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-(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): Catherine McGhee	**Phone Number:** 434-293-1973	**E-Mail** Cathy.McGhee@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:** June 2015	**Number of Extensions:** 1

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
$4,360,000	$2,609,584	63%

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	$239,128	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. Phase 2 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. PFS monthly call was held on October 31st.
   b. Face-to-face meeting was held on December 2-3 at Beckman Center, Irvine, CA
      i Project Update
      ii. Discussions for Future Activities/Directions
   c. CV PFS Phase III commitments
      i. An email was sent out on 10/28 requesting commitments for another two years for Phase III of CV PFS.

2. PFS Dynamic Mobility Application Phase II
   a. A monthly project update call was held on November 20th. Being conducted as planned.

3. Round 3 Research Program
   a. 5.9GHz Dedicated Short Range Communication Vehicle Based Road and Weather Condition Application
      i. An issue related to Intellectual Property was raised and being investigated.

4. Round 4 Research Program
   a. Surveying/Mapping for CV Applications ($150,000 / 12 months)
      i. A sub-contract with UC Riverside is being established.
   b. Tracking the Status of CV Testbeds ($50,000 / 12 months)
      i. Task1. Developing a template for documenting testbed status – completed.
      ii. Task2. Documenting current status and lessons learned for each testbed – in progress.

Anticipated work next quarter:

1. Pooled Fund Study Overall
   a. PFS monthly calls will be held in each month.
   b. CV PFS Phase III commitments will be received.

2. PFS Dynamic Mobility Application Phase II
   a. Will be conducted as planned.
   b. Field testing both in CA and AZ testbeds is expected to happen in the first half of the year 2015.

3. Round 3 Research Program
   a. 5.9GHz Dedicated Short Range Communication Vehicle Based Road and Weather Condition Application
      i. Monthly calls will continue.
      ii. The intellectual property issue will be investigated and an appropriate decision will be made.

4. Round 4 Research Program
   a. Surveying/Mapping for CV Applications ($150,000 / 12 months)
      i. A contract will be established between UVA and UC Riverside.
      ii. Actual tasks will begin.
   b. Tracking the Status of CV Testbeds ($50,000 / 12 months)
      i. Will be conducted as planned.

Significant Results:

1. A decision to extend the CV PFS to the next phase for another two years was made. Commitments for this new Phase III will be received in the first half of the year 2015.

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).

No problems have been encountered to date.

Potential Implementation:

The Multi-Modal Intelligent Traffic Signal System is being deployed in the testbeds in Arizona and California.