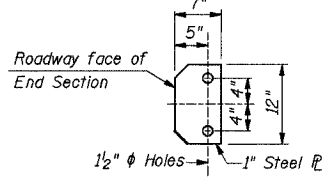
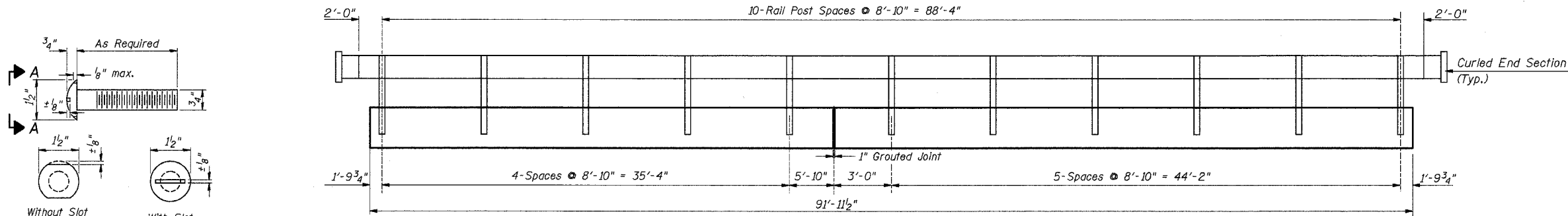
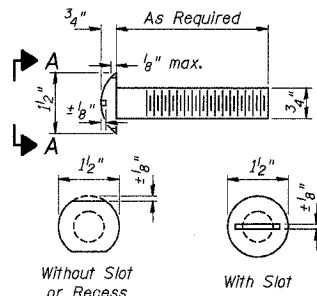


T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
235	93-02108-00-BR	CHRISTIAN	16	13
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
SHEET 4 OF 7				

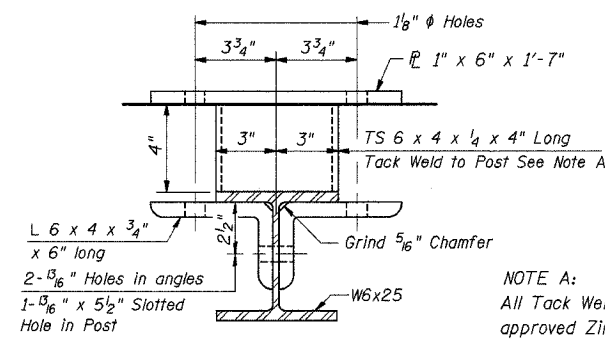


SECTION E-E

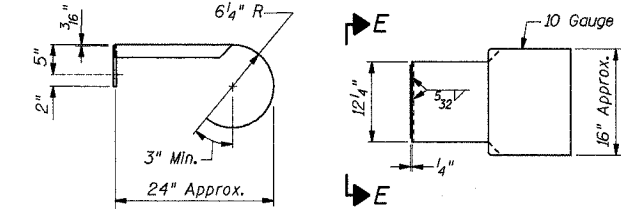


VIEW A-A
ROUND HEAD BOLT

OUTSIDE ELEVATION



SECTION B-B



CURLLED END SECTION DETAILS

NOTE A:
All Tack Welds shall be coated with an approved Zinc Rich Paint or Galvanized.

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 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 385. Galvanized rail shall not be painted.
Railing shall be in accordance with 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.
For multi-span PPC Deck Bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to STEEL BRIDGE RAIL, TYPE S-1
Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
The 3/4" high strength bolts used to connect the 6" x 4" x 3/4" angles to the post shall be tightened in accordance with Article 505.04(f)(2) 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.

