

Extended Inspection Frequency Clarification

The full lists of requirements approved by the Federal Highway Administration are at the end of this document.

The default for inspection frequencies will continue to be 24 months as shown below. It shall be the owners' decision to go to an extended inspection frequency greater than 24 months up to 48 months. To go to an inspection frequency greater than 24 months you must perform an in-depth inspection first. You are required to perform an initial inspection and a second inspection in 24 months on new and reconstructed bridges before going to an extended inspection frequency.

When an inspection report is created, SIIMs will notify you on the Inspection Info form whether the bridge is eligible for 48 month inspection cycle based on the current Edit Asset Values. If the bridge is not eligible, SIIMs will display a message stating it is not eligible, as shown in the second screen shot below.

Inspection Info Form

The first screenshot shows the 'Inspection Info Form' with 'NBI90 Information' at the top. It includes checkboxes for 'Routine' (unchecked) and 'In-Depth' (checked), and a date field for 'NBI 90 Date' set to '11/25/2014'. To the right, a red-bordered box contains the text: 'NBI 91 Freq: 24 Bridge Does Qualify for a 48 Month Inspection cycle', 'Due to the following:', and '** Other rules may not be met as well **'.

The second screenshot shows the same form but with a different message in the red-bordered box: 'NBI 91 Freq: 24 Bridge Does Not Qualify for a 48 Month Inspection cycle', 'Due to the following: Rule 2 NBI 58,59,60,61,62 does not have a rating>5', and '** Other rules may not be met as well **'.

Error Check Form

The 'Error Check Form' displays the following information: '3815.6L020 (District 1), Report Date: 08/04/2015 - 3 errors found'. It lists three errors:

- Error 91:** NBI 91 can not be 48 because the bridge is not eligible for 48 month inspection. Please correct to '24' months or less. Form: SIA [Edit Values](#)
- Rule 17:** An In-depth inspection was not done at the current inspection and the last value of NBI 91 was not 48. Form: SIA [Edit Values](#)
- Error 118:** The Load Rating Evaluation form must be filled out. Please answer if the bridge was re-rated following this inspection. Form: Load Rating Evaluation [Edit Values](#)

At the bottom of the form is a button labeled 'Submit Report for Review'.

As the bridge is inspected, criteria could change that makes a bridge ineligible or eligible for an extended inspection. If this happens, the Inspection Info will only be updated after going to the Error Check form under Report Info or when trying to finalize an inspection report. See example of error Check shown above.

If you have any Question please contact James Hauber at James.Hauber@dot.iowa.gov or at 515-239-1648.



Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

Phone: 515-239-1564

Fax: 515-239-1978

May 17, 2013

National Bridge Inspection Standard (NBIS)
48 Month Inspection Interval

Mr. Lubin Quinones
Iowa Division Administrator
Federal Highway Administration
105 Sixth St.
Ames, IA 50010

Dear Mr. Quinones;

The State of Iowa is requesting approval to establish an inspection interval of 48 months based on the specific criterion included in this request. The criteria have been established based on requirements in FHWA Technical Advisory 5140.21. The total number of bridges that are part of the National Bridge Inventory (NBI) in Iowa, which will potentially qualify for the extended inspection frequency, is 4,109. This total is approximately 17% of Iowa's bridge inventory. The list of qualifying NBI bridges is included with this request.

In Iowa, bridges are inspected by the agency having jurisdiction over the highway system where the bridge is located. A Local Public Agency (LPA) responsible for inspecting a given bridge will make the determination of the frequency interval based on the criteria proposed. They will not be required to change the frequency of any bridge, if they so choose. The State Program Manager will oversee the implementation of increased inspection intervals and provide guidance to LPA's.

The process for changing a bridge to the 48 month inspection frequency will be done manually. A Team Leader or LPA Inspection Manager will determine whether a bridge meets the 48 month frequency requirements and manually change the frequency based on the last In-depth inspection. The Structure Inventory and Inspection Management System (SIIMS) inspection software will be programmed to verify that the 48 month frequency meets all required criterion. When a bridge no longer meets the 48 month criteria, the SIIMS inspection software will not allow an inspection report to be finalized until the frequency is changed to 24 months or less.

Bridges that have been the most likely bridges to have failures are timber girder bridges or timber culverts. Timber girder bridges and timber culverts have been excluded as candidates for the 48 month inspection frequency. The majority of the bridges that meet the criteria we are proposing for the 48 month inspection frequency are pretensioned prestressed concrete

girders or concrete slab bridges. These bridges have shown to be the most reliable and efficient types in our inventory. We foresee more culverts meeting the 48 month criteria once more of them have load ratings performed.

The criteria a bridge must meet to be considered for the 48 month inspection frequency are as follows:

1. NBI Items 63 and 65 must be coded with a rating method. A coding of 5 or 0 does not qualify for extended frequency.
2. NBI Condition ratings for Deck (58), Superstructure (59), Substructure (60), Channel (61), or Culvert (62) must be greater than 5.
3. The bridge cannot be Structurally Deficient.
4. NBI Item 113 (Scour) cannot be coded as U, 1, 2, 3, 4, or 6.
5. The bridge cannot have Fracture Critical elements. Item 92A will be used to Identify Fracture Critical bridges.
6. The Inventory Rating must be greater than or equal to 36 tons or have an Inventory Rating factor greater than or equal to 1.0 based on HS-20 or HL-93 loadings.
7. Culverts must be less than 60 years old to have an extended inspection frequency.
8. Bridges must be less than 50 years old to have an extended inspection frequency.
9. The ADT must be less than or equal to 20,000.
10. All bridges and culverts on Mainline Interstate I-80 cannot have an extended inspection frequency.
11. Bridges that are posted for a Legal Load weight limit cannot have an extended inspection frequency.
12. Bridges with timber superstructures or timber culverts cannot have an extended inspection frequency.
13. Bridges with spans greater than 100 feet in length cannot have an extended inspection frequency.
14. Bridges with vertical under clearances (Item 54) less than 14'-6" cannot have an extended inspection frequency.
15. A new or rehabilitated bridge will have an Initial inspection as defined by the NBIS. An In-Depth inspection will be conducted 24 months after the Initial inspection. After the In-Depth inspection, the bridge can be considered for an extended inspection frequency.
16. Border bridges co-owned by Iowa and an adjoining state cannot have an extended inspection frequency.
17. Complex bridges, as defined by the NBIS, will not qualify for extended inspection frequency.

All of the structures in the list of potential candidates for the 48 month inspection frequency will have an in-depth inspection performed before the frequency can be changed to 48 months. Our inspection software has fields designated to identify the inspection type and will be used to verify an in-depth inspection has been done.

Any questions regarding this proposal may be directed to Scott Neubauer at 515-239-1165.

Sincerely,

A handwritten signature in black ink that reads "Scott Neubauer". The signature is written in a cursive style with a long, sweeping underline.

Scott Neubauer
Bridge Maintenance and Inspection Engineer
Office of Bridges and Structures

cc: Mitchell Dillavou, Iowa D.O.T. Project Delivery Bureau Director
Norman McDonald, Iowa D.O.T Bridge Engineer
Chris Cromwell, Iowa FHWA Division Bridge Engineer