



**Office of Bridges and Structures
Bridge Maintenance and Inspection Unit**



Bridge Condition Report

Bridge ID: 10TH ST SW NBI Number: 8920
District: 0 Inspection Group: Origin Design
Inspection Type: In-Depth
Inspection Date: 02/28/2023
Carrying: 10TH ST SW over OTTER CREEK
Location: 000000000
Approved By:





Structure Inventory and Appraisal

Bridge ID: 10TH ST SW
FHWA No.: 8920

SR: 44.5

SD/FO: Structurally Deficient

IDENTIFICATION

7 Facility Carried: 10TH ST SW
5B Rte. Signing Prefix: 5
5C Level of Service: 1 - MAINLINE
5D Inventory Route: 00000
City: Oelwein
3 County: 033 - Fayette
9 Location: 000000000
5E Directional Suffix: 2 - EAST
6 Feature Intersected: OTTER CREEK
2 District: 0
Garage: 000
98 Border Bridge Code:
% Responsibility: 0
99 Border Bridge No.:

INSPECTION

90 Inspection Date: 02/28/2023
Next Routine Insp Date: 02/28/2025
Inspection Agency: 5 - Consultant
93A FC Inspection Date:
92A FC Frequency: 0
93B UW Inspection Date:
92B UW Frequency: 0
93C SI Date:
92C SI Frequency: 0
Other Non-NBI Date:
Other Non-NBI Freq.:

Inspection Type: In-Depth
91 Frequency: 24
Next Insp Type: In-Depth
Inspection Group: Origin Design
Next FC Insp.: NA
Next UW Insp.: NA
Next Spec. Insp.: NA
Next Other Insp.: NA

STRUCTURE TYPE AND MATERIALS

43A Main Span Material: 4 - Steel Continuous
43B Main Span Design: 02 - Stringer/Multi-beam or Girder
45 No. Spans Main Unit: 3
44A Appr. Span 000 - NA
44B Appr. Span Design: 000 - NA
46 No. of Appr. Spans: Near 0 Far 0
107 Deck Type: 1 - Concrete Cast-in-Place
108A Wearing Surface: 6 - Bituminous
108B Membrane: 0 - None
108C Deck Protection: 0 - None

CONDITION

58 Deck: 4 - Poor Condition (advanced deterioration)
59 Super: 6 - Satisfactory Condition (minor deterioration)
60 Sub: 4 - Poor Condition (advanced deterioration)
61 Channel/Channel Prot.: 6 - Bank slump, widespread minor damage
62 Culvert: N - Not Applicable

APPRAISAL

67 Str. Evaluation: 4 - Meets minimum tolerable limits
68 Deck Geometry: 4 - Meets minimum tolerable limits
69 Underclear Vert & Horiz: N - Not applicable
71 Waterway Adequacy: 8 - Bridge Above Approaches
72 Approach Alignment: 8 - Equal to present desirable criteria
36A Bridge Rail: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS, OR IS NOT THERE AND IS NEEDED.
36B Transition: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS, OR IS NOT THERE AND IS NEEDED
36C Approach Rail: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS, OR IS NOT THERE AND IS NEEDED
36D Approach Rail Ends: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS, OR IS NOT THERE AND IS NEEDED
113 Scour Critical: 8 - Stable - Excellent Condition

GEOMETRIC DATA

48 Length Max Span: 59 ft.
49 Structure Length: 154 ft.
34 Skew: 0°
Deck Area: 4004.0 sq. ft.
50B Curb/Sdwb Width R: 1 ft.
50A Curb/Sdwb Width L: 1 ft.
51 Width Curb to Curb: 24.0 ft.
52 Width Out to Out: 26.0 ft.
32 Appr. Roadway width: 30 ft.
(w/ Shoulders)
33 Median: 0 - No median
35 Structure Flared: 00 - No flare
10 Vertical Clearance: 99'99"
47 Horiz. Clearance: 24'00"
53 Min. Vert. Clearance Over: 99'99"
54B Min. Vert. Underclearance: 0'0"
55 Min. Lat. Underclearance R: 00'00"
56 Min. Lat. Underclearance L: 00'00"

LOAD RATING AND POSTING

31 Design Load: 2 - H 15
63 Rating Method: 8 - Load and Resistance Factor (LRFR) rating reported by rating factor (RF) method using HL-93 loadings.
64 Operating Rating: 0.97 Tons
65 Rating Method: 8 - Load and Resistance Factor (LRFR) rating reported by rating factor (RF) method using HL-93 loadings.
66 Inventory Rating: 0.74 Tons
70 Posting: 3 - 10.0-19.9% below legal loads
41 Posting Status: P - Posted for Load

AGE AND SERVICE

27 Year Built: 1963
106 Year Reconstructed: 0
42A Type of Service on: 1 - Highway
42B Type of Service Under: 5 - Waterway
28A Lanes on: 2
28B Lanes under: 0
29 ADT: 820
30 Year of ADT: 2021
109 Truck ADT: 0 %
Speed Limit: 35
19 Detour Length: 3 mi.

NAVIGATION DATA

38 Navigation Control:
0 - No navigation control on waterway (bridge permit not required)
111 Pier Protection:
39 Vertical Clearance: 00'00"
40 Horiz. Clearance: 000'00"

CLASSIFICATION

112 NBIS Length: Y
26 Functional Class: 17 - Urban - Collector
100 STRAHNET: 0 - Not a defense highway
101 Parallel Structure: N - No parallel structure
102 Direction of Traffic: 2 - 2-way traffic
22 Owner: 04 - City or Municipal Highway Agency
21 Custodian: 04 - City or Municipal Highway Agency
37 Historical Significance: 5 - Not eligible
75A Type of Work Proposed: 31 - Replacement - Load/Geometry
75B Work Done by: 1 - Work to be done by contract

16 Latitude: 42.66372815 17 Longitude: -91.92055739

FRA No. (if RR Bridge):
Mile Post:

Bridge Data Tab New

Bridge Name: 8920

Bridge ID: 10TH ST SW

43. Main Structure Type (A): 02 - Stringer/Multi-beam or Girder

43. Main Structure Type (B): 4 - Steel Continuous

8. FHWA No. 8920

90. Inspection Date: 02/28/2023

Report Type In-Depth

Inspector Name: Nathan Miller, Matthew Weimerskirch

3. County: 033 - Fayette

City: Oelwein

Farm to Market:

45 No. Spans Main Unit 3

9. Location: 00000000

Scour Critical 8 - Stable - Excellent Condition

41 Open, Posted Or Closed P

22. Owner: 04 - City or Municipal Highway Agency

Est. Remaining Life: 10 Yrs.

27. Year Built: 1963

106. Yr. Reconst.: 0

Lat.: 42.66372815

Long.: -91.92055739

29 ADT: 820

28. Lanes On: 2

Inspection Agency: Origin Design

LOAD POSTING TABLE

Type	Recommended Tons	Actual Tons	REMARKS
Straight Truck or Gross Weight Limit	<u>21T</u>	<u>21</u>	<u>"WEIGHT LIMITS 21T-30T-32T"</u>
Truck - Semi-trailer	<u>30T</u>	<u>30</u>	<u>14T TRIPLE AXLE</u>
Truck - Full- trailer	<u>31T</u>	<u>32</u>	=
Emergency Vehicle			=
Implement of Husbandry			=

SIGNING

Type	Legibility	Visibility	REMARKS
Advanced Posting	<u>Sign Missing</u>	<u>Sign Missing</u>	<u>NONE</u>
Posted Loads	<u>Poor</u>	<u>Good</u>	<u>FADED/WORN</u>
Narrow			<u>NONE</u>
One Lane			<u>NONE</u>
Object Markers	<u>Fair</u>	<u>Fair</u>	<u>FADED/WORN/TILTED</u>

APPROACH

	CONDITION RATING	REMARKS
1. Approach Slab	<u>6</u>	<u>AC ROADWAY.</u>
2. Relief Joints	<u>N</u>	
3. Approach - Guardrail	<u>5</u>	<u>MISSING BLOCKING / DECAYED POSTS AT NORTHEAST AND SOUTHWEST ONLY.</u>
Embankment	<u>6</u>	

Deck Tab

Bridge ID: 10TH ST SW

NBI 8. FHWA No. 8920

NBI 9. Location: 00000000

DECK ITEM	CONDITION RATING	REMARKS
1. Wearing Surface	4	1/2" BITUMINOUS OVERLAY DETRIMENTAL TO CONCRETE DECK. SPALLED AND PATCHED ACROSS APPROXIMATELY 50% OF DECK.
2. Deck - Structural Condition	4	TRANSVERSE CRACKING WITH EFFLORESCENCE UNDERSIDE OF DECK.
3. Curbs	5	CRACKING AND SPALLING WITH EXPOSED REINFORCING.
4. Median	N	
5. Sidewalks	N	
6. Railings	6	CHANNEL RAIL SET BEHIND FACE OF CURB.
7. Paint	7	
8. Drains	5	DO NOT EXTEND BEYOND BOTTOM FLANGE OF BEAMS.
9. Utility Connections	N	
10. Joint leakage	5	
11. Expansion Joints and Devices	5	PACKED WITH A.C.
General Comments		

(Remark required for NBI rating of 5 or less)

ITEM 58 DECK CONDITION RATING	4	SPALLING CONCRETE WITH EXPOSED TRANSVERSE REINFORCING ON WEARING SURFACE. NUMEROUS DECK SPALLS PATCHED WITH AC AND AC OVERLAY ARE DETRIMENTAL TO CONCRETE DECK.
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Superstructure Tab

Bridge ID: 10TH ST SW

NBI 8. FHWA No. 8920

NBI 9. Location: 00000000

SUPERSTRUCTURE	CONDITION RATING	REMARKS
1. Bearing Devices	6	ABUTMENT CORRODED WITH NO SIGNS OF SECTION LOSS.
2. Stringers	N	
Lateral Support ()	N	
3. Girders/Beams	6	(4) ROLLED STEEL BEAMS WITH COVER PLATES AT PIERS.
Lateral Support ()	7	BOLTED DIAPHRAGMS AT THIRD POINTS IN CENTER SPAN AND MIDPOINTS IN END SPANS.
4. Floor Beams	N	
Lateral Support ()	N	
5. Trusses - General	N	
Portals	N	
Bracing	N	
6. Paint	6	
7. Rivets or Bolts	7	NO LOOSE OR DAMAGED FASTENERS OBSERVED.
8. Welds - Cracks	7	
9. Rust	6	ISOLATED CORROSION AT BACK FACE OF END DIAPHRAGMS AND ABUTMENT BEARINGS.
10. Timber Decay	N	
11. Concrete Cracking	N	
12. Collision Damage	8	
13. Deflection Under Load	7	
14. Alignment of Members	8	
15. Vibration Under Load	8	

General Comments

(Remark required for NBI rating of 5 or less)

ITEM 59 SUPERSTRUCTURE
CONDITION RATING

6

ABUTMENT BEARINGS CORRODED WITH NO OBSERVED SECTION LOSS.

Substructure Tab

Bridge ID: 10TH ST SW

NBI 8. FHWA No. 8920

NBI 9. Location: 000000000

SUBSTRUCTURE	CONDITION RATING	REMARKS
1. Abutments - Caps	6	
Wings	6	
Backwall	6	
Footing	N	
Piles		NOT EXPOSED.
Erosion	6	
Settlement	8	
2. Piers or Bents - Caps	6	HAIRLINE VERTICAL CRACKING AT EAST PIER CAP.
Columns	N	
Footings	N	
Piles	4	SEVERE DETERIORATION (VERTICAL CRACKING, DELAMINATIONS, AND SPALLING) OF EAST PIER PILE ENCASEMENTS WITH EXPOSED CIRCUMFERENTIAL REINFORCING.
Scour	6	
Settlement	8	
3. Concrete Cracking	4	EAST PIER PILE ENCASEMENTS SEVERELY CRACKING/SPALLING/DELAMINATED.
4. Steel Corrosion	5	CORROSION WITH SECTION LOSS OF CIRCUMFERENTIAL REINFORCING AND H PILES IN EAST PIER.
5. Timber Decay	N	
6. Debris on Seats	7	
7. Paint	N	
8. Collision Damage	8	
General Comments		
		(Remark required for NBI rating of 5 or less)
ITEM 60 SUBSTRUCTURE CONDITION RATING	4	CONCRETE SPALLING WITH EXPOSED REINFORCING AND H-PILES AT EAST PIER PILE ENCASEMENTS.

Channel Protection Tab

Bridge ID:

NBI 8. FHWA No.

