

Bonner Bridge Replacement

Outer Banks of North Carolina



Since the Bonner Bridge was constructed in 1965, numerous hurricanes have struck the Atlantic coast wreaking havoc on the Outer Banks of North Carolina. As a result, destabilization of the existing bridge has occurred, consequentially a replacement bridge has been design and construction is currently underway. GRL Engineers were called in to help aid in the replacement of this nearly three-mile long bridge across the Oregon Inlet from Bodie Island to Hatteras Island. GRL provided both static and dynamic pile testing for the preconstruction load test program as well dynamic testing for the production piles. Numerous challenges have been encountered during both the preconstruction test pile program and the production pile driving. The most prominent of these has been to achieve pile capacity for the design scour elevations which extend as deep as EL. -85. GRL's results have been used extensively for pile capacity assessment and acceptance during the production pile testing in these difficult soil conditions.

To learn more about this project or for additional information, please contact info@grlengineers.com.

Project Information
Owner: NCDOT
Client: PCL Civil Constructors
Project Name: Bonner Bridge Replacement
Project Cost: \$246M
Completion Date: Fall 2018

GRL Services Provided
Static Load Testing <ul style="list-style-type: none">One compression test (36" PSC Fully instrumented w/ strains)One lateral test (36" PSC)PDA Testing (2 ea. 36" PSC)PDA Testing (1 ea. 54" Cyl Pile)PDA Testing of Production PilesPDA Testing of Temporary Trestle piles

