



■ Bridges



Reference Details:

Owner New Jersey Department of Transportation, NJ, USA
+++ **General**

Contractor George Harms Construction Co., Inc., Howell, NJ, USA
+++ **Architect** FIGG Bridge Engineers, Inc., Tallahassee, FL, USA

DSI Units DSI USA, Northeast Division, Fairfield, NJ, USA

DSI Services Supply of 9,168 pcs. Anchorages for epoxy-coated strands, 1,126t 0.6" bare and 196t 0.6" epoxy coated strands for strand tendons, 110t DYWIDAG

THREADBAR[®]; Rental of technical equipment, stressing and grouting of PT tendons

New Victory Bridge sets US record for span of precast concrete girders

Victory Bridge replacement, NJ, USA

The existing Victory Bridge carries Route 35 over the Raritan River between Perth Amboy and Sayreville in Northern New Jersey.

Due to an advanced stage of deterioration, very narrow lanes and a low vertical clearance of just 9 m, the 1926 built low level swing span bridge needs to be replaced by a new crossing increasing the vertical clearance over the channel to 34 m.

The new bridge will consist of two parallel concrete segmental structures, each 1,210m long with a 134m precast match cast main span (new US record), two 101 m back spans and a series of approach spans varying in length from 43 to 46m. Each structure, one for northbound and one for southbound traffic, will carry two lanes and the southbound side will also include a 1.8m wide sidewalk.

The substructure consists of 22 piers and two abutments for each structure. Each pier will be constructed from precast concrete hollow box sections that are post-tensioned together using 12-0.6" and 19-0.6" epoxy-coated prefabricated strand tendons and 1 1/4" High Strength DYWIDAG bars. The epoxy-coated tendons are prefabricated in DSI's NJ plant and stressed with automatic jacks specially equipped for epoxy-coated strand. The superstructure consists of precast concrete segmental box girders erected either by the span by span (approach spans) or the balanced cantilever (main span) construction method. The approach spans with a typical length of 46 m use 4-0.6" internal flat tendons in the top deck to provide a long lasting durable riding surface. Five 19-0.6" external tendons per side are used for the longitudinal post-tensioning of the spans.

Construction started in March 2003 and is expected to be completed in December 2005.