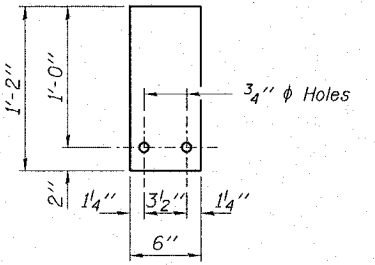
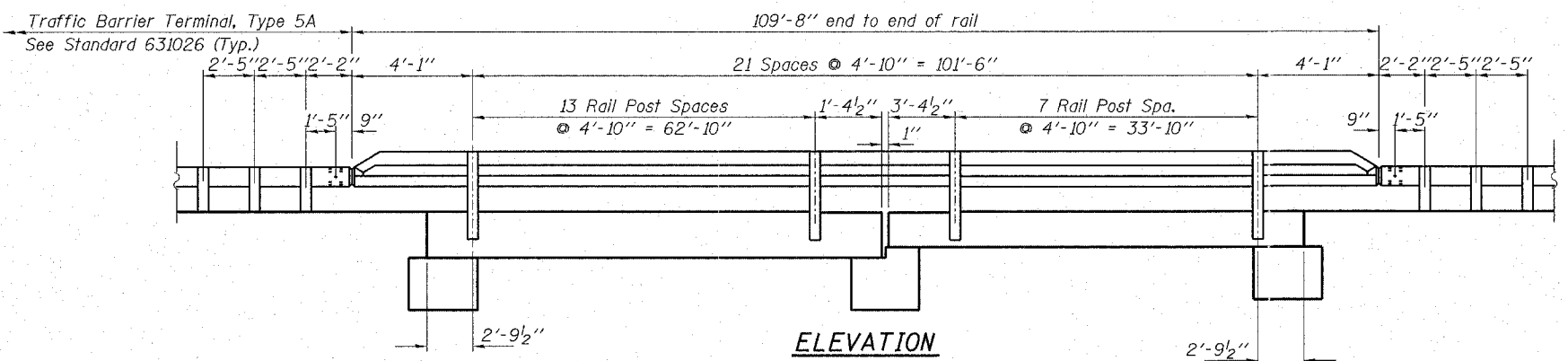
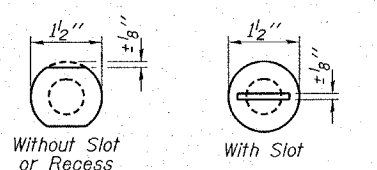
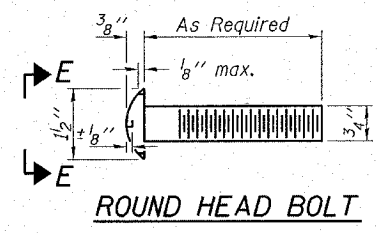


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 712	02-00104-00-BR	FAYETTE	21	17
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

CONTRACT NO. 95469



NOTES

Hollow structural sections shall conform to the requirements of A.S.T.M. designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. M-270 Grade 36 except posts and angles shall conform to A.A.S.H.T.O. M-270 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. M-164.

All bolts, nuts, cap screws, washers and lockwashers shall be galvanized according to A.A.S.H.T.O. M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.S.T.M. A-111 and A.A.S.H.T.O. M-385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per foot for STEEL BRIDGE RAIL, TYPE SM.

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

The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/2" fabric bearing pads between the plates and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Art. 505.04(f)(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 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing.

4- 3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ Holes in hollow structural section may be drilled in the field.

