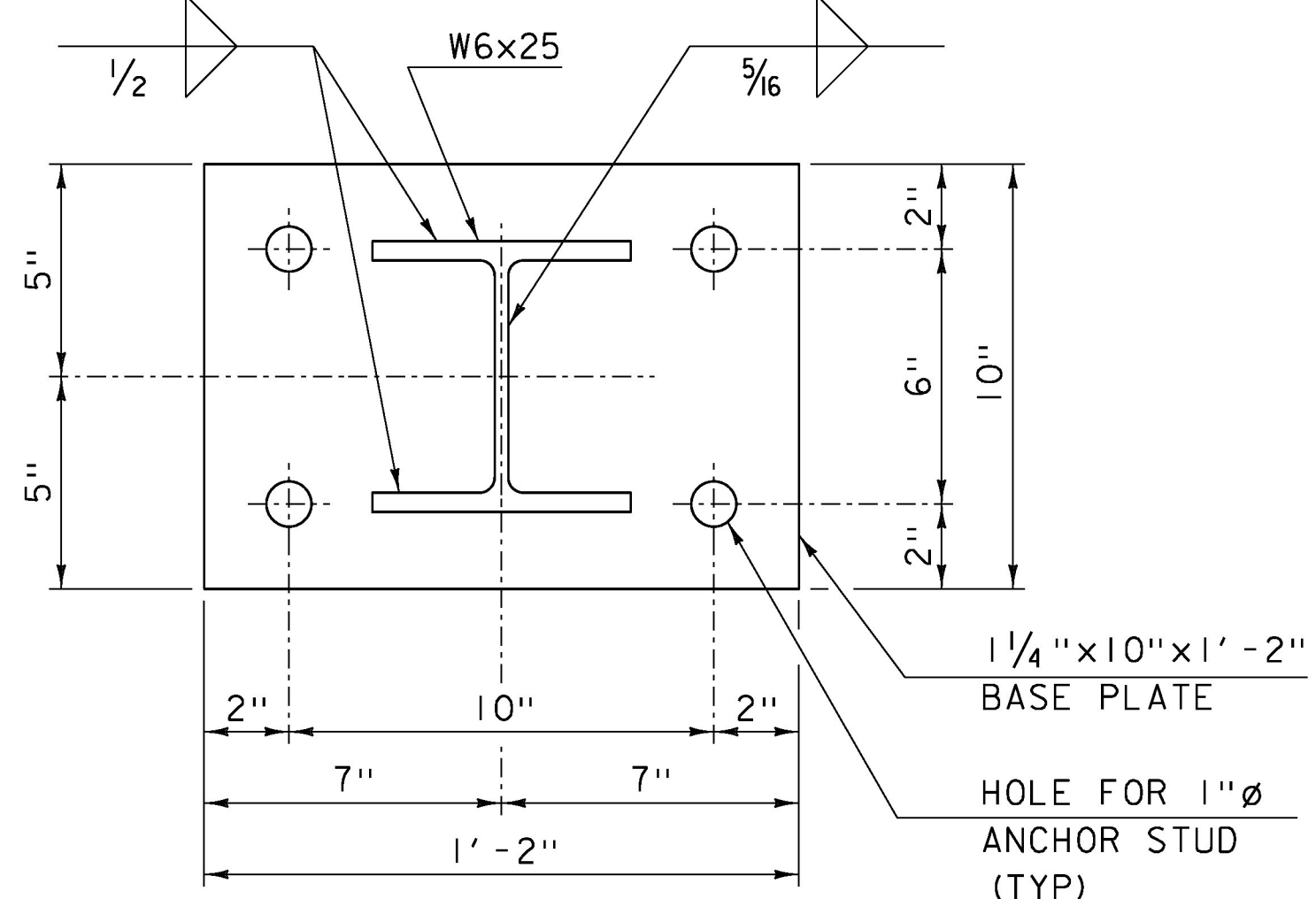
