

# Bridge Inspection Report

**M1600**  
**State Highway 88**  
**over**  
**Ward Creek - Polk Co.**



**Inspection Date:**

**Inspected By:**

**Inspection Type(s):**

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Inspector:

Structure Number: M1600

Inspection Date:

Facility Carried: State Highway 88

## Bridge Inspection Report

### Location Map



Latitude: 34.588058

Longitude: -94.239441

Inspector:

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### Location Map



Latitude: 34.588058

Longitude: -94.239441



Inspector:

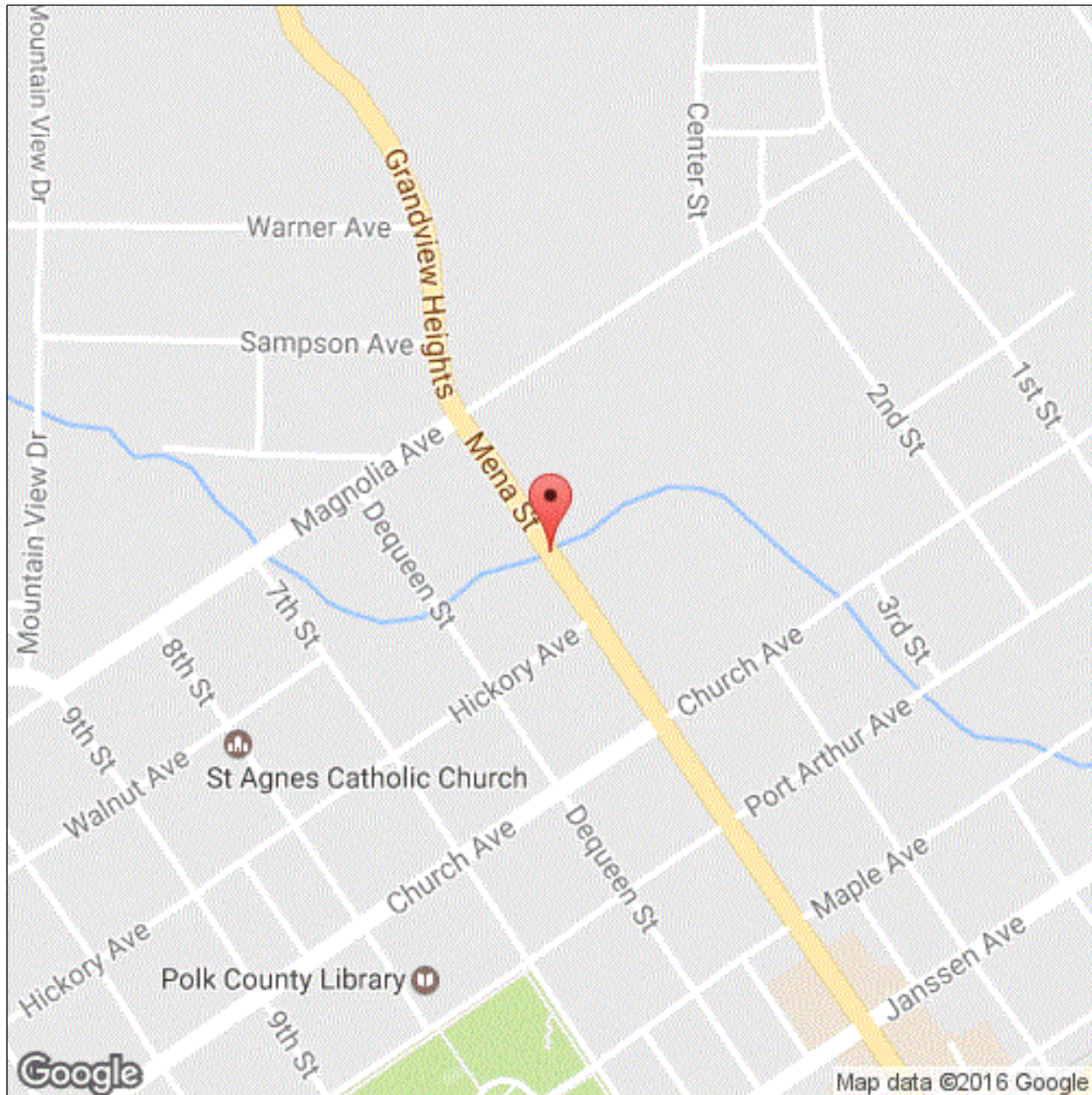
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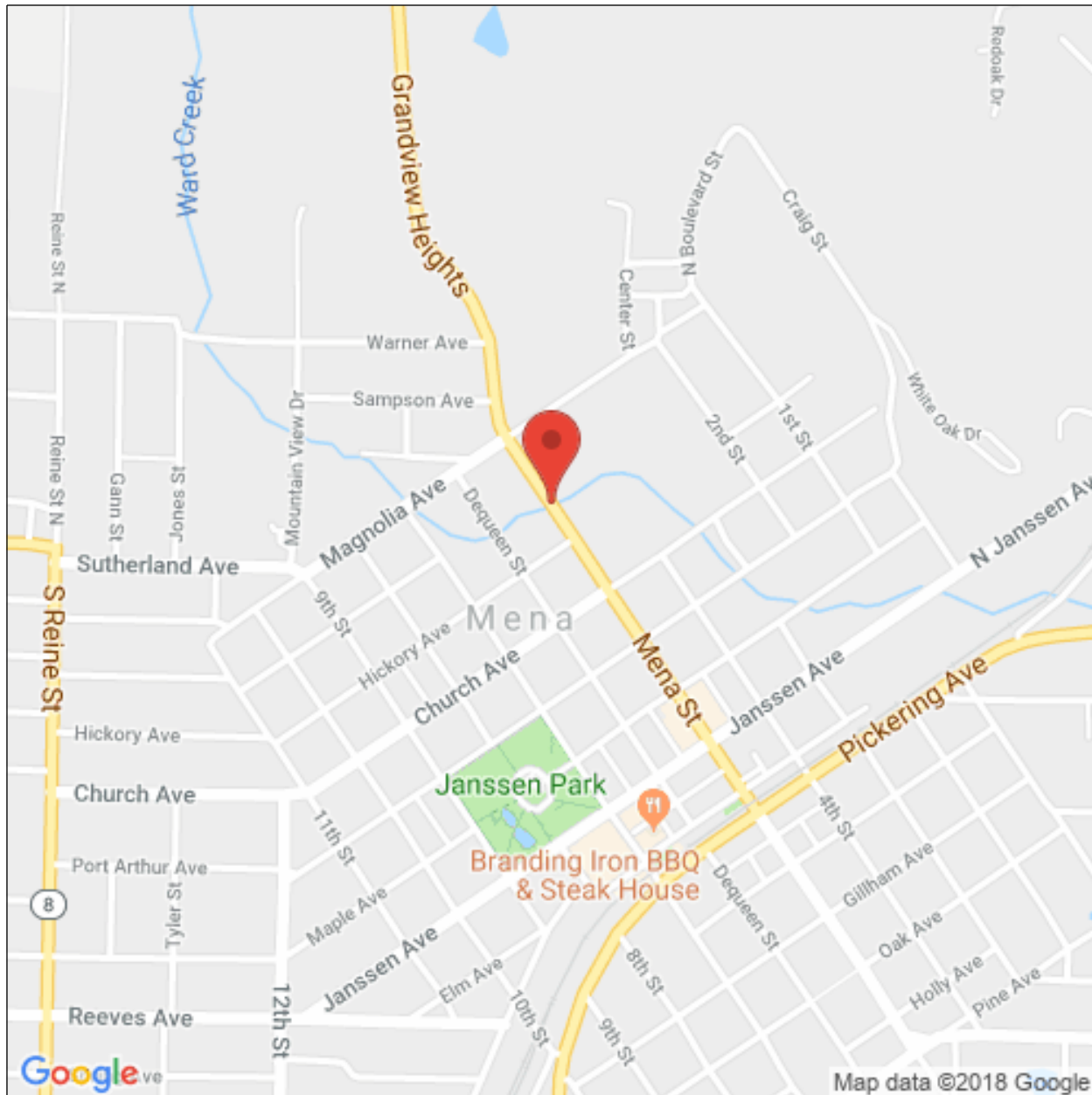
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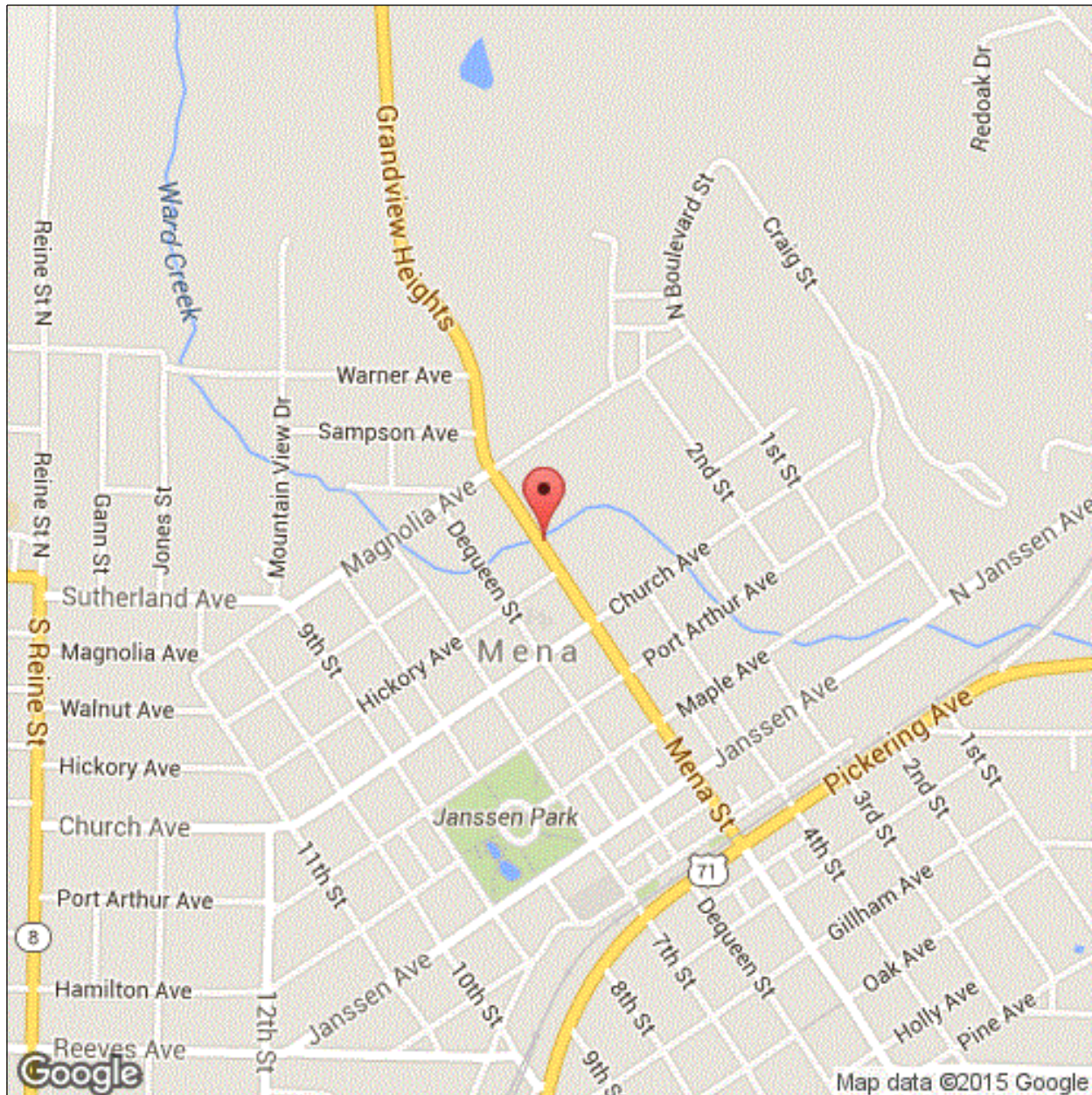
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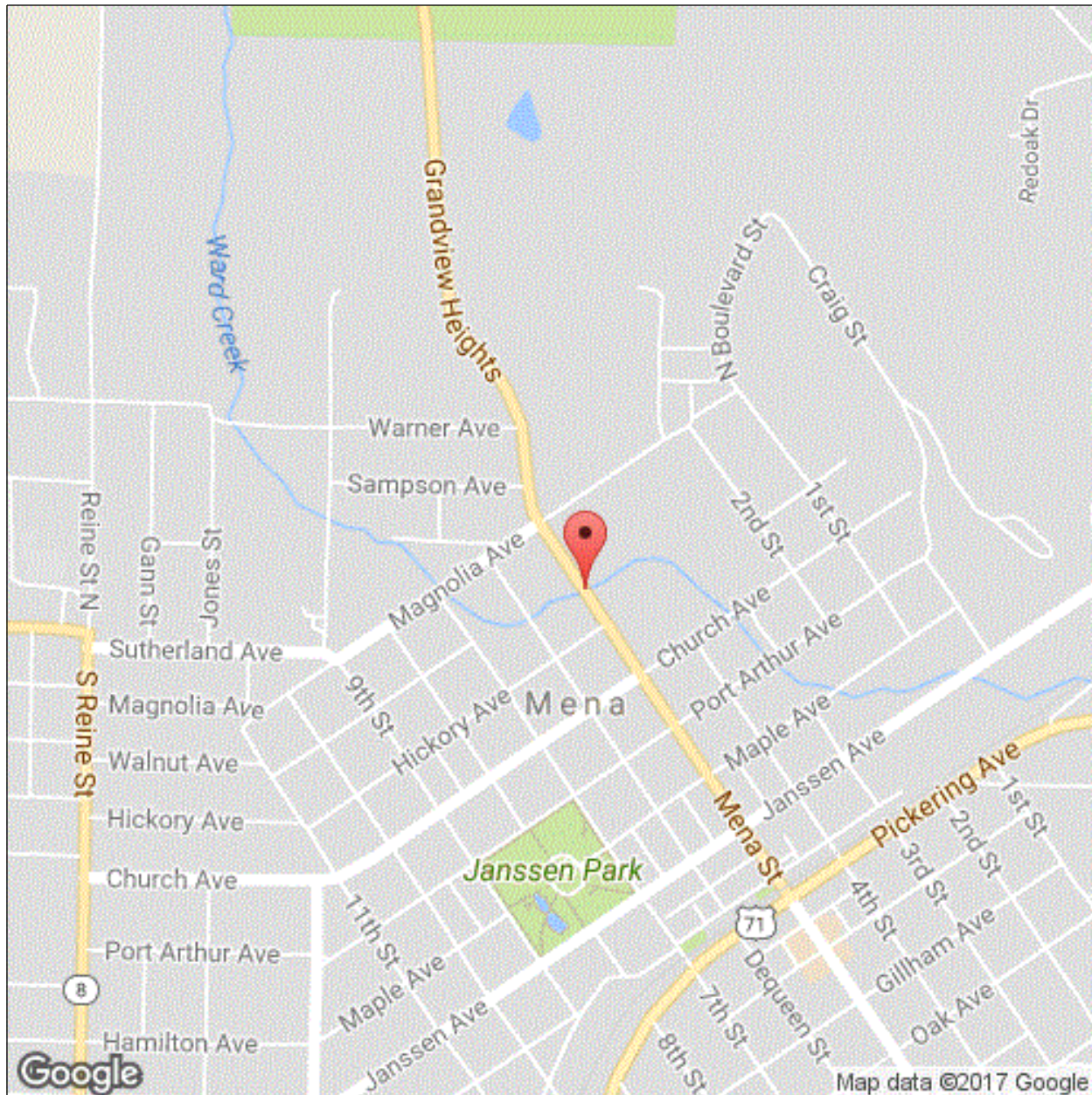
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**Bridge Inspection Report**

