Transportation Pooled Fund Program

Project Title:

Structural Testing of UHPC Connections Between Precast Bridge Deck Elements

Project Manager and Phone Number:	**Project No:**	Project is:
Ben Graybeal Research Structural Engineer FHWA Turner-Fairbank Highway Research Center 202-493-3122	TPF-5(217)	_____ PLANNING _x_ R&D

Reporting Period: January 1, 2011 - March 31, 2011	**Multi Year Project**	

Description of Work Performed and Progress:

Phase 1: Phase 1 of this project has been completed.

Phase 2:

Due to the success of the project and the interest generated within the community, the scope of the project has been expanded to include additional types of connections between prefabricated concrete components. FHWA and NYSDOT have committed additional resources to the project. The next phase of the project will focus on the composite connection between prestressed girders and precast bridge decks. This connection is to be redesigned and tested at full scale.

The two full-scale girder test specimens were fabricated this quarter. The first specimen, which included the novel UHPC connection detail, was transported to FHWA-TFHRC, then testing was initiated. The girder was loaded in 4-point bending with load magnitudes consistent with the fatigue design of the composite connection. By the close of this quarter, this specimen had accumulated 2 million cycles at the fatigue design load, 2 million cycles at 1.33x the fatigue design load, and 2 million cycles at 1.67x the fatigue design load. The specimen had exhibited very good performance through this cyclic loading regime.

In the new quarter, the testing of the first specimen will be completed. The testing of the second specimen will be initiated.

STATUS AND COMPLETION DATE

Percentage of work completed to date for total project
Project is: _55_ %

_x_ on schedule _____ behind schedule, explain:

Expected Completion Date: __December 31, 2011__

Project Manager