

North Central Superpave Center Update

by

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Steering Committee Meeting
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Detroit, Michigan



Vision

An industry-recognized source of
Superpave expertise

Mission

To lead further development and
implementation of the Superpave
technology by providing services to
its customers



Status Update

- Personnel
- Training
- Communication and Technology Transfer
- Research
- Involvement on National Level
- Challenges and Status

Personnel

- Jan Olek, Director
- Becky McDaniel, Technical Director
- Lynn Warble, Communications
- Steve Bowman, Technician
- Ayesha Shah, Research Engineer
- Opening(s) for students on research projects

Training in 2001

- **Regional Training**
 - ◆ 2 Binder and 1 Fundamentals courses for a total of 29 participants.
 - ◆ “Marketing” problem with course for experienced designers caused cancellation (called it “refresher”)
- **NHI Courses**
 - ◆ Participated in revising course content
 - ◆ Taught one course in Illinois
- **Customized Courses**
 - ◆ Mathy Construction, 3 courses (Fundamentals, Technicians and Managers) for a total of 147 people

Training in 2002

- One binder course held in January, another scheduled for March
- One Fundamentals course for beginners in February
- One Mix Design course for experienced designers in February
- Talking with a state re training for locals and a contractor re binder training on the road this Spring
- Two NHI courses scheduled to date



Video Production

- NCHRP hired Fugro/BRE to market results of NCHRP 9-12, completed by NCSC and AI in 2000.
- NSCS working with Rita Leahy to write, produce, direct and star in (!) promotional video summarizing use of RAP in Superpave (6-8 minutes)
- Ready in Spring (March-April)

Alternate Training Delivery Methods

- Investigating and implementing
 - ◆ Utilization of Internet technology
 - ◆ Combination of printed material & video clips
 - ◆ Lynn will highlight some of this work
- Offers
 - ◆ Ability to customize to fit clients' needs
 - ◆ Sharing of field/lab expertise
 - ◆ Training on *clients* schedule.

Communication

- *Newsletter (regional and national editions)*
 - ◆ hard copy mailed to ~4000 people
 - ◆ electronic copies available on web page
 - ◆ coordinated, printed and distributed by NCSC three times a year for three centers
- *Website*
 - ◆ Maintained and updated periodically
 - ◆ Major addition/expansion implemented last year

Requests for Information

- Recorded about 50 requests for information in 2001
 - ◆ Industry - contractors, equipment manufacturers, binder suppliers, organizations, etc.
 - ◆ Agencies - counties, states, FHWA
 - ◆ Academia - from 8th grade to universities
 - ◆ Media
 - ◆ Regional, National (NY to WA), Overseas (Malaysia, Australia, Brazil, Peru, Oman, etc.)

Presentations - 2001

- Transportation Research Board Committee Presentations
- New York State HMA Conference (Thanks, Gerry)
- Northeast Low Volume Roads Conference
- TRB Superpave Committee, Communications, Outreach and Training
- Institute for Safe, Quiet and Durable Highways
- 2002 - TRB Committees, Ohio Asphalt Paving Conference



Equipment/Protocol Evaluations

- FHWA sponsoring evaluation of candidate simple performance tests
 - ◆ Received training from Witczak et al. at ASU last August
 - ◆ Equipment installation at Purdue completed three weeks ago - ready to start testing
 - ◆ Collected nine mixtures from Midwest
 - ◆ Look at how typical mixtures perform in SPT
 - ◆ Start building "library" of test results for 2002 Design Guide
 - ◆ Look at testing SMAs in the SPT

Equipment/Protocol Evaluations

- Ready to begin ruggedness testing on Binder Direct Tension
 - ◆ Awaiting 600+ samples from Raj Dongre
- Working with Eyad Masad to use x-ray tomography to analyze SGC specimens in conjunction with SST and SPT results
- Other equipment/protocols possible - work with NCAUPG Technicians, DAV, etc. - suggestions?

Implementation

- INDOT will begin allowing contractors the option of using SST testing to evaluation mixes with less than 2% air voids. Mixes with satisfactory stiffness may be left in place with reduction in pay; otherwise, removal and replacement will be required.
- We will be ready to provide such testing for a fee upon request.

Research at the NCSC - New

- *Identification of Laboratory Techniques to Optimize Superpave HMA Surface Friction Characteristics - Iowa, Indiana and SQDH*
- *Effects of Hot Plant Fuel Characteristics and Combustion Conditions on Asphalt Concrete Quality - SDDOT*
- *Performance Certification of Indiana Superpave Hot Asphalt Mixes - INDOT*

Research at the NCSC

- *Use of Reclaimed Asphalt Pavement Under Superpave Specifications*
Regional - draft final report out for review.
- *Superpave Simple Performance Testing*
- *Performance Evaluation of Fiber-Modified Asphalt Mixes* - Phase I almost complete, Phase II pending funding.
- *Development of Porous Modified Asphalt Mixes for Noise Control Applications* - pending matching funds

Research at the NCSC

- Worked with Iowa State University to bid on an NCHRP project - *NCHRP selection process underway*
- *Open to suggestions and partnerships.*

Involvement on National Level

- TRB
- AAPT
- ICAR
- Long Term Pavement Performance Materials Data ETG
- ASTM Committee D4, Road and Paving Materials
- National Highway Institute Instructor
- Communication, Training and Outreach

2001 Challenges and 2002 Status

- **"Soft" Funding Mechanism**
 - ◆ Fact of life that encourages us to keep looking for ways we can help
- **Slow progress on refinement of Superpave models - uncertainty as to the test equipment and test protocols changes**
 - ◆ Progress is being made nationally and we are up to speed on current protocols. Testing starting in February with new equipment.

2001 Challenges and 2002 Status

- Space limitations

- ◆ Working with INDOT to resolve space problems - new building being designed for expanded/improved laboratory facilities. Existing lab to be remodeled for better/expanded office space.