LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

# OFF-SYSTEM BRIDGE INSPECTION MANUAL

Revision 1 2025 Edition





LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

# **Foreword**

The State of Louisiana requires the comprehensive inspection of all bridges that carry public traffic and are publicly owned, operated, or maintained as defined under Louisiana Revised Statute 48:35 and as required by *23 CFR 650.301* of the *NBIS* and the *AASHTO MBE*. As per Section 1111 of the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) modified 23 U.S.C. 144, each state is required to report bridge element level data to the Secretary of FHWA for all highway bridges on the National Highway System (NHS).

The intent behind the development of this document was to provide a sequential and intuitive manual for expeditious referencing of key procedures. Consistency is vital to an effective bridge management program. Program consistency among intergovernmental agencies, the bridge engineering community, and bridge owners will help achieve this manual's goals.

This manual replaces the following documents:

- 2020 DOTD Bridge Inspection Manual
- LA DOTD OFF SYSTEM BRIDGE GUIDELINES AND COMPLIANCE REVIEW PROCESS

This manual complements the following documents:

- LADOTD Coding and Field Guide
- LADOTD On-System Bridge Inspection Manual
- LADOTD Policies and Guidelines for Bridge Rating and Evaluation
- FHWA 23 Metrics for the Oversight of the NBIP
- FHWA Bridge Inspector's Reference Manual
- FHWA Specifications for the National Bridge Inventory
- FHWA Federal Aid Off-System Highway Bridge Program Guidelines

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# 1 Policies

# 1.1 INTRODUCTION

This manual describes the DOTD's organization, administration, and operational procedures of the State of Louisiana Off-System Bridge Inspection Program.

A bridge is defined as 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 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; including multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

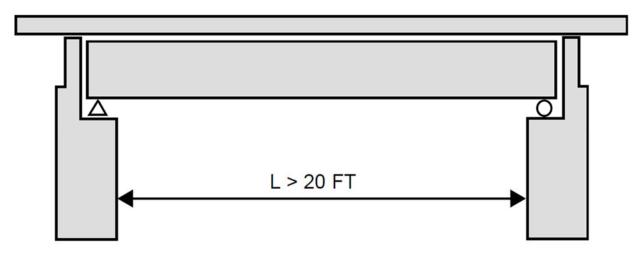
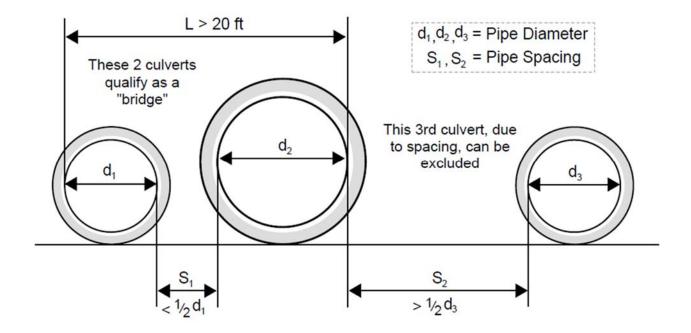


Figure 1-1: Measuring bridge span. Source: FHWA SNBI Manual

Culverts that qualify as "bridges" must be inventoried and inspected. Culverts are usually covered with embankment and the embankment depth must be measured.





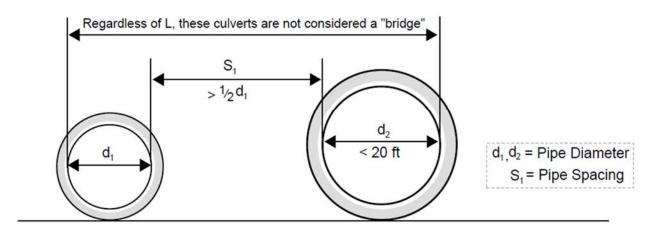


Figure 1-2: Measuring culvert span



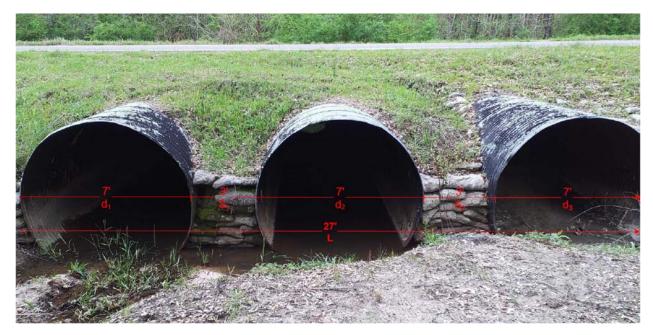


Figure 1-2: Measuring culvert span (cont.)

For more information on Parts of a Bridge, see Appendix A-9 for a schematic.

# 1.2 BRIDGE OWNER RESPONSIBILITIES

Collaboration with interagency partnerships is critical to ensuring a safe bridge structure is available for public use. Each bridge owner is responsible for performing a safety inspection and evaluation and filing that information promptly to comply with federal legislation. 23 CFR 650.315 requires individual bridge data contained in the National Bridge Inventory (NBI) (See Section 2.1) to accurately reflect the bridge's status. Following a change in status, each off-system bridge file must be updated within 90 days.

Examples of status changes are:

- Newly constructed bridges before opening to traffic
- Any load restriction or bridge closure (30 day maximum)
- Modifications to the existing inventory (SNBI) data

Municipalities, parishes, and private bridge owners will collaborate with their respective regional DOTD District Bridge Engineer. The Port of New Orleans, Greater New Orleans Expressway Commission, bordering states, toll authorities, and railroad companies will collaborate with the DOTD Headquarters Bridge Inspection Office (HQ).

All local agencies and bridge owners will report any bridge repair, rehabilitation, and/or replacements with drawings (including as-builts and revised load ratings) to the respective local DOTD District Bridge Engineer or HQ.

Contact information for bridge inspection, bridge maintenance, district offices, and load ratings can be found at <a href="https://dotd.la.gov/about/office-of-operations/structures-maintenance-and-inspection/staff-directory/">https://dotd.la.gov/about/office-of-operations/structures-maintenance-and-inspection/staff-directory/</a>.

# 1.3 PERSONNEL QUALIFICATIONS AND TRAINING

All Off-System bridge inspectors must meet the minimum qualifications for employment in Louisiana. It is recommended that bridge inspectors take the Roads Scholar #13: Inspection of Local Bridges course offered by LTAP.

All load rating reports must be stamped by a licensed professional civil or structural engineer registered in the State of Louisiana. For qualifications of LADOTD personnel, see LADOTD On-System Bridge Inspection Manual.

## 1.4 PARISH COMPLIANCE

Bi-annually, parishes are required to verify that all inspection data associated with their bridges is up-to-date and correct. Each January and July, the Districts will send a comprehensive list of the parish's bridges and their associated inspection data as it appears in InspectX. The parish is responsible for informing the District bridge office of any data corrections that are required. These bi-annual data reports must include a parish official's signature when they are submitted back to the District, whether data corrections are required or not. Parishes are given roughly 30-days to verify, mark-up, sign, and return the data reports back to the District bridge office or they risk being placed in non-compliance. Updated ADT counts are required every 6 years. Data corrections returned with ADT older than 6 years will be considered not submitted.

Each fall, DOTD District Bridge Engineers and Bridge Inspectors will meet with each off system bridge owner to discuss their bridge file and new policies. This typically occurs in October and will be scheduled by the District bridge inspection staff. InspectX reviews are conducted to determine compliance with interim inspection and load rating 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 HQ 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 (See Appendix A-10 for required format). In addition, the local bridge owner must also submit contact information for all individuals or consulting firms that perform inspection, load rating, and maintenance of their bridges. Contact information must include name, physical and mailing address, phone number, and email.

The District bridge office will submit their compliance evaluation checklists (See Appendix A-1) to HQ in January. Once received, HQ will proceed with final compliance determinations and inform the parish of their decision. If a parish has been placed in conditional compliance, they have until March to submit a plan of corrective action (PCA) to ensure compliance for the next year. Failure to submit or adhere to a conditional compliance PCA will result in the parish being placed in non-compliance.

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

## 1.4.1 Important Compliance Due Dates

Table 1-1: Important compliance dates

	! !
lamam.	Bi-annual reports are sent out to parishes for data corrections
January	District's final parish compliance evaluation checklists submitted to HQ
February	Final compliance determination sent to parishes
D.d.o.u.o.lo	Parish submittal of signed January bi-annual data corrections report
March	Parish Deadline to submit plan of corrective action for conditional compliance
July	Bi-annual reports are sent out to parishes for data corrections
September	Parish submittal of signed July bi-annual data corrections report
November 15	Parish submittal of Annual resolution and contact information for bridge files, inspection, and maintenance

# 1.4.2 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 1-2 summarizes the 11 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 HQ office can be contacted for assistance with composing plans of corrective action and will review all plans of corrective action. HQ is responsible for final determinations of compliance for local bridge owners. The final compliance determination and notification to local bridge owners will be completed in February each year. If required, a plan of corrective action should be submitted in March.

Table 1-2: Parish Compliance Metrics

Condition	Level
1. Closed Bridges	
All bridges properly closed	Compliance
Any bridge open that should be closed within the owner's jurisdiction	Non-Compliance
2. Posted Bridges	тот остранить
All bridges requiring posting are properly posted	Compliance
Not all bridges requiring posting properly posted	Conditional Compliance
3. Parish Inspection	
All inspections performed on time	Compliance
All inspections performed, majority on time	Substantial Compliance
All inspections performed, majority late	Conditional Compliance
Inspections not performed	Non-Compliance
4. Load Ratings	Worr compliance
All bridges load rated within required timeline	Compliance
All bridges load rated, majority on time	Substantial Compliance
All bridge load rated, majority late	Conditional Compliance
Load Ratings not performed	Non-Compliance
5. Bridge Data Corrections	
Corrections performed by deadlines	Compliance
Corrections submitted late	Substantial Compliance
No corrections submitted for one period	Conditional Compliance
No corrections submitted for both periods	Non-Compliance
6. Annual Resolution and Contact Information	
Submitted	Compliance
Not submitted	Conditional Compliance
7. New Bridge Documentation	'
Submitted on time	Compliance
Bridge opened to traffic without notification and/or proper documents	Non-Compliance
8. Failure to Make Bridge Accessible During Inspections	<u>'</u>
All requested debris/vegetation removal has been completed within 30-days of notification	Compliance
Failed to remove debris or vegetation within 30-days of notification, hindering inspectors	Conditional Compliance
9. Failure to Respond to Critical Findings	
Acceptable Response	Compliance
No Response upon any critical finding	Non-Compliance
10. Falsification of Inspection Reports or Bridge Data	
Non-falsified records	Compliance
Falsified records	Non-Compliance

Condition	Level	
11. Failure to Submit or Follow Plan of Corrective Action		
Plan Not Submitted or No Improvement in Year 2	Non-Compliance	

# 1.4.3 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.

## 1.5 FEDERAL COMPLIANCE

The State of Louisiana is reviewed annually on its adherence to the National Bridge Inspection Standards (NBIS), outlined in the Code of Federal Regulations (CFR) Title 23 CFR 650 Subpart C. During the compliance review process, the Federal Highway Administration (FHWA) considers 23 metrics to assess Louisiana's Bridge Inspection Program, determine the level of compliance met for each metric, and issue recommendations or suggested requirements to improve the compliance level. DOTD will consider the recommendations for improvement and develop either an Improvement Plan (IP) or a Plan of Corrective Action (PCA) when needed.

### 1.5.1 FHWA Metrics for NBIP

Highlighted metrics below can be affected by parish performance:

- Metric #1: Bridge Inspection Organization
- Metric #2: Qualifications of Personnel Program Manager
- Metric #3: Qualifications of Personnel Team Leader(s)
- Metric #5: Qualifications of Personnel UW Bridge Inspection Diver
- Metric #New 1: Qualifications of Personnel Damage, Special, and Service Inspections
- Metric #6: Inspection Interval Routine
- Metric #8: Inspection Interval Underwater
- Metric #10: Inspection Interval NSTM
- Metric #New 2: Inspection Interval Special, In-Depth, and Service
- Metric #11: Inspection Interval Frequency Criteria
- Metric #12: Inspection Procedures Quality Inspections
- Metric #13: Inspection Procedures Load Rating
- Metric #14: Inspection Procedures Post or Restrict
- Metric #15: Inspection Procedures Bridge Files
- Metric #16: Inspection Procedures NSTM
- Metric #17: Inspection Procedures Underwater
- Metric #18: Inspection Procedures Scour
- Metric #19: Inspection Procedures Complex Bridges



- Metric #New 3: Inspection Procedures In-Depth Special
- Metric #20: Inspection Procedures QC/QA
- Metric #21: Inspection Procedures Critical Findings
- Metric #22: Inventory Bridge Data Quality
- Metric #23: Inventory Timely Updating of Data

# 2 Bridge Records

Bridge records for all state-owned, locally owned, and any other inventoried bridge structure are maintained by the Headquarters Bridge Inspection Office in InspectX. Bridge records are kept in accordance with Section 2 of the AASHTO MBE (per 23 CFR 650.315(a)) and monitored in accordance with FHWA Metric #15. All bridges on public roads and private bridges that are connected to a public road on both ends of the highway (see 605.303) must have a bridge file stored in the bridge inspection collector software.

## 2.1 BRIDGE FILE

The bridge file will contain the following items as applicable:

- Inspection reports
- Waterway information
- Special inspection procedures or requirements
- Load rating documentation, including load testing results
- Posting documentation
- Critical findings and actions taken
- Scour appraisal
- · Scour plan of action (POA) for scour critical bridges and those with unknown foundations
- Documentation of post-event inspections
- SNBI inventory and evaluation data with collection/verification forms
- Significant correspondence
- Bridge maintenance records
- Construction or as-built drawings, including technical specifications
- Photographs
- Flood data
- Inspection requirements
- Traffic data/Average Daily Traffic
- Accident records
- Load test data
- Coating history
- Additional applicable data useful for maintaining the structure and ensuring the safety of the traveling public

## 2.2 UPDATING BRIDGE DATA

# 2.2.1 Adding/Deleting a Bridge to the Inventory

Once a new bridge, culvert or pipe as described in Figure 1-2, is constructed, the owner must provide all related documents via the "Add a Bridge" Request form on the Bridge Maintenance Website prior to opening the bridge to traffic. This guidance applies to <u>all</u> structures including: permanent bridges, temporary bridges, pipes, and culverts.

Under no circumstances will a bridge be added to the inventory without a valid load rating, scour analysis, and plans. For any project managed by DOTD (Off-System Bridge Replacement Program), HQ has this documentation, and it is not required to be submitted. If a local bridge owner opens a bridge to traffic without previously notifying and providing the required documentation to the DOTD, the <u>parish will be placed in non-compliance</u>.

Documents Required to Add a Bridge to the Inventory are as follows:

# • Plan Sheets (or if plans are unavailable, Sketches stamped by a Professional Engineer) showing:

- Geometric layout of the area showing the approach roadway, bridge deck, number of traffic lanes on and under the structure, and alignment of the feature crossed, and
- Cross-section of the bridge (through the deck) with measurements indicating roadway width, rail-to-rail clearance, curb-to-curb width, out-to-out width, layout of the bent(s) and/or piers, and vertical clearance over the bridge deck, and
- Profile of the bridge showing total length of the structure, length and type of each span, under-passing roadway(s) vertical and horizontal clearances
- All movable and fixed bridges over navigable waterways will have their navigation vertical and horizontal clearance field-checked and sketched. Measurements for movable bridges will be taken in both the fully open and fully closed positions.
- For pipes and culverts, all of the above (as applicable) plus the diameter, wall thickness, and spacing of each barrel

## • Timber Rating Form

 For all timber bridges or bridges with timber spans, a Timber Rating Form will be completed by the Owner. Sketches including and identifying the specific location of all deficiencies or other sub-standard conditions shall also be provided.

### • Load Rating documentation

 The stamped load rating report, including a summary sheet and calculations (for all Non-DOTD projects)

### Scour Analysis documentation

Pile length information, pile driving records, and hydraulic information, when not available
on the plans, must be submitted using the Phase 1 Scour Form and stamped by a

Professional Engineer (See Appendix A-3: Phase 1 Scour Assessment Form). New bridges with unknown foundations will not be accepted.

#### Add/Delete Sheet

• The District will complete and include an add/delete sheet when they submit the initial inspection report for approval

# 2.2.2 Updating Off-System Bridge Inventory Data

Off-System bridge owners will receive, from the DOTD District Bridge Inspection Office, a copy of the data currently entered in the inventory for their bridges each January and July. Each Off-System bridge owner must review and correct this data and submit updates/corrections to the District Bridge Inspection Office by the due dates provided in Table 1-1.

Bridge Inspection personnel should adhere to the latest edition of the *DOTD Coding and Field Guide* to ensure all bridge inventory information is correctly coded into the inspection software.

# 2.2.3 Deleting an Off-System Bridge

### Off-System bridges may be deleted under the following circumstances:

- The old bridge was removed and replaced with a bridge that does not meet NBIS Federal Bridge Definition criteria (i.e. less than 20 feet opening) and the bridge is not programmed to be replaced with Federal funds.
- The old bridge was removed and a new bridge (replaced, phased construction (split slab), or temporary) has been inventoried (See Section 2.2.1)
- The route has been abandoned in one of the following ways:
  - Routes will be considered abandoned when the bridge has been closed for over 5 years and the bridge is not programmed to be replaced with Federal funds
  - o A resolution is submitted to HQ to officially remove the route and its associated bridges from our database and subsequent downstream applications.

When a bridge is deleted from the inventory, the following tasks must be done:

- Two photographs of each location will be submitted with the Delete Form, one showing the roadway in the direction of travel and one showing the profile (end view) of the pipe(s), arch, box culvert, or bridge.
- Upon request from DOTD, the Owner will provide a Plan of Action to repair or replace a closed bridge or confirmation of abandoned route.

# 3 Bridge Inspection Procedures

## 3.1 GENERAL INFORMATION

## 3.1.1 Documentation

DOTD maintains a complete, current, and historical record of each bridge. Proper documentation is imperative. The inspection report is a record of the bridge's observed condition and must be clear, concise, accurate, and thorough. Sufficient information should be gathered in the field to allow for a comprehensive and complete report supported by photos, notes, sketches, etc.

# 3.1.2 Inspection Reporting Timeline

For all inspections, the following timeline must be followed in order to ensure compliance with 23 CFR 650.315.

- Owner's Reports must be sent for final approval within 60 days of inspection.
- Final approval is required for both On- and Off-System bridges within 90 days of inspection.

# 3.1.3 Element Level Data Collection and Labeling

## Labeling

Bridge elements will be labeled in the direction of inventory and from left to right.



Figure 3-1: Element labeling example

## Condition States and Associated Defects

DOTD inspectors will assign condition state ratings for the owner's review based on the following guidance:

Once the NBEs and Agency Defined Elements have been identified and an overall quantity for each has been established by means of reviewing as-built drawings and field verification, defect types and associated condition states can be assigned to these elements. The condition state is defined by four categories: good (CS1), fair (CS2), poor (CS3), and severe (CS4). The four condition states correlate to the severity of inherent, minor, moderate, and major damage. The AASHTO Manual for Bridge Element Inspection identifies (in detail) the defect associated with each NBE and provides guidelines to the inspector for determining the defect severity.

With the incorporation of the SNBI coding, FHWA has adopted general guidelines to help inspectors correlate element-level condition states to bridge condition ratings. The following provides a basic guide for correlating defect severity to condition ratings.

Table 3-1: Codes and descriptions for component condition ratings

Code	Condition	Description		
N	Not Applicable	Component does not exist.		
9	Excellent	Isolated inherent defects.		
8	Very Good	Some inherent defects.		
7	Good	Some minor defects.		
6	Satisfactory	Widespread minor or isolated moderate defects.		
5	Fair Some moderate defects; strength and performance of the component are not affected.			
4	Poor	Widespread moderate or isolated major defects; strength and/or performance of the component is affected.		
3	Serious	Major defects; strength and/or performance of the component is seriously affected. Condition typically necessitates more frequent monitoring, load restrictions, and/or corrective actions.		
2	Critical	Major defects; component is severely compromised. Condition typically necessitates frequent monitoring, significant load restrictions, and/or corrective actions in order to keep the bridge open.		
1 Imminent Bridge is closed to traffic due to component condition. Repair or rehrelation return the bridge to service.		Bridge is closed to traffic due to component condition. Repair or rehabilitation may return the bridge to service.		
0	Failed  Bridge is closed due to component condition, and is beyond corrective action.  Replacement is required to restore service.			

3)				Defect	Severity	<u> </u>	
Condition Ratings		Inherent (CS1)	Minor (CS2)	Moderate (CS3)	Major (CS4)	Affects Strength and/or performance	Bridge Closed
G	9 - Excellent	Isolated					
0	8 - Very Good	Some					
d	7 - Good		Some				
F a	6 - Satisfactory		Widespread o	r Isolated			
i r	5 - Fair			Some			
P	4 - Poor			Widespread o	r <b>Isolated</b> an	nd Yes 	
0	3 - Serious				Some a	nd Yes 	
r	2 - Critical				Some a	nd Yes 	
	1 - Imminent Failure				Some a	nd <b>Yes</b> ar	nd Yes 
	0 - Failed				Some a	nd Yes ar	nd Yes

#### Notes:

- 1. Isolated defects affect approximately 10% or less of the bridge component
- 2. Some defects affect approximately 10% to 40% of the bridge component
- $3.\,Wide spread\,defects\,affect\,approximately\,40\%\,or\,more\,of\,the\,bridge\,component$

Figure 3-2: SNBI Component Rating Guidance

# 3.1.4 Critical Findings

All critical findings will require a 6-month interim inspection to inspect and document the status of the critical finding until fully resolved. HQ must be alerted within 24 hours for critical findings on the NHS.

