



Memorandum

Subject: **INFORMATION**: Specification for
the National Bridge Inventory Bridge
Elements (SNBIBE)

Date: December 16, 2013

/s/ Original Signed by Thomas Everett
for

From: Joseph S. Krolak
Acting Director, Office of Bridges and Structures

In Reply :
HIBS-30

To: Federal Lands Highway Division Engineers
Director of Technical Services
Division Administrators

This memorandum¹ provides continued guidance on the collection of element level data for bridges on the National Highway System (NHS)² and issues the Specification for the National Bridge Inventory Bridge Elements (SNBIBE) (attachment one), along with the XML schema (attachment two) and example XML data set (attachment three). This specification and schema provide the framework needed to support the collection and reporting of element level bridge condition data to the Federal Highway Administration (FHWA) per 23 U.S.C 144. Each State is required under 23 U.S.C. 144(d) to report element level data as each bridge is inspected. This guidance will aid in that task. Lastly, frequently asked questions and answers that expand upon those provided in our earlier memoranda can be found in attachment four.

We will continue to keep you informed as we move forward so that you can respond to inquiries from your partners and stakeholders. Please share this update with your State DOT or Federal Agency partners and stakeholders. Mr. Wade F. Casey, P.E. may be contacted at 202-366-4606 or Wade.Casey@dot.gov for further information on this initiative.

Attachment one: Specification for the NBI Bridge Elements

Attachment two: XML schema

Attachment three: example XML data set

Attachment four: SNBIBE Frequently Asked Questions

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¹ Previous memorandums on the topic of collection of element level data were issued on April 16, 2012 and March 12, 2013.

² Recall that 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 element level data to the Secretary.

SNBIBE Frequently Asked Questions and Answers

The following frequently asked questions and answers expand upon those provided in our earlier memoranda:

What are the goals of the SNBIBE?

The goals of this specification are to: a) provide the framework needed to support inventory and assessment of common bridge elements that can be used to better describe the condition of bridges in the NBI; and b) provide consistency for element identification, quantity measurement, and condition state (CS) assessment.

Where can the element descriptions, quantity calculations and CS definitions be found?

The SNBIBE references the AASHTO Manual for Bridge Element Inspection, First Edition³ for element descriptions, quantity calculations and CS definitions. Element descriptions, quantity calculations and CS definitions are not included in the SNBIBE.

Where can I find a list of bridge elements for which data will be collected by the FHWA?

Refer to Table 1 and Appendix B of the SNBIBE for a listing of elements for which data will be collected by the FHWA for NHS bridges.

Why does FHWA intend to collect some AASHTO Bridge Management Elements (BMEs) in addition to National Bridge Elements (NBEs)?

Collection of some BME data will facilitate bridge preservation needs assessment and performance measurement. For the NBEs, the FHWA is looking for consistency in condition state language. For the BMEs, the FHWA understands that States may deviate from the condition state language found in the AASHTO Manual for Bridge Element Inspection, First Edition, as long as the four states still represent good, fair, poor, and severe conditions.

What data items will be collected for each element inventoried for a bridge?

Data items to be collected for each element inventoried for a bridge are specified in the Element Data Items section of the SNBIBE. The Bridge Element Data Format is shown in Appendix C of the specification.

Will specific material defect data shown in the AASHTO Manual for Bridge Element Inspection be collected by the FHWA?

Specific material defect data as shown in Appendix D and Figure D-1 of the AASHTO Manual for Bridge Element Inspection, First edition, will not be collected by the FHWA.

Are there any plans for combining the specification for the NBI and the SNBIBE?

Yes, we plan to eventually combine the updated specifications for the NBI and the SNBIBE.

What are the expectations for reporting element level data for NHS bridges that are inspected at an extended interval?

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. Therefore, the expectation is that element level data is to be collected during the first scheduled inspection after October 1, 2014 for bridges meeting approved criteria for extended inspection

³ This manual is available for purchase from the AASHTO book store located at, <https://bookstore.transportation.org/>

intervals. Any exceptions to this will require case-by-case approval through the Division Office.

Some States are assuming that the element inspection data is associated with the routine inspection only, is this true?

This is not true. According to the Moving Ahead for Progress in the 21st Century Act (MAP-21), “Section 1111(d)(2) - INSPECTION REPORT- Not later than 2 years after the date of enactment of the MAP-21, each State and appropriate Federal agency shall report element level data to the Secretary, *as each bridge is inspected* [emphasis added] pursuant to this section, for all highway bridges on the National Highway System.” The FHWA interprets the phrase “*as each bridge is inspected*” to mean that element data is to be updated whenever conditions change regardless of the inspection type. This is not unlike the current practice and expectations associated with reporting component condition ratings for the deck, superstructure, substructure, and culvert. The FHWA expects the element data reported to reflect current conditions regardless of the types of inspections done to gather the data. States and Federal agencies have latitude to establish their processes to ensure that the element data is updated prior to reporting to the FHWA, just as they have done for NBI component ratings.

The FHWA has indicated that they believe an element inspection may be required for all inspections, is this true?

This is true for only the elements or portions of the elements that are inspected during a specific inspection type. States and Federal agencies have latitude to establish their practices to ensure that the element data is updated and complete prior to reporting to the FHWA, just as they have done for NBI component ratings. For example, if a State chooses to only update fracture critical (FC) element condition data during an FC member inspection, they ultimately need to establish the means of combining the FC element data with all other elements on the bridge for a complete submission to the FHWA.

Attachment (4)