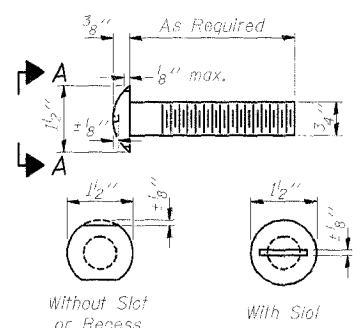
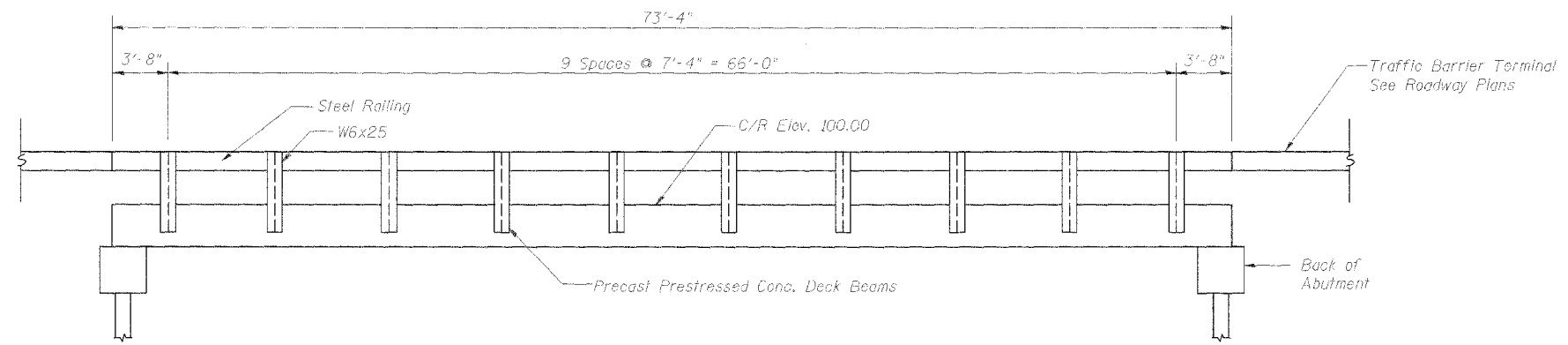


ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
TR 135	*	Vermilion	8	7
FED. ROAD DIST. NO. 7				
ILLINOIS				
FED. AID PROJECT-				

