

SECTION A-A

EXPANSION JOINT

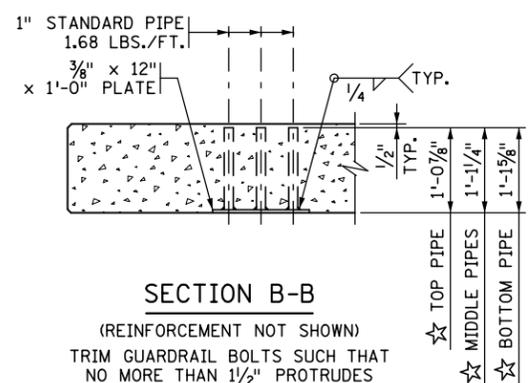
CONTROL JOINT

SECTION C-C

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

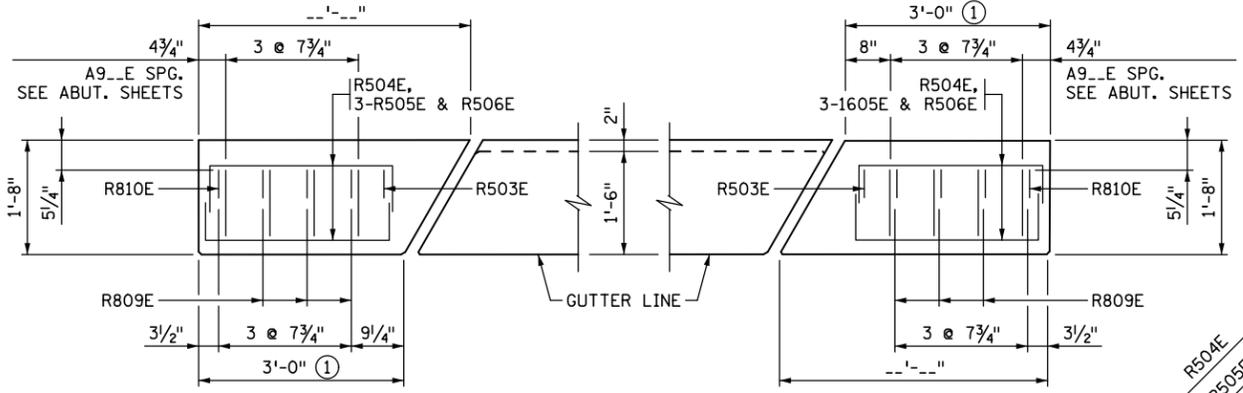
BARRIER MEETS TEST LEVEL 4 REQUIREMENTS OF NCHRP REPORT 350

BILL OF REINFORCEMENT FOR BARRIER				
BAR	NO.	LENGTH	SHAPE	LOCATION
R501E		5'-3"		BARRIER DOWEL
R502E		6'-6"		BARRIER VERTICAL
R503E		4'-8"		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'-4"		END POST
R810E		4'-9"		END POST
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.



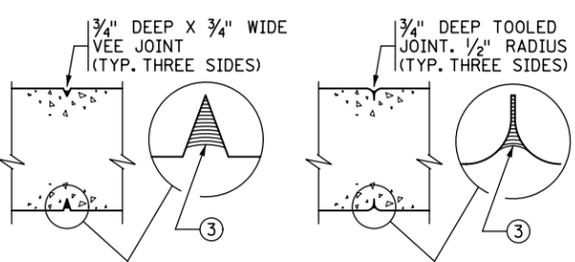
SECTION B-B

(REINFORCEMENT NOT SHOWN)
 TRIM GUARDRAIL BOLTS SUCH THAT
 NO MORE THAN 1/2" PROTRUDES
 FROM BACK FACE OF BARRIER.
 ☆ DIMENSIONS INCLUDE 3/8" PLATE



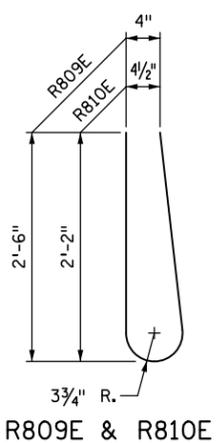
PLAN VIEW OF END POSTS

EXPANSION JOINT (DEVICE NOT SHOWN)

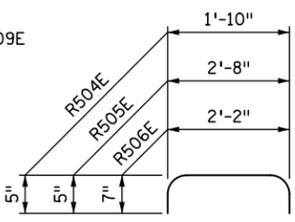


SECTION D-D
 CONTRACTOR OPTION 1 CONTRACTOR OPTION 2
 CONTROL JOINT DETAILS

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)

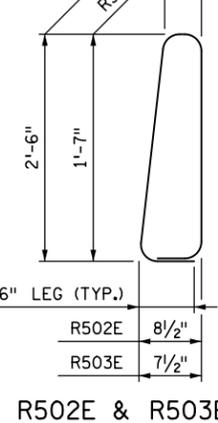
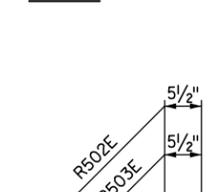


R809E & R810E



R504E,
 R505E & R506E

R501E



R502E & R503E

GENERAL NOTES

- PAYMENT LENGTH SHALL BE MEASURED BETWEEN THE OUTSIDE FACES OF THE BARRIER.
- CONCRETE BARRIER = 502 LBS./FT. (0.124 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

REVISION DATE:
 08-13-2015

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

TITLE: **CONCRETE BARRIER (TYPE F, TL-4)**
 WITH SEPARATE END POST
 (WITH CONCRETE WEARING COURSE)

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

FIG. 5-397.116