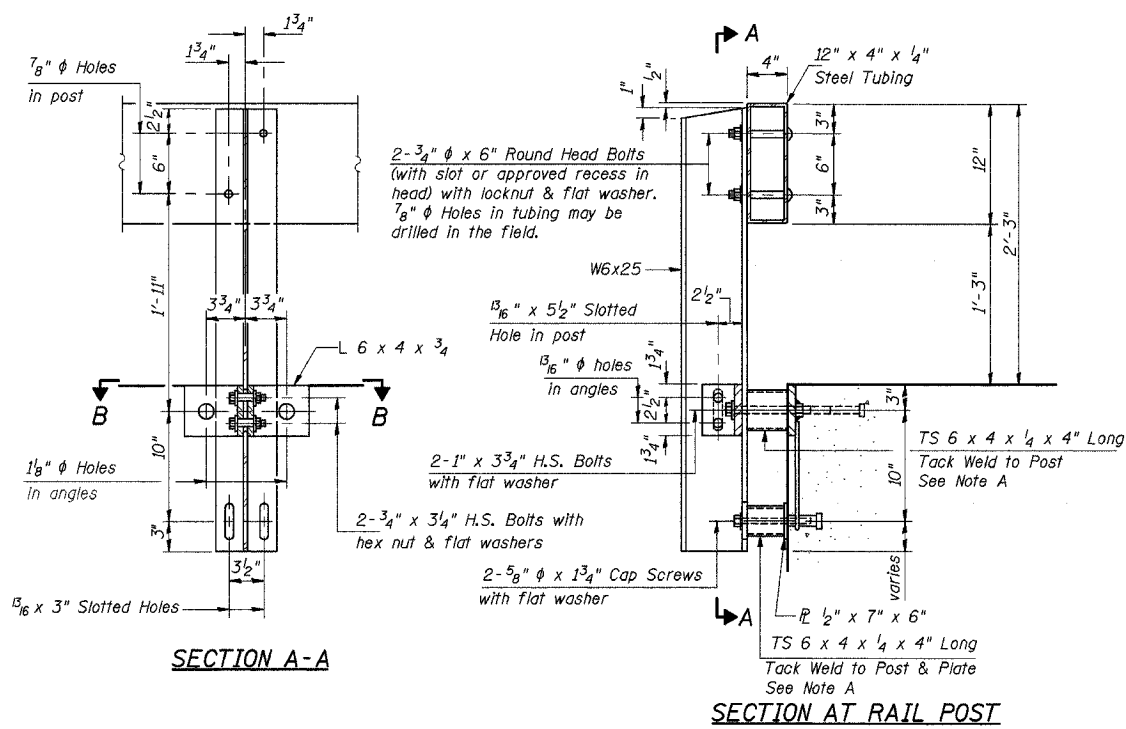
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing Type S-1	Foot	185

STEEL RAILING TYPE S-1 DETAILS
T.R. 235 OVER PRAIRIE FORK CREEK
SECTION 93-02108-00-BR
CHRISTIAN COUNTY
STR. NO. 011-3399
STA. 5+47.00

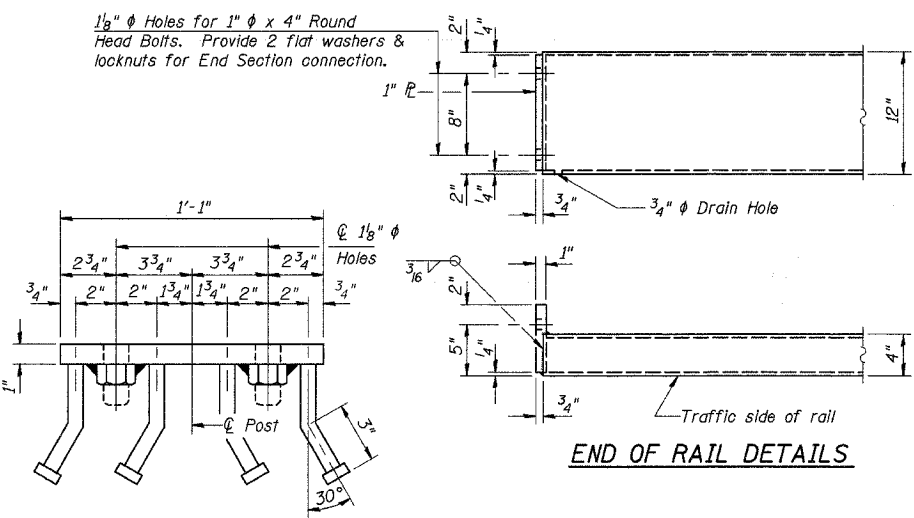
ie INTERNATIONAL ENGINEERING CONSULTANTS, INC.
6420 SOUTH SIXTH STREET
SPRINGFIELD, ILLINOIS 62707
TEL. (217) 528-8027
FAX (217) 529-4543
IESPRINGFIELD@IE-CONSULTANTS.COM
WWW.IE-CONSULTANTS.COM

