

FHWA R&T Now ~January 2009~

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

GENERAL/ADMINISTRATIVE

- Ray H. LaHood Becomes the 16th U.S. Secretary of Transportation-

Ray H. LaHood became the sixteenth U.S. Secretary of Transportation just before 1:00 p.m. Friday, January 23. LaHood was joined for an official swearing-in ceremony in his new office by his wife Kathy, son Sam and fellow Illinoisan and Assistant Majority Leader, U.S. Senator Richard J. Durbin. The oath of office was administered by Linda Washington, Assistant Secretary for Administration, and took place before an audience of his new staff and members of the Department of Transportation transition team. The full Senate confirmed LaHood by voice vote on January 22, following his being reported out of the Senate Commerce, Science and Transportation Committee just the day before, on January 21.

<http://fastlane.dot.gov/>

-Michael Trentacoste Named New Associate Administrator for Research, Development, and Technology, and Director of the Turner-Fairbank Highway Research Center-

Michael has served the Federal Highway Administration (FHWA) as Director, Office of Safety, Research, and Development, since 1999. In this capacity, he led a professional staff in developing and executing FHWA's Safety, Research, and Development Program. Prior to this position, Michael served for 3 years as Director, Office of Highway Safety, with FHWA. Michael holds a Master's Degree in Transportation from Northwestern University, and a Bachelor's Degree in Civil Engineering from Manhattan College.

-Dr. Jonathan Porter, New Chief Scientist for RD&T-

Dr. Porter was previously with the Office of the Secretary of Defense, Defense Research and Engineering. He provided oversight, coordination, and guidance for defense laboratory management and basic research initiatives. Among many other duties, he provided policy guidance, leadership, coordination, and oversight for the DoD Multi- disciplinary University Research Initiative Program.

-Economic Recovery-

Congress is drafting economic recovery legislation which will include significant new funding for transportation infrastructure. While the details and timing of the proposal are still being debated, the legislation could become law as early as mid-February. The Federal Highway Administration stands ready to implement the economic recovery and is taking steps to ensure effective coordination and support among federal agencies as well as preparing our partners and stakeholders to implement the recovery legislation as expeditiously as possible.

<http://www.fhwa.dot.gov/economicrecovery/>

-Technical Publications Catalog, October 2007 – September 2008-

The Federal Highway Administration's (FHWA) Turner-Fairbank Highway Research Center (TFHRC) is pleased to present our fourth *Technical Publications Catalog*. This is a comprehensive listing of our

research documents published from October 2007 through September 2008, and includes listings of fact sheets, flyers, product briefs, reports, summaries, and TechBriefs.

<http://www.tfhrc.gov/techpubcat/09019.htm>

INFRASTRUCTURE

-Chemistry Research Facility Fact Sheet-

The Turner-Fairbank Highway Research Center Chemistry Research Facility (CRF) conducts fundamental studies of highway materials from a chemical point of view. Investigations into the chemical mechanisms involved in well-known distress modes in concrete and asphalt pavements helps to generate new testing methods and foster the development of new materials. CRF validates Federal Highway Administration sponsored off-site research, offers unbiased support for State agencies and industry partners, and assists with the forensic evaluation of pavement failures.

<http://www.tfhrc.gov/about/08059.htm>

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PAVEMENTS

-LTPP Newsletter, Fall 2008-

This issue includes: Don't Pull Those Signs Down!; LTPP Computed Parameter: Frost Penetration; LTPP Database Tips; Seasonal Monitoring Program; and, In Brief.

<http://www.fhwa.dot.gov/pavement/ltp/news.cfm>

SAFETY

-FHWA Office of Safety R&D Announces a Transportation Pooled Fund Study (TPFS) to Support Motorcycle Crash Causation Study-

Motorcycle rider fatalities rose 127 percent between 1997 and 2006 in the U.S. In 2007, while overall motor vehicle related fatalities decreased almost 4 percent from 2006, motorcycle crash-related fatalities (5,154) increased by 7 percent. The FHWA is sponsoring a Transportation Pooled Fund Study to provide support to the Motorcycle Crash Causation Study, which is based on comprehensive on-scene, in-depth investigations of motorcycle crashes. States are invited to join this TPFS to help increase our understanding of motorcycle crashes, and arrest the growth in the resulting casualties. SP&R and FHWA-administered Section 406 funds may be used to support this effort. For more information go to:

<http://www.pooledfund.org/projectdetails.asp?id=1221&status=1>

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-FHWA Office of Safety R&D Announces Advanced Crash Analysis Program (ACAP)-

The FHWA has entered into a 2 year contract (with 3 option years) with the National Crash Analysis Center, at the George Washington University School of Engineering and Applied Science, to support the agency's new Advanced Crash Analysis Program (ACAP). ACAP's primary focus areas will be to develop and apply advanced analysis techniques, including finite element modeling, crash simulations, vehicle

design and dynamics studies, clinical analysis of crash data, occupant risk analyses, and impact testing to improve transportation safety and security. This program will launch new efforts to validate vehicle models developed in reverse engineering, undertake analyses of vehicle dynamics in road departures, and analyze rollover crashes and potential remedies. It will also apply crash dummy and human body models to investigate the risks to vehicle occupants, and will analyze and test devices aimed at enhancing infrastructure security. These efforts will enhance the understanding of the causes of roadside crashes, evaluate the effectiveness of various roadside safety treatments, and provide the basis for future crashworthiness requirements. ACAP will also continue to support the crash simulation community by creating finite element vehicle models and material models, and making them available for public use. For more information, go to: <http://www.tfhr.gov/about/ncac.htm>.

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-Test Track and Driving Simulator Evaluations of Warnings to Prevent Right-Angle Crashes at Signalized Intersections-

The Federal Highway Administration (FHWA) Office of Safety Research and Development (R&D) is focused on improving highway operations and safety by increasing the knowledge and understanding of the effects of intersection design on operational efficiency and safety. Intelligent Transportation Systems (ITS) have been shown to have both safety and operational benefits. This study was conducted to investigate the potential for an ITS countermeasure to reduce the number of collisions that result from red-light violations at signalized intersections.

<http://www.tfhr.gov/safety/pubs/08070/index.htm>

-SafetyAnalyst Brochure-

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.tfhr.gov/safety/pubs/09023/index.htm>

-Fact Sheet: Office of Safety Research and Development (R&D)-

The FHWA Office of Safety Research and Development (R&D) is helping to reduce highway crashes and related fatalities and injuries by developing and implementing safety innovations through a program of nationally coordinated research and technology. This fact sheet highlights selections from this broad research portfolio.

<http://www.tfhr.gov/safety/pubs/08025/index.htm>

-Intersection Safety-

New Summary Report released: "Two Low-Cost Safety Concepts for Two-Way STOP-Controlled, Rural Intersections on High-Speed Two-Lane, Two-Way Roadways." The FHWA Office of Safety R&D has released a summary report of research into the effectiveness of two low-cost strategies for improving safety at intersections of two-lane, two-way roadways with two-way STOP-control. The strategies are: (1) Narrowing the lane widths to 9-10' using rumble strips on outside shoulders and in a painted yellow median island on major road approaches, and (2) Installing channelized separator islands on side road approaches with supplemental STOP signs. The research indicates that operational and safety benefits can be expected from both concepts. The report is available at: <http://www.tfhr.gov/safety/intersect.htm>, and can be ordered from report.center@fhwa.dot.gov.

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OPERATIONS

-FHWA Analysis, Modeling, and Simulation Research Symposium-

The Office of Operations Research and Development hosted an FHWA Analysis, Modeling, and Simulation Research Symposium at Turner-Fairbank Highway Research Center on December 3-4. The purpose of the symposium was to: 1. share information among all offices on transportation related analysis and modeling activities being undertaken; 2. define best practices; and 3. develop analysis and modeling priority topic areas for collaboration among all offices for further joint efforts in research and resolution. The group will reconvene on May 27, 2009 to follow-up on topic area action plans. The 45 attendees included representatives from Safety Headquarters and R&D, Infrastructure, Operations Headquarters and R&D, Planning and Environment, Policy, the Resource Center, the Division offices, FTA, and RITA/JPO.

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-Comparative Analysis Report: The Benefits of Using Intelligent Transportation Systems in Work Zones-

FHWA has released a new report on its study of the effectiveness of using intelligent transportation systems (ITS) in work zones. This document provides insights into the mobility and safety benefits of using ITS for work zone traffic management, as well as tips, and lessons learned. The information presented is based on an FHWA study that examined five case study sites: I-40 outside Winston-Salem in North Carolina; I-30 between Benton and Little Rock in Arkansas; US-131 in Kalamazoo, Michigan; I-35 in Hillsboro, Texas; and DC-295 in Washington, DC. This report follows on an earlier summary report of the same study and presents a more detailed discussion, including data and analysis for each site.

http://www.ops.fhwa.dot.gov/wz/its/wz_comp_analysis/index.htm.