## **Definition**

FHWA Defines A critical finding is a structural or safety-related deficiency that requires immediate follow-up action when any of the following in Table 3-2 are true.

Table 3-2: Critical finding criteria

SNBI Item	Name	Value
B.C.01, B.C.02, B.C.03, B.C.04, B.C.15	Deck, Superstructure, Substructure, Culvert, or Underwater Condition Rating	2 or less
B.C.14	NSTM Condition Rating	3 or less
B.C.09, B.C.11	Channel, or Scour Condition Rating	2 or less
-	Bridge status	Fully or partially closed
-	"Critical deficiency"	Immediate load restriction or load posting, or immediate repair work to a bridge, including shoring, in order to remain open
-	Observed hazardous or flammable material stored under or adjacent to the bridge	

Per FHWA memorandum "ACTION: Documentation and Treatment of Materials Stored Under a Highway Bridge" dated 11/15/2023, bridge owners should direct inspectors, during their routine inspections, to be observant of materials, including flammable, explosive, or hazardous materials, stored under bridges, document any such materials stored in the ROW in the inspection report, and, if concerns exist, to communicate those concerns appropriately to the bridge inspection program manager. The discovery of such materials stored underneath a highway bridge should be treated as a critical finding requiring immediate follow-up action in accordance with our regulations and guidance (NBIS Regulations and Guidance) to ensure public safety and must be reported to the FHWA (23 CFR 650.313(q)).

Failure to respond to LADOTD notification of critical findings and provide an acceptable response within 24 hours will result in non-compliance status for the parish in question.

Refer to Appendix A-7 for a flow chart on critical finding and bridge closure procedures.

# 3.1.5 Bridge Closure Procedures

It is the responsibility of each local bridge owner to close any bridge under their jurisdiction which has been recommended for closure by DOTD 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.

If a situation is discovered during a DOTD 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. See Flowchart in Appendix A-7 (described below)

Upon notification from DOTD the owner must respond within 24 hours with one of the following responses:

- The bridge will be closed immediately
- The bridge will be repaired immediately
- The owner disagrees with the closure finding and will provide a new load rating stamped by a professional engineer (Greater than or equal to 3 tons)

Within 48 hours of notification from DOTD the owner must complete one of the following follow-up actions:

- Close the Bridge
- Complete Repairs
- Provide the new load rating stamped by a professional engineer (Greater than or equal to 3 tons)

Failure to complete one of the follow-up actions within 48 hours will result in non-compliance and DOTD will close the bridge and pass any associated costs to the owner.

For compliance, all bridges requiring closure will be field reviewed. Any bridges that are not properly closed will result in a non-compliance status for the parish, without exception. Closure will include locked gates, deep beam barriers, and other similar devices capable of preventing traffic from using the bridge. Closure does not include piles of dirt, sawhorse barricades, timbers across the roadway, or signs alone. It must be a physical positive barrier.

Below are examples of correct and incorrect bridge closures.





Figure 3-3: Correct closure with Type 3 barricade and concrete barrier



Figure 3-4: Correct closure with a locked gate





Figure 3-5: Correct closure using guardrail. NOTE: Proper signage should be used



Figure 3-6: Incorrect closure with only Type 3 barricade. NOTE: Signage should not be mixed



Figure 3-7: Incorrect closure using dirt pile

# 3.1.6 Load Ratings

All bridges on public roads shall have a current load rating on file. Off-System bridge owners are responsible for re-rating/reviewing their bridges and complying with all LADOTD policies. The frequency of re-rating/reviewing due to condition change is as follows:

**Structural Condition Re-Rating/Review Frequency** Before opening to traffic and upon notification from the Bridge Rating 0-1 Lowest SNBI (Closed) Maintenance Section or District Structural Bridge Engineer **Condition Rating** Within 90 days of notification of Rating 2-4 structural condition rating drop. As part of the design project and Overlay upon request from the project manager or district bridge engineer. As part of the design project and Structural Repair upon request by the Project task manager or District Bridge Engineer. Upon finding significant changes **Other Conditions Timber Structure** during the inspection or every four (4) years. **Primary Load** Carrying Element Within 90 days of notification of in Condition structural condition rating drop. State 4

Table 3-3: Load rating frequencies

Re-rating shall consist of an engineer review of the existing bridge rating analysis and bridge inspection report. If the rating report and analysis do not match the present conditions, a new analysis shall be performed.

For non-timber structures, when it is determined that no significant structural load carrying capacity changes have occurred due to the condition changes of the bridge or to new repairs, a re-rating analysis is not required; however, documentation of rating review must be provided. DOTD will provide the review of the condition changes and notify the parish if a new load rating analysis is required.

All Off-System load rating reports must be stamped by a professional engineer and entered in InspectX using the "Parish Load Rating" report type by the owner or owner's consultant and submitted to DOTD load rating Engineer. Load rating compliance is now based on the Load Rating Timeline (link). Load rating performance is based on the parish response within 7 days of notification and the submittal of the load rating report within 90 days of inspection approval. Failure to respond to any request or submit any agreed upon report will result in non-compliance. Late responses and/or reports may result in conditional compliance.

## 3.1.7 Repair and Rehabilitation Documentation

After repairs or rehabilitation projects are complete, the owner shall submit plans and updated load rating information prior to re-opening the bridge. The project plans will be used by DOTD inspectors to revise the element-level quantities and SNBI item documentation. For more information see ON-SYS manual.

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 applicable must be submitted to the District bridge inspection staff.

# 3.1.8 Bridge Posting

For compliance, all bridges requiring posting shall be field reviewed.

In accordance with the FHWA Memo Timeframe for Installing Load Posting Signs at Bridges, dated April 17, 2019, it is bridge inspection program policy that "bridge load postings are to be made as soon as possible but no later than 30 days after a load rating determines a need for such posting." Photo documentation is required within 30 days. Refer to the *Traffic Engineering Manual, Section 2B.4 "Use of Weight Limit Signs."* Load posting of bridges is considered a deficiency, and proper weight limit signage observation should be documented during every inspection. Photographic proof of posting is required during every inspection, and documentation of the displayed posting versus required posting shall be included in the Parish Inspection Notes.

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:

- 1. The required weight limit posting, as determined by a load rating analysis, is reflected at the bridge structure.
- If an Off-System Owner desires, a (conditionally posted) lower load limit may be selected and posted. DOTD must be notified, and the bridge inventory data must be updated.
- A bridge will not be posted at a higher load limit than the maximum required weight limit; if this is encountered, the district shall notify the owner of the bridge within seven days of the inspection and follow up with a documented critical finding per Section 3.1.4.
- Load posting signs and advanced warning signs must conform with the Manual for Uniform Traffic Control Devices MUTCD. Only signs which correspond to actual required posting values as shown in Figure 3-8 and Figure 3-9 below should be used.

BRIDGE CLOSED WEIGHT LIMIT 3 TONS

WEIGHT LIMIT 5 TONS

## A. BRIDGE CLOSED SIGN (R11-2)

B. WEIGHT LIMIT SIGN (R12-1)

Figure 3-8: Bridge weight limit signs (R11-2 and R12-1)

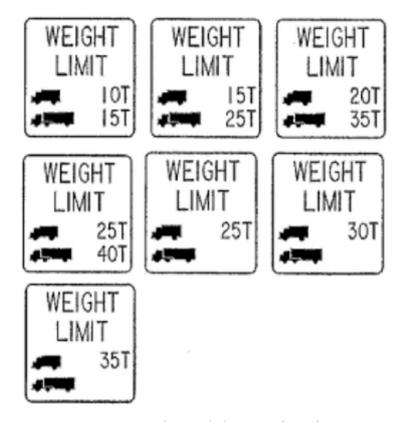


Figure 3-9: Bridge weight limit signs (R12-5)

# 3.1.9 Weight Limit Sign Inspection Procedures

If a missing, damaged, or illegible weight limit sign is observed during an inspection of an off-system bridge, the district shall notify the owner of the bridge within seven days of the inspection and follow up with a documented critical finding per Section 3.1.4.





Figure 3-10: Correct weight limit sign

Below are examples of weight limit signs that require replacement:



Figure 3-11: Damaged and incorrect weight limit sign





Figure 3-12: Illegible weight limit sign

## 3.1.10 Streambed Field Documentation

All bridges over waterways [rivers, creeks, drainage areas, floodplains (wet or dry)] require streambed profiles as part of the regular bridge inspection process. A streambed profile will be taken during every routine inspection and compared to High-Water and Underwater inspections.

Always note the reference feature that readings were taken from (i.e. top of rail, top of cap, etc.). The locations of profile readings are measured from the beginning of the bridge in the direction of inventory. Elevations of the bottom of the stream will be plotted. *Figures 3-13 & 3-14* show examples of the data required to correctly document the channel bed feature reference.

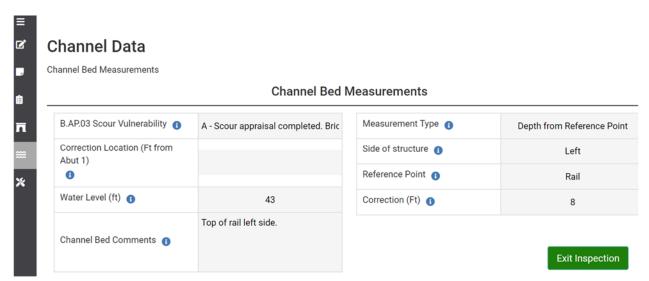


Figure 3-13: InspectX channel bed measurement example

The streambed profile is normally measured manually by dropping a weighted tape from the bridge deck at uniform intervals, beginning at the abutment, each bent, and at the midspan for spans 40 feet or longer. Measurements will be taken along the upstream fascia of the bridge at a minimum as follows (other intervals are allowed as long as their distance is properly referenced):

- At each abutment face
- At each bent
- At each midspan for each span 40 feet or longer

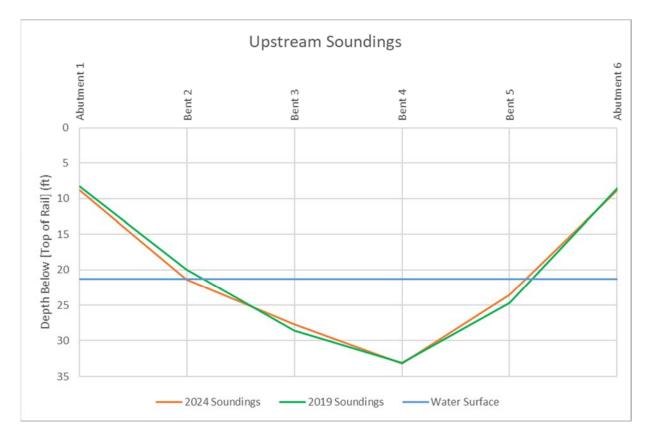


Figure 3-14: Example soundings

Scour critical bridges and bridges with unknown foundations (bridges meeting any of the criteria in Table 3-4) will have the POA reviewed, and a streambed profile performed during each High-Water inspection. The stream cross-section will be recorded and compared with the previous profile, as well as any critical elevations noted in the POA. The results of the comparison will be documented in the inspection notes. If the channel bottom at a bridge falls below a critical elevation noted in the POA, HQ is to be notified immediately per the critical finding protocol.

Table 3-4: Criteria for scour critical bridge

SNBI Item	Name	Value	
B.AP.03	Scour Vulnerability	C, D, or U	
B.C.11	Scour Condition Rating	3 or less	



# 3.2 INSPECTION TYPES AND FREQUENCIES

Each bridge in Louisiana will be inspected at the maximum interval established by the NBIS and the DOTD.

DOTD will perform a 24-month routine inspection of each Off System Bridge in Louisiana. 23 CFR 650, 650.311: Inspection interval, published 6/6/2022 to become effective by 6/6/2024, requires 12-month routine inspection for bridges where the deck, superstructure, substructure, culvert, or scour condition rating is coded 3 or less or NSTM condition coded 4 or less. 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. For more information on Inspection Intervals, see the DOTD On-System Bridge Manual. LADOTD bridge inspectors shall notify the local bridge owners 30 days prior to conducting the routine inspections in their jurisdictions.

It is the owner's responsibility to make their bridges accessible for DOTD Inspectors. Failure to remove debris and vegetation in a timely manner may result in Non-Compliance.



Figure 3-15: Example of In-accessible structure

LADOTD Reduced Interval policy for 6 month interim inspections will be updated to match Critical Finding criteria defined by the 23 CFR 650.313: Inspection procedures as meeting any of the following criteria:

- Full or partial closure of any bridge
- An NSTM condition coded three (3) or less;
- A Deck, Superstructure, Substructure, or Culvert Condition coded two (2) or less;
- The channel condition or scour condition coded (2) or less; or

• Immediate load restriction or posting, or immediate repair work to a bridge, including shoring, in order to remain open.

It is the responsibility of the local bridge owner to perform and document the findings of these 6-month inspections on structures with known deficiencies that meet the critical finding criteria as defined above. Because LADOTD is also performing 12-month routine inspections for these structures, the Parish 6-month inspection is actually only required annually on the opposite schedule of LADOTD. (Example. Routine is due 1/31/2024, Parish 6 month is due 7/31/2024, DOTD 12 month is due 1/31/2025, and Parish 6 month is due 7/31/2025 to complete the 24-month cycle.)

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

Table 3-5 below list all inspection types in Inspect X. The parish owners are required to perform the bolded inspection types as described in this chapter. For more information on other inspection types, Chapter 4 of the On-System Bridge Inspection Manual outlines each inspection type, when they are required, who is responsible to perform them, and what must be recorded.

Table 3-5: Inspection types

Inspection Type	Responsible	Requires NHI  Certified Team	Approval Levels/Timelines (Days from Inspection Date)			
inspection Type	Party	Leader?	Report Creation	TL	Prelim	Final/ Admin
Initial	District	Yes	7	30	60	90
Routine	District	Yes	7	30	60	90
NSTM	District	Yes	7	30	60	90
Interim	District	No	7	30	60	90
Special (non- Recuring)	District	No	7	30	60	90
Damage	District	No	7	30	60	90
Highwater Event	District or Local Owner	No		60*	-	90
District QC	District	Yes		60*	-	90
Posting Change Update	District	NA**	7	14*	_	30
District Inventory Update	District	NA**	-	30*	-	90
Railroad Pedestrian	District	No	-	30*	_	90
HQ QA	HQ	Yes		60*	-	90
Scour Analysis	HQ	NA**	-	30*	-	90
Load Rating	HQ	NA	-	60*	-	90
Inventory Update	HQ	NA	-	30*	-	90
Routine (Consultant)	Consultants	Yes	-	60*	-	90



Inspection Type	Responsible Party	Requires NHI Certified Team Leader?	Approval Levels/Timelines (Days from Inspection Date)			
mspection type			Report Creation	TL	Prelim	Final/ Admin
Underwater	Consultants	Yes	-	60*	-	90
In-Depth	Consultants	Yes	-	60*	-	90
NDE Consultant Inspection	Consultants	No	-	60*	-	90
Parish Inspection	<b>Local Owner</b>	No	7	60*	-	90
Parish Special (non- Recurring)	Local Owner	No	-	60*	-	90
Parish Load Rating	Local Owner	NA	-	60*	-	90

<sup>\*</sup>Submitted for Final Approval

# 3.2.1 Parish Inspection

A Parish Inspection is an Off-System Owner's interim inspection scheduled at regular intervals to inspect certain conditions on a bridge such as verifying closures and other critical finding follow up inspections. For all Parish Inspections, only the following fields should be updated:

- Inspection Comment with the purpose of the inspection as shown in Figure 3-16.
- Parish Inspection Notes to include any inspection or bridge notes (such as inspection team members, temperature, a summary of element(s) being closely monitored, etc.).

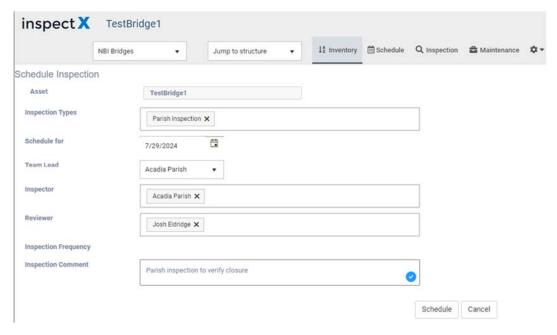


Figure 3-16: InspectX Parish Inspection Scheduling Example

<sup>\*\*</sup>NA TL due to not being a field report

## 3.2.2 Parish Special (Non-Recurring)

All repair documentation must include the date of repair or date that the repair was first documented. Provide month/year when possible.

Parish Special (non-recurring) inspections are unique, and one-time inspections conducted for a specific purpose, typically to evaluate something in detail. Reasons for special inspections include:

- Callouts for public safety concerns
- Document repairs
- Critical finding follow-up
- Damage

Special inspections of Off-System bridges will be the responsibility of, and performed by, local jurisdiction bridge owners and/or their engineering staff. For all Parish Special Inspections, the inspector should only update the Parish Inspection Notes in the inspection software. The inspector is to include or update any inspection or bridge notes (such as inspection team members, temperature, a summary of element(s) inspected, any vehicle or vessel impact information, etc.).

For all Parish Special Inspections, only the following fields should be updated:

- Inspection Comment with the purpose of the inspection as shown in Figure 3-16.
- Parish Inspection Notes to include any inspection or bridge notes (such as inspection team members, temperature, a summary of repairs, etc.).

# 3.2.3 Parish Load Rating

All bridges in the NBI are required to have a load rating, which is calculated based on the bridge's present condition. If any changes to the structural capacity of a primary member or connection are observed, a Parish load rating report will be submitted in the Inspection software.

Each local bridge owner is responsible for determining the load-carrying capacity of bridges under its jurisdiction in accordance with Section 3.1.6, the AASHTO MBE, Chapter 6 – Load Rating, 23 CFR 650.313 (c) and the DOTD Load Rating Manual.

# 3.2.4 Highwater Event

As flood events occur, Owners should monitor their scour critical bridges during and after a flood. Inspectors should also collect streambed profiles. The monitoring program should be in accordance with the POA (if one is available) and the scour criticality of a bridge. Refer to Appendix A-4: Scour Highwater Inspection for documentation forms.

Other items to visually observe and document:

- Debris accumulation
- Damage to piles\*



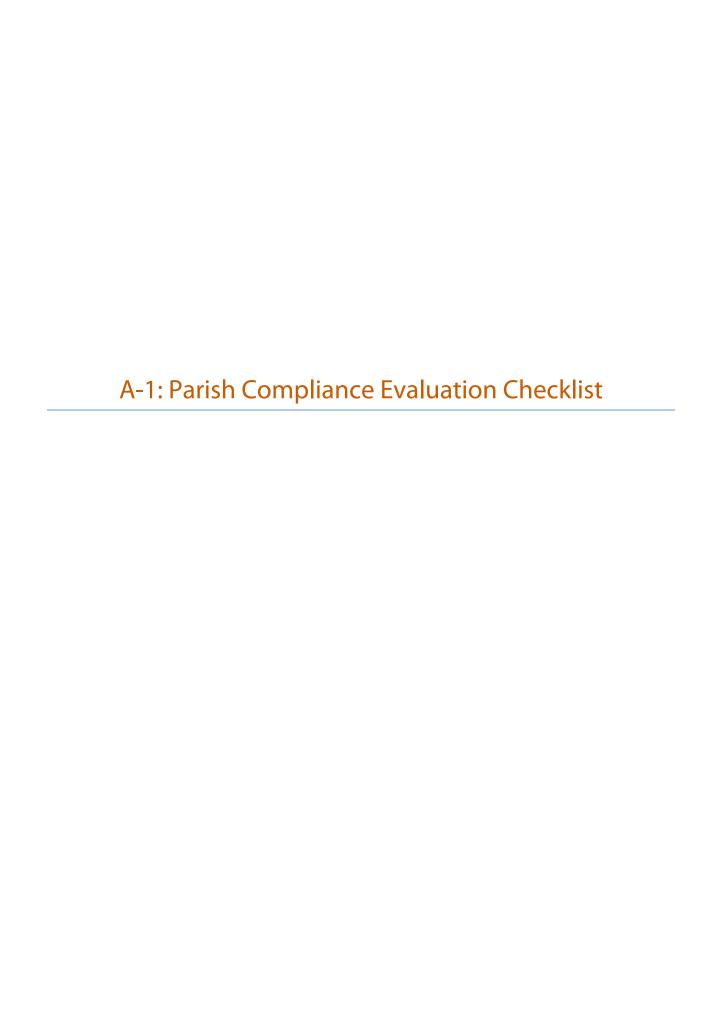
- Span alignment
- Bridge rail alignment
- Approach slab undermining
- Approach roadway wash-out or undermining
- Approach slope erosion
- Need for traffic restriction

"High Water Event" inspection type shall be selected and completed in InspectX and submitted to the LADOTD Bridge Inspection Office (District Bridge Engineer) for review.

#### Off-System Bridge Inspection Manual

# 4 Appendix

- A-1: Parish Compliance Evaluation Checklist
- A-2: Bridge Type Codes
- A-3: Phase 1 Scour Assessment Form
- A-4: Scour Highwater Inspection
- A-5: Mud Sill Use Guidance
- A-6: Examples of Good/Bad Element Notes
- A-7: Flowchart for Critical Finding and Bridge Closure Procedures
- A-8: Flowchart for Load Rating Procedure
- A-9: Parts of a Bridge
- A-10: Annual Parish Resolution Template



# PARISH COMPLIANCE EVALUATION CHECKLIST

DISTRICT: REVIEW DATE:

PARISH: REVIEW CONDUCTED BY:

TOTAL # OF BRIDGES OWNED:



For any metric evaluation that will result in a Parish being placed in **Non-Compliance**, the District must provide adequate documentation!

