

# *NCHRP Project 14-23*

## **Practical Bridge Preservation Actions and Investment Strategies:**

### **An Overview**

National Center for Pavement Preservation  
Michigan State University

Southeast Bridge Preservation Partnership Meeting  
Norfolk, Virginia  
April 3, 2013

# *Research Team*

- David W. Johnston, PE, PhD – Principal Investigator
- John Hooks, PE - Researcher
- Kelley Rehm, PE - Researcher
- Edward Welch, PE - Subject Matter Expert
- Larry Galehouse, PhD - Project Manager for NCPP
  
- Subcontract: InspectTech – Jeremy Shaffer, PhD (now Bentley)

# *NCHRP 14-23*

- Objective
- Summary of Tasks
- NCHRP limits presentations until completion
- Completion April 2015

# *Objective*

The objective of this research is to develop a handbook for possible adoption by AASHTO that will

- 1) assemble a catalog of bridge element preservation actions;
- 2) quantify the benefits of bridge preservation actions;
- 3) provide decision-making tools to optimize bridge preservation actions; and
- 4) develop a method to determine appropriate levels of funding to achieve bridge agency selected goals and performance measures.

# *NCHRP 14-23 Phases*

- Phase I – Preservation Actions That Impact Bridge Service Life
- Phase II – Development and Validation of the Proposed Methods
- Phase III – Draft Handbook for Bridge Preservation
- Phase IV – Final Products
  - Final Project Report
  - Handbook
  - Analysis Tool

# *Phase I Tasks*

- Review of literature
- Catalog bridge preservation actions
- Impacts of bridge preservation actions
- Metrics for analysis – data and measures
- Proposed method to prioritize actions
- Proposed method for level of funding
- Outline of handbook

# *Phase II Tasks*

- Detailed method to prioritize with examples
- Detailed method to determine levels of funding with examples
- Annotated description of each handbook section and subsection with expected level of detail
- A complete sample handbook section

# *Phase III Tasks*

- Draft handbook with examples
- Draft report
- Refine support tool

# *Phase IV Tasks*

- Revised Handbook
- Final Support Tool
- Final Report
- Implementation Plan

# *Parallel Factors*

- MAP-21
- AASHTO Bridge Element Inspection Guide
- AASHTOWare Bridge Management
- Lots going on nationally
- Large agency needs
- Small agency needs
- Focus is bridge element and bridge preservation
- Not creating a BMS
- Product for bridges to remain in place
- Knotty problem
- Goal: Handbook that could be an eventual AASHTO product