REHABILITATION STRUCTURE SURVEY REPORT

Wisconsin Department of Transportation
DT1696 4/2017

RECEIVED
3/12/2019
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 5992-10-02	Construction Project ID 5992-10-16	Highway (Project Name) Atwood Avenue		
Final Plan Due Date 6/1/2019	Preliminary Plan Due Date 3/12/2019	☐ Town ☐ Village ☒ City Madison		
PS&E Date 8/1/2019	Letting Date 11/12/2019	County Dane		
Structure Number B-13-254		Section 05	Town 07N	Range 10E
Station 32+18	Latitude: 43°05'27.70"N Longitude: 89°20'03.20"W	☐ YES ☒ NO Structure Located on National Highway System		
For Survey and CADD Files Horizontal Coordinate System: WCCS, Dane County (NAD 88) Vertical Datum: NAVD 88		**Traffic Forecast Data**		
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class
Feature On Atwood Avenue		Feature On 2040	18,950	35	Urban Minor Arterial
Feature Under Starkweather Creek		Feature Under			
Region Contact: Mark Westerveld (Area Code) Telephone Number(s): (608) 246-5355 Email: mark.westerveld@dot.wi.gov		Consultant Contact: Dan Wagner, MSA Professional Services, Inc. (Area Code) Telephone Number(s): 608-355-8952 Email: dwagner@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: Sidewalk Widening

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. _____	
Preparation, Decks, Type 2	Sq. Yd. _____	
Full Depth Deck Repair	Sq. Yd. _____	Galvanic Anodes? _____
Concrete Surface Repair Superstructure	Sq. Ft. _____	Galvanic Anodes? _____
Concrete Surface Repair Substructure	Sq. Ft. _____	Galvanic Anodes? _____
Curb Repair	LF. _____	Galvanic Anodes? _____

☒ 13. Sufficiency number: 64.7 (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	5	5	5	5

☒ 15. Load Ratings

	Inventory	Operational
Current Calculated Date: 2018-07-31	HS19	HS33
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
ELECTRIC	CITY OF MADISON	Conduit	None		

☐ 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)* 45 Ft.
Desired sidewalk clear width: Left: 9.00 Ft. Right: 6.00 No Change Ft.

☐ 26. Maximum increase in grade line elevation _____ In.

☐ 27. Benchmark description to be shown

☐ 28. Desired final cross slopes on bridge _____ 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.

16. Utilities: There is an existing Electric conduit hung on the south side of the bridge on the outside face of the south wings and along the outside edge of the rigid frame superstructure. This conduit is expected to remain. There is another electric conduit, also expected to remain, which is hung under the bridge along the face of the east abutment. These conduits will not conflict with construction.

19. Traffic will be staged during the reconstruction of the bridge approaches on Atwood Avenue. The contractor is expected to do the bridge sidewalk widening work when two-way traffic is shifted toward the south side of the roadway and bridge.

The load rating with the proposed increased load from the sidewalk widening will be completed at final design. The bridge was recently rerated in 2018 by the Bureau of Structures to account for the recent "epoxy overlay". MSA has coordinated with the BOS and they have committed to updating the ratings based on the proposed work. These updates will be provided with the final plans and Inventory form.