AASHTO (SCOBS) T-18 Technical Committee Update

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2011 Western Bridge Engineers' Seminar
Phoenix, Arizona

American Association of State Highway and Transportation Officials (AASHTO)

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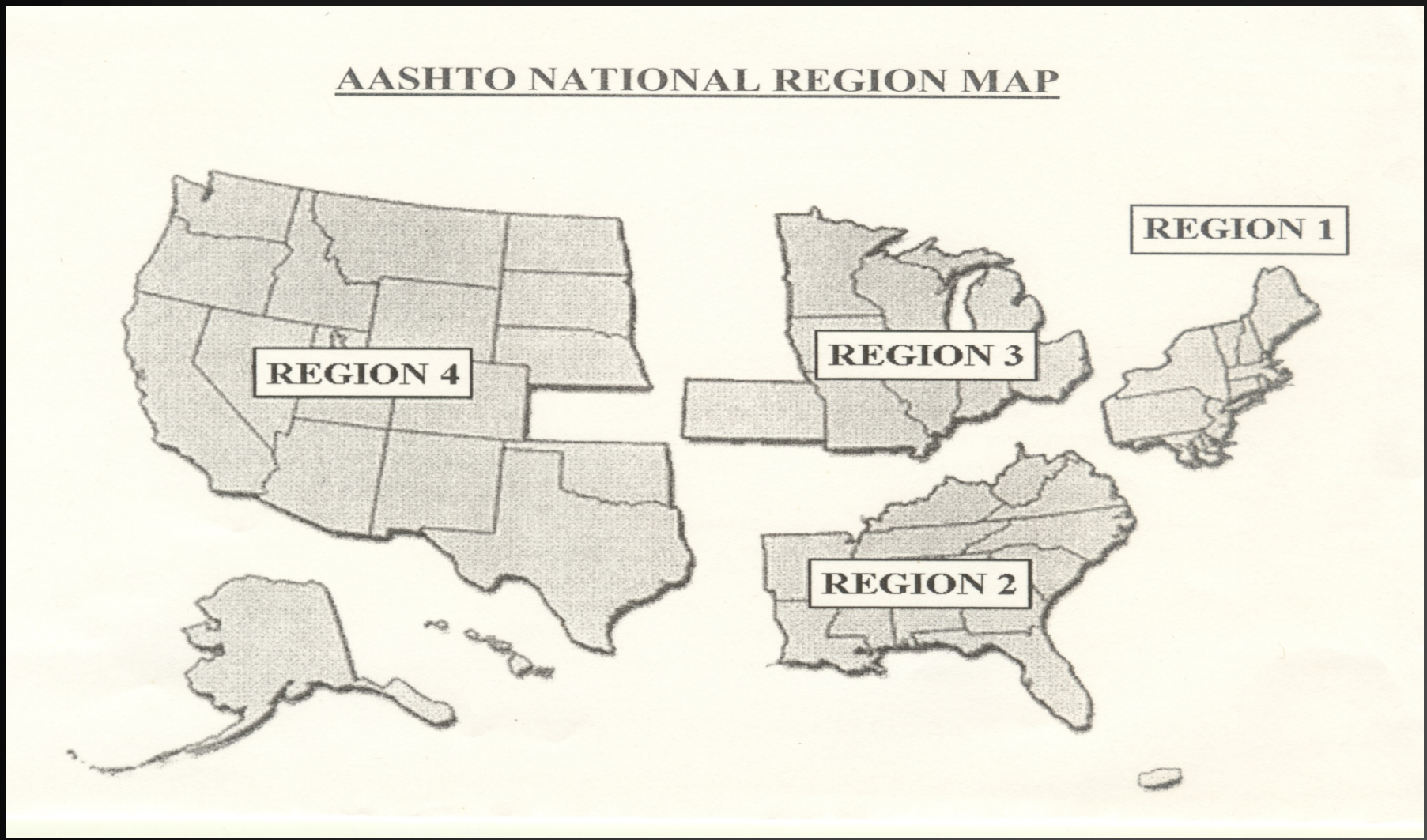
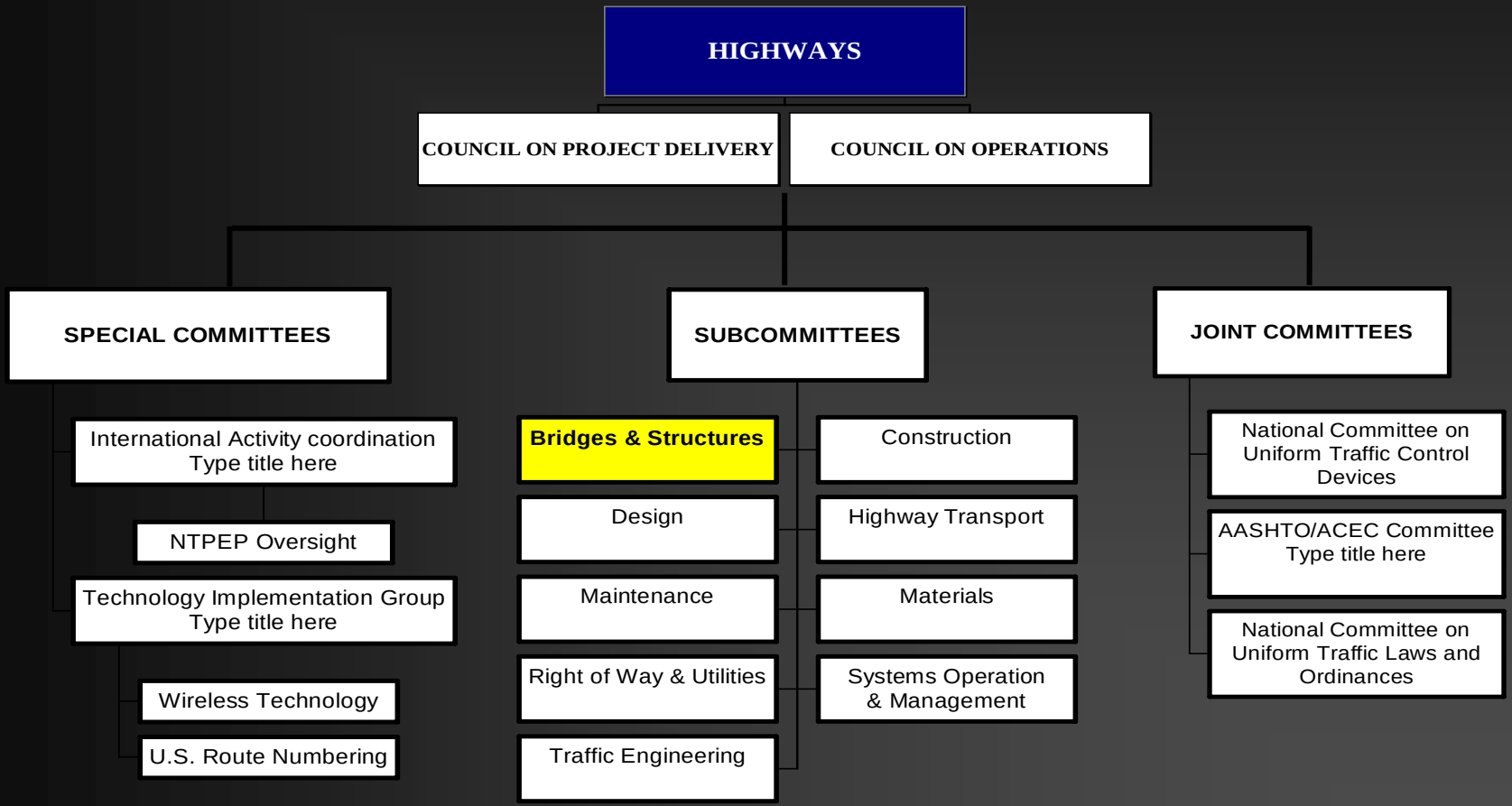


American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Bridge and Structures



American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Bridge and Structures

Technical Committee for Security (T-1)
Technical Committee for Bearings and Expansion Devices (T-2):
Technical Committee for Seismic Design (T-3)
Technical Committee for Construction (T-4)
Technical Committee for Loads and Load Distribution (T-5)
Technical Committee for Fiber Reinforced Polymer Composites (T-6)
Technical Committee for Guardrail and Bridge Rail (T-7)
Technical Committee for Movable Bridges (T-8)
Technical Committee for Bridge Preservation (T-9)
Technical Committee for Concrete Design (T-10)
Technical Committee for Research (T-11)
Technical Committee for Structural Supports for Signs, Luminaries, and Traffic Signals (T-12)
Technical Committee for Culverts (T-13)
Technical Committee for Structural Steel Design (T-14)
Technical Committee for Substructures and Retaining Walls (T-15)
Technical Committee for Timber Structures (T-16)
Technical Committee for Welding (T-17)
Technical Committee for Bridge Management, Evaluation and Rehabilitation (T-18)
Technical Committee for Computers (T-19)
Technical Committee for Tunnels (T-20)

T-18 Technical Committee on Bridge Management, Evaluation, and Rehabilitation

Committee Chair- Matt Farrar (Idaho)

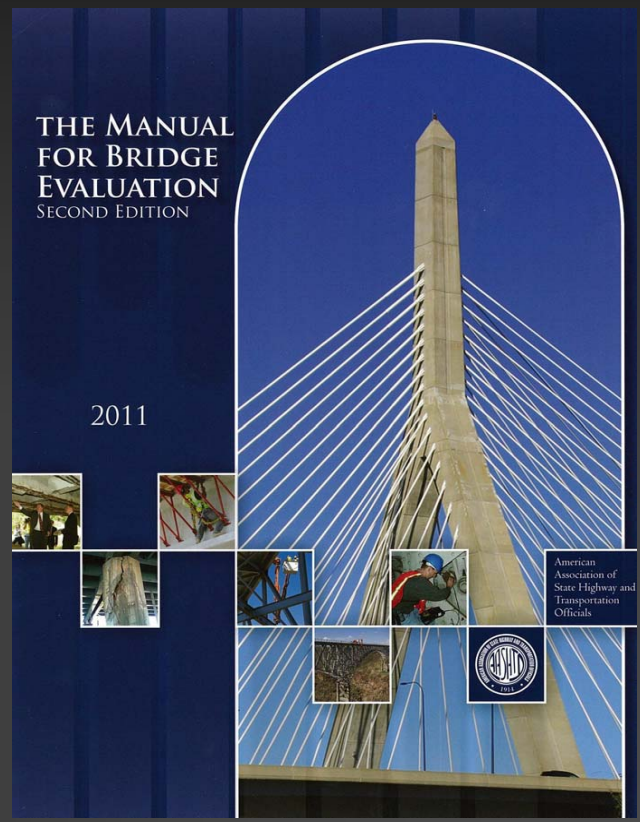
Developed and Maintains:

- **Guidelines for Bridge Management Systems, 1st Edition**
- **Manual for Bridge Evaluation (MBE), 2nd Edition**
- **New AASHTO Guide Manual for Bridge Element Inspection, 1st Edition**
- **Proposes and monitors research**
- **Liaison with FHWA in regards to the National Bridge Inspection Standards (NBIS)**

Manual for Bridge Evaluation (MBE)

This Manual serves as a standard and provides uniformity in the procedures and policies for determining the physical condition, maintenance needs, and load capacity of the nation's highway bridges.

It has been developed to assist Bridge Owners by establishing inspection procedures and evaluation practices that meet the National Bridge Inspection Standards (NBIS).

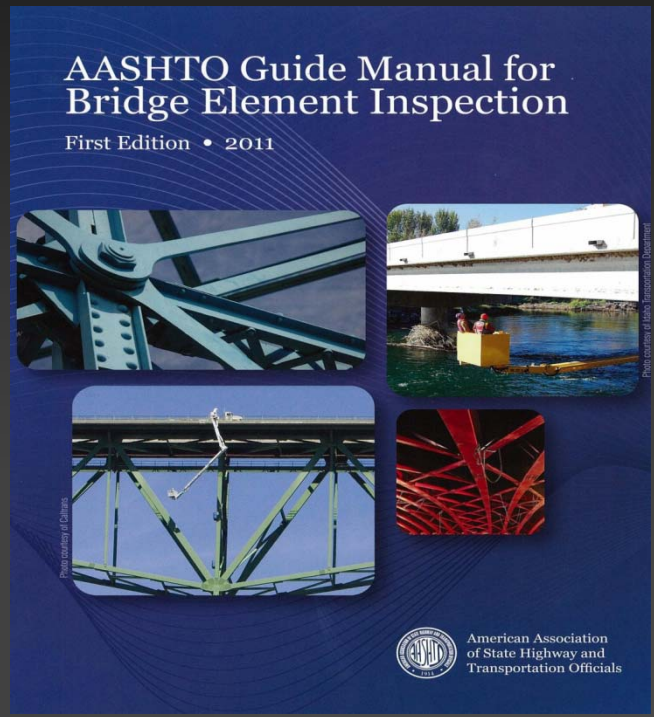


Manual for Bridge Evaluation (MBE)

ABBREVIATED TABLE OF CONTENTS

Guide Manual for Bridge Element Inspection

The goal of this guide manual is to completely capture the condition of bridges in a simple way that can be standardized across the nation while providing the flexibility to be adapted to both large and small agency settings.



Guide Manual for Bridge Element Inspection

- Four condition states for all elements (Good, Fair, Poor, Serious convention)
- Wearing surfaces separated from deck element
- Deck element units changed to square feet with multiple deterioration paths.
- Steel protective coatings separated from steel.
- All smart flags have been incorporated into condition state language.
- New elements for timber trestle and framed/built up tower supports.

Guide Manual for Bridge Element Inspection

- National Bridge Elements (NBE's)
  - Represent the primary structural components of bridges necessary to determine overall condition and safety.
  - Includes all primary structural elements .Decks, Slabs, Girders, Columns, Abutments etc.

- Bridge Management Elements (BME's)
  - Elements define secondary bridge components. Joints, wearing surfaces, protective coatings, etc.
  - Provide and added level of condition assessment for agencies utilizing bridge management systems.
  - Can be extended to capture other components as desired by the agency.

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Guide Manual for Bridge Element Inspection

- Agency Developed Elements
  - Supports agency developed elements.
  - May be sub sets of NBE's or BME's.
  - May be unrelated to any defined element.
  - May be subject to deterioration modeling or not.
  - Allows the incorporation of non bridge assets.

Guide Manual for Bridge Element Inspection

“To develop the best approach to bridge condition assessment possible and implement it’s use nationwide”

T-18 Technical Committee Update

- 2011 Manual for Bridge Evaluation Approved Ballot Items
  - Article 2.4.3, New Article to introduce the AASHTO Guide Manual for Bridge Element Inspection into the Manual for Bridge Inspection
  - New Section 3, Complete revision to Bridge Management Systems Section in the Manual for Bridge Evaluation
  - Article C4.4.3, adds new commentary acknowledging that training and experience are essential for non engineer and engineer team leaders
  - Article 6A.6.12.5 & 6B.6.3.1 revises the way in which rivet shear capacity is determined

T-18 Technical Committee Update

- What's in the future for the Manual for Bridge Evaluation?
  - Provisions for Load Rating of Culverts and other buried structures with examples
  - Updates to Sec. 5 Material Testing
  - Updates to Sec. 7 Fatigue Evaluation (NCHRP 12-81)
  - Updates to Sec. 8 Nondestructive Load Testing

T-18 Technical Committee Update

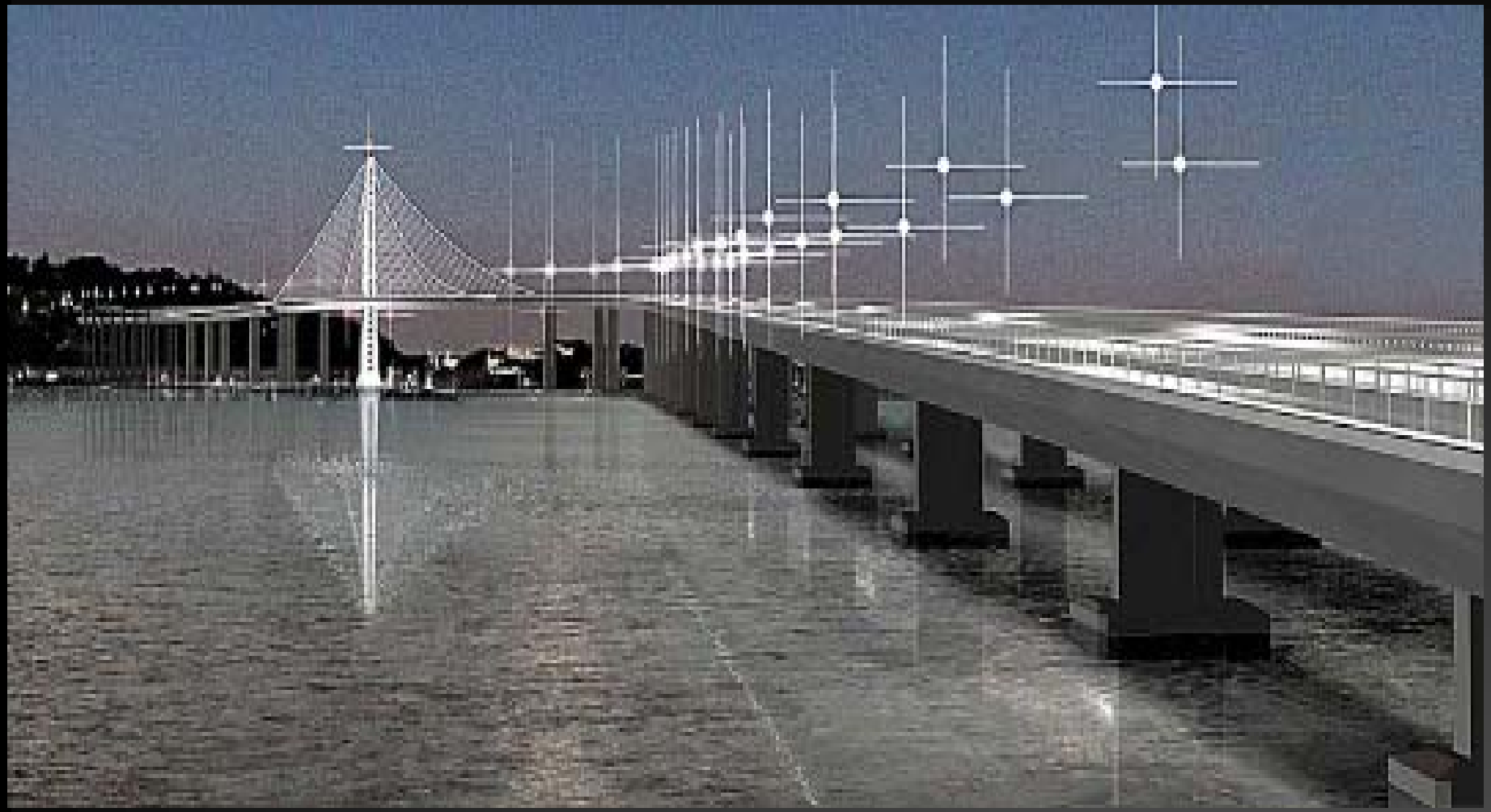
- What's in the future for the Guide Manual for Bridge Element Inspection?
  - Continuous improvements to element descriptions
  - Migrator to help do the conversion from old data to new data.
  - Pontis will support new elements in 2011.
  - Inspector training (NHI Courses)
  - Improved condition assessments will improve bridge management decisions.

T-18 Technical Committee Update

- On-going and future research
  - NCHRP 12-78, Evaluation of LRFR
  - 20-07 Task 285, Recalibration of Permit Load Factors
  - NCHRP 12-81, Reliability Based Bridge Inspections
  - NCHRP 12-82, Evaluation of Fatigue on the Serviceability of Highway Bridges
  - NCHRP 12-84, Gusset Plate Research

T-18 Technical Committee Update

- Other initiatives
  - Joint AASHTO-FHWA Task Force on the NBIS 23 Metrics
  - Establishing a notional design overload truck configuration for LRFD Strength II check (400,000 lbs to 700,000 lbs range)
  - Continue improving the MBE and the Guide Manual for Element Inspection



Thank You