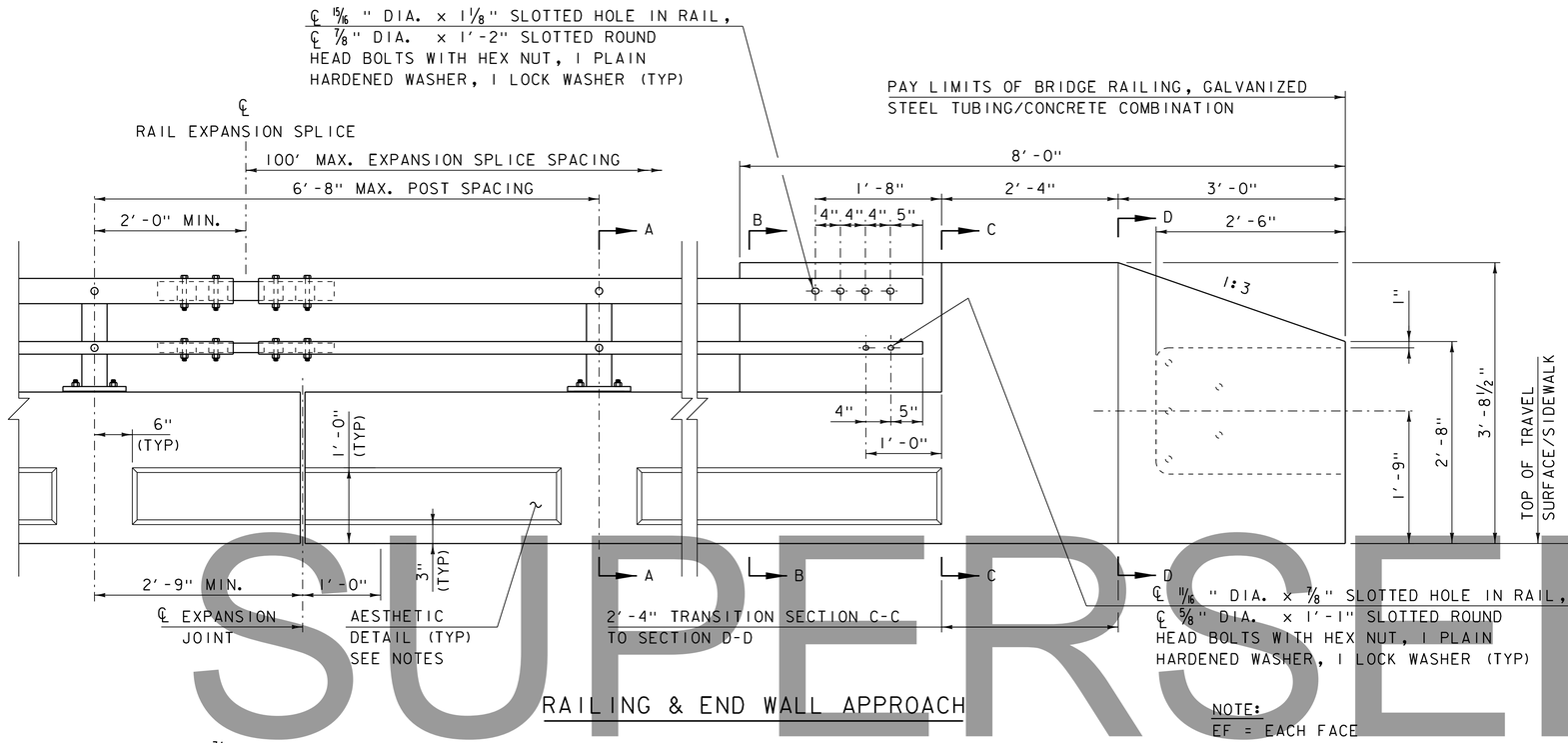
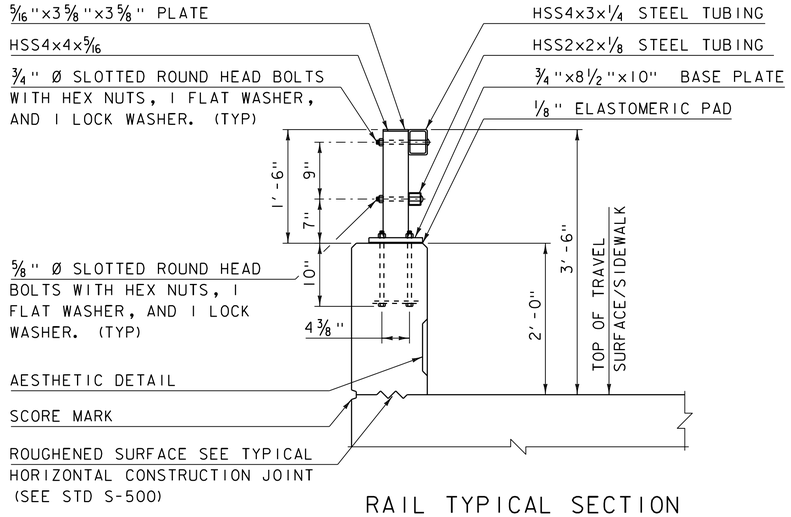
SUPERSEDED
FEB 14, 2023



RAILING & END WALL APPROACH

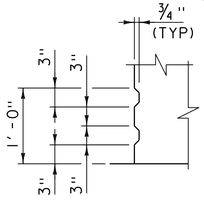
NOTE:
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
*** MATCH SLOPE OF NEAREST TRANSVERSE STEEL



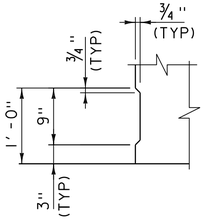
RAIL TYPICAL SECTION

NOTES:

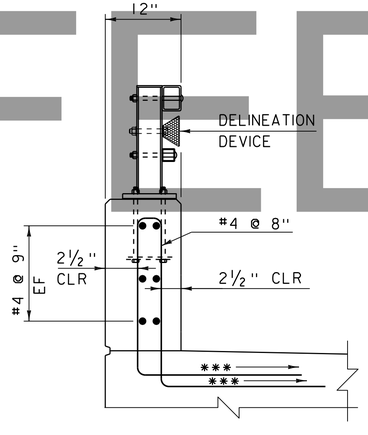
1. ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
2. PRIOR TO GALVANIZING, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
3. ALL POSTS SHALL BE SET NORMAL TO GRADE.
4. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE POSTS AND PREFERABLY TO AT LEAST 4 POSTS.
5. RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING THE END OF AN INTEGRAL ABUTMENT BRIDGE AND AT ALL SUPERSTRUCTURE EXPANSION JOINTS. EXPANSION JOINT WIDTH SHALL BE 4" AT 68°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
6. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT AND HOLES IN POSTS FOR DELINEATORS MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION IN ACCORDANCE WITH SECTION 726.08.
7. BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
8. RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY ASTM A 449 (TYPE 1) GALVANIZED ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE.
9. SEE STANDARD DRAWING G-1 FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT. PAYMENT FOR DELINEATORS SHALL BE INCIDENTAL TO OTHER ITEMS.
10. AESTHETIC TREATMENT TYPE SHALL BE APPLIED AS SPECIFIED IN THE CONTRACT PLANS. IF NONE IS SPECIFIED IT SHALL NOT BE USED. AESTHETIC TREATMENT DETAILED ON THIS SHEET MAY ALSO BE APPLIED ON THE FASCIA SIDE OF THE RAIL, IF SPECIFIED IN THE CONTRACT PLANS.
11. CHARPY V-NOTCH (CVN) TESTING SHALL BE WAIVED FOR THE HSS2x2x1/8 STEEL TUBING USED IN THE LOWER HAND RAIL.
12. THIS RAILING MEETS THE REQUIREMENTS FOR A MASH TL-4 SERVICE LEVEL.



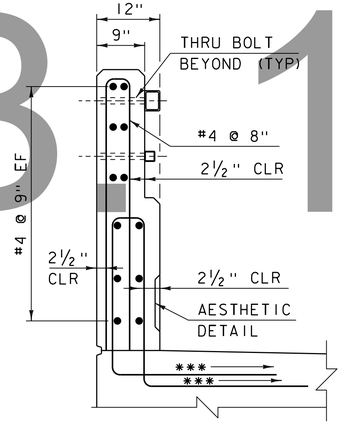
AESTHETIC DETAIL A



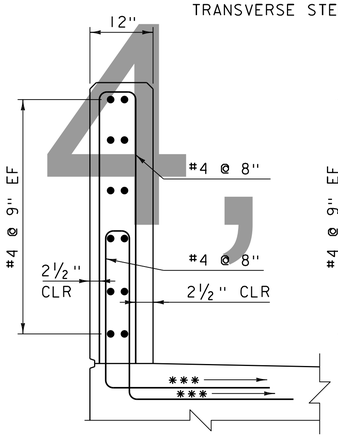
AESTHETIC DETAIL B



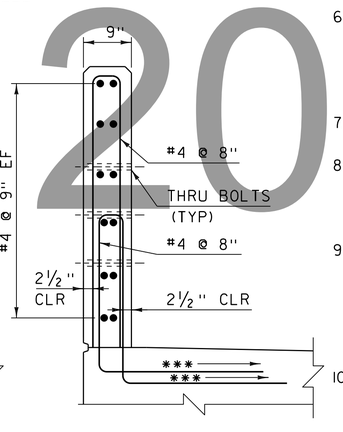
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

REV.	DATE	DESCRIPTION
0	AUG. 22, 2012	ORIGINAL APPROVAL
1	APR. 7, 2020	BORDER UPDATED AND REVISED ENDBLOCK
2	FEB. 17, 2022	REVISED NOTES
OTHER STANDARDS REQUIRED: G-1		
VTRANS AND FHWA APPROVAL ON FILE WITH CONTRACT ADMINISTRATION		

BRIDGE RAILING, GALVANIZED STEEL TUBING / CONCRETE COMBINATION

VTrans Working to Get You There — VERMONT AGENCY OF TRANSPORTATION

STANDARD
S-352A