



**US Army Corps  
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# ENGINEERING AND CONSTRUCTION BULLETIN

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**Subject:** Clarification to ER 1110-2-111, USACE Bridge Safety Program, for short span bridges, non-public access bridges, and pedestrian bridges, and new “CEBIS Lite” inventory and report format.

**Applicability:** Guidance

1. Purpose: This bulletin announces the availability of two documents, “ER 1110-2-111 Clarification Matrix for Inspection of USACE Short Span Bridges, Non-Public Access Bridges, and Pedestrian Bridges” (dated January 2010) and “CEBIS Lite – Standard Inventory Data and Report Content” (dated January 2010). The Clarification Matrix is for use in determining inspection requirements, inspector qualifications, report format, and inspection intervals for USACE owned or maintained bridges not reportable to the Federal Highway Administration. The CEBIS Lite document outlines a simplified bridge inspection data inventory and report format that may be used for certain types of bridges at the discretion of the District Bridge Safety Program Manager, as indicated by the Clarification Matrix. Both documents can be downloaded from the Corps of Engineers Bridge Inventory System (CEBIS) website: <https://cebis.wes.army.mil> under “BMS”.

2. Background: Districts have been interpreting ER 1110-2-111 requirements inconsistently for short span bridges, non-public access bridges, and pedestrian bridges. In addition, the standard CEBIS data, report, and QC/QA requirements that are geared towards significant public vehicle bridges can be overly costly and time consuming for some of these types of bridges. The Clarification Matrix document expands on the ER definitions, provides lower-bound limits for mandatory reporting and allows District Bridge Safety Program Managers flexibility in setting required inspector qualifications and report format for certain types of bridges. “CEBIS Lite” was developed as a simplified “condition assessment” type report format that may be used in accordance with the Clarification Matrix.

3. Applicability: This ECB applies to all FY2010 and future inspections of USACE owned or maintained short span bridges, non-public access bridges, and pedestrian bridges on Civil Works projects. Both referenced documents will be incorporated into a future update of ER 1110-2-111. Districts are requested to review their inventory of all bridges and culverts at their projects and ensure applicable inspection and reporting requirements are being met in accordance with ER 1110-2-111 and this ECB. Where allowed by the Clarification Matrix and determined appropriate by the District Bridge Safety Program Manager, “CEBIS Lite – Standard Inventory Data and Report Content” should be used as a template for inspections. Reports in the “CEBIS Lite” format will need to be entered by the District into an electronic database, available later this year.

**ECB 2010-**

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4. Distribution: Approved for public release; distribution unlimited.

5. POC: The HQUSACE point of contact for this bulletin is Mr. Chris Westbrook, CECW-CE, 202-761-7584.



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**ER 1110-2-111 Clarification Matrix for Inspection of USACE Short Span Bridges, Non-Public Access Bridges, and Pedestrian Bridges**

**Notes:**

- a. The matrix below shall apply to Short Span bridges, Non-Public Access bridges, and Public Pedestrian bridges, and Non-Public Pedestrian bridges, and All Other Pedestrian bridges as defined in ER 1110-2-111, paragraphs 6.b - 6.f
- b. Bridge type, inspector requirements, report format, and inspection interval for each bridge shall be included in the annual District Bridge Safety Program PMP and are subject to MSC approval, except for requirements related to All Other Pedestrian Bridges.
- c. "CEBIS Lite" standard inventory data and report content requirements can be found at <https://cebis.wes.army.mil> under "BMS".
- d. All vehicle bridges shall be treated as public access unless physical barriers are provided.

