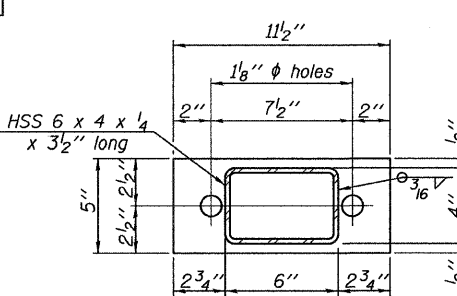
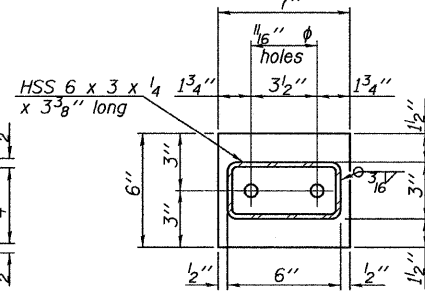


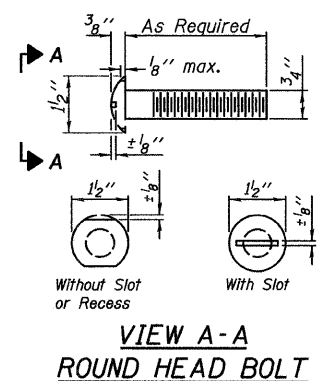
ELEVATION
(Showing Outside Face)



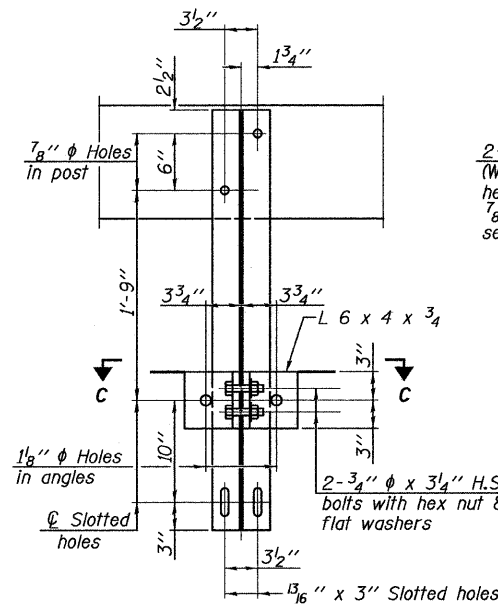
PLAN 1/2" x 11 1/2" x 5"



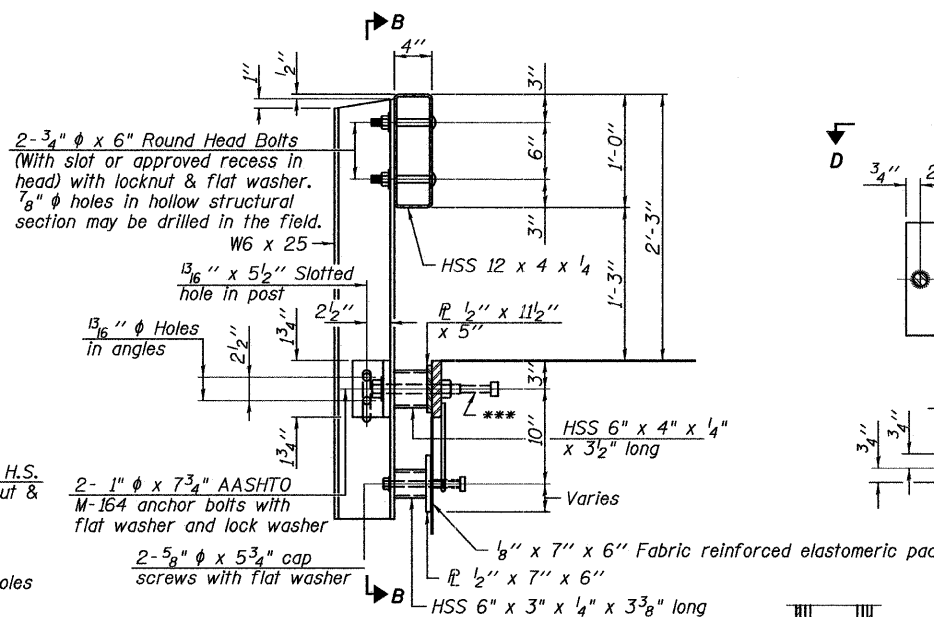
PLAN 1/2" x 7" x 6"



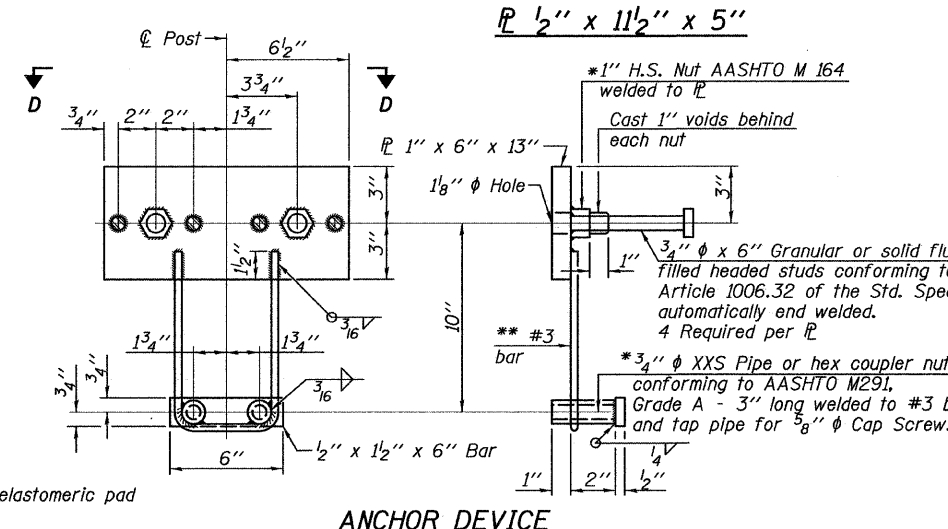
VIEW A-A
ROUND HEAD BOLT



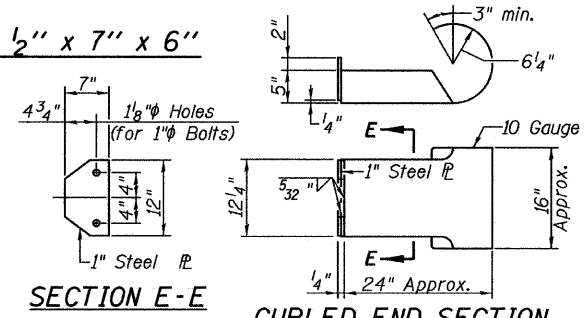
SECTION B-B



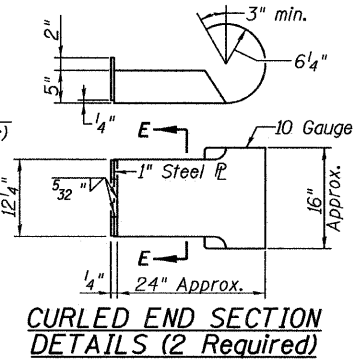
SECTION AT RAILING POST



ANCHOR DEVICE

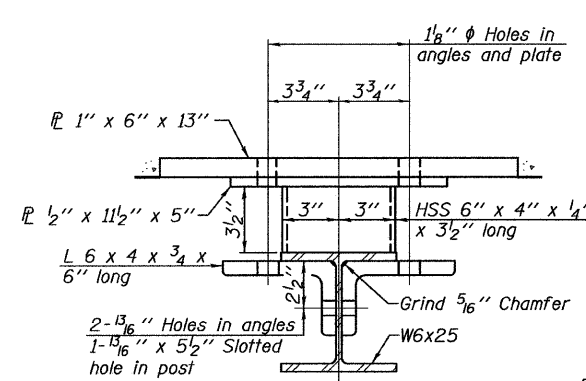


SECTION E-E

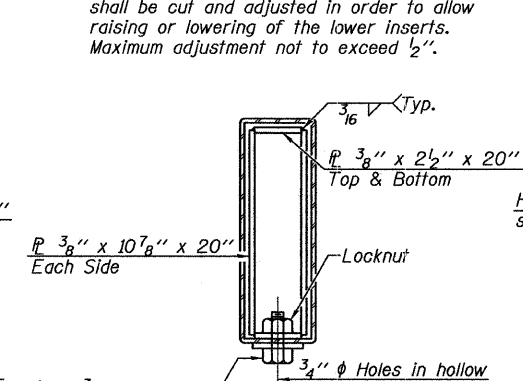


CURLED END SECTION
DETAILS (2 Required)

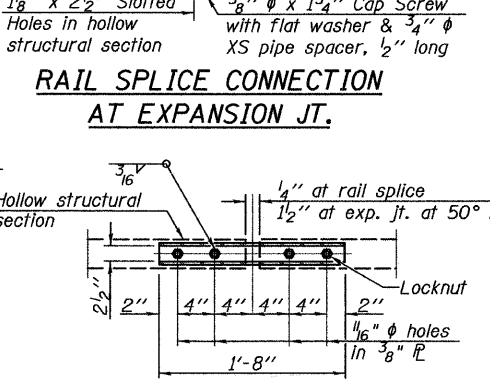
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall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



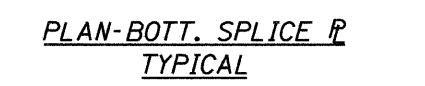
SECTION C-C



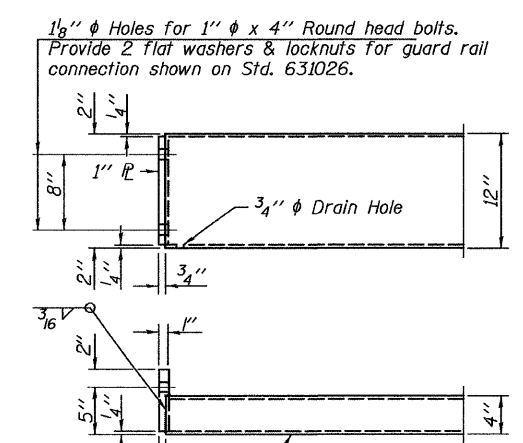
SECTIONS AT RAIL SPLICE



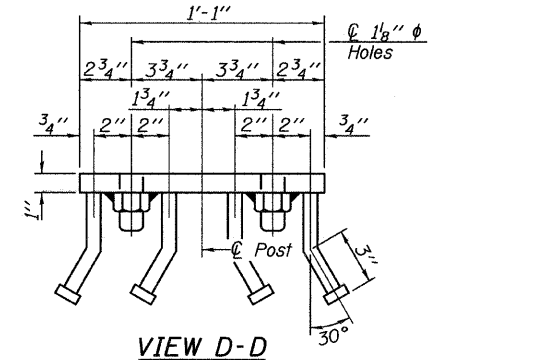
RAIL SPLICE CONNECTION
AT EXPANSION JT.



PLAN-BOTT. SPLICE P
TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	144

R-23A 10-1-08 (10'-9" Maximum Post Spacing)

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<p>Allen Henderson & Associates, Inc. Civil and Structural Engineers Springfield, IL 62703 Phone: (217)544-8033 IL Design Firm No. 184-001907</p>	T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = #SCALE#	DRAWN -	REVISED -		166	08-10110-00-BR	MENARD	17	10	
	PLOT DATE = #DATE#	CHECKED -	REVISED -		CONTRACT NO. 93510					
		DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
					SCALE: NONE	SHEET NO. 10 OF 17 SHEETS	STA. TO STA.			