

# The Maintenance Manager

A quarterly e-newsletter of the AASHTO Highway Subcommittee on Maintenance Volume 4, No. 2

## Message from the Chair:

*Hello, I hope that this newsletter finds all of you well and busy on the road towards obligating all of your ARRA funds. In Utah, with the support of our Transportation Commission, we quickly programmed almost all of our money to help address our growing pavement and bridge preservation and maintenance needs. From a health of a system perspective the money couldn't have come at a better time. I believe our ability to "sell" the idea of the money going into preservation, instead of the "sexier" capacity type of projects, can be attributed to knowing the health of our system, being able to communicate it in terms that people understood, being ready to get those type of projects out the door quickly, and being able to show the benefits the projects would provide. I bring this up because it is the work of our subcommittee that has, to a large part, provided the tools, training, and motivation to help Utah be ready to take advantage of the ARRA money.*

*Our Subcommittee has a big summer ahead of us, setting the future course for where we want and need to take the Subcommittee. You will all soon, or may have already, be receiving a survey that will be used as a starting point for developing our new Strategic Plan. I ask that you spend some time thinking about the answers you provide. It will serve as the foundation of our work. I expect that a good portion of our summer meeting will be working to get a direction that represents the collective desires of our members. Your energy invested in this will provide benefits to our Departments for many years to come. So, please get involved and make a difference.*

- Carlos

*(Carlos Braceras, UDOT Deputy Director, is the current Chairman of the Subcommittee on Maintenance)*

## Subcommittee Activities

### Bridge Task Force

A mission of the Bridge Task Force to the Subcommittee on Maintenance is to facilitate the

transfer of information between State bridge maintenance practitioners. A commonly asked question when discussing preservation actions is "What are other States doing?" Simple surveys with enough detail to help focus requests for additional information could prove beneficial when instituting a new program or testing a new material.

The first survey was on the Maintenance of Steel Coatings. Bridge Maintenance Engineers were surveyed for information on the agency's program for the maintenance of coatings on steel bridges.

Thirty States responded. In summary, most States paint with contracted forces. Of those, California, Missouri, Arkansas, and Maine have dedicated in-house painting crews. A number of states do some painting with State forces in conjunction with steel repair work. About a third of the respondents do not paint with in-house forces.

The map and a summary table of responses and each response are posted at the TSP2 website:  
<http://www.tsp2.org/phpBB2/viewtopic.php?t=78>.

### Snow & Ice Task Force

Members of the Snow & Ice Task Force participated in the NCHRP 20-68A, US Domestic Scan Program during March 2009. The title of the technology scan was "Best Practices in Winter Maintenance". The Scan was conducted to identify and evaluate best practices of winter road maintenance activities among the snow belt states within the 48 contiguous states.

Six focus areas were identified as follows:

1. Maintenance Decision Support Systems (MDSS)
2. Automatic Vehicle Location System (AVL), Geographic Positioning System (GPS), and Vehicle Infrastructure Integration (VII) [now know as IntelliDrive]
3. Equipment Technologies
4. Training and Development
5. Management Issues
6. Incorporating Weather into Traffic Management Centers (TMC)

States visited were:

1. Minnesota DOT
2. Colorado DOT and the Cities of Denver, Ft Collins, and Grand Junction, CO
3. Utah DOT
4. Indiana DOT
5. Virginia DOT

The Scan report is currently being prepared and when completed will be posted on the SICOP website at [www.sicop.net](http://www.sicop.net) click on resources. A summary of the report will be presented at the AASHTO Highway Subcommittee on Maintenance, Snow and Ice Task Force meeting in July 2009, the 2009 AASHTO Snow Expo in Madison, WI in August 2009 and the TRB Annual meeting in Washington DC in January 2010.

## Equipment Focus Group

### ***AASHTO Guide for Selection and Application of Warning Lights on Roadway Operations Equipment***

The guidelines contained in NCHRP Report 624 were presented to the AASHTO Highway Subcommittee on Maintenance (SCOM) for consideration and balloting. Sufficient affirmative votes were received from the subcommittee members for approval, and the guidelines were recently presented to the AASHTO Standing Committee on Highways (SCOH) for consideration and balloting. An official notice has also been presented to the AASHTO Board of Directors that the SCOH is voting on this technical matter, and the Board of Directors has also been asked to review and submit their ballots. If the ballot receives this final approval, then it can be printed as an official AASHTO Guide and national publication.

### ***Equipment Technical Services Program***

Contributions have been requested from several States to fund the Equipment Technical Services Program (TSP) to develop an information base on new types of equipment, innovative technologies, and other advances of interest to the equipment manager.

The next step in the process is to identify six members from the Subcommittee on Maintenance (SCOM) interested in this TSP to serve on the oversight committee. With reduced resources in every state, this TSP could be the only means DOT equipment managers have of effectively sharing information and advancing equipment management. Please volunteer to serve on this committee to help this program get

started by contacting the Equipment Focus Group Chair, Erle Potter, at [erle.potter@vdot.virginia.gov](mailto:erle.potter@vdot.virginia.gov).

### ***Equipment Reference Book***

Equipment Focus Group Vice Chair, Steve McCarthy, and his staff at UDOT have again updated the **2009 Equipment Reference Book** and had it placed on the SCOM website. The link to the reference book is located on the SCOM homepage, or it can be accessed from the link below:

<http://www.transportation.org/sites/maintenance/docs/AASHTO%20Equipment%20Reference%20Book%202009%20Format.doc>

## Contract Maintenance & Performance Measures Focus Groups

### ***Issues and Practices in Performance-Based Contract Maintenance***

Several members of the Subcommittee on Maintenance convened in Tampa Florida on April 22-23 for an NCHRP 20-24(61) Performance Based Contract Maintenance Executive Forum. Transportation agencies represented include Florida, Georgia, Kentucky, California, Maryland, Missouri, Tennessee, and Virginia in the United States, and the Ontario Ministry of Transportation in Canada. The Federal Highway Administration and AASHTO were represented, along with members of the Association for the Management and Operations of Transportation Infrastructure Assets (AMOTIA). Gary Hoffman, Applied Research Associates, facilitated the meeting and brainstorming session to identify and define critical challenges and opportunities for advancing Performance Based Maintenance Contracting. Forum Chair and VDOT Commissioner Dave Ekern relayed the importance in openly communicating issues that affect each agency's decision to implement and manage Performance Based Maintenance Contracting. The meeting was considered an overall success with both the agency and the contractors participating independently coming to a consensus on the top issues facing both industry and agency.

### ***Maintenance Training Course Pilot Delivery***

The Tennessee DOT headed by Greg Duncan, Director of Maintenance and vice chair of the Subcommittee Contract Maintenance Focus Group, hosted the pilot delivery of the **NHI Training Course #134079, Performance Based Contracting for Maintenance**, held May 4-5, 2009 in Nashville, TN.

The Tennessee DOT had a diverse group of attendees including representatives from their HQ Maintenance Division, representatives from each Region including Regional Maintenance Managers, Regional Construction Managers, and District Maintenance Superintendents. The course focused on contracting types and performance measures used as specifications for implementing performance based contracts, as well as considerations that agencies should use as they employ innovative maintenance approaches. Several comments were received during the course regarding the relevance of the topic to the Maintenance forces, and the participants generally accepted the use of performance measures that would be applicable to both in-house and contracted maintenance.

Panel members consisted of Jim Carney (MODOT), Jennifer Brandenburg (NCDOT), Tammy Sims (TxDOT), and Celso Gatchalian (FHWA) observed the course taught by Mark Robinson of SAIC.



Mark Robinson teaches the NHI Pilot Performance-based Contracting for Maintenance Course at the TDOT complex in Nashville

and durability of seal-coated roadways by developing guidelines for how and when to vary the amount of asphalt being applied across the width of a pavement.

“A roadway does not wear evenly across the surface because traffic is usually channelized,” says Paul Krugler, research engineer with TTI. “The difference in surface texture may result in new seal coat aggregate not bonding adequately outside of the roadway wheel paths, or the asphalt may rise to the surface in the wheel paths. Either situation diminishes roadway quality, and the loss of skid resistance in the wheel paths can be a safety issue. Asphalt rising to the surface in the wheel paths is commonly known as flushing, and it’s what we’re trying to prevent by varying the amount of asphalt sprayed on the roadway.”

Transversely varying asphalt rates (TVAR) works by designing the asphalt shot rate specifically for the wheel path conditions. If the wheel paths are worn down or exhibiting flushing, the proper asphalt rate is somewhat lower. Then, the asphalt shot rate is increased for the areas outside of the wheel paths. The goal of TVAR is an even coating of aggregate that is well-bonded across the entire width of the roadway but without causing flushing. This optimizes skid resistance and makes the roadway safer.

