

19 September 2018

**LA DOTD OFF SYSTEM BRIDGE GUIDELINES AND COMPLIANCE REVIEW PROCESS**

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## I. Overview on Compliance

The state of Louisiana is reviewed yearly on its adherence to the National Bridge Inspection Standards, NBIS, outlined in 23 CFR 650 Subpart C (Appendix A). During this review process, the Federal Highway Administration (FHWA) utilizes 23 metrics (published in the Metrics for the Oversight of the National Bridge Inspection Program – Appendix B) to analyze Louisiana’s bridge inspection program, determine what level of compliance is met for each metric, and issue recommendations or requirements to improve the compliance level, such as an improvement plan or plan of corrective action. A snapshot of each metric compliance level for Louisiana for the 2017 review period is given below in Figure 1.

Metric #1	23 CFR 650.307	Bridge Inspection Organization	Compliant
Metric #2	23 CFR 650.309	Qualification of Personnel – Program Manager	Compliant
Metric #3	23 CFR 650.309	Qualification of Personnel – Team Leader(s)	Compliant
Metric #4	23 CFR 650.309	Qualification of Personnel – Load Rating Engineer	Compliant
Metric #5	23 CFR 650.309	Qualification of Personnel – UW Bridge Inspection Diver	Compliant
Metric #6	23 CFR 650.311	Routine Inspection Frequency – Lower Risk Bridges	Compliant
Metric #7	23 CFR 650.311	Routine Inspection Frequency – Higher Risk Bridges	Compliant
Metric #8	23 CFR 650.311	Underwater Inspection Frequency – Lower Risk Bridges	Conditional Compliance
Metric #9	23 CFR 650.311	Underwater Inspection Frequency – Higher Risk Bridges	Conditional Compliance
Metric #10	23 CFR 650.311	Inspection Frequency – Fracture Critical Member	Compliant
Metric #11	23 CFR 650.311	Inspection Frequency – Frequency Criteria	Substantial Compliance
Metric #12	23 CFR 650.313	Inspection Procedures – Quality Inspections	Compliant
Metric #13	23 CFR 650.313	Inspection Procedures – Load Rating	Compliant
Metric #14	23 CFR 650.313	Inspection Procedures – Post or Restrict	Compliant
Metric #15	23 CFR 650.313	Inspection Procedures – Bridge Files	Compliant
Metric #16	23 CFR 650.313	Inspection Procedures – Fracture Critical Members	Compliant
Metric #17	23 CFR 650.313	Inspection Procedures – Underwater Conditional	Conditional Compliance
Metric #18	23 CFR 650.313	Inspection Procedures – Scour Critical Bridges	Compliant
Metric #19	23 CFR 650.313	Inspection Procedures – Complex Bridges	Compliant
Metric #20	23 CFR 650.313	Inspection Procedures – QC/QA	Compliant
Metric #21	23 CFR 650.313	Inspection Procedures – Critical Findings	Compliant
Metric #22	23 CFR 650.315	Inventory – Prepare and Maintain	Compliant
Metric #23	23 CFR 650.315	Inventory – Timely Updating of Data	Compliant

**Figure 1 – 2017 Metric Assessment for Louisiana**

Louisiana is currently under a plan of corrective action for metrics 8, 9, 13, and 17, and has an improvement plan in place for metric 11. The Louisiana Department of Transportation and Development’s (LADOTD) goal is 100% compliance with each of these 23 metrics.

In order to assess the compliance of off-system bridge owners with these metrics, LADOTD conducts a review each fall. This review is conducted between LADOTD District Inspection Staff and each local bridge owner.

All documents and data corrections related to the annual off-system review are due to the LADOTD Bridge Inspection Engineer by November 15 of each year. The information collected during the review must be compiled and submitted to FHWA by December 31. After this, the state as a whole receives a final compliance status update, and updates to plans of corrective action and improvement are made if necessary.

This document has been published to reflect changes to the off system bridge compliance review process. In addition, this document outlines the responsibilities of the off system bridge owners and LADOTD with respect to the off system bridge inventory.

## **II. Bridge Data and Files**

LADOTD is required under 23 CFR 650.313 (d) to inventory and maintain a file on each public bridge in the State of Louisiana, including off-system bridges. The LADOTD Headquarters Bridge Inspection office in Baton Rouge is responsible for maintaining these files. It is the responsibility of each off system/local bridge owner to provide LADOTD with all pertinent documentation related to the bridges in their jurisdiction. Metric #15: Inspection Procedures – Bridge Files, and Section 2 of the AASHTO Manual for Bridge Evaluation “Bridge Files and Documentation” give details on what constitutes a bridge file. Metric #15 summarizes a list of applicable bridge file components that are assessed yearly for the state by FHWA:

- Inspection Reports
- Channel Cross Sections, Soundings, Stream Profiles
- Special Inspection Procedures and Requirements
- Load Rating Documentation
- Critical Findings and Actions Taken
- Scour Assessment
- Scour Plan of Action (POA) for scour critical bridges and unknown foundations
- Inventory and Evaluation Data and Collection Forms
- Significant Correspondence
- Maintenance Records

Table 1 lists the responsibility of LADOTD and local owners as it pertains to maintenance of the applicable bridge file components for off-system bridges.

