



# FHWA Update

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# Presentation Outline

- Bridge Preservation and State of Good Repair
- MAP-21 Performance Requirements
- NBIS Regulations Update
- Impact of MAP-21 on Bridges
- Bridge Preservation Training

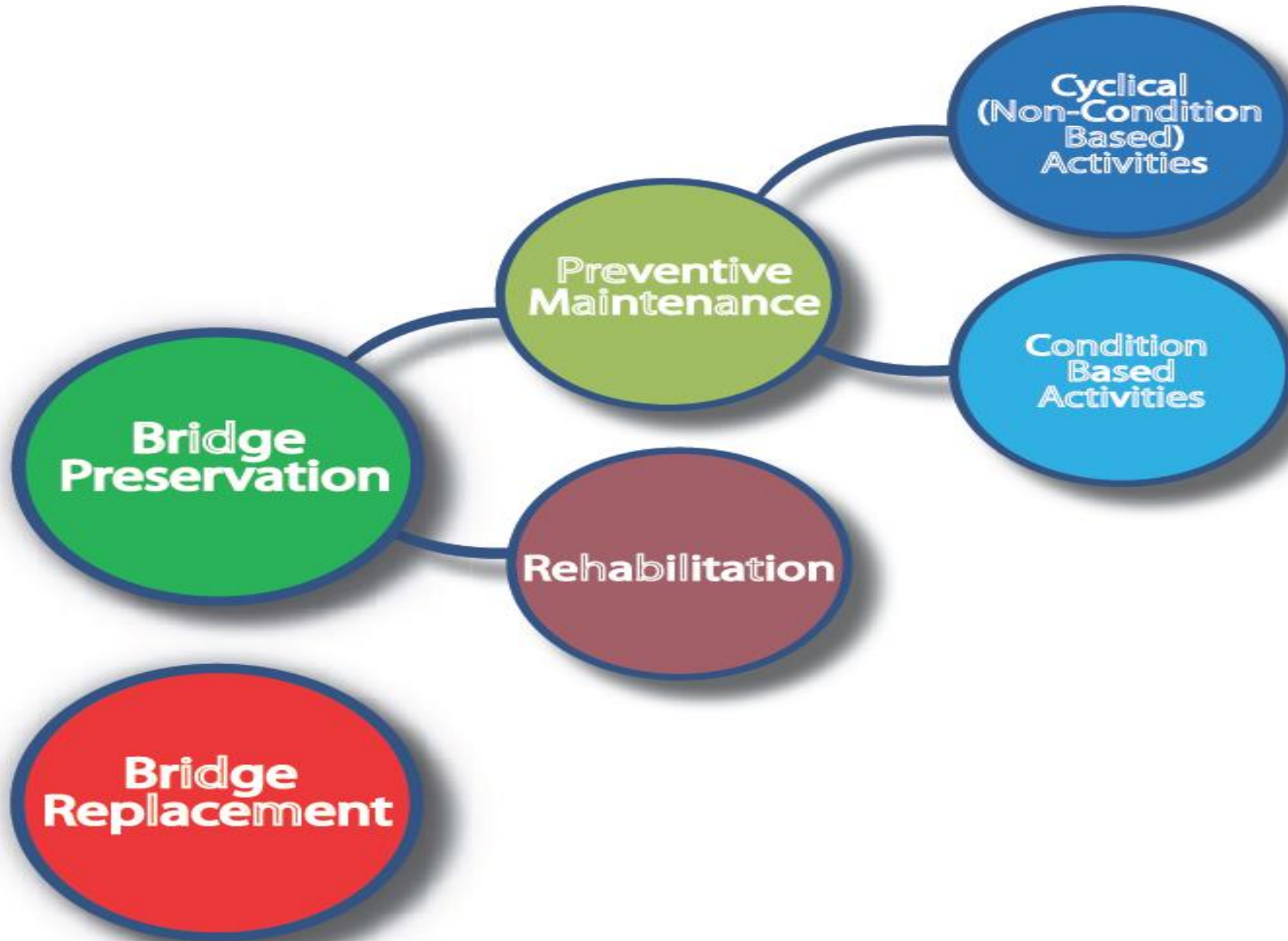
# What is Bridge Preservation?

Actions or strategies that prevent, delay or reduce deterioration of bridges or bridge elements, restore the function of existing bridges, keep bridges in good condition and extend their useful life. Preservation actions may be preventive or condition-driven.

*- This Definition was adopted by ASHTO SCOH in Sep. 2011*



# What is Bridge Preservation?



# What is State of Good Repair (SGR)?

A condition in which the existing physical assets, both individually and as a system (a) are functioning as designed within their useful service life, (b) are sustained through regular maintenance and replacement programs. SGR represents just one element of a comprehensive capital investment program that also addresses system capacity and performance.

*Secretary Mary Peters July 25, 2008 letter to Congress on this topic.*

# What Does SGR Means for Bridges?

The existing bridges are:

- 1- Functioning as originally designed
- 2- Sustained through regular maintenance, preservation, and replacement programs.



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# MAP-21 Performance Requirements

- National Goals
- Measures
- Targets
- Plans
- Reports
- Accountability



# National Goals - 23USC150(b)

Focus the Federal-aid program on the following national goals:

- 1) SAFETY
- 2) **INFRASTRUCTURE CONDITION** - *maintain the highway infrastructure asset system in a state of good repair.*
- 3) CONGESTION REDUCTION
- 4) SYSTEM RELIABILITY
- 5) FREIGHT MOVEMENT AND ECONOMIC VITALITY
- 6) ENVIRONMENTAL SUSTAINABILITY
- 7) REDUCED PROJECT DELIVERY DELAYS

# Group Measures Based on Readiness

## PROGRAM

## MEASURE CATEGORY

### STATUS I

4<sup>th</sup> Qtr CY2013

Serious Injuries per VMT

Fatalities per VMT

Number of Serious Injuries

Number of Fatalities

### STATUS II

4<sup>th</sup> Qtr CY2013

Pavement Condition on the Interstates

Pavement Condition on the Non-Interstate NHS

Bridge Condition on NHS

### STATUS III

1st Qtr CY2014

Traffic Congestion

On-road mobile source emissions

Freight Movement

Performance of Interstate System

Performance of Non-Interstate NHS

# Requirements for Asset Management

- Each State is to develop a risk-based asset management plan for the National Highway System (NHS) - *(23 U.S.C. 119(e)(1), MAP-21 § 1106)*
- USDOT is to issue a regulation not later than 18 months after date of enactment, (*23 U.S.C. § 119(e)(8), MAP-21 § 1106*)

# Asset Management Plans

- National Highway Performance Program
- Developed using process approved by USDOT
- Recertified every 4 years

# Asset Management Plan

- Plan Contents
  - pavement and bridge inventory and conditions on the NHS,
  - objectives and measures,
  - performance gap identification,
  - lifecycle cost and risk management analysis,
  - a financial plan, and
  - investment strategies

# MAP-21 Rulemakings

- Asset Management
  - Draft rule written - currently undergoing legal review.
  - Expect NPRM to be issued late fall 2013, with final rule late Summer 2014.
- Performance Measures
  - 3 separate rules (Status I, II, III shown on previous slide)
    - Bridge conditions on NHS to be part of 2<sup>nd</sup> rule anticipated by April 2014
    - Will cover measures for pavements and bridges, data standards, target setting, assessing progress, and reporting



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# NBIS Regulations Update

- Mandated by MAP-21
  - Methodology, training, and qualifications for inspectors
  - Frequency of inspections
- NPRM is scheduled to be released in 2014
- Three years to complete (October 2015)



# Bridge Element Level Inspection Data

- **National Highway System**
  - 3/12/13 Guidance memorandum
  - Begin collecting by Oct 1, 2014
  - Begin reporting by April 2015

	<b>Memorandum</b>
<hr/>	
Subject: <b>INFORMATION:</b> Collection of Element Level Data for National Highway System Bridges	Date: March 12, 2013
From: <i>/s/ Original Signed by</i> M. Myint Lwin, P.E., S.E. Director, Office of Bridge Technology	In Reply Refer To: HBT-30
To: Federal Lands Highway Division Engineers Director of Technical Services Division Administrators	
<p>This memorandum provides initial guidance on the collection of element level data for bridges on the National Highway System (NHS). Section 1111 of the Moving Ahead for Progress in the 21st Century Act (MAP-21) modified 23 U.S.C. 144, which requires each State and appropriate Federal agency to report bridge element level data to the Secretary.</p> <p>The following are frequently asked questions and answers regarding the collection of element level data for NHS bridges:</p> <p><u>When does the requirement to collect element level bridge inspection data for NHS bridges take effect?</u></p> <p>In accordance with 23 U.S.C. 144(d)(2), commencing on October 1, 2014, State and Federal agencies that have not already done so are to begin collecting element level data as each NHS highway bridge is field inspected in accordance with 23 CFR 650 Subpart C.</p> <p><u>When will the element level data for NHS bridges be reported to the Federal Highway Administration (FHWA)?</u></p> <p>As a supplement to the National Bridge Inventory (NBI) data submission due April 1, 2015, and every year thereafter, each State and Federal agency will also provide element level bridge inspection data for bridges on the NHS to the FHWA for inclusion in the NBI.</p> <p><u>How will the data be submitted?</u></p> <p>Initially, the element level bridge inspection data is to be submitted as an extensible markup language (XML) file separate from the NBI 432 character text file. Both the NBI</p>	

# Element Level Inspection Data

- **Non-National Highway System**
  - Study to be conducted
  - Federal Register Notice (3/22/13)

# Risk-based inspection intervals

Is 24 months the right interval for both of these bridges?



# Procedure for National Certification of Inspectors





# Procedures for Reporting “Critical Findings”

- Relate to structural or safety- related deficiencies of highway bridges
- Monitoring activities and corrective actions taken in response to a critical finding





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# Question: How will a State justify proposed bridge projects under MAP-21?

- **Answer:** There are four main programs that provide funding for bridge projects.

National Highway  
Performance  
Program (NHPP)

Surface  
Transportation  
Program (STP)

Each of these  
programs include  
eligible activities and  
Eligibility requirements

Congestion  
Mitigation and Air  
Quality  
Improvement  
Program (CMAQ)

Highway Safety  
Improvement  
Program (HSIP)

# National Highway Performance Program (NHPP) - 23 USC 119

- Funds an enhanced National Highway System,
- Combines NHS, IM and Bridge Programs from past legislation
- Requires a risk-based asset management plan
- States set targets for conditions and performance



# National Highway Performance Program (NHPP) - 23 USC 119

- Eligible Facility = Any facility on the NHS
- Eligible Project = Supports the national performance goals and meets at least one listed purpose
- NHS performance targets set by state as part of an asset management plan
  - Law sets standard for NHS bridges -- no more than 10% of deck area may be structurally deficient
  - Risk and performance based
  - In line with national goals, specified in law (23 USC 150)

# National Highway Performance Program (NHPP) - 23 USC 119

## Eligible Activities Include:

- Construction, Replacement, Rehabilitation, Preservation, Inspection, Evaluation, Inspector Training
- Protection – scour countermeasures, seismic retrofits, impact protection, security, extreme events
- Costs associated with obtaining, updating, and licensing software and equipment required for asset management
- Inspection and evaluation of other infrastructure assets (signs, walls, drainage structures)

# Surface Transportation Program (STP) - 23 USC 133

- Eligible Facility = Any facility including bridges and tunnels on public roads of all functional classifications
- Eligible Activities Include:
  - Construction of new bridge or tunnel on a Federal-aid Highway, replacement, rehabilitation, preservation, protection, application of de-icing chemicals, inspection, evaluation, inspector training



**Question:** What if a State Doesn't have an approved Asset Management Plan?

**Answer:** If no approved asset management plan in place, Federal share for NHPP will be limited to 65%

**Question** : Does MAP-21 require agreements between State agencies and FHWA for the use of federal funds for preventive maintenance on highway bridges?

**Answer** : MAP-21 doesn't require agreements; however, preventive maintenance activities are eligible for federal-aid funding provided that the activities are cost effective means of extending the useful life of a Federal-aid highway per 23 USC 116 (e).

*Programmatic agreements between a state agencies and FHWA are encouraged for efficiency purposes. Lack of such agreements would require project approval on a case by case basis.*



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# Bridge Preservation Training

- Three free web-based training modules are now available on SSPC website (90 minutes each)

<http://www.sspc.org/training/Training-FHWA-Bridge-Preservation/>

- Safety During Bridge Preservation
- Coating and Painting Bridge Superstructures
- Sealing and Waterproofing Bridge

# Bridge Preservation Training

- New NHI Web-based Bridge Preservation Series Training will be available in 2014 (2 to 3 hours each)
  - Course 1: Bridge Preservation Fundamentals
  - Course 2: Establishing a Bridge Preservation Program
  - Course 3: Communication Strategies for Bridge Preservation



# Bridge Preservation Training

- Updating NHI Bridge Maintenance Course, to be completed by 2016
  - Updating the bridge maintenance reference manual
  - New Web-based training on fundamentals of bridge maintenance (8 to 16 hours)
  - Updating the Instructor led training (4 days)
  - New web-based training modules (2 hours each)
    - Bridge Painting
    - Maintenance Movable Bridges
    - Maintenance of Masonry Bridges

# Thank You



## Questions

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