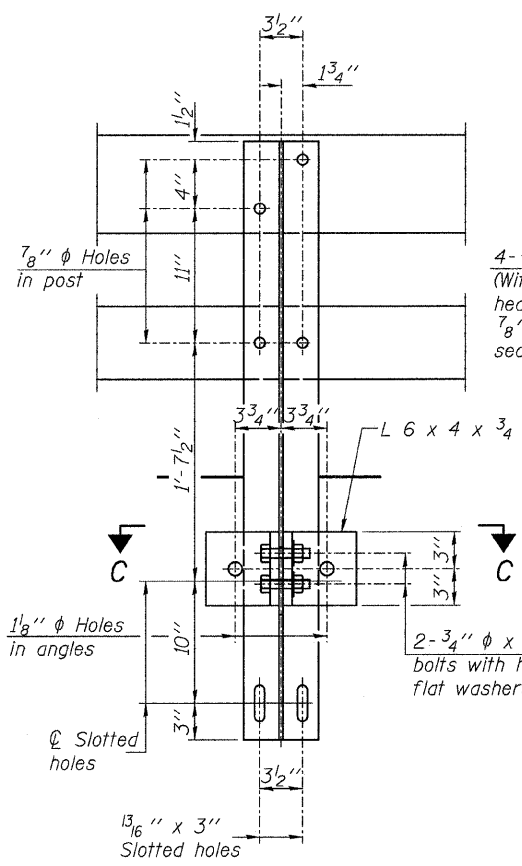
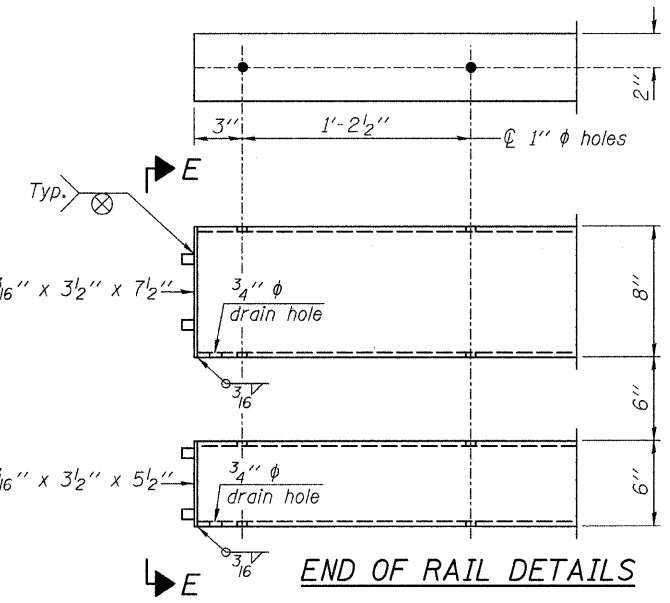
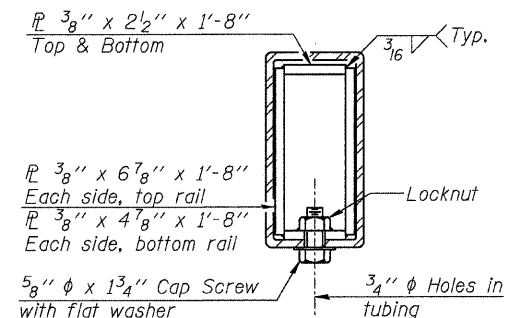
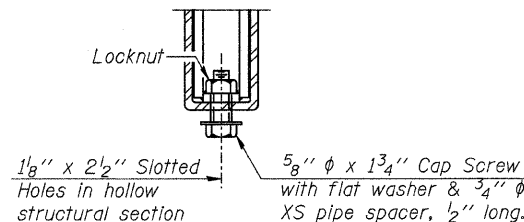
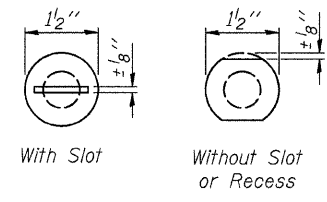
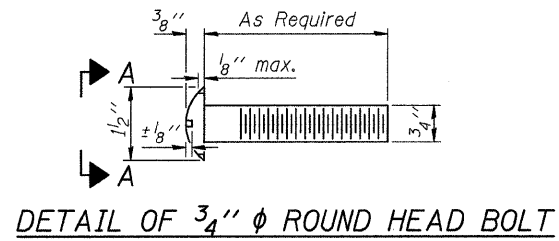


FOR RAIL POST SPACING SEE SH.#8 OF 21.

