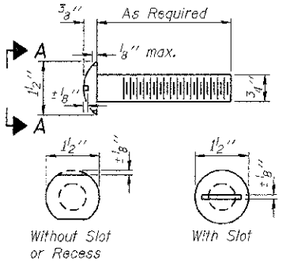
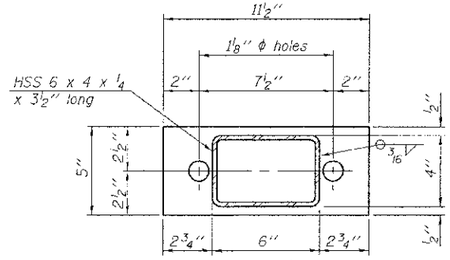
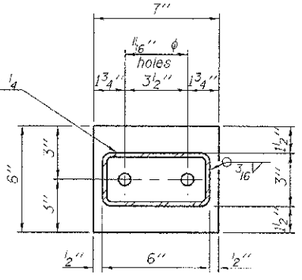


VIEW A-A
ROUND HEAD BOLT

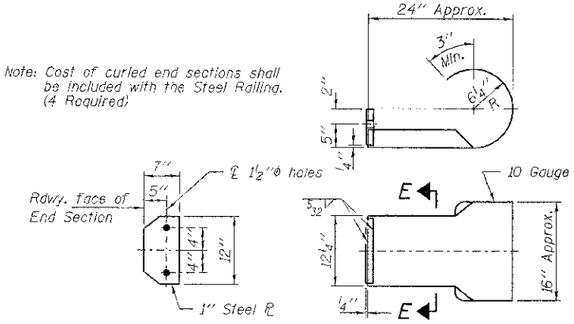


℄ 1/2" x 11 1/2" x 5"



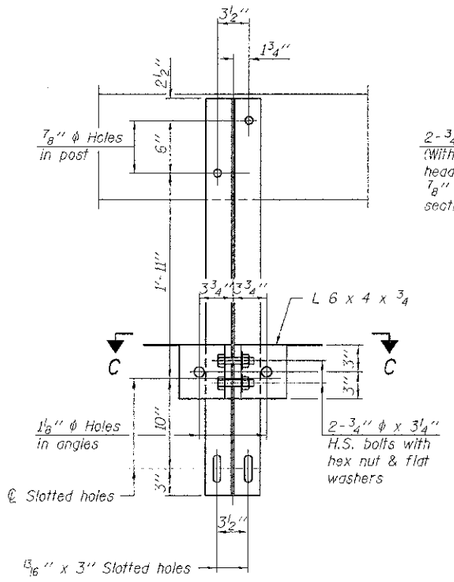
℄ 1/2" x 7" x 6"

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

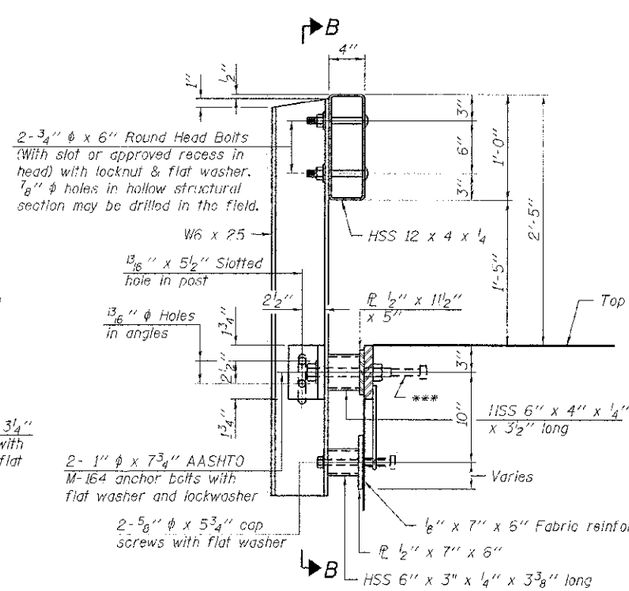


SECTION E-E

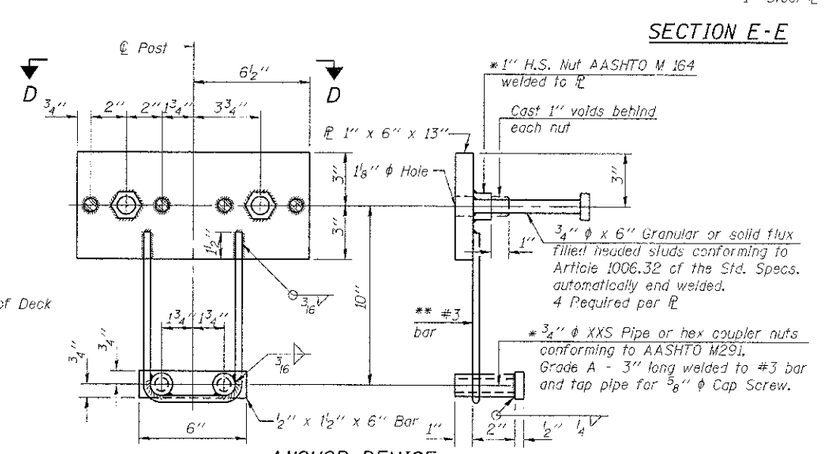
CURLED END SECTION DETAILS



SECTION B-B



SECTION AT RAILING POST



ANCHOR DEVICE

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

Notes:

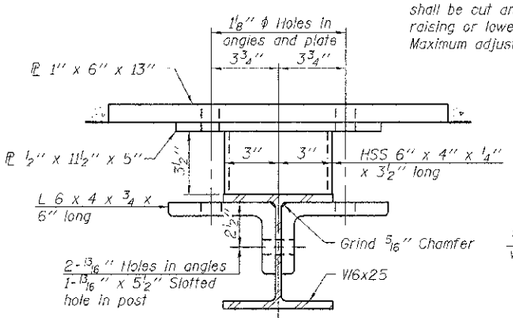
All field drilled holes shall be coated with an approved zinc rich paint before erection.

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.

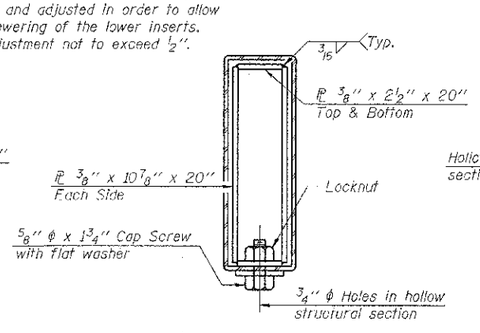
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

*** 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.

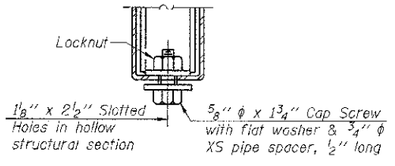
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



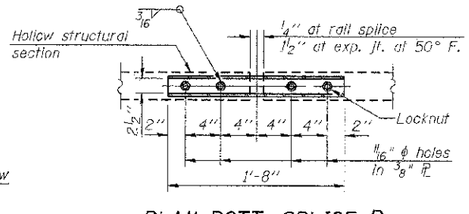
SECTION C-C



SECTIONS AT RAIL SPLICE

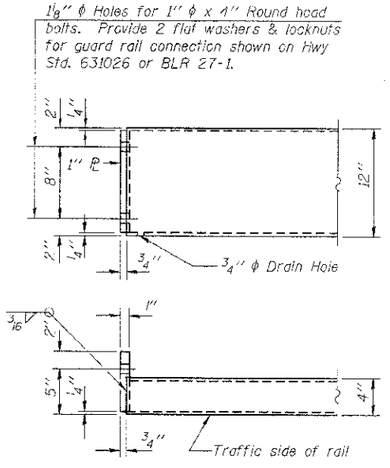


RAIL SPLICE CONNECTION
AT EXPANSION JT.

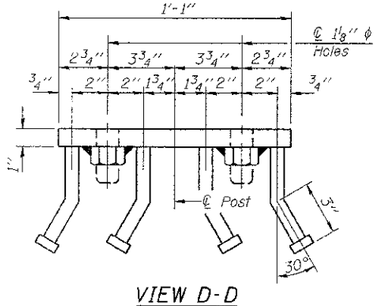


PLAN-BOTT. SPLICE ℄
TYPICAL

1 1/8" ϕ Holes for 1" ϕ x 4" Round head bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Hwy Std. 631026 or BLR 27-1.



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	109

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

FILE NAME = 310268-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3504 RESEARCH DRIVE, SUITE 201, SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM 157 PE/SE CORP. #84.000699	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 10/9/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
VERMILION COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 092-3523
SHEET NO. 5 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
143	10-15144-00-BR	VERMILION	20	15
PILOT ROAD DISTRICT		CONTRACT NO. 91472		
		ILLINOIS FED. AID PROJECT		