

4- 3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ holes in hollow structural section may be drilled in the field.

13/16" x 5 1/2" slotted hole in post
13/16" φ holes in angles

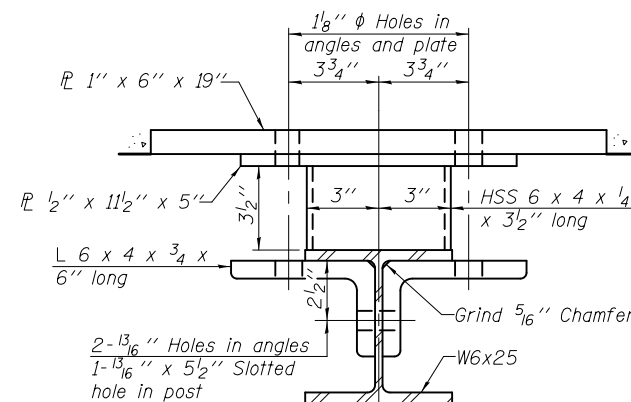
2- 3/4" φ x 3 1/4" H.S. bolts with hex nut & flat washers

2- 1" φ x 7 3/4" AASHTO M-164 anchor bolts with flat washer and lockwasher

2- 5/8" φ x 5 3/4" cap screws with flat washer

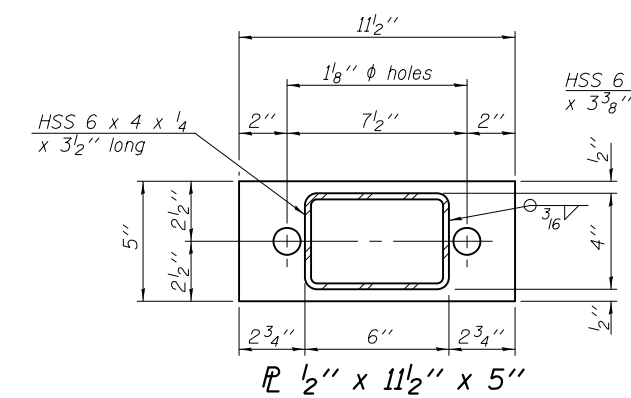
SECTION AT RAIL POST

13/16" x 3" Slotted holes

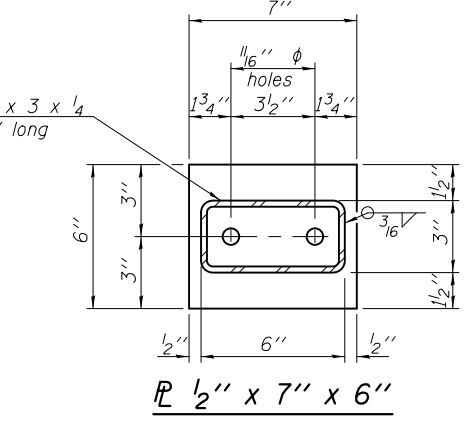