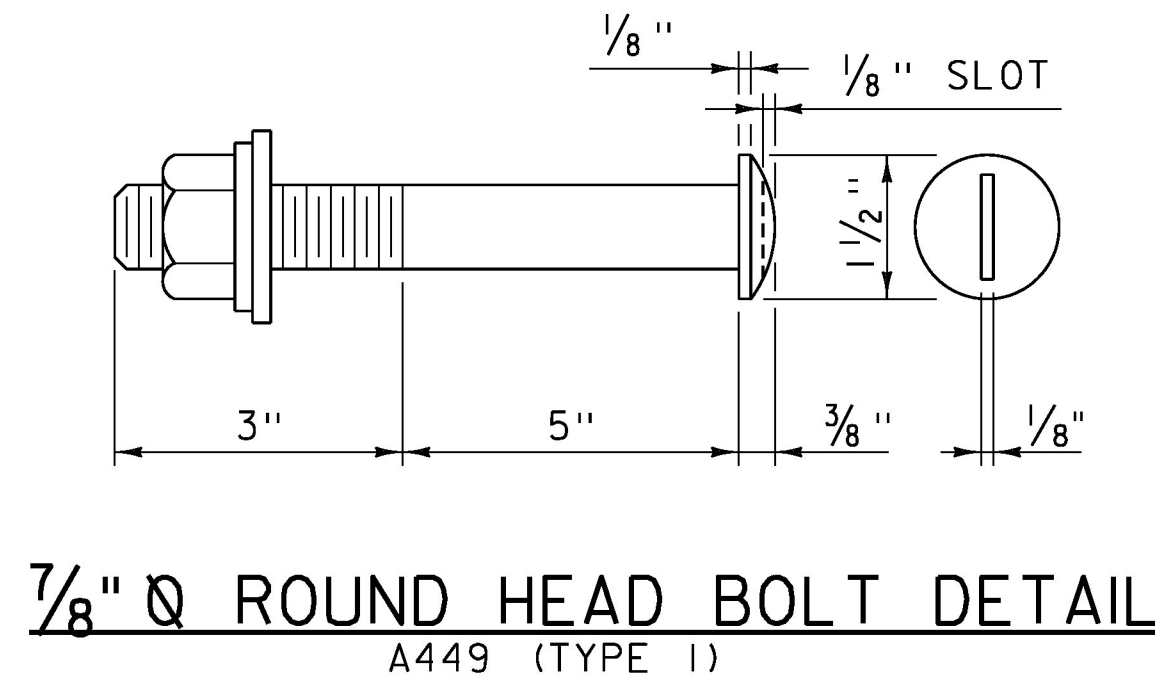


