

category; excluding those on which Airbus Modifications 27150, 27955, and 27472 have been installed.

*Compliance:* Required as indicated, unless accomplished previously.

To prevent ignition sources and consequent fire/explosion in the fuel tank, accomplish the following:

#### **Restatement of Requirements of AD 2000-14-15**

##### *Modification and Installation*

(a) Within 36 months after August 28, 2000 (the effective date of AD 2000-14-15, amendment 39-11825), modify the fuel pipe couplings and install bonding leads in the specified locations of the fuel tank, per the Accomplishment Instructions of Airbus Service Bulletin A320-28-1077, dated July 9, 1999; Revision 01, dated April 26, 2000; Revision 02, dated June 28, 2000; Revision 03, dated October 3, 2000; Revision 04, dated December 14, 2001; or Revision 05, dated August 27, 2002. As of the effective date of this AD, only Revisions 01, 02, 03, 04, and 05 may be used.

#### **New Requirements of This AD**

##### *Modification and Installation*

(b) Do the applicable actions required by paragraphs (b)(1) and (b)(2) of this AD at the times specified.

(1) For airplanes on which the actions required by paragraph (a) of this AD have been done per Airbus Service Bulletin A320-28-1077, dated July 9, 1999: Within 36 months after the effective date of this AD, install an additional bonding lead (including an electrical resistance check) by doing all the actions per paragraphs 3.B.(3) and 3.C. of the Accomplishment Instructions of Airbus Service Bulletin A320-28-1077, Revision 04, dated December 14, 2001; or Revision 05, dated August 27, 2002.

(2) For airplanes on which an additional center fuel tank is installed, as described in Airbus Service Bulletin A320-28-1079, dated November 30, 1998: Within 20 months after the effective date of this AD, modify the fuel system of the additional center fuel tank (including an electrical resistance check) by doing all the actions per paragraphs 2.A. through 2.E. of the Accomplishment Instructions of the service bulletin.

##### *Alternative Methods of Compliance*

(c)(1) In accordance with 14 CFR 39.19, the Manager, International Branch, ANM-116, FAA, is authorized to approve alternative methods of compliance for this AD.

(2) Alternative methods of compliance, approved previously in accordance with AD 2000-14-15, amendment 39-11825, are not considered to be approved as alternative methods of compliance with this AD.

**Note 1:** The subject of this AD is addressed in French airworthiness directive 2002-202(B), dated April 17, 2002.

Issued in Renton, Washington, on September 3, 2003.

**Ali Bahrami,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*  
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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Highway Administration**

#### **23 CFR Part 650**

**[FHWA Docket No. FHWA-2001-8954]**

**RIN 2125-AE86**

#### **National Bridge Inspection Standards**

**AGENCY:** Federal Highway Administration (FHWA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM); request for comments.

**SUMMARY:** The FHWA is requesting comments on proposed revisions to its National Bridge Inspection Standards (NBIS). This proposed action is necessary to address perceived ambiguities in the NBIS that have been identified since the last update to the regulation fourteen years ago. The proposed changes would clarify the NBIS language that is vague or ambiguous; reorganize the NBIS into a more logical sequence; and make the regulation easier to read and understand, not only by the inspector in the field, but also by those administering the highway bridge inspection programs at the State and Federal agency level.

**DATES:** Comments must be received on or before November 10, 2003.

**ADDRESSES:** Mail or hand deliver comments to the U.S. Department of Transportation, Dockets Management Facility, Room PL-401, 400 Seventh Street, SW., Washington, DC 20590, or submit electronically at <http://dmses.dot.gov/submit>. All comments should include the docket number that appears in the heading of this document. All comments received will be available for examination and copying at the above address from 9 a.m. to 5 p.m., e.t., Monday through Friday, except Federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard or you may print the acknowledgment page that appears after submitting comments electronically. Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if

submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70, Pages 19477-78) or you may visit <http://dms.dot.gov>.

**FOR FURTHER INFORMATION CONTACT:** Mr. Wade F. Casey, P.E., Federal Lands Highway, HFPD-9, (202) 366-9486, or Mr. Robert Black, Office of the Chief Counsel, HCC-30, (202) 366-1359, Federal Highway Administration, 400 Seventh Street, SW., Washington, DC 20590-0001. Office hours are from 7:45 a.m. to 4:15 p.m. e.t., Monday through Friday, except Federal holidays.

#### **SUPPLEMENTARY INFORMATION:**

##### **Electronic Access and Filing**

You may submit or retrieve comments online through the Document Management System (DMS) at: <http://dmses.dot.gov/submit>. Acceptable formats include: MS Word (versions 95 to 97), MS Word for Mac (versions 6 to 8), Rich Text File (RTF), American Standard Code Information Interchange (ASCII)(TXT), Portable Document Format (PDF), and WordPerfect (versions 7 to 8). The DMS is available 24 hours each day, 365 days each year. Electronic submission and retrieval help and guidelines are available under the help section of the Web site.

An electronic copy of this document may also be downloaded by using a computer, modem and suitable communications software from the Government Printing Office's Electronic Bulletin Board Service at (202) 512-1661. Internet users may also reach the Office of the Federal Register's home page at: <http://www.archives.gov> and the Government Printing Office's web page at: <http://www.access.gpo.gov/nara>.

##### **Background**

The FHWA bridge inspection program regulations were developed as a result of the Federal-Aid Highway Act of 1968 (sec. 26, Public Law 90-495, 82 Stat. 815, at 829) that required the Secretary of Transportation to establish national bridge inspection standards (NBIS). The primary purpose of the NBIS is to locate and evaluate existing bridge deficiencies to ensure the safety of the traveling public.

The 1968 Federal-Aid Highway Act directed the States to maintain an inventory of Federal-aid highway system bridges. The Federal-Aid Highway Act of 1970 (sec. 204, Public Law 91-605, 84 Stat. 1713, at 1741) limited the NBIS to bridges on the Federal-aid highway system. After the Surface Transportation Assistance Act

of 1978 (STAA) (sec. 124, Public Law 95-599, 92 Stat. 2689, at 2702) was passed, NBIS requirements were extended to bridges greater than 20 feet on all public roads. The Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURRA) (sec. 125, Public Law 100-17, 101 Stat. 132, at 166) expanded bridge inspection programs to include special inspection procedures for fracture critical members and underwater inspection.

The condition of our nation's bridges is of paramount importance to the FHWA. In proposing revisions to the NBIS regulations, the FHWA will continue to ensure the "proper safety inspection and evaluation of all highway bridges" for the safety of the traveling public.

Accordingly, a seven-member FHWA team was formed to examine and analyze comments to the ANPRM and write the proposed rule. This team has over 92 years of combined experience working with the NBIS regulations and over 140 years of combined experience working with bridges and structures. Six of the team members are licensed professional engineers (PE).

#### **Discussion of Comments Received to the Advance Notice of Proposed Rulemaking (ANPRM)**

The FHWA issued an ANPRM on September 26, 2001, at 66 FR 49154, to solicit comments on whether to revise the NBIS to incorporate current, state-of-the-art bridge inspection practices. The FHWA received 51 sets of comments to the docket. Comments to the ANPRM were submitted by representatives from 30 States, 3 Federal agencies, 2 counties, 5 consulting firms, 7 private citizens, 3 trade associations and 1 public interest group. In summary, the majority of the commenters believed the NBIS should be revised.

#### **Application of Standards**

Most commenters believed the present definition of bridge should not be modified and has generally been accepted by most public authorities. In general, commenters felt that the existing bridge definition is well understood and recognized within the bridge community. The New York DOT indicated that its State law defines a bridge the same way and therefore, the current definition should not be changed.

The Advocates for Highway and Auto Safety commented that it would be appropriate for the FHWA to revisit the definition and consider expanding the national bridge inventory (NBI) to include all structures that can

reasonably be said to perform bridge functions.

The New Jersey, Delaware, New Hampshire, Florida, and Connecticut DOT's and the American Road and Transportation Builders Association (ARTBA) indicated a preference to maintain the current method of determining bridge length and what minimum length should be used for reporting purposes. The South Dakota DOT and five private citizens indicated that they have concern regarding the definition as it applies to highly skewed, short-span reinforced concrete box culverts. The Minnesota DOT indicated that the State has changed their bridge length definition from 20 to 10 feet. The Maryland DOT recommended an alternative way to measure bridge length from "back of back wall" to "back of back wall" for beam type structures. The Advocates for Highway and Auto Safety (Advocates) commented that there are many bridges that are in all respects similar to bridges that are included in the NBI but are not counted since they are less than 20 feet. Also, the Advocates commented that the FHWA adopted the American Association of State Highway Transportation Officials (AASHTO) bridge definition without serious discussion or debate and without the agency compiling an independent record to support the AASHTO bridge definition.

On the question we posed in the ANPRM regarding the "impact of the possible inclusion of more bridges on public authorities, or on the FHWA that maintains the inventory, or on the highway bridge replacement and rehabilitation program (HBRRP) funds," many commenters felt that doing this would add additional bridges to the inventory, require additional resources to inspect those bridges and place a burden on existing HBRRP funds. The Florida DOT thought the increase in bridges to be inspected would be minimal. The Iowa DOT felt public authorities should use their own expertise and experience in deciding how and when to inspect structures that do not meet the NBIS bridge definition. The Wyoming DOT felt public authorities can elect to inspect structures 20 feet or less in length if they feel it is warranted. The Advocates commented that under an expanded definition there would be improved public safety, the NBI would be an even more comprehensive bridge inventory and it would focus more attention and Federal resources, (*i.e.*, HBRRP funds) on deficient structures.

#### **Inspection Procedures**

Most commenters did not want to see the current five-year underwater inspection interval changed. Three private citizens, David Stevens, Mark Bostick and William Hovell commented that they wanted to see the interval reduced to coincide with the two-year biennial above water inspections. The Advocates commented that it felt that the FHWA considers the bridge support above water as separate and distinct from portions of the bridge support below the waterline; it asked the FHWA to include underwater elements of bridge supports in the definition "bridges." The Advocates also commented that until there is a valid basis (*i.e.*, collected information, studies, scientific data) for evaluation of the 5-year cycle, the FHWA should not entertain extending that interval beyond 5 years. The Connecticut DOT indicated that it inspects at a two-year interval. Collins Engineers, Inc. indicated that many agencies schedule underwater inspections to coincide with biennial inspections. The New Jersey DOT and Department of the U.S. Navy recommended a four-year interval to correlate with the regular NBIS inspection. A number of State transportation departments, consulting firms and private citizens wanted the inspection interval tied to materials of the bridge and its environment.

A majority of commenters did not feel that those performing underwater inspections must be qualified licensed professional engineers. Four State transportation departments and the American Road and Transportation Builders Association felt that qualifications should be the same as those performing above water inspections. The California DOT felt that the team leader must be a licensed professional engineer and a qualified diver. The South Dakota DOT, Department of the U.S. Navy, and Collins Engineers, Inc. supported the concept of professional engineer-diver.

Most commenters felt that incorporating the evaluation of scour at bridges criteria within the NBIS regulation would have little impact since most States have scour programs. Regarding incorporation of the scour technical advisory within the NBIS some State transportation departments were in favor and some were not. The North Dakota DOT indicated that local authorities should be performing post storm event inspections and therefore post storm event inspections did not need to be addressed in the regulations. The North Carolina DOT felt that requiring States to have a major storm

event plan of action would be acceptable. The Advocates commented that the FHWA should affirmatively review the need for separate inspections specifically to determine if scour has occurred following floods, storms, earthquakes, etc. and whether scour inspections on certain bridges should be automatically required within a specified period of time.

#### Frequency of Inspection

Most commenters were not in favor of increasing the maximum inspection interval beyond the current four-year interval. New Jersey, North Carolina, Oregon, Florida and New Hampshire DOT's indicated that they do not use an extended inspection cycle and see no benefit in extending the inspection interval. Florida and New Hampshire DOT's indicated that State statute required a two-year inspection frequency. The Advocates commented that short inspection intervals should be maintained at two years, and that longer inspection intervals (not (to) exceed four years) are permissible as long as decisions for longer inspections are supported by engineering data.

#### Qualifications of Personnel

Most commenters indicated that the individual in charge of inspection and reporting, who is a Professional Engineer (PE), should be required to have the same training as a bridge inspector and have additional experience in bridge inspection. Three private citizens, Craig Fink, Mathew Farrar, and Gary Doerr along with the Wyoming, Iowa, Tennessee, Illinois, Minnesota, Maine, California and Utah DOT's indicated that having the same training as bridge inspectors was not necessary. Two private citizens, Craig Fink and Gary Doerr, and the Minnesota, Maine, and California DOT's mentioned that the rules and regulations governing professional registration would ensure that the professional engineer be competent in the area of practice. The Michigan DOT indicated that in addition to initial training the individual in charge should have refresher training. The Advocates commented that those overseeing and conducting bridge inspections have adequate experience and appropriate and relevant education.

Commenters were evenly divided as to the need for certification training in proportion to the complexity of the bridge being inspected. The Wyoming and Wisconsin DOT's and 3 private citizens felt that adequate training is fine; however, it should be combined with relevant and verifiable experience. The New Jersey, California and Florida

DOT's were strongly opposed to the idea of multi-level certifications and the New Jersey DOT thought that it would be difficult to administer. The Washington, Iowa and New York DOT's thought certification should be established by each agency or State. The Advocates commented that the NBIS should require levels of training appropriate for the complexity of the bridge structure to be inspected.

In the current regulation, the discipline of a professional engineer who is in charge of inspection and reporting is not specified. The majority of commenters thought the professional engineering discipline (*i.e.*, civil, structural, etc) should be specified within the regulation. A private citizen, Gary Doerr, along with the Minnesota, Florida and Illinois DOT's thought this unnecessary since it is adequately addressed within each State's rules and regulations governing professional registration. The Advocates commented that the NBIS should require that the person performing inspections and reporting be either a civil or structural professional engineer, with a minimum of five years experience in bridge inspection, and have periodic refresher training in latest inspection techniques and technologies.

#### Inspection Report

Most commenters believed that oversight of inspection efforts and quality control/quality assurance procedures, necessitated that inspection reports be changed by management when errors were encountered. Most commenters agreed that changes should be allowed, as long as the field inspector has been notified and concurs with the change. The Wisconsin, Delaware and Massachusetts DOT's indicated that only the inspection team leader should be authorized to make changes to an inspection report.

#### Inventory

Most commenters felt that the NBIS reporting requirements were reasonable and need not be changed. The Florida DOT indicated that the States should be relieved of the requirement to maintain data on Federal agency bridges since that information is supplied directly to the FHWA.

#### Reorganization of the Regulation

The Delaware DOT thought the regulations ambiguous and should be refined. The Oregon DOT felt that much upgrading and reorganization is needed. One of the questions posed in the ANPRM was whether the current NBIS correctly addresses the requirements of

23 U.S.C. 151 and the comments indicate that it does.

#### Recommended Improvements

Eleven State transportation departments recommended improvements to bridge inspection procedures. The Virginia DOT wanted to expand the NBIS to promote both safety inspections and maintenance evaluations. The Minnesota DOT wanted the NBIS to address private bridge ownership compliance with NBIS requirements. National certification standards, was mentioned by the Delaware DOT. The Massachusetts DOT wanted clarification of the term "unique or special feature." The South Dakota DOT suggested "less stringent inspector qualifications for more simple type of structures." The Oregon DOT proposed the incorporation of "element level bridge inspection" data. The Washington DOT suggested that the NBIS include any "structural element that can impact safety," *e.g.*, sign structures, mechanical and electrical components on movable structures, tunnels and retaining walls.

Lastly, nine State transportation departments and a private citizen recommended specific procedures to enhance the NBIS which include the following: Handheld computer data entry in the field; flexibility in minimum inspection intervals for newer or historically stable bridges; flexibility for the States to set qualification standards and certify their inspectors; enhance technology and attract engineers to the bridge inspection field; provide a communication element among the States; establish unambiguous definitions; review the NBIS regulations on a more regular basis; establish a quality control/quality assurance program; use element level inspection data; define arms length inspections; and clarify inspector qualifications.

#### Summary of the Proposed Revisions to the NBIS

The proposed revisions to the NBIS are based in part on comments received to an advance notice of proposed rulemaking (ANPRM) published on September 26, 2001, at 66 FR 49154. The proposed changes address ambiguous language and clarify the following areas: Purpose; applicability; terminology; bridge inspection organization; qualifications; inspection frequency; inspection procedures; and inventory. The FHWA proposes to reformat the NBIS to place referenced definitions in one section instead of being buried throughout the regulation's narrative. The FHWA proposes to

remove the requirement that States are responsible for Federal bridges. This proposal would require Federal agencies to be directly responsible for inspection of bridges under their jurisdiction. The proposed rule language places emphasis on applicability of the standards pertaining exclusively to "highway" bridges that carry public roads.

This proposed revision would clearly delineate the responsibilities of a bridge inspection organization and define what can and cannot be delegated. This proposal would enhance and clarify the qualifications of personnel as well as inspection frequency. It proposes periodic refresher training for inspection personnel. It includes a provision for lengthening the underwater inspection interval from 60 months to 72 months under certain conditions with FHWA approval. The proposed revision would clearly define the interval for fracture critical member (FCM) inspections. The FHWA proposes to specifically address scour critical bridges, bridges vulnerable to seismic damage, and complex bridges. The FHWA proposes to establish quality control/quality assurance (QC/QA) requirements. The proposed rule also discusses procedures for follow-up on critical findings by the inspection program manager. Lastly, this action proposes to reaffirm inventory and reporting requirements including timeframes for submission of data by both the State and Federal agencies.

### Section-by-Section Discussion of the Proposals

#### *Proposed Section 650.301 Purpose*

There were no comments on this topic.

The FHWA proposes to replace the section "Application of Standards" with "Purpose." The FHWA proposes to reiterate the purpose of the NBIS as stated in 23 U.S.C. 151 to address the proper safety inspection and evaluation of all highway bridges. The current bridge definition does not differentiate between the types of passageways carried; however, the term "highway" does. The FHWA proposes to re-emphasize that for purposes of the NBIS, a highway bridge is a bridge that carries a public road.

#### *Proposed Section 650.303 Applicability*

The FHWA proposes to replace the section "Inspection Procedures" with "Applicability." The FHWA proposes to clarify that the NBIS only applies to highway bridges that carry public roads.

The Minnesota DOT requested discussion about the responsibility of

private bridge owners to comply with the NBIS. Collins Engineers, Inc. indicated that the NBIS should be extended to all bridges whether publicly or privately owned.

The FHWA acknowledges that some confusion has existed about the applicability of the NBIS to privately owned highway bridges. While 23 U.S.C. 151 states that the NBIS are for all highway bridges, the FHWA has no legal authority to require privately owned bridge owners to inspect and maintain their bridges. While the FHWA does not have the authority to compel the States to inspect private bridges, the FHWA strongly encourages that private bridge owners follow the NBIS as the standard for inspecting privately owned bridges. Because of the seamless nature of the transportation infrastructure within many States, the motoring public does not know the difference between a privately owned and publicly owned highway bridge. This being the case, it is extremely important that privately owned highway bridges be inspected to a nationally recognized standard. Private bridge owners that do not inspect their highway bridges to the NBIS can open themselves to liability for deaths or injuries because of possible highway bridge failure. State transportation departments that do not cause private bridge owners to inspect their highway bridges to the NBIS can open themselves to liability for deaths or injuries because of possible highway bridge failure. States and Federal Agencies should encourage owners of privately-owned highway bridges to inspect their bridges in accordance with these NBIS or reroute any public highways away from such bridges if NBIS inspections are not conducted.

The National Bridge Inventory (NBI) lists roughly 2,200 privately owned highway bridges in some 41 States and Puerto Rico. However, the total number of privately owned bridges is unknown because the States are not required to report them to the FHWA. Many privately owned bridges can be assumed to carry public roads, some of which are significant highways. The FHWA does not know if privately owned bridges are inspected using the NBIS or other standard and the FHWA does not know the level to which privately owned bridges are maintained. As a result, the FHWA cannot determine whether the public may be at risk when crossing a privately owned bridge.

Public authorities, must follow the NBIS for all highway bridges located on all public roads. The term "public road" is defined in 23 U.S.C. 101(a)(27) as "any road or street under the jurisdiction of and maintained by a

public authority and open to public travel." The NBIS applies to seasonally or periodically opened public roads and to limited access public access roads.

Highway bridges owned by Indian tribes are in a separate category. Indian tribes as sovereign nations, have a unique government-to-government relationship with the Federal government. There is no explicit requirement in 23 U.S.C. 144 that requires inventory of tribally owned bridges. Likewise, there is no explicit requirement in 23 U.S.C. 151 that requires inspection of tribally owned bridges. Absent such clear language, the FHWA has no legal authority to require federally recognized Indian tribes to inventory tribally owned bridges or to comply with the NBIS. While the FHWA does not have the authority to compel the federally recognized Indian tribes to inspect tribally owned bridges, the FHWA strongly encourages that Indian tribes follow the NBIS (23 U.S.C. 151), as the standard for inspecting tribally owned bridges, particularly those open to public travel. Indian tribes that do not inspect their bridges to the NBIS can open themselves to liability for deaths or injuries because of bridge failure.

The FHWA recognizes that the NBIS does not apply to federally owned bridges on roads that are used only by public employees and not open to the general public. These bridges and administratively used roads support behind-the-scenes operations, are used by public employees engaged in official business, and are not open to the general public. While the NBIS does not apply to such bridges, these bridges need to be periodically inspected to assure the safety of public employees, contractors, official visitors and the motoring public which may inadvertently use these facilities. The public looks at the transportation infrastructure as seamless and may not know that they have driven on an administratively used road. Furthermore, public authorities could be liable for injuries or death resulting from the use of bridges that are not properly and systematically inspected and maintained.

The Michigan DOT and Collins Engineers, Inc. were concerned about the applicability of the NBIS to railroad and pedestrian bridges over public roads. The Wisconsin DOT thought sign support structures, high mast lighting, retaining walls, and noise barrier structures should be addressed, in the NBIS. Collins Engineers, Inc. thought railroad bridges and overhead traffic signs should be addressed in the NBIS.

The FHWA proposes to clarify that 23 U.S.C. 151 applies only to highway bridges; therefore the NBIS does not apply to bridges that carry only pedestrians, railroad tracks, pipelines, or other types of non-highway passageways. The FHWA would continue to strongly encourage public authorities or bridge owners to inspect these non-highway carrying bridges and other significant structures. Similarly, the FHWA believes that the NBIS does not apply to inspection of sign support structures, high mast lighting, retaining walls, noise barriers structures, railroad bridges and overhead traffic signs. Public authorities have an obligation to the motoring public to periodically inspect and maintain these facilities. Likewise, non-public authorities including utility companies, railroads, and private owners who may own these facilities, must periodically inspect and maintain their structures for the safety of the motoring public.

The FHWA would continue to emphasize some minimal inventory requirements that apply to non-highway bridges over certain highways. These requirements are described in the "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges"<sup>1</sup> and need not be mandated in the NBIS.

#### *Proposed Section 650.305 Definitions*

The FHWA proposes to replace the section "Frequency of Inspections" with "Definitions." The FHWA proposes to include all definitions that are used within the NBIS in one section at § 650.305. This proposal would add clarity to the regulation and would provide a convenient reference for the commonly used terms.

The following terms used in the current regulation would be relocated to this section: (1) American Association of State Highway Transportation Officials (AASHTO) Manual,<sup>2</sup> (2) bridge, and (3) National Institute for Certification in Engineering Technologies (NICET). The FHWA also proposes to update the address for AASHTO and NICET, to reflect their current addresses.

To ensure that there is a common understanding of bridge inspection

terms within the NBIS, the following new terms would be added to this section: (1) Bridge inspection experience; (2) "Bridge Inspector's Reference Manual, 2002", (formerly Bridge Inspector's Training Manual/90); (3) complex bridge; (4) comprehensive bridge inspection training; (5) damage inspection; (6) fracture critical inspection; (7) fracture critical member; (8) hands-on; (9) in-depth inspection; (10) initial inspection; (11) legal load; (12) load rating; (13) operating rating; (14) program manager; (15) routine inspection; (16) routine permit load; (17) scour; (18) scour critical; (19) special inspection; (20) team leader; and (21) underwater inspection.

The Virginia DOT, suggested that changes to the bridge definition might be appropriate to exclude certain minor structures from the inspection requirement. The majority of commenters did not want the definition changed, expressing concerns such as possible adverse economic impacts and conflicts with established State laws. The Advocates wanted to include all structures that can reasonably be said to perform bridge functions and thought that the FHWA adopted the AASHTO bridge definition without serious discussion or debate and without compiling an independent record to support the definition.

The FHWA adopted the AASHTO definition for "bridge" very early on in the National Bridge Inspection Program. The FHWA proposes to continue to adopt the AASHTO definition of a bridge. Title 23, U.S.C., section 151 directed the Secretary to establish national bridge inspection standards in consultation with the State transportation departments and interested and knowledgeable private organizations and individuals. According to the National Bridge Inventory (NBI), roughly 278,000 bridges or 47 percent of the bridge inventory is owned and operated by State transportation departments. Similarly, county governments own approximately 231,000 bridges or 39 percent of the NBI. This makes the States and counties the major stakeholders in the National Bridge Inspection Program. The State transportation departments report on all highway bridges within their State regardless of ownership, except for certain Federal bridges. This data is reported every April to the NBI. Based on 23 U.S.C. 151 direction, the FHWA has developed a close working relationship with the States on bridge related issues. This consultation with the State transportation departments through the AASHTO Highway

Subcommittee on Bridges and Structures, convinced the FHWA to adopt the AASHTO definition of bridge that has been used since the NBIS was first drafted. This subcommittee is chaired by a State transportation official with voting representatives from each State, the District of Columbia and Puerto Rico. The subcommittee's Secretary is a FHWA official and the subcommittee has active FHWA participation. The development of the AASHTO Manual for Condition Evaluation of Bridges, which is referenced in the current NBIS, was sponsored by AASHTO, in cooperation with the FHWA.

While we exclude bridges 20 feet and less in length, public authorities and private bridge owners are strongly encouraged to periodically examine and also maintain those bridges less than 20 feet in length to an adequate standard. The existing definition for "bridge" has served the public for over 30 years to identify which structures should be inspected and this definition is well understood and accepted, as evidenced by the statements of a majority of the commenters. There is no compelling reason to change it. To expand the inventory to include a larger number of structures may result in redistributing limited resources from inspection of larger, more critical structures, to inspection of these shorter structures thereby reducing the overall safety of the inventory.

The National Bridge Inspection Program is established to provide safe bridges. The Highway Bridge Replacement and Rehabilitation Program (HBRRP) is established to provide Federal funding to the States for bridges. Congress establishes the total level of HBRRP funding, and adding bridges to the inspection inventory would dilute funds currently available for longer, more critical structures. While the HBRRP primary focus is on bridge rehabilitation and replacement needs, bridge inspection is an eligible activity under this program. For those States that use HBRRP funds to support their bridge inspection programs, any increase in the number of highway bridges to be inspected would further reduce funds available for rehabilitation and replacement needs and thus impact bridge safety. The NBI is one tool used by the HBRRP to apportion funds to the States fairly, and expanding the inventory would have an uncertain effect on the funding apportionment. Though the inspection program provides data for the NBI, and though the NBI is a useful tool for funding purposes and for many other non-safety applications, the FHWA believes that

<sup>1</sup> The "Recording and Coding Guide for Structure Inventory and Appraisal of the Nation's Bridges," December 1995, Report No. FHWA-PD-96-001, is available electronically at the following URL: <http://www.fhwa.dot.gov/bridge/mtguide.doc> and may be inspected and copied as prescribed in 49 CFR part 7.

<sup>2</sup> The AASHTO Manual refers to the Manual for Condition Evaluation of Bridges, 1994, 2nd Edition and is available from the American Association of State Highway and Transportation Officials, 444 North Capitol Street, NW., Suite 249, Washington, DC 20001.

the inspection standards should focus on bridge safety separately without complicated ties to the considerations of the HBRRP.

The proposed definition of "Program Manager" in § 650.305, lists three overall responsibilities (*i.e.*, inspecting, reporting or inventory), which could be supervised by one or more individuals. By using the word "or" connecting those three responsibilities in the definition, the FHWA intends to indicate that each of the individuals who supervise one or more of those overall responsibilities must meet the minimum qualifications of the Program Manager. Therefore, in any organization, there may be several individuals meeting those requirements.

#### *Proposed Section 650.307 Bridge Inspection Organization*

There were no comments on this topic.

The FHWA proposes to replace the section "Qualifications of Personnel" with "Bridge Inspection Organization." The FHWA stewardship of the National Bridge Inspection Standards (NBIS) program over the years has shown that some States have not exercised sufficient control over delegated local agencies to assure compliance with the NBIS. The proposal, in general, is intended to clarify and describe bridge inspection program responsibilities, organizational requirements, and delegation requirements as well as expand on what is currently provided in § 650.303(a).

In § 650.307(a), the FHWA proposes to clarify the bridge inspection responsibilities of the States. The State transportation department is responsible for the inspection, reports, load ratings and other requirements of the NBIS for all non-Federal and non-tribal bridges within a State, regardless of public authority ownership. A public authority delegated with the authority by the State to inspect bridges could jeopardize State compliance with the NBIS if it fails to properly comply with the inspection standards. Therefore, although a State may delegate the authority to inspect, it is ultimately the State's responsibility to ensure compliance with the NBIS. As such, the FHWA proposes to clarify that delegation does not relieve the State transportation department of any of its responsibilities under the NBIS.

The FHWA also proposes to relieve States of responsibilities for bridges owned by Federal agencies. This would bring NBIS into line with current procedures followed by the FHWA and other Federal agencies.

Proposed § 650.307(b) lists the bridge inspection responsibilities of Federal

agencies. The inspection, reports, load ratings and other requirements of the NBIS for all Federal bridges within the respective Federal agency's jurisdiction is the responsibility of that specific agency.

The inspection of jointly owned State border bridges is the responsibility of all owning bordering States and/or Federal agencies. The FHWA proposes that agreements for the delegation of border bridge inspections, reports, load ratings and other requirements of the NBIS to be in accordance with the requirements of § 650.307(d).

Proposed § 650.307(c) describes basic bridge inspection program organization requirements. State transportation departments and Federal agencies would be required to be organized with a unit or units that are responsible for setting statewide or Federal agency wide bridge inspection program policies and procedures, assuring quality inspections are performed throughout the State or agency, and maintaining the State bridge inventory. Most States, but not all, have such an organizational unit or units, usually located in the central office, that perform some or all of these activities. In order to improve inspection program consistency and uniformity, the FHWA proposes to require that all of these activities be performed at a statewide or Federal agency wide organizational level of the State transportation department or Federal agency. This section does not preclude the activities described from being assigned to a qualified consulting engineering firm.

Proposed § 650.307(d) describes specific requirements for the delegation of bridge inspections, reports, load ratings and other requirements of the NBIS to "public authorities" within the State. The States would continue to be able to delegate the authority to perform bridge inspection activities; however, the overall program responsibility could not be delegated. Some States currently delegate some or all bridge inspections, reports, load ratings and other requirements of the NBIS to local agencies by authority under State law or written agreements that clearly state in writing the roles of all agencies and entities involved. However, other States delegate bridge inspections without any such State laws or agreements. This section proposes to require States that choose to delegate bridge inspections, reports, load ratings and other requirements of the NBIS, to do so by State law or by written agreement. States and delegated agencies will be required to keep these agreements on file.

The FHWA proposes that the requirement to establish a bridge inspection organization responsible for Statewide or Federal agency wide bridge inspection policies and procedures, quality assurance, and bridge inventory activities of proposed § 650.307(c)(1) could not be delegated.

As with other State administered Federal-aid programs under title 23, U.S. Code, delegation of bridge inspections, reports, load ratings and other requirements of the NBIS must be accompanied by appropriate State transportation department oversight.

Proposed § 650.307(e) would clarify that each organizational unit with the responsibilities identified in paragraph (c) of this section must be led by a person meeting the qualifications of a program manager as defined in the proposed § 650.309. The current NBIS is vague about what organizational units this qualification applies to. This clarification pertains to the individual in charge of each organizational unit involved in bridge inspections, reports, load ratings, and other requirements of the NBIS, including organizational units of delegated agencies. For example, the program manager qualifications would apply to a State district that has the organizational responsibility for bridge inspections and reports, as well as to a town with only one bridge that has been delegated the authority for bridge inspections and reports.

#### *Proposed Section 650.309 Qualifications of Personnel*

The FHWA proposes to replace the section "Inspection Report" with "Qualifications of Personnel." In this section, the FHWA proposes the minimum qualifications required for a program manager, a team leader, an underwater bridge inspector, and the individual for determining load ratings for bridges. Additionally, this section proposes to require refresher training for program managers and team leaders.

Six commenters to the docket affirmed the need to clarify the phrases "individual in charge," "responsible capacity," and "qualified for registration." The Massachusetts DOT recommended that the term "qualified for registration" be removed from the regulation. The Minnesota DOT stated that the phrase "responsible capacity" did not need further clarification.

The FHWA concurs that the phrases "individual in charge," "responsible capacity," and "qualified for registration" need further clarification. Accordingly, the following changes are proposed in paragraph (a):

1. The individual in charge would be identified as a "program manager" and

a definition of this person provided in § 650.305. The proposed definition was developed to clarify that this individual provides overall supervision and is available to inspection team leaders to provide guidance. A State or Federal organization can have multiple program managers, depending on the organizational structure and delegation of duties.

