



Hurricane Protection Projects New Orleans, Louisiana



DBA Clients:

GIWW-WCC Project: Gulf Intracoastal Constructors
(Joint Venture of Kiewit and Traylor Bros.)

LPV-145 Project: Chalmette Levee Constructors
(Joint Venture of Kiewit and Massman)

Owner: U. S. Army Corps of Engineers

DBA Services:

- Performed driveability studies for test piles and production piles.
- Geotechnical design for load test reaction frames, temporary facility foundations, and excavations.
- Geotechnical review of project designs.
- Analysis of levee settlement and stability during construction.
- Review and analysis of load test data.
- General geotechnical support of construction activities.

Project Highlights:

DBA was involved in two separate projects: 1) the Gulf Intracoastal Waterway—West Closure Complex (GIWW-WCC) and, 2) Chalmette Loop Floodwall (LPV-145). Both projects had extensive test pile programs.

The GIWW-WCC project is located just south of the junctions of the Harvey Canal and the Algiers Canal (GIWW). The major components of the project are two sector gates across the navigation channel to close the canal during storm surges, a large pumping station, relocation of the levee on the east side of the GIWW, and construction of new floodwalls on the west bank of the GIWW. The test pile program included a total of 30 test piles of various sizes and types spread among seven test sites. Pile types tested included open ended steel pipe (18, 24, 30 and 54 in diameter) and pre-cast pre-stressed concrete (18 in). Static testing included compression and tension tests, with lateral tests performed on the 54 in diameter piles. Dynamic testing was performed on all piles using the Pile Driving Analyzer.

The LPV-145 project was the construction of over 5 miles of reinforced concrete T-wall floodwalls on the crest of the Chalmette Loop Levee. The T-wall foundations consisted of 3 rows of H-piles, with a sheet pile cutoff in the levee. The test pile program consisted of 11 load test piles (compression and tension) and 6 indicator piles (dynamic testing) spread among 4 test sites. (Pile types were HP 14x73, HP 14x89, and 24" open ended pipe.

The design of the projects and the test pile programs was performed by the Corps of Engineers. DBA provided consulting support to the two contractor joint ventures for the test pile programs and for geotechnical issues related to construction of temporary works. Since both projects were being delivered through the Early Contractor Involvement delivery method, DBA also provided some geotechnical review of design plans on behalf of the joint ventures.

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