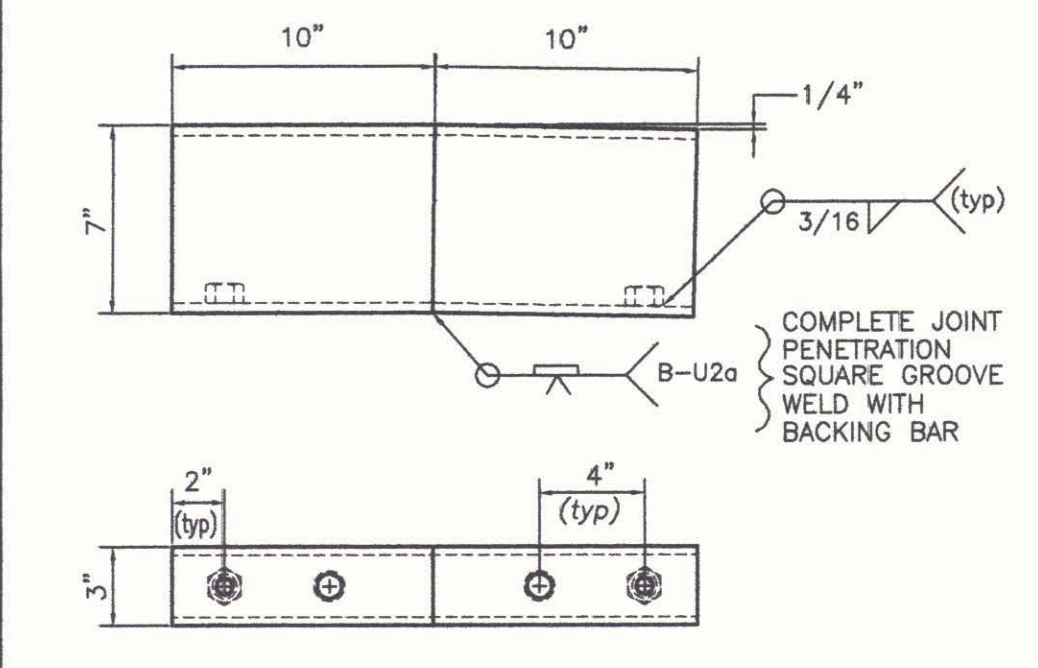
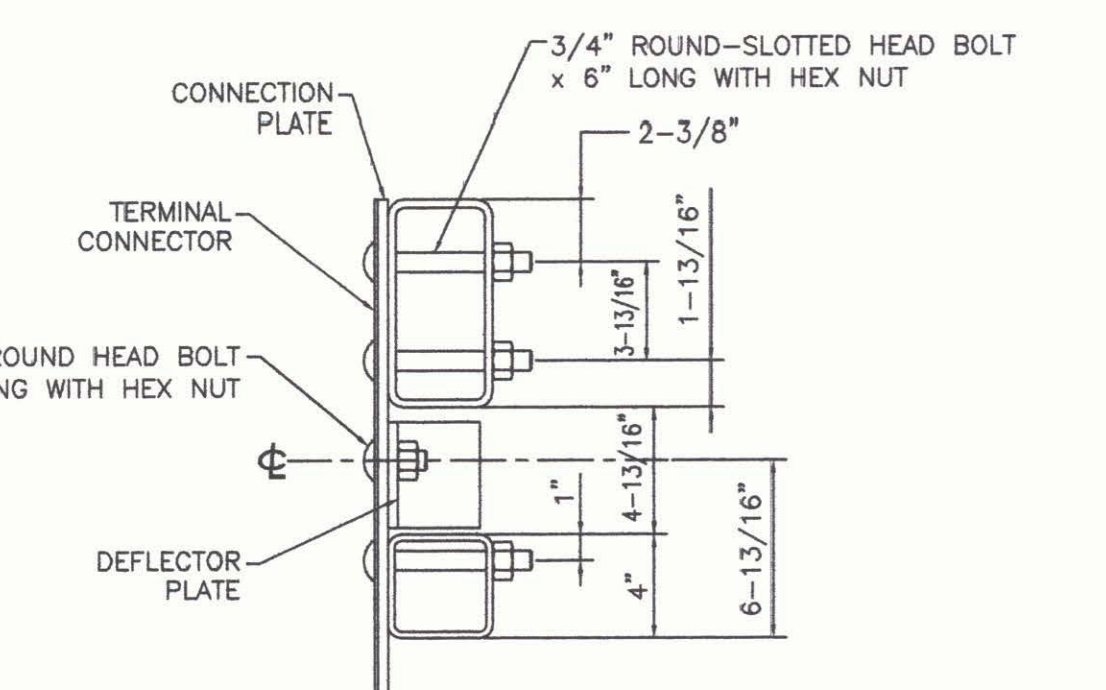


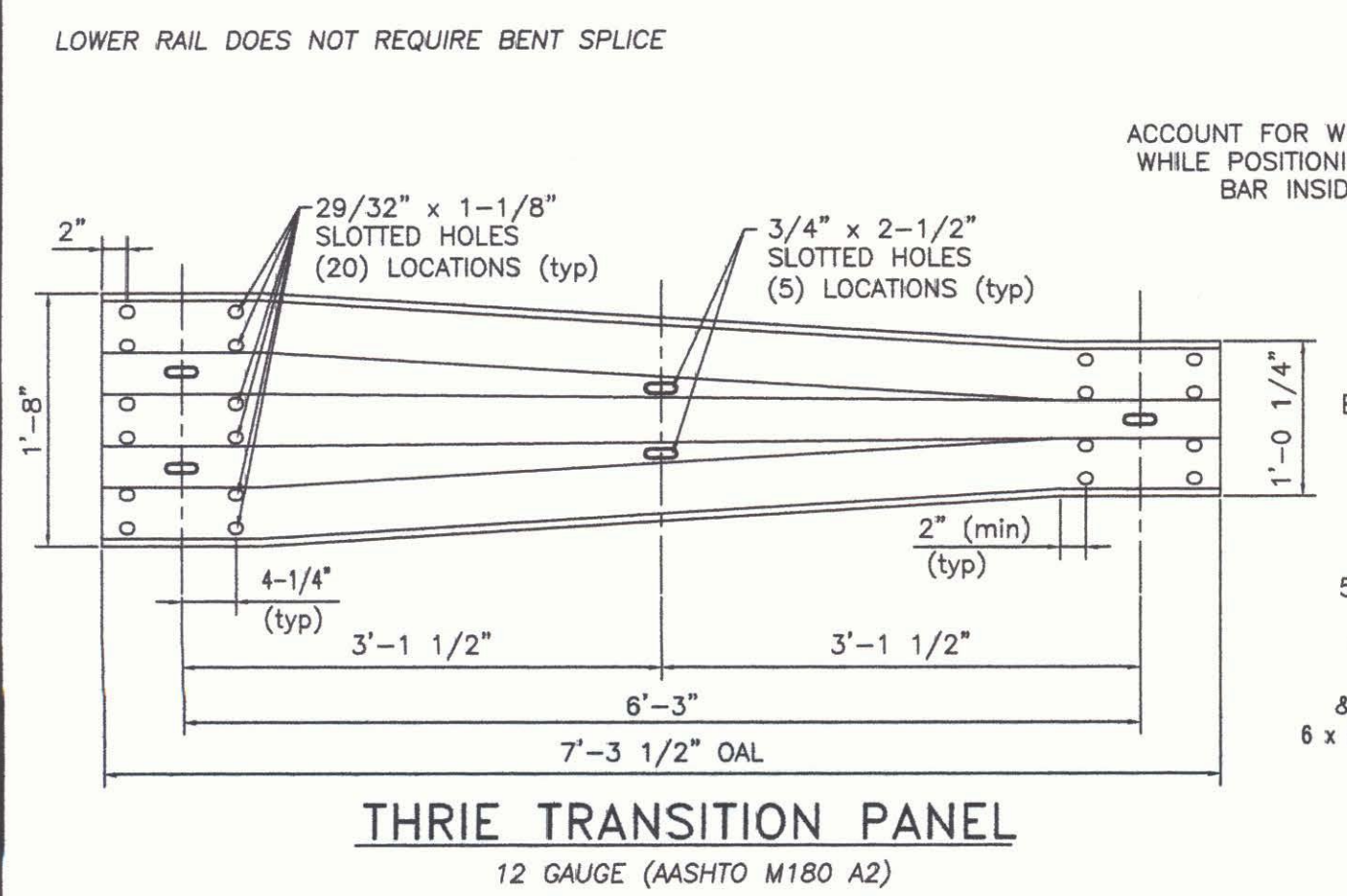
ELEVATION - APPROACH RAIL
TYPICAL (4) LOCATIONS



ANGLED SPLICE TUBE DETAIL
UPPER RAIL SPLICE SHOWN
LOWER RAIL DOES NOT REQUIRE BENT SPLICE

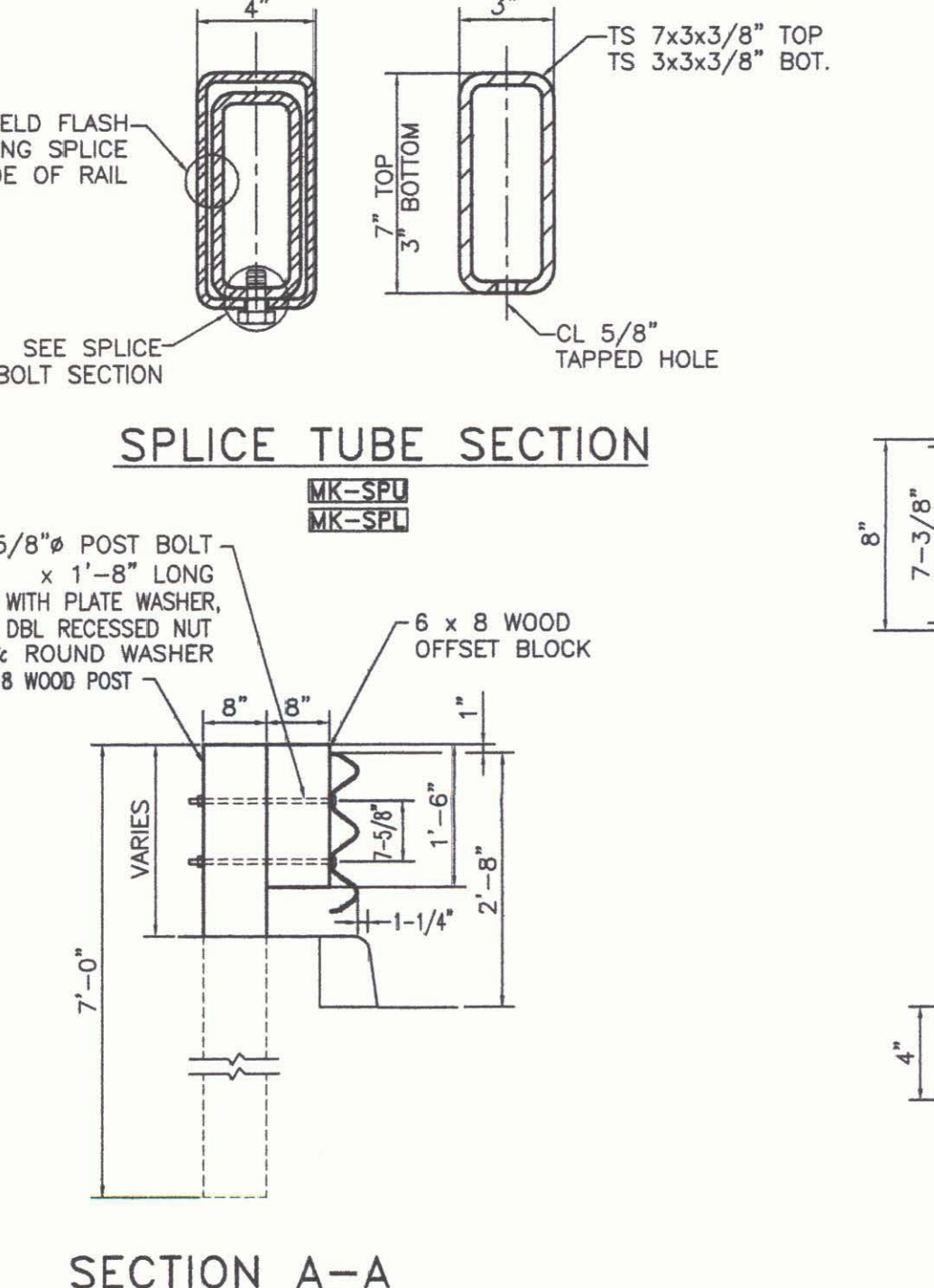


SECTION B-B

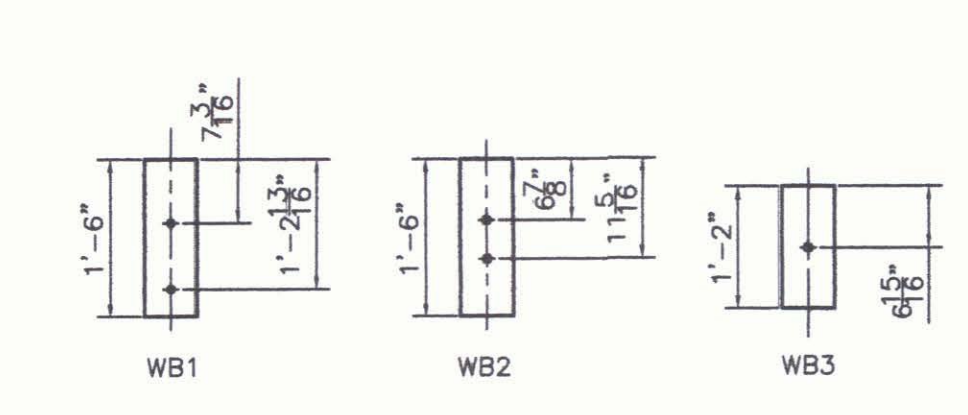


THRIE TRANSITION PANEL
12 GAUGE (AASHTO M180 A2)

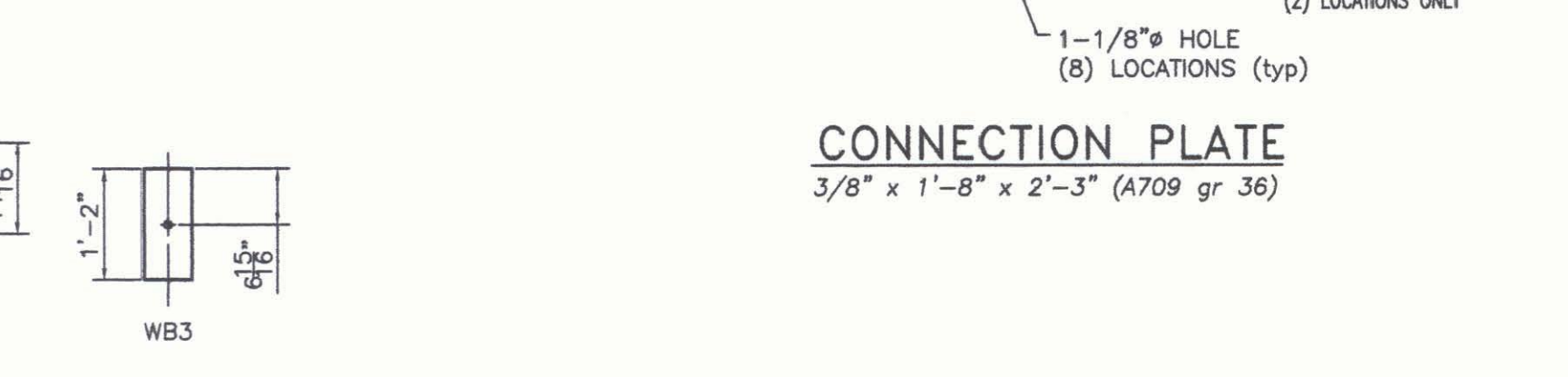
MATERIALS
 Rail bars.....ASTM A500 GR B or ASTM A501
 Rail posts.....ASTM A709 GR 50
 All other shapes & plates.....ASTM A709 GR 36
 Round-slotted head bolts for Rail-Post connections M164 (type 1)
 Hex head bolts for tube splice joints M164 (type 1)
 All other bolts [unless noted].....ASTM A307
 Nuts for ASTM A307 bolts & AASHTO M164 bolts shall comply with AASHTO M291. Nuts for anchor studs shall comply with ASTM A563.
 washers shall comply with ASTM F436
 1/8" pad shall comply with standard specification subsection 731.01 or 731.02 of Vermont Standard Specifications.



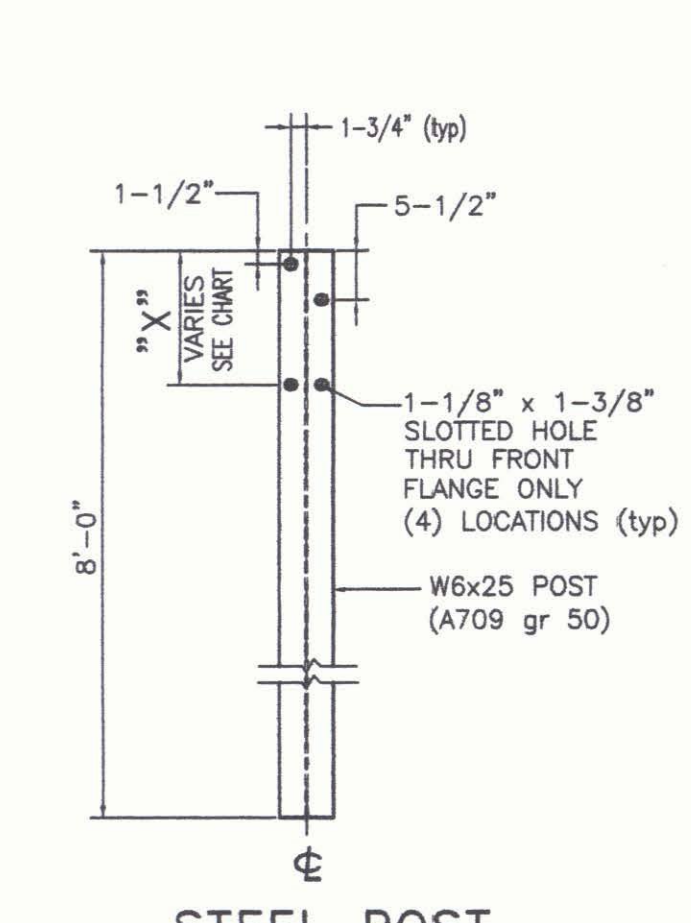
SPLICE TUBE SECTION



WOOD BLOCK DETAILS



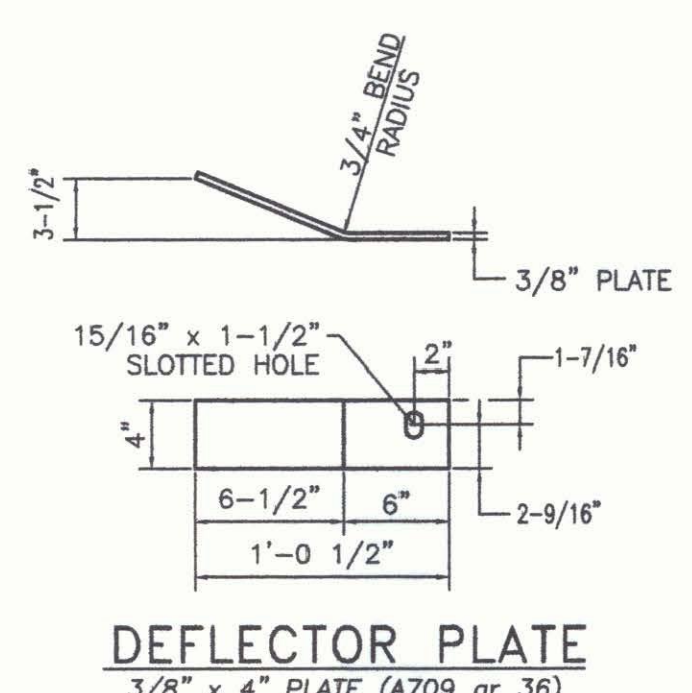
TERMINAL CONNECTOR
10 GAUGE (AASHTO M180 B2)



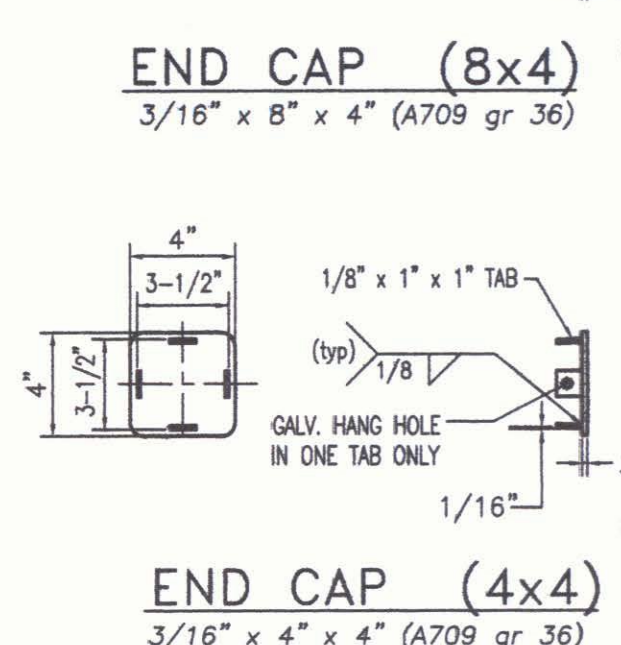
STEEL POST

STEEL POST CHART

| No. | " X " |
|-----|-------------|
| #1 | 1'-3 1/4" |
| #2 | 1'-3" |
| #3 | 1'-2 11/16" |
| #4 | 1'-2 3/8" |



DEFLECTOR PLATE
3/8" x 4" PLATE (A709 gr 36)



END CAP (8x4)
3/16" x 8" x 4" (A709 gr 36)

END CAP (4x4)
3/16" x 4" x 4" (A709 gr 36)

