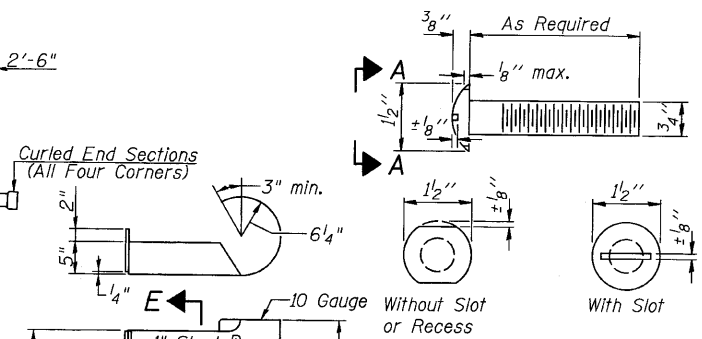
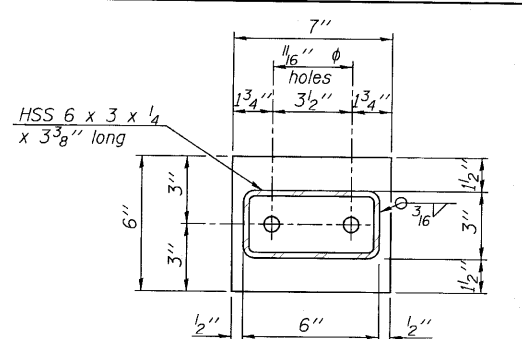


ELEVATION
(Showing Outside Face of Railing)

