Bureau of Structures

Structures Inspection Refresher

Tom Hardinger

Structures Maintenance Section Supervisor

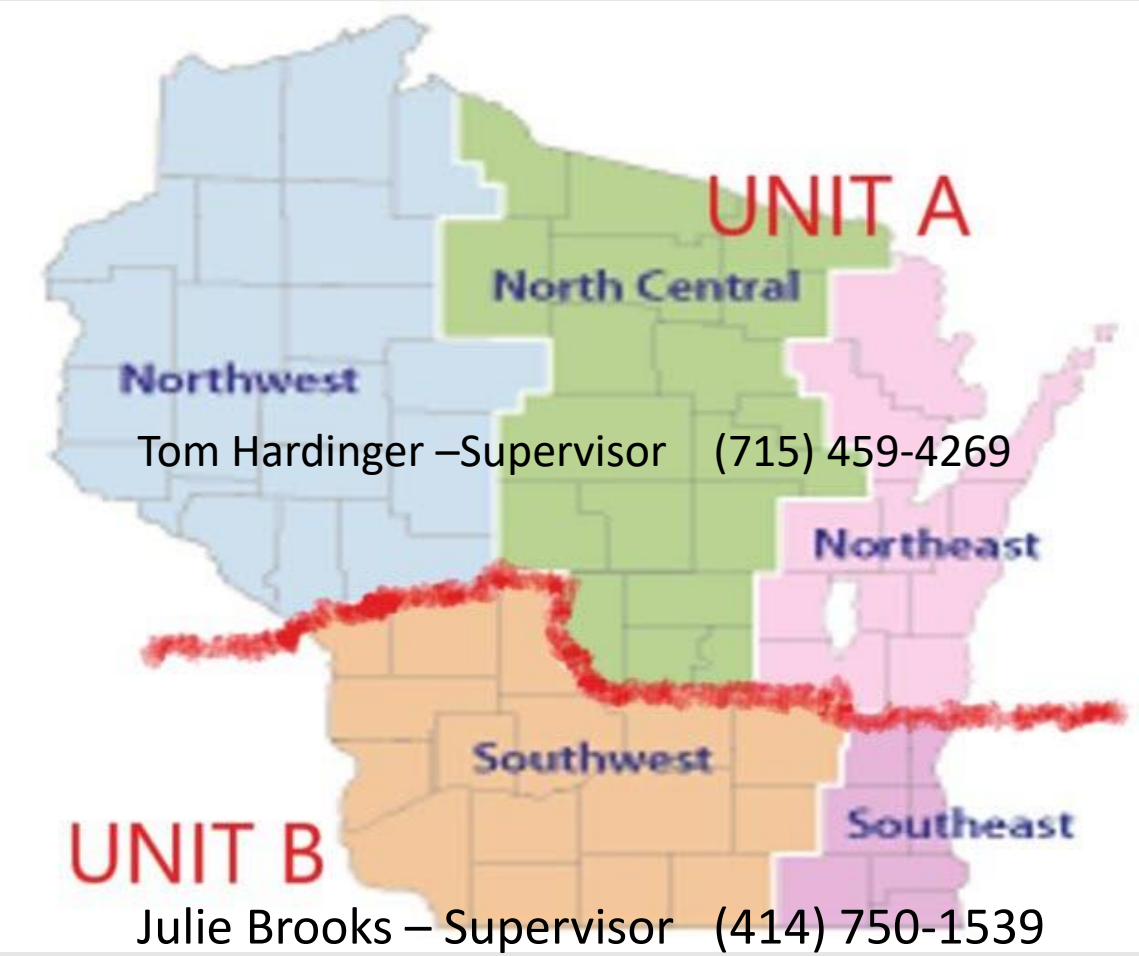
2024 WisDOT Inspector Refresher Training Series
Statewide

April 1, April 10 and April 23 Webinar

Welcome and Introductions

- Recommended Inspection Refresher Training 2024
  - 2 In-person and 1 webinar
  - Approx 5 hrs (PDHs available in Learn Center)
- Follow-up to 2019 mandatory Refresher Training & 2022/2023 Refreshers
- Part of our Quality Assurance Initiative to provide continued training for inspectors and PM's
- Informal setting. This is to be interactive.
- Introductions of State PM's

BOS Maintenance Staff Located in All Regional Offices



Tom Hardinger –Supervisor (715) 459-4269

Julie Brooks – Supervisor (414) 750-1539

Region Inspection Program Managers (PM)

Unit A -North

- NWR-Eau: Kyle Harris (715) 579-3516
- NWR-Sup: Travis McDaniel (608) 419-8672
- NCR: Mariah Krueger (715)315-2680
- NER: Brady Rades (920) 492-4152

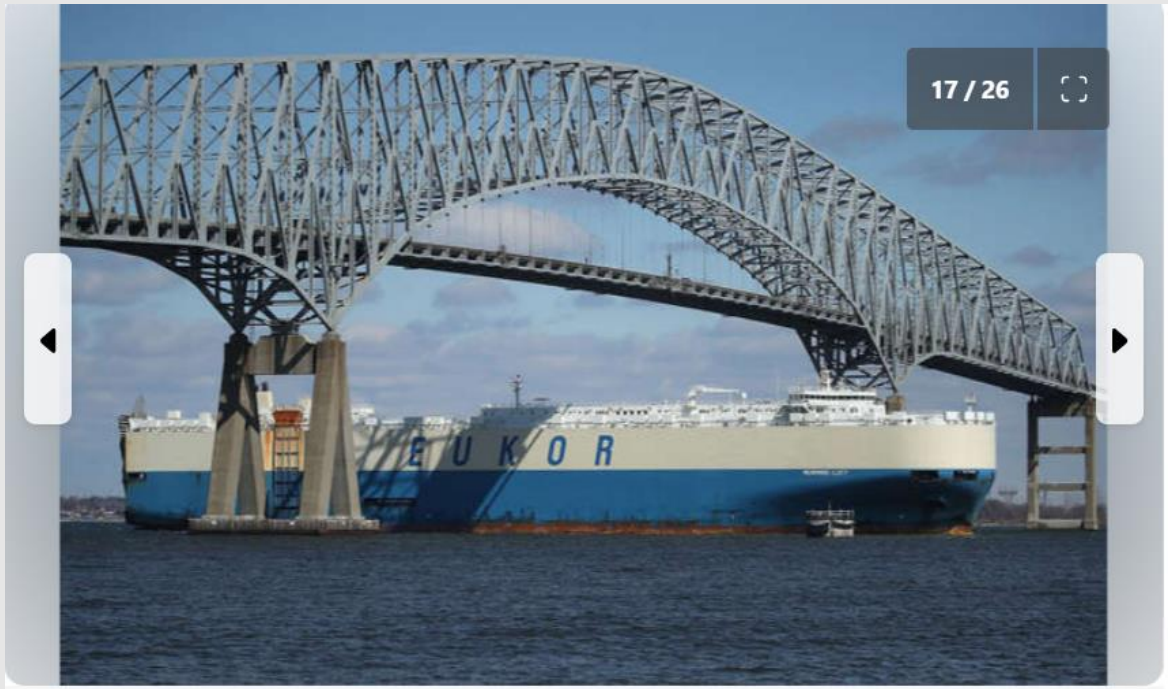
Unit B - South

- SWR (LaX) Craig Fischer (608) 668-1390
- SWR (Mad) Mike Williams (608) 516-6484
- SER- Scott Reay (414) 750-1504

Region PMs remain your primary point of contact for inspection issues.

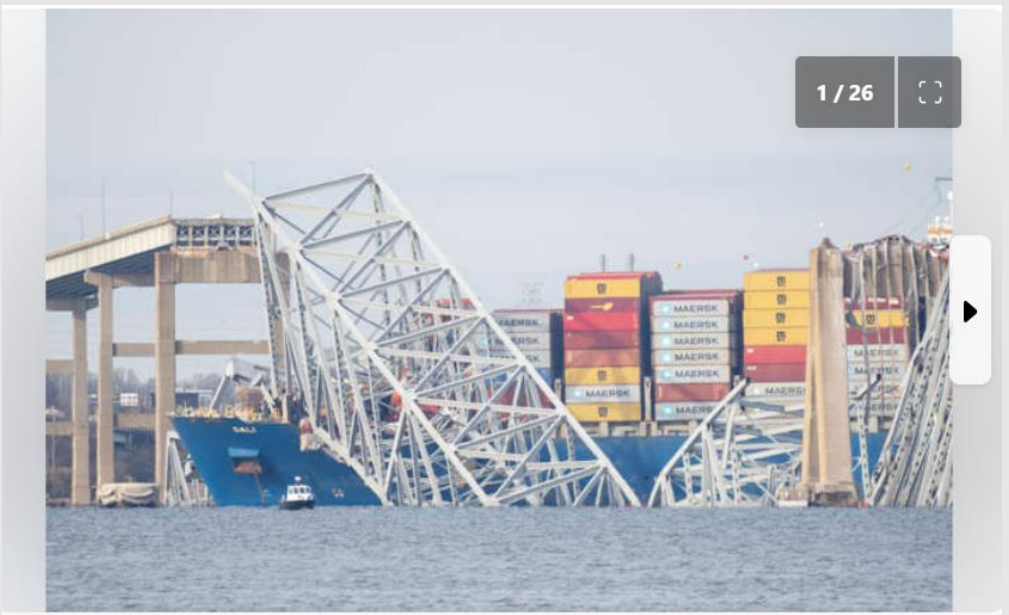
Structures – Tragic at Times

Francis Scott Key Bridge – Baltimore 3-26-2024



©Mark Wilson, Getty Images

The Francis Scott Key Bridge in Baltimore pictured in 2018.



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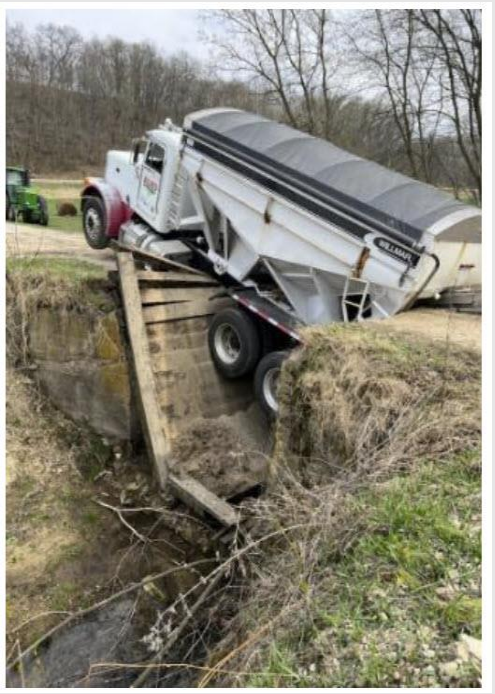
The Francis Scott Key Bridge, a major span over the Patapsco River in Baltimore, collapsed after it was struck by a large cargo ship, prompting a massive emergency response for multiple people in the water. The Baltimore City Fire Department described the collapse as a mass-casualty incident.

Structures – Closer to Home



Lansing Bridge Closure

Structure Inventory in Wisconsin

Structures	Owner: State	Owner: Local
Bridges (covered by NBIS)	5500	9300
Small Bridges (C-structures)	2500	430**
Retaining Walls	1450	800*
Sign structures & Monotubes	4700	1520*
Others (High Mast, Noise, etc)	150	24*
Tunnels (covered by NTIS)	2	3
TOTAL =		+26,000

- Incomplete inventory. * Approximate numbers
- ** Small Structure Program – New 2024

Total …TBD

Todays Refresher Training

- Provide required Refresher Training for inspectors (18 hrs required) for period 2019-2014. This Training provides 5 hrs towards Training
- Recording April 23, 2024 Webinar for future viewing
- Mute Cell Phones
- Will take several breaks and lunch break
- Building Logistics
- 4 PDH's available thru Learn Center

Agenda

1. Introduction
2. Status of SNBI Implementation and Trainings
3. Reminders of Website Resources
4. Qualification Requirements
5. QA/QC Program and Review of 2023 QA's
6. New Policy Reviews
7. Timber Defect Review
8. Inspection Scheduling/Reporting/48 Month Interval Changes
9. UW Probe, Profiles and Dives – New Policy Guidance
10. Scour POA's
11. Maintenance Actions/Activities
12. New Changes for 2024 Overview and Field Manuel
13. Misc: DOT Equipment, Trans 212/213 update, Training
14. Small Structure Program Update
15. Wrap Up

Thruout the Presentation:

Best Practices

FAQ

Knowledge Checks

Best Practice

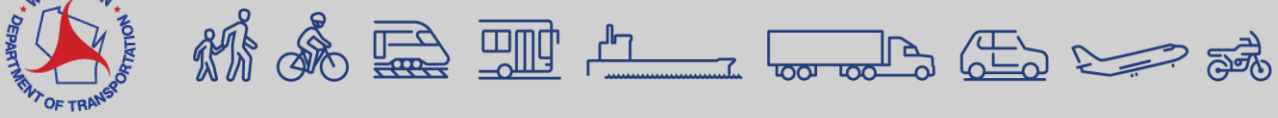
C-47-950 USH 10 – Pierce Co

Best Practice and Take Aways

C-47-950 USH 10 – Pierce Co

Points to Remember:

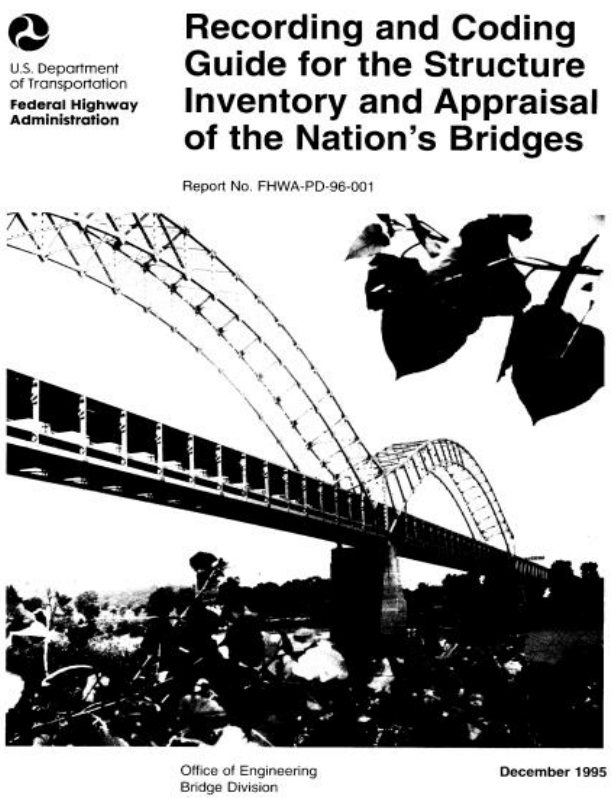
- Need to determine condition at time of inspection or as a follow up.
- Just because a deteriorated bridge is OK today doesn't mean it will be OK 5 years from now. We need to be thorough in our inspections.
- Don't take deterioration for granted.
- If you need a second opinion, ask.
- If you need someone to run some numbers to verify there's no issue, ask.
- And if they see something so disturbing they feel there's an immediate risk, act. Close a lane, close a bridge. Safety first.



