

Inspector: Banaszak, Ken
 Inspection Date: 08/24/2022

Structure Number: 1814931
 Facility Carried: USR 422

Bridge Inspection Report

Ohio Bridge Inspection Summary Report

CUY-00422-1804R (1814931)

2: District 72928 - SOLON (CUY county)
 District 12

5A: Inventory Route 1 00422

21: Major Maint A/B 01 - State Highway Agency /
 225 Routine Main A/B 01 - State Highway Agency /
 221 Inspection A/B 01 - State Highway Agency /
 220: Inv. Location DISTRICT 12

7: Facility On USR 422
 6: Feature Ints SR 91 SOM CENTER RD
 9: Location 5 MI E I-271
 Lat, Lon 41.394731 , -81.437753

| Condition | Structure Type |
|-----------|----------------|
|-----------|----------------|

58: Deck **7 - Good Condition**
 58.01 Wearing Surface 7 - Good (1% distress)
 58.02 Joint 7- Good (no leaking)
59: Superstructure **7 - Good Condition**
 59.01 Paint & PCS 4 - Poor PCS (15-20% corr.)
60: Substructure **7 - Good Condition**
61: Channel **N**
61.01 Scour **N - Not Applicable**
62: Culverts **N - Not Applicable**

43: Bridge Type 4 - Steel continuous
 02 - Stringer/Multi-beam or Girder
 N- Not Applicable
 45: Spans Main / Approach 4 / 0
 107: Deck Type 1 - Concrete Cast-in-Place
 408: Composite Deck N - Non-composite Construction
 414A Joint Type 1 2 - Sliding Metal Plate Angle
 414B: Joint Type 2 N - None
 108A: Wearing Surface 2 - Integral Concrete (separate non-modified layer of concrete added to structural deck)
 2- MicroSilica

67.01 GA **7**

| Appraisal | Inspection |
|-----------|------------|
|-----------|------------|

Sufficiency Rating 93.6 SD/FO 2 - FO
 36: Rail, Tr, Gd, Term Std 1 1 1 1
 72: Approach Alignment 8 - Equal to present desirable criteria
 113: Scour Critical N - Not over waterway
 71: Waterway Adequacy N - Not Applicable

422: WS Date 07/01/1975
 423: WS Thick (in) 2.0
 482: Protective Coating 3 - Paint System A
 483: PCS Date 01/01/1975
 453: Bearing Type 1 2 - Rockers & Bolsters
 455: Bearing Type 2 N - None
 528: Foundn: Abut Fwd 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)
 533: Foundn: Abut Rear 2 - Cast-in-Place reinforced Concrete Piles (Other diameter)
 536: Foundn: Pier 1 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)
 539: Foundn: Pier 2 0 - Other

| Geometric | Inspection |
|-----------|------------|
|-----------|------------|

48: Max Span Length (ft) 51.0
 49: Structure Length (ft) 171.0
 52: Deck Width, Out-To-Out (ft) 42.3
 424: Deck Area (sf) 7233.3
 32: Appr Roadway Width (ft) 38.0
 51: Road Width, Curb-Curb (ft) 37.8
 50A: Curb/SW Width: Left (ft) 0
 50A: Curb/SW Width: Right (ft) 0
 34: Skew (deg) 6
 33: Bridge Median 0 - No median
 54B: Min Vert Underclearance (ft) 18.12
 336A: Min Vert Clrnce IR Cardinal (ft) 99
 336B: Min V Clr IR Non-Cardinal (ft) 0
 578: Culvert Length (ft) 0

| Age and Service | Inspection |
|-----------------|------------|
|-----------------|------------|

27: Year Built/ 106 Rehab 1975 / 0000
 42A: Service On 1 - Highway
 42B: Service Under 1 - Highway, with or w/out pedestrian
 28A: Lanes on 02
 28B: Lanes Under 04
 19: Bypass Length 1
 29: ADT 14583
 109: % Trucks (%) 7

| Load Posting | Inspection |
|--------------|------------|
|--------------|------------|

41: Op/Post/Closed A - Open
 70: Posting 5 - Equal to or above legal loads
 70.01: Date
 70.02: Sign Type

| Inspections | | |
|-------------|--|--|
|-------------|--|--|

| | Months | Date |
|--------------------|--------|------------|
| 90: Routine Insp. | 12 | 08/24/2022 |
| 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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734: Percent Legal (%) 150

704: Analysis Date 07/01/1975

63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

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| | Environment | Total Quantity | Units | Condition State 1 | Condition State 2 | Condition State 3 | Condition State 4 |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------|-------------------|-------------------|-------------------|-------------------|
| 12-Reinforced Concrete Deck | 3 - Mod. | 7244 | sq. ft. | 6865 | 362 | 17 | 0 |
| | CS2- Cracks CS3- A few leached mottled cracks. Small delams near abutments. | | | | | | |
| 510-Wearing Surfaces | | 6456 | sq. ft. | 6049 | 322 | 85 | 0 |
| | CS2- A few cracks throughout. CS3- A few wide transverse cracks. | | | | | | |
| 107-Steel Open Girder/Beam | 3 - Mod. | 855 | ft. | 655 | 175 | 25 | 0 |
| | CS2- Spots of surface rust thru out, mostly to bottom flanges. CS3- Heavier rust with section loss at beam ends. | | | | | | |
| 515-Steel Protective Coating | | 6074 | sq. ft. | 0 | 4774 | 1000 | 300 |
| | CS 2 - Peeling & faded paint. CS 3 - Surface rust. CS 4 - Paint failure at beam ends. | | | | | | |
| 205-Reinforced Concrete Column | 3 - Mod. | 9 | each | 9 | 0 | 0 | 0 |
| | Note: 5 of 9 columns fiber wrapped. | | | | | | |
| 215-Reinforced Concrete Abutment | 3 - Mod. | 86 | ft. | 74 | 12 | 0 | 0 |
| | CS 2 - Cracks. Rust stains. | | | | | | |
| 234-Reinforced Concrete Pier Cap | 3 - Mod. | 128 | ft. | 123 | 4 | 1 | 0 |
| | CS2- A few cracks. CS3- Delam to P3 | | | | | | |
| 303-Assembly Joint with Seal | 3 - Mod. | 85 | ft. | 45 | 34 | 6 | 0 |
| | CS2- Some minor gouges to rear riser bar. Dirt and debris in joints. ExJt banging at rear abutment with no visible movement of armor at top. CS3- Spalls to forward exJt header. | | | | | | |
| 311-Movable Bearing | 3 - Mod. | 20 | each | 10 | 7 | 3 | 0 |
| | CS2- Surface rust. P1 and P3 rockers slightly tipped in at 66°F. CS3- Areas of heavy rust with section loss and pack rust to abutment bearings and a few pier bearings. Rear 1 and 4 are tipped out at 75°F. | | | | | | |
| 313-Fixed Bearing | 3 - Mod. | 5 | each | 0 | 5 | 0 | 0 |
| | CS2- Surface rust | | | | | | |
| 321-Reinforced Concrete Approach Slab | 3 - Mod. | 1900 | sq. ft. | 924 | 950 | 18 | 8 |
| | CS2- Cracks. Some scaling. CS3- Wide cracks. Concrete break up along nearly entire right edge of rear slab. CS4- Asphalt patches to both. | | | | | | |

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|-----------------------------------------------|-------------------------------------------------------------------------------------|----------------|-------|-------------------|-------------------|-------------------|-------------------|
| 331-Reinforced Concrete Bridge Railing | 3 - Mod. | 342 | ft. | 322 | 17 | 3 | 0 |
| | CS2- A few cracks. Minor scaling. CS3- Spall to top edge of right rail and toe. | | | | | | |
| 815-Drainage | 3 - Mod. | 6 | each | 4 | 2 | 0 | 0 |
| | CS2- Partially plugged scuppers | | | | | | |
| 830-Abutment Backwall | 3 - Mod. | 86 | ft. | 74 | 10 | 2 | 0 |
| | CS2- A few cracks CS3- A few cracks. Small spalls in rear bay 2 & forward bay 1. | | | | | | |

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ODOT District: District 12

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Date Built: 07/01/1975

Major Maint: 01 - State Highway Agency

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Traffic On: 1 - Highway

Rehab Date:

Routine Maint: 01 - State Highway Agency

Feature Inters: SR 91 SOM CENTER RD

Traffic Under: 1 - Highway, with or w/out pedestrian

Insp. 01 - State Highway Agency

FIPS Code: 72928 - SOLON (CUY county)

Location: DISTRICT 12

5 MI E I-271

Resp A:

Insp

Resp B:

Inspector

Banaszak, Ken

Inspection Date 08/24/2022

Reviewer Seif, Youssef

Inspector Comments - Deck and Approach

Deck

Deck/Floor

SOT- Bay 4 over NB lane 2

Drainage

Rusting section loss to down spouts.

Approach

Approach Wearing Surface

#1 lane new @ time of inspection

Approach Guardrail

Collision damage with damaged post at rear-left.

Inspector Comments - General Appraisal

Superstructure

Diaphragm/X-Frames

Some have surface rust. Rear bay 2 end frame has rusting thru holes.

Fatigue (LF)

Welded cover plates at center pier.

Utilities

Slightly damaged conduit on P2C1.

Substructure

Slope Protection

Cracks, some wide. Uneven settlement. Rear concrete is buckling & undermining below bay 1 & breaking up along drainage trough. Portion of forward concrete is collapsed with advanced undermining

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below bay 1 near top & broken up around base of pier columns.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

Scour Critical