Standing Committee on Highways (PPR-AM08 Attachment)
Subcommittee on Maintenance
Title: AASHTO Bridge Preservation Strategic Plan
Recommended Strategy Focus Areas 2008 - 2013

Supporting: Proposed Policy Resolution 2008-06
Title: Endorsement of the AASHTO Bridge Preservation Strategic Plan

BACKGROUND
The VISION of the Highway Sub-Committee on Maintenance is to “be the voice for system preservation and maintenance, and a champion for institutional and technical excellence”\(^1\).

As the primary group within the AASHTO organization dedicated to the preservation and maintenance of highway assets, the SCOM has taken the lead role in fostering dialogue on bridge preservation and maintenance issues with member States. The five focus areas listed in the SCOM Statement of Direction have proved successful in guiding its’ Bridge Task Force for the last five years. Those include:

1) Provide a forum for the interchange of information among the members;
2) Promote bridge safety and security through timely inspections and repair;
3) Promote bridge preservation through effective preventive and corrective bridge maintenance;
4) Increase cooperation between the maintenance, materials, and design areas in order to provide improved maintainability and extended service life;
5) Strive to elevate the awareness and importance of adequate bridge maintenance, effective repair and timely replacement.

Bridge preservation and maintenance has evolved with changes in the nation’s bridge population. The Highway Bridge Program (HBP) has been successful in reducing the number of bridges in poor condition. However, the infrastructure continues to deteriorate and operational demands continue to increase. In 2006, according to the NBI\(^2\), there were approximately 154,000 structurally deficient or functionally obsolete bridges representing some 26% of the inventory. This represents some 88,849,630 square meters of deck for structurally deficient or functionally obsolete bridges. There is widespread concern that the number of deficient bridges will increase because of adverse factors such as: (a) rising traffic demand, (b) continued bridge aging and accelerated deterioration, (c) limited funds for rehabilitation and replacement, and (d) inadequately funded preservation and maintenance programs.

Simultaneously, member states are experiencing: a) reduced revenue streams, (b) diminished buying power and, c) competing cross-asset demands for available funds. To maximize the benefits of systematic preservation and maintenance, transportation agencies (i.e. DOTs, SHAs, turnpike authorities etc.) need to:

1) Assess the effectiveness of current preservation, maintenance and improvement strategies,
2) Examine strategies, innovations and technologies that lead to improved performance of highway bridges,

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\(^1\)This vision has served as a guide for the Statement of Direction for the Bridge Task Force (BTF) since being established in 1989.

3) Support research and development to enhance bridge preservation and maintenance.

In the past bridge maintenance was a response/demand-based function. It has evolved to include:

- preservation (i.e. preventive maintenance, service-life extension),
- network level maintenance strategies,
- asset management and bridge management principles,
- updated design procedures,
- modern high-strength materials,
- alternative contracting mechanisms/practices.

The Bridge Preservation Strategic Plan fulfills the VISION of the AASHTO SCOM and provides a framework for the Bridge Task Force activities over the next five years. This plan builds on past accomplishments and acknowledges the implementation of system preservation principles as common practice employed by many member states. The plan considers the necessity for incorporating bridge preservation and maintenance principles into bridge and asset management decision making.

Five goals have been established within the plan. Each goal is further defined by a strategy containing an action item. Each of the strategies involves communication, coordination, and cooperation among member states.

**MISSION**

Advance the State of the Practice of Bridge Preservation and Maintenance (BPAM) in State DOT’s to optimize the benefits of systematic preservation and maintenance, assess the effectiveness of current strategies, and examine procedures that lead to improved operational performance of highway bridges among member agencies.

**VISION**

Timely bridge preservation performed today…for a better transportation infrastructure tomorrow.

**GOALS**

**Goal 1:** Improve bridge preservation and maintenance practices.

**STRATEGY 1:** Evaluate and promote the development, use, and integration of innovative technologies, materials, and design to support bridge preservation and maintenance activities.

**STRATEGY 2:** Develop, improve, promote, and support the use of bridge preservation and maintenance principles for application in bridge management systems, network level programming, and condition assessments.

**STRATEGY 3:** Solicit and provide support for bridge preservation and maintenance research needs from member states, regional working groups, and national committees.

**Goal 2:** Facilitate the exchange of information on bridge preservation and maintenance.
STRATEGY 1: Communicate and share information on state-of-the-art practices with member states through mutual participation in regional bridge working groups and national organizations dedicated to bridge preservation and maintenance.

STRATEGY 2: Share information (educate) with policy and technical decision makers and elected officials on the benefits of employing bridge preservation strategies to extend the service lives of bridges and employ bridge management and decision-support systems to provide effective use of preservation and maintenance funds.

Goal 3: Assist member states in implementing bridge preservation and maintenance practices.

STRATEGY 1: Assist in the maintaining and updating the AASHTO Maintenance Manual sections on Bridge Maintenance and Management.

STRATEGY 2: Promote the formation and operation of working groups to provide a forum for addressing bridge preservation and maintenance issues.

STRATEGY 3: Identify a model to identify the community of practice for bridge preservation and maintenance.

STRATEGY 4: Assist in the development of a web site for regional bridge maintenance working groups.

Goal 4: Support improvements to the knowledge base related to Bridge Preservation and Maintenance.

STRATEGY 1: Identify knowledge and technology gaps and undertake future research projects through the Transportation Research Board, the FHWA and AASHTO.

STRATEGY 2: Plan and undertake appropriate AASHTO/FHWA domestic and international scanning tours, disseminate findings and develop implementation plans as a result of the findings.

STRATEGY 3: Identify and address succession planning in the bridge preservation and maintenance arena.

Goal 5: Develop partnerships with transportation stakeholders.

STRATEGY 1: Interact with and coordinate bridge preservation and maintenance (BPAM) activities within AASHTO, Transportation Research Board (TRB), Federal Highway Administration (FHWA) and with other organizations and Federal agencies that have an interest in highway bridge preservation and maintenance.

STRATEGY 2: Promote sustained support for the advancement of highway bridge preservation and maintenance activities and research in cooperation with other organizations.

STRATEGY 3: Jointly sponsor and undertake workshops and seminars that focus on highway bridge preservation and maintenance through partnerships with other organizations.

Bridge Preservation and Maintenance Roadmap: The attached BPAM roadmap further delineates and details how the strategic plan and goals will be accomplished.