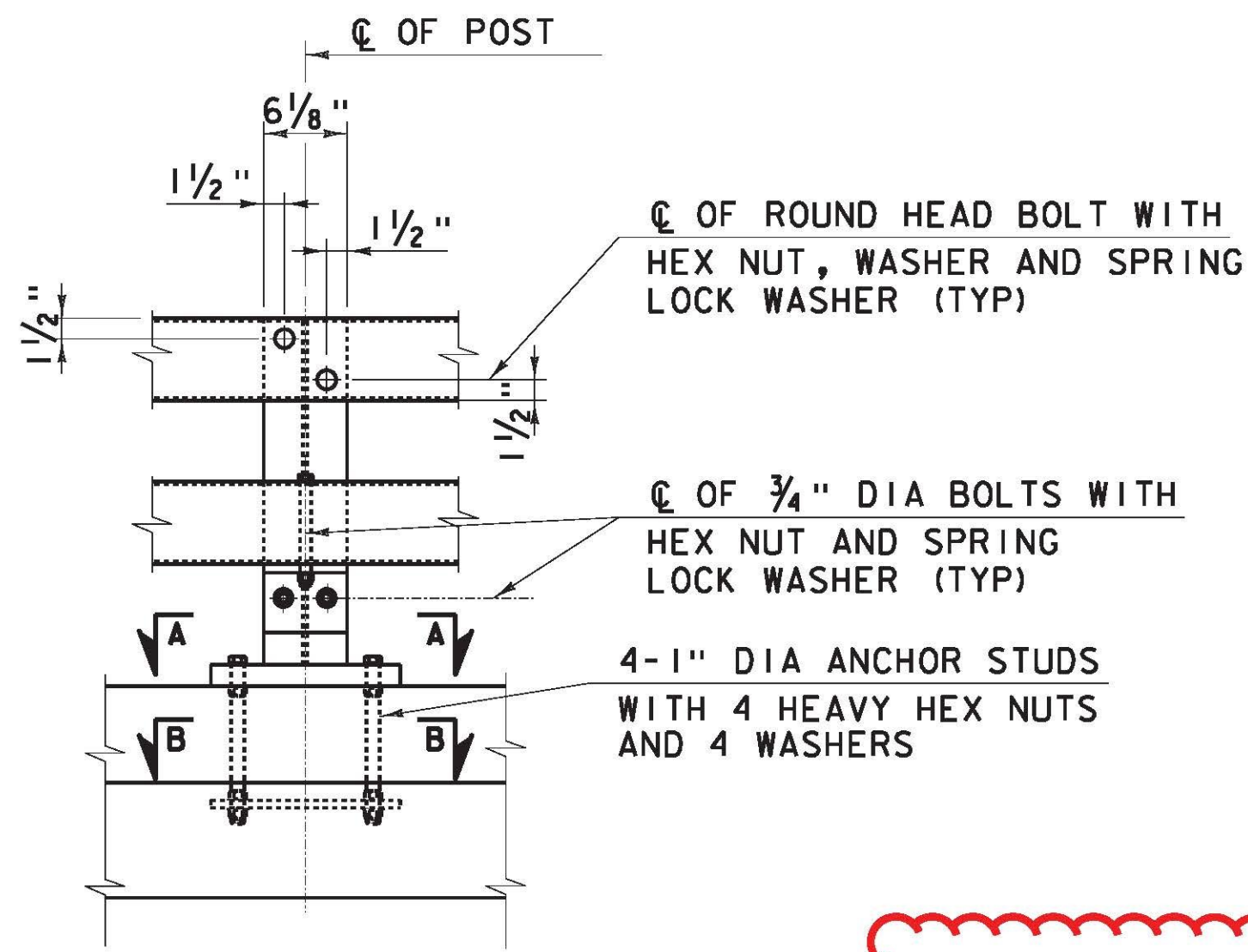
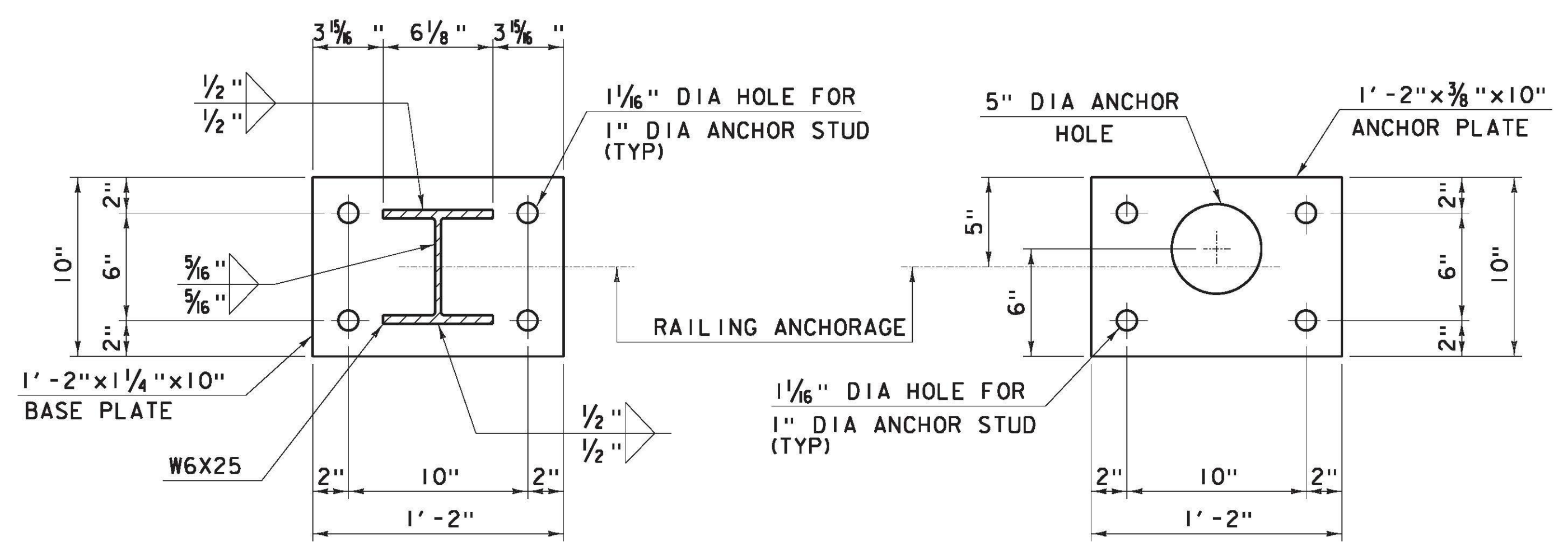


TYPICAL BRIDGE RAIL SECTION



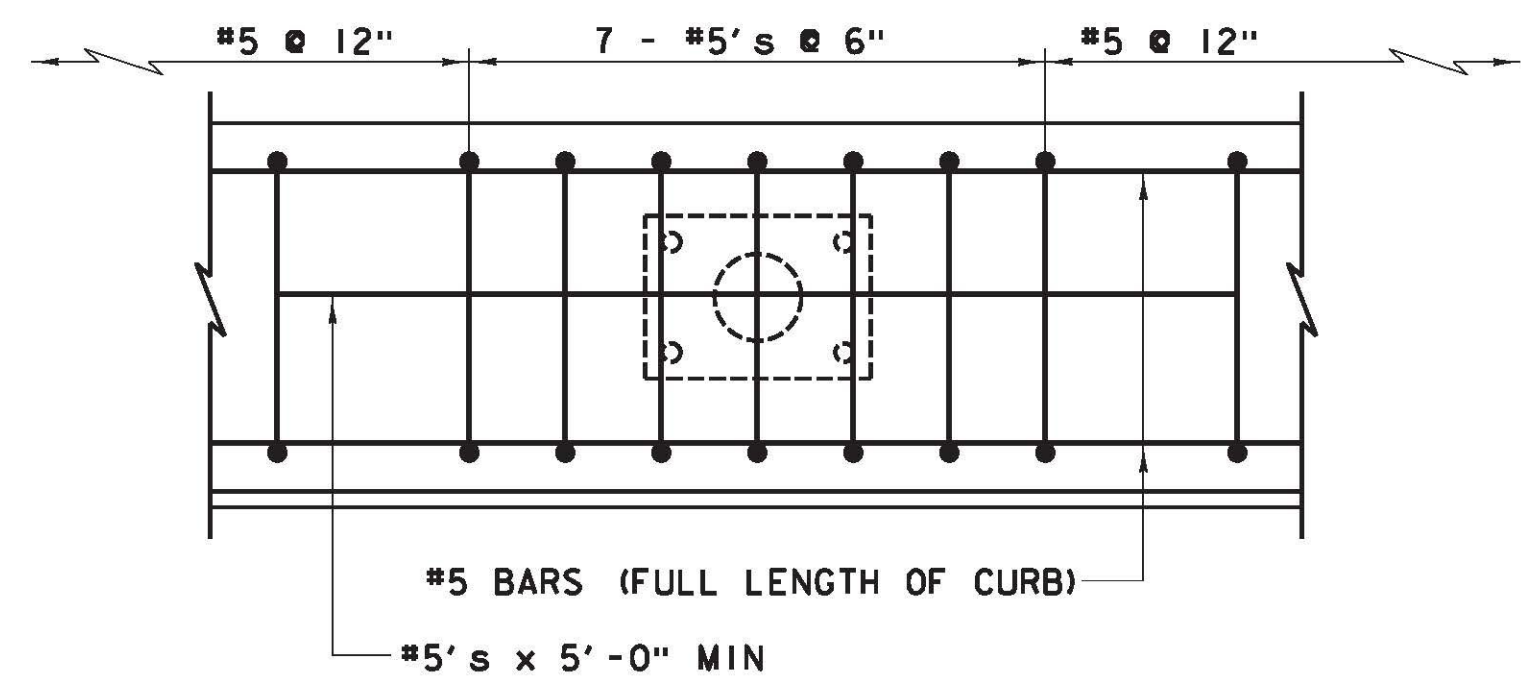
TYPICAL BRIDGE RAIL ELEVATION

THREADED ANCHOR STUDS WERE DRILLED AND GROUTED INTO THE TOPS OF THE BACKWALLS IN ALL FOUR QUADRANTS TO SECURE THE LAST BRIDGE POST.