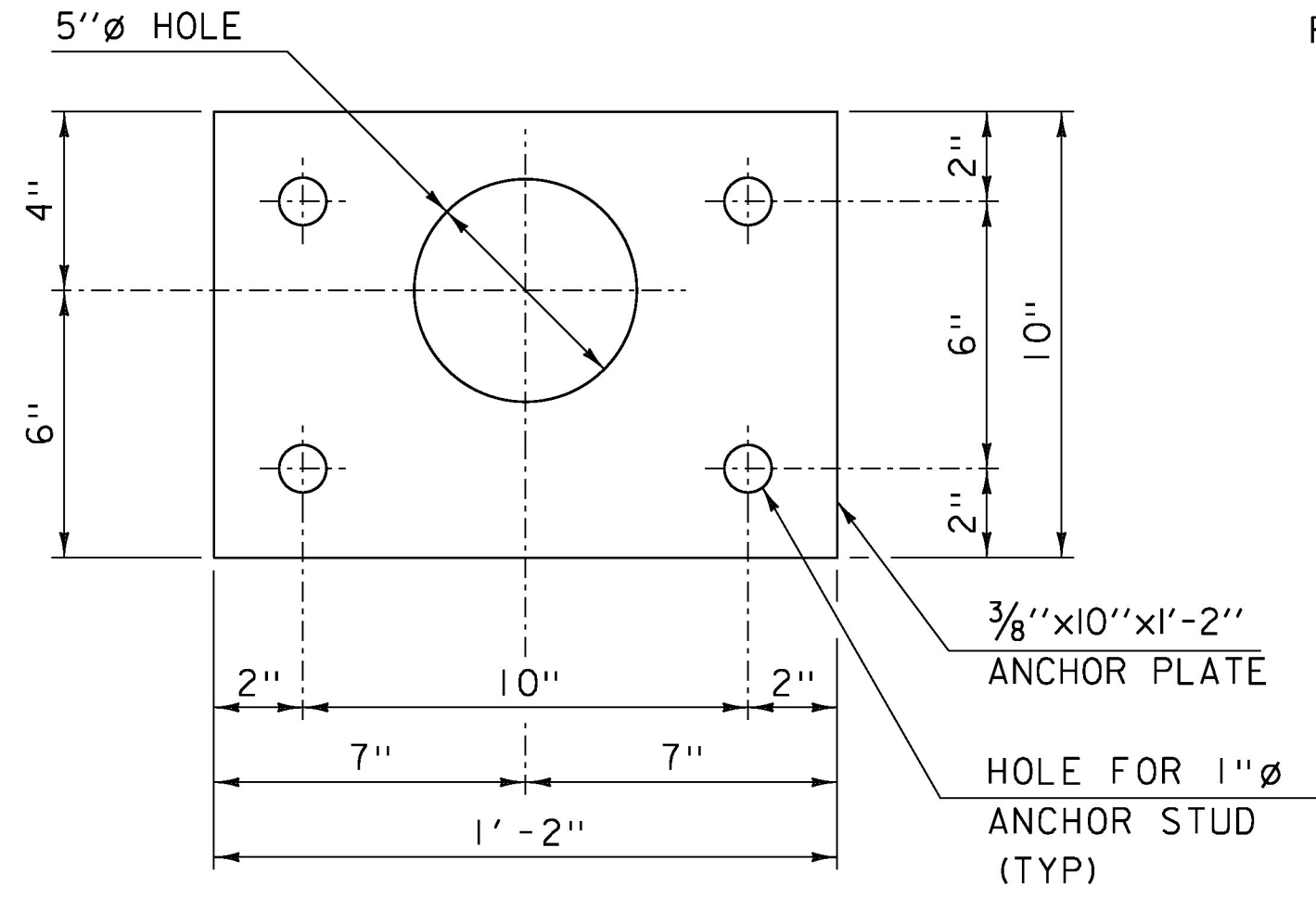
**RAILING ANGLE DETAILS**



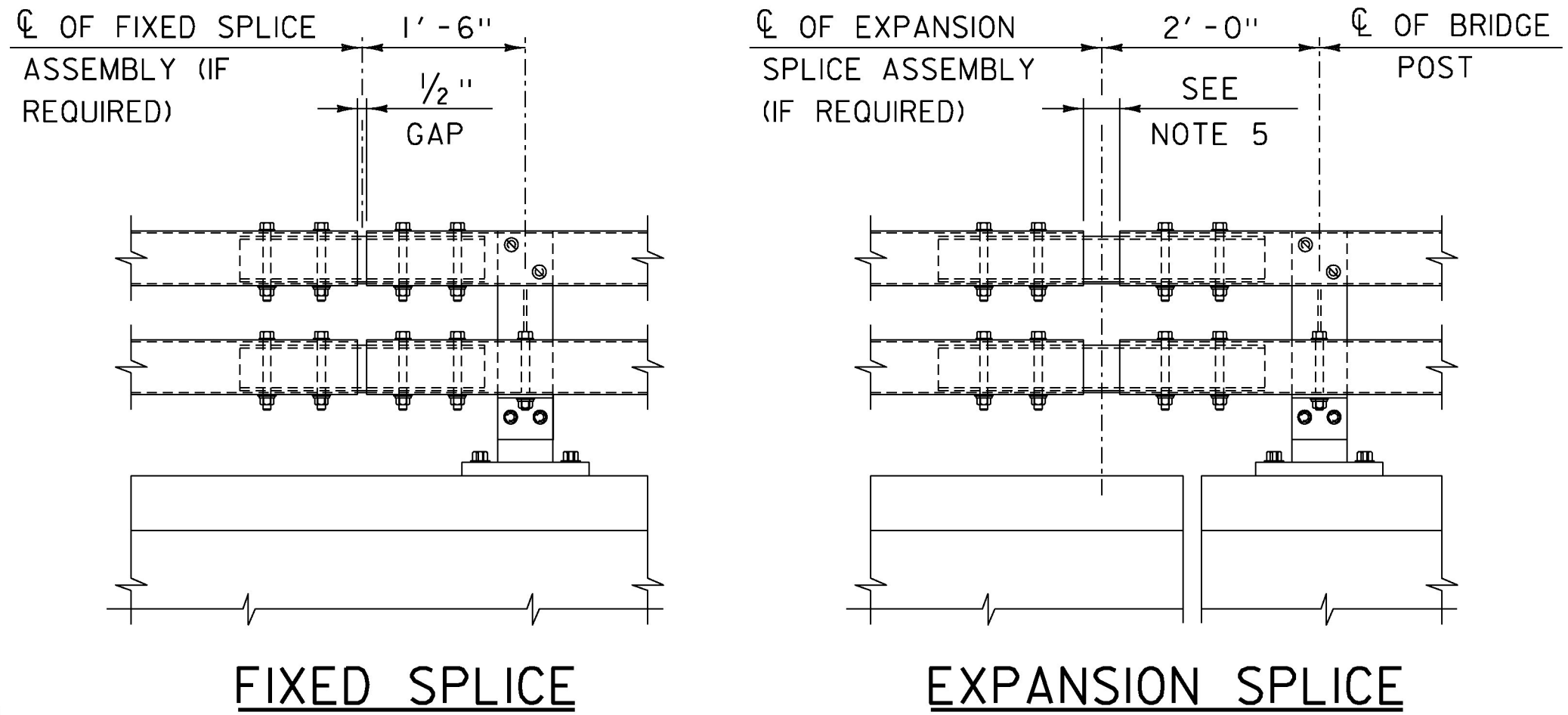
**BASE PLATE DETAIL**



**1/8" Q ROUND HEAD BOLT DETAIL**  
A449 (TYPE 1)

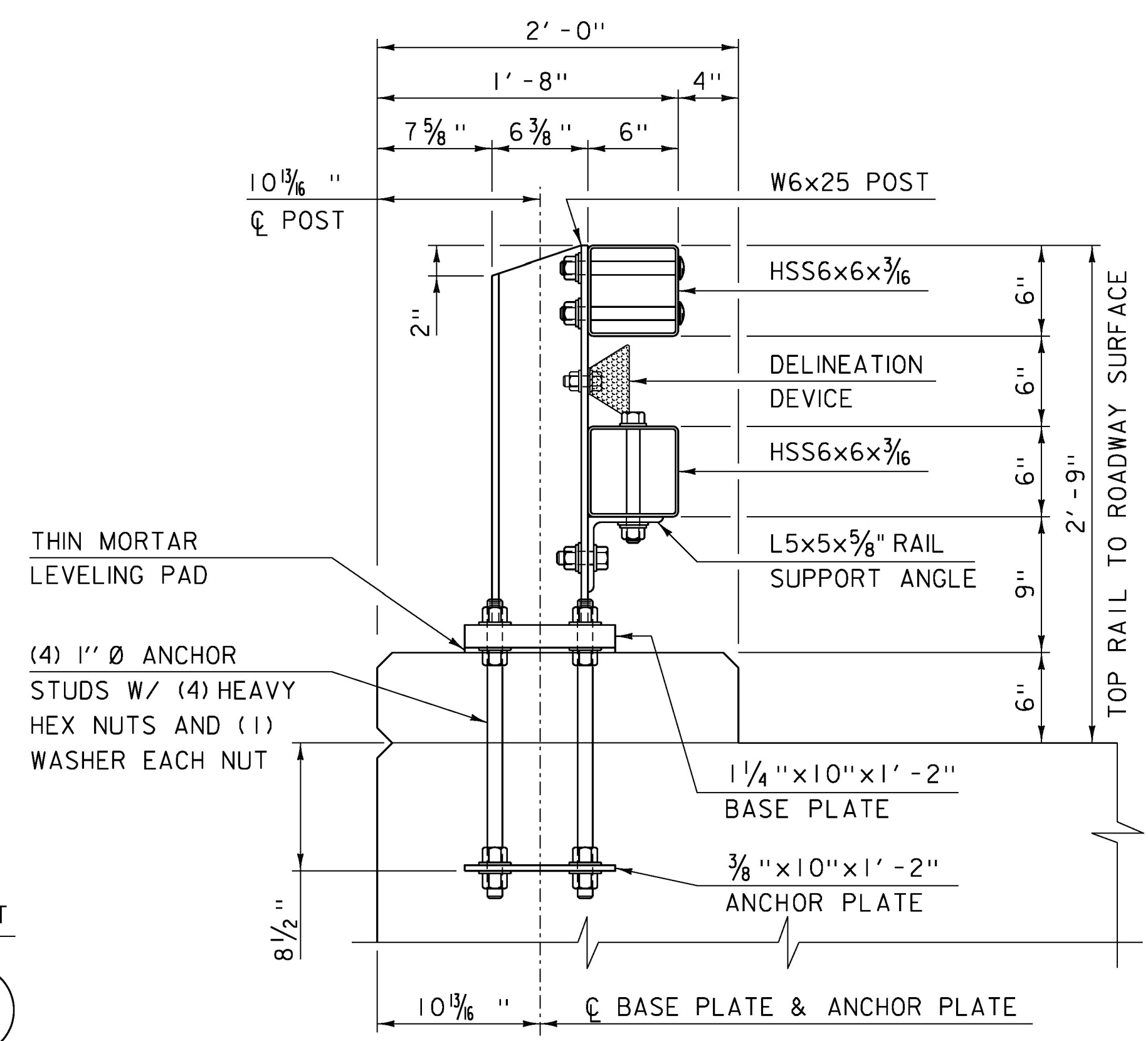


**ANCHOR PLATE DETAIL**

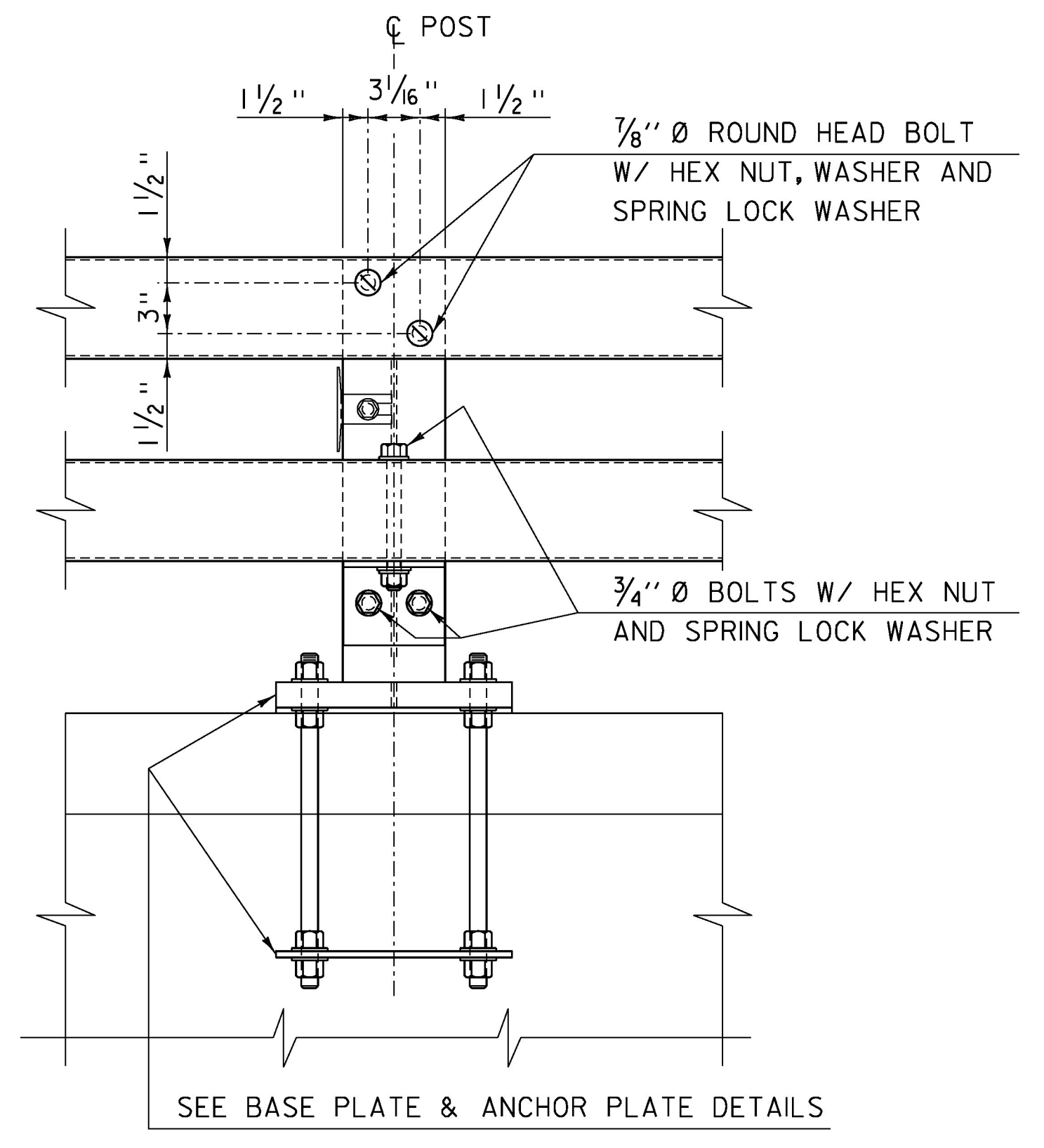


**RAILING SPLICE DETAIL ELEVATION**

A RAILING EXPANSION SPLICE IS REQUIRED IN ANY POST SPACING THAT CONTAINS A SUPERSTRUCTURE EXPANSION JOINT



**RAILING SECTION**



**RAILING ELEVATION**

- NOTES:**
- ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
  - PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
  - ALL POSTS SHALL BE SET NORMAL TO GRADE. THE MAXIMUM CENTER TO CENTER SPACING OF BRIDGE RAIL POSTS IS 8'-3".
  - SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE POSTS AND PREFERABLY TO AT LEAST 4 POSTS.
  - 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" @ 68°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
  - HOLES IN RAILS FOR TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
  - BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
  - SEE STANDARD DRAWING G-10M 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 WILL BE CONSIDERED INCIDENTAL TO OTHER CONTRACT ITEMS.
  - ANY BENDING OF RAIL SHALL BE DONE AT THE FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
  - THE MINIMUM DISTANCE FROM THE POST TO AN EXPANSION JOINT SHALL BE DETERMINED BY THE MINIMUM EDGE DISTANCE OF 5" FROM ANY ANCHOR STUD TO THE END OF THE SLAB, OR TO THE EXPANSION JOINT RECESS POUR, IF ONE IS USED.
  - THIS RAILING MEETS THE REQUIREMENTS FOR A TL-4 SERVICE LEVEL.

SEE STD S-364C FOR SPLICE DETAILS  
SEE STD G-10M FOR DELINEATORS

PROJECT NAME: ORWELL	PLOT DATE: 8/22/2016
PROJECT NUMBER: STP DECK(4I)	DRAWN BY: M. SMITH
FILE NAME: z15j108rail_bdr-4.dgn	CHECKED BY: A. GIRALDI
PROJECT LEADER: J. BYATT	SHEET 21 OF 27
DESIGNED BY: N. CARON	
BRIDGE RAIL DETAILS SHEET	