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LTRC Seminar Series Concludes with Quality

Public and private sector engineers, construction managers, inspectors, quality assurance managers, and other transportation professionals from all over the state gathered at the Hilton in Lafayette on November 19 for LTRC's latest seminar, "Building Quality Pavements." Professionals were able to network and listen to different speakers as they presented and discussed a variety of topics relating to quality pavements.

The goal of the seminar was to educate the DOTD and its affiliated working groups in the area of quality assurance aiming to raise the awareness of quality in paving. LADOTD uses various methods to measure quality and these measures define the product produced by the hard working contractors and DOTD construction inspection teams.

Speakers included: Bruce Wassill with FHWA, Western Federal Lands Highway Division; Jay Winford from Prairie Contractors, Inc.; Luanna Cambas and Joe Bond with DOTD; J.R. Connors from Info Tech, Inc.; Chris Abadie with LTRC; and Gary Doyle with HNTB.

Speakers covered a wide range of topics, such as the advantages and disadvantages of various quality measures, possible future quality control programs, and Louisiana's history of construction specifications from method-based to various statistically-based specifications. The importance of certification and training for building quality pavements was also discussed along with the impact that SiteManager Materials will have on DOTD contracts and how it will help LADOTD and others manage materials and finalize contracts. In addition, seminar topics discussed Louisiana's smoothness specifications, the use of International Roughness Index (IRI) as a preferred measure of smoothness, and new ideas to replace unreliable, extensive testing.

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Retired DOTD District Administrators (left to right) John "Chief" Andrus, Gulf Engineers and Consultants; W.C. Vincent; and Wayne Marchand, LTM attend latest QA/QC seminar.

Seminar speakers answer questions during panel discussion marking the conclusion of the "Building Quality Pavements" seminar.



LTRC Workshop Focuses on Designing for Accessibility

LTRC recently hosted a workshop entitled “Designing Pedestrian Facilities for Accessibility” in the TTEC Auditorium October 8-9. The two-day workshop, originally developed by the FHWA and US Access Board, was taught by Michael Moule, P.E., P.T.O.E., and president of Livable Streets, Inc., and Scott Windley, Accessibility Specialist, from the US Access Board. The workshop specializes in providing traffic and highway engineers, designers, planners, and inspectors with a better understanding of the latest ADA guidelines, policies, and standards and how to create and carry out proper sidewalk and intersection designs that are beneficial to persons with disabilities.

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The workshop covered a multitude of topics broken into seven modules. The first day consisted of “Pedestrians and Their Environment,” “Accessibility Laws, Regulations, Standards, and Policies,” “Sidewalk Design,” and “Curb Ramps and Other Transitions.” The second half of the workshop covered “Crossings and Intersections,” “Pedestrian Signals,” and “Maintenance and Temporary Traffic Control.”

Every module is designed to be educational in recognizing the needs of those with disabilities and providing practical engineering methods to successfully meet those needs at existing locations.

The workshop also encourages transportation professionals to create innovative solutions to similar challenges at future locations.



Participants take turns in wheelchairs as they make their way to an intersection.

In between the modules, Moule took the group outside to demonstrate the consequences of poor design and planning. By allowing the designers, planners, and inspectors to experience winding walkways and steep inclines on LSU’s campus in an actual wheelchair, many people’s eyes were opened. Brent Waguespack, DOTD Urban System Project Manager, took a turn in a wheelchair and explained, “I never realized how difficult it can be to operate a wheelchair. Depending on the grade of the sidewalk and the cross slope, you have to push harder with one hand more than the other hand.”



Speaker Michael Moule and class participant hurry as they cross a busy intersection on LSU’s campus.

While groups were traveling along the sidewalk, Moule frequently stopped to point out inconsistencies and compared the walkways to ADA standards as a learning exercise. Many times it became evident that those sitting in wheelchairs began having problems moving forward. In fact, some members from the group became so frustrated they began walking instead of finishing their turn in the wheelchair.

In addition to the wheelchair exercise, Moule gathered groups of 15 and led one group at a time to a busy pedestrian intersection and instructed the groups to close their eyes. Standing in a straight line, merely feet away from the street, Moule directed the group to raise their hand when they believed it was safe to cross. Unfortunately, many people in the group raised their hand as cars raced past them. “Listening for a break in traffic to allow you to cross can be very

difficult. Especially in this day and age, modern cars can be very quiet, making it nearly impossible to hear the location of an approaching vehicle,” added Waguespack. This exercise forced professionals to experience firsthand the difficulties visually impaired pedestrians face every day when crossing the street.

Moule enjoys teaching the workshop and values these exercises because they encourage people to examine problems from a new perspective. Moule explained, “It makes people more aware and allows them to understand the range of disabilities and how to best design for them. I hope people take away a new respect for the reasons why we need to design correctly, more easily, and more cost effective.”



Participants close their eyes as they listen carefully for a break in oncoming traffic.

LTRC Hosts Engineering Class for Non-Engineers

LTRC hosted an all day course entitled “Engineering for Non-Engineers” on November 12 in the TTEC auditorium. Charles Nemmers, P.E., with CHARLES NEMMERS, Inc. developed and presented the course to over 45 LADOTD and LTRC professionals in attendance.

Nemmers explained that the goal of the course was designed to present basic highway engineering fundamentals and terms to LADOTD and Department professionals from disciplines other than engineering. The course sections included: “Fundamentals,” “Highway and Bridge Design,” “Construction,” and “Operations and Maintenance.” The sections provided non-engineering professionals an opportunity to learn commonly used engineering terms and highway engineering fundamentals, such as design standards, the highway development process, bridge design, and testing procedures.

To make the material easier to understand, Nemmers provided diagrams, illustrated pictures and figures, and used analogies relating to the subject matter. John Whitworth, LTRC Teaching Associate, found the class extremely beneficial and explained, “The class was very engaging and provided me with an easy way to understand the terms that engineers use every day. I especially enjoyed the sections that discussed bridge design.” Nemmers also provided the group with a glossary consisting of frequently used terminology that professionals can take with them to use in their own office.

“Overall, I feel that this class will provide me with a broader base of knowledge and a new comfort level when dealing with the engineers here at DOTD as well as in private industry,” said Whitworth. While Nemmers covered a lot of information in a small amount of time, LADOTD and LTRC professionals were able to walk away with a better understanding of the engineering industry as a whole and ways to incorporate new knowledge into their own position.

For more information on unique training or education opportunities such as “Engineering for Non-Engineers,” please visit LTRC’s Web site at www.ltrc.lsu.edu, and click on the Calendar icon.

New Paving Material Not so Hot

A new generation of paving material was demonstrated recently in Shreveport, to a group of approximately 160 transportation professionals from Louisiana and Texas. The demonstration was part of a two-day symposium on Warm Mix Asphalt (WMA), a cooler alternative to the traditional hot mix in use today.

According to James “Jay” Winford, P.E., Ph.D., of Prairie Contractors, Warm Mix Asphalt is about 50 to 75 °F cooler than hot mix, thereby reducing both emissions and energy costs by 10-25 percent. Dr. Don Brock of Astec Industries describes this as “green asphalt” friendly to the environment. The process uses a mix of up to 40 percent recycled asphalt pavement (RAP) along with new material. This mix is “foamed” or injected with water during the mixing process, which reduces the temperature. This method seems to eliminate much of the carbon emissions people smell and see as smoke during asphalt application. Also, the workability of the mix is better, easier to compact, requires fewer rollers, and, as they claim, has a longer pavement life. While it has not been proven, they also claim the key advantage of the WMA is the use of a higher percentage of recycled asphalt. This substantially reduces the overall cost of the paving material. Some 130 plants around the country are now producing Warm Mix Asphalt using this proprietary process.



Dr. Jay Winford addresses WMA seminar.

The demonstration included the application of two lanes of warm mix at the Madden Contracting plant site in Shreveport, LA. One lane was Louisiana’s conventional asphalt concrete alongside a lane of the same mix with 40 percent recycled material using the warm mix technology. This application and mix was monitored by the Louisiana Transportation Research Center’s mobile laboratory, which tested the conventional mix design and the foamed mix design as well as the production run at the plant.



LTRC lab personnel test warm mix sample.

LTRC Seminar Series Concludes with Quality (cont'd)

Chris Abadie, P.E., LTRC Materials Research Administrator, explained, “All presentations confirmed that all of the test and statistical methods used to quantify our pavement quality provide good tools to measure quality.” Abadie also added, “I thought it all blended together very well. It was really good to see the contractors’ response to Luanna’s presentation on the proposed specification change that will take the LADOTD inspector out of the asphalt plant and placing the pay factor exclusively at the roadway.”

Professors from McNeese University were also in attendance and were eager to educate their students on some of the topics that were discussed during the seminar. Joseph Richardson, Associate Professor, is currently teaching a quality class and explained, “It’s good to show students real life applications of what they are learning. It’s a way to show how it applies outside the classroom.”

A short panel discussion marked the conclusion of the seminar. The panel provided answers and additional thoughts to the group regarding changes and concerns that arose during the day-long seminar.

NSF Program Director Gives Advice on Funding

LTRC recently sponsored a meeting between Dr. Richard Fragaszy, National Science Foundation (NSF) Program Director, and the engineering and science faculty of various universities in Louisiana, such as Louisiana State University (LSU), University of Lafayette at Lafayette (ULL), and Louisiana Tech (LA Tech) on Thursday, October 30 and Friday, October 31 in the TTEC conference room.

Those in attendance were able to meet with Dr. Fragaszy and observe a short presentation about NSF research funding opportunities and cross-cutting initiatives. According to the NSF Web site, NSF receives approximately 40,000 proposals each year for research, education, and training projects, of which only approximately 11,000 are funded. Dr. Fragaszy's first-hand advice was invaluable as he gave faculty members important tips on how to create better proposals and NSF submission techniques.

The section of the presentation that seemed to intrigue most faculty members was "How to Improve Chances of Funding." Dr. Fragaszy advised that one of the most important things a researcher can do is to have their proposals reviewed by their colleagues before submission. He explained that by using this approach, researchers receive valuable opinions and advice from professionals within their own field. Dr. Fragaszy also pointed out that by subjecting the proposals to this preliminary review, researchers tend to be more careful in their writing, which results in higher quality final products and increased chances of funding.

Dr. Fragaszy also encouraged faculty members that perseverance is key. He said, "It's normal to go a long time and not get NSF funding. Keep working on it, and you will most likely be successful."

At the conclusion of the presentation, Dr. Fragaszy spent the rest of the time answering various questions from faculty members on NSF funding specifics, such as proposal style, reasons why proposals are declined, and specific strategies on how to receive funding.

Dr. Fragaszy serves as a permanent program director in the Civil, Mechanical, and Manufacturing Innovation (CMMI) Division and has been with NSF for over 8 years. During his time with NSF, Dr. Fragaszy has managed numerous NSF-wide and Engineering Directorate-wide initiatives. He was also the recipient of several awards for his contribution at NSF.

To find out more information of NSF funding, visit the NSF Web site at www.nsf.gov/funding.



Dr. Fragaszy presents NSF funding information to a group of faculty members from various LA campuses.

LTRC Hosts 4th Annual Transportation Library Connectivity Conference

This year marked the 4th Annual Library Connectivity Pooled Fund Annual Meeting and Conference at TTEC from October 21-23. DOT librarians from all over the country were in attendance to network, discuss and learn new marketing strategies, and share highlights from the past year.

The three day conference and business meeting included introductions and updates from each DOT librarian followed by the Transportation Library Connectivity pooled fund business Year in Review. Reports were distributed, highlights and strategies were discussed, and Year Four of pooled fund was finalized.

6 Harold “Skip” Paul, LTRC Director, also addressed the group with an LTRC overview presentation and led the group on a tour of the TTEC facility. Sandy Brady, LTRC Librarian, explained other DOT librarians were impressed by the involvement of the LTRC administration, “Skip’s participation showed a level of support that many (most) have not had from their administration.” Brady also explained that following the tour, people commented that TTEC is a beautiful building and appears to be a very comfortable work environment. The group also noted that the classrooms and technology are very impressive, are a good use of state-of-the-art equipment, and very well designed and executed. Brady said, “They were impressed that the building planners had the forethought to dedicate a space for the library. They also said that the library is off to a good start, the work space looks comfortable, and the multiple computer workstations are good for clients and will help to draw clients in and to publicize the existence of the library.”