DRAWN BY:	CHECKED BY:	DATE:	PROJECT:
JPH	GBM	06-22-04	S03037

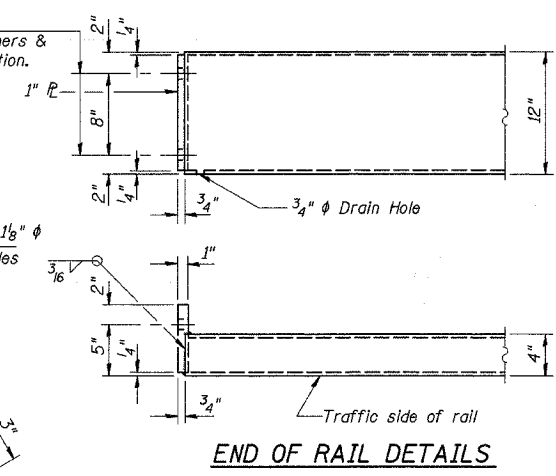


SECTION A-A

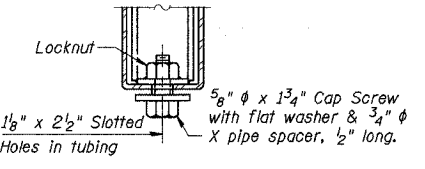
SECTION AT RAIL POST



VIEW C-C

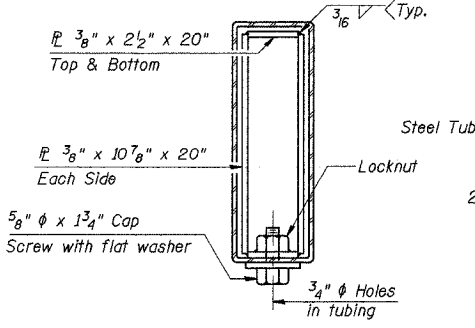


END OF RAIL DETAILS

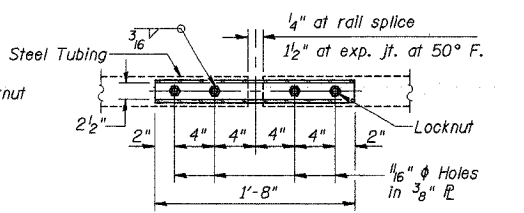


RAIL SPLICE CONNECTION AT EXPANSION JT.

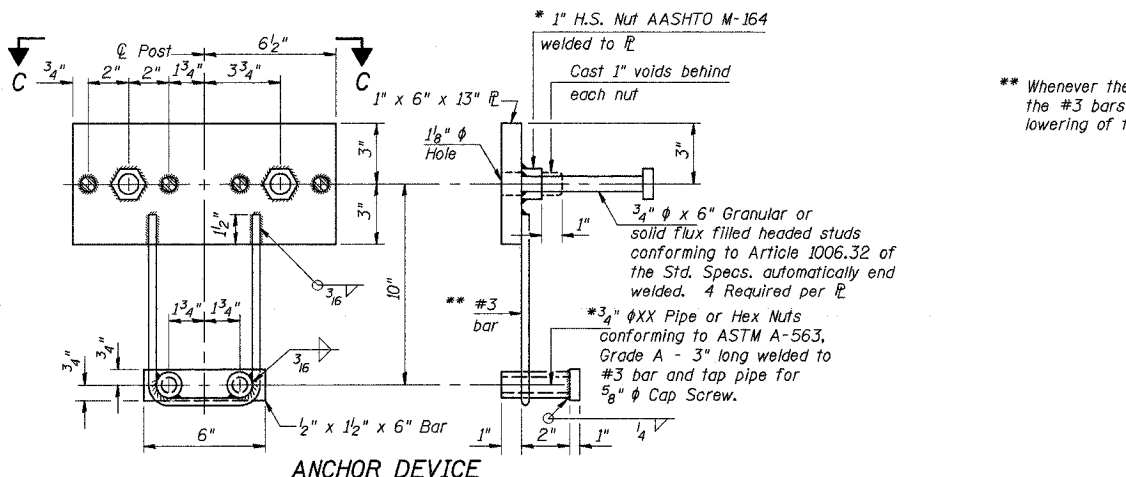
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE P TYPICAL



ANCHOR DEVICE

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

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