2. The phrase “responsible capacity” would be clarified as “bridge inspection experience.” A definition for “bridge inspection experience” is provided in § 650.305. Emphasis has been placed on active participation in bridge inspection activities. The intent is to ensure that the predominant amount of experience is acquired through direct involvement in bridge inspection activities. States and Federal organizations may choose to develop additional experience criteria that consider aspects, such as, number and types of structures inspected.

3. The criteria to be qualified for registration as a professional engineer (PE) in current § 650.307(a)(1) would be removed. The term “qualified for registration” has been interpreted to mean that an individual satisfies the education and experience requirements for professional registration, but has not obtained the license. Another interpretation has been that an individual has successfully passed the professional engineer’s exam and is awaiting issuance of his/her official license. The FHWA proposes in § 650.309(a)(1) that registration as a PE is the necessary requirement for someone with the responsibilities of a “program manager,” as an equivalent alternate to ten years of bridge inspection experience.

The majority of commenters were in favor of establishing bridge inspection training and experience requirements for the individual in charge of the bridge inspection and inventory program. Sixteen commenters noted that having a civil or structural related engineering degree, an Engineer-In-Training (EIT) certificate, or a Professional Engineer’s (PE) license should count towards an experience requirement. The majority of those in favor of establishing a training requirement recommended that the person in charge be required to complete the same training as regular bridge inspectors. The majority of commenters were in favor of requiring a specific discipline for the PE of the person in charge. Civil/structural were the most commonly recommended disciplines. Many commenters thought that the laws governing professional engineering licensing within each State ensure that PE’s only practice engineering in the fields in which they

are qualified and experienced. A private citizen, Marc S. Grunnert, noted that years of experience might not be as important as exposure to different types of structures or the number of structures inspected over a given period of time. The ARTBA and the Florida DOT noted that States should be allowed a great deal of latitude in making personnel decisions and judgment calls with respect to qualifications.

The FHWA recognizes the majority of commenters recommended that the NBIS specify the engineering license discipline for the program manager who is a PE, preferably in civil or structural engineering. However, the FHWA concurs with the minority of commenters who indicated that the laws governing licensing within each State or Federal organization ensure that PE’s only practice engineering in the fields in which they are qualified and experienced. Furthermore, the FHWA believes that it is the State or Federal organization’s responsibility to ensure that those individuals involved in the bridge inspection program meet the minimum qualifications defined in the NBIS. The proposed regulations would not specify the engineering discipline; however, individual States and Federal organizations can adopt requirements that are more specific than the minimum requirements established by the NBIS.

References to the “Bridge Inspector’s Training Manual” would be removed in the proposed regulation. A definition of “comprehensive bridge inspection training” which mentions the “Bridge Inspector’s Reference Manual (BIRM)”<sup>3</sup> would be added in the proposed § 650.305.

Commenters were almost evenly divided on the need to require certification training in proportion to the complexity of the structure being inspected. Seven of the commenters who were opposed to adding this requirement, supported the idea that both level of training and experience should be considered, particularly for the inspection of complex structures. Several commenters stated that this should be a responsibility of the bridge inspection program manager and does not need to be codified in regulation. The New Jersey, New York, North Carolina and Florida DOT’s along with a private citizen, Omaha Greene, noted that it would be very difficult to administer a program where the training

and experience requirements varied with the complexity of structures.

The FHWA agrees that program managers must have the same basic level of training as all other bridge inspectors. A requirement is proposed in § 650.309(a)(2) for the program manager to have successfully completed a comprehensive bridge inspection training course. The FHWA proposes to define comprehensive bridge inspection training in § 650.305. This requirement would apply regardless of whether the program manager is a PE or has ten years of bridge inspection experience. The FHWA proposes to allow 12 months for new or current program managers who have not participated in the training to complete the required comprehensive training. In proposed § 650.309(a)(2), States and Federal organizations would be permitted to develop their own comprehensive inspection training programs subject to approval by the FHWA. The FHWA will use the proposed comprehensive bridge inspection training definition and the BIRM as criteria to apply when reviewing these programs.

The “individual in charge” of a bridge inspection team in current § 650.307(b) would be identified as a “team leader” in § 650.309(b) and a definition of this person provided in § 650.305. The California DOT, and two private citizens, Omaha Greene and Rick Jager, recommended that an additional, alternate team leader qualification be added for those who possess an EIT certificate, have two years bridge inspection experience, and have completed an 80-hour training course based on the bridge inspector’s training manual (BITM). The FHWA agrees with the comments regarding the consideration of engineering degrees and PE licensing status in evaluating an individual’s experience level. Accordingly, the FHWA proposes the addition of an alternate qualification in § 650.309(b) that a “team leader” have a bachelors degree in engineering and have successfully completed the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering examination, and have two years of bridge inspection experience. Additionally, team leaders would also have to complete a comprehensive bridge inspection training course.

There are approximately 84,500 bridges or 14 percent of the NBI that are posted in virtually every State, the District of Columbia and Puerto Rico. Bridge load rating calculations provide the basis for determining the safe load capacity of a bridge and critical load posting and permitting decisions are

<sup>3</sup> The Bridge Inspector’s Reference Manual (BIRM), 2003, FHWA-NHI-03-001, may be purchased from the U.S. Government Printing Office bookstore, Room 118, Federal Building, 1000 Liberty Avenue, Pittsburgh, PA 15222.

also based on load rating calculations. Therefore, the FHWA would like to ensure that qualified engineers determine these load ratings. The AASHTO "Manual for the Condition Evaluation of Bridges," states that the individual charged with overall responsibility for determining load ratings of bridges should be a PE. Although we did not receive any comments regarding the need to establish qualifications for this individual, the FHWA believes it is important to outline the qualifications. Therefore, consistent with the AASHTO Manual, the FHWA proposes to require that the individual responsible for determining load ratings of bridges shall be a registered PE in § 650.309(c). The FHWA also proposes to define the term "load rating" in § 650.305.

The Bureau of Indian Affairs, the Michigan and Pennsylvania DOT's, and the Advocates recommended that a requirement for periodic bridge inspection refresher training be established and incorporated in the regulation. The recommended frequency of this training varied from one to eight years.

The FHWA concurs with the comments regarding the need for periodic refresher training. A requirement for refresher training every five years for all program managers and team leaders is proposed in § 650.309(d). The refresher training will assist in maintaining the skills and knowledge level needed to perform accurate and thorough bridge inspections in a consistent manner as technology, materials, bridge designs, and available tools change. The National Highway Institute (NHI) currently offers a FHWA approved bridge inspection refresher training course.<sup>4</sup> Other refresher training could be developed by a State or Federal organization, subject to the FHWA approval.

The Michigan DOT stated that specific requirements relative to an inspector's physical characteristics, such as vision and mobility, should not be addressed in the regulation.

The FHWA agrees with the comment that vision, mobility, and other physical characteristic requirements do not need to be addressed within the regulations. As stated above, State and Federal organizations are responsible for evaluating the qualifications of those involved in the bridge inspection program. The need for good vision and physical mobility are important in the performance of many bridge inspection

activities, particularly since the most frequent method of nondestructive evaluation is visual and access to elements of most bridges requires climbing and other physical performance. States and Federal organizations are strongly encouraged to consider these characteristics when evaluating qualifications of bridge inspection personnel.

The Massachusetts, Connecticut, and South Dakota DOT's, the Advocates, and Collins Engineers, Inc., stated that minimum training requirements should be established for all bridge inspection team members.

Based on comments from the Massachusetts, Connecticut, and South Dakota DOT's, the Advocates, and Collins Engineers, Inc., the FHWA considered the establishment of minimum qualifications for bridge inspection team members who are not team leaders. Given that a qualified team leader must be on site during the inspection and that many organizations use seasonal helpers, we decided that this is a personnel issue that should be addressed at the State or Federal agency organization level.

The majority of commenters were not in favor of establishing a requirement that those performing underwater bridge inspections be licensed professional engineers (PE). Those who were opposed to this requirement felt that the supply of licensed PE divers would not be sufficient to meet the demand, resulting in significantly higher costs of underwater inspections without a corresponding benefit. Proponents for requiring that underwater bridge inspectors be licensed PEs reasoned that there is a sufficient cadre of licensed PE divers and that costs for such would be competitive with non PE divers and would provide for a much better product. Also, many commenters indicated support for requiring that a PE be present during the underwater inspection. Commenters also stated that the regulation should establish the same qualifications for both above and below water inspectors, noting that diving is merely a means of transportation.

The FHWA concurs with the commenters who were not in favor of requiring that those performing underwater bridge inspections be licensed PEs. Currently, the NBIS does not have a requirement for the qualifications of underwater bridge inspectors. Because the desired qualifications of such personnel vary with the complexity of the bridge, the FHWA proposes § 650.309(e) to require at a minimum that all underwater inspection divers who are not fully qualified as program managers or team

leaders must complete a comprehensive bridge inspection training course. This requirement would help to ensure that a properly trained inspector, who does not necessarily have to meet team leader qualifications, performs the inspection in those instances when direct observation by a team leader is not possible. At a minimum, a qualified team leader must be on-site during the underwater inspection. The importance of having a qualified team leader on site during the underwater inspection cannot be overemphasized, and is proposed as a requirement under § 650.313(b).

The Association of Diving Contractors International, Inc. noted that in order to be compliant with the Occupational Safety and Health Administration's (OSHA) regulations contained in 29 CFR part 1910, subpart 7, dive team members must meet qualifications that require appropriate commercial diver training.

The FHWA position on this issue would be that in addition to having appropriate bridge inspection training, those personnel who participate as bridge inspection dive team members must meet minimum diver qualifications that entail training as a professional diver. Those qualifications should meet or exceed OSHA and/or industry safety standards and should be established by the "Bridge inspection organization" and need not be mandated in the NBIS. By giving the "Bridge inspection organization" the latitude to establish diver qualifications including training for its organization, the "Bridge inspection organization" may choose to establish diver qualification and training that exceed OSHA and/or industry standards. States and Federal organizations are strongly encouraged to consider stringent bridge inspection dive team member qualifications for the conduct of safe diving operations in support of bridge underwater inspections.

#### *Proposed Section 650.311 Inspection Frequency*

In this section, the FHWA examines inspection frequency and how an NBI of roughly 590,000 bridges should be inspected to assure the safety of the motoring public.

The majority of the commenters thought that the maximum inspection interval of 4 years for certain structures is reasonable and should not be extended; the remaining commenters said that 6 to 10 years may be appropriate for some low-risk structures. The majority of commenters stated that the maximum inspection cycle for most structures should remain at 2 years.

<sup>4</sup> Information regarding NHI training can be obtained at the following URL: <http://www.nhi.fhwa.dot.gov>.

Additional responses included 13 commenters who stated that the FHWA approval process should be revisited to include additional structure types, and/or be made simpler or automatic for certain groups of low-risk structures. Several commenters stated that the 2 year frequency should be clarified. The ARTBA, Florida DOT, National Association of County Engineers (NACE), and Alcona County (Michigan), stated that there should be a grace period (30 to 90 days) for each cycle to account for such things as staffing and weather problems. The Wisconsin DOT suggested a calendar year approach so that inspections may be moved to any time of a calendar year to monitor structures during various weather conditions.

