MANAGEMENT

Bridge Preservation

1) For the given federal NHS NHPP Funds under MAP 21, is your state clear regarding the performance level requirements?
   29 Yes
   18 No

   If you answered “yes” to the above question, has your state establish a baseline?
   19 Yes
   10 No

2) Does your state anticipate a degradation of non-NHS bridges as result of Map 21’s requirement to fund/improve the NHS?
   17 Yes
   30 No

3) One of the national goals of the Federal-aid highway program defined in MAP-21 is “to maintain the highway infrastructure in a state of good repair”. The FHWA Bridge Preservation Guide defines State of Good Repair as “a condition in which existing assets, both individually and as a system (a) are functioning as designed within their useful life, (b) are sustained through regular maintenance, preservation and replacement programs”.

   Has your state adopted a definition of State of Good Repair?
   15 Yes
   32 No

   If you answered “yes” to the above question, your state agrees that we need:
   4 A consistent national measure for State of Good Repair if the Federal funding is affected.
   4 Individual state-specific definitions of State of Good Repair that reflects local conditions and program priorities
   11 Both national and state-specific definitions
Which of the following does your state agree that the definition of State of Good Repair should be based on?

3 Operational considerations such as “functioning as designed”
7 Program considerations such as “a systematic program of maintenance, preservation and replacement”
12 Condition measures such as element level data
2 Both operational and program considerations
23 Operational, program and condition considerations

4) Does your state select bridge configuration, components and materials for new and rehabilitated bridges based on a comparison of alternatives using life cycle cost analysis?

4 Yes
9 No
34 We subjectively consider durability and service life in selecting configuration, components and materials for new and rehabilitation projects

If you answered “yes” to the above question, would your state use life cycle cost analysis with nationally recommended factors and cost data if a comprehensive Bridge Design Guide for Service Life were available from AASHTO?

7 Yes
9 No

5) Does your state select maintenance or preservation actions and materials based on a comparison of alternatives using life cycle cost analysis?

3 Yes
12 No
32 We subjectively consider durability and service life in selecting maintenance and preservation actions and materials.

If you answered “yes” to the above question, would your state use life cycle cost analysis with nationally recommended factors and cost data for maintenance and preservation decision making if a comprehensive Bridge Design Guide for Service Life were available from AASHTO?

6 Yes
8 No

Accelerated Bridge Construction

6) Has your state used ABC for bridge projects?

43 Yes
3 No

If you answered “yes” to the above question, please provide your state’s policy for use of ABC:

44 ABC is considered at the project development stage
0 ABC is considered after contract execution by the contractor
**Design-Build**

7) For bridge and wall structures completed using the Design-Build contracting method in your state, the overall construction quality of the completed structures can be best described as:
   - 0 Excellent construction quality
   - 1 Above expectations
   - 2 Meeting expectations
   - 8 Slightly below expectations
   - 3 Far below expectations
   - 9 Have not used the Design-Build Contracting Method

**Bridge Security and Hazards**

8) T-1 is considering expanding the technical committee’s role to engineering assessment of structures for vulnerabilities and potential risk due to extreme events. An all-hazards assessment scope and security would remain a focus area. Would your state support this expanded role for SCOBS T-1?
   - 37 Yes
   - 10 No

9) Does your state have screening criteria developed for assessing existing bridge and tunnel inventory for extreme events such as blast, fire, seismic, scour, flooding, wind, collision?
   - 10 Yes
   - 35 No

If you answered “yes” to the above question, would your state be willing to support a synthesis study to collect the state’s screening criteria and provide it to the researchers?
   - 14 Yes
   - 2 No

Would your state support the development of a nationally recommended extreme event vulnerability screening methodology from AASHTO?
   - 38 Yes
   - 9 No
DESIGN

General

10) Does your state have design specifications or criteria for temporary bridges?
   24 Yes
   23 No
   If you answered “no” to the above question, should AASHTO develop the design specifications for temporary bridges?
   20 Yes
   8 No

