TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Virginia DOT

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(206)	**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: Program to Support the Development and Deployment of Connected Vehicle Applications		
Name of Project Manager(s): Michael Fontaine	**Phone Number:** 434-293-1980	**E-Mail** Michael.Fontaine@vdot.virginia.gov
Lead Agency Project ID: 97199/90712	**Other Project ID (i.e., contract #):** 133471-GS10961	**Project Start Date:** July 2009
Original Project End Date: June 2011	**Current Project End Date:** December 2020	**Number of Extensions:** 3

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
$8,760,890.33	$6,876,216	78%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
N/A	$222,664	N/A

Project Description:

The pooled fund study entitled "Program to Support the Development and Deployment of Connected Vehicle Applications" was created by a group of state and local transportation agencies and FHWA in order to provide a means to conduct the work necessary for infrastructure providers to play a leading role in advancing the connected vehicle environment.

Objective:

Through a set of pooled fund studies, the Virginia Department of Transportation (VDOT) is working with federal, state and local departments of transportation, to establish a multi-phase program to facilitate the field demonstration, and deployment of connected vehicle infrastructure applications. In Phase I, the participants are focused on modeling, development, engineering and planning activities that will aid transportation agencies in justifying and promoting the large scale deployment of a connected vehicle environment. Phases 2 through 4 of the program will continue research and development to prepare agencies to deploy connected vehicle environments.

Scope of Work:

The pooled fund study will focus on the following:

- Development and evaluation of connected vehicle large-scale system level operations applications
- Independently research and address issues that will affect the deployment of connected vehicle systems by state and local transportation agencies
- Support AASHTO's Strategic and Deployment Plans
- Support USDOT's Connected Vehicles Programs and initiatives

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

1. Pooled Fund Study Overall
   a. Monthly calls were held on July 31, August 28, and September 25.
   b. The Pooled Fund Study Members created a panel for the Connected Intersections Program. A Request for Letters of Intent was posted to the website to solicit contractors to manage the project.
   c. Commitments are being received for the current/new PFS (TPF-5(389)) for FY2020 and beyond.
2. Multi-Modal Intelligent Traffic Signal System (MMITSS) Phase 3 - Deployment Readiness Enhancements
   a. Monthly calls were held on July 16, August 20, and September 17.
   b. Monthly MMITSS Development Group Meetings began and were held on July 23, August 27, and September 24.
   c. Task 3: Several enhancements were added in Arizona and California
   d. Task 4: Field Readiness Test Planning and Demonstration initiated.
   e. Task 5: Support Deployment in Wisconsin is underway.
3. V2I Queue Advisory/Warning
   a. Monthly calls were held on July 16, August 20, and September 17.
   b. Task 4: System Requirements Draft Document and walk through completed in July.
   d. Task 5: High Level Design Document initiated.
4. Using Third Parties to Deliver I2V
   a. Monthly calls were held on August 18 and September 15.
   b. Task 4: A Standardization Needs Tech Memo draft initiated.
5. Creation of MAP Guidance Document
   a. Task 3: Survey of IOOs Broadcasting SPaT completed.
   b. Task 4: Guidance document draft initiated.

Anticipated work next quarter:

1. Pooled Fund Study Overall
   a. Monthly calls will be held in each month.
   b. A virtual online meeting will be held via Zoom on December 15 and 16.
   c. The future project topics approved by the members will be initiated.
   d. A No-Cost Extension will be requested to extend the project deadline (current end date December 2020).

2. Multi-Modal Intelligent Traffic Signal System (MMITSS) Phase 3 - Deployment Readiness Enhancements
   a. Monthly project calls will be held in each month.
   b. Development Group Meetings will continue to be held.
   c. Field Testing will continue.

3. V2I Queue Advisory/Warning
   a. Monthly project calls will be held in each month.
   b. Final documents will be prepared anticipating project closeout in January 2021.

4. Using Third Parties to Deliver I2V
   a. Monthly project calls will be held in each month.
   b. Project will conclude in December 2020.

5. Creation of MAP Guidance Document
   a. Monthly project calls will be held in each month.
   b. A draft Guidance document will be circulated for discussion and revision.

Significant Results:

None in this quarter.

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).

We do not expect to fully utilize the allocated funds by the current contract end date of December 31, 2020. A No-Cost Extension is requested to ensure expenditures will be distributed among current and future projects.

Potential Implementation:

None in this quarter.