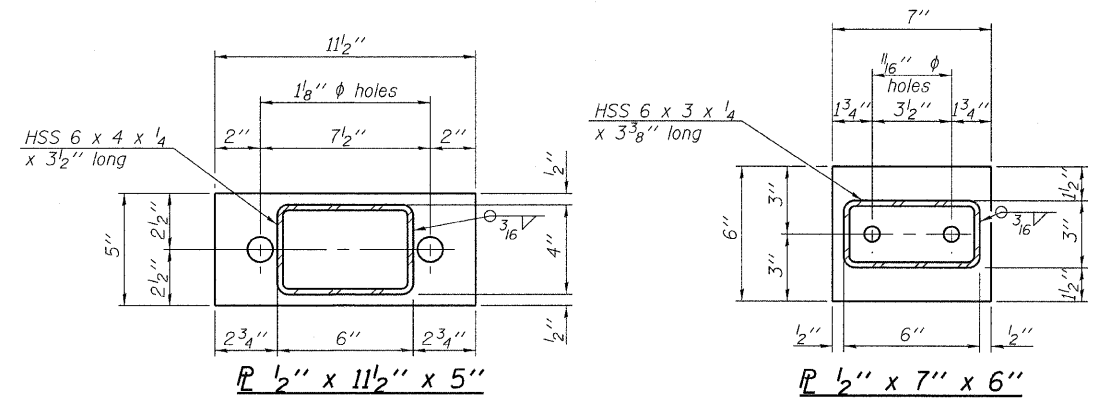
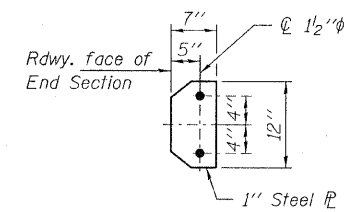


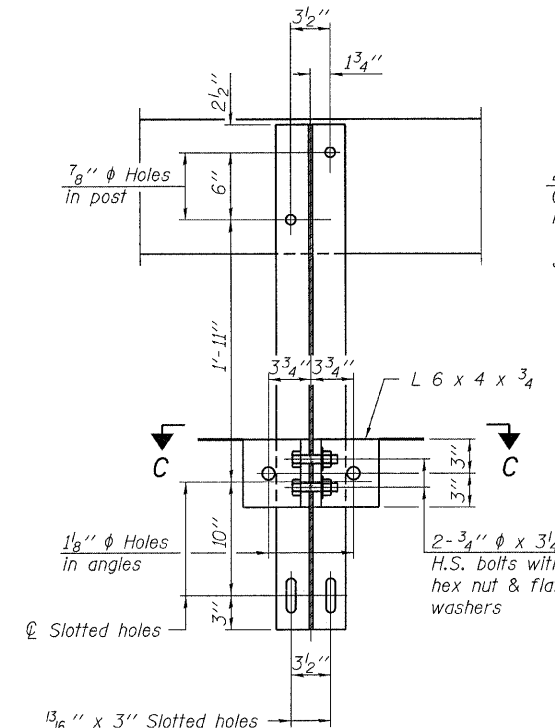
**VIEW A-A
ROUND HEAD BOLT**



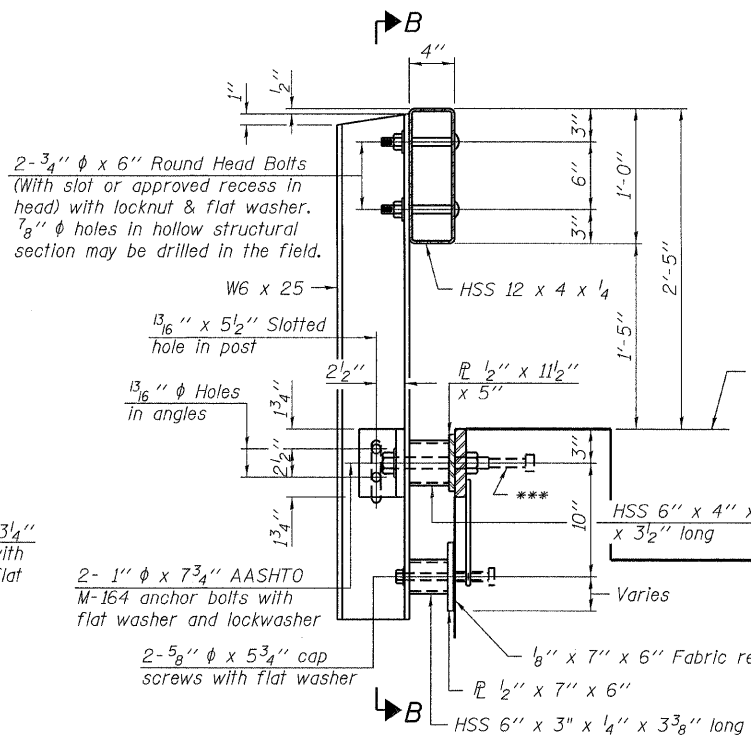
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



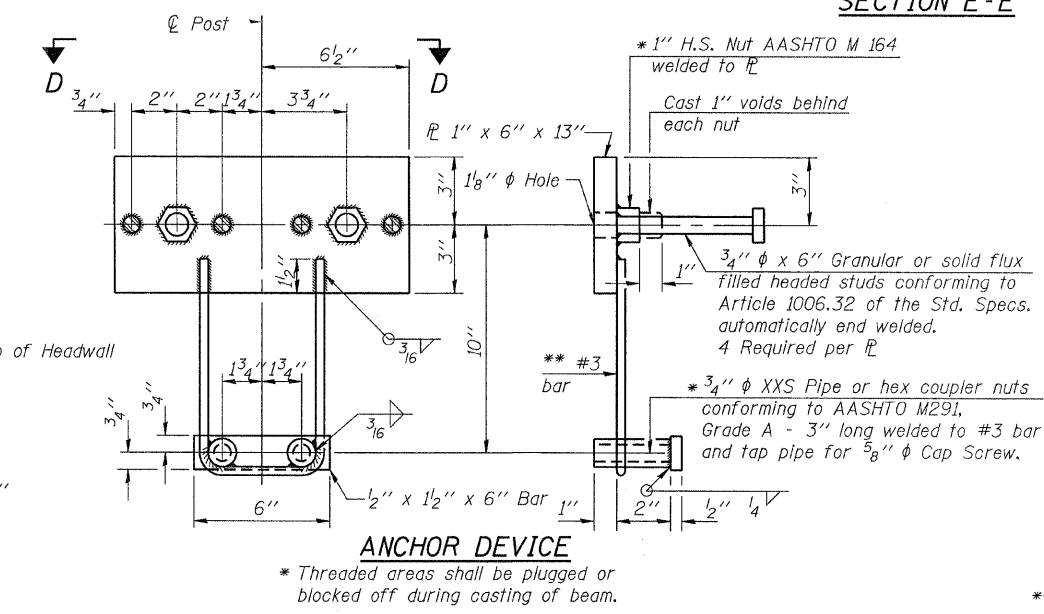
**SECTION E-E
CURLLED END SECTION DETAILS**



