAFFIC STRIPE

LOCATION	4" THERMOPLASTIC TRAFFIC STRIPE			4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)			4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	8" THERMOPLASTIC TRAFFIC STRIPE
	DETAIL NUMBER			DETAIL NUMBER			DETAIL NUMBER	DETAIL NUMBER
	19 (LF)	22 (LF)	27B (LF)	6 (LF)	12 (LF)	19 (LF)	27C (LF)	38A (LF)
PM 0.00 to PM 0.22		2,323	2,324			1,162		
PM 0.22 to PM 0.87		6,864	6,864					
PM 0.87 to PM 0.97		1,056	1,056			528		
PM 0.97 to PM 1.22		5,280	2,640			1,320		
PM 1.22 to PM 1.32		2,112	1,056			528		
PM 1.32 to PM 1.44		1,267	1,268					
PM 1.44 to PM 1.63	1,003		2,006			1,003		
PM 1.63 to PM 2.01		4,013	4,012					
PM 2.01 to PM 2.05		422	211				211	
PM 2.05 to PM 2.09		422	422					
PM 2.09 to PM 2.10			53				53	
PM 2.10 to PM 2.11		106	106					
PM 2.11 to PM 2.14		317	158				158	
PM 2.14 to PM 2.23		950	950					
PM 2.23 to PM 2.35		1,267	1,268			634		
PM 2.35 to PM 2.41		634	317			317		317
PM 2.41 to PM 2.42		106	53			53		
PM 2.42 to PM 2.56		1,478	1,478			739		
PM 2.56 to PM 2.61	264	528	528			264		
PM 2.61 to PM 2.70		950	950					
PM 2.70 to PM 2.92	1,162		2,324			1,162		
PM 2.92 to PM 3.00	422		844			422		
PM 3.00 to PM 3.60		3,062	3,062					
PM 3.60 to PM 3.89		212	106					
PM 3.89 to PM 3.91		422	211					211
PM 3.91 to PM 3.95		212	106					
PM 3.95 to PM 3.97		7,498	7,498					
PM 3.97 to PM 4.68		212	106					
PM 4.68 to PM 4.70		317	158					158
PM 4.70 to PM 4.73		212	106					
PM 4.73 to PM 4.75		3,062	3,062					
PM 4.75 to PM 5.04		106	53					
PM 5.04 to PM 5.05		950	475					475
PM 5.05 to PM 5.14		106	53					
PM 5.14 to PM 5.15		950	475					475
PM 5.15 to PM 5.24		106	53					
PM 5.24 to PM 5.25		4,013	4,012					
PM 5.25 to PM 5.63		1,056	2,112			1,056		

THERMOPLASTIC TRAFFIC STRIPE (CONTINUED)

LOCATION	4" THERMOPLASTIC TRAFFIC STRIPE			4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)			4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	8" THERMOPLASTIC TRAFFIC STRIPE
	DETAIL NUMBER			DETAIL NUMBER			DETAIL NUMBER	DETAIL NUMBER
	19 (LF)	22 (LF)	27B (LF)	6 (LF)	12 (LF)	19 (LF)	27C (LF)	38A (LF)
PM 5.83 to PM 6.03			2,112	1,056				
PM 6.03 to PM 6.14	581		1,162			581		
PM 6.14 to PM 6.25			1,162	581				
PM 6.25 to PM 6.27	106		212			106		
PM 6.27 to PM 6.28	53		53			53		
PM 6.28 to PM 6.31	158		158			158		158
PM 6.31 to PM 6.32	53		53			53		
PM 6.32 to PM 6.34	106		212			106		
PM 6.34 to PM 6.37			316	158				
PM 6.37 to PM 6.54	898		1,796			898		
PM 6.54 to PM 8.09		16,368	16,368					
PM 8.09 to PM 8.14	264	528	528					
PM 8.14 to PM 8.48		3,590	3,590			1,795		
PM 8.48 to PM 9.70	6,442		12,884			12,884	6,442	
PM 9.70 to PM 9.82		1,267	1,268			634		
PM 9.82 to PM 9.88	317	634	634			317		
PM 9.88 to PM 10.20		3,380	3,380					
SHEET TOTAL	1,795	38,650	98,419	1,795	20,592	12,883	422	1,795
TOTAL		138,864		180,260			422	1,795

NOTE: POST MILE LOCATIONS ARE APPROXIMATE.

PAVEMENT MARKER (RETROREFLECTIVE)

DETAIL	TYPE D (EA)	TYPE G (EA)	TYPE H (EA)
6	38		
12		269	
19	859		430
22	3,223		
SUBTOTAL	4,120	269	430
TOTAL		4,819	

PAVEMENT DELINEATION QUANTITIES

PDQ-1

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Joyce Loftus
 ARSHAD IOBAL
 ARSHAD IOBAL
 ARSHAD IOBAL
 TRAFFIC

LAST REVISION | DATE PLOTTED => 16-MAY-2012
 03-05-12 | TIME PLOTTED => 13:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	10	29

Joyce K. Loftus 5-11-12
 REGISTERED CIVIL ENGINEER DATE
 5-14-12
 PLANS APPROVAL DATE

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OBJECT MARKER

LOCATION (PM)	TYPE L-1 (EA)	TYPE LAYOUT	
L+	0.46	1	TYPE 11F LAYOUT
R+	0.44	1	TYPE 11L LAYOUT
R+	0.61	1	TYPE 11G LAYOUT
L+	0.99	1	TYPE 11B LAYOUT
R+	1.07	1	TYPE 11L LAYOUT
L+	1.77	1	TYPE 11E LAYOUT
L+	2.02	1	TYPE 11E LAYOUT
L+	2.46	1	TYPE 11E LAYOUT
R+	2.51	1	TYPE 11F LAYOUT
R+	2.59	1	TYPE 11E LAYOUT
L+	2.79	1	TYPE 11F LAYOUT
R+	3.62	1	TYPE 11E LAYOUT
R+	3.75	1	TYPE 11E LAYOUT
R+	3.79	1	TYPE 11E LAYOUT
L+	3.88	1	TYPE 11L LAYOUT
R+	3.93	1	TYPE 11E LAYOUT
L+	4.08	1	TYPE 11L LAYOUT
R+	4.17	1	TYPE 11E LAYOUT
L+	4.21	1	TYPE 11L LAYOUT
R+	4.26	1	TYPE 11E LAYOUT
L+	4.37	1	TYPE 11E LAYOUT
R+	4.51	1	TYPE 11E LAYOUT
L+	4.81	1	TYPE 11L LAYOUT
L+	5.01	1	TYPE 11E LAYOUT
L+	5.21	1	TYPE 11E LAYOUT
R+	5.19	1	TYPE 11E LAYOUT
L+	5.33	1	TYPE 11E LAYOUT
L+	5.59	1	TYPE 11E LAYOUT
R+	5.56	1	TYPE 11E LAYOUT
L+	5.96	1	TYPE 11E LAYOUT
L+	6.29	1	TYPE 11E LAYOUT
L+	6.73	1	TYPE 11L LAYOUT
L+	7.01	1	TYPE 11F LAYOUT
R+	6.81	1	TYPE 11L LAYOUT
R+	7.00	1	TYPE 11G LAYOUT
L+	7.41	1	TYPE 11E LAYOUT
R+	7.14	1	TYPE 11E LAYOUT
L+	7.89	1	TYPE 11E LAYOUT
L+	8.07	1	TYPE 11E LAYOUT
R+	8.03	1	TYPE 11E LAYOUT
L+	8.30	1	TYPE 11G LAYOUT
R+	8.25	1	TYPE 11G LAYOUT
R+	10.10	1	TYPE 11F LAYOUT
TOTAL	43		

NOTE: POST MILE LOCATIONS ARE APPROXIMATE.

DELINEATOR (CLASS 1)

LOCATION (PM)	TYPE E (EA)		
R+	0.18	0.38	9
L+	0.38	0.50	7
R+	0.51	0.63	12
L+	0.65	0.75	8
L+	0.80	0.94	5
R+	1.00	1.20	19
L+	1.47	1.90	26
R+	1.91	2.01	6
L+	2.22	2.41	14
R+	3.62	3.76	5
L+	3.76	3.92	6
L+	4.09	4.28	8
L+	4.36	4.44	8
R+	4.45	4.68	13
R+	5.08	5.39	18
R+	6.71	6.92	6
L+	7.08	7.31	9
R+	7.50	7.72	6
L+	8.36	8.48	4
L+	9.90	10.20	13
TOTAL			202

NOTE: EXACT DELINEATOR LOCATIONS TO BE DETERMINED BY THE ENGINEER.

PAVEMENT MARKING

LOCATION	THERMOPLASTIC PAVEMENT MARKING					PAINT PAVEMENT MARKING (2-COAT)				
	TYPE I ARROW (24'-0")	TYPE III ARROW	TYPE VI ARROW	LIMIT LINE (SQFT)	SQFT	ISA MARKING (SQFT)	"NO PARKING" (SQFT)	PARKING STALL (WHITE) (SQFT)	PARKING STALL (BLUE) (SQFT)	SQFT
0.14	0.22			3 @ 42 SQFT	126					
0.87	0.94			3 @ 42 SQFT	126					
2.02	2.05	2 @ 42 SQFT		50	134					
VISTA POINT						23	2	48.5	33.5	107
2.06	2.12	2 @ 31 SQFT			62					
2.23	2.31			3 @ 42 SQFT	126					
8.48	8.56			3 @ 42 SQFT	126					
9.62	9.71			3 @ 42 SQFT	126					
TOTAL					826	TOTAL				107

NOTE: POST MILE LOCATIONS ARE APPROXIMATE.

PAVEMENT DELINEATION QUANTITIES

PDQ-2

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	11	29

Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE

5-14-12
 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.

LEGEND:

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

METAL BEAM GUARD RAILING

M B G R #	POST MILE * TO POST MILE	MBGR (7' STEEL POST)	ADJUST MBGR	ALTERNATIVE FLARED TERMINAL SYSTEM	WEED CONTROL MAT (FIBER)	BURIED END ANCHOR (N)	TYPE LAYOUT
1	L+ 0.33 TO 0.46	708			275	2	TYPE 11F LAYOUT
2	R+ 0.44 TO 0.52	404		1	181	1	TYPE 11L LAYOUT
3	R+ 0.61 TO 0.63	62		1	48	1	TYPE 11G LAYOUT
4	L+ 0.72 TO 0.99	1,371		1	557		TYPE 11B LAYOUT
5	R+ 1.07 TO 1.14	334		1	154	1	TYPE 11L LAYOUT
6	L+ 1.21 TO 1.77	2,852		2	1,157		TYPE 11E LAYOUT
7	L+ 1.93 TO 2.02	509		2	237		TYPE 11E LAYOUT
8	L+ 2.31 TO 2.46	750		2	339		TYPE 11E LAYOUT
9	R+ 2.51 TO 2.57	299			116	2	TYPE 11F LAYOUT
10	R+ 2.59 TO 2.61	0		2	48		TYPE 11E LAYOUT
11	L+ 2.61 TO 2.79	1,152		2	496		TYPE 11E LAYOUT
12	R+ 3.62 TO 3.71		381	2	196		TYPE 11E LAYOUT
13	R+ 3.75 TO 3.77		14	2	53		TYPE 11E LAYOUT
14	R+ 3.79 TO 3.89		415	2	209		TYPE 11E LAYOUT
15	L+ 3.85 TO 3.88		90	1	59	1	TYPE 11L LAYOUT
16	R+ 3.93 TO 4.08		724	2	329		TYPE 11E LAYOUT
17	L+ 4.05 TO 4.08		133	1	76	1	TYPE 11L LAYOUT
18	R+ 4.17 TO 4.21		136	2	100		TYPE 11E LAYOUT
19	L+ 4.18 TO 4.21		135	1	76	1	TYPE 11L LAYOUT
20	R+ 4.26 TO 4.43		768	2	346		TYPE 11E LAYOUT
21	L+ 4.35 TO 4.37		52	2	68		TYPE 11E LAYOUT
22	R+ 4.51 TO 4.70		954	2	419		TYPE 11E LAYOUT
23	L+ 4.77 TO 4.81		161	1	86	1	TYPE 11L LAYOUT
24	L+ 4.98 TO 5.01		104	2	88		TYPE 11E LAYOUT
25	L+ 5.19 TO 5.21		52	2	68		TYPE 11E LAYOUT
26	R+ 5.19 TO 5.21		51	2	67		TYPE 11E LAYOUT
27	L+ 5.29 TO 5.33		99	2	86		TYPE 11E LAYOUT
28	L+ 5.56 TO 5.59		49	2	67		TYPE 11E LAYOUT
29	R+ 5.56 TO 5.59		58	2	70		TYPE 11E LAYOUT
30	L+ 5.91 TO 5.96		124	2	96		TYPE 11E LAYOUT
31	L+ 6.24 TO 6.29		189	2	121		TYPE 11E LAYOUT
32	L+ 6.62 TO 6.73		563	1	252	1	TYPE 11L LAYOUT
33	L+ 6.79 TO 7.01		1,165		453	2	TYPE 11F LAYOUT
34	R+ 6.81 TO 6.87		241	1	118	1	TYPE 11L LAYOUT
35	R+ 7.00 TO 7.05		184	1	95	1	TYPE 11G LAYOUT
36	L+ 7.14 TO 7.41		1,361	2	577		TYPE 11E LAYOUT
37	R+ 7.14 TO 7.30		747	2	338		TYPE 11E LAYOUT
38	L+ 7.84 TO 7.89		225	2	135		TYPE 11E LAYOUT
39	L+ 8.03 TO 8.07		91	2	83		TYPE 11E LAYOUT
40	R+ 8.03 TO 8.07		88	2	82		TYPE 11E LAYOUT
41	L+ 8.24 TO 8.30		300	1	140	1	TYPE 11G LAYOUT
42	R+ 8.25 TO 8.29		191	1	98	1	TYPE 11G LAYOUT
43	R+ 10.10 TO 10.16		340	2	132	2	TYPE 11F LAYOUT
TOTAL		8,441	10,185	65	8,789	20	

* POST MILE LOCATIONS AND LENGTHS ARE APPROXIMATE.

