

Inspector: Schaub,Mark

Inspection Date: 08/17/2023

Structure Number: 5738156

Facility Carried: Preble Co Line C23

Ohio Bridge Inspection Summary Report

MOT-C0023-0035 (5738156)

2: District 37912 - JACKSON TWP (MOT county)
ict
07

5A: Inventory Route 1 C0023

21: Major Maint A/B 02 - County Highway Agency /
225 Routine Main A/B 02 - County Highway Agency /
221 Inspection A/B 02 - County Highway Agency /
220: Inv. Location JAC

7: Facility On Preble Co Line C23
6: Feature Ints Twin Creek
9: Location 1.9 MILES NORTH OF SR725
Lat, Lon 39.661908 , -84.480011

Condition

58: Deck 4 - Poor Condition
58.01 Wearing Surface 7 - Good (1% distress)
58.02 Joint 6- Satisfactory (isolated leaking)
59: Superstructure 7 - Good Condition
59.01 Paint & PCS 7 - Good (1-5% corr.)
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 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 3 - Latex Concrete or similar additive
N- Not Applicable

Appraisal

Sufficiency Rating 82.6 SD/FO 1 - SD
36: Rail, Tr, Gd, Term Std 1 0 1 1
72: Approach Alignment 7 - Better than present minimum criteria
113: Scour Critical 5 - Scour within limits of footing or piles
71: Waterway Adequacy 8 - Bridge Above Approaches

422: WS Date 09/01/2013
423: WS Thick (in) 2.5
482: Protective Coating 5 - Paint System OZEU
483: PCS Date 07/30/2001
453: Bearing Type 1 2 - Rockers & Bolsters
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 4 - Spread Footing (on soil)
539: Foundn: Pier 2 0 - Other

Geometric

48: Max Span Length (ft) 90.0
49: Structure Length (ft) 330.0
52: Deck Width, Out-To-Out (ft) 30.0
424: Deck Area (sf) 9900
32: Appr Roadway Width (ft) 28.0
51: Road Width, Curb-Curb (ft) 28.0
50A: Curb/SW Width: Left (ft) 0
50A: Curb/SW Width: Right (ft) 0
34: Skew (deg) 30
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

Age and Service

27: Year Built/ 106 Rehab 1962 / 1985
42A: Service On 1 - Highway
42B: Service Under 5 - Waterway
28A: Lanes on 02
28B: Lanes Under 00
19: Bypass Length 6
29: ADT 979
109: % Trucks (%) 7

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 05/25/2011
63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Inspections

90: Routine Insp. 12 Months 08/17/2023
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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ODOT District: District 07

MOT-C0023-0035_(5738156)

Date Built: 07/01/1962

Major Maint: 02 - County Highway Agency

Facility Carried: Preble Co Line C23

Traffic On: 1 - Highway

Rehab Date: 01/01/1985

Routine Maint: 02 - County Highway Agency

Feature Inters: Twin Creek

Traffic Under: 5 - Waterway

Insp. 02 - County Highway

FIPS Code: 37912 - JACKSON TWP (MOT county)

Location: JAC

1.9 MILES NORTH OF SR725

Resp A: Agency

Inspector

Schaub,Mark

Inspection Date 08/17/2023

Reviewer Shields,David

Insp

Resp B:

Inspector Comments - Deck and Approach

Deck

Floor/Slab (SF)

- Spalling and delaminating along the face and underside adjacent edge under each guardrail post anchor bolt, heavily rusted exposed guardrail post anchors, 6" deep spalling into deck edges, exposed longi. and trans. rebar, soft loose concrete.
- Full depth patches.
- Stay in place steel forms have heavily rusted areas, some metal is perforated and rusted though in spans 2 and 3.
- Span 3 between beams 3 and 4 a stay in place form has rusted though and fallen off in a 2' x 8' area. spalled and soft concrete underneath, damage approx. 3" - 5" deep with exposed transverse rebar. (fracture cracks)

Edge of Floor/Slab (LF)

- Spalling and delaminating along the face and underside adjacent edge under each guardrail post anchor bolts, heavily rusted exposed guardrail post anchors, deep spalling along deck edges, exposed rebar, soft loose concrete.

Bridge Wearing Surface (SF)

- New asphalt wearing surface overlay 8-2013.
- Monolithic concrete surface underneath asphalt with numerous longitudinal and transverse cracks, spalling along the edges, 1 pothole midspan patched with epoxy concrete. Approx. 13% (by field measurement) of the total surface area sounded hollow and was delaminating before overlay in 2013.
- Longitudinal and transverse cracks across asphalt wearing surface, (1% total area).
- Transverse and longitudinal map cracks in asphalt over pier 2 in a 4'W x 6'L area in North bound lane near center line.
- Patched area in asphalt 4'L x 2'W over pier 2 in North bound lane. Area repaired in 2023.
- Patched are NB lane just rear of P2. Area repaired repaired in 2023.
- Patched areas reflective of deterioration apparent on bottom of deck.

Bridge Railing (LF)

- Bottom anchor bolts exposed at most all posts, bottom anchors heavily rusted, top anchor bolts in deteriorated, spalling, soft concrete.
- Heavy rust with perforations to rail panels.

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Expansion Joint (LF)

- Expansion joints have been retrofitted with a welded raised bar filled with pourable rubber material to accommodate asphalt overlay, both the North and South joints have approximately half of the rubber now missing (snow and ice damage), recommend to repair or replace rubber.

Approach

Approach Wearing Surface (EA)

-

Approach Slab (SF)

- Paved over, unsealed transverse cracking near the expansion joint area.

Inspector Comments - General Appraisal

Superstructure

Beams/Girders (LF)

- Rust stains and minor flaking rust on upper flange, web, and lower flange.

Bearing Devices (EA)

- Scaling pack rust on most rockers with minor dirt and debris built up, limited movement due to pack rust build up.

- #1 beam, rear abutment, rocker slightly out of adjustment

- #2 beam, rear abutment, loose rocker.

- #3 beam, over P2 heavy rust coming out of top bearing plate, possible loose rocker.

- #4 beam, forward abutment, rocker is slightly out of adjustment.

Substructure

Abutment Caps (LF)

Pier Walls (LF)

- Pier 3 spall with exposed steel, 48"W x 72"H x 2"D, South face near top, vertical crack propagating from spall extending to approx. 4' above grade. Crack marked at bottom with date and no change since 2014.

- Horizontal crack 6" below seat under beam 3.

Pier Caps (LF)

- Cracks and spalling with exposed steel having measurable loss of section.

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- Pier 1, 2' x 2' spall with exposed steel and loss of section on East hammerhead face, minor delam 6" x 6" on West hammerhead face, horizontal cracks 2'L on bottom side of East hammerhead.
- Pier 2, spalls with exposed steel and loss of section on East and West face.
- Pier 2, delam. on East face under hammerhead 1'W x 5'H.
- Pier 3, spall with exposed steel at the Southeast corner of hammerhead nose 18"W x full height of nose x 3"D, spalled up to the bearing plate.

Backwalls (LF)

- Rust stains, horizontal and vertical cracks and areas of delamination.

Substructure Scour (EA)

- Scour counter measures installed by MCE operations 2014 and 2019. See 2014 inspection and 2019 cross section drawing for know scour history.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

- Channel photos are on file and are available for viewing upon request.

Channel Hydraulic Opening (EA)

- Channel restored by force account in 2014.
- Tree and minor debris on P2, **recommend to remove**.

Channel

Scour Critical