

Ohio Bridge Inspection Summary Report

CUY-00010-1613 (1801503)

2: District 16000 - CLEVELAND (CUY county)
 ict
 12
 21: Major Maint A/B 01 - State Highway Agency /
 225 Routine Main A/B 04 - City or Municipal Highway /
 Agency
 221 Inspection A/B 01 - State Highway Agency /
 220: Inv. Location DISTRICT 12

5A: Inventory Route 1 00010
 7: Facility On SR 10
 6: Feature Ints CUY RIVER VALLEY & FI RR
 9: Location LORAIN/CARNEGIE BRIDGE
 Lat, Lon 41.487378 ,-81.696442

Condition	Structure Type
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58: Deck 58.01 Wearing Surface 58.02 Joint 59: Superstructure 59.01 Paint & PCS 60: Substructure 61: Channel 61.01 Scour 62: Culverts 67.01 GA	6 - Satisfactory Condition 7 - Good (1% distress) 6- Satisfactory (isolated leaking) 4 - Poor Condition 6 - Satisfactory (5-10% corr.) 6 - Satisfactory Condition 6 6 - Satisfactory N - Not Applicable 4
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43: Bridge Type 3 - Steel 09 - Truss - Deck N- Not Applicable 45: Spans Main / Approach 15 / 5 107: Deck Type 1 - Concrete Cast-in-Place 408: Composite Deck Y - Composite Construction 414A Joint Type 1 0 - Other 414B: Joint Type 2 N - None 108A: Wearing Surface 2 - Integral Concrete (separate non-modified layer of concrete added to structural deck) 2- MicroSilica	422: WS Date 09/01/2001 423: WS Thick (in) 1.5 482: Protective Coating 5 - Paint System OZEU 483: PCS Date 03/04/2004 453: Bearing Type 1 1 - Rollers 455: Bearing Type 2 N - None 528: Foundn: Abut Fwd 4 - Spread Footing (on soil) 533: Foundn: Abut Rear 4 - Spread Footing (on Soil) 536: Foundn: Pier 1 4 - Spread Footing (on soil) 539: Foundn: Pier 2 0 - Other
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Appraisal

Sufficiency Rating 64.9 SD/FO 1 - SD 36: Rail, Tr, Gd, Term Std 1 1 1 1 72: Approach Alignment 7 - Better than present minimum criteria 113: Scour Critical 8 - Stable for scour conditions 71: Waterway Adequacy 8 - Bridge Above Approaches

422: WS Date 09/01/2001 423: WS Thick (in) 1.5 482: Protective Coating 5 - Paint System OZEU 483: PCS Date 03/04/2004 453: Bearing Type 1 1 - Rollers 455: Bearing Type 2 N - None 528: Foundn: Abut Fwd 4 - Spread Footing (on soil) 533: Foundn: Abut Rear 4 - Spread Footing (on Soil) 536: Foundn: Pier 1 4 - Spread Footing (on soil) 539: Foundn: Pier 2 0 - Other

Geometric

48: Max Span Length (ft) 299.0 49: Structure Length (ft) 3657.3 52: Deck Width, Out-To-Out (ft) 83.0 424: Deck Area (sf) 303555.9 32: Appr Roadway Width (ft) 60.0 51: Road Width, Curb-Curb (ft) 60.0 50A: Curb/SW Width: Left (ft) 6.7 50A: Curb/SW Width: Right (ft) 6.7 34: Skew (deg) 0 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 1932 / 1983 42A: Service On 5 - Highway-pedestrian 42B: Service Under 7 - Railroad - waterway 28A: Lanes on 04 28B: Lanes Under 00 19: Bypass Length 2 29: ADT 13835 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 (%) 140 704: Analysis Date 07/21/2016 63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Inspections

90: Routine Insp. 92A: FCM Insp. Y 92B: Dive Insp. Y 92C: Special Insp. N 92D: UBIT Insp. N 92E: Drone Insp. Inspector Rufener,Justin	<table style="width:100%"> <tr> <th style="width:20%">Months</th> <th style="width:80%">Date</th> </tr> <tr> <td>12</td> <td>06/22/2021</td> </tr> <tr> <td>24</td> <td>07/24/2020</td> </tr> <tr> <td>60</td> <td>07/08/2020</td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td></td> <td>08/01/2014</td> </tr> </table>	Months	Date	12	06/22/2021	24	07/24/2020	60	07/08/2020	0			08/01/2014
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Inspector: Justin Rufener
 Inspection Date: 06/22/2021

Structure Number: 1801503
 Facility Carried: SR 10

Bridge Inspection Report

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	3 - Mod.	263774	sq. ft.	239674	12000	12000	100
	CS2: Delaminations, Moderate cracking with efflorescence, Failing patches, Saturation. CS3: Spalling with exposed rebar. CS4: In east approach spans between Column 6A and the east end of bridge, spalling with exposed reinforcing, with section loss ranging from minor to complete. See attached report for additional details.						
510 - Wearing Surfaces		178959	sq. ft.	169949	9000	10	0
	CS2: There are isolated moderate longitudinal, transverse and map cracks up to 1/16" wide throughout the deck CS3: Several areas with shallow potholes						
107 - Steel Open Girder/Beam	3 - Mod.	1207	ft.	1195	12	0	0
	CS2: Minor surface corrosion at the west abutment.						
515 - Steel Protective Coating		11120	sq. ft.	10564	556	0	0
	CS2: Areas of surface dulling and surface corrosion (substantially effective).						
113 - Steel Stringer	3 - Mod.	36709	ft.	32638	3671	400	0
	CS2: Areas of active surface corrosion. CS3: Areas of active and painted over minor web loss. Isolated corrosion holes which are cleaned and painted.						
515 - Steel Protective Coating		187210	sq. ft.	183010	4000	200	0
	CS2: Areas of surface dulling and surface corrosion (substantially effective). CS3: Areas of loss of pigment.						

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120 - Steel Truss	3 - Mod.	11830	ft.	9464	1183	1183	0
<p>CS2: Corrosion and pack rust are reactivating. At deck joints and junction box drains, leakage is causing active corrosion to adjacent members. Several cracks running longitudinally along the fillet between the legs of the flange angle with crack arrest holes</p> <p>CS3: Members have varying degrees of pitting and section loss, and pack rust located between the flange angles and the web plates. At lower chords pack rust measures up to 1³/₄" thick, causing significant distortion of the web plates and flange angles. Portions of the flange angles and webs of the lower chords have pockets of deep pitting or corrosion holes. The greatest section loss is typically in located in Spans 11 and 13. In these spans twelve (12) lower chord members had section loss between 5% and 22%. The lower chords, mainly in Span 12, have several cracks in the flange angles. The cracks typically run longitudinally along the fillet between the legs of the flange angle.</p>							
515 - Steel Protective Coating		650910	sq. ft.	570910	67000	13000	0
<p>CS2: Areas of surface dulling, surface corrosion (substantially effective), and peeling surface coat.</p> <p>CS3: Areas of loss of pigment and limited effectiveness.</p>							
152 - Steel Floor Beam	3 - Mod.	11218	ft.	10318	900	0	0
<p>CS2: Surface corrosion, mainly below deck joints</p>							
515 - Steel Protective Coating		77410	sq. ft.	75010	1600	800	0
<p>CS2: Areas of surface dulling and surface corrosion (substantially effective)</p> <p>CS3: Areas of loss of pigment and limited effectiveness.</p>							
161 - Steel Pin and Pin & Hanger Assembly or both	3 - Mod.	192	each	7	185	0	0
<p>CS2: Minor section loss on pins and adjacent plates. Some minor</p>							
162 - Steel Gusset Plate	3 - Mod.	1058	each	324	347	387	0
<p>CS2: Reactivating corrosion. Minor edge distortion due to pack rust.</p> <p>CS3: Minor to advanced section loss, mainly along lower chords, and widespread on plates at deck joints. Some minor to moderate rivet head loss.</p>							
202 - Steel Column	3 - Mod.	16	each	16	0	0	0
515 - Steel Protective Coating		1100	sq. ft.	1100	0	0	0
205 - Reinforced Concrete Column	3 - Mod.	54	each	12	36	6	0
<p>CS2: Areas of map cracking, staining, delamination and patching</p> <p>CS3: Spalls concentrated around areas of patching</p>							

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Bridge Inspection Report

Element Inspection

210 - Reinforced Concrete Pier Wall	3 - Mod.	166	ft.	102	62	2	0
	CS2: Areas of map cracking, staining and patching CS3: Minor spalls						
215 - Reinforced Concrete Abutment	3 - Mod.	171	ft.	126	45	0	0
	CS2: Areas of map cracking, staining, patching and delaminations						
234 - Reinforced Concrete Pier Cap	3 - Mod.	1079	ft.	439	540	100	0
	CS2: Areas of map cracking, delamination and patching CS3: Areas of spalling						
300 - Strip Seal Expansion Joint	3 - Mod.	503	ft.	93	400	10	0
	CS2: Evidence of Leakage. Debris Accumulation CS3: At Joint 18, seal is tearing and coming out of retainer.						
302 - Compression Joint Seal	3 - Mod.	498	ft.	398	100	0	0
	CS2: Evidence of leakage. Debris Accumulation. Some Gouges to Armor.						
303 - Assembly Joint with Seal	3 - Mod.	498	ft.	98	400	0	0
	CS2: Evidence of leakage. Debris Accumulation.						
311 - Movable Bearing	3 - Mod.	62	each	0	62	0	0
	CS2: Surface Corrosion. Minor section loss on pins and adjacent plates.						
313 - Fixed Bearing	3 - Mod.	102	each	0	102	0	0
	CS2: Surface Corrosion. Minor section loss on pins and adjacent plates.						
321 - Reinforced Concrete Approach Slab	3 - Mod.	2075	sq. ft.	1971	104	0	0
	CS2: Paved over. Widespread cracking and poor quality patches in wearing surface.						
331 - Reinforced Concrete Bridge Railing	3 - Mod.	10527	ft.	4527	5000	1000	0
	CS2: Moderate cracks. Delaminations CS3: Rust staining. Spalls with exposed reinforcing.						
815 - Drainage	3 - Mod.	32	each	32	0	0	0
830 - Abutment Backwall	3 - Mod.	171	ft.	130	40	1	0
	CS2: Moderate cracking and delamination. CS3: Cracking with rust staining						

ODOT District: District 12

CUY-00010-1613_(1801503)

Major Maint: 01 - State Highway Agency

Facility Carried: SR 10

Traffic On: 5 - Highway-pedestrian

Date Built: 07/01/1932

Rehab Date: 01/01/1983

Routine Maint: 04 - City or Municipal Highway

Feature Inters: CUY RIVER VALLEY & FI RR

Traffic Under: 7 - Railroad - waterway

Insp. Resp A: 01 - State Highway Agency

FIPS Code: 16000 - CLEVELAND (CUY county)

Location: DISTRICT 12

LORAIN/CARNEGIE BRIDGE

Insp

Resp B:

Inspector

Rufener,Justin

Inspection Date 06/22/2021

Reviewer Rufener,Justin

Inspector Comments - Deck and Approach

Deck

Element 12 - Reinforced Concrete Deck (SF)

The deck is overall in **Satisfactory** condition. The underside of the deck has areas of spalling with exposed rebar, delaminations, cracking with efflorescence, and failing patches noted throughout. Heavier concrete deterioration is noted near the joints and scuppers. Many of the previous spalls have been coated with a spray-on cathodic protection, but some of these exhibit areas of activating corrosion. Netting and/or wood falsework are in place over the roadways and parking lots to prevent loose concrete from falling into traffic. There is a new paved parking lot, which was not present in the 2020 inspection, between Pier 3 and 4, and there is no netting on the underside of the maintenance deck in this area. The edge of the deck has a few isolated spalls throughout with minor cracking adjacent to expansion joints and floorbeam extensions. The deck in east approach spans between Column 6A and the east end exhibits areas of cracking, saturation, delamination and spalling with exposed reinforcing, with section loss ranging from minor to complete. The deck in the west approach unit has areas of spalling with exposed rebar, delaminations and cracking with efflorescence. See the inspection report for additional details.

The lower (maintenance) deck is not open to the public and does not present a public safety concern, and therefore it is not included in the element level quantities or considered with the rating of Item N58 Deck or Item N58.01 Wearing Surface. On the top side, there are some areas of shallow spalling and delamination, with isolated areas of heavy spalling with exposed, corroded reinforcing. There are areas of cracking, delamination and spalling on the underside of the deck.

See the inspection report for additional details.

Element 300 - Strip Seal Expansion Joint (LF)

Strip seal expansion joints are present at Joints 1 and 2, and 15 through 18. The strip seal expansion joints are in **Satisfactory** condition. There is evidence of leakage through the joint seals. There is debris accumulation through most of the length of the joints. In Joint 18 there are areas of where the seal is tearing or has come out of the retainer. See the inspection report for additional details.

Element 302 - Compression Joint Seal (LF)

Compression seal expansion joints are present at Joints 3, 5, 7, 9, 11 and 13. The compression joints are in **Satisfactory** condition. There is evidence of leakage through the joint membranes. There is some minor debris accumulation in the joints and some gouges in the joint armor. See the inspection report for additional details.

Element 303 - Assembly Joint with Seal (LF)

Modular joints with seals are present at Joints 4, 6, 8, 10, 12

and 14. The modular joints are in **Satisfactory** condition. There is evidence of leakage through the joint seals. There is debris accumulation through most of the length of the joints. See the inspection report for additional details.

Element 331 - Reinforced Concrete Bridge Railing (LF)

The concrete railings are in **Fair** condition. The exterior railings have widespread cracking with rust staining and some areas of delamination and spalls with exposed reinforcing. The bikeway railing is in good condition with a few minor deteriorated areas. See the inspection report for additional details.

Element 815 - Drainage (EA)

The deck drainage is in **Good** condition. There is minor debris in the deck scuppers and recesses, and some isolated surface corrosion below the deck in the drainage downspouts. The scuppers and recesses under the multi-use path were cleaned as part of the ongoing rehabilitation. At Pier 4, the south catch basin is clogged with debris. See the inspection report for additional details.

Curb/Sidewalk

The concrete curb and sidewalk are in **Fair** condition. The sidewalks have been previously repaired at the expansion joints. Both sidewalks have isolated areas of delamination and light cracking with efflorescence. The South sidewalk shows more deterioration with some areas of spalling and vegetation growing in many of the cracked areas adjacent to the curb. See the inspection report for additional details.

Element 510 - Wearing Surface (SF)

The microsilica concrete wearing surface is in **Good** condition. There are isolated longitudinal, transverse and map cracks up to 1/16" wide throughout the deck (less than 5% of total area), and several areas with shallow potholes. See the inspection report for additional details.

Signs

The signs on the structure are in **Good** condition.

Approach

Item 321 - Approach Slab (SF)

An approach slab is located on the west approach, and has been paved over. The approach slab is in **Good** condition with no signs of settlement or shifting. There pavement on the approach slab exhibits widespread cracking and poor quality patches. Due to this pavement distress, 5% of the area has been assigned to Condition State 2. See the inspection report for additional details.

Approach Wearing Surface

The approach wearing surfaces are in **Fair** condition. The east approach pavement is in good condition and the west approach pavement is in poor condition with about 35% potholes, patches, or cracks. Approach sidewalks typically have minor delamination and cracking, similar to the deck sidewalk. See the inspection report for additional details.

Embankment

The approach embankments are in **Good** condition. There are some locations of minor erosion present on the approaches and around the piers. See the inspection report for additional details.

Guardrail

The approach guardrails are in **Fair** condition. The approach guardrail is an extension of the concrete rail on the bridge. It exhibits cracking, minor surface spalling, and rust staining. See the inspection report for additional details.

Security Items

At the west pylon, the barbed wire on the top of the vandal protection fence at the south end has been damaged, and there is evidence of access to the bridge at this location by vandals.

Inspector Comments - General Appraisal

Superstructure

Element 107 - Steel Open Girder/Beam (LF)

The beams that are part of the west approach superstructure are in overall **Good** condition. There is some minor surface corrosion at the abutment. See the inspection report for additional details.

Element 113 - Steel Stringer (LF)

The stringers are in **Satisfactory** condition. There are isolated areas of active corrosion at the floorbeam connections and fascia stringers, with some minor web loss. There are areas of isolated corrosion holes which were previously cleaned and painted, and in some locations, repaired. See the inspection report for additional details.

The lower (maintenance) deck is not open to the public and does not present a public safety concern, and therefore it is not included in the element level quantity of Steel Stringers or considered with the rating of Item N59 Superstructure. There are areas of section loss and active corrosion of the stringers, especially near the joints.

Element 120 - Steel Truss (LF)

The truss is in **Poor** condition. The rating is primarily controlled by section loss in the lower chord of the exterior trusses and section loss of members at the deck joints. Areas of corrosion, pitting and pack rust were cleaned, sealed and painted during the 2002 Rehabilitation. Select areas, where corrosion had reinitiated most heavily since 2002, were cleaned, sealed and painted as part of the rehabilitation completed in 2020. At numerous locations, corrosion and pack rust are reactivating.

The lower chords have varying degrees of section loss and pack rust located between the flange angles and the web plates. This pack rust measures up to 1³/₄" thick, causing significant distortion of the web plates and flange angles. Portions of the flange angles and webs of the lower chords have pockets of deep pitting or corrosion holes. The greatest section loss is typically in located in

Spans 11 and 13. In these spans twelve (12) lower chord members had section loss between 5% and 22% measured previously reported by the 2014 Inspection Report. Bolted plates have been placed in some areas to repair areas with corrosion holes & advanced section loss. The lower chords, mainly in Span 12, have cracks in the flange angles. The cracks typically run longitudinally along the fillet between the legs of the flange angle. Crack arrest holes have been drilled at some of the crack locations.

The verticals are generally in good condition. The verticals below some of the deck joint locations exhibit moderate painted over pitting and pack rust throughout the full height, some of which is reactivating. There is localized moderate section loss of the web plates at some of the lateral bracing and unused floorbeam connections.

The diagonals are generally in satisfactory condition. Areas of section loss or active pack rust are present, mainly near the lower gusset plates and near the deck joints. Exterior diagonals, adjacent to abandoned utility supports, have remnants of brackets welded to the web plates. Several diagonals have lower stay plates with deep section loss or corrosion holes.

The upper chords are in overall good condition. At deck joints and junction box drains, leakage is causing active corrosion to upper chord members. Below the expansion joints there is dirt and construction debris present inside some upper chord connections with to verticals. At several locations, abandoned drainage or utility brackets are welded to the webs. At U0-U1, Span 9, South Exterior Truss, the welds to one of these brackets is cracked.

The lateral and sway bracing members are in fair condition with section loss and some corrosion holes near the connections. Many of the lateral bracing gusset plates have section loss, pack rust, and corrosion holes. Pack rust at the lateral bracing members is causing distortion of the gusset plates. Minor pack rust and corrosion was noted at the connections of the sway bracing to the verticals below the deck joints.

See the inspection report for additional details.

Element 152 - Steel Floor Beam (LF)

The floorbeams are in overall **Satisfactory** condition. There is minor section loss and surface corrosion along the floorbeams, mainly below deck joint locations. See the inspection report for additional details.

The lower (maintenance) deck is not open to the public and does not present a public safety concern, and therefore it is not included in the element level quantity of the Steel Floor Beams or considered with the rating of Item N59 Superstructure. There are areas of section loss and active corrosion of the floorbeams, especially near the joints. At many locations, the floorbeam webs have arrested cracks at the truss connections.

Item 161 - Steel Pin and Pin & Hanger Assembly (EA)

The pins, hangers, and hinges are in **Fair** condition. Minor to moderate section loss and pack rust were noted on the pins and the adjacent plates. At some locations, minor misalignments of the pins were noted. More severe defects of pins and adjacent plates noted in previous inspection were repaired as part of the most recent inspection. See the inspection report for additional details.

Item 162 - Steel Gusset Plate (EA)

The truss gusset plates are in **Poor** condition.

Areas of corrosion, pitting and pack rust were cleaned, sealed and painted during the 2002 Rehabilitation. At numerous locations, corrosion and pack rust are reactivating. Areas of heavy corrosion occur below the deck expansion joints. Advanced section loss commonly occurs just above the lower chord, along the edges and at ends of the diagonal connections. Rivet head loss is also common at these locations. At pin locations, the gusset plates typically have section loss and pitting around the pins. Minor bows were noted along the free edges of the gusset plates due to pack rust. The upper chord gusset plates are in good condition with little corrosion and pitting observed, except at locations of deck joint leakage where some section loss and pack rust are present. The free edges of many of the gusset plates have been stiffened during the most recent rehabilitation. See the inspection report for additional details.

Item 311 Moveable Bearing (EA)

The moveable bearings are in **Satisfactory** condition.

Moderate surface corrosion with areas of section loss was noted on the pins and adjacent plates. There is debris and water accumulation in several of the truss bearings. At the west abutment, the bearings all have light surface corrosion. The stringer saddle bearings exhibit minor corrosion and some pack rust. See the inspection report for additional details.

The lower (maintenance) deck is not open to the public and does not present a public safety concern, and therefore it is not included in the element level quantity of the Moveable Bearings. There is active corrosion and section loss of the rocker bearings. The locations of excess tilt noted on previous inspections have been corrected by the most recent rehabilitation.

Item 313 Fixed Bearing (EA)

The fixed bearings are in **Satisfactory** condition.

Moderate surface corrosion with areas of section loss was noted on the pins and adjacent plates. There is debris and water accumulation in several of the truss bearings. See the inspection report for additional details.

The lower (maintenance) deck is not open to the public and does not present a public safety concern, and therefore it is not included in the element level quantity of the Fixed Bearings.

Item 515 - Steel Protective Coating (SF)

The protective coating system (PCS) is in **Fair** condition.

The most severe areas of PCS degradation noted in the 2019 inspection have been or were being addressed as part of the ongoing rehabilitation. There are areas of peeling and bubbling paint and surface corrosion, especially at expansion joints where water infiltration and active corrosion is occurring. At some locations, corrosion is reinitiating where pack rust was previously cleaned and sealed. There is widespread fading and loss of pigment, particularly on the portions of the truss where sun exposure is the highest. At scattered locations the top coat of paint is peeling, revealing the epoxy intermediate coat. See the inspection report for additional details.

Fatigue Prone Details

The Fatigue Prone Details are in **Satisfactory** condition. Fatigue prone details are present on the abandoned drainage and utility brackets, which are welded to the upper chords

and diagonals. At U0-U1, Span 9, South Exterior Truss, the welds to one of these brackets is cracked, but the crack does not propagate into the base metal.

Utilities

The utilities are in **Poor** condition. The PVC telecom conduits are damaged, and cables are exposed in many locations. The telecom structural supports, sheds, and corrugated roofs/walls have widespread heavy deterioration. At several locations, the lower chords have almost 100% section loss at supports and lateral bracing is detached. At the utility access hatches in the deck, there is widespread corrosion of the supports and evidence of leakage . Several of the street lights are non-operational, but no damage was detected.

Substructure

Item 202 - Steel Column (EA)

The steel pier columns in the West Approach Spans are in **Good** condition. See the inspection report for additional details.

Item 205 - Reinforced Concrete Column (EA)

The reinforced concrete pier columns are in **Satisfactory** condition. Pier columns have areas of cracking, staining, delamination, or spalling concentrated around previously patched areas.

Item 210 - Reinforced Concrete Pier Wall (LF)

The pier walls are in **Satisfactory** condition. Pier walls are present at the East and West Pylons. Minor cracking, staining, patched areas and some minor spalling were noted throughout . See the inspection report for additional details.

Item 215 - Reinforced Concrete Abutment (LF)

The abutment walls are in **Satisfactory** condition. There are cracks, areas of patching, rust staining, and some delaminations. See the inspection report for additional details.

Item 234 - Reinforced Concrete Pier Caps (LF)

The pier caps are in **Satisfactory** condition. There are areas of cracking, delamination, and patching on the caps. The inspection manholes in the pier caps are in poor condition. There is insufficient surface bearing area to support the lid and care should be taken when walking near them or opening them. See the inspection report for additional details.

The non-structural pier towers located above the pier caps of Piers 1-12 are not considered in the rating but are in poor condition. Many portions of the pier towers have been removed, but those that remain show active degradation with debris accumulating on the pier cap below.

Item 830 - Abutment Backwalls (LF)

The backwalls are in **Satisfactory** condition.

Cracking and delamination were noted in some of the backwall. See the inspection report for additional details.

Wingwalls

The wingwalls are in **Satisfactory** condition with scattered areas of cracking, delamination, and minor spalling. See the inspection report for additional details.

Decorative Pylons

The decorative sandstone pylons are in **Satisfactory** condition. The sandstone units exhibit some areas of spalling and deterioration. See the inspection report for additional details.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

Alignment

The alignment is in **Satisfactory** condition. The channel is skewed with respect to the piers, but this is an as-built condition.

Protection

The channel protection is in **Satisfactory** condition. There are some minor deficiencies to the protection on both banks.

Hydraulic Opening

The hydraulic opening is in **Very Good** condition. There is no indication of the bridge restricting high flow in the river.

Fenders

The new concrete fenders are in **Very Good** condition.

Navigation Lights

The navigation lights are in **Poor** condition. On the north side of the bridge, the middle and west navigation lights are not functioning. Damage at these locations was not noted.

Scour

The scour is in **Satisfactory** condition. An underwater inspection was performed on July 8, 2020. The underwater inspection found the following deficiencies contributing to the scour rating:

Pier 10 (West Pier), Column D: Scour has exposed a maximum height of 3.0 feet of the vertical face of the footing at the southeast corner. This represents a decrease from the 3.7 feet noted in the 2015 underwater inspection. The horizontal footing exposure extends 18 feet on the east face and 11 feet on the south face from the southeast corner.

See the 2020 Underwater Inspection Report for additional details.

Scour Critical