BRIDGE TYPE	DEFINITION CLARIFICATION	INSPECTION CLARIFICATIONS		
		Inspector Requirements	Report Format	Inspection Interval
1. Short Span Bridges	All bridges open to public vehicular traffic with spans from 5' to 20'. Shall also include culverts with single or combined opening width (span) between 5' and 20' and roadway-cover above top of culvert less than 1.5 times the culvert span.	All require inspection by a qualified Team Leader as defined in ER 1110-2-111.	Full detailed CEBIS report and SI&A data.	1-24 months per District Bridge Safety PM. Up to 60 months with MSC approval.
2. Non-Public Access Bridges	All controlled access vehicle bridges with spans greater than or equal to 5', used for operation and maintenance purposes only. Shall also include culverts with single or combined opening width (span) between 5' and 20' and roadway-cover above top of culvert less than 1.5 times the culvert span.	<ul style="list-style-type: none"> <li>a. Spans greater than 20' require inspection by a qualified Team Leader as defined in ER 1110-2-111.</li> <li>b. For spans of 5' to 20', the District Bridge Safety PM may determine required inspector qualifications. Inspectors shall be appropriately trained based on structure type, condition, risk, etc.</li> </ul>	<ul style="list-style-type: none"> <li>a. Full detailed CEBIS report and SI&amp;A data for spans greater than 20'.</li> <li>b. "CEBIS Lite" condition assessment or detailed CEBIS report per District Bridge Safety PM for spans of 5' to 20'.</li> </ul>	1-24 months per District Bridge Safety PM. Up to 60 months with MSC approval.

BRIDGE TYPE	DEFINITION CLARIFICATION	INSPECTION		
		Inspector Requirements	Report Format	Inspection Interval
3. Public Pedestrian Bridges	All bridges open to public pedestrian traffic with spans greater than or equal to 5' and having deck walking surface at least 5' above grade or channel bottom below. Public pedestrian bridges specifically designed to support an occasional light maintenance vehicle may be included in this category.	<p>a. Spans greater than 20' require inspection by a qualified Team Leader as defined in ER 1110-2-111.</p> <p>b. For spans of 5' to 20', the District Bridge Safety PM may determine required inspector qualifications. Inspectors shall be appropriately trained based on structure type, condition, risk, etc.</p>	<p>a. Full detailed CEBIS report and relevant SI&amp;A data for spans greater than 20'.</p> <p>b. "CEBIS Lite" condition assessment or detailed CEBIS report per District Bridge Safety PM for spans of 5' to 20'.</p>	1-24 months per District Bridge Safety PM. Up to 60 months with MSC approval.
4. Non-Public Pedestrian Bridges	All non-public pedestrian bridges with spans greater than or equal to 5' and having deck walking surface at least 5' above grade or channel bottom below.	<p>a. Spans greater than 20' require inspection by a qualified Team Leader as defined in ER 1110-2-111.</p> <p>b. For spans of 5' to 20', the District Bridge Safety PM may determine required inspector qualifications. Inspectors shall be appropriately trained based on structure type, condition, risk, etc.</p>	"CEBIS Lite" condition assessment or detailed CEBIS report per District Bridge Safety PM.	1-24 months per District Bridge Safety PM. Up to 60 months with MSC approval.
5. All Other Pedestrian Bridges	Public pedestrian bridges, non-public pedestrian bridges, and other bridge-like structures such as catwalks, not categorized in numbers 3 or 4 above, that are determined by the District Bridge Safety PM to warrant inspection within the Bridge Safety Program.	Requires inspection by appropriately trained personnel, dependent on structure type, condition, risk, etc. Inspector requirements for each bridge or bridge-like structure in this category shall be set by the District Bridge Safety PM.	"CEBIS Lite" condition assessment or detailed CEBIS report per District Bridge Safety PM.	1-60 months per District Bridge Safety PM.

<b>CEBIS LITE - STANDARD INVENTORY DATA AND REPORT CONTENT</b>		
<b>REQUIRED DATA</b>	<b>VALUE/DESCRIPTION (Examples Provided Below)</b>	<b>INSTRUCTIONS</b>
CEBIS Structure Number	CEXXXXXX0000015	Refer to CEBIS User Manual for COE numbering system
Structure Common Identifier	Any alpha-numeric, up to 18 characters	Optional number for use in cross-referencing with other databases
Bridge Name	Trail Bridge at Campground	Common name for bridge or identifying description
Project Name	Senator John Doe Dam	Name of project or facility that the bridge is associated with
Latitude	40d23'05.37"N	Center of bridge, obtained via Google Earth
Longitude	78d04'04.96"W	Center of bridge, obtained via Google Earth
Feature Crossed	Little Stoney Creek	Provide name. Use "Unknown" or "Not Applicable" as needed
Year Built/Year of Major Rehab	1988/Not Applicable	Provide dates. Use "Unknown" or "Not Applicable" as needed
Structure Type	Steel	Use descriptions in item 43 of FHWA Coding Guide
Deck Width (ft)	6.5	Width between curbs or railings
Deck Type	Wood	Use descriptions in item 107 of FHWA Coding Guide
Number of Spans	1	Provide number
Length of Maximum Span (ft)	18.5	Provide length
Structure Length (ft)	18.5	Provide length
Maximum Height of Deck (ft)	8	Measured from top surface of deck to grade or channel bottom below
Open, Posted, or Closed to Traffic	Open - Foot Traffic Only	Indicate status and any related description
Condition/Adequacy		Condition choices are "Good", "Fair", "Poor", "Critical" or "Not Applicable". Refer to FHWA Coding Guide instructions and ratings for Deck (item 58), Superstructure (item 59), Substructure (item 60), Channel and Channel Protection (item 61), and Culverts (item 62). Group into general conditions: Good, 9-7; Fair, 6-5; Poor, 4-3; Critical, 2-0. Safety Features should be evaluated similar to the other components of the bridge. The condition rating should not consider the adequacy as far as code compliance or adequate strength, as this is evaluated separately under Adequacy Choices. Specific problems can be described in Field Notes.
a. Deck	Fair/Probably Inadequate	Adequacy choices are "Adequate" (Evaluated by an engineer and determined adequate for current use or posting); "Probably Adequate" (Not fully evaluated, but design information is available or structure has seen design load and no distress is observed. Consider performing evaluation); "Probably Inadequate" (Not evaluated and either lacks design/performance information, appears inadequate for current use, or exhibits some evidence of distress. Evaluation by engineer required); "Inadequate" (Exhibits distress or has been evaluated by an engineer and determined inadequate for current use or posting. Close or restrict use until upgrades are made)
b. Superstructure	Good/Probably Adequate	
c. Substructure	Good/Probably Adequate	
d. Channel and Channel Protection	Good/Probably Adequate	
e. Culvert	Not Applicable	
f. Safety Features	Good/Probably Adequate	

REQUIRED DATA	VALUE/DESCRIPTION (Examples Provided Below)	INSTRUCTIONS
Inspection Notes	<p>Bridge is a steel through-truss with wood deck supported by concrete abutments. See attached sketch. Bottom chord members are fracture critical and were given a hands-on inspection with no problems noted. Almost all deck boards have some minor decay on underside at stringer locations. Starting 4' from west end of bridge, there are 5 deck boards that have significant areas of decay (rot) that have reduced the effective board depth to approx. 1". No boards have fractured at this time. The west abutment.....</p>	<p>Describe any special features of the bridge (fracture critical members, underwater elements, etc.), any problems noted (quantify if possible), and areas unable to be inspected. Attach additional notes/sketches as needed.</p>
Photo(s)	<p>Attached Photo 1 shows overall view of the bridge looking north. Photo 2 shows deck boards with significant decay.</p>	<p>At least one photo attachment is required providing an overall view of bridge. Provide additional photos of deficiencies requiring action</p>
Inspected By	Joe Inspector	Name of person in charge of field inspection
Date of Inspection	6/5/2010	Date of field inspection, mm/dd/yyyy
Recommendations	<ol style="list-style-type: none"> <li>1. Replace the 5 deck boards with the significant decay. Low cost if done in-house. Perform this year.</li> <li>2. Monitor deck boards and replace any that exhibit advanced decay, distress, or permanent deformation. Ongoing.</li> </ol>	<p>For each recommendation, provide estimated cost and schedule/priority. Attach additional information as needed</p>
Inspection Interval (months)	24	Provide recommended number of months until next inspection
Operations POC(s)	<p>(Project Manager of Dam) (Business Line Mgr for Dam) (Others as applicable)</p>	<p>Operations Project Manager, and names of other OPs personnel that report is provided to. Attach OP's comments if provided</p>
Quality Assurance By	<p>(Team Leader - other than inspector) (Others as applicable)</p>	<p>Provide names of Engineering personnel not directly involved with the field inspection that have reviewed the report. Should include a qualified "Team Leader" or "Program Manager" per ER 1110-2-111. Attach QA comments if provided</p>