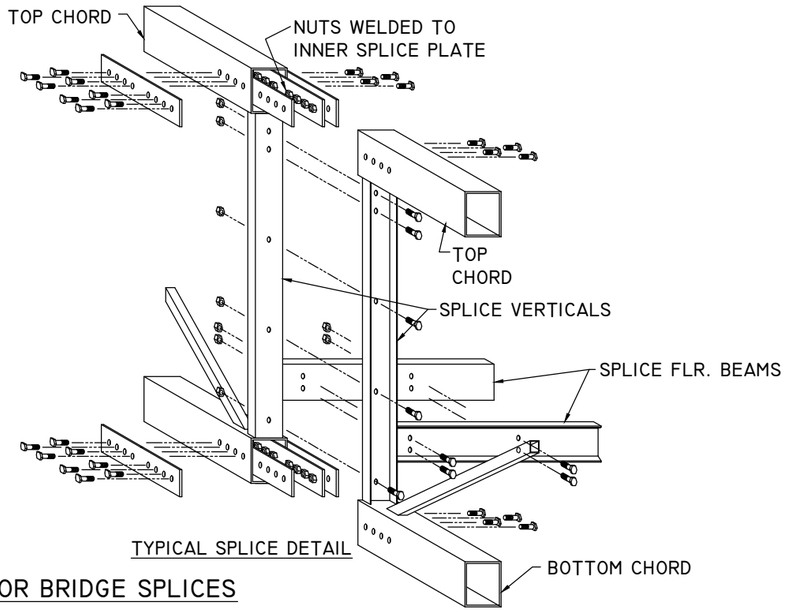
PIONEER BRIDGE INSTALLATION GUIDELINES

NOTE: IT IS THE CONTRACTOR AND ERECTOR'S RESPONSIBILITY TO FOLLOW ALL SAFETY GUIDELINES FOR CRANE RIGGING AND OPERATION.



TYPICAL SPLICE DETAIL

GUIDELINES FOR BRIDGE SPLICES

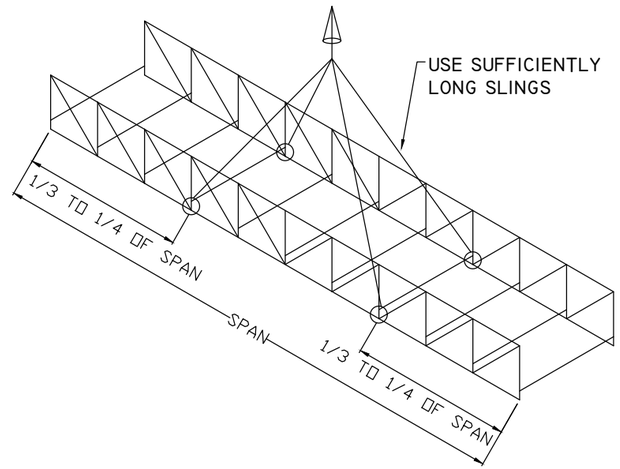
1. DO NOT REMOVE SPLICE PLATES IF THEY ARE ATTACHED TO THE BRIDGE AS EACH PLATE IS MATCHED TO ITS RESPECTIVE JOINT AND MAY NOT BE INTERCHANGEABLE. CLEAN ALL EXPOSED THREADS OF INSTALLED BOLTS (WIRE BRUSH) AND CLEAN OR BLOW OUT NUTS TO REMOVE ANY DEBRIS ACCUMULATED IN TRANSIT. IF ADDITIONAL CLEANING IS NEEDED, RUN A TAP THROUGH THE NUTS. (NOTE: A BOLT CAN BE USED AS A CLEANING TAP BY GRINDING OR CUTTING LONGITUDINAL SLOTS IN THE END OF THE BOLT).
2. LUBRICATE (AS NEEDED) BOLTS/NUTS AND THEN SLIGHTLY LOOSEN ALL BOLTS IN EACH CHORD JOINT SO THAT THE PLATES ARE FREE TO MOVE (BUT DO NOT REMOVE PLATES).
3. ONE BRIDGE SECTION SHOULD BE "FREE" TO MOVE UP/DOWN OR LEFT/RIGHT (AS IF SUSPENDED BY A CRANE) TO ALLOW THE SECTIONS TO COME TOGETHER EASILY.
4. CHORD SPLICES - USE A HAND WRENCH ONLY TO INSTALL BOLTS FULLY INTO EACH NUT. DO NOT USE AN IMPACT WRENCH TO TIGHTEN A BOLT UNTIL THE BOLT IS FULLY THREADED INTO THE NUT. FAILURE TO FOLLOW THIS GUIDELINE WILL LIKELY RESULT IN CROSSED THREADS AND BROKEN BOLTS.
5. USE CAUTION TO AVOID DAMAGING THE THREADS OF NUTS WITH A SPUD WRENCH. AFTER ALL BOLTS HAVE BEEN LOOSELY INSTALLED, TIGHTEN BOLTS AT THE CENTER OF THE PLATE FIRST AND WORK OUTWARD.
6. BOLT TIGHTENING: WE RECOMMEND TURN OF THE NUT METHOD IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS." THIS METHOD IS DESCRIBED BELOW.

TURN OF THE NUT METHOD
TIGHTENING MAY BE DONE BY IMPACT WRENCH OR HAND WRENCH. FIRST, ALL BOLTS ARE TIGHTENED TO A SNUG-TIGHT CONDITION. THIS IS ACHIEVED WHEN ALL CONTACT SURFACES OF THE JOINT ARE BROUGHT TOGETHER BY A FEW IMPACTS FROM AN IMPACT WRENCH OR THE FULL EFFORT OF A PERSON USING A SPUD WRENCH. A MATCH MARK IS PLACED ON THE BOLT HEAD (OR NUT) AND THE ADJACENT PLATE. ALL BOLTS ARE THEN TIGHTENED BY THE AMOUNT SPECIFIED IN THE TABLE BELOW.

NUMBER OF NUT OR BOLT TURNS FROM SNUG-TIGHT CONDITION FOR HIGH-STRENGTH BOLTS*	
BOLT LENGTH	BOTH FACES NORMAL TO BOLT AXIS
UP TO 4 DIAMETERS	1/3
OVER 4 DIAMETERS BUT NOT MORE THAN 8 DIAMETERS	1/2
OVER 8 DIAMETERS BUT NOT MORE THAN 12 DIAMETERS	2/3

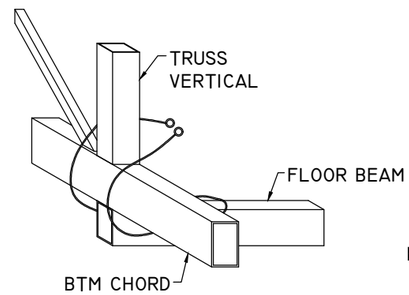
REQUIRED WRENCH SIZE FOR A325 BOLTS	
BOLT SIZE	WRENCH SIZE
Ø5/8	1 1/16
Ø3/4	1 1/4
Ø7/8	1 7/16
Ø1	1 5/8

* NUT ROTATION IS RELATIVE TO THE BOLT REGARDLESS OF WHETHER THE NUT OR BOLT IS TURNED. APPLICATION TOLERANCES ARE AS FOLLOWS:
⅓ TURN +/- 30 DEGREES
½ TURN +/- 30 DEGREES
⅔ TURN OR MORE +/- 45 DEGREES

