TRANSPORTATION POOLED FUND PROGRAM
Quarterly Report

PROJECT TITLE:	Program to Support the Development and Deployment of Infrastructure IntelliDrive Applications
OBJECTIVES:	To provide a means to conduct the work necessary for infrastructure providers to play a leading role in IntelliDrive

PERIOD COVERED: January – March 2010

PARTICIPATING AGENCIES:	California DOT, FHWA, Florida DOT, Michigan DOT, New York DOT, Texas DOT, and Virginia DOT

PROJECT MANAGER:	**SP&R PROJECT NO**:	**PROJECT IS**:
LEAD AGENCY: Virginia DOT		___ Planning
PRINCIPAL INVESTIGATOR:		_X_ Research & Development

ANNUAL BUDGET: $350,000	**PROJECT EXPENDITURES TO DATE $83,182**

WORK COMPLETED:

Project Management

1. *Research Teams for Two Year 1 Applications Selected*
   - In response to the RFPs for two Year 1 applications, i.e. Pavement Maintenance Support Application (PMSA) and Signal Phase and Timing (SPAT) Data Application, 13 proposals – six for PMSA and seven for SPAT – were received by January 15, 2010.
   - Received proposals were evaluated by the review panel consisting of one representative from each of the pooled fund study members, AASHTO and the pooled fund study management team by January 26, 2010.
   - Finally, based on the evaluation scores and the negotiation results, the University of California PATH Program was selected for the Signal Phase and Timing (SPAT) Data Application project and Auburn University for the Pavement Maintenance Support Application (PMSA) project.

2. *Kick-off Conference Calls Held*
   - Kick-off conference calls with the selected research teams for the Year 1 applications were held as following:
     - Pavement Maintenance Support Application (PMSA) with Auburn University on Monday, March 8 3:00-4:00PM
     - Signal Phase and Timing (SPAT) Data Application with the University of California PATH on Monday, March 15 1:00-2:00PM

3. *IntelliDrive Pooled Fund Study Website Launched*
   - A website for the pooled fund study was prepared and launched at http://cts.virginia.edu/IntelliDrive.html.
   - This website will be used to post relevant documents on the pooled fund study such as project plans, interim deliverables, and so on. Also posted will include important notes and meeting announcements.

IntelliDrive^{SM} Traffic Signal Algorithms

1. *Current Activity Synthesis*
   - The project team identified and studied several projects and research activities to familiarize themselves with the latest research including the SAE message set standards, University of Arizona's emergency vehicle crash avoidance application, and University of Texas's autonomous vehicles control at intersections.

2. *Literature Review*
   - Started literature review and brainstorming for potential IntelliDrive-based signal system applications. Four specific applications have been selected for further consideration and investigation.

3. *Algorithm Coding in VISSIM Network*
   - For implementing the first three algorithms, VISSIM has been selected as the microscopic traffic simulation program for development and evaluation.
   - For simulation, the research team is using a calibrated and validated model of a 16-signal corridor in Northern Virginia region. The corridor is comprised of Route 50 near Route 28 in Chantilly, VA.
   - Two of the four algorithms have begun actively coding in C# using VISSIM COM.

Pavement Maintenance Support Application

1. *Work was initiated in March with the examination of available vehicle data from IntelliDrive.*

Signal Phase and Timing Data Application

1. *Work was initiated in March with the review of SPAT data under IntelliDrive.*

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- A face-to-face meeting between the pooled fund study members and the selected contractors will be held in conjunction with the ITS America meeting in Houston, Texas. The meeting will be on Wednesday, May 5th 1:00-5:00PM.
- Work will continue on the IntelliDrive Signal System Application, Pavement Maintenance Support Application, and Signal Phase and Timing Data Application based on the schedule provided in the project plans.

STATUS AND COMPLETION DATE:

Percentage of work completed to date for total project
Project is: 12 %
 X on schedule ___ behind schedule, explain:
Expected completion Date: June 30, 2011