

QUARTERLY REPORT FORM

For the quarter of April 1, 2010 – June 30, 2010

Contract/Project Manager: **59A0420 / Charles Sikorsky**
UCSD index SSR8827-18827A

EA: **65-680912**

Title of Project

Evaluation of Prestress Losses in Long-Span Post-Tensioned Bridges

Describe last quarter's task/deliverables.

1. Additional prestress loss data were gathered from the I5-I805 bridge.
2. Youakim and Karbhari's refined method for prestress loss calculations was evaluated with the field data using the concrete properties measured from cylinders and given by AASHTO LRFD 2004 and 2007 Specifications, respectively. It has been found that the method provides satisfactory results with the measured concrete properties and with the properties given by AASHTO 2004 Specifications. Results with AASHTO 2007 Specifications are less accurate as compared to the field data.
3. A simplified analysis method to apply Youakim and Karbhari's method has been identified.
4. The approximate prestress loss calculation method in AASHTO 2007 was examined and perceived to be applicable to post-tensioned bridges. But the formula needs to be re-calibrated.

Describe next quarter's task/deliverables and their due date.

1. Calibrate the approximate prestress loss calculation method.
2. Develop design examples.
3. Develop a proposal to change the AASHTO specifications for prestress loss calculations for post-tensioned bridges. This will include both the refined and approximate calculation methods.
4. Complete the final project report.

Are you on time with your schedule? YES Are you within budget? YES Are you on scope? YES
If no, please explain below. NO If no, please explain below. NO If no, please explain below. NO

There is a delay in the completion date as compared to the original project schedule due to the change of the project PI and the transition period.

Percentage of work completed. 90 %

What is your expenditure projection for FY 09/10?

First Quarter	Second Quarter	Third Quarter	Fourth Quarter
\$2,503.87 (actual)	\$1,174.37 (actual)	\$37,914.08 (actual)	\$76,663.91 (actual)