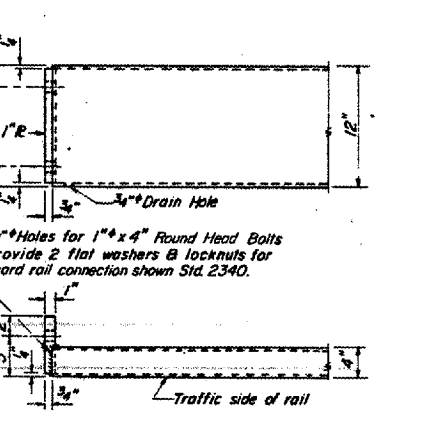
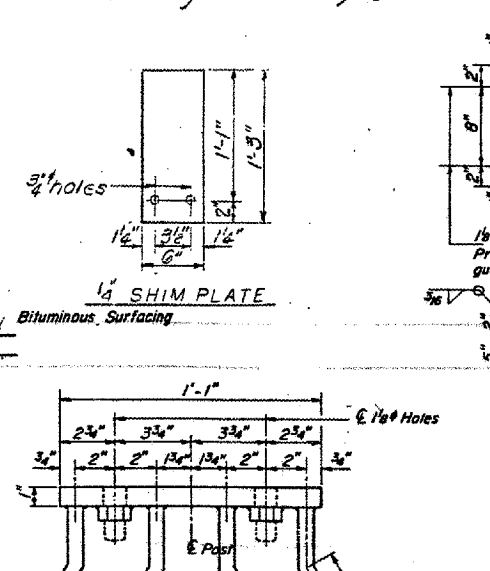
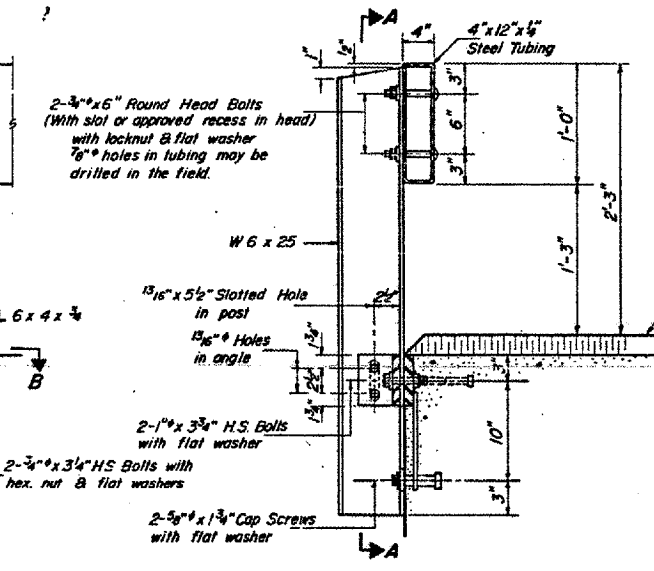
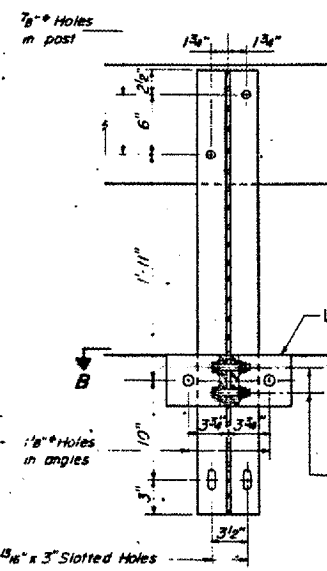
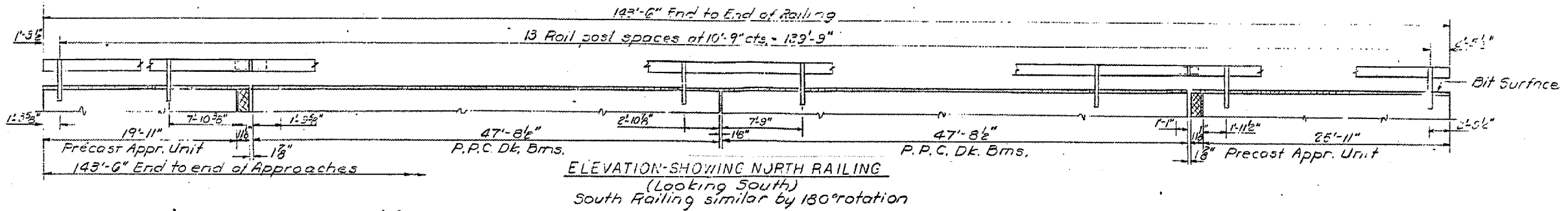


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	SPANS	TOTAL LENGTH	SHEET NO.
614	144BR-3	Co 55	22	16
12 SHEETS				



**NOTES**

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. M-103 except posts and angles shall conform to A.A.S.H.T.O. M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 and ASTM A-385. Galvanized rail shall not be painted.

