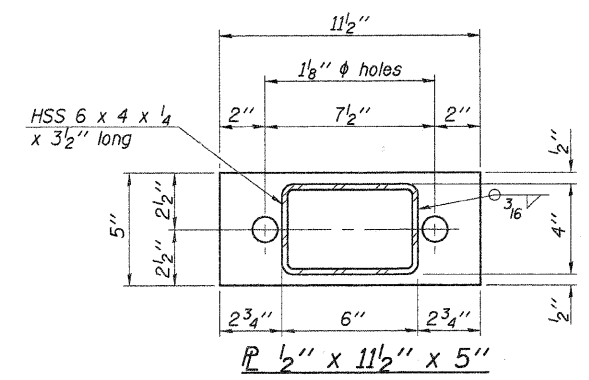
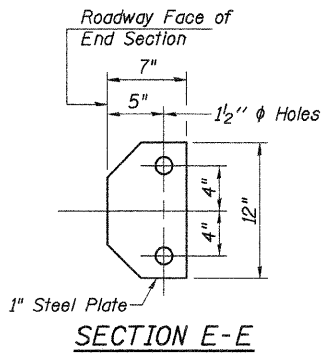
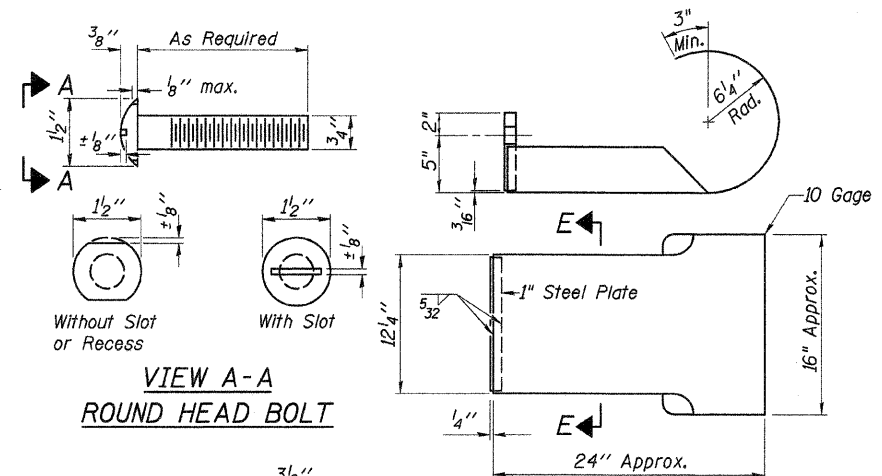


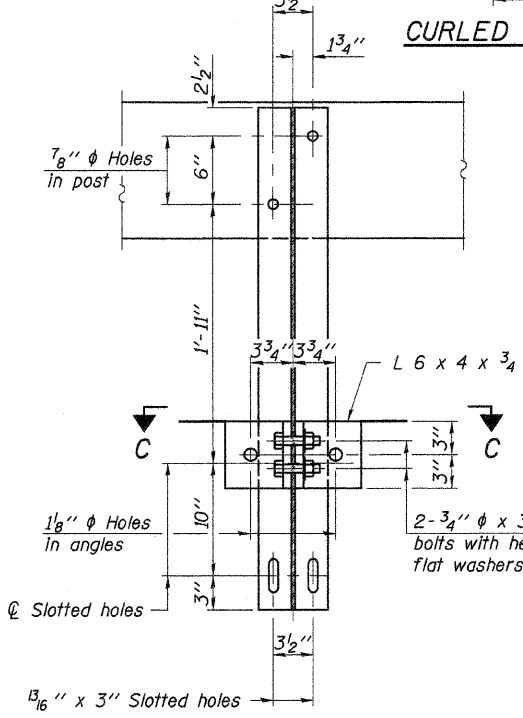
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 244	04-16101-02-BR	IROQUOIS	24	10
ROAD DIST.	ILLINOIS	MARTINTON		

