

## ***FHWA R&T Now*** ~May 2009~

*A news update of research, development and innovation delivery from the U.S. Department of Transportation, Federal Highway Administration*

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### **GENERAL/ADMINISTRATIVE**

#### **-Debra Elston Presents at MODOT's 2009 Research Forum-**

Debra Elston, FHWA's Director of Corporate Research, Technology and Innovation Management was honored to present at the Missouri Department of Transportation's 2009 Research Forum, "Setting a Course for the Future." Debra's presentation addressed the value of research, the Federal role, program improvements and funding levels.

<http://www.modot.mo.gov/services/OR/ResearchForum.htm>

### **ADVANCED RESEARCH**

#### **-FHWA Exploratory Advanced Research Solicits Proposals-**

The FHWA Exploratory Advanced Research (EAR) Program solicits proposals through a Broad Agency Announcement on 12 topics in four focus areas:

Nanoscale research;

Concepts for integrated highway safety and systems operations;

New technologies and advanced policies for energy and resource conservation systems; and,

Macro, mega and national scale modeling systems.

Proposals are due June 24, 2009, with awards anticipated through fall. The EAR Program plans to award around \$11.6 million to proposals responding to the solicitation. For more information, please contact:

[terry.halkyard@dot.gov](mailto:terry.halkyard@dot.gov) 202-493-3467

[david.kuehn@dot.gov](mailto:david.kuehn@dot.gov) 202-493-3414

#### **-FHWA Hosts Nano-Scale Research Workshop-**

On March 5-6, FHWA hosted a workshop to identify interests and capabilities for nanoscale research that can be applied to highway industry subject matters. The workshop connected technical experts from University Transportation Centers, federal laboratories, and other sources who are conducting relevant nanoscale research. The information and thoughts shared at this meeting will shape the scope of FHWA investment in nanoscale research through an open solicitation, interagency agreement, or other appropriate mechanisms. For more information, contact:

[david.kuehn@dot.gov](mailto:david.kuehn@dot.gov) 202-493-3414

#### **-FHWA Exploratory Advanced Research Program Partners with SCOR on Strategic Research-**

The FHWA Exploratory Advanced Research (EAR) Program will solicit and fund research for one of the topics identified for [NCHRP 20-83, Long-Range Strategic Issues Facing the Transportation Industry](#). The American Association of State Highway and Transportation Officials' Standing Committee on Research (SCOR) approved solicitation of five topics and funding two additional topics in FY 2010 as part of a new Long-Range Strategic Issues project. To accelerate the research, FHWA offered to fund one additional

project, "Multi-Modal Connectivity Options for a Future Seamless Transportation System." Researchers for the project will study the range of possible multi- and inter-modal connectivity options, looking 30 to 50 years ahead and focusing on optimizing different forms of system capacity, improving reliability, and creating a seamless, safe transportation system. The EAR Program is soliciting proposals on the topic from all sources and is seeking candidates to serve on an expert panel to provide technical oversight of the project similar to panels formed for the National Cooperative Highway Research Program (NCHRP). For more information, contact:

[david.kuehn@dot.gov](mailto:david.kuehn@dot.gov) 202-493-3414

## **INFRASTRUCTURE**

### **-ENR Top 25 Newsmaker for 2008-**

Mike Adams, Research Geotechnical Engineer at TFHRC was selected by Engineering News Record (ENR) to highlight as one of their Top 25 Newsmakers for 2008. Mike is known for his dedicated promotion of geosynthetic reinforced soil (GRS) technology used for building efficient and cost effective bridge substructure components, which has been an integral part of FHWA's Bridge of the Future initiative. The ENR article is online at:

<http://enr.construction.com/people/awards/2009/0107.asp>

### **-Long-Term Bridge Performance Program-**

The Long-Term Bridge Performance (LTBP) program team has conducted "Focus Group" meetings with 8 state DOT offices to discuss performance and maintenance issues that the states encounter on a regular basis; 5 additional state meetings have been scheduled. Not surprisingly, some of the key issues the states have identified include: bridge deck performance and corrosion concerns, bridge deck joint performance, bearing performance, and scour and scour countermeasures issues. From this, a preliminary set of program data requirements and bridge performance metrics has been developed. The next phase of work is initiation of a pilot program to assess data collection protocols and guidelines for the LTBP visual inspections, bridge instrumentation, and NDE. Two bridges have been selected for the pilot program to test and validate these protocols and guidelines for implementation (one each in VA and UT). Other states to be included are likely to run through 2011. For information on the LTBP program see the LTBP program Web site at:

<http://www.tfhrc.gov/ltpb/>

For information on the pilot program, contact:

[john.penrod@dot.gov](mailto:john.penrod@dot.gov) 202-493-3051

### **-Long-Term Pavement Performance Computed Parameter: Frost Penetration-**

This report will be of interest to highway agency engineers as well as researchers who will use the LTPP frost penetration data to improve pavement design and analysis procedures.

<http://www.fhwa.dot.gov/pavement/ltpb/pubs/08057/>

[larry.wiser@dot.gov](mailto:larry.wiser@dot.gov) 202-493-3079

### **-Long-Term Pavement Performance (LTPP) Manual for Profile Measurements and Processing-**

This manual describes operational procedures to be followed when measuring longitudinal pavement profiles for the LTPP program.

<http://www.fhwa.dot.gov/pavement/ltp/pubs/08056/index.cfm>

[aramis.lopez@dot.gov](mailto:aramis.lopez@dot.gov) 202-493-3145

## **SAFETY**

### **-Ver. 2 of Surrogate Safety Assessment Model (SSAM) Available – Free Download-**

SSAM conducts conflict analysis and performs statistical analysis of vehicle trajectory data output from common microscopic traffic simulation models. The software computes a number of surrogate measures of safety for each conflict that is identified in the trajectory data and then computes summaries (mean, max, etc.) of each surrogate measure. This approach yields crash frequency predictions for hypothetical designs and control alternatives, and is applicable to facilities where traditional, volume-base crash-prediction models have not been established. Contact Clayton Chen, FHWA HRDS Project Manager at:

<http://www.itssiemens.com/research/ssam/>

SSAM Software User Manual: <http://www.tfhr.gov/safety/pubs/08050/index.htm>

SSAM Final Report: <http://www.tfhr.gov/safety/pubs/08051/index.htm>

[clayton.chen@dot.gov](mailto:clayton.chen@dot.gov) 202-493-3054

### **-FHWA Senior Mobility Initiatives/Updates-**

The FHWA senior mobility program centers on providing highway engineers and transportation specialists with older road user guidelines. Since 1998 we have provided the transportation community with these guidelines in the “Highway Design Handbook for Older Drivers and Pedestrians”. This Handbook defines the physical changes of and cognitive changes in older drivers and pedestrians and recommends roadway designs and strategies which will accommodate these aging drivers and pedestrians. This Handbook, now in its third reiteration, will include reference to the most current traffic control standards, and best practices practiced around the country. Release of this updated Handbook will be in 2010 following publication of the new MUTCD. Also, the FHWA provides States with training on how to understand and apply these guidelines through classes provided by the Resource Center. These workshops can be requested by the States and are provided free of charge. For more information on the “Highway Design Handbook for Older Drivers and Pedestrians”, contact:

[dick.schaffer@dot.gov](mailto:dick.schaffer@dot.gov) 202-366-2176

For more information on requesting a workshop to learn more about the Handbook, contact:

[gene.amparano@dot.gov](mailto:gene.amparano@dot.gov) 816-329-3909

### **-Techbrief: Traffic Calming on Main Roads Through Rural Communities-**

This TechBrief summarizes an evaluation of the effects on speed of low-cost, traffic-calming treatments on main rural highways passing through small, rural communities in Iowa.

<http://www.tfhr.gov/safety/pubs/08067/index.htm>

[ray.krammes@fhwa.gov](mailto:ray.krammes@fhwa.gov) 202-493-3312

[edward.sheldahl@dot.gov](mailto:edward.sheldahl@dot.gov) 202-366-2193

**-The National Surface Transportation Safety Center for Excellence (NSTSCE) 2008 Annual Report-**

The annual report from the National Surface Transportation Safety Center for Excellence (NSTSCE) is provided for your information. The Center develops and disseminates advanced transportation safety techniques and innovations. The Center's mission is to use state-of-the-art facilities, including the Virginia Smart Road, to conduct the necessary research to improve driver safety in both rural and urban communities.

