Inspector: Shelman,Erin
Inspection Date: 09/17/2025

Structure Number: 1833405
Facility Carried: WEST 150TH ST

Ohio Bridge Inspection Summary Report

CUY-C0066-01.94 (1833405)

B.L.04: District District 1216000 - CLEVELAND (CUY county)
B.CL.02: Major Maint 02 - County Highway Agency /
225 Routine Main A/B 02 - County Highway Agency /
221 Inspection A/B 02 - County Highway Agency /

5A: Inventory Route 1 01785
7: Facility On WEST 150TH ST
6: Feature Ints N&S RR, RTA & CHATFIELD
9: Location 2500' SOUTH OF LORAIN RD
Lat, Lon 41.446331 ,-81.801331

Condition

B.C.01: Deck	**7**
58.01: Wearing Surface	7
B.C.08: Joint	7
B.C.02: Superstructure	**4**
59.01: Paint & PCS	2
B.C.03: Substructure	**5**
B.C.09: Channel	**N**
B.C.11: Scour	**N**
B.C.10: Channel Prot.	**N**
B.C.05: Bridge Railing	
B.C.06: Transitions	
B.C.07: Bearings	
B.C.04: Culverts	**N**
Ohio GA	**4**

Appraisal

B.AP.03: Scour Vul. Not over Waterway

Geometric

48: Max Span Length (ft)	91.0
49: Structure Length (ft)	708.6
52: Deck Width, Out-To-Out (ft)	62.3
424: Deck Area (sf)	44145.78
32: Appr Roadway Width (ft)	52.0
51: Road Width, Curb-Curb (ft)	52.0
50A: Curb/SW Width: Left (ft)	5
50A: Curb/SW Width: Right (ft)	5
34: Skew (deg)	57
33: Bridge Median	0 - No median
54B: Min Vert Underclearance (ft)	21
336A: Min Vert Clrnce IR Cardinal (ft)	99
336B: Min V Clr IR Non-Cardinal (ft)	0
578: Culvert Length (ft)	0

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 (%)	137
704: Analysis Date	12/09/2020
63: Analysis Method	6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Structure Type

43: Bridge Type	4 - Steel continuous 02 - Stringer/Multi-beam or Girder N- Not Applicable
45: Spans Main / Approach	10 / 0
107: Deck Type	1 - Concrete Cast-in-Place
408: Composite Deck	N - Non-composite Construction
414A Joint Type 1	8 - Elastomeric Strip Seal
414B: Joint Type 2	N - None
108A: Wearing Surface	0 - None N - Not Applicable
422: WS Date	01/01/1992
423: WS Thick (in)	3.0
482: Protective Coating	4 - Paint System B
483: PCS Date	01/01/1967
453: Bearing Type 1	2 - Rockers & Bolsters
455: Bearing Type 2	N - None
528: Foundn: Abut Fwd	7 - Steel H Piles (HP 10 x 42)
533: Foundn: Abut Rear	7 - Steel H Piles (HP 10 x 42)
536: Foundn: Pier 1	7 - Steel H Piles (HP 10 x 42)
539: Foundn: Pier 2	N - None (Such as most Culverts)

Age and Service

27: Year Built/ 106 Rehab	1967 / 0000
42A: Service On	5 - Highway-pedestrian
42B: Service Under	4 - Highway - railroad
28A: Lanes on	04
28B: Lanes Under	02
19: Bypass Length	3
29: ADT	23303
109: % Trucks (%)	8

Inspections

		Months	
B.IE.03 Routine Insp.		12	09/17/2025
B.IE.03: NSTM Insp.	N		
B.IE.03: UW Insp.	N		
B.IE.03: Special Insp.			
UBIT Insp.	N	0	
Drone Insp.	N	0	

Inspector Shelman,Erin

Executive Summary

REAR = SOUTH

Zone = B

Inspector Comments - Deck and Approach

Deck, Wearing Surface, Joints, Railing

Floor/Slab

Numerous hairline leach-stained transverse/map cracks per bay in all spans (Most extend into haunches). Mottled along exterior BMs in bays 1 & 9 in all spans ~30" wide. Scattered mottled areas above UTIL in bay 5. (Span 5 is the worst). Deck haunch at BM upper flanges is cracked and spalled up to 9” wide over several piers along BMs 6 -9. (Most portions of exposed upper flange corroded). Several haunch spalls are painted over.

