Local Structures 6 – 20ft Program

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Chief Maintenance Engineer – WisDOT Bureau of Structures

October 30, 2024

Kick-Off Meeting Agenda

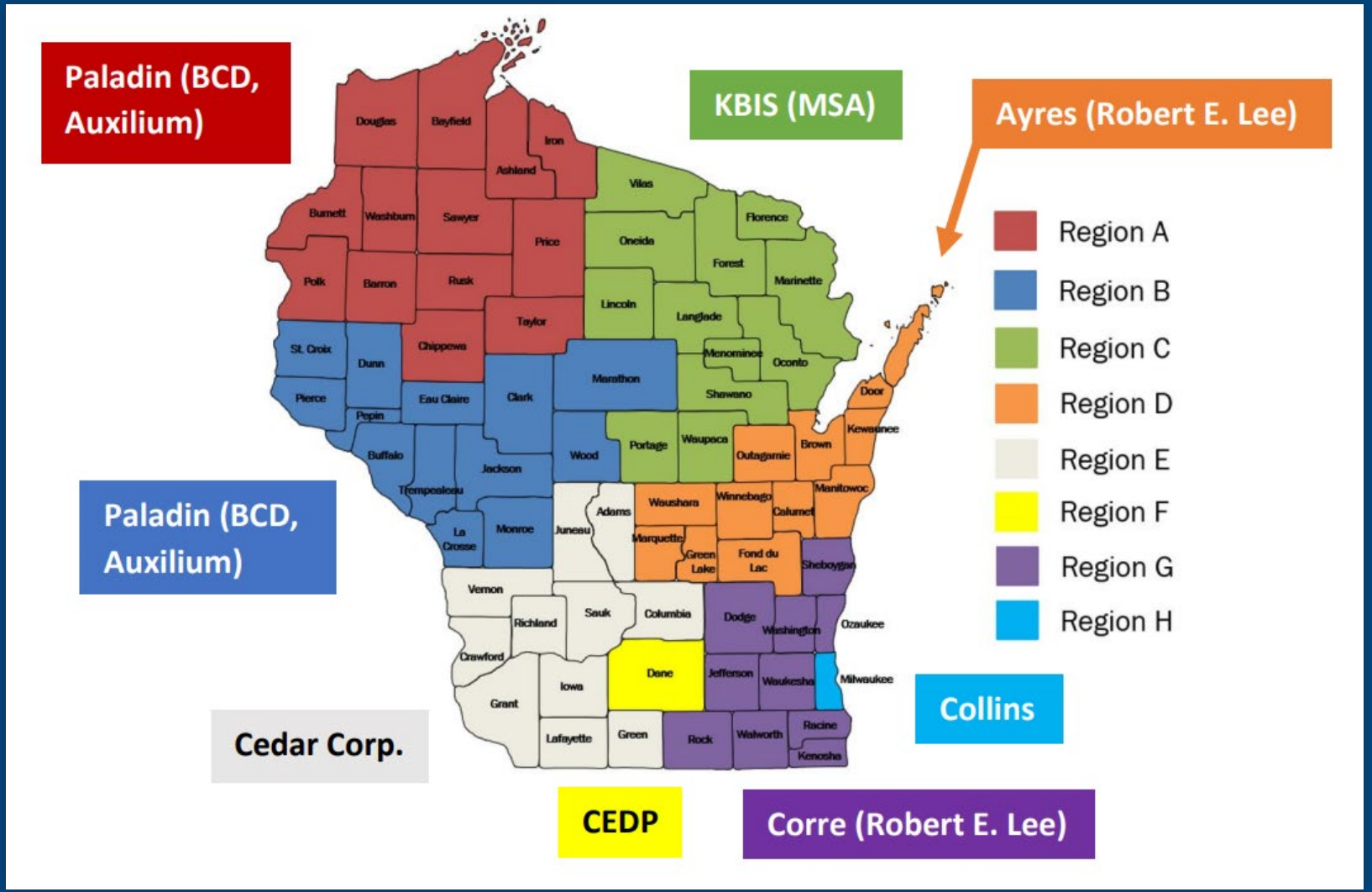
- Inspection Phase Overview
- BOS Website
- Inventory Information
- HSIS
- Inspection
- Invoicing
- Question and Answer

Inspection Phase Summary

- WCA contract/purchase order with WisDOT
  - Consultants under contract with WCA for cities, villages, and towns

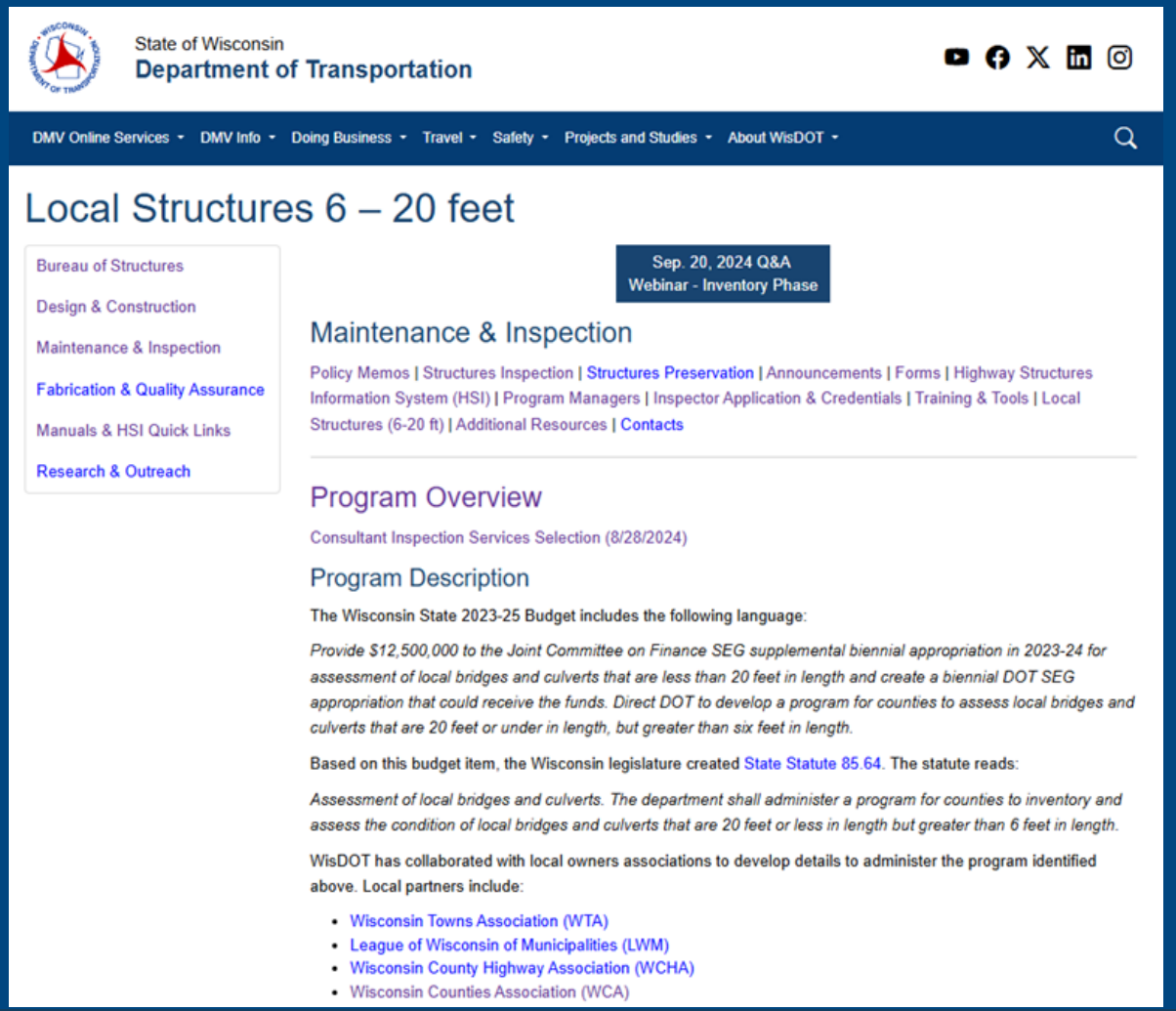
    (Counties responsible for inspections on their structures)
- Inspections completed by certified bridge inspector
- Inspection findings/data reported in HSIS
- Consultant sends invoices to WisDOT & WCA
  - $350 per structure inspected and data entered
- WisDOT reviews invoices and pays WCA
- WCA pays consultants

Inspection Services Selections



BOS Website

- www.WisconsinDOT.gov
  - Search Local Structures 6-20 ft
    - Top search return



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 ≥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)

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

WISCONSIN DEPARTMENT OF TRANSPORTATION

HSIS

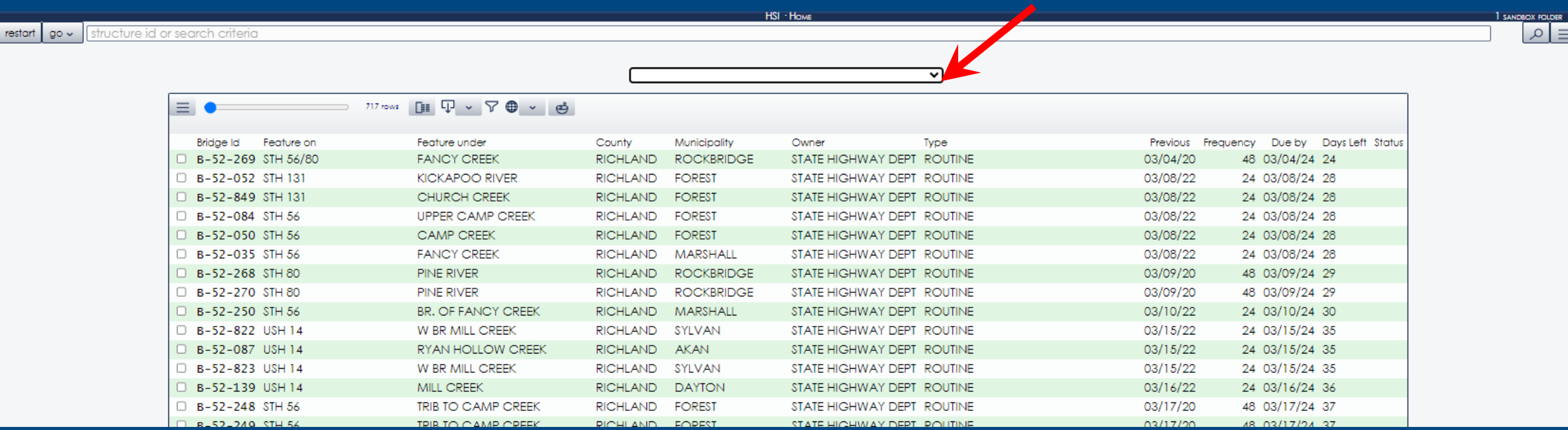
- Region A
- Region B
- Region C
- Region D
- Region E
- Region F
- Region G
- Region H

WISCONSIN DEPARTMENT OF TRANSPORTATION

HSIS

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

- Drop down arrow in top middle of HSIS home screen

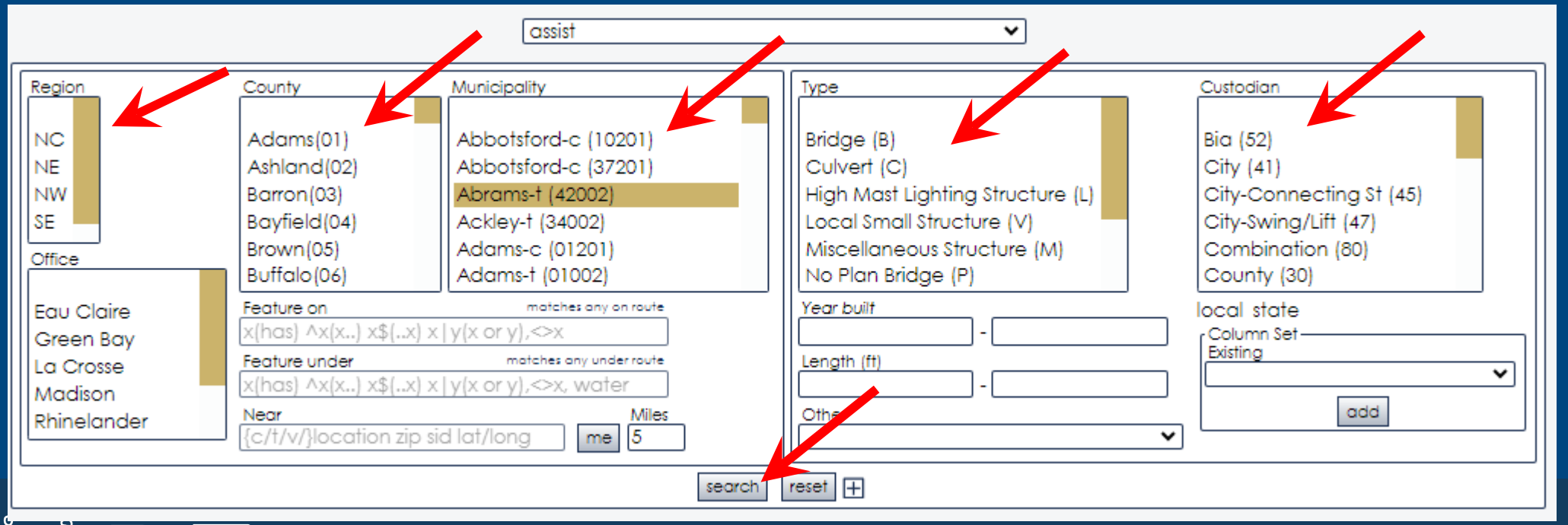


Bridge Id	Feature on	Feature under	County	Municipality	Owner	Type	Previous	Frequency	Due by	Days Left	Status
B-52-269	STH 56/80	FANCY CREEK	RICHLAND	ROCKBRIDGE	STATE HIGHWAY DEPT	ROUTINE	03/04/20	48	03/04/24	24	
B-52-052	STH 131	KICKAPOO RIVER	RICHLAND	FOREST	STATE HIGHWAY DEPT	ROUTINE	03/08/22	24	03/08/24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

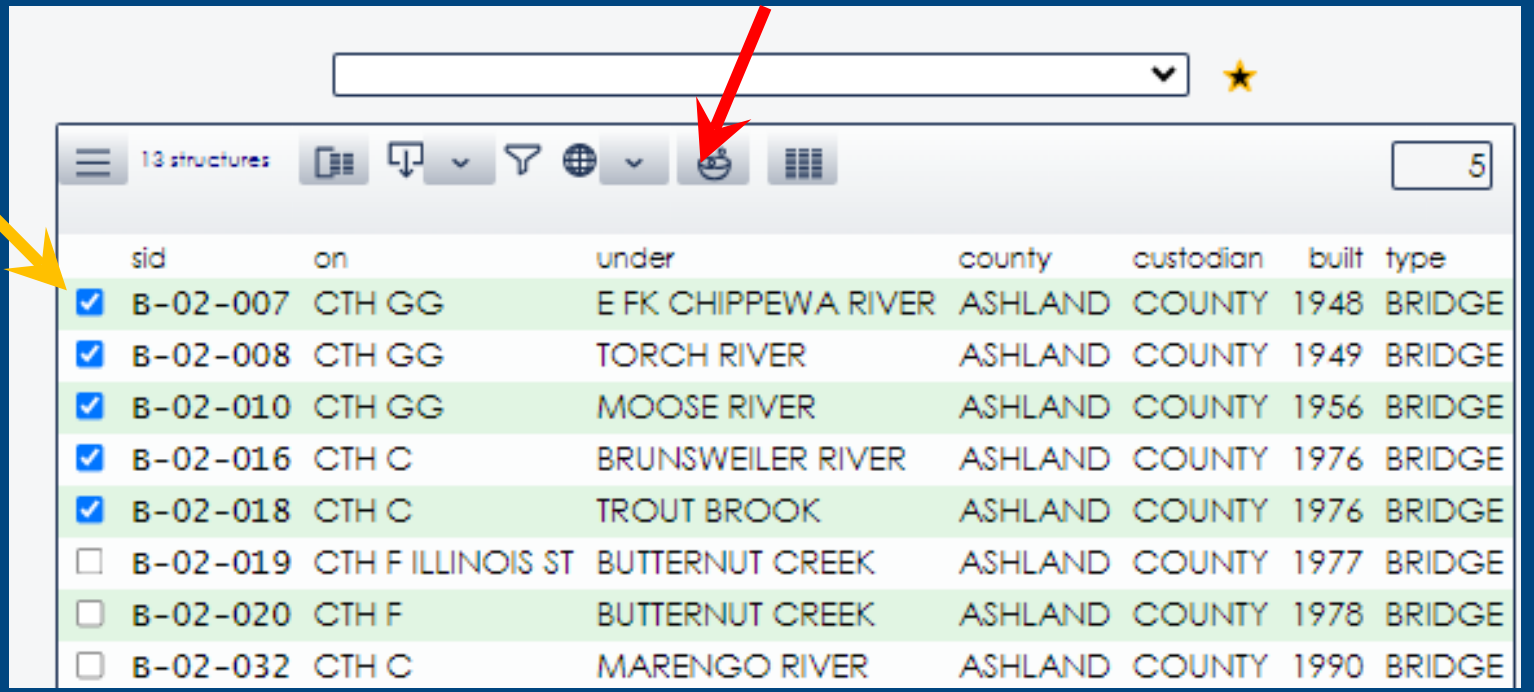
- Region, County, or Municipality,
- Type = Local Small Structure (V)
- Custodian (owner)
- Search



HSIS

List of Structures

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



sid	on	under	county	custodian	built	type
B-02-007	CTH GG	E FK CHIPPEWA RIVER	ASHLAND	COUNTY	1948	BRIDGE
B-02-008	CTH GG	TORCH RIVER	ASHLAND	COUNTY	1949	BRIDGE
B-02-010	CTH GG	MOOSE RIVER	ASHLAND	COUNTY	1956	BRIDGE
B-02-016	CTH C	BRUNSWEILER RIVER	ASHLAND	COUNTY	1976	BRIDGE
B-02-018	CTH C	TROUT BROOK	ASHLAND	COUNTY	1976	BRIDGE
B-02-019	CTH F ILLINOIS ST	BUTTERNUT CREEK	ASHLAND	COUNTY	1977	BRIDGE
B-02-020	CTH F	BUTTERNUT CREEK	ASHLAND	COUNTY	1978	BRIDGE
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*

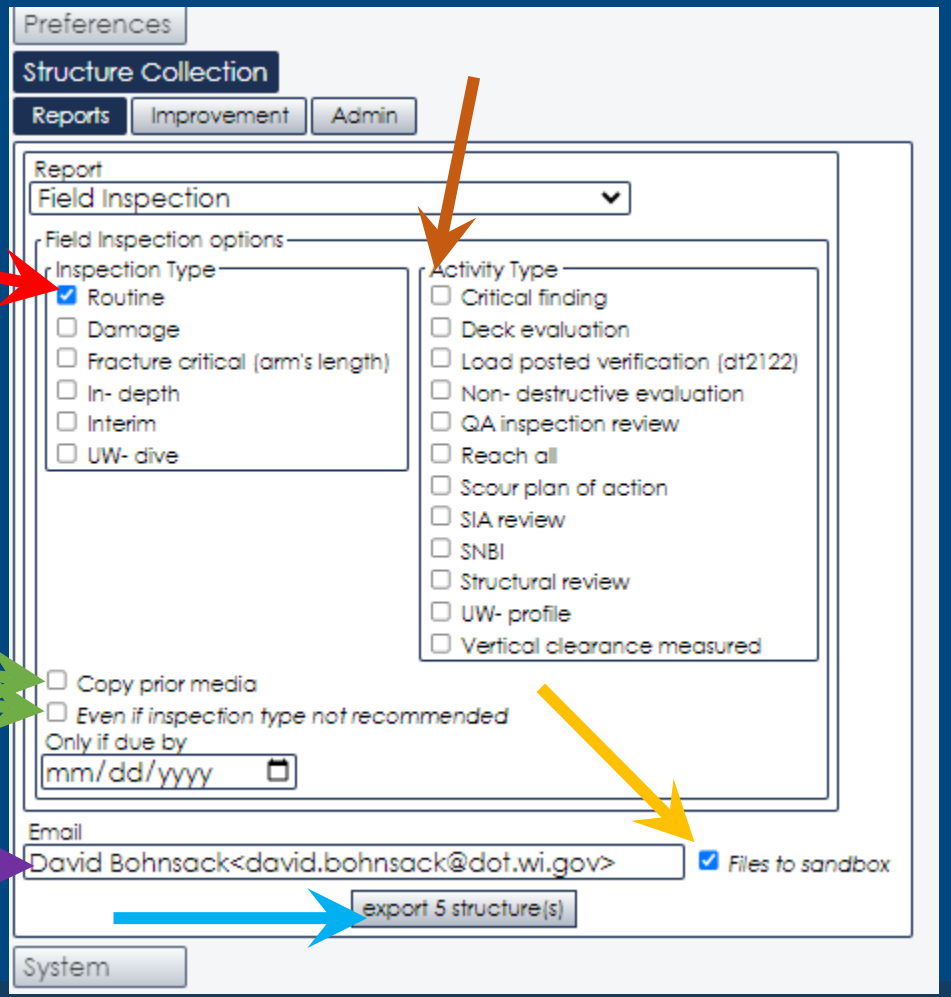
Deselect *Copy prior media*

Deselect *Even if inspection…*

Verify the email address

Select or unselect *Files to sandbox*

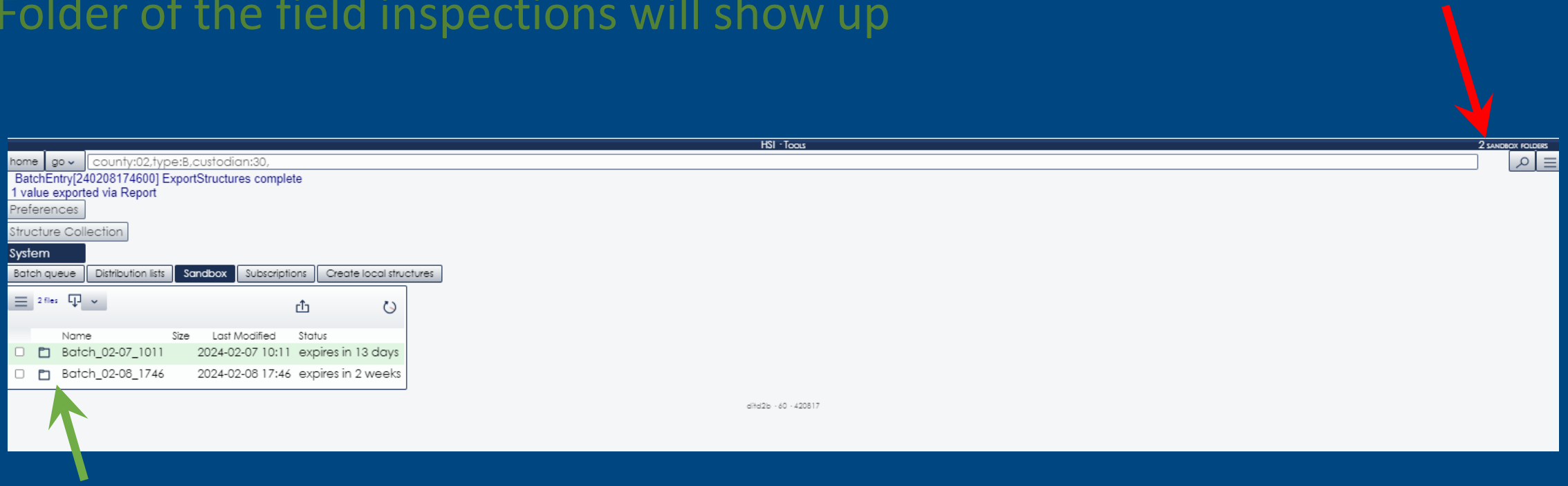
Select *export structures*



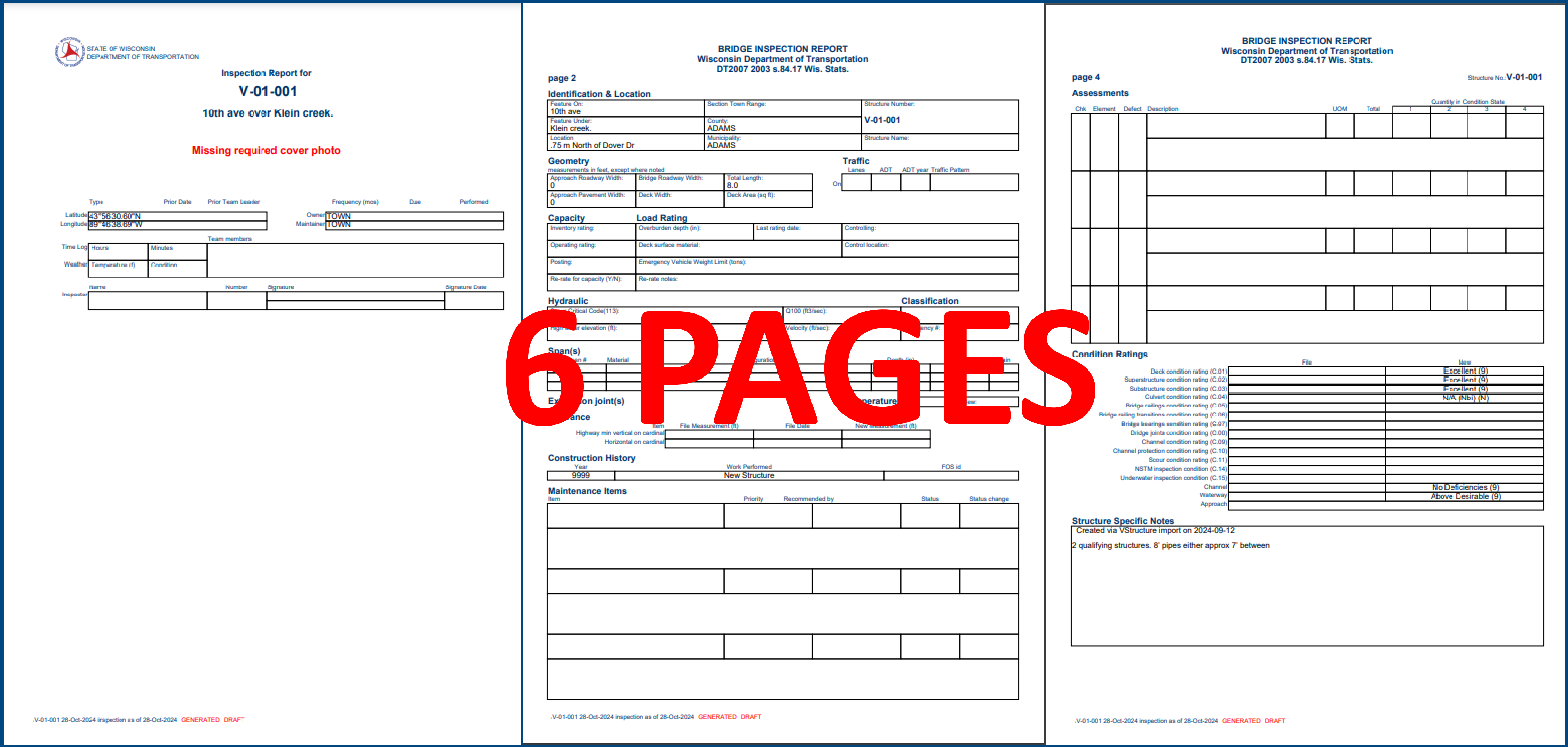
HSIS

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 43°56'30.60"N
Longitude 89°46'38.69"W
Owner TOWN
Maintainer TOWN

Time Log: Hours | Minutes
Weather: Temperature (f) | Condition
Team members

Inspection: Name | Number | Signature | Signature Date

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

