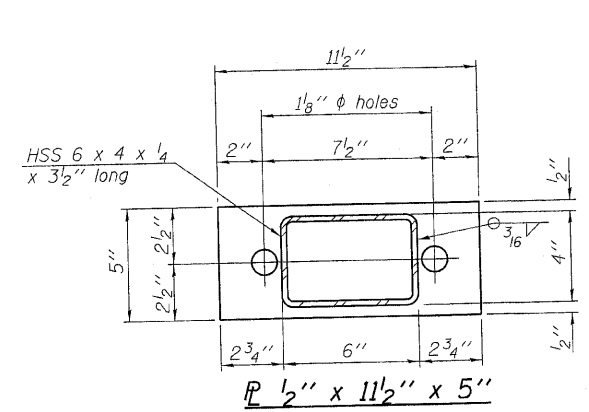
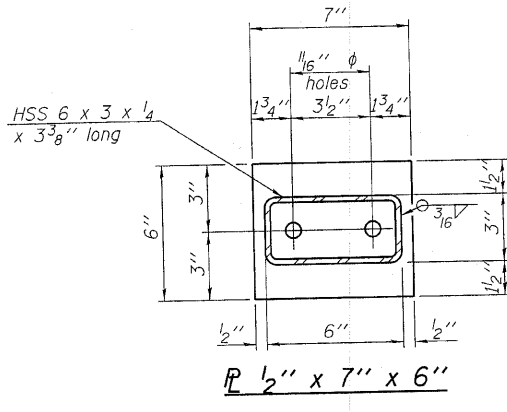


