Virginia's Tallest Segmental Box Bridge Under Construction

Phase I of the U.S. 460 Connector project in Breaks, Va., is under way and scheduled for completion in the summer of 2014. Bizzack Construction LLC is the general contractor. CJ Mahan Construction Co. has teamed up with VSL and Doka USA to provide the formwork and traveler system on this design-build project. "This will be the tallest bridge in Virginia when it's complete," says Todd Solar, senior account manager with Doka. The $113-million, balanced-cantilever concrete bridge will be 1,733 ft long and 250 ft tall. The project includes 15,340 sq ft of pre-assembled Top 50 formwork that builds four sets of traveler forms. The segmental boxes vary in depth from 31 ft at the pier table to 12 ft, 6 in. at the mid-span of the bridge.

The Virginia Dept. of Transportation (VDOT) initiated Phase 1 of the U.S. 460 Connector project to provide needed improvements to the Coalfields Expressway infrastructure system. The intent is to provide local and regional connectivity improvement and stimulate economic development.

A major challenge is that the pier table was designed with three horizontal construction joints that included the initial base slab with an 8-ft-tall wall pour for lift 1, elevated support for lift 2 and a drive deck with inverted wall pour for lift 3. Doka designed the lift 2 formwork to be supported with an overhead gantry-style system to hang the formwork so that the base slab and walls could be placed in the same pour. ■

This complex twin-segmental box bridge will reach over 1,700 ft in length and reach a height of 250 ft. The bridge includes 15,340 sq ft of pre-assembled Top 50 formwork that builds four sets of traveler forms.

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