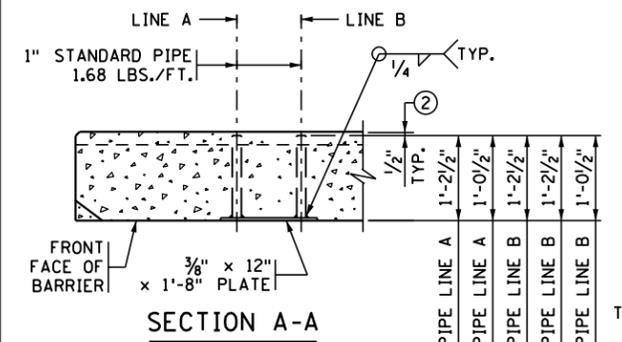
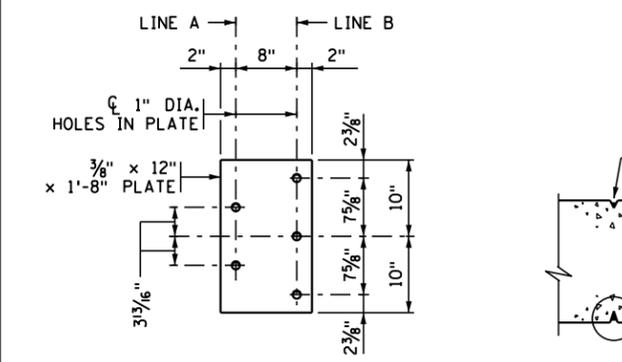


DESIGNER NOTES
 REMOVE PRIOR TO PRINTING FINAL PLANS;
 ONLY USE THIS PARAPET WHEN THE ROADWAY DESIGN SPEED IS 45 MPH OR LESS UNLESS IT IS PROTECTED BY A TRAFFIC BARRIER.
 OMIT GUARDRAIL CONNECTION IF THE PARAPET IS PROTECTED BY A TRAFFIC BARRIER THAT INCLUDES THE GUARDRAIL ATTACHMENT.
 IF GUARDRAIL CONNECTION IS INCLUDED, METAL RAILING OR FENCE ON TOP OF PARAPET MUST TERMINATE AT LEAST 3'-0" AWAY FROM THE END OF THE PARAPET.
 MINIMUM PARAPET LENGTH ON APPROACH PANEL IS 13'-4" WITH MINIMUM OF 19 R502E & R503E DOWELS WITH ACCOMPANYING APPROPRIATE PARAPET VERTICAL BARS, 12" MAX. SPACING.
 VERIFY THAT UTILITIES OR CONDUITS PLACED WITHIN THE PARAPET DO NOT INTERFERE WITH ANCHORAGE PLACEMENT.
 X-OUT ALL DETAILS NOT BEING USED.

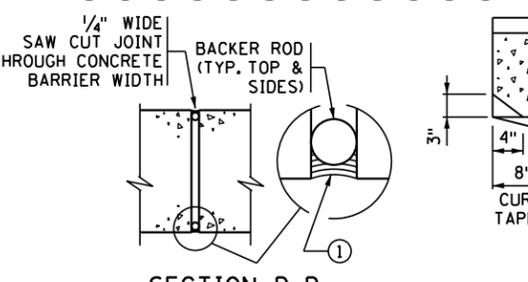
JOINT AT ABUTMENT
CONTROL JOINT
 INSIDE ELEVATION OF PARAPET
 PARAPET MEETS MASH TL-2 REQUIREMENTS



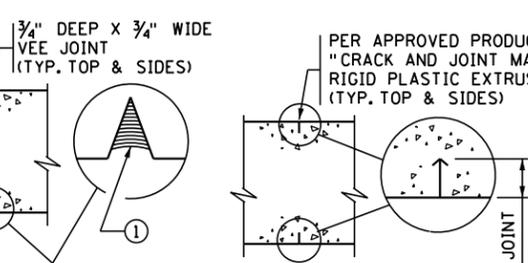
SECTION A-A
 (REINFORCEMENT NOT SHOWN)
 TRIM GUARDRAIL BOLTS SUCH THAT NO MORE THAN 1/2" PROTRUDES FROM BACK FACE OF BARRIER.
 ☆ DIMENSIONS INCLUDE 3/8" PLATE



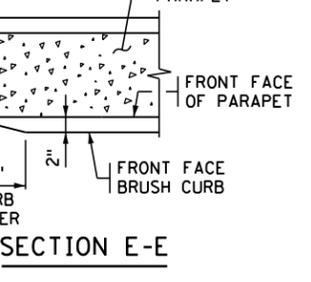
GUARDRAIL CONNECTION DETAIL
 GALVANIZE AFTER FABRICATION PER SPEC. 3394
 ESTIMATED WEIGHT = 34 LBS.



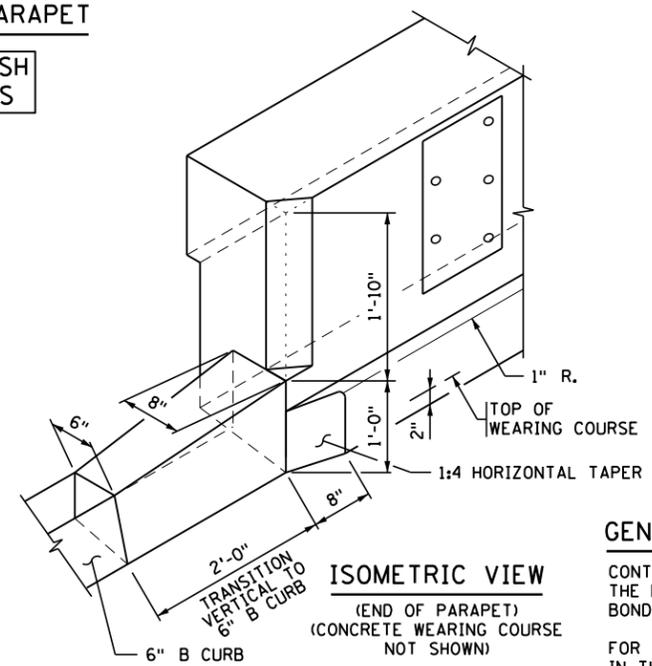
SECTION D-D



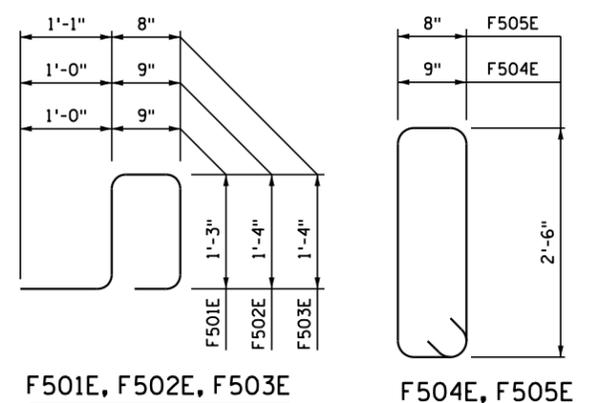
SECTION C-C
 CAST-IN-PLACE CONSTRUCTION SLIPFORM CONSTRUCTION



SECTION E-E



ISOMETRIC VIEW
 (END OF PARAPET)
 (CONCRETE WEARING COURSE NOT SHOWN)



BILL OF REINFORCEMENT FOR PARAPET				
BAR	NO.	LENGTH	SHAPE	LOCATION
F501E		4'-9"	U	PARAPET DOWEL
F502E		4'-11"	U	PARAPET DOWEL
F503E		4'-11"	U	PARAPET DOWEL
F504E		7'-5"	U	PARAPET VERTICAL
F505E		7'-3"	U	PARAPET VERTICAL
F4_E			—	PARAPET LONGIT.
F4_E			—	PARAPET LONGIT.
F4_E			—	PARAPET LONGIT.
F4_E			—	PARAPET LONGIT.
F4_E			—	PARAPET LONGIT.

GENERAL NOTES

CONTINUOUSLY GROUND ALL METAL RAILINGS; SEE THE SPECIAL PROVISIONS. REFER TO THE ELECTRICAL PLANS AND ELECTRICAL SPECIAL PROVISIONS FOR DETAILS REGARDING BONDING MULTIPLE ELECTRICAL GROUNDING SYSTEMS.

FOR SLIPFORM CONSTRUCTION, TIE 100% OF THE REINFORCEMENT BAR INTERSECTIONS IN THE PARAPET.

MEASURE PAYMENT LENGTH BETWEEN THE OUTSIDE ENDS OF THE PARAPET.

CONCRETE PARAPET = 473 LBS./FT. (0.117 CU. YDS./FT.)

FINISH ALL EDGES OF PARAPET 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 IN ACCORDANCE WITH SPEC. 3306.

GUARDRAIL CONNECTION AND NAMEPLATE TO BE CONSIDERED INCIDENTAL.

PARAPET QUANTITIES ARE LISTED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.

① JOINT SEALANT PER MNDOT APPROVED/QUALIFIED PRODUCTS LIST - CRACK AND JOINT MATERIALS - SILICONE JOINT SEALERS.

② REMOVE CONCRETE FROM PIPE ENDS AFTER SLIPFORMING OR FORM REMOVAL.

③ 4 1/2" MIN. FROM FRONT FACE OF PARAPET TO VERTICAL METAL RAILING POST IF NOT PROTECTED BY A TRAFFIC BARRIER.

④ MATCH GUTTERLINE ELEVATION.

REVISION:
 APPROVED: APRIL 09, 2020
 Kevin Westrom
 STATE BRIDGE ENGINEER

FOR SLIPFORM CONSTRUCTION; IMMEDIATELY AFTER CONCRETE IS PLACED AND WHILE IT IS STILL WET, CREATE A ONE INCH STRAIGHT GROOVE USING A TROWEL. INSERT RIGID PLASTIC EXTRUSION INTO GROOVE TO A DEPTH 1/8" BELOW THE SURFACE; FINISH OVER GROOVE COMPLETELY HIDING THE EXTRUSION.

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

TITLE: **CONCRETE PARAPET (TYPE P-1, TL-2)**
 INTEGRAL OR SEMI-INTEGRAL ABUTMENT
 (WITH 2" CONCRETE WEARING COURSE)

DESIGNED BY _____ DRAWN BY _____
 CHECKED BY _____
 APPROVED: _____
 SHEET NO. _____ OF _____ SHEETS
 BRIDGE NO. _____

CODE 69

FIG. 5-397.166(D)