

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Date: _____ 10-23-2019 _____

Lead Agency (FHWA or State DOT): _____ Indiana 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>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i> TPF-5(021)	Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input checked="" type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)	
Project Title: North Central Superpave Center Base Funding		
Name of Project Manager(s): Tommy Nantung	Phone Number: 765/463-2532 x 248	E-Mail: tnantung@indot.in.gov
Lead Agency Project ID: TPF-5(021)	Other Project ID (i.e., contract #):	Project Start Date: October 1, 2002
Original Project End Date:	Current Project End Date:	Number of Extensions:

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
Continuing		Continuing

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:

The North Central Superpave Center began on July 1, 1995, as one of five regional centers established to assist the states/provinces and industry in the region with the implementation of the Superpave mix design system for hot mix asphalt. The role of the NCSC has evolved to include all general hot mix asphalt issues as states in the region have adopted Superpave. The Center is administered through the Joint Transportation Research Program at Purdue University and is guided by a Steering Committee consisting of representatives of the agencies and industry in the participating states.

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

Progress will be reported in terms of the major activities planned for this project as established by the Steering Committee.

Training: The technical director was contacted by ASTM International, where she serves on the Board of Directors, about possibly providing training for personnel from West Africa and Cote D'Ivoire. Details have yet to be worked out.

Communication: Information requests are processed as they arrive; about 20-25 per month are received. Published reports have now been downloaded from the Joint Transportation Research Program website over 12,300 times.

Third Party Lab and Testing Services: The research engineer continued her work on proficiency testing and maintenance of AMRL accreditation records. There were no requests for third party testing this quarter.

Research:

The draft and final reports for *Investigation of Delta T_c for Implementation in Indiana* were completed last quarter and the close-out meeting was held. A draft implementation plan was provided to the business owner; implementation of the parameter is not recommended at this time. It could possibly be used as a forensics tool or could be implemented in the future after some remaining issues are resolved nationally. Publication of the final report was expected this quarter but has not yet occurred.

Work on *Real Life Experiences with Major Pavement Types* continued. A literature review to identify possible analysis techniques, data elements needed for life cycle cost analysis and other background information continued. A study advisory committee meeting was held 9/30/19, at which time a six-month time extension was requested.

The proposal submitted to the Nevada DOT for a study entitled *Developing Lower Modulus Polymer Resin Binder Systems Specifications for High Friction Surface Treatments (HFST) on Asphalt Pavements in Nevada* was selected for funding. This SPR project was expected to start in August or September, but contractual negotiations between Purdue and Nevada delayed that. Work is expected to start in November and will be conducted in part on campus and in part at the NCSC.

The NCSC was selected to conduct another NCHRP Synthesis study. The topic is *Practices for Assessing and Mitigating the Moisture Susceptibility of Asphalt Pavements*. Work is expected to begin in November.

The technical director worked with colleagues at the National Center for Asphalt Technology to submit a paper to the Association of Asphalt Paving Technologists on accelerated friction testing of asphalt mixtures in the lab. The paper is based in part on research conducted at the NCSC and sponsored by the Indiana and Iowa DOTs. Funding for additional research to refine the test method is being sought with the support of the Indiana state materials engineer and asphalt engineer.

Technology Transfer: The Technical Director made a presentation on Environmental Considerations in Asphalt at the US-Korea Conference on Science, Technology and Entrepreneurship in Chicago. She also served on an NCHRP Synthesis panel reviewing the report on *Practices for Fabricating Asphalt Specimens for Performance Testing in Laboratories*. She is working with a joint task force between AASHTO and ASTM to try to harmonize the two organizations asphalt standards. She also chairs the Long Term Infrastructure Program's Expert Task Group on Pavements, which had a conference call and meeting this quarter. Negotiations continued regarding partnering with the Asphalt Pavement Alliance to co-host the NCAUPG meeting.

Anticipated work next quarter:

Training: Training will be developed and provided as requested. A proposal will be developed to provide training to a delegation from North Africa and one from Cote D'Ivoire in cooperation with ASTM if requested.

Communication: Updates to the NCSC, M-TRAC and NCAUPG websites will be posted. Information requests will be answered as received.

Third Party Lab and Testing Services: Work will continue on maintaining the AMRL accreditation and third party testing as requested. Lab usage fees will be implemented.

Research: Work will continue as planned on the research projects. New research needs will be identified and proposals prepared as appropriate.

Technology Transfer: Additional opportunities for tech transfer will be pursued as they become available. The technical director will present the Leonard Wood Memorial Lecture at Purdue and address the Kansas Asphalt Conference next quarter. She will attend the ASTM Board of Directors meeting in Boston and provide outreach to area businesses to promote participation in ASTM. She will also chair ASTM committee meeting for D04, Road and Paving Materials and attend the meeting of the Long Term Infrastructure Program parent committee.

Significant Results:

Readership reports for the published research reports show that they have been downloaded over 12,300 times.

Changes have been made to INDOT Specifications and test methods based on research results.

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).

Potential Implementation:

Research results are considered individually for possible implementation by the states as they become available. There is great interest across the country in the study on optimizing compaction and on past recycling research, which is leading to numerous speaking engagements, which serve to spread the results to a broader audience. INDOT is constructing another trial of so-called Superpave5 based on a completed project and is pursuing reinstating an asphalt warranty program based on results of another. Changes to the specifications and Indiana test methods have been adopted based on recent research.