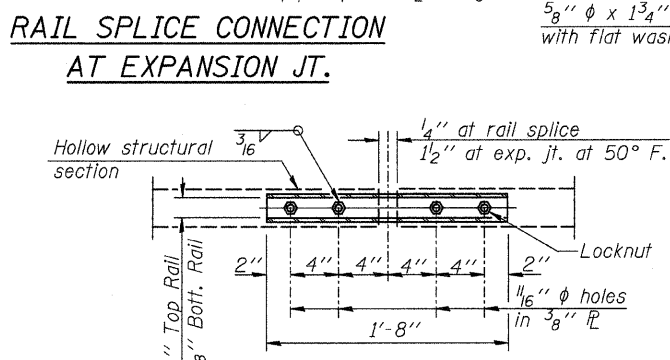
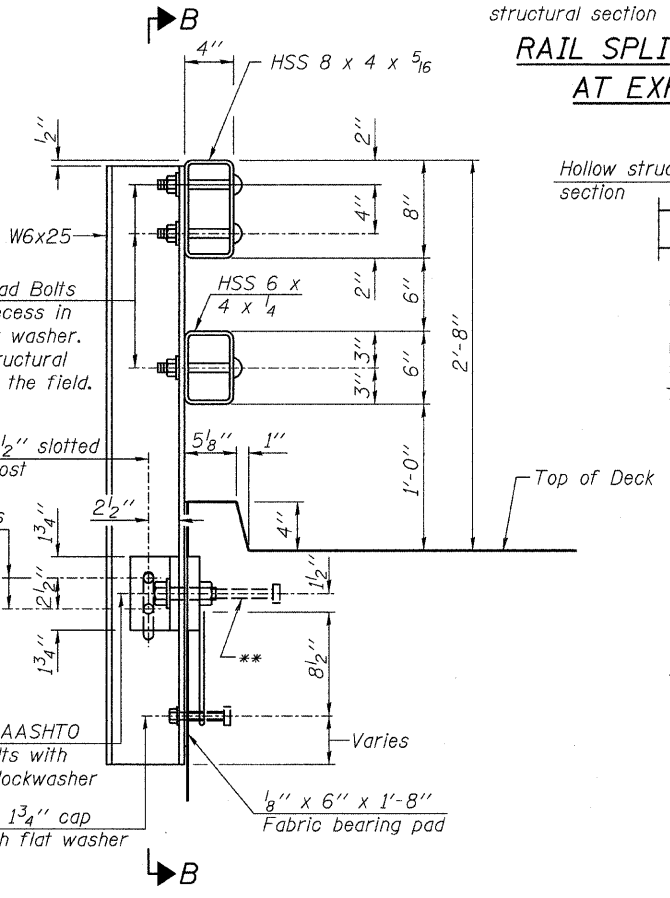


4- 3/4"  $\phi$  x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8"  $\phi$  holes in hollow structural section may be drilled in the field.

