



# Research Digest

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## **Item 1**

### **Synthesis of Information Related to Airport Practices**

*TRANSPORTATION RESEARCH BOARD*

*ACRP Research Results Digest 1 • 2007*

A staff digest of the progress and status of ACRP Project 11-03, “Synthesis of Information Related to Airport Practices,” for which the Transportation Research Board is the agency conducting the research. Individual studies for the project are managed by Gail Staba, Senior Program Officer, and Jon Williams, Manager, Synthesis Studies, serving under the Studies and Special Programs Division of the Board, Stephen R. Godwin, Director.

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## **Item 2**

### **New Facility for Calibrating Retroreflectometers**

*TRANSPORTATION RESEARCH BOARD*

*NCHRP RRD 297 • 2006*

This digest announces the results of NCHRP Project 05-16, “National Calibration Facility for Retroreflective Traffic Control Materials.” The research team (composed of C. Cameron Miller, Todd Heimer, and Edward Early, National Institute of Standards and Technology) established a center for the calibration of portable retroreflectometers used for measuring the retroreflectivity of pavement markings and signs.

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## **Item 3**

### **Evaluation of Best Management Practices for Highway Runoff Control**

*TRANSPORTATION RESEARCH BOARD*

*NCHRP Report 565 • 2006*

TRB’s National Cooperative Highway Research Program (NCHRP) Report 565: Evaluation of Best Management Practices for Highway Runoff Control examines best management practices for highway runoff control. These practices are designed to provide a means of avoiding or mitigating the negative impacts of various pollutants that can be carried by rainfall into the groundwater and receiving waters. These pollutants include materials discharged by vehicles using the highway system, pesticides and fertilizers from adjacent landscapes, and particulates from the breakdown of the pavements themselves.

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## **Item 4**

### **Comparative Review and Analysis of State Transit Funding Programs**

*TRANSPORTATION RESEARCH BOARD*

*NCHRP Report 569 • 2006*

TRB's National Cooperative Highway Research Program (NCHRP) Report 569: Comparative Review and Analysis of State Transit Funding Programs examines the levels and types of state funding provided for public transportation. The report provides supplemental analyses of information collected in the U.S. Bureau of Transportation Statistics' annual survey of state public transportation funding and explores a framework for conducting peer analyses and offers ideas on how the annual survey of state public transportation funding might be enhanced so that states could conduct additional analyses.

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## **Item 5**

### **FMCSA Regulations as They Apply to FTA Section 5310/5311 Providers: a Handbook**

*TRANSPORTATION RESEARCH BOARD*

*NCHRP Research Results Digest 311 • 2007*

This digest offers guidance to state and local governments, transit agencies, and others who provide transportation services supported by FTA Section 5310 and 5311 grants. Section 5310 grants provide local operators with funding for public transportation for those who are elderly or have disabilities. Section 5311 grants provide funding to transit providers in rural areas. The digest is intended to help these operators and providers sort out which regulations from both the Federal Motor Carrier Safety Administration (FMCSA) and the FTA apply to them, as well as help them understand how to address those regulations cost-effectively.

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## **Item 6**

### **Training Programs, Processes, Policies, and Practices**

*TRANSPORTATION RESEARCH BOARD*

*NCHRP Synthesis 362 • 2006*

This synthesis will be of interest to state transportation agency personnel, the FHWA, and a variety of other transportation organizations that understand the value of robust and flexible training and development programs. AASHTO, the National Highway Institute, and other similar entities have identified training and development as a significant tool to ensure that state departments of transportation (DOTs) can attract and retain a well-qualified workforce. This synthesis is based on an understanding of the critical importance of training and development activities within state DOTs and the ability of state DOTs to attract, retain, and manage the talents of the workforce. It focuses not on specific training needs nor courses or competencies, but on program components required to have a sound set of policies, processes, and procedures for planning, developing, implementing, funding, and evaluating state DOT training, development, and education programs. It reflects an understanding that the rationale for training programs has changed.

