**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(518) Implementation of Structural Data from Traffic Speed Deflection Devices** | **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:****Implementation of Structural Data from Traffic Speed Deflection Devices** |
| **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 #):**467764 (VT) | **Project Start Date:**2/1/2024 |
| **Original Project End Date:**9/30/2028 | **Current Project End Date:**9/30/2028 | **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** |
| $5,978,000\* | $ 1,129,728 | 19% |

***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** |
| $ 877,305 (15%) | $ 877,305 | 15% |

\* Committed; the actual contracted budget is $1,963,000(VTTI)

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| **Project Description**:The objectives of this follow-on pooled fund study include continuation of an existing research consortium that focuses on providing participating agencies guidance on how to specify and implement TSDD data within their respective pavement management systems and processes. Specific tasks within this multi-year program will be developed in cooperation with the partner agencies. |

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| **Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):*** Conducted a virtual activity planning TAC meeting
* Performed proof of concept verification testing for Phase 3 of the TSD using Doppler laser vibrometers at the Virginia Smart Road
* Organized the 3rd Symposium on September 17 and 18, 2024 in Fort Worth Texas. Delivered three presentations at the meeting.
* Performed evaluation of TSD collected data in 2023
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| **Anticipated work next quarter**:* Conduct phase 3 of proof-of-concept verification testing of the TSD using Doppler laser vibrometers at the Virginia Smart Road
* Conduct webinar of VDOT case study in November or December
* Plan for the TAC meeting on January 9, 2025
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| **Significant Results:**Three papers accepted for presentation at the annual TRB meeting in January 2025* Katicha, S., and Flintsch, G. (2025) Enhanced AASHTO cumulative difference approach (CDA) for pavement data segmentation
* Murekye, A., Katicha, S., Flintsch, G., and Diefenderfer, B. (2025) Evaluating the use of traffic speed deflectometer-based pavement structural data in VDOT’s pavement management processes for flexible pavements
* Pehrsson, H., Malmgreen-Hansen, D., Flintsch, G., and Katicha, S. (2025) Determining pavement strain from deflection slopes using plate bending theory

Paper published:* Murekye, A., Katicha, S. W., Urbaez, E. E., Flintsch, G. W., & Diefenderfer, B. K. (2024). Pilot Study to Incorporate Network-Level Structural Condition in Agency Pavement Management Practices. Transportation Research Record, 0(0). <https://doi.org/10.1177/03611981241252152>
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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:**  |