2) Status of SNBI Implementation and Trainings

Status of SNBI and Trainings

1995



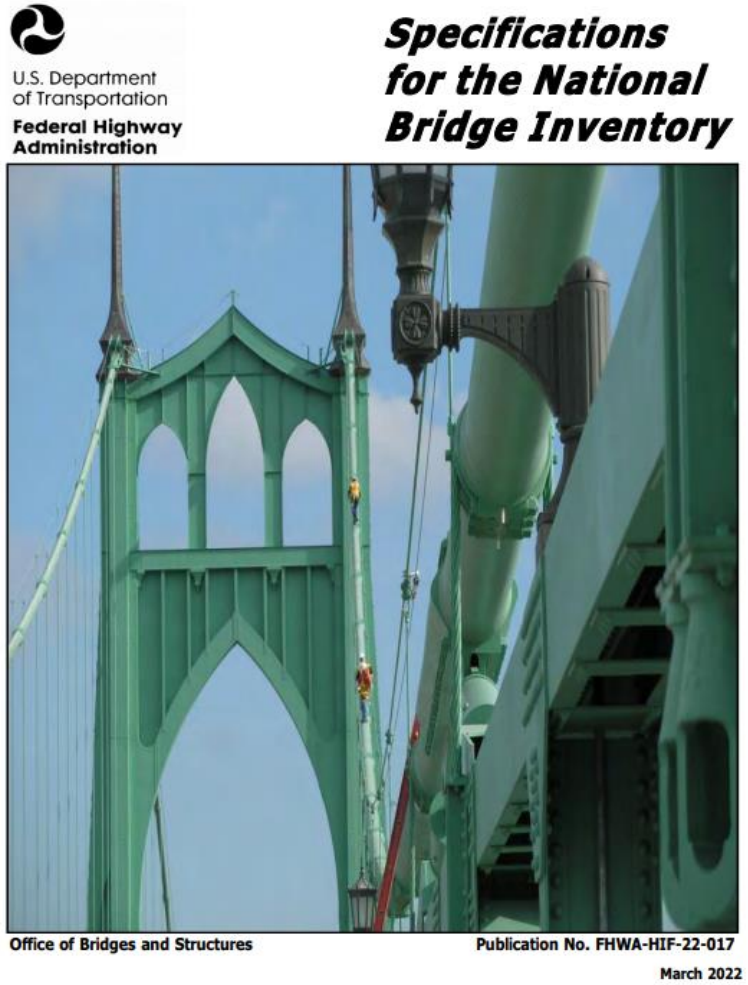
Moving from

Recording & Coding Guide

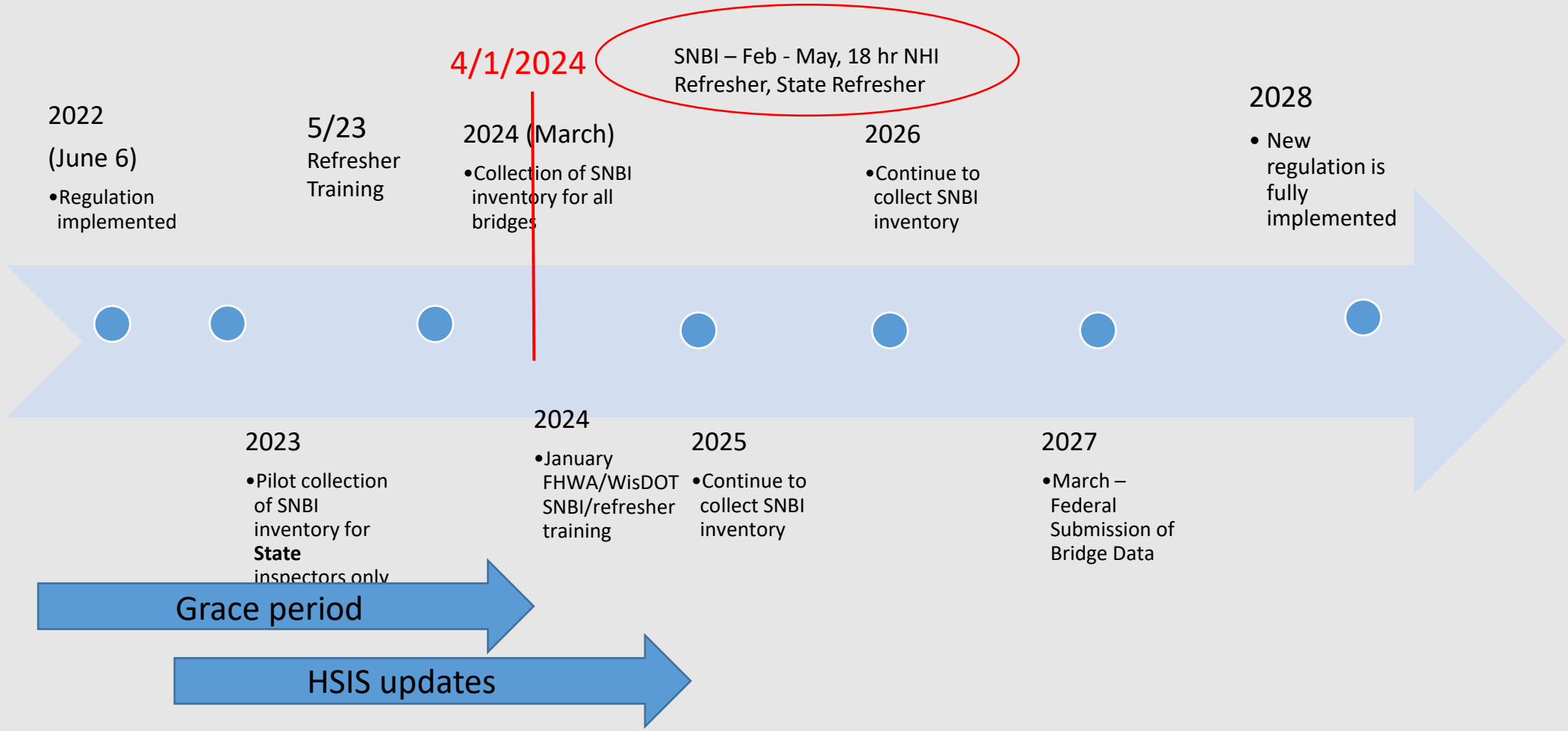
to

SNBI

2022



NBIS & SNBI Timeline



WisDOT 2023/2024 Presentations and Trainings

Recorded and posted on WisDOT's BOS Maint website

- 2/1/23: Overview of SNBI/NBIS (2 hrs)
- 2/8/23: Program Manager Training, Part 1 (2 hrs)
- 3/13/23: SNBI Training for State Inspectors
- 4/5/23: Program Manager Training, Part 2 (2 hrs)
- May 2023: 2023 Inspector Refresher (2021 and 2022 available)
- Feb 2024: SNBI Trainings – found on the LearnCenter
- Jan-March 2024: NHI 18 hr Bridge Inspector Refresher (not recorded)
- April 2024: 2024 Inspector Refresher (5 hrs) - found on the LearnCenter

Significant Changes for Inspectors

- 18-hour Inspection Refresher Requirement (2019-2024)
- 18-hour NHI Inspection Refresher Requirement (2024-2029)
- Terminology changes
- Policy re-writes
- Component Condition Ratings
- Inspection Date

FAQ: Bridges NOT Covered By NBIS

Pedestrian Bridges – Pedestrian only bridges regardless of owner or location.

Private Bridges – those not connected to a public road on both ends.

Railroad Bridges – bridges carrying rail traffic even when over a public highway.

Small Bridges – highway bridges with span lengths ≤ 20 feet.

FAQ: Can someone enter SNBI information into HSI without creating a new inspection?

Yes

How?

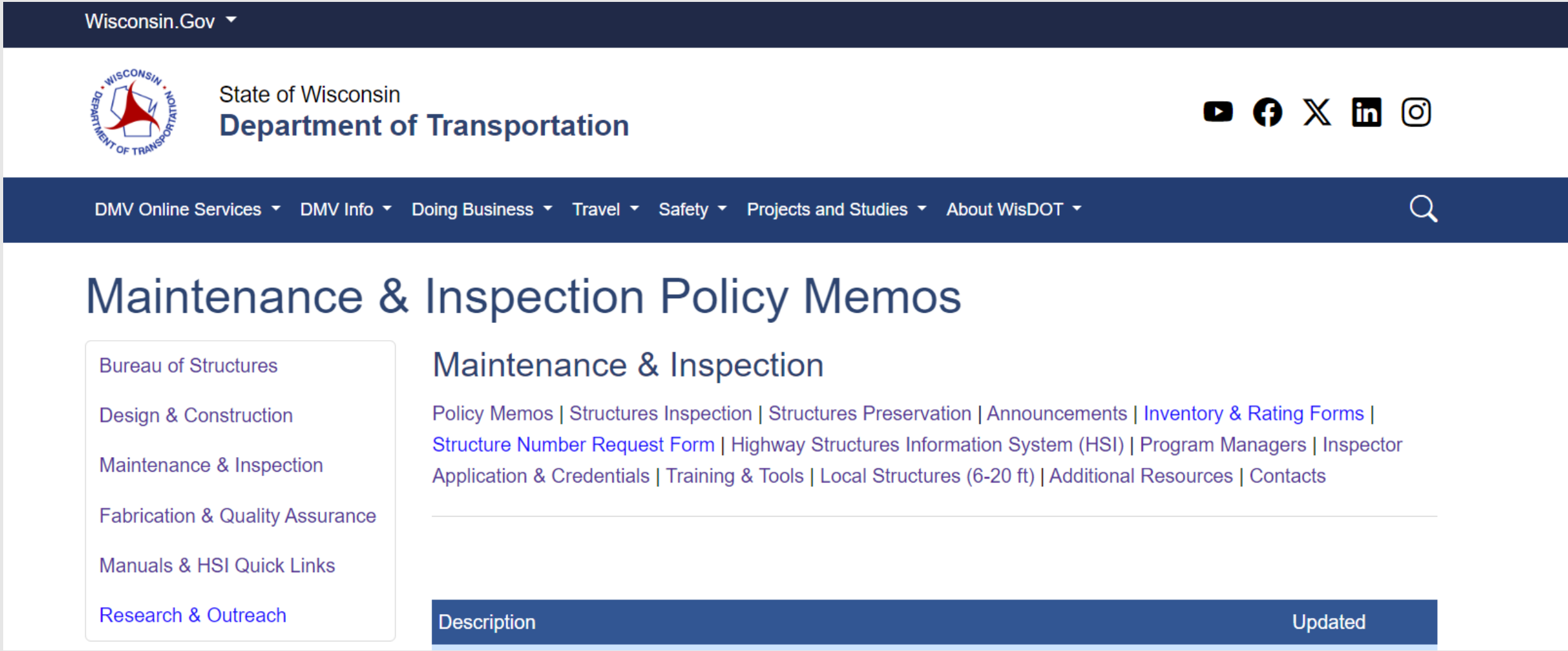
Can enter inventory data in the Bridge Tab directly or other fields at anytime, or...

Create a SNBI activity for each bridge and add information.

3) Reminders of BOS Website Resources

Reminders of Website Resources

WisDOT Maintenance and Inspection Website



4) Inspection Qualification Requirements

Inspection Personnel Qualifications
Refresher Training

Effective Until 6/6/2024:

18 hours of WisDOT approved refresher training is required (2019-2024)– a preapproved list of training can be found on WisDOT's BOS Maintenance Webpage:

https://wisconsindot.gov/dtsdManuals/strct/inspection/Approved-Training-2023-02-22.pdf

See Handout

Inspection staff need to **individually** record training: Submit record via link on BOS Website

Effective on and after 6/6/2024:

18 hours of FHWA approved training over each 60-month period

Qualification Requirements

- New Qualification Requirements for 2024
  - PM's
  - TL's
- See SIM 1.2.3.1 and 1.2.3.2

Inspection Personnel Qualifications

Program Manager (See SIM 1.2.3.1 Updated 2024)

1) Pass the FHWA approved National Highway Institute (NHI) comprehensive bridge inspection training course (NHI #130055 or #130056).

2) Either a registered Wisconsin licensed PE or have 10-years of bridge inspection experience that includes a minimum:
   A. 200 or more bridge inspections over a 10-year period and 5 years of other bridge experience. OR
   B. 400 or more bridge inspections over a 10-year period.

3) Refresher Training
   - 18 hours over a 60 month period.

Inspection Personnel Qualifications

Team Leader (See SIM 1.2.3.2 Updated 2024)

- 4 Options for Qualification (any one of the following)
  - PE + 6 months experience
  - BS degree in CE field + 2 years experience + Pass FE
  - Associates degree in CE field + 4 years experience
  - 5 years experience
- + Comprehensive Class
  - Safety Inspection of In-Service Bridges (NHI 130055); or
  - Safety Inspection of In-Service Bridges for PE (NHI 130056)
- + Refresher Training
  - 18 hours over a 60 month period

Experience Definition - PE

1. Pass the FHWA approved National Highway Institute (NHI) comprehensive bridge inspection training course (NHI #130055 or #130056).
2. Wisconsin PE and 6 months active bridge inspection experience that includes a minimum: Meeting at least one of the following:
    A. 20 or more bridge inspections over a 6 month to 3-year period and 3 months of other bridge experience (Design, Construction, Maintenance), OR
    B. 40 or more bridge inspections over a 6-month to 3-year period.

Experience Definition: BS degree in CE field + 2 years experience + FE

1. Pass the FHWA approved National Highway Institute (NHI) comprehensive bridge inspection training course (NHI #130055).
2. 5-years or more bridge inspection experience that includes a minimum:
    A. 40 or more bridge inspections over a 2-5 year period and 1 year of other bridge experience (Design, Construction, Maintenance), OR
    B. 80 or more bridge inspections over a 5-year period.

Experience Definition: Associates degree in CE field + 4 years experience

1. Pass the FHWA approved National Highway Institute (NHI) comprehensive bridge inspection training course (NHI #130055).
2. 5-years or more bridge inspection experience that includes a minimum:
    A. 80 or more bridge inspections over a 4-8 year period and 2 years of other bridge experience (Design, Construction, Maintenance), OR
    B. 160 or more bridge inspections over a 4-8 year period.

Experience Definition – 5 Year Experience

1. Pass the FHWA approved National Highway Institute (NHI) comprehensive bridge inspection training course (NHI #130055).
2. 5-years or more bridge inspection experience that includes a minimum:
    A. 100 or more bridge inspections over a 5-10 year period and 2.5 years of other bridge experience (Design, Construction, Maintenance), OR
    B. 200 or more bridge inspections over a 5-10 year period.

Qualification Procedure

All Program Managers and Team Leaders need to be formally approved/qualified by WDOT

- Submit qualification form to get registered
  - List training, inspection experience and reference(s)
- HSI System **Will Not** accept inspections unless Team Leader is properly registered

Required forms:

- Qualifications Form (DT2001) with reference letter
- See BOS Website

Qualification Record Form

- Complete Both Pages of Qualifications Form
- Fill out page 2 completely – details are good
- Submit Reference Letter(s)
  - Expectation is that reference(s) has thorough knowledge of applicant's inspection experience and abilities.
- Submit to Region Program Manager

FAQ: I attended and passed the 1 week or 2 week NHI Bridge Inspection Class this year, Do I need to take the NHI 18-hour Refresher Course?

NO

Both of these courses count for the 18-hour Requirement

5) QA/QC Program

- Review Intent
- Review 2023 Findings
- 2024 QA's

QA Program Review

- Goal is to review both region and county programs each year.
  - 1 or 2 regions/year and each county on 4 year rotation.
- Lead by BOS Supervisors (Tom, Julie and Jason) in their corresponding units.
  - Matt C supported with office assistance. Region PMs assisted on field reviews.
  - Most inspectors along during review (+/-75%).
- Bridge selection
  - By inspector, bridge type, and bridge condition.

QA/QC Program

QC - Local program manager completes and organizes. Documented on DT2002.

Local QA – WisDOT (Supervisor and Region PM) performs yearly reviews of county programs. Changed in 2022. Local TL/PM encouraged to attend.

Each county is reviewed on a 4 year cycle.

Includes random selected bridges for a field review.

Includes office visit to review bridge files and discuss inspection program.

State QA – WisDOT Supervisor performs reviews

1-2 Regions reviewed each year.

Includes random selected bridges for a field review.

FHWA QA – Led by FHWA – reviews one region per year. Includes local and state bridges randomly selected. Includes office visit to review bridges files and discuss inspection program.

2023 State QA's: Region and Countys Reviewed

- 16 Counties Reviewed, 61 bridges, 40 inspectors
  - SE Region: None
  - SW Madison: Jefferson and Lafayette
  - SW La Crosse: Monroe and Vernon
  - NW Eau Claire: Chippewa, St Croix, and Dunn
  - NW Superior: Douglas, Ashland, and Burnett
  - NC Wisconsin Rapids: Waupaca and Marquette
  - NC Rhinelander: Menominee
  - NE Green Bay: Brown, Oconto, and Manitowoc
- Region Reviews: NER and SER (10 bridges/10 inspectors)

QA Points of Interest 2023

- Bridge File Documentation
  - Bridge File Documentation (new form). Goal is to have record for all counties during next 4 year cycle.
- Underwater Profiles and Dives
  - Review Dive-eligible bridge listing vs actual.
  - Review Profiles looking for content and format.
- Scour Critical Bridges
  - Looked at least 1 SC bridge in each review. Check POA's for content and triggers for monitoring and closing.

Findings/Common Issues

- Overburden not updated (TPOs and others) Type and dimension; Similar to previous years. Make sure to verify Overburden on culvert/buried bridges.
- ADT's not updated (Still many from 2015 – last time changed globally).
- Common miscoding of prestressed top flange for T or channel sections (inspectors using deck element in lieu of top flange), few occurrences.
- Wearing surface defects coded under deck element. Not updated or older surface not deleted. Wearing surface area vs Deck area miscoding.
- Missing 9001 assessment. Still finding a few.
- Pile vs Column miscoding.
- Some miscoding of defects, ie mixing up delams vs spalls and coding delams CS3.
- Notes on corrosion/packrust/SL not confirmed by cleaning and measuring.
- Hairline vs Narrow vs Medium crks. Coding hairline as CS2 or 3 .
- NBI's – all within 1.

FAQ: What should be in the Bridge File?

- See Policy dated 4/29/22
- The *bridge file* must contain documentation applicable to bridge inspection, maintenance, rehabilitation, agreements, etc. An inexhaustive list of applicable bridge file components is below:

• **inspection reports** • **Maintenance records** • **Channel cross-section** • **Waterway information – channel cross-sections, soundings, stream profiles** • **Special inspection procedures or requirements** • **Load rating documentation, including load testing results** • **Posting documentation** • **Critical findings and actions taken**	• **Scour assessment** • **Scour Plan of Action (POA) (for scour critical bridges and those with unknown foundations)** • **Inventory and evaluation data and collection/verification forms** • **Significant correspondence** • **Agreements** • **Historic information** • **Other pertinent bridge documents**

Knowledge Check: How do you code the bare deck in these Examples?

Code all as TPO Wearing Surface. Do not code as Bare Deck.

See May 2022 Tech Memo.

Points of Interest Findings

- Underwater Profiles
  - Quite a few not showing substructure/foundation units. If showing, many not in reference or list type of foundation if known
  - Many from 2014
  - Work needs to be done. Continue to push at Refresher Training, Tech Bulletin and PM meetings
  - New Policy in 2024 – Profile every 96 months
- POAs
  - Most triggers for monitoring/closing not specific to site, very general, ie. road overtopping.
  - Work needs to be done. Continue to push at Refresher Training, Tech Bulletin and PM meetings.

Good Things to report

- Overall inspection QA's were good.
- Pictures improving including date stamping. Quantity and quality. Following Picture Guidance.
- Note detail is improving, more DLQ noted.
- Local maintenance actions: Trending to use more, some with pictures.

2024 State QA's

- 16 County Reviews
  - SE Region: Walworth and Washington
  - SW Madison: Iowa and Sauk
  - SW La Crosse: La Crosse
  - NW Eau Claire: Pepin and Pierce
  - NW Superior: Sawyer and Washburn
  - NC Wisconsin Rapids: Adams and Portage
  - NC Rhinelander: Florence, Langlade, and Lincoln
  - NE Green Bay: Calumet and Sheboygen
- Region Reviews: NCR

QA Points of Interest 2024

Similar to 2023

- Bridge File Documentation
  - Continue Bridge File Documentation (new form). Goal is to have record for all counties during next 4 year cycle.
- Underwater Profiles and Dives
  - Review Dive eligible bridge listing vs actual.
  - Review Profiles looking for content and format.
- Review NSTM (FC) and Load Posted
- Scour Critical Bridges
  - Look at least 1 SC bridge in each review. Check POA's for content and triggers for monitoring and closing. How monitoring is completed.

6) New Policy Reviews

Highlight New Policies

(Listed on BOS Website)

- Flammable Materials/Treatment of Stored Materials under Bridges
  - FHWA Memo 11/15/23
  - WisDOT Memo 12/8/23: Documentation and Treatment of Materials Stored Under a Highway Bridges.
- Uncoated Weathering Steel Bridges – Inspection Finding Follow-up
  - WisDOT Memo 11/3/23, Dave Bohnsack email of 3/7/24
- Critical Findings
  - WisDOT PowerPoint memo 10/23
- Advanced Bridge Load Posting (Weight Limit) Signage
  - WisDOT Memo 3/23

Flammable Materials
IH 10 Bridge Fire – California 11/23

The aftermath of a large fire that destroyed part of the 10 Freeway in Los Angeles on Nov. 11, 2023.

Robert Gauthier/Los Angeles Times via Getty Images

Flammable Materials/Treatment of Stored Materials under Bridges

Bridge inspectors must identify and document in the inspection report any non-highway use materials or encroachment beneath any NBIS bridge, such as stored or dumped materials, parked vehicles, equipment, buildings, etc. If an inspector has concerns material under a bridge, if ignited, would threaten a bridge's structural capacity, or cause an imminent threat to public safety, the concern must be communicated to the bridge inspection program manager (PM), the bridge owner, and FHWA through the Critical Findings process. Bridge owners must remove the materials and encroachments from beneath bridges that pose a risk of a fire event.

Flammable Materials/Treatment of Stored Materials under Bridges

- For bridges constructed using federal funds, if non-highway use facilities are located beneath a bridge or materials/items are allowed to remain beneath a bridge, a R/E agreement approved by FHWA is required. A copy of the agreement must be in the bridge file. A copy of an agreement can be emailed to DOTDLDTSDStructuresRecords@dot.wi.gov for saving in HSIS.

Flammable Materials/Treatment of Stored Materials under Bridges

- Inspector should document the non-highway use material or encroachment.
  - Add a Maintenance Action: Misc – Materials Stored Under Bridge and including photographs
  - Select the Priority (L, M or H)
  - Select Status
    - Approved for Work order
    - Decision/Work Deferred
    - Work Complete

Uncoated Weathering Steel Bridges – Inspection Finding Follow-up Actions

- Only applies to Uncoated Weathering Steel (Cor-Ten or corten)
- See Dave Bohnsack's email of 3/7/24 for further info including checklist requirement. List of bridge provided.
- Next inspection, inspector needs to:
  - Identify all preventative maintenance or preservation activities necessary to ensure the satisfactory performance of the uncoated weathering steel; and notify the bridge owner/maintainer of the identified activities.
  - Complete Weathering Steel Checklist and upload into HSI. Weathering Steel Checklist.pdf See Handout
  - Bridge Owners/Local Program Managers – Please notify WisDOT BOS Region PM when Task #3 is complete.

Critical Findings

- 10/23 Memo provided 2023 Revisions with NBIS Updates
  - Formatted as a power point presentation.
  - Encourage to review entire presentation. Includes HSIS example.

Critical Findings Procedure

2023 Revisions with NBIS Updates
and
New HSIS Updates
10/2023

Review Procedure Power Point
See SIM 1.7 and Chapter 8 in Field Guide

New Terms/Definitions

- **Critical Finding Procedures -** Two main objectives
  - The procedures must clearly establish criteria for those deficiencies which are critical findings and require immediate action to preserve public safety;
  - The procedures must describe a process to resolve immediately the critical finding.
- **Immediate Threat** – Whenever there is an imminent threat to public safety that demands an immediate response, the deficiency is considered a critical finding regardless of whether it was resolved immediately upon discovery or not.
- **Planned vs Unplanned Closures** - When deficiencies are found that result in an immediate full or partial closure, this is to be identified as a Critical Finding. Generally planned closures and restrictions are not critical findings and unplanned closures and restrictions are critical findings.
- **Resolved** – An action has been taken and completed to mitigate the deficiencies and protect public safety. This could involve lane or load restriction, shoring, repair, closure, or replacement of the bridge. Increased inspection frequency alone does not fully resolve a critical finding if the underlying safety issue is not rectified.

Summary of Updates/Clarifications

- **Critical Finding (CF) –** additional minimum criteria identified in the NBIS.
- **CF resolved -** this does not necessarily mean the deficiency has been corrected. It means an action has been taken to address any immediate safety concern.
- **Timeline to resolve a CF -** must be resolved *as soon as possible but no later than 30 days* of the finding.
- **Load posting or change of an existing load posting** - signage must be installed *as soon as possible, but no later than 30 days* after the determination of the need for the posting.
- **Increased monitoring alone** - not sufficient to completely resolve a critical finding.
- **Temporary repairs alone** - not sufficient to completely resolve a critical finding.
- **HSIS updated:**
  - Critical Findings and Structural Review activities have been separated on the Create tab under the Inspection tab.
  - A new tab will appear when the Critical Findings activity is selected.
- **WisDOT's Structure Inspection Manual (SIM) Part 1-Chapter 7.**
- **New DT2026 form – optional form for field use to help gather needed information for entry in HSIS**

Critical Findings Designation Criteria

Criteria resulting in a Critical Finding:

- Immediate partial bridge closure because of structural conditions or safety concern
- Immediate full bridge closure because of structural conditions or safety concern
- NSTM (BC14) condition rated in serious or worse condition (NBI ≤ 3)
- Deck, Super, Sub, or Culvert condition rated in the critical or worse condition (NBI ≤ 2)
- Channel (BC09) or Scour (BC11) condition rated in the critical or worse condition (NBI ≤ 2)
- Immediate load restriction or posting

  An immediate posting is when instead of a partial or full closure, the inspector, with consultation with the PM, bridge owner, and possibly the load rating engineer, decides to immediately post the bridge before an official review or rating is completed. An immediate posting is considered a short-term response.
- Immediate repair work to a bridge, in order to remain open.

  An immediate repair is one that requires immediate action to ensure public safety. Example: A full or partial depth hole in the deck, if the inspector determines a partial closure is required until the repair is complete.

NOTE: Criteria related to the new SNBI items will go into effect when the new item conditions are collected.

Critical Finding Designation

It is not possible to provide examples of every situation, below is guidance to help the inspector and PM make CF determinations.

When a finding is a Critical Finding:

- If an inspector believes a finding is an immediate safety or structural concern, the finding must be addressed immediately, proper follow-up and communications are necessary.
- CF example 1: The exterior girder of a single span bridge has serious section loss the entire length. Out of concern for the structural stability and the safety of the public the inspector immediately contacts the PM and bridge owner to set up a shoulder closure on the bridge. This is a critical finding.
- CF example 2: A motorist reports concrete falling from an overpass bridge. The inspection finds additional loose concrete that requires immediate removal. The county is called to remove the loose concrete. This is a CF.
- CF example 3: An over height load strikes an overpass highway bridge. The damage is moderate and further evaluation is necessary to determine if the bridge can handle legal loads. The inspector consults with the PM and the load rating engineer. It is decided to temporarily posted the bridge at 25 tons until the load rating can be completed. This is a CF.
- CF example 4: A pothole is found that must be addressed immediately, the area of the pothole is restricted from traffic by using cones or parking a vehicle to block the area, maintenance crews make an unplanned closure to repair/patch.
- CF example 5: A bridge railing is damaged by an errant vehicle, the bridge is temporarily closed for inspection and debris clean up, the inspector determines the damaged rail is a safety concern, the county secures the railing with a temporary repair – this is a CF.

Critical Finding Designation

When is a finding NOT a Critical Finding:

- If a deficiency identified does not require an immediate traffic restriction and the repair can be completed in the future (regardless if the future is later in the day or longer timeframe) with a planned traffic restriction, it is not a CF.
- Example 1: A developing pothole in the wearing surface is still traversable but needs immediate attention to avoid the potential for a safety concern – this is not a critical finding. The repair/patch can be planned for later in the day or in the week.
- Example 2: A bridge railing is damaged by an errant vehicle, the bridge is temporarily closed for inspection and debris clean up, the inspector determines the damaged rail is not a structural issue or a safety concern – this is not a CF.
- Example 3: A highway overpass bridge is struck by an over height load. Out of caution, the bridge is temporarily closed to traffic for the inspector to evaluate and assess. The girders have some moderate scrapes in the paint but no other damage is found and the bridge is reopened to traffic. This is not a CF.
- Example 3: The underside of a highway overpass bridge is struck by an over height load. Debris from the impact is scattered about and loose concrete hangs from the impact area over traffic. The highway under is closed for scene clean up and bridge inspection. The bridge inspection finds the only damage to be the spalled and loose concrete at the impact area. The inspector removes the loose concrete. The bridge is reopened to traffic. This is not a CF.

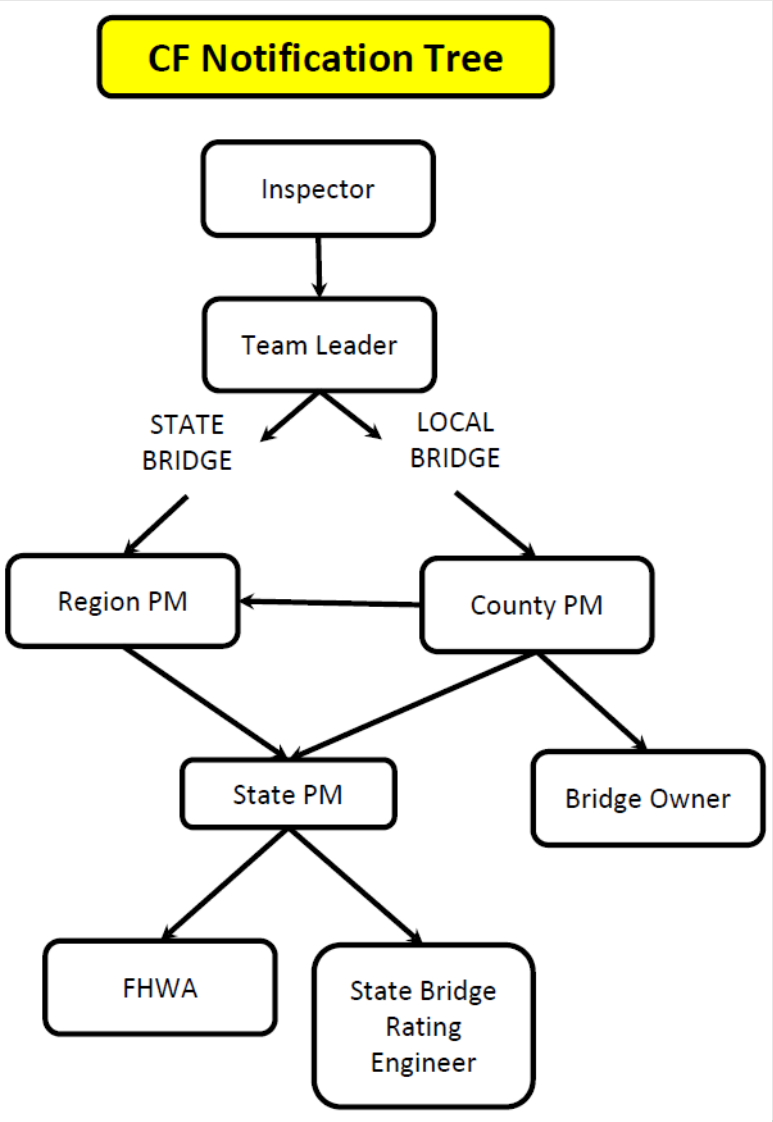
Notifications for Critical Finding

- **Inspection TL must first address the immediate safety concern.**

- **Notification Tree**
  - TL will notify the PM with jurisdiction over the bridge.
  - PM with jurisdiction will notify the State PM.
  - County PM will notify the local bridge owner and the Region PM.
  - The State PM will notify FHWA and state rating engineer within 24 hrs.
- Notification through direct communication via telephone with an email follow-up is required.

- The TL, PM, owner, and others (as necessary), must determine a plan of action; including any actions to be taken and communication going forward.

- Document the notifications in HSIS on the Critical Findings tab.



Critical Finding Documentation

- **Document in HSIS -** as soon as practicable but within 30 days of the finding…
  - On the Inspection Tab
    - Create an inspection report in HSIS
    - Select the Critical Finding Activity type.
  - Information needed for the critical finding activity and the related inspection
    - Date of Critical Finding
    - Description of the critical finding - include a detailed narrative of exact location, size, and severity of all structural deficiencies that warrant a critical findings designation. Provide additional information on how the critical finding was discovered and the reason the deficiency exists (mainly for bridge hits).
    - Any actions undertaken to resolve the critical finding (temporary, underway, planned, immediate final, and long-term final)
    - Repair plans, design/load rating calculations.
    - Action completion dates; estimated completion dates
    - Notifications and contacts completed
    - Photographs and/or sketches of the structural deficiencies
    - Photographs of the installed traffic control/restrictions

Critical Findings Tab

- The new tab, when created, will be independent of the inspection report created which initiated the CF.
- Actions taken as a result of the CF can be documented on the new CF tab independent of the inspection report.
- Once a CF tab has been created for a bridge, the tab will continue to be visible.
- Information needed for the Critical Finding Activity:
    - Critical Finding Date
    - Type (drop down menu of CF criteria)
    - Inspector (pre-populated)
    - Close-out inspection required (check box)
    - Critical Finding Description
    - Actions (type, action summary, estimated completion date, and completed date)
        - Numerous actions can be added
    - Notifications (recipient, comment, send or date)
        - First notification will prepopulate with the PM
        - Add additional notifications with comments about the communication

Critical Finding Action Definitions

- **Temporary** – Describes a temporary action taken to secure the scene. Examples include restricting traffic using temporarily traffic barrels, a temporary repair, or blocking a lane with a vehicle while trying to determine the next action.
- **Underway** – Describes any actions that are in the process of being completed. An example would be repair work that has started and is in progress. This action would typically be selected when the repair will take multiple days, weeks, or longer to complete.
- **Planned** – Describes any expected future actions that are not the Final-Immediate. Examples would be additional inspections, reduced inspection interval, or repairs being planned/designed. If bridge rehabilitation or replacement is the final planned action, the anticipated timeframe must be documented as a Final-Long Term Action.
- **Final-Immediate** – Selected for every CF. This action must resolve the immediate safety concern - the traffic restriction or bridge closure is in place, the posting signage is installed, and/or the permanent repair has been completed. A close-out inspection is required to document a final repair.
- **Final-Long Term** – Select to identify the final long-term plan. This will generally be a future bridge rehabilitation or bridge replacement. A close-out inspection is not required with a final long-term action. An initial or special inspection will be completed once the rehabilitation or replacement is completed.

Close-out Inspection

In HSIS, the Critical Findings tab has a check box to identify when a close-out inspection is required.

A close-out inspection in the form of a Routine or Special (formerly Interim) inspection must be completed to update the condition and inventory data when the final actions include a repair or rehabilitation. Document the following in the close-out inspection:

- Document and photograph the repairs completed – include as-builts plans
- Update inspection and inventory data, including condition assessment.
- Document and photograph any traffic control and bridge closure system installed
  - Include assessment 9036 Bridge Closure System when a bridge is closed.
- Document the anticipated timeframe of the rehabilitation or replacement.

A close-out inspection is **not** required when the Final-Immediate Action and inspection documentation can be included as part of the original inspection. For example, loose concrete falling from the underside of a bridge onto the highway below. This is a CF as part of a Special inspection where the Final-Immediate action is to remove the loose concrete. This entire CF can be documented in the one inspection report without the need for a close-out inspection.

Advanced Bridge Load Posting (Weight Limit) Signage

- Load posting signs and installation shall comply with Section 2B.59 of the FHWA Manual on Uniform Traffic Control Devices (MUTCD) and the Wisconsin MUTCD. Bridges requiring load posting may also require advance posting signs at the nearest intersecting roads or other points where a driver can detour or turn around.
- See Section Section 2B.59 for proper sign standards
- A bridge located close enough to an intersecting road that the load posting sign can clearly be read from that intersection should have the advanced sign placed at a further approach intersection.
- Additional advanced warning signs can be placed at other approach road intersections that may generate prohibited vehicles

Knowledge Check

You are inspecting a structure with Self Weathering Steel girders, what additional inspection work is involved? Check all that apply.

A. Spray paint girder ends
B. Identify all preventative maintenance or preservation activities necessary to ensure the satisfactory performance of the uncoated weathering steel ✓
C. Complete Weathering Steel Checklist and upload into HSI ✓
D. Notify owner and PM ✓

Knowledge Check

- As an inspection TL you discovered a Critical Finding. After you secured the situation, how long do you have to notify your PM and Region PM?
  - A. 30 Days
  - B. 1 Week
  - C. 24 hours
  - D. 3 Days

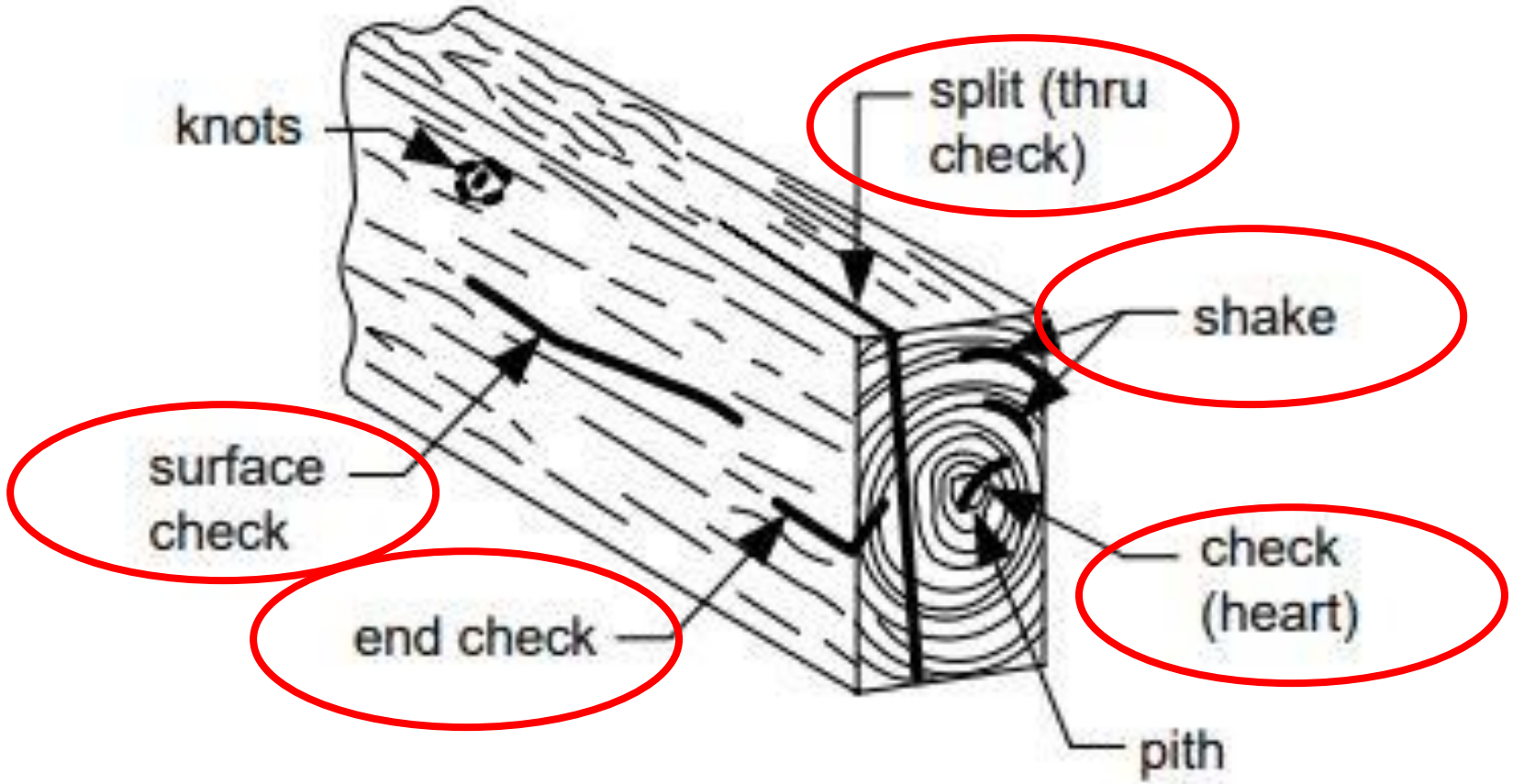
7) Review Timber Defects

From 2019 Refresher

Topics

- Splits vs. Checks vs. Shakes
- Spreader Beams (Element 8166)
- Micro-Resistance Drill
- Pile Decay / Section Loss
- CS4 Guidelines

