TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Federal Highway Administration (FHWA)

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)*	**Transportation Pooled Fund Program - Report Period:**
TPF-5(178)	☐Quarter 1 (January 1 – March 31) ☐Quarter 2 (April 1 – June 30) ☑Quarter 3 (July 1 – September 30) ☐Quarter 4 (October 1 – December 31) Year: 2013

Project Title:		
Implementation of the Asphalt Mixture Performance Tester (AMPT) for Superpave Validation		
Name of Project Manager(s):	**Phone Number:**	**E-Mail**
Jeff Withee	202-366-6429	jeff.withee@dot.gov
Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:**
		September 2008
Original Project End Date:	**Current Project End Date:**	**Number of Extensions:**
September 2011	December 2014	

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
$3,791,452	$2,829,804	75%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
4%	$161,488	80%

Project Description:

This pooled fund study is open to any highway agency interested in using simple performance tests to aid in material characterization for design and analysis of flexible pavements. The objectives of this pooled fund study are to:

1) Nationally procure the AMPT for highway agencies interested in obtaining and using the AMPT to characterize asphalt mixtures designed using Superpave technology

2) Provide support in training technicians to use the AMPT to perform the proposed standard practices for measuring dynamic modulus, flow number, and flow time of asphalt mixtures compacted using the Superpave Gyratory Compactor (SGC)

3) Advance the nation-wide implementation and use of the AMPT for assessing performance of asphalt mixtures over a wide range of climatic conditions, materials, and structures.

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

- Two additional AMPT equipment orders (VA and WV) were placed.

- Work on implementation phase activities continued through a cooperative agreement between FHWA and the National Center for Asphalt Technology.
  + Dynamic Modulus and Flow Number Interlaboratory Study: The final deadline for results submission was July 12, 2013. NCAT analyzed the submitted results and has been developing the draft report.
  + AMPT Western Workshop: A workshop targeting western states for AMPT implementation support and to consider a western AMPT user group was held. The workshop was on September 24-25 in Carson City, Nevada.
  + Friction Reducer Study: A study plan for an evaluation of the potential for spray silicone to improve the consistency and reduce the effort in fabrication of greased latex friction reducers was developed.

- Work on implementation phase activities began through a cooperative agreement between FHWA and the Asphalt Institute.
  + Specimen Fabrication Ruggedness Study: A draft study plan has been developed to evaluate multiple factors in the specimen fabrication process from lab mix heating to test specimen air voids. The potential impact of these factors on AMPT test results will be determined through this study.
  + Fatigue Testing Study: A study plan is under development to evaluate AMPT fatigue testing alongside other fatigue cracking tests.

- AMPT implementation status and flow number test protocol standardization efforts were presented and discussed at the FHWA Asphalt Mixture ETG in Fall River, MA in September 2013.

Anticipated work next quarter:

- Delivery and installation will be completed for two additional AMPT equipment orders (VA and WV.)

- Work on the implementation support activities will continue with the National Center for Asphalt Technology. Details for the next quarter are listed after each activity.
  + Dynamic Modulus and Flow Number Interlaboratory Study: NCAT will submit the draft report for review. Once the final report is complete a presentation and discussion webinar will be arranged with all participants.
  + Friction Reducer Study: Testing plan to be finalized and then experiment can begin.

- Work on the implementation support activities will continue with the Asphalt Institute. Details for the next quarter are listed after each activity.
  + Specimen Fabrication Ruggedness Study: Study plan will be revised based on comments and discussion including input from the FHWA Asphalt Mixture ETG meeting.
  + Fatigue Testing Study: Study plan development will continue.

Significant Results:

- A total of 57 technicians and engineers from pooled fund participating agencies and 82 overall have been trained on the Asphalt Mixture Performance Tester through NHI Course # 131118.

- Twenty-four (24) AMPTs have been ordered, delivered, and installed for pooled fund participant agencies. In addition, two AMPTs are on order and one AMPT has been delivered and is pending installation.

- The National Pooled-Fund Workshop on the AMPT brought together over 70 members of the AMPT user community representing state DOTs, consultants, equipment vendors, universities, and FHWA to share best practices and identify future AMPT implementation needs.

- A synthesis report titled "Use of AMPT for Characterizing Asphalt Material Inputs for Pavement ME Design Implementation" was completed to document best practices.

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).

Project end date revised to allow for completion of on-going implementation support activities.

Potential Implementation:

The AMPT evaluates asphalt mixture properties to assess potential performance. Transportation agencies can use the AMPT to: develop inputs for the structural design of flexible pavements, evaluate new asphalt mixtures including warm mix asphalt (WMA), high reclaimed asphalt pavement (RAP) mixes, and recycled asphalt shingles (RAS) mixes, and obtain information helpful in monitoring asphalt mixes and performing quality assurance.