

FHWA R&T Now ~ May 2011~

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

GENERAL/ADMINISTRATIVE

Planning for the Implementation of the Second Strategic Highway Research Program (SHRP2)

The Transportation Research Board (TRB) continues to manage the SHRP 2 program and has been convening implementation-planning workshops to prepare for the deployment of the first research results. FHWA liaisons and technical staff are fully engaged in the workshops, and with the SHRP 2 Technical Coordinating Committees (TCCs) as they evaluate the projects and recommend initiatives for implementation or further research during 2011.

Congress extended the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) surface transportation authorization through September 30, 2011, and passed a continuing resolution last December that amended Section 510 of Title 23 to allow the Secretary of Transportation to use SHRP 2 funds for implementation of research products related to the program. This provision engages FHWA resources to advance SHRP 2 development, demonstration, evaluation, and technology transfer activities.

FHWA staff has been working with TRB, the American Association of State Highway and Transportation Officials (AASHTO), and the National Highway Traffic Safety Administration (NHTSA) on a collaborative approach to SHRP 2 implementation. Working with the TCCs, each organization is assessing the relevance and readiness of the emerging products to their existing programs and proposing next steps toward product implementation. At the next SHRP 2 Oversight Committee meeting on June 13-14, FHWA's Executive Director will establish expectations about what the agency is prepared to do to implement SHRP 2 over the next 12 months.

For more information, contact Margie Sheriff, 202-366-1747, margie.sheriff@dot.gov.

Now Online: Database of FHWA—Approved Public Interest Findings for Patented & Proprietary Products

HIP-30 surveyed the Division offices in 2007 and 2009 regarding approved Public Interest Findings (PIFs). The data obtained was consolidated into a database. All told, the survey data (as well as updates provided by the Division Offices) was consolidated into a database containing over 1,000 approved PIFs for patented and proprietary products. This database is now available online at <http://www.fhwa.dot.gov/construction/contracts/pif/index.cfm>. The data can be filtered by Tracking Number, State, Basis of Approval, Product/Material, Product/Material Category, and PIF Extent.

The publishing of this database to the FHWA Internet site is the first step in providing clarification to FHWA's policy regarding patented and proprietary product approvals. Other steps in this process include:

- The existing guidance (Q & As) will be updated to clarify the differences between certifications and PIFs, and between the two types of certifications. It will also clarify when FHWA approval is required.

- FHWA guidance, as posted on the agency Web site, will be supplemented with examples of excellent certifications and public interest findings. These will include certifications based on both synchronization and “no equally suitable alternative.”
- A memo to the Divisions will be issued bringing attention to the revised guidance and emphasizing that the promotion of innovative products is a goal of the agency.
- The Stewardship Agreement Guidance will be updated to address the use of proprietary products. Divisions will be directed to include both FHWA and State DOT responsibilities with regard to certifications and public interest findings. Where authority has been delegated to the State DOT, the stewardship agreements should require the State DOT to forward all approval and documentation to the Division. The Divisions will transmit this information to Headquarters for posting on the agency Web site.
- The Office of Program Administration Web site will post and continually update a list of approved certifications and PIFs, using information submitted routinely by the Divisions.
- Both the guidance memo and the stewardship agreement guidance will emphasize that existing certifications and PIFs shall be continually evaluated as new products are developed and become available.

For more information, contact John Huyer, 202-366-1937, john.huyer@dot.gov.

ADVANCED RESEARCH

New Exploratory Advanced Research (EAR) Program Fact Sheets Available

Seven new Exploratory Advanced Research (EAR) Program fact sheets are available on the FHWA Website.

Three fact sheets provide information about an EAR Program-sponsored projects focused on the concept of vehicle-to-infrastructure (V2X) cooperation and vehicle positioning and navigation as elements of an integrated highway system: “Investigating Advanced Traffic Signal Control” (FHWA–HRT–11–044), “Efficient and Safe Merging Solutions” (FHWA–HRT–10–076), and “Staying in Lane: Intelligent Fusion of Vehicle Sensor Data” (FHWA-HRT-10-064).

Two fact sheets describe EAR Program-sponsored projects on human behavior and travel choices: “Modeling Driver Characteristics,” (FHWA–HRT–10–070) and “Investigating Congestion and Solutions: Experiments on Congestion Conditions and Pricing Initiatives” (FHWA-HRT-10-061).

The fact sheet, “New Ways to Predict Bridge Performance: Advances in Structural Health Monitoring,” (FHWA-HRT-10-062) describes advanced methods for assessing system performance.

Two fact sheets—“Harnessing the Value of Ecosystems” (FHWA–HRT–10–075) and “Exploring Cement Hydration Kinetics” (FHWA–HRT–10–078)—provide information about EAR Program initial stage investigations on innovative topics. Initial stage investigations can lead to EAR Program investments through future open solicitations.

EAR Program fact sheets are located at <http://www.fhwa.dot.gov/advancedresearch/pubs.cfm>.

INFRASTRUCTURE

Report: *Reclaimed Asphalt Pavement in Asphalt Mixtures: State of the Practice*

Recycling asphalt pavement (RAP) creates a cycle of reusing materials that optimizes the use of natural resources. RAP is a useful alternative to virgin materials because it reduces the need to use virgin aggregate, which is a scarce commodity in some areas of the United States.

<http://www.fhwa.dot.gov/publications/research/infrastructure/pavements/11021/index.cfm>

For more information, contact Audrey Copeland, 202-493-3097, audrey.copeland@dot.gov.

Technical Note: *Ultra-High Performance Concrete*

Advances in the science of concrete materials have led to the development of a new class of cementitious composites, namely ultra-high performance concrete (UHPC). The mechanical and durability properties of UHPC make it an ideal candidate for use in developing new solutions to pressing concerns about highway infrastructure deterioration, repair, and replacement.

<http://www.fhwa.dot.gov/publications/research/infrastructure/structures/11038/index.cfm>

For more information, contact Ben Graybeal, 202-493-3122, benjamin.graybeal@dot.gov.

Report: *LTPP Specific Pavement Studies (SPS) Materials Action Plan Final Report*

This report summarizes the activities and accomplishments of the Long-Term Pavement Performance (LTPP) program Materials Action Plan (MAP). The MAP was initiated in August 2004 to improve the extent and amount of materials data to characterize the pavement structure of test sections at LTPP Specific Pavement Study (SPS) -1, -2, -5, -6, and -8 experimental sites.

<http://www.fhwa.dot.gov/publications/research/infrastructure/pavements/ltp/10049/index.cfm>

For more information, contact Aramis Lopez, 202-493-3145, aramis.lopez@dot.gov.

SAFETY

Summary Report: Safety Evaluation of the Safety Edge_{SM} Treatment

The FHWA Office of Safety Research and Development announces the availability of reports on research evaluating the Safety Edge_{SM}, a pavement edge treatment. This evaluation was conducted by the Highway Safety Information System (HSIS) at the FHWA Turner-Fairbank Highway Research Center. The Safety Edge is an innovative treatment intended to minimize edge drop-off-related crashes. With this treatment, the pavement edge is sloped at a 30 degree angle from horizontal, which makes it easier for a driver to safely reenter the roadway after inadvertently driving onto the shoulder. HSIS researchers found that though the reduction in crashes due to the Safety Edge is modest, but its application under most conditions appears to be highly cost-effective because it is so inexpensive.

For more details, see the HSIS Summary Report "Safety Evaluation of the Safety Edge Treatment," (FHWA-HRT-11-025), at <http://www.fhwa.dot.gov/publications/research/safety/hsis/11025/index.cfm>. The full research report (FHWA-HRT-11-024) is available at <http://www.fhwa.dot.gov/publications/research/safety/11024/index.cfm>.

For more information, contact Carol Tan, 202-493-3315, carol.tan@dot.gov.

RECENT PERIODICALS

***FOCUS* Newsletter April 2011**

This issue includes: Building Bridges the Geosynthetic Way; Guidelines for the Preservation of High-Traffic Volume Roadways; For Soil Nail Walls, It's a SNAP; Enter the World of LTPP Data; Highway Technology Calendar; and, An Interactive Overview of Right-of-Way Requirements for Local Agencies.

<http://www.fhwa.dot.gov/publications/focus/11apr/11apr00.cfm>

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

Public Roads—May/June 2011

This issue includes: A City's Signature Centerpiece; Mississippi's Recovery; Safety Strategies Study; Securing the Nation's Bridges; and, Masters of Information.

<http://www.fhwa.dot.gov/publications/publicroads/11mayjun/index.cfm>

For more information, contact Paula Magoulas, 202-493-3398, paula.magoulas@dot.gov.

Public Roads—March/April 2011

This issue includes: A Majestic Showcase; Sustainable Streets; Evaluating Pedestrian Safety Countermeasures; From "Carmageddon" to Complete Success; and, Prizing Excellence.

<http://www.fhwa.dot.gov/publications/publicroads/11marapr/index.cfm>

For more information, contact Paula Magoulas, 202-493-3398, paula.magoulas@dot.gov.

Transportation and Climate Change Newsletter—March/April 2011

This issue includes: FHWA Publishes Transportation Planning for Sustainability Guidebook; EIA Releases Annual Report on US GHG Emissions; Texas A&M Report Examines Integration of Climate Change Adaptation into Transportation Planning; Pew Climate Center Releases Pair of White Papers in Anticipation of Transportation Legislation; UK Engineering Academy Reports on Climate Change Adaptation for Infrastructure; Transportation Research Record Focuses on Energy and Climate Change; FHWA Seeks Participants for GIS Applications in Climate Change Peer Exchange; AASHTO Seeks Environment Research Ideas; FHWA Webinar to Highlight Sustainable Pavements; and, FHWA Holding Series of Webinars on Congestion Pricing.

<http://www.fhwa.dot.gov/hep/climatechange/newsletter/ccnews0411.htm>

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>

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