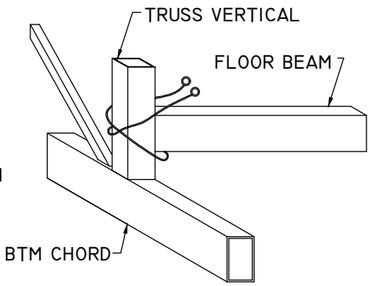


GUIDELINES FOR LIFTING A PIONEER BRIDGE

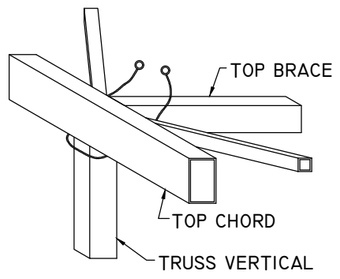
1. LIFT BRIDGE ONLY FROM BOTTOM CHORD, NOT FROM TOP CHORD.*
2. ALTERNATIVELY, A BRIDGE MAY BE LIFTED BY ITS TOP CHORD IF A SPREADER BEAM IS USED SO THAT THE TRUSSES ARE NOT PULLED INWARD BY THE SLINGS OR CHOKER.
3. CONNECT AT PANEL POINTS ONLY (THE INTERSECTION OF TRUSS MEMBERS) AS INDICATED BELOW. PADDING SHOULD BE USED TO PROTECT THE PAINT FROM SCRATCHES.
4. USE CARE NOT TO DAMAGE BRIDGE RAILINGS.
5. DO NOT LIFT BRIDGE FROM CENTER WITHOUT FIRST CONSULTING WITH PIONEER BRIDGES AS SOME MEMBERS CAN BE OVERSTRESSED.



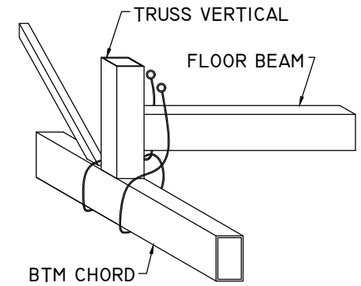
UNDERHUNG FLOORBEAM STYLE BRIDGES



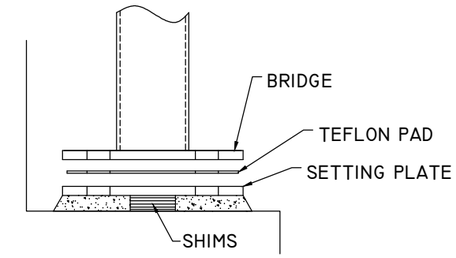
H-STYLE BRIDGES



TOP-BRACED BRIDGES
*THIS STYLE MAY BE LIFTED BY THE TOP CHORD.



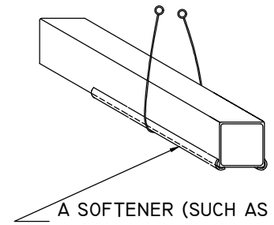
H-STYLE BRIDGES
ALTERNATIVELY, WRAP CHOKER UNDER BOTTOM CHORD



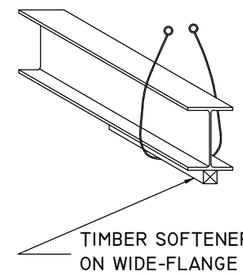
TYPICAL BEARING
(SEE SPECIFIC JOB DRAWINGS FOR ACTUAL BEARING DETAILS)

GUIDELINES FOR BEARINGS

1. SET THE SETTING PLATE ON APPROXIMATELY 1" OF SHIMS BEFORE SETTING THE BRIDGE.
2. SET TEFLON PAD ON SETTING PLATE.
3. SET BRIDGE ON TEFLON PAD.
4. ADJUST SHIMS TO MAKE FLOOR FLUSH WITH BACKWALL OR APPROACH SLAB.
5. GROUT SETTING PLATE AFTER BRIDGE IS SET. NEVER ATTEMPT TO GROUT SETTING PLATE BEFORE SETTING BRIDGE (DOING SO WILL VOID BRIDGE WARRANTY).



A SOFTENER (SUCH AS SPLIT PIPE) IS RECOMMENDED FOR THIN-WALL TUBES.



TIMBER SOFTENER MAY BE USED ON WIDE-FLANGE CHORDS. (DO NOT USE ON TUBE CHORDS!)

REV	DESCRIPTION	BY/DATE	CHECKED BY
21-4	FB ADDED TO ISO VIEW	NH 12/16/21	AF 12/16/21
21-3	NO CHANGES THIS SHEET	NH 5/20/21	AF 5/20/21
21-2	VARIOUS NOTES UPDATED	NH 2/23/21	AF 2/23/21
21-1	SPLICE NOTES UPDATED	NH 2/10/21	AF 2/10/21

PIONEER BRIDGES
A DIVISION OF BAILEY BRIDGES, INC.
119 40th Street NE
Fort Payne, AL 35967
1-866-708-5778

PROJECT: REFERENCE DRAWING
OWNER: —
ADDRESS: —
DRAWN BY: NH
APPROVED BY: AF
DESCRIPTION: PIONEER BRIDGE INSTALLATION INSTRUCTIONS

JOB NO.: REF.
SHEET: 1 OF 1
REV. 21-4