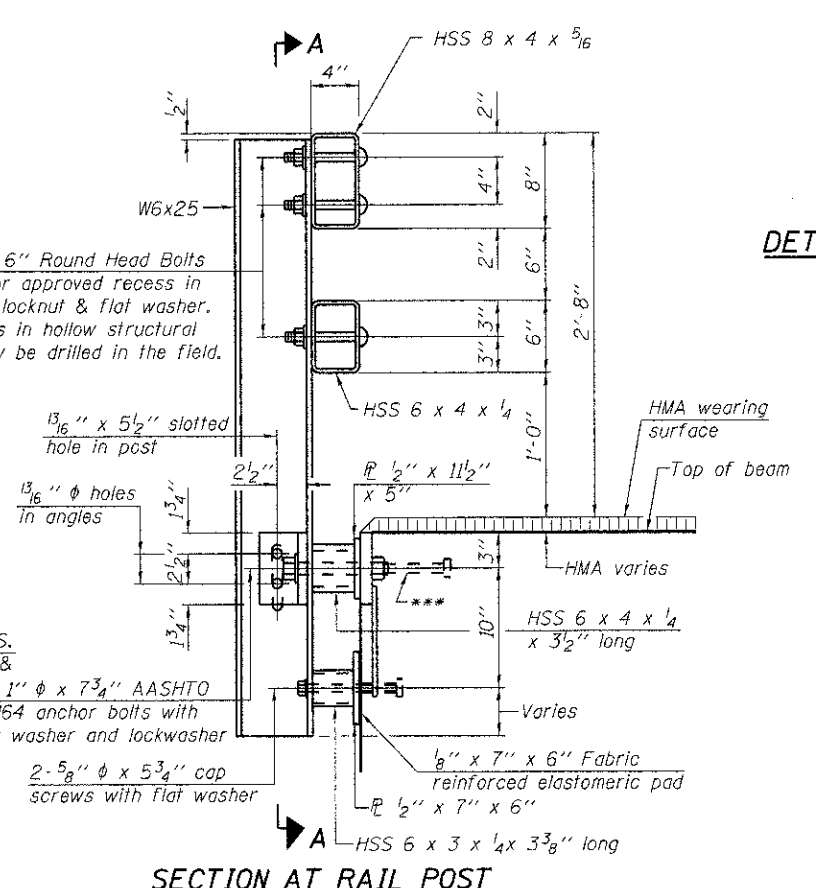
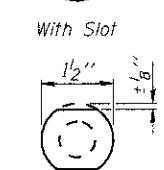
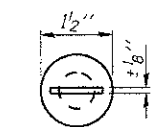
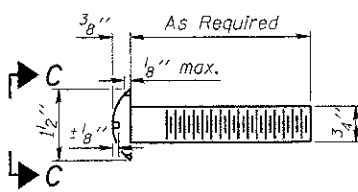


4-3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ holes in hollow structural section may be drilled in the field.