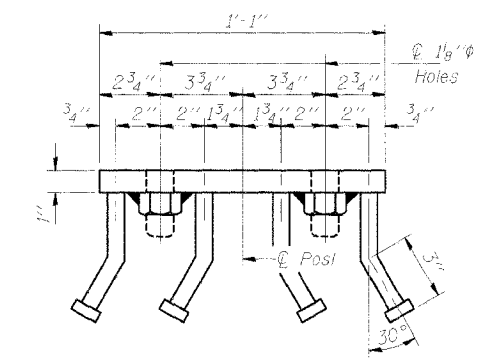
\*00-15132-00-BR



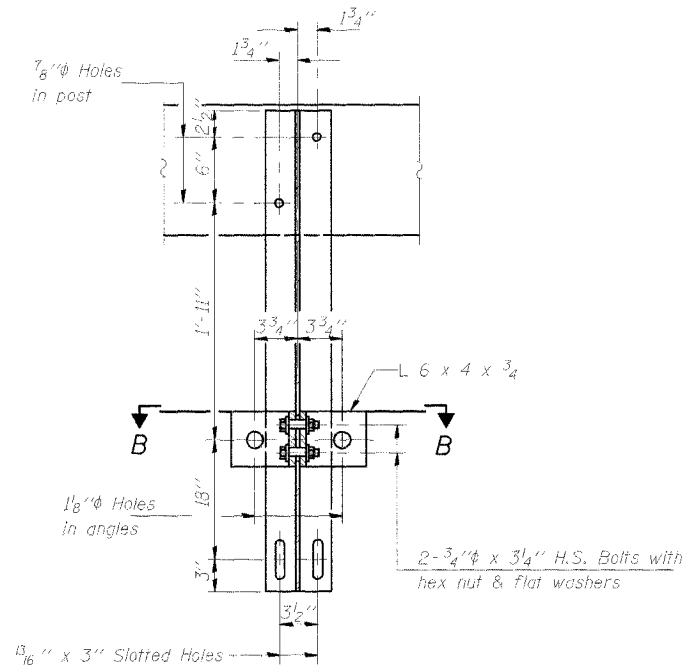
**VIEW A-A  
ROUND HEAD BOLT**



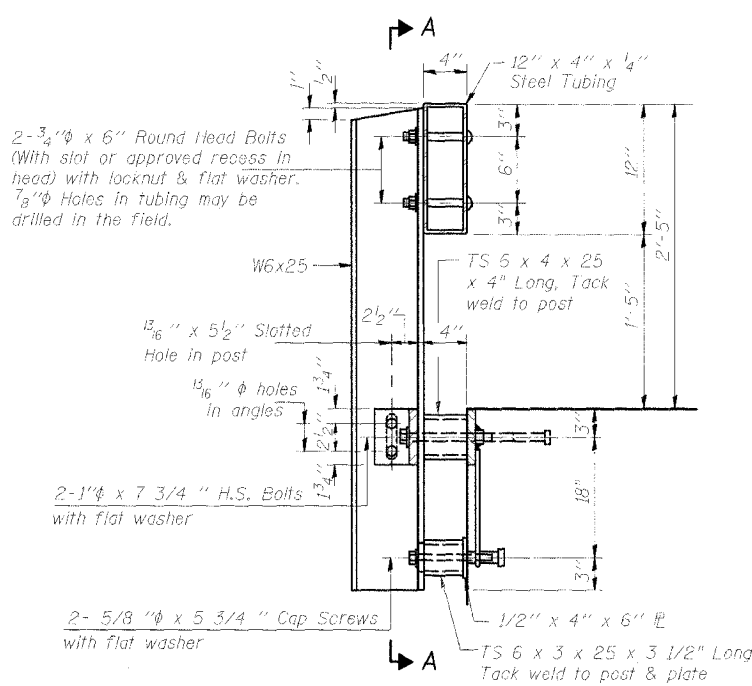
**STEEL RAILING ELEVATION**



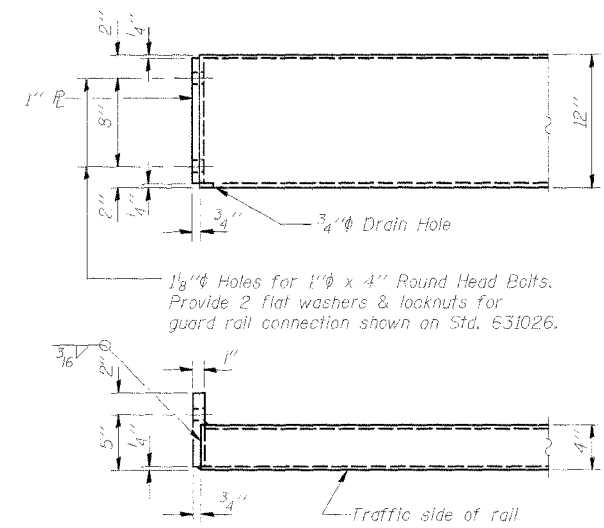
**VIEW C-C**



**SECTION A-A**



**SECTION AT RAIL POST**



**END OF RAIL DETAILS**

**NOTES**

Hollow structural steel tubing 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 requirement 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 in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-365. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL RAILING, TYPE S-1.

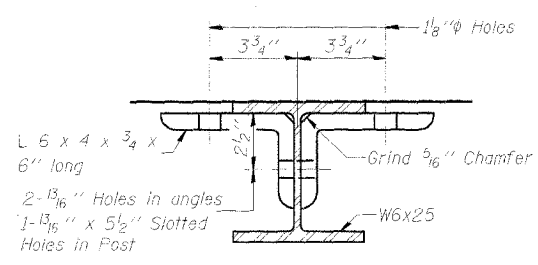
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 760.07 Type II or place 3/8\"/>