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

page 2

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

Traffic: Lanes | ADT | ADT year | Traffic Pattern

Capacity / Load Rating

Inventory rating:	Overburden 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 / Classification
Critical Code(113): | Q100 (ft3/sec):
High water elevation (ft): | Velocity (ft/sec):

Span(s)
Expansion joint(s)
Clearance

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

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

page 4

Structure No.: V-01-001

Assessments

Chk	Element	Defect	Description	UOM	Total	1	2	3	4

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)
Culvert condition rating (C.04)		N/A (Nbi) (N)
Bridge railings condition rating (C.05)		
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:	
Total Structure Width:	
Structure Roadway Width:	

Wearing Surface Material	
Overburden	inches

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

Page 1 of 3

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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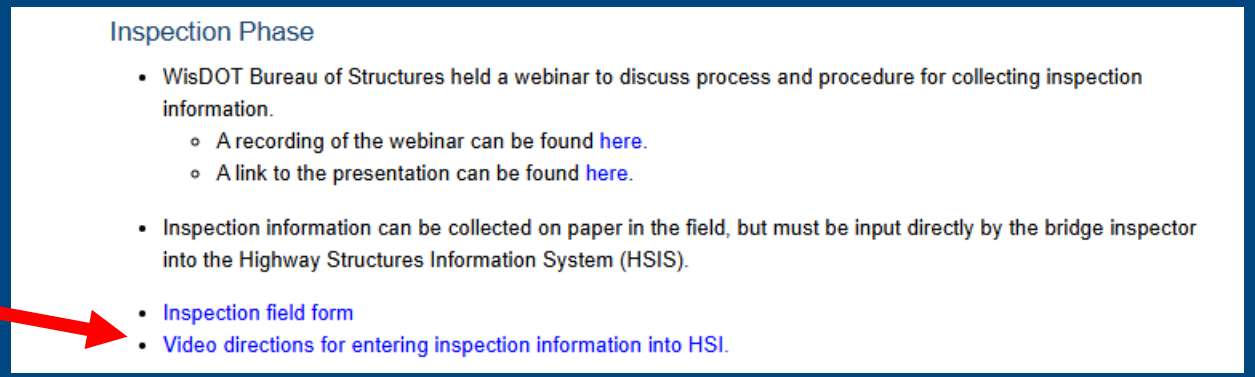
Directions for Entering Data in HSIS