REMOVE METAL BEAM GUARD RAILING

M B G R #	POST MILE * TO POST MILE	QTY
1	L+ 0.33 TO 0.46	708
2	R+ 0.44 TO 0.52	404
3	R+ 0.61 TO 0.63	62
4	L+ 0.72 TO 0.99	1,371
5	R+ 1.07 TO 1.14	334
6	L+ 1.21 TO 1.77	2,852
7	L+ 1.93 TO 2.02	509
8	L+ 2.31 TO 2.46	750
9	R+ 2.51 TO 2.57	299
10	R+ 2.59 TO 2.61	0
11	L+ 2.61 TO 2.79	1,152
12	R+ 3.62 TO 3.71	76
13	R+ 3.75 TO 3.77	76
14	R+ 3.79 TO 3.89	76
15	L+ 3.85 TO 3.88	38
16	R+ 3.93 TO 4.08	76
17	L+ 4.05 TO 4.08	38
18	R+ 4.17 TO 4.21	76
19	L+ 4.18 TO 4.21	38
20	R+ 4.26 TO 4.43	76
21	L+ 4.35 TO 4.37	76
22	R+ 4.51 TO 4.70	76
23	L+ 4.77 TO 4.81	38
24	L+ 4.98 TO 5.01	76
25	L+ 5.19 TO 5.21	76
26	R+ 5.19 TO 5.21	76
27	L+ 5.29 TO 5.33	76
28	L+ 5.56 TO 5.59	76
29	R+ 5.56 TO 5.59	76
30	L+ 5.91 TO 5.96	76
31	L+ 6.24 TO 6.29	76
32	L+ 6.62 TO 6.73	38
33	L+ 6.79 TO 7.01	0
34	R+ 6.81 TO 6.87	38
35	R+ 7.00 TO 7.05	38
36	L+ 7.14 TO 7.41	76
37	R+ 7.14 TO 7.30	76
38	L+ 7.84 TO 7.89	76
39	L+ 8.03 TO 8.07	76
40	R+ 8.03 TO 8.07	76
41	L+ 8.24 TO 8.30	38
42	R+ 8.25 TO 8.29	38
43	R+ 10.10 TO 10.16	0
TOTAL		10,949

* POST MILE LOCATIONS AND LENGTHS ARE APPROXIMATE.

REMOVE ASPHALT CONCRETE DIKE

M B G R #	POST MILE * TO POST MILE	QUANTITY
-	L+ 0.00 TO 0.04	214
7	L+ 1.92 TO 2.01	482
8,11	L+ 2.37 TO 2.62	1,374
9	R+ 2.44 TO 2.53	459
9,10	R+ 2.55 TO 2.60	277
10	R+ 2.62 TO 2.69	370
-	L+ 3.63 TO 3.70	369
-	L+ 3.70 TO 3.75	263
-	L+ 3.76 TO 3.82	352
-	L+ 3.88 TO 4.04	866
17	L+ 4.04 TO 4.08	169
18	R+ 3.93 TO 4.20	1,446
20	R+ 4.20 TO 4.41	1,126
-	L+ 4.08 TO 4.17	481
-	L+ 4.21 TO 4.27	317
9	R+ 2.51 TO 2.57	299
-	L+ 4.38 TO 4.44	317
-	L+ 4.45 TO 4.67	1,162
22	R+ 4.65 TO 4.69	211
22	R+ 4.69 TO 4.80	594
23	L+ 4.79 TO 5.01	1,146
24	L+ 5.01 TO 5.02	70
-	R+ 4.81 TO 4.92	581
-	R+ 4.92 TO 5.02	528
25,27	L+ 5.19 TO 5.33	756
-	L+ 5.33 TO 5.42	457
-	R+ 5.33 TO 5.40	371
-	R+ 5.51 TO 5.57	317
-	L+ 5.69 TO 5.79	528
-	R+ 5.71 TO 5.79	423
-	R+ 5.79 TO 5.93	740
-	R+ 5.93 TO 6.04	581
-	R+ 6.04 TO 6.10	317
31	L+ 6.03 TO 6.29	1,397
31	L+ 6.29 TO 6.31	63
-	R+ 6.17 TO 6.36	1,004
-	L+ 6.31 TO 6.48	867
32	L+ 6.62 TO 6.71	475
33	L+ 6.81 TO 6.89	422
35	R+ 7.02 TO 7.04	106
37	R+ 7.15 TO 7.28	682
39	L+ 8.04 TO 8.17	688
-	R+ 8.04 TO 8.36	1,693
41	L+ 8.18 TO 8.31	674
-	L+ 8.31 TO 8.42	595
-	R+ 8.55 TO 8.60	264
-	R+ 8.60 TO 8.65	264
-	R+ 8.66 TO 8.75	475
SUBTOTAL (1)		27,333

* POST MILE LOCATIONS AND LENGTHS ARE APPROXIMATE.

REMOVE ASPHALT CONCRETE DIKE

M B G R #	POST MILE * TO POST MILE	QUANTITY
-	L+ 8.70 TO 8.78	422
-	L+ 8.78 TO 8.82	211
-	L+ 8.82 TO 8.86	211
-	L+ 9.45 TO 9.60	792
-	L+ 9.60 TO 9.61	53
-	R+ 9.88 TO 9.94	316
43	R+ 9.94 TO 10.22	1,387
SUBTOTAL (2)		3,392
SUBTOTAL (1)		27,333
TOTAL		30,725

* POST MILE LOCATIONS ARE APPROXIMATE.

SUMMARY OF QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	12	29

Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE

5-14-12
 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
 DOUGLAS S. JONES
 No. C42337
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

PLACE HOT MIX ASPHALT DIKE

M B G R #	POST MILE TO POST MILE		(TYPE A)		(TYPE C)		(TYPE E)		(TYPE F)	
			LF	TON*	LF	TON*	LF	TON*	LF	TON*
-	L+	0.00 TO 0.04	214	7.2						
7	L+	1.92 TO 2.01						482	8.0	
8	L+	2.37 TO 2.45						456	7.5	
8	L+	2.45 TO 2.46			63	0.6				
	L+	2.46 TO 2.56					528	1.7		
11	L+	2.56 TO 2.57			63	0.6				
11	L+	2.57 TO 2.62						264	4.4	
9	R+	2.44 TO 2.53	459	15.5						
9,10	R+	2.55 TO 2.60	277	9.3						
10	R+	2.62 TO 2.69	370	12.5						
-	L+	3.63 TO 3.70					369	1.2		
-	L+	3.70 TO 3.75					263	0.9		
-	L+	3.76 TO 3.82	352	11.9						
-	L+	3.88 TO 4.04					866	2.8		
17	L+	4.04 TO 4.06			63	0.6				
17	L+	4.06 TO 4.08						106	1.7	
16	R+	3.93 TO 4.07						739	12.2	
16	R+	4.07 TO 4.08			63	0.6				
	R+	4.08 TO 4.16					422	1.4		
18	R+	4.16 TO 4.17			63	0.6				
18	R+	4.17 TO 4.20						158	2.6	
18	R+	4.20 TO 4.21			63	0.6				
	R+	4.21 TO 4.26					264	0.9		
20	R+	4.26 TO 4.27			63	0.6				
20	R+	4.27 TO 4.41						736	12.1	
-	L+	4.08 TO 4.17	481	16.2						
-	L+	4.21 TO 4.27	317	10.7						
-	L+	4.38 TO 4.44	317	10.7						
-	L+	4.45 TO 4.56	581	19.6						
-	L+	4.56 TO 4.67	581	19.6						
22	R+	4.65 TO 4.69						211	3.5	
22	R+	4.69 TO 4.70			63	0.6				
-	R+	4.70 TO 4.80					531	1.7		
23	L+	4.79 TO 4.80						91	1.5	
23	L+	4.80 TO 4.82			63	0.6				
-	L+	4.82 TO 4.97					806	2.6		
24	L+	4.97 TO 4.98			63	0.6				
24	L+	4.98 TO 5.01						123	2.0	
24	L+	5.01 TO 5.02			70	0.7				
-	R+	4.81 TO 4.92	581	19.6						
-	R+	4.92 TO 5.02					528	1.7		
25	L+	5.19 TO 5.20			38	0.4				
25	L+	5.20 TO 5.21						46	0.8	
	L+	5.21 TO 5.22			63	0.6				
	L+	5.22 TO 5.29					384	1.2		
27	L+	5.29 TO 5.30			63	0.6				
27	L+	5.30 TO 5.32						99	1.6	
27	L+	5.32 TO 5.33			63	0.6				
-	L+	5.33 TO 5.42					457	1.5		
-	R+	5.33 TO 5.40	371	12.5						
-	R+	5.51 TO 5.57	317	10.7						
-	L+	5.69 TO 5.79					528	1.7		
-	R+	5.71 TO 5.79					423	1.4		
-	R+	5.79 TO 5.93					740	2.4		
-	R+	5.93 TO 6.04					581	1.9		
-	R+	6.04 TO 6.10					317	1.0		
-	L+	6.03 TO 6.24					1,107	3.6		
31	L+	6.24 TO 6.25			63	0.6				
SUBTOTAL (1)			5,217	176.1	990	9.4	9,114	29.6	3,511	57.9

PLACE HOT MIX ASPHALT DIKE

M B G R #	POST MILE TO POST MILE		(TYPE A)		(TYPE C)		(TYPE E)		(TYPE F)	
			LF	TON*	LF	TON*	LF	TON*	LF	TON*
31	L+	6.25 TO 6.29							227	3.7
31	L+	6.29 TO 6.31				63	0.6			
-	R+	6.17 TO 6.36					1,004	3.3		
-	L+	6.31 TO 6.48					867	2.8		
32	L+	6.62 TO 6.71							475	7.8
33	L+	6.81 TO 6.89							422	7.0
35	R+	7.02 TO 7.04							106	1.7
37	R+	7.15 TO 7.28							682	11.3
39	L+	8.04 TO 8.06							93	1.5
39	L+	8.06 TO 8.07				63	0.6			
-	L+	8.07 TO 8.17	532	18.0						
40	R+	8.04 TO 8.06							94	1.6
40	R+	8.06 TO 8.07				63	0.6			
-	R+	8.07 TO 8.24					922	3.0		
42	R+	8.24 TO 8.26				63	0.6			
42	R+	8.26 TO 8.29							193	3.2
42	R+	8.29 TO 8.31				63	0.6			
-	R+	8.31 TO 8.36	295	10.0						
-	L+	8.18 TO 8.23	299	10.1						
41	L+	8.23 TO 8.25				63	0.6			
41	L+	8.25 TO 8.29							249	4.1
41	L+	8.29 TO 8.31				63	0.6			
-	L+	8.31 TO 8.42					595	1.9		
-	R+	8.55 TO 8.57					106	0.3		
-	R+	8.57 TO 8.60					158	0.5		
-	R+	8.60 TO 8.65					264	0.9		
-	R+	8.66 TO 8.75					475	1.5		
-	L+	8.70 TO 8.78					422	1.4		
-	L+	8.78 TO 8.82					211	0.7		
-	L+	8.82 TO 8.86					211	0.7		
-	L+	9.45 TO 9.52					370	1.2		
-	L+	9.52 TO 9.60					422	1.4		
-	L+	9.60 TO 9.61					53	0.2		
-	R+	9.88 TO 9.94					316	1.0		
43	R+	9.94 TO 10.09					792	2.6		
43	R+	10.09 TO 10.10				63	0.6			
43	R+	10.10 TO 10.15							284	4.7
43	R+	10.15 TO 10.16				63	0.6			
43	R+	10.16 TO 10.22					185	0.6		
SUBTOTAL (2)			1,126	38.0	567	5.4	7,374	24.0	2,825	46.6
SUBTOTAL (1)			5,217	176.1	990	9.4	9,114	29.6	3,511	57.9
TOTAL			6,343	214	1,557	15	16,488	54	6,337	105

* QUANTITY IS INCLUDED IN THE ROADWAY QUANTITIES SUMMARY TABLE, ON SHEET Q-3.

SUMMARY OF QUANTITIES

Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING
 KAO THAO
 ROBIN CHEN
 CALCULATED/DESIGNED BY
 CHECKED BY
 FUNCTIONAL SUPERVISOR
 DOUGLAS S. JONES

LAST REVISION | DATE PLOTTED => 16-MAY-2012
 05-11-12 | TIME PLOTTED => 13:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	13	29

Douglas S. Jones 5-11-12
REGISTERED CIVIL ENGINEER DATE

5-14-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DOUGLAS S. JONES
No. C42337
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

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

COLD PLANE AC PAVEMENT

MISCELLANEOUS LOCATIONS			QUANTITY
L+/R+	POST MILE*	DESCRIPTION	SQYD
R+	5.11	PAVED DRIVEWAY CONFORM	13
R+	6.87	PAVED DRIVEWAY CONFORM	13
R+	8.21	PAVED DRIVEWAY CONFORM	13
L+	8.88	PAVED DRIVEWAY CONFORM	13
R+	8.88	PAVED DRIVEWAY CONFORM	13
L+	9.45	PAVED DRIVEWAY CONFORM	13
L+	9.60	PAVED DRIVEWAY CONFORM	13
R+	9.60	PAVED DRIVEWAY CONFORM	13
SUBTOTAL			104
MAIN LINE			
PM	0.00 - 0.01	BEGIN PROJECT LOCATION 1	280
PM	2.99 - 3.00	END PROJECT LOCATION 1	235
PM	3.60 - 3.61	BEGIN PROJECT LOCATION 2	190
PM	10.19 - 10.20	END PROJECT LOCATION 2	190
SUBTOTAL			895
(SIDE ROADS & DRIVEWAYS + CONFORMS)			1,000

* POST MILE LOCATIONS ARE APPROXIMATE.

PLACE HOT MIX ASPHALT CONCRETE DRIVEWAYS

LOCATION* (POST MILE)	HOT MIX ASPHALT	
	CY	TON
R+	1.14	20.3
L+	4.15	5.7
R+	5.11	6.3
L+	5.12	4.1
R+	5.66	2.1
R+	6.87	3.8
R+	8.21	4.1
L+	8.88	5.4
R+	8.88	4.4
L+	9.45	6.1
L+	9.60	5.2
R+	9.60	5.7
SUBTOTAL		183.4

* POST MILE LOCATIONS ARE APPROXIMATE.
NOTE: SEE "ROADWAY QUANTITIES SUMMARY" TABLE ON THIS SHEET FOR TOTAL QUANTITY

PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)

HMA OVERSIDE DRAINS			
LOCATION* (POST MILE)	QUANTITY		
	SQYD	TON	
L+	2.57	1.2	0.5
L+	3.63	1.2	0.5
R+	4.17	1.2	0.5
R+	4.69	1.2	0.5
L+	4.79	1.2	0.5
L+	5.31	1.2	0.5
L+	5.79	1.2	0.5
R+	5.79	1.2	0.5
R+	5.93	1.2	0.5
R+	6.04	1.2	0.5
L+	6.26	1.2	0.5
TOTAL		13.4	5.5

* POST MILE LOCATIONS ARE APPROXIMATE.
NOTE: SEE "ROADWAY QUANTITIES SUMMARY" TABLE ON THIS SHEET FOR TOTAL QUANTITY

ROADWAY EXCAVATION

L+/R+	POST* MILE	DESCRIPTION	QUANTITY
			CY
R+	1.14	UNPAVED DRIVEWAY CONFORM	0.75
L+	4.15	UNPAVED DRIVEWAY CONFORM	0.75
L+	5.12	UNPAVED DRIVEWAY CONFORM	0.75
R+	5.66	UNPAVED DRIVEWAY CONFORM	0.75
TOTAL			3.00

* POST MILE LOCATIONS ARE APPROXIMATE.

SHOULDER BACKING

POST MILE TO* POST MILE	QUANTITY	
	TON	
R+	0.00 TO 3.00	465
L+	0.00 TO 3.00	465
R+	3.60 TO 10.20	1,020
L+	3.60 TO 10.20	1,020
TOTAL		2,970

* ALL MAIN LINE, COUNTY ROADS AND DRIVEWAYS REQUIRING SHOULDER BACKING

ROADWAY QUANTITIES SUMMARY

LOCATION	HOT MIX ASPHALT	RUBBERIZED HOT MIX ASPHALT CONCRETE (OPEN GRADED)	TACK COAT
	TON	TON	TON
ROUTE 20 PM 0.00 TO 3.00	13,884	5,554	30
ROUTE 20 PM 3.60 TO 10.20	32,001	12,800	65
DRIVEWAYS	184	0	0
HMA DIKE *	388	0	0
VISTA POINT	513	0	0
OVERSIDE DRAIN	6	0	0
TOTAL	46,975	18,354	95

* SEE SHEET Q-2 FOR PLACE HOT MIX ASPHALT DIKE.

ADJUST FRAME AND GRATE TO GRADE

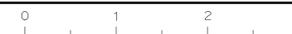
LOCATION*	QUANTITY
	EA
L+ PM 2.11	1
L+ PM 3.97	1
TOTAL	2

* TWO LOCATIONS TO BE ADJUSTED IN THE POST MILE LIMITS.

SUMMARY OF QUANTITIES

Q-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DIVISION OF ENGINEERING
 FUNCTIONAL SUPERVISOR DOUGLAS S. JONES
 KAO THAO ROBIN CHEN
 REVISOR BY DATE
 CALCULATED/DESIGNED BY CHECKED BY
 X X X X X



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	14	29

Douglas S. Jones 5-11-12
 REGISTERED CIVIL ENGINEER DATE

5-14-12
 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.

LEGEND:

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

REPLACE ASPHALT CONCRETE SURFACING

LOCATION/DESCRIPTION					REPLACE ASPHALT CONCRETE SURFACING CY	REMARK
POST MILE* TO POST MILE		(N) LENGTH	(N) WIDTH			
BEGIN	END	LF	LF	CY		
0.032	0.208	0.176	12	123.9		
0.461	0.477	0.016	12	11.3		
0.501	0.511	0.010	12	7.0		
0.520	0.585	0.065	12	45.8		
0.635	0.681	0.046	12	32.4		
0.690	0.719	0.029	12	20.4		
0.974	1.003	0.029	12	20.4		
1.064	1.153	0.089	12	62.7		
1.354	1.369	0.015	12	10.6		
1.373	1.412	0.039	12	27.5		
1.454	1.484	0.030	12	21.1		
1.586	1.62	0.034	12	23.9		
1.909	1.921	0.012	12	8.4	SHOULDER	
2.128	2.164	0.036	12	25.3		
2.363	2.374	0.011	12	7.7	PM 2.90**	
2.640	2.683	0.043	12	30.3	RUTTING	
2.807	2.829	0.022	12	15.5	SHOULDER	
4.360	4.42	0.060	12	42.2	PM 6.12**	
4.843	4.857	0.014	12	9.9		
6.050	6.08	0.030	12	21.1		
6.408	6.426	0.018	12	12.7		
6.466	6.479	0.013	12	9.2		
6.494	6.543	0.049	12	34.5		
6.830	6.849	0.019	12	13.4	PM 7.00**	
6.936	6.948	0.012	12	8.4		
-	6.964	-	12	-		
7.006	7.23	0.224	12	157.7		
7.726	7.741	0.015	12	10.6		
7.757	7.767	0.010	12	7.0		
7.783	7.81	0.027	12	19.0	PM 8.00**	
7.880	7.893	0.013	12	9.2	# 2 LANE	
-	7.946	-	12	-	# 2 LANE	
8.075	8.099	0.024	12	16.9	# 2 LANE	
8.148	8.282	0.134	12	94.3	# 2 LANE	
8.297	8.719	0.422	12	297.1	# 2 LANE	
8.843	8.927	0.084	12	59.1	# 2 LANE	
9.027	9.093	0.066	12	46.5	# 2 LANE	
9.180	9.282	0.102	12	71.8	# 2 LANE	
9.407	9.444	0.037	12	26.0	# 1 LANE	
9.490	9.504	0.014	12	9.9	# 1 LANE	
9.727	9.761	0.034	12	23.9		
9.810	9.833	0.023	12	16.2		
SUBTOTAL (1)				1,510.8		

REPLACE ASPHALT CONCRETE SURFACING

LOCATION/DESCRIPTION					REPLACE ASPHALT CONCRETE SURFACING CY	REMARK
POST MILE* TO POST MILE		(N) LENGTH	(N) WIDTH			
BEGIN	END	LF	LF	CY		
0.000	0.160	0.160	12	112.6		
0.215	0.287	0.072	12	50.7		
0.302	0.316	0.014	12	9.9		
0.347	0.400	0.053	12	37.3		
0.457	0.488	0.031	12	21.8	PM 0.50**	
0.524	0.555	0.031	12	21.8		
0.587	0.698	0.111	12	78.1		
0.728	0.802	0.074	12	52.1	PM 0.75**	
0.859	0.871	0.012	12	8.4	# 2 LANE	
0.926	0.970	0.044	12	31.0	# 2 LANE	
1.037	1.071	0.034	12	23.9	# 2 LANE	
1.083	1.203	0.120	12	84.5	# 2 LANE	
1.224	1.236	0.012	12	8.4		
1.310	1.331	0.021	18	22.2	18' DIGOUTS	
1.331	1.492	0.161	12	113.3		
1.519	1.564	0.045	12	31.7		
1.604	1.658	0.054	12	38.0	PM 1.68**	
1.905	1.954	0.049	12	34.5		
2.048	2.094	0.046	12	32.4		
2.112	2.130	0.018	12	12.7		
2.409	2.480	0.071	12	50.0	PM 2.50**	
2.496	2.516	0.020	12	14.1		
2.543	2.570	0.027	12	19.0		
2.812	2.829	0.017	12	12.0	PM 2.90**	
-	3.565	-	12	-	PM 3.61**	
3.576	3.589	0.013	12	9.2		
3.647	3.667	0.020	12	14.1		
4.000	4.049	0.049	12	34.5		
4.074	4.095	0.021	12	14.8		
4.217	4.230	0.013	12	9.2	RUTTING	
4.934	4.959	0.025	12	17.6		
5.867	5.893	0.026	12	18.3	SHOULDER	
6.182	6.241	0.059	12	41.5		
6.320	6.329	0.009	12	6.3		
6.345	6.419	0.074	12	52.1		
6.581	6.609	0.028	12	19.7		
6.723	6.743	0.020	12	14.1		
6.935	6.953	0.018	12	12.7		
7.681	7.742	0.061	12	42.9		
7.854	7.877	0.023	12	16.2		
8.124	8.227	0.103	12	72.5		
8.272	8.326	0.054	18	57.0	18' DIGOUTS	
SUBTOTAL (2)				1,373.1		

REPLACE ASPHALT CONCRETE SURFACING

LOCATION/DESCRIPTION					REPLACE ASPHALT CONCRETE SURFACING CY	REMARK
POST MILE* TO POST MILE		(N) LENGTH	(N) WIDTH			
BEGIN	END	LF	LF	CY		
8.326	8.752	0.426	12	299.9	# 2 LANE	
8.817	8.898	0.081	12	57.0	# 2 LANE	
9.260	9.311	0.051	12	35.9	# 2 LANE	
9.542	9.554	0.012	12	8.4	# 2 LANE	
9.578	9.648	0.070	12	49.3	# 2 LANE	
9.680	10.015	0.335	12	235.8		
10.116	10.13	0.014	12	9.9	PM 10.20**	
SUBTOTAL (3)				696.2		
SUBTOTAL (2)				1,373.1		
SUBTOTAL (1)				1,510.8		
TOTAL				3,580.1		

* POST MILE LOCATION AND LENGTH ARE APPROXIMATE, REPLACE ASPHALT CONCRETE SURFACING AREA IS TO BE DIRECTED BY ENGINEER.

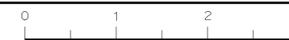
** POST MILE PADDLE (FIELD)

CRACK TREATMENT

LOCATION/DESCRIPTION	LNMI
EB & WB ROUTE 20	23.5

SUMMARY OF QUANTITIES

Q-4

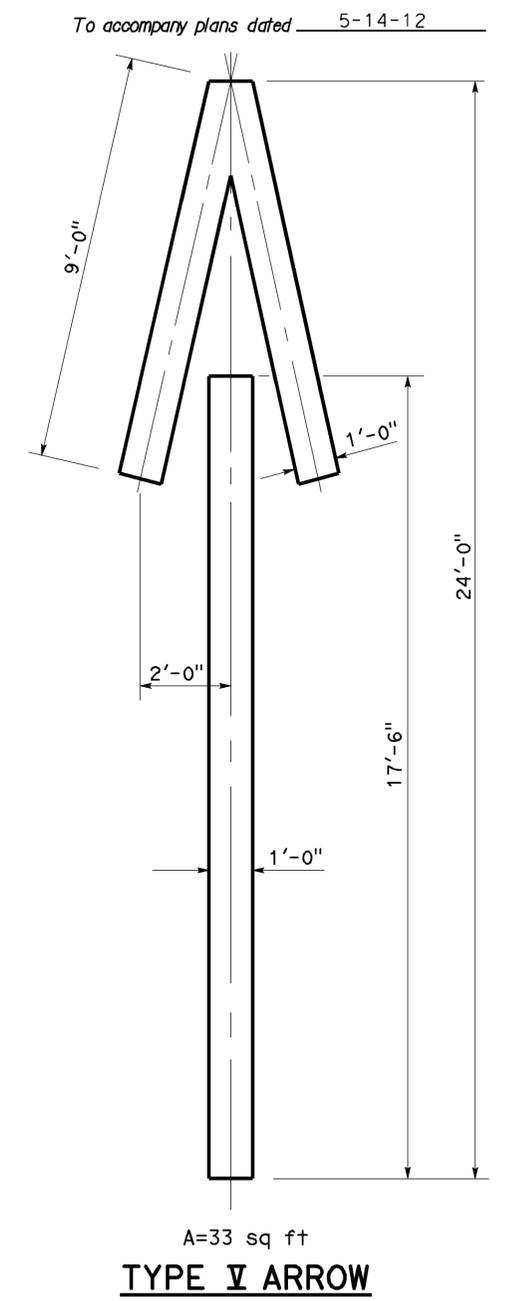
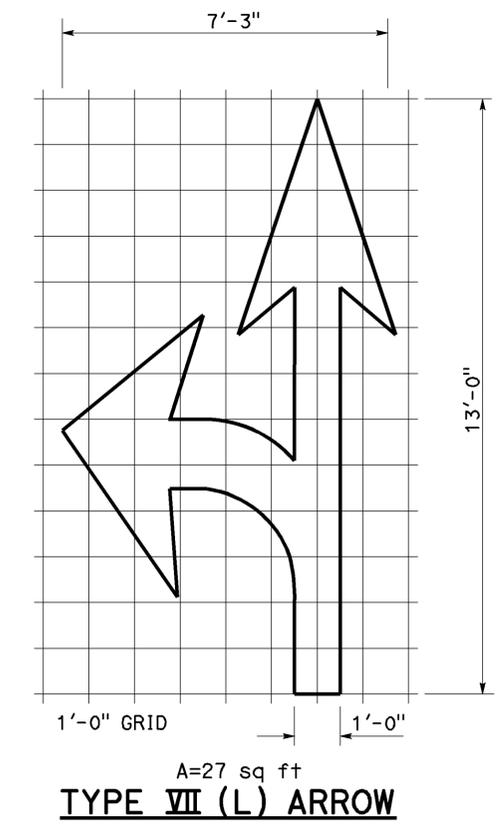
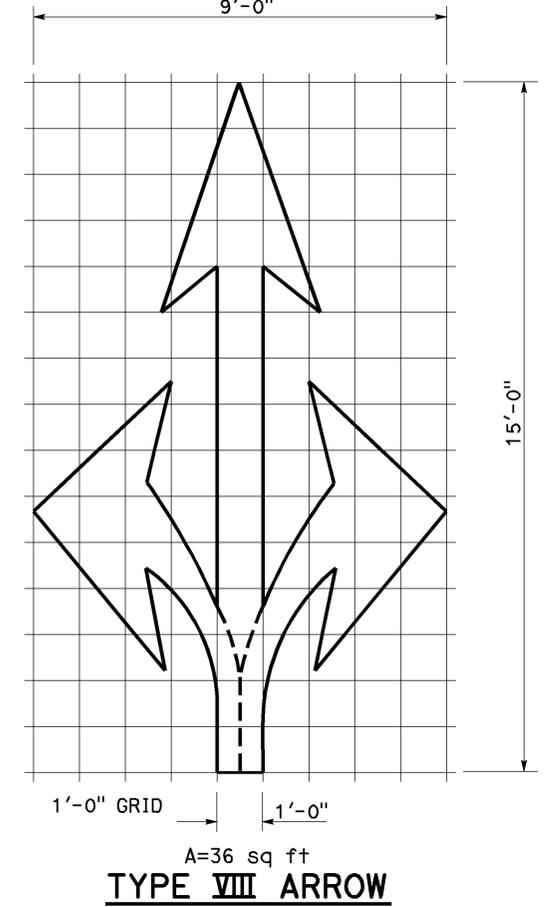
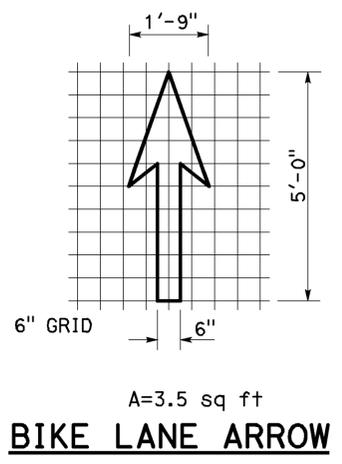
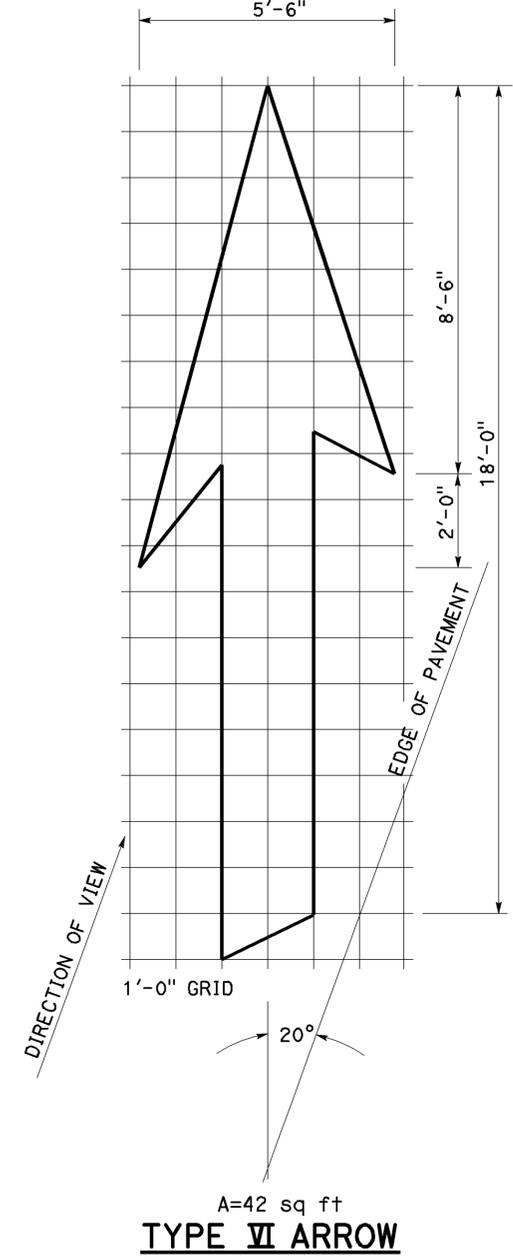
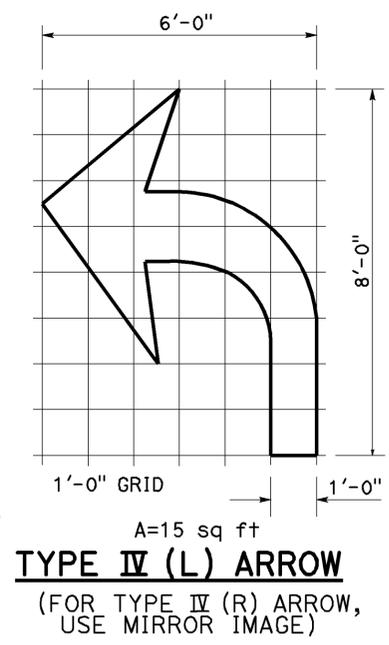
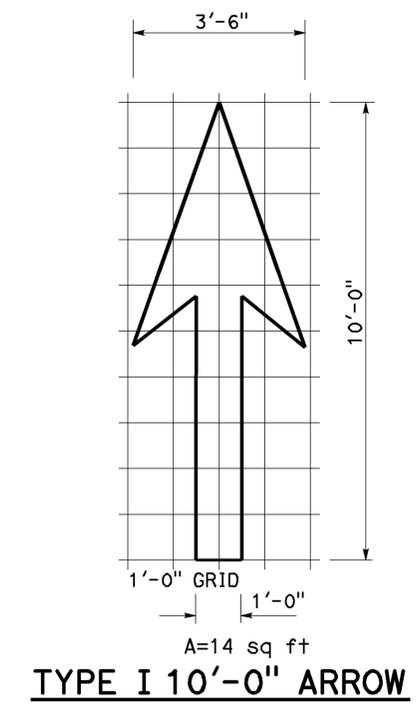
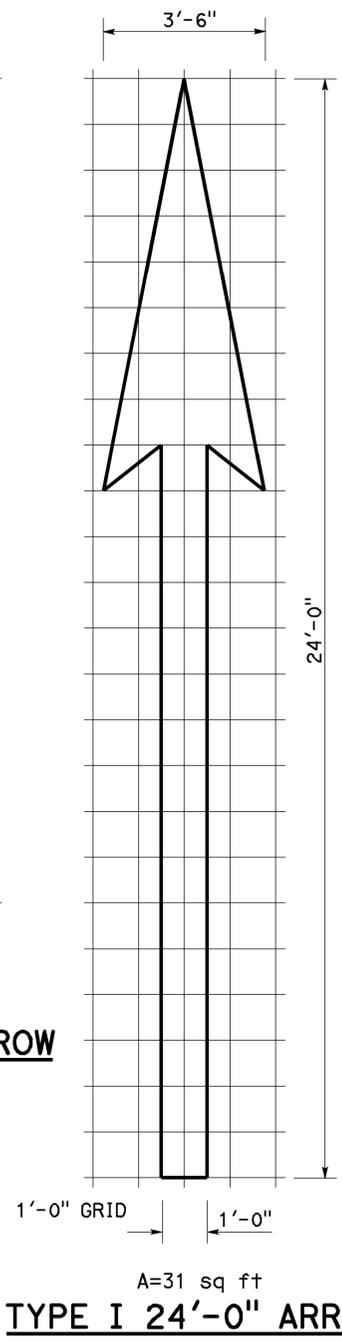
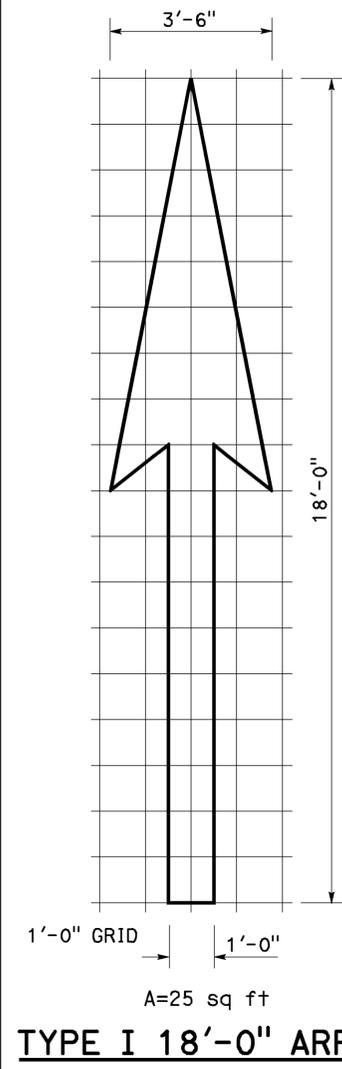


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	15	29

Registered Professional Engineer
 Roberta L. McLaughlin
 No. C40375
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

April 20, 2012
 PLANS APPROVAL DATE

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NOTE:
 MINOR VARIATIONS IN DIMENSIONS
 MAY BE ACCEPTED BY THE ENGINEER.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
 ARROWS**
 NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A
 DATED MAY 1, 2006 - PAGE 9 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A24A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	16	29

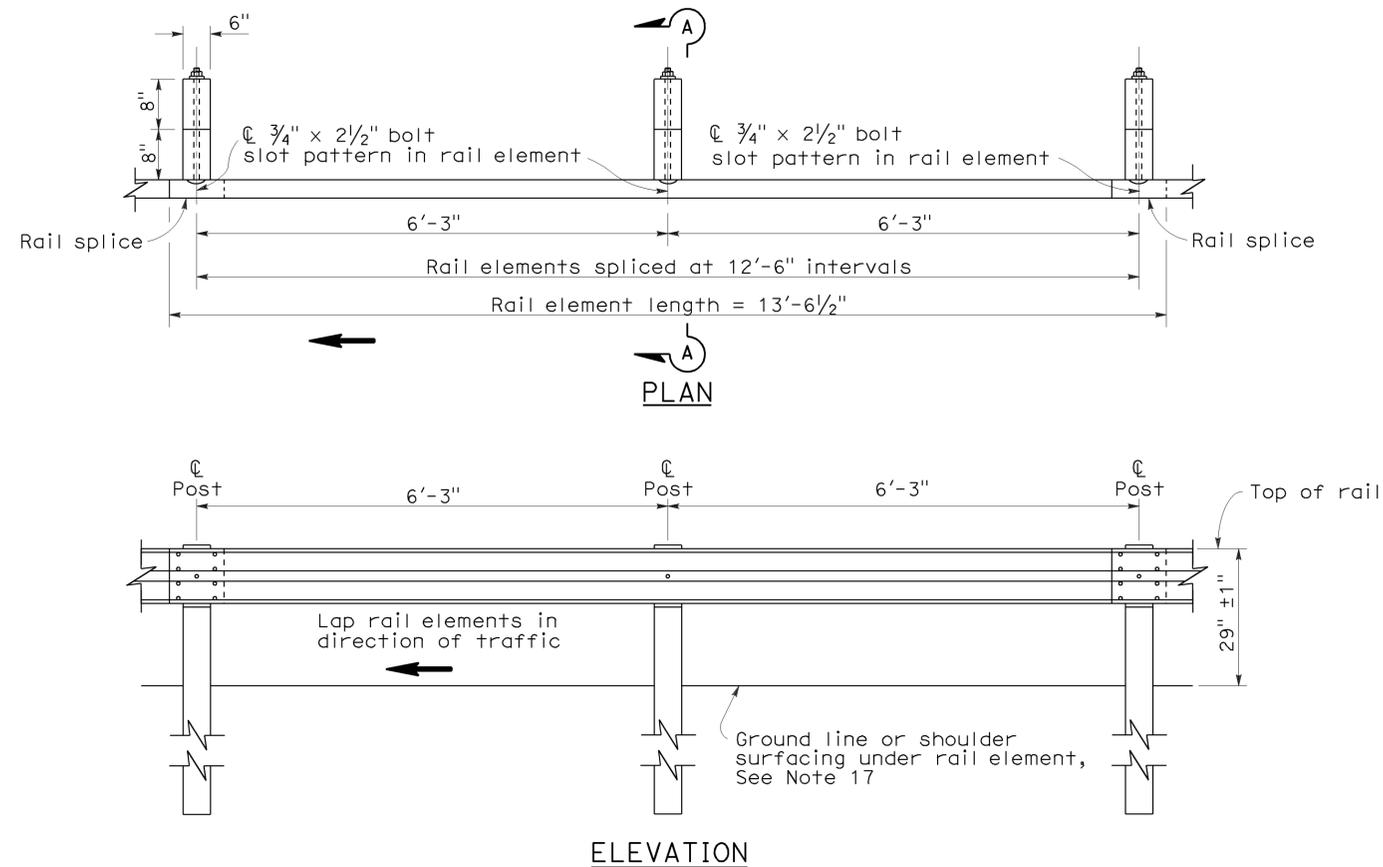
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

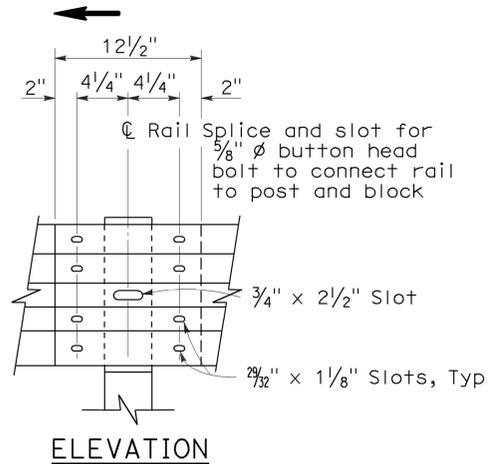
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To accompany plans dated 5-14-12

2006 REVISED STANDARD PLAN RSP A77A1

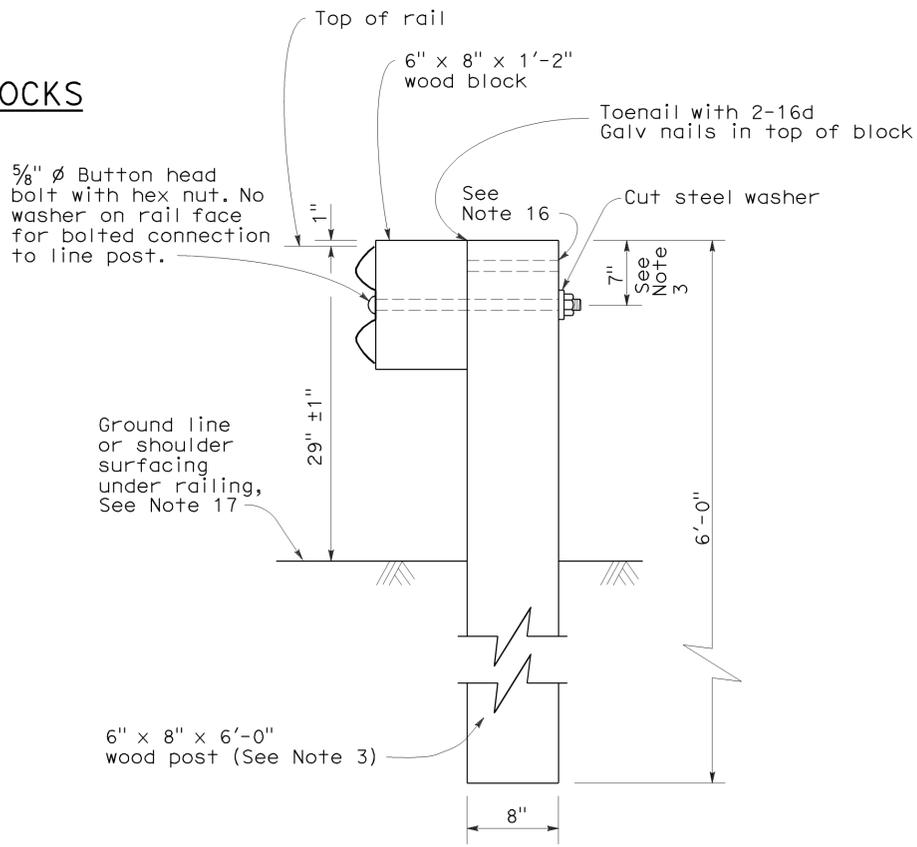
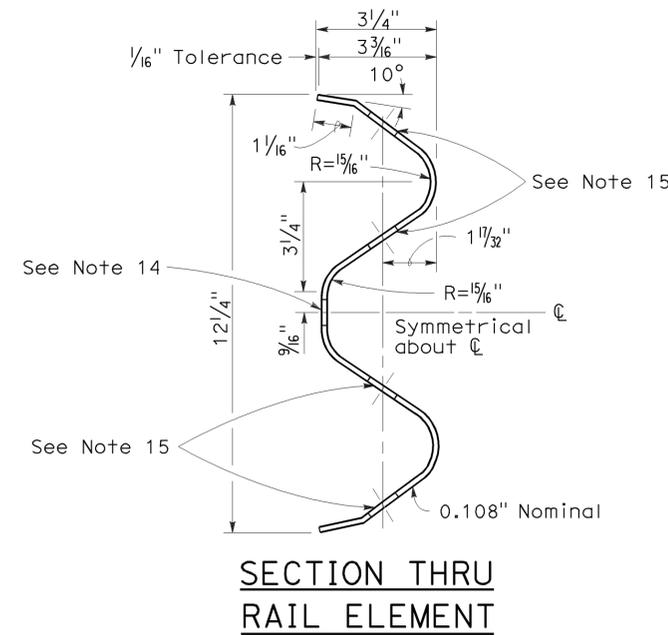


METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS



RAIL ELEMENT SPLICE DETAIL

- Connect the over lapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $2\frac{3}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION A-A

**TYPICAL WOOD LINE
POST INSTALLATION**

See Note 4

NOTES:

- For details of steel post installations, see Standard Plan A77A2.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of wood posts and wood blocks used to construct guard railing, see Standard Plan A77C1.
- For additional installation details, see Standard Plan A77C3.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
- For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
- For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
- For details of guard railing transition to bridge railing, see Standard Plan A77J4.
- For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
- For guard railing connection details to abutments and walls, see Standard Plan A77J3.
- Direction of adjacent traffic indicated by \rightarrow .
- For typical guard railing delineation and dike positioning details, see Standard Plan A77C4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77C1.
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
STANDARD RAILING SECTION
(WOOD POST WITH
WOOD BLOCK)**

NO SCALE

RSP A77A1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A1
DATED MAY 1, 2006 - PAGE 41 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	17	29

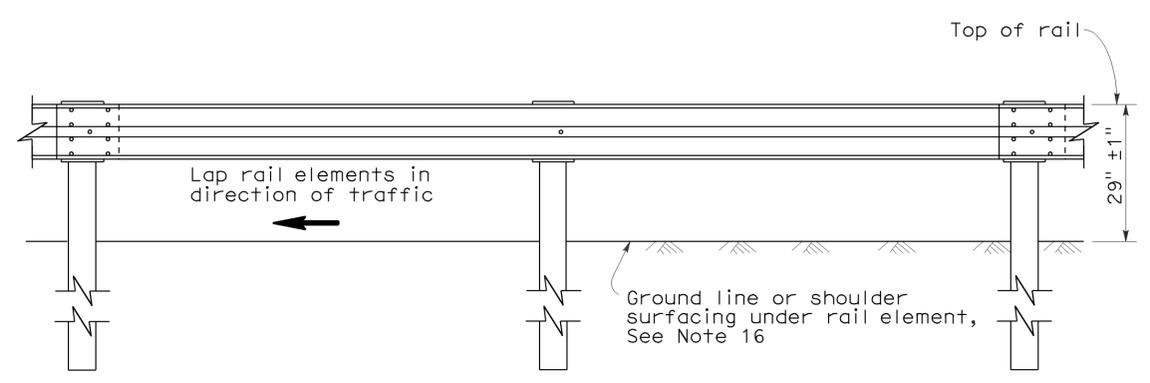
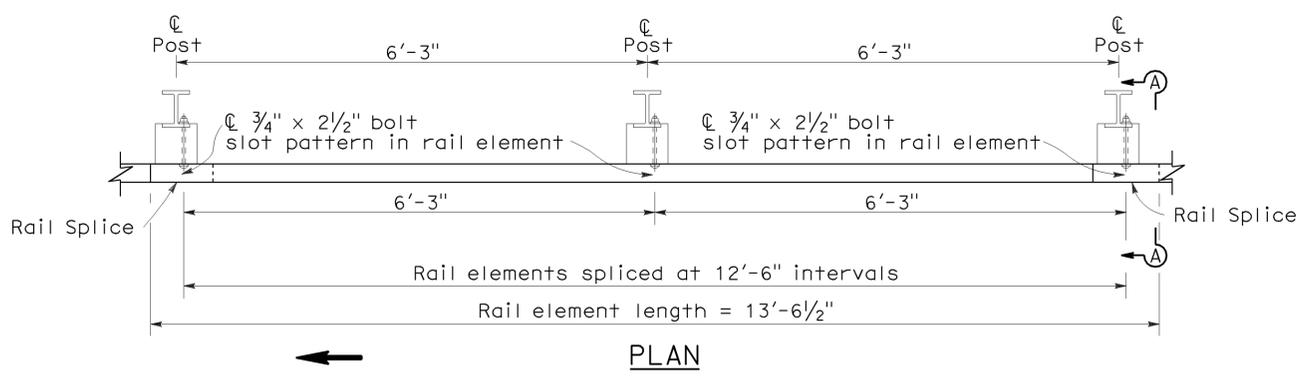
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

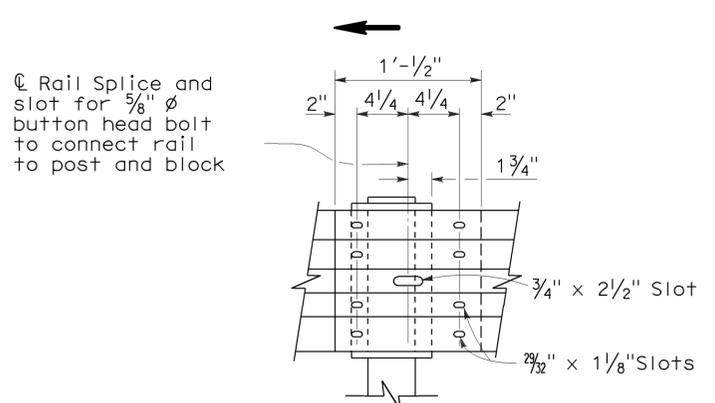
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To accompany plans dated 5-14-12

2006 REVISED STANDARD PLAN RSP A77A2



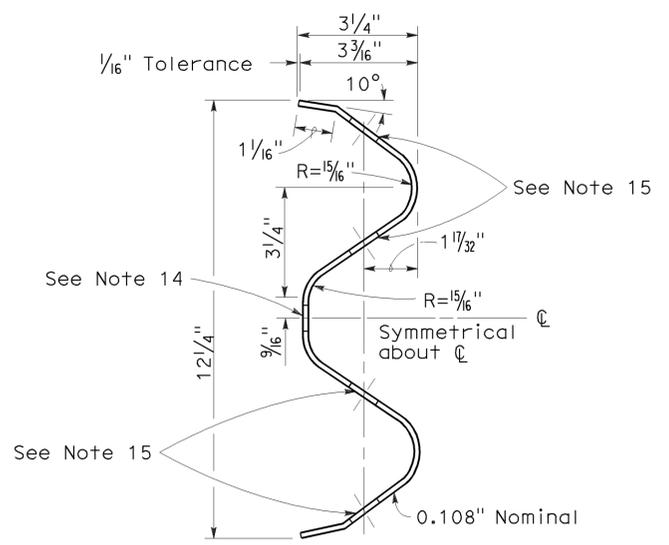
METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS



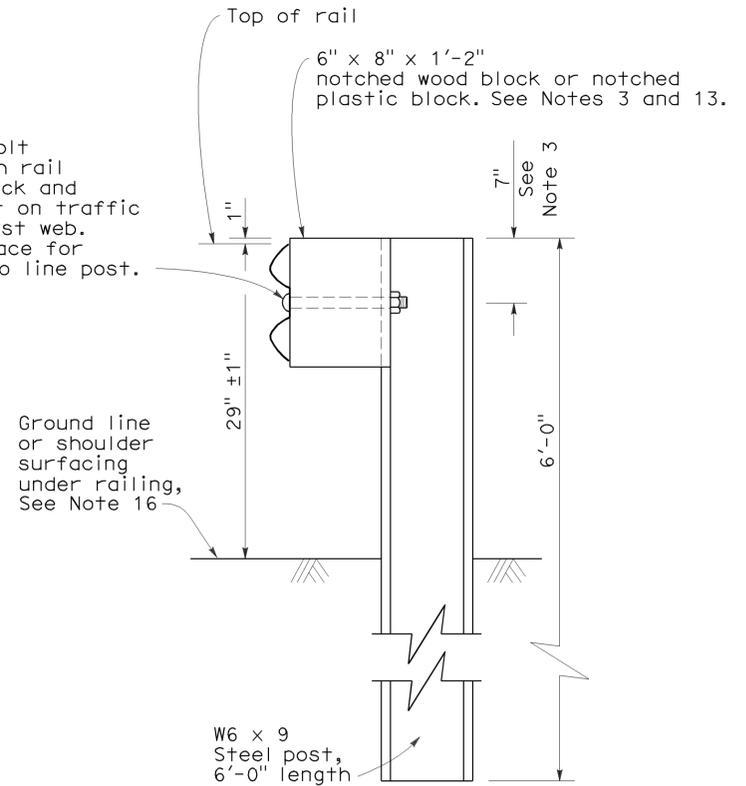
**ELEVATION
RAIL ELEMENT SPLICE DETAIL**

- a) Connect the overlapped end of the rail elements with 5/8" ϕ x 1 3/8" button head oval shoulder splice bolts inserted into the 29/32" x 1/8" slots and bolted together with 5/8" ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- b) The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- c) Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.

5/8" ϕ Button head bolt with hex nut. Attach rail element to wood block and steel post with bolt on traffic approach side of post web. No washer on rail face for bolted connection to line post.



SECTION THRU RAIL ELEMENT



**SECTION A-A
TYPICAL STEEL LINE POST INSTALLATION**

See Note 4

NOTES:

1. For details of wood post installations, see Standard Plan A77A1.
2. For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
3. For details of steel posts and notched wood blocks used to construct guard railing, see Standard Plan A77C2.
4. For additional installation details, see Standard Plan A77C3.
5. Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
6. For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
7. For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
8. For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
9. For details of guard railing transition to bridge railing, see Standard Plan A77J4.
10. For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
11. For dike positioning and guard railing delineation details, see Standard Plan A77C4.
12. Direction of adjacent traffic indicated by \rightarrow .
13. Notched face of block faces steel post.
14. Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
15. Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
16. Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
STANDARD RAILING SECTION
(STEEL POST WITH NOTCHED
WOOD OR NOTCHED
RECYCLED PLASTIC BLOCK)**

NO SCALE

RSP A77A2 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A2
DATED MAY 1, 2006 - PAGE 42 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A2

To accompany plans dated 5-14-12

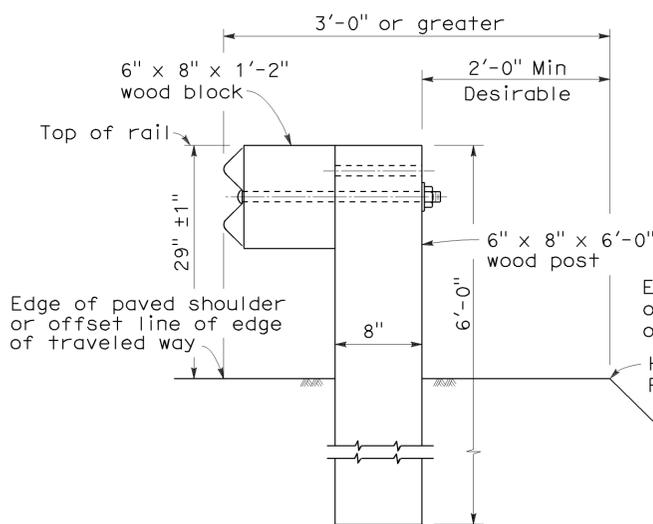
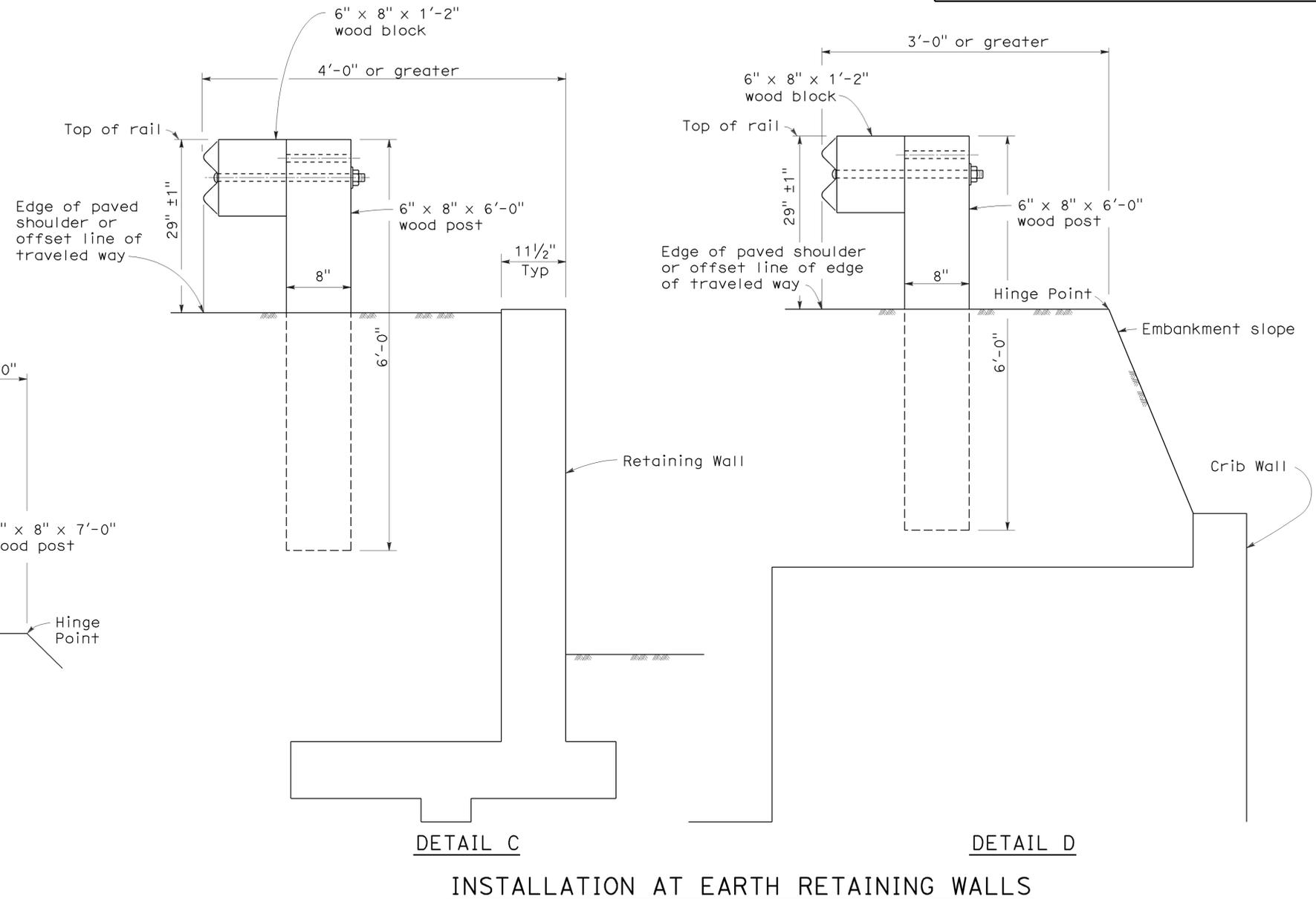
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	18	29

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

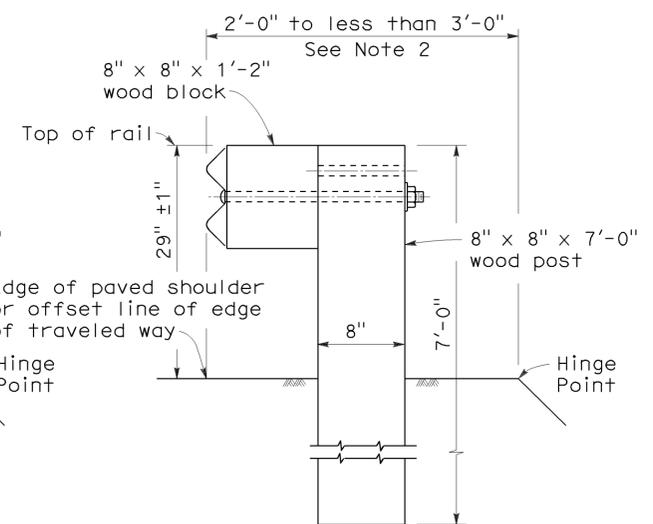
May 20, 2011
PLANS APPROVAL DATE

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

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DETAIL A
TYPICAL ROADWAY
INSTALLATION
See Note 1



DETAIL B
NARROW ROADWAY
INSTALLATION
See Note 1

POST EMBEDMENT

NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 9 steel post, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 9 steel post, 7'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Standard Plans A77A1 and A77A2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-0", see the Project Plans for special details.
3. For dike positioning with guard railing installations, see Standard Plan A77C4.

STATE OF CALIFORNIA
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METAL BEAM GUARD RAILING
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS

NO SCALE

RSP A77C3 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77C3
DATED MAY 1, 2006 - PAGE 46 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77C3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	19	29

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

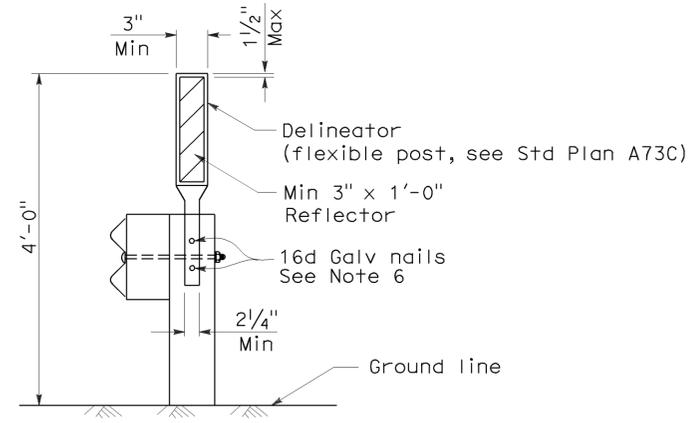
May 20, 2011
PLANS APPROVAL DATE

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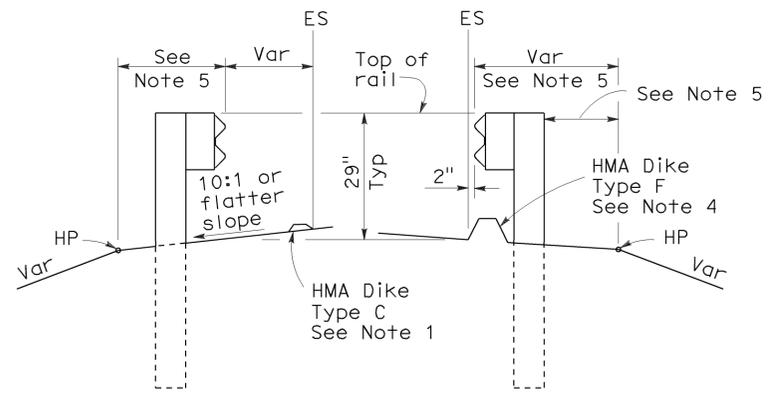
To accompany plans dated 5-14-12

NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Standard Plans A87A and A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77C4 DATED MAY 20, 2011 SUPERSEDES RSP A77C4 DATED JUNE 6, 2008 AND STANDARD PLAN A77C4 DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

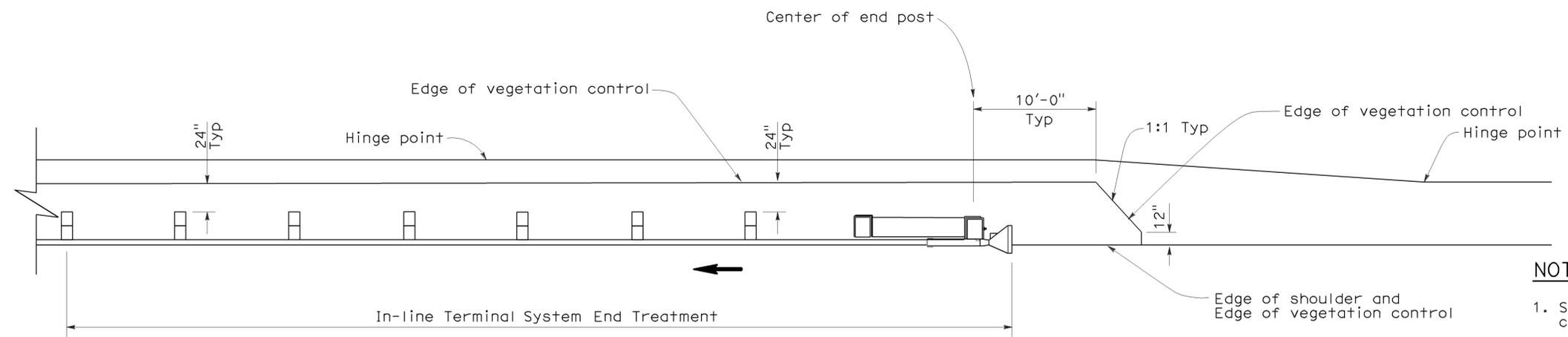
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	21	29

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

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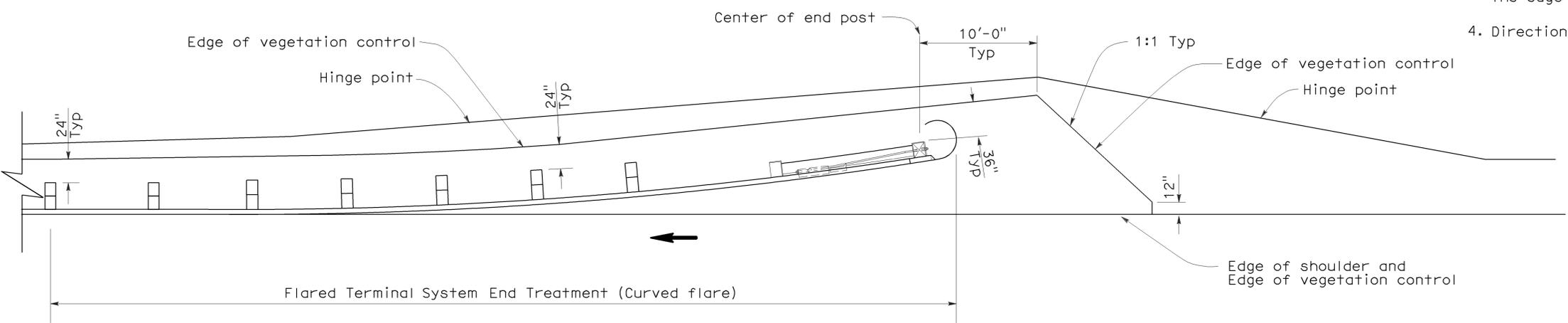
To accompany plans dated 5-14-12



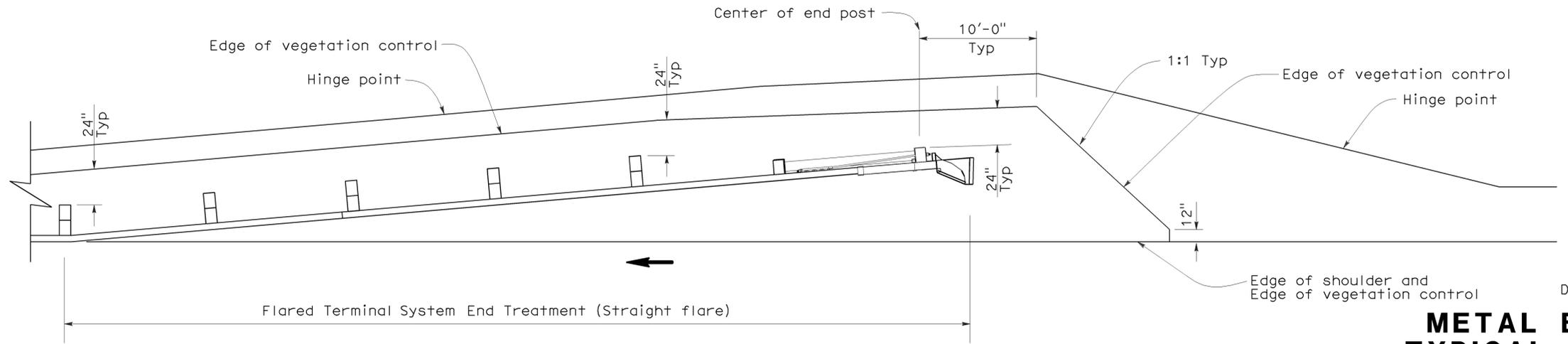
PLAN

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.



PLAN



PLAN

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
FOR TERMINAL SYSTEM END TREATMENTS**

NO SCALE

NSP A77C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP A77C6

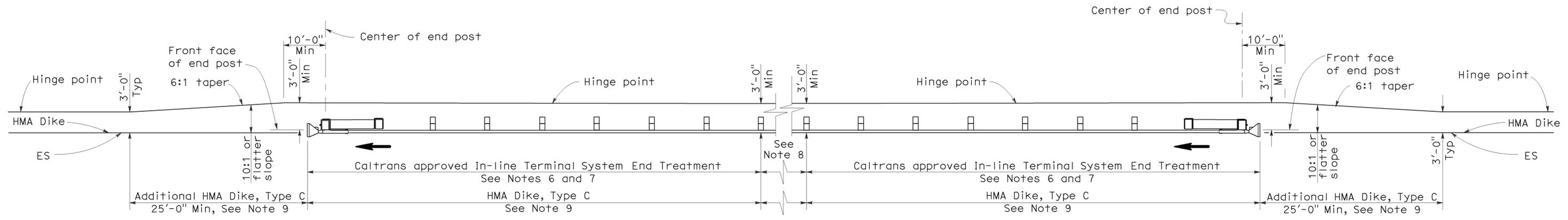
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	22	29

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

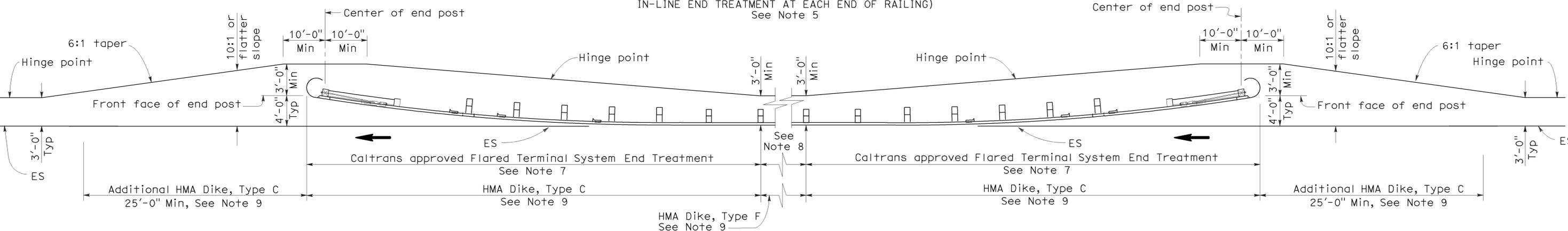
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To accompany plans dated 5-14-12



TYPE 11D LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AT EACH END OF RAILING)
See Note 5



TYPE 11E LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT EACH END OF RAILING)
See Note 5

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by .
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE
RSP A77E2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E2
DATED MAY 1, 2006 - PAGE 49 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77E2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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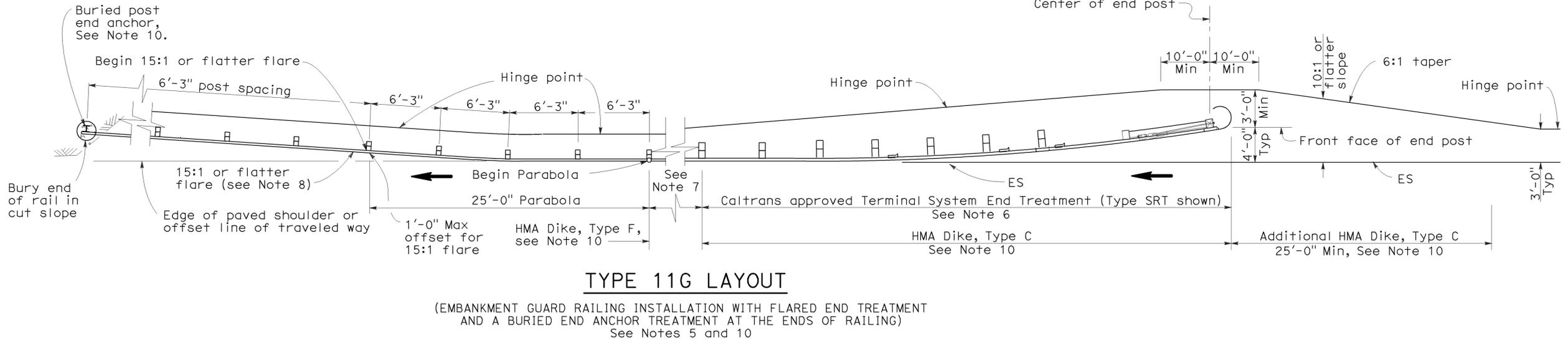
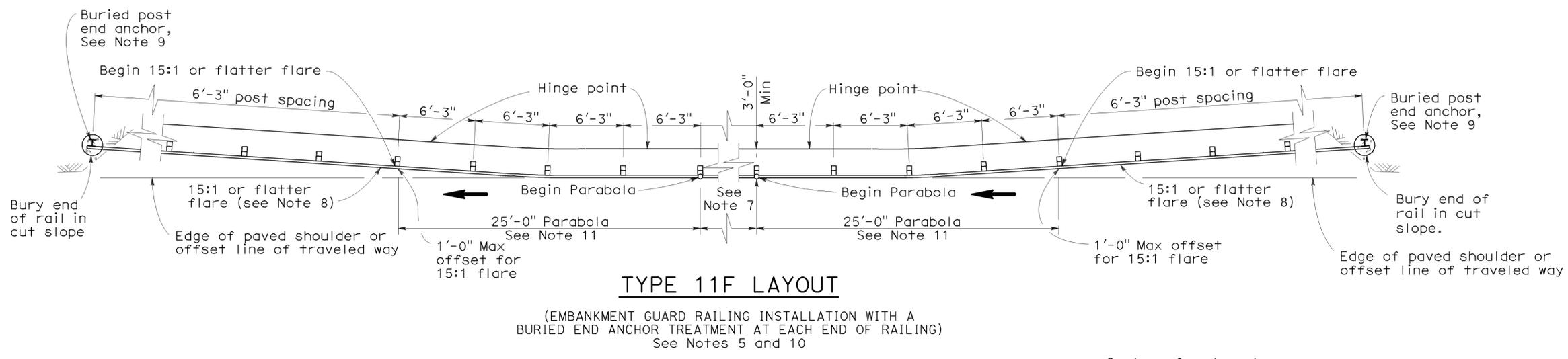
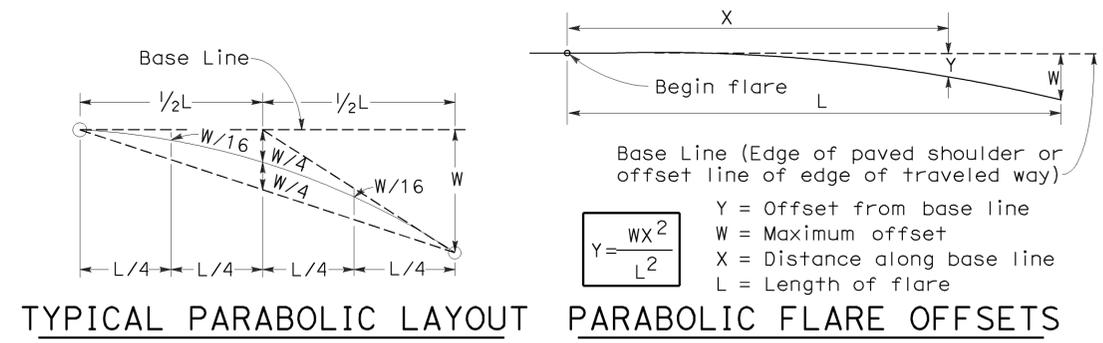
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
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Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 5-14-12



NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11F and 11G Layouts, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

RSP A77E3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E3
DATED MAY 1, 2006 - PAGE 50 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E3

2006 REVISED STANDARD PLAN RSP A77E3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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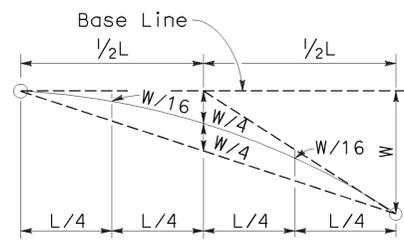
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

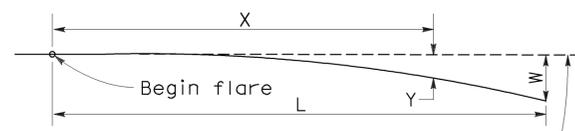
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STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL

To accompany plans dated 5-14-12



TYPICAL PARABOLIC LAYOUT

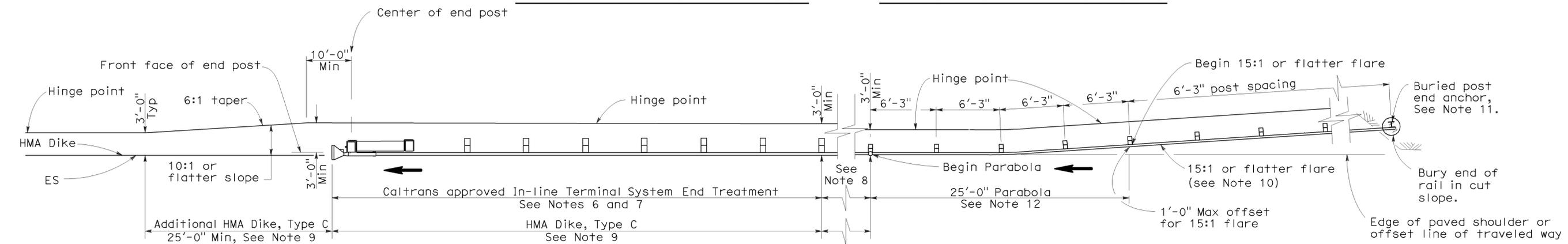


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

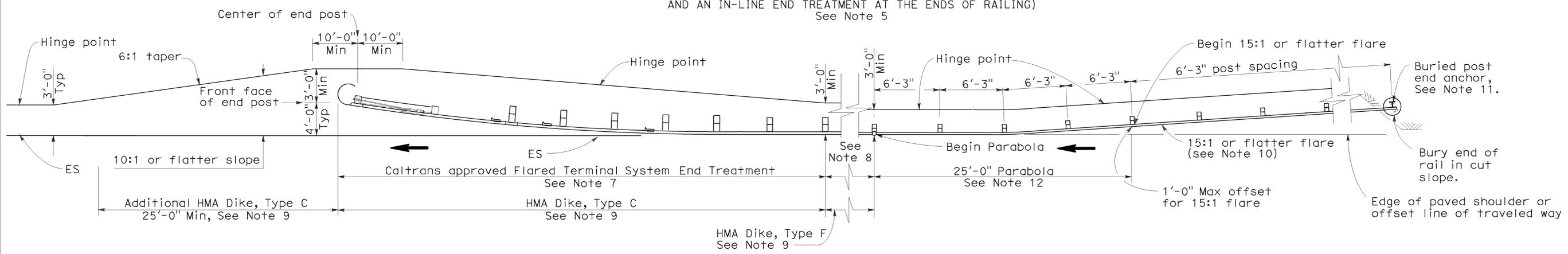
$$Y = \frac{WX^2}{L^2}$$

PARABOLIC FLARE OFFSETS



TYPE 11K LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH A BURIED END ANCHOR TREATMENT AND AN IN-LINE END TREATMENT AT THE ENDS OF RAILING)
See Note 5



TYPE 11L LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH A BURIED END ANCHOR TREATMENT AND A FLARED END TREATMENT AT THE ENDS OF RAILING)
See Note 5

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11K and 11L Layouts, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

RSP A77E6 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E6
DATED MAY 1, 2006 - PAGE 53 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E6

2006 REVISED STANDARD PLAN RSP A77E6

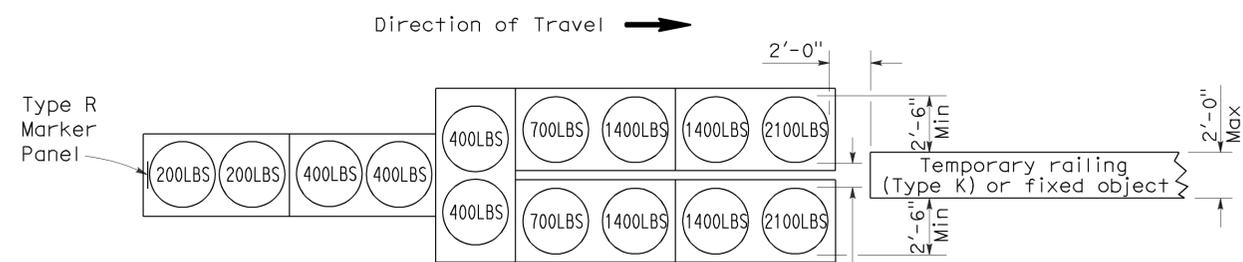
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	25	29

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

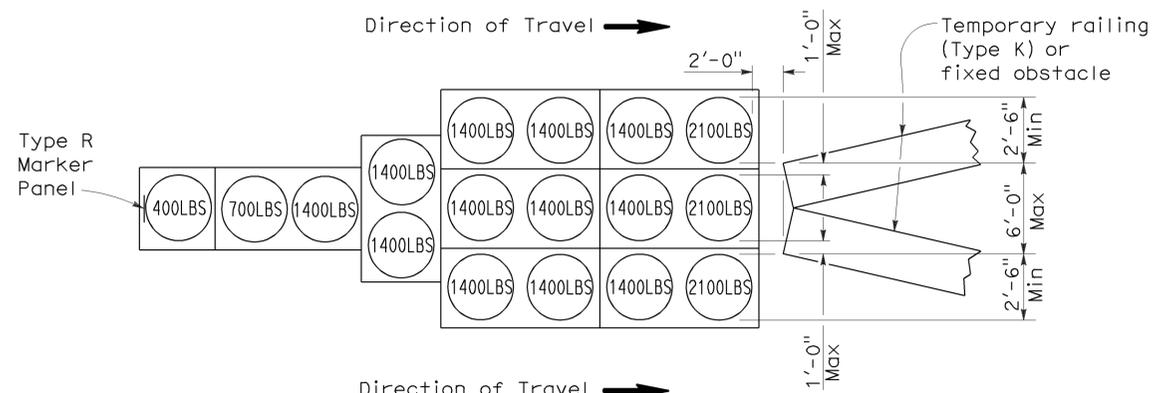
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To accompany plans dated 5-14-12



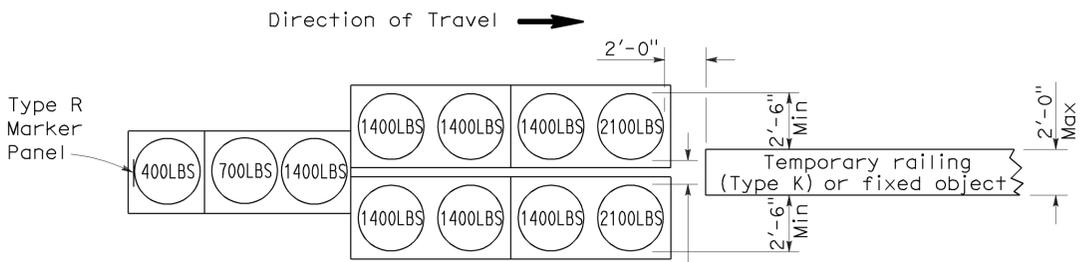
ARRAY 'TU14'

Approach speed 45 mph or more



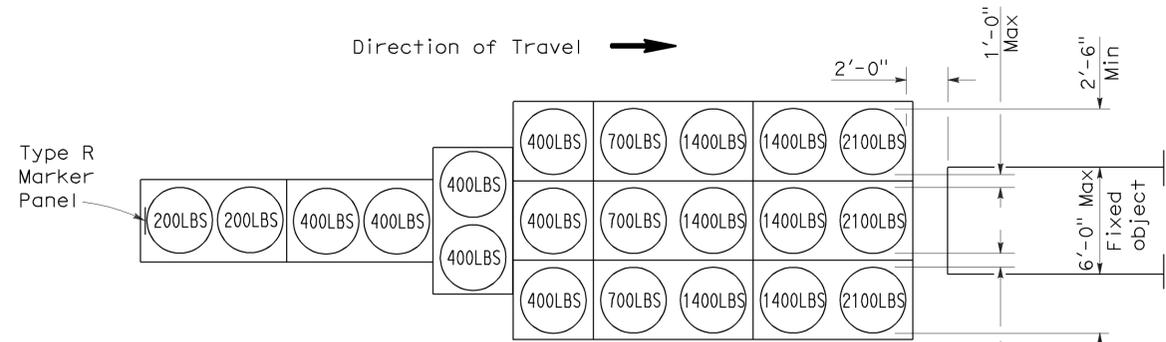
ARRAY 'TU17'

Approach speed less than 45 mph



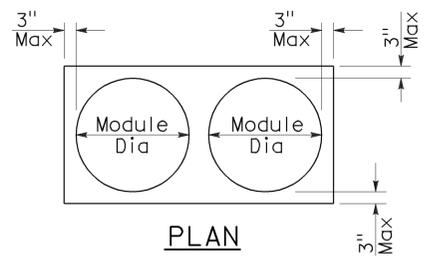
ARRAY 'TU11'

Approach speed less than 45 mph

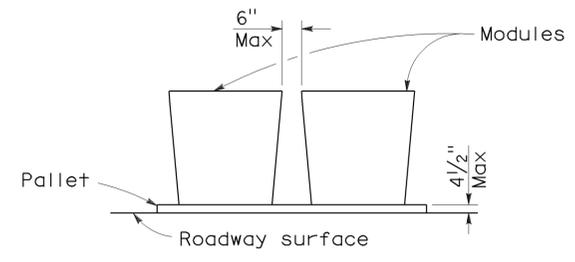


ARRAY 'TU21'

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
03	Col	20	0.0/3.0 3.6/10.2	26	29

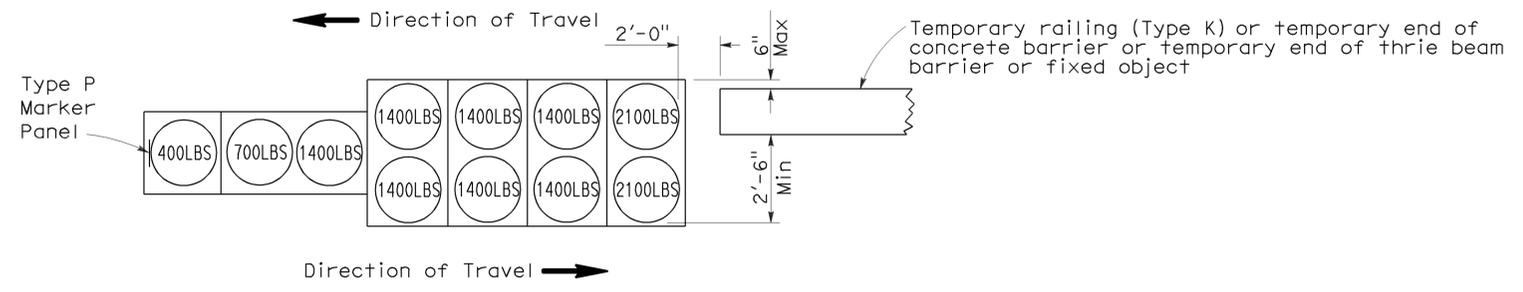
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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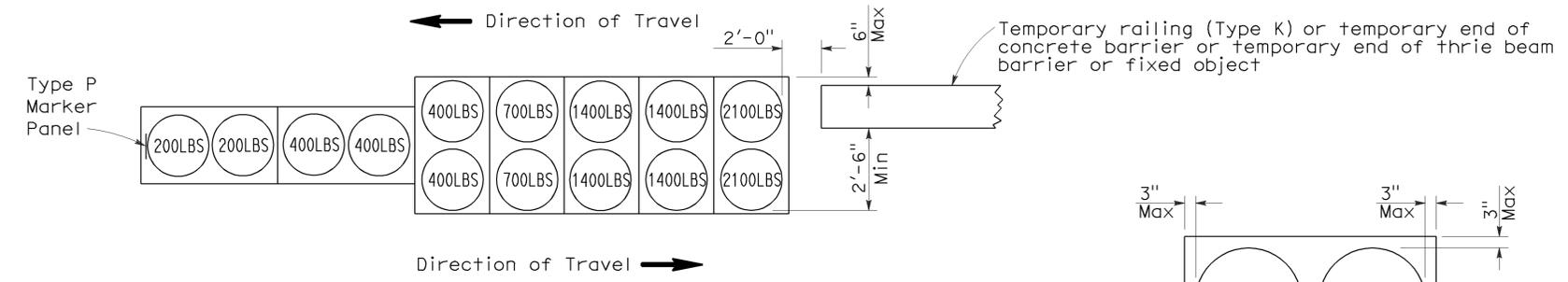


To accompany plans dated 5-14-12



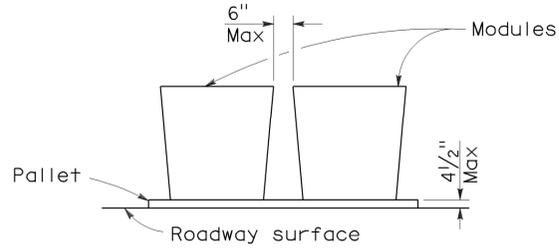
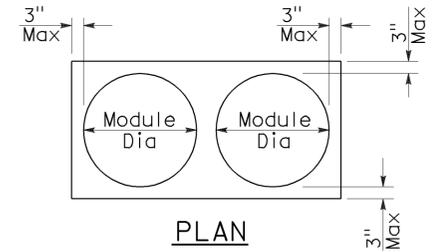
ARRAY 'TB11'

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

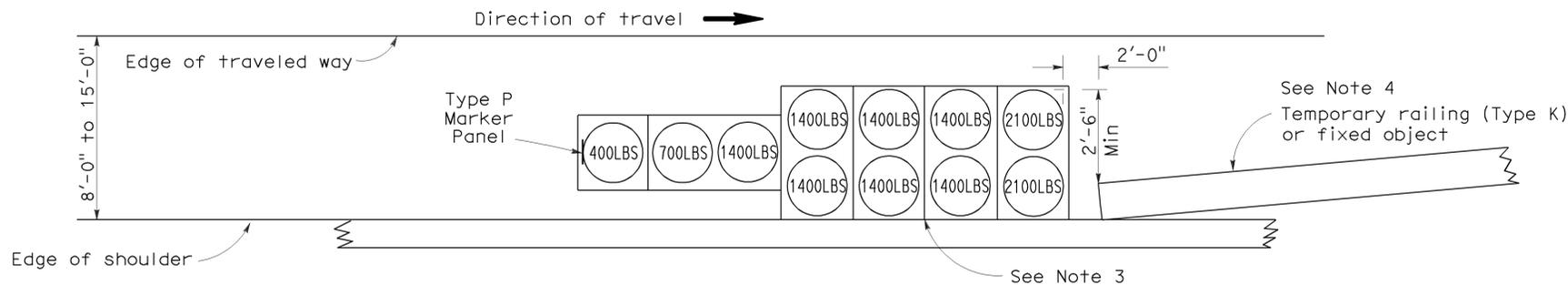
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	27	29

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

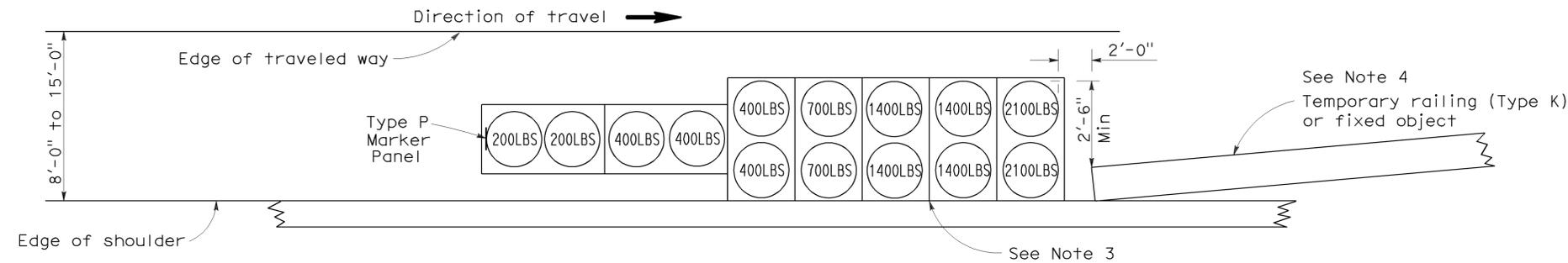
June 6, 2008
PLANS APPROVAL DATE

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 5-14-12



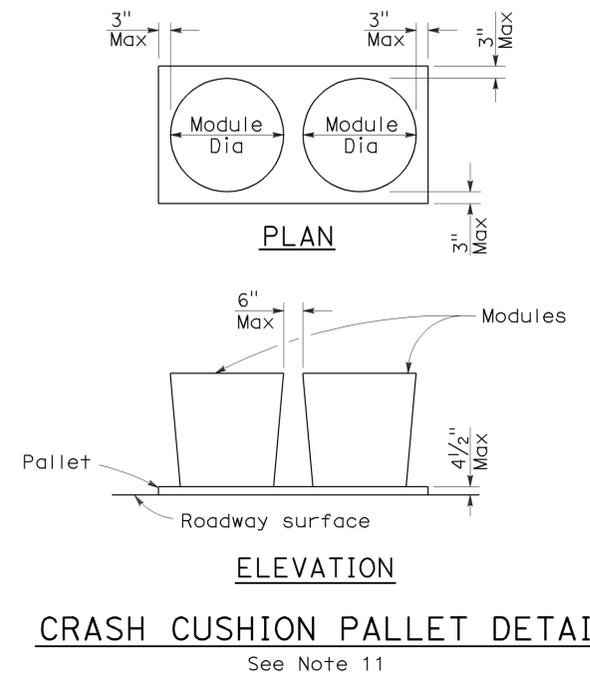
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

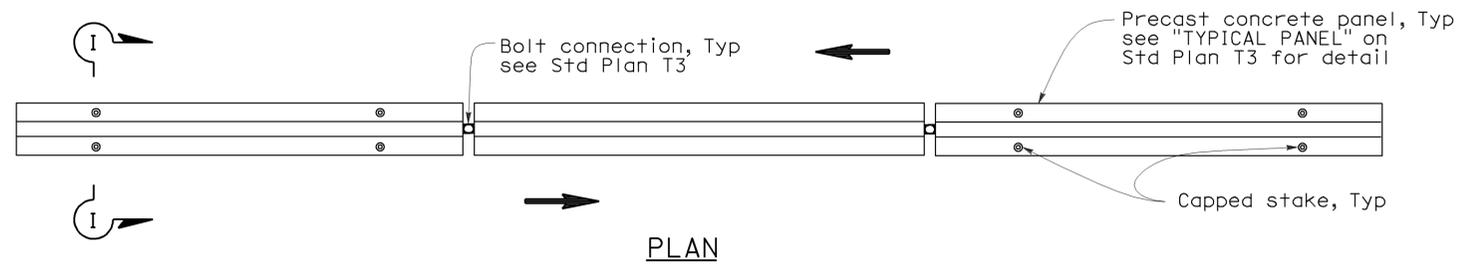
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	0.0/3.0 3.6/10.2	28	29

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

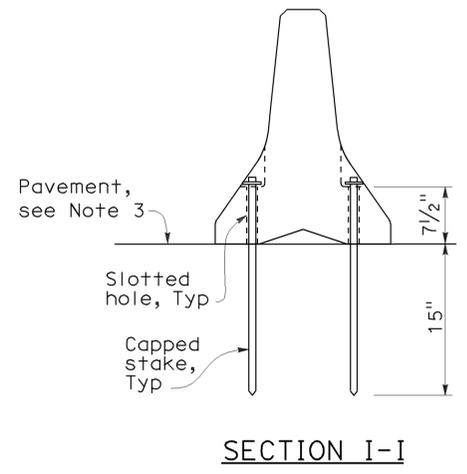
May 20, 2011
PLANS APPROVAL DATE

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To accompany plans dated 5-14-12

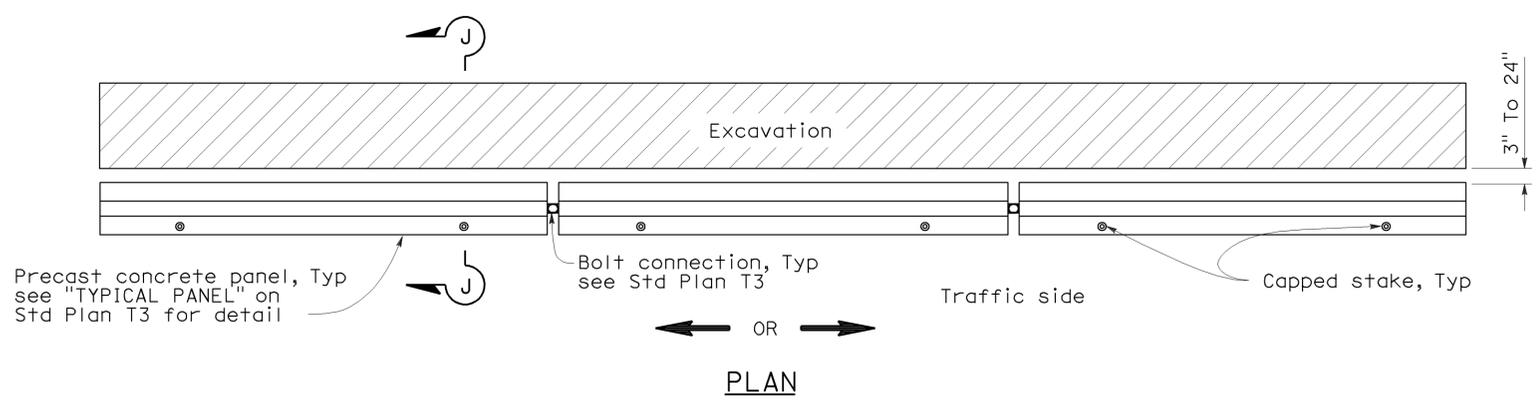


RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC
See Note 1

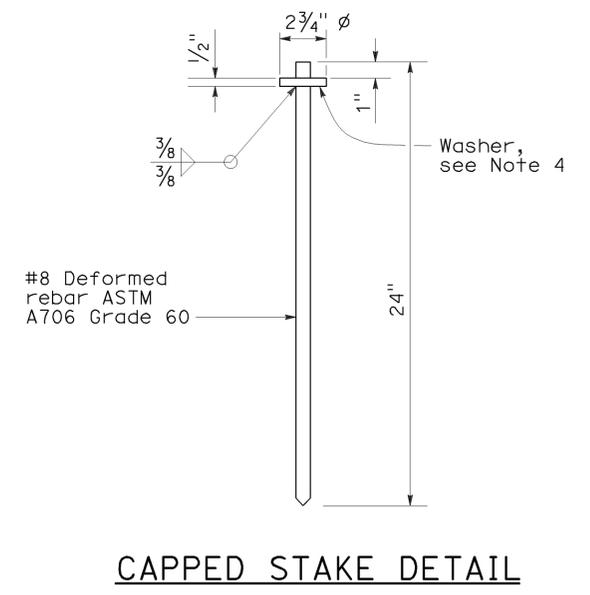
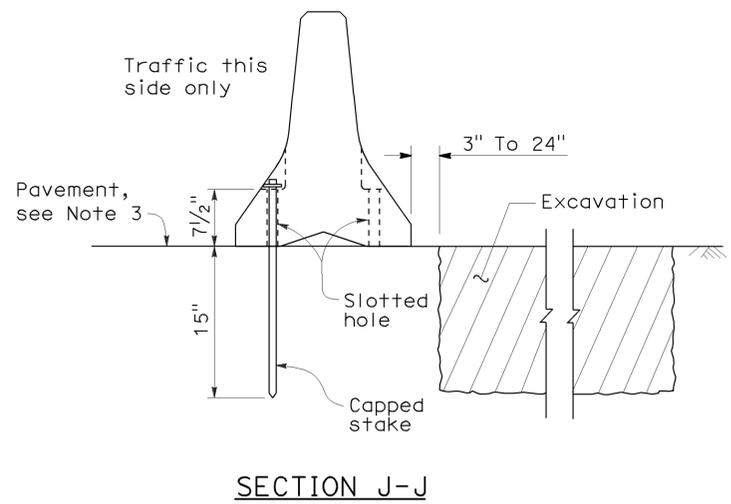


NOTES:

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

