

# Local Structures 6 – 20ft Program

**Josh Dietsche**

Director – WisDOT Bureau of Structures

**Dave Bohnsack**

Chief Maintenance Engineer – WisDOT Bureau of Structures

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# Kick-Off Meeting Agenda

- Inspection Phase Overview
- BOS Website
- Inventory Information
- HSIS
- Inspection
- Invoicing
- Question and Answer

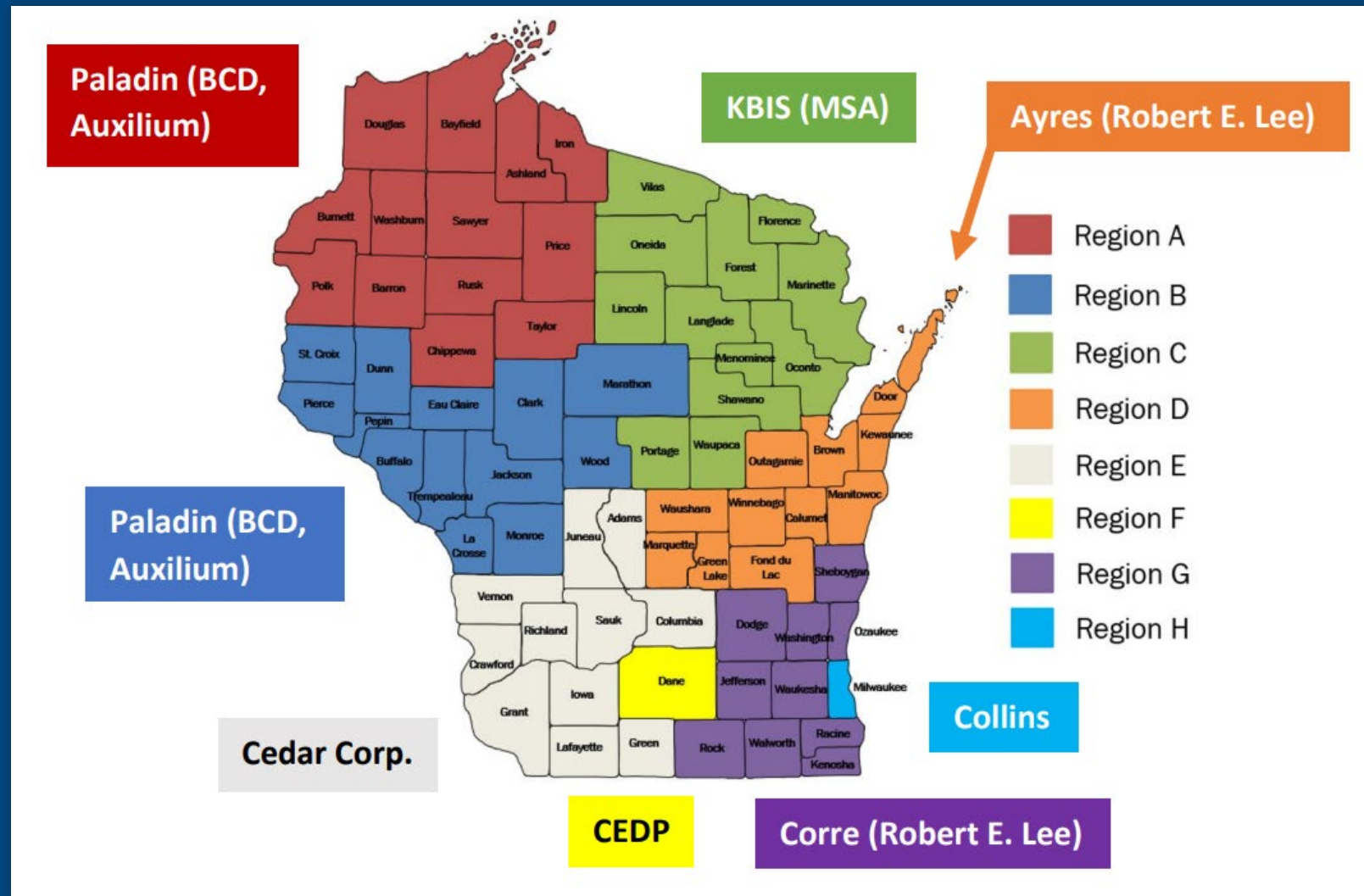


# Inspection Phase Summary

- WCA contract/purchase order with WisDOT
  - **Consultants under contract with WCA for cities, villages, and towns**  
(Counties responsible for inspections on their structures)
- Inspections completed by certified bridge inspector
- Inspection findings/data reported in HSIS
- Consultant sends invoices to WisDOT & WCA
  - **\$350 per structure inspected and data entered**
- WisDOT reviews invoices and pays WCA
- WCA pays consultants

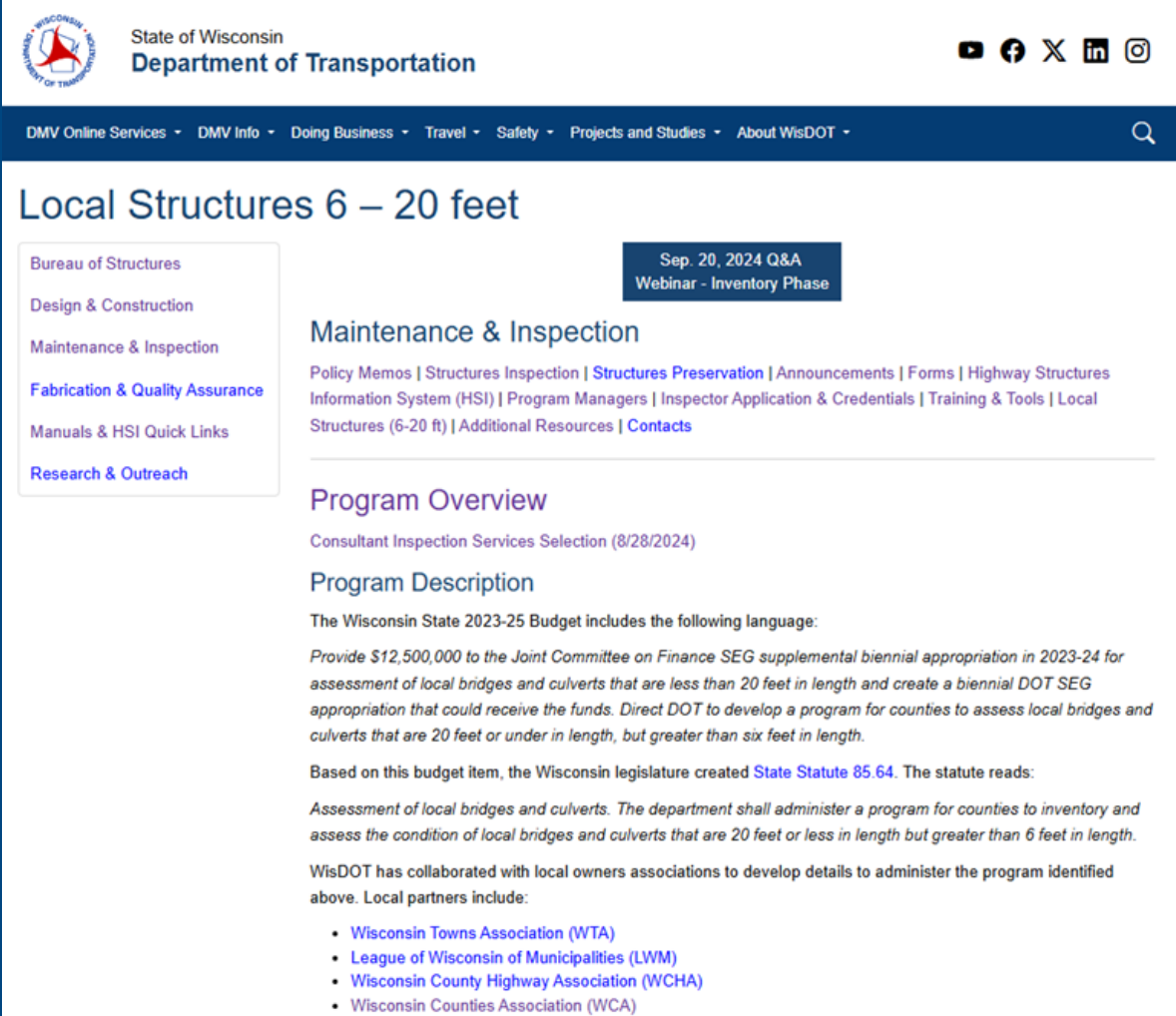


# Inspection Services Selections



# BOS Website

- [www.WisconsinDOT.gov](http://www.WisconsinDOT.gov)
  - Search Local Structures 6-20 ft
  - Top search return



The screenshot displays the Wisconsin Department of Transportation (WisDOT) website. The header includes the WisDOT logo, the text 'State of Wisconsin Department of Transportation', and social media icons for YouTube, Facebook, X, LinkedIn, and Instagram. A navigation bar below the header lists various services: DMV Online Services, DMV Info, Doing Business, Travel, Safety, Projects and Studies, and About WisDOT. A search icon is also present.

## Local Structures 6 – 20 feet

On the left side, there is a sidebar menu with the following links: Bureau of Structures, Design & Construction, Maintenance & Inspection, Fabrication & Quality Assurance, Manuals & HSI Quick Links, and Research & Outreach.

On the right side, there is a dark blue button that reads 'Sep. 20, 2024 Q&A Webinar - Inventory Phase'.

### Maintenance & Inspection

Below this heading, there is a list of links: Policy Memos | Structures Inspection | Structures Preservation | Announcements | Forms | Highway Structures Information System (HSI) | Program Managers | Inspector Application & Credentials | Training & Tools | Local Structures (6-20 ft) | Additional Resources | [Contacts](#).

