

**AASHTO Subcommittee on Maintenance Meeting, Providence, Rhode Island  
General Session & Business Meeting Minutes  
Monday – Wednesday, July 31 – August 3, 2017**

**Note:** Additional information on many of the presentations are available at the following website: <https://maintenance.transportation.org/meetings-2/meetings/2017-scom-meeting/>

**MONDAY – JULY 31, 2017**

**SCOM General Session:** George Conner, ALDOT

**Call to Order / Color Guard:** George Conner, ALDOT

Welcome to Rhode Island and thanks to Rhode Island Department of Transportation for putting all of this together for us. A Rhode Island National Guard Honor Guard started off the conference with a flag ceremony and Pledge of Allegiance.

**Welcome:** Peter Alviti Jr., Director RIDOT

We are happy to have you here in Providence. RIDOT is proud to host the Subcommittee on Maintenance this year. Our work is currently focused on rebuilding our maintenance staff and their abilities in close cooperation with our capital programs. Last week the Governor mentioned that he plans to help us recover from the employees we lost during the last recession. RI is number one in construction gains and rose over 13% since June 2016. Two years ago, we were rated 50<sup>th</sup> in the nation in regards to our road and bridge conditions. By upgrading our infrastructure, we are also assisting in economic development. Our “Road Works” legislation is a 10-year investment asset management plan which includes cradle to grave activities and requires the legislature to supply sustainable infrastructure funding along with performance measures and quarterly reporting. Our current goal is to achieve 90% bridge sufficiency which is up from 20% from several years ago. We invested over \$20 million in equipment last year alone. Embedded in this is a statewide automated tolling system on the trucking industry only which provides for about 10% to our overall infrastructure budget. The gas tax is scheduled to be increased every two years as well. RIDOT is now a construction management organization based on performance management requirements for our projects to be on time and on budget. Soliciting public feedback is also an important part of what we do. Our goal is to bring our infrastructure into a state of good repair. We are also increasing wages for our maintenance workers so that we can get the best people to do the jobs and be part of a winning team. “Road Works” provides that transparency and has given us a whole new culture across the department. I encourage you to share your own vision with one another and I thank you for that.

**SCOM Update:** George Conner, ALDOT

Welcome and thanks for your help in making this a successful meeting. I am the new chair of the subcommittee and it is my pleasure to welcome you. We have the most to gain or lose in regards to maintaining our infrastructure forever and your folks make things work when there is no other option. I am inspired by what Rhode Island is doing

and this touches on a lot of things that are important to this committee. How does it work in your state? I would like to thank several people for their past / future assistance to the Subcommittee: Mark McConnell, Jim Feda, Russ Yurek, Bryan Cawley, Connie Yew, Marc Hoescher, Bart Sweeney, Erle Potter, James Gray, and Jameelah Hayes. Our thanks is also due to RIDOT, the exhibitors and sponsors, our Vice Chairs, and the TWG leadership and AASHTO staff. The current vs new AASHTO Committee Structure was briefly explained to include: The new Proposed Committee Structure, Board of Directors, Transportation Policy Forum, Program Delivery and Operations Committees, Enterprise / Cross-Discipline Committees, Administration Committees, and Special Committees were shared. Committee Procedural Changes, AASHTO Strategic Goals, Committee on Maintenance Draft Committee Purpose Statement and Goals were also shared. Highways and Streets is our parent committee like SCOH previously was. This change was made to facilitate input from other committees. Policy, Technical, and Multi-modal Matters, Work, and Flow slides were also discussed.

**FHWA Update:** Connie Yew, FHWA

My thanks to RIDOT for hosting the subcommittee meeting this week. Preservation was recently added to the definition of construction. Routine maintenance such as snow plowing and mowing grass is not eligible for Federal-aid funds, however funding for preventative maintenance is. The goal is to extend the useful life of the infrastructure and return our highway and bridge assets to a state of good repair. Transportation Performance Measures and Asset Management Plans noting inventory and condition data were briefly noted. AM Plans are due by April 30, 2018 but no later than June 30, 2019. What the Construction Management Team does and their Vision and Mission statements were shared. Every Day Counts includes things like Intelligent Compaction, 3D Engineered Modeling in Construction, e-Construction, In Person vs Virtual Peer Exchanges, Regional Workshops, Construction Partnering, Pavement Preservation – When, Where, and How. Market Readiness includes Bridge Bundling – FAST ACT Section 1111, FHWA Implementation Activities, Unmanned Aerial Systems (UAS), Training Activities: Web-based: four training sessions for PCCC will be hosted by NHI. FHWA would like your assistance with updating the NHI Maintenance Leadership Academy NHI Course. The next MLA is scheduled from August to November in Spokane, WA.

**AASHTO Update:** Gummada Murthy, AASHTO

AASHTO Strategic Plan / Strategic Goals are to provide value to members, provide professional services, be a leader in national policy and communicate the value of transportation. Briefly discussed the previous and new AASHTO committee structures. Adopted procedural changes, encourage groups to operate virtually, establish Communities of Practice and formalize the role of Associate Members. Policy Issues vs Technical Issues – next steps is to populate the committees and chairs, and to prepare charge statements for each of the committees. SCOM Strategic Plan, Publications and SHRP2 Updates. What can we do to adopt new technologies?

**TSM&O Update:** Galen McGill, ORDOT and Steve Cook, MIDOT

The Committee on Maintenance is a key partner. STSMO Crosscutting Themes and Topic Areas. The 2017 STSMO Leadership Team has settled on 5 Focus Areas. Several changes have occurred to the Transportation System Operation Committee Chairs. STSMO Key Initiatives – Operations Guide and Workforce Development. Proposed V2I DC Structure – Phase 2. SPaT Challenge – Signal Systems. Possible connected fleet challenge capabilities. NOCOE TSP – website, knowledge center and technical services, [www.transportationops.org](http://www.transportationops.org); Path of Totality for the upcoming solar eclipse. Knowledge Center has over 3,000 resources and counting. How do we integrate all of this into what we are doing? Michigan DOT TSMO Strategic Business Plan Workshop Template – TSMO Business Plan Strategies vs Strategic Actions. This is all about developing better safety and reliability.

**Rhode Island DOT State Maintenance Update:** Joe Bucci, RIDOT

It is with great pleasure that I welcome you to Rhode Island. Facts and figures were shared. We have approximately 250 maintenance employees. Running the Maintenance Section is like getting ready for the next high school football game. The blame goes to the offensive line. If we fail at one task we get recognized for not doing our job. If we get through one day and don't get noticed, we are doing a good job. There is no other place I'd rather be than not getting noticed because this means we're doing our job. Rhode Island now has a plan in place with a sustainable funding source and we are adding more staff as needed. Getting higher wages for maintenance staff has been a heavy lift but we're getting there. Our bridge maintenance staff assists with mobile washing of bridge superstructures with no lane closures to help minimize corrosion. We have two new operating units, one which deals with drainage basins and another that deals with pavement markings. Instructional training videos are under development dealing with grass mowing, chain saws, traffic control set up, and snow plow operations etc. We are always looking for new ways to do business and don't mind borrowing from other State DOTs. "Road Works" legislation has been great because in addition to maintenance funding we have built in accountability through various performance measures. Thank you for coming to Rhode Island. We hope you leave here with the ability to make your operations better.

**AASHTO State DOT Roll Call:** AL, AR, CA, CO, CT, DE, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MO, NV, NH, NC, ND, OH, OK, OR, RI, SC, TN, TX, VT, VA, WA, WV, and WI.

**Technical Service Program Updates:**

SICOP Program Update: Rick Nelson, SICOP

SICOP Steering Committee, Regions 1-4, STSMO, TRB Winter Maintenance, Surface Trans Weather, and Liaisons from APWA, NACE, and FHWA. There were 36 SICOP Member States during 2016. National Strategic Winter Maintenance Plan 2018-2020; Seven Strategic Issues were noted and expected to be in place by the end of 2017. National Academy of Science Social and Behavioral Science study. "We provide the most accurate information to motorists yet they still make inappropriate decisions" – Quote from Steve Lund. We recently started a group on Facebook to help get the message out on general information. [www.facebook.com/aashtoSICOP](http://www.facebook.com/aashtoSICOP). However, we

do not put urgent messages out through social media. We also showcase DOT operations as well and are getting a lot of exposure. SICOP Talks Winter Ops – Pod Casts on relevant issues are under development. The 6<sup>th</sup> National Winter Maintenance Peer Exchange is scheduled for September 12-13, 2017 in Pittsburgh, PA. We will cover research and best practices along with our breakout sessions.

TSP2 Program Update: Judith Corley-Lay, NCPP

Pavement Preservation and Bridge Preservation are both part of what we do. We have 4 Regional Partnerships for pavements and bridges but their make-up is not the same.

*Pavement Preservation:* Partnership Meetings consist of: Technical presentations, agency report-outs, vendor introductions, break out groups and report outs, and a business meeting. Strong partnerships help us succeed through: willingness to share, enthusiasm for preservation, network development, common experiences, and similar financial challenges. Partnership challenges include: travel restrictions for states, led by volunteers, monthly conference calls, and hard to keep other members involved and informed. Items to work on include: coordination efforts, developing small projects, local agency involvement, and mid-year calls.

*Bridge Preservation:* Involves many of the same components as pavement preservation. Emergency Response with Reports was interesting. Developed research needs statements. Partnership challenges include: involvement of local bridge owners, many concurrent changes, and volunteer leadership and limited time. The 2018 National Bridge Preservation Conference is scheduled for April 8-12 in Orlando, FL.

NCPP's Role: Contracted by AASHTO to facilitate meeting logistics for partnership meetings, and monthly conference calls for each of the pavement and bridge partnerships, and provide technical experts. Each partnership generates its own funds for meetings and travel. Maintain TSP2 Website - Overview. Updating "At the Crossroads" Book. Focus on outreach to NACE, APWA and other organizations.

EMTSP Program Update: Lisa Kunzman, CALTRANS

The EMTSP Program Vision and Mission Statements were shared. We have 4 regional EMTSP partnerships, oversight panels and committees, an Equipment TWG and a TRB Maintenance Committee. We have Regional Equipment Management Partnerships as well. Oversight Panel membership is made up of Performance Measures and Education Committees. 2017 Conferences were noted as excellent learning experiences. A Scan Tour was shared along with best practices. The Performance Measures Committee has 5 performance measures. The preparation of web-based training courses is a three year effort. "Preventative Maintenance Concepts" and "Bench Marking and Best Practices for State Equipment Fleets" are in development. See our website at [www.emtsp.org](http://www.emtsp.org). We have a video library, contacts list, and post agendas and meeting minutes. Two research projects are almost complete and panels are being formed on three new research projects. Proposed research – Repair vs Replace Decision, Fleet Asset Preservation etc. Planned Activities were also shared. Contribution trend and what you get for your contribution was shared. Please visit our Equipment Community.

TC3 Program Update: David Cook, SCDOT

Our thanks go out to Jim Feda for his many years of assistance as SCOM Liaison to the TC3 TSP. Changes to the search function have been implemented and you can now search differently. PDH's have also been added to the Learning Management System. Recently we had over, 1,700 courses viewed in one month. Our marketing and

development committee is active in getting the word out. Many courses are under development and we are looking for assistance from subject matter experts. We are expanding our introductions and working on job aids for various courses. This is an active technical group and we are looking for a new leader who is passionate about education.

TRB & NCHRP Update: James Bryant, TRB and Amir Hanna, NCHRP

James Bryant, Technical Activities Division: TRB is part of the National Academies of Sciences, Engineering, and Medicine. We Convene, Research, and Advise. Technical Activities Council – 15 for Maintenance and Preservation. Rotation of Committee Memberships is scheduled for 2018. The Spotlight Theme for 2018 Meeting is Transportation: Moving the Economy for the Future. Focus on Practical Issues – 2016 International Conference and Workshop – Interactive Breakouts. Practice Oriented Papers can be found at <http://prp.trb.org/>.

Amir Hanna, NCHRP Research: What is NCHRP? We are part of TRB and were initially sponsored by the State DOTs in 1962. Maintenance is one of twenty-five topics with in the research program. This is a goal-oriented research program responding to State DOT needs to ensure applicability and producing products. NCHRP has a goal-oriented research program which responds to the needs of the states with applicable research results. Implementation of Research Facts was shared and presented in easy formats to help State DOTs. NCHRP products and Implementation actions are needed. Candidate projects for consideration were also shared. For FY18 an overview was given and Special Projects and Program projects were also noted. Oct 16 is the end date for research problem statements. Thank you for this opportunity to talk about our research program. Additional information can be found at: <http://www.trb.org>.

**TUESDAY – AUGUST 1, 2017**

SCOM General Session: Russ Yurek, MDDOT

**NCHRP Project 13-4, Guide for Optimal Replacement Cycles of Highway**

**Operations Equipment:** Ron Hamilton, Dye Management Group Inc: One of the products which came out of this research project was a Life Cycle Cost Analysis Tool. Equipment costs were analyzed as it relates to maintenance and repair, ownership costs and equipment depreciation. The timeframe at which a piece of equipment has reached is optimum life is more of a window than a point. Making replacement decisions is a process which includes good data collection and analysis, and where good management decisions need to be made. Data collection is the most time-consuming part of the process. Replacement factors include depreciation, overhead, and downtime which very few agencies are tracking. Tool Demonstration – Configuration tables used to customize the tool for local agencies. Depreciation tables are based on the number of hours and miles a piece of equipment is driven not how old it is. Once the configuration tables are set up you can do a life-cycle unit cost analyses. In addition, the tool can also be used to do Replacement Targets, Priority Replacement List, and a 5-Year Schedule. Where do we go next? The tool could be more user friendly as it's housed an Excel Spreadsheet, however a User's Manual is available.

### **NCHRP Project 14-33 Quantifying the Effects of Preservation Treatments on**

**Pavement Performance:** James Bryce, Amec Foster Wheeler Environmental & Infrastructure Inc: Overall our research projects need to come up with recommendations that we can implement. Project Background – Pavement preservation and performance does not add structural capacity and it's not easy to model. There are two effects that we looked at; immediate change in condition and the rate of deterioration after applying the preservation treatment. After this we can calculate service life, life cycle cost etc. Agencies need to identify information on performance measures and preservation treatment use which reflects the priorities of the agency. Initiatives included defining and selecting performance measures. Several states use PCR. The goal of modeling the effect of preservation is to capture the immediate change in condition following various preservation treatments and the rate of deterioration. Data was gathered from 8 different State Highway Agencies and LTPP. One scenario was to look at the effects of thin overlays on IRI and rutting and calculating their initial change in condition and rate of deterioration. When you are doing these models, you need to check yourself. Growth rates are modeled using robust linear regression to check distress vs time. A guide was prepared to assist States in doing their own analyses. Implementation – note the change in condition and performance inputs for effective evaluations. NCHRP Report 858 is currently in publication on the analysis of condition data requires techniques not traditionally found in pavement literature.

### **NCHRP Domestic Scan 15-03, Preservation Practices for Steel Bridge Coatings:**

Jeff Milton, VADOT: What is the cost of corrosion? Over \$278 billion from 1998 to 2001. Approximately \$8.3 billion for bridges. The team only looked at field coatings and not shop coatings. Most agency funding levels allow for a preventative maintenance program. Painting and washing are considered preventative maintenance bridge elements and are eligible for Federal-aid reimbursement. Selecting coating candidates involved leveraging agency defined elements and overcoating which most agencies are moving away from due to environmental concerns. However, CALTRANS has an overcoating process and continues to use this as a preventative maintenance treatment. Surface preparation varies for spot and overcoating and can include: high pressure washing, water blasting, and hot pressure washing around 180 degrees. Decision making for coating options may include: zinc rich, coating systems, and metalizing. Warranties vary from 1 to 5 years with 2 years being the sweet spot. Blended In-house and Consultant QA inspection is used most to help meet coating and inspection requirements. Inspector / contractor qualifications were looked at and SSPC QP1 and QP2 were required by 9 agencies. Other Findings include: add continuity, eliminate deck joints, and link spans etc. Scan Team Recommendations: dedicated bridge painting funds, have inspection elements, agency funding levels, surface preparations, coating option decision making, use of performance based contracts, and specifications for coating systems, quality control, and agency commitment to support the various recommendations.

**2016 Louisiana Flood Event:** David Miller, LADOT: The 2016 flood events in LA also effected the State of Texas. Most States have emergency support functions ESF-1 (Busing Activities) and ESF-3 (Public Works and Engineering Activities). During the

March 2016 Flood Event: Louisiana received over 26 inches of rain in 2 days and only had one bridge failure, however there were lots of bridge and culvert washouts. We also had lots of debris and stream-bed profile challenges. Due to the Stafford Act, States receiving Presidential Declarations for disaster events must work with FEMA to get debris removal reimbursement. FHWA's Emergency Relief Program can only pay for debris removal when a Presidential Declaration is not declared or when FEMA refuses to pay for debris removal.

August 2016 Flood Event LA: For the March event, we did thousands of bridge inspections and for August we did even more. We had over 30 inches of rain. These two events alone equaled a year's worth of rain for the State of Louisiana and Baton Rouge was hit hard. Over 146,000 homes and 21 schools were flooded out and 4 Interstates and almost 400 roads were closed. We received \$22 million in ER funds from FHWA, \$4 million in FEMA funds, and \$6 million in debris removal. Over 120 bridges were damaged and we did over 4,900 bridge inspections over 4 weeks. We used the deployment of large aqua-dams to open up the interstate. A row on either side of the interstate and then pumped out the water. Had some bridge damages. Tiger Dams were also used, they are round and smaller so they rolled uncontrollably. Sandbags were used to help keep them from moving. The Cajun Navy came to the rescue. 20% of LADOT staff were flooded. We learned a lot, we are surviving, and there is a lot of building going on.

