

SECTION A-A

EXPANSION JOINT

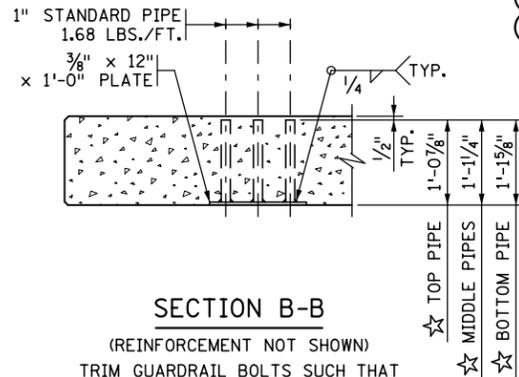
CONTROL JOINT

BILL OF REINFORCEMENT FOR BARRIER

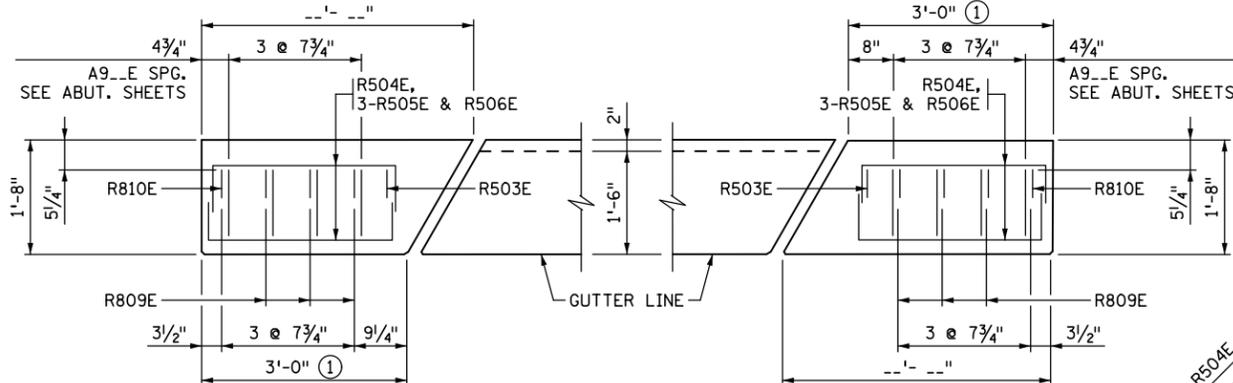
BAR	NO.	LENGTH	SHAPE	LOCATION
R501E		5'-7"		BARRIER DOWEL
R502E		6'-2"		BARRIER VERTICAL
R503E		4'-4"		BARRIER VERTICAL
R504E		2'-8"		END POST
R505E		3'-6"		END POST
R506E		3'-4"		END POST
R407E		2'-3"		END POST
R708E		4'-1"		END POST
R809E		5'-0"		END POST
R810E		4'-5"		END POST
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.

DESIGNER NOTE
 (REMOVE PRIOR TO PLOTTING FINAL PLAN);
 FOR BRIDGES WITH SUPERELEVATION EXCEEDING 2%, SHOW
 DIMENSIONS FOR BOTH THE FRONT AND BACK FACE OF THE BARRIER.
 ALSO VERIFY THAT BAR R501E HAS 10" MIN. PROJECTION
 WHEN CROSS SLOPE VARIES FROM NORMAL 0.02 FT/FT

BARRIER MEETS TEST LEVEL 4 REQUIREMENTS OF NCHRP REPORT 350

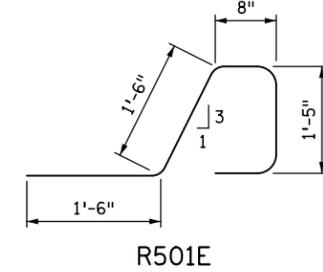


SECTION B-B

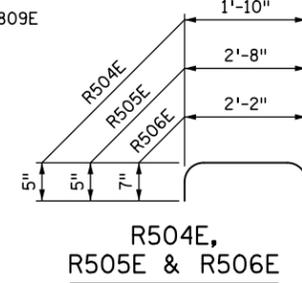


PLAN VIEW OF END POSTS

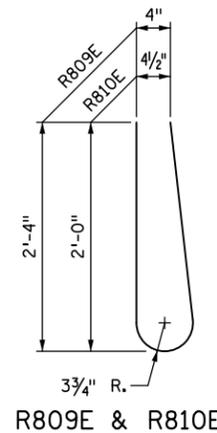
EXPANSION JOINT (DEVICE NOT SHOWN)