**VIEW A-A
ROUND HEAD BOLT**

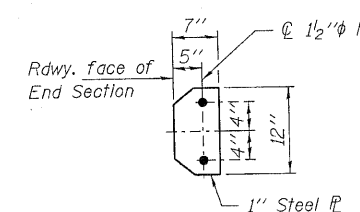


**SECTION B-B
P 1/2" x 11 1/2" x 5"**

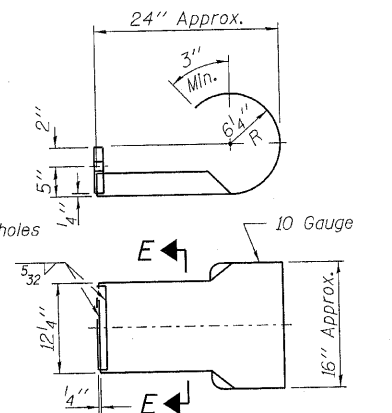


**SECTION C-C
P 1/2" x 7" x 6"**

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

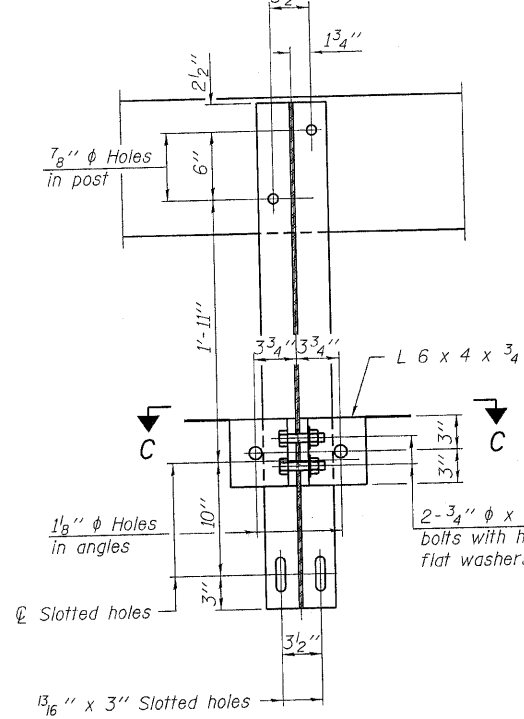


SECTION E-E

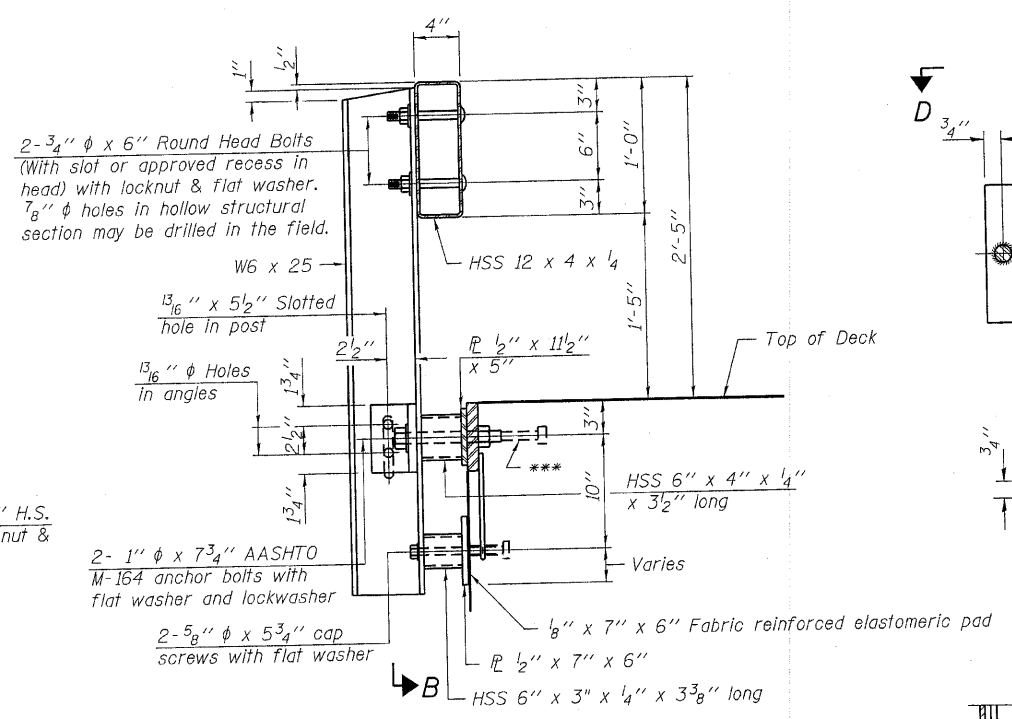


CURLED END SECTION DETAILS

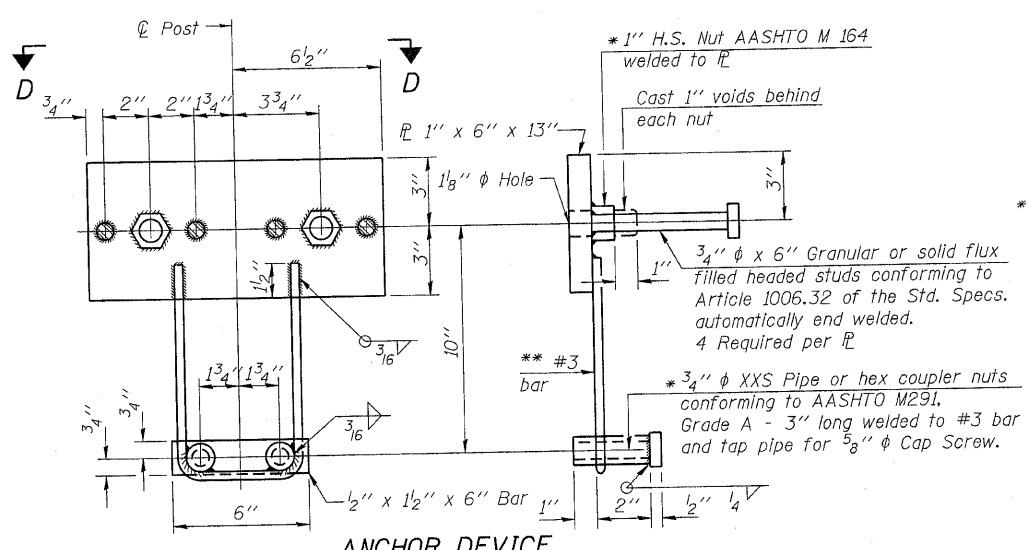
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall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



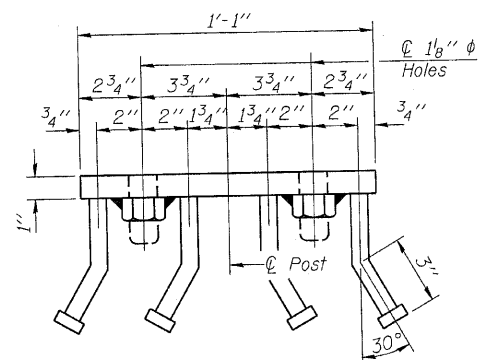
SECTION B-B



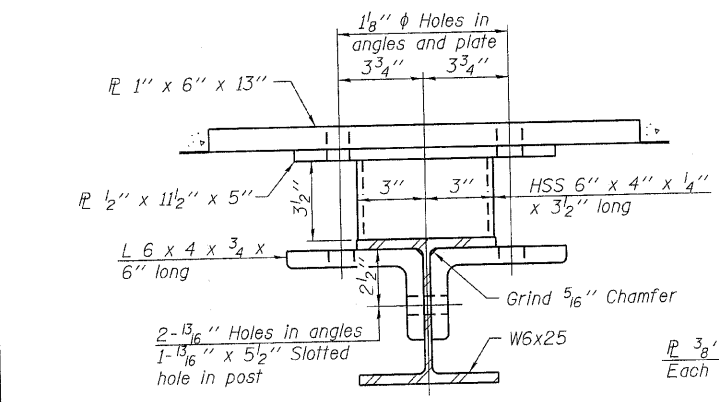
SECTION AT RAILING POST



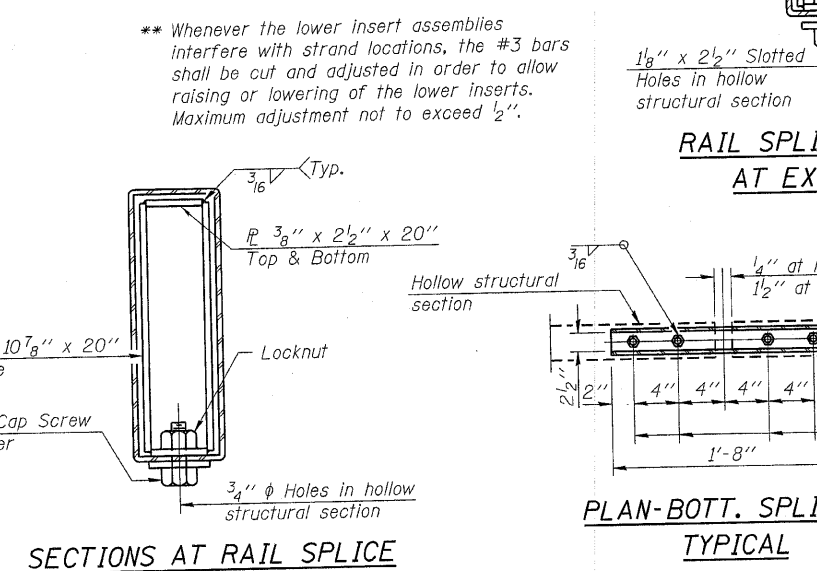
ANCHOR DEVICE



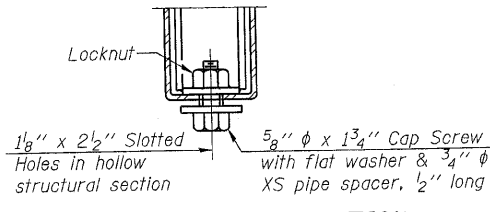
VIEW D-D



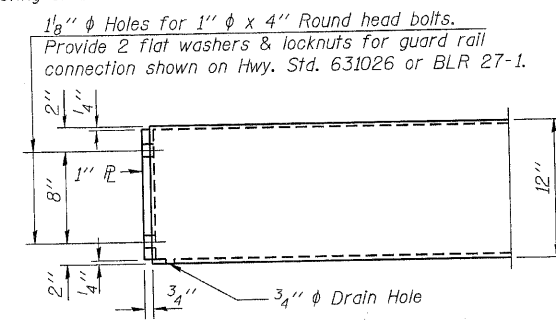
SECTION C-C



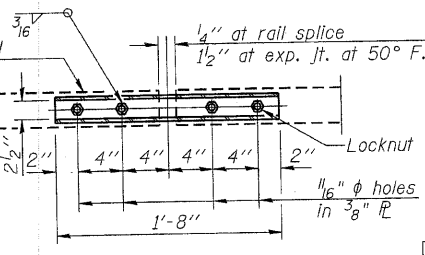
SECTIONS AT RAIL SPLICE



**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



END OF RAIL DETAILS



**PLAN-BOTT. SPLICE P
TYPICAL**

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	96

**STEEL RAILING, TYPE S-1
STRUCTURE NO. 097-3268**

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)

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HLR
184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 09.0053.130 DATE: 07/27/10

SHEET NO. 5 8 SHEETS	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1884	09-00114-00-BR	WHITE	12	9
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 99431	