TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Alabama 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)*	**Transportation Pooled Fund Program - Report Period:**
TPF-5(228)	Quarter 1 (January 1 – March 31) 2013 Quarter 2 (April 1 – June 30) Quarter 3 (July 1 – September 30) √ Quarter 4 (October 1 – December 31)

Project Title: Superpave Regional Center, Southeastern Region		
Name of Project Manager(s): Don Watson and Randy West	**Phone Number:** (334) 844-7306	**E-Mail** watsode@auburn.edu
Lead Agency Project ID: ALDOT Research Project No. 930-763P	**Other Project ID (i.e., contract #):** 224574	**Project Start Date:** April 28, 2010
Original Project End Date: September 30, 2012	**Current Project End Date:** September 30, 2014	**Number of Extensions:** 2

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**
$1,037,129	$466,287.85	45

Quarterly Project Statistics:

Total Project Expenses and Percentage as of This Quarter	**Total Amount of Funds Expended This Quarter**	**Total Percentage of Time Used to Date**
$466,287.85 (44.9% of budget)	$62,572.82	85

Project Description:

The Southeastern Superpave Center has been supported by state agencies through a pooled-fund project that has been largely used to provide training, verify ruggedness of equipment, check equipment calibrations, provide materials research, and aid in keeping agency personnel abreast of changes in asphalt technology. In order to continue the efforts in training, technology transfer, and implementable research, it is essential that the pooled-fund effort be continued.

NOTE: *This pooled-fund project is not limited to states located in the southeast. Agencies throughout the country are invited to participate and take advantage of the research and training opportunities provided by the Southeastern Superpave Center.*

OBJECTIVES

Several short-term and long-term objectives of the Southeastern Superpave Center are listed below. Several objectives deal with evaluating recently-developed performance test equipment and conducting research to address materials and tests issues. Objectives of the Center are:

1. Conduct training in regard to Superpave binders, mix design, and performance testing. Provide training on special topics as requested by participating agencies at their on-site locations.
2. Perform research, both cooperatively and agency-specific, sponsored by members of the pooled-fund.
3. Perform precision and bias testing for asphalt-related performance test equipment.
4. Conduct noise studies in an effort to develop quieter pavements.
5. Perform forensic evaluations on materials or projects that have experienced premature distress.
6. Prepare research articles of regional and national interest.

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

A Superpave Center Management Committee Meeting was held at the annual Southeastern Asphalt User/Producer Group (SEAUPG) meeting in Baton Rouge, LA on November 11, 2013. Each state was given an up-to-date report on the financial status of the Southeast Regional Superpave Center as well as an individual accounting for each state. Summary reports were given on research completed during the past year as well as objectives for research started during the past year.

MEPDG CLIMATE DATABASE:

The research team coordinated with LTRC to identify three representative pavement sections for use in verifying the climate files. The work for the first phase of this research has been completed, and LTRC recently asked that the research be extended to include more information.

Progress on the project has been delayed while the pooled fund administrative process clears the funding for the additional tasks. The project is scheduled to be completed in 2014.

AGGREGATE FRICTION STUDY:

NCAT built test slabs with the common aggregates used in the JMF of a 9.5 mm mixture and ultra-thin mixture and with the alternative friction aggregates, slag and granite. NCAT used two MDOT approved mix designs to prepare eight mixtures. The mixtures consisted of a "control" mixture and mixtures which substituted various amounts of the coarse aggregate with a comparable proportion and gradation of the coarse aggregate from an alternative friction aggregate source.

The results of this research were presented at the Management Committee Meeting. The study showed that substituting slag and granite aggregate types for a portion of the typical gravel-limestone blends would improve friction properties of the 9.5 mm mix. Substituting gravel for a portion of the limestone 4.75 mm mix would also improve friction.

COMPOSITE SPECIMEN INTERFACE CRACKING (CSIC)

The overall objective of this research funded by Florida DOT is to test 1) control, and 2) experimental pavement sections constructed at NCAT's Pavement Test Track which have undergone live heavy vehicle Traffic for a three year traffic cycle. The purpose is to determine whether a thick proprietary interlayer contributes to a delay in cracking by using the CSIC test developed at the University of Florida. Results of these tests can be used to identify interface conditions which may improve cracking performance and/or to optimize bonding materials and application rates for enhanced cracking performance. This study by University of Florida has been completed.

The results reported at the Management Committee Meeting showed that field cores from a section that used polymer-modified asphalt emulsion outperformed cores from a section that used trackless tack. No conclusions could be drawn from the laboratory portion of the study possibly due to the brittleness of the stored OGFC mix. This work has been completed and a final report from the University of Florida has been submitted to FDOT.

4.75mm Study

The objective of this study is to examine the performance of 4.75mm asphalt mixes with that of a 9.5mm mix used as a "control." Comparisons will be made with neat asphalt and with modified asphalt using two aggregate sources. The binder modification will be made with polymers for one set of mixtures and with crumb rubber for an additional set of mixtures. Mixtures with PG64-22 neat asphalt will also be compared with the performance of mixtures with a PG 67-22 binder grade. Performance tests will be conducted to address the three distresses common to asphalt pavements - rutting, stripping, and cracking. The Hamburg device will be used to evaluate resistance to rutting and stripping, and the AMPT device will be used to evaluate resistance to reflective cracking.

Testing of the control mixes has been completed and one set of the 4.75 mm mixes is complete. Additional material had to be obtained from another source and work on that set of specimens is expected to be completed next quarter.

TRAINING

A series of technician training and certification courses has been developed for Puerto Rico. The first cycle of courses has been completed, and follow-up courses are scheduled to begin in March-April, 2014.

Superpave binder testing and technician certification was conducted for GDOT lab personnel. Additional training for Superpave binder and mix design certification for GDOT technicians is being planned in 2014. A prospective course for Bituminous Technical Services personnel is also being planned.

TECHNOLOGY TRANSFER/TECHNICAL MEETINGS:

Several agencies used funds this period to pay travel and registration expenses for employees to attend technical meetings such as ASTM, AASHTO, SEAUPG, and national meetings of technical interest.

Anticipated work next quarter:

Work is expected to resume on the LA DOTD project. The research panel has met and decided on the type of pavement distresses to be Included in the analysis.

Work will continue on the 4.75 mm mix study which is evaluating three different binder grades and two aggregate sources.

New training and certification courses for Puerto Rico will be developed with implementation to begin in April, 2014.

Significant Results:

N/A

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).

The 4.75 mm mix study has been delayed while waiting on additional material to arrive.

Potential Implementation:

The climate data being obtained will be useful for one agency by providing specific climate data that is more comprehensive and more accurate than the original data used in the MEPDG development.

The training and certification courses being developed and taught will help ensure qualified technicians who are familiar with agency specifications and test procedures will be involved in the asphalt binder and mixture acceptance process.