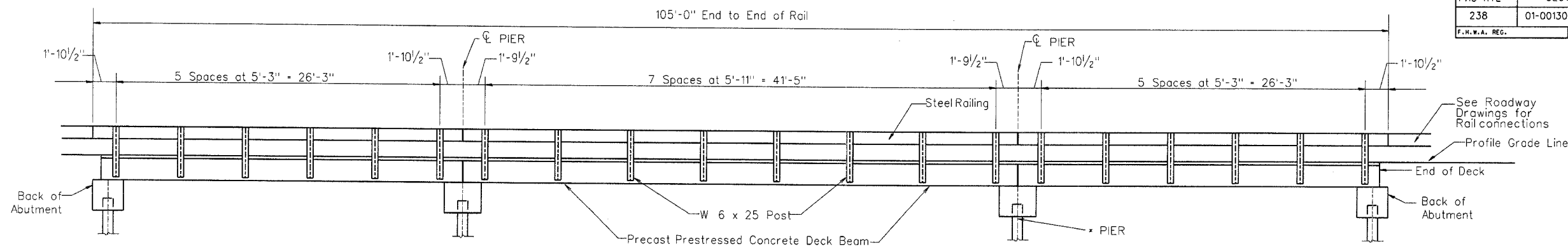
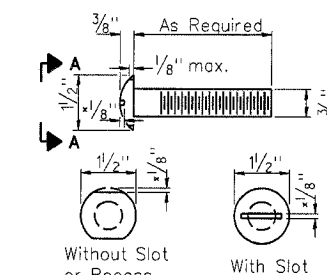


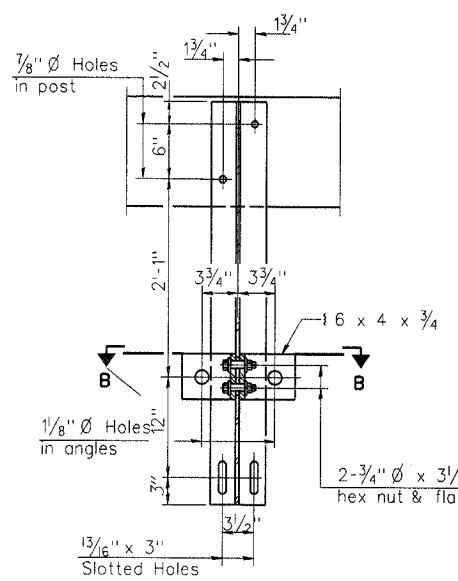
FAS RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
238	01-00130-00-BR	HENRY	14	11
F.H.W.A. REG.		ILLINOIS PROJECT		