The FHWA proposes to replace the section "Inventory" with "Inspection Frequency." Based on the NBI, there are approximately 561,000 bridges that are inspected on a 2-year cycle (*i.e.*, biennial routine inspections). The FHWA concurs with the majority of commenters, and proposes in paragraph (a) of this section, that the maximum inspection cycle should remain at 4 years (48 months) for certain structures, and that the maximum inspection cycle for most structures should remain at 2 years (24 months). The FHWA also proposes to include a definition for "routine inspection" at § 650.305.

There are roughly 27,000 bridges or 4.7 percent of the NBI that are inspected on a 4-year inspection cycle. According to the NBI, there are 32 States using the 4-year inspection cycle. The FHWA recognizes the concerns of those commenters that suggest there should be a modified approval process and/or automatic approval of some low risk structures for the 4-year inspection cycle. However, the FHWA thinks it remains necessary at this time to retain a central approval process for the 4-year cycle to minimize risk to the traveling public. Subject to bridge safety, approvals will continue to be made on a case-by-case basis, and consideration will be given to unique and specific conditions identified in order to provide maximum flexibility to each requester.

Regarding the commenters who suggested there should be an inspection "grace period," the FHWA proposes to retain and more clearly define the current 30-day grace period. It is thought that if a longer period were granted, it could be applied for several subsequent cycles, which could have an adverse impact on safety.

The majority of commenters stated that it would be reasonable to increase the underwater inspection interval beyond 4 years for certain structures

based on factors such as foundation type and materials, water quality and velocity, substructure material and condition. The majority of commenters also thought the current 5-year interval was appropriate for most structures. The New Jersey DOT, Department of the U.S. Navy and William Hovell, a private citizen, stated that the maximum interval for most structures should be reduced to 4 years to increase safety and to gain efficiency by conducting these inspections on a multiple of the "routine inspection" cycle. Several other commenters suggested that any increase in maximum frequency proposed by the FHWA should be an even-year cycle to coincide with routine inspection cycles.

With the April 1987 collapse of New York's Schoharie Creek bridge, national attention turned to underwater inspection. According to the NBI, there are roughly 47,000 bridges or 8 percent of the inventory that require underwater inspection in some 49 States, the District of Columbia and Puerto Rico. The FHWA concurs with the majority of commenters, and proposes at § 650.311(b), that the current 5-year (60 month) underwater inspection interval be maintained. Some commenters wanted a separate interval for underwater inspections from above water inspections that are conducted biennially. The FHWA continues to believe that the 5-year underwater inspection interval is a valid interval for the underwater inspection of a bridge pier and abutment substructures based on engineering judgment and review of NBI data.

The FHWA proposes to add the option for States to apply for a 72 month underwater inspection interval for certain bridges. In proposing the 72 month interval, the FHWA believes that applying engineering judgment and approval on a case-by-case basis to bridges with little or no change from inspection cycle to cycle in benign environments provides an adequate margin of safety to the motoring public. Industry standards, such as those provided by the American Society of Civil Engineers (ASCE) in their "Underwater Investigations Standard Practice Manual, 2001,"<sup>5</sup> promote a degree of latitude in the maximum interval between routine underwater inspections up to 6 years. The guidance they provide is tied to material, environment, scour and condition rating from previous inspections. While we are proposing an additional year beyond the

current 60 month underwater inspection interval, we are taking into consideration these same factors of material composition (timber, steel, concrete, protected or unprotected steel or timber, composite), environment (benign or aggressive), scour (susceptibility to scour) and previous condition rating (excellent to failed). Based on our assessment, again on a case-by-case basis, the FHWA may approve requests not to exceed 72 months. This authorization can be rescinded at any time owing to structural degradation, adverse change in environment and presence of localized bridge scour. An example of a situation that may warrant an extended interval may include a highway bridge with concrete piles with no degradation over a lined irrigation canal carrying fresh water. An example of a situation that would not warrant approval would be a highway bridge over a high flow saltwater or brackish water environment, with structural piles showing degradation and subject to localized scour.

Four-year frequencies may be used, if desired, but retention of the 60 month frequencies allows more flexibility to program managers. The FHWA also proposes to include a definition for "underwater inspection" at § 650.305.

Omaha Greene, a private citizen, and the Colorado and Oregon DOTs, stated that a firm inspection interval should be established for fracture critical member (FCM) inspections, and the first two of these three commenters thought the maximum interval should be 2 years.

Based on the NBI, there are approximately 14,000 bridges or 2.4 percent of the bridge inventory that require fracture critical member inspections in some 49 States, the District of Columbia and Puerto Rico. The FHWA agrees with these commenters, and proposes at § 650.311(c) that FCM inspections be conducted at intervals not to exceed 24 months, but that utilization of in-depth inspection and testing methods may exceed 24 months as outlined in an FCM Plan developed by the program manager. The FHWA also proposes to include a definition for "fracture critical inspection" and "fracture critical member" at § 650.305.

Many commenters indicated that the level to which individual bridges should be inspected depends on a variety of factors that should be evaluated by the individual in charge of the inspection program.

The FHWA proposes at § 650.311(d) to provide the program manager with the discretion to determine the level and frequency of these inspections to

<sup>5</sup> This document may be obtained from ASCE, 1801 Alexander Bell Drive, Reston, Virginia 20191-4400.

address damage, in-depth, and special inspections. The FHWA also proposes to define "damage," "in-depth," and "special" inspections in § 650.305.

*Proposed Section 650.313 Inspection Procedures*

The Oklahoma DOT, and Collins Engineers, Inc., noted that the level to which individual bridges should be inspected needed clarification. They suggested the type/depth of the inspection be determined by the individual in charge of the inspection program based on factors unique to the bridge.

The FHWA proposes to replace section "Inspection Procedures" with a revised section also entitled "Inspection Procedures." The FHWA agrees that the depth to which individual bridges should be inspected depends on such factors as age of the bridge, traffic characteristics, state of maintenance, and known deficiencies. The FHWA proposes in paragraph (a) of this section, that each bridge shall be inspected in accordance with the procedures in the AASHTO Manual. The FHWA determined that there is sufficient guidance in this manual to allow the program manager to establish the depth and type of inspections appropriate for each bridge without further direction in the NBIS.

The FHWA proposes in paragraph (b) of this section, that at least one Team Leader be present at the bridge during inspections. The Team Leader being present is an existing requirement that is being emphasized. The FHWA also proposes to include a definition for "initial inspection" in § 650.305.

The FHWA proposes to replace the current § 650.303(c) with a new paragraph (c) and discuss the requirements for load rating and bridge posting. The FHWA also proposes to include a definition for "legal load," "routine permit load," and "operating rating" at § 650.305.

The FHWA proposes to replace the current § 650.303(d) with a new paragraph (d) that would place greater emphasis on actions taken pursuant to findings during the inspection as well as requiring the State or Federal agency to maintain reports on the results of all highway bridge inspections. We are proposing at § 650.313(d) that records be maintained in the bridge file for the life of the bridge.

The Pennsylvania, Oregon and Kansas DOT's, suggested the NBIS should require element level inspections to be performed and reported. The NBI ratings are thought by some to be too general. Those State transportation department's thought the element level

data would be more meaningful to bridge owners for programming work. Those State transportation departments requested the annual submittal of NBI data should be made using element level bridge inspection data.

The FHWA recognizes that element level data is more meaningful to bridge owners for programming work, and that the element level data can be converted for Federal use. The FHWA agrees it would be desirable to work toward that goal for the future. However, a significant amount of additional testing of the conversion program and development of apportionment calculations is needed.

The Virginia DOT suggested the NBIS be expanded to promote both safety and maintenance evaluations. It felt States were already doing this as part of the inspection process, and that it should be a regulatory requirement.

The FHWA agrees that safety and maintenance evaluations should be conducted along with the NBIS inspections. The need for safety and maintenance inspections is already emphasized sufficiently in the AASHTO and the Bridge Inspector's Reference Manuals, and need not be mandated in the NBIS.

The Massachusetts DOT requested the NBIS contain a better definition of what is meant by "unique or special feature." The NBIS requires that master lists of such structures be kept; however, this is difficult to do if it is not clear what falls under this definition. It was also suggested that procedures and manuals be developed for the inspection of segmental, cable-stayed and suspension bridges as well as procedures for underwater inspection of bridges and the creation of a diver's manual, similar to the "Bridge Inspector's Training Manual (BITM)."<sup>6</sup> The Advocates believe the requirements for listing of fracture critical and unique bridge features are appropriate. However, the Advocates believe underwater elements should be considered part of the bridge and also receive similar inspection priority.

The FHWA agrees that the NBIS should define what is required in these master lists. Accordingly, the FHWA proposes at § 650.313(e): to require the program manager to maintain only specific lists of fracture critical bridges, bridges requiring underwater inspection, scour critical bridges, and bridges subject to seismic damage.

In paragraph (f), the FHWA proposes to replace § 650.303(l). This proposed

section would require the State or Federal agency to prepare an inspection plan for inspecting the fracture critical bridges.

In paragraph (g), the FHWA proposes to replace § 650.303(l)(2). This proposed section would require the State or Federal agency to prepare an inspection plan for inspecting bridges requiring underwater inspections. The plan would take into account the importance of underwater elements and contain procedures based on the risk of failure, as evaluated in the scour analysis required in paragraph (h).

In paragraph (h), the FHWA proposes to include requirements for action plans and inspection of scour critical bridges. There are roughly 20,600 bridges or 3.5 percent of the NBI that are identified as being scour critical in virtually all States and Puerto Rico. This proposed section would require the State or Federal agency to prepare a plan to monitor and/or correct deficiencies for scour critical bridges. The FHWA also proposes to include a definition for "scour" and "scour critical" at § 650.305.

In paragraph (i), the FHWA proposes to discuss inspection of bridges vulnerable to seismic damage and would require the State or Federal agency to establish a seismic damage vulnerability program as well as a plan to correct deficiencies in the bridge.

The FHWA agrees that the NBIS should contain a better definition of what is meant by "unique or special feature." Accordingly, the following changes are proposed at § 650.313(j):

1. A new category of "complex" bridges would be established with a more specific definition of applicable bridge types.

2. An inspection plan would be required for each of the bridges falling in the "complex" category. Complex bridges would then be inspected in accordance with the plan.

3. The FHWA also proposes to include a definition for "complex bridge" at § 650.305.

The Pennsylvania and Connecticut DOT's suggested a formal quality assurance (QA) program be required to verify inspection findings. The Oregon and South Dakota DOT's suggested that the QA provisions were enforced differently in each State and asked that the QA requirements be clarified. The specific reference to the Federal code requiring performance of the quality assurance/quality control (QA/QC) of the bridge inspection program should be clarified.

The FHWA agrees that the regulation should specifically require QA/QC of the bridge inspection program.

<sup>6</sup> The BITM/90 has been replaced with the Bridge Inspector's Reference Manual (BIRM), 2003, FHWA-NHI-03-001.

Accordingly, the following changes are proposed at § 650.313(k):

1. A new provision would be added to the NBIS that requires States to implement a systematic quality control and quality assurance program;

2. No specific requirements would be given, but general guidelines would be provided to require the program to include periodic field review of inspection teams and their work to ensure uniformity and completeness and to review inspection reports and load rating computations; and

3. The program would be required to be submitted to the FHWA for approval. This would allow the FHWA to work closely with the States to develop and implement these programs.

The Oregon DOT suggested that the FHWA amend the NBIS to strengthen the need for critical follow-up and define what structures are required to be included. Additionally, the commenter requested that the FHWA clearly indicate a requirement for each State to initiate a process to follow-up on critical findings.

The FHWA evaluated the need to strengthen the follow-up on critical findings and specify what structures are required to be included. The following changes are proposed at § 650.313(l):

1. A new provision would be added in the NBIS to require States to establish a critical follow-up program;

2. The FHWA proposes to require that States notify the FHWA of actions taken to assure public safety in response to the critical findings reported by the inspectors; and

3. The FHWA believes it is not appropriate to establish a nationwide definition of the criteria for which bridges should be included in the critical follow-up program. The FHWA proposes to allow the States the discretion, in cooperation with the FHWA, to define the criteria.

*Proposed Section 650.315 Inventory*

Almost all comments received indicated that the NBIS reporting requirements were reasonable and need not be changed. The Florida DOT indicated that the States should be relieved of the requirement to maintain data on Federal agency bridges in its State. The Delaware DOT commented that the FHWA should not be concerned with the 90 or 180 days requirement that the State, Federal agency or other bridge owner has to enter new or changed data into their inventory.

The FHWA proposes a “§ 650.315 Inventory” to replace the current “§ 650.311 Inventory.” In paragraph (a), the FHWA proposes to add language requiring Federal agencies to be responsible for the inspection, inventory and reporting of data regarding bridges under their authority/control. The FHWA feels that this will ensure the best representation of the bridges owned by the Federal agencies. This practice has been in place since 1995 and the language will reflect the current practice. Since the Federal agencies have been inventorying and reporting their own bridges, the number of federally owned bridges has grown from just over 4,000 to over 7,000 bridges. The FHWA also proposes in paragraph (a) to add language that will accommodate future changes/updates to the “Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation’s Bridges,” December 1995 (the Guide). The FHWA feels that this will clarify that the most current version of the Guide is to be used in instances where updates will be made to the Guide.

In paragraphs (b), (c) and (d), the FHWA proposes to add language that will change the time that the Federal agency has to enter new or revised data into the inventory from 180 to 90 days from change in bridge status, bridge load restriction, bridge closure status or bridge inspection. The FHWA feels that

this aligns better with the State requirements and is in the best interest of public safety and national security. In the event of a bridge catastrophe or national or statewide emergency, the State would have on hand the most current bridge information available.

*Proposed Section 650.317 Reference Manuals*

There were no comments on this topic.

The FHWA proposes to create a new section entitled “Reference Manuals” to incorporate a manual, the AASHTO Manual for Condition Evaluation of Bridges (AASHTO Manual) and its 2001 interim revision. The AASHTO Manual is referred to in the current NBIS but not incorporated by reference. This manual is discussed in the proposed NBIS, and provides good guidance for the inspection and evaluation of highway bridges, and for that reason needs to be incorporated by reference.

While we are proposing to incorporate by reference the AASHTO Manual, it is important to note that the regulation on the NBIS, takes precedence over any guidance contained in the AASHTO manual. Where there may be implied or conflicting language between the two documents, the nationwide direction provided by the NBIS will always govern.

**Related Rulemakings and Notices**

The FHWA is also in the process of reviewing 23 CFR part 650, subpart D, Highway Bridge Replacement and Rehabilitation Program (HBRRP). The FHWA published an advance notice of proposed rulemaking for the HBRRP on September 26, 2001, at 66 FR 49152. Additionally, the FHWA published a final rule for 23 CFR part 650, subpart G, Discretionary Bridge Candidate Rating Factor on October 15, 2002, at 67 FR 63539.

For ease of reference the following distribution table is provided:

Old section	New section
650.301, first sentence .....	650.303 Revised, purpose added.
650.301, second sentence .....	650.305 Revised, definition of terms added.
650.303(a), portion of first sentence .....	650.307(a) and (c)(2) Revised, bridge inspection organization added.
None .....	650.305 added.
Definitions: .....	Definitions:
650.303(a) American Association of State Highway Transportation Officials (AASHTO) Manual definition.	Revised.
Bridge .....	Bridge, revised.
None .....	Bridge inspection experience, Added.
None .....	Bridge inspector’s reference manual, Added.
None .....	Complex bridge, Added.
None .....	Comprehensive bridge inspection training, Added.
None .....	Damage inspection, Added.
None .....	Fracture critical inspection, Added.
None .....	Fracture critical member, Added.
None .....	Hands-on, Added.

Old section	New section
None .....	In-depth inspection, Added.
None .....	Initial inspection, Added.
None .....	Legal load, Added.
None .....	Load rating, Added.
None .....	National Institute for Certification in Engineering Technologies (NICET), Added.
None .....	Operating rating, Added.
None .....	Program manager, Added.
None .....	Routine inspection, Added.
None .....	Routine permit load, Added.
None .....	Scour, Added.
None .....	Scour critical, Added.
None .....	Special inspection, Added.
None .....	Team leader, Added.
None .....	Underwater inspection, Added.
650.303(b) .....	605.309 Revised.
650.303(c) .....	650.313(c) Revised.
650.303(d) .....	650.313(d) Revised.
650.303(e) introduction .....	650.313(e) Revised.
650.303(e)(1) first sentence .....	650.313(f) Revised.
650.303(e)(1) second sentence .....	650.305 Revised.
650.303(e)(2) first sentence .....	650.305 Revised.
650.303(e)(2) second sentence .....	650.311(b)(1) Revised.
None .....	650.313(k) Added.
650.303(e)(4) .....	650.313(d) and (l) Revised.
650.305(a) .....	650.311(a)(1) Revised.
650.305(b) .....	650.311(a)(2) Revised.
650.305(c) .....	650.311(a)(3) Revised.
650.307(a) introduction .....	650.307(d) Added; 650.309(a) Revised.
650.307(a)(1) .....	650.309(a)(1) Revised.
650.307(a)(2) and (a)(3) .....	650.309(a)(2) Revised.
650.307(a)(3) Bridge Inspector's Training Manual .....	650.305 Bridge Inspector's Reference Manual.
650.307(b) .....	650.309(b) Revised.
650.307(b)(1) .....	650.309(b)(1) Revised.
650.307(b)(2) .....	650.309(b)(3) Revised.
650.307(b)(3) .....	650.309(b)(4) Revised.
650.309 .....	650.313(d) Added second sentence.
650.311(a) .....	650.315(a) Revised.
650.311(b) .....	650.315(b), (c), (d) Revised.
None .....	650.307(c) Added.
None .....	650.307(c)(1) Added.
None .....	650.307(e) Added.
None .....	650.309(c) Added.
None .....	650.309(d) Added.
None .....	650.309(e) Added.
650.311(a) .....	650.315(a) Revised.
None .....	650.311(b)(2) Added.
None .....	650.311(b)(3) Added.
None .....	650.311(c) Added.
None .....	650.311(c)(1) Added.
None .....	650.311(c)(2) Added.
None .....	650.311(c)(3) Added.
None .....	650.311(d) Added.
None .....	650.313(a) Added.
None .....	650.313(b) Added.
None .....	650.313(g) Added.
None .....	650.313(h) Added.
None .....	650.313(i) Added.
None .....	650.313(j) Added.
None .....	650.313(k) Added.
None .....	650.313(l) Added.
None .....	650.317 Added.

**Rulemaking Analyses and Notices**

All comments received before the close of business on the comment closing date indicated above will be considered and will be available for examination in the docket at the above address. Comments received after the

comment closing date will be filed in the docket and will be considered to the extent practicable. In addition to late comments, the FHWA will also continue to file relevant information in the docket as it becomes available after the comment period closing date, and interested persons should continue to

examine the docket for new material. A final rule may be published at any time after close of the comment period.

### **Executive Order 12866 (Regulatory Planning and Review) and U.S. DOT Regulatory Policies and Procedures**

The FHWA has determined preliminarily that this action would be a significant regulatory action within the meaning of Executive Order 12866 and would be significant within the meaning of the U. S. Department of Transportation regulatory policies and procedures. This action is considered significant because of the substantial public interest in the safety of highway bridges. It is anticipated that the economic impact of this rulemaking would be minimal since funding the inventory of bridges is provided under 23 U.S.C. 144. The Office of Management and Budget (OMB) designated this proposed regulation as a significant regulatory action and has reviewed it under E.O. 12866.

These proposed changes would not adversely affect, in a material way, any sector of the economy. In addition, these changes would not interfere with any action taken or planned by another agency and would not materially alter the budgetary impact of any entitlements, grants, user fees, or loan programs. Consequently, a full regulatory evaluation is not required.

### **Regulatory Flexibility Act**

In compliance with the Regulatory Flexibility Act (Pub. L. 96-354, 5 U.S.C. 601-612) the FHWA has evaluated the effects of this proposed action on small entities. Since the proposed regulatory changes are primarily directed to the States, which are not considered small entities for the purposes of the Regulatory Flexibility Act, the FHWA is able to preliminarily certify that this proposed rule will not have a significant economic impact on a substantial number of small entities. The FHWA welcomes comments on this analysis.

### **Unfunded Mandates Reform Act of 1995**

This proposed rule would not impose unfunded mandates as defined by the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4, March 22, 1995, 109 Stat. 48). This proposed rule will not result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any one year (2 U.S.C. 1532). Funding to inventory highway bridges, as well as inventory of Indian reservation and park road bridges, is currently provided under 23 U.S.C. 144, Highway bridge replacement and rehabilitation program (HBRRP). Bridge inspection is an eligible activity under

the HBRRP and Federal funding is available to the States under the HBRRP.

### **Executive Order 12988 (Civil Justice Reform)**

This proposed action meets applicable standards in section 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

### **Executive Order 13045 (Protection of Children)**

We have analyzed this proposal under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This proposed rule is not an economically significant rule and does not concern an environmental risk to health or safety that may disproportionately affect children.

### **Executive Order 12630 (Taking of Private Property)**

This proposal will not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

### **Executive Order 13132 (Federalism)**

This proposed action has been analyzed in accordance with the principles and criteria contained in Executive Order 13132, and the FHWA has determined that this proposed action would not have sufficient federalism implications to warrant the preparation of a Federalism assessment. The FHWA has also determined that this proposed action would not preempt any State law or State regulation or affect the States' ability to discharge traditional State governmental functions.

### **Executive Order 13175 (Tribal Consultation)**

The FHWA has analyzed this proposal under Executive Order 13175, dated November 6, 2000. The FHWA believes that this proposal will not have substantial direct effects on one or more Indian tribes; will not impose substantial direct compliance costs on Indian tribal governments; and will not preempt tribal law. Therefore, a tribal summary impact statement is not required.

### **Executive Order 12372 (Intergovernmental Review)**

Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive

Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.

### **Paperwork Reduction Act**

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, *et seq.*), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct, sponsor, or require through regulations. Currently, the State reporting requirements related to the National Bridge Inspection Standards are covered by an existing FHWA information collection entitled Structure Inventory and Appraisal (SI&A) Sheet. The SI&A sheets are used by the States to provide to the FHWA the required information on annual bridge inspections. The current annual burden imposed on the States under this information collection is 540,000 hours. The OMB control number for this collection is 2125-0501. OMB clearance will expire on April 30, 2004.

