



Mk.	Qty.	Description	Size/Shape	Length	Material
42		PED POST 626mm OAH			
42		base plate	PL 25 x 228	330mm	A36m
42		upright post	TS 150x150x7.9	643mm	A500 Gr. B
42		cap plate	PL 8 x 143	143mm	A36m
84		shelf bracket	PL 9 x 127	127mm	A36m
R1	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	6.016m	A500 Gr. B
R2	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	6.456m	A500 Gr. B
R3	8	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	6.972m	A500 Gr. B
R4	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	7.264m	A500 Gr. B
R5	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	7.061m	A500 Gr. B
R6	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	5.269m	A500 Gr. B
R7	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	6.481m	A500 Gr. B
R8	6	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	6.883m	A500 Gr. B
R9	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	6.959m	A500 Gr. B
RA	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	4.267m	A500 Gr. B
RB	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	6.481m	A500 Gr. B
RD	2	BRIDGE RAIL (201m RAD.)	TS 150x75x6.4	4.649m	A500 Gr. B
4		PEDESTRIAN FENCE END POST			
4		upright post	TS 101x101x6.4	1.395m	A500 Gr. B
8		attachment angle	L 76x51x6.4	75mm	A36m
12		connection angle	L 76x51x6.4	51mm	A36m
8		cap plate	PL 6 x 101	101mm	A36m
46		PEDESTRIAN INTERMEDIATE POST			
46		upright post	TS 76x76x6.4	1.345m	A500 Gr. B
92		attachment angle	L 76x51x6.4	75mm	A36m
276		connection angle	L 76x51x6.4	51mm	A36m
92		cap plate	PL 6 x 76	76mm	A36m
F1	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	1.840m	A500 Gr. B
13		top bars	6 x 25mm	varies	A36m
18		bottom bars	6 x 25mm	varies	A36m
F2	2	PEDESTRIAN FENCE ASSEMBLY			
6		cross tubing	TS 51x51x6.4	1.854m	A500 Gr. B
26		top bars	6 x 25mm	varies	A36m
36		bottom bars	6 x 25mm	varies	A36m
F3	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.245m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
22		bottom bars	6 x 25mm	varies	A36m
FZ	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.245m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
22		bottom bars	6 x 25mm	varies	A36m
56		SPLICE PLATE W/WELDED BAR			
56		plate	PL 19 x 127mm	914mm	A500 Gr. B
56		welded bar	19 x 19mm	114mm	A36m

Mk.	Qty.	Description	Size/Shape	Length	Material
F4	16	PEDESTRIAN FENCE ASSEMBLY			
48		cross tubing	TS 51x51x6.4	2.245m	A500 Gr. B
256		top bars	6 x 25mm	varies	A36m
352		bottom bars	6 x 25mm	varies	A36m
F5	7	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.091m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
20		bottom bars	6 x 25mm	varies	A36m
F6	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.398m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
24		bottom bars	6 x 25mm	varies	A36m
F7	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.244m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
24		bottom bars	6 x 25mm	varies	A36m
F8	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.171m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
24		bottom bars	6 x 25mm	varies	A36m
F9	2	PEDESTRIAN FENCE ASSEMBLY			
6		cross tubing	TS 51x51x6.4	2.244m	A500 Gr. B
32		top bars	6 x 25mm	varies	A36m
44		bottom bars	6 x 25mm	varies	A36m
FA	17	PEDESTRIAN FENCE ASSEMBLY			
51		cross tubing	TS 51x51x6.4	2.257m	A500 Gr. B
272		top bars	6 x 25mm	varies	A36m
374		bottom bars	6 x 25mm	varies	A36m
FB	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.155m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
22		bottom bars	6 x 25mm	varies	A36m
FC	1	PEDESTRIAN FENCE ASSEMBLY			
3		cross tubing	TS 51x51x6.4	2.358m	A500 Gr. B
16		top bars	6 x 25mm	varies	A36m
24		bottom bars	6 x 25mm	varies	A36m
* 168		ANCHOR BOLT W/(2) NUTS & WASHER	M22	304mm	
84		HEX BOLT W/NUT & (2) WASHERS	M16	114mm	
112		HEX NUT W/NUT & WASHER	M20	101mm	
100		HEX NUT W/NUT & WASHER (FENCE)	M16	114mm	
282		HEX NUT W/NUT & WASHER (FENCE)	M16	89mm	
28		SPLICE PLATE	PL 19 x 127	914mm	A36m
6		PIPE SPACER	M25 sch. 40	12mm	A500 Gr. B
6		HOLLOW STEEL FINIAL			

- NOTES:
 1. RAILING IS DESIGNED IN ACCORDANCE WITH THE 1989 AASHTO SPECIFICATIONS.
 2. ALL PLATES, BARS, AND ANGLES SHALL BE ASTM A36 STEEL UNLESS OTHERWISE SPECIFIED, ALL BOLTS SHALL BE ASTM A307. STRUCTURAL STEEL TUBING SHALL BE ASTM A500 COLD-FORMED GRADE B AS MODIFIED IN SECTION 732.03(a).
 3. ALL STEEL COMPONENTS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AND SHOP PAINTED FLAT BLACK IN ACCORDANCE WITH VAOT SUPPLEMENTAL SPECIFICATION 513 DATED AUGUST 9, 2000.
 ALL HARDWARE SHALL BE GALVANIZED PER ASTM A153 - HARDWARE SHALL NOT BE SHOP PAINTED.
 4. THE RAIL SYSTEM SHALL BE CONTINUOUS WITH EACH TUBE SECTION ATTACHED TO A MINIMUM OF TWO POSTS. ALL JOINTS SHALL BE SPLICED AS DETAILED, WITH ALL SPLICE CONNECTIONS IN THE SAME PANEL LOCATED ONE DIRECTLY ABOVE THE OTHER.
 5. ALL POSTS SHALL BE SET NORMAL TO GRADE, NUTS PLACED IN CONCRETE ARE TO BE ROTATED WITHIN 24 HOURS AFTER CONCRETE IS PLACED TO BREAK BOND BETWEEN NUT AND CONCRETE, NUTS SHALL THEN BE USED TO ALIGN THE POSTS BOTH HORIZONTALLY AND VERTICALLY. AFTER FINAL POSITION HAS BEEN APPROVED, ALL VOIDS BETWEEN THE BASE PLATE AND CONCRETE SURFACE SHALL BE GROUTED WITH NON-SHRINK GROUT CONFORMING WITH SECTION 707.03, MORTAR, TYPE 4.
 6. ANCHOR BOLTS SHALL BE PRECAST IN THE CURB SECTION, AND CONFORM WITH THE REQUIREMENTS OF SECTION 714.07.
 7. FOR RADII LESS THEN 290m, THE BEAM RAIL SHALL BE SHOP BENT TO FIT THE APPLICABLE CURVE.
 8. RAILING JOINT SPLICES SHALL BE PROVIDED FOR ALL SUPERSTRUCTURE JOINTS. THE RAIL JOINT OPENING SHALL BE 25mm OR CAPABLE OF PROVIDING THE MOVEMENT SPECIFIED. SPLICE PLATE DETAILS SHALL BE MODIFIED AS REQUIRED FOR JOINTS REQUIRING MORE THAN 2 INCHES OF TOTAL MOVEMENT.
 9. REFER TO PROJECT PLANS FOR CURB DETAILS
 10. REFER TO STANDARD SB-R4B-B2 FOR GUARD RAIL APPROACH SECTION-TYPE 1 B. TYPE 2 DETAILS
 11. WALL THICKNESS OF THE 6" x 6" STRUCTURAL TUBING FOR THE RAIL POST SHALL BE 5/16" INCH MINIMUM, 10mm, 12mm THICKNESS TUBING MAY BE SUBSTITUTED AT THE OPTION OF THE FABRICATOR.
 12. PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC., SHALL BE GROUND TO A 1.6mm RAD.

No.	Revisions	Date
0	Initial submittal	9/4/04
	Second submittal	10/6/04
	Second submittal	10/18/04

HIGHWAY SAFETY CORP
GLASTONBURY, CT

ITEM 525.31 - 2 RAIL BOX BEAM (MOD.)
TOWN OF WATERBURY
STOWE STREET, BRIDGE 35 (LOCAL ROAD)
PROJECT No. BRO 1446(26)
WASHINGTON COUNTY

RECEIVED
OCT 20 2004
APPROVED: *As Noted*
DATE: 10/21/04

DRAWN: J. Ruiz
CHECKED: [Signature]
DATE: 6/1/04
SCALE: NONE
HSC REFERENCE NO.: 1449
SIZE: D REVISION: 0
SHEET NO.: 3 of 3

GENERAL CONTRACTOR: [Blank]
SUB CONTRACTOR: F.R. LAFAYETTE 097 BL

NAVJBS 5161 250 145
 QUALITY ASSURANCE
 CERTIFICATION