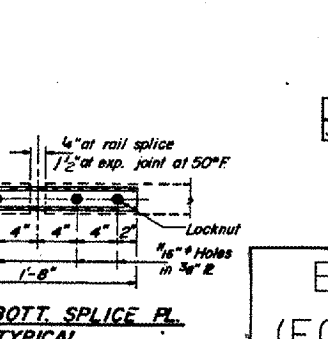
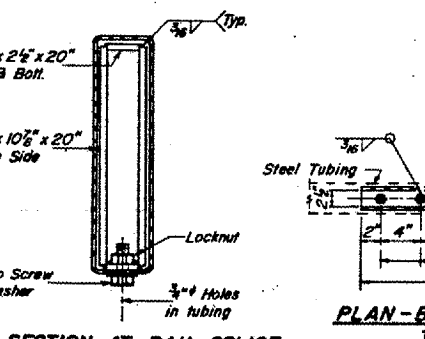
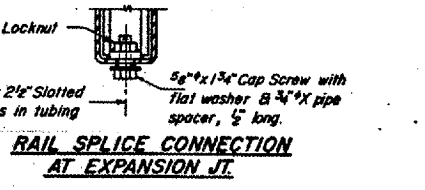
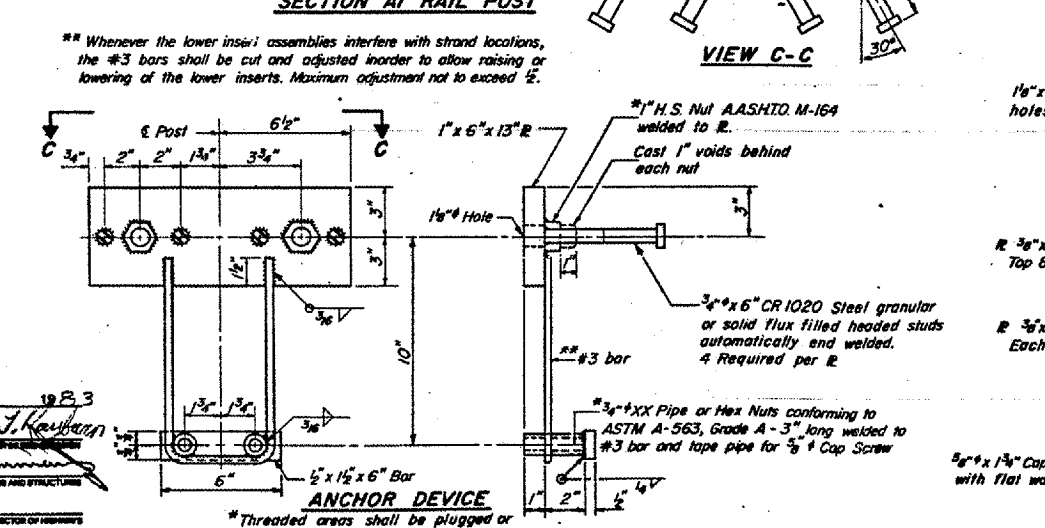
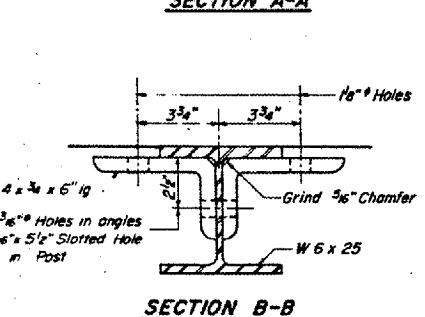
Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per linear foot for STEEL RAILING, TYPE S-1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the post and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 50704(a)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/4 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

For multi-span bridges, sufficient 1/2" x 6" x 1-3/4" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to steel railing.



**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Lin. Ft.	257

TYPE S-1  
STEEL RAILING

EXISTING RAIL PLANS  
(FOR INFORMATION ONLY)  
FAP 614 (IL 78)  
SECTION (144BR-3)D  
CASS COUNTY

DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: F.M.  
CHECKED: KDC

Tune G. 10B3  
EXAMINED: [Signature]  
PASSED: [Signature]  
APPROVED: [Signature]