ENGINEERING AND CONSTRUCTION BULLETIN

US Army Corps of Engineers

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SUBJECT: Changes to Bridge Inspection and Evaluation Requirements

CATEGORY: Directive and Policy.

1. **References**:

    a. Engineering Manual (EM) 1110-2-1102, Inspection and Evaluation of USACE Bridges, 31 JAN 2020.

    b. Engineering Regulation (ER) 1110-2-111, USACE Bridge Safety Program, 31 JAN 2020.

    c. 23 CFR Part 650 Subpart C, National Bridge Inspection Standards (NBIS), 6 MAY 2022

    d. American Association of State Highway and Transportation Officials (AASHTO) MBE-3, The Manual for Bridge Evaluation, 2018

    e. Federal Highway Administration (FHWA) FHWA-HIF-22-017, Specifications for the National Bridge Inventory, MAR 2022

    f. Federal Highway Administration (FHWA) FHWA-NHI-23-024, Bridge Inspector's Reference Manual (BIRM - 2022 NBIS), MAR 2023

2. **Purpose.** This Engineering and Construction Bulletin (ECB) updates and clarifies the requirements of ER 1110-2-111 and EM 1110-2-1102 to ensure US Army Corps of Engineers (USACE) compliance with the revised 23 CFR Part 650 Subpart C, National Bridge Inspection Standards. This ECB supersedes conflicting guidance within EM 1110-2-11 and EM 1110-2-1102 until a full revision of the documents is complete. This ECB incorporates updated requirements, clarifies existing policies, and provides implementation guidance.

3. **Applicability.** This ECB applies to all bridges or portions of bridges owned by the U.S. Army Corps of Engineers. This includes all reportable and non-reportable bridges.

4. **Background**

    a. The Federal Highway Administration (FHWA) published revised National Bridge Inspection Standards (NBIS) under 23 CFR Part 650 Subpart C in the Federal Register on May 6, 2022. These standards took effect on June 6, 2024.

    b. As a result of the revised standards, USACE is required to update the agency's bridge program regulations and guidance to align with these changes. Completion of a full revision of ER 1110-2-111 and EM 1110-2-1102 is underway but will not be completed in time to meet FHWA deadlines. This ECB will serve as the interim regulation and guidance until the revisions are complete.

c. This ECB also addresses identified inconsistencies and clarifies existing guidance from the 2020 versions of ER 1110-2-111 and EM 1110-2-1102 to promote uniform practices across USACE within the Bridge Safety Program.

5. **Specifications for the National Bridge Inventory (SNBI)** The 2022 Specifications for the National Bridge Inventory (SNBI) supersedes the 1995 Coding Guide. Transition of previously gathered Structure Inventory and Appraisal (SI&A) data to the new SNBI format and the collection of newly required data must begin by Jan 2026 and must be complete by March 2028. The USACE Bridge Safety Program Manager (BSPM) will provide additional guidance on this transition via separate correspondence following acquisition of the new USACE Bridge Management System (BMS), as described in Section 6.

6. **Bridge Management System** To facilitate compliance with 23 CFR Part 650 Subpart C and the SNBI, USACE will acquire new software to replace the Corps of Engineers Bridge Inventory System (CEBIS). All references to CEBIS in ER 1110-2-111 and EM 1110-2-1102 shall be replaced with the generic term "USACE Bridge Management System" (BMS). All Inspection Reports (Initial, Routine, NSTM, and Underwater) and all Quality Control (QC) and Quality Assurance (QA) reviews shall be completed in the USACE BMS for all USACE bridges. Further information on implementation and training on the BMS will be provided by the USACE BSPM when it is available. In the interim, continue to access the existing BMS at: https://cebis.cwbi.mil/ords/r/cebis/cebis/home.

7. **Inspection Intervals and Tolerance**

In accordance with 23 CFR Part 650 Subpart C, the criteria for determining extended and reduced inspection intervals have been revised. For all bridges, the default inspection intervals are 24-months for Routine and NSTM Inspections, and 60-months for Underwater Inspections.

a. Extended Inspection Intervals

(1) 23 CFR Part 650, Subpart C, provides two methods to establish extended inspection intervals: Method 1 (simplified and prescriptive) and Method 2 (risk-based). USACE will apply Method 1, which is similar to guidance prescribed in EM 1110-2-1102. These requirements supersede ER 1110-2-111 and EM 1110-2-1102 (see Tables 1-4 below).

