

# 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 status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.*

<b>Transportation Pooled Fund Program Project #</b> <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i>  <b>TPF-5(463) Pavement Surface Properties Consortium: Phase III - Managing the Pavement Properties for Improved Safety</b>		<b>Transportation Pooled Fund Program - Report Period:</b> <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)	
<b>Project Title:</b> <div style="text-align: center;"><b>Pavement Surface Properties Consortium Phase III</b></div>			
<b>Name of Project Manager(s):</b> Hari Krishnan Nair	<b>Phone Number:</b> (434) 293-1948	<b>E-Mail</b> <a href="mailto:harikrishnan.nair@VDOT.Virginia.gov">harikrishnan.nair@VDOT.Virginia.gov</a>	
<b>Lead Agency Project ID:</b> 82650	<b>Other Project ID (i.e., contract #):</b> 467191 (VT)	<b>Project Start Date:</b> 1/01/2021	
<b>Original Project End Date:</b> 9/30/2026	<b>Current Project End Date:</b> 9/30/2026	<b>Number of Extensions:</b> --	

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
\$1,750,000*	\$1,038,222	59%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$99,964 (6%)	\$99,964	59%

\* Committed; includes direct transfer from Arkansas DOT. The actual contracted budget is \$1,410,000 (VTTI).

### **Project Description:**

This applied research effort focuses on enhancing the level of service provided by the roadway transportation system by optimizing pavement surface characteristics. Phases I and II included regular verification and validation of the participants' equipment, opportunities for technology transfer, and the accumulation of a significant body of knowledge on the measurement of pavement surface properties and the integration of these measurements into the next generation of pavement asset management systems. The objective this phase is: (1) to continuing to support the implementation of asset management approaches and tools that help improve the safety of our road networks by reducing the number of crashes and related fatalities, and (2) to bring pavement design and evaluation experts together with maintenance and safety professionals to maximize the contribution of the pavement community Towards Zero Deaths on US highways.

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

- The Pooled Fund TAC members held a virtual meeting on October 7 to discuss the following topics:
  - ✓ Gerardo Flintsch (VTTI) provided a financial overview of the of the pooled fund funding. He also gave a summary of the key activities of the pooled fund for 2024 and those planned for 2025.
  - ✓ The most relevant activities for 2025 will be:
    - (a) RPUG/PE conference that were going to be held in Blacksburg, VA, and
    - (b) the Macrotecture Rodeo 2025 that will be used to review the AASHTO Standards.
  - ✓ Andy Mergenemeier (FHWA) updated the group on the friction certification center in Texas A&M.
  - ✓ Ross McCarthy made a presentation about the Temperature Correction Factors developed for the SCRIM measurements using the data collected at the Virginia Smart Road by. Copies of all presentations were sent to all the members.
- The FHWA SCRIM was used by Pavement Friction Management (PFM) and Continuous Pavement Friction Measurement (CPFM) to Intersection Safety Focus States project to make CPFM measurements for the following projects:
  - ✓ Collected CPFM of chip sealed pavements with light weight aggregates (LWA) in North Carolina and South Carolina during the month of December. These results will be used by FHWA to begin a database with friction measurements and other relevant information to highlight the high friction values that LWA is achieving so that it can be considered as a friction enhancing treatment.
  - ✓ A presentation was made to the Colorado DOT on December 17 of 150 miles of data collected in July on various routes. The presentation showed the equipment sensitivity of CPFM measurements that showed lower friction and macrotecture values found on PCCP bus stops and various intersections, as well as some areas with higher friction and macrotecture found on SMA and some DGAC pavements. Some results found on some chip seal pavements also found losses in friction and macrotecture. This information shows that CPFM can assist in safety investigations/analysis and friction performance.
- CSRI participated in a meeting with WSP and other consultants in the VDOT PFMP kickoff meeting that will continue the implementation started by CSRI in 2020.
- Edgar de León Izeppi participated in the 2024 Illinois Bituminous Conference in December in Urbana, Champagne as part of the program "Effective Friction for Safe and Sustainable Pavements" with participations from Jeff Shaw (FHWA), Priscilla Tobias (ARORA), and John Senger (IDOT).
- A request from the Maricopa County DOT (MCDOT) in Arizona was received to inquire about the possibility of using the Grip Tester from the old Friction Loan Program. After consultations with FHWA, it was decided that this equipment could be loaned to MCDOT and receive the support of the Pooled Fund as the program used to run before FHWA acquired the SCRIM truck in 2015. CSRI will start the process to refurbish and update the software on this system so that it can be used by MCDOT.

### **Anticipated work for next quarter:**

- The FHWA project Continuous Pavement Friction Measurement (CPFM) to Intersection Safety Focus States project has requested CSRI to make CPFM measurements in Florida in January 2025 in the following locations:
  - ✓ Jacksonville in several intersections,
  - ✓ Gainesville several locations on ramps with HFST, and
  - ✓ SunTrax test tracks where data will be collected in several research surfaces (granite tiles, ceramic tiles, and metal plates.
- CSRI will continue working on the Report for Arkansas DOT, aiming for a final presentation in early 2025.
- Presentations of the papers submitted to TRB are planned for the meeting in January.

**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).**

**Potential Implementation:**