



To: Tommy Nantung, INDOT
From: Jan Olek, Director, North Central Superpave Center
Date: April 14, 2011
Subject: Status Report – January - March 2011

Background

The North Central Superpave Center began on July 1, 1995, as one of five regional centers established to assist the states/provinces and industry 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.

Work Performed – January - March 2011

Training:

There were no formal training programs offered this quarter. The Wisconsin Asphalt Pavement Association contacted the Center about providing training in Wisconsin on noise walls and quiet pavements (for the public) and for one district of WisDOT in the Spring.

Communication:

A new contract for the joint newsletter was finally established with Auburn University late in the quarter. Work is beginning on planning the next issue for publication next quarter.

Routine updates were made to the NCSC website. Information is added and updated when received. Presentations, HMA “hot topics” and news articles, as well as HMA-related calendar events are frequently added to the website.

NCSC staff responds to approximately 25 calls and emails each quarter. These inquiries typically include questions and requests for information from HMA professionals across the country and around the world. Some example questions from this quarter included a high school student wanting to understand asphalt pavements, more questions from contractors and states about RAP usage and information about modified binders.

Third Party Lab and Testing Services:

The NCSC lab has been AMRL accredited since December 2009. Work is ongoing to maintain the equipment calibrations, training and record-keeping required to keep the accreditation current. Two contractors have requested RAP testing to be completed early next quarter.

Research:

Slab polishing and testing is continuing on the study entitled *Maximizing the Use of Local Materials in HMA*. This study is evaluating blends of polish resistant and polish susceptible aggregates in terms of their frictional

properties. Selected slabs are being subjected to additional polishing and testing to verify that terminal friction has been achieved. A no-cost, short time extension was approved last quarter due to changes in the test plan and problems with the tires on the polishing machine.

Data analysis of field friction testing on sites used in the study entitled *Investigating the Feasibility of Integrating Pavement Friction and Texture Depth Data in Modeling for INDOT Pavement Management System* is underway. The draft final report is nearing completion. A SAC meeting will be held next quarter.

The draft final report on the NCHRP study *History of Superpave* was completed in March. The research team is awaiting panel comments.

The study entitled *Risk Management of Low Void Content Asphalt Mixtures* is underway. Accelerated pavement testing was completed in March. Data analysis is also underway. A no-cost, short time extension will be requested since a graduate student was never identified to work on the project and our former post doc will return in July to assist with writing the final report.

Work continues on data analysis and report preparation for the *Evaluation of Recycled Asphalt Pavement for Surface Mixtures* study. The current plan is to have the data analysis and report completed next quarter.

Regarding the *Continued Monitoring Indiana's SPS9-A Site* study, the binder direct tension testing was completed this quarter, after a delay because of equipment problems. Purdue Mechanical Engineering IT personnel are still working on programming the Cox machine to be used for IDT testing. As soon as the software is available, IDT testing of the surface layers will be conducted. The draft final report writing is in progress.

Work continued on mix designs, slab fabrication, dynamic modulus testing and noise testing (grazing incidence) for the *Quiet Pavements* study this quarter. A request for no-cost time extension will be prepared and submitted to the sponsor early next quarter along with already completed sections that include literature review and final experimental plan. The paper based on this study was presented at the 2011 TRB meeting.

The revised final report for the study on the *Investigation of Low and High Temperature Properties of Plant-Produced RAP Mixtures, Phase II*, was completed this quarter. We are awaiting any additional comments from FHWA prior to writing a technical paper for submission to a venue approved by the technical contact.

Technology Transfer, Presentations and Interactions with other Centers and Organizations:

The 2011 North Central Hot Mix Asphalt Technical Conference, sponsored by the North Central Asphalt User Producer Group (NCAUPG), was held in conjunction with the Ohio Asphalt Paving Conference in February. The NCSC staff coordinated the meeting along with Flexible Pavements of Ohio. Despite a major winter storm, over 250 people attended the conference. The NCAUPG Management Committee and NCSC Steering Committee meetings were held in conjunction with the conference, but because of the storm, attendance was low. Video or telephone conferences will be scheduled with these committees next quarter.

The Center hosted a visit from Jia Yu of the [Jiangsu Research Institute](#) in China and two representatives of ArrMaz Custom Chemicals this quarter.

The Technical Director gave presentations at the North Central Hot Mix Asphalt Technical Conference and the Minnesota Contractors Workshop this quarter. She also participated in meetings of the Association of Asphalt Paving Technologists and Transportation Research Board. She also gave a presentation on pavement design to this semester's Civil Engineering Senior Design class at Purdue University.

SAC Meeting: The Steering Committee met on February 2, 2011, in Columbus, OH, but because of the winter storm attendance was low. A video or phone conference will be scheduled next quarter.

Work Next Quarter: Work will continue on research, communication, training and testing as planned.

Financial Information

North Central Superpave Center Base Funding Expenditures TPF-5 (021)					
July 1, 2010 - June 30, 2011 (Base Six-Year Two)					
States	Quarter One July - Sept 10	Quarter Two Oct - Dec 10	Quarter Three Jan - Mar 11	Quarter Four Apr - June 11	Total per State
Illinois					
Indiana	<u>\$6,250</u>	<u>\$6,250</u>	<u>\$6,250</u>		<u>\$18,750</u>
Iowa					
Kansas	<u>\$6,250</u>	<u>\$6,250</u>	<u>\$6,250</u>		<u>\$18,750</u>
Michigan	<u>\$6,250</u>	<u>\$6,250</u>	<u>\$6,250</u>		<u>\$18,750</u>
Minnesota					
Missouri					
Wisconsin	<u>\$6,250</u>	<u>\$6,250</u>	<u>\$6,250</u>		<u>\$18,750</u>
Quarterly Total					
Cumulative Grand Total					<u>\$75,000</u>