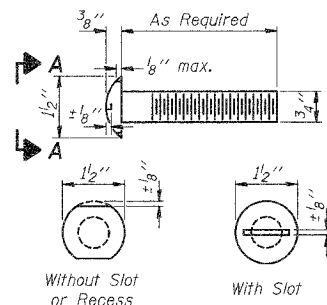


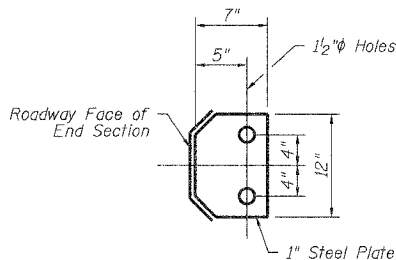
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 3
E. 3150	#	BUREAU	15	6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		9 SHEETS

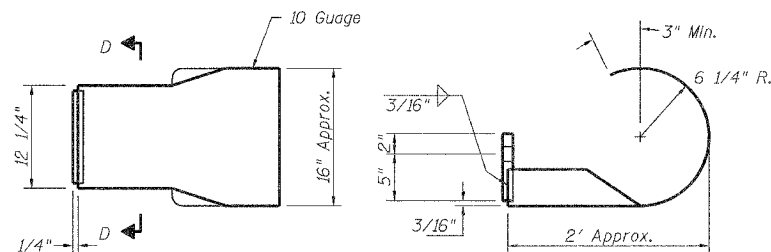
\* 04-04113-00-BR



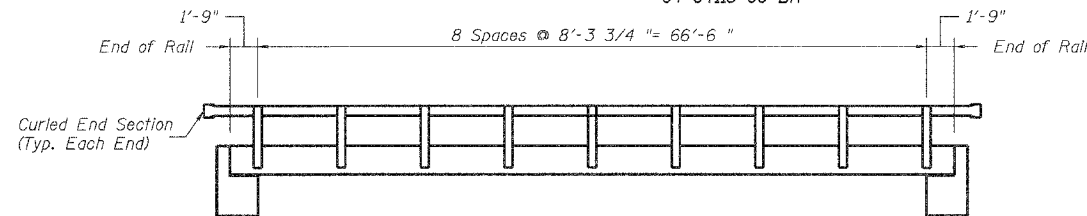
VIEW A-A  
ROUND HEAD BOLT



SECTION D-D



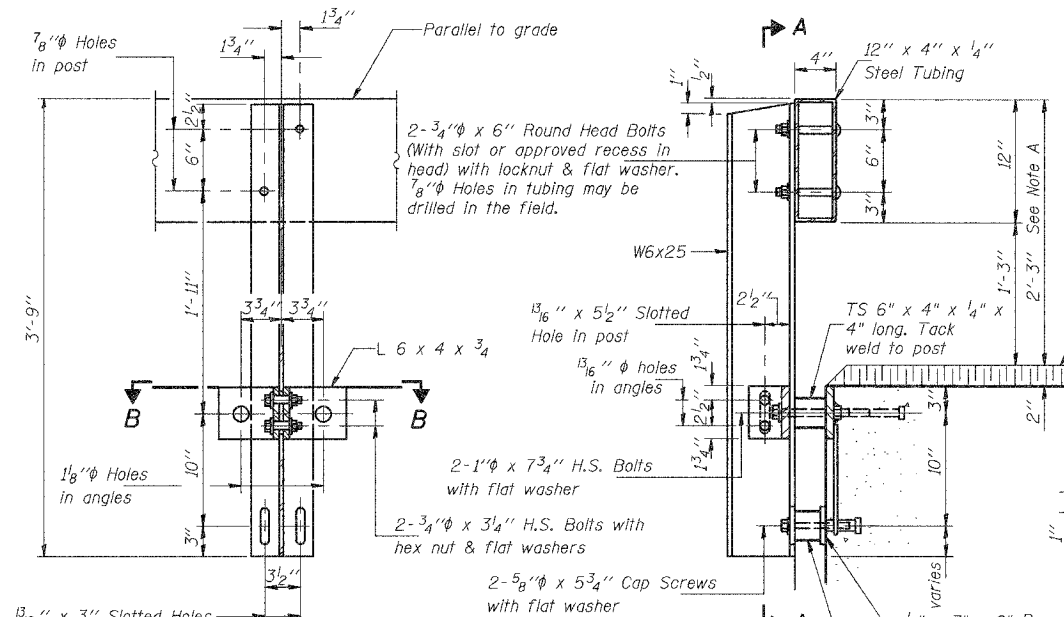
DETAILS OF CURLED END SECTION



RAIL POST SPACING

NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM 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 AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.  
Bolts, cap screws, and nuts shall conform to the requirements 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 according to AASHTO M 232.  
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.  
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL RAILING, TYPE S-1.  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/2 inch fabric bearing pad between the post and concrete.  
The 3/4 inch high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(X3) of the Standard Specifications. The 1 inch 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 inch 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, TYPE S-1.  
The cost for curled end sections shall be included in the contract unit price for STEEL RAILING, TYPE S-1.



