Transportation Pooled Fund Program

Project Title: **Steel Suspension Bridge Vulnerability and Countermeasures**

Project Manager and Phone Number:	**Project No:**	Project is:
Eric Munley (202) 493-3046	TPF(5)216	____ PLANNING __X__ R&D
Reporting Period: April-May-June 2011	**Multi Year Project** FY 2010-14	

Description of Work Performed and Progress:

Task 1 - Towers

- Completed 1/7 scale testing of specimens to establish program's mitigation measure phenomenology.
- Completed lead abatement of plate steel from Crown Point Bridge (CPB) for construction of tower specimens.
- Completed new A36 and CPB steel tower structures for explosive testing. These tests will establish comparative baselines (i.e., New vs. Old steel) of tower behavior with no mitigating measures.

Task 2 – Main Cables

- Test plan for the Cold Gas Thruster (CGT) testing of Ft. Steuben Bridge was drafted and submitted to the Ohio DOT for review.
- COE contract with Duron Consulting for CGT testing support was established. Matching funds will be provided by Harvey Mudd College. In-place Cable testing on the Ft. Steuben Bridge will continue the data acquisition started on the Waldo-Hancock Bridge (in Maine). This will be used to establish the relationship between off-site explosive test data (i.e. from blast tests conducted on cut main cable specimens) and in-place main cable behavior under an actual blast load on a bridge.

Task 3 – Suspender Ropes and Sockets

- Collected more than 20 suspender specimens (of varying age and condition) removed from the Manhattan Bridge during its renovation project.
- Designed cable tensioning frame (to provide full service loads to the members during tests of Contact-Charge loading. This device also allows for explosive testing of retrofit measures on a tensioned cable.
- Test plan, for the CGT testing of in-place suspenders, drafted / submitted to the Ohio DOT for review.

STATUS AND COMPLETION DATE

Percentage of work completed to date for total project
Project is: _22_%

__X__on schedule _____ behind schedule, explain:

Expected Completion Date: 7-11-2015