SECTION B-B

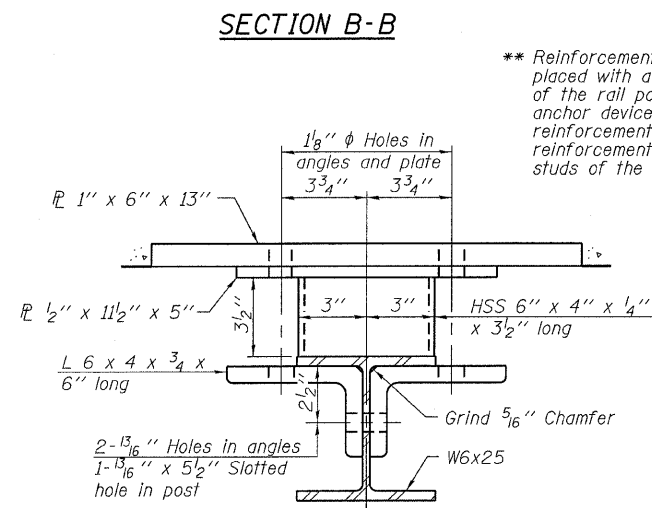


SECTION AT RAILING POST

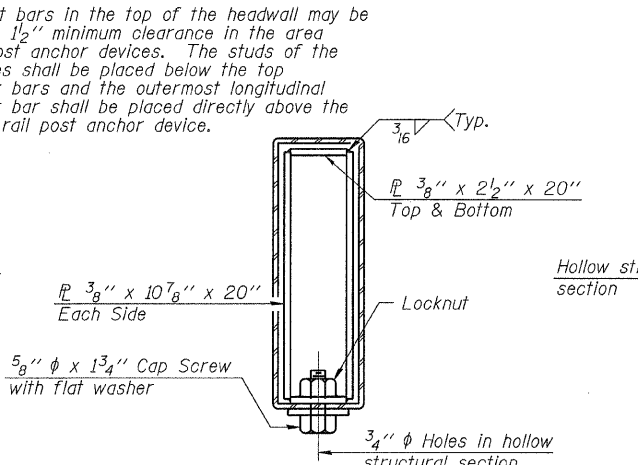


ANCHOR DEVICE

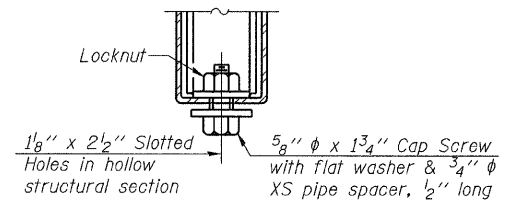
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements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



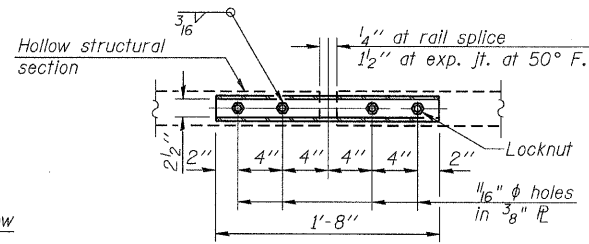
SECTION C-C



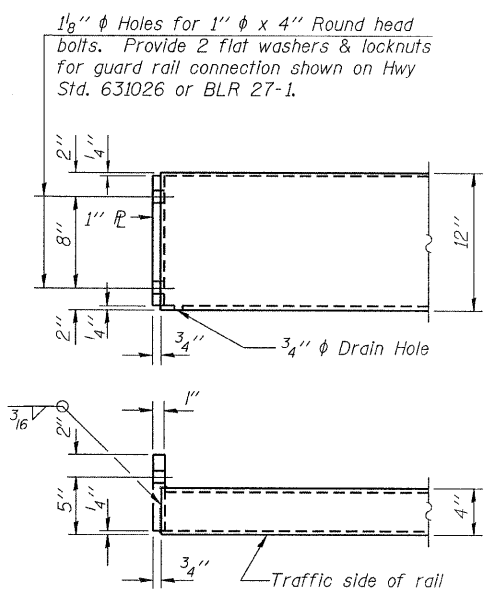
SECTIONS AT RAIL SPLICE



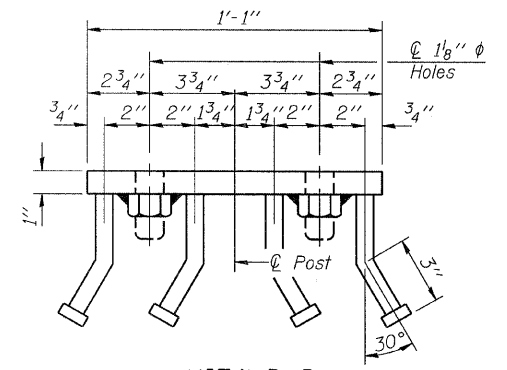
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	52

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

FILE NAME = 110286-eh-culvert.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3/P/E/SE CORP. 184.000939	PLOT DATE = 2/20/2012	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

**STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT**

**STEEL RAILING, TYPE S-1
STRUCTURE NO. 041-5077**
SHEET NO. 4 OF 4 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	09-06122-00-BR	JEFFERSON	37	25
FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471	
ILLINOIS FED. AID PROJECT BR05-0081(063)				