#### **NCHRP Project 14-20A, Consequences of Delayed Maintenance of Highway**

**Assets:** Carlos Chang, University of Texas at El Paso: Topics included: Research objectives, Approach, Procedures, Step by step pavement example, and a Summary and Recommendations for implementation. Research objectives: quantifying the consequences of delayed maintenance. Integrating procedures for various asset management processes. Work needed to preserve the highway system, but postponed in the agency maintenance program. If you don't do it, what will happen? We looked at information, did phone interviews, and performed delayed maintenance scenarios. We defined the asset preservation policy, determined maintenance and budget needs, and conducted scenarios to quantify the consequence for delayed maintenance of pavements, bridges, culverts, guardrail, lighting, pavement markings, and signs. A framework was prepared to share the data. Step 1 – Identification, Step 2 – Assessment, and Step 3 – Formulate delayed AM scenarios. Recommendations for Implementation, want to know it, integrate policy, need tools, select reports to facilitate interpretation of the results from the scenario analyses.

#### **Follow Up to Domestic Scan 14-01, Leading Management Practices in**

**Determining Funding Levels for Maintenance and Preservation:** Mark McConnell, Volkert, and Lonnie Watkins, NCDOT: Leading Management Practices in Determining Funding Levels for Maintenance and Preservation. It's difficult to plan your work and performance measures and then lose your money. Brief overview of scan, summary of findings, recommendations, and update on peer exchange request will be shared. The approach was to do a desk top scan and determine which states to focus on. Initial findings showed that leading states did better with an agency culture that supports this, relationships with elected officials, performance measures and targets, accurate data is

critical, and program support. Recommendations: establish performance measures and targets, use the money and targets to accomplish that work, customer driven targets establish accountability, develop national guidance on data quality, governance, and utilization. Implementation activities, post products, webinars, presentations, and technology showcases, peer exchanges, clearinghouse, guides, and research statement. Simplify your data so that others understand what we're trying to present. The Maintenance Quality Assurance (MQA) website update summary was shared. A request for additional documents, reports, and policies was made. Go to the following website for additional information. [www.highwaymqa.com](http://www.highwaymqa.com)

## **THURSDAY, AUGUST 3, 2017**

**SCOM Business Meeting:** George Conner, AL

**Opening Comments / Thank You / SCOM Goals:** George Conner, AL

**AASHTO State DOT Roll Call:** AL, AR, CA, CO, CT, DE, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, NV, NH, NC, ND, OH, OR, RI, SC, TN, TX, UT, VA, WA. Determination of a quorum. (Approximately 34 States were present)

**Resolutions:** George Conner, AL; 2017: Several acknowledgement resolutions were presented and one resolution from the Pavement TWG titled – Establish the Committee on Maintenance as the Responsible Body for Pavement Preservation Treatment Construction Guidance Specifications. With a quorum, these resolutions were reviewed and an official vote taken.

**Research Ballot Handout:** Jon Wilcoxson, KY; a vote was taken on what is the importance of this research to each of the state's present.

**TWG Reports:** George Conner, AL; Bridge, Pavement, Equipment, Roadway/Roadside, & Maintenance Operations TWGs; See report out slides for details. All TWG Chairs reported out on their 2017 Work Plan Accomplishments and 2018 Work Plan Proposal (Safety, Asset Management, Environment, Workforce Development, Communication, & Research), Research Implementation Recommendations; New Research Problem Statements, and Proposed Resolutions.

### **TWG Chairs/Presenters for Report Outs:**

Bridge TWG: Jeff Milton, VA

Pavement TWG: Anita Bush, NV

Equipment TWG: Tim Cunningham, KS

Roadway/Roadside TWG: Jerry Hatcher, TN

Maintenance Operations: Brad Darr, ND

**Collect Research Ballots:** Jon Wilcoxson, KY

**Regional Reports:** Russ Yurek, MD; See report out slides for details. Regional Meeting minutes are also available.

- NASTO – Russ Yurek, MD
- SASHTO – David Miller, LA
- MAASTO – Steve Cook, MI
- WASHTO – Anita Bush, NV

**TRB and NCHRP Update:** James Bryant, TRB; & Amir Hanna, TRB Update; NCHRP Overview, Future Problem Statements & Moving Research into Practice through Implementation. Research Problem Statements need to be submitted following the recommended format and remember to be concise. Please submit your research problem statements by October 16, 2017. Research implementation is also very important.

**Future AASHTO SCOM Meetings:** 2018 North Carolina Subcommittee on Maintenance Update: Scott Capps, NC – Subcommittee Meeting. Scott gave an overview and invited everyone to come to Charlotte, North Carolina next year. Additional SCOM meetings are scheduled for 2019(MI), 2020(CO), and 2021(ME).

**Other Business:** George Conner, AL; Thank you everyone for your assistance and for being here this morning.

End of Minutes