**Executive Summary**

12/28/2016 - JCJ & JML - Type 2 Underwater Inspection - The top of Bent # 1 footing is exposed with a 4' wide void that penetrates approximately 1' under the edge of the footing at this inspection.

Bent # 2 footing is partially undermined with a void that is approximately 8' long and penetrates approximately 1' past the face of the stem wall. Substructure appears to be founded upon creek gravel. No apparent settlement at this inspection. There are no apparent repairs since the last inspection.

12/07/2017 JCJ & TJL - Type 2 Underwater Inspection conducted this date to monitor undermining of the abutment footings. Only minor changes since the last inspection.

-The top of Bent # 1 footing is exposed with a 4' wide void that penetrates approximately 2" under the edge of the footing at this inspection.

-Bent # 2 footing is partially undermined with a void that is approximately 8' long and penetrates approximately 7" past the face of the stem wall at this inspection. Substructure appears to be founded upon creek gravel. No apparent settlement at this inspection. There are no apparent repairs since the last inspection.

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## Bridge Inspection Report

## National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	12/19/2018
(8) STRUCTURE NUMBER	M1600	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 3 1 88 0	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	04 (3) COUNTY CODE 113	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	42920	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	Ward Creek - Polk Co.	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	State Highway 88		
(9) LOCATION	W JCT US 71 MENA		
(11) MILEPOINT 17.120	(12) BASE HIGHWAY NETWORK 0		
(13A) LRS INVENTORY ROUTE	0000000000 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 34.588058	(17) LONGITUDE -94.239441		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	7
A) KIND OF MATERIAL/DESIGN: 1 - Concrete		(59) SUPERSTRUCTURE	7
B) TYPE OF DESIGN/CONSTR: 01 - Slab		(60) SUBSTRUCTURE	5
(44) STRUCTURE TYPE, APPROACH SPANS		(61) CHANNEL & CHANNEL PROTECTION	7
A) KIND OF MATERIAL/DESIGN: 0 - Other		(62) CULVERT	N
B) TYPE OF DESIGN/CONSTR: 00 - Other			
(45) NUMBER OF SPANS IN MAIN 1	(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 1931	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	1
(42) TYPE OF SERVICE ON 1	UNDER 5	(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 04	UNDER 00	(64) OPERATING RATING	38.0
(29) AVERAGE DAILY TRAFFIC 5300	(19) BYPASS DETOUR LENGTH 21	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2014		(66) INVENTORY RATING	23.0
(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.) 20	(49) STRUCTURE LENGTH (ft.) 22	(67) STRUCTURAL EVALUATION	5
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 1	RIGHT 1	(68) DECK GEOMETRY	5
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	57.7	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(52) DECK WIDTH, OUT-TO-OUT (ft.)	59.2	(71) WATERWAY ADEQUACY	8
(32) APPROACH ROADWAY WIDTH (ft.)	55.1	(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.)	57.7	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:	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	N 99.9	(113) SCOUR CRITICAL BRIDGES	5
(56) MIN LATERAL UNDER CLEARANCE (ft.)	0	SUFFICIENCY RATING	60.4
		STATUS	0
PROPOSED IMPROVEMENTS		CLASSIFICATION	
(75A) TYPE OF WORK PROPOSED 35	(75B) WORK DONE BY 1	(112) NBIS BRIDGE LENGTH	Y
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)	22.0	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0
(94) BRIDGE IMPROVEMENT COST (\$)	0	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	16
(95) ROADWAY IMPROVEMENT COST (\$)	0	(100) STRAHNET HIGHWAY DESIGNATION	0
(96) TOTAL PROJECT COST	57	(101) PARALLEL STRUCTURE DESIGNATION	N
(97) YEAR OF IMPROVEMENT COST ESTIMATE	2003	(102) DIRECTION OF TRAFFIC	2
(114) FUTURE ADT 7475	(115) YEAR OF FUTURE ADT 2028	(103) TEMP STRUCTURE	
		(105) FEDERAL LANDS HIGHWAYS	0
		(110) DESIGNATED NATIONAL NETWORK	0
		(20) TOLL	3
		(21) MAINTENANCE RESPONSIBILITY	01
		(22) OWNER	01
		(37) HISTORICAL	5
		NAVIGATION DATA	
		(38) NAVIGATION CONTROL	0
		(111) PIER OR ABUTMENT PROTECTION	1
		(39) NAV VERT CLEARANCE (ft.)	0
		(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
		(40) NAV HORIZONTAL CLEARANCE (ft.)	0



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## Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
<b>38 - Reinforced Concrete Slab</b>	1- Ben.	1267	sq. ft.	1246	21	0	0
	-This structure is a concrete slab span that has been widened at the inlet and outlet ends of the structure. -Maintenance forces have placed asphalt wedges at the bridge ends as a type of repair to the previously documented approach roadway settlement. -The asphalt driving surface is map cracked. The worst areas are the two inside lanes with heavy wide mapcracking in the wheel paths. -The center portion of undersurface of deck is covered with felt / tar paper. Some areas of the tar / felt paper are beginning to release and are exposing the undersurface of the slab in a few isolated locations. a few shallow spalls with no exposed reinforcing steel is visible in the undersurface of the original portion of structure. -Undersurface has isolated areas of shallow honeycombing from the construction process with no exposed reinforcing steel. -Leakage with scaling along the longitudinal construction joints with minor efflorescence. -The undersurface of the original portion of slab has a 5' long x 4" wide delaminated area adjacent to the left longitudinal construction joint.						
1080 - Delamination/Spall/Patched Area		21		0	21	0	0
510 - Wearing Surfaces		1267	sq. ft.	931	0	336	0
3220 - Crack (Wearing Surface)		336		0	0	336	0
<b>215 - Reinforced Concrete Abutment</b>	1- Ben.	120	ft.	27	71	22	0
	-The base of the abutments have areas of concrete deterioration / section loss up to 1" deep in random locations adjacent to the top of the footings. No apparent significant changes since the last inspection.						
1190 - Abrasion/Wear (PSC/RC)		93		0	71	22	0
<b>220 - Reinforced Concrete Pile Cap/Footing</b>	1- Ben.	120	ft.	25	60	35	0
	-The top of abutment # 1 footing is exposed with a 10' long area that has voids that penetrate under the footing. One isolated area penetrates up to 15" under footing near the right longitudinal construction joint. -Abutment # 2 footing has voids that penetrate under the majority of the footing of original portion of structure. An 8' long area on the right side penetrates up to 15" past the face of stem wall. Substructure appears to be founded upon creek gravel. No apparent settlement at this inspection. There are no apparent repairs since the last inspection.						
1190 - Abrasion/Wear (PSC/RC)		55		0	20	35	0
6000 - Scour		40		0	40	0	0

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#### Element Inspection

<b>330 - Metal Bridge Railing</b>	1- Ben.	44	ft.	2	42	0	0
	-The paint system is failing with rust forming throughout. The left bridge rail has minor collision damage that has bent the post anchorage brackets at post # 4 and # 5 over abutment # 2 causing the posts to lean out of plumb. No apparent significant changes since the last inspection.						
1000 - Corrosion		40		0	40	0	0
1900 - Distortion		2		0	2	0	0
515 - Steel Protective Coating		207	sq. ft.	0	0	104	103
3440 - Effectiveness (Steel Protective Coatings)		207		0	0	104	103



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**Bridge Inspection Report**

**Pictures**

PHOTO 1

Description M1600 Drawing.pdf

PHOTO 1

Description

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**Bridge Inspection Report**

**Sketches**



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### Maintenance Needs

Date Reported: 7/5/2012 12:00:00 AM

Priority: D - Routine

Work Code: Repair

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#### Deficiency Description:

Substructure -

Concrete deterioration / section loss at the base of abutments located above the footing juncture.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

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Stage: Assigned



PHOTO 1 Description Bent 1 concrete deterioration.

Stage: Open



PHOTO 2 Description Abutment # 1, left side-Heavy abrasion / concrete section loss.

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## Bridge Inspection Report

### Maintenance Needs

Stage: Open



PHOTO 3      Description      Abutment # 2, Left side-abrasion.

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 6/26/2013 12:00:00 AM

Priority: C - Important

Work Code: Repair

#### Deficiency Description:

Substructure -

12-18-2019 - maintenance items still exist at abutment #2. Abutment #1 has gravel accumulation that has voids covered at this inspection.

Top of abutment # 1 footing is exposed with a 10' long area that has voids that penetrate under the footing. One isolated area penetrates up to 15" under footing near the right longitudinal construction joint. Abutment # 2 has voids that penetrate under the majority of the footing of original portion of structure. An 8' long area on the right side penetrates up to 15" past the face of stem wall.

#### Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bent 2 undermining.

Stage: Open



PHOTO 2 Description Abutment # 2-Voids penetrate 15" past face of stemwall. Photo #1.



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## Bridge Inspection Report

### Maintenance Needs

Stage: Open



PHOTO 3      Description      Abutment # 2-Voids penetrate 15" past face of stemwall. Photo #2.

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 12/20/2018

Priority: D - Routine

Work Code:

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#### Deficiency Description:

Superstructure - The undersurface of the original portion of slab has a 5' long x 4" wide delaminated area adjacent to the left longitudinal construction joint.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

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Stage: Open



PHOTO 1      Description      Delaminated area in undersurface adjacent to left construction joint.