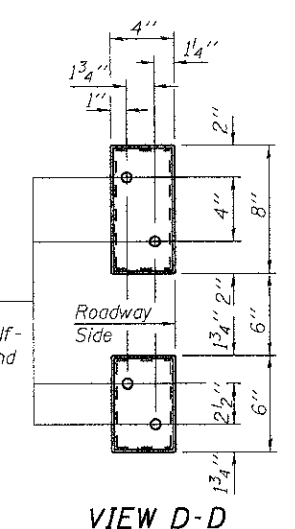


**DETAIL OF 3/4" φ ROUND HEAD BOLT**

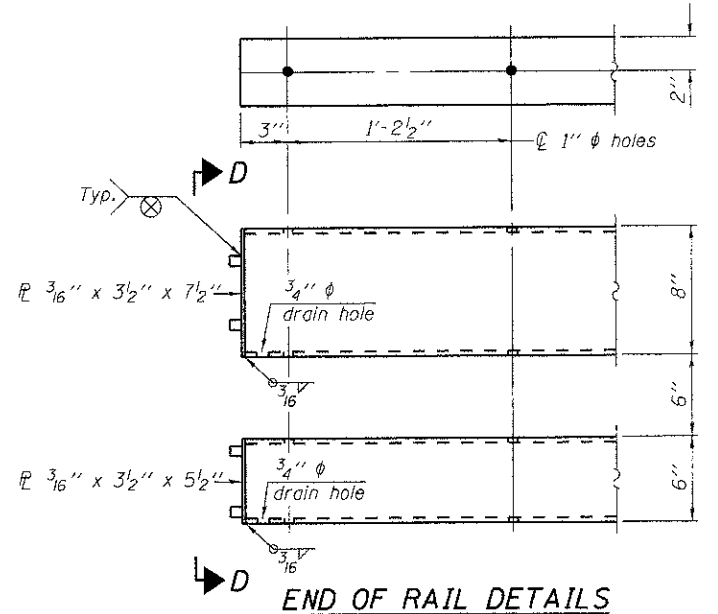


**VIEW C-C**

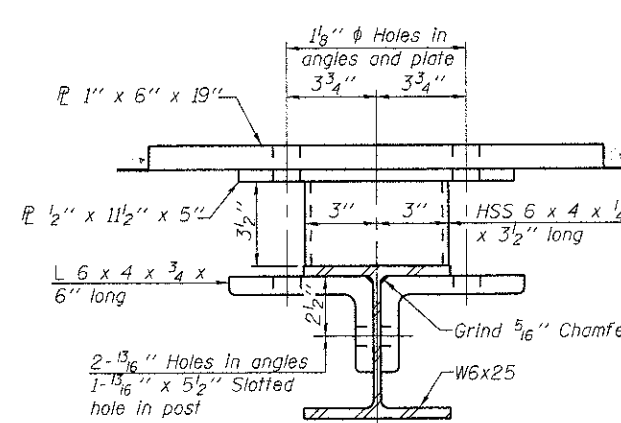
φ - 5/8" reduced base welded studs. Provide 4-5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 6.310.32.



**VIEW D-D**

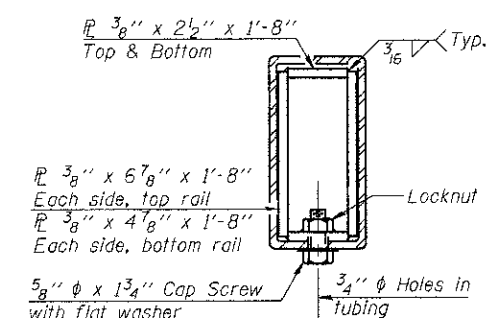
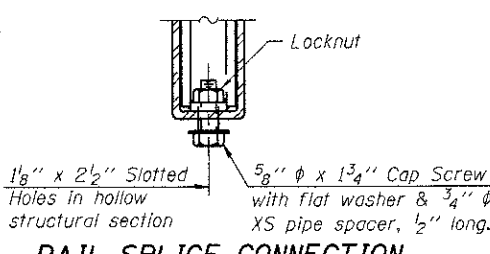


**END OF RAIL DETAILS**

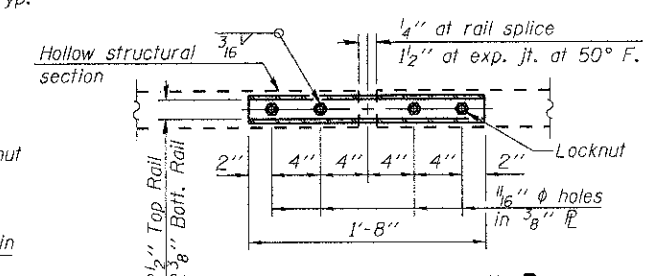


**SECTION B-B**

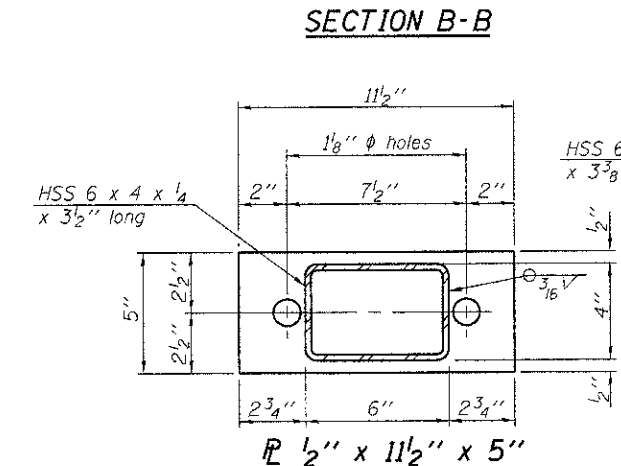
**RAIL SPLICE CONNECTION AT EXPANSION JT.**