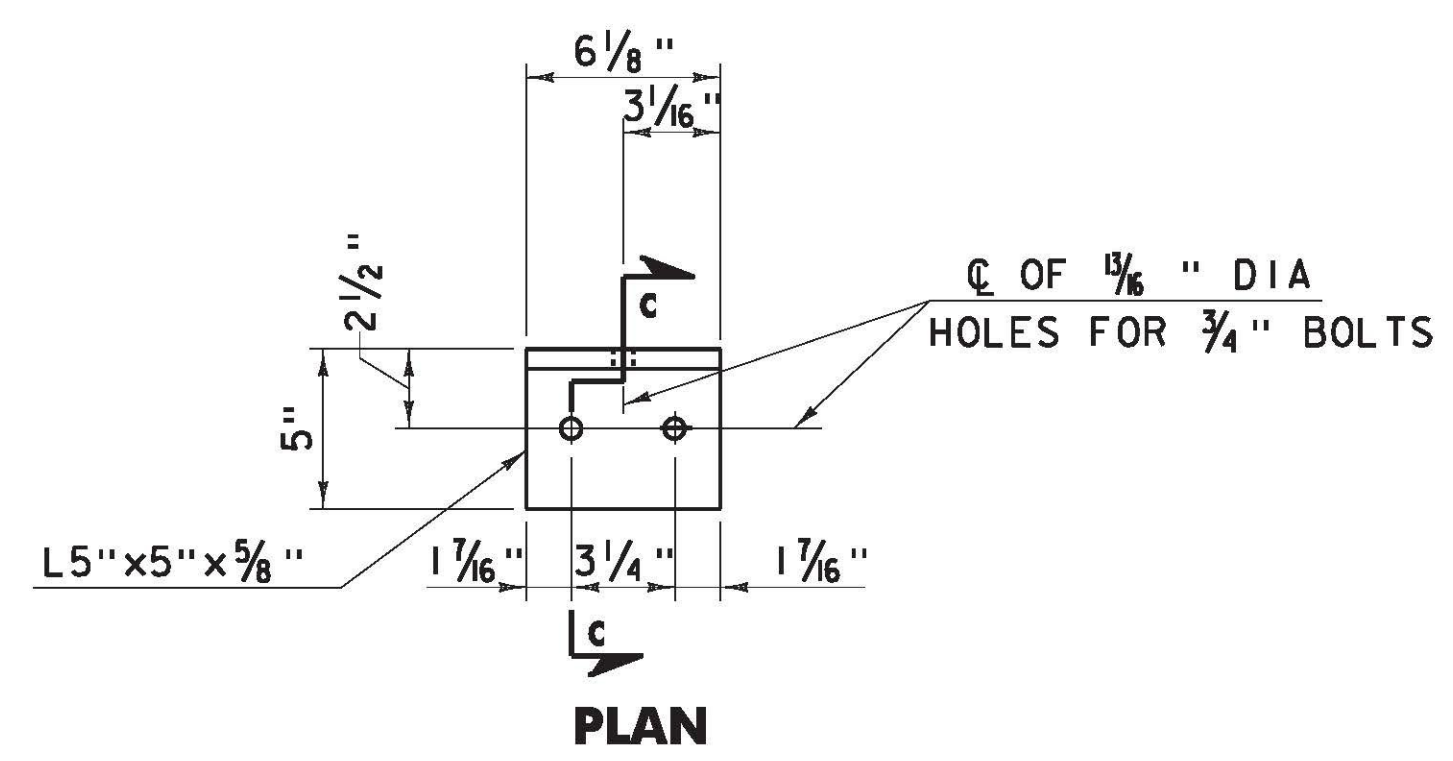


**SECTION A-A
BASE PLATE**

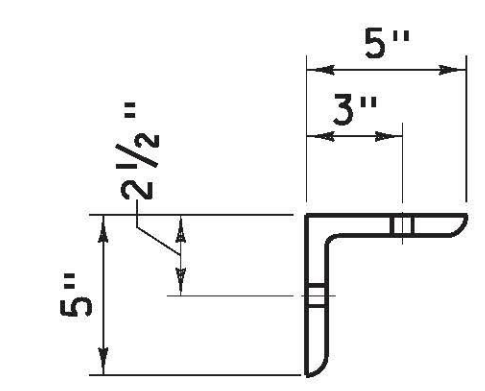
**SECTION B-B
ANCHOR PLATE**



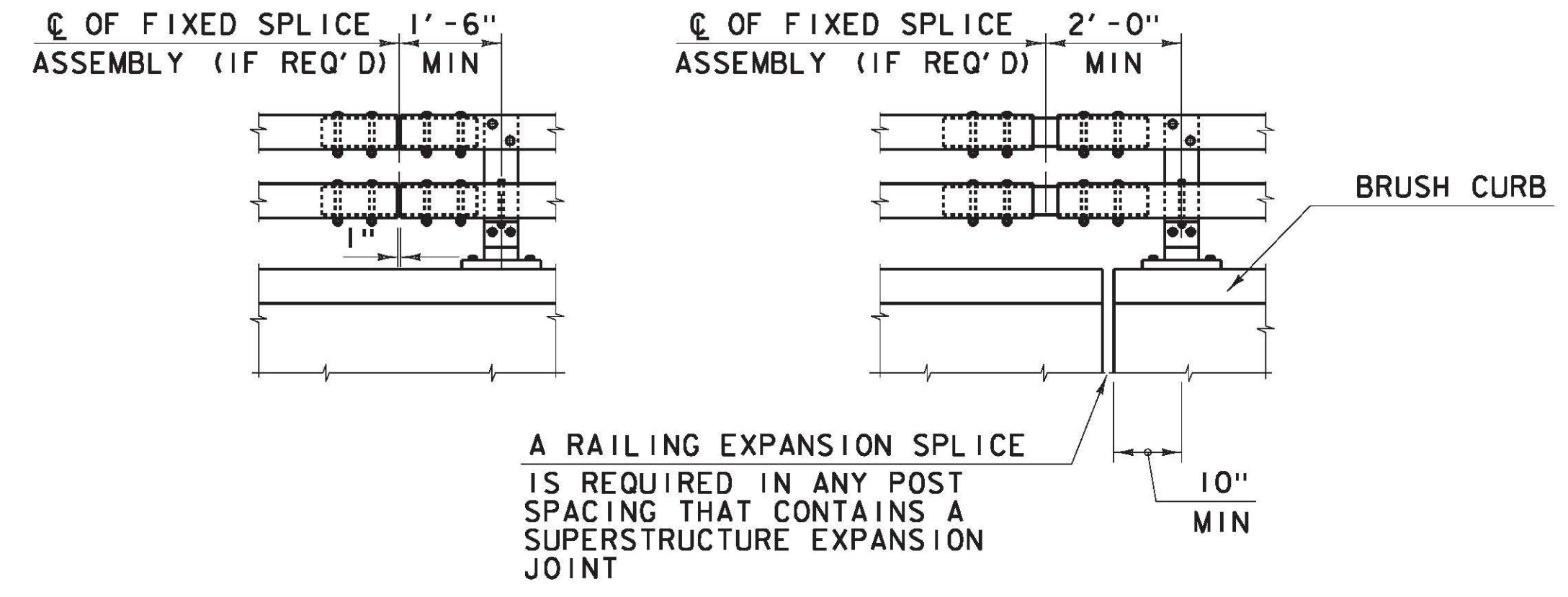
CURB REINFORCING PLAN



PLAN



**SECTION C-C
RAILING ANGLE DETAILS**



**ELEVATION
STEEL BRIDGE RAILING SPLICE DETAILS
(TWO-RAIL - BRUSH CURB)**

NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
2. RAILING MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION 732.
3. ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
4. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
5. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE RAIL POSTS AND PREFERABLY TO AT LEAST FOUR POSTS.
6. 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 "X" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
7. RAIL POSTS ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
8. RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY ASTM A 449 (TYPE 1) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
9. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
10. ANY BENDING OF RAIL SHALL BE DONE AT A FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
11. THE FABRICATOR SHALL SUBMIT FABRICATION DRAWINGS INCLUDING WELDING PROCEDURES IN ACCORDANCE WITH SECTION 105.

MATERIALS

1/8" PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02.

BRIDGE RAIL DETAILS	PROJECT NAME: RICHMOND	
	PROJECT NUMBER: STP-RS 0284(III)	
	FILE NAME: z90c092 rail d11 01.dgn	PLOT DATE: 3/14/2013
	PROJECT LEADER: DJV	DRAWN BY: PKR
	DESIGNED BY: DJV	CHECKED BY: VC/KM
	DWG. NO.: RI	SHEET 10 OF 10

FILE NAME = V:\Projects\AMV\K2\22076\CADD\INSTN\BRIDGE WORK\WBS (1-16) BRIDGE DESIGN\96d92_rail.d11.dgn
DATE/TIME = 3/14/2013
USER = 3293