Reference Details:

Owner Florida Department of Transportation, Tallahassee, Florida, USA +++ **Engineer** Figg Engineers (Segmental Bridge) and E.C. Driver & Assoc. (Carina Piers), both Tallahassee, Florida, USA +++ **Contractor** Traylor Bros., Inc., Evansville, Indiana, USA

DSI Units DSI USA, SE Division, Tucker, Georgia, USA
DSI Services Supply of 485 t of DYWIDAG Post-Tensioning Multistrand, Rental of Post-Tensioning Equipment; Technical Assistance

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New 17th Street Causeway Bridge post-tensioned with DYWIDAG Systems

17th Street Causeway Bridge, Fort Lauderdale, Florida, USA

The 17th Street Causeway Bridge was built during the 1950's. It was built over the intracoastal waterway and provided a critical link between Fort Lauderdale's mainland and its tourist loaded beaches. As the area grew, the bridge's narrow lanes became increasingly congested. The original bridge clearance was 25 feet and this was insufficient for marine traffic.

The new bridge construction began in 1997 and was completed on April 13 of 2002. The new structure includes wider traffic lanes, bicycle lanes, 55 foot vertical, and 125 horizontal clearances. It was built using precast segmental construction with post-tensioning supplied by DSI. There were 344 segments, each 10 feet long, with weights of 61-67 tons each. The completed structure is very graceful and is a signature bridge for the Fort Lauderdale area.

DSI supplied the post-tensioning materials and equipment for this project.
This project used Carina Piers, inspired by an existing German high-speed railroad bridge,for the foundation of the lift span. These piers were post-tensioned vertically, horizontally, and longitudinally. The Carina Piers were unstable until they were tied into the main bridge structure. These piers were of highest concern all through the hurricane season prior to their connection with the segmental portion of the project.

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