The FHWA has determined that this proposed rulemaking would result in an additional 67,000 burden hours (12 percent increase) on the States. This is based on review of the national bridge inspection data coupled with the additional NBIS requirements this rulemaking action would impose on the States. These additional requirements include development of seismic damage vulnerability and quality control/quality assurance programs; procedures for follow-up on critical findings; State-agency agreements; and comprehensive bridge inspection training. The revised total annual burden on the States would be 607,000 hours.

The FHWA will submit to the OMB the required clearance request documents to cover the additional burden hours at the time this proposed rulemaking is published in the **Federal Register**. The FHWA is required to submit this proposed collection of information to OMB for review and approval, and accordingly seeks public comments. Interested parties are invited to send comments regarding any aspect of these information collection requirements, including, but not limited to: (1) Whether the collection of information would be necessary for the performance of the functions of the FHWA, including whether the information would have practical utility; (2) the accuracy of the estimated burden; (3) ways to enhance the quality, utility, and clarity of the collection of information; and (4) ways to minimize the collection burden without reducing the quality of the information collected.

### National Environmental Policy Act

The agency has analyzed this proposed action for the purpose of the National Environmental Policy Act of 1969 (42 U.S.C. 4321) and has determined that this proposed action would not have any effect on the quality of the environment.

### Executive Order 13211 (Energy Effects)

We have analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a significant energy action under that order, because although it is a significant regulatory action under Executive Order 12866 it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

### Regulation Identification Number

A regulation identification number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross reference this action with the Unified Agenda.

### List of Subjects in 23 CFR Part 650

Bridges, Grant Programs—transportation, Highways and roads, Reporting and recordkeeping requirements.

Issued on: September 2, 2003.

Mary E. Peters,

Federal Highway Administrator.

In consideration of the foregoing, the FHWA proposes to amend, title 23, Code of Federal Regulations, part 650, subpart C, as set forth below:

### PART 650—BRIDGES, STRUCTURES, AND HYDRAULICS

1. The authority citation for part 650 continues to read as follows:

**Authority:** 23 U.S.C. 109 (a) and (h), 144, 151, 315, and 319; 23 CFR 1.32; 49 CFR 1.48(b), E.O. 11988 (3 CFR, 1977 Comp. p. 117); Department of Transportation Order 5650.2 dated April 23, 1979 (44 FR 24678); section 161 of Public Law 97–424, 96 Stat. 2097, 3135; section 4(b) of Public Law 97–134, 95 Stat. 1699; 33 U.S.C. 401, 491 *et seq.*, 511 *et seq.*; and section 1057 of Public Law 102–240, 105 Stat. 2002.

2. Revise subpart C to read as follows:

### Subpart C—National Bridge Inspection Standards

Sec.

650.301 Purpose.  
650.303 Applicability.  
650.305 Definitions.  
650.307 Bridge inspection organization.  
650.309 Qualifications of personnel.  
650.311 Inspection frequency.  
650.313 Inspection procedures.  
650.315 Inventory.  
650.317 Reference Manuals.

### Subpart C—National Bridge Inspection Standards

#### § 650.301 Purpose.

This regulation sets the national standards for the proper safety inspection and evaluation of all highway bridges in accordance with 23 U.S.C. 151.

#### § 650.303 Applicability.

The National Bridge Inspection Standards (NBIS) in this part apply to all structures defined as highway bridges located on all public roads.

#### § 650.305 Definitions.

Terms used in this regulation are defined as follows:

*American Association of State Highway Transportation Officials (AASHTO) Manual.* “Manual for Condition Evaluation of Bridges,” 1994, second edition, published by the American Association of State Highway and Transportation Officials. [A copy of the AASHTO Manual may be obtained upon payment in advance by writing to the American Association of State Highway and Transportation Officials, 444 N. Capitol Street, NW., Suite 249, Washington, DC 20001. The AASHTO Manual may also be ordered via the AASHTO bookstore located at <http://www.aashto.org/aashto/home.nsf/FrontPage>.]

*Bridge.* A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying vehicular traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

*Bridge inspection experience.* Active participation in bridge inspections in accordance with the NBIS, in either a field inspection, supervisory, or management role. A combination of bridge design, maintenance, construction and bridge inspection experience, with the predominant amount being bridge inspection, is acceptable.

*Bridge Inspector's Reference Manual (BIRM).* A comprehensive FHWA manual on programs, procedures and techniques for inspecting and evaluating a variety of in-service highway bridges. This manual may be purchased from the U.S. Government Printing Office bookstore, Room 118, Federal Building, 1000 Liberty Avenue, Pittsburgh, PA 15222.

*Complex bridge.* Movable, suspension, cable stayed, prestressed concrete segmental, long span arches and other bridges with unusual or complex designs.

*Comprehensive bridge inspection training.* A minimum of 80 hours of training that covers all aspects of bridge inspection and enables inspectors to relate conditions observed on a bridge to established criteria (see the Bridge Inspector's Reference Manual for the recommended material to be covered in a comprehensive training course).

*Damage inspection.* An unscheduled inspection to assess structural damage resulting from environmental factors or human actions.

*Fracture critical inspection.* A detailed, visual, close-up, hands-on inspection that may include other non-destructive evaluation of fracture critical members.

*Fracture critical member.* A steel member in tension, or with a tension element, whose failure would probably cause a portion of or the entire bridge to collapse.

*Hands-on.* Inspection of bridge components conducted with the inspector being within arms length of the component. Inspection is performed using visual techniques that are supplemented by nondestructive testing.

*In-depth inspection.* A close-up, hands-on inspection of one or more members above or below the water level to identify any deficiencies not readily detectable using routine inspection procedures.

*Initial inspection.* The first inspection of a bridge as it becomes a part of the bridge file to provide all Structural Inventory and Appraisal (SI&A) data and other relevant data and to determine baseline structural conditions.

*Legal load.* The maximum legal load for each vehicle configuration permitted by law for the State in which the bridge is located.

*Load rating.* The determination of the live load carrying capacity of a bridge using bridge plans and supplemented by information gathered from a field inspection.

*National Institute for Certification in Engineering Technologies (NICET).*

NICET provides nationally applicable voluntary certification programs covering several broad engineering technology fields and a number of specialized subfields. For information on the NICET program certification contact: National Institute for Certification in Engineering Technologies, 1420 King Street, Alexandria, VA 22314-2794.

*Operating rating.* The maximum permissible live load to which the structure may be subjected for the load configuration used in the rating.

*Program Manager.* The individual in charge of the unit, that has been assigned or delegated the duties and responsibilities for bridge inspection, reporting, or inventory. The program manager provides overall leadership and is available to inspection team leaders to provide guidance.

*Routine inspection.* Regularly scheduled inspection consisting of observations and/or measurements needed to determine the physical and functional condition of the bridge, to identify any changes from initial or previously recorded conditions, and to ensure that the structure continues to satisfy present service requirements. Areas of the bridge to be closely monitored based on previous inspection findings or found to be of concern during the current regular inspection must be inspected using in-depth inspection procedures, either during the current regular inspection or as a follow-up in-depth inspection.

*Routine permit load.* A live load, higher than the legal load, authorized to move along side other heavy vehicles on a regular basis.

*Scour.* Erosion of streambed or bank material due to flowing water; often considered as being localized around piers and abutments of bridges.

*Scour critical.* A bridge, whose foundation has been determined to be unstable for the assessed, observed or calculated scour condition.

*Special inspection.* An inspection scheduled at the discretion of the bridge owner, used to monitor a particular known or suspected deficiency.

*Team leader.* Individual in charge of an inspection team responsible for planning, preparing, and performing field inspection of the bridge.

*Underwater inspection.* Inspection of the underwater portion of a bridge substructure and the surrounding channel, which cannot be inspected visually at low water by wading or probing, generally requiring diving or other appropriate techniques.

#### **§ 650.307 Bridge inspection organization.**

(a) Each State transportation department must inspect, or cause to be inspected, all highway bridges located on public roads that are fully or partially located within the State's boundaries, except for bridges that are owned by Federal agencies.

(b) Federal agencies must inspect, or cause to be inspected, all highway bridges located on public roads that are fully or partially located within the respective agency responsibility or jurisdiction.

(c) Each State transportation department or Federal agency must include a bridge inspection organization that is responsible for the following:

(1) Statewide or Federal agency wide bridge inspection policies and procedures, quality assurance, and bridge inventory.

(2) Bridge inspections, reports, load ratings and other requirements of these standards.

(d) Each State transportation department may delegate bridge inspections, reports, load ratings and other requirements of these standards to public authorities. Delegation does not relieve the State transportation department of any of its responsibilities under this subpart. Delegation must be made according to State law or a fully executed agreement, which clearly states in writing the roles and responsibilities of all agencies and entities involved.

(e) Each organizational unit with the responsibilities identified in paragraphs (c)(1) or (2) of this section, including each organizational unit of an Agency with delegated authority to perform bridge inspections, reports, load ratings and other requirements of these standards, must be led by a program manager with qualifications defined in § 650.309.

#### **§ 650.309 Qualifications of personnel.**

(a) A program manager must possess, at a minimum, the following qualifications:

(1) Be a registered professional engineer, or have ten years bridge inspection experience; and,

(2) Successfully completed a Federal Highway Administration (FHWA) approved comprehensive bridge inspection training course prior to or within 12 months of becoming a Program Manager. Previous FHWA approved comprehensive bridge inspection training is also acceptable.

(b) A team leader must possess, at a minimum, the following qualifications:

(1) Have the qualifications specified in paragraph (a) of this section, or

(2) Have all of the following:

(i) A bachelor's degree in professional engineering from a college or university accredited by the Engineering Accreditation Committee of the Accreditation Board for Engineering and Technology (EAC/ABET);

(ii) Successfully passed the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering examination;

(iii) Two years of bridge inspection experience; and

(iv) Successfully completed a FHWA approved comprehensive bridge inspection training course, or

(3) Have five years bridge inspection experience and have successfully completed a FHWA approved comprehensive bridge inspection training course; or

(4) Be certified as a Level III or IV Bridge Safety Inspector under the National Society of Professional Engineer's program for National Certification in Engineering Technologies (NICET) and have successfully completed a FHWA approved comprehensive bridge inspection training course.

(c) The individual charged with the overall responsibility for determining load ratings of bridges must be a registered professional engineer.

(d) Program managers and team leaders must complete FHWA approved bridge inspection refresher training every five years.

(e) An underwater bridge inspection diver must complete an FHWA approved comprehensive bridge inspection training course or other FHWA approved underwater bridge inspection training course.

#### **§ 650.311 Inspection frequency.**

(a) Routine inspections.

(1) Inspect each bridge at regular intervals not to exceed twenty-four months.

(2) Certain bridges require inspection at less than twenty-four month intervals. The program manager determines the level and frequency to which these bridges are inspected considering such factors as age, traffic characteristics, and known deficiencies.

(3) State or Federal agencies may inspect certain types of bridges at greater than twenty-four month intervals, not to exceed forty-eight months, with the FHWA's approval. This may be appropriate when past inspection findings and analysis justifies the increased inspection interval.

(b) Underwater inspections.

