**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.*

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| **Transportation Pooled Fund Program Project #***(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)***TPF-5(345) Pavement Surface Properties Consortium – A Research Program at the Virginia Smart Road Phase II** | **Transportation Pooled Fund Program - Report Period:**🞎 Quarter 1 (January 1 – March 31)🞎 Quarter 2 (April 1 – June 30)🗹 Quarter 3 (July 1 – September 30)🞎 Quarter 4 (October 1 – December 31) |
| **Project Title:****Pavement Surface Properties Consortium: A Research Program** |
| **Name of Project Manager(s):**Brian Diefenderfer | **Phone Number:**(434) 293-1944 | **E-Mail**brian.diefenderfer@vdot.virginia.gov |
| **Lead Agency Project ID:**82650 | **Other Project ID (i.e., contract #):**449501 (VT) | **Project Start Date:**5/19/2016 |
| **Original Project End Date:**2/28/2022 | **Current Project End Date:**10/31/2022 | **Number of Extensions:**-- |

Project schedule status:

* On schedule 🞎 On revised schedule 🞎 Ahead of schedule 🞎 Behind schedule

Overall Project Statistics:

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|  **Total Project Budget** |  **Total Cost to Date for Project** |  **Percentage of Work**  **Completed to Date** |
| $1,402,079\* | $1,296,341 |  92% |

***Quarterly*** Project Statistics:

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|  **Total Project Expenses**  **and Percentage This Quarter** |  **Total Amount of Funds**  **Expended This Quarter** |  **Total Percentage of**  **Time Used to Date** |
| $52,215 (4%) | $52,215 | 92% |

\* Committed; the actual budget contracted with VTTI is $1,283,774

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| **Project Description**: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: (1) equipment comparisons; (2) technology transfer; and (3) research on emerging topics. |

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| **Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):*** Participated in a Peer Exchange on Pavement Friction Management (PFM) and Continuous Pavement Friction Measurement (CPFM) meeting organized by the FHWA in Louisville, Kentucky on July 26-27 to discuss the findings of all the states where CPFM has made demonstrations to date. This event had roundtable discussions to evaluate what should be some of the short/intermediate/and long-term list of actions that should be taken to continue improving/implementing PFM and CPFM.
* The 14th Annual Surface Properties Rodeo was held at the Virginia Smart Road on August 8-11, 2022, with the participation of 9 state members, 1 state non-member, FHWA, IGGA, NCAT, VTRC, VTTI, and over ten (10) private company representatives and operators.
	+ The emphasis of the Rodeo this year was to conduct friction and macrotexture measurements on the Smart Road with static and dynamic equipment to evaluate relationships between different testing systems that are used in the field and asses their sensitivity to friction characteristics (e.g., macrotexture vs. microtexture). Testing systems were provided by agencies, manufacturers, integrators, and service providers at their expense.
	+ Friction measurements were conducted at 30, 40 and 50 mph with the seven (7) locked-wheel skid testers (LWST), and six different types of continuous friction measurement equipment (CFME). Macrotexture measurements were made with one stationary, two walk behind, and five (5) dynamic texture measurement devices. Additionally, friction data was also collected with an instrumented vehicle and from a walk behind device.
* The Consortium Technical Advisory Committee (TAC) also met during the rodeo. The TAC approved to hold next year’s meeting in conjunction with the 2023 Road Profilers Users Group Conference in O’Fallon, IL in May 2023. The report of the measurements done in the Rodeo will be reviewed before the RPUG meeting and presented during RPUG. There were ten (10) presentations made by all the manufacturers that brought equipment to the Rodeo. Additionally, there was a presentation on Concrete Diamond Grinding and another one on shot blasting for texturing pavements.
* Edgar de León Izeppi participated in the ATSSA Midyear Meeting in Providence, Rhode Island, on August 23-26, 2022, at the High Friction Surface Treatment Council. He made two presentations about an update on the FHWA CPFM Friction Related Research and about the list of Research Needs Statements (RNS) that are being worked on by the Pavement Surface Properties Pooled Fund Project TPF-5(345/463). These RNS were started during the last Rodeo held in Blacksburg on August 8-12.
* The FHWA SCRIM was used to support a FHWA Continuous Pavement Friction Measurement (CPFM) in three demonstrations of the CFM equipment in Vermont, New Hampshire, and Rhode Island, where around 150 miles were surveyed in each state. These results will be presented to the DOTs after merging the data with crashes and pavement surface mix types.
* The Pooled Fund TAC members and other invited guests held several virtual meetings in this quarter related to the RNS task forces that were formed. The objective of these groups is to work on an RNS for each topic and submit it to the pooled fund to decide whether to propose them to the TRB-NCHRP process or seek for another mechanism to perform the research. The following were some of the topics discussed during this quarter:
	+ - Macrotexture for Raveling and Safety RNS task force, August 30.
		- Asphalt based HFST treatments, September 8.
		- Guidance for HFST applications lengths, September 9.
		- Epoxy application amounts based on surface macrotexture, September 29.
* CSRI continued the processing and analysis of the data collected in Illinois.
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| **Anticipated work next quarter**:* Continue processing the Rodeo data to present to the TAC group and all other participants before the end of the year.
* Organize an in-person TAC meetings during the RPUG conference Illinois. Similarly, the plan is to hold the annual Rodeo event in 2023 in the new ICART test track in Illinois.
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| **Significant Results:** |

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| **Circumstance affecting project or budget. (Please 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).** |

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| **Potential Implementation:**  |