

Inspector: Miller,Jason

Inspection Date: 03/30/2023

Structure Number: 1814893

Facility Carried: USR 422

Ohio Bridge Inspection Summary Report

CUY-00422-1597R (1814893)

2: District 72928 - SOLON (CUY county)
ict
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 CR-99 (CANNON RD)
9: Location 3 MI E I-27
Lat, Lon 41.409447 ,-81.470358

Condition Structure Type

58: Deck **6 - Satisfactory Condition**
58.01 Wearing Surface 6 - Satisfactory (1-10% distress)
58.02 Joint 4- Poor (heavy leaking, offset)
59: Superstructure **7 - Good Condition**
59.01 Paint & PCS 7 - Good (1-5% corr.)
60: Substructure **6 - Satisfactory 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 3 / 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 6

Appraisal

Sufficiency Rating 98.0 SD/FO 0 - ND
36: Rail, Tr, Gd, Term Std 1 1 1 0
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 5 - Paint System OZEU
483: PCS Date 11/07/2009
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

48: Max Span Length (ft) 75.0
49: Structure Length (ft) 185.0
52: Deck Width, Out-To-Out (ft) 54.0
424: Deck Area (sf) 9990
32: Appr Roadway Width (ft) 42.0
51: Road Width, Curb-Curb (ft) 50.5
50A: Curb/SW Width: Left (ft) 0
50A: Curb/SW Width: Right (ft) 0
34: Skew (deg) 32
33: Bridge Median 0 - No median
54B: Min Vert Underclearance (ft) 14.58
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

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 02
19: Bypass Length 0
29: ADT 37654
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 07/01/1975
63: Analysis Method 7 - Allowable Stress (AS) rating reported

Inspections

90: Routine Insp. 12 Months 03/30/2023
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

Inspector Miller,Jason

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	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.	9990	sq. ft.	8186	1504	300	0
<p>Slight movement of forward deck end with live load at beams 4 & 5.</p> <p>CS2- Transverse leaching cracks. Delams. Mottled areas.</p> <p>CS3- Spalls, some with exposed rebar. Mottled areas with efflorescence in bay 4 spans 2 & 3.</p> <p>CS4- Spalls with 360 degree rebar exposure in span 2.</p>							
510-Wearing Surfaces		9343	sq. ft.	7522	1401	400	20
<p>CS2- Transverse & longitudinal cracks. Concrete patches. Small delaminated areas.</p> <p>CS3- Wide cracks, mostly transverse. Deteriorated patches in lane 2.</p> <p>CS4- Asphalt patches and areas of breaking up concrete.</p>							
107-Steel Open Girder/Beam	3 - Mod.	1260	ft.	1114	20	126	0
<p>CS2- Areas of surface rust. Scrapes to edges of lower flanges over NB traffic.</p> <p>CS3- Arrested section loss at beam ends.</p>							
515-Steel Protective Coating		14047	sq. ft.	13627	420	0	0
<p>CS2- Chalking on exterior of fascia beams. Initiated rust.</p>							
205-Reinforced Concrete Column	3 - Mod.	8	each	6	2	0	0
<p>CS2- P2C1- ~1 SF delam/spall P2C3- ~6 SF delam</p>							
215-Reinforced Concrete Abutment	3 - Mod.	128	ft.	78	25	25	0
<p>CS2- Cracks. Minor delams.</p> <p>CS3- Deep spalls with exposed rebar in forward bays 4 & 5 (one of which undermines 25% of bearing #5). Spall that goes into seat in rear bay 4.</p>							
234-Reinforced Concrete Pier Cap	3 - Mod.	128	ft.	126	2	0	0
<p>CS2- Small chips and honeycombing to P2 end.</p>							
305-Assembly Joint without Seal	3 - Mod.	108	ft.	48	36	6	18
<p>CS2- A few gouges to forward armor. Cracks to headers. Patches to headers. Debris in joint.</p> <p>CS3- Areas of section loss.</p> <p>CS4- Removed riser bar in lane #1 of forward exjt. Removed riser bar in lane 2 of rear exjt. Rear broken at lane line with thru holes.</p>							
311-Movable Bearing	3 - Mod.	21	each	0	7	10	4
<p>CS2- Areas of surface rust.</p> <p>CS3- Arrested section loss to abutment bearings. Approximately 25% of forward bearing #5 undermined (see abutment comments).</p> <p>CS4- Air gaps between some abutment rockers & masonry plates.</p>							
313-Fixed Bearing	3 - Mod.	7	each	7	0	0	0

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	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
321-Reinforced Concrete Approach Slab	3 - Mod.	2100	sq. ft.	1082	1000	15	3
CS2- Map cracking to both. CS3- Breaking up areas in forward slab. CS4- Asphalt patch in lane 2 at rear.							
331-Reinforced Concrete Bridge Railing	3 - Mod.	370	ft.	331	37	2	0
CS2- A few cracks. Collision scrapes & gouges to left rail. CS3- A few spalls with exposed rebar.							
815-Drainage	3 - Mod.	8	each	8	0	0	0
830-Abutment Backwall	3 - Mod.	128	ft.	62	63	3	0
CS2- Cracks, top of both backwalls concrete patched in areas. CS3- A few spalls.							

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ODOT District: District 12

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Date Built: 07/01/1975

Major Maint: 01 - State Highway Agency

Facility Carried: USR 422

Traffic On: 1 - Highway

Rehab Date:

Routine Maint: 01 - State Highway Agency

Feature Inters: CR-99 (CANNON RD)

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

Insp. 01 - State Highway Agency

FIPS Code: 72928 - SOLON (CUY county)

Location: DISTRICT 12

3 MI E I-27

Resp A:

Inspector

Miller,Jason

Inspection Date 03/30/2023

Reviewer Seif,Youssef

Insp

Resp B:

Inspector Comments - Deck and Approach

Deck

Floor

Spalls Over Traffic - WB lanes in bay 6

EB lanes in bays 2 and 3.

Approach

Approach Wearing Surface

Cracks. Asphalt break up along both slabs.

Approach Guardrail

Minor cracks & rust stains to concrete approach rails. Collision damage to rear-left & forward-right guardrails.

Signs

Peeling of reflective tape to both bridge end markers.

Inspector Comments - General Appraisal

Superstructure

Diaphragm/X-Frames

Endframe rusted section loss with thru holes. Bent up horizontal angle in bay 5 over NB traffic. Horizontal endframe angles cut out in rear bays 3-5.

Fatigue

Welded cover plates at piers.

Substructure

Slope Protection

Cracks, uneven settlement, rear-left bottom section has collapsed. Concrete slid as much as 7.5" at rear & as much as 5" at forward. Areas of vegetation growing thru CSP.

Culvert

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Inspector Comments - Waterway

Waterway Adequacy

Channel

Scour Critical

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Bridge Inspection Report

Pictures