

Bridge Inspection Report

02405
US 270-10 LM 2.54
over
Hubbard Creek



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

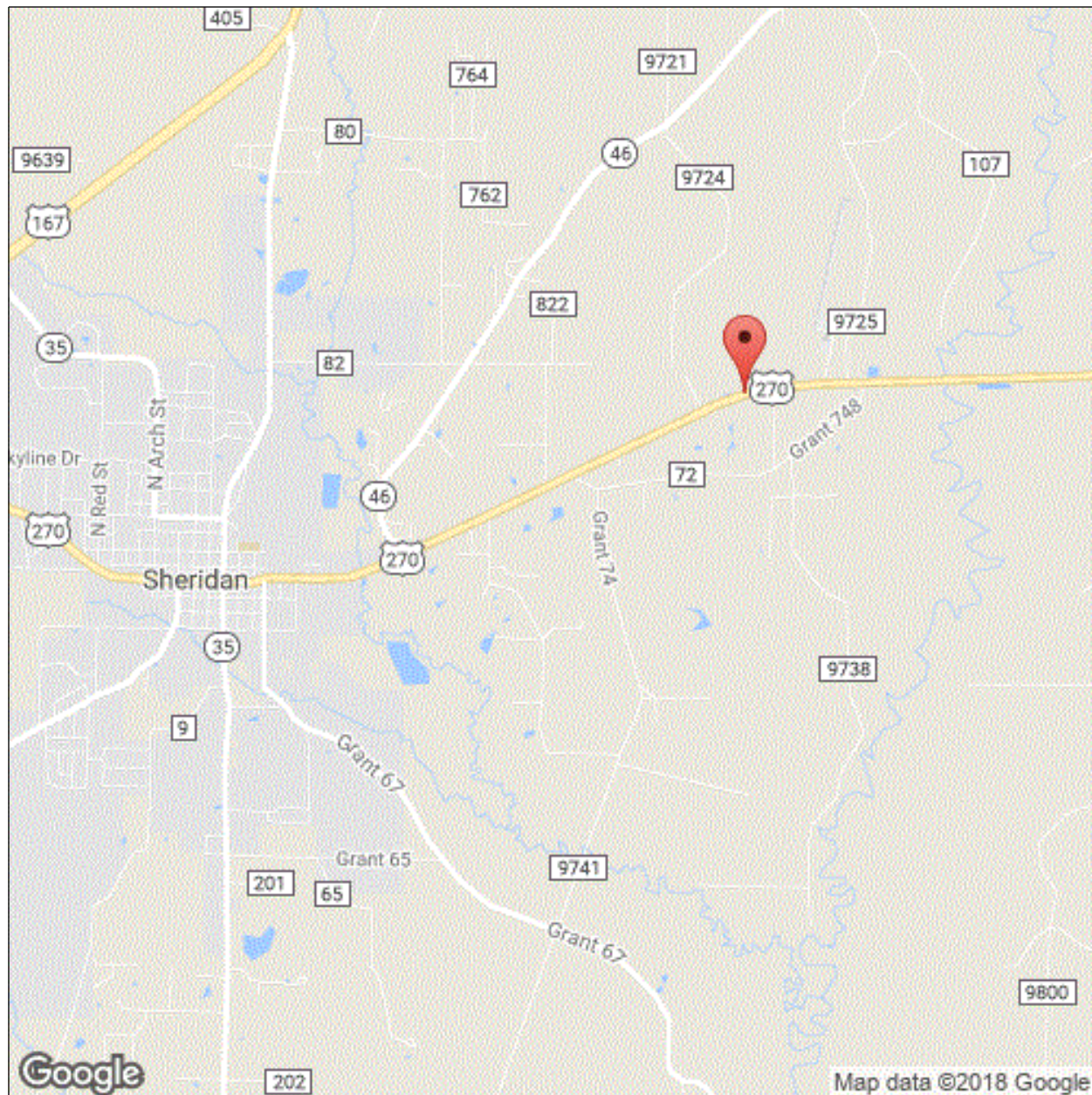
Structure Number: 02405

Inspection Date:

