

Inspector: Banaszak, Ken  
 Inspection Date: 09/16/2022

Structure Number: 1810003  
 Facility Carried: IR 71

Bridge Inspection Report

**Ohio Bridge Inspection Summary Report**

**CUY-00071-02.030 (1810003)**

2: District 75098 - STRONGSVILLE (CUY county)  
 ict 12  
 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  
 5A: Inventory Route 1 00071  
 7: Facility On IR 71  
 6: Feature Ints Creek  
 9: Location just south of SR 82  
 Lat, Lon 41.3092253712772 , -81.809786507867

| Condition                 |  | Structure Type            |  |
|---------------------------|--|---------------------------|--|
| <b>58: Deck</b>           | <b>N - Not Applicable</b>  | 43: Bridge Type           | 3 - Steel                              |
| 58.01 Wearing Surface     | N - Not Applicable   |                           | 19 - Culvert (includes frame culverts) |
| 58.02 Joint               | N - Not Applicable   |                           | N - Not Applicable                     |
| <b>59: Superstructure</b> | <b>N - Not Applicable</b>  | 45: Spans Main / Approach | 1 / 0                                  |
| 59.01 Paint & PCS         | N - Not Applicable   | 107: Deck Type            | N - Not Applicable                     |
| <b>60: Substructure</b>   | <b>N - Not Applicable</b>  | 408: Composite Deck       | N - Non-composite Construction         |
| <b>61: Channel</b>        | <b>5</b>   | 414A Joint Type 1         | N - None                               |
| <b>61.01 Scour</b>        | <b>4 - Poor or Advanced Scour (Spread: no undermining, Deep: Piles may be visible)</b> | 414B: Joint Type 2        | N - None                               |
| <b>62: Culverts</b>       | <b>4 - Large spalls, heavy scaling, wide cracks</b>                                    | 108A: Wearing Surface     | N - NA                                 |
| <b>67.01 GA</b>           | <b>4</b>   |                           | N - Not Applicable                     |

| Appraisal                  |   | 422: WS Date            |                                  |
|----------------------------|---|-------------------------|----------------------------------|
| Sufficiency Rating         | 43.0 SD/FO 1 - SD                       | 423: WS Thick (in)      | 0                                |
| 36: Rail, Tr, Gd, Term Std | 0 1 1 1                                 | 482: Protective Coating | N - None or Not Applicable       |
| 72: Approach Alignment     | 8 - Equal to present desirable criteria | 483: PCS Date           |                                  |
| 113: Scour Critical        | 6 - Not yet evaluated for scour         | 453: Bearing Type 1     | N - None                         |
| 71: Waterway Adequacy      | 7 - Slight Chance of Overtopping Bridge | 455: Bearing Type 2     | N - None                         |
|                            |   | 528: Foundn: Abut Fwd   | N - None (Such as most Culverts) |
|                            |   | 533: Foundn: Abut Rear  | N - None (such as most Culverts) |
|                            |   | 536: Foundn: Pier 1     | N - None (Such as most Culverts) |
|                            |   | 539: Foundn: Pier 2     | N - None (Such as most Culverts) |

| Geometric                              |               | Age and Service           |              |
|--|---------------|---------------------------|--------------|
| 48: Max Span Length (ft)               | 8.0           | 27: Year Built/ 106 Rehab | 1963 / 0000  |
| 49: Structure Length (ft)              | 11.7          | 42A: Service On           | 1 - Highway  |
| 52: Deck Width, Out-To-Out (ft)        | 0.0           | 42B: Service Under        | 5 - Waterway |
| 424: Deck Area (sf)                    | 2340          | 28A: Lanes on             | 06           |
| 32: Appr Roadway Width (ft)            | 200.0         | 28B: Lanes Under          | 00           |
| 51: Road Width, Curb-Curb (ft)         | 0.0           | 19: Bypass Length         | 9            |
| 50A: Curb/SW Width: Left (ft)          | 0             | 29: ADT                   | 65086        |
| 50A: Curb/SW Width: Right (ft)         | 0             | 109: % Trucks (%)         | 3            |
| 34: Skew (deg)                         | 47            |                           |              |
| 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)   | 99            |                           |              |
| 578: Culvert Length (ft)               | 564           |                           |              |

| Load Posting           |                                   | Inspections        |                      |
|------------------------|-----------------------------------|--------------------|----------------------|
| 41: Op/Post/Closed     | A - Open                          | 90: Routine Insp.  | 12 Months 09/16/2022 |
| 70: Posting            | 5 - Equal to or above legal loads | 92A: FCM Insp.     | N 0                  |
| 70.01: Date            |                                   | 92B: Dive Insp.    | N 0                  |
| 70.02: Sign Type       |                                   | 92C: Special Insp. | N 0                  |
| 734: Percent Legal (%) | 150                               | 92D: UBIT Insp.    | N 0                  |
| 704: Analysis Date     |                                   | 92E: Drone Insp.   | N 0                  |
|                        |                                   | Inspector          | Banaszak, Ken        |

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63: Analysis Method      6 - Load Factor (LF) rating reported 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 |
|---|-------------|----------------|-------|-------------------|-------------------|-------------------|-------------------|
| <b>240-Steel Culvert</b>  | 3 - Mod.    | 564            | ft.   | 0                 | 314               | 150               | 100               |
| <p>CS 2 - Light rusting section loss to CMP and hardware throughout. Areas of water infiltration and efflorescence throughout. A few areas of deformation throughout, but particularly near inlet and outlet.</p> <p>CS 3 - Areas of heavy rusting section loss. Missing nut at 9:00, 80' from inlet.</p> <p>CS 4 - CMP at outlet has rusted through and failed and is undermined 20'. North side of CMP is shoved in at outlet. Rusted through holes to invert between 5:00 and 7:00 mainly near inlet and outlet. Through holes near inlet are as wide as 6" in the first 30' of CMP. Several rusted through holes between 8:00 and 11:00 near outlet. Rusting layered section loss at invert throughout. Approximately 80 bolt holes cracked in the 9:00 seam from 78' to 128' from outlet and 10 bolt holes cracked in the 9:00 seam approximately 140' from inlet. 3" tear at 2:00 near mid-point.</p> |             |                |       |                   |                   |                   |                   |
| <b>835-Culvert End Treatment</b>  | 3 - Mod.    | 2              | each  | 0                 | 0                 | 1                 | 1                 |
| <p>CS 3 - Approximately 3 sf of spalls and deterioration to North inlet headwall. 1/2" faulted through crack to South inlet headwall. Top half has shifted 3 3/4" to the West.</p> <p>CS 4 - North side of outlet headwall has collapsed.</p>   |             |                |       |                   |                   |                   |                   |
| <b>845-Roadway Over Structure</b>   | 3 - Mod.    | 2              | each  | 2                 | 0                 | 0                 | 0                 |
| <p>CS 1 - A few minor cracks.</p>   |             |                |       |                   |                   |                   |                   |

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ODOT District: District 12

Major Maint: 01 - State Highway Agency

Routine Maint: 01 - State Highway Agency

FIPS Code: 75098 - STRONGSVILLE (CUY county)

Facility Carried: IR 71

Feature Inters: Creek

Inspector Banaszak, Ken

Location: DISTRICT 12

Inspection Date 09/16/2022

Traffic On: 1 - Highway

Traffic Under: 5 - Waterway

just south of SR 82

Reviewer Seif, Youssef

Date Built: 01/01/1963

Rehab Date:

Insp. 01 - State Highway Agency

Resp A:

Insp

Resp B:

**Inspector Comments - Deck and Approach**

**Deck**

**Approach**

**Approach Wearing Surface (EA)**

A few cracks.

**Approach Embankment (EA)**

Areas of minor erosion at inlet. Erosion ruts & large slips to outlet embankment that extend 1/2 way up the slope to the highway.

**Guardrail (EA)**

Impact damage to SB guardrail above inlet. Other minor dings and dents.

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**Inspector Comments - General Appraisal**

**Superstructure**

**Substructure**

**Culvert**

**Culvert Shape (LF)**

A few areas of deformation throughout but particularly near inlet & outlet. North side of CMP is shoved in at outlet.

**Culvert Seams (EA)**

Missing nut at 9:00, 80' from inlet.

**Culvert Scour (EA)**

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Scour hole 2.5' deep at outlet , and undermining of the pipe extending 20' from outlet. Piping through corrosion holes and embankment erosion due to collapsed north outlet headwall are main cause of scour.

**Inspector Comments - Waterway**

**Waterway Adequacy**

**Channel**

**Channel Alignment (LF)**

90° bend approx 60' west of inlet. S-curve at outlet (channel bank is eroding).

**Channel Protection (LF)**

Rip-rap at outlet has washed away.

**Scour Critical**

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**Pictures**