NBI 9. Location:

CHANNEL AND CHANNEL PROTECTION	CONDITION RATING	REMARKS
1. Channel Scour	<input type="text" value="6"/>	
2. Embankment Erosion	<input type="text" value="6"/>	
3. Drift	<input type="text" value="6"/>	FLOOD DEBRIS CAUGHT AT EAST PIER.
4. Vegetation	<input type="text" value="6"/>	CHANNEL EMBANKMENTS WELL VEGETATED.
5. Channel Change	<input type="text" value="6"/>	CHANNEL FLOWS THROUGH CENTER SPAN AND WEST HALF OF EAST SPAN.
6. Fender System	<input type="text" value="N"/>	
7. Spur Dikes and Jetties	<input type="text" value="N"/>	
8. Riprap	<input type="text" value="6"/>	MINIMAL AMOUNT PLACED AT BOTH ABUTMENTS AND EAST PIER.
9. Adequacy of Opening	<input type="text" value="7"/>	
General Comments	<input type="text"/>	

(Remark required for NBI rating of 5 or less)

ITEM 61 CHANNEL / CHANNEL PROTECTION CONDITION RATING

Drainage Area square miles

Item 113 Scour Critical Bridges

Scour Critical Bridge

Scour Plan of Action (POA) Implemented for Bridges with Item 113 coded 0, 1, 2, or 3 (Upload POA):

Scour Analysis (Upload Analysis PDF): Level A Level B Level C

Bridge with Unknown Foundation

Unknown Foundation Analysis (Upload Analysis PDF): Level A Level B

Unknown Foundation Risk Level:

Plan of Action (POA) Implemented for Unknown Foundation determined to be Moderate or High Risk (Upload POA):

Pictures

NBI Number: 8920

Bridge ID: 10TH ST SW

Facility Carried: 10TH ST SW

Feature(s) Intersected: OTTER CREEK



Photo Number: 1

Photo Taken: 02/28/2023

ROAD VIEW LOOKING WEST



Photo Number: 2

Photo Taken: 02/28/2023

WEIGHT EMBARGO SIGNAGE

Pictures

NBI Number: 8920
Facility Carried: 10TH ST SW

Bridge ID: 10TH ST SW
Feature(s) Intersected: OTTER CREEK



Photo Number: 3

Photo Taken: 02/28/2023

SIDE VIEW LOOKING SOUTH



Photo Number: 4

Photo Taken: 02/28/2023

UNDER LOOKING EAST

Pictures

NBI Number: 8920

Bridge ID: 10TH ST SW

Facility Carried: 10TH ST SW

Feature(s) Intersected: OTTER CREEK



Photo Number: 5

Photo Taken: 02/28/2023

TRANSVERSE CRACKING WITH EFFLORESCENCE AND CORROSION AT BEAM TOP FLANGE



Photo Number: 6

Photo Taken: 02/28/2023

CRACKING, DELAMINATED, SPALLING WITH EXPOSED CIRCUMFERENTIAL REINFORCING AT EAST PIER PILE ENCASEMENTS

Pictures

NBI Number: 8920

Bridge ID: 10TH ST SW

Facility Carried: 10TH ST SW

Feature(s) Intersected: OTTER CREEK



Photo Number: 7

Photo Taken: 02/28/2023

VERTICAL CRACKING AT N3 PILE ENCASEMENT IN WEST ABUTMENT



Photo Number: 8

Photo Taken: 02/28/2023

CRACKING, DELAMINATED, SPALLING WITH EXPOSED CIRCUMFERENTIAL REINFORCING AT N5 PILE ENCASEMENT IN EAST PIER

Pictures

NBI Number: 8920

Bridge ID: 10TH ST SW

Facility Carried: 10TH ST SW

Feature(s) Intersected: OTTER CREEK



Photo Number: 9

Photo Taken: 02/28/2023

IMPACT DAMAGE AT EXTERIOR FACE OF BOTTOM FLANGE AT N4 BEAM IN EAST SPAN NEAR ABUTMENT BEARING



Photo Number: 10

Photo Taken: 02/28/2023

CORROSION AT ABUTMENT BEARINGS, TYPICAL

Pictures

NBI Number: 8920

Bridge ID: 10TH ST SW

Facility Carried: 10TH ST SW

Feature(s) Intersected: OTTER CREEK



Photo Number: 11

Photo Taken: 02/28/2023

AC OVERLAY DETRIMENTAL TO CONCRETE DECK