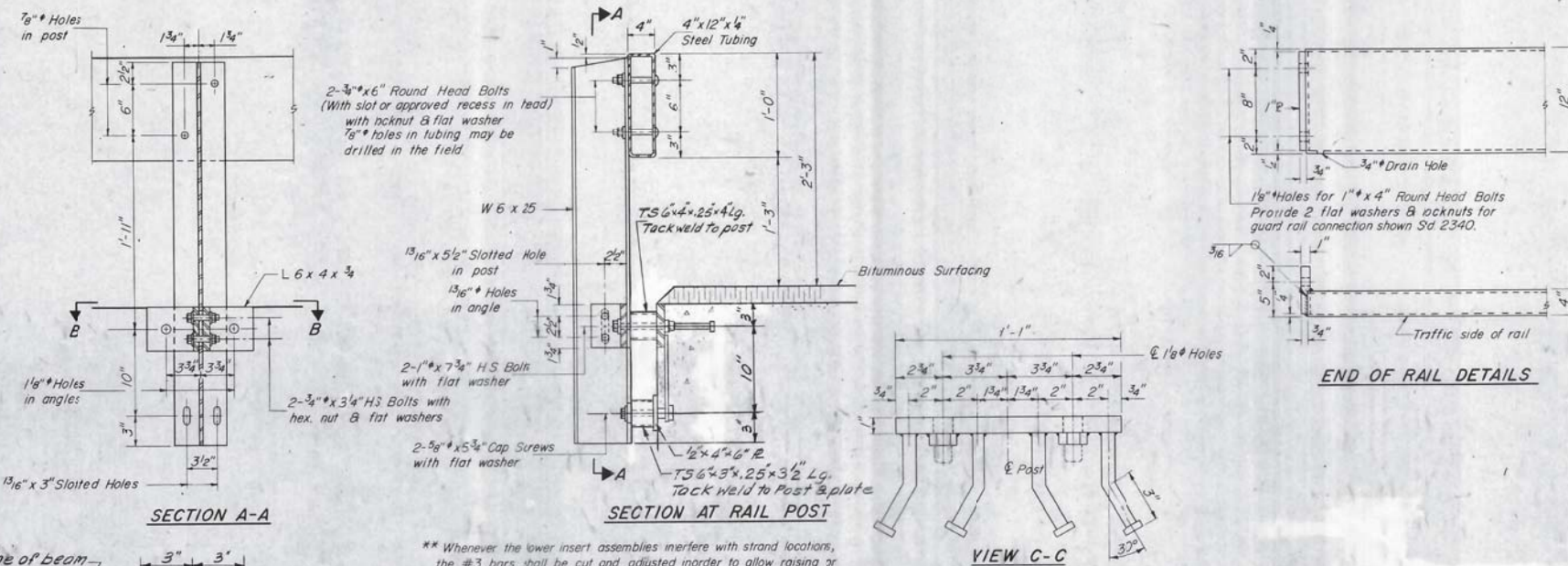


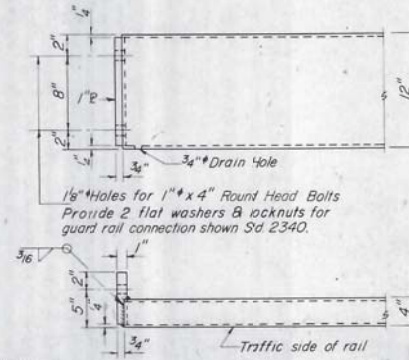
ELEVATION



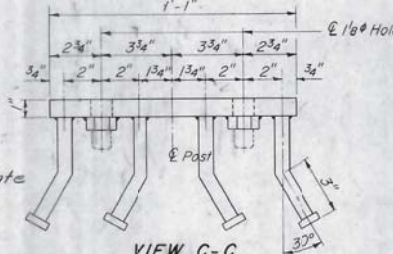
SECTION A-A

SECTION AT RAIL POST

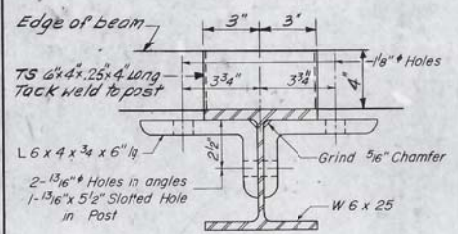
SECTION B-B



END OF RAIL DETAILS



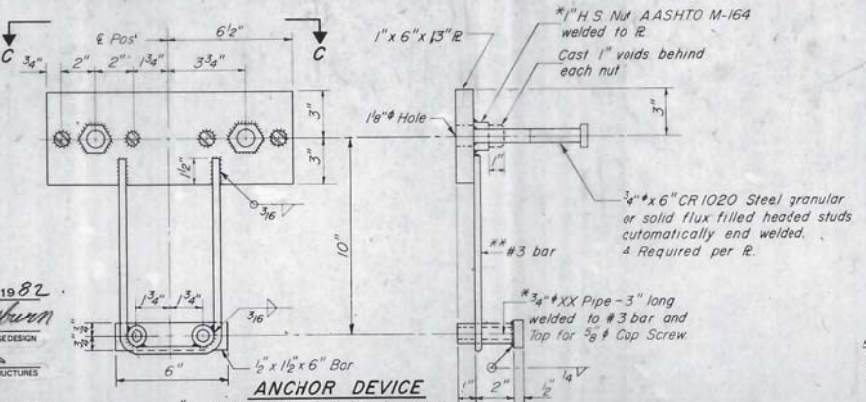
VIEW C-C



DESIGNED Robert T. Bero  
CHECKED Steven K. Doerflinger  
DRAWN [Signature]  
CHECKED SKD

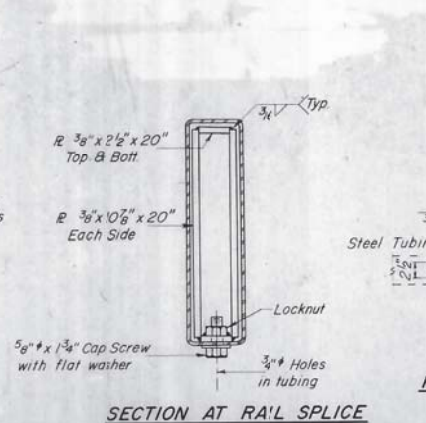
EXAMINED [Signature] January 7, 1982  
PASSED [Signature]  
APPROVED [Signature] DIRECTOR OF HIGHWAYS

\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

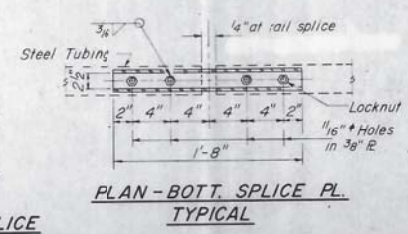


ANCHOR DEVICE

\* Threaded areas shall be plugged or blocked off during casting of beam.



SECTION AT RAIL SPLICE



PLAN - BOTT. SPLICE PL. TYPICAL

**NOTES**

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-395. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE S-1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The 2" x 4" x 1/4" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the plates and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles in the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Lin. Ft.	117

**TYPE S-1  
STEEL RAILING**  
F.A. RT.681 SEC.113-BR  
LIVINGSTON COUNTY  
STA.24+91.5