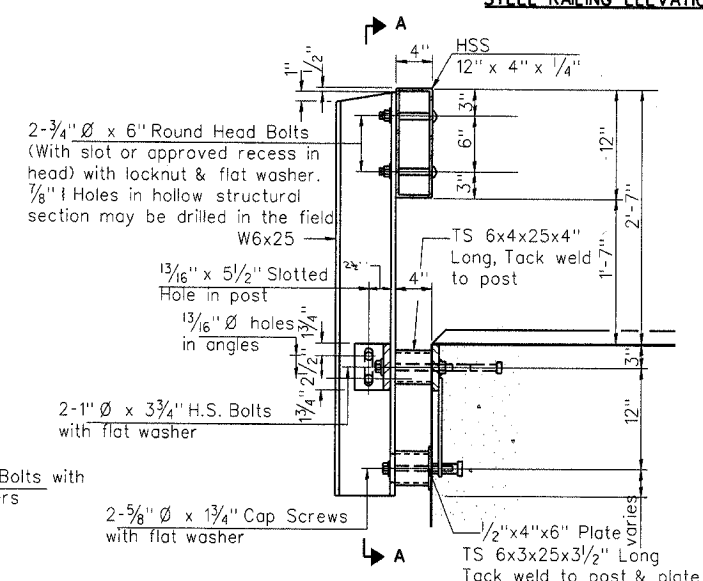
STEEL RAILING ELEVATION



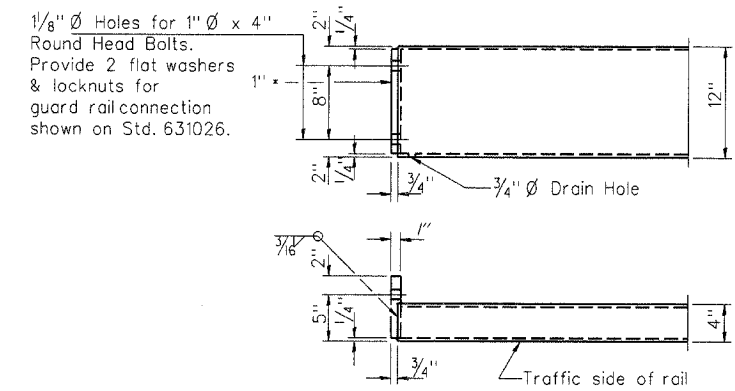
VIEW A-A ROUND HEAD BOLT



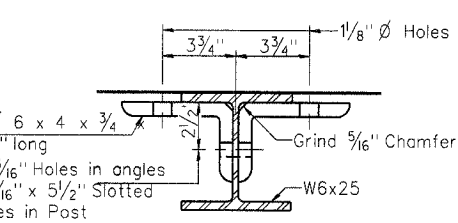
SECTION A-A



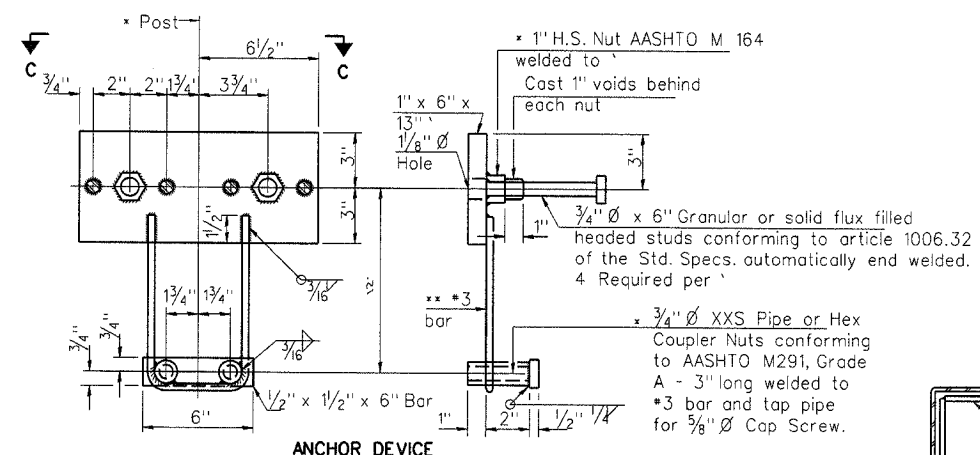
SECTION AT RAIL POST



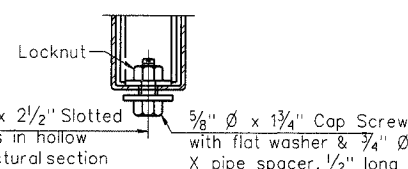
END OF RAIL DETAILS



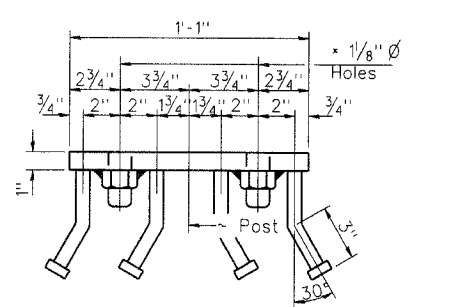
SECTION B-B



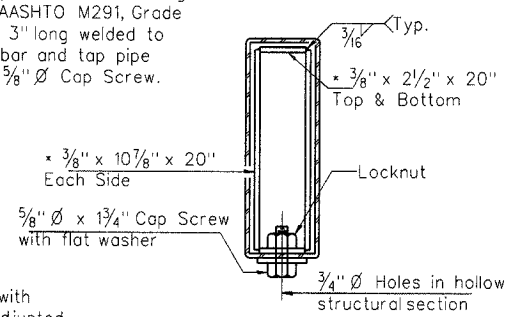
ANCHOR DEVICE



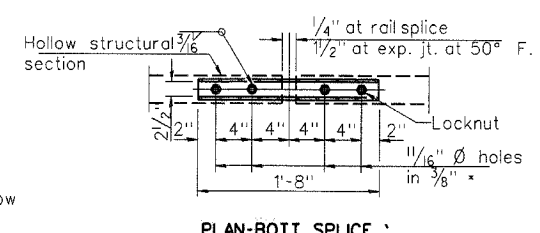
RAIL SPLICE CONNECTION AT EXPANSION JT.



VIEW C-C



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL

- NOTES**
- Hollow structural sections 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 1/8" fabric bearing pad between the post and concrete.
  - The 3/4" dia 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(f)(2) of the Standard Specifications. The 1" dia 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" dia 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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing Type S-1	Foot	210

TYPE S-1 STEEL RAILING

DESCRIPTION: HENRY COUNTY BRIDGE

DATE: 03.01.07

REVISION: SHEET NO. 11

PROJECT TITLE: HENRY COUNTY BRIDGE

SECTION: 01-00130-00-BR (FAS 1232)

SHEET TITLE: TYPE S-1 STEEL RAILING

Sodemann and Associates, Inc.  
 340 NORTH NEW STREET  
 POST OFFICE BOX 557  
 CHAMPAIGN, ILLINOIS 61824-0557  
 TEL 217 352-7686 FAX 217 352-7922  
 ENGINEERING / ANALYSIS / MANAGEMENT

DES. REB: 07066

PROJ. NO. 07066

DATE: 03.01.07

SHEET: 11

OF 13 SHEETS