U.S. Department of Transportation
Federal Highway Administration

2006

Priority, Market-Ready Technologies and Innovations

2006 List

The Federal Highway Administration's (FHWA) Research & Technology Leadership Team endorses **six new** priority, market-ready technologies and innovations (T&Is). This list continues to fulfill our Agency commitment established in the FHWA *Corporate Master Plan for Research and Deployment of Technology & Innovation* to identify market-ready T&Is.

CONSTRUCTION & PROJECT MANAGMENT

Accelerated Construction Technology Transfer (ACTT)*—This undertaking promotes creative techniques to reduce construction time and enhance quality and safety. Contact: james.sorenson@fhwa.dot.gov, 202–366–1333; jerry.blanding@fhwa.dot.gov, 410–962–2253

FINANCE

***Asset Management Guide*—**This guide illustrates asset management principles and identifies techniques and methods for adopting the decisionmaking framework in transportation agencies. Contact: stephen.gaj@fhwa.dot.gov, 202–366–1336; thay.bishop@fhwa.dot.gov, 404–562–3695

ENVIRONMENT

Dispute Resolution Guidance for Environmental Streamlining—These procedures present strategies for interagency collaborative problem solving during the transportation development and environmental review process. Contact: ruth.rentch @fhwa.dot.gov, 202–366–2034; don.cote@fhwa. dot.gov, 720–963–3210

GEOTECHNICAL & HYDRAULICS

Continuous Flight Augered (CFA) Piles—This technology is characterized by the drilling of a hollow-stem auger into the ground, pumping grout or concrete into the hole, and installing reinforcement in the pile. This eliminates the need for a temporary casing. Contact: silas.nichols @fhwa.dot.gov, 410–962–2460

Expanded Polystyrene (EPS) Geofoam—This lightweight material can be used as fill behind walls and other support structures. Contact: silas.nichols@fhwa.dot.gov, 410–962–2460

OPERATIONS

511 Traveler Information—This easy-to-remember, three-digit telephone number is available to State and local transportation agencies nationwide so that agencies can provide information readily about highway and transit conditions to travelers by telephone. Contact: robert.rupert@fhwa.dot.gov, 202–366–2194; mac.lister@fhwa.dot.gov, 708–283–3532

DYNASMART-P—This traffic analysis tool can integrate travel demand models into the planning process. The tool can evaluate intelligent transportation system (ITS) technologies and provide traffic operations data for air quality analysis. Contact: henry.lieu@fhwa.dot.gov, 202–493–3273; john.tolle@fhwa.dot.gov, 708–283–3541

Intelligent Transportation System Deployment Analysis System (IDAS)—This tool can predict the costs and benefits of ITS investments and provide data and information that enable agencies to analyze ITS operational improvements. Contact: robin.mayhew@fhwa. dot.gov, 360–753–9416; james.sturdevant@fhwa. dot.gov, 708–283–3552

Maintenance Decision Support System (MDSS)—The MDSS tool uses weather forecasting and data fusion techniques to provide maintenance managers with precise surface condition forecasts and treatment recommendations, thereby reducing maintenance costs for winter operations. Contact: paul.pisano@fhwa.dot.gov, 202–366–1301; ray.murphy @fhwa.dot.gov, 708–283–3517

QuickZone—This user-friendly computer software tool enables users to estimate and analyze the length of queues and delays in work zones. Contact: deborah.curtis@fhwa.dot.gov. 202–493–3267; daniel.grate@fhwa.dot.gov, 404–562–3912

PAVEMENTS & MATERIALS

Air Void Analyzer (AVA)*—This technology can be used to provide real-time evaluation for measuring air content, specific surface, and the spacing factor of fresh portland cement concrete. Contact: gary.crawford@fhwa.dot.gov, 202–366–1286; angel.correa@fhwa.dot.gov, 404–562–3907

Pavement Smoothness Methodologies—The new pavement smoothness specification covers smoothness test methods, smoothness equipment specifications, and equipment certification programs. Contact: mark.swanlund@fhwa.dot.gov, 202–366–1323; robert.orthmeyer@fhwa.dot.gov, 708–283–3533

PLANNING

Highway Economic Requirements System, State Version (HERS-ST)—This software model evaluates the implications of alternative programs and policies on the condition, performance, and user cost level associated with highway systems. Contact: robert.mooney@fhwa.dot.gov, 202–366–4657

Improved Decisionmaking Using Geographic Information Systems—A software program that enables manipulation, analysis, and display of geographically referenced data. Contact: mark.sarmiento@fhwa.dot.gov, 202–366–4828; ben.williams@fhwa.dot.gov, 404–562–3671

Transportation, Economics, and Land Use System (TELUS)—This information-management and decision-support system helps State departments of transportation and metropolitan planning organizations prepare their annual transportation improvement programs and statewide transportation improvement programs. Contact: bruce.spear@fhwa.dot.gov, 202–366–8870; lisa.randall@fhwa.dot.gov, 720–963–3209

STRUCTURES

Fiber-Reinforced Polymer (FRP)*—This material can be used to repair cracks in overhead sign supports by wrapping the support with fiber-reinforced material. Contact: benjamin.tang@fhwa.dot.gov, 202–366–4592; lou.triandafilou@fhwa.dot.gov, 410–962–3648

Load and Resistance Factor Design (LRFD) and Rating of Structures—The American Association of State Highway and Transportation Officials' (AASHTO) Load and Resistance Factor Design (LRFD) and Rating bridge specification provides for more uniform levels of safety, which should lead to superior serviceability and long-term maintainability. Contact: firas.ibrahim@fhwa.dot.gov, 202–366–4598; thomas.saad@fhwa.dot.gov, 708–283–3521

Prefabricated Bridge Elements and Systems (PFBES)*—These systems minimize traffic impacts of bridge construction, improve work zone safety, and make construction less disruptive by minimizing the necessary lane closures, detours, and narrow lane uses. Contact: vasant.mistry @fhwa.dot.gov, 202–366–4599; raj.ailaney@fhwa.dot.gov, 410–962–2542

SAFETY & DESIGN

Cable Median Barriers*—Cable median barriers are effective mechanisms for preventing fatal and disabling crashes and are more forgiving than traditional concrete and metal beam barriers. Contact: nick.artimovich@fhwa.dot.gov, 202–366–1331; frank.julian@fhwa.dot.gov, 404–562–3689

PEDSAFE—This online, interactive system enables users to "diagnose" a pedestrian-related issue based on site characteristics and to formulate potential solutions that improve conditions for pedestrians within the public right-of-way. Contact: tamara.redmon@fhwa.dot.gov, 202–366–4077; aida.berkovitz@fhwa.dot.gov, 415–744–2614

Red Light Cameras—The traditional enforcement of violations for running red lights are automated by using camera systems at light-controlled intersections that detect offending motorists, capture images of license plates, and issue citations by mail. Contact: louisa.ward@fhwa.dot.gov, 202–366–2218; craig.allred@fhwa.dot.gov, 720–963–3236

Road Safety Audits (RSA)*—RSAs improve transportation safety by using an independent audit team to conduct a formal safety performance examination of an existing or future road or intersection. Contact: louisa.ward@fhwa.dot.gov, 202–366–2218; craig.allred@fhwa.dot.gov, 720–963–3236

Roundabouts—This design treatment is a circular intersection that requires entering vehicles to yield to existing traffic in the circulatory roadway. Contact: ed.rice@fhwa.dot.gov, 202–366–9064; joe.bared@fhwa.dot.gov, 202–493–3314; mark.doctor@fhwa.dot.gov, 404–562–3732

Rumble Strips—Shoulder rumble strips are continuously grooved indentations in roadway shoulders that provide audible warnings and physical vibrations to alert drivers that their vehicles are leaving the roadway. Contact: debra.chappell@fhwa.dot.gov, 202–366–0087; frank.julian@fhwa.dot.gov, 404–562–3689

* Denotes an AASHTO Technology Implementation Group approved technology.

Additional Resources

FHWA Research and Technology (R&T) future Web site, www.fhwa.dot.gov/crt.

FHWA Resource Center Web site, www.fhwa.dot.gov/resourcecenter/misc/technology.cfm.

AASHTO Technology Innovation Group Web site, http://tig.transportation.org.

To request additional copies of this publication, contact:

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