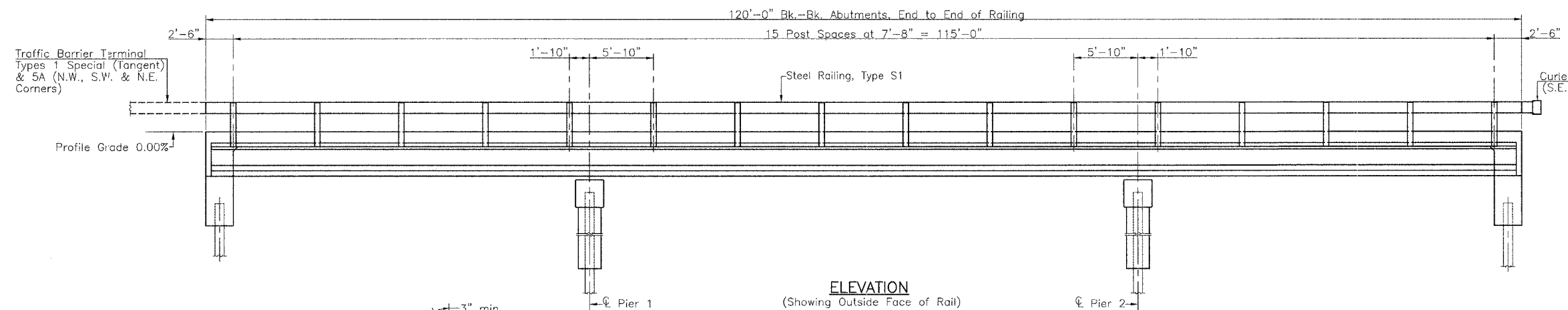
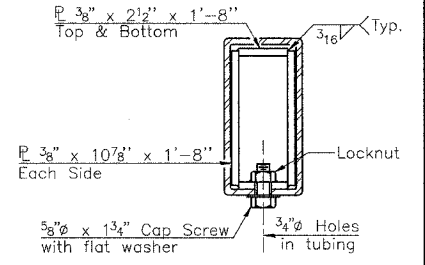


| RTE.    | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------|---------|--------|--------------|-----------|
| C.H. 28 | *       | **     | 24           | 11        |

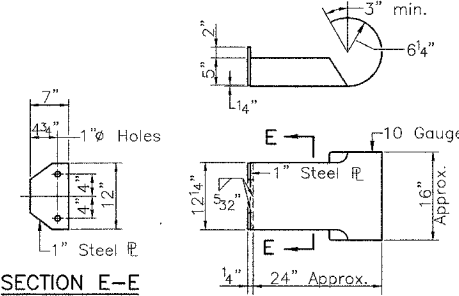
PROJECT BRS-174(103)  
 \* 03-00085-00-BR & 03-00126-00-BR  
 \*\* MACOUPIN COUNTY & MONTGOMERY COUNTY  
 Sheet 7 of 17



**ELEVATION**  
(Showing Outside Face of Rail)

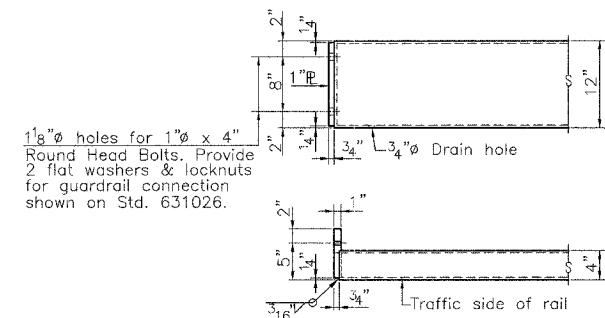


**SECTION AT RAIL SPLICE**

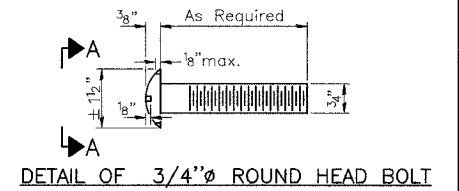


**SECTION E-E**

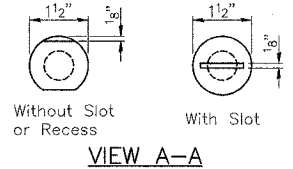
**CURLED END SECTION DETAILS (1 Required)**