Splits vs. Checks vs. Shakes



Splits vs. Checks vs. Shakes

Split

Shake

Check

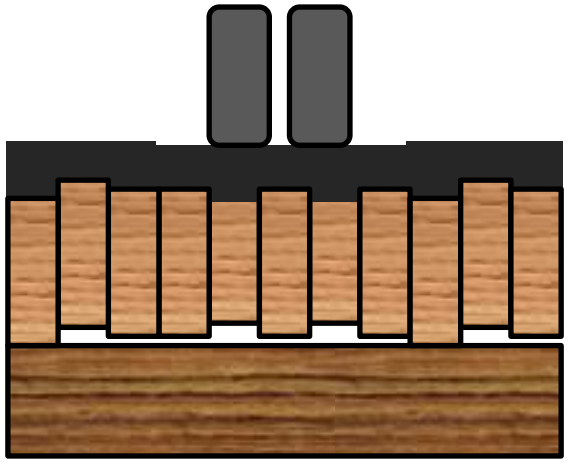
Spreader Beams (Element 8166)

Somewhat common missed element

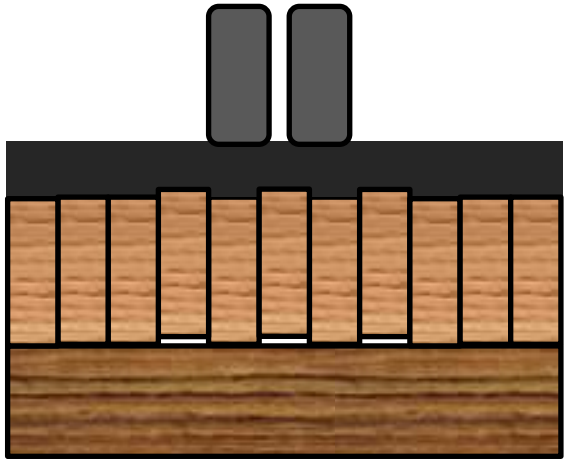
- Check for loose bolts
- Check for gaps between bottom of slab and top of spreader beam
- Consider wearing surface

Spreader Beams (Element 8166)

Loose



Tight

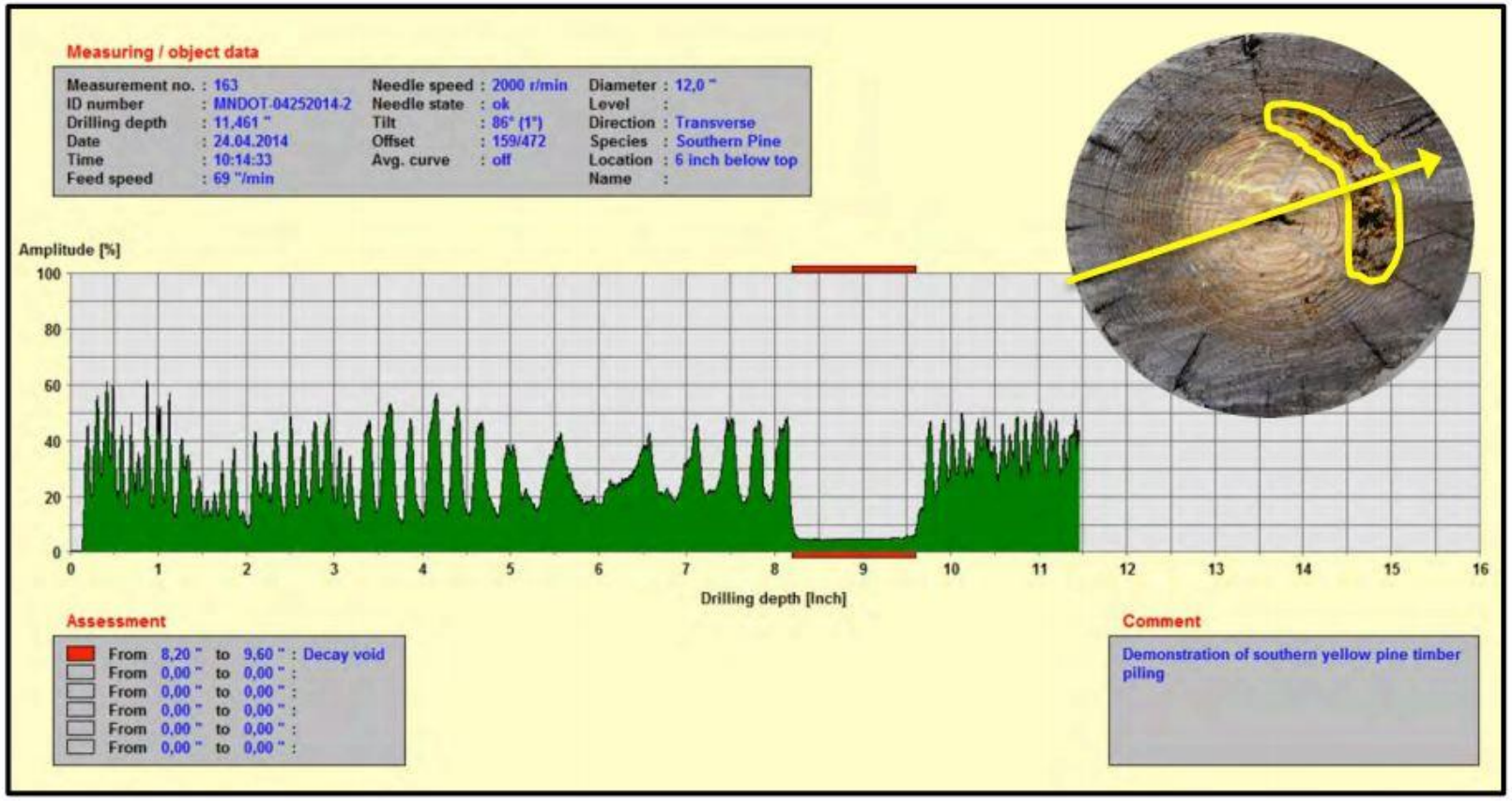


Spreader Beams (Element 8166)

Micro-Resistance Drill

Micro-Resistance Drill

Micro-Resistance Drill



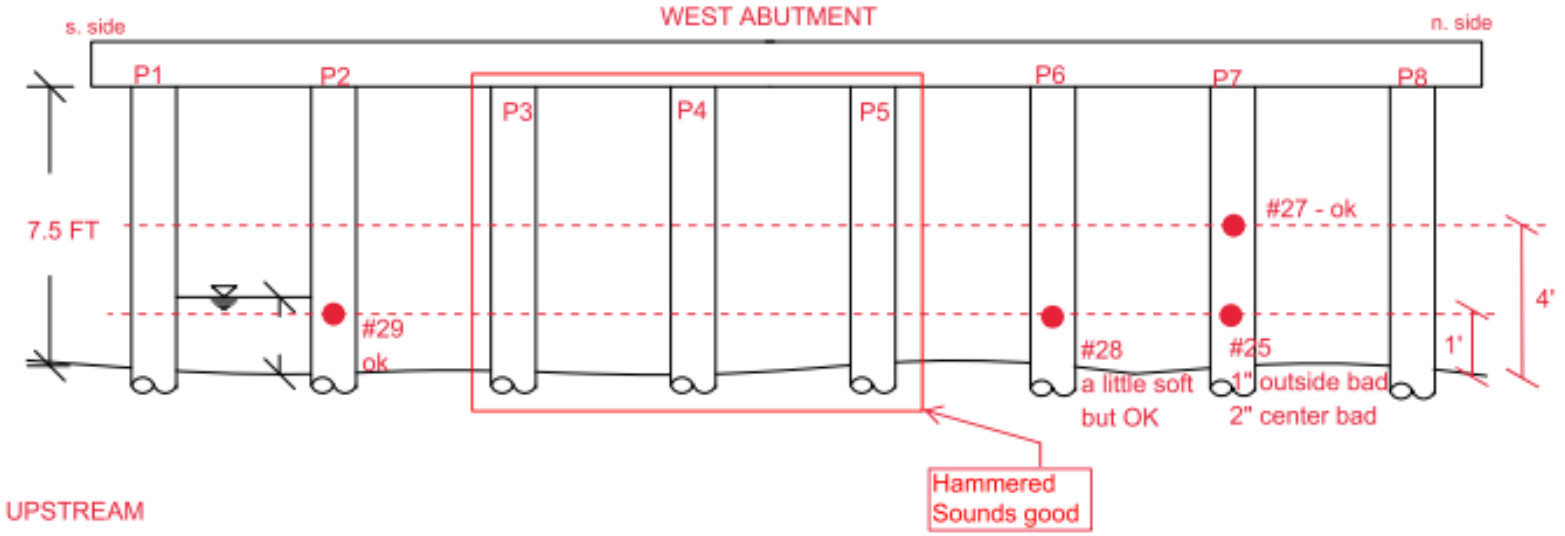
Micro-Resistance Drill

- WisDOT's model – IML PD400
  - Available for use by WisDOT Bridge Inspectors
- Troubleshooting / Challenges
  - Broken or Worn Needles
    - Need to replace occasionally – about $200 for 10
  - Overload Feed Motor!
    - Adjust needle speed, feed speed
  - Memory – allows about 75 readings
    - Must download to computer with PD-Tools Pro
  - Maintenance & Repair
    - Calibration / lubrication

Micro-Resistance Drill

- Additional Resources
  - YouTube: “Timber Bridge Inspection: Resistance Microdrilling Demonstration”
  - Contact BOS Maintenance Section for:
    - Usage Requests (WisDOT Inspectors can acquire device and perform measurements)
    - Instruction Manuals (IML PD400 Manual and WisDOT’s Supplemental Instructions)
    - PD-Tools Pro
    - Measurement Templates

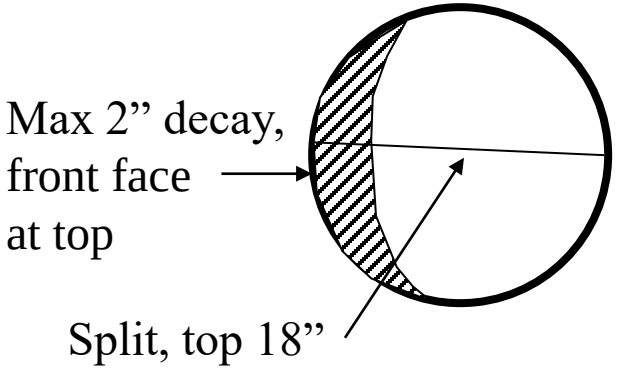
NDT/observation record of abutments and bents



Bridge ID: P110091 Inspector: McDermid / Pence / Hardy / Balice Instrument: Resistograph PD400 Date: 10/4/2017

Pile Decay / Section Loss

- Documentation
  - Diameter
  - Height
  - Spacing
  - Locations of Deterioration
  - Estimate of % Decay / Loss (and is it inside or outside?)
  - Measurements for any tipping (out of plumb)
  - Any deadman tiebacks or bracing?
  - Photos / Sketches



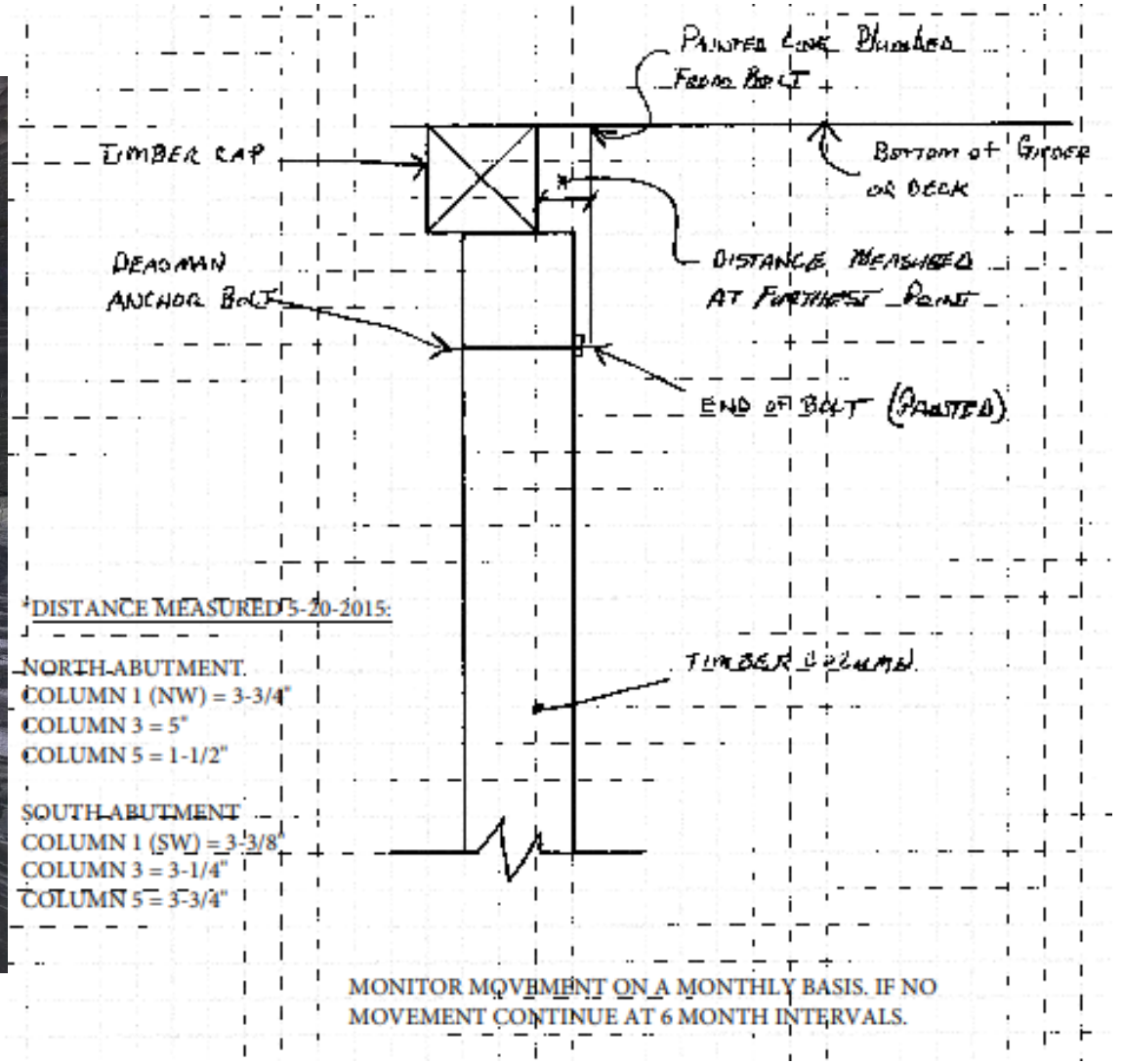
Pile Decay / Section Loss

- Clear on diameter vs. area, inside vs. outside, location of piles and location on pile
- How to Calculate and Report Loss
  - 50% decay/rot ✗
  - 50% section loss ✗
  - 1” rot around exterior ✓
  - 3” decay in center ✓
  - Estimated 50% area loss from interior decay ✓
  - Estimated 60% area section loss around exterior ✓
  - Two piles getting soft at water line ✗
  - Piles 1 and 8 with estimated 50% area loss from exterior decay at water line ✓

CS4 Guidelines

- Distortion or Misalignment
- Locations susceptible to decay
  - Paths for water infiltration
  - Natural (checks, splits, shakes)
  - Mechanical (bolts)
  - Water / ground line, timber cap beams
- Crushing

CS4 Guidelines



CS4 Guidelines

CS4 Guidelines

Knowledge Check

What type of timber defect is indicated by the arrow?

A) Split
B) Check ✓
C) Shake
D) Crack

Knowledge Check

Which of the following are potential adverse effects of a loose spreader beam? Check all that apply.

A) Reflective cracking in asphalt wearing surface ✓
B) Weight limit posting ✓
C) Expensive repair or replacement required

8) Inspection Scheduling/Reporting, 48 Month Interval Changes

See SNBI Module 4

Inspection Scheduling

- An acceptable interval tolerance for late inspections is allowed by the NBIS which WisDOT has adopted
  - Field inspections completed after the month in which it is due are considered late by WisDOT
  - The PM for a late inspection or anticipated to be late inspection must provide e-mail notification and an expected completion date to the next level inspection program authority as soon as possible

Inspection Scheduling

Acceptable Inspection Interval Tolerances	
Existing interval	Interval Tolerance
< 24 months	2 months *
≥ 24 months	3 months *

*After the month in which the inspection was due

Inspection Scheduling

- The Region PM will enter a grace date in HSIS for all inspections utilizing the late tolerance for the anticipated completion date
  - County and Local Inspectors shall notify the County PM who will notify the Region PM
  - State inspectors are to notify the Region PM who will notify the BOS Structures Inspection Unit Supervisor

Report Entry into HSIS

- Inspection Results
  - Inspectors shall create the inspection in HSIS within 28 days after the month in which the field portion of the inspection is completed
    - Date, Team Leader, Inspection Type, and Activity
  - Inspection data must be entered and report completed within 3 months after the month when the field portion of the inspection is completed

48 Month Interval Bridges

SIM 1.3.3.3

- The 48-month extended Intervals is optional and is up to the owner/PM to utilize. Has been allowed for last several cycles.
- The routine inspection interval may be kept at the standard 24-month interval by the county or region inspection PM even though meeting criteria for 48 months.
- If interested in participating in the 48-month extended intervals the County PM or Commissioner needs to fill out the DT2002 Structure Inspection Quality Control Form.

48 Month Criteria – incl's new SNBI Criteria

- NBI Deck, Super, Sub, Culvert ≥ 6 or N.
- Must have an initial or routine inspection and another routine inspection 24 months or more apart.
- Span Type – all slab types, all girder types (except thru girder, girder/floorbeam), all box girder - multiple, arch under fill without spandrel, 3 and 4 sided frames only, T-beam, and pipe.
- Span Material – Concrete or Steel
- Inventory Load Rating Factor ≥ 1.0
- Routine Permit Loads = A or N.
- Fatigue Details (E & E') = None
- Cannot have steel defect 1010 Cracking.
- Cannot be load posted.
- Routing Permit Load item = A (routine permit loads are not restricted) or N (no permit loads allowed)
- Cannot have Element 161 Steel Pin, Pin & Hanger Assemblies or Pin thru Web.
- Border bridges with adjoining states are eligible with adjoining state agreement.
- Not a NSTM (fracture critical) bridge
- Hwy Min Vertical Clearance ≥ 14.0' (on or under)
- Scour Vulnerability = A or B (stable for scour)
- Scour Condition Rating ≥ 6
- Channel Condition ≥ 6
- Channel Protection Condition ≥ 6
- Must be less than 50 years old.
- No bridges with complex features

48 Month Interval Bridges

Existing and New Ones

- If bridge has current 48-month interval
  - Will remain 48 month until next inspection.
  - Will re-evaluate criteria at next inspection to determine if still eligible.
- If bridge is suggested/wanted to be a 48-month interval
  - Need to have new inspection entered and/or all new SNBI require fields populated to determine criteria match.

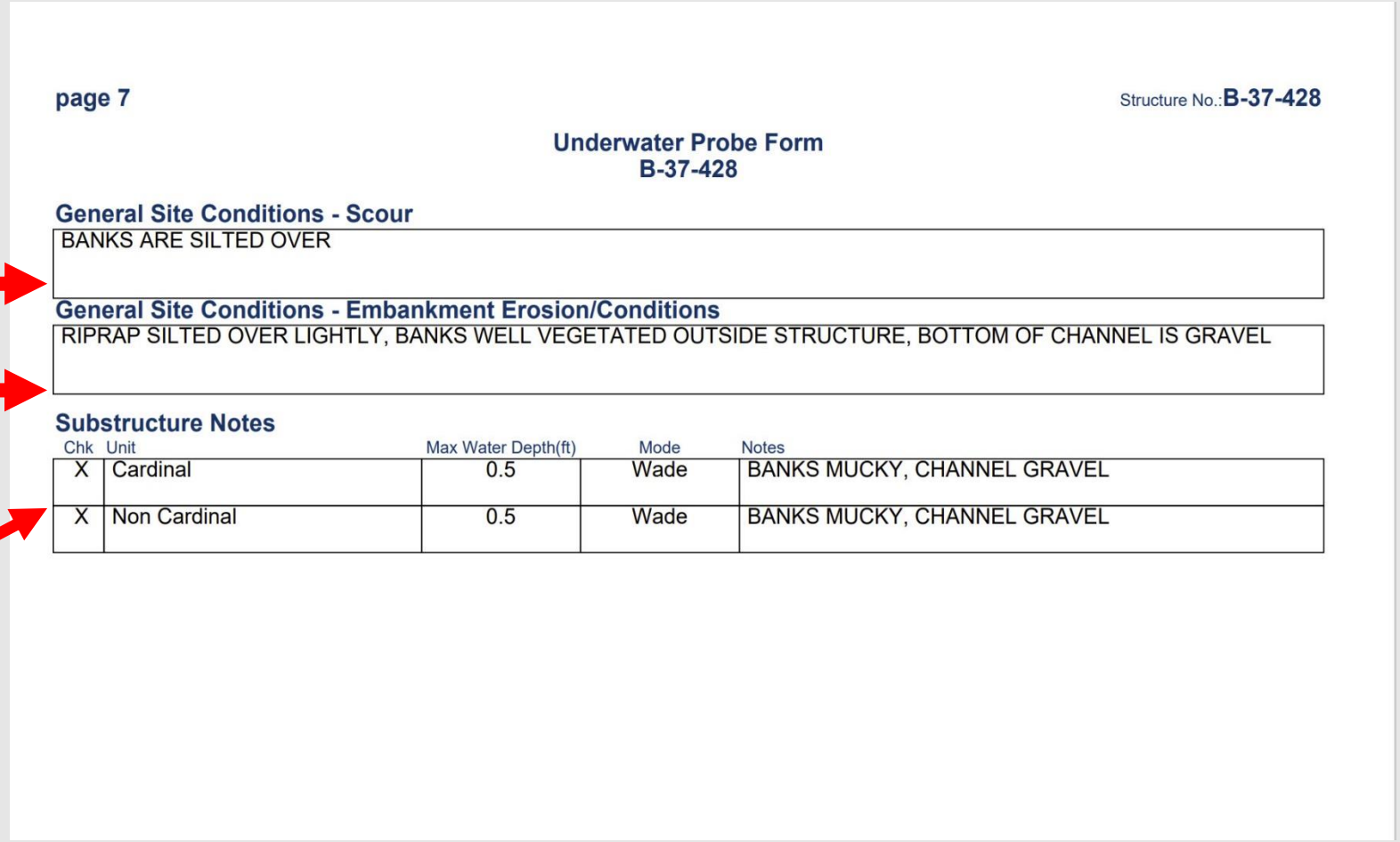
9) UW Probe, Profiles and Dives

Underwater Probe/Profiles/Diving

- See SIM 1.3.6
- Updates for Profiles and Diving. Need to Review and will affect most programs.
  - 96-month max interval for profiles
  - Re-defined Significant Flood Event
  - High Risk Bridges updated with new SNBI coding

UW Probe Form

- Fill out General Site Condition and Embankment Condition
- Need to fill out with each inspection
- Cardinality Discussion



page 7

Structure No.: B-37-428

Underwater Probe Form
B-37-428

General Site Conditions - Scour

BANKS ARE SILTED OVER

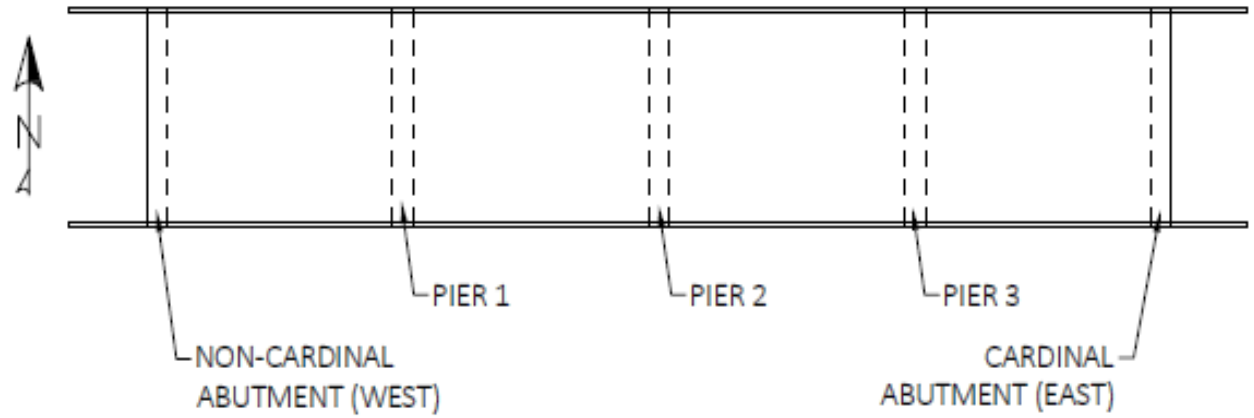
General Site Conditions - Embankment Erosion/Conditions

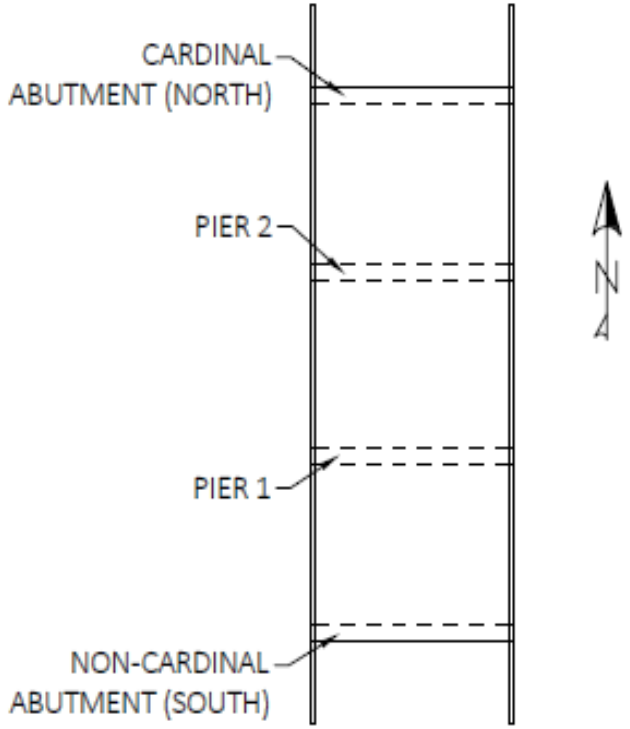
RIPRAP SILTED OVER LIGHTLY, BANKS WELL VEGETATED OUTSIDE STRUCTURE, BOTTOM OF CHANNEL IS GRAVEL

Substructure Notes

Chk	Unit	Max Water Depth(ft)	Mode	Notes
X	Cardinal	0.5	Wade	BANKS MUCKY, CHANNEL GRAVEL
X	Non Cardinal	0.5	Wade	BANKS MUCKY, CHANNEL GRAVEL

Cardinality Diagram





UW Probe Example

All though Cardinal Abutment shows 1st

Underwater Probe Form
B-49-092

General Site Conditions - Scour

MINOR LOCALIZED AT PIERS.

ALL PIERS ENCASED W 8-10 CONCRETE USING VINYL SHEETING FROM STREAMBED TO 1' ABOVE NORMAL WATER. (2017).

General Site Conditions - Embankment Erosion/Conditions

BANKS HAVE HEAVY RIPRAP AND ARE WELL VEGETATED.

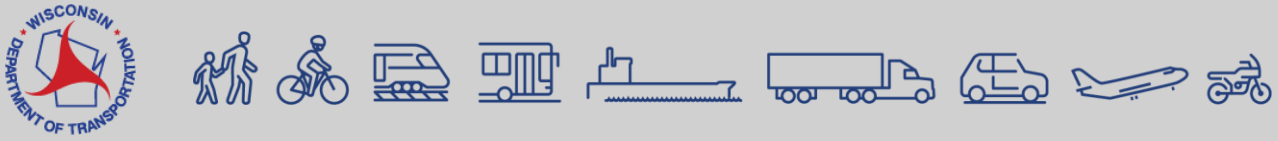
Substructure Notes

Chk	Unit	Max Water Depth(ft)	Mode	Notes
X	Cardinal	0.0	Dry	RIPRAP
X	Pier 1	6.7	Scuba	UW PROFILE DONE WITH BOAT AND ACOUSTIC IMAGES. SEE SEPERATE INSPECTION.
X	Pier 2	8.7	Scuba	UW PROFILE DONE WITH BOAT AND ACOUSTIC IMAGES. SEE SEPERATE INSPECTION.
X	Pier 3	10.6	Scuba	UW PROFILE DONE WITH BOAT AND ACOUSTIC IMAGES. SEE SEPERATE INSPECTION.
X	Non Cardinal	0.0	Dry	RIPRAP

Profile Inspection Interval

SIM 1.3.6.3

1. All structures over water except 4-sided structures (i.e. box culverts and round/elliptical pipes) are required to have an initial underwater profile activity completed during the Initial Inspection with subsequent underwater profiles completed at a maximum interval of 96 months.
2. Bridges with a concrete floor for the streambed, other than culvert type bridges, require only an initial profile activity completed. The profile elevations should be obtained along the end of the concrete floor. If the concrete floor runs beyond the right-of-way, the initial profile can be taken along the bridge soffit.



Profile Inspection Interval

SIM 1.3.6.3

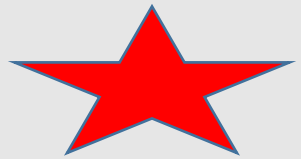
3) Higher Risk Bridges are those meeting the criteria below. These bridges have the underwater profile activity completed at a maximum 24-month interval.

a. B.C.09 Channel Condition Rating ≤ 4 (poor)
b. B.C.10 Channel Protection Condition Rating ≤ 4 (poor)
c. B.C.11 Scour Condition Rating ≤ 6
d. B.AP.03 Scour Vulnerability = C, D, or U (bridge is scour critical)

4. Structures that require underwater dive inspections will have Global area profiles at 60 months and can forgo the 24-month requirement.

Significant Flood Event

SIM 1.3.6.1



- Bridges involved in a significant flooding event – Bridges and bridge like structures that experience a 25 year or greater storm event in 24 hours or that are located on river systems that reach flood stage require a post flood evaluation to ensure the channel has not shifted affecting the structural integrity of the bridge. A post flood evaluation will include a streambed profile when signs of channel movement, degradation, or aggradation exist.

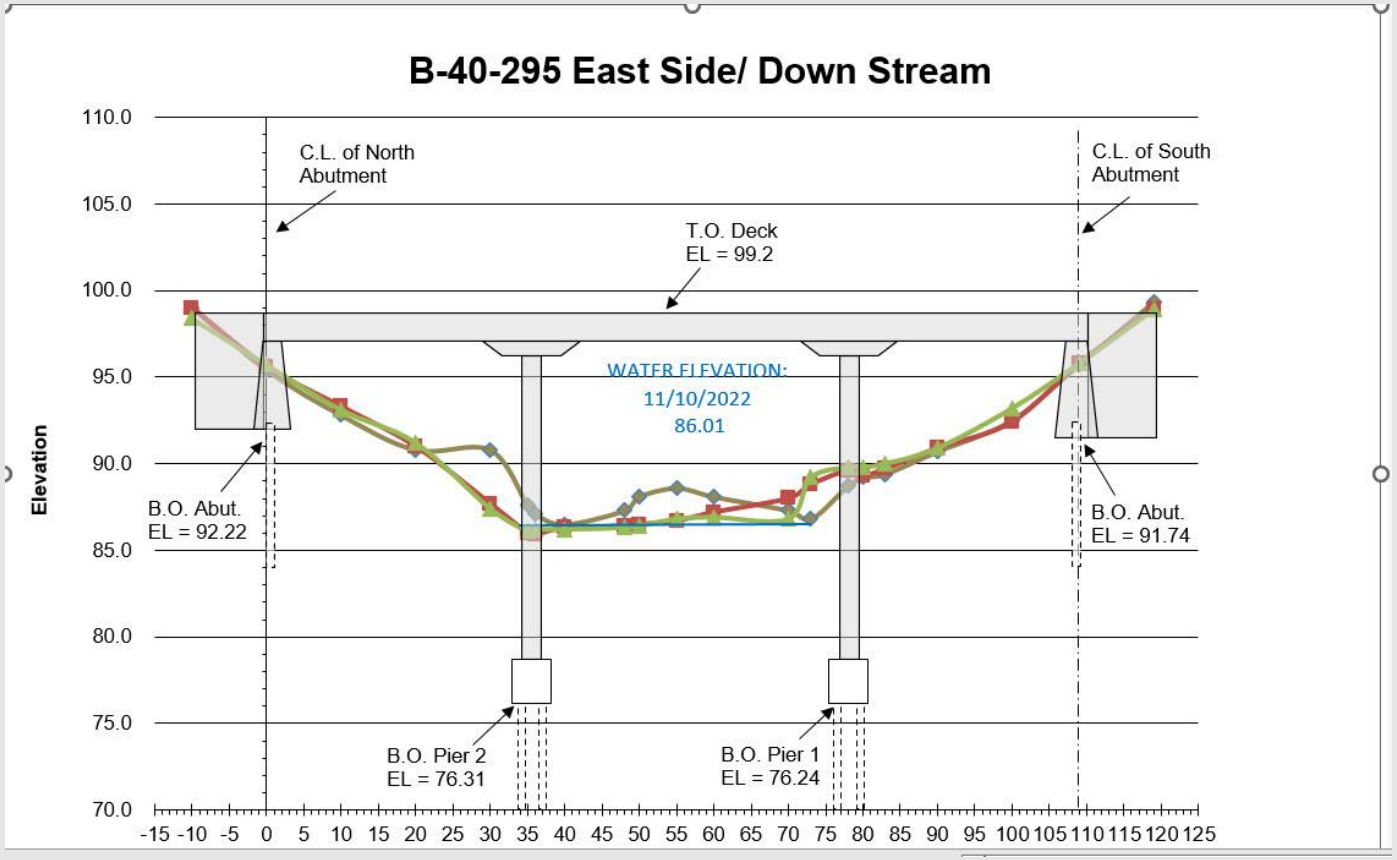
- Resources for determining precipitation estimates and flood events can be found through the National Weather Service. See SIM

UW Profile Requirements

- Required to Have (SIM 1.3.6.2)
  - A reference elevation, starting point and water elevation
  - Substructure units shown and labeled
  - Plotted history of past inspections
- Format can vary. Different file types allowed.
- Entered into HSI
- Discussed in detail in 2023 Refresher

UW Profile Examples

3 span structure



Multiple profiles shown
Substructure Units labeled
Elevations shown and referenced

Excellent Profile.

UW Diving

Structures that also require Underwater Dive inspections shall have extensive profiles taken during the Dive inspection; water depth measurements during an underwater inspection should also include the following “global area” locations:

1. Maximum water depth measurements at each substructure unit in the water.
2. Bottom elevations at sufficient intermediate points between substructure units at the upstream fascia and downstream fascia, to adequately determine the thalweg of the waterway.
3. Termini of upstream and downstream profiles shall be referenced or monumented to ensure that subsequent profiles are taken at the same locations. GPS coordinates are acceptable.
4. The lateral movement of the channel will be monitored by …
    a. Review existing arial photographs to compare to the field conditions.
    b. Take up/downstream photographs of the channel and conditions from the bridge deck. Capture enough photos from above the abutments and piers to capture an upstream and downstream view of the entire flood plain.
    c. Document signs of lateral movement of the channel
    d. Hydrographic survey. Generally, performed on bridges over larger bodies of water where the water stretches across the full span or multiple spans

UW Probe/Profiles/Dives

Wrap Up

- Most likely, UW profile work will be needed in 2024 and beyond
- Review your profile templates – may need to be revised/updated or modified
- Review/Identify High Risk Structures for required 24 month profiles
- Review UW dive bridges. Ensure all are being completed
- QA Reviews will be looking at profiles/diving in-depth this year

Knowledge Check

How often is a UW Profile required with a Scour Critical Bridge?

A. 98 months

B. 48 months

C. 24 months

Inspection Best Practices

- Best Practice: Steel culverts – use pointed probe or hammer along waterline for corrosion and section loss.
- Best Practice: Carry a simple paint scraper tool – use to remove pack rust or other debris.
- Best Practice: Create a simple checklist to use to ensure all is complete
  - overburden, ADT, location – distance from x, lat/long, rebar type in the deck, wing lengths, new elevation photo on cover page, inspection procedure, deck vs. WS area. May sound simplistic, but if you have a list of things to always check before an inspection is closed, there is a better chance of including everything you're supposed to.

- Others???

10) Scour POA's

Scour Plan of Actions - POA's

Scour Critical Bridges

Scour Critical bridge is one with foundation elements determined to be unstable for observed or calculated scour conditions.

- POA required. NBI Scour Code 113 = 3 or less, Scour Vulnerability = C, D, or U (bridge is scour critical)
- Inventory: 825 scour critical bridges requiring POA's
- FHWA Metric 18 – Inspection Procedures – Scour. WisDOT under 5-year Plan of Corrective Action (PCA)
  - Will be part of 2024 QA Reviews to review POA's
  - More work will be forth coming under this Plan of Corrective Action. More than likely resulting in more structures requiring POA's

What is in a POA

- Describe procedures before, during and after a flood event to protect the traveling public.
  - Pertinent bridge info (plans, profiles, maps, contact info)
  - Includes “Triggers” for Monitoring and Closing Bridge
  - Indicates who’s responsible for closing/opening/monitoring
  - Closure plan (detour)
  - Requires UW profile/Dive at 24 month frequency (interval).
  - Requires post-flood UW profile and documentation***
    - Working on Action Plan, HSI updates and guidance, New Scour Monitoring Inspection type in near future
  - Require POA to be update every 48 months. Contacts, revise triggers etc

POA Triggers

Important Points to Remember

- Triggers are important to have identified in POA
  - Triggers can be adjusted after post flood evaluations.
- Record/document trigger events and actions based on triggers
  - Record as attachment to POA as documentation.
    - Date and action
    - New Scour Monitoring Inspection type when available

POA References

- Structure Inspection Manual, Chapter 3, Section 1.3.15.1
- NHI: Plan of Action (POA) for Scour Critical Bridges, NHI 135085 (1 hr webinar)
- FHWA POA Template
  - FHWA POA Template

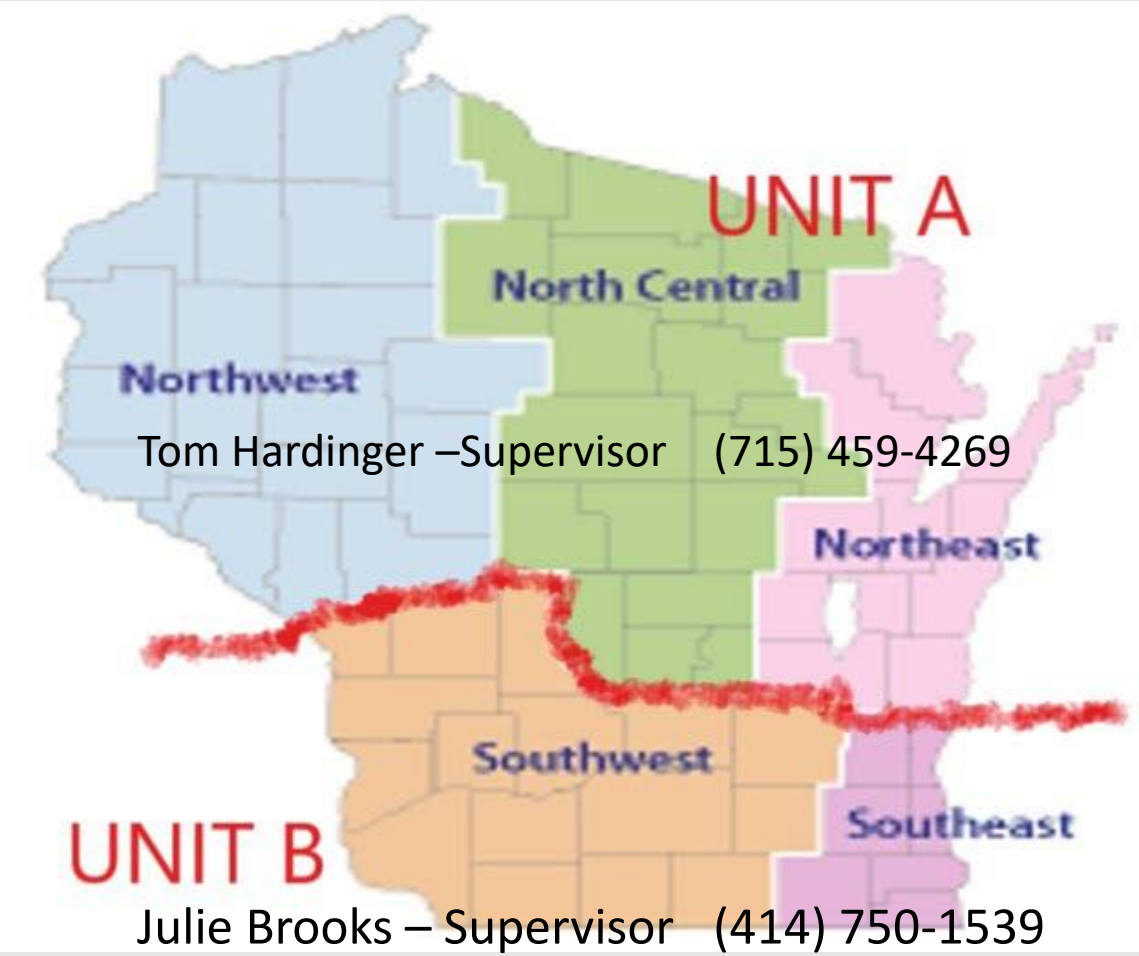
11) Maintenance Actions/Activities

Maintenance Items and Actions

Also see 2022 Refresher

- WisDOT Maintenance PM's
- Priority Listing (High, Medium, Low)
- PM Notification
- List DLQ (Description, Location, Quantity) & Add Pictures.

BOS Maintenance Staff Located in All Regional Offices



Tom Hardinger –Supervisor (715) 459-4269

Julie Brooks – Supervisor (414) 750-1539

Region Maintenance Program Managers

Unit A -North

- NWR: Lee Balsiger (715) 225-2231
- NCR: Philip Saeger (715) 421-8026
- NER: Shane McCarty (920) 492-5991

Unit B - South

- SWR (LaX) Mike Olson (608) 792-5894
- SWR (Mad) Steve Katzner (608) 516-6425
- SER- Jason Zemke (262) 548-8734
- SER- Vacant

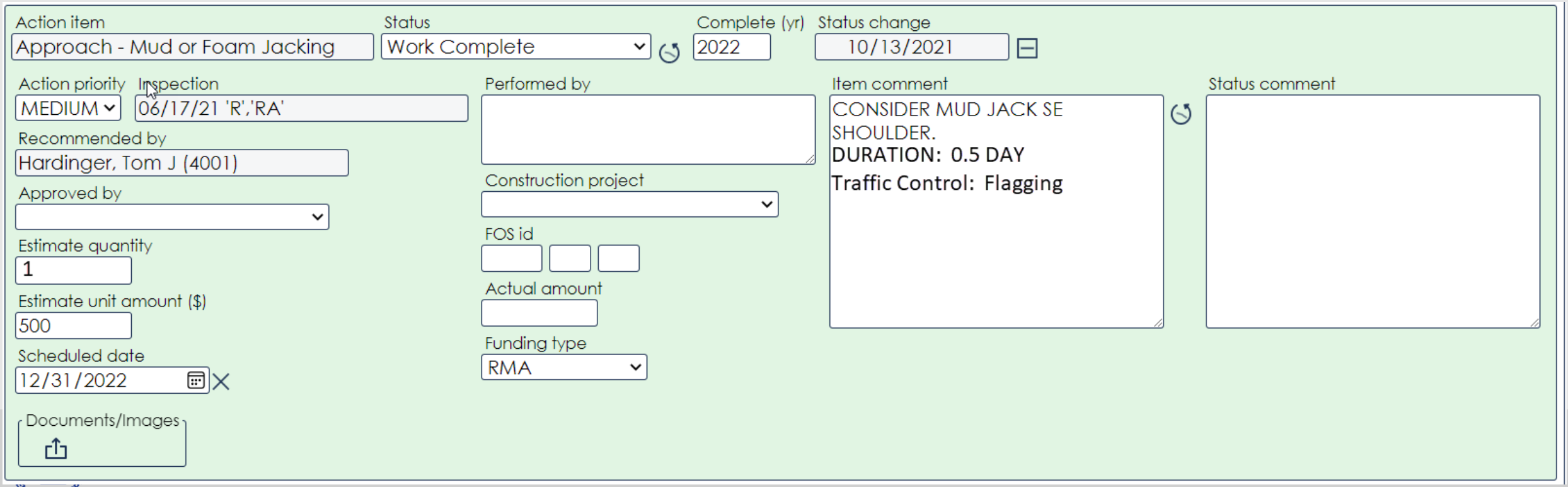
Maintenance Action Items

- Action Priority
  - High – within 30 days and notify PM
  - Medium – within 1 year
  - Low – before next inspection

- Bridge PMs should be notified of High priority items via email or phone call within a reasonable length of time following field inspection.

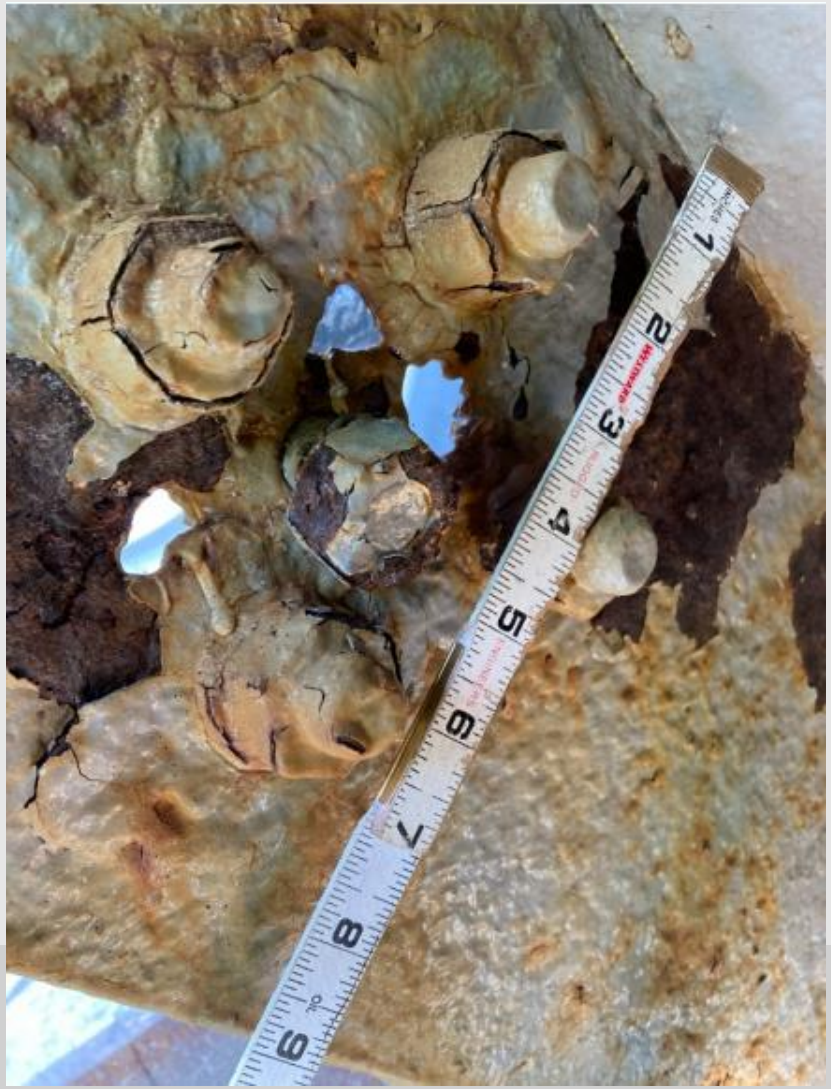
Maintenance Action Items – Item Comment Field (HSIS)

- Estimated costs
- Duration
- Location
- Traffic Control



Maintenance Action Items – Item Comment Field (HSIS)

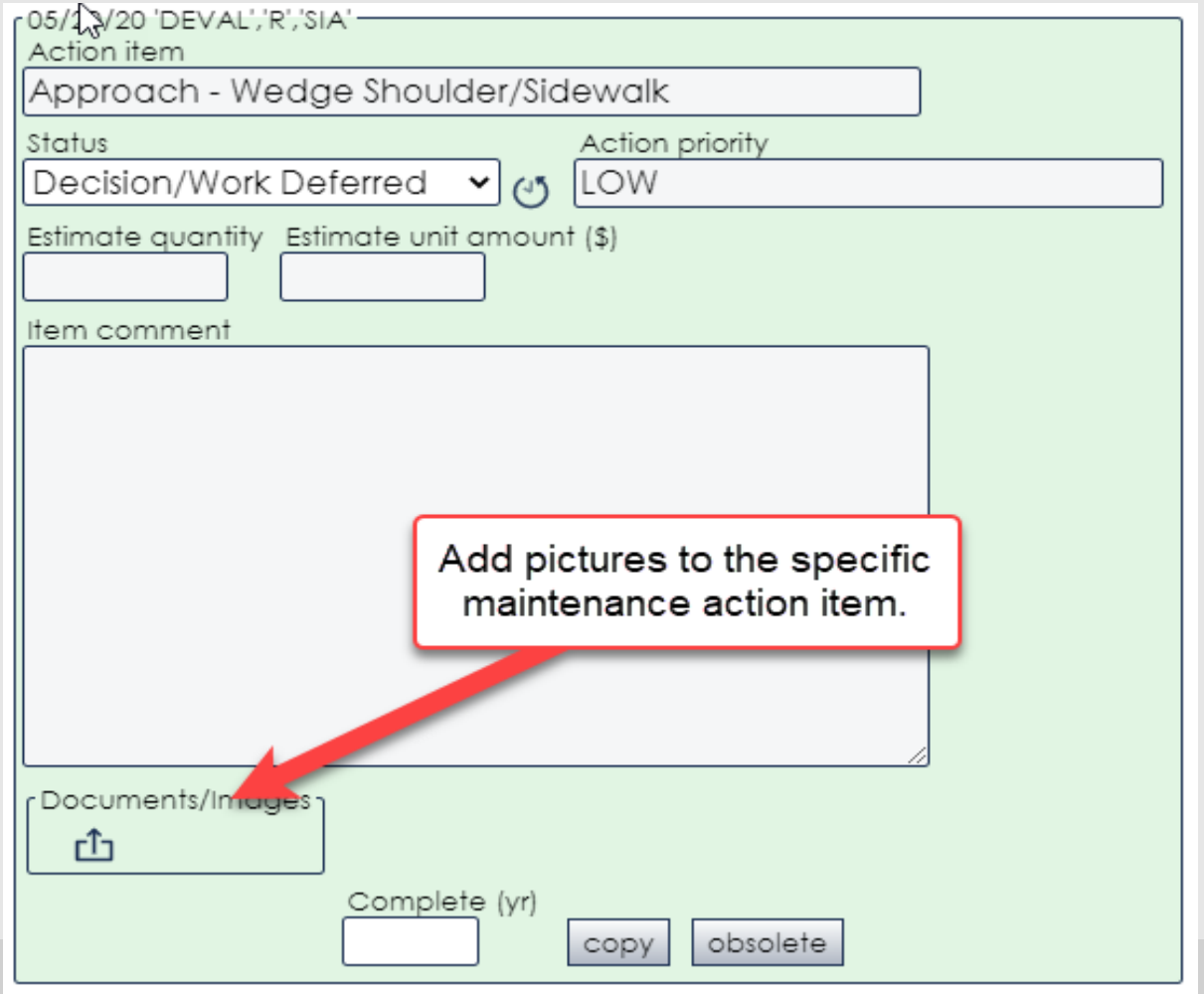
- Helpful Recommendation:
  - Any other pertinent information that would be useful.
    - E.g. Exact locations of any steel repairs.
- State Inspectors:
  Recommend Repair Method
  - Let Project,
  - County Crew, or
  - BOS Maintenance Crews.



Maintenance Action Items

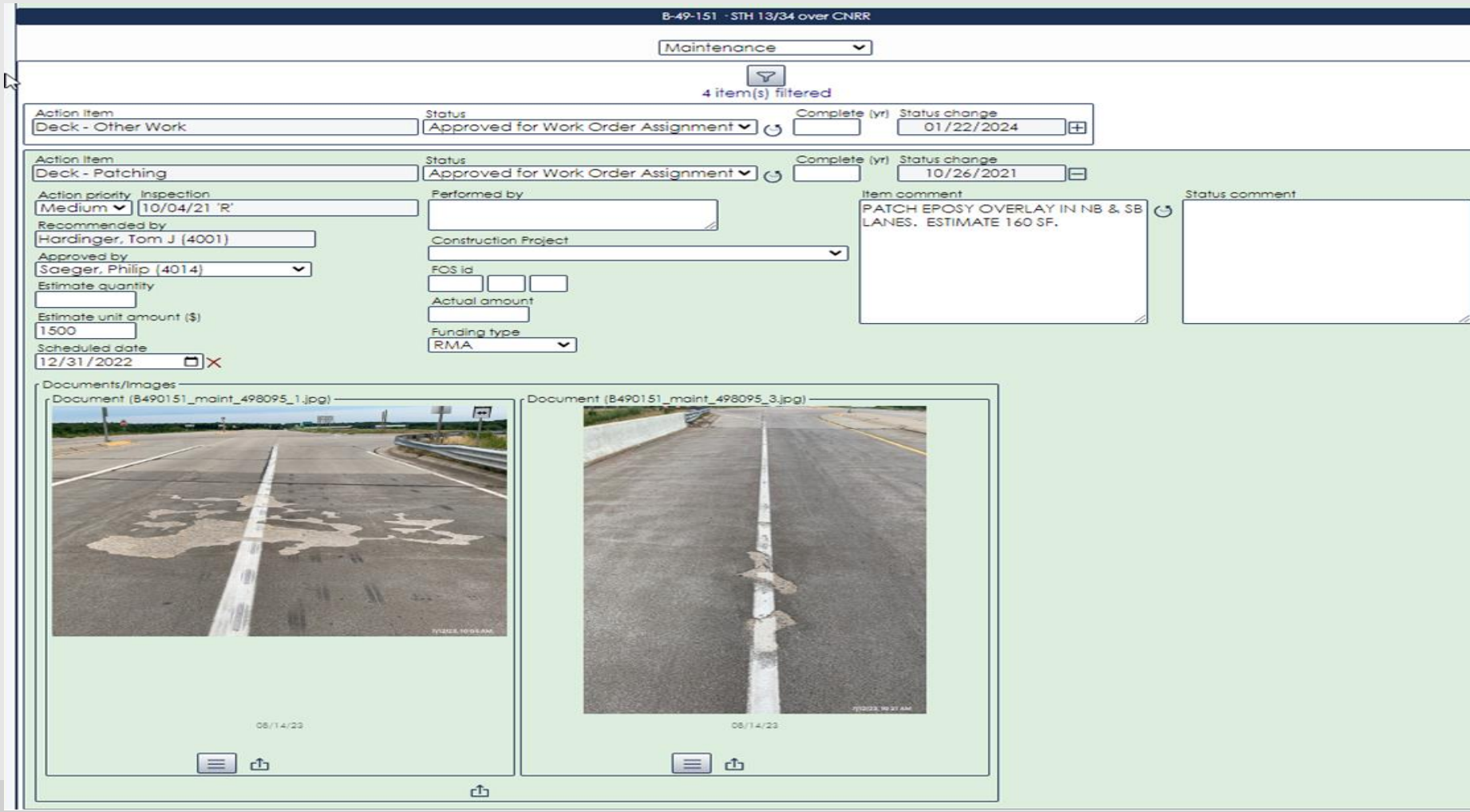
- Include Photo(s) –

  Maintenance Tab or Documents/Images Tab.
  - E.g.
    - Specific Picture(s) of Repair Location – prefer many pictures with different angles.
    - Including a wide-angle picture for location information and possible access issues.