11) Does your state have the design specifications or criteria for prefabricated modular steel truss (for example, Bailey, Acrow or Mabey) bridges?
   14 Yes
   33 No
   If you answered “no” to the above question, should AASHTO develop the design specifications for prefabricated modular steel truss (Bailey–type) bridges?
   19 Yes
   18 No

12) Does your state use the overhead lane signal lights to manage traffic on a multi-lane highway?
   19 Yes
   28 No
   If you answered “yes” to the above question, please provide the overhead lane signal lights mounting method:
   7 On supports with other fixed signs
   14 On separate structures

13) AASHTO no longer provides hard copies of the interims for the *AASHTO LRFD Bridge Design Specifications* and the *Manual for Bridge Evaluation* as numbered replacement sheets, but rather comes on pink stand-alone sheets not meant for replacement. Which of the following does your state prefer?
   5 New system – pink stand-alone sheets
   36 Old system - numbered replacement sheets
   6 Either system
14) AASHTO provides the electronic interims for the *AASHTO LRFD Bridge Design Specifications* and the *Manual for Bridge Evaluation* as a group at the end of the entire specifications. Which of the following does your state prefer?
   - 3 New system - a group at the end of the entire specifications
   - 39 Old system - inserted into proper locations of the specifications
   - 6 Either system

**Loads**

15) Vehicular Collision Force: CT. Does your state find the 600 kip collision force requirement in the *AASHTO LRFD Bridge Design Specifications* excessive?
   - 30 Yes
   - 15 No

   If you answered “yes” to the above question, is the problem limited to the column diameter < 30"∅?
   - 8 Yes
   - 22 No

16) Ice Load: Does your state apply Ice Loads on?
   - 1 Superstructure only
   - 21 Substructure only
   - 8 Both superstructure and substructure
   - 17 None of above

   If you answered “Superstructure only”, or “Substructure only” or " Both superstructure and substructure” to the above question, please indicate load distribution method:
   - 5 Distribute equally to each girder
   - 11 Distribute based on tributary deck area
17) Has your state used Stay-in-Place Metal Forms (SIPMF) or permanent metal deck forms for cast-in-place concrete deck slabs in precast concrete and steel girder superstructures?

- Yes: 37
- No: 10

If you answered “yes” to the above question, please provide method to consider additional dead load due to the use of SIPMF:

- No consideration: 2
- The deck dead load between the girders is increased by a factor of 10%: 4
- The deck dead load between the girders is increased by a factor of 7.5%: 0
- The deck dead load between the girders is increased by a factor of 5.0%: 0
- The deck dead load between the girders is increased by a factor of 2.5%: 1
- The deck dead load between the girders is calculated based on actual SIPMF: 14
- Add a load note on the structural plan: 2

If you answered “yes” to the above question, should there be a consideration of the long term attachment of these forms to the structure and specific drainage details for draining water from the forms later when the deck degrade?

- Yes: 3
- No: 33

**Analysis**

18) Has your state used 3D modeling for bridge design?

- Yes: 28
- No: 19

If you answered “yes” to the above question, please indicate your observation:

- A practical, cost-effective tool in the current form: 1
- An expensive, time intensive, developmental tool with future: 1
- An appropriate tool for some structures now—and for all structures after software becomes more time efficient: 9
- Not appropriate for routine bridge design: 18

**Seismic Design**

19) Does your state consider performance based seismic design for conventional or ordinary bridges?

- Yes: 12
- No: 32
20) Does your state allow the use of seismic isolation bearings for ordinary bridges?
   22 Yes
   18 No

21) Does your state allow participation of abutment walls and wingwalls in the overall
dynamic response of bridge systems to earthquake loading and in providing resistance
to seismically induced inertial loads?
   22 Yes
   18 No

22) Has your state conducted any research projects on precast concrete seismic-resistant
bridges and their connections?
   4 Yes
   42 No

Concrete

23) Has your state used concrete multi single cell box beams as shown in AASHTO-LRFD
Table 4.6.2.1-1, Case B?
   21 Yes
   26 No

