

## A-17 Lincoln Co Hilt Lake Bridge Rehab

State of Wisconsin  
Department of Natural Resources  
[dnr.wi.gov](http://dnr.wi.gov)

## Motorized Recreation Grant Application

For: (choose all that apply)

Form 8700-159 (R 02/2024)

Page 1 of 5

Due Date: April 15

- ☒ ATV/UTV Trail Aid  
☐ Snowmobile Trail Aid

**Notice:** Completion of this form is required under Wisconsin Statutes 23.09(26) and 23.33. Failure to complete this form will result in denial of financial assistance. Personally identifiable information found on this form is not intended to be used for any other purpose. The Department of Natural Resources (DNR) may provide this information to requesters as required by Wisconsin's Public Records law (ss. 19.31 – 19.39, Wis. Stats.).

**Instructions:** Applications may combine more than one source of funds. They may be submitted for consideration of traditional ATV, UTV, Snowmobile and Motorized Stewardship funding. Submit one copy of all forms and attachments. See Page 2 for necessary attachments. Send applications to your [Community Services Specialist](#).

| DNR Use Only |        |
|--------------|--------|
| Category     | Number |
|              |        |

## Section 1: Applicant Information

|  |       |                            |  |       |          |
|--|-------|----------------------------|--|-------|----------|
| Applicant / Organization Name                                      |       |                            | Check Recipient: Individual other than authorized individual to act on behalf of the applicant. <input checked="" type="checkbox"/> Select if the same as applicant. |       |          |
| Lincoln County Forestry, Land and Parks Department                 |       |                            |  |       |          |
| Individual Authorized to Act on Behalf of Applicant per Resolution |       |                            | Check Recipient Name (Name to Appear on Check)   |       |          |
| Dean Bowe  |       |                            | Dean Bowe  |       |          |
| Title  |       |                            | Title  |       |          |
| County Forest Administrator  |       |                            | County Forest Administrator  |       |          |
| Address  |       |                            | Address  |       |          |
| 801 North Sales Street Suite 106                                   |       |                            | 801 North Sales Street Suite 106   |       |          |
| City   | State | ZIP Code                   | City   | State | ZIP Code |
| Merrill  | WI    | 54452                      | Merrill  | WI    | 54452    |
| Telephone Number   |       | Email Address              |  |       |          |
| (715) 539-1034   |       | dean.bowe@co.lincoln.wi.us |  |       |          |

## Section 2: Project Information Required for all Projects

|                                       |          |                 |         |     |                      |  |
|---------------------------------------|----------|-----------------|---------|-----|----------------------|--|
| Project Title                         |          |                 |         |     | Current Funded Miles | New Miles (if applicable)                        |
| Hilt Lake Summer ATV UTV Bridge Rehab |          |                 |         |     | 47.4                 |  |
| County                                | Township | Range           | Section | ¼ ¼ | ¼                    | GPS Coordinates:<br>Lat. 45.515<br>Long. -89.457 |
| Lincoln                               | 35 N     | 8<br>● E<br>○ W | 14      | NW  | SE                   |  |

## Project Description Summary

Lincoln County is requesting funding to rehab an existing wooden bridge on our summer ATV/UTV trail system. This bridge is located on a highly used segment of trail that connects to Oneida County. Failure to repair the bridge soon will result in the closure of this important segment of trail. A recent bridge inspection from a 3rd party found the bridge's deck and wear surface to be in poor condition. The wooden 98'x13' bridge was constructed in 2015 with grant funding from the WI DNR summer ATV program. The bridge lies in a low damp area that receives very little direct sunlight. The high moisture environment that this bridge is located in has resulted in a rapid deterioration of the bridge's deck and wear surface. The funds being applied for will be used to replace the bridge's deck, wear surface, and railings. Since the bridge is in a high moisture area ground contacted treated lumber will be used.

\*\*At the time of this application submittal we are still waiting for a contractor to get back to us with an estimate. We are hopeful the estimate comes in soon and that we are able to update the application.

☒ I certify that all maintenance land use agreements are on file.

## Estimated Cost

|                            |             |           |             |               |              |                      |
|----------------------------|-------------|-----------|-------------|---------------|--------------|----------------------|
| Maintenance                | Acquisition | Insurance | Development | Bridge Rehab. | Trail Rehab. | Total Estimated Cost |
|                            |             |           | \$80,000.00 |               |              | \$80,000.00          |
| Leave Blank – DNR Use Only |             |           |             |               |              |                      |
|                            |             |           |             |               |              |                      |

## Applicant Certification

|                                     |                             |
|-------------------------------------|-----------------------------|
| Printed Name of Authorized Official | Official's Title            |
| Dean Bowe                           | County Forest Administrator |

As the applicant's authorized official, I certify that, to the best of my knowledge, the information in this application is true and correct.

  
Signature of Authorized Official

  
Date Prepared



**Appendix A – Required for Bridge Rehab/Replace, New, or Reroute with New Bridge**
☒ Bridge Rehab/Replace    ☐ New Bridge    ☐ Reroute with new bridge

|  |                  |                     |   |                         |   |  |
|--|------------------|---------------------|---|-------------------------|---|--|
| County<br>Lincoln  | Township<br>35 N | Range<br>8          | Section<br>14   | ¼ ¼<br>NW               | ¼<br>SE   | GPS Coordinates:<br>Lat. 45.515<br>Long. -89.457 |
| Water Body Name<br>Unnamed stream  |                  |                     | Bridge Name<br>Oneida Connection Bridge   |                         | County Inventory Number<br>28                                 |  |
| Funded Trail Name or Number (SNARS if applicable)<br>Oneida Connection Summer ATV/UTV Trail                                    |                  |                     | Has this bridge site ever received development or rehabilitation funds in the past? <input checked="" type="radio"/> Yes <input type="radio"/> No Year: 2014 \$ 50,270.00 |                         |   |  |
| Bridge is located on: <input type="radio"/> Private property<br><input checked="" type="radio"/> Public property               |                  |                     | Old Bridge/Culvert Size 98'x13'   |                         | New Bridge/Culvert Size 98'x13'                               |  |
| Landowner Where Bridge is Located<br>Lincoln County Forest   |                  |                     | Telephone Number<br>(715) 539-1034  |                         | Length of Trail Use Agreement (5 year minimum)<br>Public Land |  |
| Current maximum load 14,000 lbs.   |                  | Age of Bridge<br>10 |   | Bridge Material<br>Wood |   |  |
| Proposed maximum load 14,000 lbs.  |                  |                     |   |                         |   |  |
| Sponsoring Club Name<br>Lincoln County   |                  |                     | Club Contact<br>Dean Bowe   |                         | Telephone Number<br>(715) 539-1034                            |  |
| Do you have your trail bridges posted as to maximum load?<br><input type="radio"/> Yes <input checked="" type="radio"/> No     |                  |                     | What is the maximum load of the other bridges on the system if groomed with this bridge?  |                         |   |  |
| What is the weight of your puller & drag/grading equipment?<br>Grading equipment is not taken across the bridge.               |                  |                     |   |                         |   |  |
| What other recreational trail uses are planned for this bridge?<br>None  |                  |                     |   |                         |   |  |
| If there are other Recreational uses planned, how much of the bridge cost will be paid for by non-snowmobile or non-ATV users? |                  |                     |   |                         |   |  |

- ☐ Yes ☒ No Have you contacted your local [DNR Water Management Specialist \(WMS\)](#) regarding a permit?  
☐ Yes ☒ No Is a permit needed? (Please provide any written correspondence from WMS.)  
☐ Yes ☒ No Have you contacted your County Zoning Dept. regarding a floodplain determination?  
☐ Yes ☒ No Will an H & H (hydrologic and hydraulic) study be required?

**Bridge Project Detailed Description**

Lincoln County is requesting funding to rehab an existing wooden bridge on our summer ATV/UTV trail system. This bridge is located on a highly used segment of trail that connects to Oneida County. Failure to repair the bridge soon will result in the closure of this important segment of trail. A recent bridge inspection from a 3rd party found the bridge's deck and wear surface to be in poor condition. The wooden 98'x13' bridge was constructed in 2015 with grant funding from the WI DNR summer ATV program. The bridge lies in a low damp area that receives very little direct sunlight. The high moisture environment that this bridge is located in has resulted in a rapid deterioration of the bridge's deck and wear surface. The funds being applied for will be used to replace the bridge's deck, wear surface, and railings. Since the bridge is in a high moisture area ground contacted treated lumber will be used.

**\*\*At the time of this application submittal we are still waiting for a contractor to get back to us with an estimate. We are hopeful the estimate comes in soon and that we are able to update the application.**

**Appendix A (continued)****Summarize Costs in Appropriate Categories:****Bridge Structure****Quote 1**☐ Steel   ☐ Wooden**Quote 2**☐ Steel   ☐ Wooden

Bridge Dimensions: \_\_\_\_\_

Bridge Manufacturer: \_\_\_\_\_

Design Weight Load \_\_\_\_\_ lbs.

Cost of Structure: 1. Engineering \$ \_\_\_\_\_

2. Structure \$ \_\_\_\_\_

**Subtotal** \$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

**Quote 1**☐ Contractor or ☐ Sponsor  
Estimate**Quote 2**☐ Contractor or ☐ Sponsor  
Estimate**Installation Costs:**

1. Engineering \$ \_\_\_\_\_

2. Site Preparation \$ \_\_\_\_\_

3. Abutments \$ \_\_\_\_\_

4. Pilings/Piers \$ \_\_\_\_\_

5. Approaches \$ \_\_\_\_\_

6. Riprap \$ \_\_\_\_\_

7. Labor \$ \_\_\_\_\_

8. Equipment Rental \$ \_\_\_\_\_

9. Culverts \$ \_\_\_\_\_

10. H &amp; H Study \$ \_\_\_\_\_

11. Wetland Delineation \$ \_\_\_\_\_

12. Other \_\_\_\_\_ \$ \_\_\_\_\_

**Subtotal** \$ \_\_\_\_\_**Total Cost** \$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

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\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

**For the application grant, you must take the lowest of the two quotes.****Entire Deck and Railing Projects**☒ Contractor   ☐ Sponsor   ☐ ClubBridge Dimensions: 98'x13'Design Weight Load 14,000 lbs.

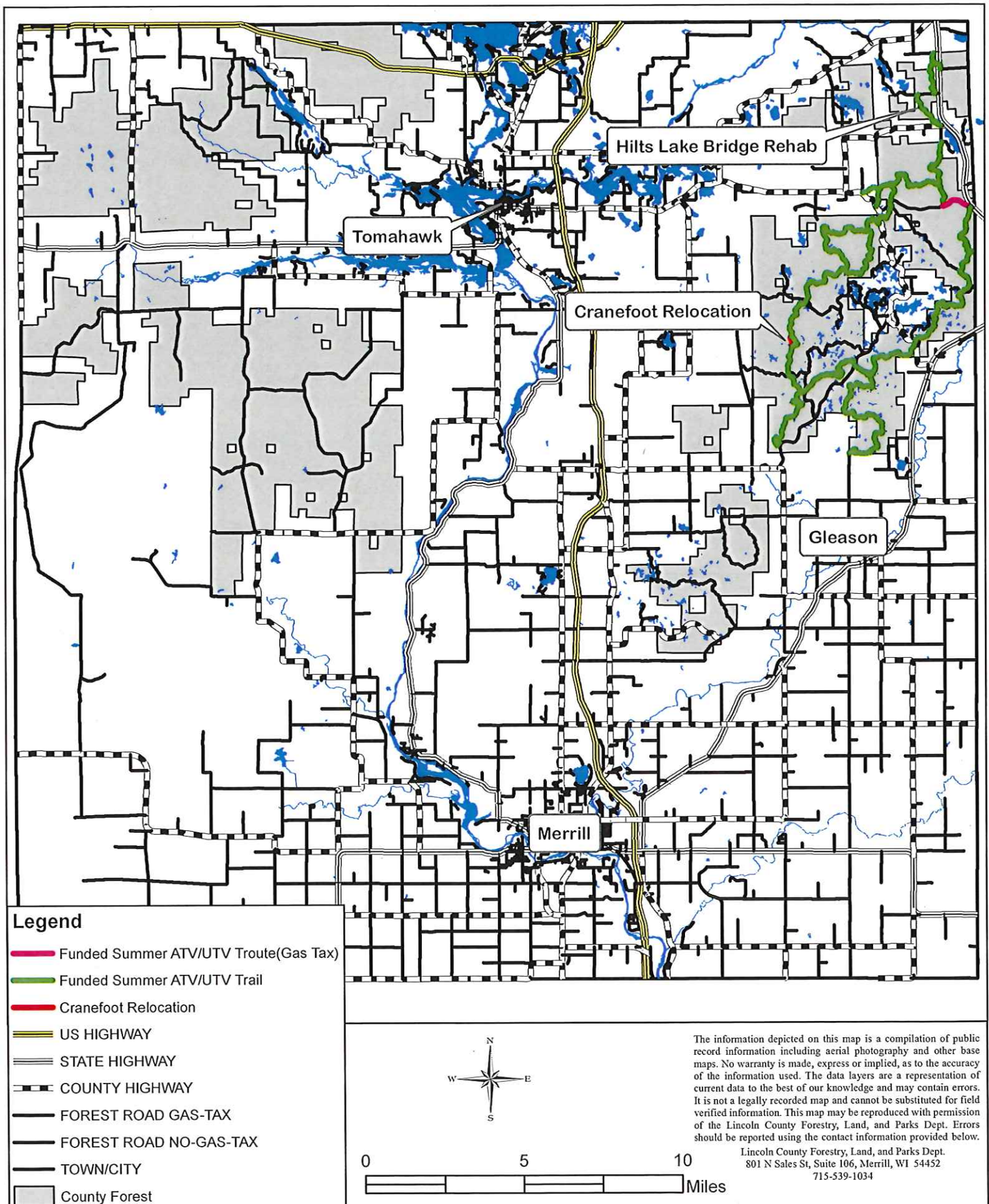
1. Materials \$ \_\_\_\_\_

2. Labor \$ \_\_\_\_\_

**Total** \$ \_\_\_\_\_

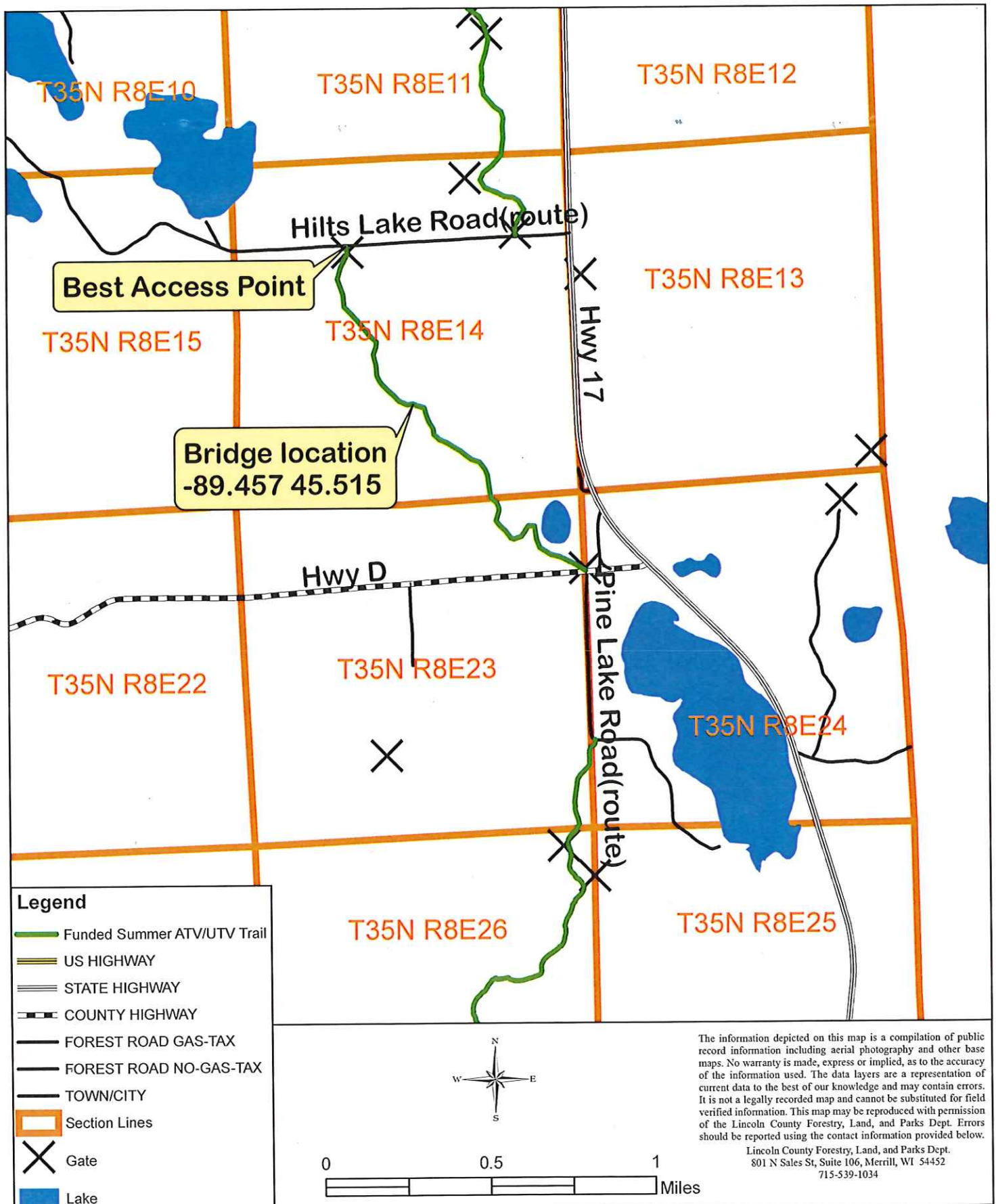


# Lincoln County 2025 Funded Summer ATV/UTV Trail and Troute with Projects



# Lincoln County

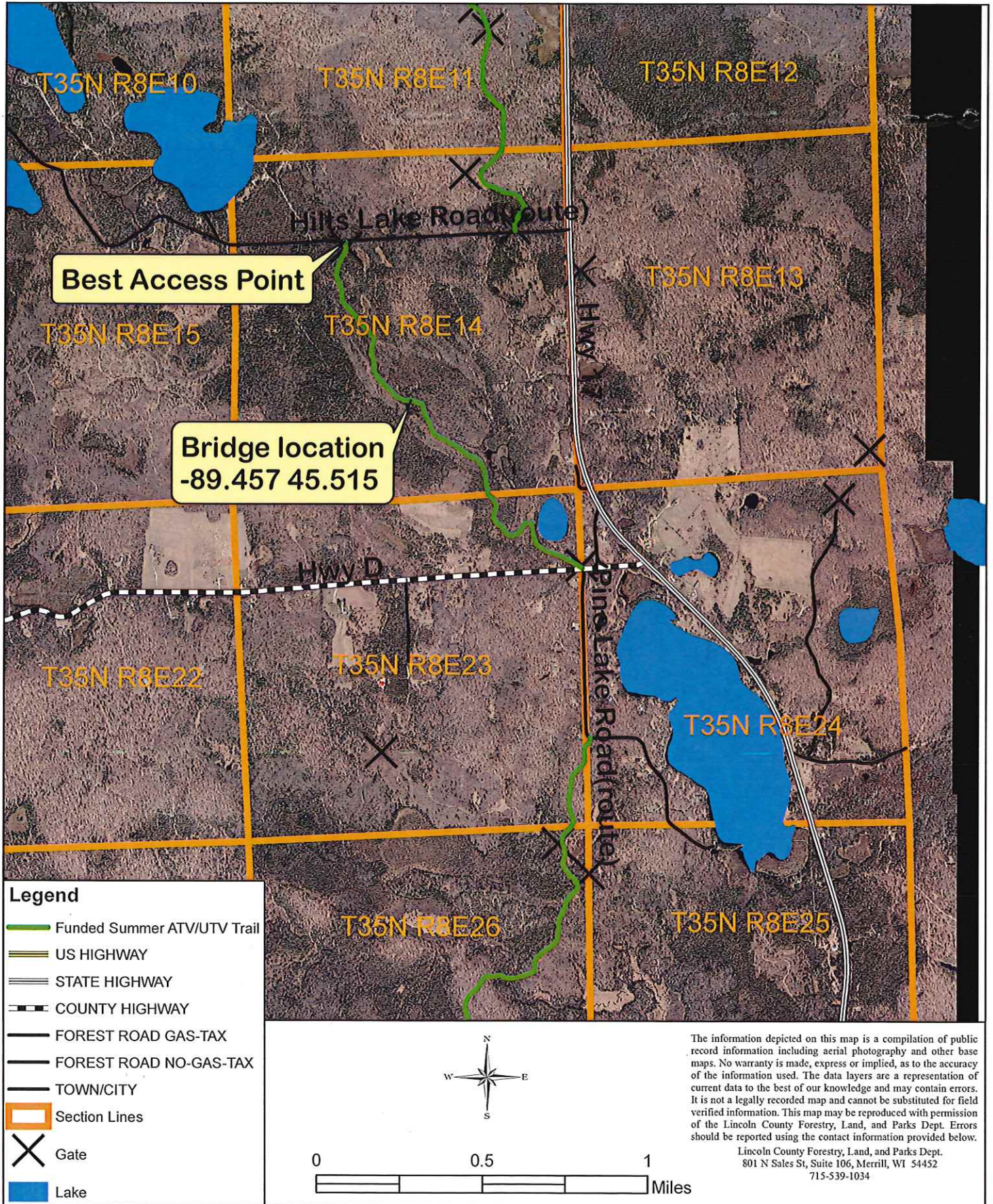
## Hilts Lake Summer ATV/UTV Bridge Rehab





# Lincoln County

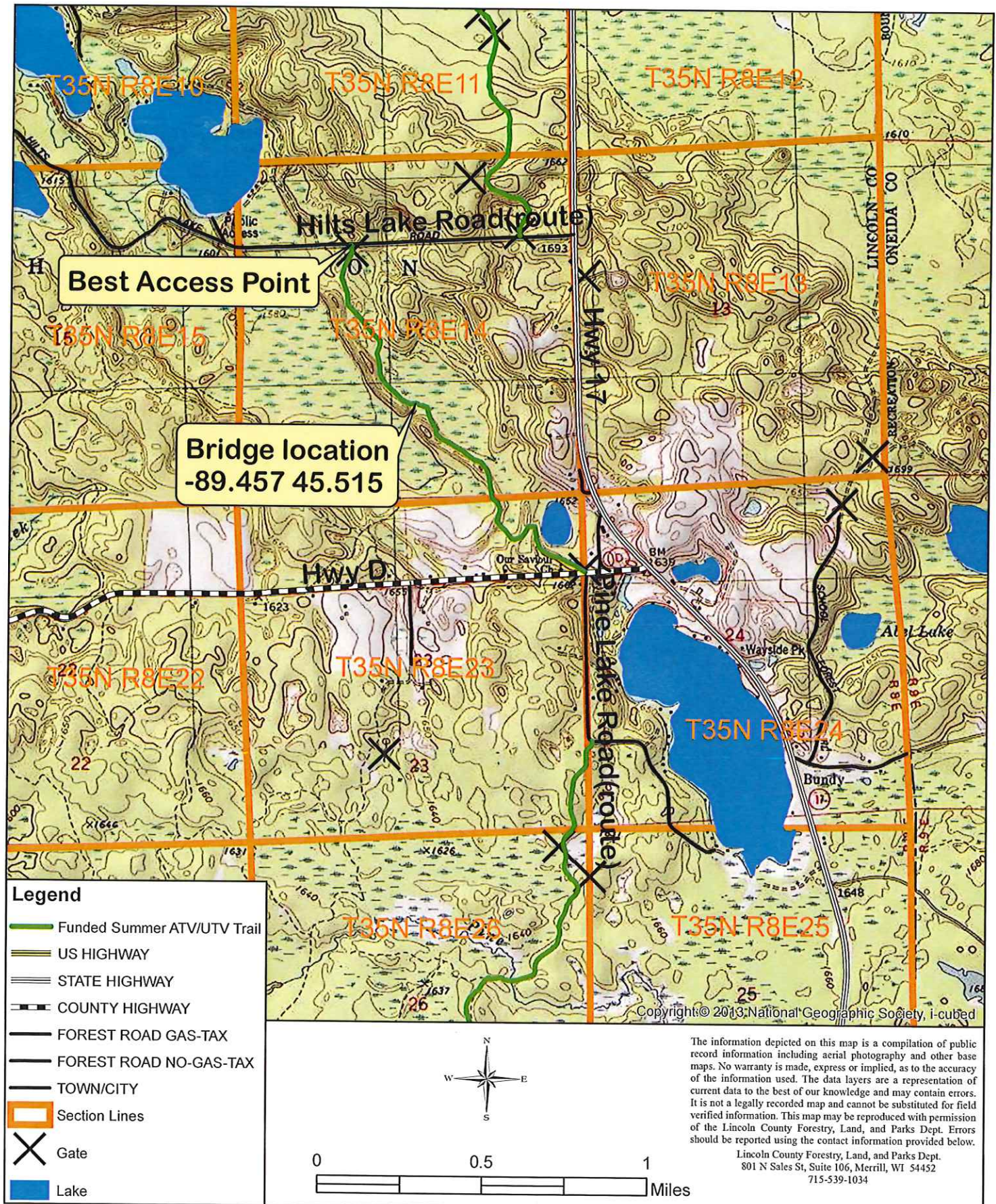
## Hilts Lake Summer ATV/UTV Bridge Rehab





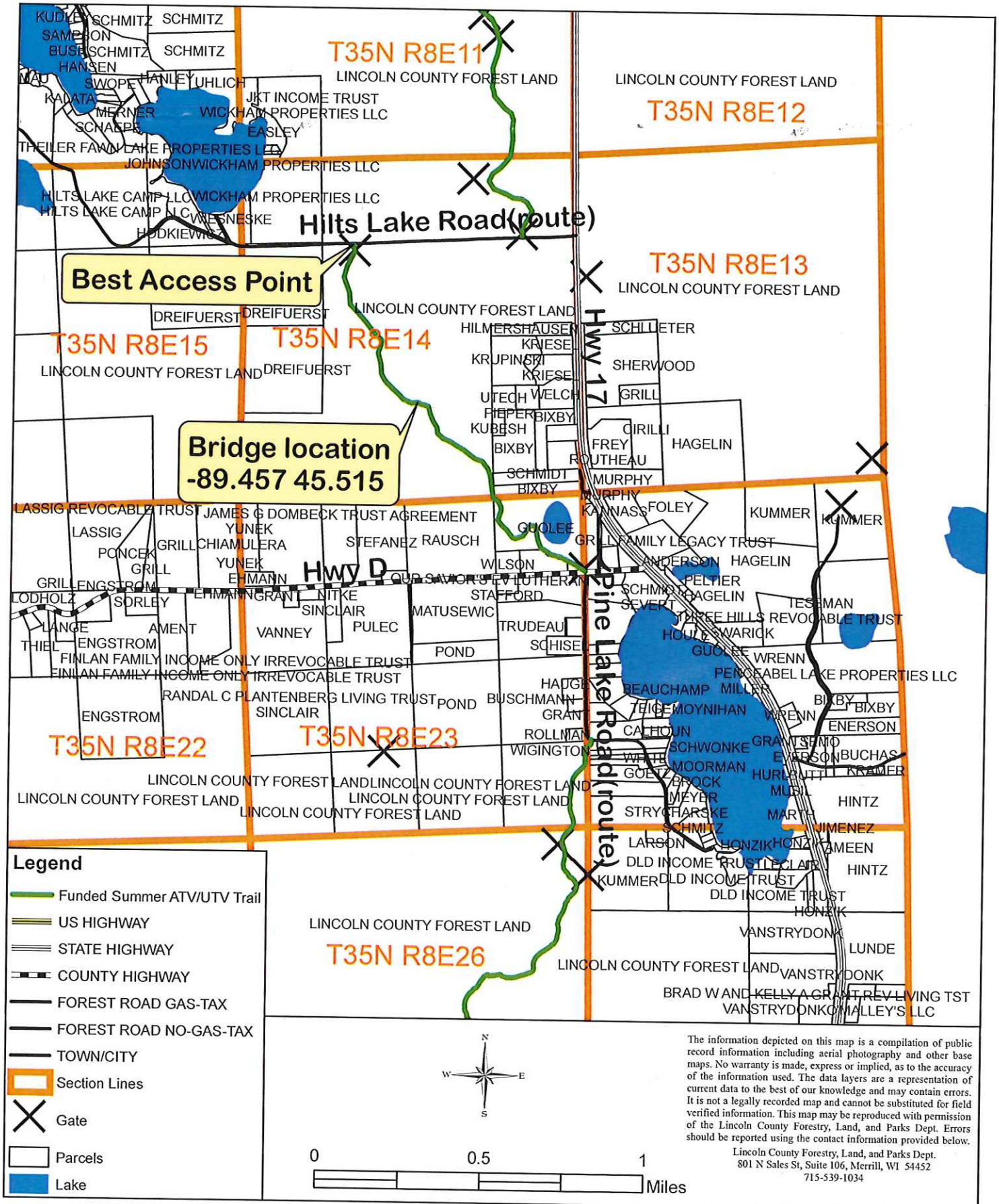
# Lincoln County

## Hilts Lake Summer ATV/UTV Bridge Rehab





# Lincoln County Hilts Lake Summer ATV/UTV Bridge Rehab







Date Printed: 3/14/2025 3:54 PM



# GENERAL

- ALL MATERIALS, WORKMANSHIP AND DETAILS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE "WISCONSIN COMMERCIAL BUILDING CODE".
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- THE TYPICAL DETAILS SHOWN ON THE DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE CONTRACT DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SAFETY DURING CONSTRUCTION.

## DESIGN LOADS

- LIVE LOADS: (1) 85 PSF PEDESTRIAN  
(2) 12,000 LB GROOMER
- SNOW LOADS: 50 PSF WITH LIVELOAD (2)
- WIND LOADS: 30 PSF

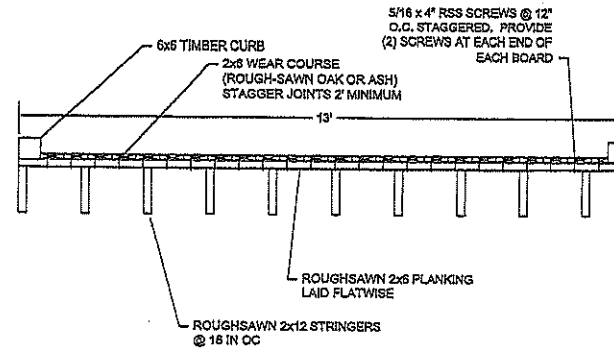
## FOUNDATIONS

- FOUNDATION WORK FOR THIS PROJECT SHALL CONSIST OF DRIVEN TIMBER PILES.
- THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED IN THE DRAWINGS, SPECIFICATIONS, TEST BORINGS OR GEOTECHNICAL REPORTS. THESE DATA ARE INCLUDED TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION AND TO REPRESENT CONDITIONS ONLY AT SPECIFIC LOCATIONS AT THE PARTICULAR TIME OBSERVATIONS WERE MADE.
- MINIMUM PILE EMBEDMENT SHALL BE 12'-0" BELOW ADJACENT FINISH EXTERIOR GRADE.
- PILE ELEVATIONS SHOWN ON THE DRAWINGS REPRESENT ESTIMATED DEPTHS AND ARE NOT TO BE CONSTRUED AS LIMITING THE AMOUNT OF EFFORT REQUIRED TO REACH SUITABLE BEARING MATERIAL.
- CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO PREVENT HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT WHICH WILL ENDANGER ADJACENT STRUCTURES, STREETS OR UTILITIES.

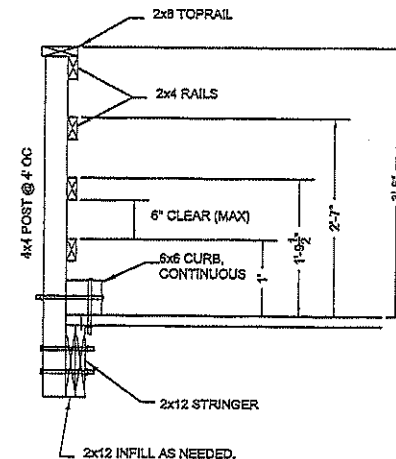
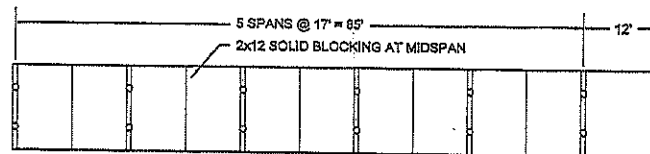
## STRUCTURAL WOOD CONSTRUCTION

- WOOD MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:  
AF&PA - "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION"  
AF&PA - "DESIGN VALUES FOR WOOD CONSTRUCTION"  
AITC - "TIMBER CONSTRUCTION MANUAL, PART II, DESIGN SPECIFICATIONS"  
APA - "U.S. PRODUCT STANDARD PS 1-83 FOR CONSTRUCTION AND INDUSTRIAL FLYWOOD"
- STRUCTURAL WOOD SHALL BE VISUALLY GRADED IN ACCORDANCE WITH ASTM D1990-00a1 OR ASTM D245. WOOD SHALL BE IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY A RECOGNIZED INSPECTION AGENCY.
- ALL WOOD SHALL HAVE A MOISTURE CONTENT OF 19% OR LESS PRIOR TO INSTALLATION.
- NEW WOOD SHALL HAVE ALLOWABLE UNIT STRESSES ACCORDING TO THE SCHEDULE OF WOOD DESIGN STRESSES SHOWN ON THE DRAWINGS.
- JOISTS SHALL BE BRIDGED WITH 1 X 3 CROSS BRIDGING, OR EQUAL, AT INTERVALS NOT EXCEEDING 8'-0".
- ALL JOISTS AND RAFTERS SHALL BE SUPPORTED BY DIRECT END BEARING ON WALLS, BEAMS, OR JOIST HANGERS.
- ALL WOOD PERMANENTLY EXPOSED TO THE WEATHER, IN CONTACT WITH EXTERIOR CONCRETE, OR IN CONTACT WITH THE GROUND SHALL HAVE A PRESERVATIVE TREATMENT EQUAL TO 0.4 P.C.F. RETENTION OF PRESSURE INJECTED PRESERVATIVE.

- WOOD PLANK DECKING SHALL BE INSTALLED IN THE "CONTROLLED RANDOM LAY-UP" PATTERN, CONTINUOUS OVER THREE SPANS.
- WOOD PLANK DECKING SHALL BE FACE NAILED TO EACH SUPPORT ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- USE COMMON WIRE NAILS UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307. USE STEEL WASHER BETWEEN HEAD OF BOLT OR LAG SCREW AND WOOD. USE STEEL WASHER BETWEEN NUT AND WOOD.
- ALL FASTENERS USED FOR PRESERVATIVE TREATED WOOD SHALL BE GALVANIZED OR STAINLESS STEEL. STAINLESS STEEL IS PREFERRED.
- JOIST HANGER FASTENERS MUST BE AS SUPPLIED AND/OR REQUIRED BY THE JOIST HANGER MANUFACTURER.
- WEAR DECK SHALL BE FASTENED TO SUB-DECK USING  $\frac{3}{8}$ " x 4" RUGGED STRUCTURAL SCREWS (RSS) WITH CLIMATEK COATING.



TYP SECTION THROUGH BOARDWALK



RAIL POST ATTACHMENT  
TO WOOD STRINGER  
WITH INFILL BLOCKING

| WOOD FRAMING DESIGN STRESSES |                 |                     |          |                                 |                            |           |
|------------------------------|-----------------|---------------------|----------|---------------------------------|----------------------------|-----------|
| MEMBER                       | SPECIES & GRADE | Fb Single Use (psi) | Fv (psi) | Pc (psi) PERPENDICULAR TO GRAIN | Pc (psi) PARALLEL TO GRAIN | E (psi)   |
| JOISTS AND BEAMS             | SYP #1          | 1,200               | 175      | 565                             | 1,600                      | 1,700,000 |
| DECK AND CURBS               | DF #2           | 875                 | 95       | 625                             | 1,300                      | 1,600,000 |
| POSTS & TIMBERS              | SYP #1          | 1,300               | 185      | 375                             | 875                        | 1,500,000 |
| PILES                        |                 |                     |          |                                 | 800                        |           |

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**PINE LAKE  
ATV BOARDWALK**  
LINCOLN COUNTY  
WISCONSIN

**McMULLEN & PITZ**  
17 MARITIME DRIVE  
MANITOWOC, WI

SEAL

Date:  
Design Firm:

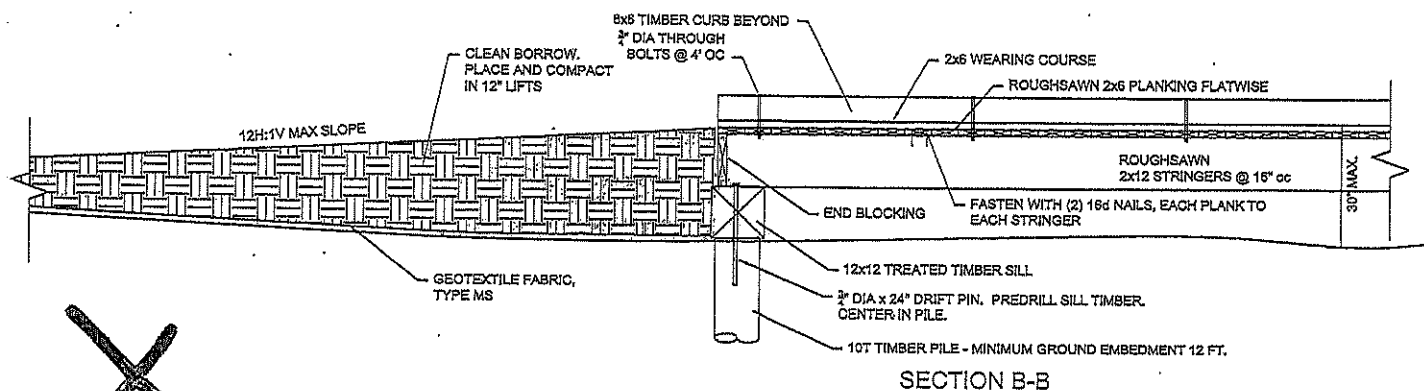
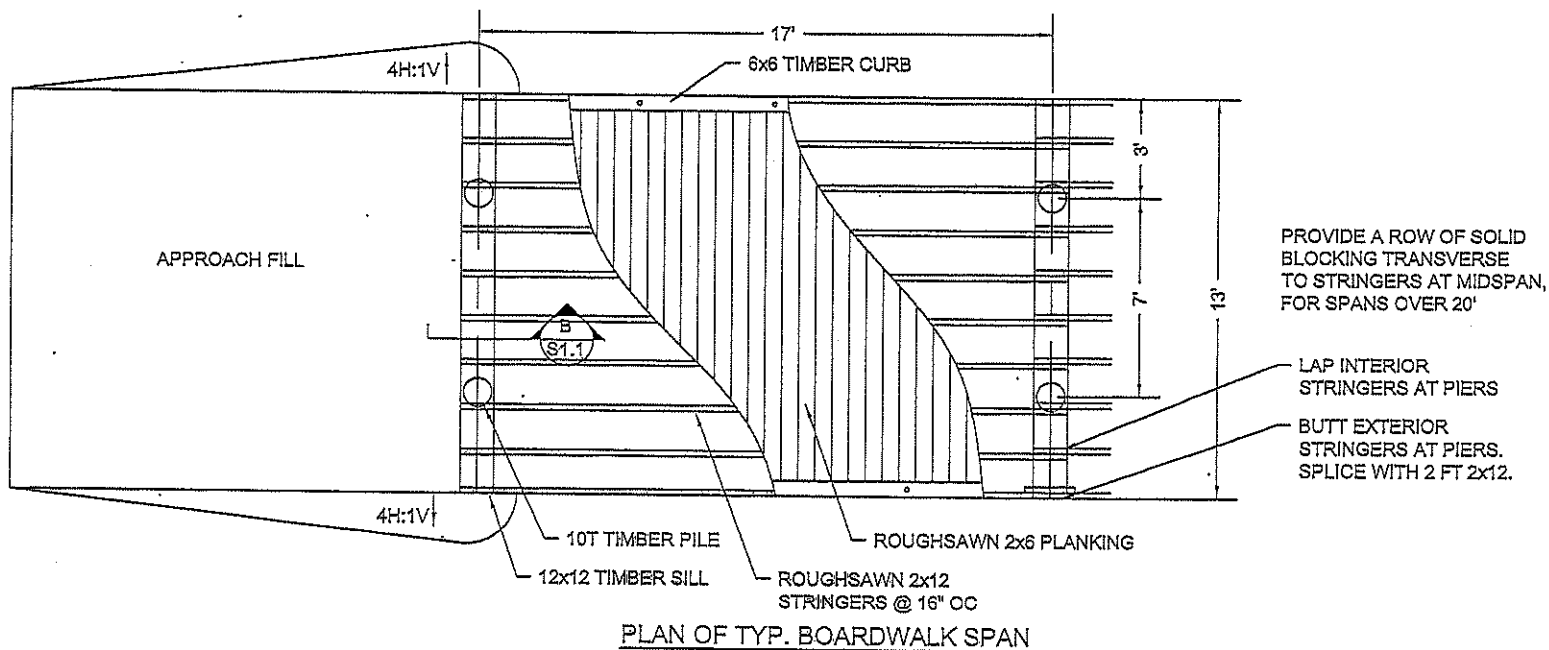
| No. | Date    | Description |
|-----|---------|-------------|
| 1   | 9/30/15 | Added span  |

Project#: 31150000.000  
Drawn by: SBK  
Checked by: SEK

## NOTES AND SCHEDULES

**S1.0**





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**PINE LAKE**  
**ATV BOARDWALK**  
LINCOLN COUNTY  
WISCONSIN

**McMULLEN & PITZ**  
17 MARITIME DRIVE  
MANITOWOC, WI

SEAL

Date:  
Design Firm#

| No. | Date    | Description |
|-----|---------|-------------|
| 1   | 5/30/15 | Added span  |

Project#: 31130000.000  
Drawn by: SEK  
Checked by: SEK

Sheet Title:  
**BOARDWALK PLAN**

**S1.1**

Structural Sheet: 2 of 2





# Trail Bridge Inspection

## Lincoln County

Bridge Name

Baily

Inspected By:

Patrick Hampston, P.E.

10/12/24

Prepared By

KBIS, LLC



Bailey Trail Bridge





W7218 Hickory Lane  
Phillips, WI 54555  
wm.kbis@gmail.com  
715.820.0095

## Bridge Inspection Report

### General Information

The structure in this report was inspected by certified Wisconsin Department of Transportation Bridge Inspectors. Inspectors are Bridge Inspection Team Leaders and NSTM certified inspectors.

The bridge was inspected with trail use in mind, using normal vehicle bridge standards to determine the condition of the structure.

All recommendations made in the report are also considering the use of the trail. Trail bridges in general should have a load rating considering all the possible uses of the structure. Even though the bridges may be just for snowmobiles, several types of vehicles may use the structure.

### Location information/General Description:

Located south of Hilts Lake Road, Langlade County.  
45.515028°, -89.456693°

### Bridge Condition

Condition State (CS) 1-Good, CS2-Fair, CS3-Poor, CS4-Critical

Abutments, pile bents, and spans are numbered along the trail from south to north. Girders are numbered from upstream to downstream.

Bridge has timber railings, timber wearing surface, timber transverse deck planks, timber stringers, on timber pile abutments.

Length 97.8', Width 13.0', 8.5' clearance from deck to stream bottom.

Wearing surface has CS3 wear at center and scattered sections that are CS4, completely rotten or gone. Edges are gravel covered.

Decking has widespread CS3 black / white rot. No drainage under curbs.

Stringers have widespread black mold staining, sounded solid, but will begin to rot soon, CS2.

Abutments have slight undermining of backwalls, CS2. Piles and pile caps have some minor checking.

Channel is in good condition. There is a tree over the stream downstream.

Bailey Trail Bridge





W7218 Hickory Lane  
Phillips, WI 54555  
wm.kbis@gmail.com  
715.820.0095

Approaches are in good condition. Bridge ahead signs are CS1. Object markers are CS1.





W7218 Hickory Lane  
Phillips, WI 54555  
wm.kbis@gmail.com  
715.820.0095

## Bridge Inspection Report

### Report Summary

#### NBI Ratings: 9-7 Good, 6-5 Fair, 4-3 Poor, 2-1 Critical, 0-Closed

|                 |     |   |
|-----------------|-----|---|
| Deck            | # 4 | Widespread major defects, strength affected |
| Wearing Surface | # 4 | Widespread major defects, strength affected |
| Superstructure  | # 6 | Widespread minor defects                    |
| Substructure    | # 7 | Some minor defects                          |
| Channel         | # 8 | Some inherent defects                       |

Overall Condition      Poor

#### Recommendations/Maintenance Items:

Replace entire deck / wearing surface  
Highly recommend load rating superstructure before redecking. (questionable capacity for groomers by inspection)  
Clean deck  
Add scupper blocks under curbs for drainage

Signed By:



Digitally signed by Patrick  
Hampston  
Date: 2024.10.12 19:59:11  
-05'00'

Patrick Hampston, P.E.



## Bridge Inspection Report

### Photo Observations



West bridge ahead sign



## Bridge Inspection Report

### Photo Observations



East bridge ahead sign



## Bridge Inspection Report

### Photo Observations



West approach



## Bridge Inspection Report

### Photo Observations



Top of deck



## Bridge Inspection Report

### Photo Observations



Channel looking upstream



## Bridge Inspection Report

### Photo Observations



Channel looking downstream



## Bridge Inspection Report

### Photo Observations



Typical deck underside



## Bridge Inspection Report

### Photo Observations



West abutment



## Bridge Inspection Report

### Photo Observations



East abutment



## Bridge Inspection Report

### Photo Observations



Upstream elevation view



## Bridge Inspection Report

### Photo Observations



Typical pier elevation view



## Bridge Inspection Report

### Photo Observations



Rotten deck planks



## Bridge Inspection Report

### Photo Observations



Rotten deck planks



## Bridge Inspection Report

### Photo Observations



Preservative tag Copper Azole, 0.05 pcf above ground (insufficient treatment for high humidity bridge use)

## Bridge Inspection Report

### Photo Observations



tag location on stringer