Maintenance Recommendation w Pics

- Pictures are very helpful!!



Knowledge Check

As TL, you make a recommendation to repair a 4’ spall in the concrete parapet on the bridge you inspected. What priority value do you tag with the inspection?

A. Low
B. Medium
C. High
D. Urgent

FAQ: We have a “Closed Bridge”, do we need to perform an inspection?

Yes

- All structures closed to highway traffic that remain in the HSI system as highway bridges shall continue to receive Routine inspections. The inspection shall include an evaluation of the closure system(s) and recorded under Assessment 9036 – Bridge Closure Systems. (See SIM 1.3.13.1)
- Closed bridge inspections shall be conducted every 12 months and shall be entered as a Routine Inspection in the HSI system.

FAQ: We have a “Closed Bridge”, do we need to perform a Special inspection, ie NSTM or UW Dive?

No

- Inspections such as NSTM, Complex, Underwater, etc. are no longer required for the closed structure unless those inspections are crucial to ascertaining the stability of the structure in the field. The Regional PM shall be consulted to determine if these inspection types are required for individual bridges. (See SIM 1.3.13.1)

12) New Changes for 2024 Overview

New Changes for 2024 Overview

- New Terms- Extent and Severity
- New Inspection Names and Types
- 2024 Field Guide
  - New/Moved Elements and Defects
  - New Verbage
  - Condition Rating Tables

SNBI COMPONENT CONDITION RATING GUIDANCE WORKSHEET
(TABLE 20 AND APPENDIX C)

must be part of load path

SNBI Table 20 Expanded			SEVERITY *				
			INHERENT	MINOR	MODERATE	MAJOR	STRENGTH & PERFORMANCE AFFECTED?
GOOD	9	Excellent	Isolated				
	8	Very Good	Some				
	7	Good		Some			
FAIR	6	Satisfactory		Widespread Or Isolated			
	5	Fair			Some		No
POOR	4	Poor**			Widespread Or Isolated	And	Yes
	3	Serious					Seriously
	2	Critical					Compromised
	N	Not Applicable					

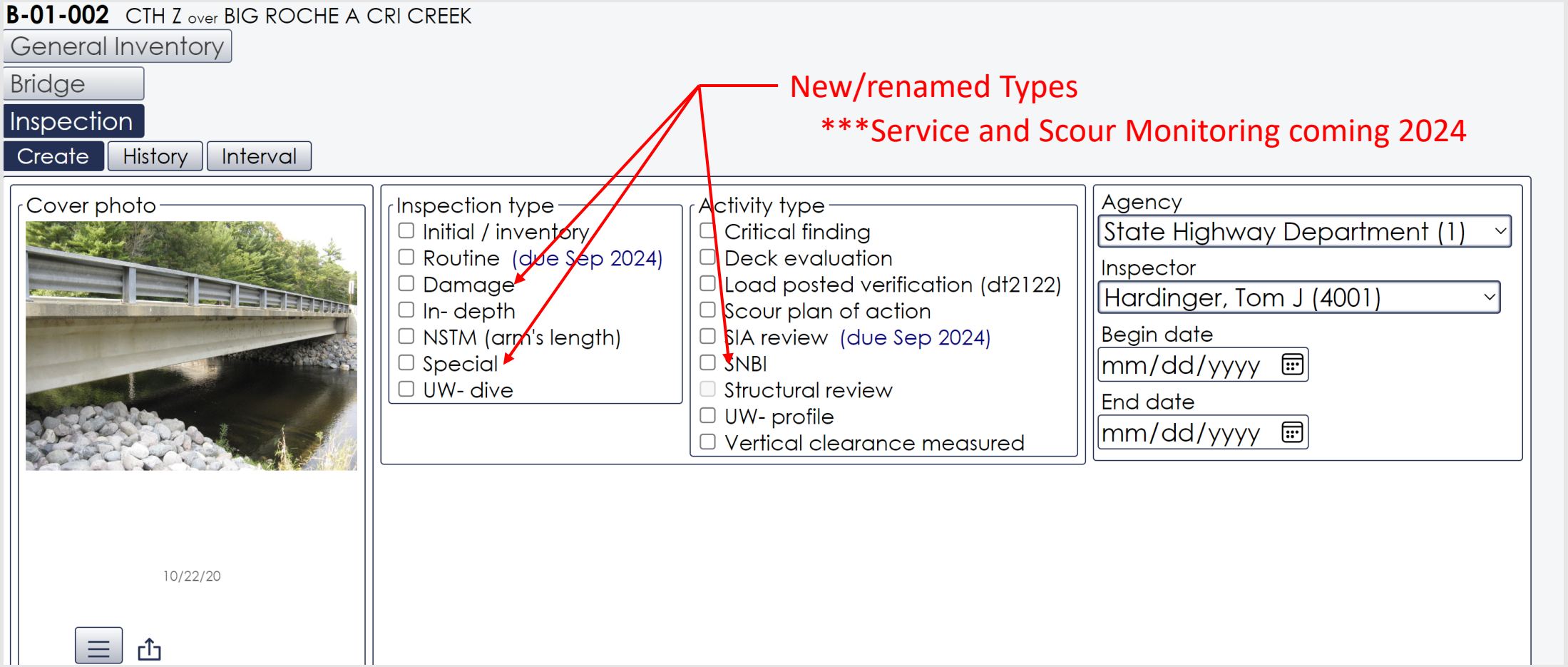
* Refer to SNBI Item Commentary and Appendix C for Rules and Clarification

** The Whole Description Must Read True to Report '4-Poor'

Extent and Severity Chart

From NHI 18 Hr Refresher Class, Handout provided

New/Renamed Types



2024 Field Manual Updates

Module 5

Review Field Manual Updates

Fickett Structural Solutions, Inc.

SNBI Update Training

February 2024

Need to print your own copy
See BOS Website

2024 Field Guide Updates

- Element
  - Cross Girder, 8102 and 8107
  - New Wearing Surfaces 8509, 8510 and 8512
- Defect
  - Damage
- Moved items to New element
  - Medians – 8207 and Sidewalks - 8209
- Verbiage
- Condition Rating Tables

Steel Cross Girder Element

(Chapter 3.A - pg. 20)

- Two new steel elements have been added
  - Element 8102: Steel Cross Girder – Closed Web/Box Girder
  - Element 8107: Steel Cross Girder – Open Girder/Beam

- A steel cross girder oriented perpendicular to the direction of the main girders ensuring the main girders act together and share loads
- The element must be located above the bearings to be a cross girder
- If the element is located below the bearings, it is a pier cap
- A cross girder is not a diaphragm or a floor beam

New Wearing Surface Elements

(Chapter 3.J - pg. 101 & Chapter 6.E - pg. 170)

- 8509 – Asphaltic Chip Seal
  - A spray applied asphalt binder embedded with aggregate chips
- 8510 – HMA (AC) Overlay with Sheet Membrane
  - A flexible hot mixed asphalt overlay placed on a waterproofing sheet membrane
- 8512 – HMA (AC) Overlay with Spray Membrane
  - A flexible hot mixed asphalt overlay placed on a spray applied waterproofing membrane

Defect 7000 -Damage
(Chapters 3.A, B, C, D, E, F)

- The damage defect has been added to steel, reinforced concrete, prestressed concrete, timber, masonry, and other materials

Defect	CS 1	CS 2	CS 3	CS 4
	Good	Fair	Poor	Severe
Damage (7000)	Not applicable.	The element has impact damage. The specific damage caused by the impact has been captured in CS 2 under the appropriate material defect entry.	The element has impact damage. The specific damage caused by the impact has been captured in CS 3 under the appropriate material defect entry.	The element has impact damage. The specific damage caused by the impact has been captured in CS 4 under the appropriate material defect entry. Structural review not required.

Defect 7000 - Damage

(Chapters 3.A, B, C, D, E, F)

- The occurrence of vehicle caused damage is quantified for each occurrence as a defect for primary element damage (EACH)
- The quantity will increase for each damage occurrence
- Include a narrative with location and short description of damage and date found or occurred (if known)
- Incidental vehicle impacts to railing that result in scrapes are not recorded
- The condition of the element damaged is recorded under the appropriate material defect
- A structural review is not triggered by the Damage Defect but by the appropriate material defect
- The condition state of the damage remains the same for the life of the element regardless of a completed repair. It is intended to capture the number and severity of each occurrence

Moved Median and Sidewalk
(Chapter 3.J - pg. 101 & Chapter 6.A - pg. 165)

- Medians and sidewalks have been removed from Chapter 4 – Bridge Assessments to Chapter 3.J – Wearing Surface
  - Element 8207 (Reinforced Concrete Median) / Previously 9007 – Median
    - Use for assessing the visible portions of the median
    - Measure the SF of the exposed top horizontal surface
    - Note any defects observed on the exposed top, bottom, and edge surfaces captured using the condition states for each SF of the element
    - A railing/parapet as part of the median with or without curb assessed as a railing element is not measured and assessed as Element 8207 Median

Moved Median and Sidewalk

(Chapter 3.J - pg. 101 & Chapter 6.A - pg. 165)

- Medians and sidewalks have been removed from Chapter 4 – Bridge Assessments to Chapter 3.J – Wearing Surface
  - Element 8209 (Reinforced Concrete Sidewalk) / Previously 9009 – Sidewalk
    - Use for assessing the visible portions of the sidewalks, must be raised and >18” wide
    - Measure the SF of the exposed top horizontal surface
    - Note any defects observed on the exposed top, bottom, and edge surfaces captured using the condition states for each SF of the element
      - For timber sidewalks, use timber defects identified in Chapter 3.D of the field manual

Moved Median and Sidewalk

(Chapter 3.J - pg. 101 & Chapter 6.A - pg. 165)

- Medians and sidewalks have been removed from Chapter 4 – Bridge Assessments to Chapter 3.J – Wearing Surface
  - Element 8209 (Reinforced Concrete Sidewalk) / Previously 9009 – Sidewalk
    - Sidewalks on approaches slabs are rated with the approach element
      - Element 321 R/I Concrete Structural Approach Slab **OR**;
      - Approach roadway assessments (Assessments 9322, 9323, or 9324)
    - Sidewalks over buried structures is not rated but condition notes placed with the assessment for the roadway over structure
      - Assessment 9325
    - Sidewalks or pedestrian paths that are not raised above the deck/slab are assessed as a wearing surface element

New Verbiage

- Concrete Cracking
- Concrete Scale/Abrasion/Wear
- Steel Protective Coatings
- Wearing Surface Cracking
- Wearing Surface Scale/Abrasion/Wear

Reinforced Concrete Cracking
(Chapter 3.B - pg. 29)

- Verbiage updates and reduced number of severity levels from 4 to 3
- Reinforced concrete cracking verbiage updates (updated from MBE 2019)
  - Hairline has been replaced with insignificant (<0.012”)
  - Narrow has been replaced with moderate (0.012” up to 0.05”)
  - Medium has been replaced with wide (>0.06”)
  - Crack Density and Spacing Added

Concrete Cracks	
Crack Widths	
Hairline	<0.012”
Narrow	0.012” up to 0.05”
Medium	0.05” up to 0.1”
Wide	>0.1”

Reinforced Concrete Cracks			
Crack Widths		Crack Density or Spacing	
Insignificant	<0.012"	Minor	>3 feet
Moderate	0.012" up to 0.05"	Moderate	1 to 3 feet
Wide	>0.05"	Heavy	<1 foot

Prestressed Concrete Cracking

(Chapter 3.C - pg. 43)

- Verbiage updates and reduced number of severity levels from 4 to 3
- Prestressed concrete cracking verbiage updates
  - Hairline has been replaced with insignificant (<0.004”)
  - Narrow has been replaced with moderate (0.004” up to 0.009”)
  - Medium has been replaced with wide (>0.01”)
  - Crack Density and Spacing Added

Concrete Cracks	
	Prestressed
Hairline	<.004”
Narrow	.004” to .009”
Medium	.01” to .03”
Wide	>.03”

Prestressed Concrete Cracks			
Crack Widths		Crack Density or Spacing	
Insignificant	<.004”	Minor	>3 feet
Moderate	.004” to .009”	Moderate	1 to 3 feet
Wide	>.009”	Heavy	<1 foot

Concrete Scale/Abrasion/Wear

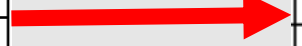
(Chapter 3.B - pg. 29 & Chapter 3.C - pg. 43)

- Verbiage updates and reduced number of severity levels from 4 to 3
- Concrete scale/abrasion/wear verbiage updates to definition
  - Light scale is now defined as “aggregate visible”, used to be “< ¼” deep”
  - Moderate scale is now defined as “aggregate exposed but secure”, used to be “¼” up to ½” deep”
  - Heavy scale is now defined as “loss of aggregate”, used to be “½” up to 1” deep”
  - Severe scale has been deleted from the list

Concrete Scale/Abrasion/Wear

(Chapter 3.B - pg. 29 & Chapter 3.C - pg. 43)

Concrete Scale/Abrasion/Wear	
Light Scale	<¼" Deep
Medium Scale	¼" up to ½" Deep
Heavy Scale	½" to 1" Deep
Severe Scale	Loss of aggregate



Concrete Scale/Abrasion/Wear	
Light Scale	Aggregate Visible
Moderate Scale	Aggregate exposed but secure
Heavy Scale	Loss of aggregate

Steel Protective Coating Verbiage Update
(Chapter 3.I - pg. 97)

- Old
  - Steel Protective Coatings will be calculated for all steel superstructure elements, as well as primary steel substructure elements (pier caps, piles, columns, towers, and abutments)
- New
  - Steel Protective Coating areas will be calculated separately for each steel element
  - Total area of coating will be calculated and assessed

Wearing Surface Cracking
(Chapter 3.J - pg. 101)

- Verbiage updates and reduced number of severity levels from 4 to 3
- Wearing surface cracking verbiage updates
  - Hairline has been replaced with insignificant (<0.012”)
  - Narrow has been replaced with moderate (0.012” up to 0.05”)
  - Medium has been replaced with wide (>0.05”)
- Wearing surface crack density verbiage updates
  - Extensive has been replaced with heavy

Wearing Surface Cracking

(Chapter 3.J - pg. 101)

Concrete Cracks			
Crack Widths		Crack Density or Spacing	
Hairline	<0.012”	Minor	>3 feet
Narrow	0.012” up to 0.05”	Moderate	1 to 3 feet
Medium	0.05” up to 0.1”	Extensive	<1 foot
Wide	>0.1”		

Concrete Cracks			
Crack Widths		Crack Density or Spacing	
Insignificant	<0.012"	Minor	>3 feet
Moderate	0.012" up to 0.05"	Moderate	1 to 3 feet
Wide	>0.05"	Heavy	<1 foot

Wearing Surface Scale/Abrasion/Wear

(Chapter 3.J - pg. 101)

- Verbiage updates and reduced number of severity levels from 4 to 3
- Wearing surface scale/abrasion/wear verbiage updates to definition
  - Light scale is now defined as “aggregate visible”, used to be “< ¼” deep”
  - Moderate scale is now defined as “aggregate exposed but secure”, used to be “¼” up to ½” deep”
  - Heavy scale is now defined as “loss of aggregate”, used to be “½” up to 1” deep”
  - Severe scale has been deleted from the list

Wearing Surface Scale/Abrasion/Wear

(Chapter 3.J - pg. 101)

Concrete Scale/Abrasion/Wear	
Light Scale	<¼" Deep
Medium Scale	¼" up to ½" Deep
Heavy Scale	½" to 1" Deep
Severe Scale	Loss of aggregate

Concrete Scale/Abrasion/Wear	
Light Scale	Aggregate Visible
Moderate Scale	Aggregate exposed but secure
Heavy Scale	Loss of aggregate

Condition Rating Tables
(Chapter 9 - pg. 216)

- Condition rating table for Deck (B.C.01), Superstructure (B.C.02), and Substructure (B.C.04) have been updated to match SNBI verbiage
- The NBI culvert condition rating table has been deleted
  - Table 20 will now be used. Same as Deck, Superstructure, and Substructure
- This updated table will also be used for Bridge Railing (B.C.05), Bridge Railing Transition (B.C.06), Bridge Bearings (B,C.07), NSTM (B.C.14), and Underwater (B.C.15)

Condition Rating Tables

(Chapter 9 - pg. 216)

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	Immient Failure	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.

New Condition Rating Tables

(Chapter 9 - pg. 222, 223, 224, 225)

- Condition tables have been added for:
  - Bridge Joints (B.C.08)
  - Channel (B.C.09)
  - Channel Protection (B.C.10)
  - Scour (B.C.11)

Bridge Joint (B.C.08) Condition Rating Table

(Chapter 9 - pg. 222)

Code	Condition	Description
N	Not Applicable	Bridge does not have deck joints.
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.
4	Poor	Widespread moderate or isolated major defects.
3	Serious	Some major defects.
2	Critical	Widespread major defects.
1	Immient Failure	Joints have failed and are ineffective.
0	Failed	Joints have failed and present a safety hazard.

Channel (B.C.09) Condition Rating Table

(Chapter 9 - pg. 223)

Code	Condition	Description
N	Not Applicable	Bridge does not cross over water.
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. Performance of the channel protection is not affected.
4	Poor	Widespread moderate or isolated major defects; performance of channel protection is affected.
3	Serious	Major defects; performance of channel protection is seriously affected. Condition typically necessitates more frequent monitoring or corrective actions.
2	Critical	Major defects; channel protection is severely compromised. Condition typically necessitates more frequent monitoring or corrective actions.
1	Immient Failure	Channel protection has failed, but corrective action could restore it to working condition.
0	Failed	Channel protection is beyond repair and must be replaced.