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

2024 WISCONSIN DEPARTMENT OF TRANSPORTATION
STRUCTURE INSPECTION FIELD MANUAL
Wisconsin Department of Transportation

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

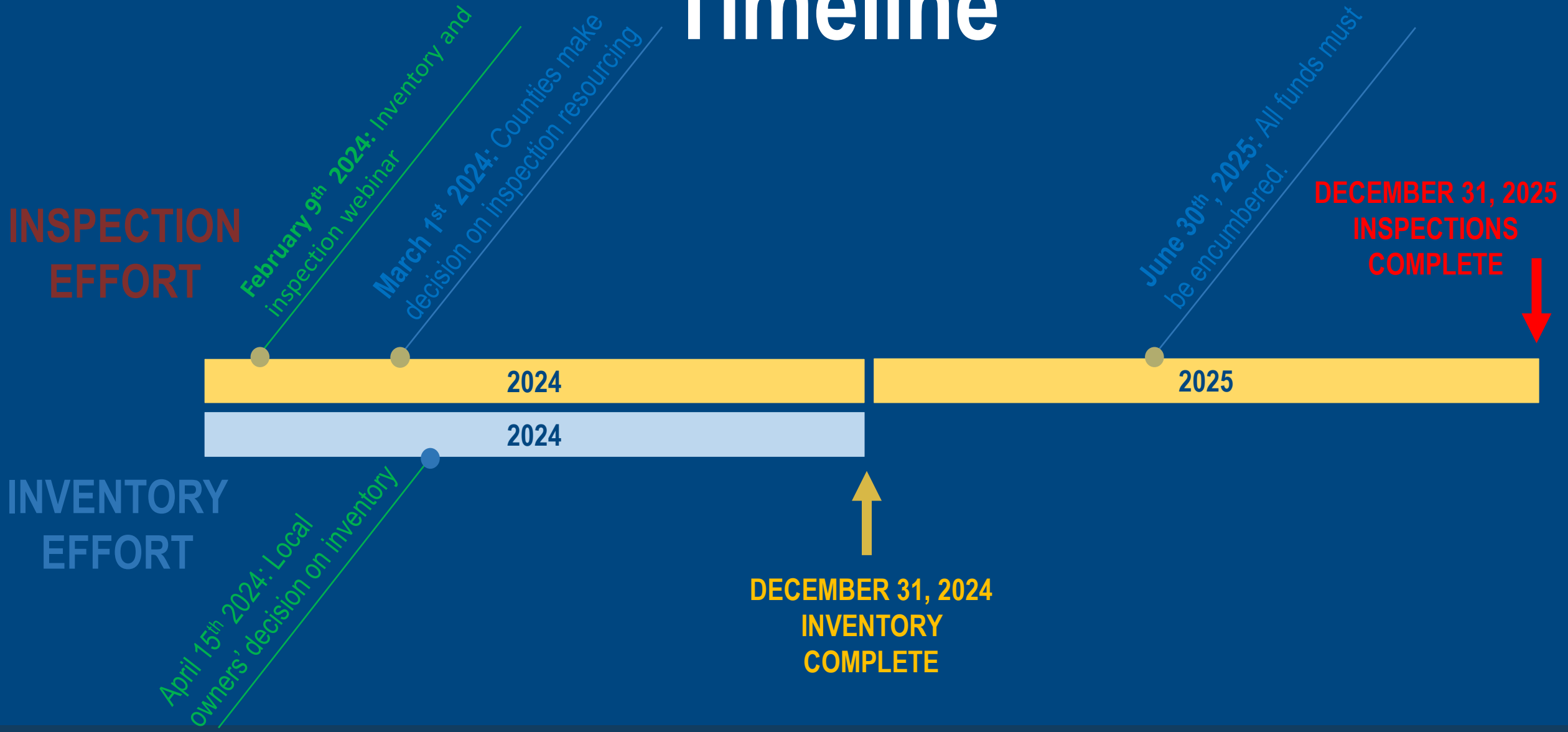
Critical Safety Concern

- 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 ≤ 5.
- **Photos**
  - Profile/side and roadway views
  - Defect or deterioration that justifies any NBI rating ≤ 5
  - Safety Concerns

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

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
    - Terry Schumacher at schumacher@wicounties.org
  - Or mail invoice to both WisDOT and WCA

David Bohnsack
Wisconsin DOT-Bureau of Structures
4822 Madison Yards Way 4th 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 ≤ 20’ prior to starting the inspection.
  - Structures ≤ 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 ≤ 5.

Critical Safety Concerns

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

WISCONSIN COUNTIES ASSOCIATION

WISCONSIN COUNTY HIGHWAY ASSOCIATION

WISCONSIN DEPARTMENT OF TRANSPORTATION

LEAGUE OF WISCONSIN MUNICIPALITIES

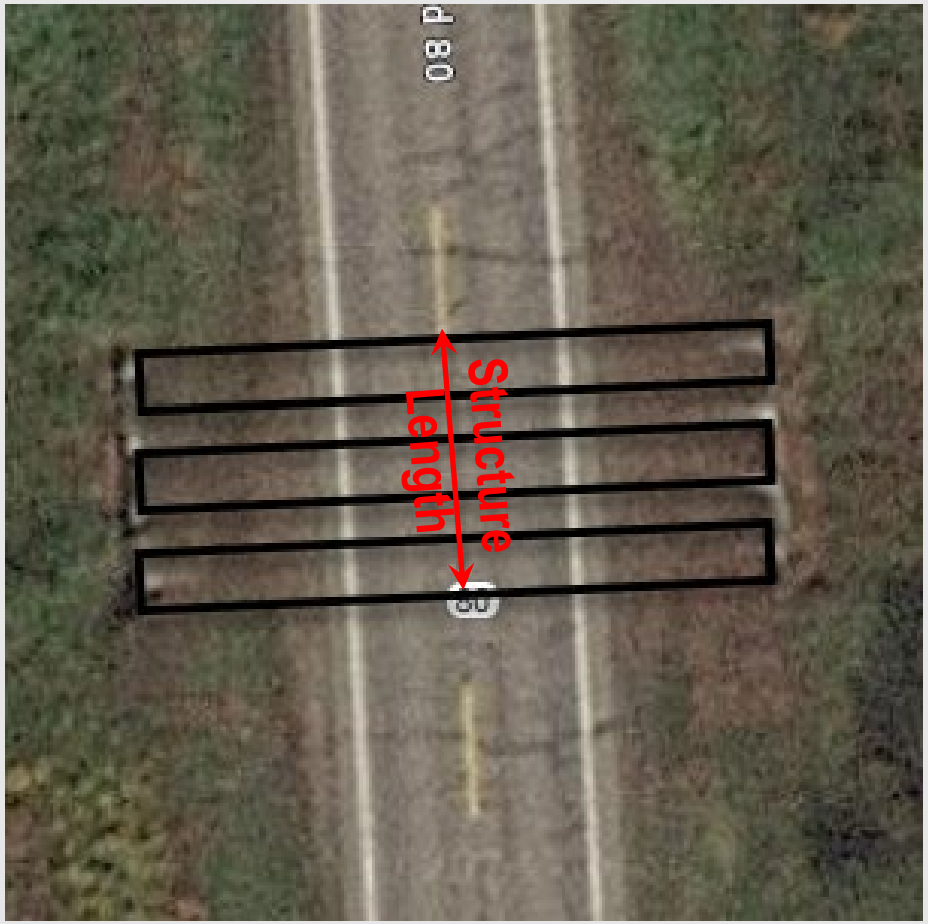
WTA WISCONSIN TOWNS ASSOCIATION
Empowering Town Officials

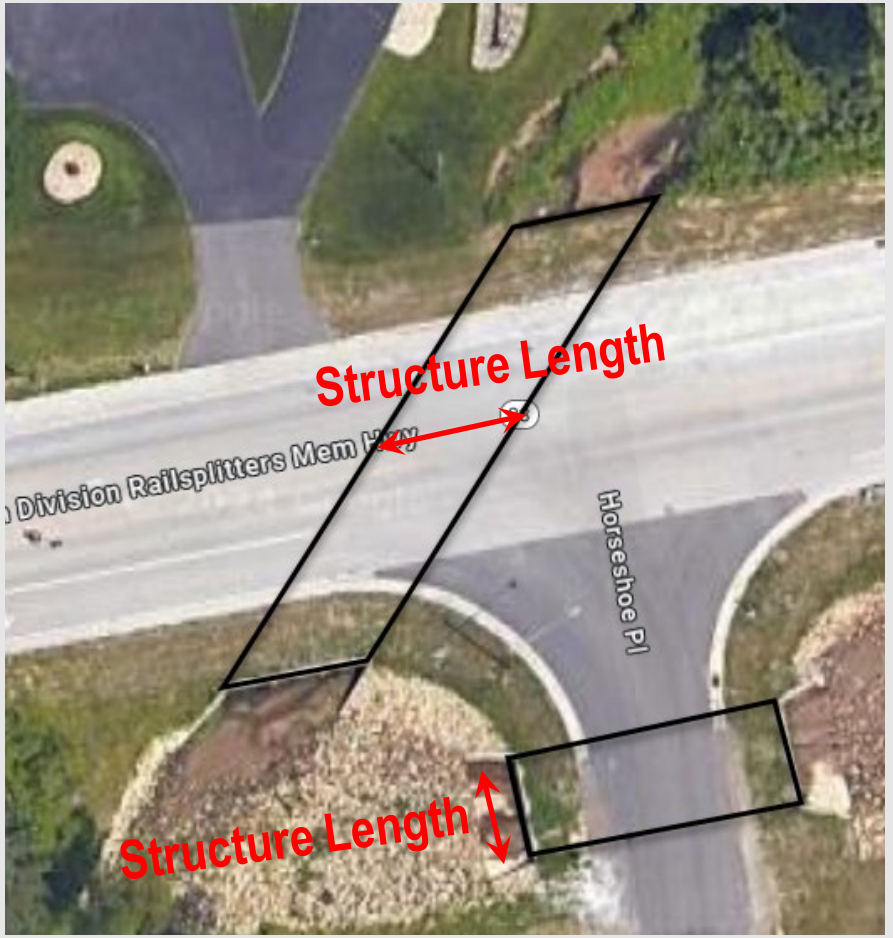
Questions?

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

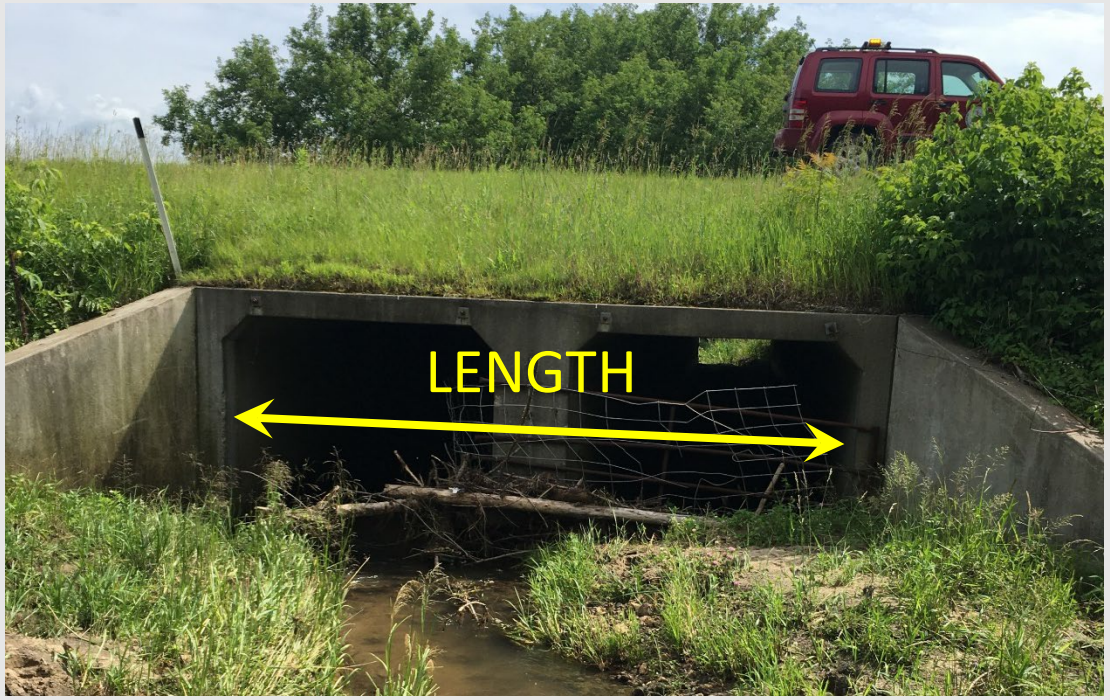
Multipipe Pipe Culvert

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

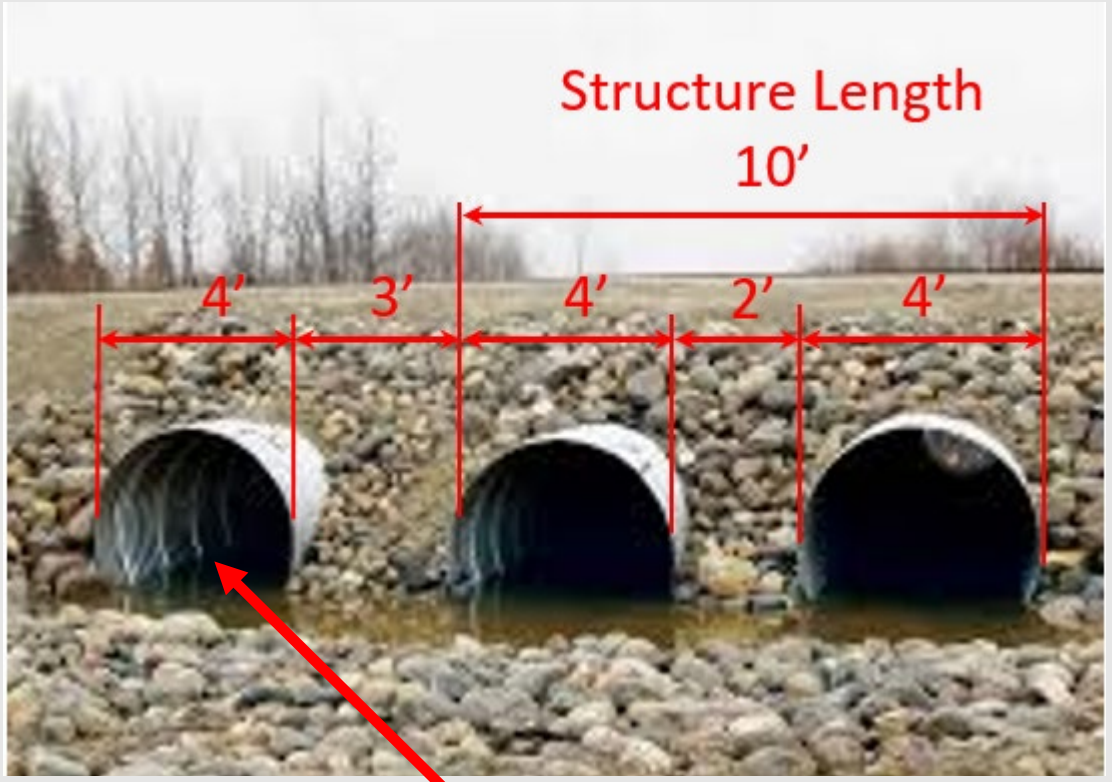
CONCRETE FLAT SLAB
ON TIMBER ABUTMENTS, 0° SKEW
(bridge like structure)

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’, 0º SKEW

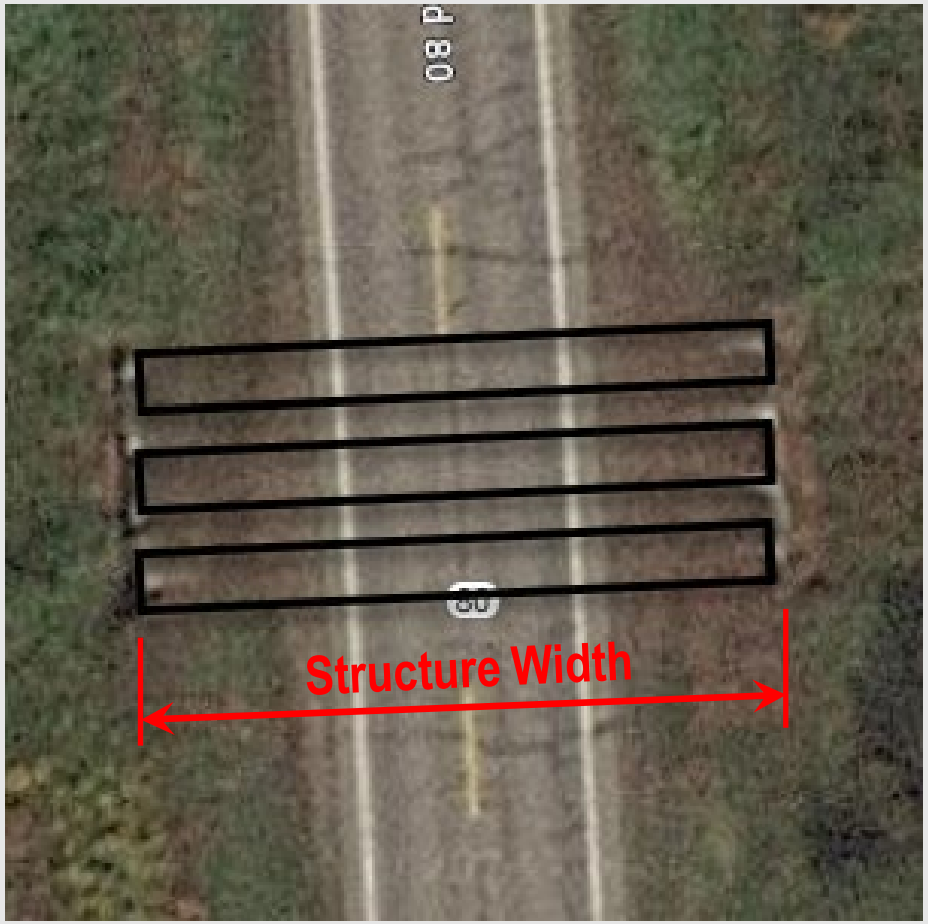
10’ SPAN LENGTH

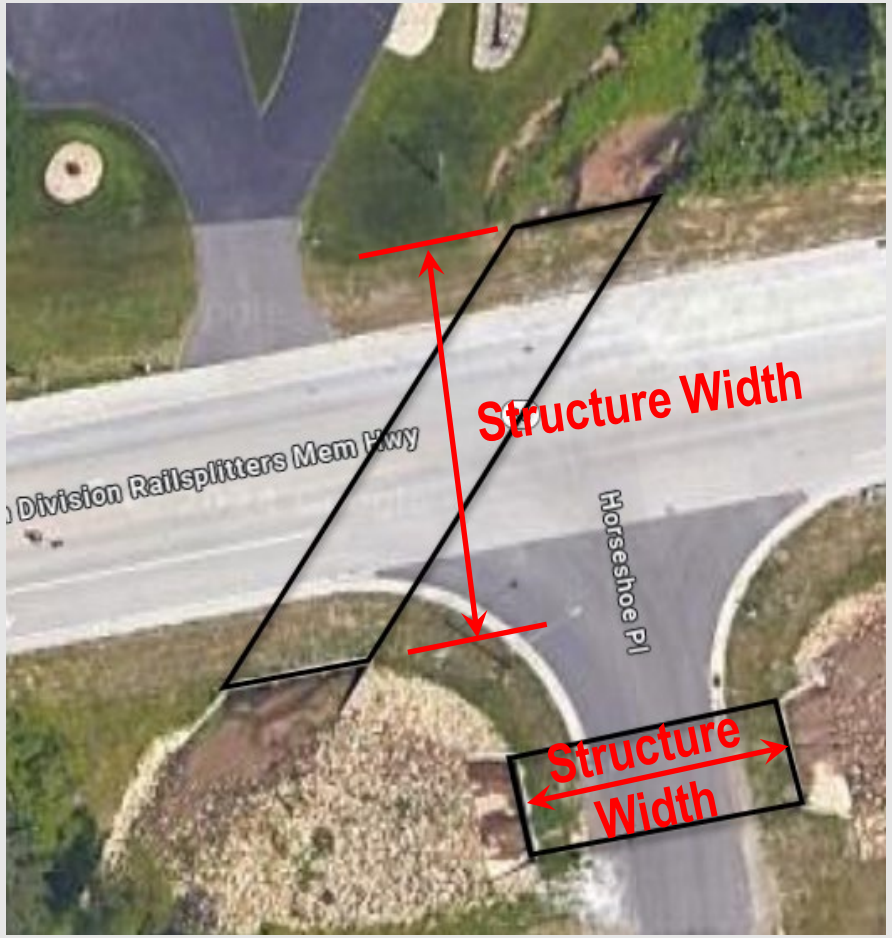
Structure Length = 10’ along C/L

Furthest 4’ pipe on the left does not qualify because the spacing is greater than ½ the span length of the adjacent structures

Structure Width

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



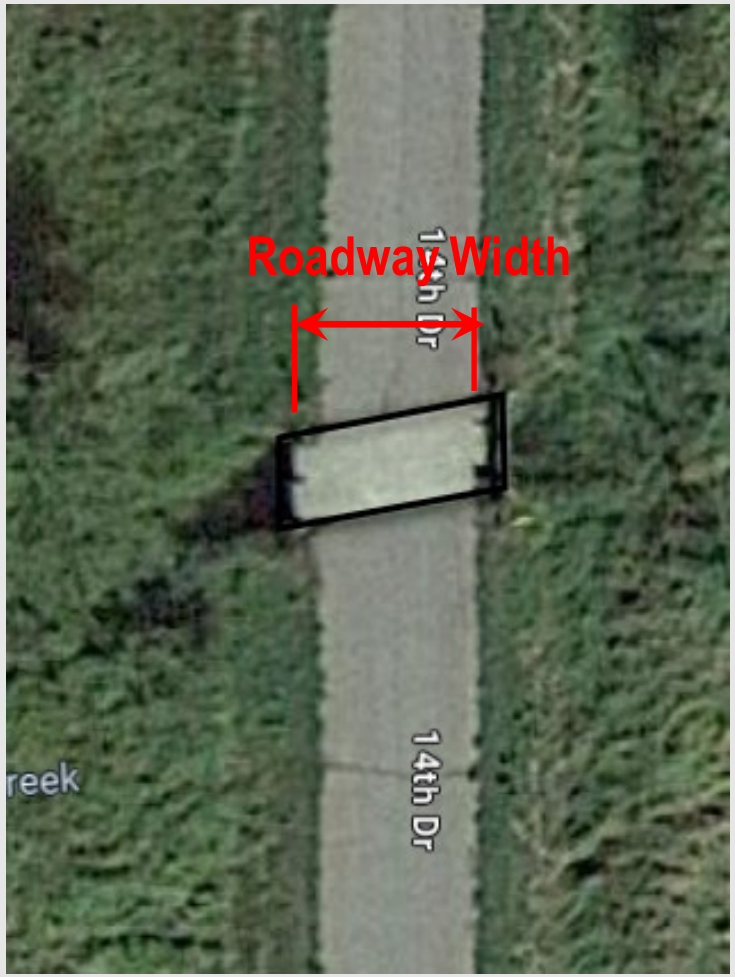


Structure Width

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

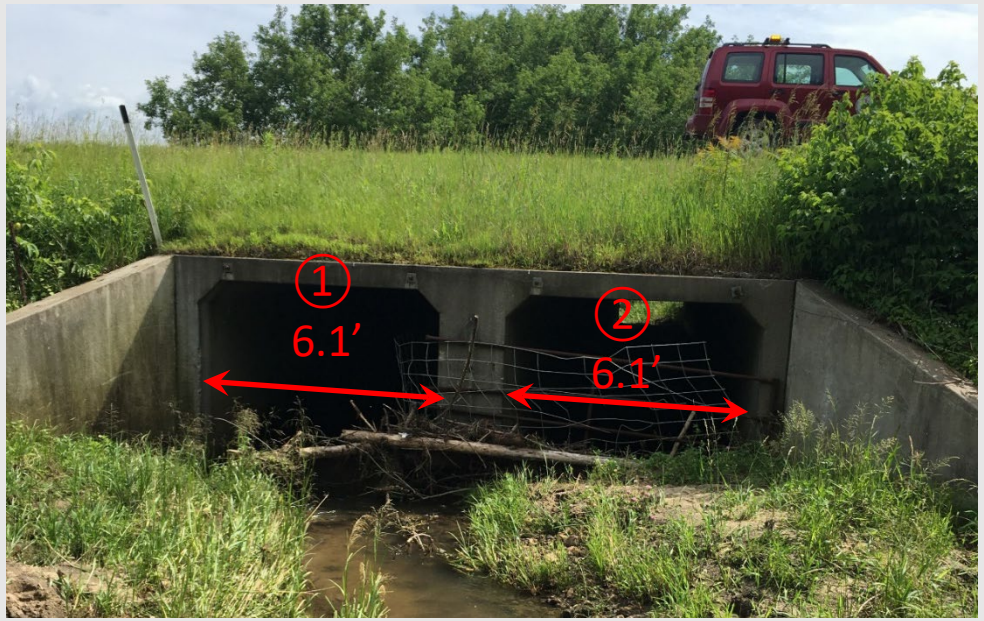
- Type/Configuration – bridge, box, arch, pipe
- Material – code the primary material
  - Concrete, precast concrete, steel, galvanized steel, aluminum, timber, masonry, plastic
  - If the structure is bridge like, code the material of the girders or beams

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.