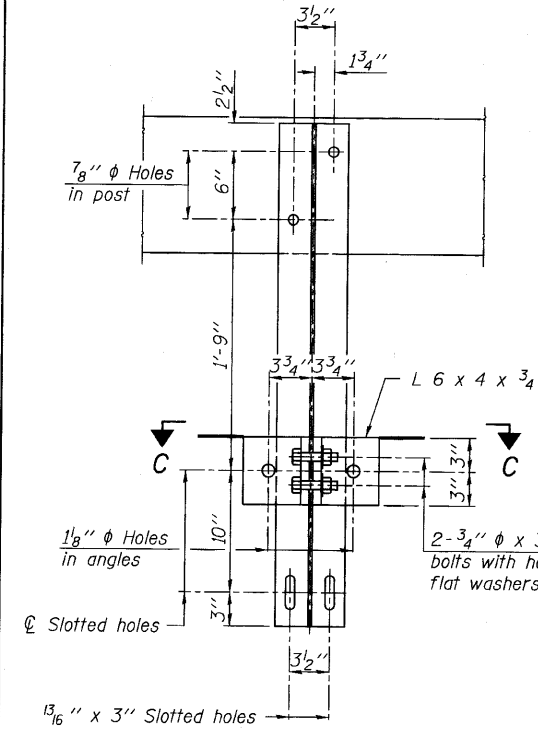


VIEW A-A
ROUND HEAD BOLT

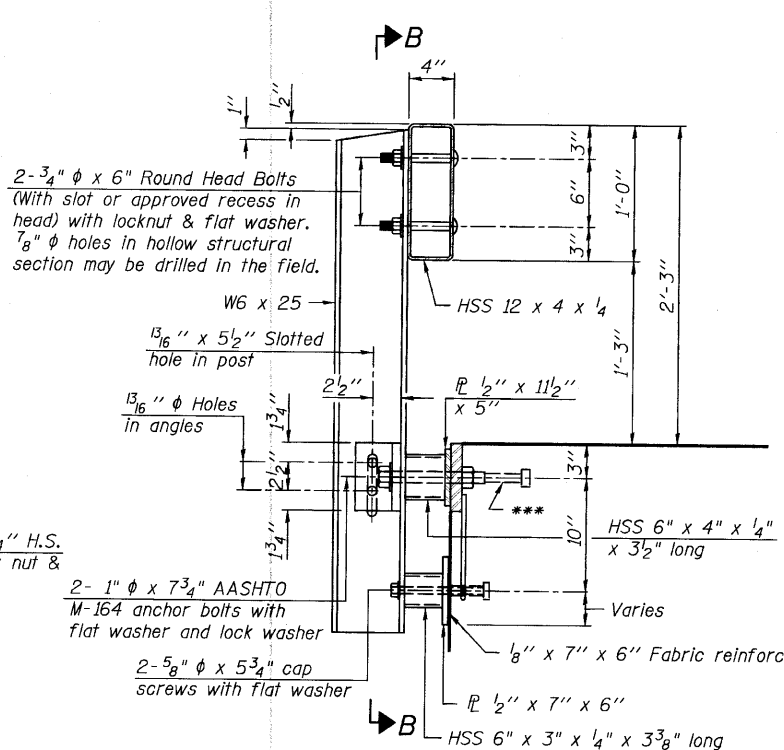


PLAN
1 1/2" x 7" x 6"

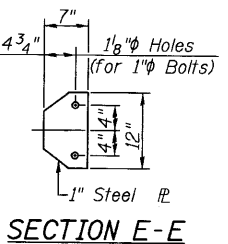
PLAN
1 1/2" x 11 1/2" x 5"



SECTION B-B

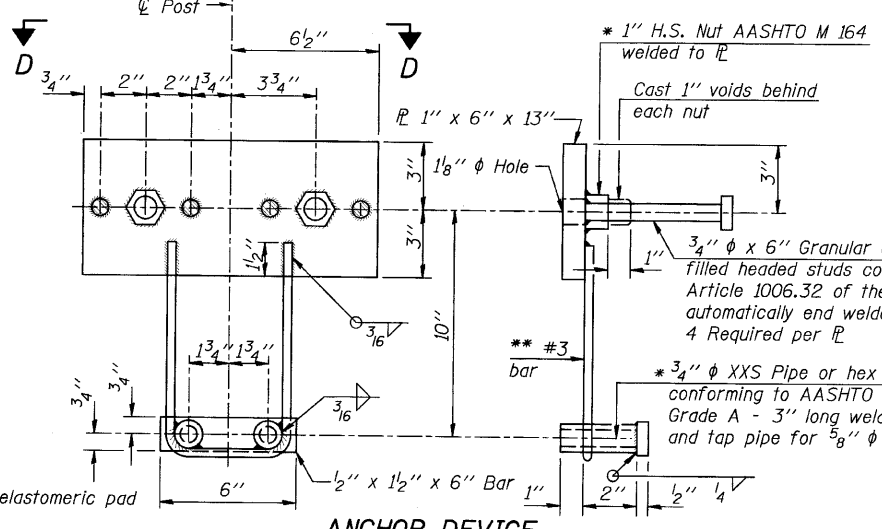


SECTION AT RAILING POST



SECTION E-E

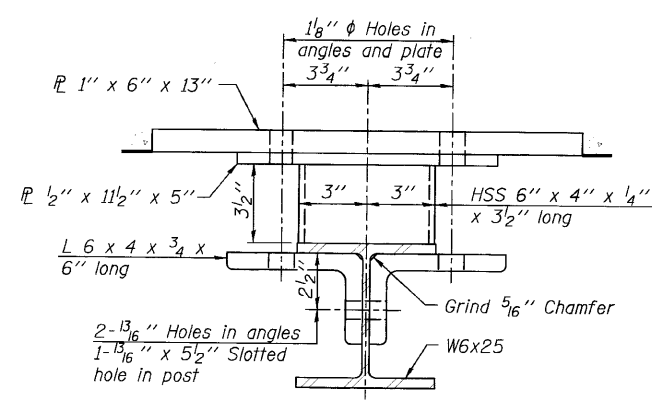
CURLED END SECTION
DETAILS (4 Required)
(Cost of Curled End Sections to be included in the cost of Steel Railing, Type S-1.)