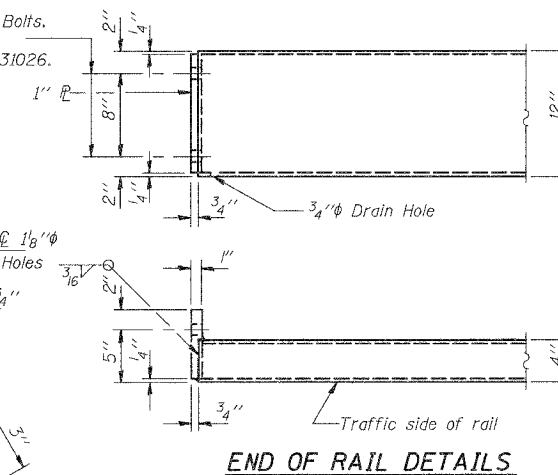
SECTION A-A

Note: A: Where no overlay is to be provided adjust top of rail to lay parallel to grade 2'-5" max. above top of beam

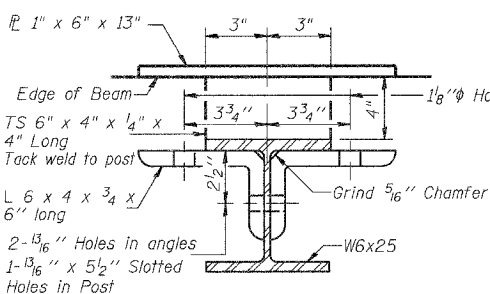
1/8 inch diameter Holes for 1 inch diameter Round Head Bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Std. 631026.

Top of Overlay

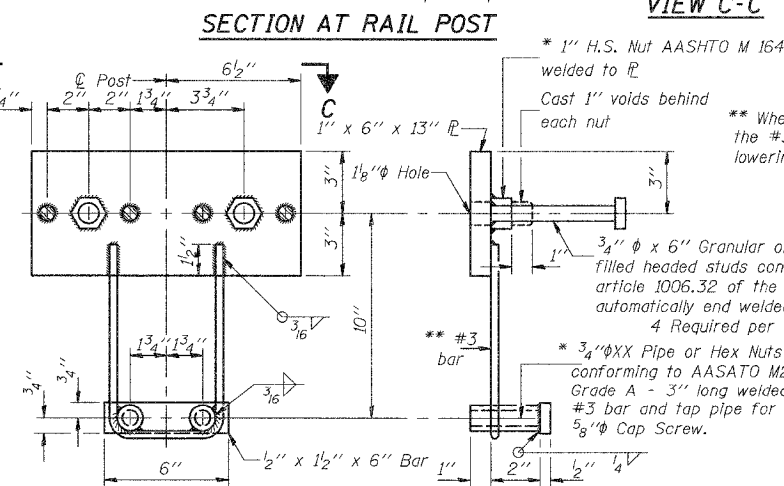
SECTION AT RAIL POST



END OF RAIL DETAILS



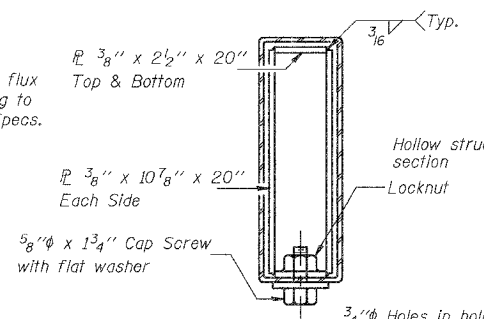
SECTION B-B



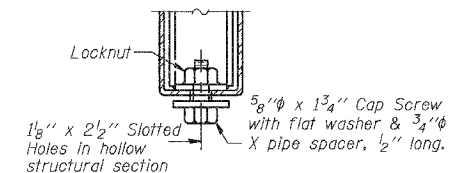
ANCHOR DEVICE

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

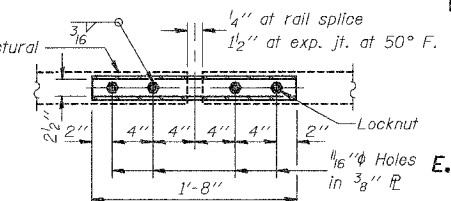
\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.



SECTIONS AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE R TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing Type S-1	Foot	140

TYPE S-1  
STEEL RAILING  
E. 3150 TH ROAD OVER PIKE CREEK  
SECTION 04-04113-00-BR  
BUREAU COUNTY  
STA. 10+00  
SN 006-4051

DESIGNED	
CHECKED	
DRAWN	
CHECKED	