Inspector: Miller,Jason **Structure Number:** 4305345

Inspection Date: 10/23/2023 **Facility Carried:** WHITE RD

Ohio Bridge Inspection Summary Report LAK-00271-0001 (4305345)

2: District	District 12 85512 - WILLOUGHBY HILLS (LAK county)	5A: Inventory Route	1 00539
21: Major Maint A/B	01 - State Highway Agency /	7: Facility On	WHITE RD
225 Routine Main A/B	04 - City or Municipal Highway Agency /	6: Feature Ints	IR-271&271X (LAK-271-.01
221 Inspection A/B	01 - State Highway Agency /	9: Location	.1 MI N CUY CNTY ON I-271
220: Inv. Location	DISTRICT 12	Lat, Lon	41.570429746795256 ,-81.44794840269535

Condition

58: Deck	**5 - Fair Condition**
58.01 Wearing Surface	6 - Satisfactory (1-10% distress)
58.02 Joint	6- Satisfactory (isolated leaking)
59: Superstructure	**6 - Satisfactory Condition**
59.01 Paint & PCS	4 - Poor PCS (15-20% corr.)
60: Substructure	**5 - Fair Condition**
61: Channel	**N**
61.01 Scour	**N - Not Applicable**
62: Culverts	**N - Not Applicable**
67.01 GA	**5**

Appraisal

Sufficiency Rating	67.0 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

Geometric

48: Max Span Length (ft)	74.0
49: Structure Length (ft)	402.0
52: Deck Width, Out-To-Out (ft)	30.8
424: Deck Area (sf)	12381.6
32: Appr Roadway Width (ft)	34.0
51: Road Width, Curb-Curb (ft)	24.0
50A: Curb/SW Width: Left (ft)	2.2
50A: Curb/SW Width: Right (ft)	2.2
34: Skew (deg)	16
33: Bridge Median	0 - No median
54B: Min Vert Underclearance (ft)	15.84
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 (%)	150
704: Analysis Date	07/01/1973
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	6 / 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	3 - Latex Concrete or similar additive
	N- Not Applicable
422: WS Date	01/01/1977
423: WS Thick (in)	1.125
482: Protective Coating	7 - Metalized (Alum/Zinc)
483: PCS Date	01/01/1988
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

Age and Service

27: Year Built/ 106 Rehab	1963 / 0000
42A: Service On	5 - Highway-pedestrian
42B: Service Under	1 - Highway, with or w/out pedestrian
28A: Lanes on	02
28B: Lanes Under	06
19: Bypass Length	0
29: ADT	4185
109: % Trucks (%)	5

Inspections

		Months	
90: Routine Insp.		12	10/23/2023
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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	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12-Reinforced Concrete Deck	3 - Mod.	12362	sq. ft.	9762	2000	450	150
	Timber sub-decked over traffic. CS2- Leaching cracks. Epoxy injected areas. Lightly mottled areas. CS3- Large heavily mottled areas. Many delams and spalls (based on what is visible). CS4- Spalls with 4+ exposed rebar.						
510-Wearing Surfaces		9648	sq. ft.	6748	2500	400	0
	CS2- Many transverse cracks, spaced ~4'. Shallow spall in EB lane at rear expansion joint. CS3 - Some wide transverse cracks.						
107-Steel Open Girder/Beam	3 - Mod.	1592	ft.	562	950	80	0
	CS2 - Surface rust, mainly at lower flanges. CS3- Areas of section loss to fascia beams, mainly at lower flange, web connections, and abutments.						
515-Steel Protective Coating		13944	sq. ft.	0	7944	4000	2000
	CS 2 - Chalking, faded. CS 3 - Rust. CS 4 - Peeling paint, rusting. Note: beam ends painted 9/05 (OZEU) are re-rusting.						
205-Reinforced Concrete Column	3 - Mod.	15	each	5	3	6	1
	2 of 15 columns fiber wrapped. CS2- P1C2- Delminating fiber wrap. P4C1, P5C1- Cracking and delams. CS3- P3C1- 3, P4C2, and P5C2- Wide cracks and delams. P5C3, Failing fiber wrap with spall through fiber wrap. CS4- P2C2, Large spall with 4+ rebar exposed.						
521-Concrete Protective Coating		1695	sq. ft.	1695	0	0	0
215-Reinforced Concrete Abutment	3 - Mod.	56	ft.	44	10	2	0
	CS2- Cracks, some leached CS3- Concrete deterioration and spalls below some weep holes.						
521-Concrete Protective Coating		168	sq. ft.	168	0	0	0
234-Reinforced Concrete Pier Cap	3 - Mod.	125	ft.	123	2	0	0
	CS2- A few cracks.						
521-Concrete Protective Coating		1125	sq. ft.	1125	0	0	0
300-Strip Seal Expansion Joint	3 - Mod.	56	ft.	0	46	10	0
	CS2- Dirt & debris in joints. Cracks to headers. CS3- Tears in both seals. Spalls and wide cracks to rear header.						

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311-Movable Bearing	3 - Mod.	24	each	4	16	4	0
	CS2- Surface rusting. CS3- Rear rocker 1 & forward rocker 4 engulfed in dirt & debris. Pack rust to some bearings.						
313-Fixed Bearing	3 - Mod.	4	each	0	4	0	0
	CS2- Surface rusting.						
321-Reinforced Concrete Approach Slab	3 - Mod.	1400	sq. ft.	760	400	240	0
	Both paved over with asphalt. CS2- Cracking. Asphalt patches. CS3- Wide cracking and breakup to asphalt throughout slabs.						
330-Metal Bridge Railing	3 - Mod.	796	ft.	786	0	10	0
	CS3- One aluminum post bracket cracked to left rail over grass area between NB mainline & express lanes. A few locations of anchor bolts missing from base plates.						
331-Reinforced Concrete Bridge Railing	3 - Mod.	796	ft.	521	180	95	0
	CS2- Cracks, some leaching. CS3- Many spalls, some with exposed rebar, to inside & outside of rails. Wide cracks and delams to inside & outside of rails. Areas of deteriorated concrete.						
521-Concrete Protective Coating		3980	sq. ft.	3830	0	0	150
	CS4- Not effective.						
815-Drainage	3 - Mod.	8	each	4	4	0	0
	CS2- Partially plugged scuppers. Several downspouts have rusted thru holes just above lower flanges. Broken welds to 1st two downspout supports from rear abutment & the last downspout support near forward abutment on left fascia.						
830-Abutment Backwall	3 - Mod.	56	ft.	27	10	15	4
	CS2- Cracks. CS3- Delams. A few other spalls CS4- Large spalls with exposed cheese plate & rebar in bays 1 & 3 at both abutments.						

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LAK-00271-0001 _(4305345)

ODOT District:	District 12					Date Built:	07/01/1963
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FIPS Code:	85512 - WILLOUGHBY HILLS (LAK county)	Location:	DISTRICT 12		.1 MI N CUY CNTY ON I-271	Insp Resp B:	

Inspector Miller,Jason Inspection Date 10/23/2023 Reviewer Seif,Youssef

Inspector Comments - Deck and Approach

Deck

Curbs/Sidewalk

Cracks, a few large delams. Spall to rear-right corner & to left curb between rear scuppers 1 & 2. Large area of concrete deterioration at forward-right.

Approach

Approach Wearing Surface

Cracks. Areas of asphalt breaking up. Asphalt patches.

Approach Slab

Shallow void to forward-right slab along curb as deep as 8" x 48" long.

Approach Embankment

Minor erosion between rear-right guardrail posts 2 & 3.

Approach Guardrail

Post rot. Collision damage to rear-left. Partial exposure of concrete encasement of rear-right post 2. A few spacers missing at forward.

Signs

No bridge end markers.

Inspector Comments - General Appraisal

Superstructure

Diaphragm/X-Frames

Endframe rusting section loss. Rusted thru holes to forward endframe 1. Horizontal angle of first x-frame from rear abutment in bay 2 is bent up 2".

Fatigue

Welded cover plates at piers.

Substructure

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Slope Protection

As much as 4" of forward abutment footing exposed.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

Scour Critical

Pictures