

3.6 CRITICAL FINDINGS

3.6.1 Definition and Reporting Responsibilities

Critical Findings are defined as structural or safety related deficiencies which require immediate action to ensure public safety. Critical findings must be addressed with immediate corrective action to restore service on that structure and safeguard the travelling public using it in a timely manner. ADOT's "Critical Findings Procedure" must be followed after a critical finding has been reported. Subsection 3.6.2 covers ADOT's critical findings procedure.

A Critical Findings is a finding that warrants the following:

- a) Full or partial closure of any bridge (including lane or shoulder closure);
- b) An NSTM to be rated in serious or worse condition, as defined in the NBI by the NSTM inspection item, coded three (3) or less;
- c) A deck, superstructure, substructure, or culvert component to be rated in critical or worse condition, as defined in the NBI by the Deck, Superstructure, or Substructure Condition Rating items, or the Culvert Condition Rating item, coded two (2) or less;
- d) The channel condition or scour condition to be rated in critical or worse condition as defined in the NBI by the Channel Condition Rating or Scour Condition Rating items, coded critical (2) or less; or
- e) Immediate load restriction or posting, or immediate repair work to a bridge, including shoring, in order to remain open.

Critical findings can be discovered in 2 ways:

1. The critical finding is discovered during a field inspection by bridge inspection personnel.
2. The critical finding is discovered by non-bridge inspection personnel, and the Bridge Inspection Section is notified of it (By District or local agency staff, or via the ADOT Traffic Operations Center (TOC)).

3.6.2 Critical Findings Procedure for State Owned Structures:

ADOT's "Critical Findings Procedure" defines any critical findings considering the location and the redundancy of the member affected and the extent of a deficiency. Deficiencies include, but are not limited to scour, damage, corrosion, section loss, settlement, cracking, deflection, distortion, delamination, loss of bearing, and any condition posing an imminent threat to public safety.

3.6.2.1 Procedure for Critical Findings Discovered by Bridge Inspection Personnel:

The following procedure shall be followed when bridge inspection personnel discover a critical finding during a field visit to a state owned structure that warrants the following:

(a) Conditions 3.6.1(a) and 3.6.1(e):

- 1) The Team Leader shall immediately contact ADOT's Traffic Operations Center (TOC) (Dial 602.712.6591 and select option 3), report the condition, and request an ADOT Emergency Response Unit (ERU)/DPS/Local Law Enforcement Agency be dispatched to the bridge.
- 2) The Team Leader shall call the Program Manager and/or the Bridge Inspection Section

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Leader to report the critical finding, as soon as the situation permits.

- 3) Upon the arrival of a unit authorized to close or partially close the bridge, the Team Leader shall explain the critical finding, and request the bridge be closed or partially closed to traffic immediately.
- 4) The Team Leader shall keep the Program Manager and/or the Bridge Inspection Section Leader updated until the safety of the public is ensured.
- 5) The Team Leader must note the date and time the Critical Finding was discovered, the incident duration, and the traffic restrictions imposed.

(b) Conditions 3.6.1(b), 3.6.1(c), and 3.6.1(d):

- 1) If, in the opinion of the Team Leader, full or partial closure is needed to ensure the public's safety; the Team Leader should follow step 1 as noted in Subsection 3.6.2.1(a).
- 2) If the Critical Finding does not pose an imminent danger to the traveling public, the Team Leader shall contact the Program Manager and/or the Bridge Inspection Section Leader as soon as possible to alert them of the critical findings and discuss what corrective action needs to be taken to address the safety issues.
- 3) The Program Manager or the Bridge Inspection Section Leader will contact the ADOT District the bridge is located within, and alert them to safety issues that need to be addressed as soon as possible.
- 4) The team Leader shall remain at the bridge site to meet with the District's personnel, if needed.
- 5) The Team Leader must note the date and time the Critical Finding was discovered, the incident duration, and if any traffic restrictions were imposed.

ADOT personnel will keep FHWA updated per the requirements shown in Subsection 3.6.2.2 (steps 2 and 3).

3.6.2.2 Procedure for Critical Findings Discovered by Non-Bridge Inspection Personnel:

The following procedure shall be followed when non-bridge inspection personnel discover a critical finding on a state owned structure and ADOT's Districts or the TOC were notified of the situation first:

- 1) After being notified of a critical finding, ADOT's Bridge Group personnel (State Bridge Engineer, Program Manager, or the Bridge Inspection Section Leader) will gather the information received from the District's personnel that responded to the critical finding discovery or contact them for any additional information needed in order to update "ADOT's Bridge Critical Findings Status Report".
- 2) FHWA must be notified within 24 hours of the discovery of all critical findings on the National Highway System (NHS) that meet either condition 3.6.1(a) or 3.6.1(b). ADOT's Bridge Group personnel will notify FHWA within 24 hours of the critical finding discovery and will also provide an initial update on the critical finding. The initial update will include the following:
 - a) Structure owner.
 - b) NBI structure number.
 - c) Date of critical finding.
 - d) Description of the critical finding including any available photos.
 - e) Description of the immediate action taken to address safety issues, the date the immediate action was taken, and a brief description of future action to be taken to completely resolve the critical finding.

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- f) Status of the corrective actions (Active/Completed).
- g) Estimated date when the critical finding will be completely resolved.
- h) Date of completion if corrective actions are completed (This step will be part of the final update).

3) ADOT's Bridge Group personnel will provide FHWA with timely updates until the critical finding is completely resolved.

3.6.3 Critical Findings Procedure for Local Public Agencies Owned Structures:

When a critical finding occurs on a structure owned by a LPA, the owner must inform ADOT of such findings unless the critical finding was discovered by a bridge inspector performing a bridge inspection. The bridge owner must also periodically update ADOT of the progress made until the deficiency is removed, and the critical finding is completely resolved. ADOT Bridge Inspection Section will keep FHWA informed of the status of LPA owned structures critical finding(s).

