

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3-9	CONSTRUCTION DETAILS
10	CONSTRUCTION AREA SIGNS
11	PAVEMENT DELINEATION DETAILS
12	PAVEMENT DELINEATION QUANTITIES
13-15	SUMMARY OF QUANTITIES
16-36	REVISED STANDARD PLANS

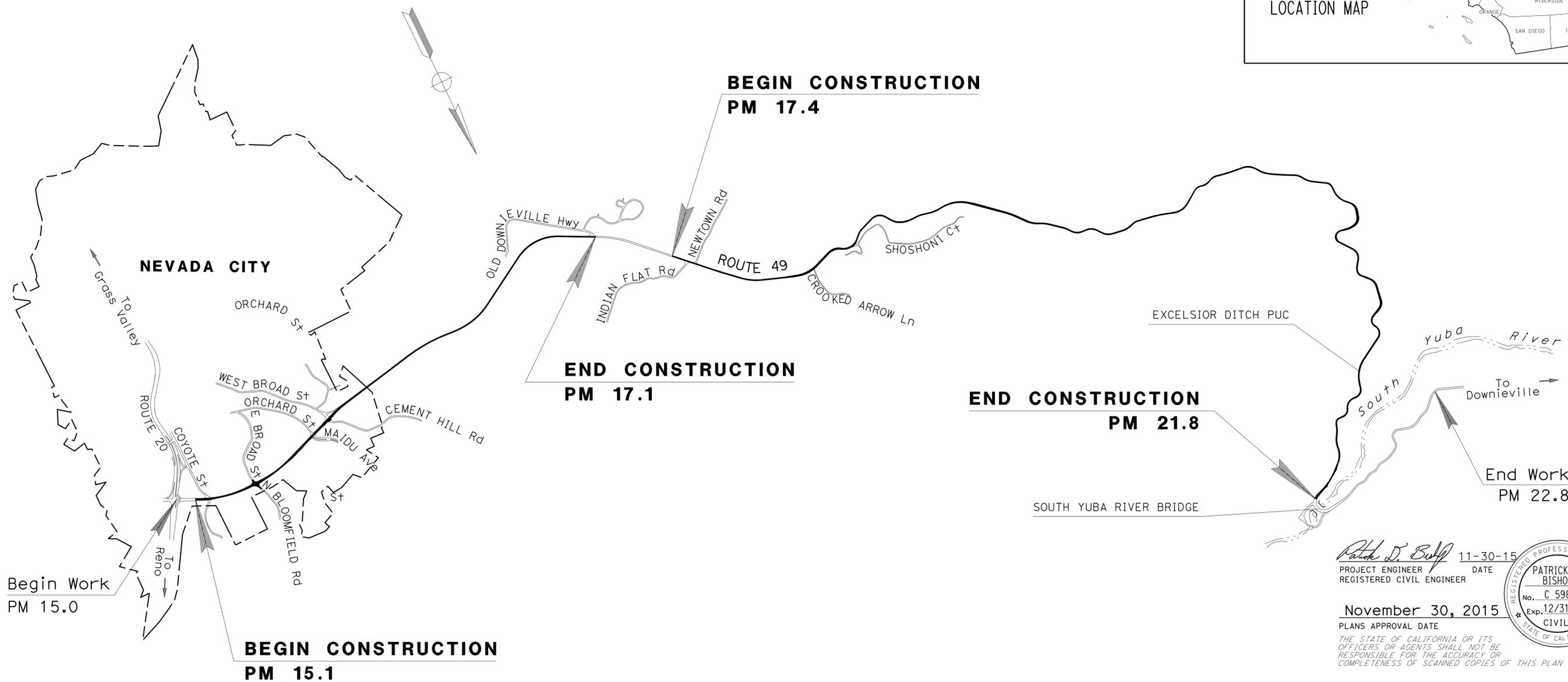
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA ACSTP-P049(168)
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN NEVADA COUNTY
IN AND NEAR NEVADA CITY
FROM 0.1 MILE SOUTH OF COYOTE STREET
TO OLD DOWNIEVILLE HIGHWAY AND
FROM 0.1 MILE SOUTH OF INDIAN FLAT ROAD
TO SOUTH YUBA RIVER BRIDGE

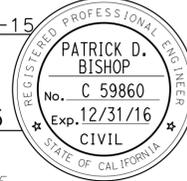
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



PROJECT MANAGER
PATRICK D. BISHOP
 DESIGN MANAGER
PATRICK D. BISHOP



Patrick D. Bishop 11-30-15
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
November 30, 2015
 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.	03-0G3304
PROJECT ID	0315000083

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 MAINTENANCE DESIGN

FUNCTIONAL SUPERVISOR
 PATRICK D. BISHOP

CALCULATED/DESIGNED BY
 CHECKED BY

HARVEY GENEROSO
 PATRICK D. BISHOP

REVISED BY
 DATE REVISED

NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- FOR REMOVE GUARDRAIL, MIDWEST GUARDRAIL SYSTEM (8' STEEL POST), REMOVE AC DIKE, PLACE HMA DIKE, AND CRACK TREATMENT SEE CONSTRUCTION DETAILS AND SUMMARY OF QUANTITIES.

ABBREVIATIONS:

RHMA-G (BWC) = RUBBERIZED HOT MIX ASPHALT-GAP GRADED (BONDED WEARING COURSE)
 LL = LANE LINE

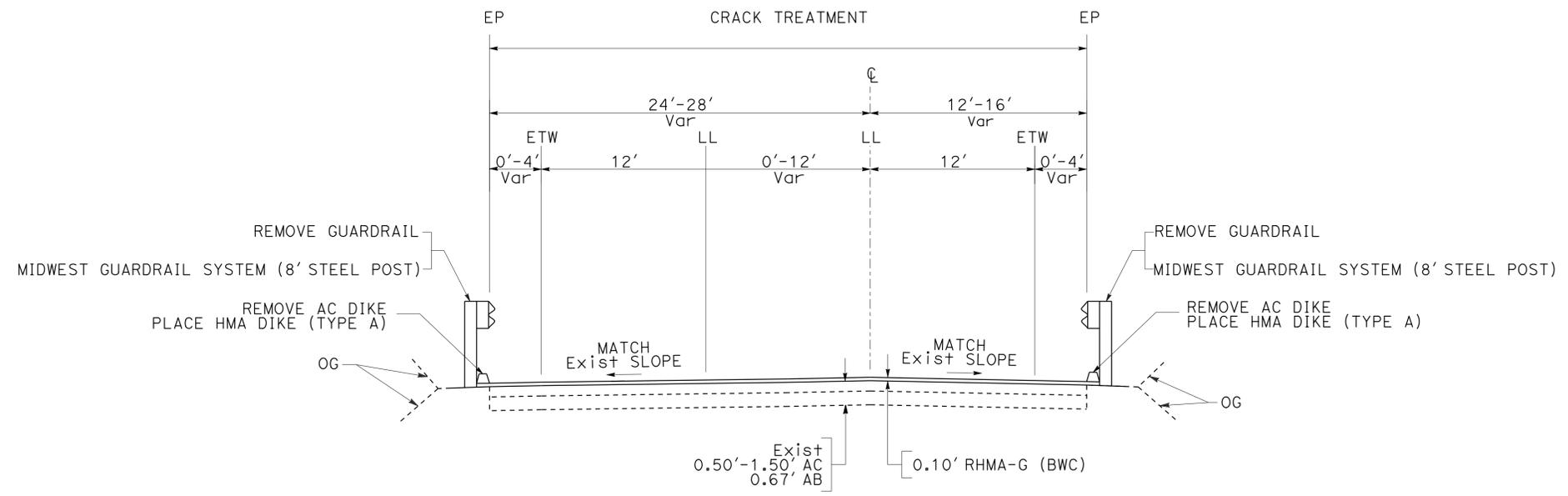
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	2	36

11-30-15
 REGISTERED CIVIL ENGINEER DATE
 11-30-15
 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
 PATRICK D. BISHOP
 No. C 59860
 Exp 12/31/16
 CIVIL
 STATE OF CALIFORNIA

PAVEMENT CLIMATE REGION

LOW MOUNTAIN



ROUTE 49
 PM 15.1 TO 17.1
 PM 17.4 TO 21.8

TYPICAL CROSS SECTIONS
 NO SCALE
X-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	3	36

11-30-15
 REGISTERED CIVIL ENGINEER DATE
 11-30-15
 PLANS APPROVAL DATE

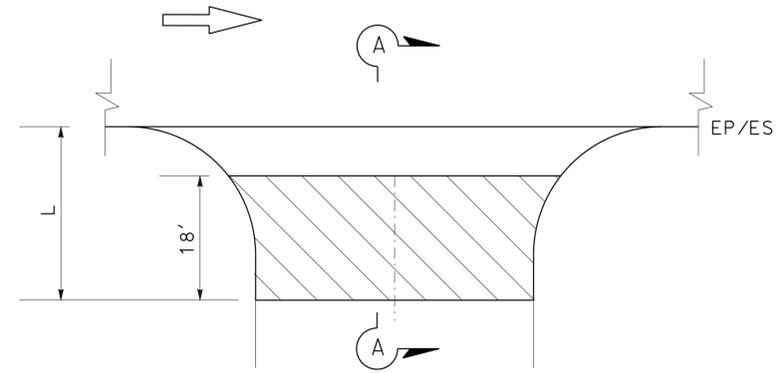
PATRICK D. BISHOP
 No. C 59860
 Exp. 12/31/16
 CIVIL

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.

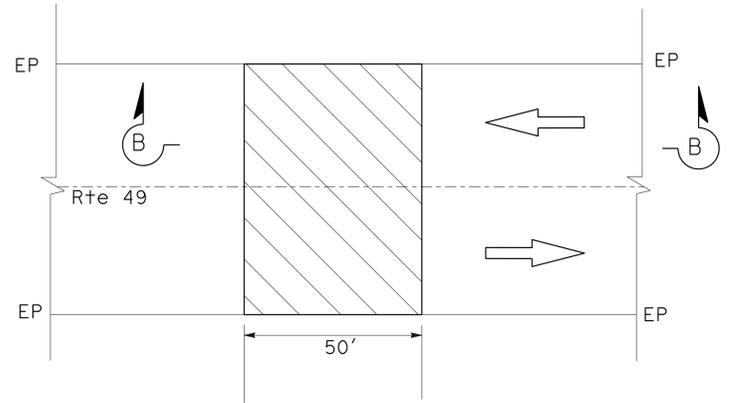
NOTE:
 1. THE LOCATIONS OF WORK ARE FLEXIBLE AND MAY BE ADJUSTED TO MITIGATE ANY CONFLICTS WITH EXISTING UTILITY FACILITIES. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.

ABBREVIATIONS:
 RHMA-G (BWC) = RUBBERIZED HOT MIX ASPHALT-GAP GRADED (BONDED WEARING COURSE)
 HMA-A = HOT MIX ASPHALT (TYPE A)

LEGEND:
 COLD PLANE AC PAVEMENT (0.10' Max)

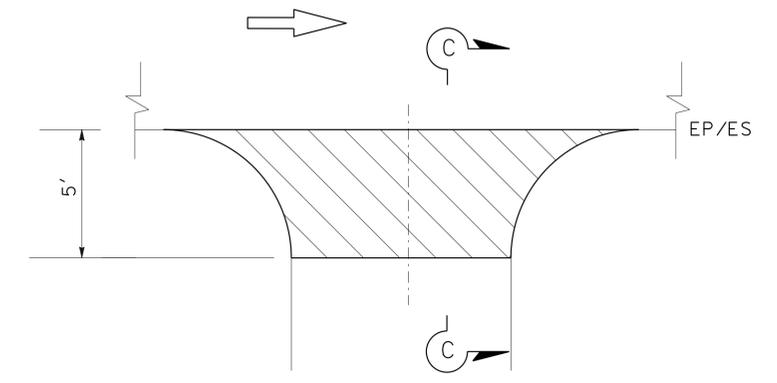


PLAN
INTERSECTION CONFORM

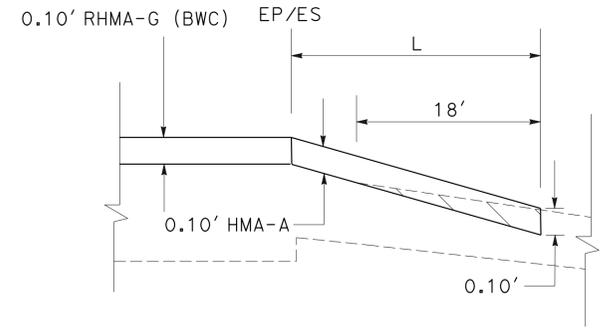


PLAN
MAINLINE CONFORM

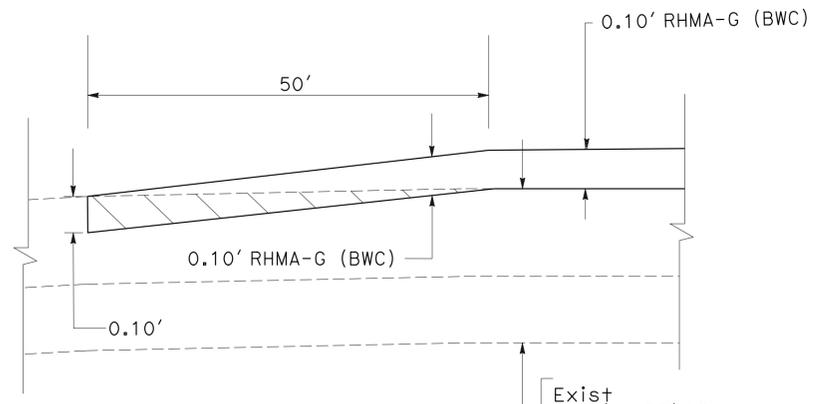
PM 15.1
 PM 17.1
 PM 17.4



PLAN
DRIVEWAY CONFORM

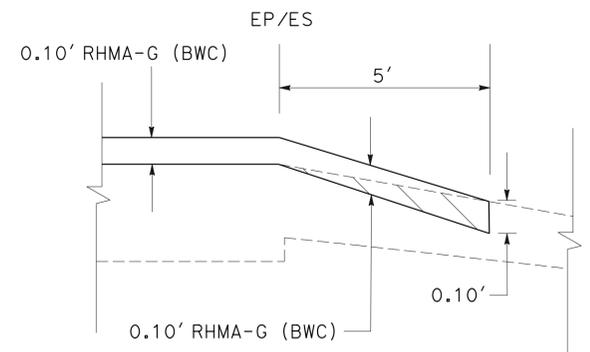


SECTION A-A



SECTION B-B

Exist
 0.50' - 1.50' AC
 0.67' AB



SECTION C-C

POST MILE	LENGTH "L"
	LF
15.20 R+ - COYOTE St	50
15.20 L+ - COYOTE St	75
15.39 R+ - NORTH BLOOMFIELD Rd	125
15.39 L+ - NORTH BLOOMFIELD Rd	50
15.60 R+ - MAIDU Ave	25
15.60 L+ - ORCHARD St	50
15.78 R+ - CEMENT HILL Rd	25
15.78 L+ - W BROAD St	25
15.78 L+ - W BROAD St (GORE AREA)	25
17.10 L+ - OLD DOWNIEVILLE Hwy	25
17.48 R+ - INDIAN FLAT Rd	50
17.53 L+ - NEWTOWN Rd	50

CONSTRUCTION DETAILS
 NO SCALE
C-1

REVISIONS:
 REVISION NO. | DATE | BY | DESCRIPTION
 1 | 11/30/15 | PDB | INTERSECTION CONFORM
 2 | 11/30/15 | PDB | MAINLINE CONFORM
 3 | 11/30/15 | PDB | DRIVEWAY CONFORM
 4 | 11/30/15 | PDB | SECTION A-A
 5 | 11/30/15 | PDB | SECTION B-B
 6 | 11/30/15 | PDB | SECTION C-C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	4	36

<i>Patrick D. Bishop</i>	11-30-15
REGISTERED CIVIL ENGINEER	DATE
11-30-15	
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:

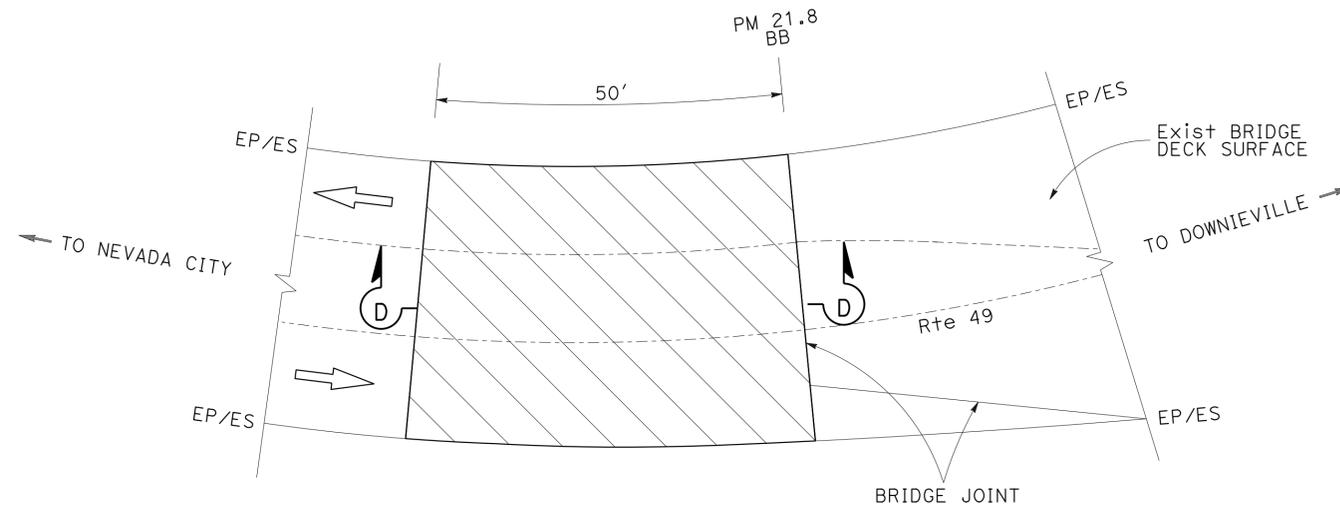
- GRIND EXISTING SURFACES TO ACCOMMODATE A MINIMUM TAPER THICKNESS OF 0.10' WHEN EITHER:
 - HMA MATERIAL SUCH AS RUBBERIZED, POLYMER MODIFIED OR OPEN GRADED IS UNSUITABLE FOR RAKING TO A MAXIMUM 0.02' THICKNESS AT THE CONFORM.
 - TEMPORARY TAPER WILL BE IN PLACE FOR MORE THAN 14 DAYS.
- PERMANENT SURFACE MAY BE EXISTING OR NEW PAVEMENT.
- ROADWAY SURFACE IS THE TOP OF EXISTING SURFACE OR THE TOP OF THE PLANED SURFACE.
- FOR TEMPORARY TAPERS ON BRIDGE DECKS AND APPROACH SLABS, CONSTRUCT TEMPORARY TAPERS WITH POLYESTER CONCRETE.
- IF AUTHORIZED, YOU MAY USE ALTERNATIVE MATERIALS OR METHODS TO PRODUCE THE REQUIRED TAPER.
- THE LOCATIONS OF WORK ARE FLEXIBLE AND MAY BE ADJUSTED TO MITIGATE ANY CONFLICTS WITH EXISTING UTILITY FACILITIES. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.

LEGEND:

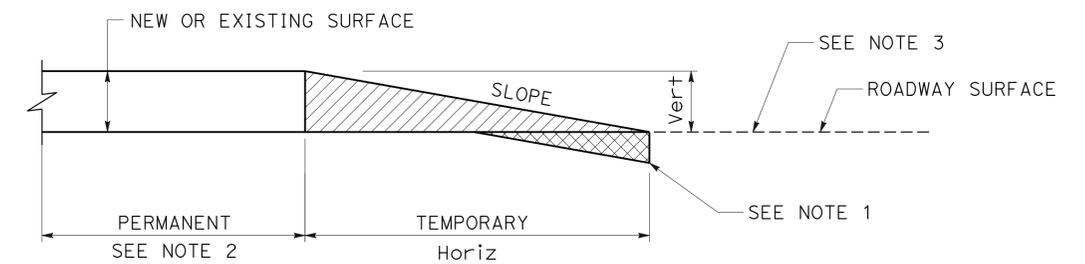
- COLD PLANE AC PAVEMENT (0.10' Max)
- HMA MATERIAL (TEMPORARY TAPER) (SEE NOTE 4)
- IF NECESSARY, COLD PLANE ASPHALT CONCRETE PAVEMENT AND PLACE HMA MATERIAL (SEE NOTE 1)

ABBREVIATION:

RHMA-G (BWC) = RUBBERIZED HOT MIX ASPHALT-GAP GRADED (BONDED WEARING COURSE)

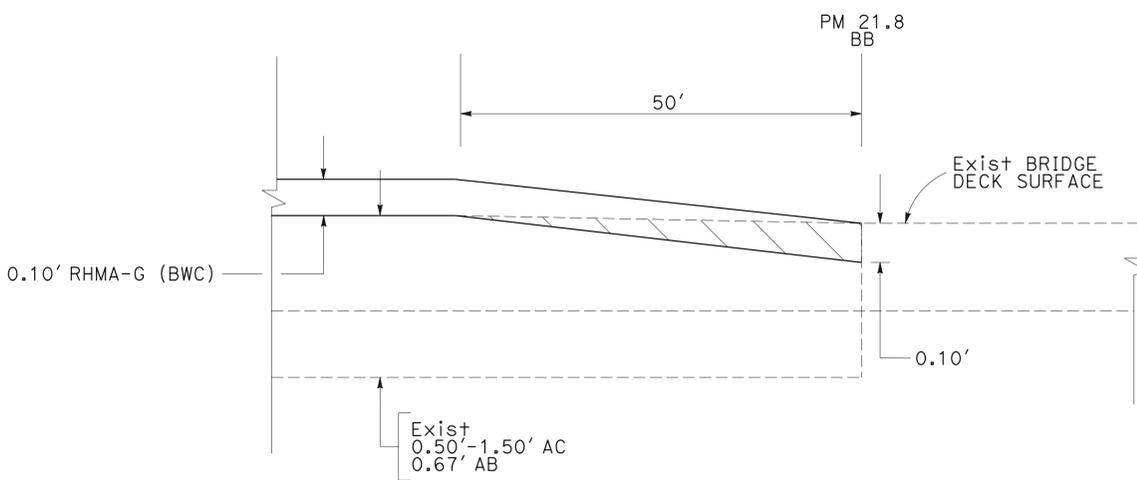


PLAN
BRIDGE APPROACH AND DEPARTURE PAVEMENT CONFORM
SOUTH YUBA RIVER BRIDGE



Vert	SLOPE RATIO Horiz/Vert
0-0.10'	70:1
GREATER THAN 0.10'	160:1

PAVING CONFORM
FOR TEMPORARY CONSTRUCTION TAPERS



SECTION D-D

CONSTRUCTION DETAILS
NO SCALE **C-2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	5	36

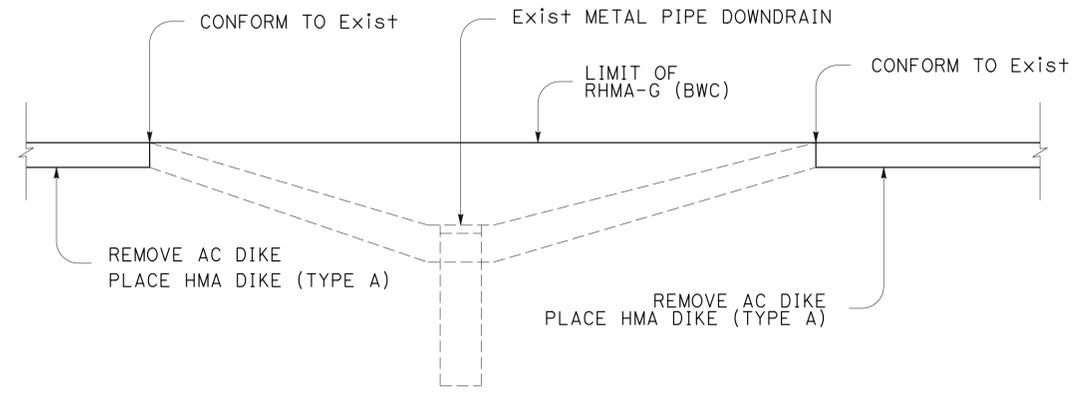
<i>Patrick D. Bishop</i>		11-30-15
REGISTERED CIVIL ENGINEER	DATE	
PATRICK D. BISHOP No. C 59860 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA		
11-30-15		
PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

NOTES:

- FOR LOCATIONS OF DIKE SEE SUMMARY OF QUANTITIES.
- FOR LOCATIONS OF COLD PLANE ASPHALT CONCRETE PAVEMENT SEE SUMMARY OF QUANTITIES.
- THE LOCATIONS OF WORK ARE FLEXIBLE AND MAY BE ADJUSTED TO MITIGATE ANY CONFLICTS WITH EXISTING UTILITY FACILITIES. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.

ABBREVIATIONS:

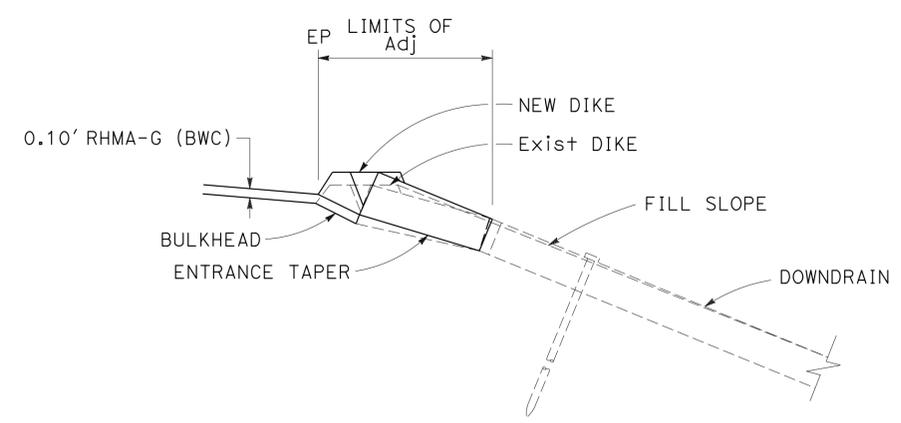
RHMA-G (BWC) = RUBBERIZED HOT MIX ASPHALT-GAP GRADED (BONDED WEARING COURSE)
 HMA-A = HOT MIX ASPHALT (TYPE A)



CONFORM TO Exist METAL PIPE DOWNDRAIN

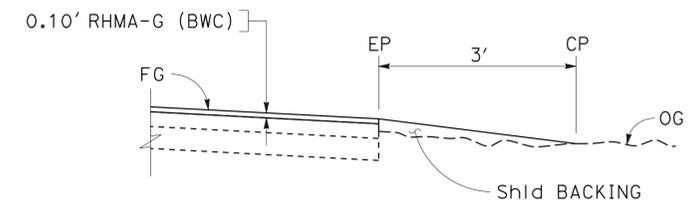
PLAN

PM 17.95 R+	PM 21.63 R+
PM 18.08 R+	PM 21.70 R+
PM 18.10 R+	PM 21.76 R+
PM 18.14 R+	PM 21.77 R+
PM 18.16 R+	PM 21.78 R+
PM 19.30 R+	

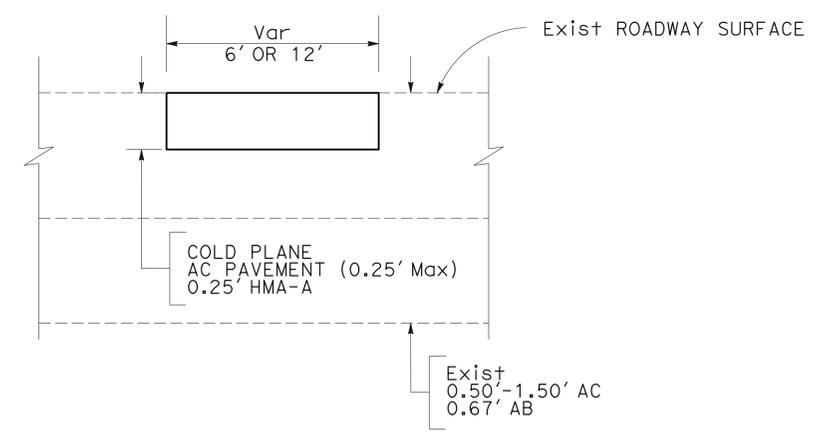


ADJUST OVSIDE DRAIN

PM 18.01 R+
PM 18.08 L+
PM 18.18 R+
PM 19.03 L+
PM 20.86 L+
PM 20.96 L+
PM 21.08 L+



SHOULDER BACKING



AC PAVEMENT REPAIR

CONSTRUCTION DETAILS
NO SCALE **C-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: PATRICK D. BISHOP
 HARVEY GENEROSO
 PATRICK D. BISHOP
 REVISOR: HARVEY GENEROSO
 DATE: PATRICK D. BISHOP
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	6	36

<i>Patrick D. Bishop</i>	11-30-15
REGISTERED CIVIL ENGINEER	DATE
11-30-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
PATRICK D. BISHOP
 No. C 59860
 Exp. 12/31/16
 CIVIL
 STATE OF CALIFORNIA

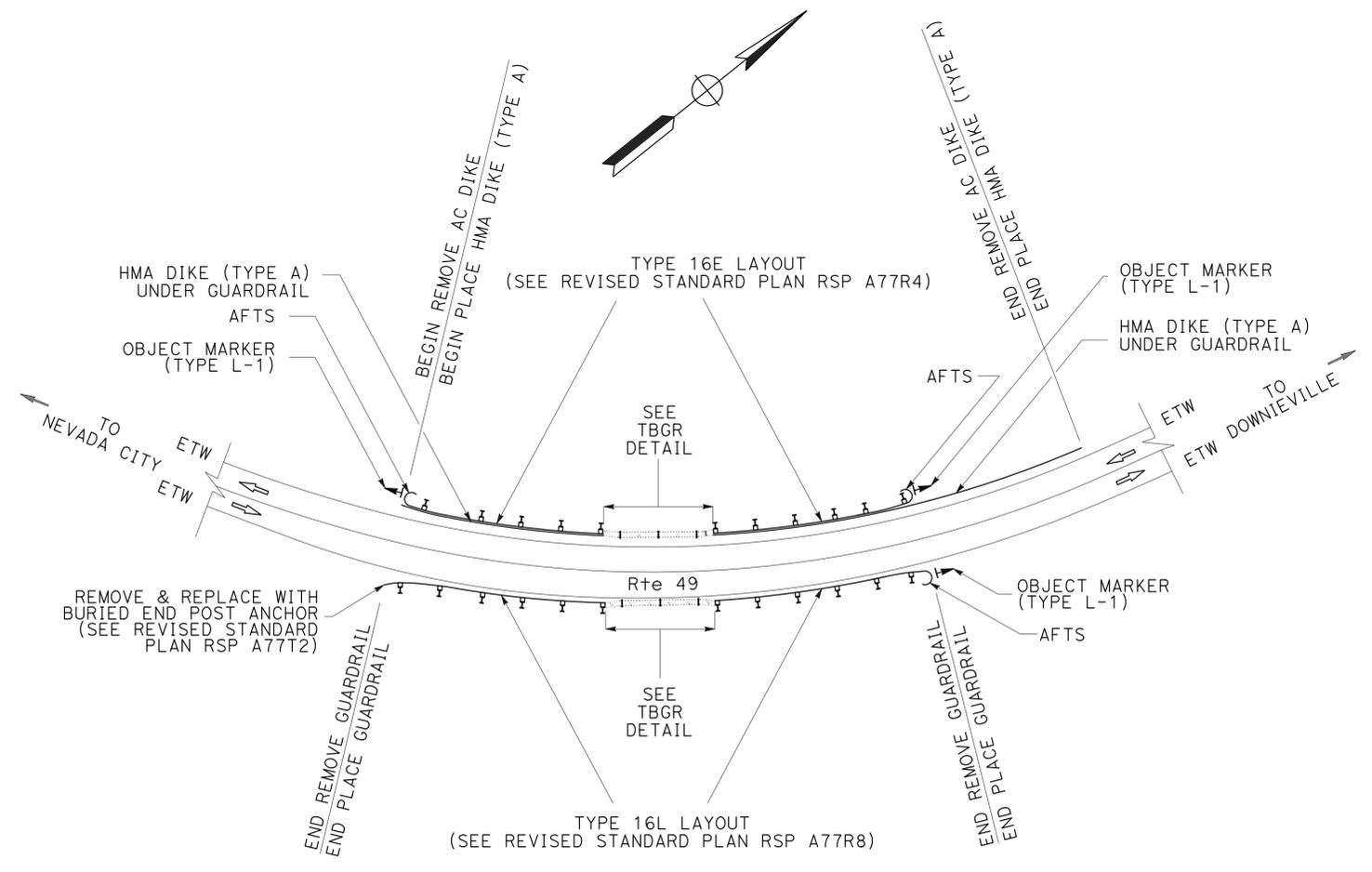
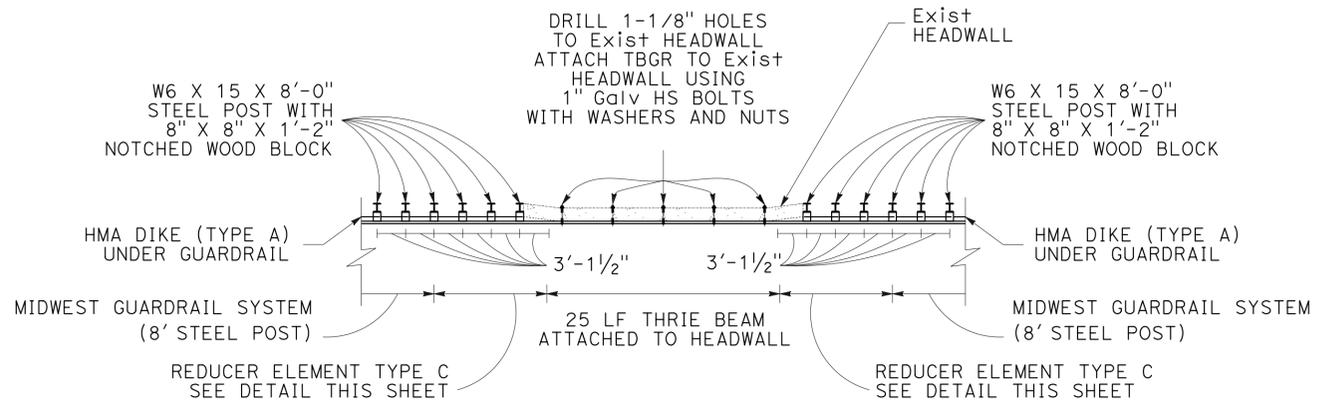
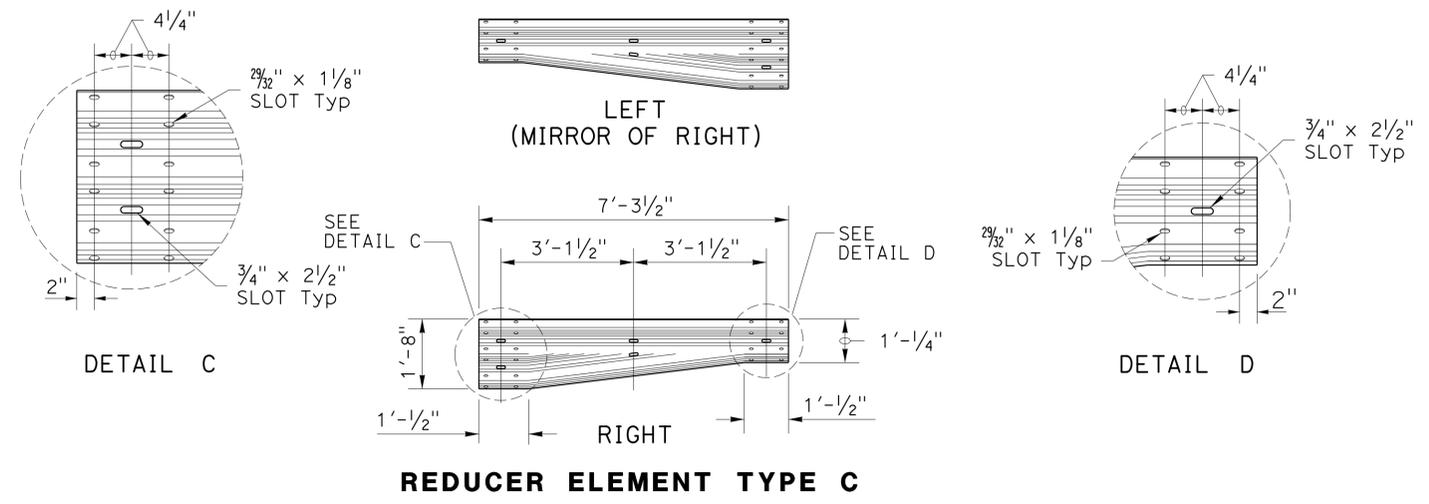
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

1. THE LOCATIONS OF WORK ARE FLEXIBLE AND MAY BE ADJUSTED TO MITIGATE ANY CONFLICTS WITH EXISTING UTILITY FACILITIES. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.

ABBREVIATIONS:

TBGR = THRIE BEAM GUARDRAIL
 AFTS = ALTERNATIVE FLARED TERMINAL SYSTEM



EXCELSIOR DITCH PUC

PM 21.24

CONSTRUCTION DETAILS

NO SCALE

C-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	PATRICK D. BISHOP	HARVEY GENEROSO	
MAINTENANCE DESIGN	CHECKED BY	DATE REVISED	
		PATRICK D. BISHOP	

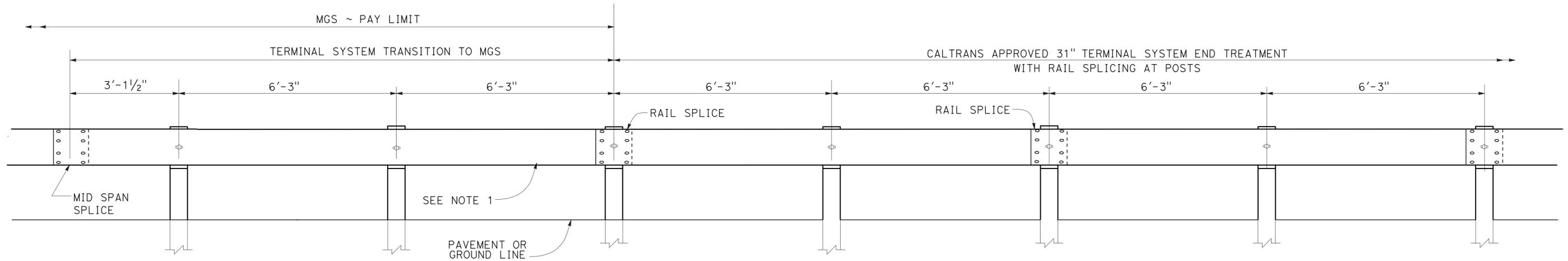
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	7	36

Patrick D. Bishop 11-30-15
 REGISTERED CIVIL ENGINEER DATE
 11-30-15
 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:

1. USE 15'-7 1/2" LENGTH RAIL.
2. SEE SUMMARY OF QUANTITIES FOR TERMINAL SYSTEM END TREATMENT TYPE.
3. THE LOCATIONS OF WORK ARE FLEXIBLE AND MAY BE ADJUSTED TO MITIGATE ANY CONFLICTS WITH EXISTING UTILITY FACILITIES. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.

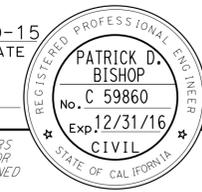


TRANSITION DETAIL FOR 31" TERMINAL SYSTEM END TREATMENT WITH RAIL SPLICING AT POSTS TO MIDWEST GUARDRAIL SYSTEM

CONSTRUCTION DETAILS
NO SCALE **C-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGNED BY	REVISOR
Caltrans	HARVEY GENEROSO	DATE
MAINTENANCE DESIGN	PATRICK D. BISHOP	REVISION
FUNCTIONAL SUPERVISOR	CHECKED BY	DATE
PATRICK D. BISHOP		



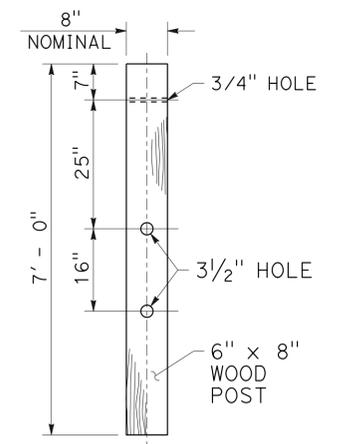
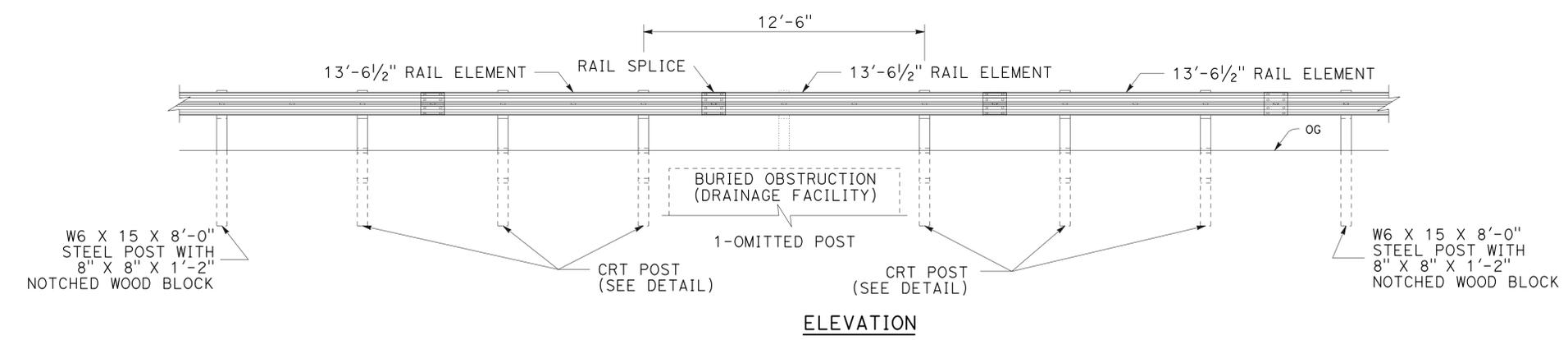
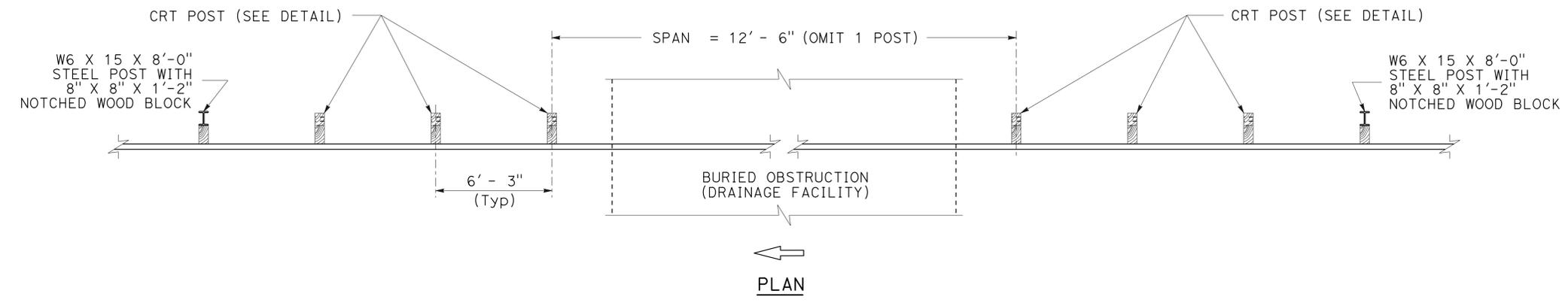
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	8	36
 REGISTERED CIVIL ENGINEER			11-30-15	DATE	
11-30-15 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:

1. ALL RAIL ELEMENTS ARE MIDWEST GUARADRAIL SYSTEM.
2. FOR DETAILS OF STANDARD HARDWARE USED TO CONSTRUCT MIDWEST GUARADRAIL SYSTEM SEE REVISED STANDARD PLAN RSP A77M1.
3. FOR DETAILS OF RAIL ELEMENT SPLICE SEE REVISED STANDARD PLAN RSP A77L2.
4. MIDWEST GUARADRAIL SYSTEM POST SPACINGS TO BE 6'-3" CENTER TO CENTER EXCEPT OTHERWISE NOTED.
5. CONTROLLED RELEASING TERMINAL (CRT) POST TO BE WOOD ONLY.
6. THE LOCATIONS OF WORK ARE FLEXIBLE AND MAY BE ADJUSTED TO MITIGATE ANY CONFLICTS WITH EXISTING UTILITY FACILITIES. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.

ABBREVIATION:

CRT = CONTROLLED RELEASING TERMINAL



POST OMISSION DETAILS

CONSTRUCTION DETAILS
NO SCALE **C-6**

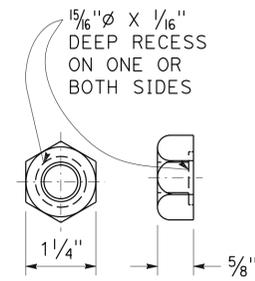
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: PATRICK D. BISHOP
 CALCULATED/DESIGNED BY: HARVEY GENEROSO
 CHECKED BY: PATRICK D. BISHOP
 REVISOR BY: DATE REVISOR

NOTES:

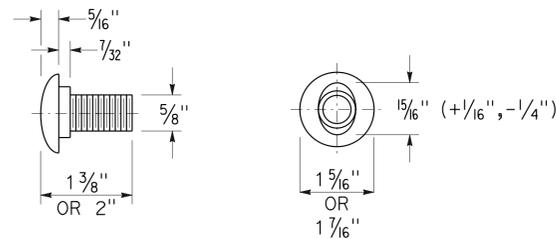
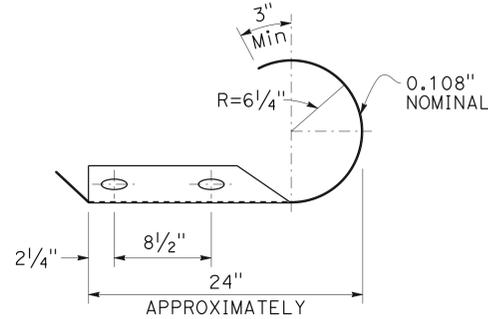
- FOR LOCATIONS OF END CAPS SEE SUMMARY OF QUANTITIES.
- THE LOCATIONS OF WORK ARE FLEXIBLE AND MAY BE ADJUSTED TO MITIGATE ANY CONFLICTS WITH EXISTING UTILITY FACILITIES. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.
- PLACE HMA DIKE (TYPE A) UNDER MIDWEST GUARDRAIL SYSTEM (8' STEEL POST). SEE REVISED STANDARD PLAN RSP A87B.
- PLACE HMA DIKE (TYPE C) UNDER GUARDRAIL TERMINAL SYSTEM. SEE REVISED STANDARD PLAN RSP A77P1, RSP A77P2, AND RSP A87B.

ABBREVIATIONS:

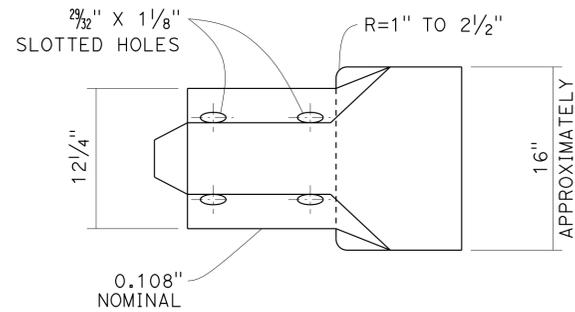
- RHMA-G (BWC) = RUBBERIZED HOT MIX ASPHALT-GAP GRADED (BONDED WEARING COURSE)
 HMA-A = HOT MIX ASPHALT (TYPE A)



5/8" RECESS NUT



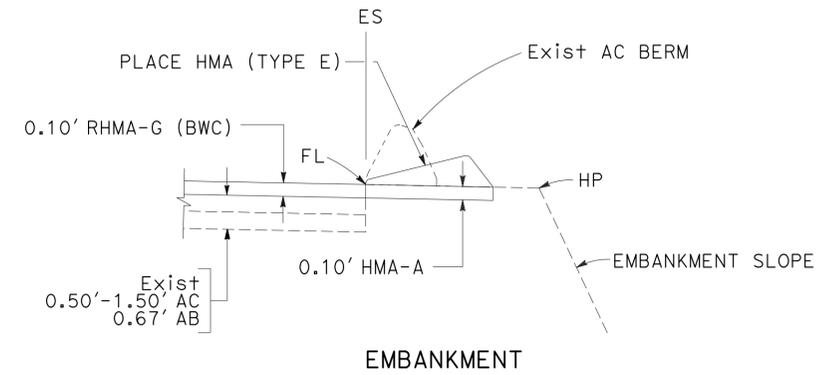
5/8"Ø BUTTON HEAD BOLT



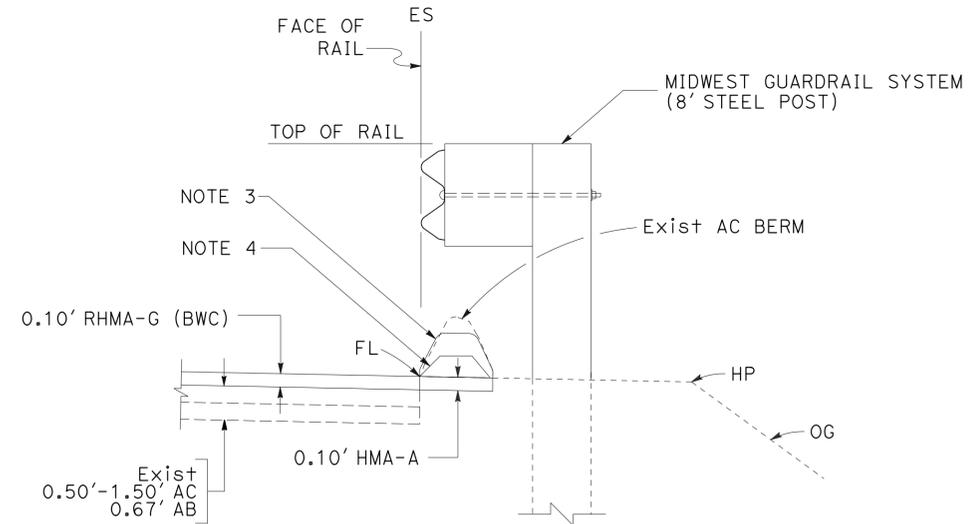
END CAP (3/4 WRAP END SECTION)

EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS TO BE MAINTAINED

POST MILE	DIRECTION	LOCATION
	NB/SB	EA
15.81	NB	1
15.81	SB	2
TOTAL		3



EMBANKMENT



MIDWEST GUARDRAIL SYSTEM (8' STEEL POST)
 ALTERNATIVE IN-LINE TERMINAL SYSTEM
 ALTERNATIVE FLARED TERMINAL SYSTEM
 END ANCHOR ASSEMBLY (TYPE SFT)

DIKE

CONSTRUCTION DETAILS
 NO SCALE
C-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans
 MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: PATRICK D. BISHOP
 REVISIONS: REVISOR: HARVEY GENEROSO, DATE: PATRICK D. BISHOP, DATE:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	10	36

11-30-15
 REGISTERED CIVIL ENGINEER DATE
 11-30-15
 PLANS APPROVAL DATE

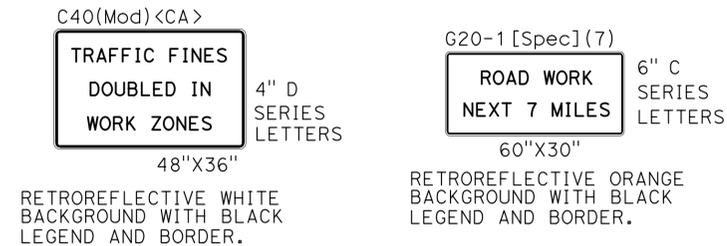
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LOCATION AND DESCRIPTION	FACING TRAFFIC				SIGN CODE		SIGN MESSAGE	PANEL SIZE	NUMBER AND SIZE OF POST	NUMBER OF SIGNS
	NB	SB	EB	WB	FEDERAL	CALIFORNIA				
500 FT BEFORE BEGIN Const ON HWY 20			1		W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
300 FT BEFORE BEGIN Const ON HWY 20				1	W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
UREN ST	1				W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
100 FT BEFORE BEGIN CONSTRUCTION	1				G20-1(Spec](7)		ROAD WORK NEXT 7 MILES	60" X 30"	2-4"X6"	1
150 FT BEFORE BEGIN CONSTRUCTION		1			G20-2	C14	END ROAD WORK	36" X 18"	1-4"X4"	1
100 FT AFTER BEGIN CONSTRUCTION	1					C40(Mod)	TRAFFIC FINES DOUBLED IN WORK ZONES	48" X 36"	1-4"X6"	1
COYOTE St Rt, Nev PM 15.20				1	W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
COYOTE St Lt, Nev PM 15.20			1		W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
N BLOOMFIELD Rd Rt, Nev PM 15.39				1	W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
E BROAD St Lt, Nev PM 15.39		1			W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
MAIDU Ave, Rt Nev PM 15.61			1		W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
ORCHARD St, Lt Nev PM 15.61			1		W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
CEMENT HILL Rd, Rt Nev PM 15.78				1	W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
W BROAD St, Lt Nev PM 15.81			1		W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
OLD DOWNIEVILLE Hwy, Lt Nev PM 17.10			1		W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
INDIAN FLAT Rd, Rt Nev PM 17.54				1	W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
NEWTOWN Rd, Lt Nev PM 17.57			1		W20-1	C23	ROAD WORK AHEAD	48" X 48"	1-6"X6"	1
250 FT AFTER END CONSTRUCTION		1				C40(Mod)	TRAFFIC FINES DOUBLED IN WORK ZONES	48" X 36"	1-4"X6"	1
250 FT AFTER END CONSTRUCTION	1				G20-2	C14	END ROAD WORK	36" X 18"	1-4"X4"	1
500 FT AFTER END CONSTRUCTION		1			G20-1[Spec](7)		ROAD WORK NEXT 7 MILES	60" X 30"	2-4"X6"	1

NOTES:

- EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
- ALL SIGN CODES SHOWN ARE FEDERAL SIGN CODES UNLESS OTHERWISE DESIGNATED AS A CALIFORNIA SIGN CODE.
- <CA> = CALIFORNIA SIGN CODE.



SIGN DETAILS

CONSTRUCTION AREA SIGNS

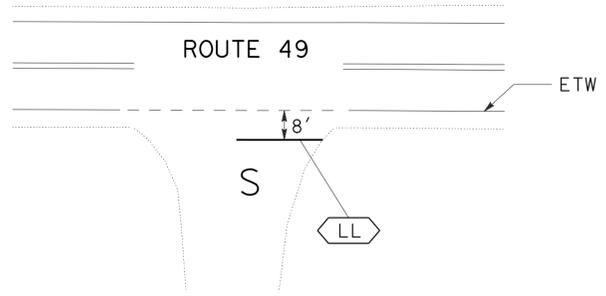
APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1; 17.4/21.8	11	36

11-30-15
 REGISTERED CIVIL ENGINEER DATE
 11-30-15
 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.

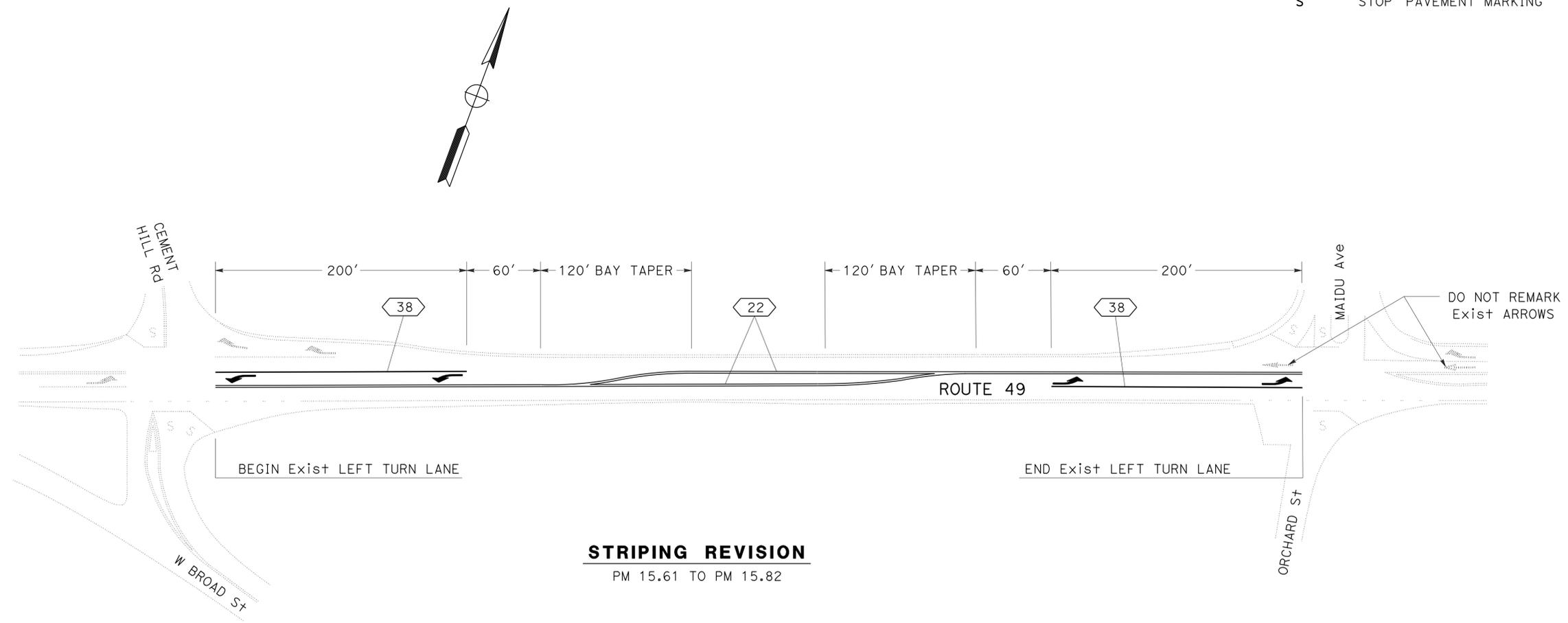
REGISTERED PROFESSIONAL ENGINEER
ALEX WIN WU
 No. C77266
 Exp. 6-30-17
 CIVIL
 STATE OF CALIFORNIA



TYPICAL INTERSECTION PAVEMENT MARKING DETAIL

LEGEND

-  PAVEMENT DELINEATION DETAIL NUMBER
-  LIMIT LINE
-  TYPE III ARROW
-  "STOP" PAVEMENT MARKING



STRIPING REVISION
PM 15.61 TO PM 15.82

**PAVEMENT DELINEATION
DETAILS**
NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	JOYCE LOFTUS	KRIS ALBERS	
TRAFFIC		JOHN KEBER	
	CHECKED BY	DESIGNED BY	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	12	36

11-30-15
 REGISTERED CIVIL ENGINEER DATE
 11-30-15
 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.

PAVEMENT DELINEATION QUANTITIES

LOCATION	4" THERMOPLASTIC TRAFFIC STRIPE (EWNV)				4" THERMOPLASTIC TRAFFIC STRIPE (EWNV) (BROKEN 36-12)			4" THERMOPLASTIC TRAFFIC STRIPE (EWNV) (BROKEN 12-3)	8" THERMOPLASTIC TRAFFIC STRIPE (EWNV)
	DETAIL NUMBER				DETAIL NUMBER			DETAIL NUMBER	DETAIL NUMBER
Nev-49-PM 15.1/17.1, 17.4/21.8	18	22	27B	32	12	18	32	27C	38
	LF	LF	LF	LF	LF	LF	LF	LF	LF
SUBTOTAL	795	70,232	65,580	636	3224	795	636	1003	1622
TOTAL	137,243				4655			1003	1622

EWNV = ENHANCED WET NIGHT VISIBILITY

THERMOPLASTIC PAVEMENT MARKING (EWNV)

DESCRIPTION	NUMBER	SQFT
TYPE III ARROW	12	504
"STOP"	20	440
LIMIT LINE	12	487
TYPE I ARROW	2	62
"SIGNAL"	2	64
"AHEAD"	3	93
CROSSWALK	3	270
TOTAL		1920

NOTE:

ALL CROSSWALKS ARE 1'-0" BASIC CROSSWALKS.

REMOVE THERMOPLASTIC PAVEMENT MARKING

DESCRIPTION	NUMBER	SQFT
TYPE I ARROW	4	124
TYPE III ARROW	12	504
"SIGNAL"	2	64
"AHEAD"	3	93
"STOP"	1	22
CROSSWALK	2	160
TOTAL		967

PAVEMENT MARKER (RETROREFLECTIVE-RECESSED)

DETAIL NUMBER	RETROREFLECTIVE	
	TYPE D EA	TYPE G EA
12		86
22	2905	
32	47	
38		66
SUBTOTAL	2952	152
TOTAL	3104	

REMOVE THERMOPLASTIC TRAFFIC STRIPE

DESCRIPTION	LF
CHANNELIZING LINE	1622
TOTAL	1622

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: JOYCE LOFTUS
 CALCULATED/DESIGNED BY: KRIS ALBERS
 CHECKED BY: JOHN KEBER
 REVISED BY: DATE REVISED:



ROADWAY QUANTITIES

LOCATION / POST MILE	COLD PLANE ASPHALT CONCRETE PAVEMENT	HOT MIX ASPHALT (TYPE A)	TACK COAT	RUBBERIZED HOT MIX ASPHALT-GAP GRADED (BONDED WEARING COURSE)	ASPHALTIC EMULSION (BONDED WEARING COURSE)	CRACK TREATMENT	PREPAVING GRINDING DAY	NOTES
	SQYD	TON	TON	TON	TON	LNMI	EA	
MAINLINE - PM 15.1 TO 17.1, 17.4 TO 21.8				4,672	56.2	4.0	10	
MAINLINE - PM 15.1 TO 17.1				1,924	23.1	8.8		
MAINLINE - PM 17.4 TO 21.8								
PM 15.1	295							
PM 17.1	223							
PM 17.4	295							
PM 21.8	234							SOUTH YUBA RIVER BRIDGE
DRIVEWAYS				45	0.6			
L+ PM 15.95	67							NEVADA CITY ELKS LODGE
R+ PM 16.06	69							NEVADA COUNTY JUVENILE HALL
R+ PM 17.88	38							JOHN BARLEY Rd
R+ PM 18.00	105							CROOKED ARROW Ln
R+ PM 18.19	68							SHOSHONI TRAIL Ct
R+ PM 18.80	21							LOWDEN Ln
R+ PM 18.81	32							SHOSHONI TRAIL Ct
R+ PM 18.86	33							DELPHINE Ln
L+ PM 18.91	16							RUSH CREEK Wy
R+ PM 19.28	115							GARESIO RANCH Rd
R+ PM 19.38	44							CEDARSONG Rd
L+ PM 19.53	13							TOLL RIDGE Ct
R+ PM 19.55	34							NO NAME Rd
R+ PM 19.61	36							SUN SHADOW Cir
L+ PM 20.11	23							NISHMAN GULCH Rd
LOCAL ROAD INTERSECTIONS								
R+ PM 15.20	508	29	0.2					COYOTE St
L+ PM 15.20	791	39	0.4					COYOTE St
R+ PM 15.39	585	54	0.3					N BLOOMFIELD Rd
L+ PM 15.39	390	32	0.2					N BLOOMFIELD Rd
R+ PM 15.60	1,197	56	0.5					MAIDU Ave
L+ PM 15.60	189	14	0.1					ORCHARD St
R+ PM 15.78	688	27	0.3					CEMENT HILL Rd
L+ PM 15.78	496	19	0.2					W BROAD St
L+ PM 15.83	395	15	0.2					GORE AREA
L+ PM 17.10	309	17	0.1					OLD DOWNIEVILLE Hwy
R+ PM 17.48	340	27	0.2					INDIAN FLAT Rd
L+ PM 17.53	273	19	0.1					NEWTOWN Rd
AC PAVEMENT REPAIR	119	8.8	0.056					
TOTAL	8,041	356.8	2.856	6,641	79.9	12.8	10	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	13	36

11-30-15
REGISTERED CIVIL ENGINEER DATE

11-30-15
PLANS APPROVAL DATE

PATRICK D. BISHOP
No. C 59860
Exp. 12/31/16
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.

SHOULDER BACKING

POST MILE	SIDE	(N)	SHOULDER BACKING
FROM	TO	Lt/Rt	MILE TON
15.13	15.19	R+	0.06 7
15.13	15.17	L+	0.04 5
15.21	15.36	L+	0.15 17
15.22	15.38	R+	0.16 18
15.40	15.58	L+	0.18 21
15.41	15.59	R+	0.18 21
15.62	15.69	R+	0.07 8
15.62	15.72	L+	0.10 11
15.75	15.77	R+	0.02 2
15.82	15.92	L+	0.10 11
15.84	17.10	R+	1.26 145
15.96	16.04	L+	0.08 9
16.07	16.38	L+	0.31 36
16.52	17.10	L+	0.58 67
17.40	17.47	R+	0.07 8
17.40	17.90	L+	0.50 57
17.50	17.87	R+	0.37 42
17.97	18.00	R+	0.03 3
18.10	18.15	L+	0.05 6
18.17	19.00	L+	0.83 95
18.21	18.27	R+	0.06 7
19.03	20.15	L+	1.12 129
19.32	20.18	R+	0.86 99
20.30	20.35	R+	0.05 6
20.48	20.77	R+	0.29 33
20.59	20.66	L+	0.07 8
20.94	21.02	R+	0.08 9
21.08	21.20	R+	0.12 14
21.08	21.13	L+	0.05 6
21.28	21.31	L+	0.03 3
21.34	21.39	R+	0.05 6
21.34	21.41	L+	0.07 8
21.43	21.45	L+	0.02 2
21.44	21.48	R+	0.04 5
21.46	21.50	L+	0.04 5
21.48	21.51	L+	0.03 3
21.51	21.56	R+	0.05 6
21.62	21.67	R+	0.05 6
TOTAL			944

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

SUMMARY OF QUANTITIES Q-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	14	36

REGISTERED CIVIL ENGINEER: *Patrick D. Bishop* DATE: 11-30-15
 PLANS APPROVAL DATE: 11-30-15

PROFESSIONAL ENGINEER: PATRICK D. BISHOP
 No. C 59860
 Exp. 12/31/16
 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.

DIKE

POST MILE	SIDE	REMOVE ASPHALT CONCRETE DIKE	PLACE HMA DIKE (TYPE A)	PLACE HMA DIKE (TYPE C)	PLACE HMA DIKE (TYPE E)	MINOR HMA
		LF	LF	LF	LF	TON
15.10 TO 15.13	R+	158	158			4.2
15.10 TO 15.13	L+	158	158			4.2
15.69 TO 15.75	R+	317	317			8.4
15.72 TO 15.75	L+	158	158			4.2
15.78 TO 15.81	R+	158	158			4.2
15.79 TO 15.84	L+	264	264			7.0
16.04 TO 16.05	L+	53	53			1.4
16.38 TO 16.50	L+	634	634			16.7
17.89 TO 17.97	R+	422	422			11.2
17.90 TO 18.09	L+	1,003	1,003			26.5
18.01 TO 18.18	R+	898	898			23.7
18.15 TO 18.17	L+	106	106			2.8
19.00 TO 19.03	L+	158	158			4.2
20.55 TO 20.59	L+	211	111	100		3.7
20.66 TO 21.08	L+		2,180	38		57.9
21.13 TO 21.15	L+		56	50		1.8
21.15 TO 21.25	L+				528	27.4
21.25 TO 21.28	L+	158	108	50		3.2
21.28 TO 21.29	L+	53	3	50		0.4
21.29 TO 21.34	L+	264	158		106	9.7
21.41 TO 21.47	L+		217	100		6.5
21.49 TO 21.54	L+		164			5.1
21.68 TO 21.80	L+	422	422			11.2
TOTAL		5,595	7,906	388	634	245.6

REMOVE AC BERM

POST MILE	SIDE	REMOVE AC BERM	
FROM	TO	LF	
20.66	21.08	L+	2,218
21.13	21.15	L+	106
21.15	21.25	L+	528
21.41	21.47	L+	317
21.49	21.54	L+	264
TOTAL			3,433

TEMPORARY WATER POLLUTION CONTROL

POST MILE	SIDE	TEMPORARY DRAINAGE INLET PROTECTION
	L+/R+	EA
17.95	R+	1
18.01	R+	1
18.08	L+	1
18.08	R+	1
18.10	R+	1
18.14	R+	1
18.16	R+	1
18.18	R+	1
19.03	L+	1
19.30	R+	1
20.86	L+	1
20.96	L+	1
21.08	L+	1
21.63	R+	1
21.70	R+	1
21.76	R+	1
21.77	R+	1
21.78	R+	1
TOTAL		18

AC PAVEMENT REPAIR

	(1) BEGIN POST MILE	(1) END POST MILE	(N) LENGTH	(N) WIDTH	LEFT/RIGHT WHEEL PATH	* COLD PLANE AC PAVEMENT	* HMA (TYPE A)	* TACK COAT
			LF			SQYD	TON	TON
NB	15.141	15.147	15	12	R+ & L+	20	1.5	0.009
	15.154	15.160	6	12	R+ & L+	8	0.6	0.004
	15.211	15.218	3	6	R+	2	0.1	0.001
	20.625	20.631	32	6	R+	21	1.6	0.010
SB	19.838	19.844	12	6	R+	8	0.6	0.004
	20.625	20.631	23	6	R+	15	1.1	0.007
	20.625	20.631	9	6	R+	6	0.4	0.003
	20.625	20.631	45	6	R+	30	2.2	0.014
	20.625	20.631	14	6	R+	9	0.7	0.004
SUBTOTAL						119	8.8	0.056

(N) = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY
 (1) = EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD
 * = SEE ROADWAY QUANTITIES TABLE FOR PROJECT TOTALS

SUMMARY OF QUANTITIES Q-2

ABBREVIATIONS:
 AFTS = ALTERNATIVE FLARED TERMINAL SYSTEM
 AILTS = ALTERNATIVE IN-LINE TERMINAL SYSTEM
 BEPA = BURIED END POST ANCHOR

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	15	36

Patrick D. Bishop 11-30-15
 REGISTERED CIVIL ENGINEER DATE

11-30-15
 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.