ANCHOR DEVICE

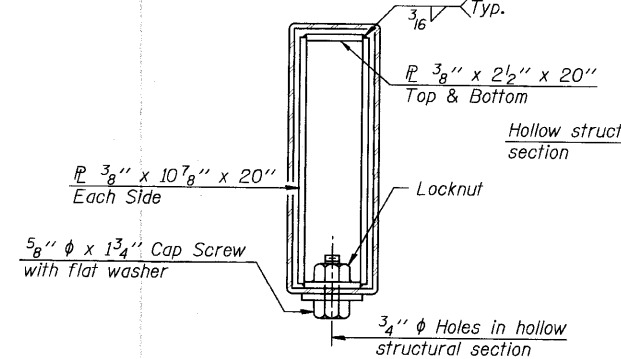
* Threaded areas shall be plugged or blocked off during casting of beam.

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.

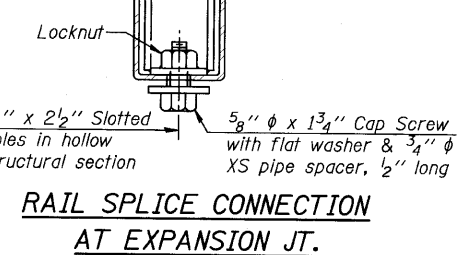


SECTION C-C

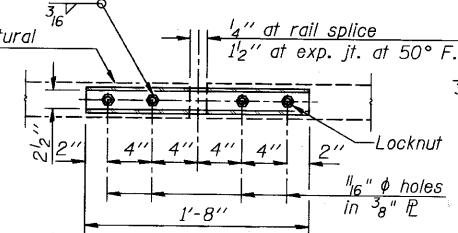
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



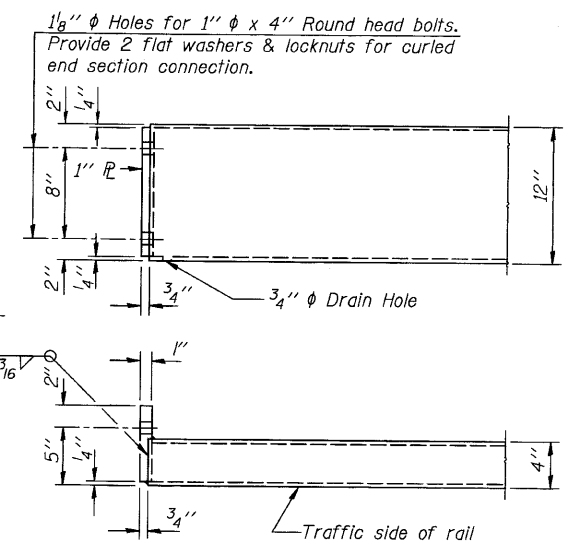
SECTIONS AT RAIL SPLICE



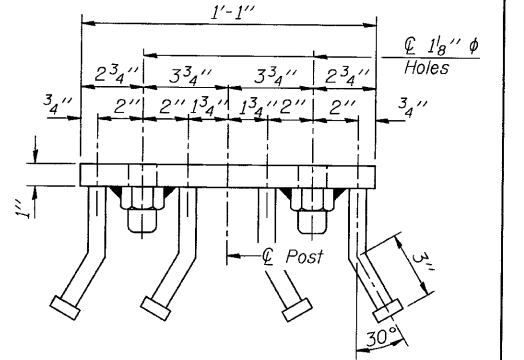
RAIL SPLICE CONNECTION
AT EXPANSION JT.



PLAN-BOTT. SPLICE
TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	240

R-23A 11-1-09 (10'-9" Maximum Post Spacing)

FILE NAME	USER NAME	DESIGNED	REVISED
#FILEL#	#USER#	-	-
PLOT SCALE = #SCALE#	CHECKED	-	-
PLOT DATE = #DATE#	DATE	-	-

Allen Henderson & Associates, Inc.
Civil and Structural Engineers Springfield, IL
62703 Phone: (217)544-8033 IL Design Firm
No. 184-001907

SCALE	SHEET NO.	TOTAL SHEETS	STA.	TO STA.
NONE	7 OF 11	11		

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
303	09-11118-00-BR	SHELBY	22	11
CONTRACT NO. 95629				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				