

Borton-Lawson strives to deliver value engineering (VE) and savings to each and every client. The SR 322 bridge replacement project was no different, as Borton-Lawson worked to reduce construction time and costs by providing an alternate design.

The \$4.7 million bridge, which was built in 1929, was originally designed using steel beams. Borton-Lawson's alternate design incorporated the longest pre-stressed concrete beams fabricated and erected in the Commonwealth of Pennsylvania. Each beam has a length of 169.48'. This design reduced costs and expedited timelines.

The project design was completed within the original project schedule, even though additional time was not granted for the alternate design. This milestone represented the successful fulfillment of the owner's needs. The project complexity was overcome with value engineering and alternate engineering designs.

The design will service motorists and pedestrians for up to 100 years. The bridge is 167 feet long, with 12-foot wide travel lanes, a new eight-foot wide shoulder, and an eight-foot wide sidewalk, which will serve as a bicycle lane for Pennsylvania's Bike Route L. The sidewalk will also carry a county pedestrian trail, and allow foot traffic to safely cross over the waterway.

The SR 322 bridge replace project clearly demonstrates the significance of value engineering being used to meet an owner's aggressive schedule. Borton-Lawson's alternative design help achieve a more economic, social, and sustainable solution for PennDOT and the end user, the public. This bridge clearly demonstrates the value of VE, and alternate engineering design.