W6x25 4'-3 1/4" long 1 3/16" x 5 1/2" Slotted Hole in post 1 3/16" φ holes in angles

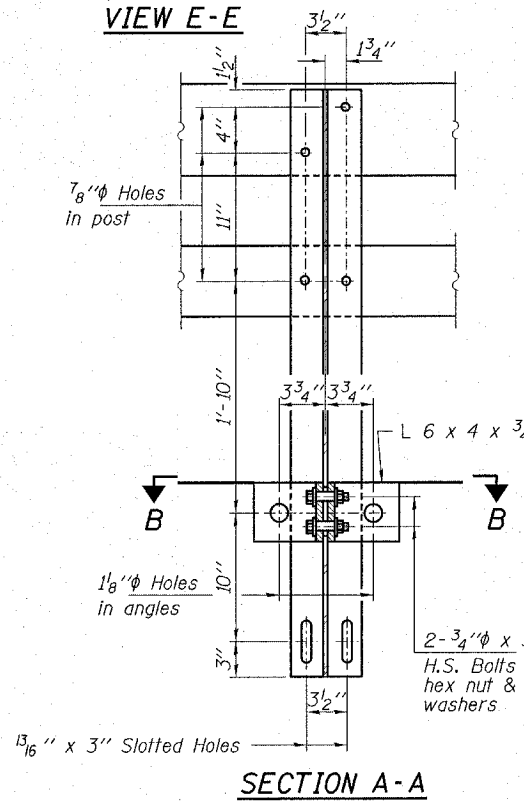
L 6 x 4 x 3/4 1 1/2" x 10" 1 1/8" φ Holes in angles 2- 3/4" φ x 3 1/4" H.S. Bolts with hex nut & flat washers

2- 1" φ x 7 3/4" AASHTO M-164 Anchor Bolts with flat washer & lockwasher 2- 5/8" φ x 5 3/4" Cap Screws with flat washer.

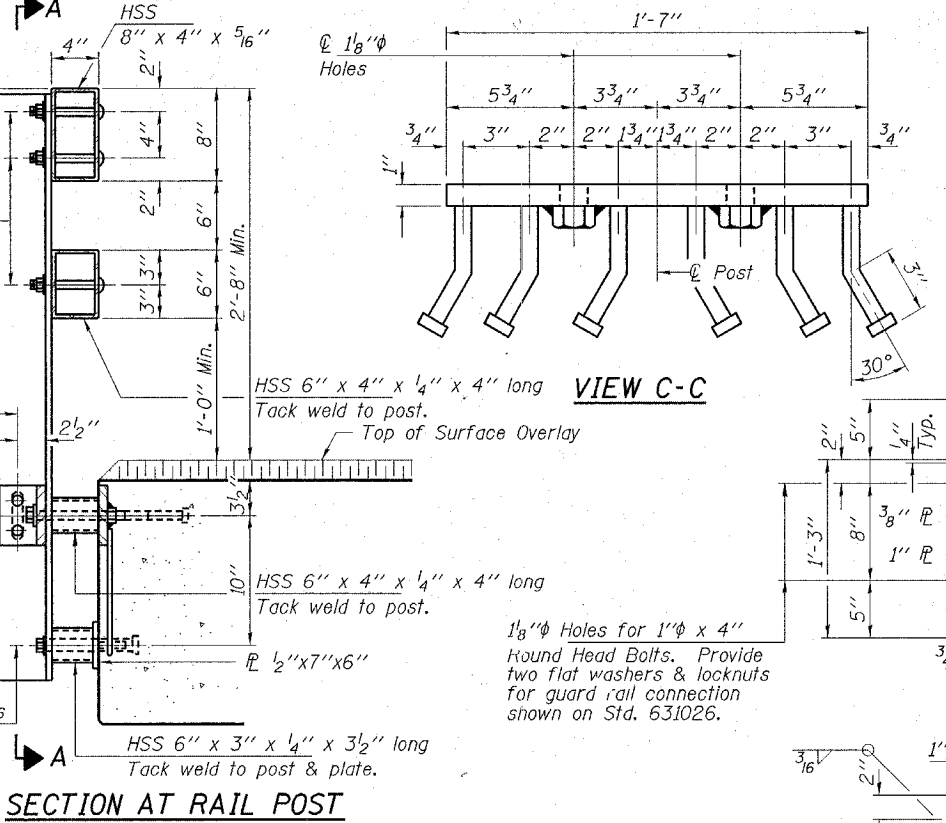
HSS 6" x 4" x 1/4" x 4" long Tack weld to post. Top of Surface Overlay 10" HSS 6" x 4" x 1/4" x 4" long Tack weld to post. 1 1/8" φ Holes for 1" φ x 4" Round Head Bolts. Provide two flat washers & locknuts for guard rail connection shown on Std. 631026.