NSTSCE Annual Reports - links for the pdf files are after the "About NSTSCE" section

<http://www.vtti.vt.edu/stsce.html>

**-SafetyAnalyst Brochure update-**

SafetyAnalyst is a set of software tools under development to help State and local highway agencies advance their programming of site-specific safety improvements.

<http://www.tfhrc.gov/safety/pubs/safetyanalystbroch/index.htm>

**OPERATIONS**

**-Follow-On to Advanced Modeling and Simulation Workshop-**

On May 27<sup>th</sup>, the Turner-Fairbank Highway Research Center (TFHRC) will host a follow-on to the *Advanced Modeling and Simulation Workshop* that was held here in December 2008. This workshop will help define research agendas for the four topics selected in December: Data -Warehousing Databases/Availability; How do we get models to work together?; Traveler Behavior; and, External Factors/Non-Recurring Conditions. Operations R&D staff will be liaisons to each of these groups along with a co-chair from other FHWA offices with a vested interest in the topic. This will ensure collaboration as we scope and execute a research plan. Dale Thompson, Travel Management Team, Office of Operations R&D is the lead for this workshop. Proceedings will be made available after the symposium.

[dale.thompson@dot.gov](mailto:dale.thompson@dot.gov) 202-493-3420

**-Second FHWA/UTC/RITA Conference on Traffic Management-**

On May 13-14, the Office of Operations R&D hosted a second meeting of its University Transportation Center (UTC) partners at TFHRC. There were over 60 people in attendance at the meeting representing 23 universities, other Federal offices, and included world leaders in traffic management research, program managers from the ITS Joint Program Office, FHWA's Offices of Operations, Environment and Planning, Federal Highway Lands, and Safety R&D. Four main topics were discussed at the meeting: New control algorithms and hardware; Simulation and modeling; Use of traffic data; and, Vehicle-Highway Cooperative Systems. Participants established a baseline understanding of current Operations R&D activities and possible new directions in these technical areas. For more information contact:

[deborah.curtis@dot.gov](mailto:deborah.curtis@dot.gov) 202-493-3267

## ENVIRONMENT

### **-GIS-Bicycle/Pedestrian Peer Exchange-**

On May 11<sup>th</sup> & 12<sup>th</sup>, 2009, HEP's Office of Interstate and Border Planning sponsored a peer exchange hosted by the Miami-Dade County MPO in Miami, Florida. Planned in conjunction with Gabe Rousseau in the Office of Natural Environment, the exchange brought together professionals representing Michigan DOT, New Jersey DOT, Two-Rivers-Ottawaquechee Regional Commission, Martin MPO, Broward County Department of Environmental Protection and Growth, the city of Miami, and the Seattle DOT. Participants shared lessons and challenges in using GIS to accomplish various bicycle/pedestrian transportation objectives. A summary report of the exchange will be available by the end of June on the FHWA *GIS in Transportation* Web site (<http://gis.fhwa.dot.gov>). For more information contact:

[mark.sarmiento@dot.gov](mailto:mark.sarmiento@dot.gov) 202-366-4828

## RECENT PERIODICALS

### **-FOCUS Newsletter – April 2009-**

This issue includes: Swimming with the Fishes: Recycled Concrete Finds New Life Supporting Maryland's Marine Habitat; Improving Bridge Safety and Reliability with LRFR; FHWA Introduces Quality Assurance Specification Course; Achieving Better Pavement Design with WIM Technologies; FHWA Workshop Offers Step-by-Step Guide; and, Highway Technology Calendar.

<http://www.tfhr.gov/focus/apr09/index.htm>

[lgpope@woodward.com](mailto:lgpope@woodward.com)

### **-Public Roads – March/April 2009-**

This issue includes: 1. Revisiting the TEA-21 Reauthorization: Extensions and Delays. 2. Building Lightly on the Land. 3. Maximizing Transportation Investments: Collaborative Fraud Prevention and Outreach. 4. Congestion Pricing With Lane Reconfigurations to Add Highway Capacity. 5. Low-Cost Safety Improvements for Horizontal Curves. 6. Designing Excellence.

<http://www.tfhr.gov/pubrds/09mar/index.htm>

[martha.soneira@dot.gov](mailto:martha.soneira@dot.gov)

### **-Safety Compass Newsletter – January/February/March 2009-**

This issue includes: President Obama Marks Historic Transportation Investment, Including Safety Strategies In The Recovery Act Delivery, Missouri's Smooth Roads Initiative Improves Roadway Safety, Tennessee is implementing a Ramp Queue Program, Montana Highway Patrol has created a six-person roving unit to patrol Montana's high-enforcement corridors, Roadway Safety Foundation Awards Technical Assistance to Educate Public about Lifesaving Benefits of Roadway Safety Features, Pennsylvania's Local Safe Roads Communities and Walkable Communities Programs, Safety on the Centerline - Nevada Department of Transportation is installing rumble strips in the center of over 1,300 miles of two-lane rural State roadways, New Jersey Department of Transportation's Division of Traffic Engineering and Safety's Plan4Safety - a free web-based application available to all state, county, and local safety professionals involved in engineering, enforcement, and education., Reductions in Highway-

Rail Grade Crossing Crashes: Increase in Pedestrian Incidents Brings New Challenges, HSIP 23 CFR Part 924 – Revised Regulation, Florida Web-based Safety Program Tracking Tool, Iowa’s High-Crash Curve Database, FHWA Safety Office Concludes Successful 6-Year Study on Deployment of Pedestrian Countermeasures in Three Cities: Las Vegas, San Francisco and Miami.

<http://safety.fhwa.dot.gov/newsletter/safetycompass/safetycompass.htm>

[janet.ewing@dot.gov](mailto:janet.ewing@dot.gov)

**-Transportation and Climate Change Newsletter – April 2009-**

This issue includes: FHWA Launches New Climate Change Website; Secretary LaHood Testifies on Climate Change Legislation; EPA Proposes Endangerment Finding for Greenhouse Gases; EPA Proposes First National Reporting on Greenhouse Gas Emissions; Center for Clean Air Policy Releases “A Pragmatic Approach to Regulating Greenhouse Gases Under the Clean Air Act (CAA)”; Conference Proceedings Released on Integrating U.S. Climate, Energy, and Transportation Policy; Asset Management and Adaptation to Climate Change Webinar Presentations Available; California Adopts Low Carbon Fuel Standard; Michigan Climate Action Council Releases Final Plan; Southern Transportation and Air Quality Summit, August 25-27; DOE Funding Available for Transportation Projects that Conserve Energy; 2009 Transportation, Planning, Land Use and Air Quality Conference to Focus on Climate Change; and, Transportation Research Board Starts a New Climate Change Website.

<http://www.fhwa.dot.gov/hep/climatechange/newsletter/ccnews0409.htm>

**-Innovator–Accelerating Innovation for the American Driving Experience-April/May 2009-**

This issue includes: Q&A With Sandra Larson: Working in an Innovative Culture; Innovations Highlight Missouri Project; Utah Project Results Show Innovation Benefits; Web Conference Centers on Performance Contracting; Labs Test System to Automate Aggregate Analysis; ARTBA Honors Technology Partnerships Project; and, Calendar.

<http://www.fhwa.dot.gov/hfl/innovator/issue12.cfm>

**-Centered on Service- May 2009-**

This issue includes: The FHWA and NEPA, 40 Years Later; Civil Rights Team Highlights Promising Practices; STAQS 2009-Jacksonville, FL; COP on Historic Bridges; PDS Update: National Title VI/Nondiscrimination Forum; Precast Concrete Pavement Systems PDS; New Course Helps Public Involvement Practitioners; New NHI Offerings; Transportation Partnership Programs News: LTAP/TTAP Activities; Office of Technical Services Brings Together RC, NHI, and TPP Staffs; and RC Staff Honored for Commitment to Excellence.

<http://www.fhwa.dot.gov/resourcecenter/success/cosvol5iss2.pdf>

**Links:**

**Turner-Fairbank Highway Research Center:** [www.tfhrc.gov](http://www.tfhrc.gov)

**Resource Center:** <http://www.fhwa.dot.gov/resourcecenter/>

**National Highway Institute:** <http://www.nhi.fhwa.dot.gov/home.aspx>

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Suggestions may be submitted to: [FHWA\\_Now@fhwa.dot.gov](mailto:FHWA_Now@fhwa.dot.gov)