

Inspector: Cooper, Kenneth  
 Inspection Date: 08/14/2023

Structure Number: 7807082  
 Facility Carried: US 422

## Ohio Bridge Inspection Summary Report

**TRU-00422-1559 (7807082)**

2: District 55916 - NILES (TRU county)  
 District

5A: Inventory Route 1 00422

21: Major Maint A/B 01 - State Highway Agency /  
 225 Routine Main A/B 04 - City or Municipal Highway /  
 Agency  
 221 Inspection A/B 01 - State Highway Agency /  
 220: Inv. Location DISTRICT 04

7: Facility On US 422  
 6: Feature Ints MOSQUITO CREEK  
 9: Location 1.06 MI W OF SR 46  
 Lat, Lon 41.212161 , -80.758

### Condition

**58: Deck** **6 - Satisfactory Condition**  
 58.01 Wearing Surface 4 - Poor (advanced)  
 58.02 Joint 7- Good (no leaking)  
**59: Superstructure** **6 - Satisfactory Condition**  
 59.01 Paint & PCS N - Not Applicable  
**60: Substructure** **6 - Satisfactory Condition**  
**61: Channel** **7**  
**61.01 Scour** **7 - Good**  
**62: Culverts** **N - Not Applicable**  
**67.01 GA** **6**

### Structure Type

43: Bridge Type 6 - Prestressed concrete continuous  
 05 - Box Beam or Girders - Multiple  
 N- Not Applicable  
 45: Spans Main / Approach 3 / 0  
 107: Deck Type 1 - Concrete Cast-in-Place  
 408: Composite Deck N - Non-composite Construction  
 414A Joint Type 1 B - Polymer modified expansion  
 device  
 414B: Joint Type 2 N - None  
 108A: Wearing Surface 6 - Bituminous  
 N- Not Applicable

### Appraisal

Sufficiency Rating 95.2 SD/FO 0 - ND  
 36: Rail, Tr, Gd, Term Std 1 1 1 1  
 72: Approach Alignment 9 - Superior to present desirable criteria  
 113: Scour Critical 8 - Stable for scour conditions  
 71: Waterway Adequacy 4 - Occasional Flooding - Significant  
 Delays

### Age and Service

422: WS Date 08/01/2010  
 423: WS Thick (in) 3.0  
 482: Protective Coating N - None or Not Applicable  
 483: PCS Date  
 453: Bearing Type 1 4 - Elastomeric (Plain)  
 455: Bearing Type 2 N - None  
 528: Foundn: Abut Fwd 1 - Steel H Piles (Other size)  
 533: Foundn: Abut Rear 1 - Steel H Piles (Other Size)  
 536: Foundn: Pier 1 1 - Steel H Piles (Other size)  
 539: Foundn: Pier 2 N - None (Such as most Culverts)

### Geometric

48: Max Span Length (ft) 41.0  
 49: Structure Length (ft) 125.0  
 52: Deck Width, Out-To-Out (ft) 74.0  
 424: Deck Area (sf) 9250  
 32: Appr Roadway Width (ft) 30.0  
 51: Road Width, Curb-Curb (ft) 64.0  
 50A: Curb/SW Width: Left (ft) 4  
 50A: Curb/SW Width: Right (ft) 4  
 34: Skew (deg) 25  
 33: Bridge Median 0 - No median  
 54B: Min Vert Underclearance (ft) 0  
 336A: Min Vert Clrnce IR Cardinal (ft) 99  
 336B: Min V Clr IR Non-Cardinal (ft) 0  
 578: Culvert Length (ft) 0

### Inspections

27: Year Built/ 106 Rehab 1971 / 0000  
 42A: Service On 1 - Highway  
 42B: Service Under 5 - Waterway  
 28A: Lanes on 04  
 28B: Lanes Under 00  
 19: Bypass Length 3  
 29: ADT 11742  
 109: % Trucks (%) 5

### Load Posting

41: Op/Post/Closed A - Open  
 70: Posting 5 - Equal to or above legal loads  
 70.01: Date  
 70.02: Sign Type  
 734: Percent Legal (%) 150  
 704: Analysis Date 07/01/1973  
 63: Analysis Method 7 - Allowable Stress (AS) rating reported  
 by rating factor (RF) method using MS18  
 loading.

### Inspections

	Months	
90: Routine Insp.	12	08/14/2023
92A: FCM Insp.	N	0
92B: Dive Insp.	N	0
92C: Special Insp.	N	0
92D: UBIT Insp.	N	0
92E: Drone Insp.	N	0

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	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
<b>15-Prestressed Concrete Top Flange</b>	3 - Mod.	8000	sq. ft.	3438	3437	1125	0
<p>CS2 - Wearing surface has multiple transverse and longitudinal cracks.</p> <p>CS3 - Passing lanes both directions have failing patches, full length, 1125 sf.</p>							
<b>510-Wearing Surfaces</b>		8000	sq. ft.	3438	3437	1125	0
<p>CS2 - Wearing surface has multiple transverse and longitudinal cracks.</p> <p>CS3 - Passing lanes both directions have failing patches, full length, 1125 sf.</p> <p>The right sidewalk has 50' of the curb spalled off with rebar exposed. The left sidewalk also has 35' of the curb spalled off with rebar exposed. The sidewalk also has cracks.</p>							
<b>104-Prestressed Concrete Closed Web/Box Girder</b>	3 - Mod.	2375	ft.	1860	500	15	0
<p>CS2- There is some minor leakage in all the spans between joints 2, 3, 4 and 6. Couple minor spalls on beam 5. Light to moderate saturation on forward ends of beams 12,13 &amp; 14 above forward abutment face.</p> <p>CS3 - Beam 5 from the left, over the river has a delaminated area no steel exposed. Beam 5 in span 1 has 15 ft of delamination no steel exposed.</p>							
<b>215-Reinforced Concrete Abutment</b>	3 - Mod.	164	ft.	140	21	3	0
<p>QAR sticker is on right forward corner of abutment (04-06 2022)</p> <p>CS2 - The abutments have developed vertical cracks. Rear abutment has 11 tight vertical cracks and forward has 8 tight vertical cracks. There is 2' of heavy saturation with spalling beginning on forward right abutment.</p> <p>CS3 - There is 3' spall with rebar exposed in the middle of the rear abutment.</p>							
<b>225-Steel Pile</b>	3 - Mod.	32	each	32	0	0	0
<p>Pile are encased in concrete.</p>							
<b>234-Reinforced Concrete Pier Cap</b>	3 - Mod.	164	ft.	161	3	0	0
<p>CS2 - The rear right pier cap has 3 ft of saturation with spalling just beginning.</p>							
<b>301-Pourable Joint Seal</b>	3 - Mod.	74	ft.	56	18	0	0
<p>CS2 - Fwd joint has rutting in EB passing lane, 6'.          Rr joint has rutting in passing lane in both directions, 12'.</p>							
<b>310-Elastomeric Bearing</b>	3 - Mod.	76	each	76	0	0	0
<b>321-Reinforced Concrete Approach Slab</b>	3 - Mod.	1950	sq. ft.	650	1300	0	0
<p>CS2 - The approach slabs are paved over with asphalt and the asphalt has numerous transverse and longitudinal cracks.          Fwd - 675 sf          Rr - 625 sf</p>							

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	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
<b>330-Metal Bridge Railing</b>	3 - Mod.	250	ft.	234	16	0	0
CS2 - The right side has a sections of tubular railing that has had accident damage approximately 16' Right curbing has 50ft of spalled out concrete. The left side curb has 35 ft of spalled out concrete.							
<b>331-Reinforced Concrete Bridge Railing</b>	3 - Mod.	250	ft.	55	195	0	0
CS2- The concrete has horizontal and vertical cracks. Left - 77' Right - 118'							
<b>815-Drainage</b>	3 - Mod.	2	each	2	0	0	0

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ODOT District: District 04

**TRU-00422-1559\_(7807082)**

Date Built: 07/01/1971

Major Maint: 01 - State Highway Agency

Facility Carried: US 422

Traffic On: 1 - Highway

Rehab Date:

Routine Maint: 04 - City or Municipal Highway Agency

Feature Inters: MOSQUITO CREEK

Traffic Under: 5 - Waterway

Insp. Resp A: 01 - State Highway Agency

FIPS Code: 55916 - NILES (TRU county)

Location: DISTRICT 04

1.06 MI W OF SR 46

Insp Resp B:

Inspector

Cooper,Kenneth

Inspection Date 08/14/2023

Reviewer Chaney,Nicholas

## **Inspector Comments - Deck and Approach**

### **Deck**

#### **Floor/Slab (SF)**

THERE IS SOME MINOR LEAKAGE AT ALL SPANS BETWEEN JOINTS 2, 3 AND 6. THERE IS MINOR SPALLING IN A FEW AREAS ON SOME OF THE BOX BEAMS. BOX BEAM #14, IN SPAN #1, HAS AN 8' LONGITUDINAL SPALLED EDGE THAT I'M SURE IS INTO THE OUTER PRESTRESSED WIRE. THERE ARE POTHOLES ABOVE THIS THAT COULD BE CREATING THIS PROBLEM.

#### **Bridge Wearing Surface (SF)**

MODERATE CRACKING ESPECIALLY BETWEEN RUNS WHERE THE ASPHALT WAS OVERLAYED. POTHOLES IN WESTBOUND PASSING LANE HAVE BEEN PATCHED, NOT A VERY GOOD PATCH JOB. THERE ARE ALSO SOME LONGITUDINAL PAVEMENT JOINTS THAT HAVE BEEN HEAVILY PATCHED

#### **Curbs/Sidewalk (LF)**

NUMEROUS CRACKS. SEALER IS STARTING TO PEEL OFF. A 30' OF THE LEFT SIDE CURB \SIDEWALK HAS SPALLED OFF WITH REBAR EXPOSED. ADDED PICTURES OF THIS TO FOLDER.

#### **Bridge Railing (LF)**

MINOR ACCIDENT DAMAGE ON RIGHT ALUMINUM RAILING. 15' OF RAILING IS DAMAGED AND ONE POST. .

### **Approach**

#### **Approach Wearing Surface (EA)**

NUMEROUS CRACKS, BOTH LONGITUDINAL AND TRANSVERSE. LIGHT TO MODERATE DETERIORATION.

#### **Approach Slab (SF)**

PAVED OVER AND HAS NUMEROUS CRACKS IN BOTH DIRECTIONS.

#### **Approach Embankment (EA)**

MINOR EROSION AT ALL FOUR CORNERS.

#### **Approach Guardrail (EA)**

MINOR ACCIDENT DAMAGE IN MANY PLACES.

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## **Inspector Comments - General Appraisal**

### **Superstructure**

#### **Beams/Girders (LF)**

THERE IS SOME MINOR LEAKAGE AT ALL SPANS BETWEEN JOINTS 2, 3 AND 6. THERE IS MINOR SPALLING IN A FEW AREAS ON SOME OF THE BOX BEAMS. BOX BEAM #14, IN SPAN #1, HAS AN 8' LONGITUDINALLY SPALLED EDGE THAT I'M SURE IS INTO THE OUTER PRESTRESSED WIRE. THERE ARE POTHOLES ABOVE THIS THAT COULD BE CREATING THIS PROBLEM.

### **Substructure**

#### **Abutment Walls (LF)**

2' X 4' SPALL IN THE MIDDLE OF THE REAR ABUTMENT. TIGHT CRACKS ARE DEVELOPING.

#### **Pier Caps (LF)**

REAR RIGHT IS SPALLED, SPALL IS HANGING

### **Culvert**

## **Inspector Comments - Waterway**

### **Waterway Adequacy**

#### **Channel Hydraulic Opening (EA)**

FLOW IS LT TO RT.

### **Channel**

### **Scour Critical**

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**Bridge Inspection Report**

**Pictures**