“The whole concept of TVARs is to put more asphalt on the road,” says Paul Montgomery, TxDOT. “We want more asphalt on the road. But we don’t want to get flushing in the wheel paths when we do it. By using the set of guidelines developed by TTI, our construction inspectors and maintenance crews can achieve this goal and optimize our seal coat applications, while also making the roadways safer for the traveling public.”

For more information, contact Paul Krugler, P.E., TTI, e-mail [p-krugler@ttimail.tamu.edu](mailto:p-krugler@ttimail.tamu.edu), ph. 512-467-0952

### State DOT News



#### **TxDOT varying Seal Coat asphalt rates across the roadway**

A recently completed project, sponsored by TxDOT and conducted by the Texas Transportation Institute (TTI), researched a method of improving the safety



#### **TSP-2 Updates**

With the recent retirement of Steve Varnedoe, Chief Engineer with the North Carolina Department of Transportation, the AASHTO Highway Subcommittee on Maintenance would like to thank him for his contributions to the Subcommittee. In addition to serving on the Subcommittee, Steve also served as the first Chair of the AASHTO Subcommittee on Maintenance Transportation System Preservation

Oversight Panel. With his long term dedication to the TSP•2 program, preservation is now a household term in the departments of transportation.

As we change leadership, AASHTO is proud to announce the appointment of John A. Barton, P.E., Texas Department of Transportation, as the new Chair of the TSP•2 Oversight Panel. John is the current Assistant Executive Director for Engineering Operations. He is responsible for management and control of the Aviation, Bridge, Construction, Design, Environmental, Maintenance, Right of Way, Traffic Operations Divisions and the Research and Technology Implementation Office. He assists in directing long- and short-range planning for the agency including the establishment of overall operating objectives and the technical merits of programs and policies.

He graduated with honors at Texas A&M University in 1986 with a Bachelor of Science degree in Civil Engineering. He now has over 23 years of service with TxDOT. We call on all members of the Subcommittee to lend our support for John as he takes on this important role in the TSP•2 Program.



TRIS

### TRB Announces New Service for Sponsors

The Transportation Research Board is offering a new service to sponsors including all of the State DOTs. Sponsors of TRB are now be able to access TRISworld – a searchable database that combines the Transportation Research Information Services (TRIS) database and English language records of the International Transport Research Document (ITRD) database. TRISworld will allow anyone in sponsoring agency access to more than 720,000 records of published transportation research from around the world.

TRISworld offers increased flexibility in searching. It includes both simple and advanced query screens, and offers browsing of recent publications by mode. TRISworld allows users to print, download, and directly e-mail search results. Many records include links to the full text of the document or to direct ordering information. The TRISworld Website also offers “Hot Topic” searches on subjects of current interest.

Sponsor access TRISworld based on their organizations IP address (work computer servers). If you can not access TRISworld or have any questions on this new service, please contact Barbara Post at E-Mail: [bpost@nas.edu](mailto:bpost@nas.edu) or Telephone: (202) 334-2990.

Access TRISworld at: <http://TRISworld.trb.org>

### Calendar of Events

- **12<sup>th</sup> AASHTO-TRB Maintenance Management Conference** – July 19-23, 2009, Loews Annapolis Hotel, Annapolis, MD.  
<http://www.marylandroads.com/businesswithsha/aashto/oom/2009aashtoconference.asp>
- **2009 National Winter Maintenance Peer Exchange** – August 25-26, 2009, Madison, Wisconsin.  
[www.transportation.org/?siteid=88&pageid=2169](http://www.transportation.org/?siteid=88&pageid=2169)
- **14<sup>th</sup> Eastern Snow Expo**—August 26-27, 2009, Madison, Wisconsin,  
<http://www.transportation.org/?siteid=88&pageid-2169>.
- **Eight National Conference on Transportation Asset Management: Putting the Asset Management Piece Together** – October 19-21, 2009, Portland, Oregon,  
<http://www.trb.org/conferences/2009/Assets>

*Please e-mail any news articles/events that you would like to share with the Subcommittee members to Celso Gatchalian: [celso.gatchalian@dot.gov](mailto:celso.gatchalian@dot.gov)*

*Also make sure to visit our Subcommittee website: <http://maintenance.transportation.org/?siteid=76>*