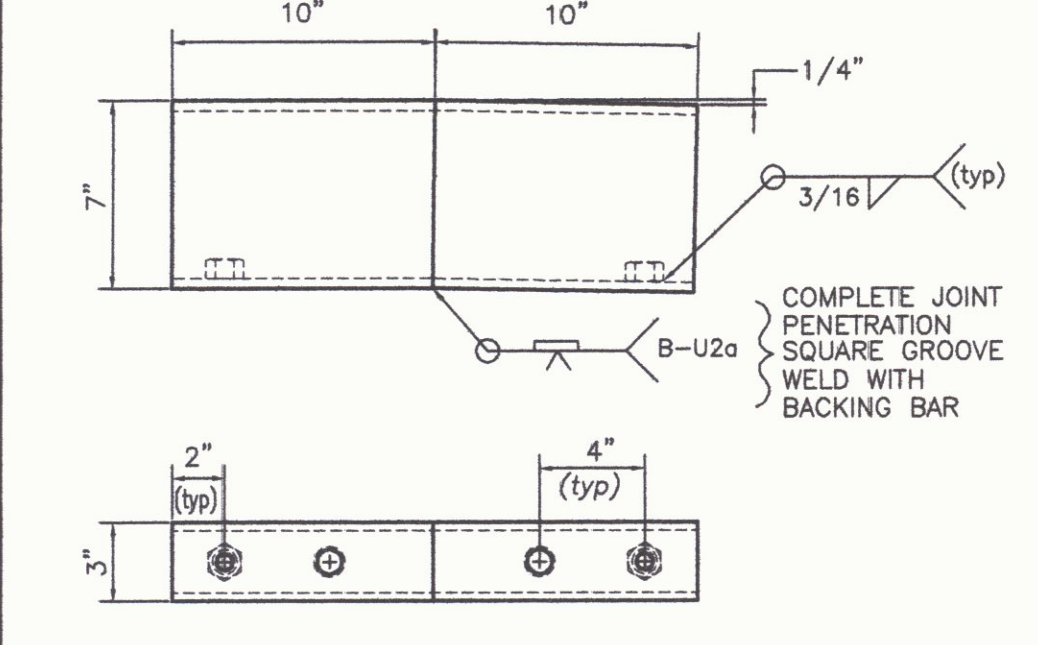


BILL OF MATERIAL				
4 BRIDGE APPROACHES				
MK.	Qty.	Description	Size/Shape	Material
	4	APPROACH RAIL TUBE	TS 8x4x5/16"	A500 Gr. B
	4	APPROACH RAIL TUBE	TS 4x4x1/4"	A500 Gr. B
	16	STEEL POST	W6 x 25	A709 Gr. 50
WP1	32	WOOD POST	6x8	7'-0"
WP2	4	WOOD POST	6x8	7'-0"
WP3	4	WOOD POST	6x8	7'-0"
WB1	32	WOOD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

TOTAL PAY LIMIT ITEM 621.72 = 118'

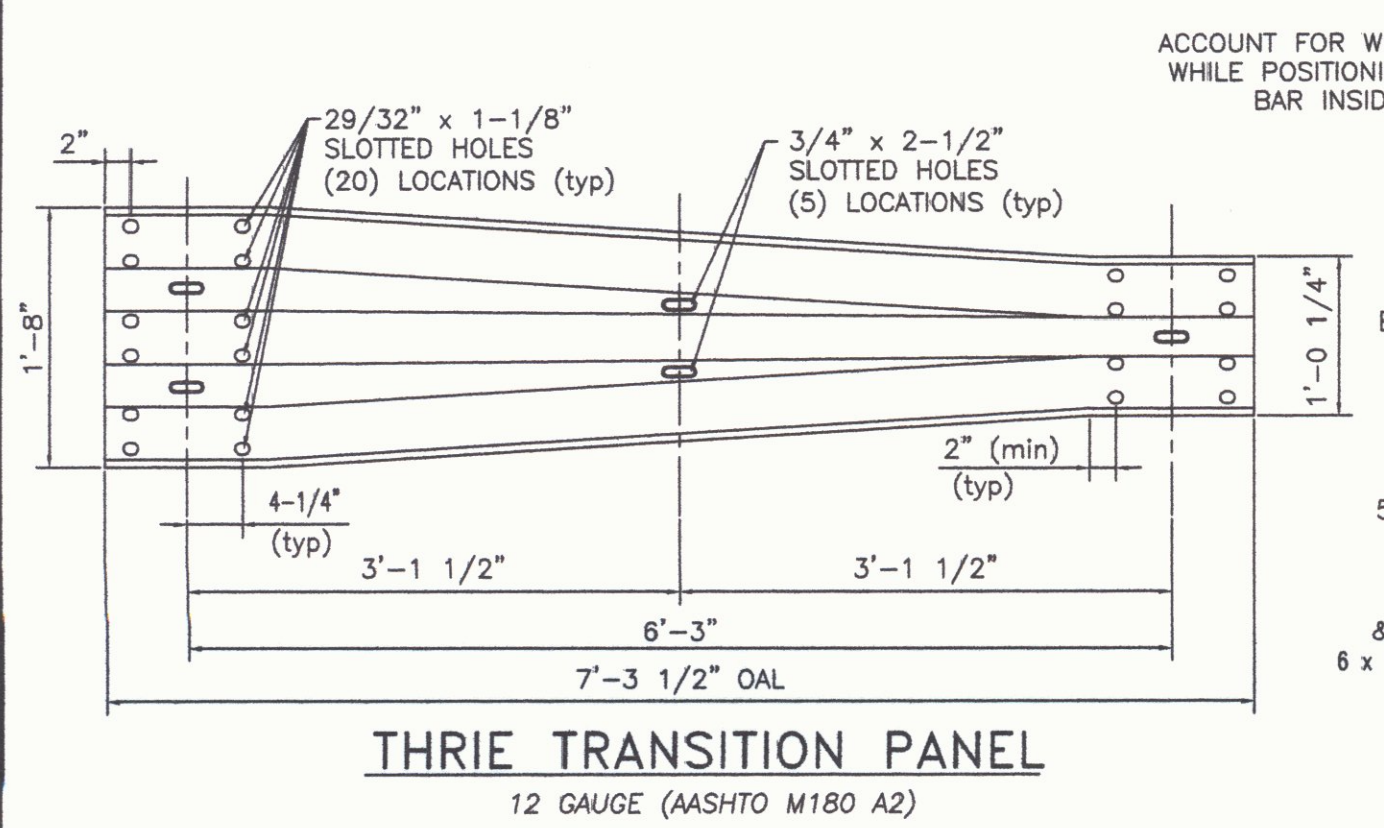
**GENERAL ERECTION NOTES**

1. ALL BRIDGE RAIL APPROACH, RAIL MATERIALS, DIMENSION SIZES, AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL UNLESS OTHERWISE NOTED.
2. CARRIAGE BOLTS SHALL BE AASHTO M164 AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED)
3. CUT & WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2).
4. 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.
5. 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.
6. 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.

