



To: Tommy Nantung, INDOT
From: Jan Olek, Director, North Central Superpave Center
Date: November 16, 2007
Subject: Status Report April 1 – June 30, 2007

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 April – June 2007

Training: No training was planned this quarter.

Communication: The latest issues of the newsletters can be found at <http://bridge.ecn.purdue.edu/~spave/Newsletters/Newletters.htm>.

The NCSC website redesign began this quarter. Unfortunately, our new communication specialist resigned to accept a position closer to her home. A student was hired to spend the summer working on the website and assisting with other activities. The future needs of the center, especially regarding its marketing plans, are being examined as we consider how best to fill this position.

Third Party Lab: The NCSC was contacted this quarter to provide third party testing of RAP for a contractor in New York. Samples were received and testing began. The center was also contacted about doing some noise and texture testing for BP, SST testing for Kansas State University and binder characterization for the Illinois DOT. A work plan will be written for BP. The NCSC agreed to assist KSU with the SST testing, but the SST is currently in need of repair, so this is on hold. The NCSC will test as many as 40 binders for IDOT, beginning as soon as the first shipment is received. Permeability testing for the sealer/binder study continued, this quarter on cores from California. Wisconsin data analysis continued.

Research

The JTRP study *Continued Monitoring of Indiana's SPS9A Site* is continuing. Binder extraction and recovery was completed on 42 cores from six test sections. Binder specific gravity, penetration and rotational viscosity was completed.

The study *Performance Certification of Indiana Superpave Hot Asphalt Mixes* is funded by JTRP and is being conducted in cooperation with the Indiana Department of Transportation, Division of Research. Testing is completed, but report is past due; there has not been sufficient time or staffing to analyze the massive amount of data collected.

Identification of Laboratory Techniques to Optimize Superpave HMA Surface Friction Characteristics, is funded by INDOT and the Iowa Department of Transportation through JTRP. Partial funding was also provided by the Institute for Safe, Quiet and Durable Highways (SQDH). Slab polishing and testing is underway. Field friction and texture testing was also completed this quarter. The extension was granted but the delays in transferring the funds continue.

Follow-up monitoring of *Long Term Performance of a Porous Friction Course* was conducted in April and will be repeated next quarter.

Work continued on the study *Determining the Binder Content of Hot Mix Asphalt Containing Dolomitic Aggregates Using the Ignition Oven*. The draft final report was prepared and is being reviewed internally.

Progress on the project *Investigating the Feasibility of Integrating Pavement Friction and Texture Depth Data in Modeling for INDOT PMS* was slow this quarter. There is still no news of a contract between INDOT and the consultant. Testing resumed on the INDOT Test Track in March, and contact will be made with the consultant, when identified.

The draft report on a study on plant-produced RAP mixtures was reviewed with the FHWA sponsor in March. Final revisions will be completed next quarter. Plans continue regarding replicating the experiment in other hot mix plants. A meeting was held with Indiana contractors to discuss this possibility. This study is being conducted in cooperation with Heritage Research Group and is funded by FHWA.

Data analysis continues on the project *Validation of NCAT Structural Test Track Experiment using INDOT APT Facility*. A no-cost extension was granted this quarter.

The NCSC is the PI on an NCHRP study documenting the history of the Superpave system. Work this quarter involved completing interviews with key researchers and implementors and the review of documentation of various aspects of the program.

The NCSC met this quarter with Prof. Bob Bernhard, an internationally known noise researcher. Bernhard is leaving Purdue (though will have an adjunct position for two years). The NCSC offered to take over and maintain control of the library of the Institute for Safe, quiet and Durable Highways, which he previously headed up. This will reinforce the NCSC's involvement in the noise field.

Interaction with other Centers and Organizations: The Superpave Centers cooperate with each other routinely; two remain active on a national level. The NCSC is also very active with numerous other organizations within and beyond the region in the areas of hot mix asphalt, binders, aggregates, noise and more.

This quarter the NCSC Technical Director was invited to join the FHWA HMA Recycling ETG. She accepted and attended the first meeting of the group in May. She also participated in ASTM D04, Road and Paving Materials biennial meeting. She chaired the meeting of TRB's Committee on General Issues in Asphalt Technology.

A professor from Taiwan, Shih-Huang Chen, joined the NCSC staff as a visiting scholar for a three-month visit. He will assist with a literature review on friction management.

SAC Meeting: The last NCSC Steering Committee meeting was held on January 9, 2007. The next meeting will be held in Springfield, IL, in January 2008.

Work Next Quarter: Work will continue on following up on the marketing plan, third party testing and continuing research as planned.

Financial Information

| North Central Superpave Center Base Funding Expenditures TPF-5 (021) | | | | | |
|--|-------------------------------|-----------------------------|-------------------------------|-------------------------------|--------------------|
| July 1, 2006 - June 30, 2007 (Base Five-Year Two) | | | | | |
| States | Quarter One July - Sept 06 | Quarter Two Oct - Dec 06 | Quarter Three Jan - Mar 07 | Quarter Four Apr - June 07 | Total per State |
| Illinois | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Indiana | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Iowa | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Kansas | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Michigan | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Minnesota | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Missouri | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Wisconsin | \$6,250 | \$6,250 | \$6,250 | \$6,250 | \$25,000 |
| Quarterly Total | \$50,000 | \$50,000 | \$50,000 | \$50,000 | |
| Cumulative Grand Total | | | | | \$200,000 |

Comment [rsm1]: Tommy gave us \$10k extra to balance his books. Need to check with him on how he wants us to report this.