Without adequate documentation, the Parish will not be placed in Non-Compliance. Adequate documentation includes: emails, phone call logs, and/or letters that indicate that the Parish was made aware of the compliance issue and given a chance to respond.

#### **METRIC #1: Closed Bridges**

Non-Compliance = ANY bridge not properly closed [Proper = closed with an appropriate traffic barrier]

Total no. of closed bridges

No. of bridges properly closed

No. of bridges not properly closed



Provide adequate documentation if > 0.

Comments

#### **METRIC #2: Posted Bridges**

Conditional-Compliance = ANY bridge not properly posted. [Proper = posted with the correct signs]

Total no. of posted bridges

No. of bridges properly posted

No. of bridges not properly posted

Comments

#### **METRIC #3: Interim Inspections**

Non-Compliance = ANY required interim inspections not performed at all

Total no. of interim inspections performed

No. of inspections performed on time

No. of inspections performed late

No. of inspections not performed

O

Provide adequate documentation if > 0.

Comments

# PARISH COMPLIANCE EVALUATION CHECKLIST

#### **METRIC #4: Load Ratings**

Non-Compliance = ANY required load ratings not performed at all

Total no. of load ratings performed

No. of load ratings performed on time

No. of load ratings performed late

No. of load ratings not performed at all

**Q** 

Provide adequate documentation if > 0.

Comments

#### **METRIC #5: Bi-Annual Bridge Data Corrections**

Non-Compliance = no signature or failure to inform District of necessary data corrections for BOTH periods (Jan and July)



Provide adequate documentation if both N

**Signed** January data corrections submitted with markups (if necessary)? Y/N

Signed July data corrections submitted with markups (if necessary)? Y/N

No. of data corrections submitted on time

Comments

#### **METRIC #6: Annual Resolution and Contact Information**

Conditional-Compliance = neither the annual resolution nor contact information provided

Annual resolution submitted in correct format? Y/N

Contact information provided? Y/N

Comments

#### **METRIC #7: New Bridge Documentation**

Non-Compliance = if ANY bridge is opened to traffic without notification or proper documentation

No. of new bridges added this year

No. of new bridges opened to traffic with notification and documentation submitted on time

No. of new bridged opened to traffic without notification and/or documentation



Provide adequate documentation if > 0.

Comments

# PARISH COMPLIANCE EVALUATION CHECKLIST

#### METRIC #8: Failure to Make Bridge Accessible During Inspections

Conditional-Compliance = is Parish fails to remove debris or vegetation in a timely manner once notified of the issue

No. of requests made to the Parish to remove debris/vegetation

No. of requests fulfilled in a timely manner

Comments

#### **METRIC #9: Failure to Respond to Critical Findings**

Non-Compliance = if, upon notification of a critical finding, parish does not reply with an acceptable/timely response

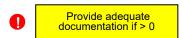
No. of bridges that have had a critical finding this year

No. of timely and acceptable responses

No. of late or non-responses

Comments

Comments



#### METRIC #10: Falsification of Inspection Reports or Bridge Data

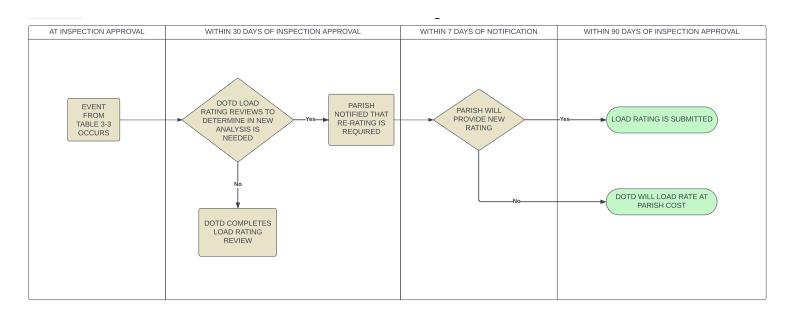
Non-Compliance = if Parish has falsified ANY records

Has the Parish falsified any bridge records this year? Y/N

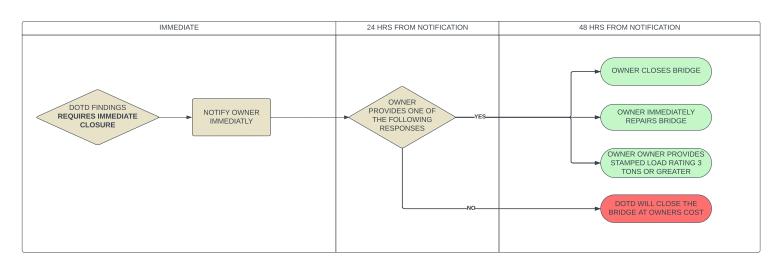
0

Provide adequate documentation if > 0

# **LOAD RATING TIMELINE**



# **CRITICAL FINDING TIMELINE**



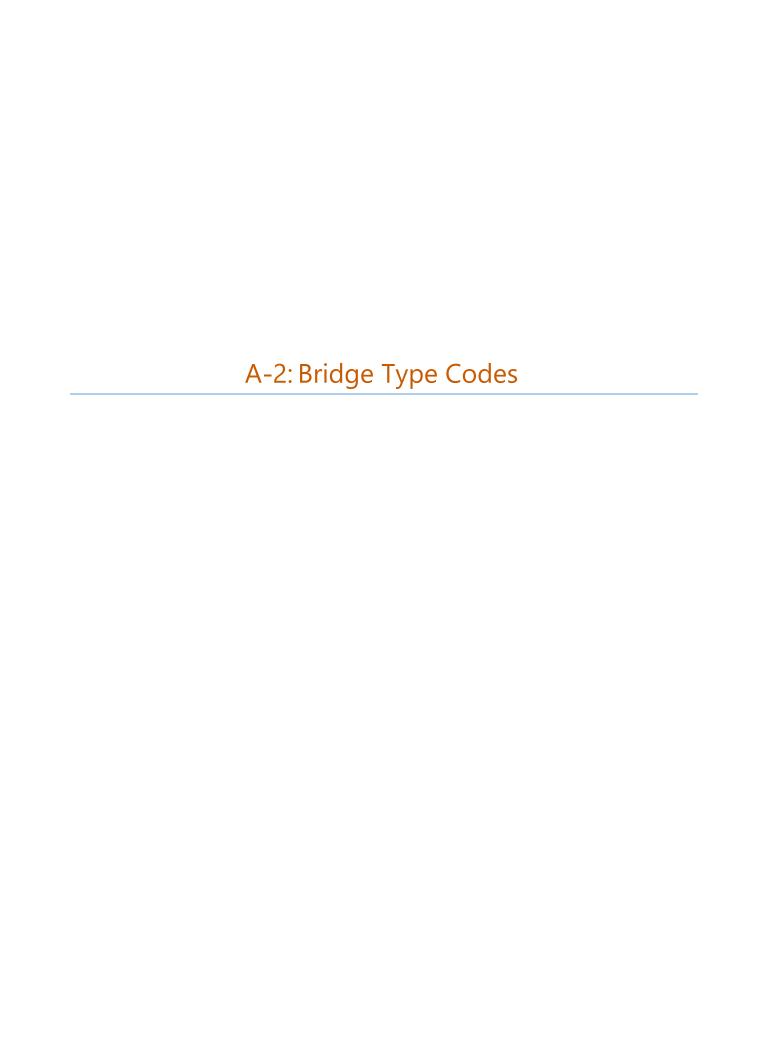
## PARISH RESOLUTION TEMPLATE

WHEREAS, the Code of Federal Regulations, as enacted by the United States Congress, mandates that all structures defined as bridges located on all public roads shall be inspected, rated for safe load capacity, and posted in accordance with the National Bridge Inspection Standards, and that an inventory of these bridges be maintained by each state; and

WHEREAS, the responsibility to inspect, rate, and	load post those b	oridges under the authority of
Parish, in accordance with those Stan	dards, is delegate	d by the Louisiana Department of
Transportation and Development to F	Parish.	
NOW, THEREFORE, BE IT RESOLVED BY THE	OF	PARISH, LOUISIANA,
convened in Regular Session on the day of	, that it o	does hereby certify to the Louisiana
Department of Transportation and Development	(DOTD) that for the	he period of January 1, 2026 through
December 31, 2026:		

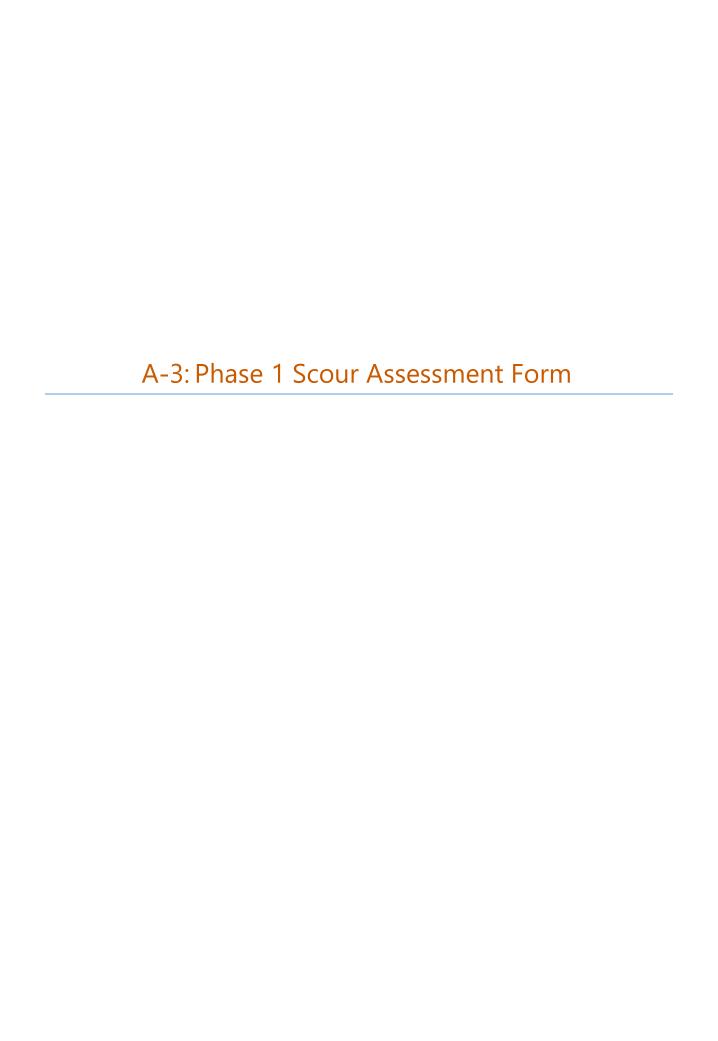
- The Parish will perform all interim inspections on all parish-owned or maintained bridges in accordance with the National Bridge Inspection Standards and Specifications for the National Bridge Inventory.
- 2. All bridges owned or maintained by the Parish will be structurally analyzed and rated by the Parish as to the safe load capacity in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Manual for Bridge Evaluation. The load posting information that has been determined by DOTD for all bridges where the maximum legal load under Louisiana State Law exceeds the load permitted under the operating rating as determined above will be critically reviewed by the Parish. Load posting information will be updated by the Parish to reflect all structural changes, any obsolete structural ratings, or any missing structural ratings.
- 3. All Parish-owned or maintained bridges which require load posting or closing will be load posted or closed in accordance with the table in the DOTD Load Rating Directives. All DOTD supplied load posting information concerning a bridge has been critically reviewed by the Parish Engineer prior to load posting.
- 4. All bridges owned or maintained by the Parish are shown on the attached list in the format specified by the DOTD. Corrections to data supplied to the Parish by the DOTD are noted.
- 5. All bridges owned and maintained by the Parish are accessible to DOTD for all routine bridge inspections. Parish will clear vegetation as required upon DOTD request.

These stipulations are prerequisites to participation by the Parish in the Off-System Bridge Replacement Program.



# LADOTD Bridge Types

	NAME	DESCRIPTION
Timber Spans	TTTRES	Treated Timber Trestles
	TTTCOF	Treated Timber Trestles (w/ Concrete Deck)
	TTTLAM	Treated Timber Trestles (w/ Laminated Deck and/or Stringers)
Timber & Steel Spans	CIBTTF	Timber Trestle w/ I-Beam Stringers (w/ Timber Deck)
	CIBTCF	Timber Trestle w/ I-Beam Stringers (w/ Concrete Deck)
Concrete Girder/Slab Spans	COSLAB	Concrete Slab
	LWSLAB	Lightweight Concrete Slab
	CNTSLB	Concrete Slab - Continuous
	COPCSS	Concrete Precast Slab Units
	LWPCSS	Lightweight Concrete Precast Slab Units
	COCHAN	Concrete Channel Units
	COVSLB	Concrete Voided Slab
	CODEKG	Concrete Deck Girder
	CNTCDG	Concrete Deck Girder - Continuous
	COPSGR	Concrete Prestressed Girders
	CCPSGR	Concrete Prestressed Girders - Continuous
	COBXGR	Concrete Box Girder
	CBXSEG	Concrete Box Girder - Segmental
Movable Spans	TRSWNG	Truss Swing Span
	PGSWNG	Steel Plate Girder Swing Span
	TRBASC	Steel Truss Bascule Span
	PGBASC	Steel Plate Girder Bascule Span
	STVERT	Steel Tower Vertical Lift Span
	COVERT	Concrete Tower Vertical Lift Span
	PONTON	Pontoon Bridge
<u>Culverts</u>	BOXCLV	Box Culvert(s)
(Over 20ft total opening)	FRACLV	Frame Culvert(s)
	ARCCLV	Arch Culvert(s)
	PIPCLV	Pipe Culvert(s)
Steel Girder Spans	STSIBM	Steel I-Beam (Simple Span)
	STCIBM	Steel I-Beam - Continuous
	STPLGR	Steel Girder (w/ Floor Beams or Pin & Hanger)
	STCUGR	Steel Curved Girder
	STBXGR	Steel Box Girder
	STCUBX	Steel Curved Box Girder
	STCAGR	Cable Stayed
Truss Spans	STHITR	Steel Simple Through Truss
	STCANT	Steel Cantilevered Through Truss
	STPONY	Steel Pony Truss
	STDKTR	Steel Deck Truss
Miscellaneous Structures	FERRYT	Ferry - Toll
	RRFLCR	Railroad Flat Car
	PEDXNG	Pedestrian Walkway
	BAILEY	Bailey, ACRO, or other "Portable Army Type" Bridging



S.P. No:	PHASE 1	DISTRICT:		
FAP. No:	SCOUR ASSESSMENT OF	PARISH:		
Date:	BRIDGES OVER WATERWAYS	RECALL. No.:		
Stream Name: Route:				
SNB∐tem B.AP.03 Worksheet				
Unknown Foundation, Code (D)		Pile Length		
Bridge Not Over Water (N)		pile penetration %		
Scour Stable (A)	Scour Stable (A) Bridge Designed for Scour: See plans, Project #			
Min. pile penetration of 50%, 20-ft minimum (drainage area < 10-sq mi)				

Min. pile penetration of 50%, 25-ft minimum (10-sq mi < drainage area < 25-sq mi)

☐ Drainage area <= 2-sq mi ☐ No history of scour (from available records)

☐ Bridge service life >= 20-yrs ☐ Not on Interstate/NHS Route

☐ No significant signs of lateral/vertical instability

Min. pile penetration of 50%, 30-ft min; (25-sq mi < drainage area < 100-sq mi)

Scour Susceptible (D), Bridge is or may become Scour Critical Pile penetration less than 50%

Pile penetration less than 20-ft (drainage area < 10-sq mi)

Pile penetration less than 25-ft (drainage area > 10-sq mi)

Pile penetration less than 30-ft (25-sq mi < drainage area < 100-sq mi)

Drainage area greater than 100-sq mi

**Engineering Judgment\*** 

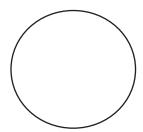
(See Notes/Report)

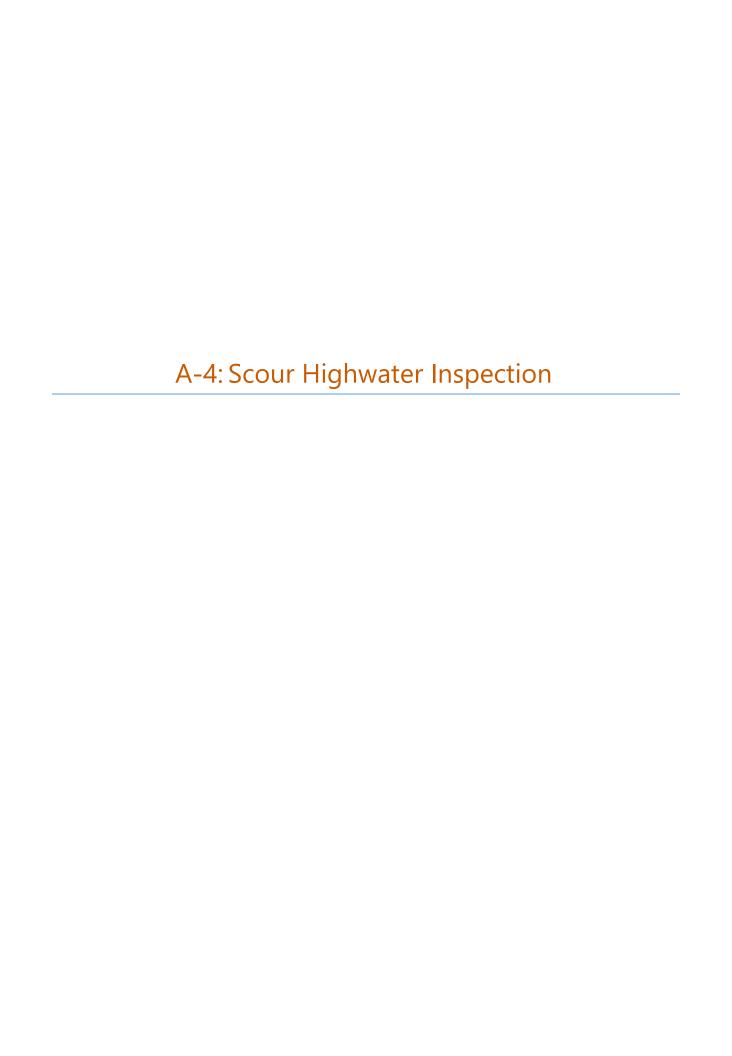
\*Not valid for new bridges

Scour Critical with Temporary (not designed) Countermeasures (C)

Phase I SNBI Item B.AP.03 Rating

Notes:

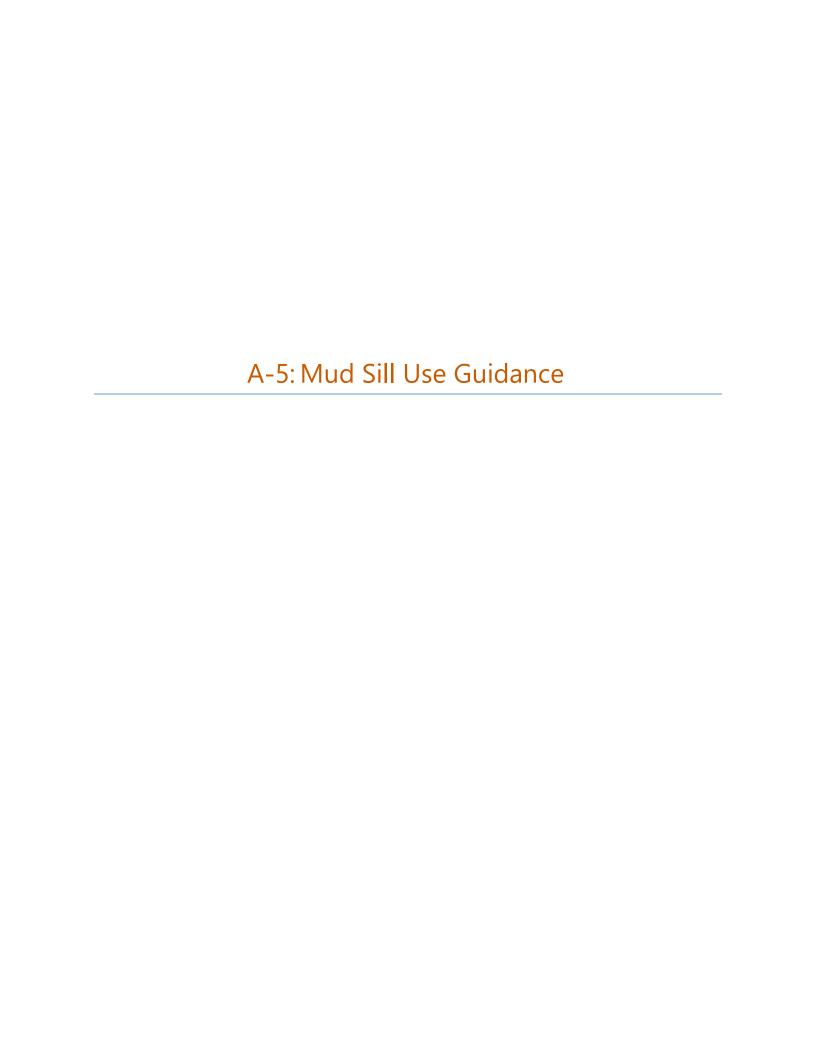




#### lev. 08/2024

# STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT <u>SCOUR/HIGH WATER INSPECTION REPORT</u>

			Recall#		District	·	
	Distance from		Parish:				
Bent No.	Distance from beginning of	<b>Current Streambed Measurement</b>	Circle	On / Off			
	structure	Upstream		Side of structure	LEF	T OR	RIGHT
				Reference Point			
				Correction (Ft)			
				Water Level (Ft)			
			(Including Abutments &	Active Scour : Approach Rdwy)		or explaii	NO n in notes)
				Debris :		or explair	NO n in notes)
		1		Damasa			
				Damage:		or ill out	NO Survey123
			Hydrographc S	urvey Required :	YES	or	NO
		<del></del>		Overtopping:	YES	or	NO
				Concrete Lined:	YES	or	NO
		<del></del>	Natar				
		·	Notes:				
			-				
		<del></del>					
		<del></del> -	-				
		<del></del>					
			Photos Taken :	YES or	NO	_	
			Further Review Needed :	YES or	NO	_	
			Inspected By:				
			(Full Name)				
			Nate ·				





#### DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

#### INTRADEPARTMENTAL CORRESPONDENCE

	REFERRED FOR ACTION
	ANSWER FOR MY SIGNATURE
	FOR FILE
	FOR YOUR INFORMATION
	FOR SIGNATURE
	RETURN TO ME
	PLEASE SEE ME
_	PLEASE TELEPHONE ME
	FOR APPROVAL
_	PLEASE ADVISE ME
Y	DATE
Y	DATE

DATE

REFERRED TO

#### MEMORANDUM

TO: DISTRICT BRIDGE INSPECTION OFFICES

FROM: DAVID MILLER, P.E. Din H. Mills

DATE: OCTORBER 24, 2013

SUBJECT: MUD SILLS

As bridges come up for their routine inspection or bridge rating, the use of existing mud sills should be evaluated for consistency with the guidance from this memorandum.

Because of the uncertainty in calculating the capacity of mud sills, their use will be phased out over time and should only be used as a last resort on temporary repairs not to exceed 12 months. There are many repair methods that function better and can be backed up with engineering data to support the repair methodology.

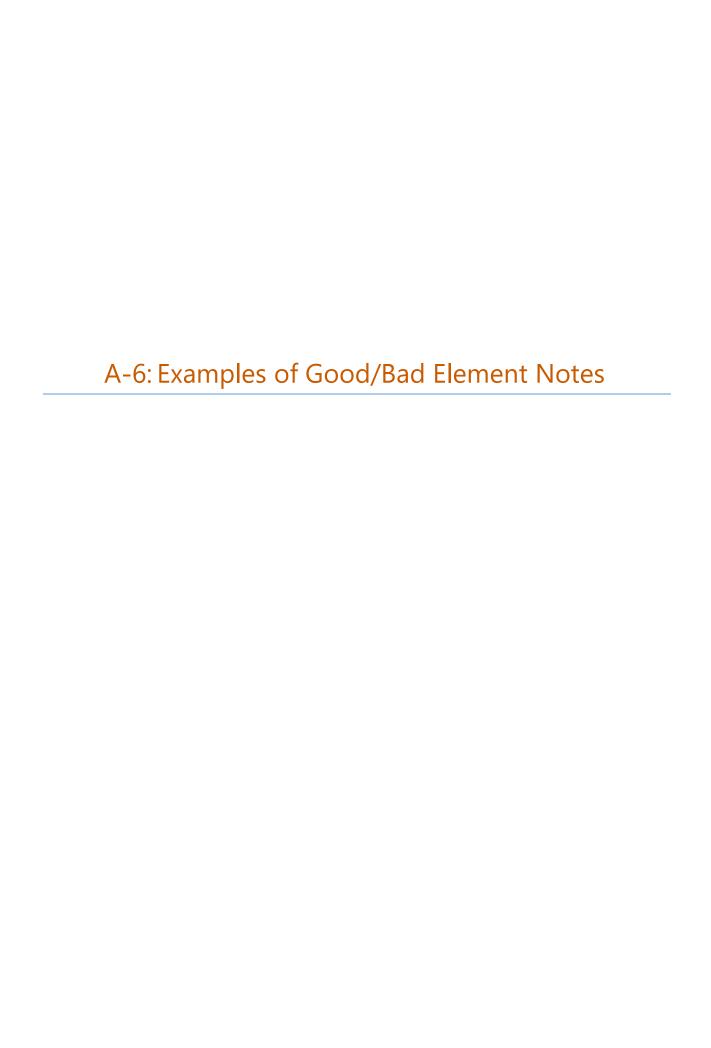
Criteria for use of mud sill are listed below:

- · Heights of 5 feet or less
- If inundated do not use
- Should not be used on scour susceptible waterways
- · Full bearing between the cap and the ground
- Mud sill usage should be limited to abutments. They should also be limited to portions of the abutment and not the entire abutment.

If there are extenuating circumstances that arise that are not covered in the memorandum, please contact the Section 51 office for further guidance.

cc: Vince Latino

RECOMMENDED FOR APPROVAL	DATE
RECOMMENDED FOR APPROVAL	DATE
RECOMMENDED FOR APPROVAL	DATE
APPROVED	DATE





**Bad Description** 

Bottom of deck has cracks, delaminations, and spalls with exposed corroding rebar along panel joints and throughout deck area.

#### QA Comments:

Add Dimensions of spalls and corrosion Defect, Condition state, and quantity to the end of comment

#### **Good Description**

Bottom of deck in Span 1 has cracks and delaminations up to 12" diameter along a spall approximately 3' L x 6" W x 2" D with exposed rebar having approximately 10% section loss (1090, CS3, 1.5 SF).



Panel 6, left side is spalled. (77" x 13" x 4") with 120" of # 8 rebar with 1/8" section loss.

#### QA Comments:

Great! Very Descriptive, just add location, Defect, Condition State, and quantity to the end of comment.

#### **Good Description**

Span 3, Panel 6, left side has a spall at midspan, 77" L x 13" W x 4" D with 120" of #8 rebar with 1/8" section loss (1090, CS4, 7 SF).



Both spans are longitudinally cracked with efflorescence.

#### QA Comments:

Add crack width measurement, approximate spacing (or number), and Defect, Condition State, and quantity to end of comment.

Good Description

Both spans have 3 full-length, longitudinal cracks less than 0.012" with light efflorescence (1120, CS2, 40 SF).



The piles are in fair condition with protective paint system failure in the bottom 10" to 12", with up to 1/16" section loss present.

#### QA Comments:

Great job, just add Defect, Condition State, and quantity!

#### **Good Description**

The piles are in fair condition with protective paint system failure in the bottom 10" to 12", with up to 1/16" section loss present (1000, CS3, 20 LF).



Helper piles and caps have corrosion.

#### QA Comments:

Needs improvement.

Add dimensions of corrosion, pile number and location.

Add Defect, Condition State, and quantity to the end of the comment.

#### **Good Description**

Helper Piles 1 - 4 at Bent 2 have flaking corrosion with up to 3/16" section loss on the flanges and webs extending 12" down from the cap (1000, CS3, 4 LF).

Bent 2 Cap beam has corrosion with up to 3/16" section loss on the flanges and 1/8" section loss on the web, extending 24" at all 4 pile to cap connections (1000, CS3, 8 LF).



Girders 5 and 6, which are the center girders, have heavy corrosion with section loss to the webs and bottom flanges. This is caused by the joints being unsealed at the median. The open joints are allowing debris to accumulate on the caps and around the bearings and girders.

#### QA Comments:

Add more dimensions.

Add Defect, Condition State, and quantity. Get away from paragraphs, use bulleted list instead

#### **Good Description**

Span 1, Girders 5 and 6

- Heavy corrosion with 100% section loss at the bottom of the web 12" L x 3" H located at Abutment 1 (1000, CS3, 1 LF).
- Corrosion appears to be accelerated by open joints at Abutment 1 and Pier 2 above the girders allowing debris and water to accumulate.



Pile 1 (CS 3) - has 4" outer shell decay (41" circ.). This needs to be repaired.

## QA Comments:

Nice Comment! Add Dimension of decay area, Defect, and quantity.

#### **Good Description**

#### Pile 1 at Bent 3

- Decay 8" H x 6" W X 4" D (1140, CS3, 1 EA).
- The original circumference of the pile is 41".



#### Span #8

- Timber girder #6 broken mid-span 5' in length.

### QA comments:

Add Defect, Condition State, and quantity

## Good Description

#### Span 8

- Timber Girder 6 has a 5' L fracture at midspan (1160, CS4, 25 LF).
- This condition has been referred to Load Ratings for review.



Girder 9, Span 1, has a 4'L x 3"W x 3"D loss of section on bottom, also a 3'L x 3"W x 2"D loss of section on bottom.

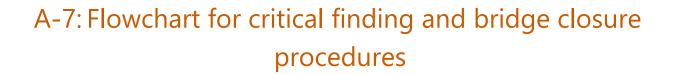
#### **QA Comments:**

Add locations, Defect, Condition State, and quantity.

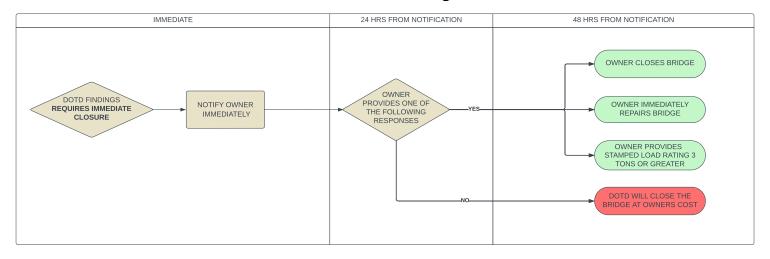
#### **Good Description**

#### Girder 9, Span 1:

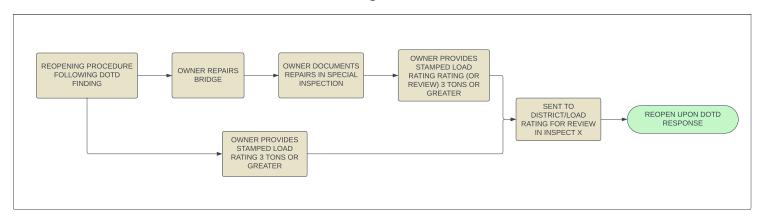
- 4'L x 3"W x 3"D loss of section on bottom, near bearing w/ cap at Abutment 1 (1140, CS4, 4 LF)
- 3'L x 3"W x 2"D loss of section on bottom near midspan (CS3). (1140, CS4, 3 LF)
- These conditions have been referred to Load Ratings for review.

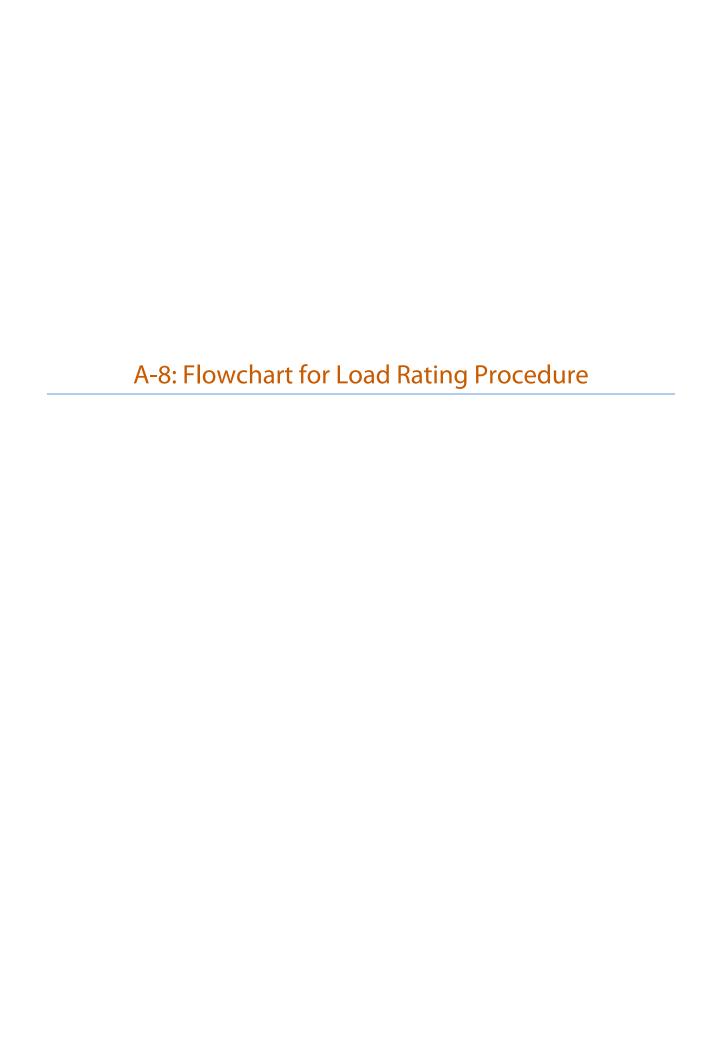


# Flowchart for Critical Finding Procedure

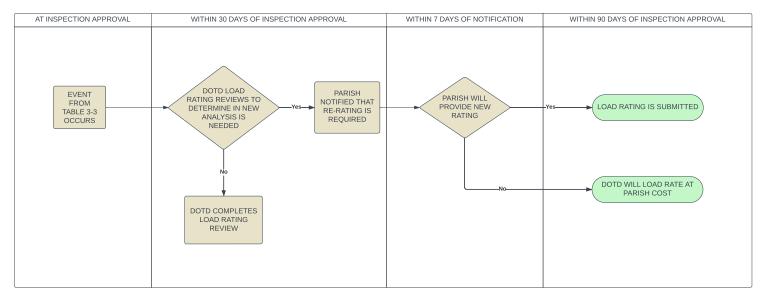


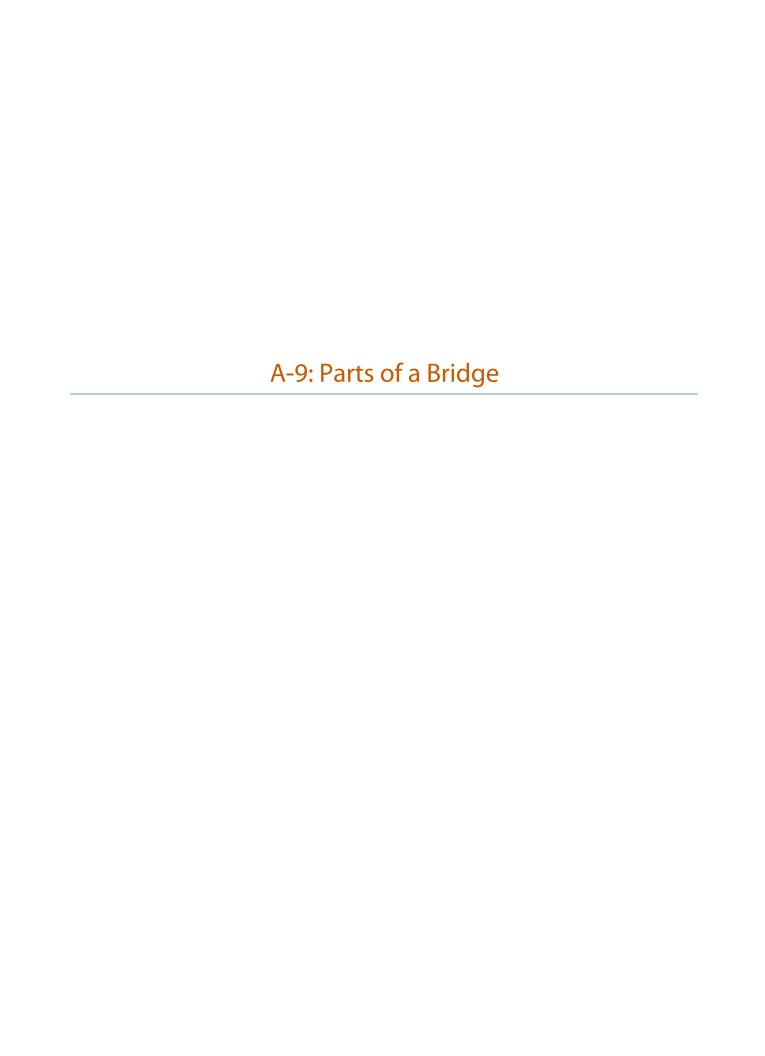
# Flowchart for Bridge Closure Procedure

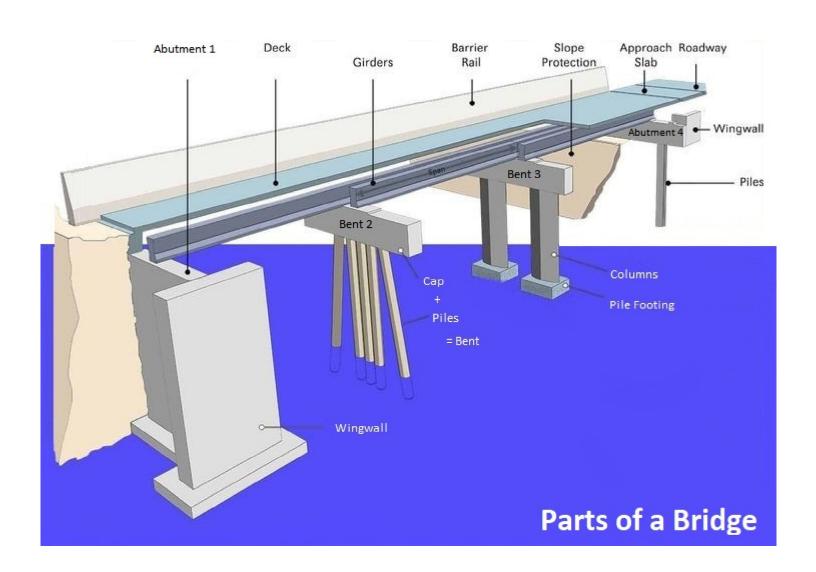


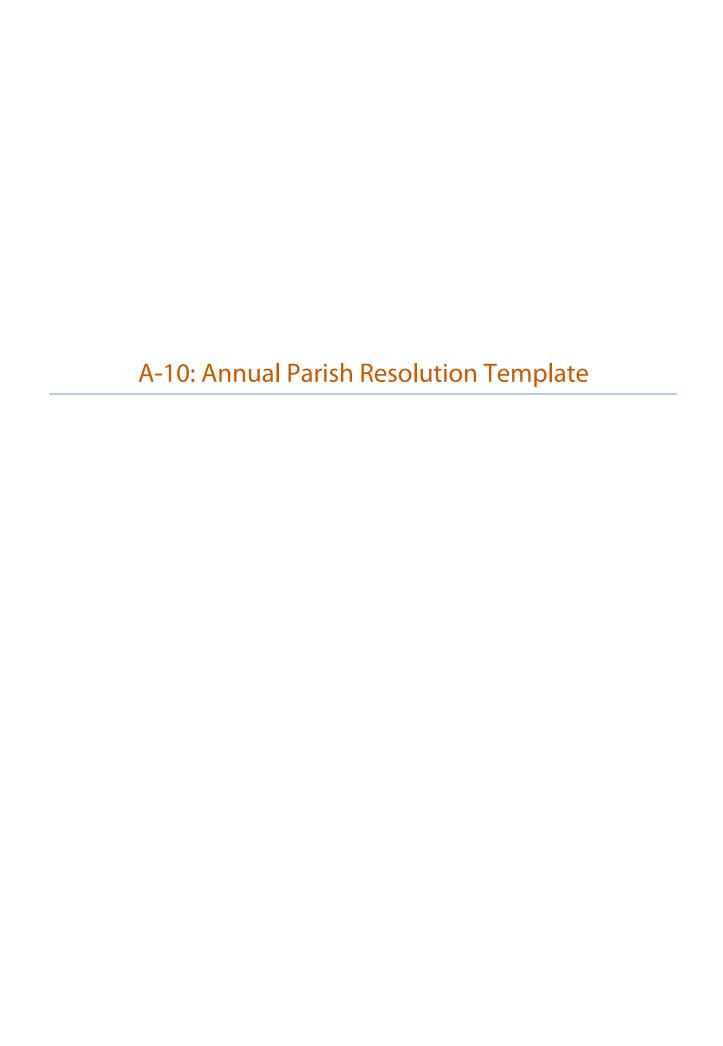


# Flowchart for Load Rating Procedure









WHEREAS, the Code of Federal Regulations, as enacted by the United States Congress, mandates that all structures defined as bridges located on all public roads shall be inspected, rated for safe load capacity, and posted in accordance with the National Bridge Inspection Standards, and that an inventory of these bridges be maintained by each state; and

WHEREAS, the responsibility to inspect, rate, and	load post those b	oridges under the authority of
Parish, in accordance with those Stand	dards, is delegate	d by the Louisiana Department of
Transportation and Development to P	arish.	
NOW, THEREFORE, BE IT RESOLVED BY THE	OF	PARISH, LOUISIANA,
convened in Regular Session on the day of	, that it c	does hereby certify to the Louisiana
Department of Transportation and Development	(DOTD) that for th	ne period of January 1, 2026 through
December 31, 2026:		

- 1. The Parish will perform all interim inspections on all parish-owned or maintained bridges in accordance with the National Bridge Inspection Standards and Specifications for the National Bridge Inventory.
- 2. All bridges owned or maintained by the Parish will be structurally analyzed and rated by the Parish as to the safe load capacity in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Manual for Bridge Evaluation. The load posting information that has been determined by DOTD for all bridges where the maximum legal load under Louisiana State Law exceeds the load permitted under the operating rating as determined above will be critically reviewed by the Parish. Load posting information will be updated by the Parish to reflect all structural changes, any obsolete structural ratings, or any missing structural ratings.
- 3. All Parish-owned or maintained bridges which require load posting or closing will be load posted or closed in accordance with the table in the DOTD Load Rating Directives. All DOTD supplied load posting information concerning a bridge has been critically reviewed by the Parish Engineer prior to load posting.
- 4. All bridges owned or maintained by the Parish are shown on the attached list in the format specified by the DOTD. Corrections to data supplied to the Parish by the DOTD are noted.
- 5. All bridges owned and maintained by the Parish are accessible to DOTD for all routine bridge inspections. Parish will clear vegetation as required upon DOTD request.

These stipulations are prerequisites to participation by the Parish in the Off-System Bridge Replacement Program.