

THURSTON AVENUE BRIDGE

Architectural Structure > Ithaca, New York



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Thurston Avenue Bridge serves as a gateway between the residential and academic areas of Cornwell's campus, each day carrying more than 12,000 cars and 2,000 pedestrians. BendTec was the fabricator for the bridge's reconstruction. It was widened by 12 feet by adding new induction bent tubular arches at each fascia. The addition allowed for 10-foot sidewalks and 5-foot bicycle lanes.

The tube's large size required BendTec's custom fabrication services. At 32 inches by 30 inches and 1-inch thick, the tubular shape was larger than any standard tube section produced in the U.S.

To fabricate the tube, two 50 ksi, 1-inch thick flat plates were cold bent into U shapes and then welded together with complete joint penetration seam welds. Fed through BendTec's induction bending machine, the 20-foot steel tube section was heated to 1,850 degrees F. As it was being pushed through, it was bent into a parabolic curve.

Field-welded splices were added to maintain the smooth appearance over the length of the arch.



The U-shape was created by cold bending a 1-in. plate. The pieces were then welded together to create a 32-in. x 30-in. rectangular tube.



Weld material was removed prior to grinding the weld seams.



As the tube passes through the induction bender, it is bent to the final radius for each arch.



The bent tube sections are fit and welded together to form one of the three segments required for each arch.



A bearing assembly attaches each end of the arch to the concrete footing. After machining, they are trial fit together.



Half of the bearing assembly goes through the paint shop.



Painted and assembled, the bearing assembly gets a final inspection prior to shipping.



Prior to painting, areas of the arch tube are taped for the field welds.



An end segment is lifted into place to attach to the bearing assembly and concrete anchor point.