

# Bridge Element Deterioration for Mid-West States TPF-5(432)

Collaboration of AASHTO TSP-2 Members

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Wisconsin Department of Transportation**



**2019 Midwest Bridge Preservation Partnership Meeting  
Bismarck, North Dakota**

# Current Need

- It is necessary for DOTs to have insight to rates of deterioration to be able to anticipate future condition and work actions to manage their bridge assets.
- Deterioration rates and forecasting future condition provides the ability to identify, prioritize, plan, budget, and implement work in a systematic manner.

# Objective of the Study

- **12** mid-west DOTs pool **resources** and historic mid-west DOT bridge **data** related to:
  - Historic design/construction details.
  - Operation practices
  - Maintenance activities
  - **Element, Defect, NBI, and related Inspection data**



# Objective of the Study

- Develop deterioration curves that are specific and focused to address **key transition points** in a life of bridge structures so that **accurate determination of timing of work actions is possible**
- This effort will pool data and create results that will improve accuracy of various bridge management and asset management applications that the member DOTs use (AASHTO BrM, Agile Assets, and homegrown).

# Deliverables

- Analyze DOT **Element**, and **Defect**, and **NBI** information to develop deterioration curves.
- **Correlate available NDE** to historic element information (past NDT results) with actual field work actions.
- Produce first generation of select deterioration curves with documented **methodology to update these curves** and add additional element curves.



# TPF - Bridge Element Deterioration for Mid-West States



- Proposals received August 5<sup>th</sup>, 2019
- 7 Proposals Received
- TAC Selection Meeting September 6<sup>th</sup>, 2019
- Award Letter September 20<sup>th</sup>, 2019
- Project Kick-Off meeting Thursday October 17<sup>th</sup> - Bismarck

# TPF - Bridge Element Deterioration for Mid-West States

- Deterioration Workgroup Leads
  - Bill Oliva – Wisconsin DOT, Fouad Jaber – Nebraska DOT
- Duration: 24 months October 2019 - 2021
- Cost: RFP \$400,000 (2-year project)
- Lead Agency: Wisconsin Department of Transportation
- Contractor – Wood Environmental & Infrastructure Solutions,  
Jonathan Groeger



# TPF - Bridge Element Deterioration for Mid-West States



## Technical Advisory Committee (TAC)

Wisconsin	Bill Oliva	Nebraska	Kent Miller	FHWA Liaison	Ping Lu
Iowa	Scott Neubauer	Nebraska	Fouad Jaber	Ohio	Brad Noll
Iowa	Joe Stanisiz	Michigan	Beckie Curtis	North Dakota	Nancy Huether
South Dakota	David Coley	Michigan	Jacob Armour	Indiana	Adam Post
WisDOT Research	Lynn Hanus	Wisconsin	Ryan Bowers	Kansas	Don Whisler, John Culbertson
Minnesota	Sarah Sondag	Wisconsin	Philip Meinel	Illinois	Sarah Wilson
Minnesota	David Hedeem	Kentucky	Josh Rogers	Indiana	Adam Post



