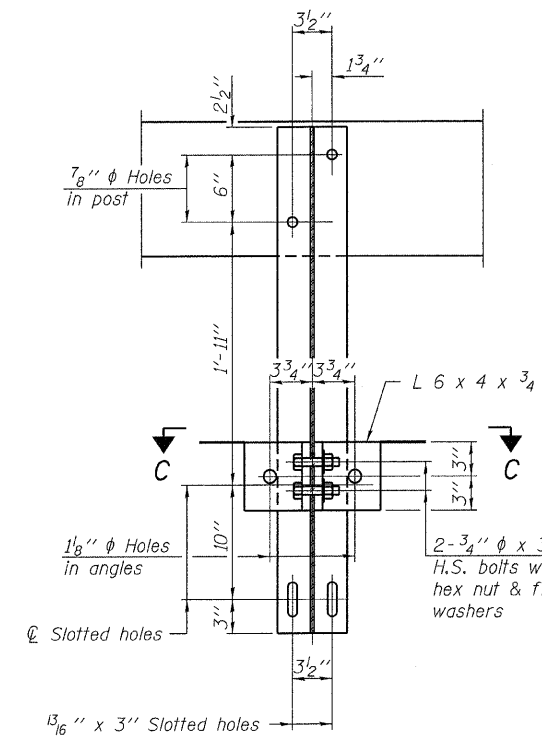
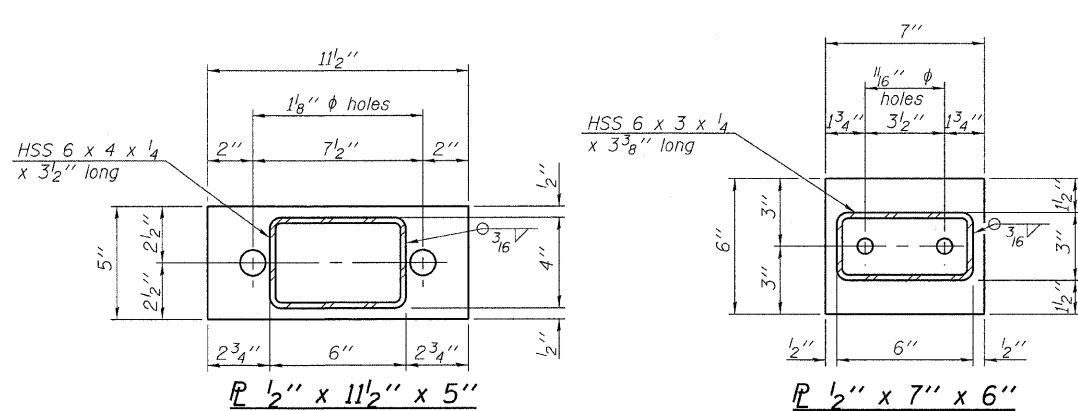
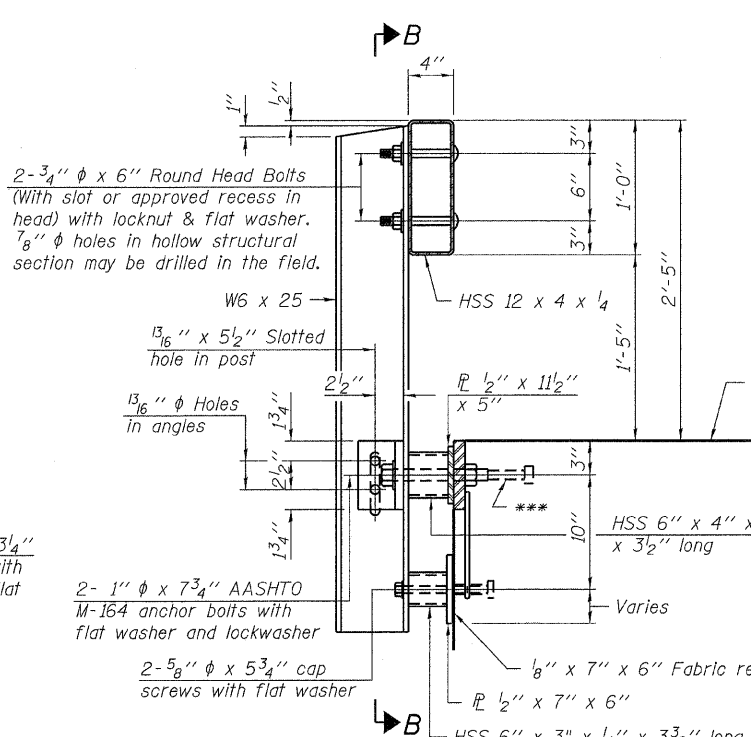


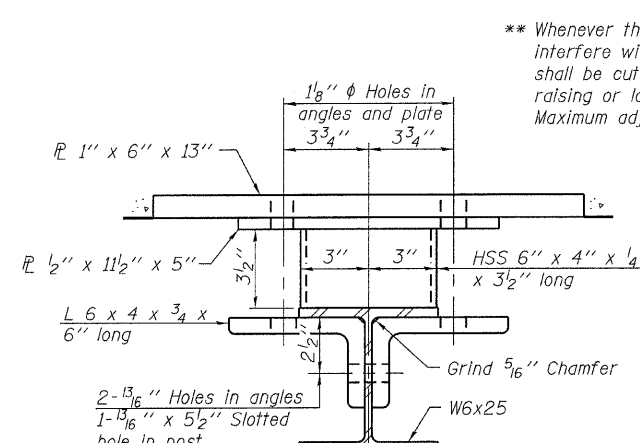
**VIEW A-A  
ROUND HEAD BOLT**



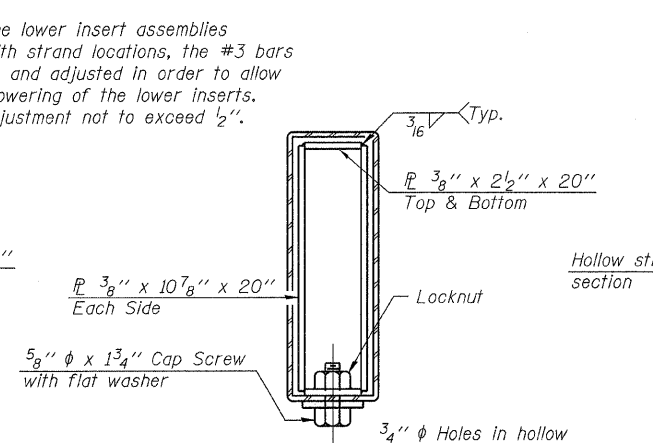
**SECTION C-C**



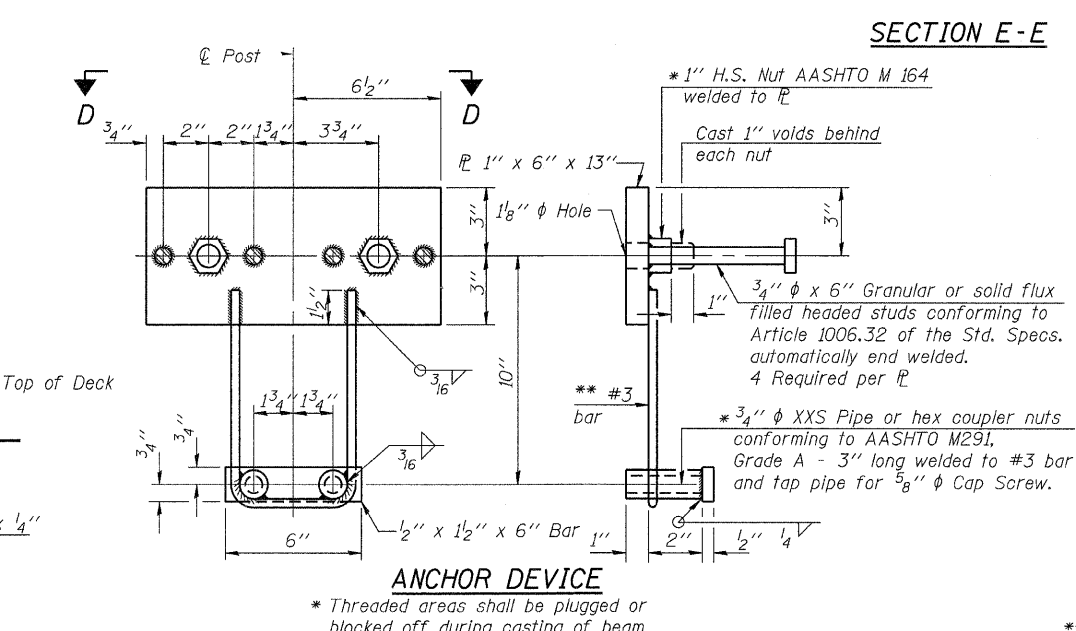
**SECTION AT RAILING POST**



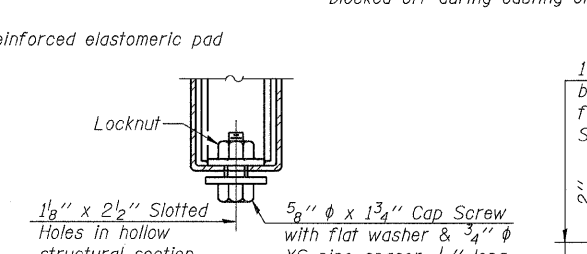
**SECTION C-C**



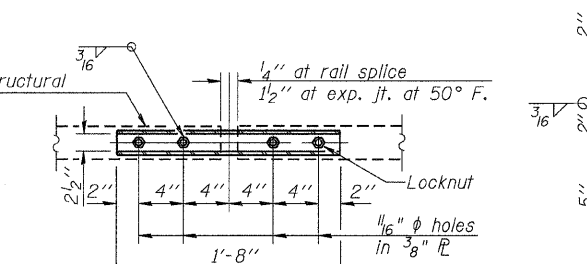
**SECTIONS AT RAIL SPLICE**



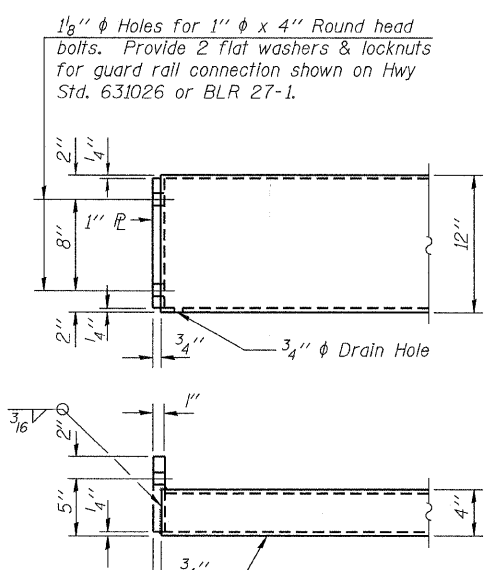
**ANCHOR DEVICE**



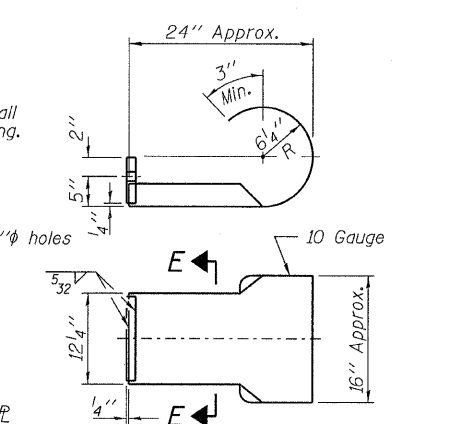
**RAIL SPLICE CONNECTION  
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE PLATE  
TYPICAL**

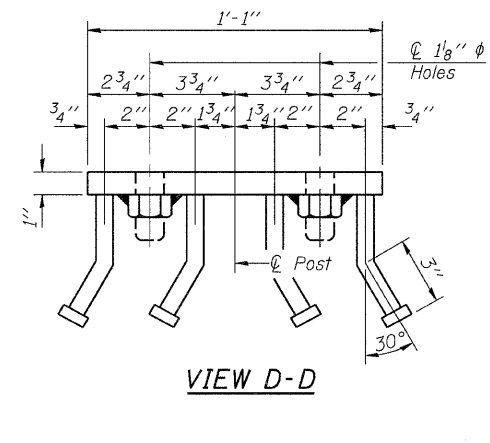


**END OF RAIL DETAILS**



**SECTION E-E  
CURLLED END SECTION DETAILS**

**Notes:**  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch 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.



**VIEW D-D**

**BILL OF MATERIAL**

| Item                    | Unit | Quantity |
|-------------------------|------|----------|
| Steel Railing, Type S-1 | Foot | 96       |

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

|                                    |             |                   |           |
|------------------------------------|-------------|-------------------|-----------|
| FILE NAME = 100322-shr-bridge.dgn  | USER NAME = | DESIGNED - A.S.L. | REVISED - |
| HAMPTON, LENZINI AND RENWICK, INC. |             | CHECKED - M.G.B.  | REVISED - |
| 3035 STEVENSON DRIVE, SUITE 201    |             | DRAWN - D.T.M.    | REVISED - |
| SPRINGFIELD, ILLINOIS 62702        |             | CHECKED - M.G.B.  | REVISED - |
| ILLINOIS PROFESSIONAL DESIGN FIRM  |             |                   |           |
| LS / PE / SE CORP.                 |             |                   |           |
| 184.000989                         |             |                   |           |

**STATE OF ILLINOIS  
VERMILION COUNTY HIGHWAY DEPARTMENT**

**STEEL RAILING, TYPE S-1  
STRUCTURE NO. 092-3513**  
SHEET NO. 5 OF 8 SHEETS

|                       |                |           |                           |           |
|-----------------------|----------------|-----------|---------------------------|-----------|
| T.R.                  | SECTION        | COUNTY    | TOTAL SHEETS              | SHEET NO. |
| 225                   | 08-14136-00-BR | VERMILION | 21                        | 18        |
| OAKWOOD ROAD DISTRICT |                |           | CONTRACT NO.              | 91457     |
|                       |                |           | ILLINOIS FED. AID PROJECT |           |