OPPORTUNITIES

-Call for 2009 National Roadway Safety Awards Nominations-

The Federal Highway Administration and the Roadway Safety Foundation co-sponsor the program biennially to provide national recognition for exemplary roadway safety efforts and to publicize award-winning "best practices". Federal, State, regional, and local organizations are eligible to apply, as are companies and associations. Awards are given for infrastructure, operational and program-related improvements and programs that address safety needs. The 2009 nomination application materials provide more detailed information and can be downloaded from the program Web site:

<http://www.roadwaysafetyawards.org/>

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RECENT PERIODICALS

-FOCUS Newsletter - November 2008-

This issue includes: FHWA Develops Resources to Prevent and Mitigate ASR in Concrete; Learn More About Long-Term Bridge Performance at the TRB Annual Meeting, Excellence in Highway Design 2008, Highway Technology Calendar; A Core Curriculum for Construction Contract Administration; Highways for LIFE Extends 2009 Project Application Deadline; and, The Place to Go for LTPP Data and Information.

<http://www.tfsrc.gov/focus/nov08/index.htm>

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-FOCUS Newsletter - December 2008-

This issue includes: Pavement Preservation at Your Fingertips: FHWA Resources Offer Guidance and Training; Pavement Management System Key to Improving Highway Condition in Washington State; FHWA Publication Resources; Advancing Pavement Performance Measurement in the United States and Europe; Highway Technology Calendar; Partnering for Progress: The 2008 National Hydraulic Engineering Conference; and, FHWA Sponsors Concrete Materials Seminars.

<http://www.tfsrc.gov/focus/dec08/index.htm>

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-Public Roads – November/December 2008-

This issue includes: 1. The Quest for Zero Fatalities: A comprehensive program aims to eliminate deaths on Utah's roadways. 2. LTAP/TTAP: 25 Years of Service: Local and Tribal Technical Assistance Programs rise to the challenge of meeting transportation needs at the local level. 3. Higher Gas Efficiency Equals Lower Fuel Revenues: A Texas study shows that drastically higher motor fuel taxes—or something else—will be needed soon to compensate for revenue losses from increasing vehicle fuel efficiency. 4. Deploying Technology in Challenging Terrain: Now 25 years old, the Federal Lands Highway Program is still making out-of-the-way places safely accessible. 5. Bringing Freight Lessons Home: Lessons from other nations on improving freight transportation indicate the need to set a clear national vision and coordinate public and private action effectively. 6. News on Nanotechnology: Recent nanoscience research improves understanding of cement and concrete properties and looks to the next generation of highway pavements.

<http://www.tfsrc.gov/pubrds/08nov/index.htm>

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-Public Roads – January/February 2009-

This issue includes: 1. Bicyclist-and Pedestrian-Only Roundabouts: Facilities dedicated solely to nonmotorized traffic are an emerging development for improving mobility and reducing injury and fatality rates. 2. The Sound of Safety: Arizona's findings point to centerline rumble strips and reducing injury and fatality rates. 3. UHPC Making Strides: Progress is continuing on implementing ultra-high performance concrete technology on the U.S. highway system, even while some challenges remain. 4. Bringing Innovations to Market: FHWA's Technology Partnerships Program smoothes deployment in the transportation industry. 5. Fostering a Culture of Ethics: Establishing and maintaining strong moral standards in the workplace are essential building public trust and delivering the transportation program effectively. 6. Electronic Freight Management: USDOT's new EFM system provides an accurate, efficient, and inexpensive Web-based method of tracking the transport of goods across the world.

<http://www.tfsrc.gov/pubrds/09janfeb/index.htm>

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-Transportation and Climate Change Newsletter – December 2008-

This issue includes: FHWA Sponsors Peer Exchange on Adaptation of Transportation Systems to Climate Change; National Action Plan Vision for 2025: A Framework for Change; Uncle Sam's Rusty Toolkit; VMT & Climate Policy Dialogue; FHWA Hosts Second Federal Interagency Meeting on Climate Change, Transportation and Land Use; California Governor Directs State Agencies to Plan for Sea Level Rise and Climate Impacts; California Air Resources Board Approves Climate Change Scoping Plan; Hawaii Commits to Electric Vehicles; A Fare Choice: How Rhode Island Can Invest in Public Transit and Energy Independence; New FHWA Sustainable Transport and Climate Change Team; and, 8th Annual New Partners for Smart Growth Conference.

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

-Innovator—Accelerating Innovation for the American Driving Experience-December/January-

This issue includes: Oregon DOT Engages Communities Through Students; Maine Highways for LIFE Project Meets Goals; All-Weather Pavement Marking System Ready for Test; Workshop Tackles Tough Questions About Performance Contracting; Virginia Bridge Project Satisfies Customers; Whitetopping Project a First for North Dakota; and, Calendar.

<http://www.fhwa.dot.gov/hfl/innovator/issue10.cfm>

Links:

Turner-Fairbank Highway Research Center: www.tfsrc.gov

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