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.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)* **TPF-5(141)**	**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:
Pavement Surface Properties Consortium: A Research Program

Name of Project Manager(s):	**Phone Number:**	**E-Mail**
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Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:**
82650		7/1/2006
Original Project End Date:	**Current Project End Date:**	**Number of Extensions:**
6/30/2011	6/30/2013	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
$1,505,268.00	$1,426,696.95	95%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date

Project Description:

Through a regional pooled fund, this program of research focuses on optimizing pavement surface texture characteristics. The initial focus of the program was on the application of inertial and laser-based equipment for measuring pavement surface properties, but the scope has been expanded based on the guidance provided by the Technical Advisory Committee. The program has included the following main broad activities:

- ✓ Establishment equipment comparison and verification facility and hosting of annual equipment roundups
- ✓ Evaluation of new and existing methods and technologies for measurement of functional highway surface properties and providing enhanced pavement surfaces.
- ✓ Conducting specific studies that require measurement of pavement surface properties under controlled traffic or environmental conditions on different surfaces. These have included (among others):
    - Investigation of seasonal effects on friction measurements
    - Evaluating the potential adoption of the International Friction Index (IFI), and
    - Determining speed adjustment factors for locked-wheel friction trailers.
- ✓ Supporting the FHWA Continuous Friction Measurement Equipment (CFME) Technology Deployment program.
- ✓ Conducting technology transfer activities, such as: making presentations at national and international conferences and meetings, organizing training workshops, publishing journal papers, and organizing conferences and symposia.

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

- The Grip Tester Loan Program continued with Grip Tester #2 in the Transportation Laboratory of CALTRANS in Sacramento, California. This unit, on loan to CALTRANS, has been there since April. It was due back before the end of the year, but FHWA authorized it to stay in California to do several pre-treatment measurements in HFS sites.
- Grip Tester #1 was requested by the Puerto Rico DOT. FHWA is evaluating whether it will be better to bring the operators to the Smart Road to test the equipment or ship it there. A decision on this matter has not been communicated yet.
- Support work for the organization of the *7th Symposium on Pavement Surface Characteristics* (SURF 2012) included:
    - The website has been updated. It now shows a preliminary program, the six organizers, information for sponsors, and the committees in charge of paper evaluation and organization. A abstracts have been reviewed and papers have been invited,. Full papers are due by January 21st and presentations by April 30th 2012.
    - The hotel has been secured and will be evaluated by the organizing committee early in 2012. Monthly meetings have continued to be held to define speakers, translations, marketing, etc. An additional monthly meeting will be held during TRB in Washington DC on January 22, 2012.
- A new temperature-based model for friction measurements that can be more universally applicable will be developed with data collection starting in 2012. Arrangements have already been made with VDOT to start data collection on a monthly basis.
- Revised papers for the papers for the *91st Annual Meeting of the Transportation Research Board* in January have been resubmitted. In total, there will be 4 papers presented, 3 in podium presentation, and 1 in a poster, that use data collected as part of the consortium activities. Three of these papers have been accepted for publication in the TRR journal.
    - "Limits of Agreement Method for Comparing Pavement Friction Measurements," paper 12-1864, and
    - "Pilot Demonstration of the Use Probe Vehicle Dynamic Signatures to Measure Road Smoothness," paper 12-3384,
    - "Determination of Pavement Macrotexture Limit For Use in The International Friction Index (IFI) Mode," paper 12-1408.
- A paper, titled "Continuous Friction Measurement Equipment (CFME) Loan Program," was presented at the *8th International Conference on Managing Pavement Assets* (ICMPA 2011), in Santiago, Chile on November 14-17, 2011. The presentation included a demonstration of the Grip-Val software.

- A paper, titled "Effects of Water, Speed, and Grade on Continuous Friction Measurement Equipment (CFMEs)," was presented in the *ASTM International Symposium on Pavement Performance: Trends, Advances and Challenges in Tampa*, FL on December 5-7, 2011. A researcher from the consortium also participated in the ASTM E17 Committee meetings.
- The Final Draft Report of the 2011 Rodeo has been completed this quarter and will be distributed to all members in early 2012.
- The Dynatest HFT was handed over to representatives from Transtec, as requested by FHWA, on December 13, 2011.

Anticipated work next quarter:

- Florida DOT has expressed interest in borrowing the Grip Tester. Contact is expected by FDOT and the unit will be taken and the training made.
- Follow up on the requested by the Puerto Rico DOT for the Grip tester.
- Work on the presentations and poster for TRB will be done to be ready for the meeting in January 22-25, 2012 in DC.
- Start the organization of the *6th Annual Surface Properties Rodeo* to be held in Blacksburg on May 21-25 at the Smart Road. Preparations will begin this quarter with the partners and invited equipment.
- Complete the development of a 2-page Friction Technology Brief.
- Initiate the measurements for the seasonal monitoring experiment.
- Continue to support the organization of the SURF 2012 conference.

Significant Results:

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).

No problems were encountered in this quarter.

Potential Implementation: