

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): IOWA DOT

INSTRUCTIONS:

Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # TPF-5(205)	Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input checked="" type="checkbox"/> Quarter 4 (October 4 – December 31), 2011	
Project Title: Concrete Pavement Mixture Design and Analysis (MDA)		
Project Manager: Peter Taylor	Phone: 294-9333	E-mail: ptaylor@iastate.edu
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Lead Agency Project ID: RT 0315	Other Project ID (i.e., contract #): Addendum 353	Project Start Date: 5/15/09
Original Project End Date: 6/30/13	Current Project End Date: Same	Number of Extensions:

Project schedule status:

On schedule On revised schedule Ahead of schedule Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Total Percentage of Work Completed
\$385,000	\$216,532.92	40%

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$8,538.45		5%

Project Description:

The work to be covered by this pooled fund addresses focused activities under the [Concrete Pavement Road Map](#) (CP Road Map) Track 1, Mix Design and Analysis. The activities are intended to meet some of the needs identified by the track. These include the need for:

- Verification tests that are easier to perform or better characterize materials and mixtures, both for uniformity control and for acceptance.
- Relationships and models that predict the performance of a mixture based on knowledge of the characteristics and proportions of the materials in it.
- Guides and Specifications that help users make good decisions, and make clear who is responsible for what and how it will be measured and paid for.
- Communication and education tools that help practitioners stay abreast of innovations being developed under this pooled fund.

This pooled fund is being set up to address specific tasks within the Road Map, notably those tasks that can, and should, be addressed in the short term, with high probability of achieving significant improvements in the quality and uniformity of concrete mixtures.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

- Data analysis of the lab mixtures with integral waterproofers continued; some mixtures were repeated. Testing in progress.
- Manufacturing of the mixes for the paste aspect of proportioning task has begun. Testing is in progress.
- For the air entrainment research, which is under the modeling task:
 - Hardened air-void analysis have been completed. Data is being compared and analyzed.
- Preparing for a presentation at the National Concrete Consortium meeting in Oklahoma City in the Spring.
- For the work on the optimized aggregate gradation:
 - Materials for the project have been gathered and the experiments have been designed.

Anticipated work next quarter:

- Work will continue on all tasks.
- Testing of the mixes regarding the paste aspect of proportioning task.
- For the air entrainment research, which is under the modeling task:
 - The data will continue to be analyzed and the literature review over current specifications for air entrained concrete will be completed.
- For the work on the optimized aggregate gradation:
 - Mixtures will begin on the project in early January.

Significant Results:

- A report will be presented at the March NCC meeting and available on the website after that.

Circumstance affecting project or budget (Describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope, and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).