2- 13/16" Holes in angles
1- 13/16" x 5 1/2" Slotted hole in post

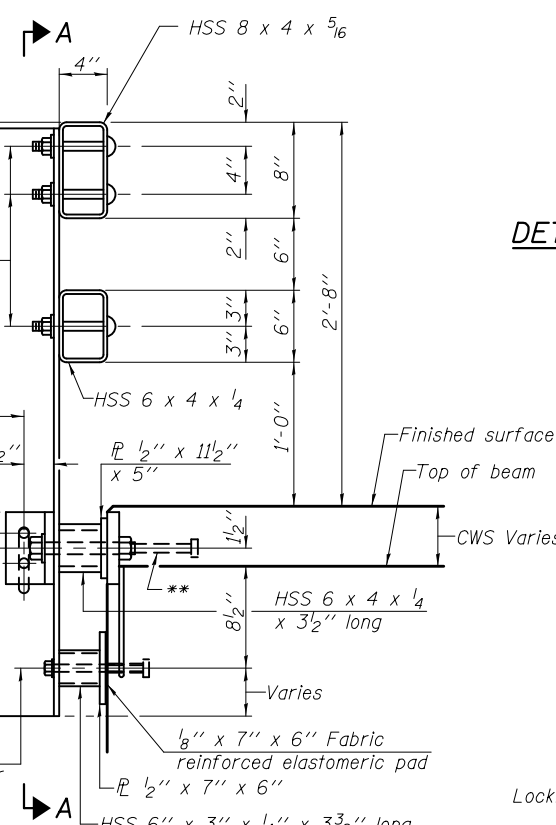
SECTION B-B



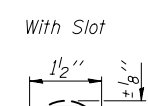
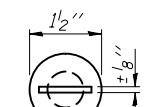
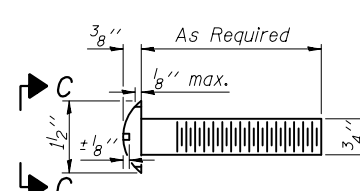
SECTION C-C



SECTION D-D

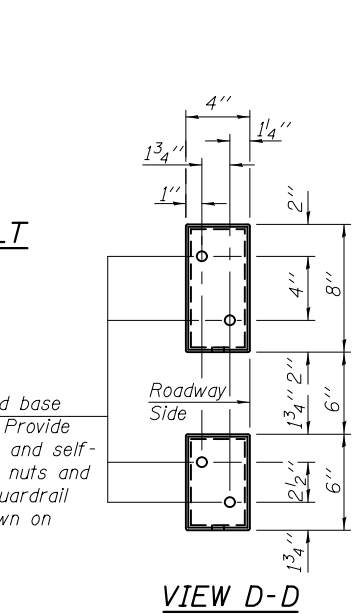
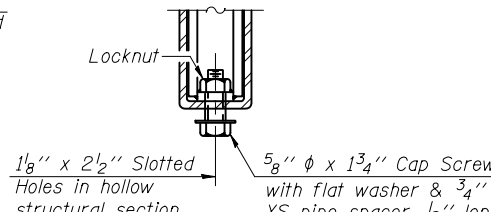


DETAIL OF 3/4" φ ROUND HEAD BOLT

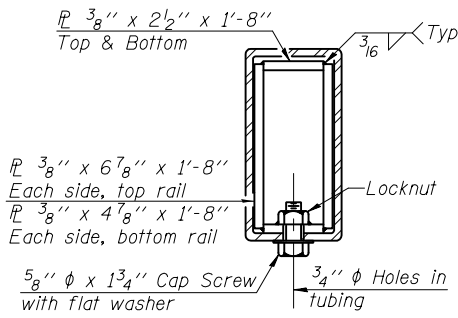


VIEW C-C

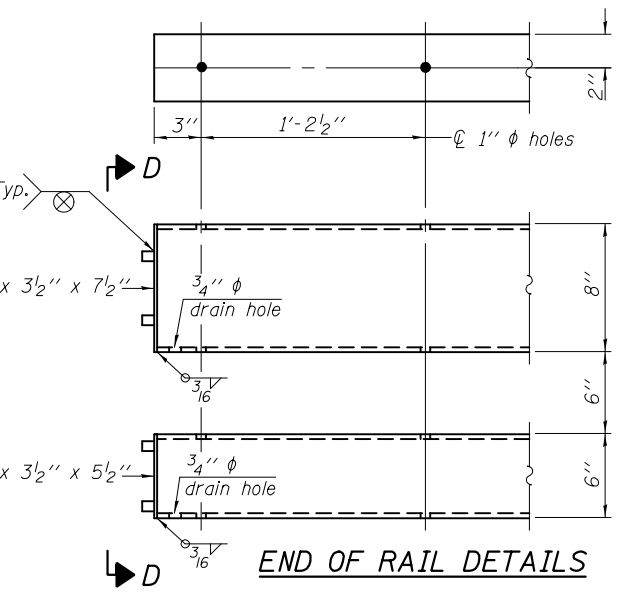
RAIL SPLICE CONNECTION AT EXPANSION JT.