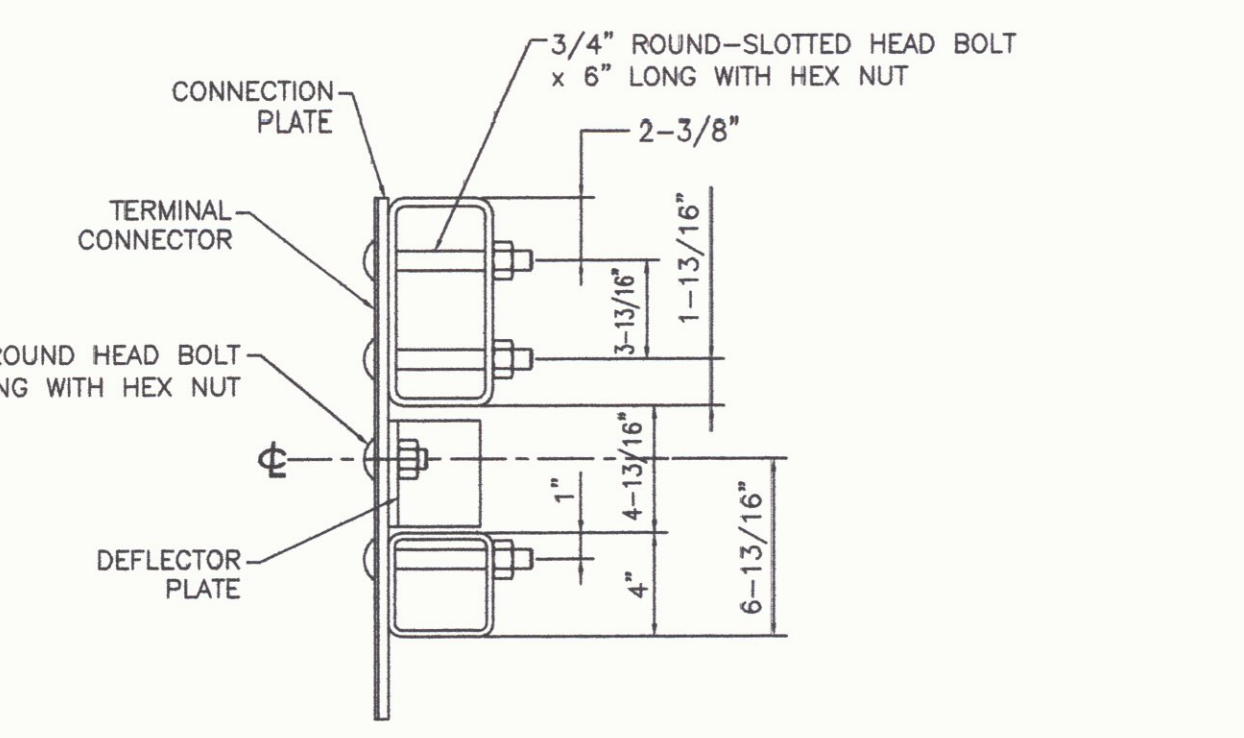


**ANGLED SPLICE TUBE DETAIL**  
UPPER RAIL SPLICE SHOWN

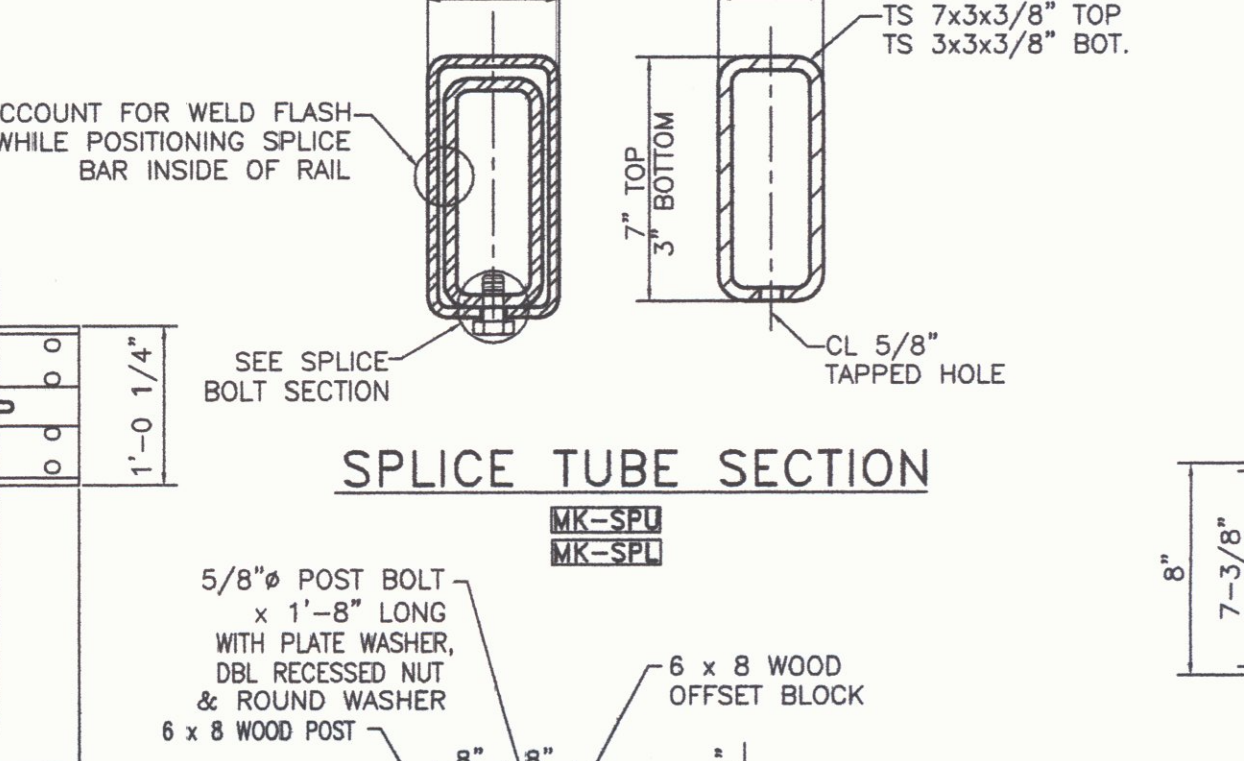
LOWER RAIL DOES NOT REQUIRE BENT SPLICE



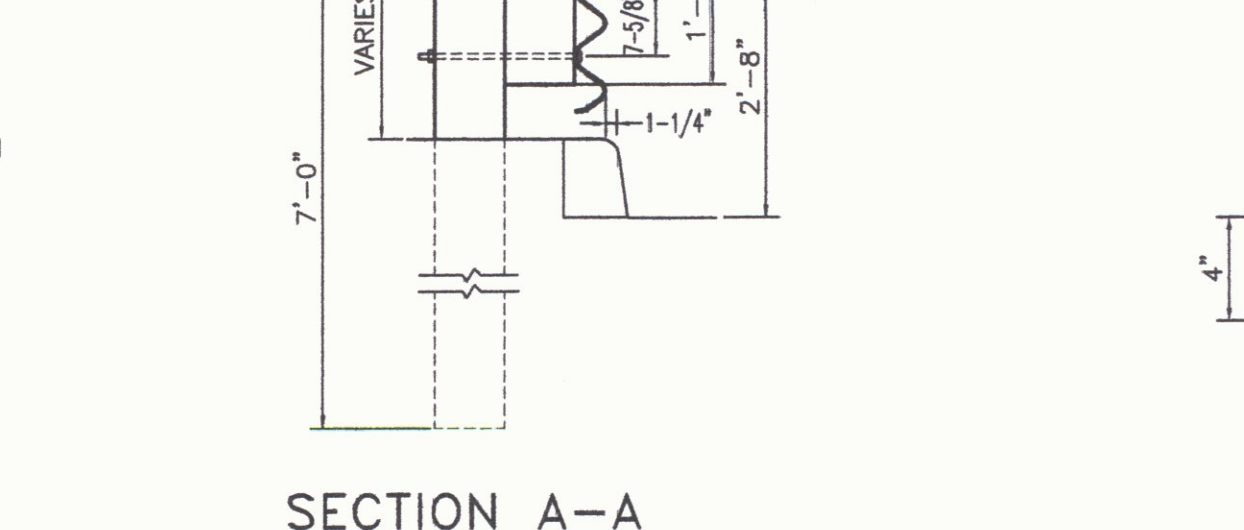
**MATERIALS**  
 Rail bars.....ASTM A500 GR B or ASTM A501  
 Rail posts.....ASTM A709 GR 50  
 All other shapes & plates.....ASTM A709 GR 36  
 Round-slotted head bolts for Rail-Post connections ..... M164 (type 1)  
 Hex head bolts for tube splice joints ..... M164 (type 1)  
 All other bolts [unless 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.



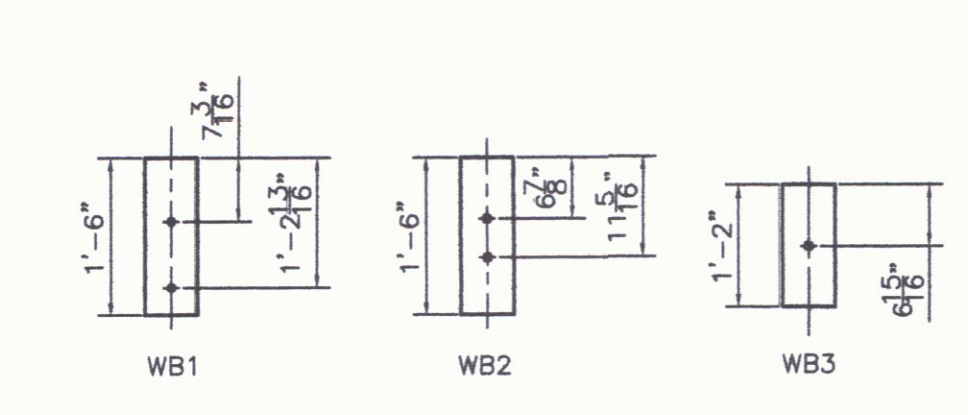
**SECTION B-B**



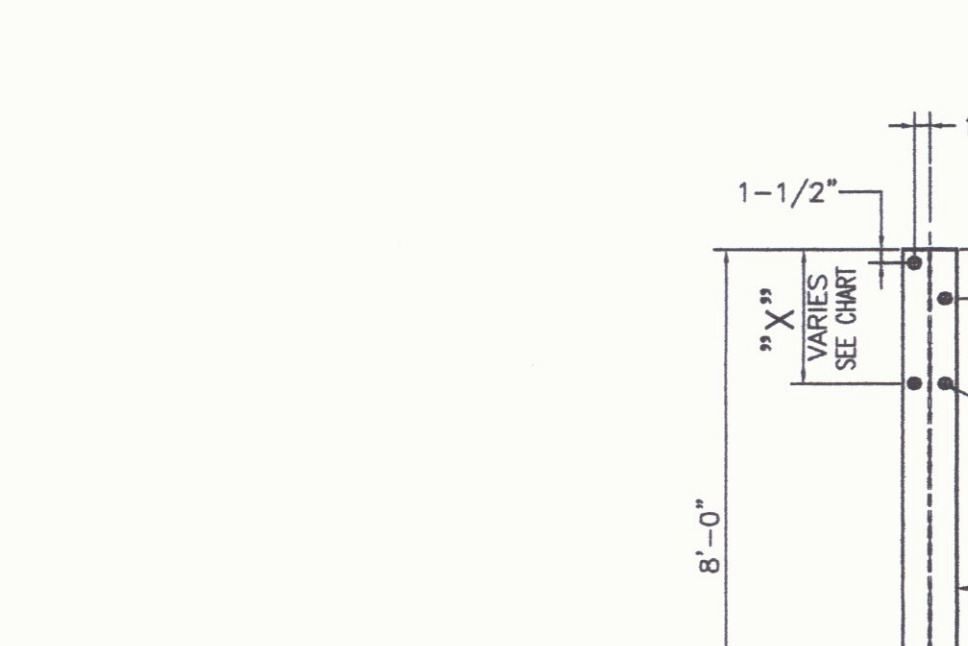
**THRIE TRANSITION PANEL**  
12 GAUGE (AASHTO M180 A2)



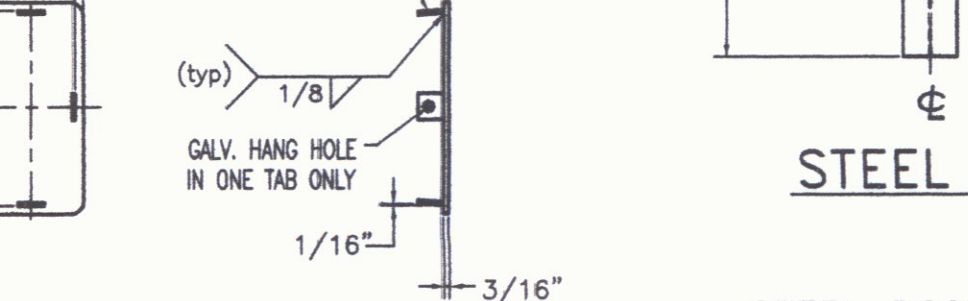
**SECTION A-A**



**WOOD BLOCK DETAILS**



**STEEL POST**



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

**STEEL POST CHART**

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

**REVISIONS**

No.	Remarks	Date
0	Initial submittal	

**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: F.R. LAFAYETTE, INC.  
 SHEET NO.: 4 of 4

DATE: 6/7/2010