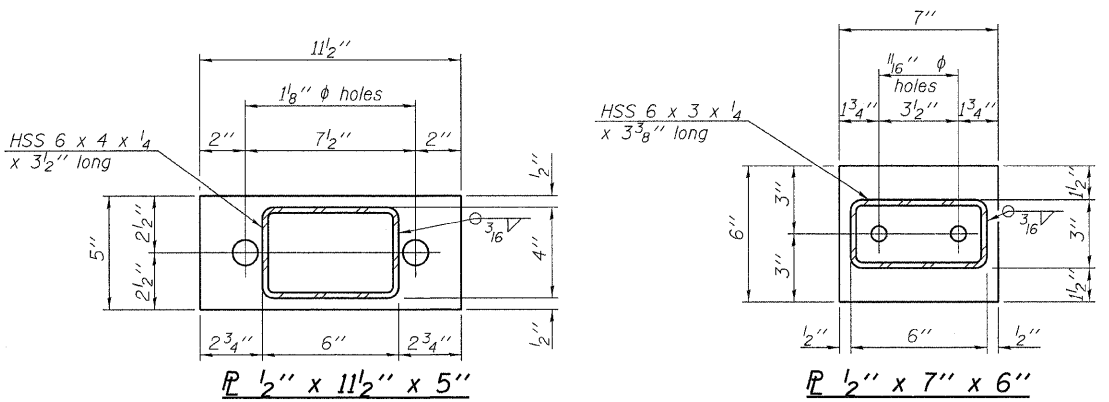
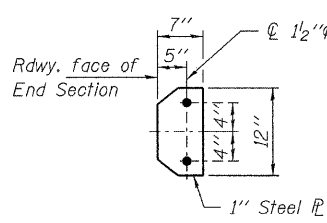


**VIEW A-A
ROUND HEAD BOLT**

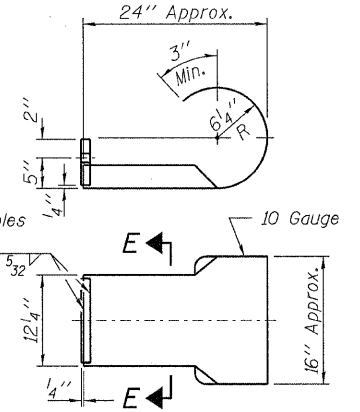


1/2" x 11 1/2" x 5" **1/2" x 7" x 6"**

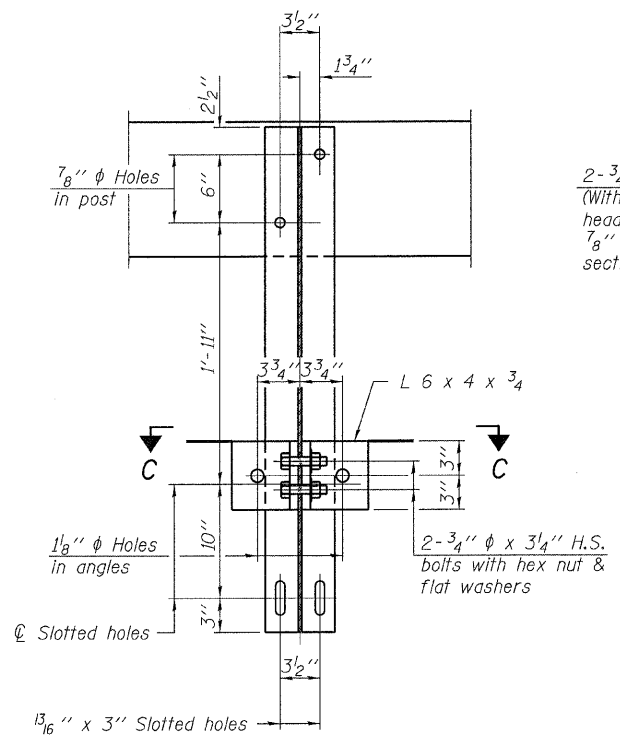
Note: Cast of curled end sections shall be included with the Steel Railing. (4 Required)



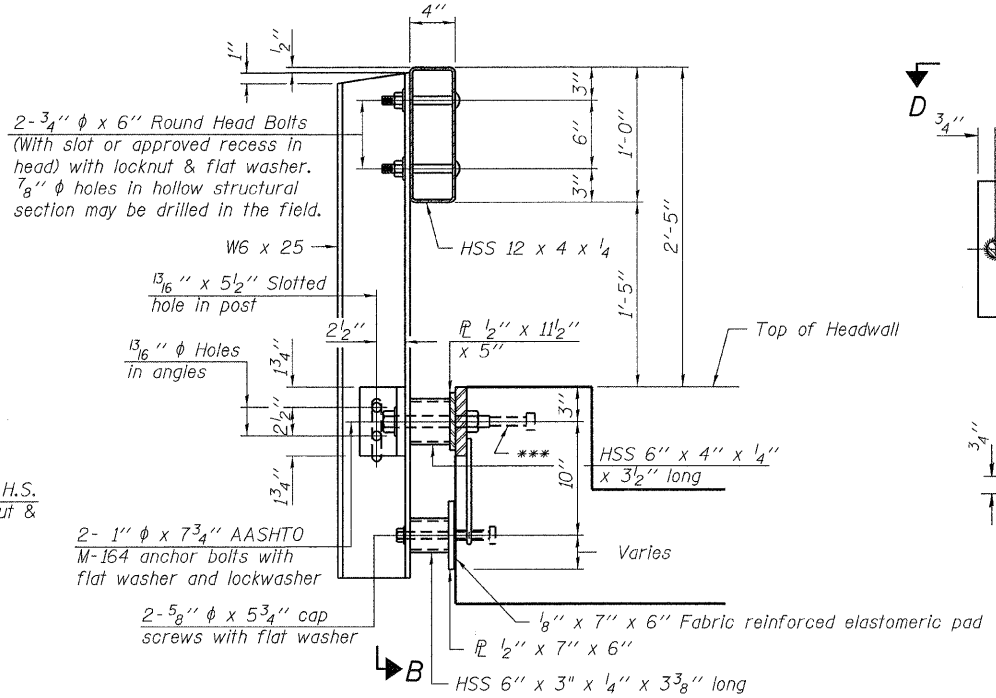
SECTION E-E



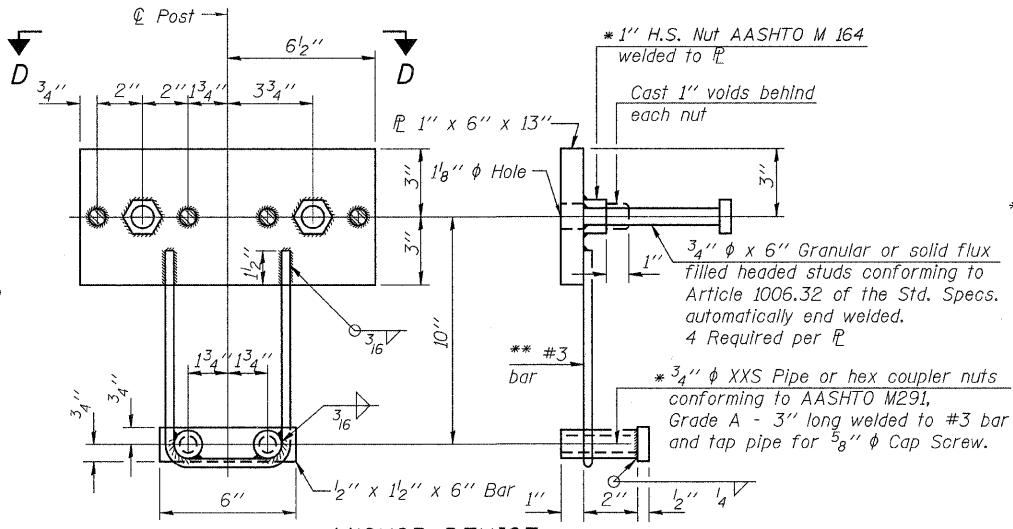
CURLED END SECTION DETAILS



SECTION B-B

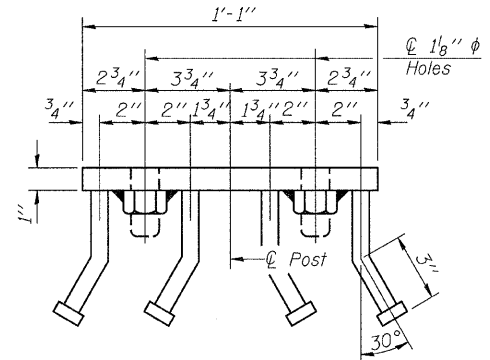


SECTION AT RAILING POST

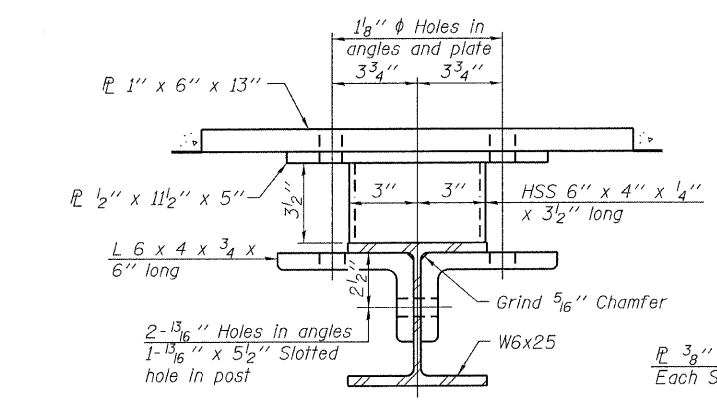


ANCHOR DEVICE

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cast included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

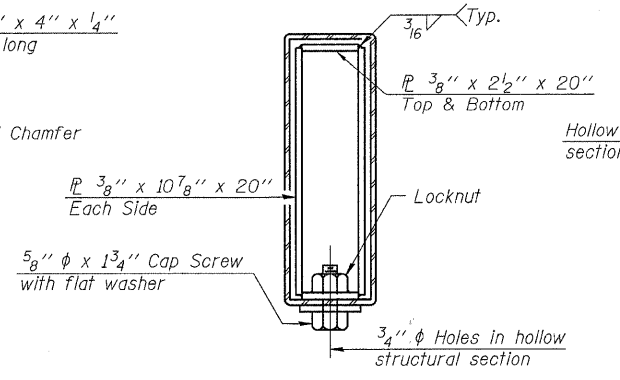


VIEW D-D

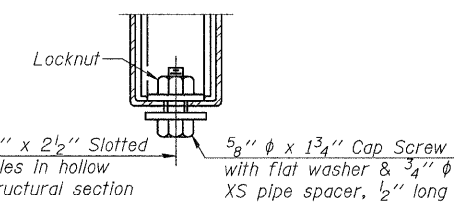


SECTION C-C

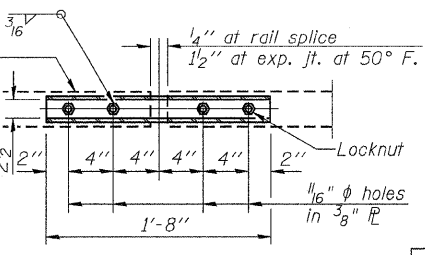
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



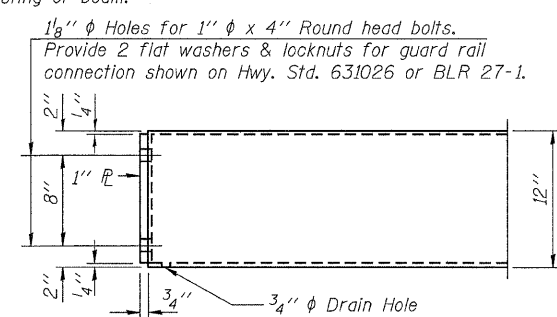
SECTIONS AT RAIL SPLICE



**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE
TYPICAL**



END OF RAIL DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	58

**STEEL RAILING, TYPE S-1
STRUCTURE NO. 092-5025**

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

R-23A

11-1-09 (10'-9" Maximum Post Spacing)

HAMPTON, LENZINI AND RENWICK, INC.
 CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 217.546.3400 www.hlrengineering.com

184.00089
 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION
 PROJECT NUMBER: 09.0288.130 DATE: 02/05/10

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
58	08-17127-00-BR	VERMILION	10	10
SIDELL ROAD DISTRICT		CONTRACT NO. 91438		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT BROS-0183(304)		