Today, the value of human capital programs is seen in direct proportion to the program's ability to enhance the workforce capability to achieve the organization's strategic goals and objectives.

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## **Item 7**

### **Control of Invasive Species**

*TRANSPORTATION RESEARCH BOARD*

*NCHRP Synthesis 363 • 2006*

TRB's National Cooperative Highway Research Program (NCHRP) Synthesis 363: Control of Invasive Species explores the extent to which state departments of transportation are identifying actions that affect the spread of invasive species, preventing introduction, tracking status and locations of "invasives" in a timely and ongoing manner, controlling found populations, restoring invaded habitats, conducting research, and sharing lessons learned. The report documents successful practices and lessons learned. It also synthesizes the state of the practice in developing Integrated (Roadside) Vegetation Management, along with physical, chemical, biological, and cultural control mechanisms.

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## **Item 8**

### **Improved Surface Drainage of Pavements: Final Report**

*TRANSPORTATION RESEARCH BOARD*

*NCHRP Web Document 16 • 1998*

The primary objective of this research project was to identify methods for draining rainwater from the surface of pavements and to develop guidelines for their implementation. Improved methods are needed for draining the surface of multi-lane pavements because of the important role that drainage plays in the mitigation of hydroplaning and splash and spray.

Full-text PDF of this report is available for free download from <http://www.nap.edu/catalog/6357.html>

## **Item 9**

### **Center Truck Performance on Low-Floor Light Rail Vehicles**

*TRANSPORTATION RESEARCH BOARD*

*TCRP Report 114 • 2006*

This report should be of interest to engineers, manufacturers, maintainers, and others interested in low-floor light rail vehicle (LFLRV) center truck performance issues and their potential solutions for center trucks with unpowered, independently rotating wheels (IRWs). The report describes performance issues observed in the operation of LFLRV center trucks (focusing on 70-percent low-floor vehicles), such as excessive wheel wear and noise and occasional derailments, and provides guidance on how to minimize or avoid these issues. The report also includes guidance on LFLRV specifications, maintenance, and design, as well as on related infrastructure design and maintenance, to maximize performance of these LFLRV center trucks.

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## **Item 10**

### **Smartcard Interoperability Issues for the Transit Industry**

*TRANSPORTATION RESEARCH BOARD*

*TCRP Report 115 • 2006*

TCRP Report 115: Smartcard Interoperability Issues for the Transit Industry defines interoperability; identifies key information needed by public agencies to implement smartcard payment systems interoperability; describes the necessary information flows; and outlines a set of functions needed for a standard public domain application programming interface (API) that may be used in the development of a uniform application protocol data unit (APDU). The report includes a prototype for an API and an APDU that demonstrates this “proof of concept” for International Organization for Standardization (ISO)-compliant Type A and Type B cards. The report is intended for use by transit decision makers and practitioners to help guide them through the creation and implementation of interoperable smartcard payment systems. Agencies at varying points of creating and implementing an interoperable transit smartcard system will find this helpful.

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## **Item 11**

### **Guidebook for Evaluating, Selecting, and Implementing Suburban Transit Services**

*TRANSPORTATION RESEARCH BOARD*

*TCRP Report 116 • 2006*

TCRP Report 116: Guidebook for Evaluating, Selecting, and Implementing Suburban Transit Services examines the current status of suburban transit services and land-use environments and the relationship between the two. Types of suburban transit services include commuter, route deviation, demand response, circulators, shuttles, and vanpools. Also, the guidebook describes the emerging trends that significantly influence the availability and operation of suburban transit services.

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## **Item 12**

### **Synthesis of Information Related to Transit Problems**

*TRANSPORTATION RESEARCH BOARD*

*TCRP Research Results Digest 80 • 2006*

This is a staff digest of the progress and status of TCRP Project J-7, “Synthesis of Information Related to Transit Problems,” for which the Transportation Research Board is the agency conducting the research. Individual studies for the project are managed by Donna L. Vlasak, Senior Program Officer, with assistance from Jon Williams, Manager, Synthesis Studies, serving under the Studies and Special Programs Division of the Transportation Research Board, Stephen R. Godwin, Director.

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# Research Digest

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## **Item 13**

### **Bus Transit Service in Land Development Planning**

*TRANSPORTATION RESEARCH BOARD*

*TCRP Synthesis 67 • 2006*

TRB's Transit Cooperative Research Program (TCRP) Synthesis 67: Bus Transit Service in Land Development Planning examines successful strategies that assist in the incorporation of bus transit service into land developments, as well as the challenges that transit agencies face when attempting to do so. The report also explores the state of the practice regarding the use and components of transit agency development guidelines.

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## **Item 14**

### **Methods of Rider Communication**

*TRANSPORTATION RESEARCH BOARD*

*TCRP Synthesis 68 • 2006*

This synthesis will be of interest to transit planners and managers and to those who work with them, who strive to build new ridership and retain existing riders by providing high quality customer service. It documents effective methods of communicating with transit customers in a variety of situations. The state of the practice in transit agency communications with customers is discussed, using the following five dimensions as a way of determining what constitutes successful communication: (1) who an agency is communicating with and where they are located; (2) content, form, and accessibility of communication; (3) communication timing and frequency; (4) communication dissemination media; and (5) capital and operating costs associated with communication. This synthesis also offers information from transit agencies about how they determine the effectiveness of their communications and lessons learned in developing communications programs and providing communications by electronic means. This report includes a literature review that revealed a wealth of information on the subject of rider communication. Literature focusing on the use of electronic media to disseminate communication was also plentiful, covering both U.S. and international studies. Survey information from 33 transit agencies is presented, covering such fundamental elements of communicating with riders as communication characteristics, types of riders receiving communication, dissemination media and access methods, and costs associated with communication. Interviews with key personnel at agencies considered to have innovative methods of communicating are included, as well as case studies from five transit agencies offering detailed program information.

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## **Item 15**

### **Web-Based Survey Techniques**

*TRANSPORTATION RESEARCH BOARD*

*TCRP Synthesis 69 • 2007*

This synthesis documents the current state of the practice for web-based surveys. The intent of the report is to provide a resource for successful practice, discuss the technologies necessary to conduct web-based surveys, and present several case studies and profiles of transit agency use of web-based surveys. The topic will be of interest to transit planners and managers and those who work with them as they attempt to develop and refine web-based surveys for their own transit agencies. Particular emphasis is placed on understanding the strengths and limitations of all survey methods. Information presented in this synthesis was obtained from a literature review, as well as from survey responses from 36 transit professionals. Follow-up telephone calls were made to gather further information. Longer telephone interviews were conducted to develop three detailed case studies: NJ TRANSIT, Southern California Regional Rail Authority (Metrolink), and Tri-County Metropolitan Transportation District of Oregon (TriMet). Greg M. Spitz, Frances L. Niles, and Thomas J. Adler, Resource Systems Group, Inc., White River Junction, Vermont, collected and synthesized the information and wrote the paper, under the guidance of a panel of experts in the subject area. The members of the Topic Panel are acknowledged on the preceding page. This synthesis is an immediately useful document that records the practices that were acceptable within the limitations of the knowledge available at the time of its preparation. As progress in research and practice continues, new knowledge will be added to that now at hand.

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## **Item 16**

### **Improving Road Safety in Developing Countries: Opportunities for U. S. Cooperation and Engagement (Workshop Summary)**

*TRANSPORTATION RESEARCH BOARD*

*TRB Special Report 287 • 2006*

The workshop focused on the sharp increases in road traffic-related deaths and injuries in developing countries with a goal of providing a view of the diversity of U.S. interests, the scope of activities of U.S. agencies addressing this problem, and prospects for further U.S. engagement. The workshop discussions were intended to help the responsible government agencies gauge whether the U.S. response is proportional to the interests at stake and to identify next steps toward a more effective response. PGA and IOM, like TRB, are part of the National Academies, which include the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council.

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