MIDWEST GUARDRAIL SYSTEM

POST MILE	SIDE	REMOVE GUARDRAIL	TREATED WOOD WASTE	MIDWEST GUARDRAIL SYSTEM (8" STEEL POST)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	BURIED END POST ANCHOR (N)	END CAP (3/4 WRAP END SECTION)	SINGLE THRIE BEAM BARRIER	REDUCER ELEMENT (TYPE C)	OBJECT MARKER (TYPE L-1)	MIDWEST GUARDRAIL SYSTEM LAYOUT TYPE (N)	NOTES
		LF	LB	LF	EA	EA	EA	EA	EA	LF	EA	EA		
20.16 TO 20.44	L+	1,478	18,924	1,403	2							1	TYPE 11E	AFTS AT PM 20.16, AFTS AT PM 20.44
20.46 TO 20.59	L+	686	8,786	649	1		1		1			1	TYPE 11B	TYPE SFT AT PM 20.46, AFTS AT PM 20.59
20.67 TO 21.08	L+	2,165	27,710	2,115		1	1		1			1	TYPE 11A	AILTS AT PM 20.67, TYPE SFT AT PM 21.08
21.13 TO 21.15	L+	211	1,352	68	1		1		1			1	TYPE 11B	TYPE SFT AT PM 21.13, AFTS AT PM 21.15
21.20 TO 21.24	R+	106	2,703	174	1			1		25	2	1	TYPE 16L	BEPA AT PM 21.20, AFTS AT PM 21.24
21.25 TO 21.29	L+	211	2,703	136	2					25	2	1	TYPE 16E	AFTS AT PM 21.25, AFTS AT PM 21.29
21.41 TO 21.47	L+	317	4,055	242	2							1	TYPE 11E	AFTS AT PM 21.41, AFTS AT PM 21.47
21.50 TO 21.54	L+	211	2,703	136	2							1	TYPE 11E	AFTS AT PM 21.50, AFTS AT PM 21.54
SUBTOTAL		5,385	68,936	4,923	11	1	3	1	3	50	4	8		
TOTAL		5,385	68,936	4,923	11	1	3		3	50	4	8		

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

SUMMARY OF QUANTITIES
Q-3

	M	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	N	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	O	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	P	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	P continued	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	Q	
Qty	QUANTITY	
	R	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	S	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
SL	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	T	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	T continued	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	U
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	V
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	W
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWLLOL	WINGWALL LAYOUT LINE	X
X Sec	CROSS SECTION	
Xing	CROSSING	Y
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8'	16	36

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Grace M. Tsushima
 No. C49814
 Exp. 9-30-14
 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.

TO ACCOMPANY PLANS DATED 11-30-15

UNIT OF MEASUREMENT SYMBOLS:
Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

TABLE A

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

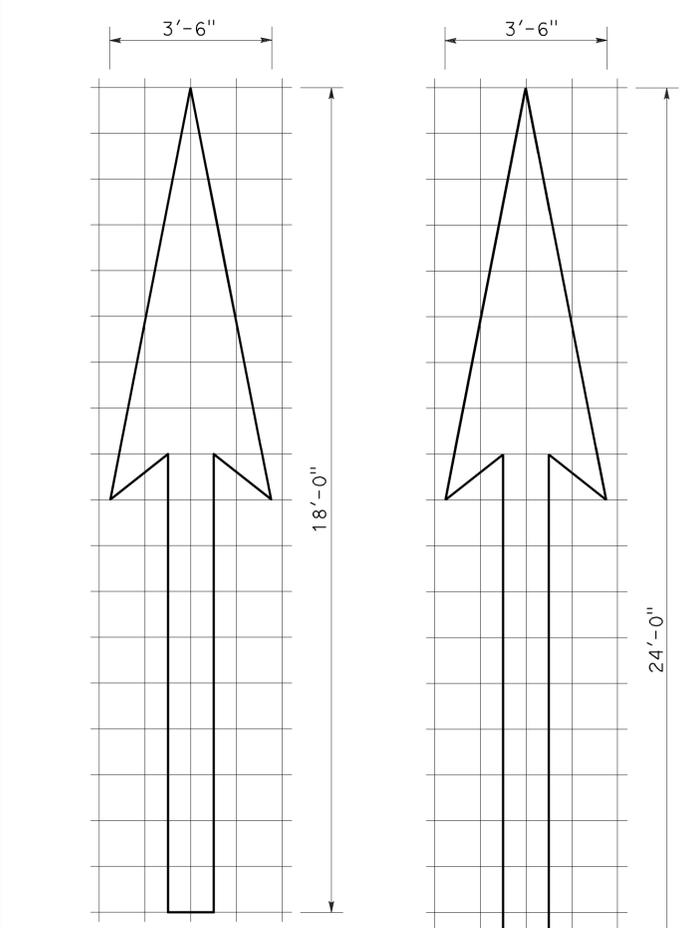
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	17	36

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

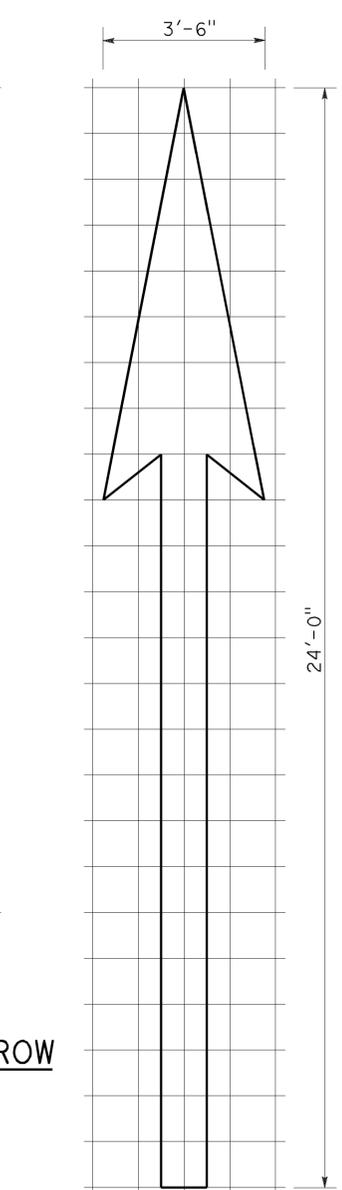
April 20, 2012
 PLANS APPROVAL DATE

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.

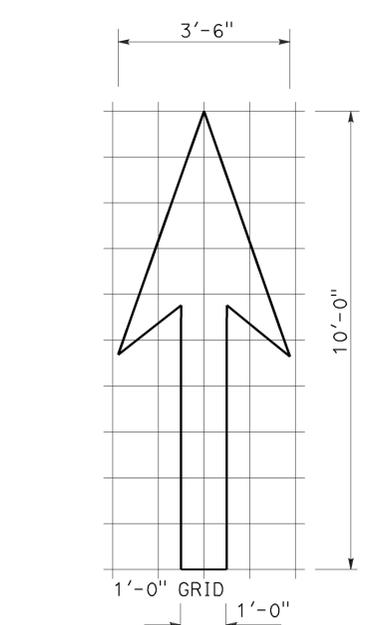
TO ACCOMPANY PLANS DATED 11-30-15



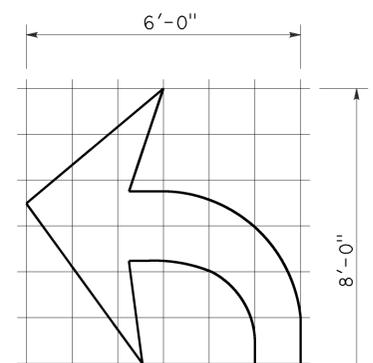
TYPE I 18'-0" ARROW



TYPE I 24'-0" ARROW

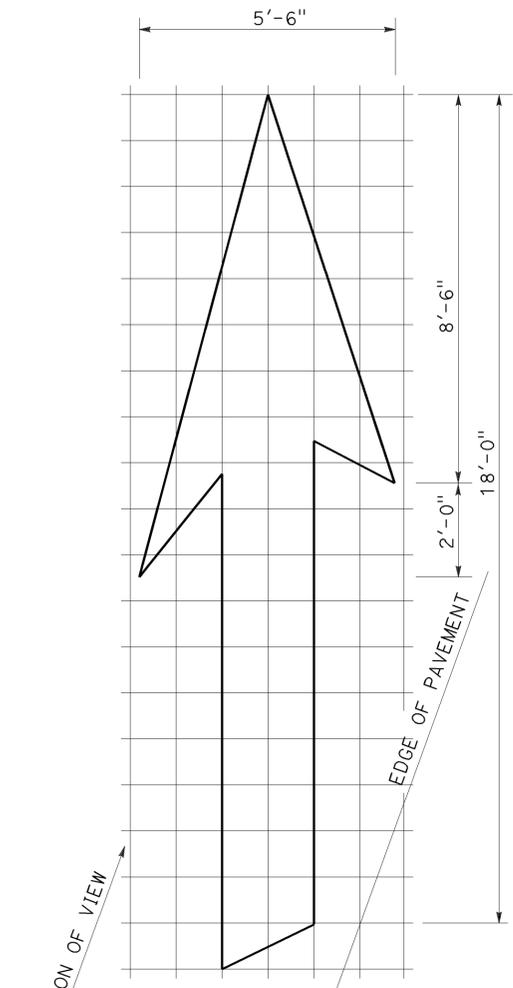


TYPE I 10'-0" ARROW



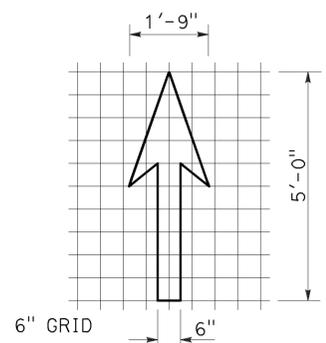
TYPE IV (L) ARROW

(For Type IV (R) arrow, use mirror image)

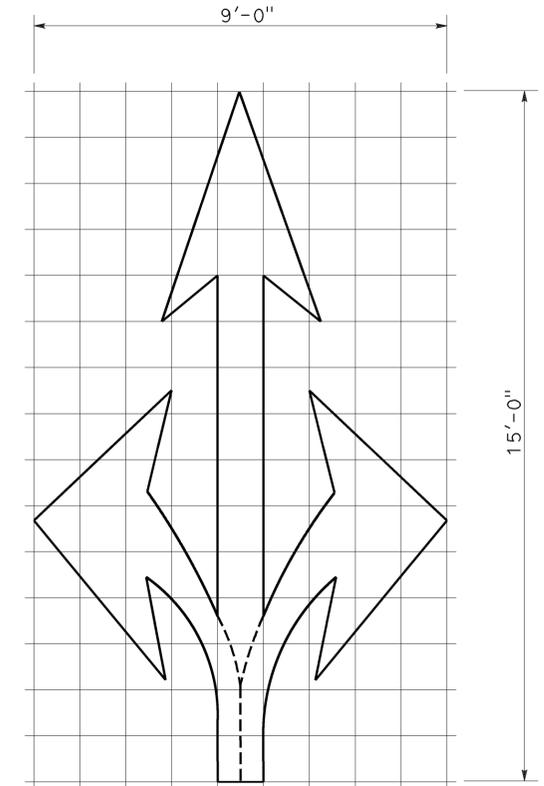


TYPE VI ARROW

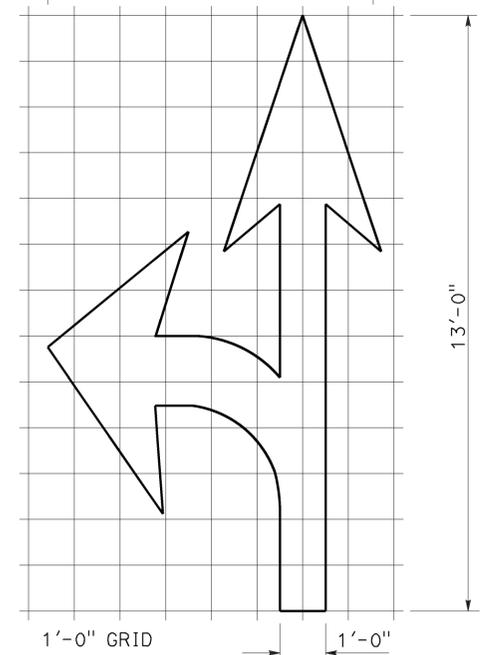
Right lane drop arrow
(For left lane, use mirror image)



BIKE LANE ARROW

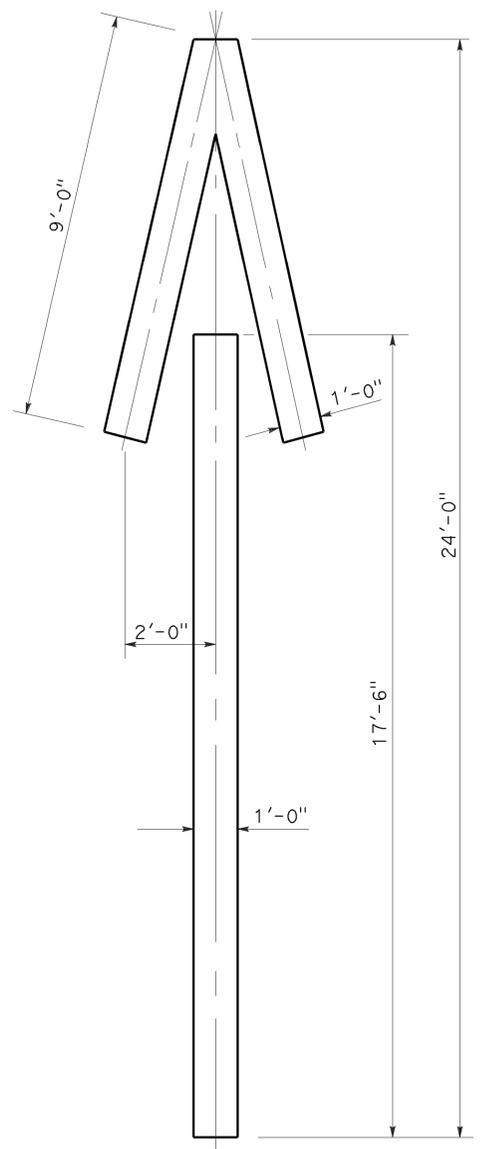


TYPE VIII ARROW



TYPE VII (L) ARROW

(For Type VII (R) arrow, use mirror image)



TYPE V ARROW

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

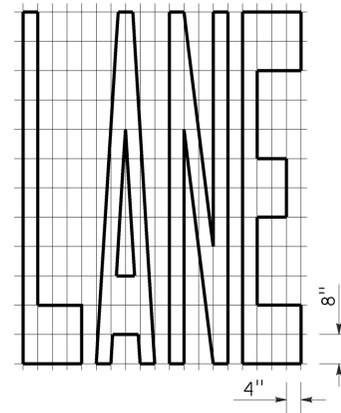
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A
DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

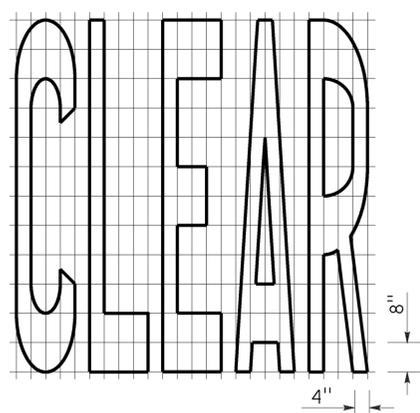
2010 REVISED STANDARD PLAN RSP A24A

NOTE:
Minor variations in dimensions
may be accepted by the Engineer.

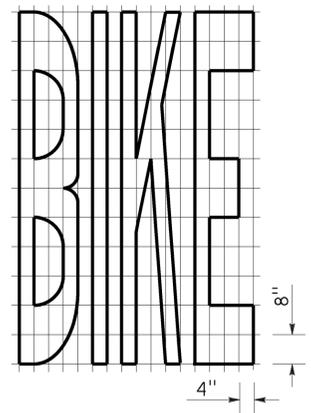
TO ACCOMPANY PLANS DATED 11-30-15



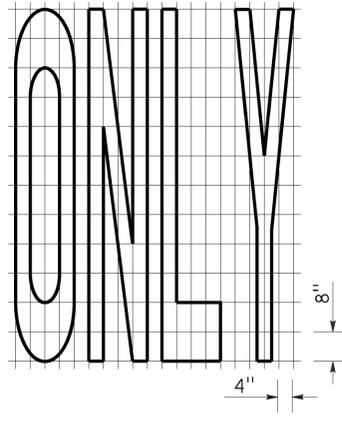
A=24 ft²



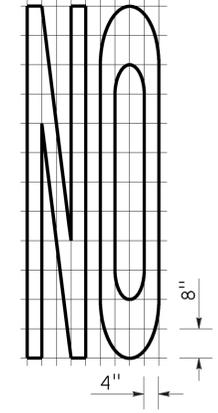
A=27 ft²



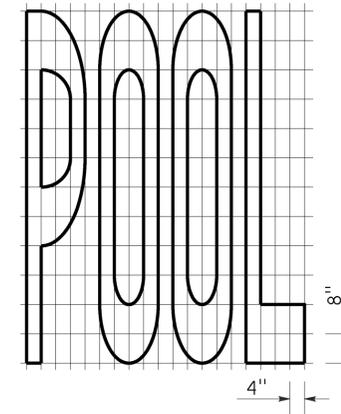
A=21 ft²



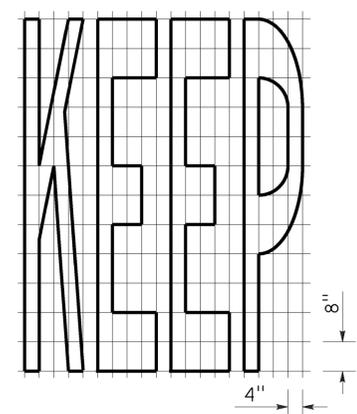
A=22 ft²



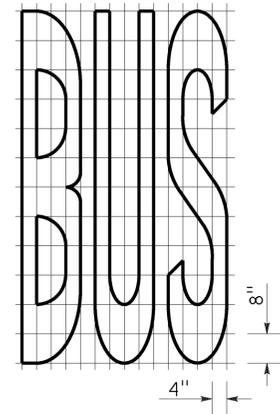
A=14 ft²



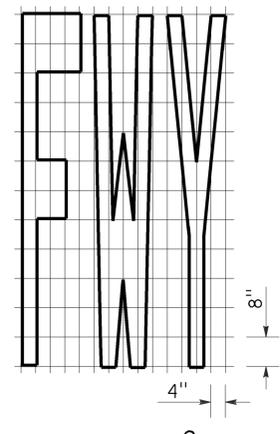
A=23 ft²



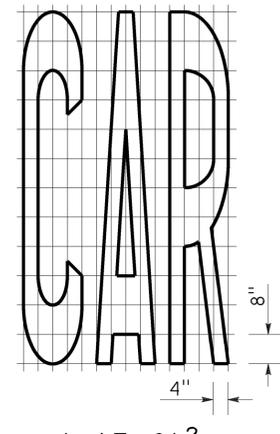
A=24 ft²



A=20 ft²

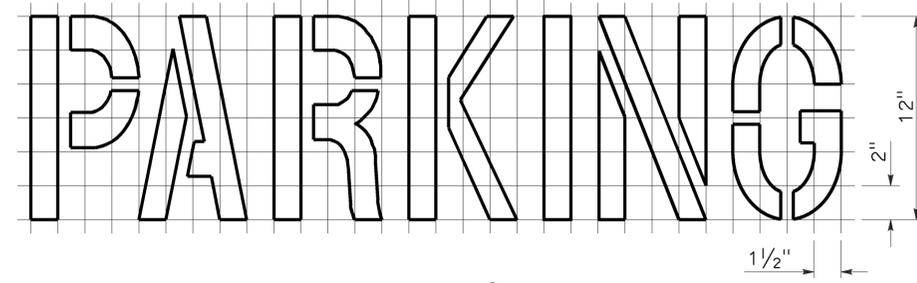
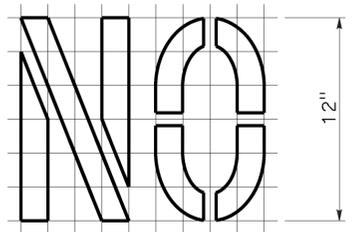


A=16 ft²

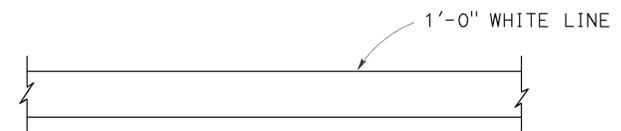


A=17 ft²

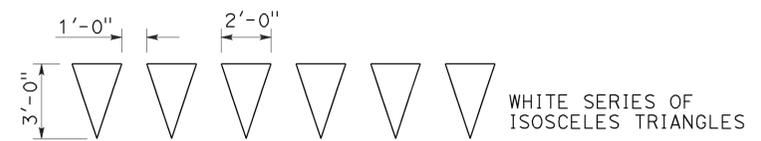
WORD MARKINGS			
ITEM	ft ²	ITEM	ft ²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES**
NO SCALE

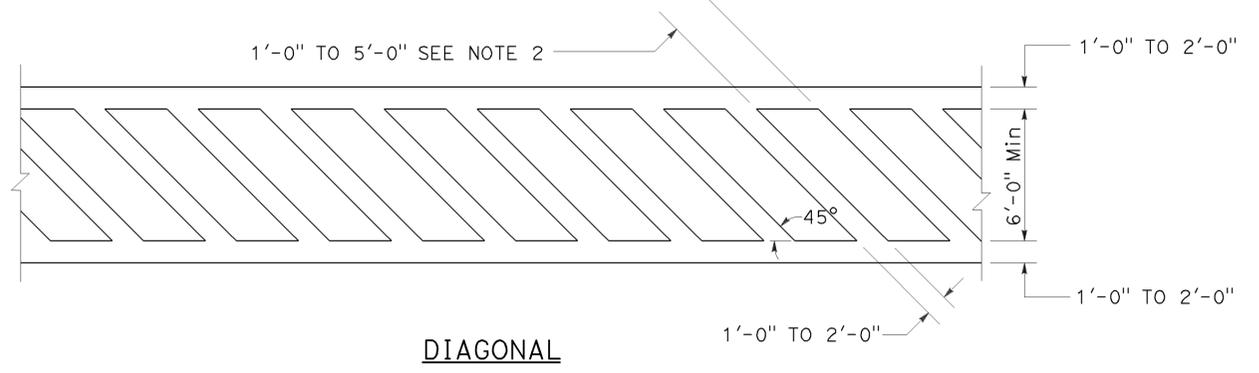
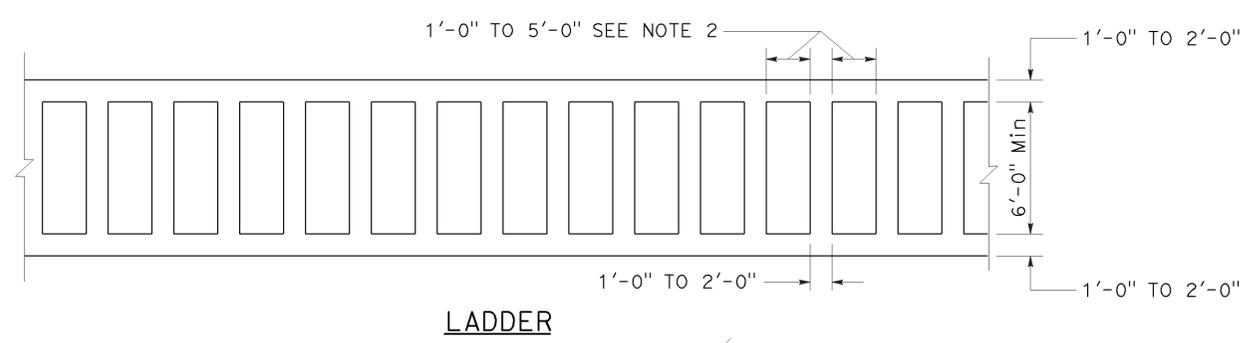
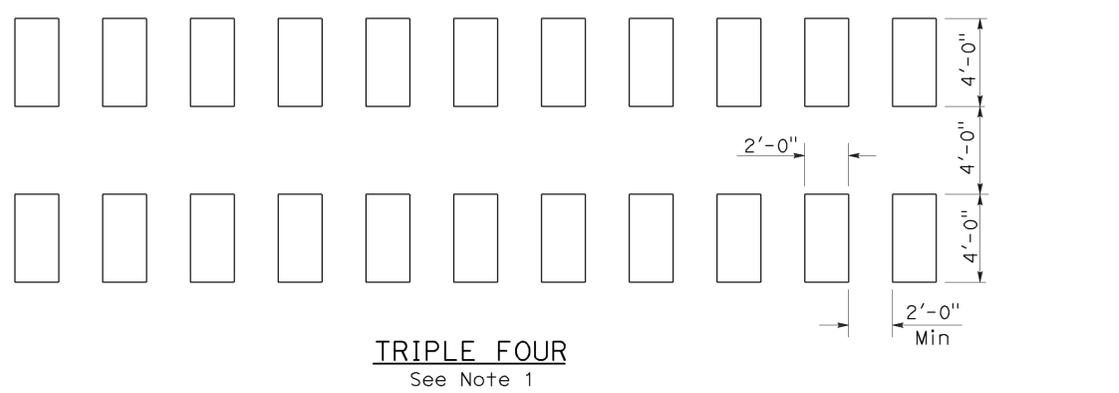
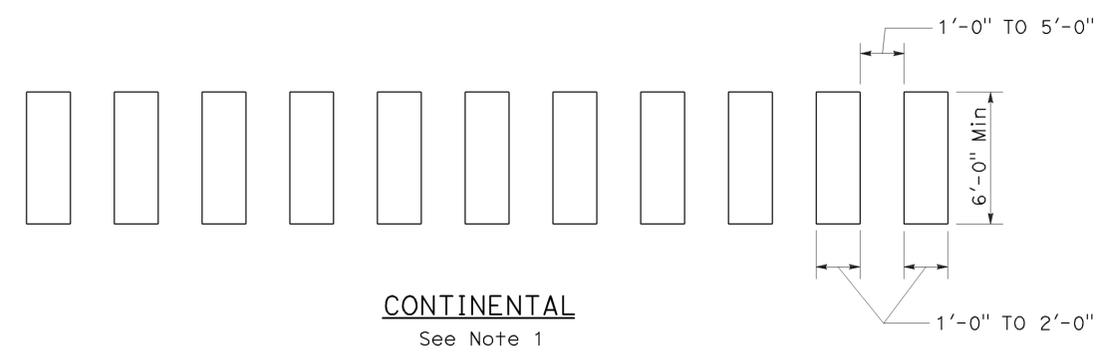
RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	19	36

Roberta L. McLaughlin
 REGISTERED CIVIL ENGINEER
 July 20, 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.

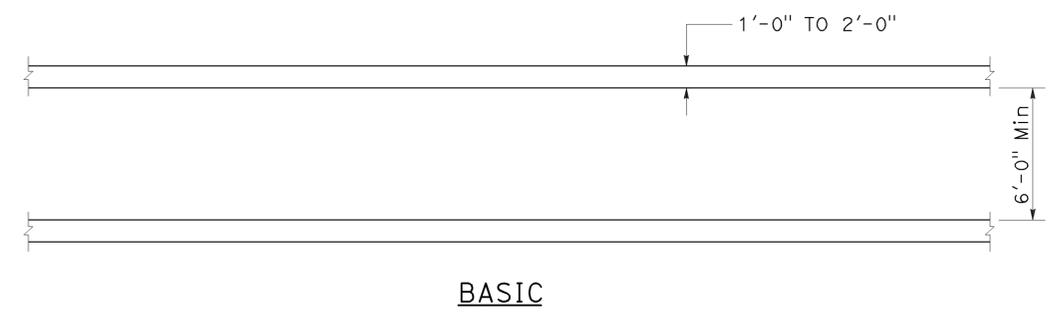
TO ACCOMPANY PLANS DATED 11-30-15



HIGHER VISIBILITY CROSSWALKS

NOTES:

1. Spaces between markings should be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except for those near schools must be yellow.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS
CROSSWALKS
NO SCALE

RSP A24F DATED JULY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A24F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	20	36

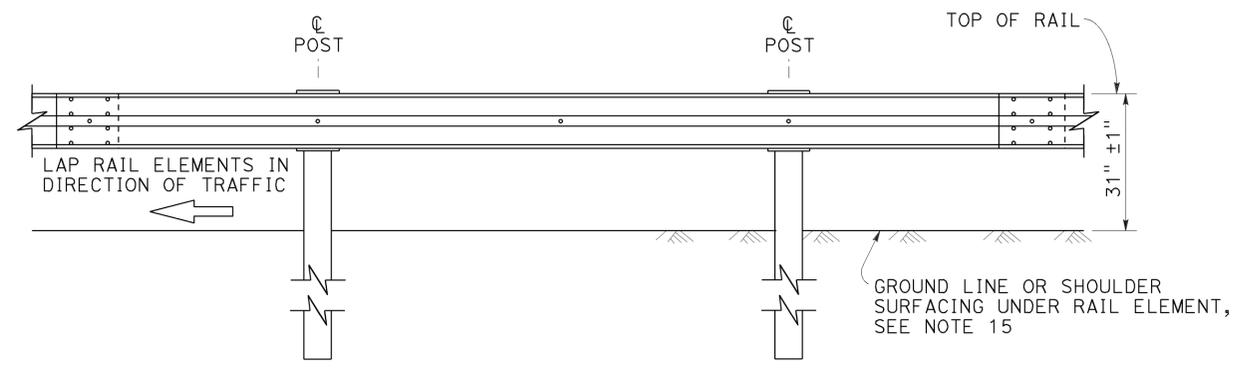
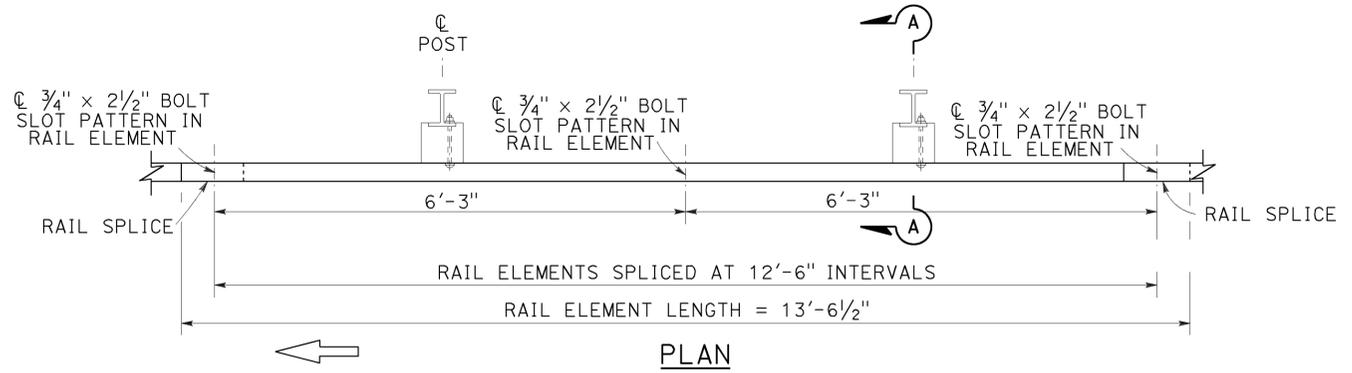
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

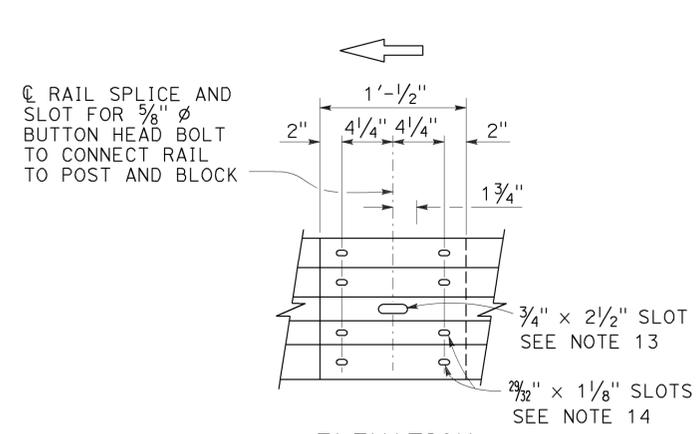
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 11-30-15

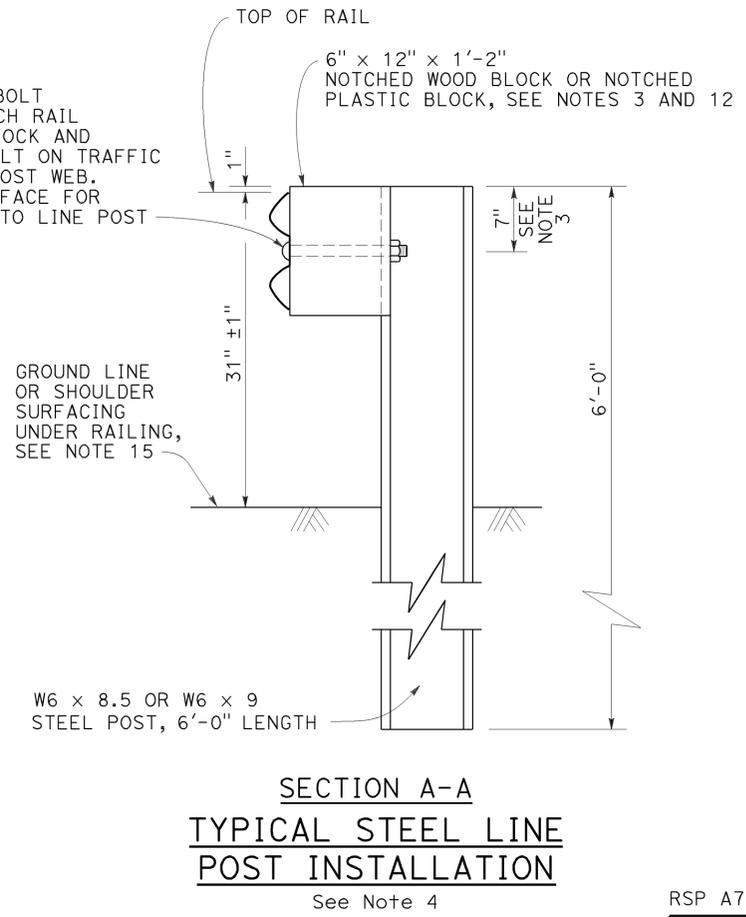
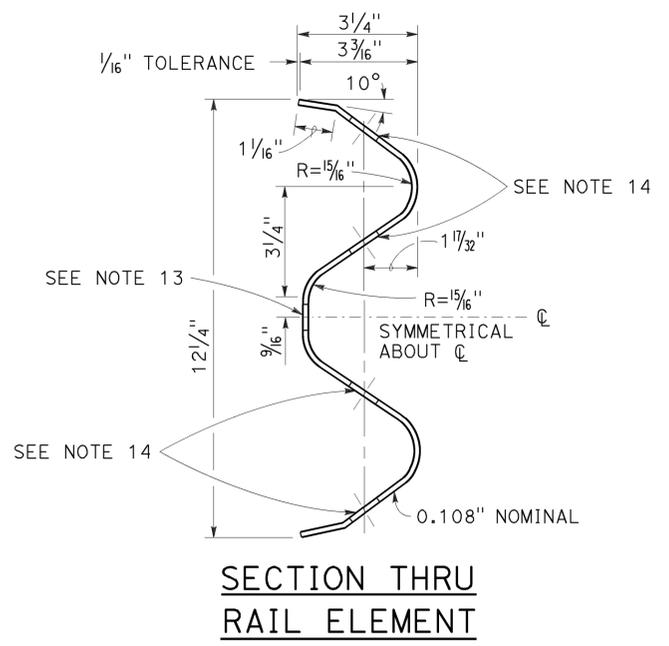
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA



MIDWEST GUARDRAIL SYSTEM WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS



- 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 7/32" x 1 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.
- 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.



NOTES:

- For details of wood post installations, see Revised Standard Plan RSP A77L1.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of steel posts and notched wood blocks used to construct MGS, see Revised Standard Plan RSP A77N2.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railings, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For dike positioning and MGS delineation details, see Revised Standard Plan RSP A77N4.
- Notched face of block faces steel post.
- 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".
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

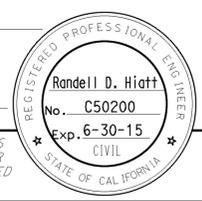
**MIDWEST GUARDRAIL SYSTEM
STANDARD RAILING SECTION
(STEEL POST WITH NOTCHED
WOOD OR NOTCHED
RECYCLED PLASTIC BLOCK)**

NO SCALE

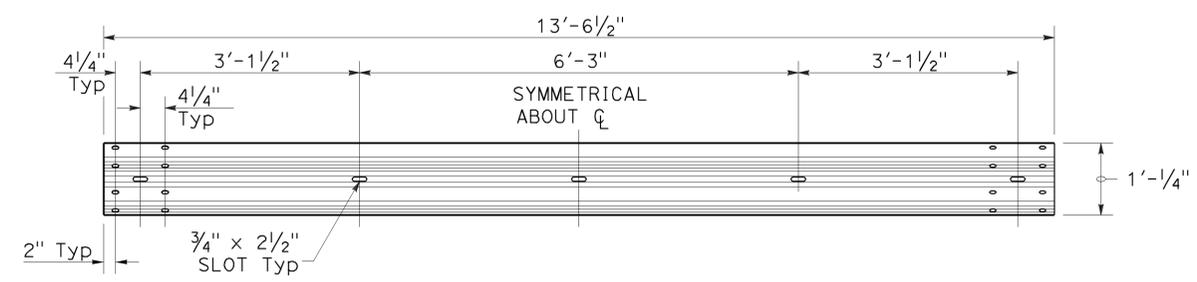
RSP A77L2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L2

2010 REVISED STANDARD PLAN RSP A77L2



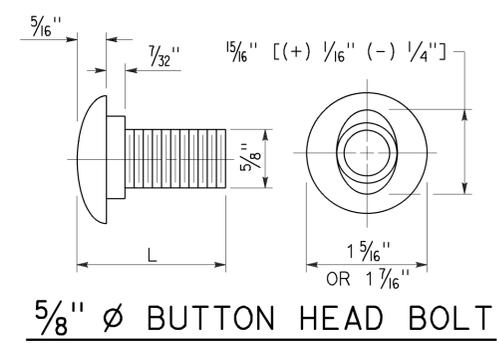
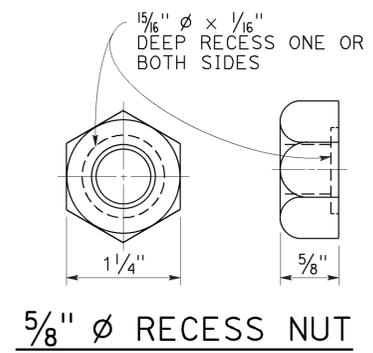
TO ACCOMPANY PLANS DATED 11-30-15



TYPICAL RAIL ELEMENT

NOTE:

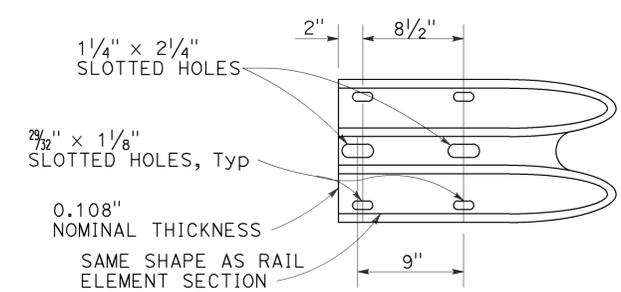
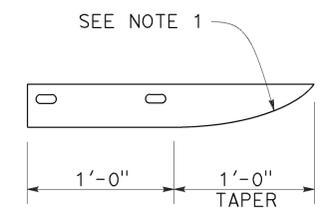
1. Slotted holes for splice bolts to overlap ends of rail element.



BUTTON HEAD BOLT

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

** For nested rail applications.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77M1

2010 REVISED STANDARD PLAN RSP A77M1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	22	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
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.

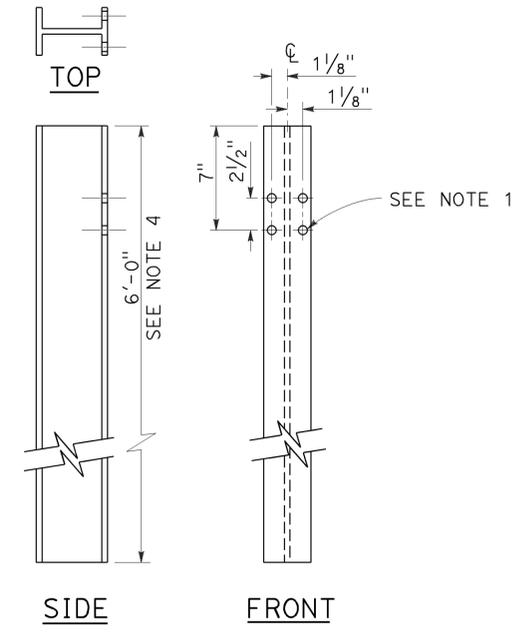
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 11-30-15

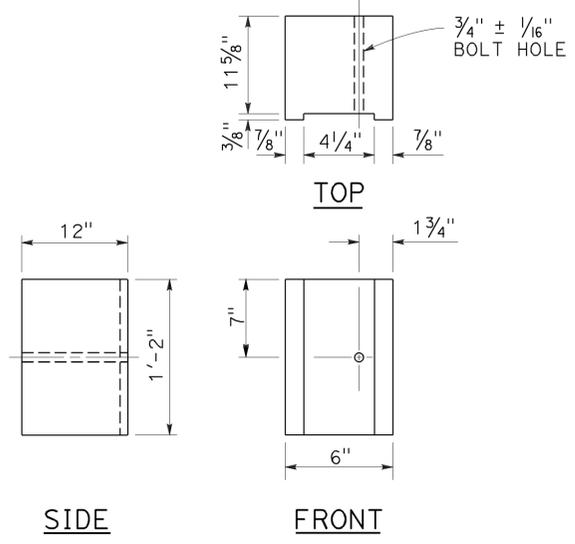
NOTES:

1. All holes in steel post shall be 1 3/8" Dia maximum.
2. Dimensions shown for wood block are nominal.
3. Notched face of block faces steel post.
4. 6'-0" length posts to be used for typical roadway installation. See Revised Standard Plan RSP A77N3.
5. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" notched wood blocks.
6. This post and 8" x 12" block combination to be used for line post sections of MGS on narrow roadways and where strengthened line post sections of MGS are warranted to shield fixed objects.

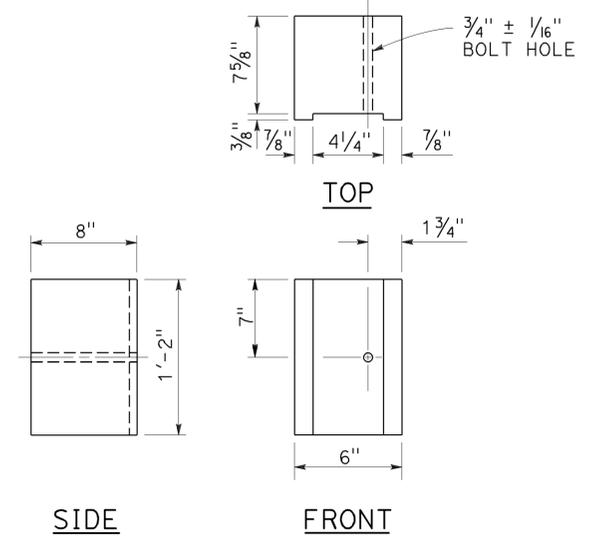
2010 REVISED STANDARD PLAN RSP A77N2



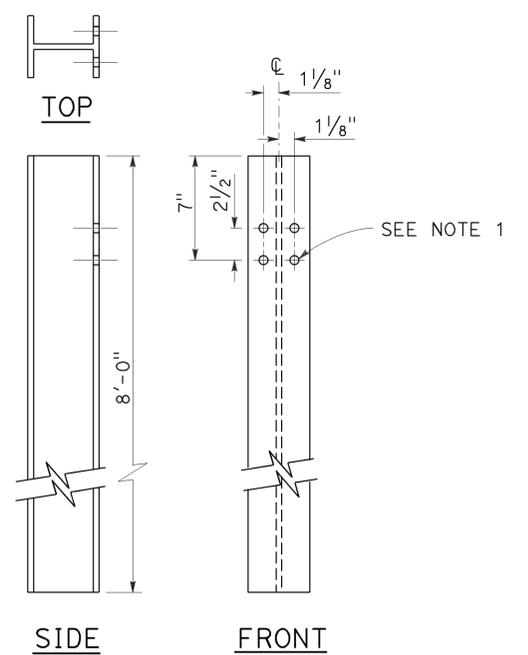
**W6 x 9 OR W6 x 8.5
STEEL POST**
See Note 4



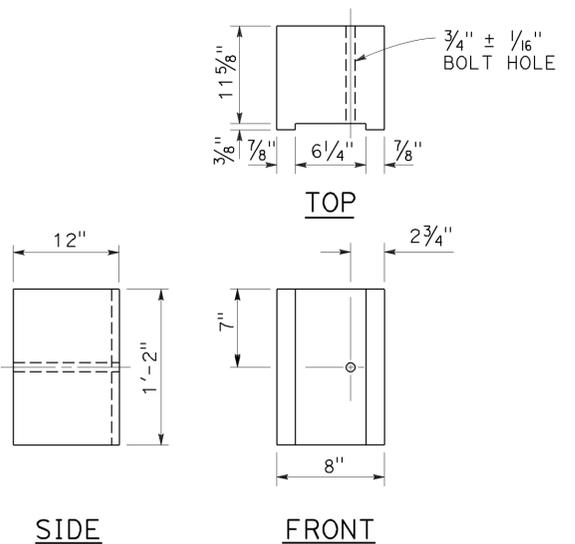
**6" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



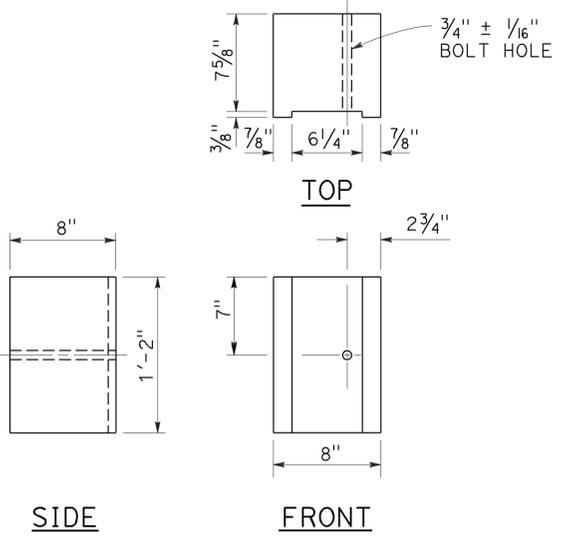
**6" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5



**W6 x 15
STEEL POST**
See Note 6



**8" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



**8" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STEEL POST AND
NOTCHED WOOD BLOCK DETAILS**

NO SCALE

RSP A77N2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N2
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	23	36

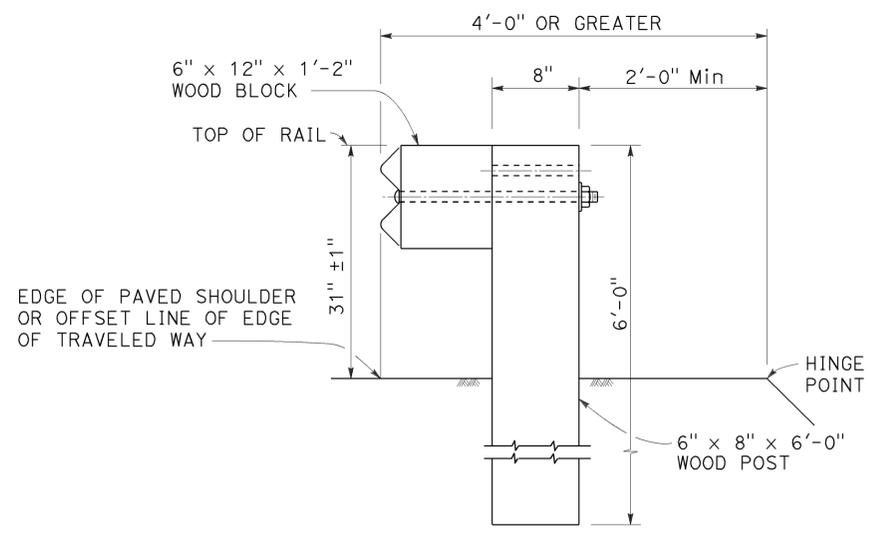
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

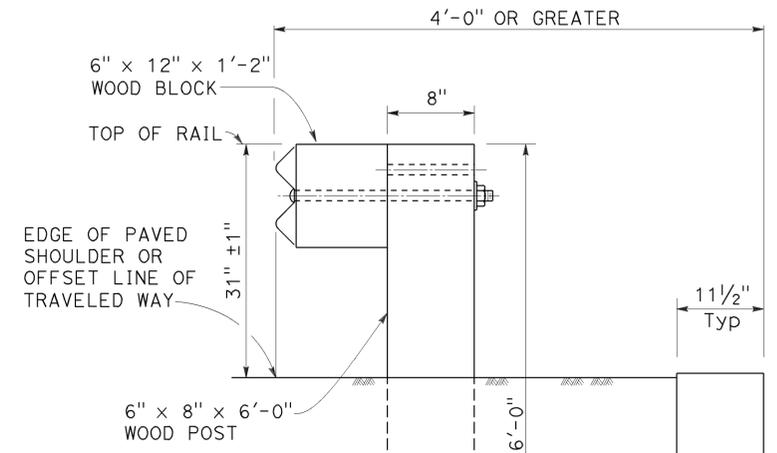
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

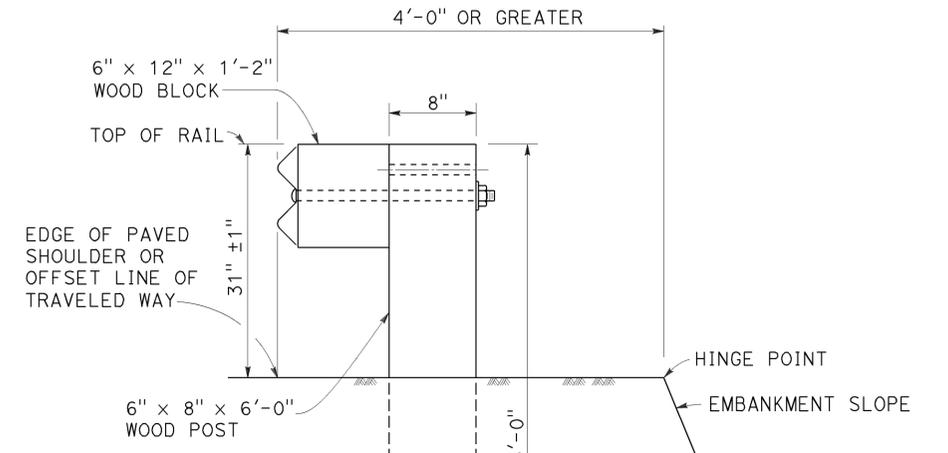
TO ACCOMPANY PLANS DATED 11-30-15



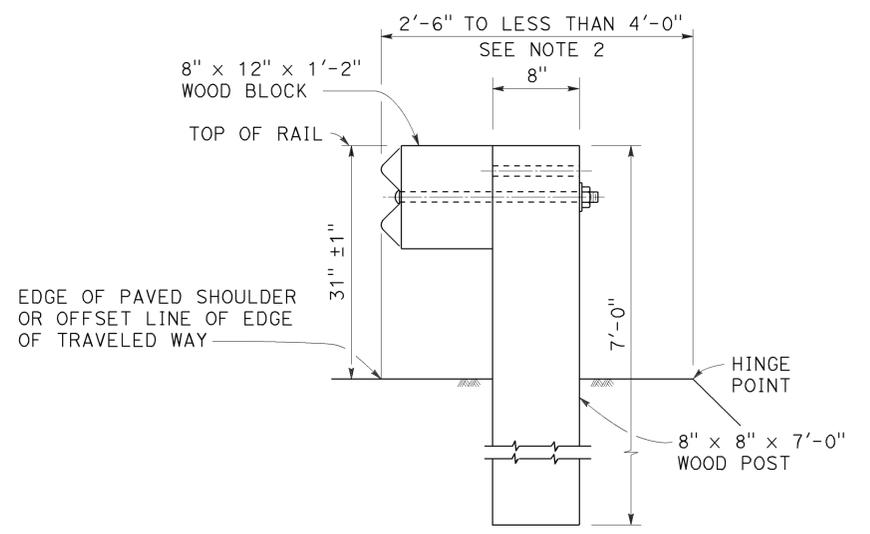
DETAIL A
TYPICAL ROADWAY
INSTALLATION
See Note 1



DETAIL C



DETAIL D



DETAIL B
NARROW ROADWAY
INSTALLATION
See Note 1

POST EMBEDMENT

INSTALLATION AT EARTH RETAINING WALLS

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 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 12" 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 15 steel post, 8'-0" in length, with 8" x 12" 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 Revised Standard Plan RSP A77L1 and RSP A77L2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-6", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Revised Standard Plan RSP A77N4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS

NO SCALE

RSP A77N3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N3
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N3

2010 REVISED STANDARD PLAN RSP A77N3

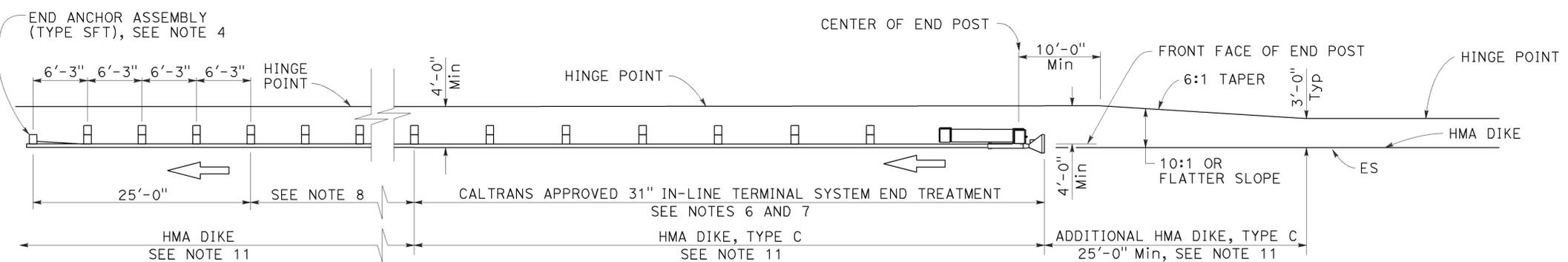
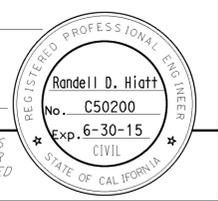
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	25	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

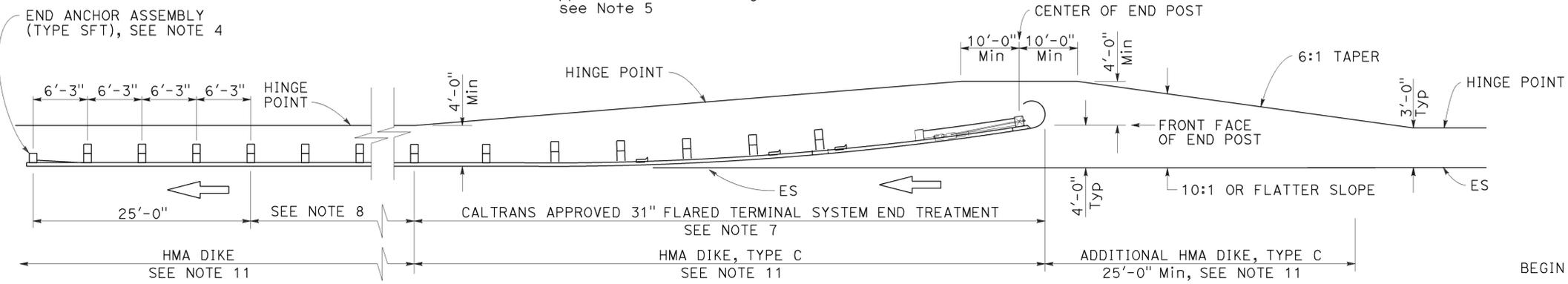
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 11-30-15



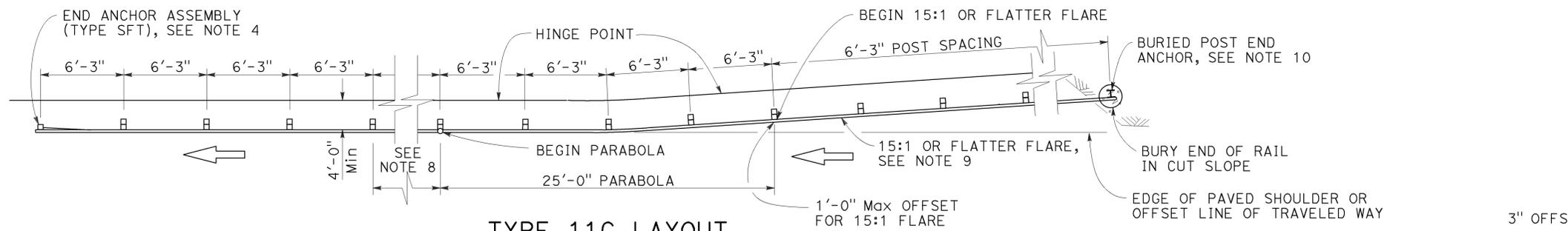
TYPE 11A LAYOUT

(Embankment MGS installation with 31" in-line end treatment at traffic approach end of railing) see Note 5



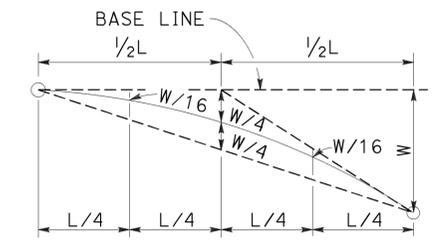
TYPE 11B LAYOUT

(Embankment MGS installation with 31" flared end treatment at traffic approach end of railing) see Note 5

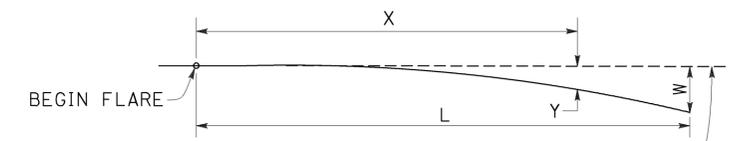


TYPE 11C LAYOUT

(Embankment MGS installation with buried end anchor treatment at traffic approach end of railing) see Notes 5 and 11



TYPICAL PARABOLIC LAYOUT

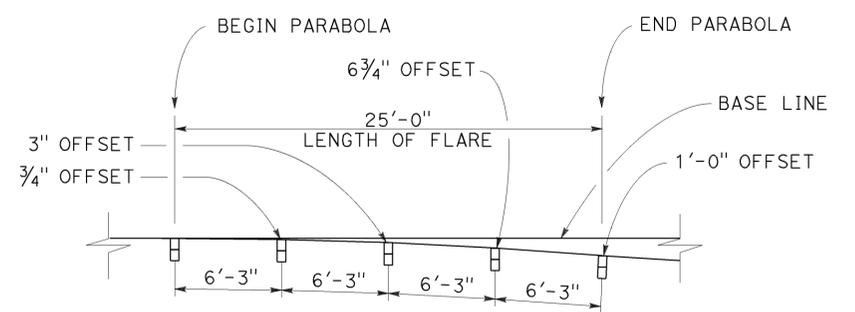


BASE LINE (EDGE OF PAVED SHOULDER OR OFFSET LINE OF EDGE OF TRAVELED WAY)

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

Y = OFFSET FROM BASE LINE
W = MAXIMUM OFFSET
X = DISTANCE ALONG BASE LINE
L = LENGTH OF FLARE

PARABOLIC FLARE OFFSETS



TYPICAL FLARE OFFSETS FOR 1 FOOT Max END OFFSET

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM TYPICAL LAYOUTS FOR EMBANKMENTS

NO SCALE

RSP A77P1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77P1 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77P1

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MGS 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 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or recycled plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- For End Anchor Assembly (Type SFT) details, see Revised Standard Plan RSP A77S1.
- Layout Types 11A, 11B or 11C are typically used where MGS is recommended to shield embankment slopes and a crashworthy end treatment is required for only one direction of traffic.
- 31" in-line terminal system end treatments are used where site conditions will not accommodate a flared end treatment.
- The type of 31" 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 MGS (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 MGS 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 11C Layout, see Revised Standard Plan RSP A77T2.
- Where placement of dike is required with MGS installations, see Revised Standard Plan RSP A77N4 for dike positioning details.

2010 REVISED STANDARD PLAN RSP A77P1

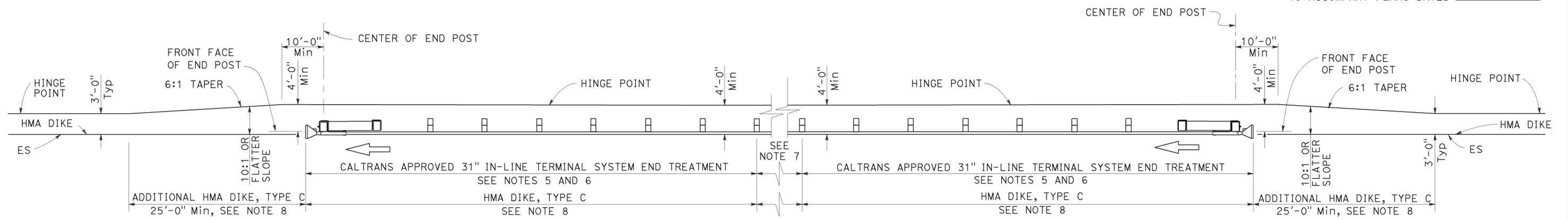
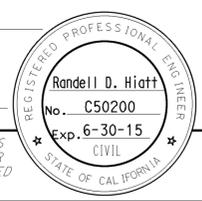
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	26	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

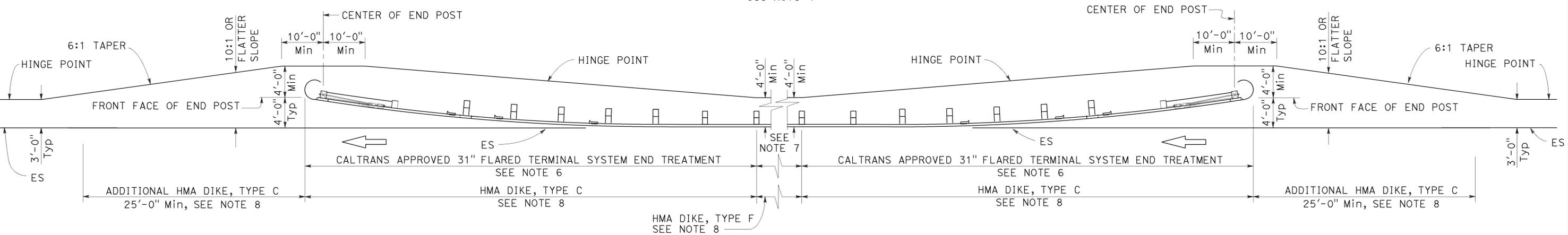
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 11-30-15



TYPE 11D LAYOUT

(Embankment MGS installation with 31" in-line end treatment at each end of railing)
See Note 4



TYPE 11E LAYOUT

(Embankment MGS installation with 31" flared end treatment at each end of railing)
See Note 4

NOTES:

1. Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
2. MGS post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
4. Layout Types 11D through 11L, shown on the A77P Series of Standard Plans, are typically used where MGS is recommended to shield embankment slopes and a crashworthy 31" end treatment is required for both directions of traffic.
5. 31" in-line terminal system end treatments are used where site conditions will not accommodate a flared end treatment.
6. The type of 31" terminal system end treatment to be used will be shown on the Project Plans.
7. Dependent on site conditions (embankment height and side slope), construction of additional MGS (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
8. Where placement of dike is required with MGS installations, see Revised Standard Plan RSP A77N4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

RSP A77P2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77P2

2010 REVISED STANDARD PLAN RSP A77P2

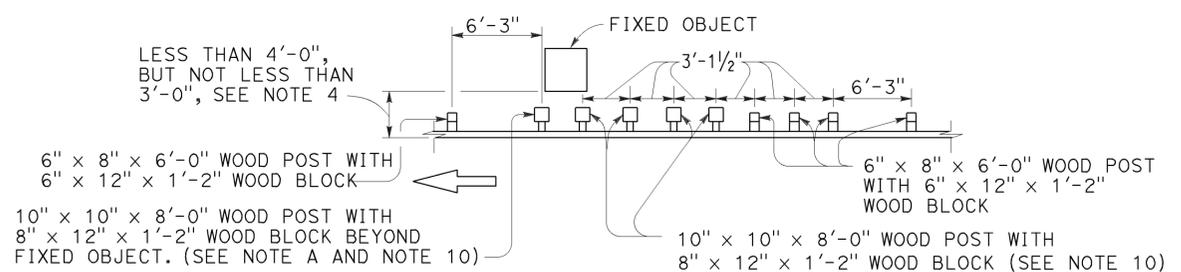
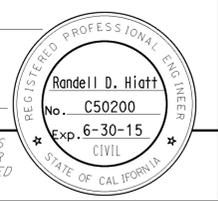
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	27	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
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.

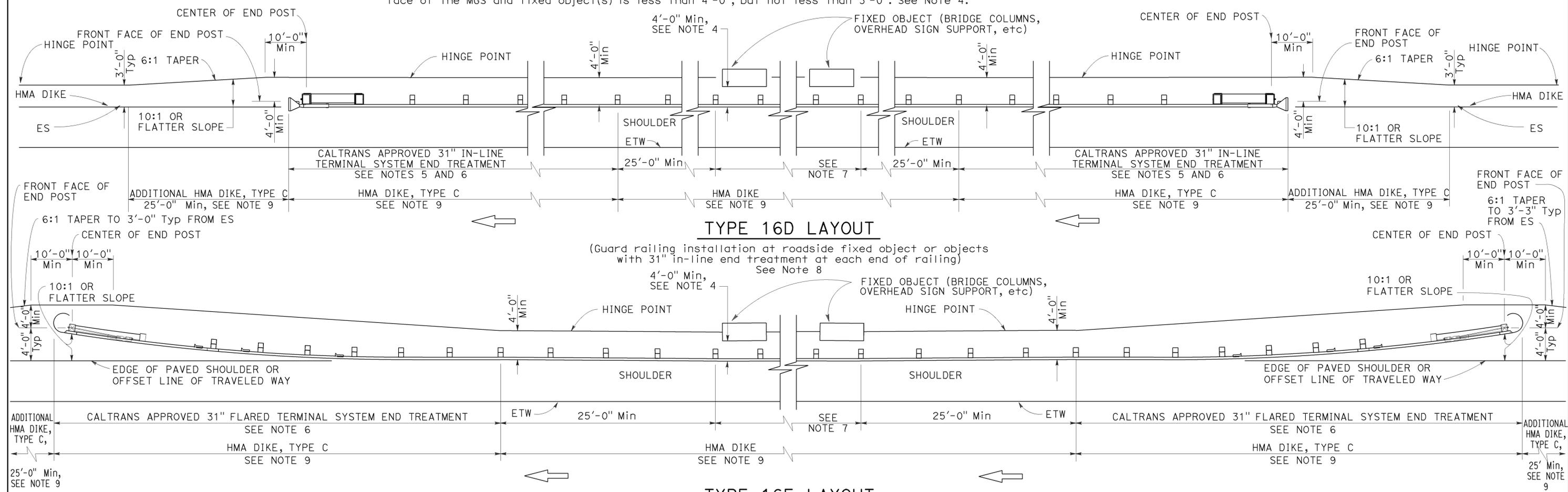
TO ACCOMPANY PLANS DATED 11-30-15



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 12" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

STRENGTHENED MIDWEST GUARDRAIL SYSTEM SECTIONS FOR FIXED OBJECT

Use strengthened MGS sections with layout Types 16D or 16E where minimum clearance between the face of the MGS and fixed object(s) is less than 4'-0", but not less than 3'-0". See Note 4.



- NOTES:**
- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
 - MGS 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 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
 - A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind MGS sections with post spacing at 6'-3". Construct MGS as shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object", on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 3'-0". Where the clearance is less than 3'-0", a concrete wall or barrier should be constructed to shield the fixed object(s).
 - 31" in-line terminal system end treatments are used where site conditions will not accommodate a 31" flared end treatment.
 - The type of 31" terminal system to be used will be shown on the Project Plans.
 - As site conditions dictate, construct additional MGS to shield fixed object(s). Additional MGS length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
 - Layout Types 16D through 16L, shown on the A77R Series of Standard Plans, are typically used where MGS is recommended to shield roadside fixed object(s) and a crashworthy 31" end treatment is required for both directions of traffic.
 - Where placement of dike is required with MGS, see Revised Standard Plan RSP A77N4 for dike positioning details.
 - W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood block or notched recycled plastic block may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 12" x 1'-2" wood block shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS**
NO SCALE

RSP A77R4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77R4

2010 REVISED STANDARD PLAN RSP A77R4

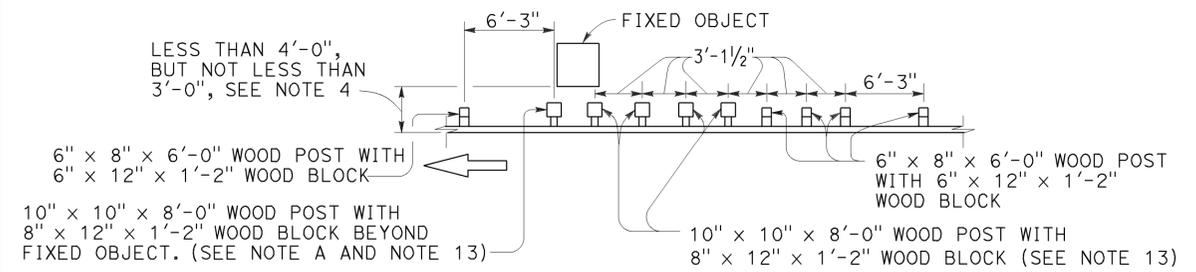
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	NeV	49	15.1/17.1, 17.4/21.8	28	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

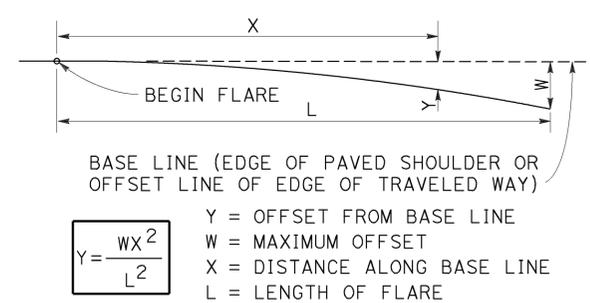
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NO. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

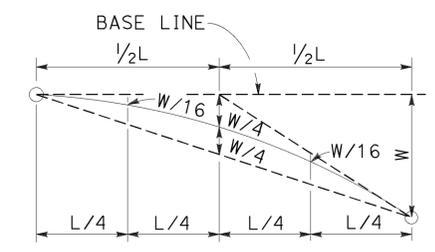


NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 12" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

STRENGTHENED MIDWEST GUARDRAIL SYSTEM SECTIONS FOR FIXED OBJECT

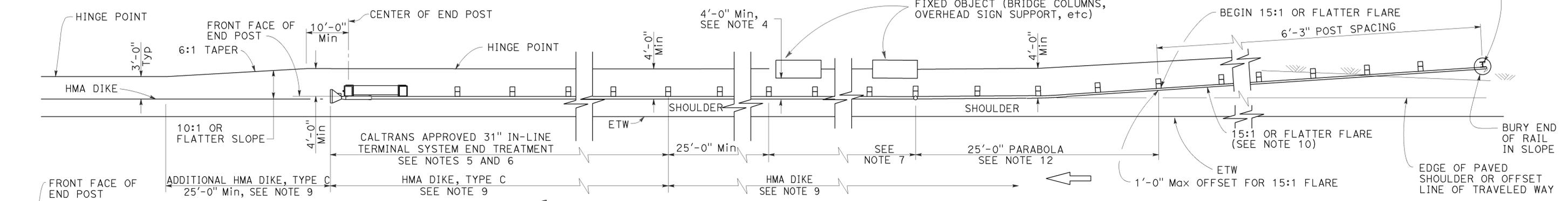


PARABOLIC FLARE OFFSETS



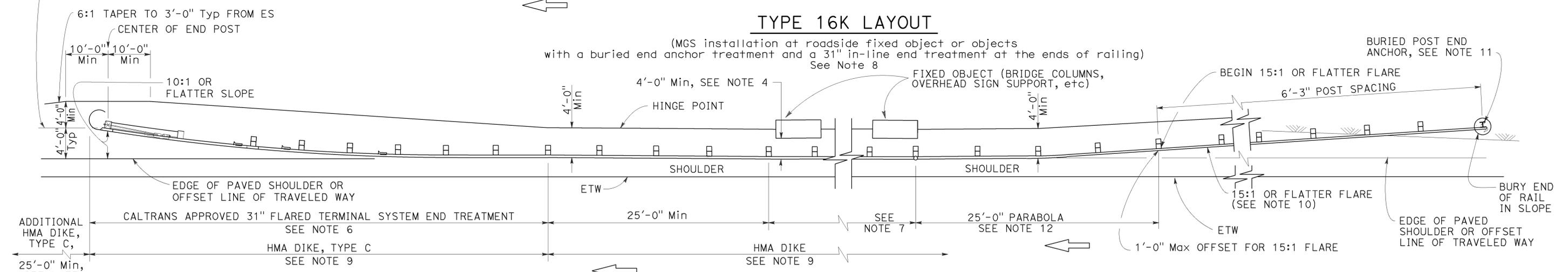
TYPICAL PARABOLIC LAYOUT

Use strengthened MGS sections with layout Types 16K or 16L layouts where minimum clearance between the face of the MGS and fixed object(s) is less than 4'-0", but not less than 3'-0". See Note 4.



TYPE 16K LAYOUT

(MGS installation at roadside fixed object or objects with a buried end anchor treatment and a 31" in-line end treatment at the ends of railing) See Note 8



TYPE 16L LAYOUT

(MGS installation at roadside fixed object or objects with a buried end anchor treatment and a 31" flared end treatment at the ends of railing) See Note 8

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MGS 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 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind MGS sections with post spacing at 6'-3". Construct MGS as shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 3'-0". Where the clearance is less than 3'-0", a concrete wall or barrier should be constructed to shield the fixed object(s).

- 31" in-line terminal system end treatments are used where site conditions will not accommodate a 31" flared end treatment.
- The type of 31" terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional MGS to shield fixed object(s). Additional MGS length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77R Series of Standard Plans are typically used where MGS is recommended to shield roadside fixed object(s) and a crashworthy 31" end treatment is required for both directions of traffic.
- Where placement of dike is required with MGS, see Revised Standard Plan RSP A77N4 for dike positioning details.
- The 15:1 or flatter flare for the buried post anchor is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of MGS 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 Buried Post End Anchor, see Revised Standard Plan RSP A77T2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77P1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 12" x 1'-2" wood block shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE

RSP A77R8 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77R8

2010 REVISED STANDARD PLAN RSP A77R8

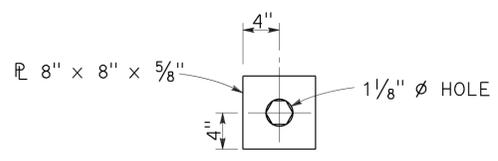
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	29	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

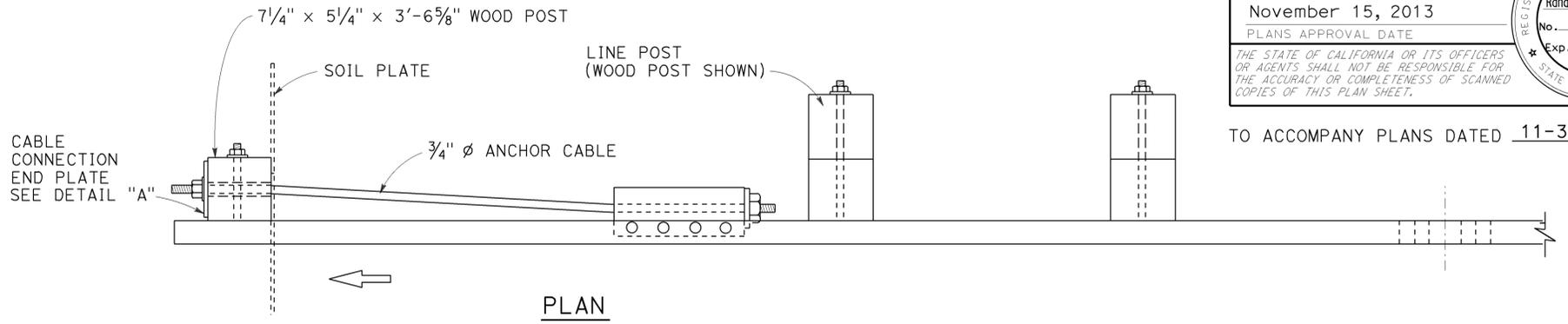
November 15, 2013
PLANS APPROVAL DATE

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.

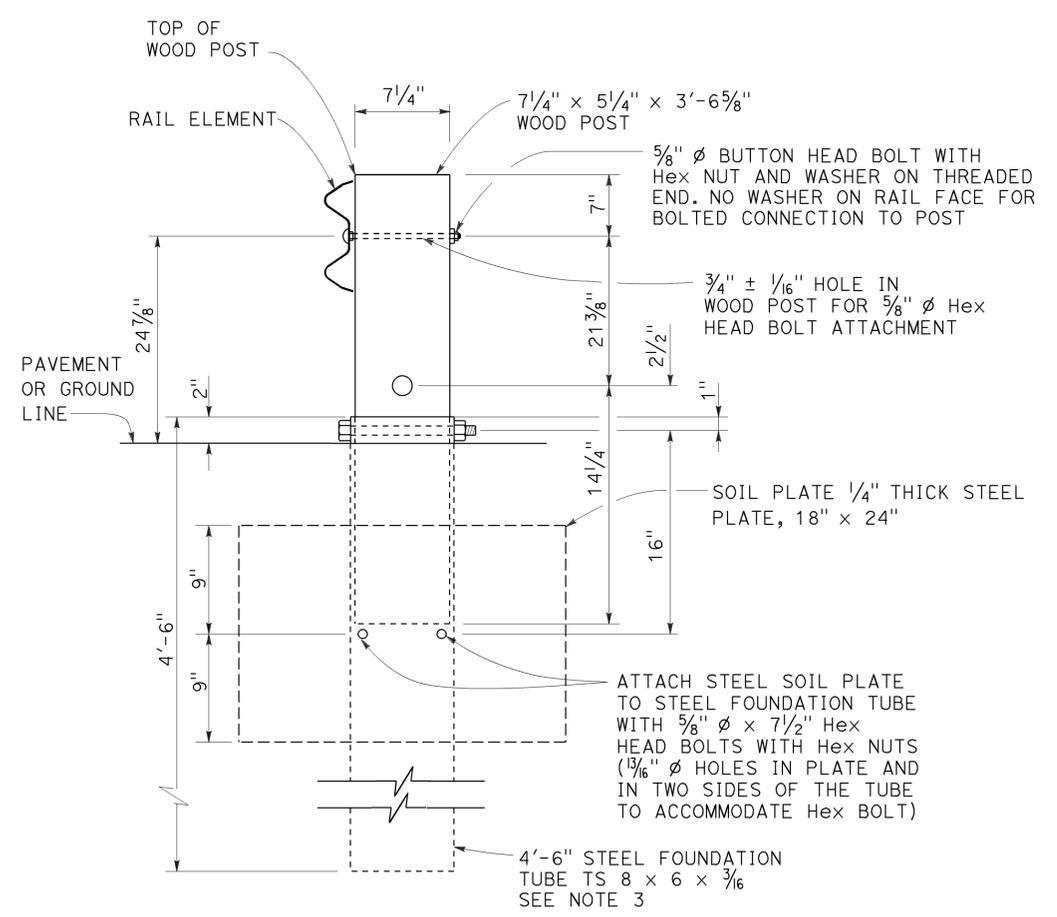
TO ACCOMPANY PLANS DATED 11-30-15



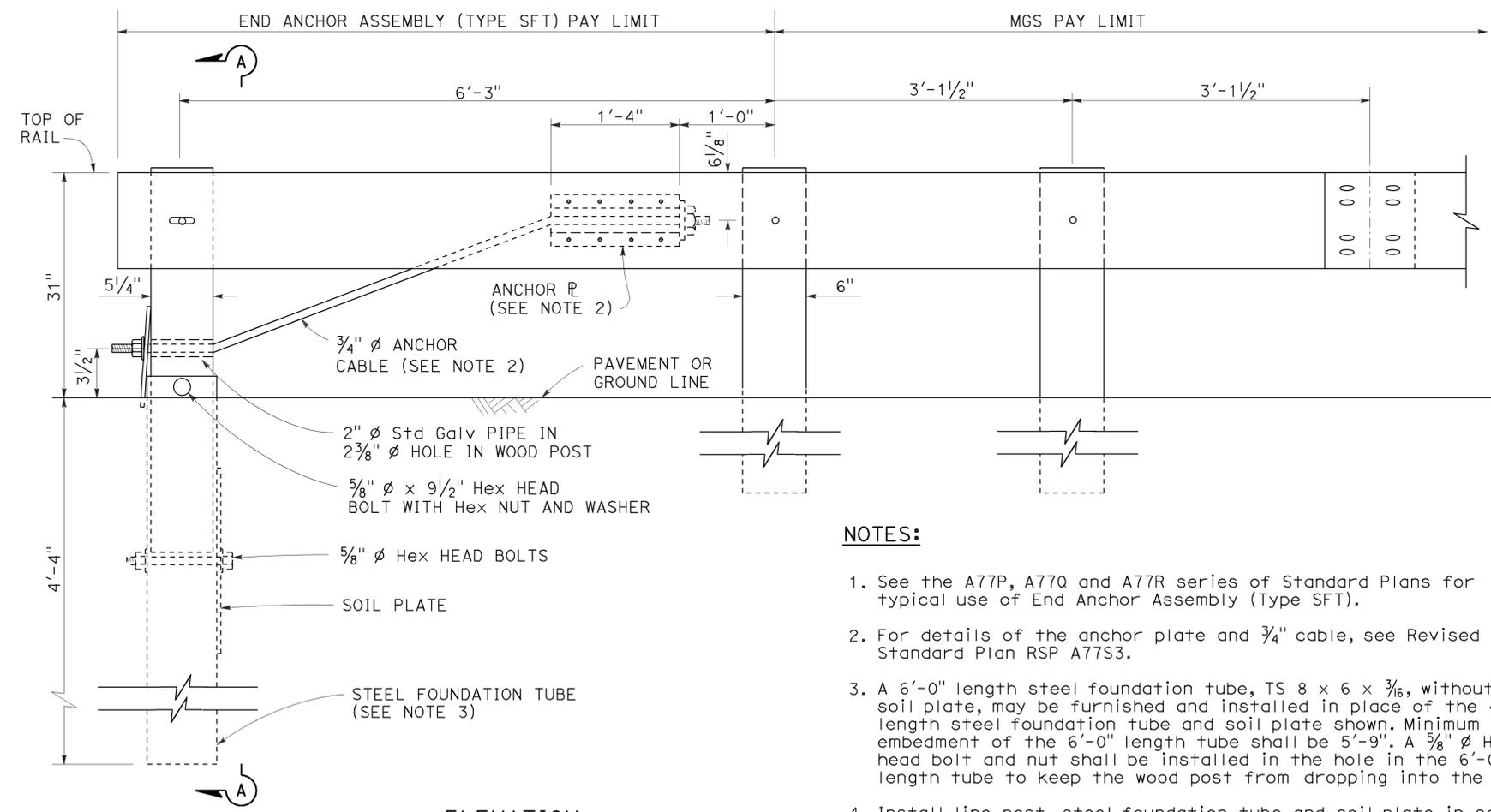
DETAIL "A"
CABLE CONNECTION
END PLATE



PLAN



SECTION A-A



ELEVATION

END ANCHOR
ASSEMBLY (TYPE SFT)
See Note 1

NOTES:

1. See the A77P, A77Q and A77R series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Revised Standard Plan RSP A77S3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM
END ANCHOR ASSEMBLY
(TYPE SFT)

NO SCALE

RSP A77S1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S1 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77S1

2010 REVISED STANDARD PLAN RSP A77S1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	30	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

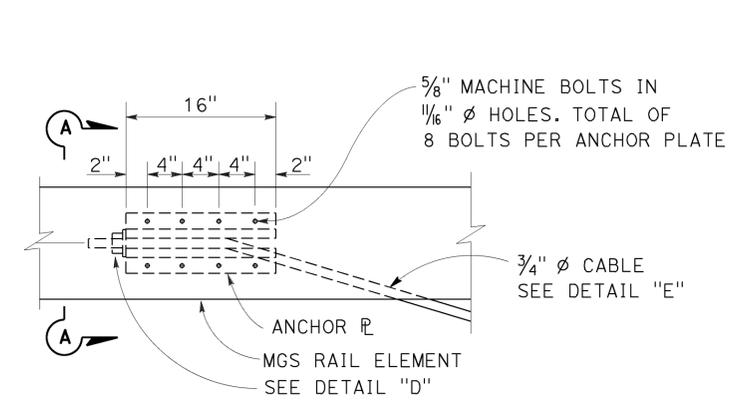
November 15, 2013
PLANS APPROVAL DATE

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.

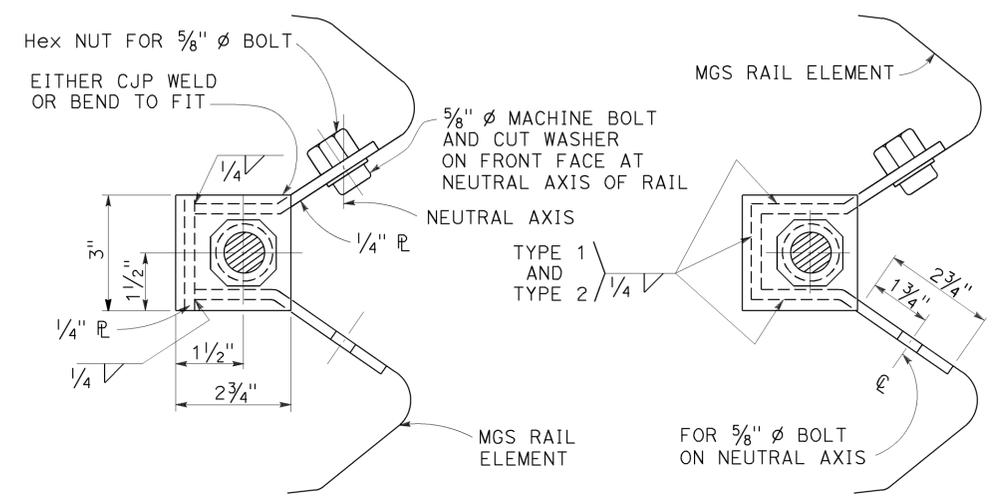
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 11-30-15

NOTE:
See Revised Standard Plans RSP A77S1, RSP A77S2 and RSP A77T1 for typical use of anchor cable and anchor plate.



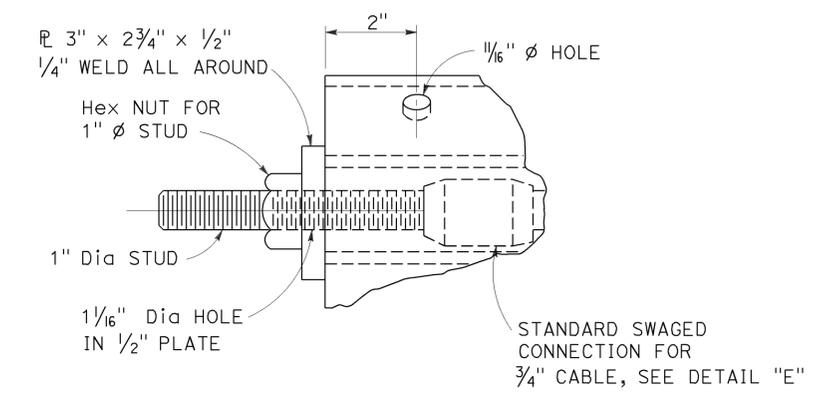
ANCHOR PLATE DETAIL
(MGS shown, TBB similar)



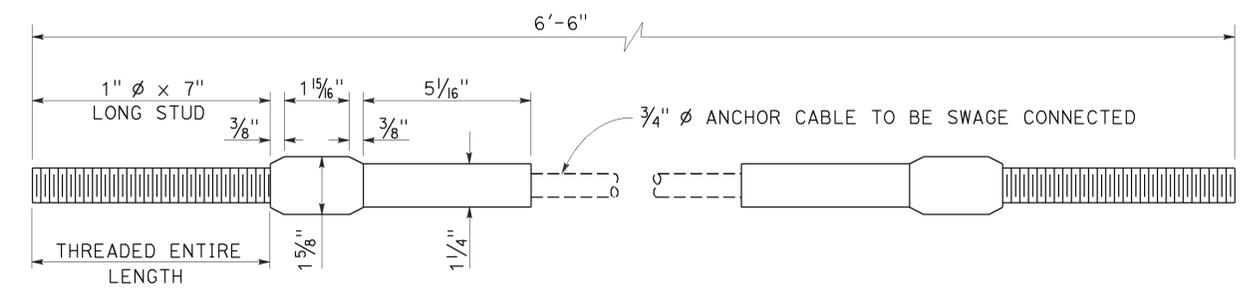
SECTION A-A (ALTERNATIVE TYPE 1)

SECTION A-A (ALTERNATIVE TYPE 2)

NOTE:
Dimensioning applies to both types.



DETAIL "D"



ANCHOR CABLE WITH SWAGED FITTING AND STUD
DETAIL "E"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL RAILING
ANCHOR CABLE AND
ANCHOR PLATE DETAILS**

NO SCALE

RSP A77S3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S3 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A77S3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	31	36

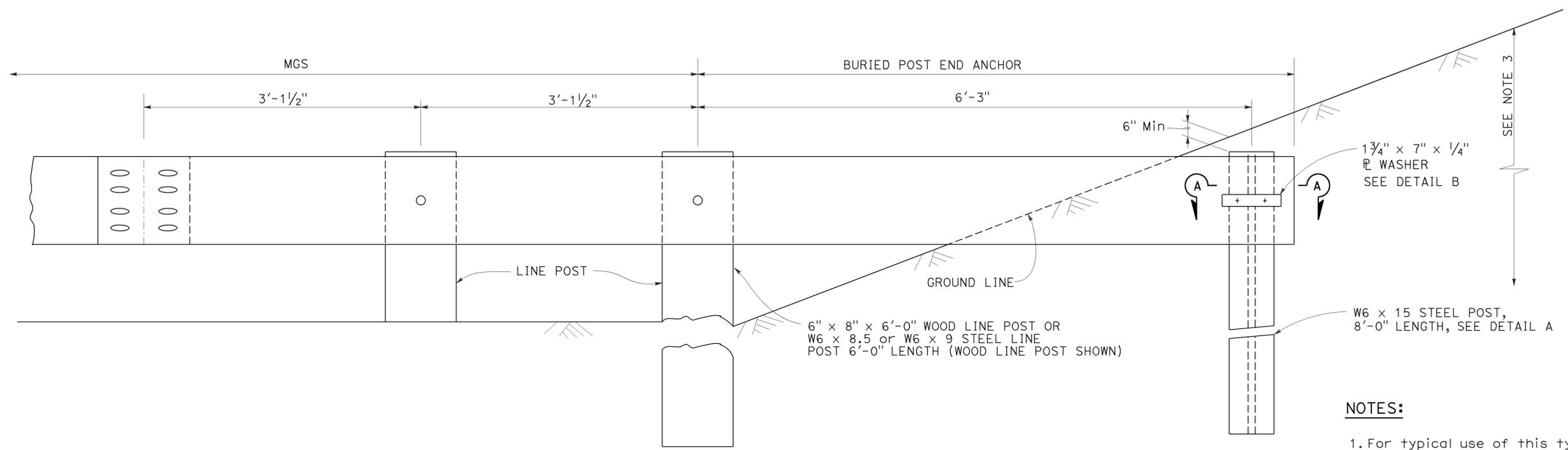
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
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
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

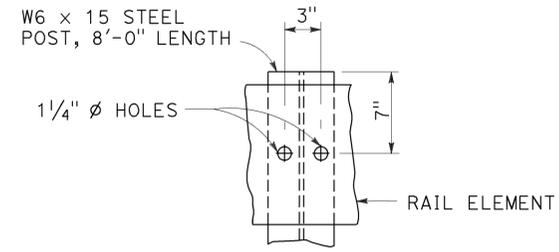
TO ACCOMPANY PLANS DATED 11-30-15



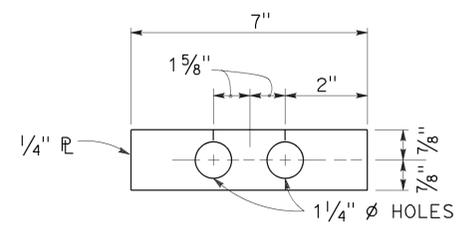
BURIED POST END ANCHOR
See Note 3

NOTES:

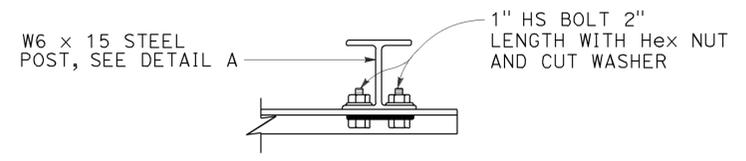
1. For typical use of this type of end anchor with MGS see the A77P, A77Q and A77R Series of the Standard Plans.
2. Holes excavation in the slope to construct the buried post end anchor shall be backfilled with selected earth, placed in layers approximately 1'-0" thick. Each layer shall be moistened and thoroughly compacted.
3. The buried post end anchor shall only be constructed at those locations where the slope perpendicular to the roadway is non-traversable.



DETAIL A



DETAIL B



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
BURIED POST END ANCHOR**

NO SCALE

RSP A77T2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77T2
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77T2

2010 REVISED STANDARD PLAN RSP A77T2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	32	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

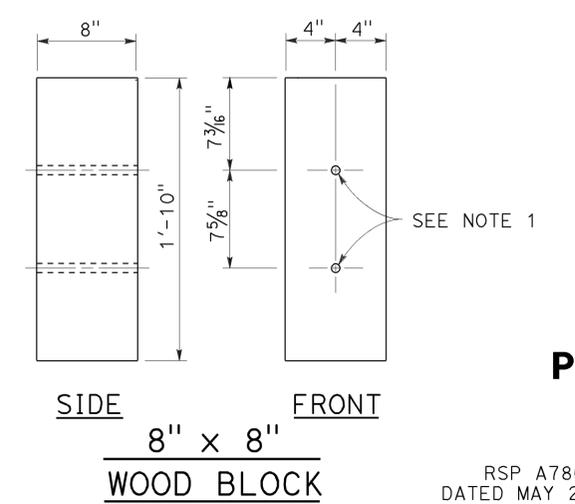
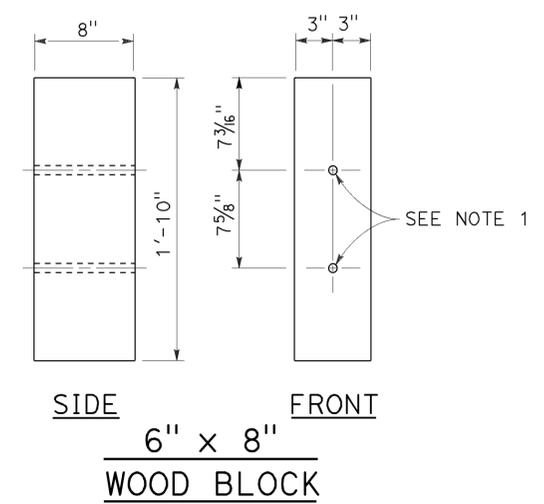
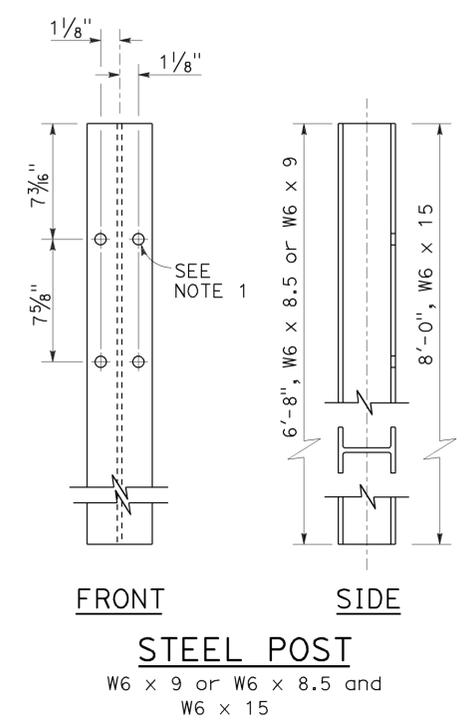
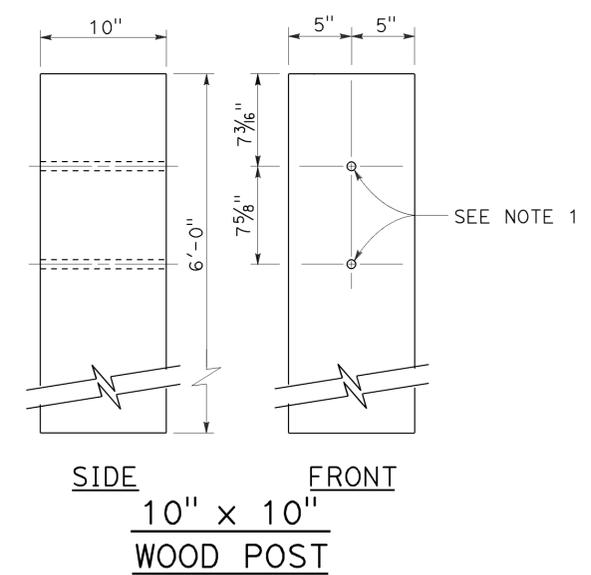
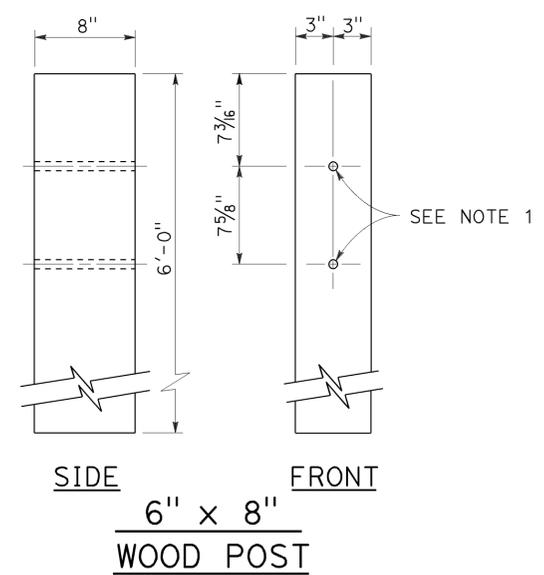
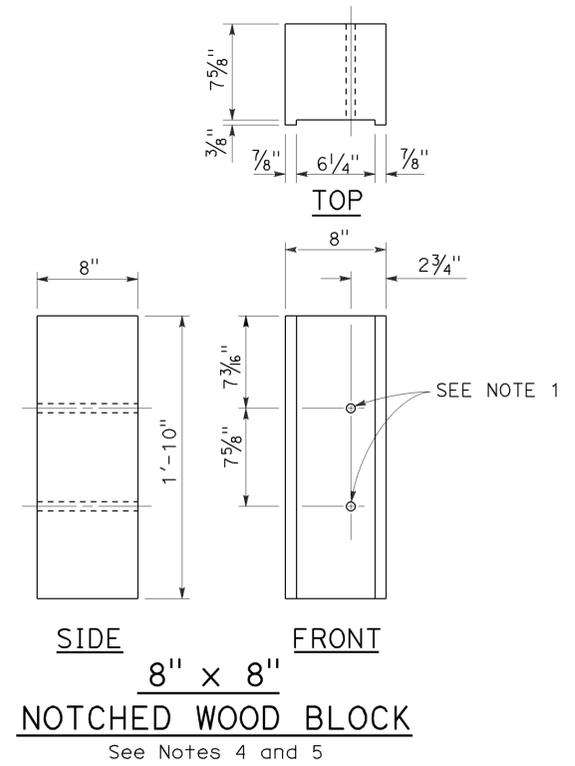
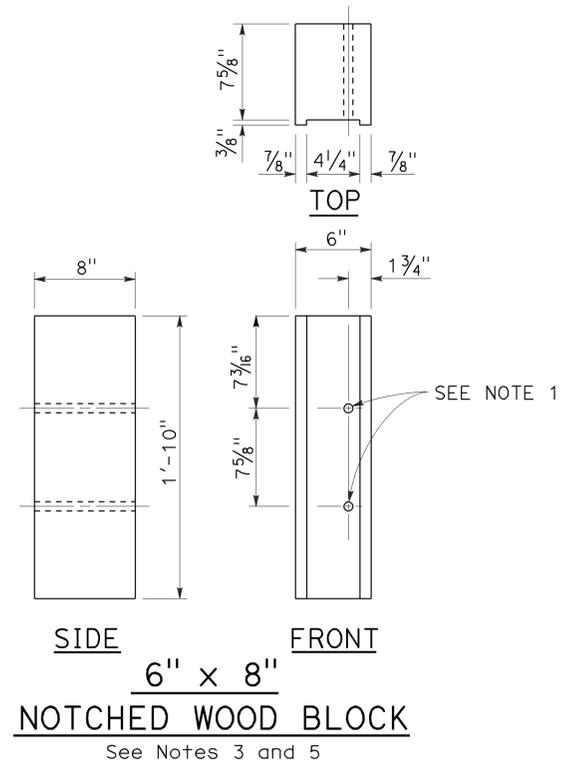
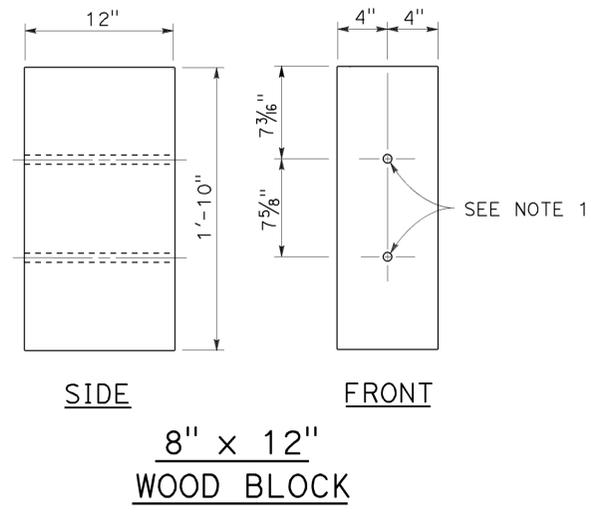
July 19, 2013
PLANS APPROVAL DATE

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
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 11-30-15

- NOTES:**
- All holes in steel post to be $\frac{1}{8}$ " Dia maximum. Holes in wood posts and wood blocks to be $\frac{3}{4}$ " Dia $\pm \frac{1}{16}$ ".
 - Dimensions shown for wood post are nominal.
 - For use with W6 x 8.5 or W6 x 9 steel post.
 - For use with W6 x 15 steel post.
 - Notched face of block faces steel post.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**THRIE BEAM BARRIER
POST AND BLOCK DETAILS**

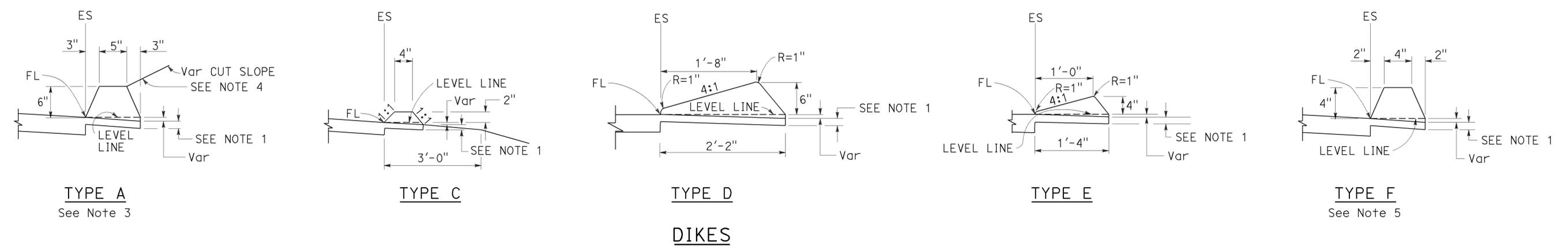
NO SCALE

RSP A78C2 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A78C2
DATED MAY 20, 2011 - PAGE 92 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A78C2

2010 REVISED STANDARD PLAN RSP A78C2

TO ACCOMPANY PLANS DATED 11-30-15



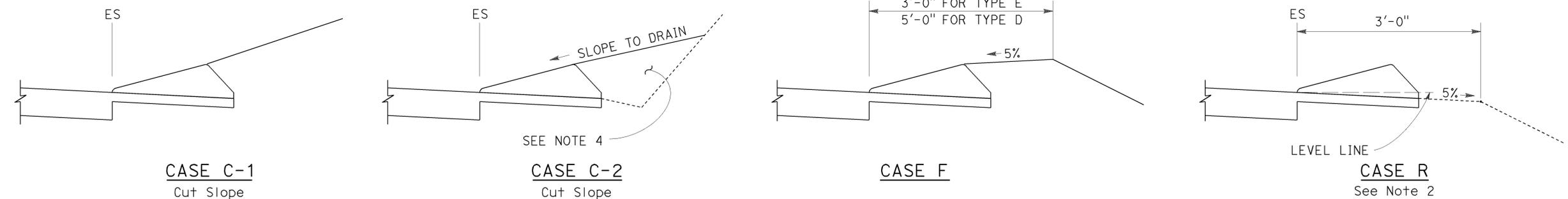
TYPE A
See Note 3

TYPE C

TYPE D

TYPE E

TYPE F
See Note 5



CASE C-1
Cut Slope

CASE C-2
Cut Slope

CASE F

CASE R
See Note 2

NOTES:

- For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
- Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
- Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
- Fill and compact with excavated material to top of dike.
- Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

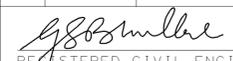
Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT DIKES
NO SCALE

RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B
DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	34	36


 REGISTERED CIVIL ENGINEER
 July 19, 2013
 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.

TO ACCOMPANY PLANS DATED 11-30-15

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

* - For other offsets, use the following merging taper length formula for L:
 For speed of 40 mph or less, $L = WS^2/60$
 For speed of 45 mph or more, $L = WS$

Where: L = Taper length in feet
 W = Width of offset in feet
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph
 ** - Longitudinal buffer space or flagger station spacing
 *** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP T9

NOTES:

See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.1/17.1, 17.4/21.8	35	36

Devinder Singh
REGISTERED CIVIL ENGINEER

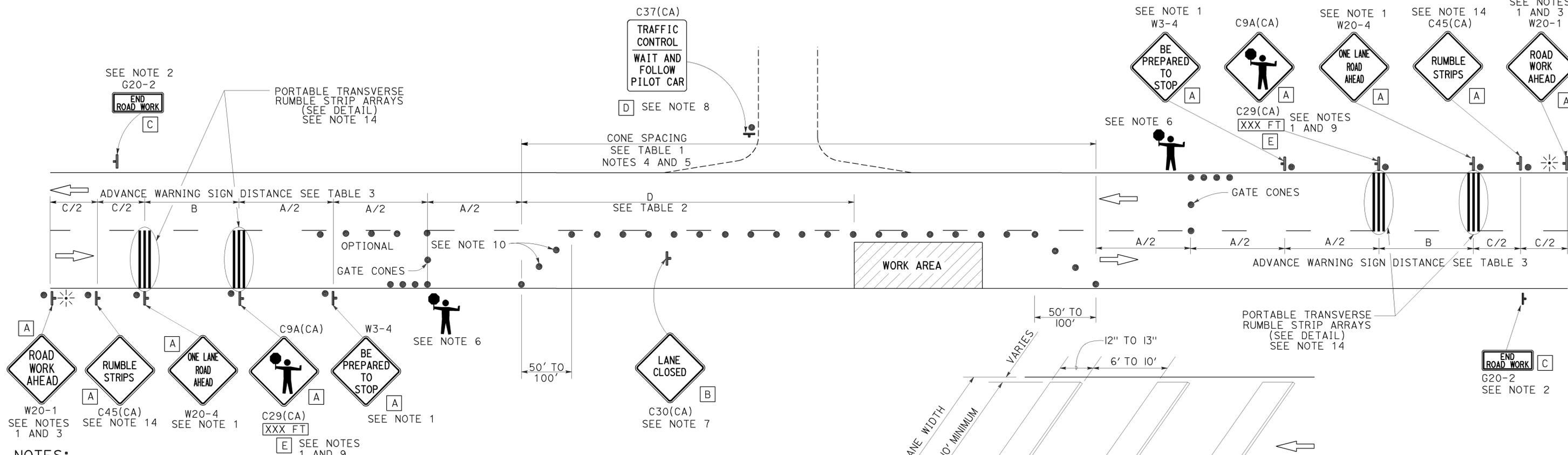
October 30, 2015
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Devinder Singh
No. C50470
Exp. 6-30-17
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.

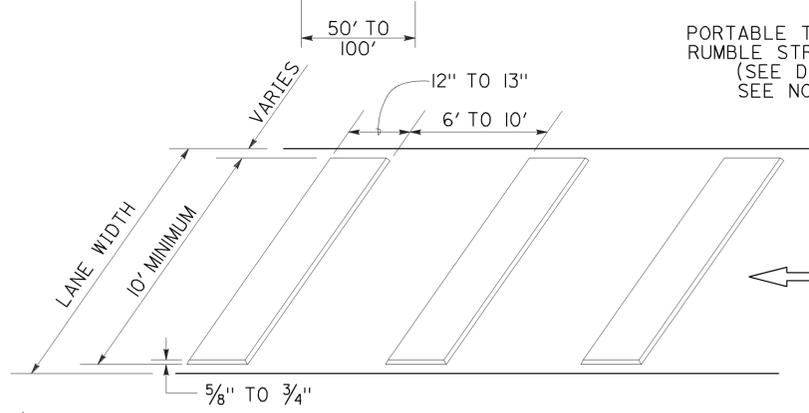
TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL

TO ACCOMPANY PLANS DATED 11-30-15



NOTES:

- Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
- Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
- The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
- Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
- If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
- Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
 - Work duration occupies a location for four hours or less
 - Posted speed limit is below 45 MPH
 - Work is of emergency nature
 - Work zone is in snow or icy weather conditions



PORTABLE TRANSVERSE RUMBLE STRIP ARRAY DETAIL

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

LEGEND

- TRAFFIC CONE
- ⊥ TEMPORARY TRAFFIC CONTROL SIGN
- ⚡ PORTABLE FLASHING BEACON
- 🚧 FLAGGER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

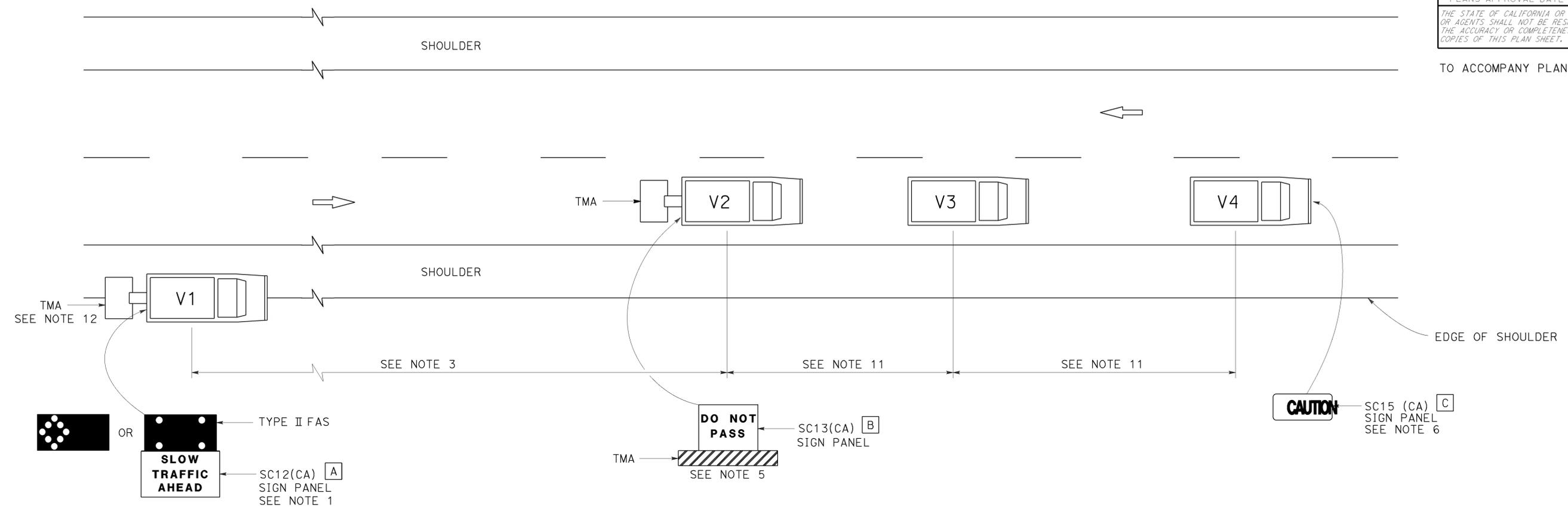
NO SCALE

RSP T13 DATED OCTOBER 30, 2015 SUPERSEDES RSP T13 DATED OCTOBER 17, 2014, RSP T13 DATED JULY 18, 2014 AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

2010 REVISED STANDARD PLAN RSP T13

TO ACCOMPANY PLANS DATED 11-30-15



NOTES:

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.

7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- V4 SIGN VEHICLE
- TMA TRUCK-MOUNTED ATTENUATOR
- FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
- FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

SIGN PANEL SIZE (Min)

- A 72" x 42"
- B 54" x 42"
- C 54" x 24"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR MOVING LANE CLOSURE
 ON TWO LANE HIGHWAYS**
 NO SCALE

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17 DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T17

2010 REVISED STANDARD PLAN RSP T17