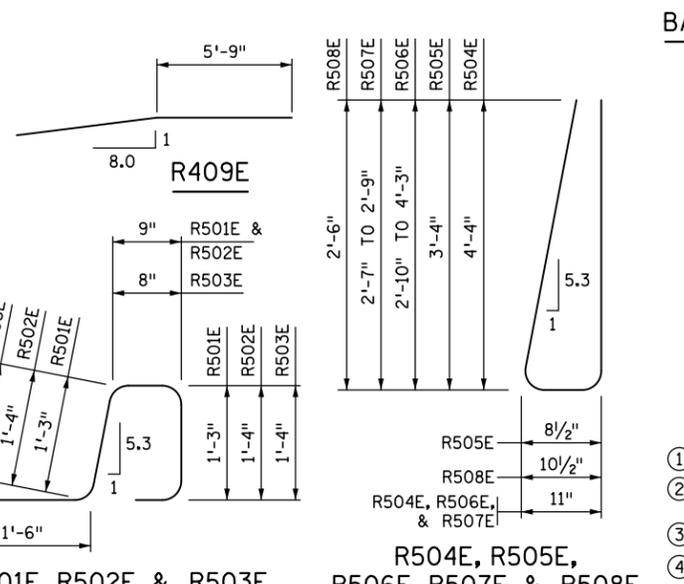
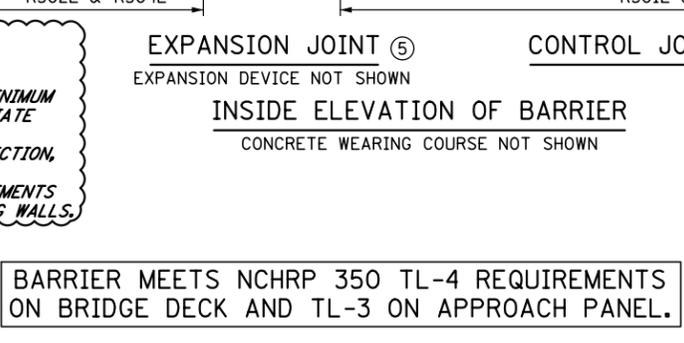
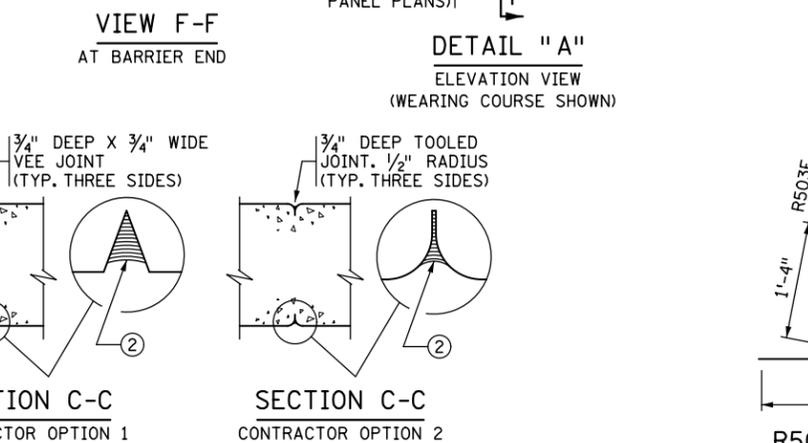
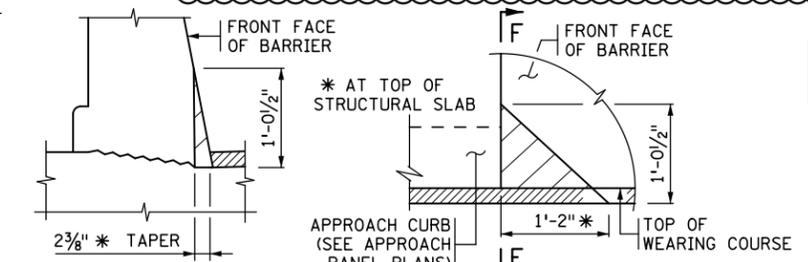


DESIGNER NOTE
 (REMOVE PRIOR TO PLOTTING FINAL PLAN):
 MINIMUM BARRIER LENGTH ON APPROACH PANEL IS 16'-8" WITH MINIMUM OF 22 R502E AND R503E DOWELS WITH ACCOMPANYING APPROPRIATE BARRIER VERTICAL BARS, 12" MAX. SPACING. VERIFY APPROACH BARRIER LENGTH, NEED FOR A GUARDRAIL CONNECTION, AND VERTICAL TAPER WITH ROADWAY DESIGNER. REFER TO MEMO TO DESIGNERS (2016-01) FOR ADDITIONAL REQUIREMENTS REGARDING BARRIER PLACEMENT AND LINK WITH ADJACENT RETAINING WALLS.



BILL OF REINFORCEMENT FOR BARRIER

BAR NO.	LENGTH	SHAPE	LOCATION
R501E	5'-4"	[Symbol]	BARRIER DOWEL
R502E	5'-6"	[Symbol]	BARRIER DOWEL
R503E	5'-5"	[Symbol]	BARRIER DOWEL
R504E	9'-6"	[Symbol]	BARRIER VERTICAL
R505E	7'-4"	[Symbol]	BARRIER VERTICAL
R506E	-- SER. OF 12	6'-7" TO 9'-5"	BARRIER VERTICAL
R507E	-- SER. OF 4	6'-1" TO 6'-5"	BARRIER VERTICAL
R508E	5'-6"	[Symbol]	BARRIER VERTICAL
R409E	13'-0"	[Symbol]	BARRIER LONGIT.
R410E	7'-7"	[Symbol]	BARRIER LONGIT.
R4__E		[Symbol]	BARRIER LONGIT.
R4__E		[Symbol]	BARRIER LONGIT.
R4__E		[Symbol]	BARRIER LONGIT.

GENERAL NOTES

- MEASURE PAYMENT LENGTH BETWEEN THE OUTSIDE ENDS OF THE BARRIER.
- CONCRETE BARRIER = 643 LBS./FT. (0.159 CU. YDS./FT.)
- FINISH ALL EDGES OF BARRIER WITH 1/2" CHAMFER, EXCEPT WHERE OTHERWISE NOTED.
- SPACE CONTROL JOINTS AT 10 FT. MAXIMUM. REFER TO SUPERSTRUCTURE SHEET FOR SPECIFIC SPACING INFORMATION.
- 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.
- PLACE BAR ON TOP OF BOTTOM REINFORCEMENT MAT IN DECK.
- JOINT SEALANT PER MNDOT APPROVED/QUALIFIED PRODUCTS LIST - CRACK AND JOINT MATERIALS - SILICONE JOINT SEALERS.
- DIMENSIONS TO BE DETERMINED BASED ON THE BRIDGE DECK SLOPE.
- REMOVE CONCRETE FROM PIPE ENDS AFTER SLIPFORMING OR FORM REMOVAL.
- REFER TO "WATERPROOF EXPANSION DEVICE" STANDARD PLANS FOR COVER PLATE DETAILS.

REVISION:
 APPROVED: AUGUST 24, 2016
 Kevin Weston
 STATE BRIDGE ENGINEER

CONTROL JOINT DETAILS
 CONTRACTOR OPTION 1
 CONTRACTOR OPTION 2
 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).

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

TITLE: SINGLE SLOPE CONCRETE BARRIER 54" (TYPE S, TL-4)
 PARAPET ABUTMENT WITH BRIDGE SLAB SIDEWALK AND GUARDRAIL CONNECTION (WITH 2" CONCRETE WEARING COURSE)

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