

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Virginia DOT (VDOT) .

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 # <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i> TPF-5(268)		Transportation Pooled Fund Program - Report Period: <input checked="" 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 type="checkbox"/> Quarter 4 (October 1 – December 31)	
Project Title: <p style="text-align: center;">Pavement Surface Properties Consortium: A Research Program</p>			
Name of Project Manager(s): Kevin Kenneth McGhee	Phone Number: (434) 293-1956	E-Mail Kevin.McGhee@VDOT.Virginia.gov	
Lead Agency Project ID: VCTIR 103567	Other Project ID (i.e., contract #): 448679	Project Start Date: 7/1/2012	
Original Project End Date: 6/30/2018	Current Project End Date: 6/30/2018	Number of Extensions: 0	

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	Percentage of Work Completed to Date
\$124,992 *	\$ 95,270	76%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$47,828 (38%)	\$47,828	38%

* Received; total committed = \$450,000

Project Description:

Through a regional pooled fund, this program of research focuses on enhancing pavement sustainability. The initial project scope covers:

- ✓ Examine emerging sustainable materials, technologies, products and pavement systems; how to facilitate their adoption; and what testing approaches and methods are needed to implement these technological improvements
- ✓ Identify an appropriate set of metrics that comprises all aspects of pavement sustainability and the adaption or development of tools designed to assess pavement sustainability on qualitative and quantitative scales.
- ✓ Examine how sustainability considerations will affect all aspects of pavement engineering and management such as planning, design, construction, maintenance, management, and reclamation and develop guidelines for integration of these tools into pavement/ asset management business processes.
- ✓ Investigate the effect of climatic change on regional pavement engineering in terms of design, construction, maintenance, and management.

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

- Continued working on the literature review for the two initiated projects:
 - (1) Measuring the Benefits of Emerging Materials and Construction Processes.
 - ✓ Developed a case study of a recycling project on I-81 and prepared a summary presentation.
 - ✓ Initiated a literature review on all pavement recycling technologies and prepared a summary PowerPoint presentation.
 - (2) Consideration of the Use Phase in the Pavement Life-Cycle Assessment.
 - ✓ In this effort, we have initially concentrated on the impact of maintenance actions and rolling resistance on energy consumption. The tire viscoelastic behavior is the single most important parameter affecting rolling resistance. As far as pavement properties, roughness (IRI) and macro-texture (MPD) have been the most studied.
- Developed a web site and posted the presentation of the Virginia Pavement Recycling Conference to make them available to the broad pavement community (<http://www.vtti.vt.edu/outreach/conferences/vprc-2012.html>).
- Organized a short meeting of consortium members during the *92nd Annual Meeting of the Transportation Research Board* and updated them on the progress of the work.

Anticipated work next quarter:

- Prepare a case study illustrating the impact of project selection on the energy consumption due to maintenance action and pavement roughness.
- Present the results of the I-81 case study and the literature review on pavement recycling technologies to the consortium members.
- Develop a research need statement for the *Use of LCA in Pavement-Type Selection*.
- Organize the second technical advisory committee meeting.

Significant Results:

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

No problems were encountered in this quarter.

Potential Implementation: