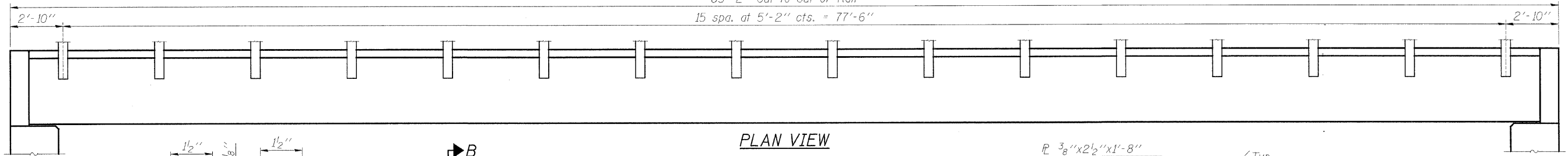
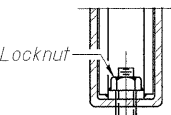


83'-2" Out to Out of Rail  
15 spa. at 5'-2" cts. = 77'-6"

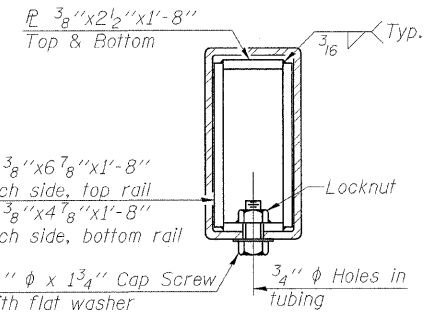


PLAN VIEW



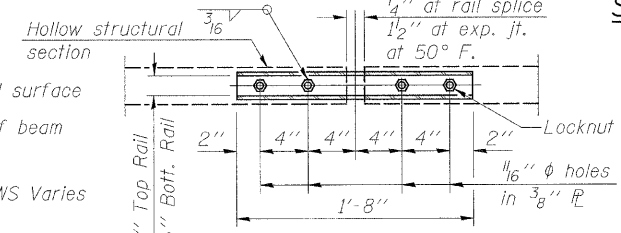
Locknut  
1/8" x 2 1/2" Slotted Holes in hollow structural section  
5/8" φ x 1 3/4" Cap Screw with flat washer & 3/4" φ XS pipe spacer, 1/2" long

RAIL SPLICE CONNECTION AT EXPANSION JT.



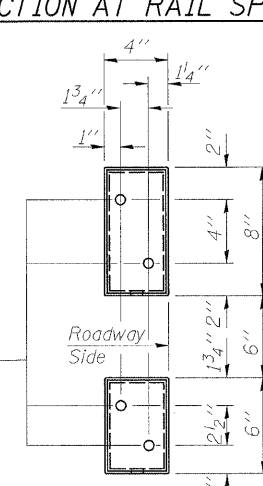
3/8" x 2 1/2" x 1'-8" Top & Bottom  
3/16" Typ.  
3/8" x 6 7/8" x 1'-8" Each side, top rail  
3/8" x 4 7/8" x 1'-8" Each side, bottom rail  
5/8" φ x 1 3/4" Cap Screw with flat washer  
3/4" φ Holes in tubing

SECTION AT RAIL SPLICE

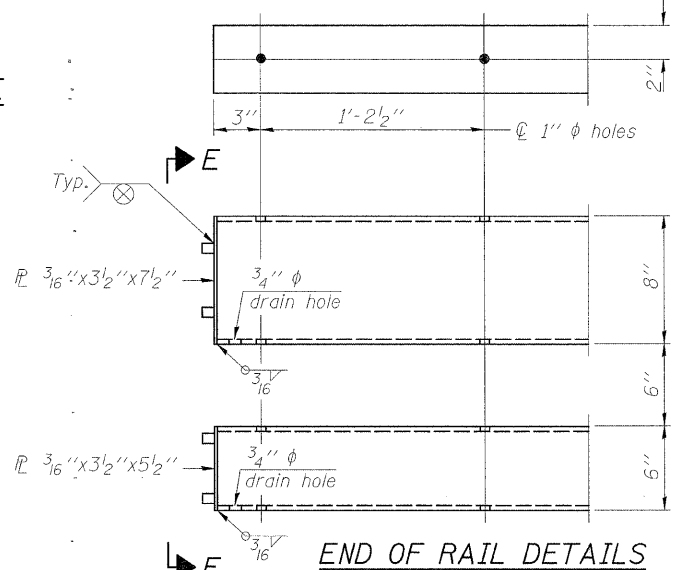


PLAN-BOTT. SPLICE R TYPICAL

Hollow structural section  
1/4" at rail splice  
1/2" at exp. jt. at 50° F.  
Locknut  
1/16" φ holes in 3/8" R  
2 1/2" Top Rail  
2 3/8" Bott. Rail