Facility Carried: US 270-10 LM 2.54

Bridge Inspection Report

Location Map



Latitude: 34.31899300650834

Longitude: -92.35799637781253

Inspector:

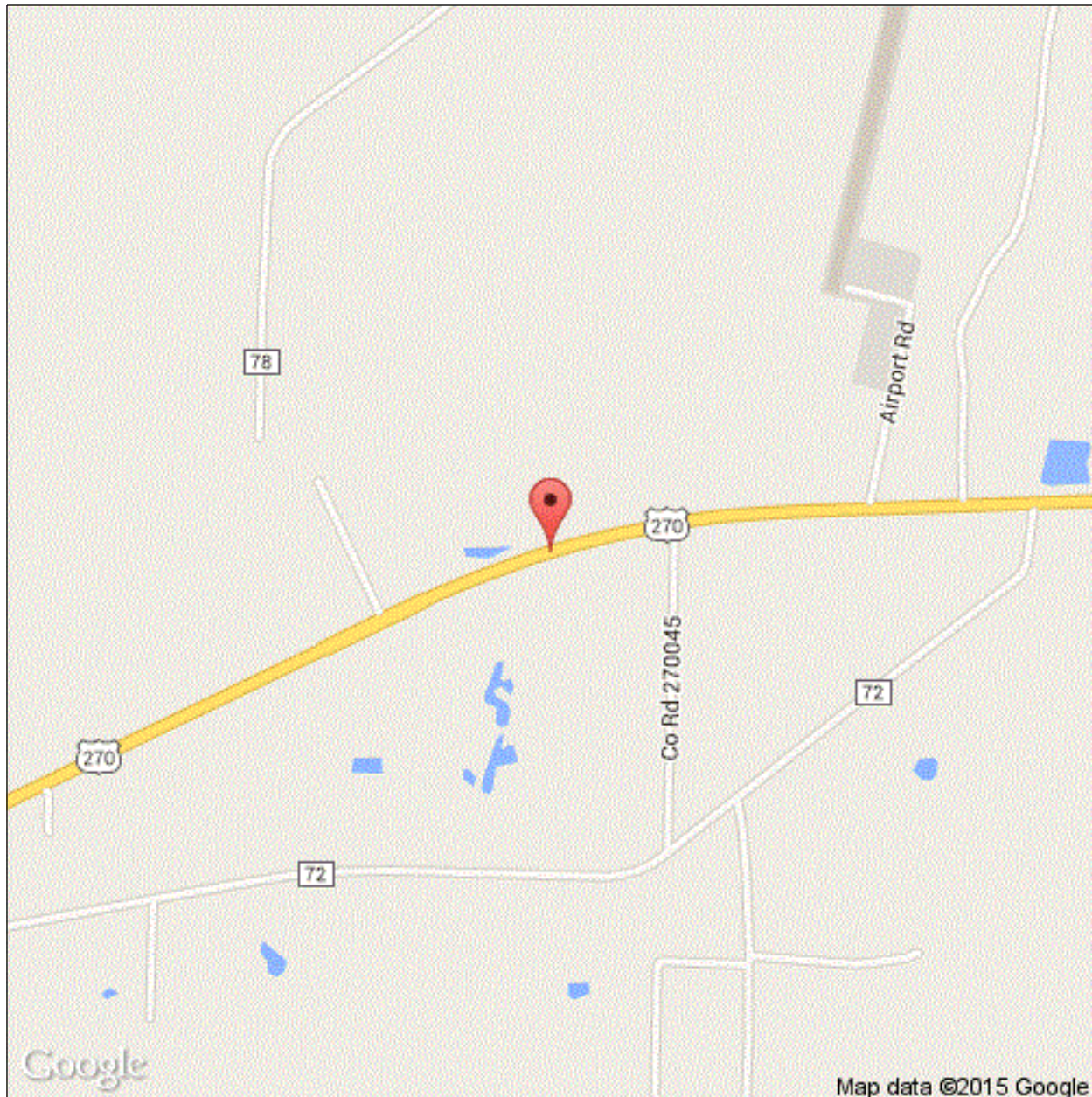
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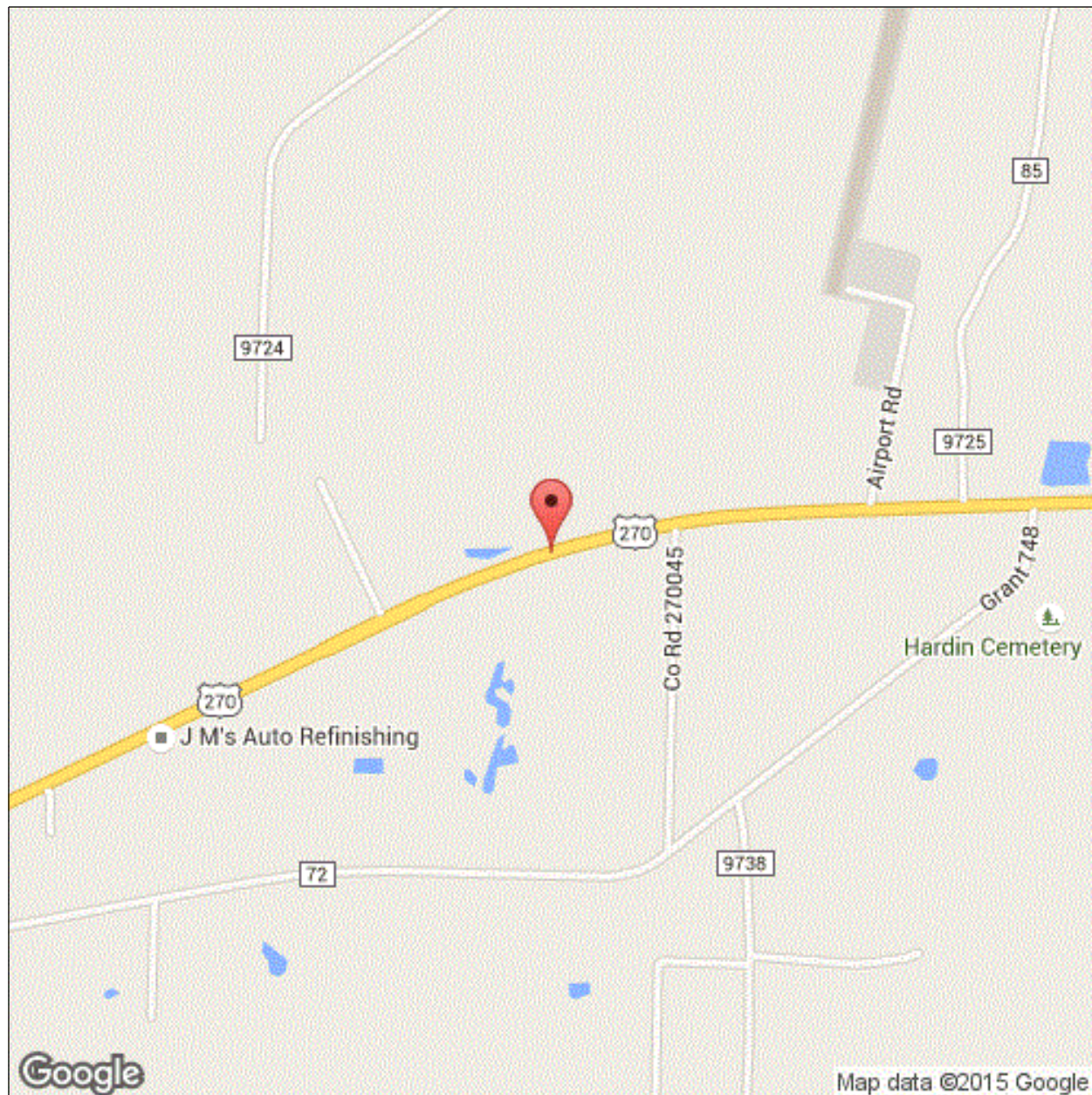
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Executive Summary

Bridge is logged from west to east.

SPOA: bottom of cap is trigger elevation for flood monitoring program

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Bridge Inspection Report

National Bridge Inventory

| IDENTIFICATION | | INSPECTIONS | |
|--|--|---|-----------------------|
| (1) STATE CODE | 056 - Arkansas | (90) INSPECTION DATE | 07/19/2016 |
| (8) STRUCTURE NUMBER | 02405 | (91) DESIGNATED INSPECTION FREQUENCY | 24 |
| (5) INV. ROUTE (ON/UNDER) | 1 2 1 270 0 | (92) CRITICAL FEATURE INSPECTION | (93) CFI DATE |
| (2) HIGHWAY AGENCY | 02 (3) COUNTY CODE 053 | A. FRACTURE CRITICAL DETAIL | N |
| (4) PLACE CODE | 00000 | B. UNDERWATER INSPECTION | N |
| (6) FEATURES INTERSECTED | Hubbard Creek | C. OTHER SPECIAL | Y 24 07/19/2017 |
| (7) FACILITY CARRIED | US 270-10 LM 2.54 | | |
| (9) LOCATION | 2.54 Mi E US 167-Sheridan | | |
| (11) MILEPOINT 2.540 | (12) BASE HIGHWAY NETWORK 1 | | |
| (13A) LRS INVENTORY ROUTE | 0000270100 (13B) SUBROUTE NUMBER 00 | | |
| (16) LATITUDE 34. | (17) LONGITUDE -92.35799637781253 | | |
| | 31899300650834 | | |
| (98A) BORDER BRIDGE CODE | | | |
| PERCENT RESPONSIBILITY | (99) BORDER BRIDGE STRUCT | | |
| STRUCTURE TYPE AND MATERIAL | | CONDITION | |
| (43) STRUCTURE TYPE, MAIN | | (58) DECK | 6 |
| A) KIND OF MATERIAL/DESIGN: 3 - Steel | | (59) SUPERSTRUCTURE | 6 (60) SUBSTRUCTURE 7 |
| B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder | | (61) CHANNEL & CHANNEL PROTECTION | 7 (62) CULVERT N |
| (44) STRUCTURE TYPE, APPROACH SPANS | | | |
| A) KIND OF MATERIAL/DESIGN: 0 - Other | | | |
| B) TYPE OF DESIGN/CONSTR: 00 - Other | | | |
| (45) NUMBER OF SPANS IN MAIN 3 | (46) NUMBER OF APPROACH 0 | | |
| (107) DECK STRUCTURE TYPE 1 | (108A) WEARING SURFACE 6 | | |
| (108B) DECK MEMBRANE 0 | (108C) DECK PROTECTION 0 | | |
| AGE OF SERVICE | | LOAD RATING AND POSTING | |
| (27) YEAR BUILT 1948 | (106) YEAR RECONSTRUCTED 0000 | (31) DESIGN LOAD | 4 |
| (42) TYPE OF SERVICE ON 1 | UNDER 5 | (63) METHOD USED TO DETERMINE OPERATING RATING | 1 |
| (28) LANES ON 02 | UNDER 00 | (64) OPERATING RATING | 41.0 |
| (29) AVERAGE DAILY TRAFFIC 6700 | (19) BYPASS DETOUR LENGTH 37 | (65) METHOD USED TO DETERMINE INVENTORY RATING | 1 |
| (30) YEAR OF AVERAGE DAILY TRAFFIC 2014 | | (66) INVENTORY RATING | 25.0 |
| (109) AVERAGE DAILY TRUCK TRAFFIC 1 | | (70) BRIDGE POSTING | 5 |
| | | (41) STRUCTURE OPEN/POSTED/CLOSED | A |
| GEOMETRIC DATA | | APPRAISAL | |
| (48) LENGTH OF MAX SPAN (ft.) 30 | (49) STRUCTURE LENGTH (ft.) 92 | (67) STRUCTURAL EVALUATION | 5 |
| (50) CURB/SIDEWALK WIDTHS (ft.) LEFT 2.1 | RIGHT 2.1 | (68) DECK GEOMETRY | 2 |
| (51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) | 25.9 | (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL | N |
| (52) DECK WIDTH, OUT-TO-OUT (ft.) | 31 | (71) WATERWAY ADEQUACY | 8 |
| (32) APPROACH ROADWAY WIDTH (ft.) | 29.9 | (72) APPROACH ROADWAY ALIGNMENT | 8 |
| (33) BRIDGE MEDIAN 0 | (34) SKEW (DEG.) 0 | (36) TRAFFIC SAFETY FEATURE | |
| (35) STRUCTURE FLARED 0 | (10) INV RTE, MIN VERT CLEAR (ft.) 99.99 | 36A) BRIDGE RAILINGS: | 0 |
| (47) TOTAL HORIZONTAL CLEARANCE (ft.) | 29.9 | 36B) TRANSITIONS: | 0 |
| (53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) | 99.99 | 36C) APPROACH GUARDRAIL: | 0 |
| (54) VERTICAL UNDER CLEARANCE (ft.) | N 0 | 36D) APPROACH GUARDRAIL ENDS: | 1 |
| (55) LATERAL UNDER CLEARANCE RIGHT (ft.) | N 99.9 | (113) SCOUR CRITICAL BRIDGES | 3 |
| (56) MIN LATERAL UNDER CLEARANCE (ft.) | 0 | SUFFICIENCY RATING | 2 STATUS 53.1 |
| PROPOSED IMPROVEMENTS | | CLASSIFICATION | |
| (75A) TYPE OF WORK PROPOSED 31 | (75B) WORK DONE BY 1 | (112) NBIS BRIDGE LENGTH | Y |
| (76) LENGTH OF STRUCTURE IMPROVEMENT (ft.) | 119.0 | (104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE | 1 |
| (94) BRIDGE IMPROVEMENT COST (\$) | 0 | (26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE | 02 |
| (95) ROADWAY IMPROVEMENT COST (\$) | 400 | (100) STRAHNET HIGHWAY DESIGNATION | 0 |
| (96) TOTAL PROJECT COST | 915 | (101) PARALLEL STRUCTURE DESIGNATION | N |
| (97) YEAR OF IMPROVEMENT COST ESTIMATE | 2004 | (102) DIRECTION OF TRAFFIC | 2 |
| (114) FUTURE ADT 7117 | (115) YEAR OF FUTURE ADT 2028 | (103) TEMP STRUCTURE | |
| | | (105) FEDERAL LANDS HIGHWAYS | 0 |
| | | (110) DESIGNATED NATIONAL NETWORK | 1 |
| | | (20) TOLL | 3 |
| | | (21) MAINTENANCE RESPONSIBILITY | 01 |
| | | (22) OWNER | 01 |
| | | (37) HISTORICAL | 5 |
| | | NAVIGATION DATA | |
| | | (38) NAVIGATION CONTROL | 0 |
| | | (111) PIER OR ABUTMENT PROTECTION | 5 |
| | | (39) NAV VERT CLEARANCE (ft.) | 0 |
| | | (116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.) | 0 |
| | | (40) NAV HORIZONTAL CLEARANCE (ft.) | 0 |

Inspector:

Structure Number: 02405

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Facility Carried: US 270-10 LM 2.54

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 | 1- Ben. | 2852 | sq. ft. | 2852 | | | |
| | Deck: 31' wide x 92' long. Asphalt wearing surface: Large-sized, heavy cracking at joints with some small potholes beginning to appear. Chunks of asphalt are beginning to come loose and may become a hazard to traffic (26' long 1' wide @ 2 locations) Remaining of asphalt wearing surface is beginning to crack with a couple small potholes appearing, especially in wheel ruts at Span 3 left (30' long x 3' wide). | | | | | | |
| 510 - Wearing Surfaces | | 2392 | sq. ft. | 2250 | 90 | 52 | 0 |
| 3210 - Delamination/Spall/Patched Area/Pothole (Wearing Surfaces) | | 52 | | | | 52 | |
| 3220 - Crack (Wearing Surface) | | 90 | | | 90 | | |
| 107 - Steel Open Girder/Beam | 1- Ben. | 450 | ft. | 429 | 0 | 21 | 0 |
| | Girders: 5 per span / 90' total. Coating: 5.7 square feet / linear feet of girder. Span 3 - Girder 5 @ Bent 3: Hole (2.5" x 1.25") rusted through web at haunch. (1') Span 2 - Girder 2 @ Bent 2: Old section loss to bottom of web and to bottom flange. (2') Girders - All spans: Scattered rust with minor section loss on the webs at the ends of some girders at the haunches and around the diaphragm connections. (18' total) Diaphragm rusted through - Span 2 Girder 1 @ Bent 2 right. | | | | | | |
| 1000 - Corrosion | | 21 | | | | 21 | |
| 515 - Steel Protective Coating | | 2565 | sq. ft. | 2445 | 0 | 0 | 120 |
| 3440 - Effectiveness (Steel Protective Coatings) | | 120 | | | | | 120 |
| 215 - Reinforced Concrete Abutment | 1- Ben. | 76 | ft. | 76 | | | |
| | Abutments: 38' each / Bents 1 & 4. | | | | | | |
| 227 - Reinforced Concrete Pile | 1- Ben. | 8 | each | 8 | | | |
| | Piling: 4 per bent / Bents 2 & 3. Some minor abrasion and loss of mortar, especially near waterline. | | | | | | |
| 234 - Reinforced Concrete Pier Cap | 1- Ben. | 52 | ft. | 52 | | | |
| | Caps: 26' each / Bents 2 & 3. | | | | | | |
| 311 - Movable Bearing | 1- Ben. | 15 | each | 0 | 0 | 15 | 0 |
| | Moveable bearings: 5 per bent / Bent 2 back, Bent 3 back & ahead. Coating: 2 square feet each. Most bearings have heavy pack rust between rocker and masonry plate, restricting movement. Remaining bearing have some scattered rust and minor section loss in various locations. | | | | | | |
| 1000 - Corrosion | | 15 | | | | 15 | |
| 515 - Steel Protective Coating | | 30 | sq. ft. | 0 | 0 | 0 | 30 |

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Bridge Inspection Report

Element Inspection

| | | | | | | | |
|---|---------|-----|---------|-----|---|----|----|
| 3440 - Effectiveness (Steel Protective Coatings) | | 30 | | | | | 30 |
| 313 - Fixed Bearing | 1- Ben. | 15 | each | 9 | 0 | 6 | 0 |
| Fixed bearings: 5 per bent / Bent 1, Bent 2 ahead, Bent 4. Coating: 2 square feet each. Pitting and section loss, mainly on outside bearings. Bent 1 Bearing 3: Nut missing from left side of bearing pin. | | | | | | | |
| 1000 - Corrosion | | 6 | | | | 6 | |
| 515 - Steel Protective Coating | | 30 | sq. ft. | 0 | 0 | 18 | 12 |
| 3440 - Effectiveness (Steel Protective Coatings) | | 30 | | | | 18 | 12 |
| 331 - Reinforced Concrete Bridge Railing | 1- Ben. | 184 | ft. | 184 | | | |
| Railing: 92' each side. Span 3 left: Railing has been repaired due to traffic impact. | | | | | | | |

Inspector:

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Bridge Inspection Report

Pictures

Inspector:

Inspection Date:

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Facility Carried: US 270-10 LM 2.54

Bridge Inspection Report

Sketches

Inspector:

Structure Number: 02405

Inspection Date:

Facility Carried: US 270-10 LM 2.54

Bridge Inspection Report

Maintenance Needs

Date Reported: 7/18/2012 12:00:00 AM

Priority: C - Important

Work Code: N/A

Deficiency Description:

Span 3 – Girder 5 @ Bent 3: Hole (2.5" x 1.25") rusted through web at haunch.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 3 Girder 5 @ Bent 3
(corrosion/hole rusted)

Inspector:

Structure Number: 02405

Inspection Date:

Facility Carried: US 270-10 LM 2.54

Bridge Inspection Report

Maintenance Needs

Date Reported: 7/18/2012 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code: N/A

Deficiency Description:

Bearings – various locations: Most movable bearings have heavy pack rust between rocker and masonry plate, restricting movement. Remaining bearing have some scattered rust and minor section loss in various locations.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bearings 4A & 4B @ Bent 3 (corrosion)

Stage: Monitor

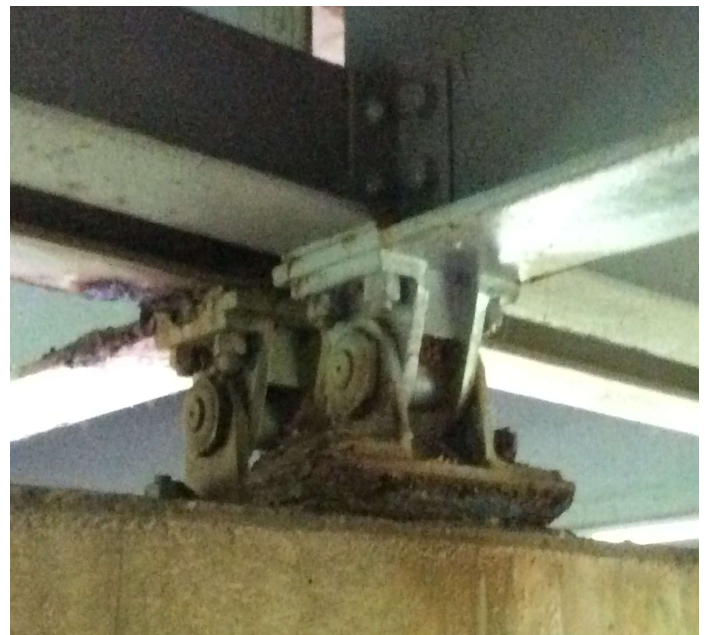


PHOTO 2 Description Bearings 3A & 3B @ Bent 2 (corrosion)

Inspector:

Structure Number: 02405

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 7/18/2012 12:00:00 AM

Priority: C - Important

Work Code: N/A

Deficiency Description:

Deck – asphalt wearing surface: Large-sized, heavy cracking at joints with some small potholes beginning to appear. Chunks of asphalt are beginning to come loose and may become a hazard to traffic.

Remaining of asphalt wearing surface is beginning to crack with a couple small potholes appearing, especially in wheel ruts at Span 3 left.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Grant: repair as you have time

Stage: Monitor



PHOTO 1 Description Wearing surface - Bent 2 (potholes)

Stage: Monitor



PHOTO 2 Description Wearing surface - Bent 3 (potholes)

Inspector:

Structure Number: 02405

Inspection Date:

Facility Carried: US 270-10 LM 2.54

Bridge Inspection Report

Maintenance Needs

Date Reported: 7/30/2014 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code: N/A

Deficiency Description:

Girders – All spans: Scattered rust with minor section loss on the webs at the ends of some girders at the haunches and around the diaphragm connections.

Diaphragm rusted through – Span 2 Girder 1 @ Bent 2 right.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 3 Girder 5 @ Bent 3 (corrosion of bottom flange)

Stage: Monitor



PHOTO 2 Description Span 3 Girder 2 @ Bent 3 (corrosion)

Inspector:

Inspection Date:

Structure Number: 02405

Facility Carried: US 270-10 LM 2.54

Bridge Inspection Report

Maintenance Needs

Stage: Monitor



PHOTO 3 Description Girders 1-2 @ Bent 2 (corrosion)