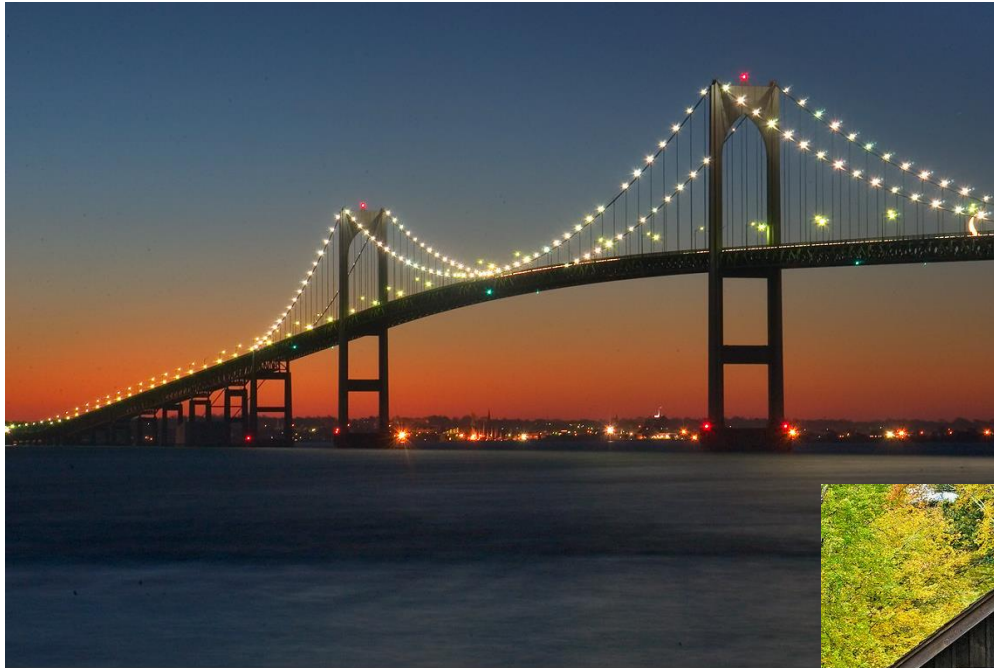


# Bridge Working Group

## Jeff Milton, VA



# 2018 Work Plan Accomplishments 1 of 2

## Safety

- Continued to promote the reliability and safety of bridges by focusing on innovative maintenance practices, early intervention techniques, timely inspections and repair, and worker safety.
- Continued to work through the Bridge TWG representative on the Fall Protection Resolution Team to ensure a practical outcome for the states that are affected.

# 2018 Work Plan Accomplishments 2 of 2

## Safety

- Encouraged member agencies to explore the use of connected and automated vehicles for use in smart work zones.

# 2018 Work Plan Accomplishments 1 of 2

## Asset Management

- Continued to promote Bridge Preservation activities by owners.
- Continued to promote accountability and transparency through performance management and asset management of bridges and structures - BTWG members participated in the National BMS Working Group.

# 2018 Work Plan Accomplishments 2 of 2

## Asset Management

- Supported member agencies in the inspection and maintenance of tunnels and ancillary (traffic, MSE walls, etc.) structures.

# 2018 Work Plan Accomplishments 1 of 1

## Environmental

- Continued to promote sustainability of the highway bridge environment with a special focus on climate change, mitigation strategies and pollution prevention.
- Supported the NCHRP 20-07 Project titled “Synthesis for Bridge Maintenance and Preservation Practices that Minimize Environmental Impact”.

# 2018 Work Plan Accomplishments 1 of 4

## Workforce Development

- Continued supporting the AASHTO TC3 program by participating in the development of new training.
- Continued serving as a liaison and facilitator between the TSP.2 regional bridge preservation partnerships and AASHTO MaC Leadership.

# 2018 Work Plan Accomplishments 2 of 4

## Workforce Development

➤ Supported the liaisons from MaC to other committees. For example:

- AASHTO COBS
- FHWA BPETG
- TRB
- AASHTO STSM&O



# 2018 Work Plan Accomplishments 3 of 4

## Workforce Development

- Continued supporting FHWA's Bridge Preservation Expert Task Group efforts. For example, reviewing and providing comments for the pocket guides.
- The FHWA Bridge Preservation Expert Task Group has updated the FHWA Bridge Preservation Guide – the new guide is available on the FHWA website. BTWG members participated in this update.

# 2018 Work Plan Accomplishments 4 of 4

## Workforce Development

- **The National Bridge Preservation Partnership Conference was held in Orlando, Florida from April 8 to 12, 2018. The conference included more than 80 technical presentations by bridge preservation experts from DOTs, local transportation agencies, AASHTO, FHWA, academia, and industry. Live demonstrations were also held and more than 30 industry partners participated. The last day of the conference was devoted to the 2018 regional partnership meetings and a conference wrap-up presentation.**

# 2018 Work Plan Accomplishments 1 of 4

## Communication

- Continued supporting the implementation of SHRP2 Project R06A (Non-destructive Testing to Identify Concrete Bridge Deck Deterioration) and R19A (Designing Bridges for 100 years service life).
- Continued to promote communications concerning bridge maintenance and preservation with local agencies.

# 2018 Work Plan Accomplishments 2 of 4

## Communication

- Continued to encourage regional bridge preservation partnerships to submit proposed research needs statements through the MaC Bridge Technical Working Group.

# **2018 Work Plan Accomplishments 3 of 4**

## **Communication**

- **The National Center for Pavement Preservation is in the process of preparing a document title “At the Crossroads - Preserving Our Infrastructure Investment”.**

**Members of the BTWG participated in the review of this document.**

# 2018 Work Plan Accomplishments 4 of 4

## Communication

- **Conducted email exchanges with the BTWG members.**
- **Prepared content for the Maintenance Manager Newsletter.**

# 2018 Work Plan Accomplishments 1 of 8

## Research

- Continued to provide a collaborative environment that encourages new research problem statement ideas.
- Continued to encourage implementation of research recommendations.
- Continued to review and considered for endorsement research problem statements from other committees.

# 2018 Work Plan Accomplishments 2 of 8

## Research

- Continued to support Bridge related NCHRP projects and submit research problem statements.
- Continued to support the work of the TRB bridge related committees: Bridge Preservation (AHD37), Structures Maintenance (AHD30), and Bridge Management (AHD35).



# 2018 Work Plan Accomplishments 3 of 8

## Research

- **The Maintenance Committee re-endorsed the proposed research titled “Effective Use of Duplex Coating Systems to improve Steel Bridge Structure Durability”. This problem statement was re-submitted to NCHRP on October 13, 2017. This project was selected for FY19 funding – NCHRP Project 12-117.**

# 2018 Work Plan Accomplishments 4 of 8

## Research

- **The Maintenance Committee endorsed the proposed NCHRP Project 20-07 proposal titled “Emerging LED technologies, and their spectrum of use on roadways and tunnels”. This problem statement was submitted to NCHRP on August 25, 2017. This project was not selected for FY19 funding.**

# 2018 Work Plan Accomplishments 5 of 8

## Research

- **The Bridge Technical Working Group supported a research problem statement titled “Protecting bridge approaches during flooding events”. This research will suggest methods and designs that could protect the approaches of structures from damage during flood events. This problem statement was submitted to NCHRP on October 13, 2017. This project was not selected for FY19 funding.**

# 2018 Work Plan Accomplishments 6 of 8

## Research

- **NCHRP Project 12-100 “Guidelines for Maintaining Small Movement Bridge Expansion Joints” is complete and the Maintenance Committee has voted to published the report as an AASHTO Document – Work in progress on the AASHTO document.**

# 2018 Work Plan Accomplishments 7 of 8

## Research

- **NCHRP Project 14-29– “Assessing, Coding, and Marking of Highway Bridges in Emergency Situations” is complete and the Maintenance Committee has voted to published the report as an AASHTO Document – Work in progress on the AASHTO document.**

# 2018 Work Plan Accomplishments 8 of 8

## Research

- **The AASHTO Maintenance Manual for Roadways and Bridges has been updated under NCHRP Project 20-07/Task 380.**

# 2019 Work Plan 1 of 1

## Safety

- **Continue to promote the reliability and safety of bridges by focusing on innovative maintenance practices, early intervention techniques, timely inspections and repair, and worker safety.**
- **Encourage member agencies and support other TWGs in the use of connected and automated vehicles for use in smart work zones.**

# 2019 Work Plan 1 of 2

## Asset Management

- Support member agencies in the implementation of the FHWA Rules for bridge and pavement condition and for asset management systems.
- Continue to promote Bridge Preservation activities by owners.
- Participate in the TSP2 National Bridge Management System working group.