**Table 1 – Bridge File Maintenance Responsibilities**

<b>File Component</b>	<b>LADOTD Responsibility</b>	<b>Local Owner Responsibility</b>
Inspection Reports	Submit at each 24 mo inspection and maintain records of inspections	Maintain records of all interim inspections performed Notify LADOTD if responsible parties for inspection change
Channel Cross Sections/Stream Profiles	Plot at each 24 mo inspection	Plot at each interim inspection for every scour critical bridge or bridge with a scour plan of action
Special Inspection Procedures/Requirements	Document any unique procedures/requirements for inspections, such as fracture critical, underwater, complex, etc	Ensure special procedures are followed as necessary at interim inspections
Load Rating Documentation	Maintain load rating records, including plans, sketches and calculations Load rate locally owned timber bridges and notify owners of results	Provide load ratings as required by LADOTD EDSM I.1.1.15 Ensure that all bridges being added to LADOTD inventory have an updated and valid load rating
Critical Findings	Report critical findings monthly to FHWA and ensure that local owners address critical findings properly	Notify LADOTD of any critical finding per the procedures in Maintenance Directive #13
Scour Assessment	Maintain records of scour assessments	Perform a scour assessment on all bridges over water and provide LADOTD with a copy
Scour POA	Develop scour POAs for scour critical bridges and unknown foundations	-
Inventory and Evaluation Data and Collection Forms	Maintain and update records for bridge inventory and evaluation data Provide local bridge owners with copy of current bridge data on a semiannual basis	Provide LADOTD with all changes to bridge inventory data according to Maintenance Directive #8
Significant Correspondence	Maintain as part of the bridge file	Maintain as part of the bridge file
Maintenance Records	Ensure that local bridge owners are maintaining maintenance records	Maintain maintenance records for all bridges Notify LADOTD if responsible parties for maintenance change

**a) Corrections to Bridge Inventory Data**

Bridge inventory data may be updated at any time by contacting the District bridge inspection staff. After receiving this request, the district will prepare a master structure file update form (MSF form), and submit this form to the LADOTD Headquarters Bridge Inspection office.

Local bridge owners will receive a copy of the data currently entered in the inventory for their bridges each January and July. It is required that each local bridge owner review and correct this data, and submit the corrections to the District bridge inspection staff by the below deadlines.

- January data will be sent by January 31, and corrections are due by April 30.

- July data will be sent by July 31, and corrections are due by October 31.

#### **b) Adding or Deleting a Bridge from the Bridge Inventory**

After a new bridge has been constructed, it must be added to the LADOTD bridge inventory within 180 days. In order for LADOTD to add the bridge to the inventory, procedures in LADOTD Maintenance Directive #8 “Adding, Deleting, and Updating Data in the Master Structure File” must be followed. Under no circumstances will a bridge be added to the inventory without a valid load rating, scour analysis, or plans. For existing bridges recently acquired by the owner, the owner must provide a load rating and a scour analysis performed by a Louisiana licensed professional engineer.

If a local bridge owner opens a bridge to traffic without notifying LADOTD and providing the required documentation anytime in the review year, the parish of the bridge in question will be placed in non-compliance.

When a bridge is taken out of service, the District Bridge Inspection staff should be notified and procedures in Maintenance Directive #8 followed. The policy for removing bridges that are out of service from the LADOTD inventory is given in LADOTD Maintenance Directive #10/11, “Bridges Which are Closed to Traffic/Out of Service.”

### **III. Bridge Inspections**

LADOTD will perform the 24-month routine inspection on each off system bridge in Louisiana. These inspections will be performed by LADOTD Certified Bridge Inspectors. The inspections must conform to the requirements of the National Bridge Inspection Standards and the *AASHTO Manual for Bridge Evaluation and Interim Revisions*. Local bridge owners are invited and encouraged to accompany the DOTD Bridge Inspectors during these routine inspections. LADOTD bridge inspectors shall notify the local bridge owners 30 days prior to conducting the routine inspections in their jurisdictions. Local bridge owners will be provided with copies of these reports upon completion.

The *AASHTO Manual for Bridge Evaluation* requires Interim (reduced interval, typically 6 or 12 months) Inspections of bridges with known deficiencies. It is the responsibility of the local bridge owner to perform and document the findings of these inspections on structures with known deficiencies or structures that are not capable of carrying the full legal load allowed by Louisiana Law. The frequency of Interim Inspections will be in accordance with LADOTD established criteria published in the LADOTD Maintenance Directive #4, “Bridge Inspection Procedures and Frequencies.”

The Interim Inspection shall include a re-inspection of all components with a rating of “5” or less. Documentation of the dates and findings of the Interim Inspections will be maintained by the bridge owner in a file for each bridge under their jurisdiction. The minimum documentation will be a completed LADOTD Bridge Inspection Report form. (DOTD Form #03-41-3097) The

actual date the inspection was performed shall be recorded on the report and shall not be back dated or otherwise modified.

#### **a) Critical Findings**

If a critical deficiency is found during any type of inspection (LADOTD or owner's inspector), the LADOTD District Inspection staff must be notified according to the procedure in LADOTD Maintenance Directive #13.

Failure to respond to LADOTD notification of critical findings and provide an acceptable response (per Maintenance Directive #5) will result in non-compliance status for the parish in question.

### **IV. Bridge Load Rating**

It is the responsibility of each local bridge owner to determine the load carrying capacity of all bridges under its jurisdiction in accordance with the AASHTO Manual for Bridge Evaluation, Chapter 6 – Load Rating, LADOTD Maintenance Directive #5, and EDSM I.1.1.15

Bridges built under the Off-System Bridge Replacement Program will have a load rating performed by LADOTD. Timber bridges will also be load rated by LADOTD. The timber rating form is completed by the LADOTD Inspectors during the 24-month routine inspections. Local bridge owners are responsible for reviewing these ratings and ensuring that the bridges are properly weight restricted if necessary as per EDSM I.1.1.8.

If it is determined during a subsequent routine or interim inspection that the bridge condition has changed, invalidating the original load rating, the bridge owner is responsible for having the bridge load rated to reflect the current condition. LADOTD Bridge Inspectors must ensure that the load ratings and load postings shown in the bridge inventory data for each off system bridge agrees with their observed/reported condition of the bridge.

Repairs may require that a bridge be rerated. If performing in kind or better repairs on non-timber bridges, a professional engineer may apply a previous rating on file for the bridge in certain situations. Details of the repairs and a letter stating that the prior rating is now applicable must be submitted to the District bridge inspection staff.

### **V. Posted Bridges**

For Louisiana to be in compliance with federal regulations regarding bridge postings, bridges must be properly posted, and all posting and closing deficiencies should be promptly resolved.

It is the responsibility of each local bridge owner to install and maintain load limit signs at each bridge under their jurisdiction that is not capable of carrying the full legal load allowed by Louisiana Law. Load limit regulations should be established by an official act of the local governmental body to be legally enforceable. Local bridge owners are expected to have a system in place to maintain and replace signs if necessary.



For compliance purposes, a properly posted or restricted bridge is defined as follows:

- The required load posting as determined by a load rating is reflected at the bridge structure by the installation of load posting signs.
  - If the owner desires, a lower load limit may be selected. LADOTD must be notified and the bridge inventory data updated.
- Load posting signs must conform with the Manual for Uniform Traffic Control Devices MUTCD.

For more information, refer to LADOTD Maintenance Directive #5 in Appendix C. For compliance, all bridges requiring posting shall be field reviewed.

## **VI. Closing Bridges**

It is the responsibility of each local bridge owner to close any bridge under their jurisdiction which has been recommended for closure by LADOTD, or rated for a load carrying capacity of less than three (3) tons. These bridges must be physically closed with positive barriers sufficient to restrict all traffic until removed, repaired or replaced. The procedures for closing an off system bridge are given in LADOTD Maintenance Directive #5 (Appendix C).

If a situation is discovered during an LADOTD routine inspection that requires the immediate closure of a bridge because of imminent danger to the public, the bridge owner must be notified. It may be necessary for the bridge inspectors to physically block traffic. The owner should immediately evaluate the situation and take whatever steps necessary to safeguard the traveling public, i.e. physically barricade the bridge, repair the bridge, etc.

For compliance, all bridges requiring closure will be field reviewed. Any bridges that are not properly closed per LADOTD Maintenance Directive #5 will result in a non-compliance status for the parish, no exceptions.

**VII. Annual Compliance Review with Off System Bridge Owners**

Each fall, DOTD District Bridge Engineers and Bridge Inspectors will visit each off system bridge owner to inspect their bridge files. This typically occurs in the months of September and October and will be scheduled by the District bridge inspection staff. Visits to the bridge files are conducted to determine compliance with interim inspection and load posting requirements. All bridge inspection reports will be reviewed. In addition, District bridge inspection staff will field check bridges which require load posting and closure to determine compliance with these requirements.

Each local bridge owner will submit to LADOTD by November 15 of each year a resolution by the local governing body that they have and will continue to comply with all NBIS/FHWA/DOTD requirements regarding performance of interim inspections, calculating the load carrying capacity, and load posting/closure of deficient bridges under their jurisdiction.

In addition, the local bridge owner must submit contact information for all individuals or consulting firms that perform inspection and maintenance of their bridges, as well as the individuals responsible for maintaining the bridge files and the location of the bridge files. Contact information must include name, physical and mailing address, phone number, and email.

If ownership or maintenance responsibility of a bridge changes, the District Bridge Inspection staff should be notified immediately.

**a) Important Compliance Due Dates**

**Table 2 – Important Compliance Dates**

<b>April 30</b>	Submittal of January Bridge Data Corrections
<b>October 31</b>	Submittal of July Bridge Data Corrections
<b>November 15</b>	Annual Resolution
	Plan of Corrective Action to Load Rate Bridges without Load Ratings
	Contact Information for Bridge Files, Inspection and Maintenance
<b>December 31</b>	Final Compliance Determination and Notification to Owners
<b>February 1</b>	Deadline to Submit Plan of Corrective Action for Conditional Compliance

**b) Compliance Levels**

There are four levels of compliance assessment: Compliance, Substantial Compliance, Conditional Compliance, and Non-Compliance.

- Compliance – All conditions met.
- Substantial Compliance – Most conditions met. Improvement should be made within the next compliance review year or risk being dropped to Conditional Compliance.

- Conditional Compliance – Improvement must be made within the next review year or non-compliance will be enforced. A plan of corrective action must be submitted to address the issues resulting in Conditional Compliance.
- Non-Compliance – Critical conditions not addressed or public safety has been impacted by failure to comply. Owner has not improved from Conditional Compliance from the previous review cycle.

Table 3 summarizes the compliance conditions measured and the different levels that can be achieved. These levels and conditions are subject to change each year based on federal updates and the statewide compliance assessment. The LADOTD Headquarters Bridge Inspection office can be contacted for assistance with composing plans of corrective action and will review all plans of corrective action. This office is responsible for final determinations of compliance for local bridge owners. The final compliance determination and notification to local bridge owners will be completed by December 31 of each year. If required, a plan of corrective action should be submitted by February 1 in the following year.

**Table 3 – Compliance Conditions and Levels**

Condition	Level
<b>1. Closed Bridges</b>	
All bridges properly closed	Compliance
Any bridge open that should be closed with the owner's jurisdiction	Non-Compliance
<b>2. Posted Bridges</b>	
All bridges requiring posting are properly posted	Compliance
Not all bridges requiring posting properly posted	Conditional Compliance
<b>3. Interim Inspections</b>	
All inspections performed on time	Compliance
All inspections performed, but only some on time	Substantial Compliance
Inspections not performed	Non-Compliance
<b>4. Load Ratings</b>	
All bridges load rated	Compliance
Plan of corrective action submitted to rate remaining bridges missing ratings	Substantial Compliance
No plan of corrective action submitted for missing ratings	Non-Compliance
<b>5. Bridge Data Corrections</b>	
Corrections performed by deadlines	Compliance
Corrections submitted late	Substantial Compliance
No corrections submitted for one period	Conditional Compliance
No corrections submitted for either period	Non-Compliance
<b>6. Annual Resolution and Contact Information</b>	
Submitted	Compliance
Not submitted	Conditional Compliance
<b>7. New Bridge Documentation</b>	
Submitted on time	Compliance
Submitted after the 180 day window but with all documents	Conditional Compliance
Bridge opened to traffic without notification and/or proper documents	Non-Compliance
<b>8. Failure to Respond to Critical Findings per MD #5</b>	
Acceptable Response	Compliance
No Response upon any critical finding	Non-Compliance
<b>9. Falsification of Inspection Reports or Bridge Data</b>	
Non-falsified records	Compliance
Falsified records	Non-Compliance
<b>10. Prior Conditional Compliance Status</b>	
Full or Substantial Comp Prev Year	Compliance
Conditional Compliance Previous Year	Non-Compliance
<b>11. Failure to Submit Plan of Corrective Action</b>	
Plan Submitted	Compliance
Plan Not Submitted	Non-Compliance

## **VIII. Loss of Bridge Replacement Funding**

If the local bridge owner is found in non-compliance, the Off-System Bridge Program Manager and the FHWA will be officially notified with the recommendation that the federal funding for the parish be revoked for a period of one year. Evaluation for re-entry into the Off System Bridge Replacement Program will be completed at the subsequent annual compliance review.