



Figure 10 –
US 281 Colorado River Bridge over Lake Marble Falls. (Photo Courtesy of Archer Western Contractors)

US 281 Colorado River Bridge, Marble Falls, Texas

When completed, the US 281 Colorado River Bridge (**Figs. 10, 11, 12 and 13**) will become the eleventh segmental bridge in the **Texas Department of Transportation's (TxDOT)** inventory, continuing a history of successful segmental implementation in Texas that began in 1973. **TxDOT** awarded the contract to **Archer Western Contractors**. Construction of the northbound structure commenced on December 6, 2010.

The twin structures replace a deck truss built in 1935 and widened in 1975. The existing bridge, with 4 narrow traffic lanes and one sidewalk, is functionally obsolete. Each new bridge will provide 2 standard traffic lanes in one direction, shoulders, and a 6 ft. sidewalk. The bridges are single cell boxes with spans of 274 ft., 410 ft., and 274 ft., built using the cast-in-place balanced cantilever method.

Lake Marble Falls, and its namesake community, are in the Texas Hill Country, a region of rolling hills that is popular for tourism and outdoor recreation. As such, the visual appeal of the new bridge was paramount. The bridges have flaring, hexagonal piers that seamlessly transition into the boat-hull shaped segmental superstructure. Lighting beneath the segment wings will illuminate the full length of the superstructure, providing a stunning evening view.

At the contractor's option, the bridge was redesigned by **FINLEY**, using shorter segment lengths that accommodated form travelers on hand. The redesign modified the longitudinal and transverse post-tensioning layout, but maintained the cross-section of the segmental superstructure. As a result, the contractor saw savings in erection equipment and post-tensioning installation.

The northbound bridge was completed on December 20, 2012 and opened to two-way traffic. Current work is focused on demolition of the deck truss. Following demolition, the southbound structure will be constructed in the footprint of the old bridge.



Figure 11 –
US 281 Colorado River Bridge over Lake Marble Falls. (Photo Courtesy of Archer Western Contractors)

Owner: Texas Dept. of Transportation
Designer: Texas Dept. of Transportation, Bridge Division
Contractor: Archer Western Contractors
Construction Engineering Services: FINLEY Engineering Group, Inc.
Constructability Review/Estimating Services: Archer Western Contractors
Construction Engineering Inspection: Texas Dept. of Transportation
Form Travelers for Cast-in-Place Segments: VStructural
Post-Tensioning Materials: VStructural
Bearings: Dynamic Rubber
Expansion Joints: CMC Capital City Steel
Prepackaged Grout: Masterflow 1205
Roadway and Hydraulic Design: Jacobs Engineering Group, Inc.



*Figs. 12 and 13 –
US 281 Colorado River Bridge
over Lake Marble Falls.
(Photo Courtesy of
Archer Western Contractors)*

