



BILL OF MATERIALS												
SHOP BILL							MATERIAL ASTM A709-50 T2 U.N.O.					
LINE	SEQ	SHIPPING ENDS	ASSEMBLY	MARK	SHAPE	DESCRIPTION	LENGTH	REMARKS	MATL GRADE	MATL REMARK	WEIGHT	HEAT NO
							ft	in				
1												
2	4			M20A	W	16 x 45	6	9 5/8				
3		16		x20a	L	5 x3 1/2 X 3/8	1	4				
4		4		x21a	PL	3/8 x 20 1/16	2	6				
5												
6		80		sb7-225	BOLT	7/8 #	2	1/4	1st/2nd	A325		
7		40		sb7-275	BOLT	7/8 #	2	3/4	1st/2nd	A325		
8												
9											TOTAL lb	1691.1
10												
11												
12	4			M20B	W	16 x 45	6	9 5/8				
13		16		x20a	L	5 x3 1/2 X 3/8	1	4				
14		4		x21a	PL	3/8 x 20 1/16	2	6				
15												
16		80		sb7-225	BOLT	7/8 #	2	1/4	1st/2nd	A325		
17		40		sb7-275	BOLT	7/8 #	2	3/4	1st/2nd	A325		
18												
19											TOTAL lb	1691.1
20												

ALL HOLES TO BE PUNCHED U.N.O.

- NO EXCEPTION TAKEN
- REJECTED
- MAKE CORRECTIONS NOTED
- REVISE AND RESUBMIT
- SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF THE WORK.

DATE 4/12/12 BY CHA/d

- LEGEND:**
- CL = CENTERLINE
 - CTR'D = CENTERED
 - C/C = CENTER TO CENTER
 - FLG = FLANGE
 - TOP = TOP
 - BTM = BOTTOM
 - RDHF = RUNNING DIMENSIONS FROM HERE
 - FB = FIELD BOLTS (QUANTITY) DIAMETER x LENGTH
 - ◇ = ALTERNATE HOLE DIAMETER
 - TYP = TYPICAL
 - N/S = NEAR SIDE
 - F/S = FAR SIDE
 - B/S = BOTH SIDES
 - BTS = BOLT TO SHIP
 - SHIP'G BOLT = SHIPPING BOLT
 - ◇ = SHIPPING BOLT
 - D.O.R. = DIRECTION OF ROLL
 - T2 = CHARPY V-NOTCH TESTING REQUIRED
 - F2 = FRACTURE CRITICAL MATERIAL
 - ⊗ = FIELD DRILLED HOLE
 - ⊗ = FIELD DRILLED HOLE

- PAINT NOTES:**
- ALL ITEMS THIS SHEET TO RECEIVE UPPER STEEL PAINT SYSTEM PER GN1.
 - CLEAN AND PRIME BOLTED PARTS PRIOR TO ASSEMBLY.
 - PRIMER ONLY, WITHIN 3" FROM ALL OPEN HOLES, (A307) SHIPPING BOLTS AND NUTS OR TO NEAREST EDGE OR PERPENDICULAR SURFACE (WHICHEVER IS LESS) UNLESS SPECIFICALLY NOTED OTHERWISE.
 - ALL TORQUED BOLTS TO RECEIVE COMPLETE PAINT SYSTEM NOTED. NO PAINT ON (A307) SHIPPING BOLTS AND NUTS.
- NOTES:**
- FOR GENERAL NOTES SEE DRAWING GN1.
 - ALL BOLTS THIS SHEET TO BE FULLY TORQUED UNLESS NOTED AS (A307) SHIPPING BOLTS.
 - INSTALL WASHER UNDER HEAD OF BOLT AS WELL AS NUT. ADDITIONAL WASHER IS NOT REQUIRED FOR (A307) SHIPPING BOLTS.
 - ALL HOLES MARKED "⊗" OR "⊗" ARE TO BE FIELD DRILLED HOLES. DO NOT SHOP DRILL.

ALL DIMENSIONS HAVE BEEN FIELD VERIFIED BY: _____ DATE: _____

1	04/05/12	PG	BOLTS REVISED TO A325 BLACK LEGEND UP DATED ISSUED FOR FINAL APPROVAL.
B	03/15/12	RC	NOTES UPDATED AND BOLTS REVISED TO A325 GALV FOR APPROVAL.
A	03/02/12	RC	FOR APPROVAL.
NO.	DATE	BY	REVISION
STS STEEL, INC. ENGINEERS • FABRICATORS • ERECTORS PH: (518) 370-2693 FAX: (518) 370-2696			
DRAWING TITLE UPPER STEEL (END PORTAL D1)			
PROJECT No. US RT 2 BRIDGE No 24 FEDERAL AID No.			
ENGINEER : CHA			
CUSTOMER : Harrison & Burrows Bridge Constructors, Inc.			
PROJECT : RICHMOND, VT - TRUSS BRIDGE REHAB			
RICHMOND, VT			
HOLE:	15/16" U.N.O.	PAINT:	PER SPEC
BOLTS:	A325 U.N.O.	DR.BY:	RC
WELDS:	AWS D1.5	CHK.BY:	BH
DATE:	03/01/12	JOB NO.	1156
		DWG NO.	20