

## Office of Research and Library Services Monthly Report

January 2007

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The Office of Research and Library Services (ORLS) Monthly Report for January 2007 highlights activities in the following areas:

- [ORLS Program News](#)
    - [TRB Annual Meeting](#)
  - [WSDOT Library Activities](#)
    - [Librarians Invade Seattle](#)
  - [Research Project News](#)
    - [Five New Research Reports](#)
    - [Multimodal Transportation RAC](#)
      - [Survey on Container Fees](#)
      - [A Synthesis of Incentives for Commercial Truck Traffic in Off-Peak Hours](#)
    - [Project Delivery RAC](#)
      - [Subsurface Drainage for Landslide and Slope Stabilization \(TPF-5\(151\)\)](#)
      - [Constructability Software Traffic Modeling Workshop \(SPR-3\(098\)\)](#)
      - [Liquefaction Hazards – Phase III](#)
      - [Rapid Bridge Construction – Phase II](#)
      - [Pile Driving Funding](#)
      - [Western Washington Natural Dispersion Research to Begin](#)
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### ORLS PROGRAM NEWS

#### ***86th Annual Transportation Research Board Meeting***

More than 1200 state Department of Transportation (DOT) employees attended the 86th Annual Transportation Research Board (TRB) Meeting in Washington, D.C., January 21-25. Forty of these were WSDOT employees. Overall, approximately 10,500 transportation professionals from government, industry, and the academic community in the United States and other nations attended.

Of the 40 WSDOT employees attending:

- 5 traveled on sponsored trips
- 5 paid their own travel expenses
- 13 are members of 20 TRB Division A committees
- 1 chaired TRB committee meetings
- 15 presented 23 papers in sessions and committee meetings
- 3 presented posters
- 8 presided over sessions, poster sessions, or committee meetings
- 12 are members of NCHRP panels

Fifteen other WSDOT staff that are members of the TRB Division A committees did *not* attend the meeting. Funding for sponsored trips was provided for three employees by FHWA, one by TRB and one by AASHTO.

The meeting included more than 600 technical sessions, 80 workshops, and 350 TRB committee meetings covering all aspects of project development, construction, financing, and operation of transportation systems. There were also 150 committee meetings of associated groups outside of TRB. Approximately 70 countries were represented. The

meeting offered an unparalleled opportunity to attend presentations covering the latest developments in transportation research, policy, and practice.

### **2007 Legislative Resources available Online**

During past long legislative sessions, the Government Relations Office (GRO) has assembled a *Legislative Notebook* as a guide to WSDOT staff about legislation that affects transportation, and in which WSDOT has an interest. This year the GRO thought it would be a good idea to transform the notebook into a web page, and they asked the library for assistance. The result is the [2007 Staff Legislative Notebook](#), which is accessible from the [WSDOT Library](#) Intranet home page.

The site includes a "[Tool Kit](#)" section with links to the legislative tracking system, fiscal notes, guidelines and a template for preparing testimony, links to the Revised Code of Washington and the Washington Administrative Code, and the 2007 legislative calendar with cutoff dates. Another section links to all WSDOT briefings to date, to WSDOT testimony, current folios and legislative reports, and the current edition of the [Transportation Resource Manual](#).

Traffic to the site has been good – nearly 300 page views during the first 12. GRO encourages WSDOT staff who may be involved in bill analysis or testimony to look through the Tool Kit, in order that WSDOT speaks with a consistent voice to the legislature on issues of interest or consequence.

### ***A Synthesis of State's Using Sobriety Checkpoints with Strong Privacy Laws in Development***

Steve Reinmuth, WSDOT Director of Government Relations, in collaboration with the Washington State Patrol and the Washington Traffic Safety Commission, requested information on issues related to sobriety checkpoints and state privacy laws. A literature was completed to identify approaches other states are using to apprehend impaired drivers. This information will assist in the development of legislation in Washington that fits within the state's privacy laws. If you would like more information on this synthesis, please contact Kathy Lindquist at 360.705-7976 or [LindquK@wsdot.wa.gov](mailto:LindquK@wsdot.wa.gov).

### **State DOT Search Tool**

The [50 State DOT Search Tool](#) that was created by WSDOT's Reference Librarian, Mike Wendt, continues to be popular within the transportation community. Over 36,000 searches were conducted in the first month of use – not bad for an item that has only been marketed by word of mouth and email list serves. In meetings at the TRB Annual Meeting where this information was shared, there were always nods of familiarity, expressions of appreciation, as well as people hearing about it for the first time.