3.6.3.1 Procedure for Critical Findings Discovered by Bridge Inspection Personnel:

The following procedure shall be followed when bridge inspection personnel discover a critical finding during a field visit to a structure owned by a Local Public Agency that warrants the following:

- (a) Conditions 3.6.1(a) and 3.6.1(e):
 - 1) The Team Leader shall immediately contact the Local Law Enforcement Agency, report the condition, and request personnel authorized to close the bridge to traffic be dispatched to the bridge site.
 - 2) The Team Leader shall call the Program Manager and/or the Bridge Inspection Section Leader to report the critical finding, as soon as the situation permits.
 - 3) Upon the arrival of a unit authorized to close or partially close the bridge, the Team Leader shall explain the critical finding, and request the bridge be closed or partially closed to traffic immediately.
 - 4) The Team Leader shall keep the Program Manager and/or the Bridge Inspection Section Leader updated until the safety of the public is ensured.
 - 5) The Team Leader must note the date and time the Critical Finding was discovered, the incident duration, and the traffic restrictions imposed.
- (b) Conditions 3.6.1(b), 3.6.1(c), and 3.6.1(d):
 - 1) If, in the opinion of the Team Leader, full or partial closure is needed to ensure the public's safety; the Team Leader should follow step 1 as noted in Subsection 3.6.3.1(a).
 - 2) If the Critical Finding does not pose an imminent danger to the traveling public, the Team Leader shall contact the local agency that owns the bridge as soon as possible to alert them of the critical findings and discuss what corrective action needs to be taken to address the safety issues as soon as possible.
 - 3) The team Leader shall remain at the bridge site to meet with the LPA's personnel, if needed.
 - 4) The Team Leader must note the date and time the Critical Finding was discovered, the incident duration, and if any traffic restrictions were imposed.

ADOT personnel will keep FHWA updated per the requirements shown in Subsection 3.6.3.2 (steps 2 and 3).

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3.6.3.2 Procedure for Critical Findings Discovered by Non-Bridge Inspection Personnel:

The following procedure shall be followed when non-bridge inspection personnel discover a critical finding on a structure owned by a Local Public Agency, and ADOT's Districts or the TOC were notified of the situation first:

- 1) After being notified of a critical finding, ADOT's Bridge Group personnel (State Bridge Engineer, Program Manager, or the Bridge Inspection Section Leader) will gather the information received personnel on site or contact them for information in order to update "ADOT's Bridge Critical Findings Status Report".
- 2) ADOT's Bridge Group personnel will provide FHWA with an initial update on the critical finding. The initial update will include the following:
 - a) Structure owner.
 - b) NBI structure number.
 - c) Date of critical finding.
 - d) Description of the critical finding including any available photos.
 - e) Description of the immediate action taken to address safety issues, the date the immediate action was taken, and a brief description of future action to be taken to completely resolve the critical finding.
 - f) Status of the corrective actions (Active/Completed).
 - g) Estimated date when the critical finding will be completely resolved.
 - h) Date of completion if corrective actions are completed (This step will be part of the final update).
- 3) ADOT's Bridge Group personnel will provide FHWA with timely updates until the critical finding is completely resolved.

Below is a sample of ADOT's Bridge Critical Findings Status Report:

ARIZONA DEPARTMENT OF TRANSPORTATION		Bridge Critical Finding Status Report - 2025								
NBI Structure Number (B)	Date of finding (C)	Owner (A)	Description of critical finding (email report and/or photos) (D)	Status of corrective actions: Active/Completed (F)	Brief description of the immediate action taken to ADDRESS safety issues (E)	Date the immediate actions were taken to ADDRESS safety issues (E)	Brief description of the future action taken to completely RESOLVE the current CF (E)	Estimated Date when CF will be completely resolved (G)	Provide a brief description of the action taken to completely RESOLVE the current CF (E)	Date of completion if corrective actions are completed (H)
08258	1/24/25	Pima County	Localized failure (decay and collapse) of the deck timber was observed during a routine inspection in December, 2023.	Completed	The owner, Pima County, decided in the best interest of the public to close the bridge.	3/25/2024	The bridge is scheduled for replacement at the end of 2025. It will remain closed until replaced.	12/31/2025	Once ADOT was notified that the bridge was closed to the public, the Program Manager contacted Pima County and ADOT maintenance to provide a photo showing the type of traffic control used to prevent the public from accessing the bridge. Photos received show concrete barrier on both sides of the bridge. As a result, vehicles will not be able to cross the bridge. The status of the bridge was changed to Closed (N41 = Closed to all traffic) in BrM.	1/30/2025
01112	3/16/2025	ADOT	A large hole was discovered in the I-10 Country Club WB OP bridge deck	Completed	The lane where the hole was found was closed immediately in order to quickly repair the hole.	3/16/2025	The SC District contacted their on-call concrete contractor and tasked them with repairing the hole. As the contractor started cleaning loose concrete in preparation for mixing and pouring a highstrength mix, the size of the hole grew to 8 feet long, and it was determined that the hole size is too big and requires a batched mix to be used.	3/17/2025	The District's on-call contractor prepared the distressed area for repair, and poured highstrength fast setting concrete into the formed area. The right lane remained closed until concrete breaks can show that the mix has reached an acceptable strength in order to open the lane for traffic. At 1:28 pm, the right lane was reopened to traffic.	3/17/2025

A full size example page of ADOT's Bridge Critical Findings Status Report is available on the Bridge Group website and can be accessed via the link below:

<https://azdot.gov/business/engineering-and-construction/bridge/bridge-preservation-services/bridge-inspection>