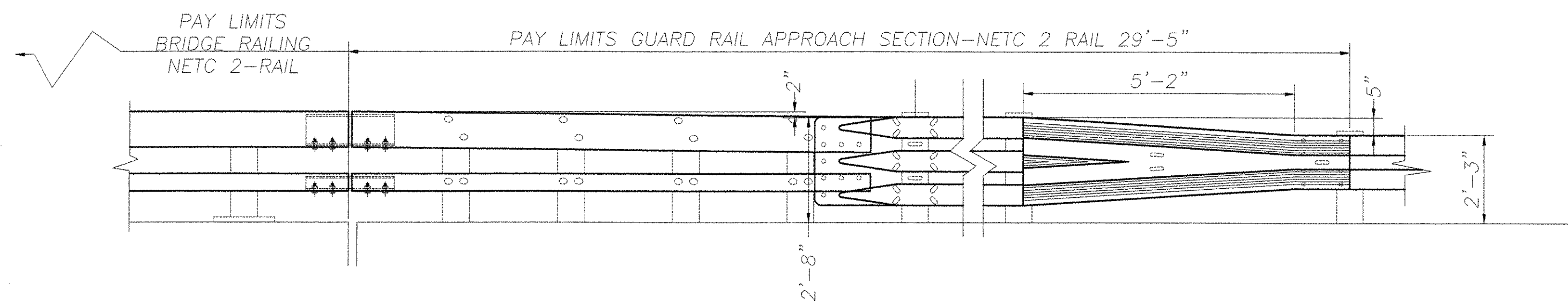
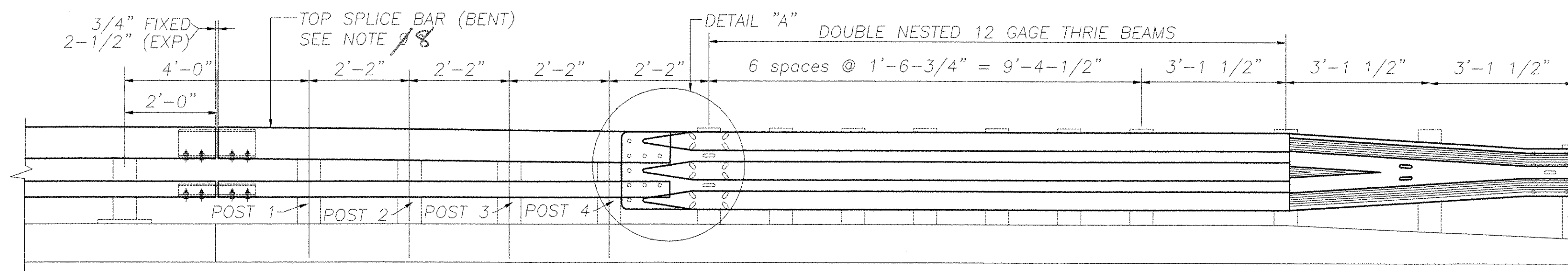


BILL OF MATERIAL				
BRIDGE No. 51S				
Qty.	Description	Size/Shape	Length/Qty. per unit	Material
2	APPROACH RAIL TUBE (UPPER)-EXP.	TS 8x4x5/16"	8'-3-1/8"	A500 Gr. B
2	APPROACH RAIL TUBE (LOWER)-EXP.	TS 4x4x1/4"	8'-3-1/8"	A500 Gr. B
2	APPROACH RAIL TUBE (UPPER)-FIXED	TS 8x4x5/16"	9'-9 5/8"	A500 Gr. B
2	APPROACH RAIL TUBE (LOWER)-FIXED	TS 4x4x1/4"	9'-9 5/8"	A500 Gr. B
16	STEEL POST	W6 x 25	8'-0"	A709 Gr. 50
40	WOOD POST	6x8	7'-0"	
40	WOOD OFFSET BLOCK	6x8	1'-6"	
4	BENT SPLICE TUBE FOR 8 x 4 RAIL TUBE	TS 3/8"		
	TUBE	TS 7x3x5/16"	1'-8"	A500 Gr. B
	LOCK NUTS	5/8"	2 pcs.	A563
4	BENT SPLICE TUBE FOR 4 x 4 RAIL TUBE	TS 3/8"		
	TUBE	TS 7x3x1/4"	1'-8"	A500 Gr. B
	LOCK NUTS	5/8"	2 pcs.	A563
4	TERMINAL CONNECTOR	10 Ga.	2'-6"	M180 B2
4	CONNECTION PLATE	PL 3/8 x 1'-8"	2'-3"	A709 Gr. 36
4	DEFLECTOR PLATE	PL 3/8 x 4"	1'-8 1/2"	A709 Gr. 36
4	END CAP FOR 8 x 4 RAIL TUBE	PLATE 3/8 x 1" x 1"	4 pcs.	A709 Gr. 36
	PLATE	PL 3/8 x 4"	8"	A709 Gr. 36
4	END CAP FOR 4 x 4 RAIL TUBE	PLATE 3/16 x 1" x 1"	4 pcs.	A709 Gr. 36
	PLATE	PL 3/8 x 4"	4"	A709 Gr. 36
4	THREE TRANSITION PANEL	12 Ga.	7'-3 1/2"	M180 A2
8	DOUBLE NESTED 12 GAGE THREE PANELS			M180 A2
92	3/4" x 6" SLOTTED HEAD BOLT W/LOCK NUT AND FW			A325
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			A325
32	5/8" x 1 3/4" LG. HEX BOLT W/WASHER			A307
128	5/8" x 1 1/4" LG. PANEL SPLICE BOLT W/DBL RECESSED NUT			A307

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2	APPROACH RAIL TUBE (UPPER)-FIXED	TS 8x4x5/16"	9'-9 5/8"	A500 Gr. B
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4	BENT SPLICE TUBE FOR 8 x 4 RAIL TUBE	TS 3/8"		
	TUBE	TS 7x3x5/16"	1'-8"	A500 Gr. B
	LOCK NUTS	5/8"	2 pcs.	A563
4	BENT SPLICE TUBE FOR 4 x 4 RAIL TUBE	TS 3/8"		
	TUBE	TS 7x3x1/4"	1'-8"	A500 Gr. B
	LOCK NUTS	5/8"	2 pcs.	A563
4	TERMINAL CONNECTOR	10 Ga.	2'-6"	M180 B2
4	CONNECTION PLATE	PL 3/8 x 1'-8"	2'-3"	A709 Gr. 36
4	DEFLECTOR PLATE	PL 3/8 x 4"	1'-8 1/2"	A709 Gr. 36
4	END CAP FOR 8 x 4 RAIL TUBE	PLATE 3/8 x 1" x 1"	4 pcs.	A709 Gr. 36
	PLATE	PL 3/8 x 4"	8"	A709 Gr. 36
4	END CAP FOR 4 x 4 RAIL TUBE	PLATE 3/16 x 1" x 1"	4 pcs.	A709 Gr. 36
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128	5/8" x 1 1/4" LG. PANEL SPLICE BOLT W/DBL RECESSED NUT			A307



- PAYMENT FOR GUARD RAIL APPROACH SECTION - NETC 2 RAIL SHALL INCLUDE THE TERMINAL CONNECTOR, THE CONNECTION PLATE, THE DEFLECTOR PLATE, RAIL, POSTS, BLOCKS, AND ATTACHMENT HARDWARE.
- THE REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERRECTED EVER 30' (OR CLOSEST POST) WITH A 5/8" DIA BOLT. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32
- REFLECTIVE MATERIAL SHALL MEET REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVERS LEFT AND SILVER ON THEIR RIGHT
- ON BRIDGES WITH A SIDEWALK, DELINEATORS ARE NOT TO BE INSTALLED ON THE SIDEWALK SIDE OF THE BRIDGE (I.E. DELINEATORS INSTALLED ONLY ON THE CURB SIDE AND ON THE APPROACH ON THE CURB SIDE). PAYMENT SHALL BE SUBSIDIARY TO ALL OTHER ITEMS.
- ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
- ALL BRIDGE APPROACH MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL UNLESS OTHERWISE NOTED.
- APPROACH RAIL BOLTS SHALL BE ASTM A307 GRADE A AND NUTS SHALL AASHTO M291 (ASTM GRADE A OR BETTER (GALVANIZED). WASHERS SHALL BE ASTM F844
- WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2)
- THE CONCRETE CURB WILL BE PAID FOR AS ITEM 616.28. "CAST-IN-PLACE CONCRETE CURB, TYPE B."

REVISIONS		
No.	Remarks	Date
0	Initial submittal	28-JAN-05
0	Re-submittal	09-MAR-05
0	Re-submittal	02-MAY-05

TVGA CONSULTANTS

- NO EXCEPTIONS TAKEN
 RETURN AS CORRECTED
 REVISE AND RESUBMIT

ENGINEER has reviewed Shop Drawings and Samples and other data which Contractor is required to submit, for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. Such reviews do not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto. Contractor is responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades.

BY: *[Signature]*
DATE: 5/18/05

HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 621.72 GUARDRAIL APPROACH-NETC 2 RAIL
TOWN OF BOLTON
COUNTY OF CHITTENDEN
PROJECT AC IM 089-2(29)
BR 51 N&S OVER U.S. ROUTE 2

GENERAL CONTRACTOR: F.R. LAFAYETTE, INC.
DRAWN: C CRAMER
CHECKED: *[Signature]*
DATE: 12/07/04
SCALE: 1/2"=12'
HSC REFERENCE NO: 1482
SIZE: D REVISION: 0
SHEET NO.: 1 of 2

