



Transportation

Highways & Bridges

Client

Virginia Department of Transportation

Location

Virginia, USA

Virginia Route 288 Design-Build

- \$236-million design-build project for the construction of 10.5 miles of new limited access freeway and the expansion of an additional 7 miles
- Construction of 23 new bridges, six new interchanges, and modifications to two existing interchanges
- Design-build delivery approach will save over \$47 million and be completed 3 years sooner than conventional delivery
- Historic canal structure preservation at the James River Bridge crossing

Project Description

CH2M HILL is providing design and construction management services to the Virginia Department of Transportation (VDOT) for the Virginia Route 288 project.

The project is one of the largest highway projects awarded under the state's Public-Private Transportation Act of 1995. This legislation allows VDOT to consider proposals from private entities to construct, fund, finance, or maintain transportation facilities. The CH2M HILL team scoped, priced, scheduled, and negotiated the project in approximately 4 weeks from notice of award. The CH2M HILL team proposed a design-build approach and offered the lowest price and the fastest schedule—and was the only team that offered a performance-based pavement warranty that relieves VDOT of pavement maintenance costs for a 20-year period. The pavement performance warranty is estimated to save VDOT \$6-10 million in maintenance costs over the term of the warranty.

Project elements include 10.5 miles of new four-lane highway and the expansion of 7 miles of existing highway from the Powhite Parkway (Route 76) in Chesterfield County to Interstate 64 in Goochland County. The scope of work also includes six new interchanges; modification of two existing interchanges; construction of 23 new bridges; and a 3,600-foot crossing of the James River.

CH2M HILL completed portions of the design work inhouse and managed several other consultants in finalizing the design work they started under preexisting VDOT contracts. Our efforts are focused on ensuring compliance with design standards and context-sensitive issues along the corridor. CH2M HILL also provided construction management and independent quality assurance services as a subconsultant to both firms leading the consortium. In addition to design management, CH2M HILL provided design for roadways and bridges, including five steel plate girders and pre-stressed, pre-cast I-beam structures.

During construction, CH2M HILL is also responsible for the QA/QC inspections and materials testing for the entire 17 miles and 23 bridges of the project, as well as construction documentation, requests for information (RFI), submittals and tracking, verification of material testing frequency and results, and project element inspection. This responsibility takes on added importance given the 20-year pavement warranty term. CH2M HILL is using laptop computers with high-speed wireless modems in the field for data collection to provide accurate and timely project documentation.