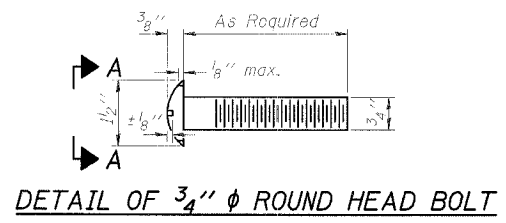
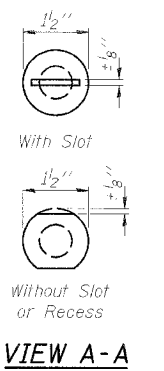


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

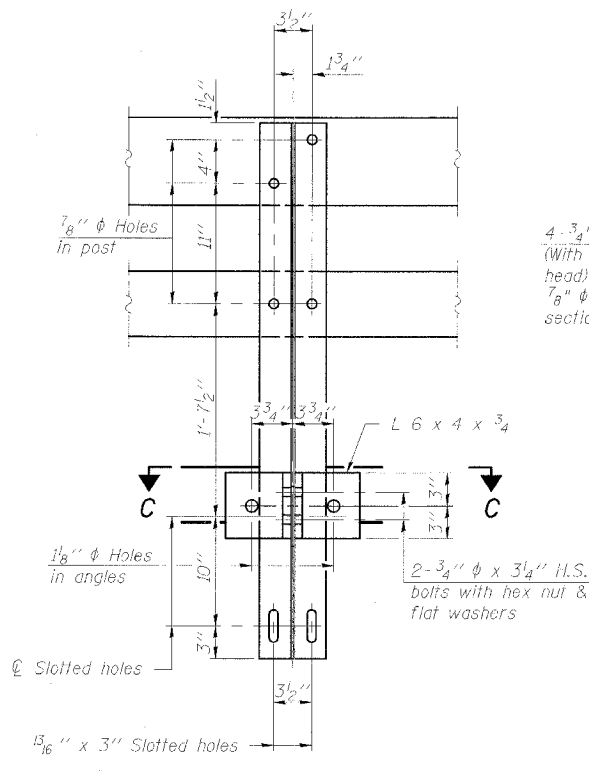
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 840	*	IROQUOIS	39	18
FED. ROAD DIST. NO.		FED. ROAD PROJECT		14 SHEETS
66647		123-BR-1		



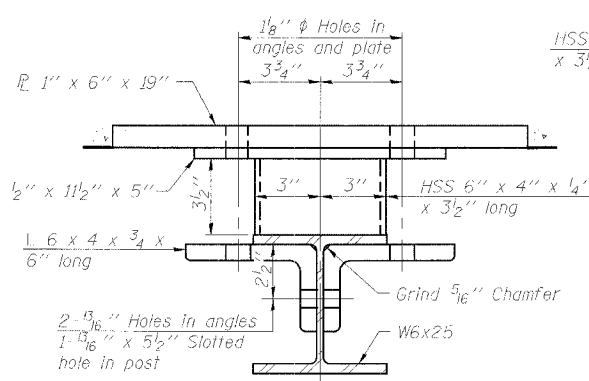
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



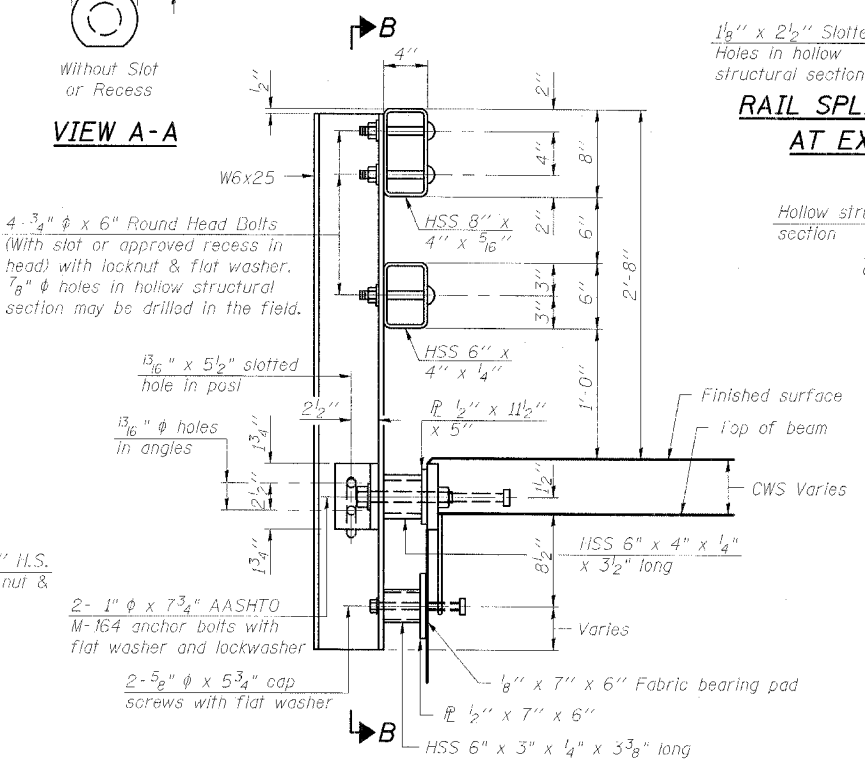
VIEW A-A



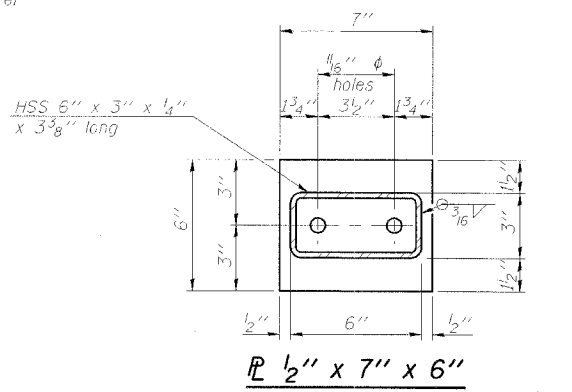
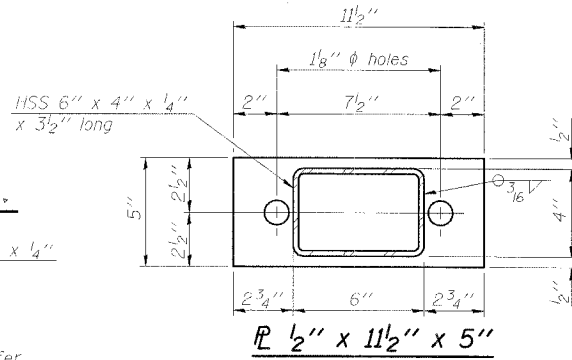
SECTION B-B



SECTION C-C

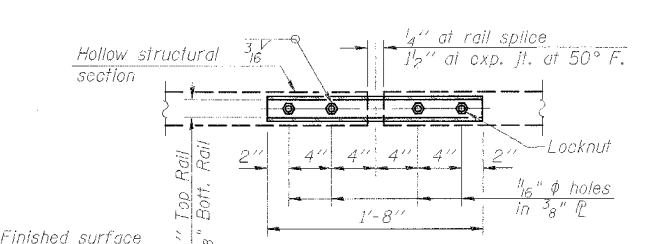
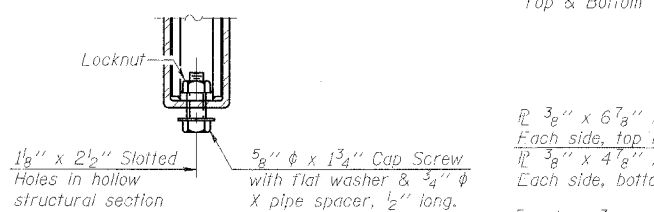