(2) All previously approved extended intervals are rescinded, and default intervals re-established as 24 months for Routine and NSTM and 60 months for Underwater. Requests for extended intervals must be submitted by memorandum through the MSC BSPM. For reportable bridges, the MSC BSPM coordinates with the USACE BSPM, who will notify FHWA. For non-reportable bridges, the MSC BSPM approves and forwards notification to the USACE BSPM. Approved memoranda must be uploaded to the official bridge file in the USACE BMS. Bridges must meet all the applicable conditions in Tables 1-3 to qualify for extended inspection intervals.

Table 1- Routine Inspections – Conditions for Extended Intervals		
Reportable Vehicular Bridges	Short-Span Vehicular, Non-Public Vehicular, and Crane Rail Bridges	Pedestrian Bridges
Deck (B.C.01), Superstructure (B.C.02), Substructure (B.C.03), Culvert (B.C.04), Channel (B.C.09), and Channel Protection (B.C.10) Condition Ratings all ≥ 6[4]		
Inventory Load Rating Factor (B.LR.05) ≥ 1.0	Load Rating Method (B.LR.04) is not N[2,3]	N/A[5]
Routine Permit Loads (B.LR.08)[1] = A or N		N/A
Fatigue Details (B.IR.02) = N	Fatigue Details (B.IR.02) = N, or B.IR.02 = Y with AADTT (B.H.10) < 10	N/A
Scour Vulnerability (B.AP.03) = A or B or bridge not over water Scour Condition Rating (B.C.11) ≥ 6 or = N		
Span Material (B.SP.04) = C01-C05 or S01-S05	Span Material (B.SP.04) = A01, C01-C05, M01-M02, S01-S05, or T01-T04	
Span Type (B.SP.06) = A01, B02-B03, F01-F02, G01-G08, P01-P02, or S01-S02	Span Type (B.SP.06) is not: L01-LX, M01-MX, X01-X03, X	
Highway Minimum Vertical Clearance (B.H.13) ≥ 14.0ft	N/A	
1. USACE does not issue routine permits. B.LR.08 should = N for all USACE bridges 2. See exception for Crane Rail Bridges in 7.a(3) below 3. See exception for Short-Span and Non-Public Vehicular Bridges in 7.a(4) below 4. See additional information for nonreportable bridges in 7.a(5) below 5. Further guidance will be provided in updates to ER 1110-2-111 and EM 1110-2-1102		

Table 2- NSTM Inspections – Conditions for Extended Intervals		
Reportable Vehicular Bridges	Short-Span Vehicular, Non-Public Vehicular, and Crane Rail Bridges	Pedestrian Bridges
Year Built (B.W.01) ≥ 1979 and fabricated in accordance with a fracture control plan.	Year Built (B.W.01) ≥ 1979 or B.W.01 < 1979 and AADTT (B.H.10) < 10	N/A
NSTM Inspection (B.C.14) Condition Rating ≥ 6		
Fatigue Details (B.IR.02) = N	Fatigue Details (B.IR.02) = N or B.IR.02 = Y with AADTT (B.H.10) < 10	N/A
NSTMs have no fatigue details with finite life, history of fatigue cracks, nor pin and hanger assemblies		NSTMs have no history of fatigue cracks nor pin and hanger assemblies

Inventory Load Rating Factor (B.LR.05) ≥ 1.0	Load Rating Method (B.LR.04) is not N[2,3]	N/A[4]
Routine Permit Loads (B.LR.08) = A or N[1]		N/A
1. USACE does not issue routine permits. B.LR.08 should = N for all USACE bridges 2. See exception for Crane Rail Bridges in 7.a(3) below 3. See exception for Short-Span and Non-Public Vehicular Bridges in 7.a(4) below 4. Further guidance will be provided in updates to ER 1110-2-111 and EM 1110-2-1102		

Table 3- Underwater Inspections – Conditions for Extended Intervals for All Bridges
Underwater Inspection (B.C.15), Channel (B.C.09), Channel Protection (B.C.10), and Scour (B.C.11) Condition Ratings all ≥ 6
Scour Vulnerability Rating (B.AP.03) = A or B

(3) Crane rail bridges without vehicular traffic may qualify for extended inspection intervals without a load rating if the crane and lifted load remain as originally designed and constructed, with no modifications increasing load effects on the bridge (e.g., increased weight, changes to gate seal configuration, crane hoist alterations), and no distress due to overload is evident. If such modifications exist, distress from overload is evident, or if the crane rail bridge carries vehicular traffic, a load rating is required to qualify for an extended inspection interval. To request an extended interval, the District BSPM shall submit a written request to the MSC BSPM. Upon approval, the signed memorandum and supporting evaluation shall be uploaded to the bridge file.

(4) Non-public and short-span vehicular bridges without a load rating may be approved for an extended inspection interval on a case-by-case basis when engineering judgement indicates a low risk of overload. To request an extended interval, the District BSPM shall submit a written request to the MSC BSPM. Upon approval, the signed memorandum and supporting evaluation shall be uploaded to the bridge file. To be approved for an extended interval, the following must be true:

- The original design load for the bridge shall be available to review
- Bridge Average Annual Daily Traffic (B.H.09) shall be ≤ 25
- Average Annual Daily Truck Traffic (B.H.10) shall be ≤ 1

The District BSPM shall evaluate and document the following factors as part of the request:

- Likelihood of Overload: Consider exposure to unregulated traffic, proximity to heavily trafficked areas, and the presence of physical or administrative load restrictions.
- Typical Loading: Assess the usual vehicle types utilizing the bridge and compare with the design load. Bridges designed for highway loads but serving only light-duty or passenger vehicles are more suitable for extended intervals.
- Operational Controls and Monitoring: Posted load limits, restricted access, or active monitoring reduce risk and may support approval.

- Inspection Value: Identify what types of deterioration or defects due to a lack of load rating more frequent inspections are likely to detect and whether an extended inspection frequency could delay identification of critical issues.

(5) Nonreportable bridges with one or more condition ratings below 6 may be approved for extended routine inspection intervals on a case-by-case basis. To request an extended interval, the District BSPM shall submit a written request to the MSC BSPM. Upon approval, the signed memorandum and supporting evaluation shall be uploaded to the bridge file. To be approved for an extended interval, the following must be true:

- Deck (B.C.01), Superstructure (B.C.02), Substructure (B.C.03), Culvert (B.C.04), Channel (B.C.09), and Channel Protection (B.C.10) Condition Ratings are all ≥ 5
- None of these bridge components have exhibited a downward trend in condition over the previous 72 months.
- The bridge remains safe for its intended use and shows no signs of progressive or active deterioration.

The District BSPM shall evaluate and document the following factors as part of the request:

- Material type: Timber structures deteriorate more rapidly than steel or concrete and generally warrant shorter intervals.
- Bridge age and redundancy: Older bridges or those with limited redundancy may require more frequent inspection.
- Traffic volume: Bridges with very low traffic volumes or limited operational use are more suitable for extended intervals.
- Environmental exposure: Conditions such as marine environments, chlorides, freeze–thaw cycles, or high humidity increase deterioration risk.
- Performance history: Consider prior damage, overloads, maintenance history, and responsiveness of local operations staff.
- Accessibility: Limited site access or operational constraints may justify adjustment of inspection frequency when risk is otherwise low.

(6) Table 4 defines the maximum allowable extended intervals. District BSPMs may adopt shorter intervals to align with District scheduling needs (e.g., 48 months to coincide with nearby bridges on 24-month cycles). Changes to intervals must follow the request process in 7.a(2).

Table 4 – Maximum Allowable Extended Inspection Intervals

Bridge Type	**Routine and NSTM Inspections**	**Underwater Inspections**
Reportable Bridges	48 months	72 months
Short-Span Vehicular, Nonpublic Vehicular and Crane Rail Bridges	60 months	72 months
Pedestrian Bridges	60 months	72 months

b. Reduced Inspection Intervals. All previously reduced Bridge Inspection Intervals remain in effect. Intervals must be reduced if any conditions in Tables 5–7 are met. Reduced intervals do not require prior approval but must be reported by the District

BSPM to the USACE BSPM via the MSC BSPM, and to FHWA for reportable bridges. The rationale for the reduced interval must be documented in the bridge inspection report, and the Inspection Interval (B.IE.05) updated in BMS. Reduced intervals shall not exceed 12 months for Routine and NSTM inspections, or 24 months for Underwater inspections. If a reduced condition rating is due to an isolated deficiency, a special inspection limited to that deficiency may be used in lieu of a full routine or underwater inspection. A complete routine or underwater inspection must still be conducted at the default interval. This exception does not apply to NSTM inspections.

Table 5-Routine Inspections – Conditions for Reduced Intervals for All Bridges
Any of Deck (B.C.01), Superstructure (B.C.02), Substructure (B.C.03), Culvert (B.C.04), or Scour (B.C.11) Condition Ratings ≤ 3

Table 6-NSTM Inspections – Conditions for Reduced Intervals for All Bridges
NSTM Inspection Condition Rating (B.C.14) ≤ 4

Table 7-Underwater Inspections – Conditions for Reduced Intervals for All Bridges
Any of Underwater Inspection (B.C.15), Channel (B.C.09), Channel Protection (B.C.10), or Scour (B.C.11) Condition Ratings ≤ 3

c. Inspection Interval Tolerance. For intervals < 24 months, inspections may be completed up to 2 months after the due date. For intervals ≥ 24 months, inspections may be completed up to 3 months after the due date. If inspection will occur more than 1 month late, the District BSPM must notify the MSC BSPM via email **before** the original due date. For reportable bridges, the District BSPM must also notify the USACE BSPM. If the tolerance cannot be met, District BSPM must notify MSC and USACE BSPM by email **before** the inspection due date and submit a "Change of Schedule Request" in BMS. The USACE BSPM will notify FHWA and perform required coordination for reportable bridges. Such deviations are not normally permitted except during major repairs or replacement.

d. Next Inspection Date. Schedule the next inspection date based on the results of the current inspection. The date of the next inspection will be the inspection date plus the approved inspection interval.

e. Early Inspections. Inspections conducted before the due date do not require approval but must be reported to the MSC BSPM before being performed. If performed early, the next inspection date will be based on the actual inspection date plus the approved inspection interval.

8. **Bridge Safety Program Team Qualifications**

Inspection team member qualifications have been updated. The information below replaces the corresponding requirements in ER 1110-2-111. The District BSPM is responsible to ensure that inspection team members meet the minimum qualification requirements for the bridge being

inspected to adequately perform the inspection and to protect public safety. The MSC BSPM will confirm this determination as part of the QA process.

Personnel shall only serve in roles for which they are qualified in accordance with this section, and for which they have approved qualifications documented in the USACE BMS. Personnel who are not qualified shall not lead inspection teams, sign bridge inspection reports or qualification forms, or conduct any other work for which they are not qualified.

a. USACE Bridge Safety Program Manager. The USACE BSPM must:

(1) Be a Structural Engineer by job type and experience

(2) Be a licensed professional engineer

(3) Have at least 5 years of bridge inspection, evaluation, design, maintenance, or construction experience

(4) Have inspected at least 35 bridges

(5) Have successfully completed an FHWA-approved comprehensive bridge inspection training course, complete FHWA-approved bridge inspection refresher training and pass each course assessment with 70% or greater every 60 months and maintain documentation supporting compliance with these requirements.

b. MSC Bridge Safety Program Manager. The MSC BSPM must:

(1) Be a Structural Engineer by job type and experience

(2) Be a licensed professional engineer

(3) Have inspected at least 25 bridges

(4) Have successfully completed an FHWA-approved comprehensive bridge inspection training course, complete FHWA-approved bridge inspection refresher training and pass each course assessment with 70% or greater every 60 months and maintain documentation supporting compliance with these requirements.

(5) Meet one of these two conditions:

(a) Have at least 5 years of bridge inspection, evaluation, design, maintenance, or construction experience

(b) Have at least 10 years of experience in Civil Works inspections, evaluations, design, maintenance, or construction

c. District Bridge Safety Program Manager. The District BSPM must:

(1) Be a Structural Engineer by job type and experience

(2) Be a licensed professional engineer

(3) Have at least 5 years of bridge inspection, evaluation, design, maintenance, or construction experience

(4) Have inspected at least 25 bridges

(5) Have successfully completed an FHWA-approved comprehensive bridge inspection training course, complete FHWA-approved bridge inspection refresher training and

pass each course assessment with 70% or greater every 60 months and maintain documentation supporting compliance with these requirements.

d. Bridge Inspection Team Leader. This position is titled "Nationally Certified Bridge Inspector" in the CFR and SNBI. A Bridge Inspection Team Leader must:

(1) Be a structural engineer by job title and type of work conducted

(2) Have successfully completed an FHWA-approved comprehensive bridge inspection training course, complete FHWA-approved bridge inspection refresher training and pass each course assessment with 70% or greater every 60 months, and maintain documentation supporting compliance with these requirements

(3) Meet one of these two conditions:

(a) Be a registered professional engineer with at least 6 months of bridge inspection, evaluation, design, maintenance, or construction experience and have inspected at least 15 bridges

(b) Have a bachelor's degree in civil engineering, have successfully passed the FE exam, and have 2 years of bridge inspection, evaluation, design, maintenance, or construction experience and have inspected at least 25 bridges

e. Team Leader for NSTM Inspections for Reportable Bridges. A Team Leader for NSTM inspections of Reportable Bridges must have successfully completed an FHWA-approved NSTM training course, including passing the course assessment with a 70% score or greater, and meet all other requirements for a Bridge Inspection Team Leader.

f. Team Leader for NSTM Inspections for Nonreportable Bridges. A Team Leader for NSTM inspections of all other bridges must have successfully complete a USACE or FHWA-approved NSTM training course, including passing the course assessment with a 70% score or greater, and must meet all other requirements for a Bridge Inspection Team Leader for the bridge being inspected.

g. Team Leader for Underwater Inspections. A Team Leader for Underwater Inspections must be a Bridge Inspection Team Leader.

h. Complex Bridge Inspection Team Leader. A Team Leader for routine inspections of bridges with complex features must have at least 5 years of experience in complex bridge inspection, evaluation, design, maintenance, or construction and must meet all other requirements for a Bridge Inspection Team Leader above.

i. Team Leader for Damage or Special Inspections. There are no additional requirements for Team Leaders for Damage or Special Inspections. The Team Leader for damage or special inspections must have the same qualifications as the Team Leader for a routine inspection of the bridge. The District BSPM will ensure that additional staff with relevant expertise are involved in these inspections and follow-on evaluations as needed if the Team Leader does not have the necessary expertise.

j. Assistant Team Leader. An Assistant Team Leader must:

(1) Have successfully completed an FHWA-approved comprehensive bridge inspection training course; complete FHWA-approved bridge inspection refresher training and pass each course assessment with 70% or greater every 60 months; and maintain documentation supporting compliance with these requirements.

(2) Meet one of these three conditions:

(a) have at least an associate degree in civil engineering technology, have at least 4 years of bridge inspection, evaluation, design, maintenance, or construction experience, and have inspected at least 25 bridges or

(b) have a bachelor's degree in civil engineering, have successfully passed the FE exam, have at least 1 year of bridge inspection, evaluation, design, maintenance, or construction experience and have inspected at least 15 bridges or

(c) be a registered professional engineer, have at least 3 months of bridge inspection, evaluation, design, maintenance, or construction experience and have inspected at least 10 bridges.

k. Underwater Bridge Inspection Diver (UBID). An underwater bridge inspection diver must have successfully completed an FHWA-approved underwater bridge inspection training and pass the course assessment with 70% or greater. If the UBID is not also qualified as a Team Leader for the bridge being inspected, they must work under the direct supervision of an Underwater Inspection Team Leader.

l. Inspector. An Inspector must have at least an associate degree in civil engineering technology, have successfully completed an FHWA-approved comprehensive bridge inspection training course, complete FHWA-approved bridge inspection refresher training and pass each course assessment with 70% or greater every 60 months, and maintain documentation supporting compliance with these requirements.

m. Inspection Team Support. Inspection Team Support is personnel who do not meet the qualification requirements as noted above. They may assist with bridge inspections as needed for safety, assistance, or training but must do so under the direct supervision of a qualified Team Leader or Assistant Team Leader.

n. Alternate Qualifications. Alternate qualifications for District personnel can be submitted for review and approval by the MSC BSPM. The District and MSC BSPM will ensure that individuals meet minimum CFR qualification requirements when inspecting reportable bridges. Alternate qualifications for MSC BSPMs can be submitted for review and approval by the USACE BSPM. When evaluating experience, the USACE and MSC BSPM will consider the following:

- The relevance of the individual's actual experience
- Exposure to the problems or deficiencies common in the types of bridges the individual will inspect and oversee
- The complexity of the structures being inspected compared to the skills of the individual gained through prior experience
- Does the individual have other non-bridge inspection related experience that is relevant, such as bridge design or load rating, dam inspection, etc.
- The individual's understanding of the specific data-collection needs and requirements for the bridge

- Demonstrated ability to lead inspection teams

As part of the alternative qualification approval memo, the MSC or USACE BSPM will develop a plan, including a target date, for how the individual will work towards meeting as many of the qualification requirements above as practicable.

Table 8 - Inspection Team Lead Requirements		
Bridge Type	**Inspection Type**	**Minimum Team Leader Requirements**
Reportable Bridges	Initial, Routine, Damage, In-Depth, Service, Scour, Special	Bridge Inspection Team Leader
	NSTM	NSTM Inspection Team Leader for Reportable Bridges
	Underwater	Underwater Inspection Team Leader
Short Span, Non-Public Vehicular, and Crane Rail Bridges	Initial, Routine, Damage, In-Depth, Service, Scour, Special	Bridge Inspection Team Leader
	NSTM	NSTM Inspection Team Leader for Nonreportable Bridges
	Underwater	Underwater Inspection Team Leader
All Pedestrian Bridges	Initial, Routine, Damage, In-Depth, Service, Scour, Special	Assistant Inspection Team Leader
	NSTM	NSTM Inspection Team Leader for Nonreportable Bridges
	Underwater	Underwater Inspection Team Leader
Complex Bridges	Initial, Routine, Damage, In-Depth, Service, Scour, Special	Complex Bridge Inspection Team Leader
	NSTM	Complex Bridge Inspection Team Leader
	Underwater	Underwater Inspection Team Leader

9. **Inspection Team Requirements.** All field inspections are to be performed by a team consisting of at least two people, with at least one person designated as the Team Leader who has the minimum qualifications as required in Section 8 above. Personnel who will actively participate in conducting inspection activities must meet the requirements of an Inspector as required in Section 8.l above as a minimum. Other Inspection Team Support personnel may assist in tasks such as operating UBIT or lifts, holding ladders, providing access, assisting

with tools, or undergoing training, but they must operate only under the direction of the Team Leader.

10. **Critical Findings**

a. When a critical finding is discovered, the Inspection Team Leader or BSPM must take action to address the critical finding.

(1) Bridges must be closed for critical findings of significant deficiencies or other changes that compromise the safety of the bridge. See 11.b for more information.

(2) Other Prompt Interim Actions (PIA) may be appropriate for some critical findings, see EM 1110-2-1102 for more information.

b. When a critical finding is identified on any bridge the Inspection Team Leader initiates the critical finding notification hierarchy in accordance with the critical findings plan, even if the finding does not require the closure of the bridge.

(1) When a critical finding is identified on a reportable bridge that is on the National Highway System (NHS), FHWA must be notified within 24-hours. The notification hierarchy for these bridges must be updated to indicate that the MSC and USACE BSPMs will both be notified concurrently with the District BSPM. This will allow USACE to fulfill our requirement to notify FHWA.

(2) When a reportable bridge not on the NHS is closed, the MSC BSPM must be notified within 24 hours, who will then notify the USACE BSPM.

(3) For all other critical findings on reportable bridges, the MSC BSPM must be notified within 48 hours, who will notify the USACE BSPM.

(4) For critical findings on non-reportable bridges, the MSC BSPM must be notified within 48 hours. The MSC BSPM will determine if the critical finding is reported to the USACE BSPM.

c. For all critical findings, the Inspection Team Leader will prepare a critical finding report, which will be submitted by the District BSPM to the MSC BSPM within 5 days of discovering the critical finding.

11. **Bridge Closure and Closure Verification Inspections**

a. Bridges may be closed for various reasons, including critical inspection findings, construction activities, load restrictions, lack of use, natural disasters, security concerns, or other safety-related circumstances. When a bridge is closed, both a physical barrier and bridge closure signage must be installed. Closure signage for vehicular bridges must conform to the Manual on Uniform Traffic Control Device (MUTCD). The bridge must remain closed until the situation that prompted the closure has been resolved.

(1) If closure results from a critical finding during an inspection, the Inspection Team Leader must ensure that the physical barrier is in place prior to leaving the site.

(2) For other closures, the District BSPM must ensure that a barrier and signage are installed as soon as practicable after becoming aware of the closure need.

b. The inspection Team Leader has the authority to close a bridge any time significant deficiencies or other changes exist to the extent that the safety of the bridge is compromised. At a minimum, a bridge must be closed for the following critical findings:

- Condition rating of Deck (B.C.01), Superstructure (B.C.02), Substructure (B.C.03), Culvert (B.C.04), Channel (B.C.09), or Scour (B.C.11) of 2 or less
- Vehicular Bridge Legal Load rating less than 3 tons
- Pedestrian Bridge Safe Load Rating less than 15 psf or less than 3 persons
- Pedestrian Bridge Safe Load Ratings between 15 and 40psf must consult with USACE Load Rating Engineer to determine if finding is critical and bridge must be closed

c. If a bridge remains closed beyond its required inspection interval, it must undergo closure verification inspections until the bridge is repaired, replaced, or demolished. The purpose of closure verification inspections is to confirm that closure barriers and signage remain in place and effective, document that the bridge condition has not changed in a way that increases risk to the public or adjacent structures, and meet inspection and reporting requirements.

d. The frequency of closure verification inspections is the same as specified in Section 7 and must be tracked in the BMS. Each inspection must include an evaluation of the bridge for any increased risk to the public or adjacent structures; photo documentation of closure barriers and signage, showing they remain in place and functional; and at least one overall photo of the bridge. This information must be uploaded in the BMS on the regular inspection cycle as described in paragraph 10.d below.

e. The District BSPM is responsible for determining inspector qualifications for closure verification inspections. For reportable bridges, closure verification inspections must be conducted by a Bridge Inspection Team Leader. If the District BSPM determines that the closed bridge condition, location, or other factors pose a risk to the public or to adjacent structures, a Bridge Inspection Team Leader must perform the closure verification inspection. If no such risk exists, inspections may be performed by other designated personnel, such as Operations or Construction staff or Park Rangers.

f. Closure verification inspections must be documented in the BMS and routed for signature following the same processes as routine bridge inspections. Each report must include:

- Name and title of individual who conducted the inspection
- Date and time of closure verification
- Confirmation that the bridge is still closed
- Describe any major changes at the bridge
- Assessment of whether the bridge poses increased risk to the public or adjacent structures
- Recommendation regarding repair, replacement, or demolition, based on anticipated future use
- Photo documentation of barriers, signage, and an overall bridge photo.

12. **National Inspector Identification.** In accordance with 23 CFR Part 650 Subpart C, USACE must maintain a database of certified bridge inspectors and must issue each nationally certified bridge inspector a unique identification code. All Bridge Inspection Team Leaders will ensure that documentation of their qualifications is provided for the database according to instructions from the USACE BSPM. The database will be maintained as part of the USACE BMS.

13. **Initial Inspections.** The initial inspection must be completed within 3 months of a bridge being opened to traffic. The initial NSTM inspection must be completed within 12 months of a bridge being opened to traffic. The initial underwater inspection must be completed within 12 months of a bridge being opened to traffic. These requirements apply to both newly constructed bridges as well as bridges reopening after rehabilitation.

14. **Inspection Requirements.** Develop, document, and complete inspections in accordance with the requirements of the AASHTO Manual for Bridge Evaluation, section 4.2. When special inspections are used to monitor localized deficiencies where condition ratings are coded 3 or less, develop a special inspection plan to be utilized during the inspection.

15. **Quality Control and Quality Assurance.** Quality control (QC) and quality assurance (QA) are shared responsibilities of all parties involved in bridge inspection and management. QC/QA procedures shall be followed as prescribed in EM 1110-2-1102. The District BSPM is responsible for ensuring that all bridge inspection reports undergo the required quality checks and independent reviews. The MSC BSPM is responsible for conducting QA reviews of bridge inspection reports in accordance with EM 1110-2-1102 requirements. All QC/QA documentation must be retained in the (BMS) to ensure compliance, accountability, and auditability.

16. **Access and Loading for Bridges.** Placing large equipment or vehicles on a bridge without a completed load rating poses a significant safety risk, as the bridge's capacity to support such loads is unknown. Bridges without a completed load rating shall not be subjected to heavy loads without an engineering evaluation. For bridges without a completed load rating, under-bridge inspection trucks (UBITs), cranes, or other large equipment shall not be placed, operated, or driven on the bridge unless a review of the original design confirms sufficient capacity to safely support the applied loads. This restriction applies to equipment traveling across, setting up on, or operating from the bridge deck or approaches. The engineering evaluation shall be uploaded to the bridge file.

    For bridges with a completed load rating, any proposed large or atypical load – such as a crane crossing or setup – must be evaluated against the bridge's rated capacity to confirm adequacy prior to use. The completed evaluation shall be uploaded to the bridge file.

17. **Inventory and Inspection Data Entry and Report Completion Deadlines.** For all inspection types, enter changes into the USACE BMS within 60 days of the field inspection completion. When modifications to a bridge occur or there are changes to the load rating, posting, or closure status, enter the changes into the USACE BMS within 60 days.