(1) Inspect underwater structural members at regular intervals not to exceed sixty months.

(2) Certain underwater structural members require inspection at less than sixty month intervals. The program manager determines the level and frequency to which these members are inspected considering such factors as construction material, environment, age, scour characteristics, condition rating from past inspections and known deficiencies.

(3) State or Federal agencies may inspect some underwater structural members at greater than sixty-month intervals, not to exceed seventy-two months, with the FHWA's approval. This may be appropriate when past inspection findings and analysis justifies the increased inspection interval.

(c) Fracture critical member (FCM) inspections.

(1) Inspect FCMs at intervals not to exceed twenty-four months.

(2) Certain FCMs require inspection at less than twenty-four month intervals. The program manager determines the level and frequency to which these members are inspected considering such factors as age, traffic characteristics, and known deficiencies.

(3) Nondestructive testing or other specialized techniques beyond visual inspection must follow the frequency specified in the FCM inspection plan discussed in § 650.313(f) and may exceed the twenty-four month interval.

(d) Damage, in-depth, and special inspections. The program manager determines the level and frequency of these inspections.

#### § 650.313 Inspection procedures.

(a) Inspect each bridge in accordance with the inspection procedures in the AASHTO Manual.

(b) Provide at least one team leader, who meets the minimum qualifications stated in § 650.309, at the bridge at all times during each initial, routine, in-depth, fracture critical, special and underwater inspection.

(c) Rate each highway bridge as to its safe load-carrying capacity in accordance with the AASHTO Manual. Post the bridge in conformity with the AASHTO Manual or in accordance with State law, if the maximum unrestricted legal load or routine permit load under State law exceeds the load allowed under the operating rating or equivalent rating factor.

(d) Prepare bridge files as described in the AASHTO manual. Maintain reports on the results of highway bridge inspections together with notations of any action taken pursuant to the findings of such inspections. Maintain the records in the bridge file for the life of the bridge. Record the findings and

results of bridge inspections on standard forms found in the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges.<sup>1</sup>

(e) The program manager must identify and maintain a list of bridges with FCMs, bridges requiring underwater inspection, bridges that are scour critical, and bridges that are vulnerable to seismic damage.

(f) Fracture critical bridges. For each fracture critical bridge, prepare an FCM inspection plan containing the location and description of FCMs, the inspection frequency, and the inspection procedures. Inspect FCMs according to the FCM inspection plan.

(g) Bridges requiring underwater inspections. Develop a plan containing a description of the underwater elements, the inspection frequency and the procedures. Inspect those bridges requiring underwater inspections according to the plan.

(h) Scour critical bridges. For each scour critical bridge, prepare an action plan to monitor and/or correct deficiencies. Scour critical bridges should be inspected after a major flood event.

(i) Bridges vulnerable to seismic damage. Establish a seismic damage vulnerability program to evaluate the adequacy of existing bridges to resist damage from earthquakes and an action plan to correct deficiencies.

(j) Complex bridges. For each complex bridge prepare an inspection plan that includes specialized inspection needs and additional inspector training and/or experience required. Inspect complex bridges according to the plan.

(k) Quality control/quality assurance program. Provide systematic quality control (QC) and quality assurance (QA) to maintain the accuracy and consistency of the inspection program. Include periodic field review of inspection teams, and the review of reports and computations by a person other than the originating individual. Submit documentation of the QC/QA Program to the FHWA for approval.

(l) Follow-up on critical findings. Establish a Statewide or Federal agency-wide procedure to assure that critical findings are addressed in a timely manner. Notify the FHWA of the actions taken to assure public safety.

<sup>1</sup>The "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges," December 1995, FHWA Report No. FHWA-PD-96-001, is available at [URL:http://www.fhwa.dot.gov/bridge/mtguide.pdf](http://www.fhwa.dot.gov/bridge/mtguide.pdf) and may be inspected and copied as prescribed at 49 CFR part 7.

#### § 650.315 Inventory.

(a) Each State and Federal agency must prepare and maintain an inventory of all bridges subject to the NBIS. Certain structure inventory and appraisal (SI&A) data must be collected and retained by the State and Federal agency for collection by the FHWA as requested. A tabulation of this data is contained in the SI&A sheet distributed by the FHWA as part of the "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges," (December 1995) together with subsequent interim changes or the most recent version. Report the data using FHWA established procedures as outlined in the "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges."

(b) For all types of inspection listed in § 650.313(b), enter SI&A data into the State or Federal agency inventory not to exceed 90 days for State and Federal agency bridges and within 180 days for all other bridges after the date of inspection.

(c) For existing bridge modifications that alter previously recorded data and for new bridges, enter SI&A data into the State or Federal agency inventory not to exceed 90 days for State and Federal agency bridges and within 180 days for all other bridges after the completion of the work.

(d) For changes in load restriction or closure status, enter SI&A data into the State or Federal agency inventory not to exceed 90 days for State and Federal agency bridges and within 180 days for all other bridges after the change in status.

#### § 650.317 Reference Manuals.

The documents listed in this section are incorporated by reference with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 and are on file at the Office of the Federal Register in Washington, DC. They are available as noted in paragraph (c)(1) of this section.

(a) Manual for Condition Evaluation of Bridges, 1994 second edition, AASHTO. [See § 650.317 (c)(1)].

(b) 2001 Interim Revisions to the Manual for Condition Evaluation of Bridges, AASHTO. [See § 650.317 (c)(1)].

(c) Availability of documents incorporated by reference. The documents listed in § 650.317 are incorporated by reference and are on file and available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. These documents may also be reviewed at the Department of Transportation Library, 400 Seventh

Street, SW., Washington, DC, in Room 2200. These documents are also available for inspection and copying as provided in 49 CFR part 7. Copies of these documents may be obtained from the following organization:

(1) American Association of State Highway and Transportation Officials (AASHTO), Suite 249, 444 North Capitol Street, NW., Washington, DC 20001.

(2) [Reserved].

[FR Doc. 03-22807 Filed 9-8-03; 8:45 am]

BILLING CODE 4910-22-P

## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

#### 33 CFR Part 117

[CGD08-02-035]

RIN 1626-AA09

#### Drawbridge Operation Regulation Change, St. Croix River, Minnesota and Wisconsin

**AGENCY:** Coast Guard, DHS.

**ACTION:** Supplemental notice of proposed rulemaking.

**SUMMARY:** The Coast Guard has revised its proposal to amend the regulations governing the operation of the Burlington Northern Santa Fe Railroad Bridge, mile 0.2, Prescott, Wisconsin; the U.S. 16-61 Bridge, mile 0.3, Prescott, Wisconsin, the Union Pacific Railroad Bridge, mile 17.3, Hudson, Wisconsin across the St. Croix River, and the S36 Highway Bridge at Stillwater, mile 23.4. The revised proposal would modify the dates and hours requiring advanced notice for openings on each of the bridges. This proposed change is intended to reduce the number of hours that a drawtender is required to be on site at each of the bridges while maintaining satisfactory service to vessels navigating the area.

**DATES:** Comments and related materials must be received by November 10, 2003.

**ADDRESSES:** Comments and related materials received from the public, as well as documents indicated in this preamble as being available in the docket, are part of docket CGD08-02-035 and are available for inspection or copying at room 2.107f in the Robert A. Young Federal Building at Eighth Coast Guard District, Bridge Branch, 1222 Spruce Street, St. Louis, MO 63103-2832, between 7 a.m. and 4 p.m., Monday through Friday, except Federal holidays. The telephone number is (314)

539-3900, extension 2378. Commander (obr) maintains the public docket for this rulemaking.

**FOR FURTHER INFORMATION CONTACT:** Mr. Roger K. Wiebusch, Bridge Administrator, (314) 539-3900, extension 2378.

#### SUPPLEMENTARY INFORMATION:

##### Request for Comments

We encourage you to participate in this rulemaking by submitting comments and related material. If you do so, please include your name and address, identify the docket number for this rulemaking (CGD08-02-035), indicate the specific section of this document to which each comment applies, and give the reason for each comment. Please submit all comments and related material in an unbound format, no larger than 8½ by 11 inches, suitable for copying. If you would like to know if it reached us, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period. We may change this proposed rule in view of them.

##### Public Meeting

We do not now plan to hold a public meeting. But you may submit a request for a meeting by writing to the Eighth Coast Guard District, Bridge Branch, at the address under **ADDRESSES** explaining why one would be beneficial. If we determine that one would aid this rulemaking, we will hold one at a time and place announced by a later notice in the **Federal Register**.

##### Regulatory History

On April 16, 2002, we published a notice of proposed rulemaking (NPRM) entitled Drawbridge Operation Regulation Change, St. Croix River, MN in the **Federal Register** (67 FR 18521). On March 25, 2003, we clarified a statement in the NPRM and reopened the comment period to receive additional comments (68 FR 14364). We received six letters commenting on the proposed rule. No public hearing was requested, and none was held.

##### Background and Purpose

In accordance with 33 CFR 117.667, the draws of the Burlington Northern Santa Fe Railroad Bridge, Mile 0.2 at Prescott, Wisconsin, the U.S. 16-61 Bridge, Mile 0.3, at Prescott Wisconsin and the Union Pacific Railroad Bridge, Mile 17.3, at Hudson, Wisconsin, currently open on signal; except that, from December 15 through March 31, the draws open on signal if at least 24-hours notice is given. Currently, the S36 Stillwater Highway Bridge, Mile 23.4,

opens on signal at various times throughout the day from May 15 through October 15, and on signal from October 16 through May 14. The NPRM proposed to amend the regulations governing drawbridges across the St. Croix River by adding a notice requirement for bridge openings during the summer season. Specifically, the NPRM proposed requiring that advance notice be given prior to 11 p.m. for openings between midnight and 7 a.m. from April 1 to October 15 for three of the four bridges.

The Burlington Northern Santa Fe Railroad, Mile 0.2 at Prescott initially requested a change to the regulation for the Burlington Northern Santa Fe Railroad, to open on signal from 7 a.m. to midnight and to open between midnight and 7 a.m., if the bridge was notified prior to 11 p.m. during the summer tourism months. Although the request was submitted by only one bridge owner, the approval would also impact the U.S. 16-61 Bridge and the Union Pacific Railroad Bridge. Therefore, the proposal was expanded to include these two bridges. The S36 Bridge at Stillwater is more remotely located than the other three bridges, and we have proposed a separate opening requirement for the S36 Bridge rather than including it with the other three bridges.

##### Discussion of Comments and Changes

The rule proposed by the NPRM included two separate changes to the existing regulation that affect the Burlington Northern Santa Fe Bridge, the U.S. 16-61 bridge, and the Union Pacific railroad bridge. The first change would restrict drawbridge openings between midnight and 7 a.m. by requiring that advance notice be made by 11 p.m. the night before. The second change would move up the date when the drawbridges require 24-hour notification for an opening from December 15 to October 16 each year. The Coast Guard received six letters commenting on one or both of the proposed changes.

One letter opposed the proposed requirement allowing the drawbridges to remain in the closed to navigation position between midnight and 7 a.m. except when a request for an opening was received prior to 11 p.m. The letter cited impacts on weekend boaters who may want late night openings, additional openings required by increases in the river level, and the difficulty in amending the bridge operating regulations once they have become effective. A review of the bridge opening data for the period of April 1 to December 14 for the years 1998—