



WisDOT Office of Management & Budget Research & Library Services

RFP Questions and Responses: Transportation Pooled Fund TPF-5(432) Bridge Element Deterioration for Midwest States

1. The 1st bullet point for Tier 1,
 - a. Are the element level deterioration curves for a reinforced concrete deck with no consideration of any maintenance or preservation activities as the 4th bullet point for Tier 1 listed?
Answer: Typically, when an inspection reports that condition improved, from a previous inspection, the deterioration timeline is reset to begin at the improved condition and inspection date. Different deck types would be evaluated separately if sample size is sufficient.
 - b. Does it also include prestressed concrete decks?
Answer: The bridge inventory of the 12 DOTs in the pooled fund should indicate if this should or should not be included. It is likely that the examination of bridge inventory for the 12 Midwest DOTs will show this to be relatively uncommon compared to cast in place decks.
2. The 3rd bullet point Tier 1, does it consider different materials (e.g., steel, PSC, RC, Timber, etc.) and types (e.g., Tee Beam, Single or Multiple Box Beam, Truss Deck, Arch, etc.) as categorized in the NBI database?
Answer: Yes, it does consider different materials and types. The bridge inventory of the 12 Midwest DOTs should provide insight and guide priority of materials and types. Researcher will need to look at inventory and propose priority of select combination to include.
3. The 4th bullet point for Tier 1,
 - a. What types of major preservation activities should be considered?
Answer: The bridge inventory of the 12 Midwest DOTs should provide insight and guide priority of major preservation activities (such as mill & overlay) or other materials.
 - b. Are the major preservation activities considered for both concrete decks and wearing courses?
Answer: Yes. Again, this will be driven by the practices and population of bridges of the 12 DOTs.
 - c. What types of rigid concrete wearing course should be considered?
Answer: This will be based on the practices and population of bridges of the 12 DOTs. We would anticipate that Ridged Concrete and Thin Polymer Overlays would be included.
4. The 1st bullet point for Tier 2, how can each type of wearing surface be identified as they are coded as Element Number 510 in the database?
Answer: FHWA NBI Item 108A may provide information as well as DOTs with Bridge Management Systems (element BMEs).

5. The 3rd bullet point for Tier 2, what are the scopes for defects (e.g., concrete, steel, timber, decks, slabs, superstructure, etc.)?
Answer: The intent was to focus on decks and concrete.
6. The 4th bullet point for Tier 2,
a. Is the effectiveness of Paint system for all steel made elements at deck, superstructure, and substructure?
Answer: Focus is on superstructures.
b. What about evaluating deterioration rates of concrete beams subjected to corrosion and evaluating protective systems such as concrete wraps?
Answer: This bullet point is focused at paint system effectiveness related to superstructures. It is unlikely that there would be much data among the 12 DOTs related to concrete wraps.
7. The 5th bullet point for Tier 2, is the Steel Girder corrosion for both steel closed web and steel open girder?
Answer: Both closed and open girder should be considered.
8. The 6th bullet point for Tier 2, does it consider different types of materials (i.e., different element numbers)?
Answer: It is anticipated that concrete would be predominant, but inventory of the 12 Midwest DOTs bridges may indicate other materials be included.
9. How much importance do you want us to place for super and substructures in the proposal in relation to slab/deck systems?
Answer: All are important. Decks and slab would be highest priority, followed by superstructure, and substructure. We would anticipate that decks and slabs have the most amount of effort.
10. Is the intent that this is not a materials-based enquiry into deterioration, but instead is a data science base enquiry that would use the data history to find best fit deterioration models for bridge components and elements?
Answer: The intent is that this is not a materials-based enquiry into deterioration, but instead is a data-science-based enquiry that would use the data history to find best fit deterioration models for bridge components and elements. Lab tests will not be required to determine and verify deterioration rates.
11. The RFP is interested in specific element level and material deterioration curves. These types of deterioration curves cannot be obtained from NBI data alone. Do you know what other types of data is available to support this work? The Tier 1 problem statement does mention that "Access to data will be provided as the basis for the research to determine the curves." But it is not clear what this data includes.
Answer: Participating State DOTs would provide access to bridge related data as appropriate.
12. Assuming all items being equal (say between the University of Wisconsin and another institution, would you award the proposal to the University of Wisconsin?

Answer: The RFP for Transportation Pooled Fund TPF-5(432) is an open request for proposals. All proposals will be considered according to the criteria on page 12 of the RFP. Although WisDOT is the lead agency, it is one of 12 states participating in the pooled fund. Each state participating has one vote as part of the proposal scoring and selection process.

13. Can you please identify the other States pooling funds into the project at this time? Clearly, we would like to involve, and give priority to, those Midwestern states in the field study portion of the project.

Answer: Please see the Transportation Pooled Fund web site for a full listing of Midwest DOTs participating in TPF-5(432): <https://www.pooledfund.org/Details/Study/655>

14. Are the research meetings with the TAC planned for Madison, Wisconsin? Or because of the broader participation of the Midwestern state consortium, are face-to-face meetings going to be held at a more central location?

Answer: We anticipate two face-to-face meetings with the Principal Investigator and a series of web-based meetings. The location and timing of the face-to-face meetings will be within one of the participating Midwest DOT states.

15. Under V. - *Scope of Work*, the deliverables require two interim reports, a final report, and a final presentation. Is the DOT open to loosening the interim report requirements, and will maybe consider just progress PowerPoint presentations? Past experience with similar research projects show that a lot of effort goes into preparing the interim reports. Truthfully, the report expense could be better utilized by actually doing more of the basic research work on the project, leading to more information in the final report. We recognize, appreciate, and respect the need for the state DOTs and the TAC to be informed on the progress, but every report and meeting has hard costs associated with it that is diluting the funding actually going to the research.

Answer: We require written reports as part of the research project. The reports will document progress and results at key phases of the project. These reports will help the DOTs move results into production.