Bridge Wearing Surface

- **REAR-LEFT:** One (1) diagonal crack.
- **RIGHT:** Scattered transverse cracks ~4" propagating from curb plates for ~20% of length.

Curbs/Sidewalk

Curbs: Curb plates are scraped and corroded.

Sidewalks: Numerous hairline transverse, LONGL and diagonal cracks. Vegetation growing along the curb plates and railings.

- **LEFT:** Cracked/heaved along curb (LTV: ~375' x up to 15" x up to 2").
- **Exterior LEFT face:** Spans 1-5 spall/DELAM ~20 SF. Span 8 has a full-length leach-stained crack. Spans 9-10 spall/DELAM ~10 SF.
- **RIGHT:** Spalled/heaved along curb for ~500' up to 10” wide. **Center EXP JT:** Panel heaved/cracked/DELAM/spalled along the curb plate ~10 SF exposing the wire mesh.
- **FWD-RIGHT:** Two (2) small spalls at curb plate exposing wire mesh.
- **Exterior RIGHT face: Span 6:** Spall/DELAM ~12'. **Span 7:** Spall/DELAM ~10'. **Span 10:** Spall/DELAM ~5'.

Bridge Railing

Parapets: Scattered leach stained vertical/HORZL cracks. Scattered areas of rust staining. Scattered spall/DELAM areas with exposed corroded REINF.

Spalled areas:

- **LEFT: Exterior:** 36 LF. **Interior:** 6 LF.
- **RIGHT: Exterior:** 64 LF. **Interior:** 33 LF.

Fence: Scattered corrosion of base plates (RIGHT side worse).

- **LEFT:** Interior face near REAR end, before RR track, has one (1) missing bolt in fence base plate (Located ~135' to the South of the center EXP JT). Bottom rail is bent near center EXP JT. Expansion collar at center EXP JT has galvanic corrosion and inhibits thermal expansion and contraction. Missing utility covers throughout. Three (3) small holes up to 8" diameter in fence fabric near the center EXP JT just to the South.
- **RIGHT:** Lower fence rail at center EXP JT pulled out of post attachment and bent.

Deck Drainage

- **REAR-RIGHT:** Deck scupper and downspout is plugged.

Expansion Joint

Strip seal of all joints filled with dirt and debris.

- **Center EXP JT:** Cover plate in RIGHT railing has broken loose and separated from railing.

Approach

Approach Wearing Surface

- **REAR: Asphalt:** Spalled ~14 SF at JT with concrete. **Concrete:** RIGHT center lane spalled ~4 SF. JT with asphalt spalled ~19 SF (partially asphalt patched).
- **FWD:** Asphalt has a 1 SF patched spall in the LEFT center lanes ~8 SF at the junction with the concrete APPR WS. Patched spalls in RIGHT lanes ~4 SF. Scattered sealed cracks in the asphalt.

Concrete Parapet Railing:

Cracked with spall/DELAM areas throughout. Leach and rust staining throughout. Multiple areas have exposed corroded RIENF.

Spalled areas:

- **REAR-LEFT: Exterior:**101 LF. **Interior:** 94 LF.
- **REAR-RIGHT: Exterior:** 57 LF. **Interior:**129 LF.
- **FWD-LEFT: Interior:** 5 LF.
- **FWD-RIGHT: Exterior:**105 LF. **Interior:** 67 LF.

Steel Tube Railing/Fence:

- **REAR-RIGHT:** Fence near the concrete APPR WS is missing set screws on the lower rail.
- **FWD-RIGHT:** Scattered corrosion on fence anchor bolts.

Sidewalks:

- **REAR-LEFT:** Seven (7) panels are spalled/cracked.
- **REAR-RIGHT:** Scattered panels are diagonally cracked. A portion of one (1) panel is cracked/DELAM/spalled and heaved up to 2-1/2" deep at the curb. Numerous spalled control joints at/along/near the curb.
- **FWD-LEFT:** One (1) panel is transverse cracked at juncture with APPR slab (Panel is half in APPR slab and half in APPR WS). Scattered panels are transversely to map cracked on the ramp.
- **FWD-RIGHT:** Several panels are slightly settled along the curb. The worst panel being settled ~2".

Curbs:

Vegetation growing between curb and sidewalk.

- **REAR-LEFT:** Small spalls or missing areas of the curb ~20 LF.

Approach Slab

- **REAR-LEFT:** Spalled ~6 SF at backwall. Spalled ~4 SF at centerline.
- **REAR:** Chipped up to 2” wide x up to 2-1/2" deep along ~50% of the BW. Scattered small shallow spalls ~2 SF, and scattered LONGL hairline cracks.
- **REAR-RIGHT:** Joint material is missing between the BW and APPR slab for ~10 LF. BW spalled for ~10 LF up to 5" wide.
- **FWD-RIGHT:** Spalled (LTV: 16' x 3" x 3") adjacent to BW. Joint material missing in spalled area.

Railing: Scattered corrosion on bolts. Cracked/spalled in numerous areas.

Sidewalks:

- **REAR-LEFT:** Spall/DELAM at end of slab ~4 SF.
- **REAR-RIGHT:** Panel at the EXP JT is spall/DELAM ~10 SF exposing wire mesh.

Curbs:

- **REAR-RIGHT:** Spalled at EXP JT 4” long x 4” wide.
- **FWD-RIGHT:** Cracked/DELAM at FWD end ~1 LF.

Approach Embankment

Concrete retaining walls supporting roadway: Scattered transverse, vertical and map cracks. Fascia at top of walls and wall face have scattered spall/DELAM.

- **REAR-LEFT:** Surface scaling. Wall/corbel and exterior face of railing have spalls/DELAMs ~75 SF exposing corroded REINF.
- **REAR-RIGHT:** Three (3) areas are spalled below parapet totaling 10 SF. Spalled under corbel for ~24 LF up to 6” wide.

- **FWD-RIGHT:** DELAM at JT with ABUT ~3 SF. Exterior face of railing has ~100 SF of scattered spalls/DELAMs exposing scattered corroded REINF.

Approach Guardrail

Height of BTAs is 29".

- **REAR-RIGHT:** No GRAIL just a BTA.

Signs

All chevron posts are loose. Posts are mounted to the parapets.

Inspector Comments - General Appraisal

Superstructure, Bearings

Beams/Girders

- **Spans 5-6:** Ends of BMs 1, 2, and 10 over P5 have sheeting pack rust from leakage through EXP JT.
- **Spans 6-7:** Unpainted BMs have minor section loss (Up to 3.5%) in lower flange at midspan (< 2% Average); BMs 5-6 have sheeting corrosion-pack rust on interior faces of web and flanges. The interior and exterior flanges of each BM are exposed to the old LONGL joint in bay 5 (Joint eliminated in 2000 rehab). BMs are corroded from the past leakage through open LONGL JT in bay 5 and the old leaking UTIL deck cover plate in span 7 (Plate has since been repaired). Average section loss of lower flange of BMs 5 & 6 is ~10% in span 6 and ~40% in span 7. (See 2017 Measured Section of BMs for details).
- **Span 8 (RTA Span):** BMs have small flaking corrosion under the failed PCS.

Diaphragm/X-Frames

Span 1:

- **Bay 1:** One (1) intermediate diaphragm has a missing bottom angle.
- **Bay 3:** One (1) diaphragm has a broken weld and buckled diagonal cross frame member.

Span 2:

- **Bay 4:** One (1) intermediate cross frame has a broken weld at the top and a buckled diagonal member.

Span 4:

- **Bay 9:** Three (3) XFRAMEs are bent. Top diagonal angle of the diaphragm adjacent to the North splice on BM 10 is detached from web.

Span 5:

- **Bay 1:** Diagonal member of one (1) cross frame is DET with several through holes.

Span 6:

- **All:** XFRAMEs have sheeting corrosion.

Span 7:

- **Bay 1:** Diaphragm 5 has holes in a diagonal.

Span 9:

- **Bay 9:** Center XFRAME is bent and has through holes in both legs of bottom angle.

Span 10:

- **Bay 1:** First XFRAME from ABUT, one (1) leg of the diagonal angle has failed.

Bearing Devices

The ABUT and pier BRGs only have 1 to 2 anchor bolts per BRG, and many of those anchor bolts are crooked/bent and have loose nuts.

Protective Coating System

Slight pinhole to blush rust on webs, BM ends, top and/or bottom flanges of all BMs. Blush rust on bottom edge of BRG sliding sole plates at both ABUTs and BRGs on all piers. Exterior faces of both fascia BMs (BMs 1 and 10) at REAR ABUT have vertical cracks in the PCS along the edge of web repair plates for their entire height (31-1/2”) and the coating on both BMs and PLs is flaking. Superstructure over RR tracks (Spans 6-8) has not been painted. BMs and diaphragms are heavily corroded with pack rust. Spans 6 and 7 are covered with soot. Top flanges of BMs in bays 6-9 over piers in areas of deck haunch spalls have corroded.

Fatigue

Several scattered moment PLs are corroded along top and lower LONGL welds. Scattered moment PLs have corrosion between the lower flange and the moment PL at the ends of transverse welds. ~65% of the bolted splices have minor DET/bending of the lower flange splice PLs. Bottom PLs bowed at ends by pack rust and/or bent at joint between flanges (Most due to pack rust). All splices in spans 2, 4 and, 9 have scattered areas of light corrosion to pack rust on edges of web PLs, bolt heads and between edges of flanges/splice PLs. Fifteen (15) lower flange HORZL bolted splice plates are bent from 1/8” up to 1/4" at the JTs between the bottom flanges (**Span 2:** BM 6 North splice {NS} top PL on lower flange also bent here, BM 7 South splice {SS}, BM 9 SS and, BM 10 SS. **Span 4:** BM 5 SS. **Span 9:** BM 3 NS & SS, BM 4 NS, BM 5 NS, BM 6 NS & SS and, BM 7 NS).

- **Span 2:** BM 5, South splice, North edge of lower PL is bent; BM 10, South splice, bottom splice PL of lower flange has a 1-1/4" transverse crack at the SE corner.
- **Span 4:** BMs 5 & 6, North BM ends and splice PLs at P3 are bowed by pack rust. BM 6, North splice has a transverse crack/saw-cut ~1/2" from South edge. BM 10, North transverse weld moment PL at P3 is corroded.
- **Span 7:** Unpainted BM splice PLs and bolt heads on BMs 5 & 6 are corroded with significant pack rust/scale and have noticeable section loss of ~25% or more. BMs 5 & 6 over P6 has flaking pack rust along top of transverse moment PL welds which gives the appearance of a crack in the weld.
- **Span 8:** BMs 5 & 6 over P7 has flaking pack rust along top of transverse moment PL welds which gives the appearance of a crack in the weld.
- **Span 9:** BM 5, bottom PL, South splice has a tear, ~1" wide, across entire South end.

Utilities

Top: Numerous concrete railing UTIL access cover plates are missing, damaged or loose and have wires hanging out.

- **REAR-LEFT:** APPR ramp light one (1) post leans South.

Underneath: Scattered areas of the UTIL insulation is missing or failed in all spans.

- **Bay 5:** UTIL hangers are corroded in all spans.

Substructure

Abutment Walls

REAR: Breast wall has scattered hairline cracks, rust staining that appears to be from form-work nails. Surface scaling.

- **LEFT:** HORZL seat spalled/DELAM up to 12" wide along BW at end and at BRGs 1-5. Repairs around the front edge of BRG 3 are DELAM.

FWD: Breast wall has scattered hairline cracks, rust staining that appears to be from form-work nails, surface scaling, patches and DELAMs, ~90 SF.

- **RIGHT:** End face spalled 36 SF at parapet (Corbel). Corbel is cracked and rust stained at the joint with the ramp ~8' long x ~6" wide with a 2 SF spall along the crack.

Pier Walls

Scattered vertical and/or diagonal cracks. Rust staining and light surface scaling. Scattered spalls/DELAMS on pier wall end faces.

- **P1L:** Spall/DELAM ~11 SF.
- **P1R:** DELAM ~6 SF. Spalled ~2 SF.

- **P2L:** DELAM ~5 SF.
- **P2R:** DELAM ~18 SF. Spalled ~2 SF.
- **P3R:** Spall/DELAM ~30 SF exposing corroded REINF.
- **P4L:** Spalled ~6 SF on FWD face near LEFT edge.
- **P4R:** DELAM ~5 SF.
- **P8L:** Spall/DELAM on REAR face at RIGHT end ~3 SF exposing corroded REINF. DELAM on FWD face ~27 SF.
- **P8R:** DELAM on FWD face ~43 SF and spalled ~4 SF.
- **P9L:** Spall/DELAM on REAR face ~11 SF.
- **P9R:** DELAM on FWD face ~10 SF. Spall/DELAM on REAR face ~11 SF up to 2-1/2" deep with exposed corroded REINF at LEFT end face.

Pier Caps

All have scattered rust staining, vertical, diagonal and map cracks and light surface scaling. Scattered spalls/DELAMs on pier caps.

- **P1L:** DELAM ~43 SF. Spalled ~12 SF exposing corroded REINF.
- **P1R:** DELAM ~8 SF. Spalled ~2 SF on bottom of LEFT cantilever face exposing corroded REINF.
- **P2L:** Large vertical cracks under BMs 2-3 in both faces. DELAMs on the REAR face at the RIGHT end ~8 SF.
- **P2R:** DELAM ~10 SF. REAR face has a diagonal shear crack in RIGHT cantilever at BM10. Spall/DELAM on the FWD face ~4 SF. Bottom of LEFT cantilever is spalled ~3 SF.
- **P3L:** Spall/DELAM ~21 SF. RIGHT end and FWD face of cantilever is spalled ~4" deep exposing corroded REINF. Bottom face of LEFT cantilever has a DELAM ~7 SF.
- **P3R:** DELAM ~20 SF. Spalled on the LEFT end ~2 SF. Spalled on the FWD LEFT face ~1 SF. Spalled on the FWD RIGHT face ~2 SF.
- **P4L:** DELAM ~105 SF. Spalled ~6 SF.
- **P4R:** Both sides of cap cracked open up to 1/2" under BM 6. DELAM ~10 SF. Spalled on the RIGHT end face ~3 SF.
- **P6L:** Spall/DELAM on FWD-RIGHT cantilever ~7 SF under BM 5.
- **P6R:** Diagonal shear cracks and scattered vertical cracks under BM 10 on both faces. DELAM on FWD face of RIGHT cantilever ~15 SF.
- **P8R:** Spall/DELAM on the FWD face ~15 SF.
- **P9L:** Spall/DELAM on bottom face of LEFT cantilever ~10 SF exposing corroded REINF. Diagonal shear crack on the FWD face under BMs 1-2.

Backwalls

Tops:

- **Both:** Scattered spalls up to 3-1/2" wide along both sides (EXP JT and APPR slab sides).

Vertical Faces:

- **Both:** Scattered vertical cracks.

Wingwalls

- **FWD-LEFT:** Pulled away up to 2-1/4” to the West (2-1/4” at top; 1-3/4” at bottom); ~75% of the seal is failed.

Culvert

Inspector Comments - Waterway

Channel Protection

Channel

Scour