VIEW E-E



END OF RAIL DETAILS

NOTES:

All field drilled holes shall be coated with an approved zinc rich paint before erection.  
For multi-span bridges, sufficient 1/4"x6"x1'-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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	167

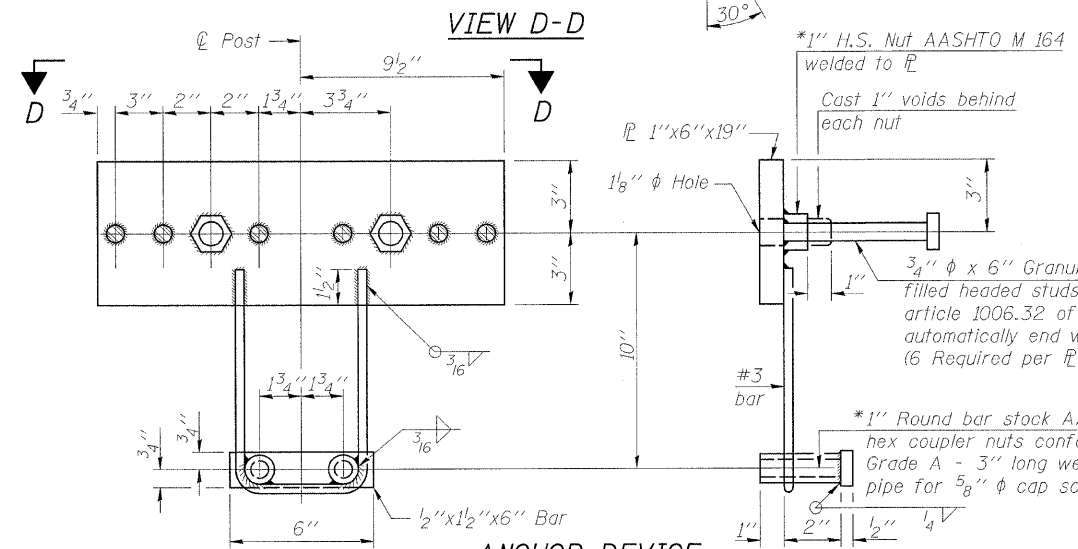
STEEL RAILING, TYPE SM  
SCOUT CAMP ROAD OVER BR. OF APPLE RIVER  
STATION 13+60 (S.N. 043-3276)  
SECTION 09-00133-00-BR  
JO DAVIESS COUNTY  
WHA # 1169D09

ROUTE NO.	SECTION	COUNTY	JOIN SHEETS	SHEET NO.
F.A.S. 73	09-00133-00-BR	Jo Daviess	48	27

STRUCTURAL SHEET NO. 7 OF 12 SHEETS

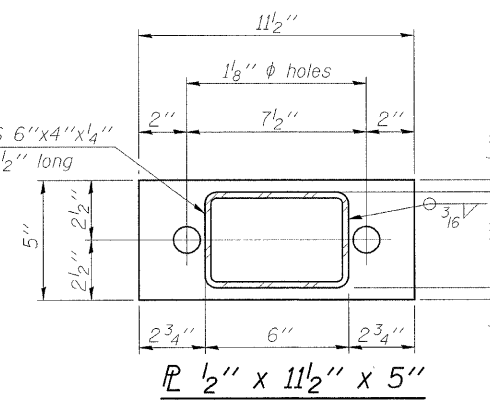
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-

