

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(385)		Transportation Pooled Fund Program - Report Period: <input checked="" 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 type="checkbox"/> 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 #): 449904 (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
\$4,763,000*	\$ 2,804,530	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
\$194,039 (4%)	\$194,039	59%

* Committed (including transfer from FHWA EFL); the actual contracted budget is \$3,469,999 (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.):

- Contributed to a TRB Workshop 1022 on - Early State DOT Experiences and Applications with Traffic Speed Deflection Devices.
- Conducted third webinar in March focused on how to implement TSD measurements into the pavement management system.
- Continued work on Guideline for Pavement Management Implementation of TSD.
- Initiated two use case studies that included: (1) calculating the effective structural number from TSD measurements using two different methods and comparing the results; and (2) determining required overlay thickness.
- Formed four subgroup of pooled fund members to conduct outreach web meetings and discuss how to move forward.
- Continued work on Idaho implementation project.

Anticipated work next quarter:

- Document results of case studies to be submitted for review by pooled fund members.
- Finalize work on *Guideline for Pavement Management Implementation of TSD* and submit for review by pooled fund members.
- Conduct fourth webinar in May.
- Conduct subgroup meetings.
- Finalize the Idaho implementation project.
- Continue work on Guidelines and Specifications for TSDD Data Collection.
- Finalize literature review document and submit for review by pooled fund members.

Significant Results:

- The following paper has been published and is now available:
 - Scavone*, M., Katicha, S., Flintsch G., "Identifying Weak Joints in Jointed Concrete and Composite Pavements from Traffic Speed Deflectometer Measurements by Basis Pursuit," *ASCE Journal of Computing in Civil Engineering*, 2021, vol 35(2) (published online Dec 2020).
[https://doi.org/10.1061/\(ASCE\)CP.1943-5487.0000951](https://doi.org/10.1061/(ASCE)CP.1943-5487.0000951).

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).

None

Potential Implementation: