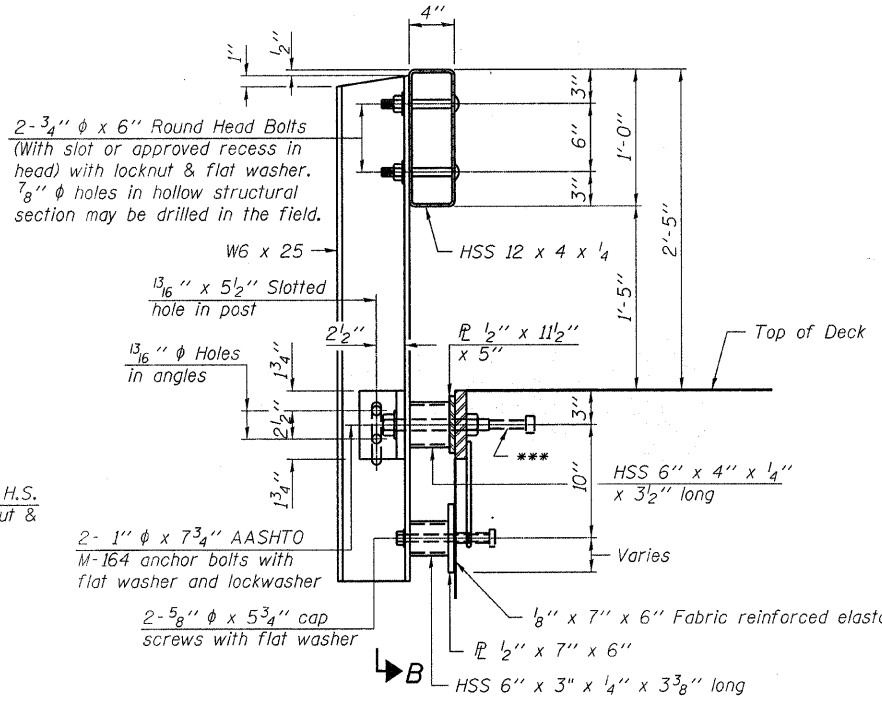
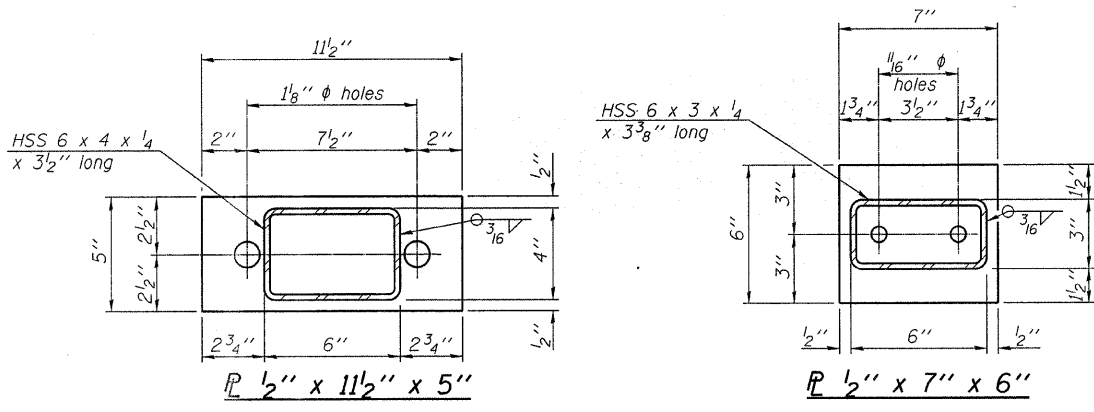
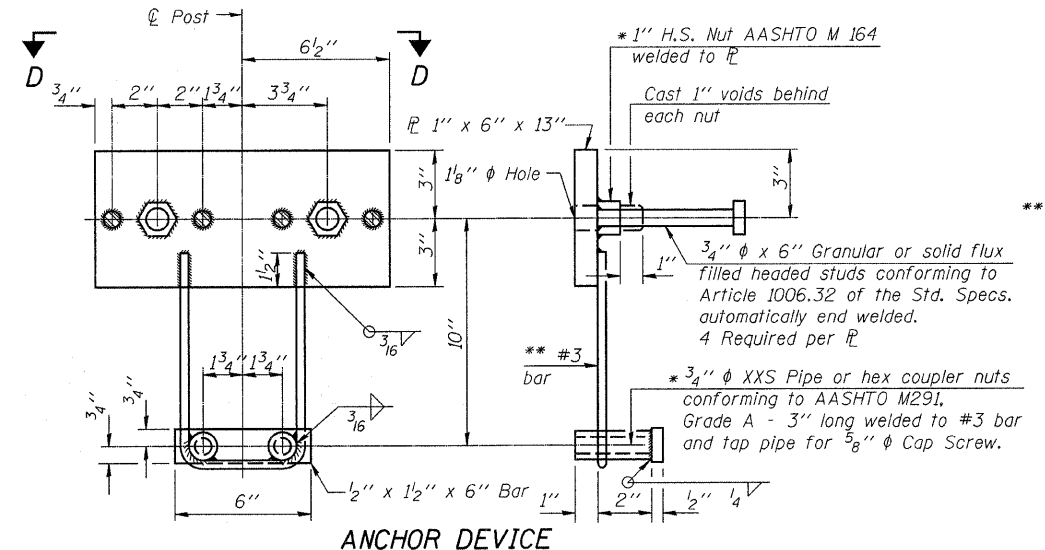


**VIEW A-A  
ROUND HEAD BOLT**

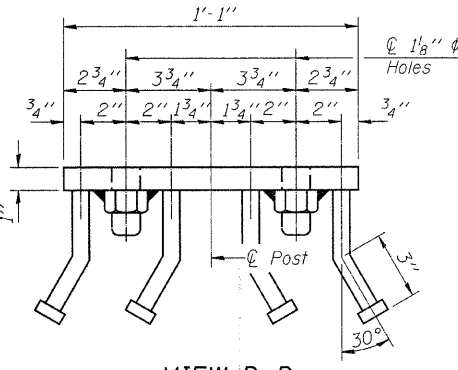


**SECTION AT RAILING POST**

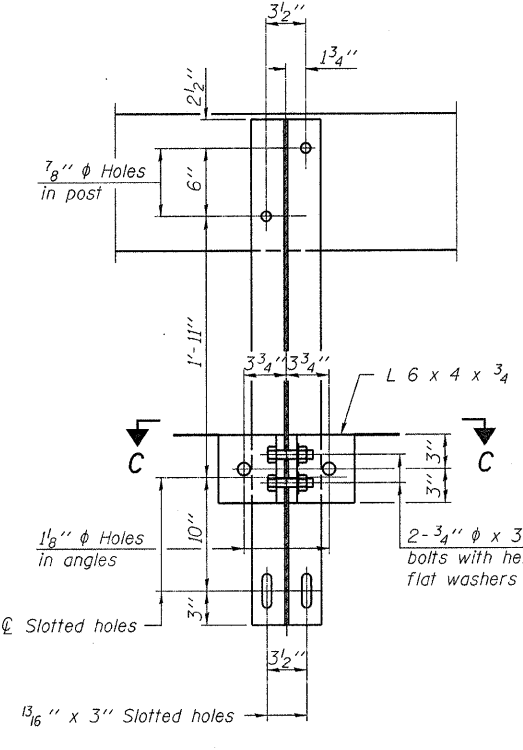


**ANCHOR DEVICE**

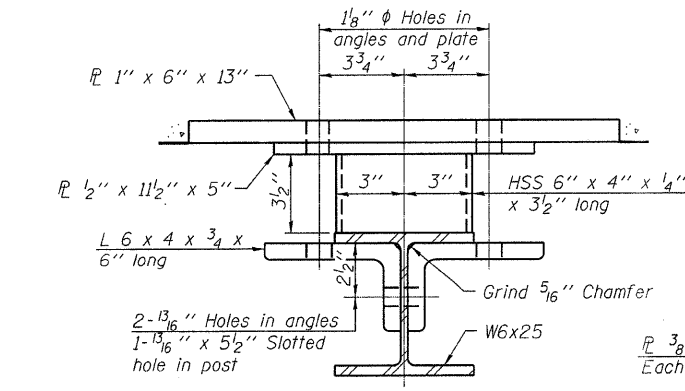
**Notes:**  
 All field drilled holes shall be coated with an approved zinc rich paint before erection.  
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.  
 All steel rail 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**

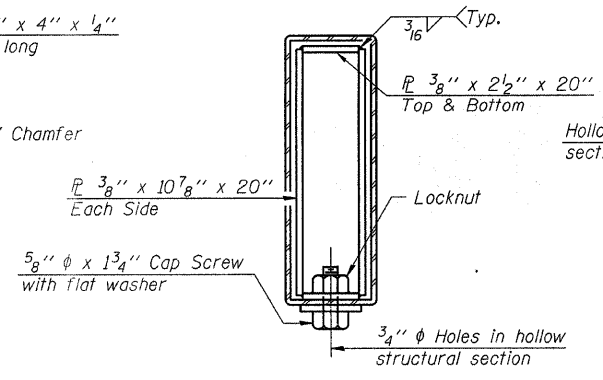


**SECTION B-B**

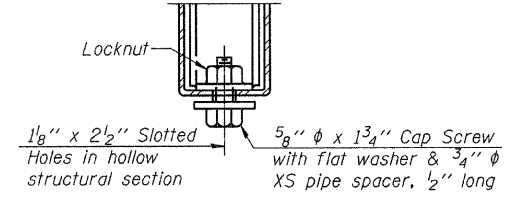


**SECTION C-C**

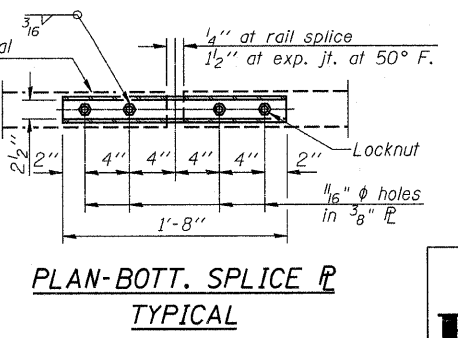
\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



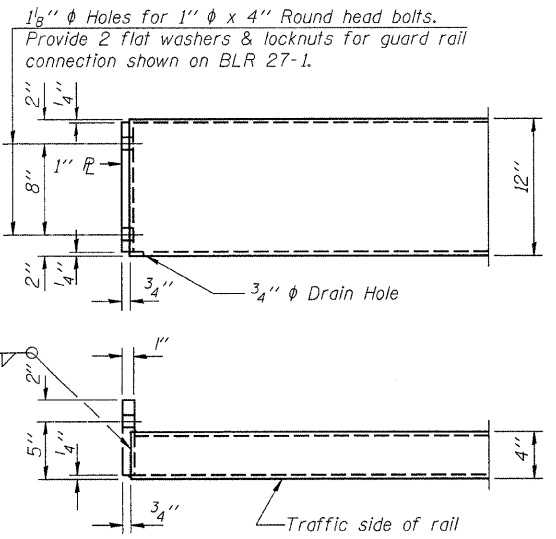
**SECTIONS AT RAIL SPLICE**



**RAIL SPLICE CONNECTION  
AT EXPANSION JT.  
TYPICAL**



**PLAN-BOTT. SPLICE RAIL  
TYPICAL**



**END OF RAIL DETAILS**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	170

**STEEL RAILING, TYPE S-1  
STRUCTURE NO. 041-3743**

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

R-23A

10-1-08 (10'-9" Maximum Post Spacing)

**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS  
 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 546-3400  
 PROJECT NUMBER: 08.0129.130 DATE: 02/06/09

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
824	05-00183-00-BR	JEFFERSON	23	20
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
		CONTRACT NO. 99361		