

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(345) Pavement Surface Properties Consortium – A Research Program at the Virginia Smart Road Phase II	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: 5/19/2016
Original Project End Date: 2/28/2022	Current Project End Date: 2/28/2022	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
\$832,181*	210,516	25%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$34,232 (4%)	\$34,232	25%

* Committed; the actual contracted budget is \$259,981 (VTTI) and \$28,398 (TTI)

Project Description:

Through a regional pooled fund, this program of research focuses on optimizing pavement surface texture characteristics. Phase I of the program demonstrated that a collaborative research program can provide an accessible and efficient way for highway agencies and other organizations to conduct research on pavement surface properties. This second phase focuses on addressing some of the emerging challenges in the evaluation of pavement surface properties and the changes needed to best support the next generation of pavement and asset management systems, including support for MAP21-related initiatives. The program includes the following main broad activities:

- ✓ Equipment Rodeos: continue equipment comparisons by hosting the annual equipment roundups and provide consortium members with a forum for discussion of common challenges, and a unique opportunity to seek solutions for these challenges, learn from each other, and be exposed to emerging practices and technologies.
- ✓ Technology Transfer: The Consortium will continue to support the development of a body of knowledge in pavement surface characteristics and vehicle-road interaction and facilitate the transition from research to practice of new and existing methods and technologies for measurement of functional highway surface properties and enhanced pavement surfaces.
- ✓ Research on Emerging Topics: the consortium provides a unique opportunity to conduct specific studies of common interest that require measurement of pavement surface properties under controlled traffic and/or environmental conditions on different types of road surfaces. Examples of potential topics include: Evaluation of emerging 3D systems, new methods for characterizing macrotexture, and implications for FAST act requirements on current practices.

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

- Prepare the following revised papers and presentations for the 2018 *Annual Meeting of the Transportation Research Board*:
 - Interconversion of locked-wheel and CFME friction measurements (paper 18-04991)
 - Impact of surface cleaning on pavement skid resistance inside tunnel (paper 18-05047);
 - Comparison of locked wheel and continuous friction measurement equipment (paper 18-01277).
 - Participation in the following workshops:
 - Implementation of Pavement Friction Management Programs
 - Balancing Durability and Safe Function in Dense-Graded Asphalt Pavements
- Held the TPF-5(345) mid-year meeting during the RPUG 2017 in Denver, CO. Kevin McGhee led the presentation to discuss with the members of the consortium the following topics and the result of the discussion:
 - The results of the Rodeo Report 2017 were presented and discussed. The report and several spreadsheets were distributed previously to all the members (e-mail 11/12/2017). Afterwards, a couple of members reported on some of the research projects they are working on and will be updating the Consortium as they progress (Ohio – texture scanning; Illinois – Finer Mix Designs.)
 - Kevin McGhee made the presentation of the potential to have the Rodeo hosted by TRC and their proposal No. 170675 describing the costs associated. By Consensus vote, the partners agreed to hold next rodeo at the TRC Proving Grounds facility in East Liberty, OH
 - The following consensus votes were made:
 - Inertial profiling work through TPF-5(345) will be suspended for next year and reconsidered in the following year as warranted given actions/requirements of FHWA, TPF-5(354), as well as continuing construction/development of the Smart Road.
 - Brian Schleppe and Luke Gibson were elected as Chair and Co-Chair of the pooled fund unanimously.
 - Gerardo also announced the transverse profile and macrotexture rodeo to be held in the Smart Road April 9 – 13, 2018.
- Participated in the *2017 Road Profiler User Group Meeting* in Denver, CO and delivered the following presentations:
 - TPF-5(345) Pooled Fund Update (McGhee)
 - Guidance for Predicting and Mitigating Hydroplaning (Flintsch)
 - Pavement Macrotexture: State of the art and Practice (Bongioanni)
 - Pavement Friction Management (de León)

Anticipated work next quarter:

- Participate in the *97th Annual Meeting of the Transportation Research Board*, January 7-11, 2018 in Washington, D.C.
 - Edgar de León Izeppi will be making a presentation on the workshop 119 Implementation of Pavement Friction Management Programs scheduled for Sunday January 7, 2018.
 - Kevin McGhee and Edgar de León Izeppi will be making a presentation on the workshop 879 Balancing Durability and Safe Function in Dense-Graded Asphalt Pavements scheduled for Thursday January 11, 2018.
 - The following papers will be presented:
 - “A Comparison of Locked Wheel and Continuous Friction Measurement Equipment”, poster session 314, Monday 1-8-2018, 10:15 am – 12:00 pm
 - “Interconversion of Looked-Wheel and CFME Friction Measurements”, lectern session 345, Monday 1-8-2018, 1:30 – 3:15 pm
 - “*Impact of Surface Cleaning on Pavement Skid Resistance Inside Tunnels*”, Maintenance and Operations Management Committee Meeting, Wednesday 1-10-2018, 8:00 am – 12:00 pm
- Start the organization of the *12th Annual Surface Properties Rodeo* to be held in East Liberty, Ohio at the Transportation Research Center (TRC) skid tester calibration facility, on June 4-8, 2018. Preparations will begin with the partners and other invited representatives/equipment from other states/organizations.
- Start the organization of the Transversal Profile and Macrotexture Rodeo to be held in the Smart Road from April 9 – 13, 2018.

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: