

## Local-Owned Structures Between 6ft and 20ft – Program Summary

The WisDOT 2023-25 budget includes the following language:

*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.*

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

*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 \(WCA\)](#)

### Program Overview

Efforts for this program were broken into two phases; inventory and inspections.

#### **Inventory**

WisDOT worked with local owners' associations to communicate the details of the program. The inventory phase was intended to get a count of the number of eligible structures, their location, and a few other basic pieces of information.

- Information during this phase was kept to a minimum for accuracy, to encourage participation, and in consideration of the timeline to use available funding.

Information collected by local municipalities was submitted to the appropriate County Highway Commissioner. The commissioner then submitted information to WisDOT's Highway Structures Information System (HSIS), an online database used to store all bridge and structures-related information.

- Local owners were reimbursed \$100 per structure for the inventory collection/submittal.
- The County Highway Commissioners acted as points of contact for receiving/distributing payments. WisDOT distributed reimbursement funds to the commissioners, who in turn reimbursed the appropriate local owners.

WisDOT communicated a deadline of December 31, 2024 to complete the inventory effort.

To date, WisDOT has received inventory information for **17,560 structures**.

- While we may receive a small number of new structures submitted to the inventory, this should be close to the final number of structures for this effort.

More information on the program can be found at the WisDOT website below.

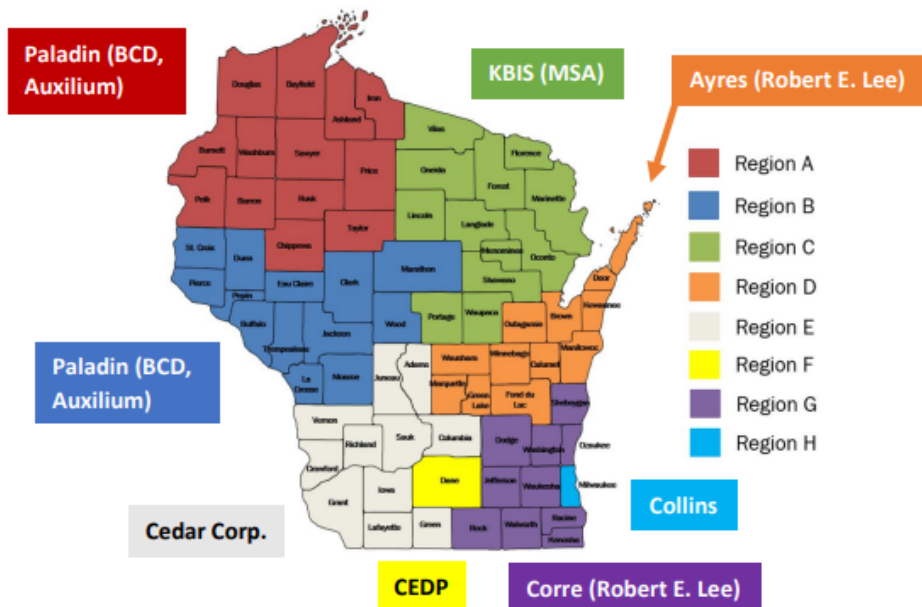
<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/strct/local-structures.aspx>

## Inspections

To determine condition, all structures will be inspected by Wisconsin certified bridge inspectors.

- Inspections will be reimbursed at \$350 per structure.
- Inspections for county-owned structures may be performed by qualified county staff or by a consultant firm of the county's choosing.
- Inspections for cities, towns, and villages will be performed by consultant engineers.
  - The state was divided into 8 regions, corresponding to the Wisconsin Towns Association's districts.
  - Collaborating with local owners' associations, WisDOT led an effort to solicit for these inspection services and select a consultant firm or team for each region. Results of these selections are shown below.

Region	Firm(s) Selected
A	Paladin Project Management Group, LLC (Prime) <ul style="list-style-type: none"> <li>• BCD Services, LLC (subcontractor)</li> <li>• Auxilium North (subcontractor)</li> </ul>
B	Paladin Project Management Group, LLC (Prime) <ul style="list-style-type: none"> <li>• BCD Services, LLC (subcontractor)</li> <li>• Auxilium North (subcontractor)</li> </ul>
C	KBIS (prime) <ul style="list-style-type: none"> <li>• MSA (subcontractor)</li> </ul>
D	Ayres Associates, Inc. (prime) <ul style="list-style-type: none"> <li>• Robert E. Lee &amp; Associates, Inc. (subcontractor)</li> </ul>
E	Cedar Corporation
F	CEDP, Inc.
G	Corre, Inc. (prime) <ul style="list-style-type: none"> <li>• Robert E. Lee &amp; Associates, Inc. (subcontractor)</li> </ul>
H	Collins Engineers, Inc.



Overall condition for these structures is coded based on the National Bridge Inventory (NBI) 0 – 9 rating scale. A high-level description for each rating is shown below. More detailed information/instruction for inspectors can be found in national bridge inspection standards.

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.

To date, **5,174 inspections** have been completed and entered into WisDOT's HSIS database.

- 2,632 are reported as in good condition (50.9%)
- 2,143 are reported as in fair condition (41.4%)
- 381 are reported as in poor condition (7.4%)
- 18 are reported in severe condition (0.3%)

The total number of inspections represents about 30% of the total inventory. It's worth noting that the percentages of good/fair/poor/severe have remained stable, even as the number of inspections completed grows.

For high-level planning purposes, below is some rule-of-thumb guidance for replacement needs based on the structure condition ratings shown above.

#### ***Good condition (7 – 9 condition rating)***

- Structure is in good condition, with little deterioration noted. Dependent on structure type and site-specific conditions, the structure has many (20+) years of life remaining. Because of this, no advanced planning/funding considerations are required.

#### ***Fair condition (5 – 6 condition rating)***

- Structure shows some signs of deterioration but is still structurally sound and functional. Dependent on structure type and site-specific conditions, the structure likely has at least 10 - 20 years of life remaining. Structures in fair condition may be included in long-term planning efforts, but no near-term action is required.
- Depending on structure- and site-specific conditions, there may be rehabilitation options to extend the structure life an additional 20 years.

### ***Poor condition (3 –4 condition rating)***

- Structure shows some signs of deterioration that affect the capacity of the structure and/or its ability to properly allow water to flow through/underneath it. Dependent on structure type and site-specific conditions, the structure is assumed to have about 5 - 10 years of life remaining. Condition observations for poor structures are generally more volatile; these structures are susceptible to more rapid deterioration. The local owner should be developing plans for replacement and identifying required funding for eventual replacement.

### ***Severe condition (0 –2 condition rating)***

- Structure shows severe deterioration to the point that performance of the structure and capacity are significantly diminished. Structures in severe condition likely require load postings or closure in order to ensure the safety of the traveling public. They may be a flood/over-topping risk due to no longer being able to properly convey water. Action is required for structures in severe condition. The structure should be replaced as soon as practicable and load posting, partial closure, or full closure may be required.

It should be noted that all structures, regardless of condition, should be monitored to remove blockages which may affect water flow and lead to rapid deterioration of the structure or surrounding soils.

## **Program Next Steps**

### ***Inventory***

- Though we are past our target deadline, we are willing to accept any outstanding structures that communities would like to submit.
- We continue to communicate the details of the program to a broad audience as we have the opportunity; WCHA meetings, WTA meetings, etc.

### ***Inspection***

- We are targeting December 31, 2025 for completion, with funds encumbered by June 30, 2025.
- Inspectors are finding a small number of severely deteriorated structures that need immediate attention in the form of a load posting, partial or full closure. As they encounter these situations, inspectors are coordinating with affected parties; WisDOT, county commissioners, and local municipality points-of-contact.

### ***Load Rating***

- In developing this program WisDOT wanted to include load ratings as a possible tool to evaluate structures with potential safety issues. In evaluating inspection information received to-date, we don't feel there is value in pursuing a consultant engineering contract to perform this work. With no design plans or calculations to review, there are simply too many unknowns (material strengths, reinforcement size and spacing, etc.) to derive a reliable analysis of the structure capacity.
- Inspection information combined with engineering judgement by a combination of consultant inspectors, local owners, county commissioners, and WisDOT have thus far proven an effective, efficient method to address structures in poor or severe condition.
- In several cases, action has been taken to monitor, load post, partially or fully close structures with safety concerns.

### **Funding**

- The total amount allocated to this effort through the 2023-25 state budget is \$12,500,000.
- With the current submitted inventory, the Department will provide reimbursements as follows:
  - Inventory: 17,560 structures x \$100/inventory = \$1,756,000
  - Inspection: 17,560 structures x \$350/inspection = \$6,146,000
    - **Reimbursement total = \$7,902,000**
- Any remaining funds not used for inventory and inspection will be unencumbered and lapse to the transportation fund.
  - The 2023-25 budget created a biennial appropriation for this purpose and the funds cannot be used for other work, such as structure replacement, and they do not carryover into future biennia.