SECTION AT RAIL POST



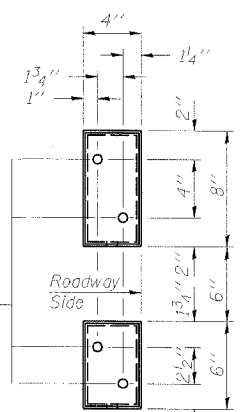
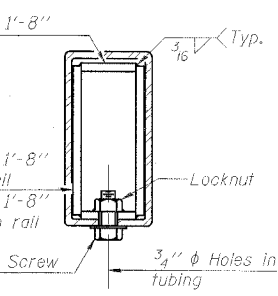
SECTION AT RAIL POST

RAIL SPLICE CONNECTION
AT EXPANSION JT.

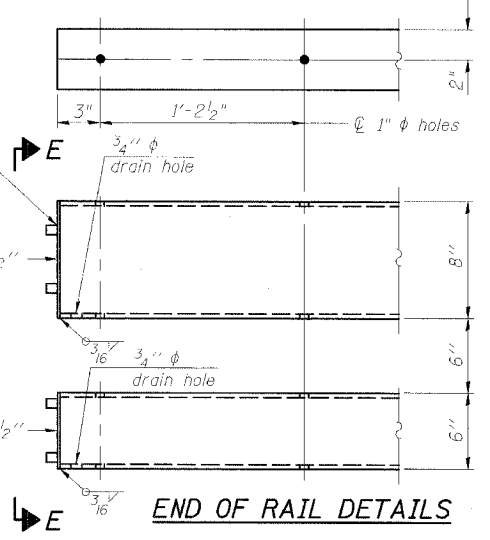


PLAN-BOTT. SPLICE TYPICAL

SECTION AT
RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

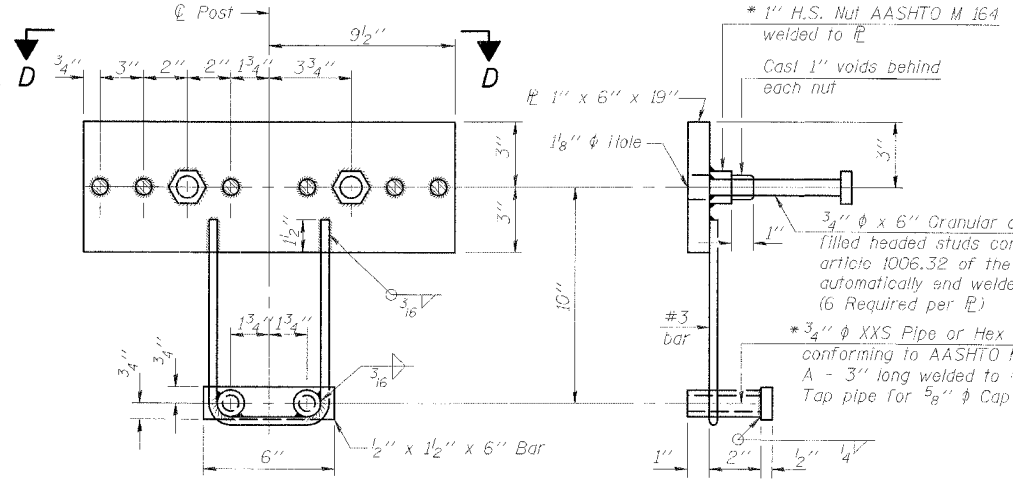
NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.
Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.
All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.
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 Bridge Rail, Type SM.
The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(FXP) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	180

TYPE SM
STEEL BRIDGE RAIL
IL 49 OVER PIGEON CREEK
FAP ROUTE 840 - SECTION 123-BR-1
IROQUOIS COUNTY
STATION 135+74.00
STRUCTURE NO. 038-0174



ANCHOR DEVICE

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

ESCA
CONSULTANTS, INC.

DESIGNED BY:	FMA	04/06
DRAWN BY:	HAG/cj	04/06
CHECKED BY:	ELH/MTD	09/06
APPROVED BY:	RDP	09/06

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