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DRILLED SHAFT TESTING AT WASHINGTON COUNTY SEGMENTAL BRIDGE AND HAMILTON-50 TEST SITE	June, 2000
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16. Abstract

A total of four lateral load tests on eight fully instrumented drilled shafts have been successfully carried out. The test data and analysis results have been submitted to ODOT structure office in a timely manner to allow ODOT engineers to implement these test results into design. Specifically, two load tests have been conducted at Putnam bridge site with the shafts diameter of 1.22-m (48-inch) and shaft length of 14-m and 9-m respectively. Also, two lateral load tests have been conducted at CLE-50 site with the shafts diameter of 1.067-m (42-inch) and shaft length of 5.48-m (18-ft), and 9.62-m (26-ft) respectively. Test results included the load-displacement relationship at the shaft head, and strains and deflections along shaft length at different load levels. In addition to lateral load testing a new back-analysis method was employed to demonstrate the benefits of deriving the *p-y* relationship from the curve-fitting back-analysis techniques.

The research results have allowed ODOT engineers to adopt the design changes of the drilled shaft foundations. As a rough estimate, a saving of 1.5 million dollars of construction cost have been realized. The test results also formed a part of on-going efforts of developing pertinent data base of the behavior of laterally loaded drilled shafts. The large data base could be used for further development of an improved analysis method.

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