Sheet 7 of 16 Contract No. 87445

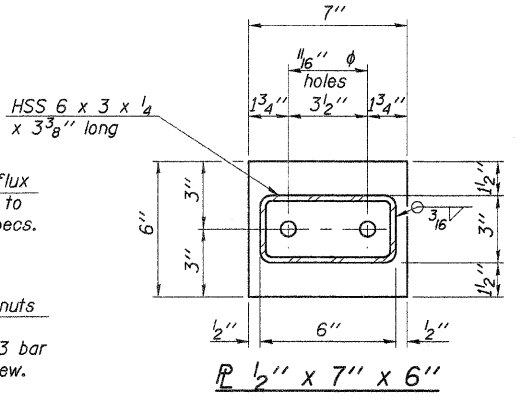
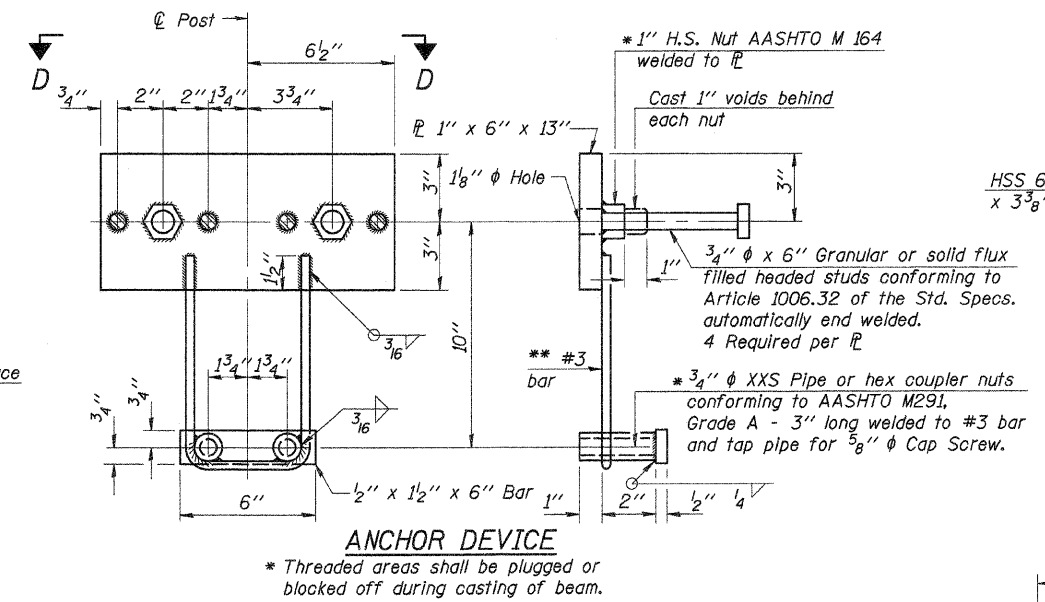
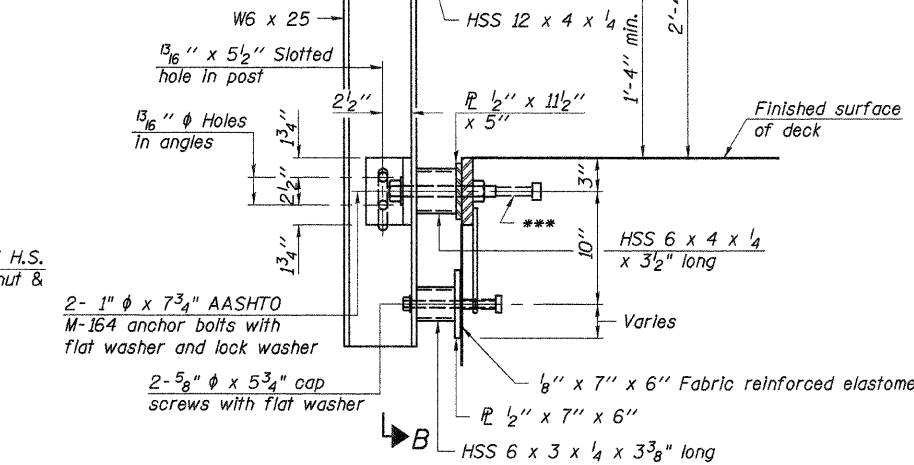
Notes:  
 All field drilled holes shall be coated with an approved zinc rich paint before erection.  
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.  
 All steel rail elements 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.



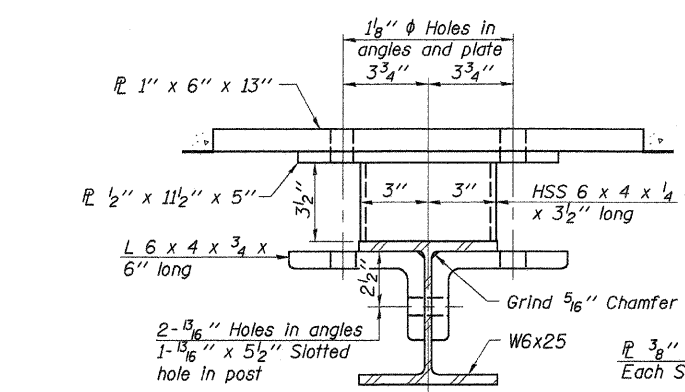
**CURLED END SECTION DETAILS**  
 (4 Required)



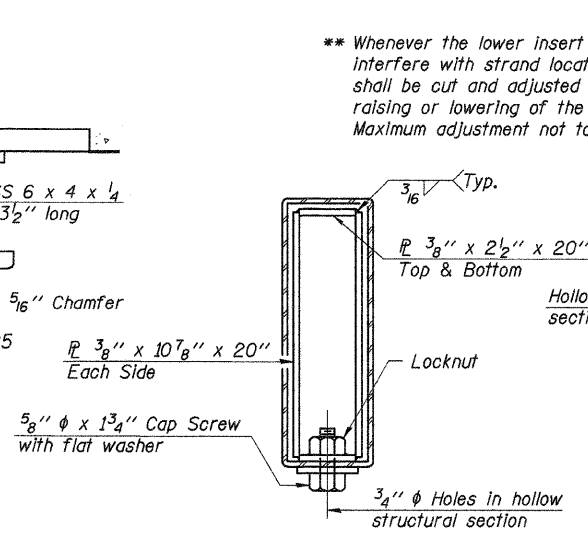
2-3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ holes in hollow structural section may be drilled in the field.



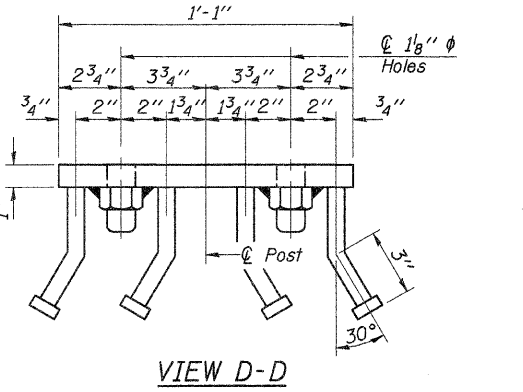
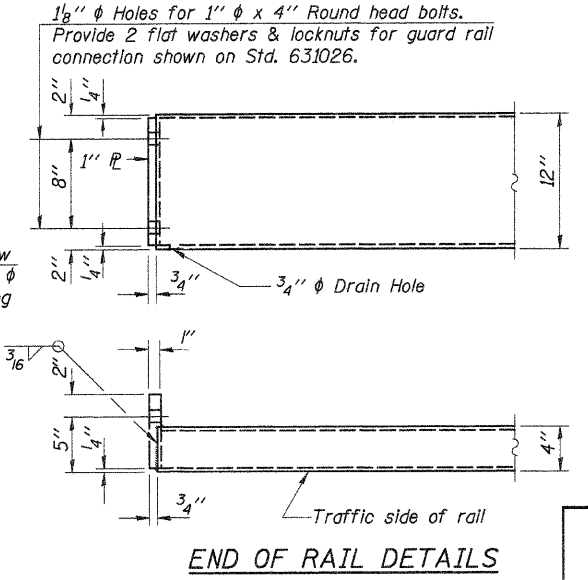
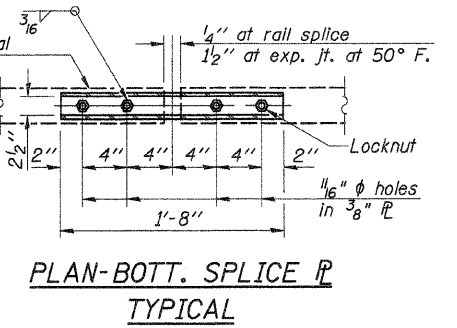
**SECTION C-C**



**SECTIONS AT RAIL SPLICE**



**RAIL SPLICE CONNECTION AT EXPANSION JT.**



**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	265

Note: See Sheet 2 of 16 for Post Spacings.

**STEEL RAILING, TYPE S-1**  
 SECTION 04-16101-02-BR  
 MARTINTON ROAD DISTRICT  
 IROQUOIS COUNTY  
 STATION 38+50

DESIGNED -	A.R.K.
CHECKED -	A.L.S.
DRAWN -	S.A.P.
CHECKED -	A.R.K. & A.L.S.

R-23A

10-1-08 (10'-9" Maximum Post Spacing)

4440 ASH GROVE  
 SPRINGFIELD, IL 62711  
 (217) 793-8800  
 www.fehr-graham.com

**FEHR-GRAHAM & ASSOCIATES, LLC**  
 ENGINEERING AND SCIENCE CONSULTANTS

JOB NO.: 48341  
 FILE: RAIL\_S1-3.dgn  
 DATE: 12/04/09