### **World of Concrete Conference**

Kim Willoughby attended the World of Concrete in Las Vegas, NV the week of January 22<sup>nd</sup>. This year's conference had over 90,000 attendees and a multitude of booths to visit for detailed information. Kim attended the following seminars: (1) Self-consolidating concrete, (2) How today's cements affect concrete properties, (3) Concrete mix design – Evaluation of mixtures, (4) Using Chemical admixtures to achieve better concrete, (5) Troubleshooting concrete cracks, and (6) Green building and sustainable design. If you would like more information on any of these topics, please contact Kim at 360.705.7978 or [willouk@wsdot.wa.gov](mailto:willouk@wsdot.wa.gov).

## ***NCHRP 2008 Problem Statements Sent Out for Review***

NCHRP annually solicits problem statement ratings from each state for their national program of research. Twenty-five continuing and 120 new problem statements covering the areas of Administration, Finance, Workforce, Construction, Asset Management, Performance Management, Information Management and Planning were sent to staff in those technical areas requesting them to rate the review and rate the statements. Eighteen of these problem statements were submitted by WSDOT staff. The ratings are due back to the Office of Research and Library Services on February 2nd, 2007 with final submittal to NCHRP by February 16, 2007.

[Return to top](#)

## **LIBRARY ACTIVITIES**

### ***Librarians Invade Seattle***

WSDOT Librarian Stephen Cochran, and Interlibrary Loan and Circulation Services Associate Andrew Poultridge joined 12,000 other librarians from around the country at the Midwinter Conference of the American Library Association (ALA) in Seattle in January. The conference was held from January 19<sup>th</sup> – 22<sup>nd</sup>, and featured over 700 exhibitors and hundreds of discussion groups around various library and information service issues.

Andrew toured the exhibits hall, meeting library publishers and vendors on the 19<sup>th</sup> and 20<sup>th</sup>, while Stephen spent some time with Andrew in the exhibits, but also attended panel discussions on social networking tools, digital document collections management, and gathering use statistics on digital documents and databases. This information will be helpful in assessing the value of services and resources provided by the WSDOT Library.

### **Library Usage**

Circulation – Checked out 132 items to WSDOT employees

Interlibrary Borrowing – Obtained 7 items on behalf of WSDOT employees.

Interlibrary Loans – Lent 12 items to other libraries; unable to fill 4 requests.

Collection – Added 134 new items to WSDOT Library collection

Library Cards – Issued 9 new library cards to WSDOT employees, renewed 6

Web Page (12/21 – 1/27)

- Intranet Total Home Page Views: 798
- Intranet Total Page Views: 1,441
- Average Daily Intranet Page Views: 42
- Popular Intranet Pages: Online Journals; Standards and Manuals; Journals, Newspapers, Books, & Reports; and 2005 Staff Legislative Notebook
- Internet Total Home Page Views: 1334
- Internet Total Page Views: 2,293

### **Questions from the Public**

- Provided information on “frost laws” and weather-related hauling and weight restrictions for commercial vehicles – Trucking Operator from Out of State
- Located historical information about an old rail bridge in Renton, WA – Washington State Library

- Compiled materials on geosynthetics and railways – Transportation researcher from Japan
- Found information on highway runoff and its affect on water quality for the University of Technology, Queensland, Australia
- Provided HTML code for the State DOT Search box developed by Mike Wendt – National Transportation Library
- Found information on the planning and construction of highways 9 and 11 in Whatcom County – Washington state citizen

### **Support to WSDOT Staff**

- Found newspaper articles from the past three years which mention the Gray Notebook – Strategic Assessment
- Located information about the topics of recent speeches given by former US Secretary of Transportation Norm Mineta – Public Transportation & Rail
- Located information on the Highway System Level of Development Plan – Design
- Located an ANSI Standard on Protective Footwear – Safety Office, South Central Region
- Conducted a literature search on roadside advertising and driver distraction – Traffic Operations
- What information do we have on a 1957 rockslide at Snoqualmie Pass? – Northwest Region Communications
- Would it be possible to create a custom search engine for MPOs? – Policy Development & Regional Coordination
- Conducted a literature search on current wetland performance evaluation – Environmental Services
- Provided a book of specialized standards and specifications - Headquarters Traffic Operations Office
- Can you help me locate an electronic version of the WSDOT Safety Procedures and Guidelines Manual M 75-01? – Northwest Region Environmental Services
- Can you locate any studies or surveys of WA resident’s attitudes towards tolling? – Communications
- Searched national newspapers for any news articles about the MacDonald Challenge. – Strategic Assessment
- Request to borrow *Design of marine facilities for the berthing, mooring, and repair of vessels* – Washington State Ferries
- Request for WA DNR Forest Practices Habitat Conservation Plan – Environmental Services
- Provided PE Examination materials to four employees – 2 Olympic, 1 HQ, & 1 Northwest Region

[Return to top](#)

## RESEARCH PROJECT NEWS

### ***Five New Research Reports Published***

WA-RD 658.1 [Studded Tire Wear Resistance of PCC Pavements](#), Washington State Department of Transportation, January 2007, Keith W. Anderson, Jeff Uhlmeyer, and Linda Pierce.

WA-RD 660.1 [Deployment of a Virtual Sensor System, based on Transit Probes, in an Operational Traffic Management System](#), University of Washington, January 2007, Daniel J. Dailey and Fredrick W. Cathey.

WA-RD 661.1 [Phase I: Preliminary Environmental Investigation of Heavy Metals In Highway Runoff](#), Washington State University, January 2007, Michael E. Barber, Michelle G. Brown, Katie M. Lingenfelder, and David R. Yonge.

WA-RD 662.1 [NCHRP Report 350 Test 3-11 of the Long-Span Guardrail with 5.7 M Clear Span Nested W-Beams Over 11.4](#), Texas Transportation Institute, January 2007, C. Eugene Buth, D. Lance Bullard, Jr., and Wanda L. Menges.

WA-RD 663.1 [Combined Aggregate Gradation as a method for mitigating Studded Tire Wear on PCCP](#), Washington State Department of Transportation, January 2007, Keith W. Anderson, Jeff Uhlmeyer, and Linda Pierce.

### ***Two project modifications were requested and approved***

- A two year time extension was granted to T2696 12 – Strategic Freight Analysis, Phase 2. The extension was requested based on recommendations from the project advisory committee. Funding for the project is from a special federal earmark. The Principal Investigator is Ken Casavant.
- As the result of a meeting of the advisory committee for the Roadside Safety Pooled Fund Project Task Order T4541 AB was granted a 10 month time extension and a \$77,915 increase in project funding. This will allow for additional testing of anchored concrete barrier systems. The Principal Investigator for the project is N. M. Sheikh at Texas Transportation Institute.

### ***Seven Research Reports Requested***

The following research reports were requested from ORLS. Other reports are downloaded from the website or requested through the WSDOT Library or through other libraries that have added our reports to their collection.

#### *Reports Requested by private consultants and vendors*

WA-RD 312.1 [Evaluation of Surface Friction Guidelines for Washington State Highways](#) University of Washington, October 1993, Patricia Corsello

WA-RD 321.1 [Performance of Geotextile Separators in Western Washington](#) University of Washington, May 1994, Robert C. Metcalfe and Robert D. Holtz

WA-RD 350.1 [Finite Element Study of the Rehabilitation of Faulted Portland cement Concrete Pavements](#), Washington State University, December 1994, Balsingam Muhunthan and Andrew T. Jennings

WA-RD 440.1 [Performance of Geotextile Separators, Bucoda Test Site – Phase II](#) University of Washington, July 1997, Peter Jason Black and Robert D. Holtz

WA-RD 476.1 [Construction-Related Asphalt Concrete Pavement Temperature Differentials And The corresponding Density Differentials](#), University of Washington, July

2001, Kim A. Willoughby, Joe P. Mahoney, Linda M. pierce, Jeff S. Uhlmeyer, Keith W. Anderson, Steven A. Read, Stephen T. Muench, Travis R. Thompson, and Robyn Moore.

WA-RD 519.1 [Targeting Pedestrian Infrastructure Improvements: A Methodology to Assist Providers in Identifying Suburban Locations with Potential Increases in Pedestrian Travel](#), University of Washington, September 2001, Anne Vernez Moudon.

WA-RD 595.1 [Long-Term Performance of Geotextile Separators Bucoda Test Site-Phase III](#), University of Washington, October 2005, Brian M. Collins, and Robert D. Holtz  
[Return to top](#)

## MULTIMODAL TRANSPORTATION RAC

### ***Survey through AASHTO's Research Advisory Committee on Container Fees***

Doug Brodin prepared a survey that Leni Oman emailed to members of the National Research Advisory Committee asking for information Barb Ivanov requested on marine cargo container fees. Legislation introduced in the Washington State Legislature would create a fee on all containers entering Washington state ports. The survey went to all states as well as Canadian provinces and Mexico. To date we have responses from eight states and two provinces. To this point we have found no state that has implemented a container fee. If you would like copies of the results, contact Doug Brodin at [BrodinD@wsdot.wa.dot](mailto:BrodinD@wsdot.wa.dot).

If you are interested in conducting quick surveys of the state DOTs on a particular topic, please contact Leni Oman at 360-705-7974 or [OmanL@wsdot.wa.gov](mailto:OmanL@wsdot.wa.gov).

### ***A Synthesis of Incentives for Commercial Truck Traffic in Off-Peak Hours***

Paul Parker, Senior Policy Analyst with the Washington State Transportation Commission, requested information in response to a citizen inquiry. The citizen offered suggestions on incentives to encourage commercial trucks to operate at night (between 7:00 PM and 6:00 AM). A literature search was completed to identify tools other states and cities use to ease commercial truck movements and reduce congestion. If you would like more information on this synthesis, please contact Kathy Lindquist at 360.705-7976 or [LindquK@wsdot.wa.gov](mailto:LindquK@wsdot.wa.gov).

[Return to top](#)

## PROJECT DELIVERY RAC

### ***Subsurface Drainage for Landslide and Slope Stabilization (TPF-5(151))***

This pooled fund project has been cleared by the FHWA and work will begin in 2007 with Washington State University and the University of British Columbia. WSDOT expects to receive the project proposal within the next few weeks and follow up with a Technical Advisory Committee meeting in April.

The objectives of this research are as follows: (1) To provide best practices and guidance for subsurface drainage applications for slope stabilization, including subsurface investigation and testing, groundwater-flow characterization, analysis, drain configurations and design, installation methods, monitoring, and maintenance. (2) To evaluate new applications of existing materials and technologies, such as trenchless technologies (horizontal directional drilling, micro tunneling, guided boring, etc.) and other innovative technologies and materials, for stabilizing slopes using subsurface

drainage. There are eight partner states for this project at this time (MD, MS, MT, NH, OH, PA, TX, and WY).

### ***Constructability Software Traffic Modeling Workshop (SPR-3(098))***

The FHWA is sponsoring a traffic modeling and construction simulation workshop to discuss/exchange ideas to improve the knowledge on the state of the art and to better inform States and the FHWA on a series of tools and options to manage congestion impacts related to construction projects. This workshop will be held in Sacramento, CA on March 20<sup>th</sup> and 21<sup>st</sup>.

### ***Liquefaction Hazards – Phase III***

The draft report and the computer program (WSliq) have been received. It is in the review process and expects the final report to be available at the end of February.

### ***Rapid Bridge Construction – Phase II***

A meeting was held on January 18<sup>th</sup> to discuss the progress of this project and the next steps. The team at the University of Washington has already performed some bond tests between the reinforcing steel and the grout/concrete. The results were positive and a decision was made to modify the next round of tests based on these results and look at the more extreme cases of testing.

### ***Pile Driving Funding***

The ongoing data analysis on pile driving noise is scheduled to be complete in February 2007. This work by the Pacific Northwest National Laboratory will help the Washington Environmental Services Office, N.W. Region and Washington State Ferries understand how some pile driving activities produce various levels of underwater sound and pressure. This information, along with the outcomes of the national NCHRP study, and the FHWA led pooled fund study, will help determine future research investments. Since most of the 05-07 biennium funding (est. \$97,000) is still available for pile driving research. The Research Executive Committee has requested that the amount of funding needed for WSDOT sponsored pile driving research be identified and set aside and if funds are remaining they be spent for other high priority research.

### ***Western Washington Natural Dispersion Research to Begin***

Natural dispersion research in Eastern Washington was the subject of research conducted by Mitch Reister, WSDOT, and North Central Region. This work will be extended to Western Washington to ascertain its benefits for flow control and pollutant removal into receiving waters. The science developed by Reisters' work will be used in the study along with a complex model involving land characteristics values and rainfall to determine the required distance of travel for dispersion. Study design and site reconnaissance will be accomplished this spring and summer, with field testing scheduled through next winter season. Rose Peralta, Hydraulics Engineer, is the technical monitor for the project.

[Return to top](#)