



INSTALLATION INSTRUCTIONS

BRIDGE KIT on Concrete Abutments

TOOLS & EQUIPMENT

- Equipment
 - Crane, Telehandler, Skid Steer, and equipment required to prepare the site and position the I-Beams
- Tools Required
 - Sockets and Wrenches
 - 15/16"
 - 3/4"
 - 9/16" deep well
 - 90-degree Angle Drill for Decking
 - Drill Bit- 3/8" – 13/32"
 - ¼" Impact Driver w/ T25 and T30 Bits
 - ½" Impact Driver
 - Drill with ¼ Drill Bit for Vertical Railing
 - Hammer
 - Sledgehammer
 - Concrete Drill to set Anchors
 - Wrench to tighten anchors



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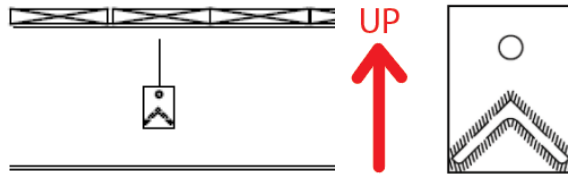
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1. Set Beams

- a. A crane, telehandler or skid-steer is typically used to position the I-Beams depending on their size. The kit installer is responsible for providing this equipment and its safe use.
- b. Set the beams in place on top of the concrete abutments
- c. Set all beams prior to installing frame ties

2. Install Frame Ties

- a. Install the frame ties that go in between the beams finger tight. The tab should be up.
 - Hardware: ½" x 2" Hex Head Bolt. *Only finger tight*
 - SEE HARDWARE DETAIL 2

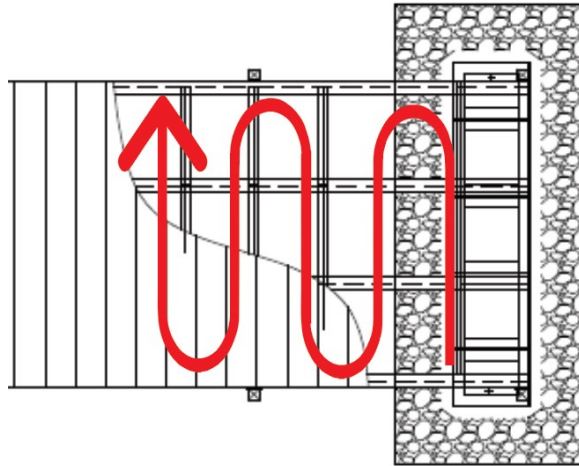


3. Tighten Frame Ties and Beams

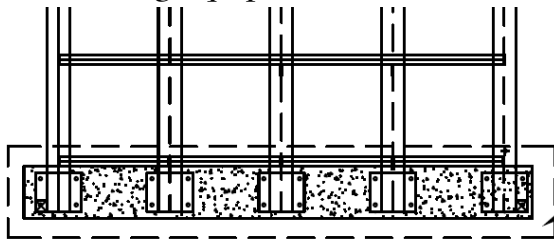
- a. Tighten the frame ties across the width of one end of the bridge, then moving down the length of the bridge continue tightening across the width of the bridge until reaching the end.
 - Tools Required: ½" Impact with ¾" Socket & Wrench

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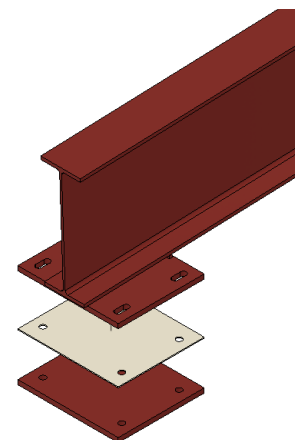
- This step is crucial for the overall leveling of the bridge.
- b. Position the beam and frame tie assembly into its final position using the beam setting equipment



- c. If the shoe was not installed at the factory, Set the final shoe position, grind the paint as required and weld it to the beam. Apply touch up paint to the welded area.

4. Anchor Bridge to Concrete Abutments

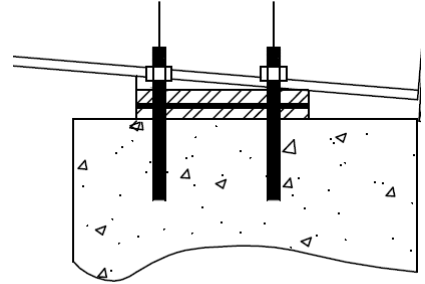
- a. Confirm the bridge is in its correct final position
adjust as needed so that the shoe sits on the center of
the concrete abutment.
- b. Ensure the Bottom plate and HDPE Sheet are
positioned below the shoe on the Beam
- c. Bore holes for $\frac{3}{4}$ " ASTM All-Thread Anchor



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- d. Insert the $\frac{3}{4}$ " all-thread with 7" set in Hilti HIT-RE 500 V3 Epoxy Adhesive per Manufacturer Direction into the holes or equivalent epoxy adhesive.
- e. Install Nuts and washers on all thread per the adhesive instruction to secure the bridge in place after the adhesive has set.



5. Deck Bridge

- a. Start at the same end from step 1-a.
- b. Set board in desired location and predrill through the holes in the top of the I-Beam.
 - Tool Required: 90 Degree Angle Drill
- c. Install Carriage Bolt & Tighten nut to secure into position
 - Tools Required: $\frac{1}{4}$ " Impact with 9/16" Socket & Wrench
 - SEE HARDWARE DETAIL 3
- d. Every 10 – 15 boards, Measure back to the end of the bridge to ensure everything is straight. If necessary, rip deck board to bring back to straight.

6. Attach Railing Post

- a. Attach Railing post to the post brackets located on the outside of the beams.
 - The X on the 4 x 4 should be put facing in towards the brackets.
 - Tools Required: $\frac{1}{4}$ " Impact with 9/16" Socket & Wrench, Drill, Impact Driver
 - SEE HARDWARE DETAIL 5
- b. Level post before tightening.

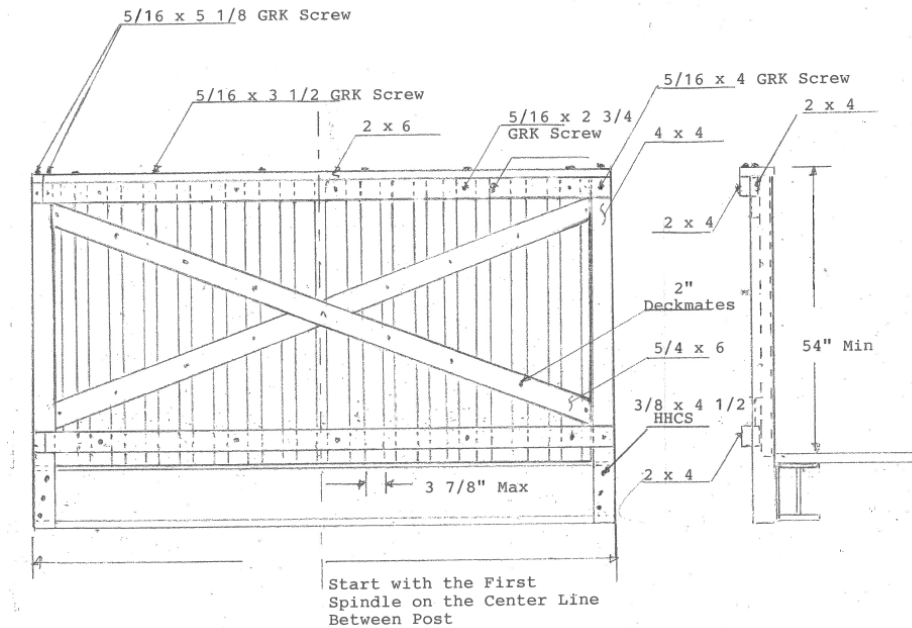
7. Assemble Railing

- a. The railing needs to be custom fit and custom cut



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- b. Predrill ends of railing before securing. Use 1/4" drill bit for pilot hole.

8. Finish Detail

- a. Use touch up stain to stain any cut ends.



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Hardware Details

1. **Abutment Anchor Hardware** – Per Print
2. **Red Iron Frame Ties** – ½” x 2” Zinc Hex Head Cap Screw with ½” zinc nut and lock washer ----- ¾” socket
3. **Deck Carriage Bolt Galvanized**- 3/8” x 2-1/2” with 3/8” nut – no washer. ----- 9/16 Deep well socket ---
4. **Galvanized Pipe** – 2” x 5’ schedule 40 galvanized pipe
5. **Railing Hex Head Bolt** – 3/8” x 4 ½” Hex Head Bolt - 3/8” Flat washer – 3/8” nut – Bolt through 4x4 with washer nut on inside – Galvanized Components – 9/16” socket
6. **Top Railing Cap to Post** – 5/16” x 4” GRK Screw – T30 Bit – ¼” Pilot Hole
7. **Top Railing Cap to Top Railing** – 5/16” x 4” GRK Screw – T30 Bit – ¼” Pilot Hole
8. **Railing to Post** – 5/16” x 4’ GRK Screw – T30 Bit – ¼” Pilot Hole