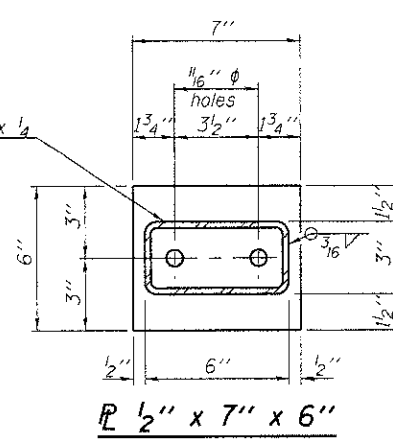
**SECTION AT RAIL SPLICE**



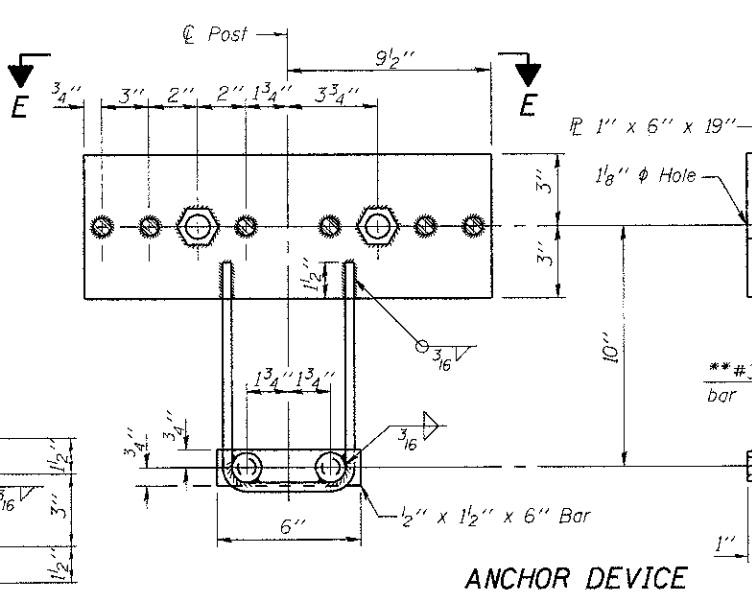
**PLAN-BOTT. SPLICE TYPICAL**



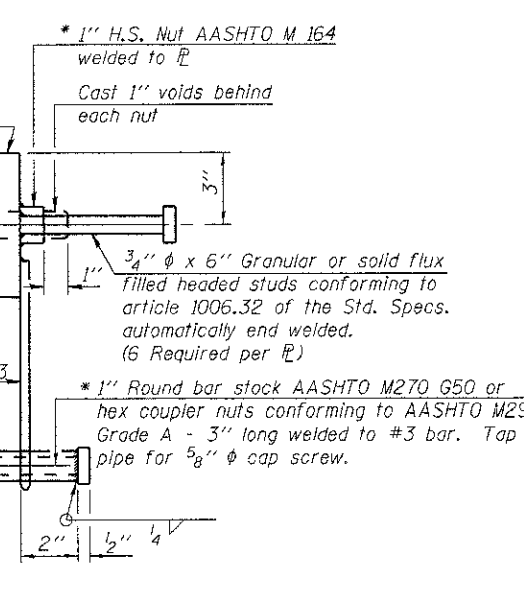
**SECTION B-B**



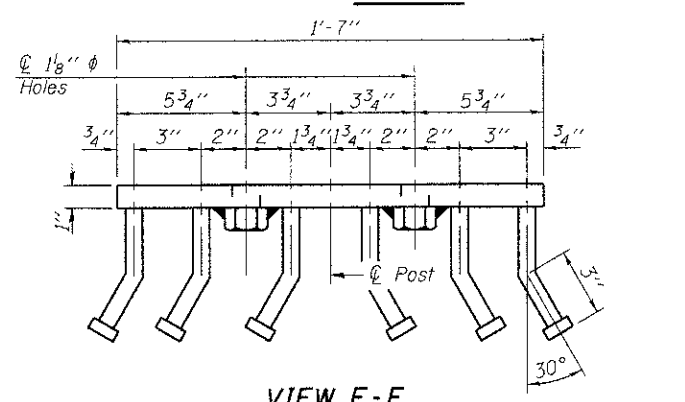
**SECTION AT RAIL SPLICE**



**ANCHOR DEVICE**



**SECTION AT RAIL SPLICE**



**VIEW E-E**

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.  
 All steel rail members 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.

R-34HMAWS 7-1-10 (6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum HMA thickness)

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

\*\* 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".

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type SM	Foot	275

USER NAME =	DESIGNED - KRG	REVISED -
PLOT SCALE = NONE	CHECKED - MJK	REVISED -
PLOT DATE =	DRAWN - GSJ	REVISED -
	CHECKED - MJK	REVISED -

**MID-AMERICA ENGINEERING SERVICES**  
 SPRINGFIELD ILLINOIS

**STEEL RAILING, TYPE SM WITH HOT-MIX ASPHALT WEARING SURFACE**  
 STRUCTURE NO 084-3414  
 SHEET NO. 9 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
624	08-00085-00-BR	SANGAMON	32	18
	STRUCTURE NO. 084-3414	CONTRACT NO. 93585		
STA. 122+30 ILLINOIS FED. AID PROJECT				