HSS 6" x 3" x 1/4" x 3 1/2" long Tack weld to post & plate. 1 1/8" φ Holes in 1" φ x 4" Round Head Bolts. Provide two flat washers & locknuts for guard rail connection shown on Std. 631026.

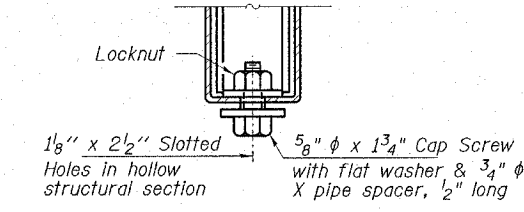
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 2".



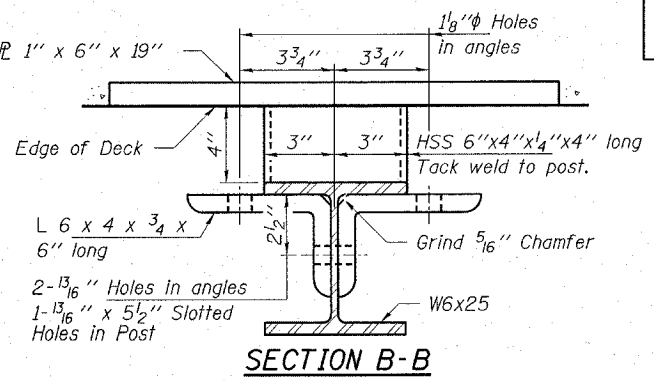
SECTION A-A



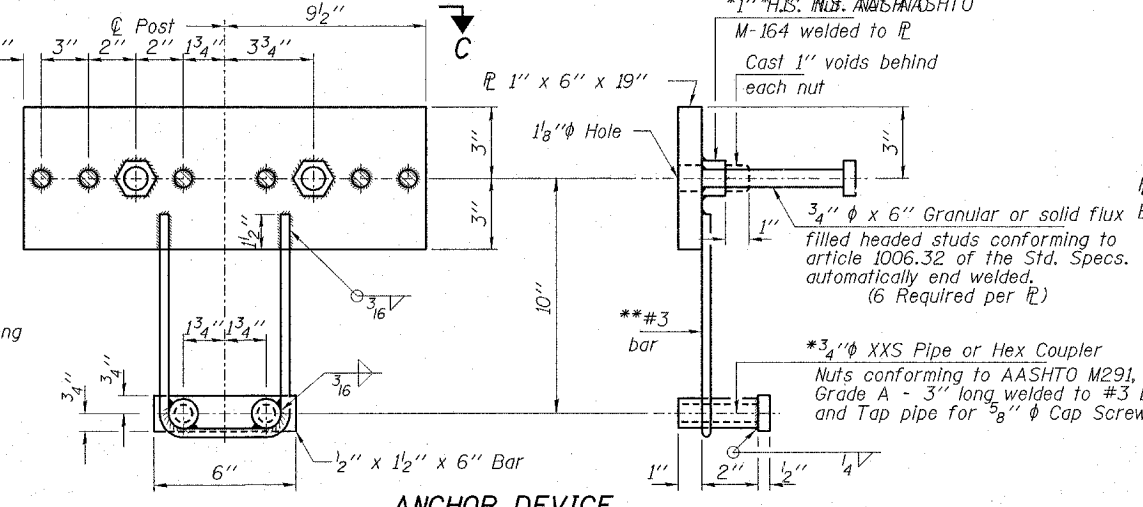
SECTION AT RAIL POST



RAIL SPLICE CONNECTION AT EXPANSION JT.