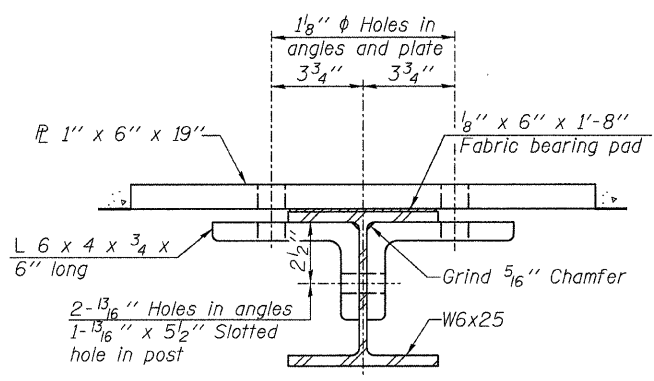
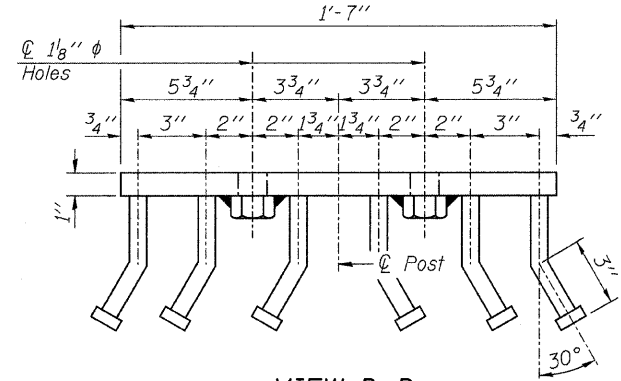
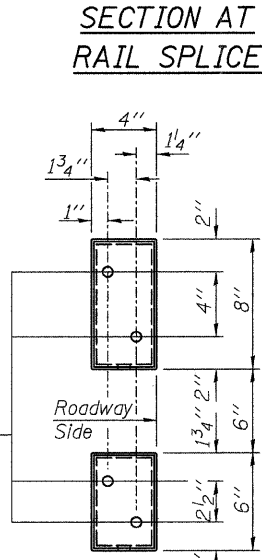
2- 3/4"  $\phi$  x 3 1/4" H.S. bolts with hex nut & flat washers

2- 1"  $\phi$  x 3 3/4" AASHTO M-164 anchor bolts with flat washer and lockwasher

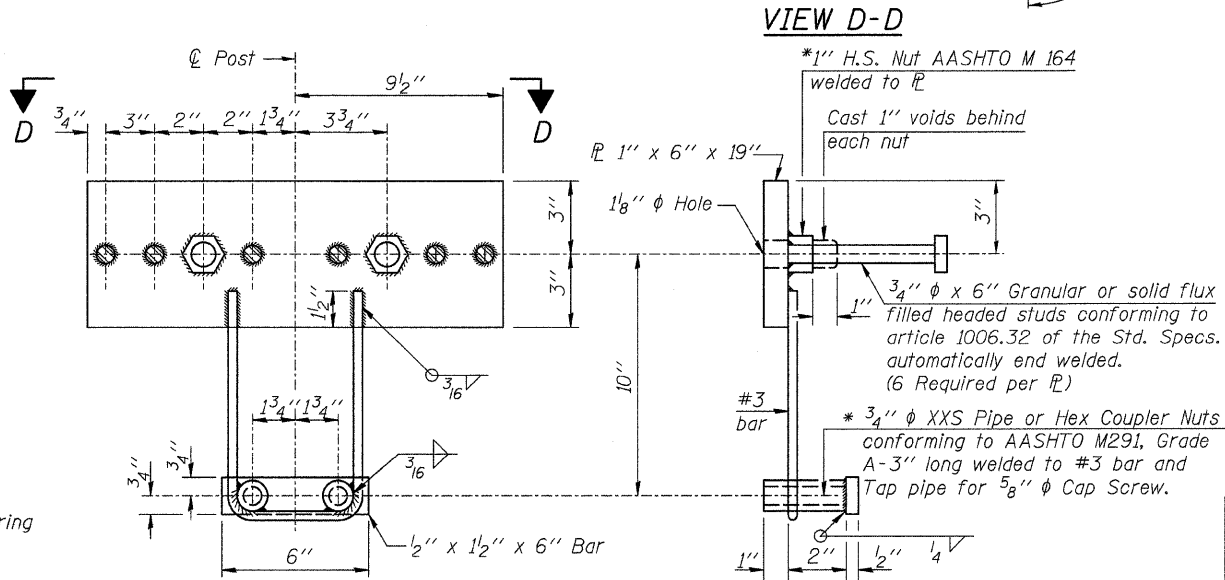
2- 5/8"  $\phi$  x 1 3/4" cap screws with flat washer



1/2" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



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



**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 railing 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	174

**STEEL RAILING TYPE SM, WITH CONCRETE CURB**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 29	10-00649-00-BR	LASALLE	43	17
S.N. 050-3593		CONTRACT NO. 87430		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BRS-0099(043)		

SHEET NO. 10  
21 SHEETS