Brady also explained the group was pleasantly surprised when the Louisiana Secretary of Transportation, Dr. William D. Ankner, made time to visit and speak to the DOT librarians. His discussion focused primarily on creating seamless access to all DOT libraries across the nation. Dr. Ankner explained, “What I’d like is the ability to get an answer and not worry about a library card for a certain library.” Ankner also discussed the benefits of accessing multiple libraries and coupling the information with other sources to create better policies that would ultimately serve as a power tool for big decision makers. Ankner applauded the group for the importance in their position and expressed, “I’m looking forward to using your product. You can make a significant difference.”



Secretary Ankner welcomes DOT librarians.



Following Dr. Ankner’s visit, DOT librarians spent time discussing strategies on how to make their libraries and networks work more efficiently for their customers and provide tangible benefits and deliverables for their departments. The afternoon workshop led by Karen Wilson with Outsell, Inc. provided the group with a well-developed outline and template for a collection of strategic plans as well as a roadmap for completing strategic planning and return on investment (ROI) documents.

Following the workshop, participants shared their own DOT library's marketing collateral with the entire group. Some common items included: notepads, library logos, bookmarks, magnets, flyers, and brochures. Other more inventive marketing methods consisted of following up with new employees by conducting library tours and handing out information on how to best utilize the library's services. Some states even hosted open house receptions and events to those interested or new to the department.

Another important element of the conference included an in depth look at Second Life, an online, 3D virtual world created by its residents (users), and the possibility of using it for USDOT conferences, meetings, and general communication. The group also spent time to discuss the benefits of collaborating by using other Web 2.0 applications, such as micro blogging, wikis, social networking, and bookmarking. Web 2.0 marks the second generation in the World Wide Web and is a movement toward increasing secure information sharing and collaboration between users. By incorporating Web 2.0 applications into DOT libraries, the group hopes to generate seamless communication between libraries and create libraries that reflect the needs of its users.

At the conclusion of the meeting, the group reviewed key points, discussed action items, and determined the next steps for the 2009 conference and meeting. Brady enjoyed this year's conference and meeting and is excited about the possibilities of next year, "The membership continues to grow, so by next year, attendance and participation will be even higher. 'Connectivity' will be well established, so we can turn our attention towards developing even better ways to promote better knowledge management and to encourage support of Transportation libraries and information centers across the country."



DOT librarians from all over the nation group together at the conclusion of the conference.

Upcoming Events

Be sure to mark your calendar for the 2009 Louisiana Transportation Conference (LTC) that will be held **February 8-11, 2009**, at the Baton Rouge River Center in downtown Baton Rouge.

The 2009 conference will feature more than 70 technical sessions and is expected to be attended by over 1,500 transportation professionals from government, industry, and academia.

To learn more about the conference, register, or to become a sponsor, go to http://www.ltrc.lsu.edu/ltrc_09



Visit www.ltrc.lsu.edu for more upcoming events.

Staff Updates and Accomplishments

LTRC is pleased to welcome **Jenny Gilbert**. Jenny joins the LTRC staff as Editor and can be reached at 225. 767. 9150 or jennygilbert@dotd.la.gov.

Dr. Vijaya (VJ) Gopu, Associate Director for External Programs at LTRC, delivered a Grand Challenges in Science and Engineering Lecture at Tulane University entitled "Restoring and Improving Urban Infrastructure" on November 5, 2008.

Dr. Gopu also served on two NSF review panels and participated in an earthquake engineering equipment site review team for NSF during the 2008 fall semester.

Samuel B. Cooper, Jr., LTRC Associate Director of Technology Transfer and Training, successfully defended his Master Thesis on the "Characterization of HMA Mixtures Containing High Recycled Asphalt Pavement Content with Crumb Rubber Additives" on November 6, 2008 for the Civil Engineering graduate program at Louisiana State University (LSU). Cooper's Master of Science in Civil Engineering degree from LSU was conferred on December 19, 2008.

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