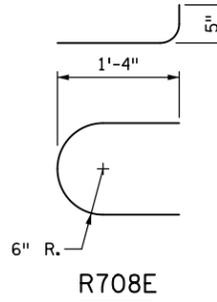
R501E



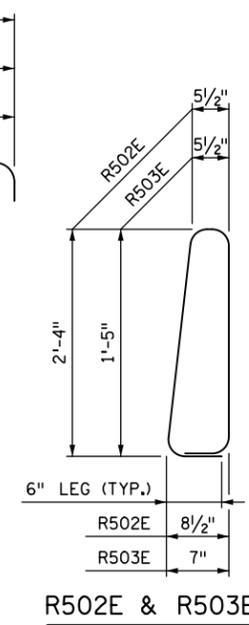
R504E, R505E & R506E



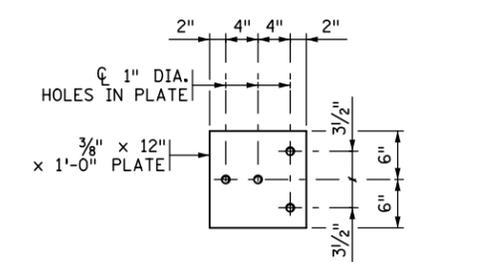
R809E & R810E



R708E

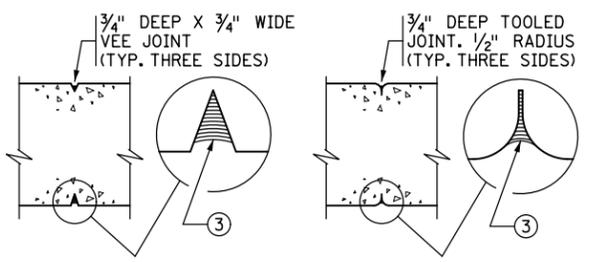


R502E & R503E



GUARDRAIL CONNECTION DETAIL

GALVANIZE AFTER FABRICATION PER SPEC. 3394
 ESTIMATED WEIGHT = 23 LBS



SECTION D-D CONTRACTOR OPTION 1

SECTION D-D CONTRACTOR OPTION 2

CONTROL JOINT DETAILS

WHEN USING SLIP FORM METHOD TO PLACE THE CONCRETE, CUT JOINT 3 INCHES DEEP USING MARGIN TROWEL OR SIMILAR MEANS IMMEDIATELY AFTER CONCRETE PLACEMENT (TYP. THREE SIDES)

GENERAL NOTES

- PAYMENT LENGTH SHALL BE MEASURED BETWEEN THE OUTSIDE FACES OF THE BARRIER.
- CONCRETE BARRIER = 464 LBS./FT. (0.115 CU. YDS./FT.)
- FINISH ALL EDGES OF BARRIER AND END POST WITH 1/2" CHAMFER, EXCEPT WHERE OTHERWISE NOTED.
- MAXIMUM SPACING OF CONTROL JOINTS SHALL BE 10 FT. SEE SUPERSTRUCTURE SHEET FOR JOINT SPACING.
- GUARDRAIL CONNECTION TO BE STRUCTURAL STEEL, SPEC. 3306.
- GUARDRAIL CONNECTION AND NAME PLATE TO BE CONSIDERED INCIDENTAL TO BARRIER.
- BARRIER QUANTITIES ARE LISTED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.
- ① END POST DIMENSIONS ARE ALONG GUTTER LINE OR OUTSIDE FACE OF END POST.
- ② PLACE BAR ON TOP OF BOTTOM REINFORCEMENT MAT.
- ③ JOINT SEALANT PER MNDOT APPROVED/QUALIFIED PRODUCTS LIST - CRACK AND JOINT MATERIALS - SILICONE JOINT SEALERS.

REVISION: 11-03-2015

APPROVED: NOVEMBER 6, 2013
 Nancy Subenberger
 STATE BRIDGE ENGINEER

CERTIFIED BY _____
 LICENSED PROFESSIONAL ENGINEER DATE _____
 NAME: _____ LIC. NO. _____

TITLE: CONCRETE BARRIER (TYPE F, TL-4)
 WITH SEPARATE END POST
 (WITHOUT CONCRETE WEARING COURSE)

DES: _____ DR: _____ APPROVED: _____
 CHK: _____ CHK: _____
 SHEET NO. OF SHEETS BRIDGE NO. _____

FIG. 5-397.114