REHABILITATION STRUCTURE SURVEY REPORT

Wisconsin Department of Transportation
DT1696 4/2017

RECEIVED
8/15/2019
BUREAU OF STRUCTURES

☒ **Grade Separation** ☐ **Stream Crossing** ☐ **Culvert**

☐ **Railroad** ☐ **Retaining Wall** ☐ **Noise Barrier**

☐ **Sign Structure** ☐ **Other:** _____

For guidance see: **http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/strct/survey.aspx**

Design Project ID 3839-03-03	Construction Project ID 3839-03-73	Highway (Project Name) USH 12		
Final Plan Due Date 3/1/2020	Preliminary Plan Due Date 8/30/2019	☒ Town ☐ Village ☐ City Lyons		
PS&E Date 5/1/2020	Letting Date 9/8/2020	County Walworth		
Structure Number B-64-187		Section 31	Town 02N	Range 18E
Station 559+47.60 R/L USH 12 WB	Latitude: 42 35 38.27 Longitude: 88 24 29.90	☒ YES ☐ NO Structure Located on National Highway System		
For Survey and CADD Files Horizontal Coordinate System: Vertical Datum:		**Traffic Forecast Data**		
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class
Feature On USH 12 WB/NB		Feature On 2041	18,100	70 mph	Prin Arterial-Urbanl
Feature Under STH 50		Feature Under 2038	23,300 (from HSI)	50 mph	Prin Arterial-Urbanl
Region Contact: Justin Suydam (Area Code) Telephone Number(s): 262-548-8745 Email: Justin.Suydam@dot.wi.gov		Consultant Contact: Pat Cashin (Area Code) Telephone Number(s): 414-315-7040 Email: PCashin@hntb.com			

Work To Be Performed

Field Information Required
Item Number *(see Pages 2–4)*

- ☐ A. Structural Repair 1–3, 22
- ☒ B. Overlay 1–3, 10–22, 26–28, 32, 34
  - ☐ Concrete Overlay ☐ Asphalt Overlay
  - ☐ Polymer Modified Asphalt Overlay ☒ Thin Bonded Polymer Overlay
  - ☐ Other: _____
- ☐ C. New Bearings 3, 8, 9, 22
- ☐ D. New Railings 15–17, 20–23
- ☐ E. Curb and Sidewalk Repair 2, 3, 16, 22, 23
- ☐ F. Abutment Repair 2, 3, 12, 16
- ☐ G. Pier Repair 2, 3, 12, 16
- ☐ H. New Deck 1–6, 9, 10, 13–28, 32–34
- ☐ I. Widening 1–28, 30, 32–35
- ☐ J. Joint Repair 2, 3, 8, 16, 19, 22
- ☐ K. Surface Repair 2, 3, 22
- ☐ L. Raising Bridge 3, 6, 9, 16, 20–24
- ☐ M. Slope Stabilization 1–3, 30
- ☐ N. Scour Repair ..... 1, 2 or 3, 16, 19, 21, 27, 29, 31–35
- ☐ O. Painting 16, 22, 24
- ☐ P. Other: _____

Field Information Required

If no structure number exists provide the following: Small County Map on which the location of proposed structure is shown in red and any highway relocation in green. In addition, provide Location Map of scale not less than 1" = 2000' showing the structure location and number.

☒ 1. Most recent inspection report, brief history of bridge construction date, and description of repairs with dates.

☒ 2. Outline deficient areas on existing structure plan or drawing.

☒ 3. Photographs of details requiring repairs or modifications, such as: bearings, x-frames, joints, etc. Photograph all deficient areas. Clearly label all photographs.

☐ 4. Provide proposed typical section for roadway and structure showing dimensions and cross slopes.

☐ 5. Survey beam seat or girder elevations at both sides of bridge at all substructure units.

☐ 6. Provide cross-section elevations at 10 foot intervals extending across the structure and a minimum of 100 feet beyond each end. Sections should be normal to centerline and show elevations at centerline roadway and gutter line. Take elevations along joints and at floor drains.

☐ 7. Show and identify starting stationing on bridge.

☐ 8. Record measurement, temperature of the structure, and date taken for each of the following:
(a) Joint opening measured normal to joint at centerline of roadway and both curb lines.
(b) Clearance between girder ends at piers.
(c) Distance from front face of abutment backwall to closest point of girder end measured parallel to girder.
(d) Temperature of structure determined by averaging top and under deck (if accessible) readings.

☐ 9. Fixed and expansion bearings - condition and orientation.

☒ 10. Number and width of proposed pours including construction staging sequence.

☒ 11. Location of existing construction joints in the deck.

☒ 12. Estimated Quantities:

Preparation, Decks, Type 1	Sq. Yd. None	
Preparation, Decks, Type 2	Sq. Yd. None	
Full Depth Deck Repair	Sq. Yd. None	Galvanic Anodes? _____
Concrete Surface Repair Superstructure	Sq. Ft. None	Galvanic Anodes? _____
Concrete Surface Repair Substructure	Sq. Ft. None	Galvanic Anodes? _____
Curb Repair	LF. None	Galvanic Anodes? _____

☒ 13. Sufficiency number: 97.5 (obtain from HSI Bridge Inventory System)

☒ 14. Appraisal and Condition Rating

	Deck Condition	Superstructure Condition	Substructure Condition	Load Capacity Appraisal	Structural EVAL Appraisal
Current	7	7	7	5	7

☒ 15. Load Ratings

	Inventory	Operational
Current Calculated Date: 6/6/2014	RF 1.11	RF 1.43
After Completed by Bridge Designer		

☒ 16. Utilities on/near Structure. (WisDOT policy is to avoid placing utilities on the structure.)
☐ Yes ☒ No

Type	Owner and Contact Information	Size	Opening at Abutment	Weight	Pressure

☒ 17. Is existing bridge railing deficient?
☐ Yes ☒ No If Yes – Replacement Rail Type:

☒ 18. Drains to be:
☐ Raised ☐ Closed ☐ Downspouted ☐ New

☒ 19. Traffic maintained on bridge during work?
☒ Yes ☐ No If Yes – Include sketches

☒ 20. Will guard rail be attached?
☐ Yes ☐ No If Yes – Which corners?

☒ 21. Will work to be performed eliminate all deficiencies?
☒ Yes ☐ No If No – Explain:

☒ 22. Hazardous waste (asbestos) to be removed?
☐ Yes ☒ No If Yes – Explain:

☐ 23. Wing location(s) for surface drain anchors:

☐ 24. Painting?
☐ Yes ☐ No If Yes – Explain on Page 4
(all, part, railing, color system, containment, bid items)

☐ 25. Desired roadway width: *(new deck / widening)* _____ Ft.
Desired sidewalk clear width: Left: _____ Ft. Right: _____ Ft.

☒ 26. Maximum increase in grade line elevation 0.25 In.

☒ 27. Benchmark description to be shown

☒ 28. Desired final cross slopes on bridge 0.02 Ft./Ft.

☐ 29. Underwater Inspection Report including:
- Streambed Cross Section With Pier, Footing and Seal Elevations
- Pier Elevation Drawings
- Pier Layout
- Hydrographic Survey

☐ 30. Slope stabilization, provide:
Type: _____ Quantity: _____ CY.
Slope: _____ Ft./Ft. Fill: _____ CY.

☐ 31. Preliminary layout of grout bags or proposed scour repair.
C.I.P. Articulated Mats (for Scour) _____ CY.
Grout Bags (for Scour) _____ CY.
Heavy Riprap _____ CY.
Extra Heavy Riprap _____ CY.

☒ 32. Report submitted with Preliminary Plan requires **no** CADD file submittal *(See ESubmittal instructions)*.

☐ 33. Report submitted for development of Preliminary Plan to structure design engineer requires CADD file (if available) submittal and Report submittal to Soils Engineer if project involves foundation modifications.

☒ 34. Coordinate with structure design engineer **before** going into the field if existing structure has no available plans, if staged construction is planned, or if there are adjoining/adjacent structures that will remain in place.

☐ 35. If project involves substructure widening coordinate with structure and/or hydraulic design engineer to determine if information on the separation and/or stream crossing SSR will be required.

Additional Information

Elaborate on other concerns such as: DNR, Local, Utility Conflicts, Aesthetics, Railing Type and Staged Construction.
Please be as detailed and specific as possible.

NOTE: This work was added to the USH 12 Bridge Rehabilitation project, but the polymer overlay is for preventative maintenance rather than rehabilitation. B-64-187 was constructed in 2015.

Work to be Performed:
Thin polymer overlay

Item # 1: See most recent inspection report, which also includes construction history.

Item #2: See preliminary plans for proposed work.

Item #3: See separate document for photographs.

Item #10: Overlay will be placed in two stages, with a construction joint on the crown line. Traffic will be maintained on approximately half of the bridge width while the overlay is placed on the other half. In Stage 1, one lane of through traffic and one lane for the exit ramp will be maintained. In Stage 2, there will be only one lane of through traffic and access to the exit ramp will be closed.

Items #13, 14, 15: These values were taken from the HSI system on 8/13/2019.

Item #16: No utilities on the bridge.

Item #18: No floor drains.

Item #19: See staging summary under Item #10.