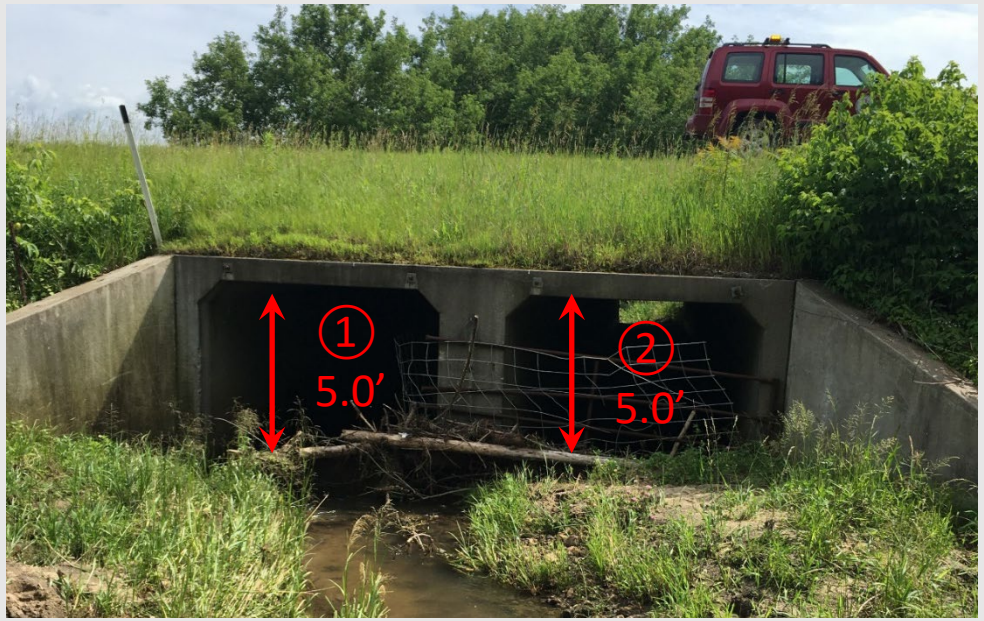
Pipe/Cell/Span Width (0.1 feet)

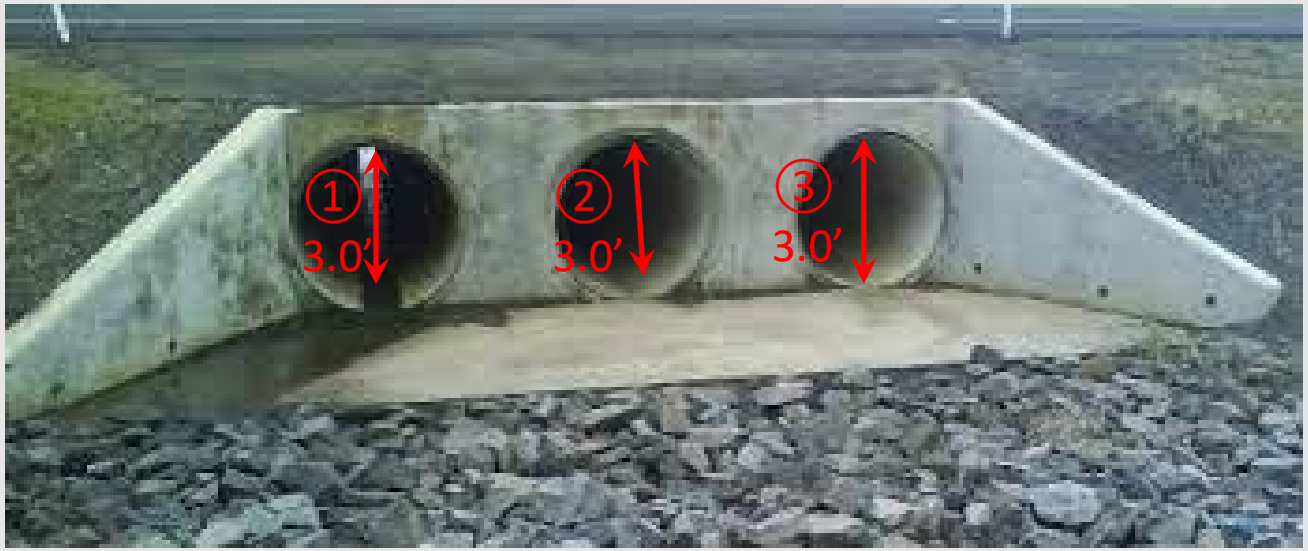
- Measure each pipe/cell/span inside to inside wall



Opening Height (0.1 feet)

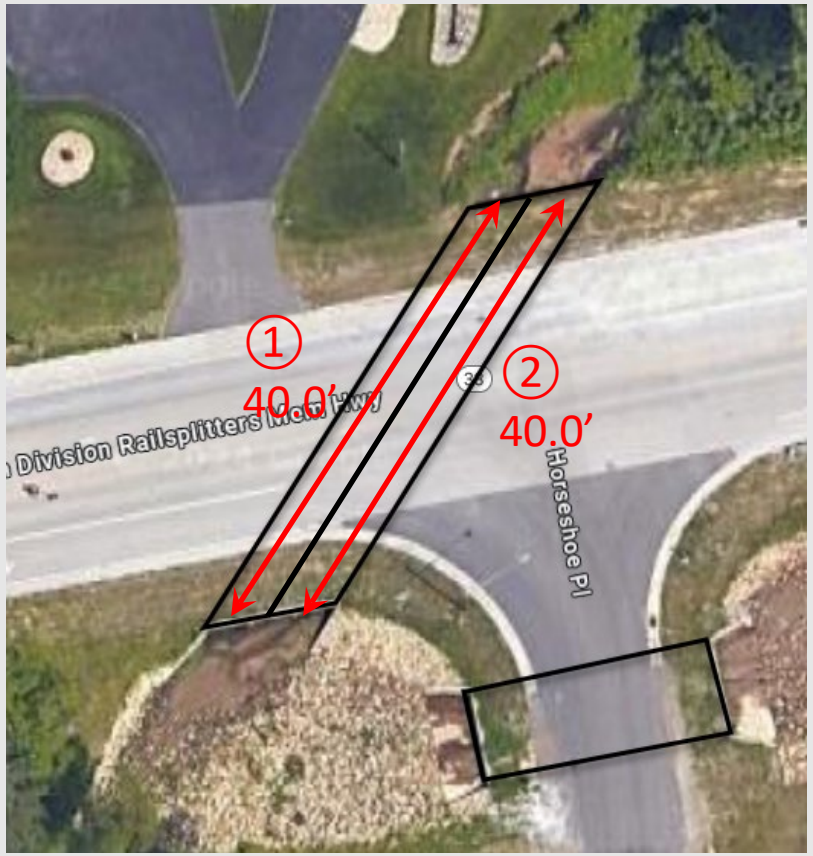
- Measure each pipe/cell/span height – inside to inside

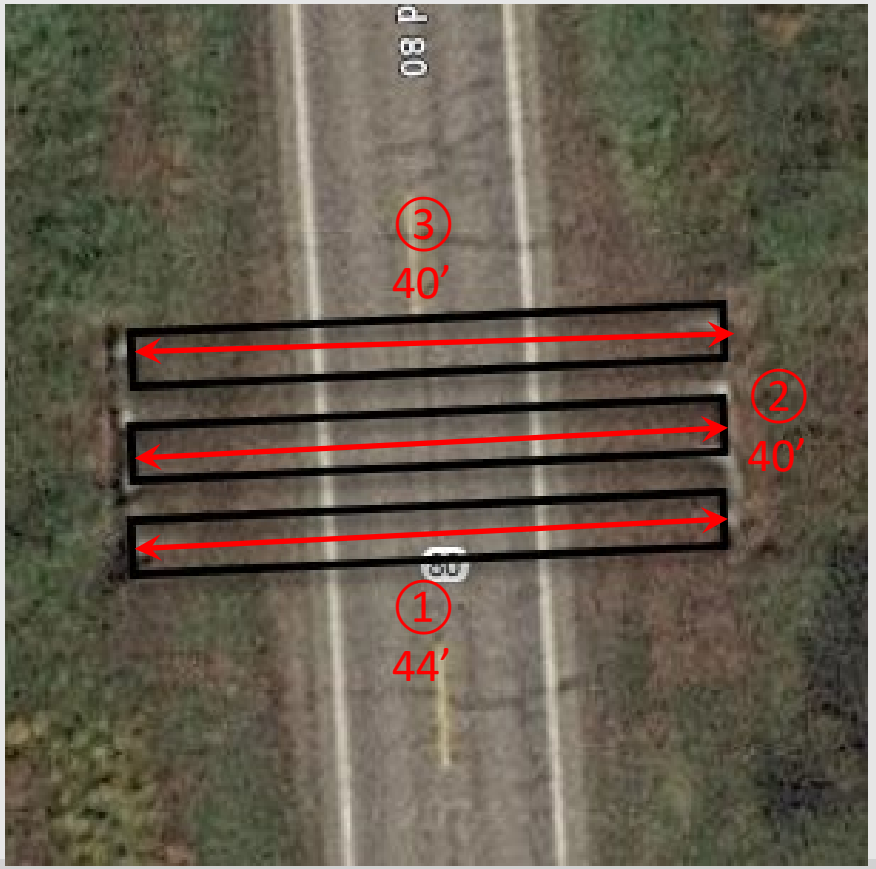




Pipe/Cell Length (0.1 feet)

- 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.