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.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)* **TPF-5(385) Pavement Structural Evaluation with Traffic S Deflection Devices (TSDDs)**	**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 Structural Evaluation with Traffic Speed Deflection Devices (TSDDs)

Name of Project Manager(s): Brian Diefenderfer	**Phone Number:** (434) 293-1944	**E-Mail** brian.diefenderfer@vdot.virginia.gov
Lead Agency Project ID:	**Other Project ID (i.e., contract #):** 467027- 467225 - 467545 (VT)	**Project Start Date:** 10/15/2018
Original Project End Date: 9/30/2021	**Current Project End Date:** 10/31/2023	**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
$7,235,000*	$ 4,982,758	69%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
$267,306 (4%)	$267,306	69%

* Committed (including transfers from FHWA EFL); the actual contracted budget is $6,252,610 (VTTI)

Project Description:

The objective of the pooled-fund is to establish a research consortium focused on providing participating agencies the opportunity to test available TSDDs as part of a demonstration project and providing guidelines on how to specify collection and use data collected with TSDDs. Specific tasks within this multi-year program will be developed in cooperation with the consortium participants.

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

- Conducted TAC meeting on January 12, 2023:
  - Provided financial update.
  - Presented overview of metrics for structural evaluation (VTTI update)
  - Presented GPR capabilities (Kontur update)
  - Discussed initiation of new (phase II) TSDD pooled fund
- Presented a paper (see significant results) at the TRB annual meeting.
- Developed and posted solicitation for new (phase II) TSDD pooled fund.
- Submitted paper to International Journal of Pavement Engineering: Learning the appropriate local averaging for TSD deflection velocity measurements: Application to the analysis of rigid pavement joints response

Anticipated work next quarter:

- Plan for workshop meeting in September 2023
- Schedule mid-year TAC meeting for July 2023
- Schedule and conduct regional meetings.
- Finalize reports (these have been delayed but are in the editing phase):
  - *Finalize Webinars 1-6 report.*
  - *Guidelines for Data Collection.*
- Continue support of Wisconsin TSD analysis efforts and expand it to the analysis of joints in a jointed concrete pavement.

Significant Results:

- Scavone, M. Katicha, S., Flintsch, G., and Amarh E. "Estimating Load Transfer Load Transfer Efficiency for Jointed Pavements from TSD Deflection Velocity Measurements." presented at the 2023 Transportation Research Board Meeting.

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: