

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Date: _____ 1-8-2015 _____

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.

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| 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 type="checkbox"/> Quarter 3 (July 1 – September 30) <input checked="" 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 |
|--|---|---------------------------------------|
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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 is reported below in terms of the major areas of activity as directed/approved by the Steering Committee.

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: No training was planned for this quarter. Training will be developed and provided to participating states and other groups upon request..

Communication: Information requests are processed as they arrive; about 20-25 per month are received. Updates to the website and hosted sites (Multi-Regional Training and Certification Group (M-TRAC) and Combined State Binder Group (CSBG) were also posted. Survey results were received from state steering committee members to determine the most pressing asphalt-related issues facing the region, which include longitudinal joints, tack coats, premature cracking, durability, use of shingles and recycled engine oil bottoms. Several of these topics have been or are being addressed by the NCSC and results will be shared with the region. Some of these topics will also be addressed at the upcoming North Central Asphalt Technical Conference. Published reports have now been downloaded from the Joint Transportation Research Program website about 5800 times.

Third Party Lab and Testing Services: Work continued on proficiency testing and maintenance of AMRL accreditation records. DFT testing was performed for CalTrans this quarter under a subcontract with Fugro Consultants. The NCSC also performed friction testing for some Indiana counties through collaboration with the Indiana LTAP Center. The NCSC will perform binder testing for the Illinois DOT when samples are received.

Research: Work continued on the project entitled *Optimizing Laboratory Mixture Design as it Relates to Field Compaction in Order to Improve Hot-Mix Asphalt Durability*, including testing of materials from a field test section. An additional time extension was approved to allow construction and testing of a second field trial placed in Indianapolis in late November.

The second draft of NCHRP Synthesis study, 45-15, *Fiber Additives in Asphalt Mixtures*, was submitted and minor changes recommended for the final manuscript. The final manuscript was prepared and submitted on schedule. The synthesis should be published in early 2015.

Work continued on a study for INDOT entitled *Analysis of the MSCR Asphalt Binder Test and Specifications for Use in Indiana*. A total of 13 binders have been tested to date and mixture testing of selected binders is beginning. A Study Advisory Committee meeting was held in November.

A new study on *Performance of Warranted Asphalt Pavements* is underway. Existing INDOT data has been collected from the central office and analysis is underway. Visiting the remaining field sections is tentatively planned for spring.

NCSC staff had joined a team proposing an innovative power source for transportation for possible NSF funding. The proposal was not approved for funding but may be resubmitted. In the meantime, a portion of that work has been broken out and submitted for possible funding elsewhere. That proposal was prepared and submitted in December.

A proposal was submitted to INDOT for a new project entitled *Tack Coat Installation Performance Guidelines*. The project reportedly been approved to begin January 1, 2015.

Technology Transfer: Work continues to plan and promote the next meeting of the North Central Asphalt User Producer Group, to be held in Illinois in February. The technical director participated in meetings of the Long Term Pavement Performance Program Expert Task Group on LTPP Special Activities as chair and the LTPP Committee as liaison; the Association of Asphalt Paving Technologists Board Meeting as past president; and the Kansas Asphalt Pavement Association's Fall Forum as an invited speaker. She also presented a seminar on pavement recycling at the University of

Waterloo and served as an external reviewer of a University of Waterloo PhD candidate.

Anticipated work next quarter:

Training: No training is currently planned.

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

Third Party Lab and Testing Services: Third party testing will be performed as needed and as described above. Work will continue on maintaining the AMRL accreditation.

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

Technology Transfer: The NCSC staff will meet with state and industry Steering Committee members during the joint North Central Asphalt User Producer Group Technical Conference and Illinois Bituminous Conference in February. A presentation will be made at TRB on the results of a completed project funded by the Minnesota DOT and another will be made at the Association of Asphalt Pavement Technologists on the Optimizing Compaction study. The technical director will participate in a conference on electrified vehicles and will give a seminar on potential impacts of embedding power transmission coils in the roadway.

Significant Results:

Readership reports for the published JTRP research reports show that they have been downloaded about 5800 times.

An increase in third party testing requests demonstrates the value of AMRL accreditation of the lab and represents an increasing funding source.

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).

No problems this quarter other than lack of an interested graduate student to work on the new Warranty project.

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. The NCHRP synthesis on Pavement Patching Practices is already generating interest and should serve an important need. There have also been numerous requests for information on the use of fibers in asphalt generated by the forthcoming synthesis publication.