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



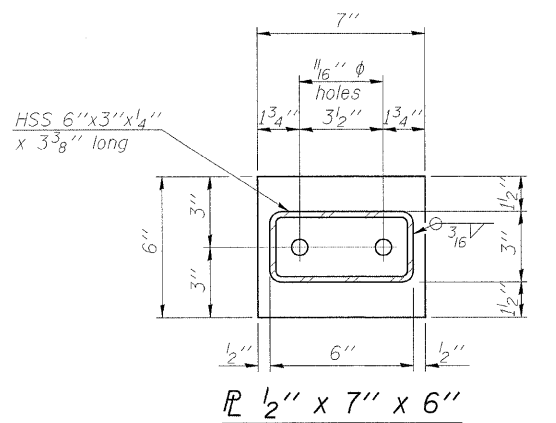
ANCHOR DEVICE

SECTION AT RAIL POST



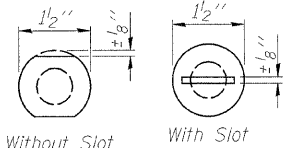
2- 1" φ x 7 3/4" AASHTO M-164 anchor bolts with flat washer and lockwasher  
2- 5/8" φ x 5 3/4" cap screws with flat washer  
1/8" x 7" x 6" Fabric reinforced elastomeric pad  
1/2" x 7" x 6"

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



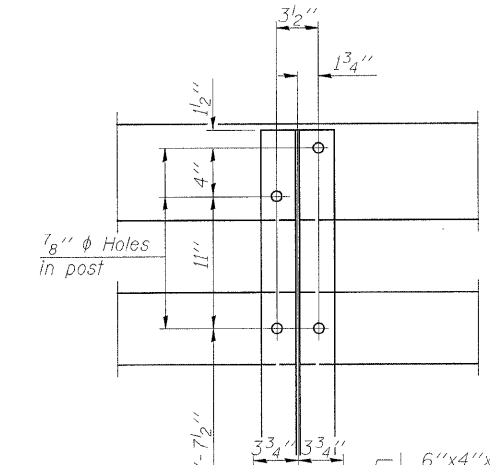
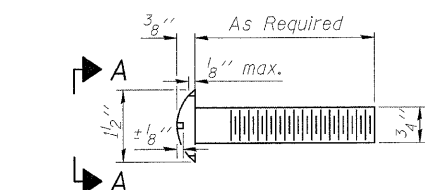
1/2" x 7" x 6"

VIEW A-A

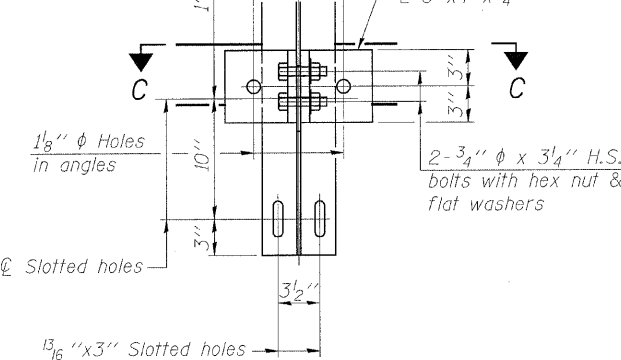


4- 3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ holes in hollow structural section may be drilled in the field.

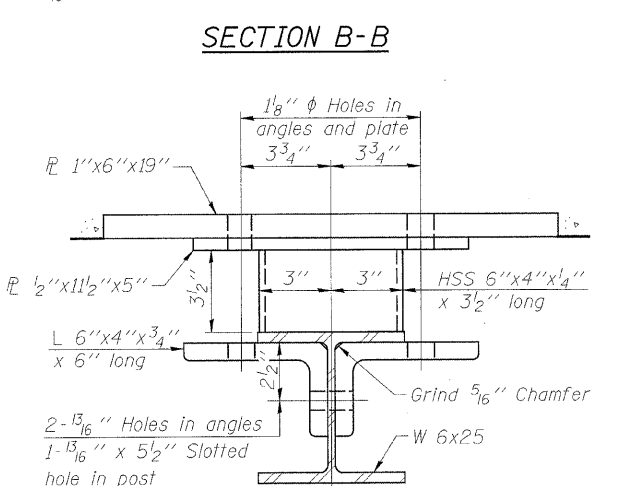
DETAIL OF 3/4" φ ROUND HEAD BOLT



SECTION B-B



SECTION C-C



FILE NAME = s:\PROJECTS\2009\1169D09\JoDaviesCo\_ScoutCampRd\DESIGN\STRUCT\1169D09\_SteelRailing\_TypeSM.dgn