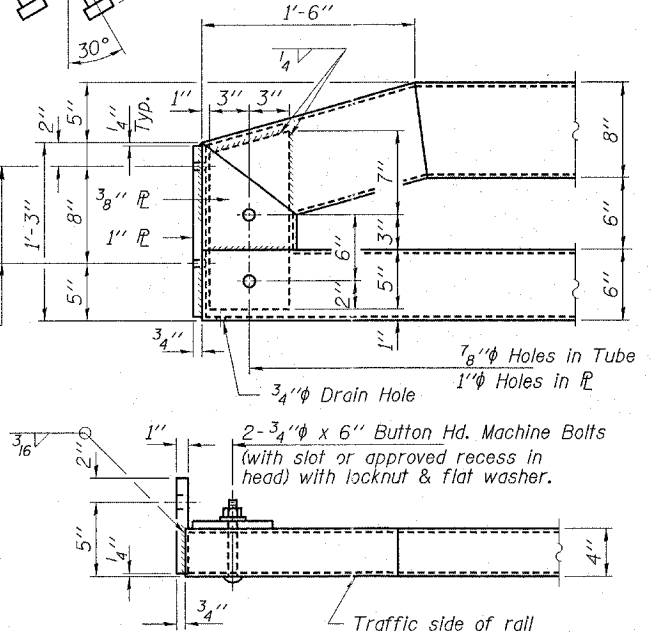


SECTION B-B

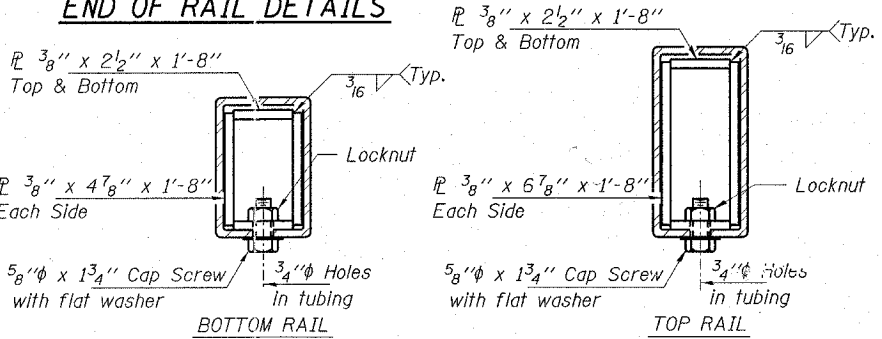


ANCHOR DEVICE

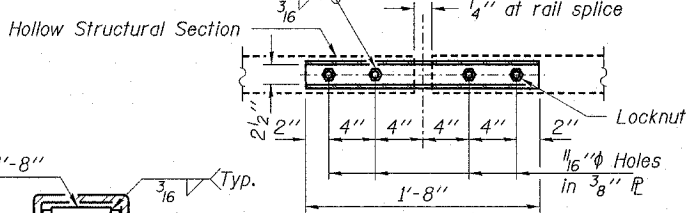
* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



END OF RAIL DETAILS



SECTION AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	220

HLR
 Rice, Berry and Associates
 A Division of Hampton, Lenzi and Renwick, Inc.
 Civil & Structural Engineers
 3085 Stevenson Drive
 Suite 201
 Springfield, Illinois 62703
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4637
 Account Number: 12-34-0002-1
 Date: 03/13/06
 DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.T.M.

RAILING DETAILS
SECTION 02-00104-00-BR
F.A.S. 712 / C.H. 24
FAYETTE COUNTY
STR. NO. 026-3431 / STATION 102+50