**END OF RAIL DETAILS**



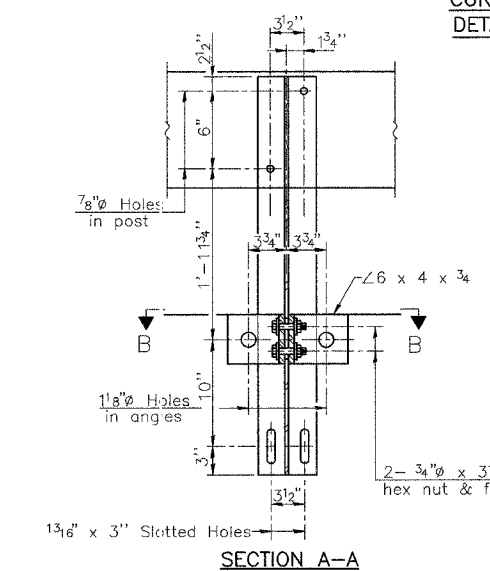
**DETAIL OF 3/4" ROUND HEAD BOLT**



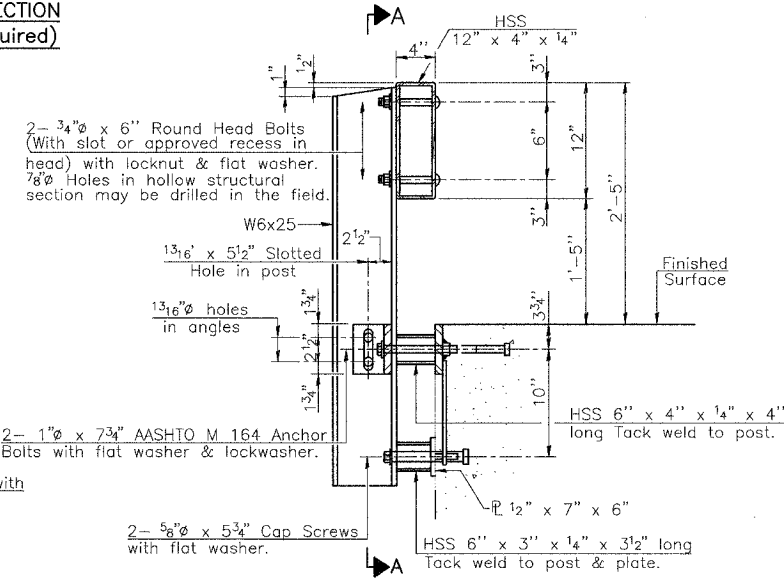
**VIEW A-A**

**NOTES**

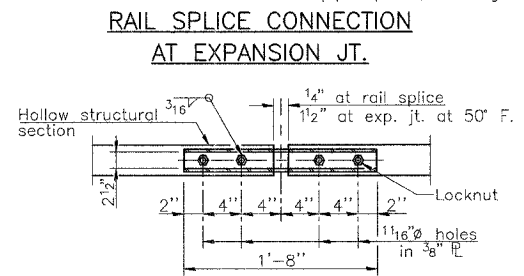
Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.  
 All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and 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 Railing, Type S1.  
 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 S1.  
 For the 1/2" x 7" x 6" plates that come in contact with concrete,



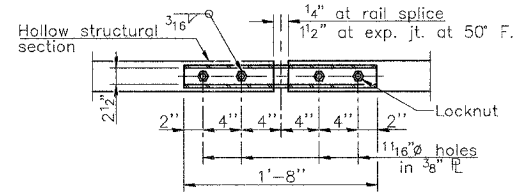
**SECTION A-A**



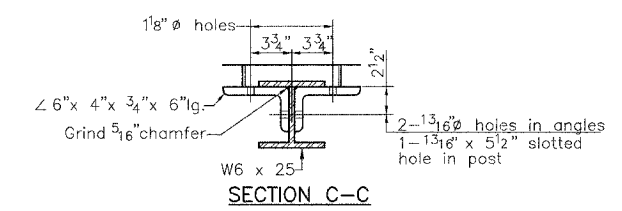
**SECTION AT RAIL POST**



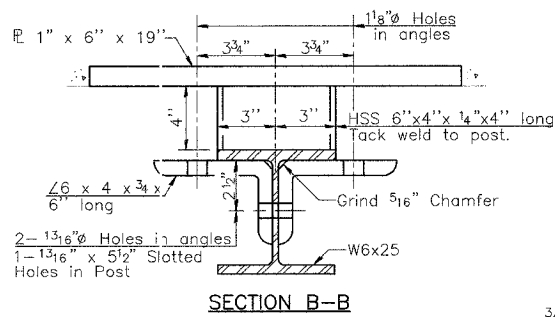
**RAIL SPLICE CONNECTION AT EXPANSION JT.**



**PLAN-BOTT. SPLICE PLATE TYPICAL**



**SECTION C-C**

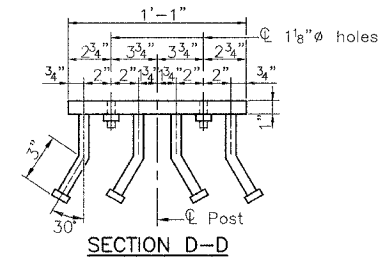


**SECTION B-B**



**ANCHOR DEVICE**

\* Threaded areas shall be plugged or blocked off during casting of deck.



**SECTION D-D**

**BILL OF MATERIAL**

| Item                   | Unit | Quantity |
|------------------------|------|----------|
| Steel Railing, Type S1 | Foot | 240      |

**RAILING**  
 C.H. 28 OVER MACOUPIN CREEK  
 SECTION 03-00085-00-BR  
 MACOUPIN COUNTY  
 SECTION 03-00126-00-BR  
 MONTGOMERY COUNTY

FILE NAME: MAGERL (REV. 8/4/08)