

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(141)	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 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: 82650	Other Project ID (i.e., contract #):	Project Start Date: 7/1/2006
Original Project End Date: 6/30/2011	Current Project End Date: 3/31/2016	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	Percentage of Work Completed to Date
\$1,890,581	\$1,879,145	99%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$50,413 (2.7%)	\$50,413	99%

Project Description:

Through a regional pooled fund, this program of research focuses on optimizing pavement surface texture characteristics. The initial focus of the program was on the application of inertial and laser-based equipment for measuring pavement surface properties, but the scope has been expanded based on the guidance provided by the Technical Advisory Committee. The program has included the following main broad activities:

- ✓ Establishment equipment comparison and verification facility and hosting of annual equipment roundups.
- ✓ Evaluation of new and existing methods and technologies for measurement of functional highway surface properties and providing enhanced pavement surfaces.
- ✓ Conducting specific studies that require measurement of pavement surface properties under controlled traffic or environmental conditions on different surfaces. These have included (among others):
 - Investigation of seasonal effects on friction measurements,
 - Evaluating the potential adoption of the International Friction Index (IFI), and
 - Determining speed adjustment factors for locked-wheel friction trailers.
- ✓ Supporting the FHWA Continuous Friction Measurement Equipment (CFME) Technology Deployment program.
- ✓ Conducting technology transfer activities, such as: making presentations at national and international conferences and meetings, organizing training workshops, publishing journal papers, and organizing conferences and symposia.

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

- The results of the 2015 9th *Annual Surface Properties Rodeo* were presented on Monday November 2, 2015 before the start of the RPUG conference in Raleigh, N.C.
 - A final draft report was distributed for review by the members, which included an annex with the details of the friction comparison for each state.
 - The research team summarized the processing of the friction and the profile data collected during the 9th *Annual Surface Properties Rodeo* held in early June in Blacksburg.
 - The TAC group discussed the results, the progress of the various ongoing activities, research needs, and identified priorities for the upcoming year. The feedback obtained will be incorporated in the final 2014 Rodeo Report.
- The members of the consortium discussed the need to restart the pooled fund as it has been 10 years since its inception.
 - All the partners expressed interest in continuing the program through the second phase.
 - All the partners agreed that a rodeo compilation and summary of publications would be an acceptable final deliverable.
 - The partners were asked to then review the scope and objectives of the existing work, recommend potential new members that can be invited to participate, and provide any other topics that can to be studied.
 - Work has begun to have the consortium extended by setting up a new pooled-fund the information has been forwarded to the present members and other possible additional states that might be interested in participating.
- The Consortium participated in RPUG 2015 and delivered the following three presentations:
 - Using continuous pavement friction measurements to develop Safety Performance Functions, improve the accuracy of crash count predictions, and evaluate possible treatments for the roads in Virginia (Edgar de León)
 - Macrotexture characterization by using the Effective Area for Water Evacuation (Samer Katicha)
 - Virginia “Quieter” Pavement Demonstration Program (Kevin McGhee)
- Five papers related to surface properties for the 95th *Annual Meeting of the Transportation Research Board* in January 2016 have been revised as needed and resubmitted, and have been approved for presentation and possible publications.
 - “Pioneering the use of continuous pavement friction measurements to develop new Safety Performance Functions, improve the accuracy of crash count predictions, and evaluate possible treatments for the roads in Virginia”, paper 16-4952, for presentation and possible publication.
 - “Enhancing Pavement Surface Macrotexture Characterization by Using the Effective Area for Water Evacuation”, paper 16-1834, for presentation and publication.
 - “New Approach for Managing Pavement Friction and Reducing Road Crashes”, paper 16-4433, for presentation and

publication.

- “Developing Crash Prediction Models”, paper 16-1895, for presentation and publication.
- “Virginia Quieter Pavement Demonstration Program”, paper 16-3833, for presentation and publication.

Anticipated work next quarter:

- Finalize the presentations and deliver them at the *95th Annual Meeting of the Transportation Research Board* in January 10-14, 2016 in Washington, D.C.
- Start the organization of the *10th Annual Surface Properties Rodeo* to be held in Blacksburg on May 16-20, 2016 at the Smart Road. Preparations will begin with the partners and seeking invited equipment.

Significant Results:

- ✓ “Pioneering the use of continuous pavement friction measurements to develop new Safety Performance Functions, improve the accuracy of crash count predictions, and evaluate possible treatments for the roads in Virginia”, paper 16-4952, *95th Annual Meeting of the Transportation Research Board*.
- ✓ “Enhancing Pavement Surface Macrotexture Characterization by Using the Effective Area for Water Evacuation”, paper 16-1834, *95th Annual Meeting of the Transportation Research Board*.
- ✓ “New Approach for Managing Pavement Friction and Reducing Road Crashes”, paper 16-4433, *95th Annual Meeting of the Transportation Research Board*.
- ✓ “Developing Crash Prediction Models”, paper 16-1895, *95th Annual Meeting of the Transportation Research Board*.
- ✓ “Virginia Quieter Pavement Demonstration Program”, paper 16-3833, *95th Annual Meeting of the Transportation Research Board*.

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: