

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(183)	Transportation Pooled Fund Program - Report Period: Quarter 1 (January 1 – March 31, 2014) Quarter 2 (April 1 – June 30, 2014) Quarter 3 (July 1 – September 30, 2014) X Quarter 4 (October 1 – December 31, 2014)	
Project Title: Improving the Foundation Layers for Concrete Pavement		
Project Manager: Steve Megivern	Phone: 239-1936	E-mail: stephen.megivern@iowa.dot.gov
Project Investigator: David White	Phone: 294-1463	E-mail: djwhite@iastate.edu
Lead Agency Project ID: RT 0314	Other Project ID (i.e., contract #): Addendum 352	Project Start Date: 3/16/09
Original Project End Date: 3/15/14	Current Project End Date: 3/15/2016	Number of Extensions: On-going pooled fund project

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
\$875,000	\$624,264.62	96

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$25,194.81		2

Project Description:

The objective of this research is to improve the construction methods, economic analysis and selection of materials, in-situ testing and evaluation, and development of performance-related specifications for the pavement foundation layers. The outcome of this study will be conclusive findings that make pavement foundations more durable, uniform, constructible, and economical. Although the focus of this research will be PCC concrete pavement foundations, the results will likely have applicability to ACC pavement foundations and, potentially, unpaved roads. All aspects of the foundation layers will be investigated including thickness, material properties, permeability, modulus/stiffness, strength, volumetric stability and durability. Forensic and in-situ testing plans will be conceived to incorporate measurements using existing and emerging technologies (e.g. intelligent compaction) to evaluate performance related parameters as opposed to just index or indirectly related parameter values. Field investigations will be conducted in each participating state. The results of the study will be compatible with each state's pavement design methodology and capable for use with the Mechanistic-Empirical Pavement Design Guide (MEPDG). Evaluating pavement foundation design input parameters at each site will provide a link between what is actually constructed and what is assumed during design. There are many inputs to the pavement design related to foundation layers and this project will provide improved guidelines for each of these. The study will benefit greatly from maximizing the wide range of field conditions possible within the framework of a pooled fund study.

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

The main research activity during this quarter involved updating the field project reports shown in the table below as part of the Sub Tasks 1.5, 1.7, 3.1, 3.2, 3.4. The process of internal review was provided in the last QPR. In brief, the research team authors finishes the first draft and a technical editor (Dr. Chris White) reviews and updates the report followed by revisions by the authors, and the report is submitted to InTrans Publications team for final review. Then the report is uploaded to an FTP site for TAC review.

Report	First Draft by Authors	Technical Editor Review	Updates by Authors	InTrans Pubs Review	Upload to FTP site for TAC
Non-Uniformity Analysis Report	Done	Done	Done	Done	
MEPDG Sensitivity Analysis Report	Done	Done	Done	Done	
Wisconsin US10 Report	Done	Done	Done	Done	
Michigan I96 Report	Done	Done	Done		
Iowa I29 Report	Done	Done	In Progress		
Pennsylvania US422 Report	Done	Done			
Michigan I94 Report	Done	In Progress			

Manual of Practice: The research management team continues meeting internally to develop the publication details for the Manual.

Anticipated work next quarter:

- Continue working on field project reports.
- Continue working on the “Manual of Practice”.
- Begin planning for TAC meeting early next quarter to review final project reports and provide update on manual.
- Send out several reports on CEER FTP site for TAC review and comment.

Significant Results:

Most significant of this quarter is updating field data analysis from project sites and updating the reports listed above.

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).

TAC committee:

Pooled Fund Members		
Mehdi	Parvini*	California DOT
Mark	Dunn	Iowa DOT
Todd	Hanson	Iowa DOT
Linda	Narigon	Iowa DOT
Steve	Megivern*	Iowa DOT
Kevin	Merryman	Iowa DOT
Mark	Grazioli*	Michigan DOT
John	Staton	Michigan DOT
Josh	Freeman	Pennsylvania DOT
Lydia	Peddicord*	Pennsylvania DOT
Jeff	Horsfall*	Wisconsin DOT
Lisa	Rold	FHWA
Gina	Ahlstrom	FHWA
*Primary state contact		
Research Team		
Tom	Cackler	CP Tech Center/ISU
Barry	Christopher	Geotech Engr Consultant
Andrew	Dawson	Univ of Nottingham
Jeff	Roesler	Univ of Illinois U-C
Pavana	Vennapusa	CEER/ISU
David	White	CEER/ISU