### Program Overview

Below this heading, there is a link: Consultant Inspection Services Selection (8/28/2024).

### Program Description

The Wisconsin State 2023-25 Budget includes the following language:

*Provide \$12,500,000 to the Joint Committee on Finance SEG supplemental biennial appropriation in 2023-24 for assessment of local bridges and culverts that are less than 20 feet in length and create a biennial DOT SEG appropriation that could receive the funds. Direct DOT to develop a program for counties to assess local bridges and culverts that are 20 feet or under in length, but greater than six feet in length.*

Based on this budget item, the Wisconsin legislature created [State Statute 85.64](#). The statute reads:

*Assessment of local bridges and culverts. 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.*

WisDOT has collaborated with local owners associations to develop details to administer the program identified above. Local partners include:

- Wisconsin Towns Association (WTA)
- League of Wisconsin of Municipalities (LWM)
- Wisconsin County Highway Association (WCHA)
- Wisconsin Counties Association (WCA)



# Local “C” Structures

- All known local “C” structures changed to “V”
- Same number used - only changed “C” to “V”.
- Many may have a plaque indicating the C number.
- Some C structures may not have been inventoried.
- Not all original C structures were in HSIS inventory.
- Inspections required on all  $>6$  to  $\geq 20'$  local structures

# “P” changed to “V”

- Length measurement verification as part of SNBI resulted in a small number of P structures found to be less than 20' – these have been renumbered with a V.
- These will show up in a local's inventory.
- All have recent inspections and will not need to be reinspected as part of the initial LSS program.



# HSIS

## (Highway Structures Information System)

HSI - Home

restart go structure id or search criteria

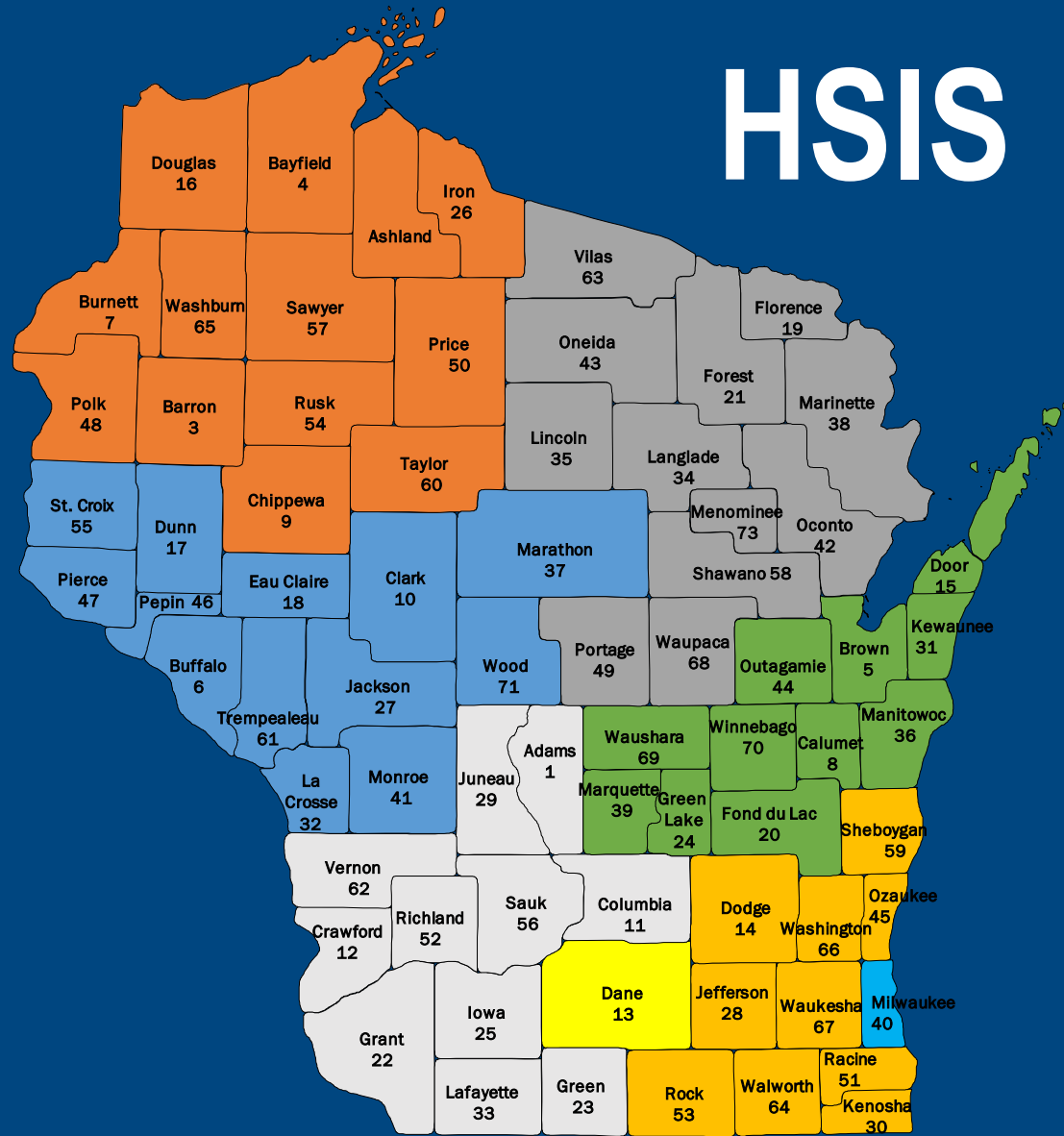
34,650 structures

sid	on	under	custodian	built
<input type="checkbox"/> B-01-002	CTH Z	BIG ROCHE A CRI CREEK	COUNTY	1975
<input type="checkbox"/> B-01-003	13TH LANE	BIG ROCHE A CRI CREEK	TOWN	1981
<input type="checkbox"/> B-01-004	CZECH RD	ROCHE A CRI CREEK	TOWN	1984
<input type="checkbox"/> B-01-005	13TH DR	CARTER CREEK	TOWN	1984
<input type="checkbox"/> B-01-006	BROWNDEER LANE	BIG ROCHE A CRI CREEK	TOWN	1984
<input type="checkbox"/> B-01-007	8TH DRIVE	FORDHAM CREEK	TOWN	1986
<input type="checkbox"/> B-01-008	8TH DRIVE	BINGHAM CREEK	TOWN	1986
<input type="checkbox"/> B-01-009	8TH AVE	LITTLE ROCHE A CRI CREEK	TOWN	1988
<input type="checkbox"/> B-01-010	COTTONVILLE AVE	CARTER CREEK	TOWN	1990
<input type="checkbox"/> B-01-012	15TH AVE	WHITE CREEK	TOWN	1988
<input type="checkbox"/> B-01-013	STH 21	WISCONSIN RIVER	STATE HIGHWAY DEPT	1959
<input type="checkbox"/> B-01-014 <sup>1a</sup>	6TH AVE	BUCKNER CREEK	TOWN	1989
<input type="checkbox"/> B-01-015	18TH AVE	BIG ROCHE A CRI CREEK	TOWN	1991
<input type="checkbox"/> B-01-016	20TH AVENUE	BIG ROCHE-A-CRI CREEK	TOWN	1989
<input type="checkbox"/> B-01-017	STH 13-MAIN ST	LITTLE ROCHE A CRI CREEK	STATE HIGHWAY DEPT	1993
<input type="checkbox"/> B-01-018 <sup>1a</sup>	Z	KLEIN CREEK	COUNTY	1991
<input type="checkbox"/> B-01-019	ELK AVE	UNION PACIFIC RAILROAD	RAILROAD	1997
<input type="checkbox"/> B-01-020 <sup>1</sup>	RIVER ROAD	COLDWATER CANYON	TOWN	1997
<input type="checkbox"/> B-01-021	C	BIG ROCHE A CRI CREEK	COUNTY	1999
<input type="checkbox"/> B-01-022	11TH AVE	BINGHAM CREEK	TOWN	2001
<input type="checkbox"/> B-01-023	CTH H	WHITE CREEK	COUNTY	2003
<input type="checkbox"/> B-01-025 <sup>1a</sup>	CTH W	BIG ROCHE A CRI CREEK	COUNTY	2005
<input type="checkbox"/> B-01-027	CTH Z	Duck Creek	COUNTY	
<input type="checkbox"/> B-01-028	O	BR BIG ROCHE A CRI CR	COUNTY	2006
<input type="checkbox"/> B-01-029	O	BIG ROCHE A CRI CR	COUNTY	2006
<input type="checkbox"/> B-01-030	EDGEWOOD DR	BR WISCONSIN RIVER	TOWN	2009
<input type="checkbox"/> B-01-031	CTH G	No name creek	COUNTY	2013
<input type="checkbox"/> B-01-032	STH 21	WISCONSIN R BACKWATER	STATE HIGHWAY DEPT	2010
<input type="checkbox"/> B-01-033	STH 13	BIG ROCHE A CRI LAKE	STATE HIGHWAY DEPT	2012
<input type="checkbox"/> B-01-034	STH 21	CARTER CREEK	STATE HIGHWAY DEPT	2013
<input type="checkbox"/> B-01-036	STH 13	CARTER CREEK	STATE HIGHWAY DEPT	1937
<input type="checkbox"/> B-01-037	CTH J	LITTLE ROCHE A CRI CREEK	COUNTY	





# HSIS



- Region A
- Region B
- Region C
- Region D
- Region E
- Region F
- Region G
- Region H

# HSIS

Use the **Assist** function to develop lists of structures

- Drop down arrow in top middle of HSIS home screen

HSI - Home

restart go structure id or search criteria

SANDBOX FOLDER

717 rows

Bridge Id	Feature on	Feature under	County	Municipality	Owner	Type	Previous	Frequency	Due by	Days Left	Status
<input type="checkbox"/> B-52-269	STH 56/80	FANCY CREEK	RICHLAND	ROCKBRIDGE	STATE HIGHWAY DEPT	ROUTINE	03/04/20	48	03/04/24	24	
<input type="checkbox"/> B-52-052	STH 131	KICKAPOO RIVER	RICHLAND	FOREST	STATE HIGHWAY DEPT	ROUTINE	03/08/22	24	03/08/24	28	
<input type="checkbox"/> B-52-849	STH 131	CHURCH CREEK	RICHLAND	FOREST	STATE HIGHWAY DEPT	ROUTINE	03/08/22	24	03/08/24	28	
<input type="checkbox"/> B-52-084	STH 56	UPPER CAMP CREEK	RICHLAND	FOREST	STATE HIGHWAY DEPT	ROUTINE	03/08/22	24	03/08/24	28	
<input type="checkbox"/> B-52-050	STH 56	CAMP CREEK	RICHLAND	FOREST	STATE HIGHWAY DEPT	ROUTINE	03/08/22	24	03/08/24	28	
<input type="checkbox"/> B-52-035	STH 56	FANCY CREEK	RICHLAND	MARSHALL	STATE HIGHWAY DEPT	ROUTINE	03/08/22	24	03/08/24	28	
<input type="checkbox"/> B-52-268	STH 80	PINE RIVER	RICHLAND	ROCKBRIDGE	STATE HIGHWAY DEPT	ROUTINE	03/09/20	48	03/09/24	29	
<input type="checkbox"/> B-52-270	STH 80	PINE RIVER	RICHLAND	ROCKBRIDGE	STATE HIGHWAY DEPT	ROUTINE	03/09/20	48	03/09/24	29	
<input type="checkbox"/> B-52-250	STH 56	BR. OF FANCY CREEK	RICHLAND	MARSHALL	STATE HIGHWAY DEPT	ROUTINE	03/10/22	24	03/10/24	30	
<input type="checkbox"/> B-52-822	USH 14	W BR MILL CREEK	RICHLAND	SYLVAN	STATE HIGHWAY DEPT	ROUTINE	03/15/22	24	03/15/24	35	
<input type="checkbox"/> B-52-087	USH 14	RYAN HOLLOW CREEK	RICHLAND	AKAN	STATE HIGHWAY DEPT	ROUTINE	03/15/22	24	03/15/24	35	
<input type="checkbox"/> B-52-823	USH 14	W BR MILL CREEK	RICHLAND	SYLVAN	STATE HIGHWAY DEPT	ROUTINE	03/15/22	24	03/15/24	35	
<input type="checkbox"/> B-52-139	USH 14	MILL CREEK	RICHLAND	DAYTON	STATE HIGHWAY DEPT	ROUTINE	03/16/22	24	03/16/24	36	
<input type="checkbox"/> B-52-248	STH 56	TRIB TO CAMP CREEK	RICHLAND	FOREST	STATE HIGHWAY DEPT	ROUTINE	03/17/20	48	03/17/24	37	
<input type="checkbox"/> B-52-249	STH 56	TRIB TO CAMP CREEK	RICHLAND	FOREST	STATE HIGHWAY DEPT	ROUTINE	03/17/20	48	03/17/24	37	

# HSIS

## Assist function - Select

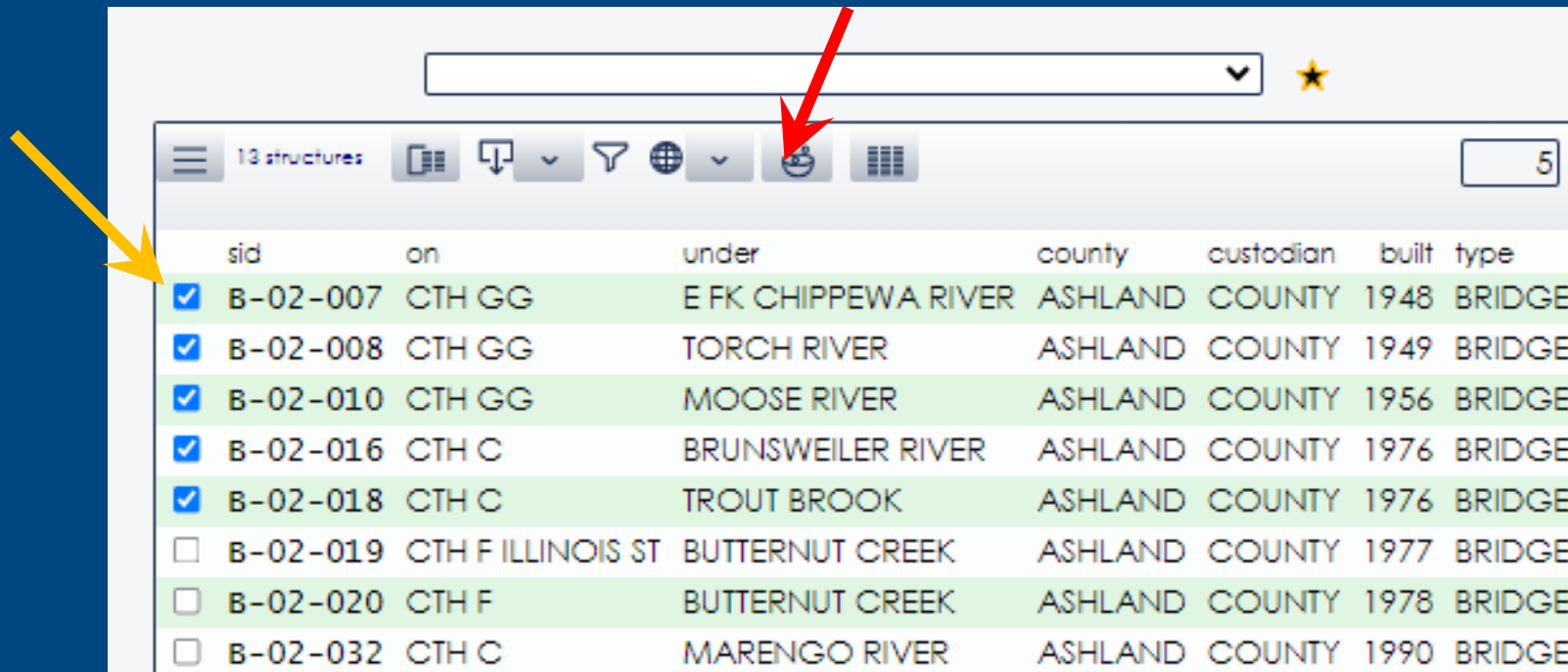
- Region, County, or Municipality,
- Type = Local Small Structure (V)
- Custodian (owner)
- Search

The screenshot shows the HSIS Assist function interface. At the top, there is a dropdown menu labeled 'assist'. Below it, there are five main selection panels: Region, County, Municipality, Type, and Custodian. Each panel has a list of options. Red arrows point to the selection area of each panel. The 'Region' panel lists NC, NE, NW, and SE. The 'County' panel lists Adams(01), Ashland(02), Barron(03), Bayfield(04), Brown(05), and Buffalo(06). The 'Municipality' panel lists Abbotsford-c (10201), Abbotsford-c (37201), Abrams-t (42002), Ackley-t (34002), Adams-c (01201), and Adams-t (01002). The 'Type' panel lists Bridge (B), Culvert (C), High Mast Lighting Structure (L), Local Small Structure (V), Miscellaneous Structure (M), and No Plan Bridge (P). The 'Custodian' panel lists Bia (52), City (41), City-Connecting St (45), City-Swing/Lift (47), Combination (80), and County (30). Below these panels, there are input fields for 'Feature on', 'Feature under', and 'Near'. The 'Near' field has a dropdown menu with 'me' selected and a 'Miles' input field with '5' entered. At the bottom, there are 'search' and 'reset' buttons, and a small icon of a plus sign.

# HSIS

## List of Structures

- Check the boxes for structures needing inspections (yellow arrow)
- Select icon that looks like a bowl (red arrow)



The screenshot shows a web application interface for 'HSIS'. At the top, there is a search bar and a star icon. Below this is a toolbar with various icons, including a bowl icon highlighted by a red arrow. The main content area displays a table of structures. The first column of the table contains checkboxes, with the first five checked and highlighted by a yellow arrow. The table has the following columns: sid, on, under, county, custodian, built, and type.

	sid	on	under	county	custodian	built	type
<input checked="" type="checkbox"/>	B-02-007	CTH GG	E FK CHIPPEWA RIVER	ASHLAND	COUNTY	1948	BRIDGE
<input checked="" type="checkbox"/>	B-02-008	CTH GG	TORCH RIVER	ASHLAND	COUNTY	1949	BRIDGE
<input checked="" type="checkbox"/>	B-02-010	CTH GG	MOOSE RIVER	ASHLAND	COUNTY	1956	BRIDGE
<input checked="" type="checkbox"/>	B-02-016	CTH C	BRUNSWEILER RIVER	ASHLAND	COUNTY	1976	BRIDGE
<input checked="" type="checkbox"/>	B-02-018	CTH C	TROUT BROOK	ASHLAND	COUNTY	1976	BRIDGE
<input type="checkbox"/>	B-02-019	CTH F ILLINOIS ST	BUTTERNUT CREEK	ASHLAND	COUNTY	1977	BRIDGE
<input type="checkbox"/>	B-02-020	CTH F	BUTTERNUT CREEK	ASHLAND	COUNTY	1978	BRIDGE
<input type="checkbox"/>	B-02-032	CTH C	MARENGO RIVER	ASHLAND	COUNTY	1990	BRIDGE

# HSIS

Bowl icon – print – field inspections

Select *Routine inspection type*

Deselect any *Activity types*

Deselect *Copy prior media*

Deselect *Even if inspection...*

Verify the *email address*

Select or unselect *Files to sandbox*

Select *export structures*

Preferences

Structure Collection

Reports Improvement Admin

Report  
Field Inspection

Field Inspection options

Inspection Type

- ☒ Routine
- ☐ Damage
- ☐ Fracture critical (arm's length)
- ☐ In- depth
- ☐ Interim
- ☐ UW- dive

Activity Type

- ☐ Critical finding
- ☐ Deck evaluation
- ☐ Load posted verification (dt2122)
- ☐ Non- destructive evaluation
- ☐ QA inspection review
- ☐ Reach all
- ☐ Scour plan of action
- ☐ SIA review
- ☐ SNBI
- ☐ Structural review
- ☐ UW- profile
- ☐ Vertical clearance measured

☐ Copy prior media

☐ Even if inspection type not recommended

Only if due by  
mm/dd/yyyy

Email  
David Bohnsack<david.bohnsack@dot.wi.gov>

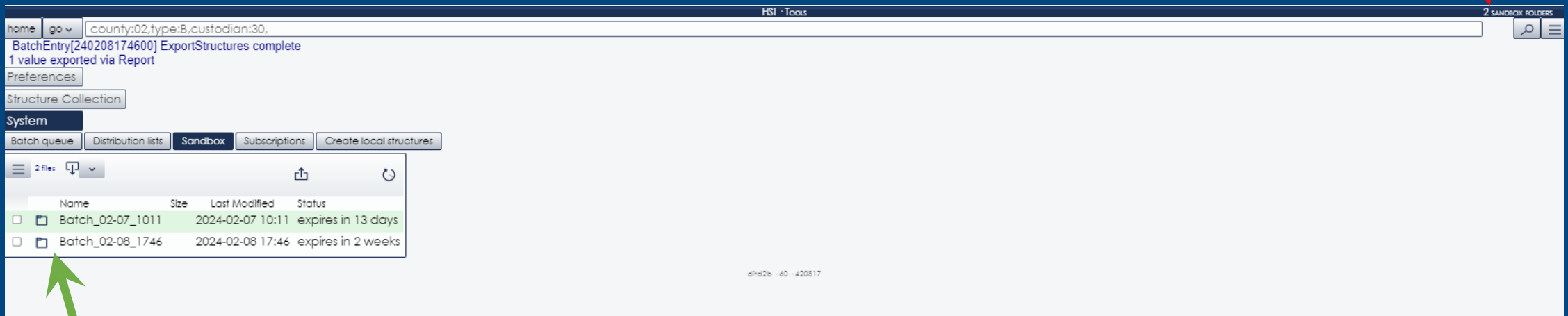
☒ Files to sandbox

export 5 structure(s)


System

# HSIS

*Upper left corner of screen on colored bar - **SANDBOX FOLDERS** – select  
Folder of the field inspections will show up*



# Inspection Form – HSIS Form



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

Inspection Report for  
**V-01-001**  
10th ave over Klein creek.

Missing required cover photo

Type:  Prior Date:  Prior Team Leader:  Frequency (mos):  Due:  Performed:

Latitude:  Longitude:

Owner:  Maintainer:

Time Log: Hours:  Minutes:

Weather: Temperature (F):  Condition:

Inspector: Name:  Number:  Signature:  Signature Date:

page 2

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

Identification & Location

Feature On: 10th ave	Section Town Range:	Structure Number: V-01-001
Feature Under: Klein creek	County: ADAMS	
Location: 75 m North of Dover Dr	Municipality: ADAMS	Structure Name:

Geometry  
measurements in feet, except where noted

Approach Roadway Width: 0	Bridge Roadway Width: 0	Total Length: 8.0
Approach Pavement Width: 0	Deck Width: 0	Deck Area (sq ft): 0

Traffic

Lanes:	ADT:	ADT year:	Traffic Pattern:
On:			

Capacity

Inventory rating:	Overload depth (in):	Last rating date:	Controlling:
Operating rating:	Deck surface material:	Control location:	
Posting:	Emergency Vehicle Weight Limit (tons):		
Re-rate for capacity (Y/N):	Re-rate notes:		

Hydraulic

Hydraulic Code (113):	Q100 (ft <sup>3</sup> /sec):	Velocity (ft/sec):	Agency #:
Water elevation (ft):			

Classification

Span(s)	Material	Condition	Deck	Abutment	Piers

Expansion joint(s)

Temperature	Rate

Clearance

Highway min vertical on cardinal:	File Measurement (ft)	File Date:	New measurement (ft)
Horizontal on cardinal:			

Construction History

Year:	Work Performed:	FOS id:
9999	New Structure	

Maintenance Items

Item	Priority	Recommended by	Status	Status change

V-01-001 28-Oct-2024 inspection as of 28-Oct-2024 GENERATED DRAFT

page 4

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

Assessments

CHK	Element	Defect	Description	UCM	Total	Quantity in Condition State			
1	2	3	4	5	6	7	8	9	10

Condition Ratings

File	New
Deck condition rating (C.01)	Excellent (9)
Superstructure condition rating (C.02)	Excellent (9)
Substructure condition rating (C.03)	Excellent (9)
Current condition rating (C.04)	Excellent (9)
Bridge railing condition rating (C.05)	N/A (Nbl) (N)
Bridge railing transitions condition rating (C.06)	
Bridge bearings condition rating (C.07)	
Bridge joints condition rating (C.08)	
Channel condition rating (C.09)	
Channel protection condition rating (C.10)	
Scour condition rating (C.11)	
NSTM inspection condition (C.14)	
Underwater inspection condition (C.15)	
Channel	No Deficiencies (9)
Waterway	Above Desirable (9)
Approach	

Structure Specific Notes

Created via VStructure import on 2024-09-12

2 qualifying structures. 8' pipes either approx 7' between

V-01-001 28-Oct-2024 inspection as of 28-Oct-2024 GENERATED DRAFT

6 PAGES

# Inspection Form – Hardcopy

## SMALL STRUCTURE INSPECTION REPORT

6' up to and including 20' LENGTH

Feature On		County:		Structure Number
Feature Under		Municipality:		
Service Feature Under		Owner:		
Location		Lane Count On		
Latitude		Traffic Pattern On		
Longitude		Existing Load Posting		

Total Structure Length:		Wearing Surface Material	
Total Structure Width:		Overburden	inches
Structure Roadway Width:			

### Structure Type

Pipe/Cell/Span	Type/Configuration	Material	Pipe/Cell/Span Width (feet)	Opening Height (inches)	Pipe/Cell Length
1					
2					
3					
4					
5					

### Bridge Type Structures (Information needed to complete load rating)

Girder Size	Girder Height	Girder Width	Web Size	Flange Thickness	Other
Girder Information/Size					
Number of Girders					
Girder Spacing					
Deck/Slab Thickness					
Wearing Surface Material					

Channel/Waterway Observations (erosion, scour, flood/highwater, debris):


General Inspection Notes –


### NBI Condition Ratings

NBI	Rating
Deck	
Superstructure	
Substructure	
Culvert	

### Inspector Information

Team Leader Name and No. (Print)	Team Member(s) Name(s) (Print)
Team Leader Signature	Insp. Date
	Inspection Agency

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## Instructions

### SMALL STRUCTURE INSPECTION REPORT

6' up to and including 20' LENGTH

- **Structure Number** - The unique number assigned by HSIS upon inventory upload.  
**Note:** If a unique number has not been assigned by HSIS, use this line to assign a Temporary ID.
- **Feature On** - Name(s) of the roadway or route number(s) on the structure.
- **Feature Under** - Name, if known, of the feature under. Examples – Smith Creek, Hilldale Ped Path.
- **Service Feature Under** - Select from waterway, pedestrian path, land/cattle pass, or other.
- **Location** - A distance in tenths of a mile and a direction from nearest public highway intersection.
- **Latitude and Longitude** – use decimal degrees with up to 7 numbers beyond the decimal.
- **County** - The county in which the structure is located.
- **Municipality** - The municipality in which the structure is located (city, village, or town).
- **Owner** - The owner agency of the structure (Options: County-30, City-40, Village-41, Town-42)
- **Lane Count On** – The number of highway traffic lanes over the structure.
- **Traffic Pattern On** – The traffic pattern over the structure – one way, two way.
- **Existing Load Posting** – Any load limit posted on a sign at the structure.
- **Total Structure Length** - Length of the structure in tenths of a foot measured at the center of the roadway between under-copings on bridge like structures or extreme ends of the opening of culvert like structures.
- **Total Structure Width** - The out-to-out width of the structure measured perpendicular to the roadway centerline. For culverts, the distance perpendicular to the roadway centerline from the end to end of the culvert.
- **Structure Roadway Width** - The clear width of the useable roadway over the structure. The distance between the inside faces of rails, curbs or parapets; or for buried structures, outside edge to outside edge of useable travel way.
- **Wearing Surface Material** – Material makeup of the wearing surface - typically, asphalt, concrete, or crushed rock.
- **Overburden** - measured or estimated average depth of the overburden material placed on the top of the structure (note in the comments area if measured or estimated).
- **Wearing Surface Material** – The top surface of the overburden, such as an asphalt, concrete, base course, soil, etc.

### Structure Type

- **Pipe/Cell/Span** – Each pipe, cell, or span must be recorded separately.
- **Type/Configuration** – The structure configuration: Bridge, Box, Arch, or Pipe
- **Material** – If structure is bridge like, code the material of the girders or beams, otherwise code the primary material of the arch, box, or pipe. (concrete, precast concrete, steel, galvanized steel, aluminum, timber, masonry, or plastic)
- **Pipe/Cell/Span Width (feet)** – the width of each pipe/cell/span measured perpendicular from the inside wall to inside wall, or the pipe diameter.
- **Opening Height (inches)** – the maximum vertical height of each pipe/cell/span measured from the ceiling. This is the diameter for circular pipes.
- **Pipe/Cell Length (feet)** - the length of the pipe or cell measured along the center of the pipe or cell of the structure.

### Channel/Waterway Observations (erosion, scour, flood/highwater, debris)

- Record observations about the condition of the channel or waterway with respect to erosion, movement, scour, flood damage, or highwater marks.

### General Inspection/Maintenance Notes

- General inspection/maintenance notes that come up during the inspection that the inspector deems necessary to document. Include notes used to further describe and clarify the structure's condition.

### NBI Condition Ratings

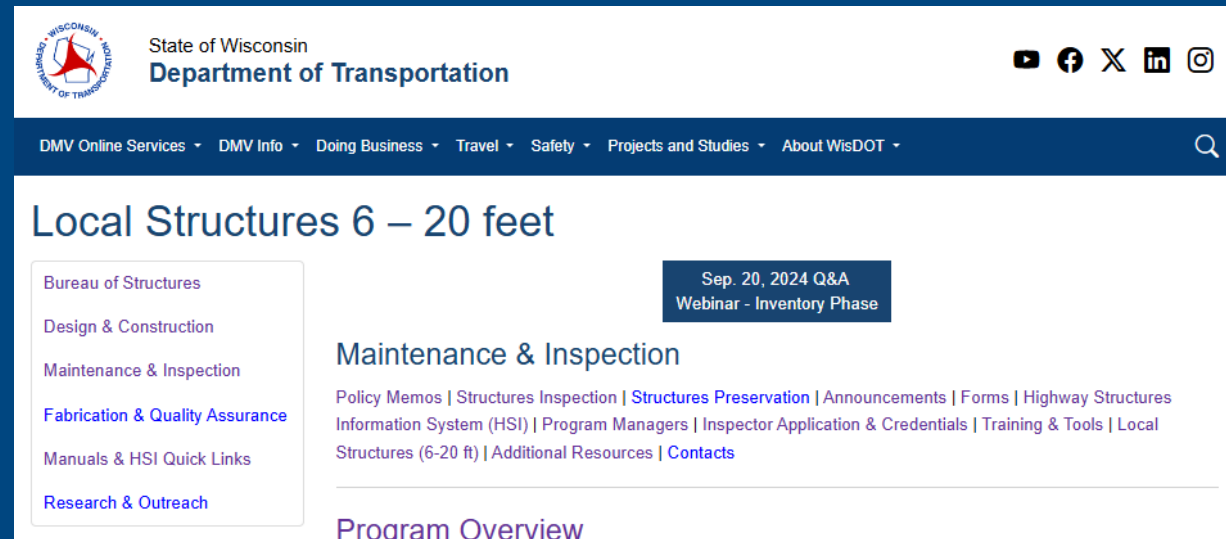
- **Deck** – The portion of a bridge like structure which directly supports the live load traffic of a multigirder, or rigid frame. The entire slab of slab structures.
- **Superstructure** – Girders and rigid frames, support the deck, and deliver the deck and live traffic loads to the substructure units. The entire slab of slab structures.
- **Substructure** – All elements located below the bearings which support the superstructure and deck.
- **Culvert** – A buried structure carrying traffic over an obstruction that is 20-feet or less in length.

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# Directions for Entering Data in HSIS



State of Wisconsin  
Department of Transportation

DMV Online Services ▾ DMV Info ▾ Doing Business ▾ Travel ▾ Safety ▾ Projects and Studies ▾ About WisDOT ▾

## Local Structures 6 – 20 feet

Bureau of Structures  
Design & Construction  
Maintenance & Inspection  
Fabrication & Quality Assurance  
Manuals & HSI Quick Links  
Research & Outreach

Sep. 20, 2024 Q&A  
Webinar - Inventory Phase

### Maintenance & Inspection

Policy Memos | Structures Inspection | [Structures Preservation](#) | Announcements | Forms | Highway Structures Information System (HSI) | Program Managers | Inspector Application & Credentials | Training & Tools | Local Structures (6-20 ft) | Additional Resources | [Contacts](#)

### Program Overview

## Inspection Phase

- WisDOT Bureau of Structures held a webinar to discuss process and procedure for collecting inspection information.
  - A recording of the webinar can be found [here](#).
  - A link to the presentation can be found [here](#).
- Inspection information can be collected on paper in the field, but must be input directly by the bridge inspector into the Highway Structures Information System (HSIS).
- [Inspection field form](#)
- [Video directions for entering inspection information into HSI](#).



# HSIS

- Inspection data must be entered in HSIS
- Data entry and reports are the same as it is for bridge inspections
- Inspectors need to verify inventory data already entered in HSIS
- Local small structures 6 to 20 ft are assigned “V” numbers
  - V number assigned only after inventory loaded in HSIS
  - Inspection data cannot be loaded without a V number assigned



# Verify/Gather Missing Inventory Data

- Location and Owner
  - Length, Feature On (public highway), Feature Under, Service Feature Under, Location, Latitude, Longitude, County, Municipality, Owner
- Lane Count On
  - The number of highway traffic lanes on/over the structure.
- Traffic Pattern On
  - Highway traffic pattern on/over the structure – **one way or two way.**
- Existing Load Posting
  - Record any load limit posting for the structure.



# Inspection Items

- Lane Count On
- Traffic Pattern
- Existing Load Posting
- Length (total span length)
- Width
- Structure Roadway Width
- Opening Height
- Opening Width
- Barrel/cell/pipe length
- Configuration type of each span
- Material of each span
- Bridge Type 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
  - Describe the conditions
- **Photos** –
  - Profile/side and roadway views
  - General defect or deterioration that justifies the rating given
  - Safety Concerns



# Condition Rating

## 2024 WisDOT Structure Inspection Field Manual



**NBI rating = 0 to 9**  
**Follow the table on Page 218**  
**of the Structure Inspection**  
**Field Manual**

**NBI Rating:**  
**Deck**  
**Superstructure**  
**Substructure**  
**Culvert**

### Chapter 9. SNBI Condition Rating System

#### SNBI - Condition Ratings

The following criteria should be used to rate items B.C.01 (Deck), B.C.02 (Superstructure), B.C.03 (Substructure), B.C.04 (Culvert), B.C.05 (Bridge Railing), B.C.06 (Bridge Railing Transition), B.C.07 (Bridge Bearings), B.C.14 (NSTM), B.C.15 (Underwater)

Code	Condition	Description
N	Not Applicable	Component does not exist.
9	Excellent	Isolated inherent defects.
8	Very Good	Some inherent defects.
7	Good	Some minor defects.
6	Satisfactory	Widespread minor or isolated moderate defects.
5	Fair	Some moderate defects; strength and performance of the component are not affected.
4	Poor	Widespread moderate or isolated major defects; strength and/or performance of the component is affected.
3	Serious	Major defects; strength and/or performance of the component is seriously affected. Condition typically necessitates more frequent monitoring, load restrictions, and/or corrective actions.
2	Critical	Major defects; component is severely compromised. Condition typically necessitates frequent monitoring, significant load restrictions, and/or corrective actions in order to keep the bridge open.
1	Imminent 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.

**Note:** See the SNBI for commentary and examples



# Bridge-Like Structures

Bridge-like structures have deck, superstructure and substructure elements

- Record measurements and condition/defects about load path elements
  - **Information needed to complete future load rating**
    - Girder Size – height, width, web size, flange thickness.
    - Number of girders
    - Deck/Slab thickness
    - Note any condition/defects that may have an affect on the load rating.
    - Create a sketch and upload into HSIS



# Critical Safety Concern

- Identify any critical safety concerns.
- Notify the owner directly as soon as possible.



# Photos and Notes

## ■ Notes

- Describe defect or deterioration that justifies any NBI rating  $\leq 5$ .

## ■ Photos

- Profile/side and roadway views
- Defect or deterioration that justifies any NBI rating  $\leq 5$
- Safety Concerns





# Timeline

INSPECTION  
EFFORT

February 9<sup>th</sup> 2024: Inventory and  
inspection webinar

March 1<sup>st</sup> 2024: Counties make  
decision on inspection resourcing

June 30<sup>th</sup>, 2025: All funds must  
be encumbered.

DECEMBER 31, 2025  
INSPECTIONS  
COMPLETE

2024

2025

2024

INVENTORY  
EFFORT

April 15<sup>th</sup> 2024: Local  
owners' decision on inventory

DECEMBER 31, 2024  
INVENTORY  
COMPLETE



# Invoicing for Inspections

- Invoice must include
  - List of structures inspected
  - Reference **WisDOT/WCA PO #39584-0000029721**
- Send a copy of the invoice to WisDOT and WCA
  - Email invoice to both:
    - David Bohnsack at [david.bohnsack@dot.wi.gov](mailto:david.bohnsack@dot.wi.gov)
    - Terry Schumacher at [schumacher@wicounties.org](mailto:schumacher@wicounties.org)
  - Or mail invoice to both **WisDOT and WCA**

David Bohnsack  
Wisconsin DOT-Bureau of Structures  
4822 Madison Yards Way 4<sup>th</sup> Floor  
Madison WI 53707

Terry Schumacher  
Wisconsin Counties Association  
22 East Mifflin St, Suite 900  
Madison WI 53707



# Reminders

## Structure Length

- **Verify the length is  $> 6'$  and  $\leq 20'$  prior to starting the inspection.**
  - Structures  $\leq 6'$  or  $> 20'$  do not qualify and will not be reimbursed for inspection.
  - Measurement between multiple pipe culverts must be less than  $1/2$  of the smaller opening.

## Public Highway

- **Highway must be a public road, not just open to the public. Road must get General Transportation Aids (GTA) – verify with town or municipality.**

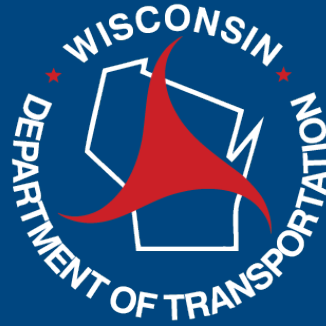
## Photos and Notes

- **Provide representative photos and notes showing defects or deterioration that justifies any NBI rating  $\leq 5$ .**

## Critical Safety Concerns

- **Identify any critical safety concerns - notify the structure owner as soon as possible.**



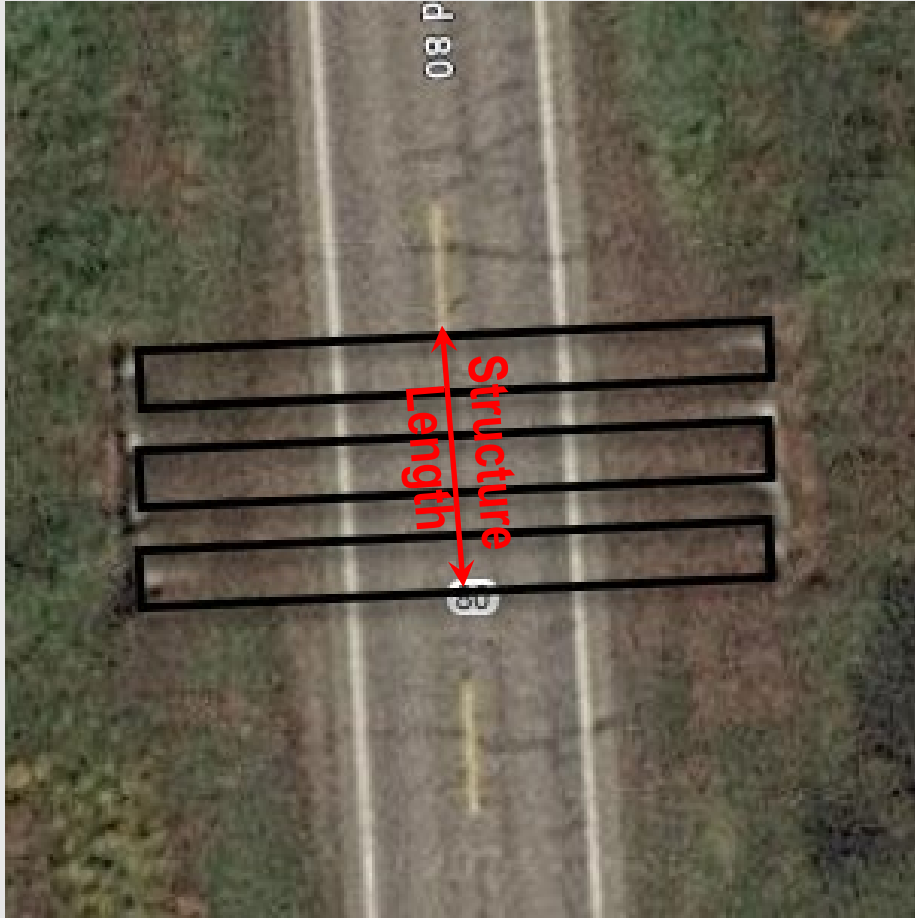


# Questions?

October 30, 2024

# Structure Length (total span length)

Structure Length: Measured along the center of the roadway





# Structure Length (total span length)

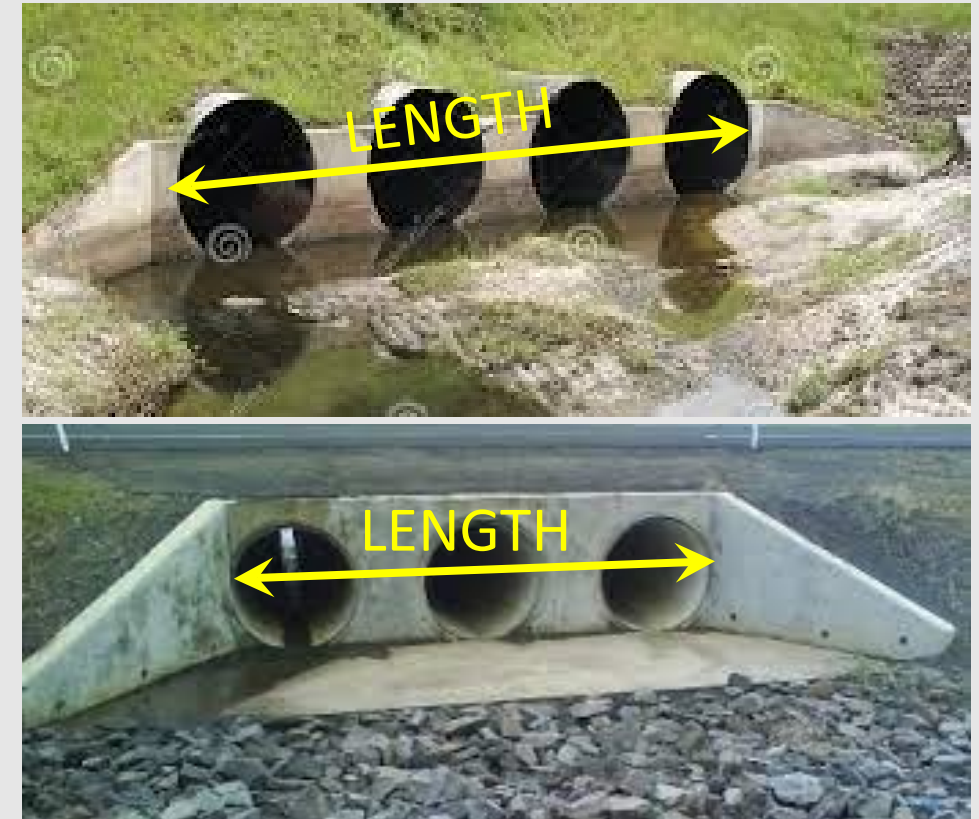
## Example Structures: Pipe Culverts



**Steel Pipe**



**Steel Pipe Arch**



**Multipipe Pipe Culvert**

AKA “culvert nest”



# Structure Length (total span length)

## Example Structures: Concrete Box Culvert



**Single Concrete Box Culvert Pipe**



**Double Barrel (multicell) Box Culvert**



# Structure Length (total span length)

## Example Structures: Arch Structures



**Precast Concrete Arch**



**Masonry Arch**



**Concrete Arch**



# Structure Length (total span length)

## Example Structures: Bridge Like Structures



**Concrete Flat Slab**



**Buried Rigid Frame**  
(no floor)



**Steel Girders/Beams**

# Structure Length (total span length)

## Example Structure



**CONCRETE FLAT SLAB  
ON TIMBER ABUTMENTS, 0° SKEW**  
(bridge like structure)

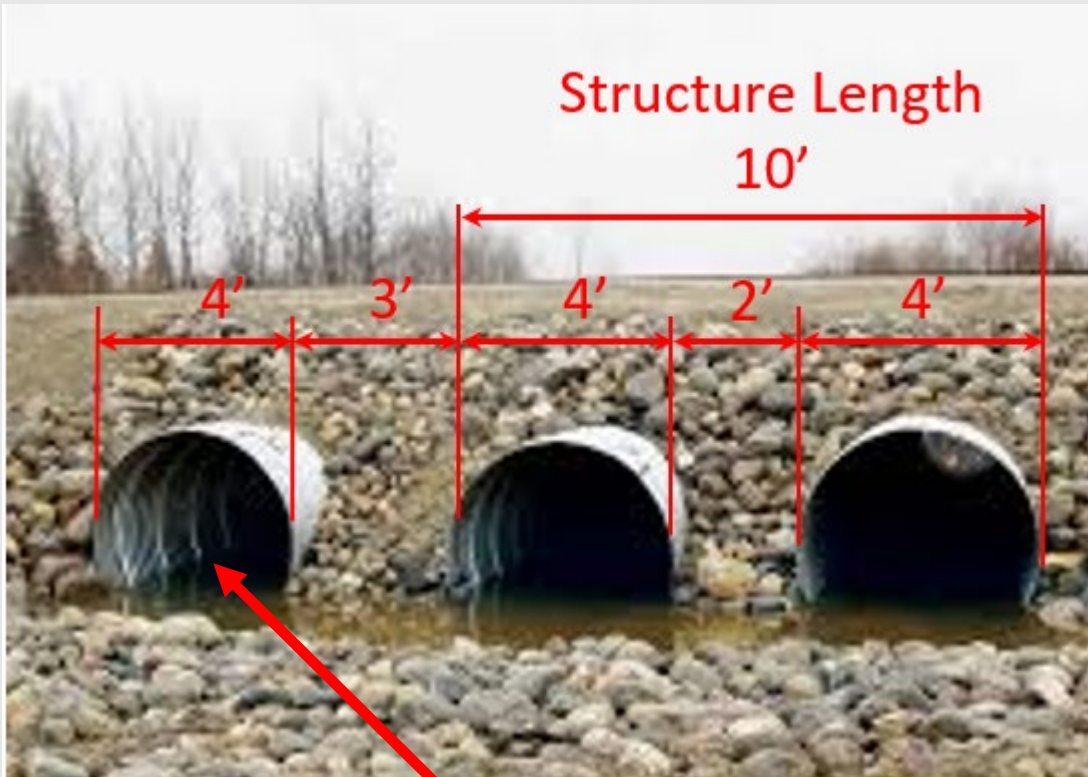
**14' SPAN LENGTH**

**Structure Length = 14' along C/L  
between faces of outcroppings**



# Structure Length (total span length)

## Multi-pipe Structure Example



**2 – 4' DIA STEEL CULVERT PIPES  
SPACED = 2', 0° SKEW**

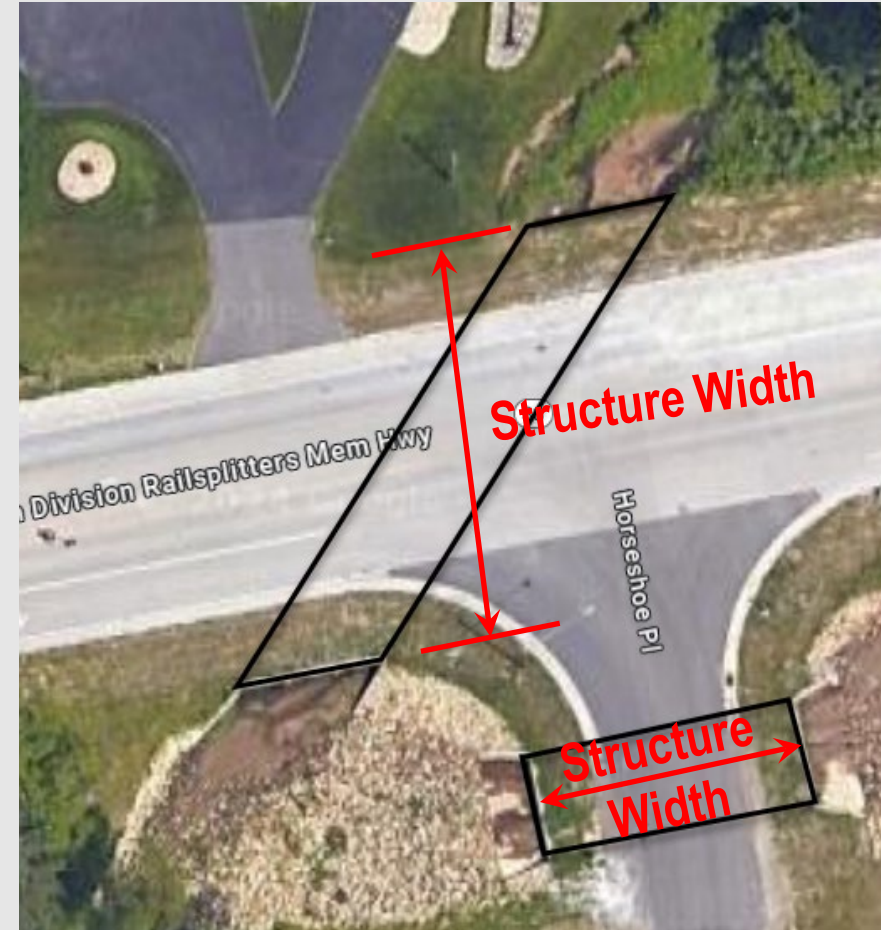
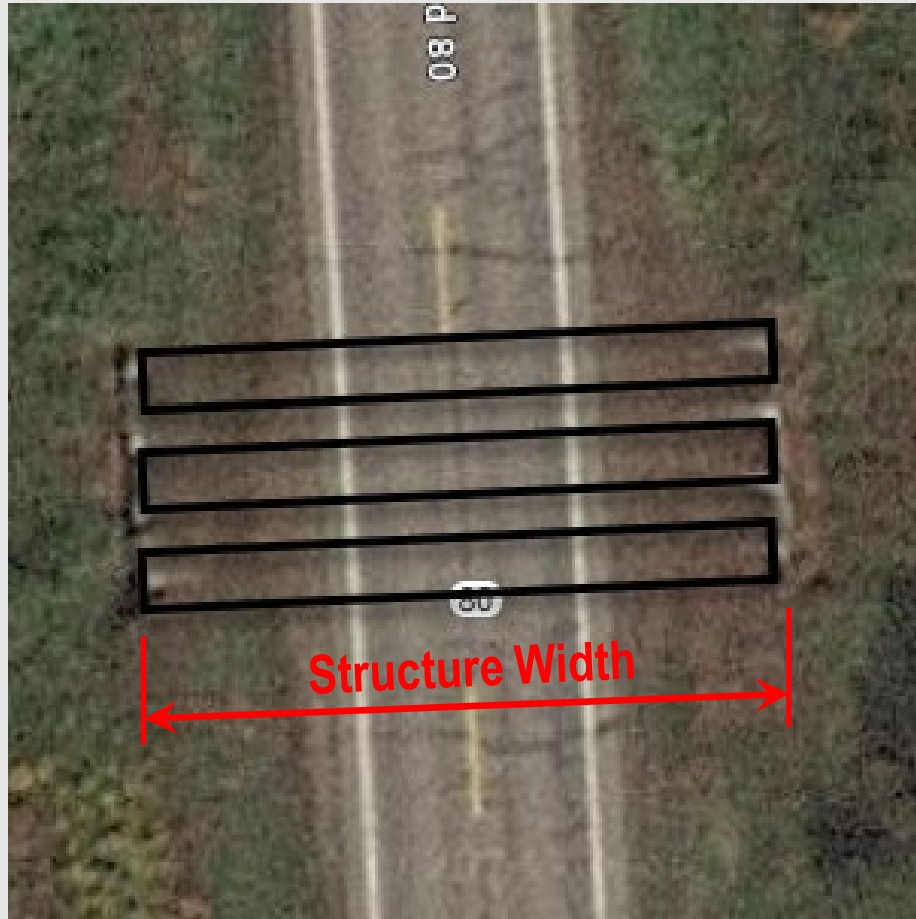
**10' SPAN LENGTH**

**Structure Length = 10' along C/L**

Furthest 4' pipe on the left does not qualify because the spacing is greater than  $\frac{1}{2}$  the span length of the adjacent structures

# Structure Width

Structure Width: Out-to-out distance perpendicular to the roadway.



# Structure Width

Structure Width: Out-to-out distance perpendicular to the roadway.





# Roadway Width (on the structure)

The clear width of the useable roadway over the structure.  
The distance between the inside faces of rails, curbs or parapets.



# Roadway Width (on the structure)

**Structure Width:** For buried structures, outside edge to outside edge of useable travel way. Include shoulders in width if shoulders appear structurally sufficient for traffic.



# Wearing Surface Material

- Identify the material of the wearing surface

Typical surface materials:

- Asphalt
- Concrete
- Crushed rock



# Overburden (inches)

- Measure or estimate the average depth of the overburden material placed on the top of the structure in inches (note in the comments section if measured or estimated).

Total materials (ave thickness):

- Pavement overlays
- Pavement
- Crushed rock
- Fill/soil



# Structure Type

- Each pipe, cell, or span making up a structure must be recorded separately



- Type/Configuration – bridge, box, arch, pipe
- Material – code the primary material
  - Concrete, precast concrete, steel, galvanized steel, aluminum, timber, masonry, plastic
  - If the structure is bridge like, code the material of the girders or beams

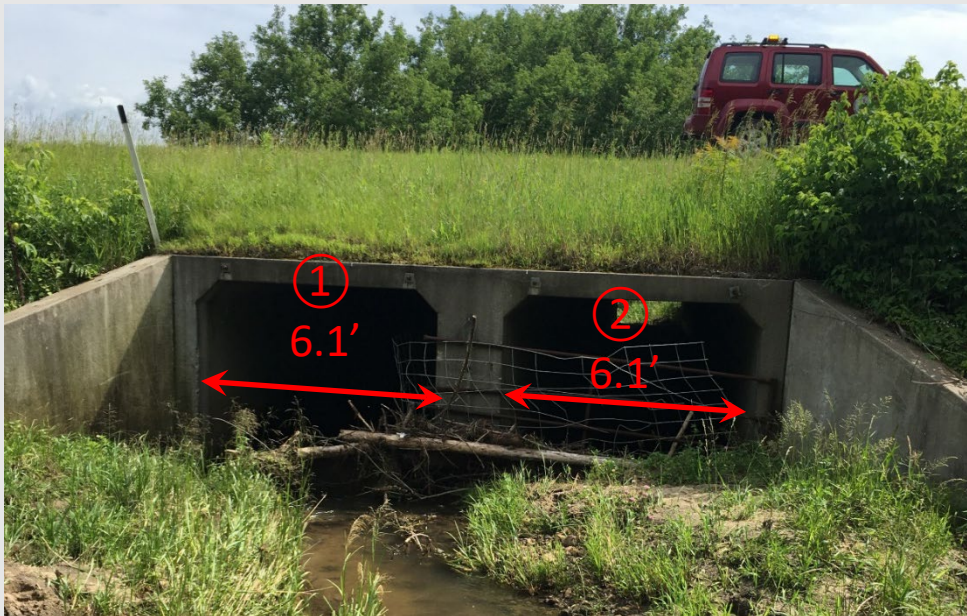
# Structure Type (continued)

- Pipe/Cell/Span Width (round to 0.1 ft)
  - Width of each pipe/cell/span measured perpendicular from the inside wall to inside wall, or the pipe diameter.
- Opening Height (round to 0.1 ft)
  - Maximum vertical height of each pipe/cell/span measured from the ceiling. This is the diameter for circular pipes.
- Pipe/Cell Length (round to 0.1 ft)
  - Length of the pipe or cell measured along the center of the pipe or cell of the structure.



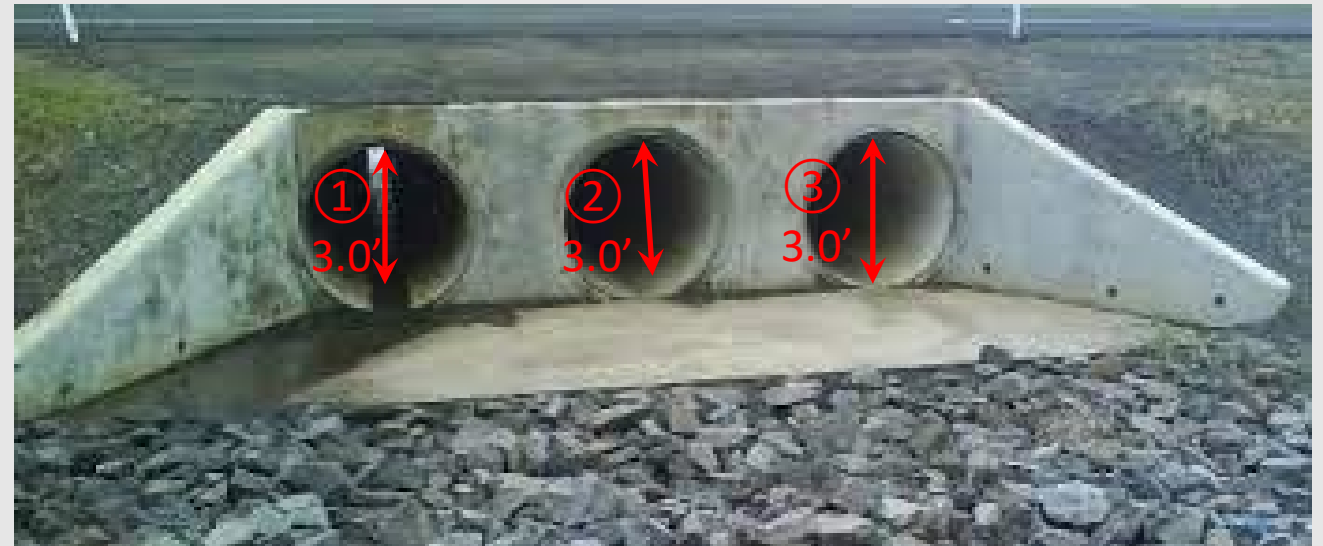
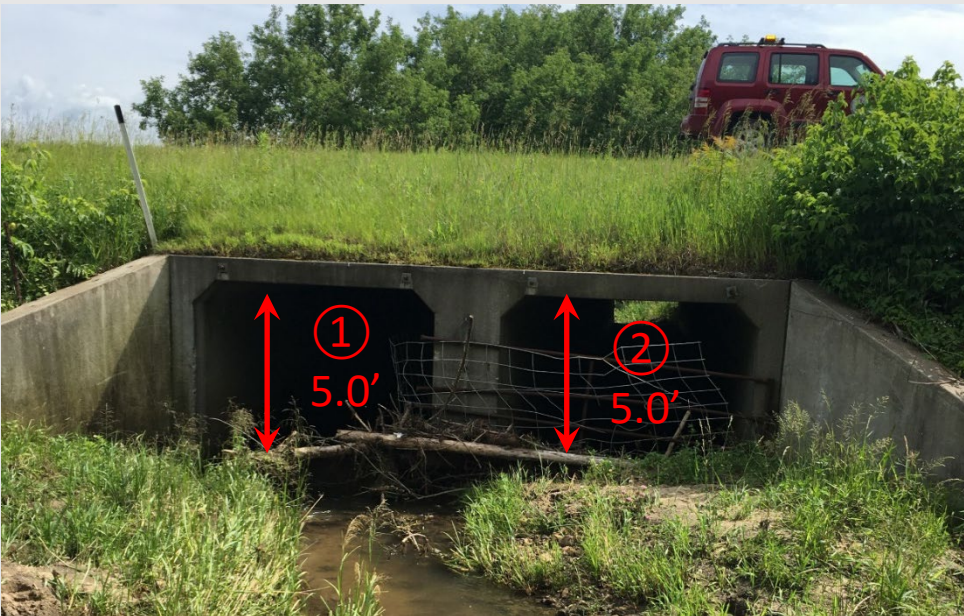
# Pipe/Cell/Span Width (0.1 feet)

- Measure each pipe/cell/span inside to inside wall



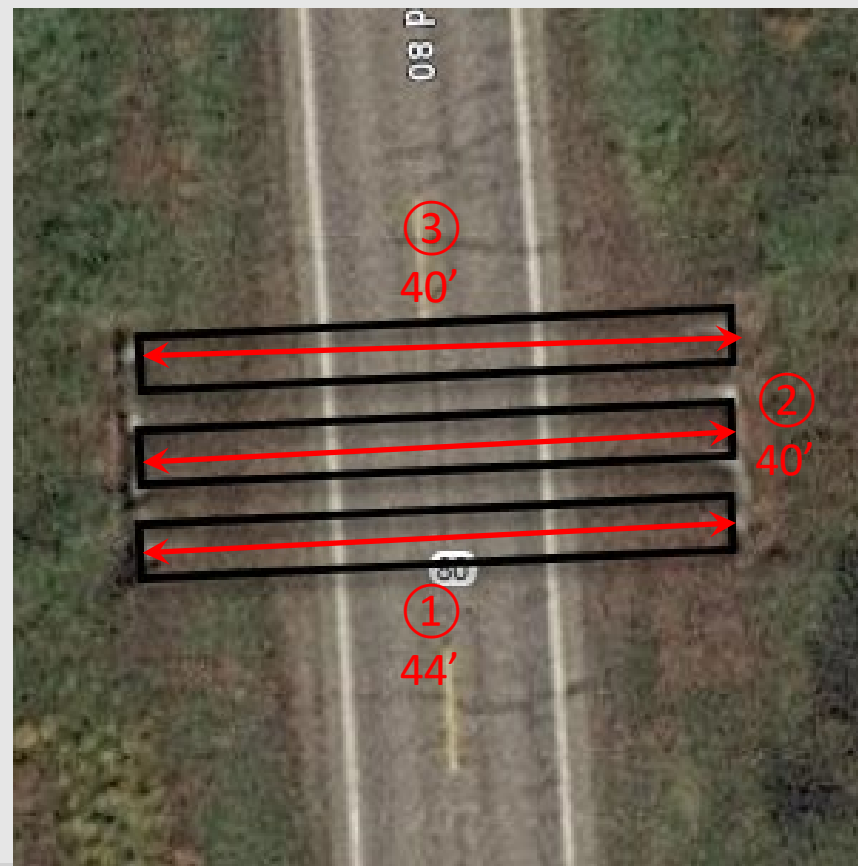
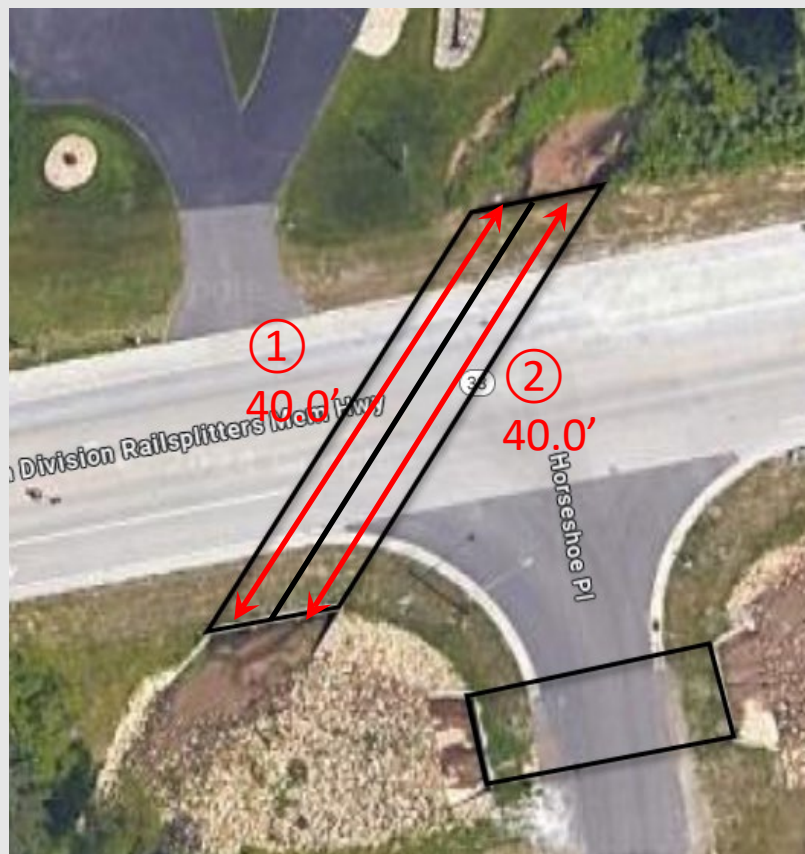
# Opening Height (0.1 feet)

- Measure each pipe/cell/span height – inside to inside



# Pipe/Cell Length (0.1 feet)

- Measure each pipe/cell length end to end inside along center of pipe/cell





# Structure Type (examples)

- Examples of populated table on field form:



Structure Type					
Pipe/Cell/Span	Type/Configuration	Material	Pipe/Cell/Span Width (0.1 feet)	Opening Height (0.1 feet)	Pipe/Cell Length (0.1 feet)
1	BOX	CONCRETE	6.1	5.0	40
2	BOX	CONCRETE	6.1	5.0	40
3					
4					
5					



Structure Type					
Pipe/Cell/Span	Type/Configuration	Material	Pipe/Cell/Span Width (0.1 feet)	Opening Height (0.1 feet)	Pipe/Cell Length (0.1 feet)
1	PIPE	CONCRETE	3.0	3.0	44
2	PIPE	CONCRETE	3.0	3.0	44
3	PIPE	CONCRETE	3.0	3.0	44
4					
5					



# Channel/Waterway Observations

- Record observations about the condition of the channel or waterway with respect to erosion, movement, scour, flood damage, or highwater marks
  - Erosion
  - Scour
  - Flood/highwater Marks
  - Debris Accumulation



# General Inspection/Maintenance Notes

- Record any inspection notes or maintenance items during the inspection that the inspector deems necessary to document. Include notes used to further describe and clarify the structure's condition.