    Upon release of the replacement BMS, the inventory and inspection data entry and report completion deadline will be updated to the following: For all inspection types, enter changes

into the USACE BMS within 90 days of the field inspection completion. When modifications to a bridge occur or there are changes to the load rating, posting, or closure status, enter the changes into the USACE BMS within 90 days. Inspection Report milestone deadlines shall per table 9 below.

Table 9 - Inspection Milestone Deadline Requirements		
Task	Time Frame	Signature Required
Inventory Data updated in BMS and report prepared by Team Leader	Within 90 days of inspection	Team Leader
Technical Review Performed by independent, qualified bridge inspector	Within 120 days of inspection	Technical Reviewer
Report certified by Chief, Engineering Function	Within 120 days of inspection	Chief of Engineering function (or delegate)
MSC QA and report approval	Within 150 days of inspection	MSC BSPM

18. **Temporary Structures.** For temporary bridges open to traffic greater than 24 months, inventory data must be collected in accordance with the requirements of this ECB, ER 1110-2-111, EM 1110-2-1102, and 23 CFR 650 Subpart C. The bridge must be entered into the USACE BMS and follow all other applicable requirements. When the temporary structure is removed, it will be removed from the USACE BMS following bridge removal procedures.

19. **Routine Inspection of Moveable Bridges.** For routine inspection of moveable bridges, the inspection team must also include a licensed professional mechanical engineer and a licensed professional electrical engineer who each have at least 3 years of experience in moveable bridge inspection, evaluation, design, maintenance, or construction.

20. **Scour Evaluations.** All bridges over waterways must be evaluated for scour. Bridges that are scour critical (B.AP.03 = C or D) must have a scour plan of action. Scour evaluations and scour plans of action will be stored in the bridge file in the USACE BMS.

    a. For bridges on dams, the District Dam Safety Program is responsible for Scour Evaluations. The Dam Safety Officer (DSO) will provide notification in writing that an adequate scour evaluation has been conducted, which will be added to the bridge file. The District DSO will determine the need for new scour evaluations.

    b. For all other bridges, the District BSPM is responsible to ensure that scour evaluations are completed and the documentation maintained in the bridge file.

21. **Definitions**

    a. Assistant Team Leader. An Assistant Team Leader leads lead semi-autonomous sub-teams during inspections on large bridges that require multiple concurrent inspection teams, acting under the Bridge Inspection Team Leader. An assistant team leader can also serve as the inspection team lead on some bridge types.

    b. Crane Rail Bridge. A crane rail bridge is a bridge with spans greater than or equal to 6 ft. and a deck walking surface at least 4 ft. above the grade or channel bottom below

that is mainly intended to support crane rails for a gantry or other crane. The bridge may be subjected to vehicular or pedestrian loads, but the controlling live load is the supported crane.

c. Complex Bridge. A complex bridge is a bridge that has a Complex Feature, which is a Bridge component(s) or member(s) with advanced or unique structural members or operational characteristics, construction methods, and/or requiring specific inspection procedures. Complex Bridges include moveable, suspension, cable stay, floating, and other bridges with unusual characteristics. Note that Complex Bridges are a bridge classification and not an inspection type. The complex features of a bridge are inspected as part of each routine inspection.

d. Non-redundant Steel Tension Member (NSTM). A primary steel member fully or partially in tension, and without load path redundancy, system redundancy, or internal redundancy, whose failure may cause a portion of or the entire bridge to collapse. Formerly called Fracture Critical Member (FCM).

e. NSTM Inspection. An inspection of all NSTM on a bridge, conducted within arm's length. Inspection uses visual techniques and may be supplemented by nondestructive evaluation techniques.

22. **Schedule for Implementation.** The following schedule of changes is expected for USACE compliance with 23 CFR 650 Subpart C requirements:

- March 2025 – Last FHWA Submittal in Coding Guide Format
- January 2026 – Last date to start transition from Coding Guide to SNBI Format
- March 2026 – First FHWA Submittal in SNBI Format, data may be in transitional format
- March 2028 – FHWA submittal 100% in SNBI Format

23. **Update.** All new requirements will be included in the next update of ER 1110-2-111 and EM 1110-2-1102.

24. **Point of Contact.** HQUSACE point of contact for this ECB is the USACE BSPM Mr. Thomas North, CE-EC, (503) 313-1824.

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Encl.
NBIS side-by-side comparison 2009 to 2022