# 2019 Work Plan 2 of 2

## Asset Management

- **Support member agencies in the inspection and maintenance of tunnels and ancillary (traffic, MSE walls, etc.) structures.**
- **Promote the use of condition categories of Good, Fair, and Poor for bridge management decisions.**

# 2019 Work Plan 1 of 1

## Environmental

- **Continue to promote sustainability of the highway bridge environment with a special focus on climate change, mitigation strategies and pollution prevention.**

# 2019 Work Plan 1 of 3

## Workforce Development

- **Work with LTAPs to provide and promote Bridge Maintenance Training for local agencies.**
- **Continue supporting the AASHTO TC3 program by reviewing the competency matrices for bridge workers and by participating in the development of new courses.**
- **Continue serving as a liaison and facilitator between the TSP.2 regional bridge preservation partnerships and AASHTO MaC Leadership.**

# 2019 Work Plan 2 of 3

## Workforce Development

➤ **Continue to support the liaisons from Mac to other committees. For example:**

- **AASHTO COBS**
- **FHWA BPETG**
- **TRB**
- **AASHTO STSM&O**

# 2019 Work Plan 3 of 3

## Workforce Development

- **Continue supporting FHWA's Bridge Preservation Expert Task Group efforts. For example, reviewing and providing comments for the pocket guides.**
- **Continue to conduct email exchanges with the Bridge TWG members.**

# 2019 Work Plan 1 of 4

## Communication

- **Continue supporting the implementation of SHRP2 Project R06A (Non-destructive Testing to Identify Concrete Bridge Deck Deterioration) and R19A (Designing Bridges for 100 years service life).**
- **Continue to promote communications concerning bridge maintenance and preservation with local agencies.**

# 2019 Work Plan 2 of 4

## Communication

- **Develop a marketing package to communicate the value of system preservation to elected officials, the general public and state DOT executives. This strategy will include:**
  - **Implement existing research in order to promote the need for additional funding**
  - **Promote safety**
  - **Promote environmentally friendly practices**
  - **Develop a communication plan that promotes the value of bridge preservation**

# 2019 Work Plan 3 of 4

## Communication

- **Develop a strategy to better communicate bridge information by and with the media (ENR, Roads and Bridges, ARTBA, etc.). An Ad-hoc committee will be formed to develop this.**



# 2019 Work Plan 4 of 4

## Communication

- **Continue to encourage regional bridge preservation partnerships to submit proposed research needs statements through the MaC Bridge Technical Working Group.**

# 2019 Work Plan 1 of 1

## Research

- **Continue to support the implementation of completed research projects – NCHRP Project 12-100 and NCHRP Project 14-29 - publish the reports for these projects AASHTO Documents.**

# Proposed Research

- **Measuring Chlorides in Bridge Decks with Ground Penetrating Radar**
  - **Ground penetrating radar (GPR) technology has been shown to respond to the presence of chlorides in concrete, which are also the prerequisites for reinforcement corrosion and delamination. The proposed research will investigate a nondestructive methodology, using GPR, that may be used by bridge owners to quantify chloride content in concrete and identify chloride-contaminated concrete on a deck-wide basis for subsequent removal during bridge deck rehabilitation.**

# Proposed Research

- **Establishing a Procurement Guide for NDT/E and SHM based on Best Practices and Vendor Qualifications for State Departments of Transportation**
  - **The objective of this research will be to develop a guideline for procurement of NDT/E and SHM services for the heavy civil infrastructure industry with a focus on highway infrastructure based on quality of service and best practices for consistent, quality driven, data collection, analysis, and reporting.**
  - **This guideline will increase the ease of which stakeholders can implement NDT/E an SHM type service contracts by ensuring that the same quality standards are in place across the United States while simultaneously ensuring that these stakeholders receive data of a high enough quality that can be used to confidently manage their assets.**

# Proposed Research

- **Evaluating and implementing unmanned aerial systems (UAS) into bridge inspection and management methods**
  - **This research will be focused on field testing the application of UAS based bridge inspections as it relates to supporting bridge management data collection and practices.**

# Proposed Research

- **Update of the Bridge Preservation Research Roadmap**
  - **This project is to develop a bridge preservation research roadmap to guide future bridge preservation research efforts in productive directions.**
  - **In 2008, the FHWA, AASHTO, and the highway preservation industries, completed a study which identified the most critical knowledge gaps in pavement and bridge preservation and the research necessary to fill those gaps**
  - **An updated Bridge Preservation Research Roadmap would help guide not only national research efforts in the area of bridge maintenance and preservation but also state- and provincial-funded research.**