Build the Best. ***Be the Best.***

FLATIRON

Washington Bypass

A HOCHTIEF Company

Owner
North Carolina Department of Transportation

Location
Washington, NC

Value
$192,000,000

Market
Design-Build – Bridges, Highways

Start - Completion Dates
2/2006 – 2/2010

- Patented, proprietary top-down construction technique to minimize footprint over wetlands
- 6.8 miles of four-lane highway through environmentally sensitive terrain
- Two major interchanges and one three-mile long bridge
- Right-of-way acquisition

Project Description

The North Carolina Department of Transportation commissioned the joint venture team of Flatiron and United Contractors to design and build a new $192 million 6.8-mile Highway 17 Bypass around Washington and Chocowinity, N.C. The new bypass was completed eight months early and begins north of town, forking west from existing US 17. It curves south and crosses US 264 (a major east-west route carrying traffic to and from Raleigh) and the river. It curves east and crosses back over mainline US 17, and then under NC 33.

The project included construction of a three-mile bridge over the Pamlico-Tar River and environmentally sensitive wetlands. To ensure minimal disturbance to the surrounding environment, Flatiron developed innovative construction methods and utilized a patented variation of the top-down construction technique. This span-by-span construction method used the newly constructed permanent structure for personnel access and material deliveries. The process consisted of self-contained gantries capable of performing all tasks associated with the bridge construction, including driving the precast piles, building the bent caps, erecting the 120-foot-long precast girders and pouring the deck. All of these operations were performed without the use of temporary access trestles, thus significantly reducing environmental disturbances.

This method required designing and manufacturing a specialized piece of equipment – a launching gantry designed and supplied by Deal of Italy with special pile driving equipment designed by Bermingham of Canada – never before used to actually drive pile from the cantilevered end of the gantry.

Design and permitting occurred simultaneously over the first year, with construction beginning in February 2007 and lasting approximately three years.

Company Role
Flatiron managed the joint venture.

Awards
- American Road and Transportation Builders Association – Globe Award Honorable Mention, 2011
- Associated General Contractors of America – Aon Build America Award, 2011
- National Partnership for Highway Quality – National Achievement Award, 2011

Awards (cont.)

- Carolinas AGC – Presidential Award, 2010
- Women's Transportation Seminar – Innovative Transportation Solutions Award, 2010
- Federal Highway Administration – Environmental Excellence Award, 2009
- Construction Innovation Forum – NOVA Award, 2009
- Roads and Bridges Magazine – Top 10 Bridges (#8), 2008