

FHWA R&T Now ~ January 2012~

A news update of research, technology, and development from the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA)

GENERAL/ADMINISTRATIVE

Report: Telling The R&T Story: The Value of Research

This report details how the Federal Highway Administration (FHWA) is advancing its research and technology (R&T) programs to meet the Nation's needs. It includes select examples of state-of-the-art technologies that are being developed and implemented, such as highway safety software, intelligent traffic lights, and the deployment of prefabricated bridge elements and systems.

To learn more about the array of initiatives underway, including details on new research projects, technology deployment, opportunities for partnerships, and plans for the R&T future, visit www.fhwa.dot.gov/research.

For more information regarding the FHWA R&T Program, contact Michael Trentacoste Associate Administrator for Research, Development, and Technology, Turner-Fairbank Highway Research Center, 202-493-3260, michael.trentacoste@dot.gov.

<http://www.fhwa.dot.gov/publications/research/general/11053/index.cfm>

Fact Sheet: Telling the R&T Story: The Value of Research

This fact sheet summarizes the abovementioned report, specifically the value of FHWA's R&T work to improve highway safety, infrastructure integrity, operations, and freight productivity. It also includes information about research and technologies focused on reducing congestion, strengthening transportation planning and environmental linkages, assessing policy and system financing alternatives, exploring next generation solutions, and accelerating the deployment of innovation.

For more information regarding the FHWA R&T Program, contact Michael Trentacoste, 202-493-3260, michael.trentacoste@dot.gov.

<http://www.fhwa.dot.gov/publications/research/general/11054/index.cfm>

ADVANCED RESEARCH

New Exploratory Advanced Research Program Workshop Reports Available

Two new Exploratory Advanced Research (EAR) Program workshop reports, "Technological Innovations in Transportation for People With Disabilities Workshop Summary Report" and "Agent-Based Modeling and Simulation Workshop 2010," are available on FHWA's Web site. "Technological Innovations in Transportation for People With Disabilities Workshop Summary Report" examines requirements of pedestrians and travelers with visual impairment or other disabilities and advances in sensing, robotics, and positioning that could lead to new technologies for enhancing accessible transportation.

The "Agent-Based Modeling and Simulation Workshop 2010" is part of an ongoing effort to examine the area of Agent-Based Modeling and Simulation (ABMS) and its application in transportation research. The

workshop brought together experts from various fields outside of transportation to share their knowledge and experience in applying ABMS to study topics such as consumer behavior in the marketplace, the impact of certain policies on fisheries, and predicting the spread of epidemics.

The EAR Program is supporting multiyear ABMS research on driver behavior. A short description of the research project is located at <http://www.fhwa.dot.gov/advancedresearch/research/researchfocus3.cfm>.

EAR Program workshop reports are located at <http://www.fhwa.dot.gov/advancedresearch/pubs.cfm>. For more information about the EAR Program, contact David Kuehn, 202-493-3414, david.kuehn@dot.gov. For more information about ABMS, contact David Yang, 202-493-3284, david.yang@dot.gov.

INFRASTRUCTURE

Report: 2011 FHWA Infrastructure Research and Technology Strategic Plan

This 2011 FHWA Infrastructure Research and Technology Strategic Plan describes the direction and outcomes that will be pursued through FHWA's Infrastructure R&T program for the next 5 or more years. It is founded on and informed by input provided by a broad array of highway stakeholders assembled through formal and informal mechanisms.

Additional details concerning the specific work that will be undertaken by the FHWA Offices of Infrastructure, Infrastructure Research and Development, and Technical Services will be provided in a supporting FHWA Infrastructure R&T program roadmap that will be reviewed and updated on an annual basis.

For more information, contact Michael Trentacoste, 202-493-3260, michael.trentacoste@dot.gov.

<http://www.fhwa.dot.gov/publications/research/infrastructure/12028/index.cfm>

Highways for LIFE Technology Partnerships Program Offers Additional Grants to Spur Innovation

FHWA is soliciting for proposals for a fourth round of grants under the Highways for LIFE Technology Partnerships Program. The focus of the 2012 Solicitation will be to work with the highway industry to accelerate the adoption of promising innovations that have the potential to directly reduce crashes or crash severity; or innovations that significantly enhance decisionmaking relative to the deployment of treatments to reduce crashes, crash severity, and the understanding of the effectiveness of the treatments. The program is intended to fund proven innovations that have been developed to a late-stage prototype with the proof of concept well established. Before they would be available for commercialization, these prototypes would require further development, testing, and evaluation in a real-world setting.

The closing date is May 3, 2012. Each grant award may range from \$250,000 to \$1,000,000 for up to 2 years of performance. Subject to available funding, FHWA anticipates awarding up to \$5 million through this solicitation. Competition is open to all sources. International companies may apply.

To download the solicitation, visit www.grants.gov and search by funding opportunity number: DTFH61-12-RA-00002. For more information, contact Julie Zirlin, 202-366-9105, julie.zirlin@dot.gov.

Report: Investigation of Low- and High-Temperature Properties of Plant-Produced RAP Mixtures

As asphalt prices fluctuate, reclaimed asphalt pavement (RAP) use mitigates variability in material costs, making RAP a valuable commodity for use in asphalt pavements. Understanding the performance of pavements containing high amounts of RAP (greater than 25 percent) is important to State highway agencies across the United States.

For more information, contact Butch Wlaschin, Director, Office of Pavement Technology, 202-366-0392, butch.wlaschin@dot.gov.

<http://www.fhwa.dot.gov/publications/research/infrastructure/pavements/11058/index.cfm>

Report: Improved Corrosion-Resistant Steel for Highway Bridge Construction

This study was undertaken to identify steels with lower potential cost than ASTM A1010 that could be candidates for bridge construction while still providing low corrosion rates.

For more information, contact Paul Virmani, 202-493-3052, paul.virmani@dot.gov.

<http://www.fhwa.dot.gov/publications/research/infrastructure/bridge/11062/index.cfm>

Report: Multiple Corrosion-Protection Systems for Reinforced Concrete Bridge Components

Eleven systems combining epoxy-coated reinforcement (ECR) with another corrosion-protection system were evaluated using rapid macrocell, southern exposure, cracked beam, linear polarization resistance, and field tests.

For more information, contact Paul Virmani, 202-493-3052, paul.virmani@dot.gov.

<http://www.fhwa.dot.gov/publications/research/infrastructure/bridge/11060/index.cfm>

OPERATIONS

CAP-X Tool Enhanced for Capacity Analysis of Junction Designs

The FHWA Office of Operations Research and Development has enhanced a sketch planning tool to conduct capacity analysis for planning of junctions (CAP-X). It is a tool that can be used to evaluate selected types of innovative or alternative junction designs (8 intersections, 5 interchanges, and 3 roundabouts) using given peak hourly traffic counts. The Intersections and Interchanges are evaluated using the method of critical lane volume summation to provide planning capacity assessment at each crossing.

For more information, contact Taylor Lochrane, 202-493-3293, taylor.lochrane@dot.gov. For instructions on how to use the CAP-X tool, visit <http://tsi.cecs.ucf.edu/index.php/cap-x>.

Report: Guide on The Consistent Application of Traffic Analysis Tools and Methods

In support of the Traffic Analysis and Simulation Pooled Fund Study (PFS), FHWA initiated a study to identify and address consistency in the selection and use of traffic analysis tools. This document offers recommendations on the management, planning, and conduct of traffic analysis that will promote greater traffic analysis tool consistency over the typical project development life cycle. It is directed toward professionals operating in State departments of transportation and other agencies responsible for transportation project development and delivery.

For more information, contact Randall VanGorder, 202-493-3266, randall.vangorder@dot.gov.

<http://www.fhwa.dot.gov/publications/research/operations/11064/index.cfm>

SAFETY

Phase VI of Pooled Fund Study on Low Cost Safety Improvements Underway

The FHWA Offices of Safety R&D and Infrastructure R&D announce the initiation of Phase VI of Evaluation of Low Cost Safety Improvements Pooled Fund Study. This new phase is a pioneering study of pavement improvements that have the potential to reduce the frequency and severity of run-off-the-road crashes. The study will conduct statistical evaluations of before-and-after crash and pavement data to determine which safety improvements are most effective. Improvements in flexible pavements and in rigid pavements will be considered for evaluation. Expected project outcomes are Crash Modification Factors, Benefit/Cost ratios, and technical recommendations.

States interested in participating in this innovative safety performance research program are invited to contact the project's research managers: Roya Amjadi, Office of Safety R&D, 202-493-3383, roya.amjadi@dot.gov, and Jim Sherwood, Office of Infrastructure R&D, 202-493-3150, jim.sherwood@dot.gov.

RECENT PERIODICALS

***Public Roads*—January 2012**

This issue includes: Every Day Counts; Montana's Roundabout Corridor; Spotlight on Pedestrian Safety; Why Does FHWA Have a Chemistry Lab?; and The DRT Start.

It is available online via <http://www.fhwa.dot.gov/publications/publicroads/12janfeb/index.cfm>

For more information, contact Paula Magoulas, paula.magoulas@dot.gov.

***FOCUS* Newsletter December 2011**

The December issue includes: New FHWA Manual Presents State of the Practice for Accelerated Bridge Construction; Redesigning the Bridge: Video Demonstrates a Geosynthetic Approach to Bridge Construction; Online Training Offers Introduction to Warm Mix Asphalt; Highway Technology Calendar; FHWA Releases New Guidance on Patented and Proprietary Products; and Infrastructure Innovation Webinars.

The issue is available online via <http://www.fhwa.dot.gov/publications/focus/11dec/11dec00.cfm>

For more information, contact Lisa Pope, lgpope@woodwardcom.com.

Links:

Turner-Fairbank Highway Research Center: <http://www.fhwa.dot.gov/research/>

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

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

Please forward this newsletter to others you think might find it interesting and/or useful.

Suggestions may be submitted to: FHWA_Now@fhwa.dot.gov