



# BILOXI BAY BRIDGE REPLACEMENT

## Biloxi and Ocean Springs, Mississippi

Owner: Mississippi DOT

Designer: Parsons Transportation Group

Contractor Joint Venture:  
Massman Construction Company  
Kiewit Southeast  
Traylor Brothers, Inc.

Years of Project: 2006—2008

Total Project Cost: \$ 339 Million

Owner Reference:  
Sean Ferguson, P.E. (601-359-1795)

Client Reference:  
Pat Cassity, P.E., S.E. (Parsons— 312-930-5100)

### Project Highlights:

The U.S. 90 Bridge over Biloxi Bay is a 1.6-mile long bridge spanning the bay between Biloxi and Ocean Springs, Mississippi. The previous structure was destroyed by Hurricane Katrina in August, 2005. DBA helped develop and oversee a comprehensive test pile program of indicator piles and load test piles. Twenty one indicator piles were installed and tested during driving using a Pile Driving Analyzer (PDA). Five load tests were also performed: two Statnamic axial, two Statnamic lateral, and one static axial. The results of the testing program were used to develop driving criteria that included allowance for pile setup after initial driving. The effort to establish the setup relationship provided assurance to the MSDOT that piles driven to satisfy the established end of drive criteria would ultimately achieve the required ultimate axial resistance. The criteria were also developed to minimize restrikes, contributing to the early completion of foundations and ultimately the entire bridge.

### Technical Publications:

Thompson, W.R., Held, L., and Saye, S., 2009. "Test Pile Program to Determine Axial Capacity and Pile Setup for the Biloxi Bay Bridge", DFI Journal Volume 3, No. 1, May 2009, Deep Foundations Institute, pp13-22.

*Photo Credits: Dan Brown and Associates, PC.; FHWA*