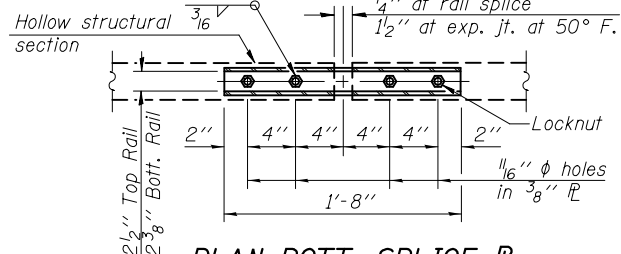
VIEW D-D



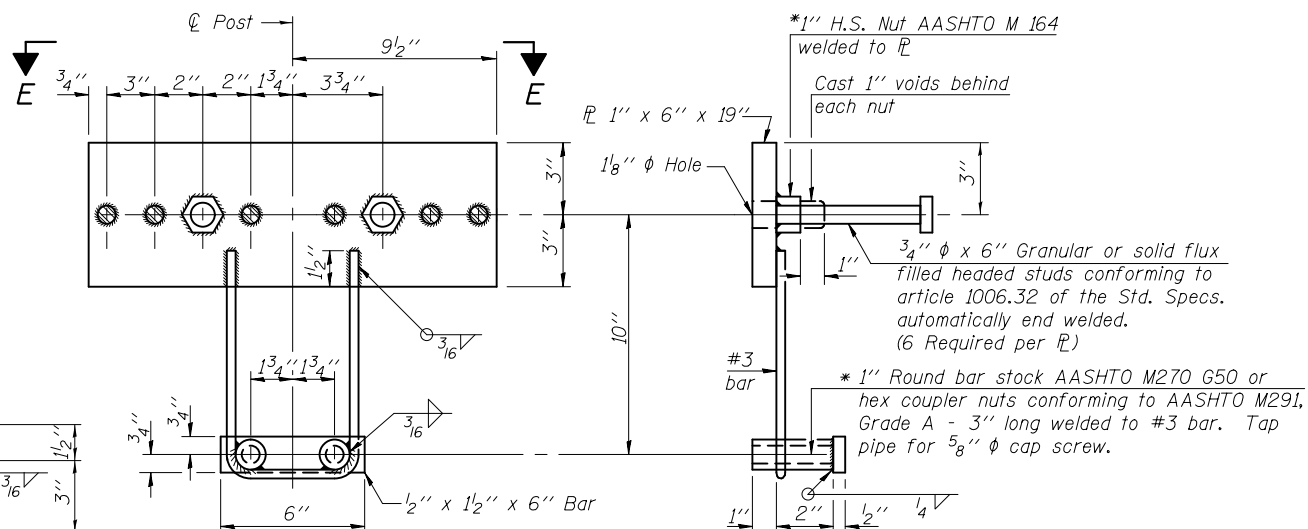
SECTION AT RAIL SPLICE



END OF RAIL DETAILS



PLAN-BOTT. SPLICE TYPICAL



ANCHOR DEVICE

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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	151.0

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 SM.
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.
For rail post spacing, see sheets 3 & 4 of 11.

R-34CWS 7-1-10 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

DESIGNED - Fess Teklehaimanot	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - SEPTEMBER 3, 2014
CHECKED - Ray Ahanchi	PASSED - <i>Carl [Signature]</i>	REVISED -
DRAWN - h.t. duong		REVISED -
CHECKED - FT/GRA		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE
STRUCTURE NO. 038-0184

F.A.S. RTE. 1324	SECTION 38BR	COUNTY IROQUOIS	TOTAL SHEETS 35	SHEET NO. 20
CONTRACT NO. 66A72				

SHEET NO. 7 OF 11 SHEETS

ILLINOIS FED. AID PROJECT