Channel Protection (B.C.10) Condition Rating Table

(Chapter 9 - pg. 224)

Code	Condition	Description
N	Not Applicable	Bridge does not cross over water or channel protection devices do not exist.
9	Excellent	No defects.
8	Very Good	Inherent defects only.
7	Good	Some minor defects.
6	Satisfactory	Widespread minor or isolated moderate defects.
5	Fair	Moderate defects; bridge and approach roadway are not threatened.
4	Poor	Widespread moderate or isolated major defects.bridge and/or approach roadway is threatened.
3	Serious	Major defects; bridge or approach roadway is seriously threatened. Condition typoically necessitates more frequent monitoring, load restrictions, and/or corrective actions.
2	Critical	Major defects. Bridge or approach roadway is severely threatened. Condition typically necessitates frequent monitoring, significant load restrictions, and/or corrective actions in order to keep the bridge open.
1	Immient Failure	Bridge is closed to traffic due to channel condition. Channel rehabilitation may return the bridge to service.
0	Failed	Bridge is closed due to channel condition, and is beyond corrective action. Bridge location or design can no longer accommodate the channel, and bridge replacement is needed to restore service.

Scour (B.C.11) Condition Rating Table

(Chapter 9 - pg. 225)

Code	Condition Description
N	Bridge does not cross over water.
9	No scour.
8	Insignificant scour.
7	Some minor scour.
6	Widespread minor or isolated moderate scour.
5	Moderate scour; strength and stability of the bridge are not affected.
4	Widespread moderate or isolated major scour; strength and/or stability of the bridge is affected.
3	Major scour; strength and/or stability of the bridge is seriously affected. Condition typically necessitates more frequent monitoring, load restrictions, and/or corrective actions.
2	Major scour; strength and/or stability of the bridge is severely compromised. Condition typically necessitates frequent monitoring, significant load restrictions, and/or corrective actions to keep the bridge open.
1	Bridge is closed to traffic due to scour condition. Channel rehabilitation may return the bridge to service.
0	Bridge is closed due to scour condition, and is beyond corrective action. Bridge replacement is needed to restore service.

Approach Roadway Alignment
(Chapter 9 - pg. 226)

- The NBI ratings of 8, 6, and 3 have been replaced with SNBI ratings of good (G), fair (F), and poor (P)
- Expanded the definition in each description for good, fair, and poor

(B.AP.01) Approach Roadway Alignment Appraisal	
SNBI Rating	**Description**
G	Good – No speed reduction required. Operating speed is no different at the bridge than the rest of the roadway segment that crosses the bridge.
F	Fair – Horizontal or Vertical curvature requires a very minor speed reduction. Operating speed is noticeably different at the bridge than the rest of the roadway segment that crosses the bridge.
P	Poor – Horizontal or Vertical curvature requires a substantial reduction in vehicle operating speed. Operating speed is substantially different at the bridge than the rest of the roadway segment that crosses the bridge.

Overtopping Likelihood
(Chapter 9 - pg. 227)

- NBI Waterway Adequacy has been replaced with SNBI Overtopping Likelihood (B.AP.02)
- The 0-9 rating table for Waterway Adequacy has been replaced with a 0-6 table for Overtopping Likelihood

Overtopping Likelihood
(Chapter 9 - pg. 227)

Principal Arterials, Interstates, Freeways, or Expressways

Other Principal and Minor Arterials and Major Collectors

Minor Collectors, Locals

Code	Description
0	Never.
1	Remote – once every 100 years or less frequently
2	Very low – once every 51 to 99 years
3	Low – once every 26 to 50 year
4	Moderate – once every 11 to 25 years
5	High – once every 3 to 10 years
6	Very High – once every 2 years or more frequently

2	2	2	Occasional or frequent overtopping of bridge deck and roadway approaches with severe traffic delays.
0	0	0	Bridge Closed.

Questions

- Learning Outcome
  - Review the big updates in WisDOT Field Manual

13) Miscl.

Misc.

- WisDOT Equipment
- Trans 212/213 Update
- Training

WisDOT Equipment

Reach-All units

- 3 units
  - A52
  - A62T
  - A62
- Contact: Region PM
  - Early in year. Schedule is set for 2024.

WisDOT Equipment

Drones

- Total Number
  - Autel Evo II Pro 6k (8)
  - Autel Evo II 640T (thermal) (1)
  - Skydio S2+ (4)
  - Chasing M2 underwater drone (1)
- Pilots
  - 23 (licensed FAA 107
  - 10 Active pilots
- Contact Steve Doocy or Regional PM

WisDOT Equipment

Resistograph

Testing Timber

Contact Jason Lahm

WisDOT Equipment

Emily Boat

- Sonar Emily Specification:
- Speed: 18 mph
- Size: 14 x 14 x 50 inches
- Motor; 2.4 KW
- Run Time w/ Dual Battery Pack: 3 – 6 HRS at 2 MPH

- Hummingbird Helix 12:
  - Side scan and downward imaging transducer mounted above KEEL allows for driving over obstacles.
  - Auto Chart Function displays realtime mosaic of sonar imagery.
  - Waypoint Autonomous Control, downward imaging, and 2 dimensional imaging all on one screen.
  - Multi-screen functions with side scan imaging, downward imaging, and 2 dimensional imaging.

- Contact: Anthony Stakston

WisDOT Equipment

Pipe Trekker

Pipe Trekker Specs

- 1080p, 10 optical zoom, Full Point- Tilt-Zoom (PTZ) Camera
- 7” LCD Weatherproof controller
- Waterproof trekker up to 154’ in depth
- Motorized Lift Arm
- Modular Wheel Kits (4 different wheel types)
- LED Flood lights
- Up to 8 hours Battery Life
- Magnetically Couple Drives
- Weight is 44 lbs
- Operating temp is 23 degrees to 104 degrees F
- Tether length of 656 feet

- Contact: Jason Lahm

Misc: Trans 212 and 213 Update

- Currently working on revisions
  - Trans 212 (Bridge standards for inspection and Inventory)
  - Trans 213 (Funding eligibility for local bridges)
- Needs Legislature approval. Lengthy process.
- See Jan 2024 Tech Bulletin
- Possible revisions by end of year.

Miscl: Training Update

- NHI 1 week and 2 week held (Jan and March respectfully)
- NHI NSTM – April 2024

- No more scheduled…….

- Let us know if there is needs…..

14) Small Structure Program Update

Small Structure Update

See BOS Website for Information and Directions

WI Biennial State Budget & Statute

- **Budget Language (2023-2025)**

  Provides $12,500,000 SEG to JCF's supplemental appropriation in FY24 for assessment of local bridges and culverts and create a biennial DOT SEG appropriation that could receive the funds. Directs the Department to develop a program for counties to assess local bridges and culverts that are less than 20 feet, but greater than six feet in length.

- **State Statute 85.64**

  The department shall administer a program for counties to inventory and assess the condition of local bridges and culverts that are 20 feet or less in length but greater than 6 feet in length.

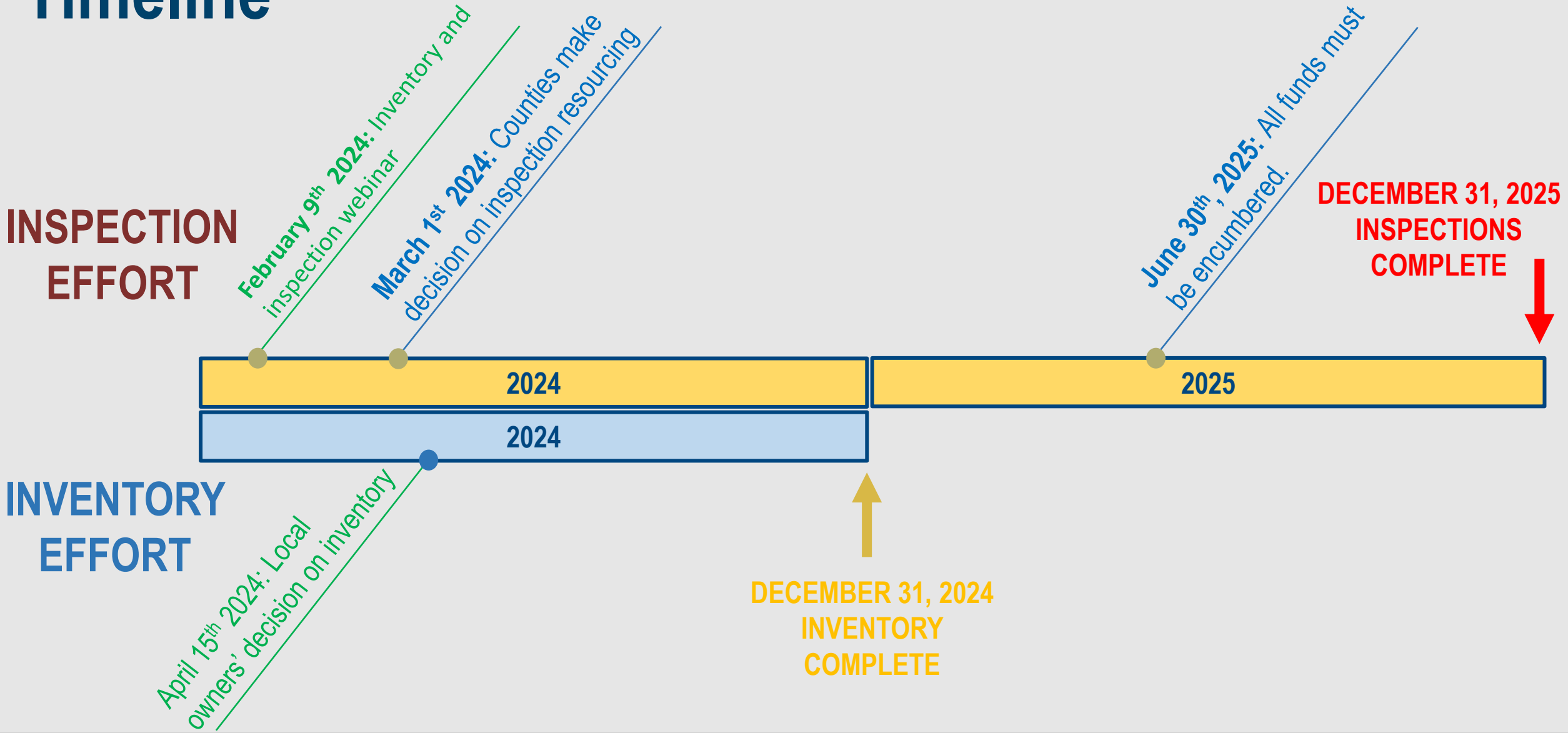
- **The program includes:**
  - *Inventory*
  - *Assessment (Inspection)*
  - *Load Rating, as deemed necessary & funding allows*

Local Structures 6 to 20 ft

Definition

- Defined following guidance in WisDOT's Structure Inspection Manual (SIM 4.6.2) ←link
  - Publicly owned highway structures having openings > 6 feet and ≤ 20 feet, measured along the centerline of the roadway.
  - Includes multiple barrels/boxes or pipe culverts where the total distance from the inside edges of the outermost walls is > 6 feet and ≤ 20 feet (measured along the centerline of the roadway) and the distance between openings is less than 1/2 of the smaller opening.

Timeline


INSPECTION EFFORT
February 9th 2024: Inventory and inspection webinar
March 1st 2024: Counties make decision on inspection resourcing
June 30th, 2025: All funds must be encumbered.
DECEMBER 31, 2025 INSPECTIONS COMPLETE
2024
2025
2024
INVENTORY EFFORT
April 15th 2024: Local owners' decision on inventory
DECEMBER 31, 2024 INVENTORY COMPLETE

Local Structures 6 to 20 ft

Highway Structures Information System (HSIS)

- Local small structures 6 to 20 ft will be assigned “V” numbers
- Inventory will need to be uploaded in HSI in order for V structure number to be assigned
- Program also includes existing C structures
  - Complete inspections on existing C structures
- Enter inventory and inspections using HSIS
- Inspection reports will be laid out the same as the current bridge inspection reports

Inventory Items

An inventory must be completed to identity the number of local small structures that will require an inspection and condition assessment.

- Name of the person completing the inventory
- Date of the inventory
- Structure Owner (county, city, village, township)
- County
- Municipality (city, town, village)
- Feature Over/Road name
- Number of traffic lanes
- Feature under (waterway, pedestrian path, land/cattle pass, other)
- Name of waterway (if known)
- Latitude/Longitude
- Location Description (distance from nearest public road intersection)
- Structure Length (NBIS Bridge Length)
- Structure Type
- Structure Material
- Weight Limit (if posted)
- Critical Finding - intended to ID any critical issues noticed that should be brought to the immediate attention of the owner.
- Comments
- Photos

Inspection Items

Wisconsin Certified Bridge Inspector to be the team leader for Inspections

- Name of the person completing the inspection
- Date of the inspection
- Width
- Length (total span)
- Structure Roadway Width
- Lane Count
- Traffic Pattern
- Opening Height
- Opening Width
- Barrel/cell/pipe length
- Configuration type of each span
- Material of each span
- If bridge like structure:
  - Measurements and Sketches of span
    - Girder size and spacing
    - Deck or slab thickness
- Overburden depth
- Deck/Wearing surface/material
- NBI Condition Rating (0 to 9)
  - Deck
  - Superstructure
  - Substructure
  - Culvert
- Channel/Waterway observations
- Inspection notes
- Photos – profile/side and roadway views, concerns

Inspection Form – HSIS Form

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for

B-52-084 (BENSON HOLLOW)

STH 56 over UPPER CAMP CREEK

Type	Prior	Team Leader	Frequency (mos)	Due	Performed
Routine	03-08-22	Fisher, Craig (5027)	24	03-31-24	
Interim	09-29-20	Bohnsack, Dave (5015)	0		
Deck Evaluation	06-28-22	Carmichael, Adam (9714)	60	06-30-27	
SIA Review	03-17-20	Olson, Michael A (5024)	48	03-31-24	
Uw-Profile	03-08-16	Bohnsack, Dave (5015)		N/A	

Start Coordinates		End Coordinates (optional)	
Latitude	43°29'43.09"N	Latitude	
Longitude	90°34'33.13"W	Longitude	

Owner	STATE HIGHWAY DEPT	Maintainer	STATE HIGHWAY DEPT

Team members

Time Log	Hours	Minutes	
Weather	Temperature (f)	Condition	

	Name	Number	Signature	Signature Date
Inspector				

inspection as of 07-Feb-2024

BRIDGE INSPECTION REPORT
Wisconsin Department of Transportation
DT2007 2003 s.84.17 Wis. Stats.

page 2

Identification & Location

Feature On: STH 56	Section Town Range: S23 T12N R02W	Structure Number: B-52-084
Feature Under: UPPER CAMP CREEK	County: RICHLAND	
Location: 1.5M E JCT CTH MM TO S	Municipality: FOREST	Structure Name: BENSON HOLLOW

Geometry

measurements in feet, except where noted

Approach Roadway Width: 36	Bridge Roadway Width: 36.0	Total Length: 44.3
Approach Pavement Width: 24	Deck Width: 37.8	Deck Area (sq ft): 1675

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	1200	2021	two way traffic

Capacity / Load Rating

Inventory rating: HS22	Overburden depth (in): 0.0	Last rating date: 01-20-87	Controlling: SLAB Positive Moment
Operating rating: HS37	Deck surface material: Concrete		Control location: 0.5 SPAN 1
Posting:	Emergency Vehicle Weight Limit (tons):		
Re-rate for capacity (Y/N):	Re-rate notes:		

Hydraulic

Scour Critical Code(113): Stable- above top footing (8)	Q100 (ft3/sec): 1100	
High water elevation (ft): 932.2	Velocity (ft/sec): 12.0	Sufficiency #: 82.8

Classification

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONCRETE	Slab - Solid - Flat		42.0	Y

Expansion joint(s)

Temperature: File: 70 New:

Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Special Components

Component	Year	Work Performed	Note
CONC. PROTECTIVE TREATMENT - TK - 590 - 1 MS	2019	Miscellaneous Preventative Maintenance	APPLIED IN 2014 MAINTENANCE PROJECT
DECK CRACK SEALER - TK - 9030	2019	Miscellaneous Preventative Maintenance	APPLIED IN 2014 MAINTENANCE PROJECT
DECK - DRIP EDGE REPAIR	2015	Repair Deck	Installed.

Construction History

Year	Work Performed	FOS Id
2020	Repair Rail	5730-00-60
2020	Repair Superstructure	5730-00-60
2019	Miscellaneous Preventative Maintenance	
1987	New Structure	5731-02-71
2015	Repair Deck	

inspection as of 07-Feb-2024

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Wisconsin Department of Transportation
DT2007 2003 s.84.17 Wis. Stats.

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NBI Ratings

	File	New
Deck	5	
Superstructure	5	
Substructure	8	
Culvert	N	
Channel	7	
Waterway	8	

Structure Specific Notes

Located near Benson Hollow Drive.

Aggregation under the bridge from past flood events.

Inspection Specific Notes

Inspector Site-Specific Safety Considerations

inspection as of 07-Feb-2024

WISCONSIN DEPARTMENT OF TRANSPORTATION

FAQ: What if Small Structure Program discovers a Bridge?

- Coordinate with Regional PM to inventory and inspect structure
  - Local needs to provide inventory and inspection data
  - Region PM will assign Structure Number
  - Local enters into HSIS
  - Becomes part of local inventory

Questions?

Contact information:
David Bohnsack, PE
BOS Maintenance Section Chief
david.bohnsack@dot.wi.gov
(608) 785-9781

15) Wrap Up

Covered a lot of subject matter today. Stay on top of changes.

Print new inspection Field Manual

Review new Policy's

Regional PM’s are your main point of Contacts

2024 County QA’s…coming to a county near you

Safety Safety Safety!!!!

Final Q and A

Parting Thoughts

Reiterate Opening Points to Remember:

- Need to determine condition at time of inspection or as a follow up.
- Just because a deteriorated bridge is OK today doesn't mean it will be OK 5 years from now. We need to be thorough in our inspections.
- Don't take deterioration for granted
- If you need a second opinion, ask.
- If you need someone to run some numbers to verify there's no issue, ask.
- And if they see something so disturbing they feel there's an immediate risk, act. Close a lane, close a bridge. Safety first.

Parting Thoughts

2024 inspection season has started

Remember your QC Program, Update if necessary

Plan your work (staff, schedule)

Ask for assistance if needed

Stay abreast of inspection program upcoming changes due to new code revisions

Be Safe!!!

That's All

Thank You

Fill out Evaluation