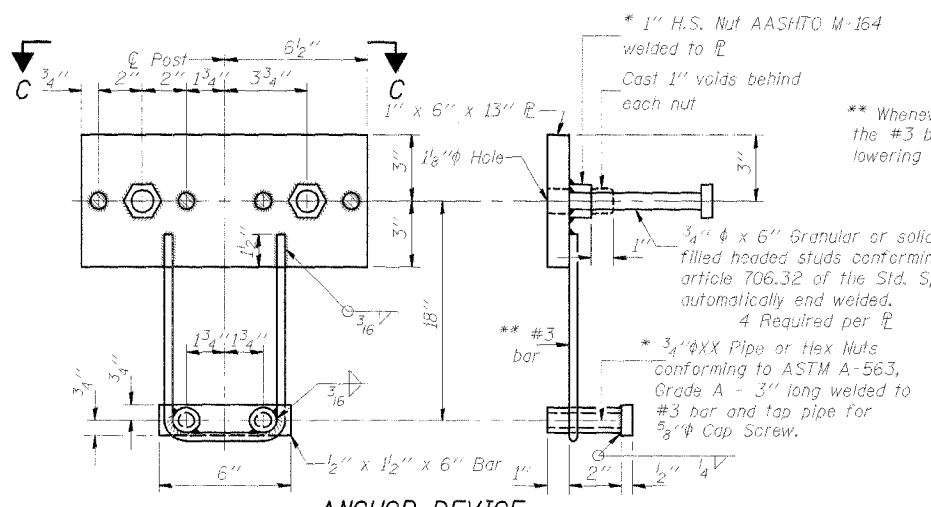
The 3/4\"/>

The 1\"/>

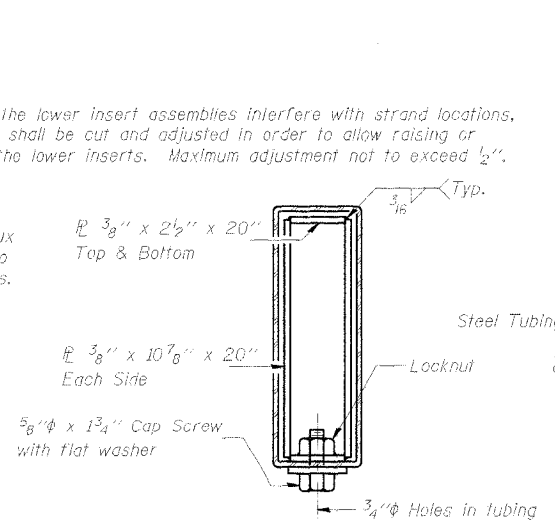
All field drilled holes shall be coated with an approved zinc rich paint before erection.



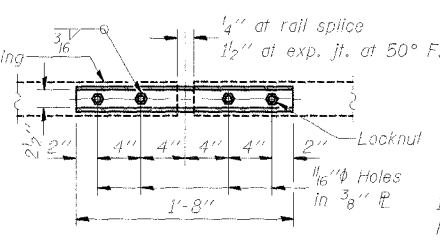
**SECTION B-B**



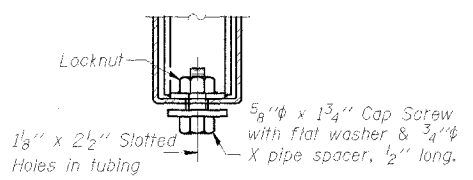
**ANCHOR DEVICE**



**SECTIONS AT RAIL SPLICE**



**PLAN-BOTT. SPLICE TYPICAL**



**RAIL SPLICE CONNECTION AT EXPANSION JT.**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing Type S-1	Foot	147

R-23A 7-1-94

DSGN	R.J. Wagner				
DR	R.J. Wagner				
CHK	K.E. Brandau				
APVD	K.E. Brandau	NO.	DATE	REVISION	BY

**FRAUENHÖFFER**

Frauenhoffer and Associates, P.C. Consulting Engineers  
3002 Crossing Court Champaign, IL 61821 217-351-6268

**STEEL RAILING TYPE S-1**

PILOT ROAD DISTRICT  
SECTION 00-15132-00-BR  
VERMILION COUNTY

SHEET	7
DWG NO.	pl11-s1.dgn
DATE	SEP 2004
PROJ NO.	20054