BILL OF MATERIAL
4 BRIDGE APPROACHES

| MK. | Qty. | Description | Size/Shape | Length/Qty. | Material |
|-----|------|---|-------------------|-------------|-------------|
| 4 | 4 | APPROACH RAIL TUBE | TS 8x4x5/16" | 9'-9 1/2" | A500 Gr. B |
| 4 | 4 | APPROACH RAIL TUBE | TS 4x4x1/4" | 9'-9 1/2" | A500 Gr. B |
| 16 | 16 | STEEL POST | W6 x 25 | 8'-0" | A709 Gr. 50 |
| WP1 | 32 | WOOD POST | 6x8 | 7'-0" | |
| WP2 | 4 | WOOD POST | 6x8 | 7'-0" | |
| WP3 | 4 | WOOD POST | 6x8 | 7'-0" | |
| WB1 | 32 | WOOD OFFSET BLOCK | 6x8 | 1'-6" | |
| WB2 | 4 | WOOD OFFSET BLOCK | 6x8 | 1'-6" | |
| WB3 | 4 | WOOD OFFSET BLOCK | 6x8 | 1'-2" | |
| 4 | 4 | BENT SPLICE TUBE FOR 8 x 4 RAIL TUBE | TUBE TS 7x3x5/16" | 1'-8" | A500 Gr. B |
| 8 | 8 | LOCK NUTS | 5/8" | --- | A563 |
| 4 | 4 | SPLICE TUBE FOR 4 x 4 RAIL TUBE | TUBE TS 7x3x1/4" | 1'-8" | A500 Gr. B |
| 8 | 8 | LOCK NUTS | 5/8" | --- | A563 |
| 4 | 4 | TERMINAL CONNECTOR | 10 Ga. | 2'-6" | M180 B2 |
| 4 | 4 | CONNECTION PLATE | 3/8 x 1'-8" | 2'-3" | A709 Gr. 36 |
| 2 | 2 | LEFT DEFLECTOR PLATE | 3/8 x 4" | 1'-9 1/2" | A709 Gr. 36 |
| 2 | 2 | RIGHT DEFLECTOR PLATE | 3/8 x 4" | 1'-9 1/2" | A709 Gr. 36 |
| 4 | 4 | END CAP FOR 8 x 4 RAIL TUBE | PLATE 1/8 x 1" | 1" | A709 Gr. 36 |
| 16 | 16 | PLATE | 1/8 x 1" | 1" | A709 Gr. 36 |
| 4 | 4 | END CAP FOR 4 x 4 RAIL TUBE | PLATE 3/8 x 4" | 8" | A709 Gr. 36 |
| 16 | 16 | PLATE | 3/8 x 4" | 4" | A709 Gr. 36 |
| 4 | 4 | THRIE TRANSITION PANEL | 12 Ga. | 7'-3 1/2" | M180 A2 |
| 92 | 92 | 3/4" x 6" LG. ROUND HEAD BOLT W/LOCK NUT & ROUND WASHER | | | M164 |
| 4 | 4 | 3/4" x 2" LG. ROUND HEAD BOLT W/NUT | | | A307 |
| 8 | 8 | 5/8" x 1'-8" LG. POST BOLT W/DBL RECESSED NUT, PLATE & ROUND WASHER | | | A307 |
| 68 | 68 | 5/8" x 1'-6" LG. POST BOLT W/DBL RECESSED NUT, PLATE & ROUND WASHER | | | A307 |
| 32 | 32 | 5/8" x 1 3/4" LG. HEX BOLT W/WASHER | | | A325 |
| 128 | 128 | 5/8" x 1 1/4" LG. PANEL SPLICE BOLT W/DBL RECESSED NUT | | | A307 |
| 32 | 32 | 3/4" x 1/2" LG. (SCH 40) SPACER PIPE | | | A53 Gr. B |

TOTAL PAY LIMIT ITEM 621.72 = 118'

GENERAL ERECTION NOTES

- ALL BRIDGE RAIL APPROACH, RAIL MATERIALS, DIMENSION SIZES, AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL UNLESS OTHERWISE NOTED.
- CARRIAGE BOLTS SHALL BE AASHTO M164 AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED)
- CUT & WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2).
- REFLECTORIZED ALUMINUM DELINEATION IS TO BE ERECTED EVERY 30 FT. (OR CLOSEST POST) WITH A 5/8" DIAMETER BOLT. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.
- REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVERS LEFT AND SILVER ON THE RIGHT.
- PAYMENT FOR THE GUARD RAIL APPROACH SECTION - GALVANIZED NETC 2 RAIL SHALL INCLUDE THE TERMINAL CONNECTOR, THE CONNECTION PLATE, THE DEFLECTOR PLATE, RAIL, POSTS, BLOCKS AND ATTACHMENT HARDWARE.

HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 621.72 BRIDGE RAILING APPROACH
US RT 5 OVER I-91, BRIDGE 19A
TOWN OF PUTNEY COUNTY OF WINDHAM, VT
PROJECT NUMBER: IM 091-1(31)

CERTIFIED FABRICATOR

GENERAL CONTRACTOR: _____
SUB CONTRACTOR: F.R. LAFAYETTE, INC.
DRAWN: MHM CHECKED: PAR DATE: 6/7/2010 SCALE: NONE SIZE: D

ITEM NO. 1752
SHEET NO. 4 of 4

REVISIONS

| No. | Remarks | Date |
|-----|-------------------|------|
| 0 | Initial submittal | |