If you answered “yes” to the above question, have your state use diaphragms
between single cell box beams at the location other than abutments and piers?
   4 Always
   12 Sometimes
   6 Never

Decks

24) Has your state constructed any bridge decks using stainless steel reinforcing bars?
   20 Yes
   27 No

If you answered “yes” to the above question, please provide types of steel used:
   2 304
   6 316L or 316LN
   1 2101
   7 2304

25) Does your state provide a protective overlay or coating for new bridge decks?
   20 Yes
   27 No
If you answered “yes” to the above question, please indicate the predominate type that your state use:

- 8 Bituminous prior to bridge opening
- 1 Bituminous after bridge has been in service
- 1 Latex modified concrete prior to bridge opening
- 0 Latex modified concrete after bridge has been in service
- 1 Epoxy prior to bridge opening
- 5 Epoxy after bridge has been in service
- 2 Methacrylate prior to bridge opening
- 1 Methacrylate after bridge has been in service

If you apply the protective layer after the bridge is in service, approximately how long into the service life:

- 5 Less than 5 years
- 6 5 to 15 years
- 8 15 to 25 years
- 7 Over 25 years

26) Does your state consider performance based concrete mix design for bridge decks?

- 18 Yes
- 29 No

Foundations

27) Have footing sizes increased in your state for the following types of foundations as result of using LRFD?

- Spread footing on soil
  - 23 Yes
  - 18 No

- Spread footing on rock
  - 15 Yes
  - 27 No

- Spread footing on piles
  - 18 Yes
  - 26 No
Abutments

28) Has your state built any Mechanically Stabilized Earth (steel-reinforced MSE) abutments with spread footing?
   10 Yes; for single-span bridges, only
   16 Yes; for both single and multi-span bridges
   21 Not used

29) Has your state built any bridge abutments using geosynthetic soil reinforcement?
   12 Yes; for single-spans, only
   4 Yes; for both single and multi-span bridges
   30 Not used

30) Has your state built any bridge abutments using a “Geosynthetic Reinforced Soil Integrated Bridge System” (GRS-IBS: stiffer than geosynthetic soil reinforcement with more closely spaced reinforcement to limit deformation)?
   18 Yes; for single-spans, only
   2 Yes; for both single and multi-span bridges
   27 Not used

If answered “yes” to the above question, had your state previously built a successful geosynthetic soil abutment?
   4 Yes
   16 No

If answered “yes” to the above question, would your state use GRS-IBS again?
   7 Yes
   4 Yes, with minor changes
   0 Yes, with major changes
   2 No

Bearings

31) Does your state support AASHTO in modifying specs to allow for sloped neoprene bearing pads?
   21 Yes
   25 No

Barriers and Railings

32) Has your state modified bridge traffic barrier standards to meet the fall protection requirement for workers safety (e.g. 39 inches minimum barrier height)?
   5 Yes
   41 No
Sound Walls (Noise Walls)

33) Does your state allow sound walls to be mounted on bridges?
   29 Yes
   17 No

   If you answered “yes” to the above question, your state (check all that apply)?
   5 Has a sound wall/barrier combination that has been crash tested.
   5 Designs the sound wall to resist impact forces per LRFD Article 15.8.4.
   1 Designs the sound wall based on your state policy exemptions to the LRFD Specifications.
   12 Considers the sound wall components to be sacrificial and does not design for collision.
   8 Uses details expected to prevent shattering and debris falling on traffic below (if mounted on a grade separation structure).
   3 Sets the sound wall back 4 ft or more from the barrier, to be out of the zone of intrusion.

CONSTRUCTION

34) Does your state have experience using a two-part protective coating system for metal railing consisting of hot dip galvanizing and electrostatic powder coating?
   19 Yes
   28 No

35) Does your state require the use of ground-in pigment for coatings on structural steel?
   6 Yes
   41 No

36) Does your state permit the use of a contrasting intermediate coating when using a three coat system on structural steel?
   38 Yes
   9 No

37) When you require the contractor to submit PE-stamped calculations for shoring or temporary works during construction, do you require use of the LRFD Specifications?
   21 Yes
   26 No
38) Does your state have a definition for a “mass” concrete pour?

24 Yes
23 No

If you answered “yes” to the above question, please provide the minimum dimension of concrete

13 - 5 ft
4 - 6 ft
2 - 7 ft
0 - 8 ft
0 - 9 ft
2 - Over 9 ft

MAINTENANCE

Rehabilitation

39) Does your state have a policy requiring truss bridges to be cleaned and inspected prior to any rehabilitation or bridge painting projects?

5 Yes
42 No

Repairs

40) Has your state ever done a splice repair to broken pre-stressed strands in an adjacent box beam structure?

3 Yes
44 No

If you answered “yes” to above question, does your state assume that the capacity of the strand has been recovered as result of this repair?

1 Yes
2 No

Inspection

41) Is your state implementing National Bridge Elements (NBE’s) for?

37 State owned bridges
6 Local owned bridges
5 Just NHS bridges
42) When does (did) your state plan to inspect by the NBE manual and input the data electronically?
   - 8 - Before 2014
   - 24 - 2014
   - 10 - 2015
   - 1 - 2016
   - 3 - 2017 or after

43) Does your state plan to inspect your bridges using National Bridge Elements by October 1, 2014 for?
   - 26 - State owned bridges
   - 3 - Local owned bridges
   - 4 - The enhanced NHS bridges
   - 9 - The NHS Bridges

44) With the new NBE system, your state is
   - 28 - Individually coding all defect codes
   - 8 - Not using any defect codes
   - 16 - Selecting certain defects to code

45) Will your state create any Agency Developed Elements (ADE’s)?
   - 38 - Yes
   - 7 - No

46) With your current data management system, when is the expected date to have that system ready for NBE data entry?
   - 33 - 2014
   - 9 - 2015
   - 2 - 2016
   - 1 - 2017 or after

47) Does your state have existing element inspection data?
   - 41 - Yes
   - 5 - No

   If you answered “yes” to the above question, what is being done about old data?
   - 15 - Leaving old data intact
   - 22 - Translating old data
   - 5 - Starting with a clean slate
48) Does your state inspect High Mast Light Poles?
   33 Yes
   13 No

   If you answered “yes” to the above question, what is inspection frequency?
   3 - One year
   3 - Two years
   2 - Three years
   9 - Four years
   10 - Five years
   5 - More than five years

49) Does your state inspect Standard Light Poles?
   12 Yes
   34 No

   If you answered “yes” to the above question, what is inspection frequency?
   1 - One year
   0 - Two years
   1 - Three years
   3 - Four years
   2 - Five years
   3 - More than five years

50) Does your state inspect MSE Retaining Walls?
   13 Yes
   32 No

   If you answered “yes” to the above question, what is inspection frequency?
   1 - One year
   6 - Two years
   1 - Three years
   2 - Four years
   1 - Five years
   0 - More than five years

51) Does your state inspect Concrete Retaining Walls?
   10 Yes
   36 No

   If you answered “yes” to the above question, what is inspection frequency?
   0 - One year
   3 - Two years
   0 - Three years
   2 - Four years
   1 - Five years
   0 - More than five years
52) Does your state inspect Sign Structures?
   35 Yes
   11 No
   If you answered “yes” to the above question, what is inspection frequency?
   0 - One year
   6 - Two years
   2 - Three years
   9 - Four years
   12 - Five years
   6 - More than five years

53) Does your state use remote controlled flying cameras to inspect your bridges or any other assets like light poles, sign structures or walls?
   0 Yes
   46 No

Load Rating and Posting

54) Posting Signs for Specialized Hauling Vehicles (SHV’s). Does your state agree with the latest FHWA memorandum requiring the states to re-rate all bridges in their inventory and post them accordingly?
   17 Yes
   28 No

55) What is load rating criterion used in your state for bridge widening?
   15 LRFR for both existing and widening
   26 LFR for both existing and widening
   3 LFR for existing structure and LRFR for widening