REHABILITATION STRUCTURE SURVEY REPORT

Wisconsin Department of Transportation
DT1696 4/2017

RECEIVED
1/15/2019
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 5730-00-30	Construction Project ID 5730-00-60	Highway (Project Name) STH 56		
Final Plan Due Date June 1, 2019	Preliminary Plan Due Date November 2018	☒ Town ☐ Village ☐ City Forest		
PS&E Date August 1, 2019	Letting Date November 12, 2019	County Richland		
Structure Number B-52-84		Section 23	Town T12N	Range R2W
Station 262+20.61	Latitude: 43°29'43.09"N Longitude: 90°34'33.13"W	☐ YES ☒ NO Structure Located on National Highway System		
For Survey and CADD Files Horizontal Coordinate System: Richland County Coordinates Vertical Datum: NAVD 88 (2012 adjusted)		**Traffic Forecast Data**		
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class
Feature On STH 56		Feature On 2041	1300	55 MPH	Minor Arterial
Feature Under Upper Camp Creek		Feature Under			
Region Contact: Dan Kleinertz (Area Code) Telephone Number(s): (608) 789-5709 Email: daniel.kleinertz@dot.wi.gov		Consultant Contact: Joshua Sweno (Area Code) Telephone Number(s): (608) 355-8852 Email: jsweno@msa-ps.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: Cleaning channel

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. 8	
Preparation, Decks, Type 2	Sq. Yd. 3	
Full Depth Deck Repair	Sq. Yd. 1	Galvanic Anodes? _____
Concrete Surface Repair Superstructure	Sq. Ft. 40	Galvanic Anodes? _____
Concrete Surface Repair Substructure	Sq. Ft. 6	Galvanic Anodes? _____
Curb Repair	LF. 0	Galvanic Anodes? _____

☒13. Sufficiency number: 83.8 (obtain from HSI Bridge Inventory System)

☒14. Appraisal and Condition Rating

	Deck Condition	Superstructure Condition	Substructure Condition	Load Capacity Appraisal	Structural EVAL Appraisal
Current	5 - Fair	5 - Fair	8 - Very Good	5 - Legal Load Stress Not Exceeded	5 - Condition Adequate, No Repairs

☒ 15. Load Ratings

	Inventory	Operational
Current Calculated Date: 05/24/2013	HS22.4	HS37.4
After Completed by Bridge Designer	TBD	TBD

☒ 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? All quadrants

☒ 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 0.06 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.

1. The last inspection date was March 5, 2018. The bridge was constructed in 1987. It is a single span concrete flat slab bridge with a span length of 42'. The North edge of deck was repaired in 2015. See Attachment A for the current Inspection Report.

2. See Attachment B for details of deficient areas.

3. See Attachment A and Attachment C for photos of areas requiring repairs.

10. STH 56 will be closed and detoured during construction. A longitudinal construction joint should not be needed for the polymer overlay and is not shown on the plans.

12. Deck preparation areas are based on coordination with the SW Region DOT and the SW Region Bridge Maintenance Engineer. See Attachment D for correspondence with the DOT regarding work on the structure.

17. The existing steel 'W' Rail will be replaced in kind, utilizing the existing rail posts on the deck.

18. There are no deck drains in the existing slab.

19. STH 56 will be closed and detoured during construction.

20. The guardrail will be replaced at all 4 quadrants of the bridge with MGS guardrail.

22. Hazardous waste (asbestos) was not found on the existing structure. See Attachment E for Asbestos Inspection Report.

26. Polymer Overlay: 1/4" thick, two layer system
-The two layer system will be applied to the entire bridge deck

27. A benchmark will not be shown on the plans. There will be no references to elevations on the plans.

28. The existing bridge deck has a superelevation of 6% down towards the left (north).

Other:
Sediment has accumulated along the abutments, which has started to restrict the stream flow. The SW Region DOT requested that a provision be included with the bridge plans to remove the sediment build-up. This work will be covered under the bid item "Excavation for Structures Bridges B-52-84" and additional description for the item will be included in the Special Provisions.

DNR:
See Attachment F for DNR Initial Review comments.

Utility Conflicts:
No utility conflicts are anticipated.

Aesthetics:
No aesthetic treatments are anticipated.