Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

Latitude:34.06785, Longitude:-93.96717

Route:278 Section:03 Log:6.49

Arnold Road ID:31x278x3xA, Arnold Log mile:6.492

District 03, 61 - Howard County

Owner: 1 - State Highway Agency

Asset #06415(Routine)
US 278- 03- 6.63 over MESSER CREEK
Location: 6.6 M S OF DIERKS
Team Lead: John King, **Inspection Date:** 04/11/2022

Bridge Posting Information

41 - Structure Open/Posted/Closed: A - Open, no restriction

70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	40		
Code 9 (31 Tons)	50		
Code 5 (40 Tons)	60		

If calculated Capacity is less than the Legal Load Listed, the Bridge Legally Requires Posting Signs to be installed by the Bridge Owner

30"x36" AR

Asset **#06415**(Routine)

District: 03, **County:** 61 - Howard County

Team Lead: John King, **Inspection Date:** 04/11/2022

34.06785, -93.96717

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	06415
(5) Inventory Route	1
(2) Highway Agency District	03 - District 03
(3) County Code	61 - Howard County
(4) Place Code	0
(6) Features Intersected	MESSER CREEK
(7) Facility Carried	US 278- 03- 6.63
(9) Location	6.6 M S OF DIERKS
(11) Mile Point	6.49 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	34.067848
(17) Longitude	-93.967171
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	14
Material	1 - Concrete
Type	4 - Tee beam
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	4
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	1 - Monolithic Concrete (concurrently pl
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1993
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	1600
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	32 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	35 ft
(49) Structure Length	105 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	32.2 ft
(52) Deck Width Out to Out	34.8 ft
(32) Approach Roadway Width (W/Shoulders)	40 ft
(33) Bridge Median	0 - No median
(34) Skew	28 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	32.8 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	99.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	0 - No navigation control on w
(111) Pier Protection	1 - Navigation protection not
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	7 - Rural Major Collector
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exis
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	0 - The inventory route is not
(20) Toll	3 - On free road. The structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	7
(59) Superstructure	7
(60) Substructure	7
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	60
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	36
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1 - Inspected feature meets current
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	5 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	0 ft
(94) Bridge Improvement Cost	$ 0
(95) Roadway Improvement Cost	$ 0
(96) Total Project Cost	$ 0
(97) Year of Improvement Cost Estimate	0
(114) Future ADT	1809
(115) Year of Future ADT	2028

INSPECTIONS *

(90) Inspection Date			04/11/2022
(91) Frequency			24
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	No		

* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.

General Observation

4/18/2018 AL,SS,DECK PHOTOS TAKEN PER THIS INSPECTION....4/23/2020...AL, Elevation, Deck, Def. Photos taken. Soundings taken this inspection...
4/11/2022… Alignment and Elevation photos taken per this inspection

---

6A - Features Intersected (MESSER CREEK)

-

---

58 - Deck (7 - GOOD CONDITION - some minor problems.)

Joints: Some ..Parapet: BM & name plate top wall..Wearing Surface: Some cracks sealable..Underside of Deck: Cracks on bottom side has efflorescence....04/2022. Minor cracking on deck surface. Cracks on bottom of deck have efflorescence

---

59 - Superstructure (7 - GOOD CONDITION - some minor problems.)

Girders/Beams: CONCRETE TEE BEAMS…04/2022. Minor cracking and efflorescence at various locations

---

60 - Substructure (7 - GOOD CONDITION - some minor problems.)

Other: SEE PLANS FOR PILES AT ABUTMENTS.
Slope Protection: Good
Columns: CONCRETE
Pier Cap: CONCRETE
Footing: CONCRETE FOOTINGS SEE PLANS # 03922
04/2022… Concrete caps have cracking and efflorescence at various locations

---

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	3654	3594	60	0	0
1120	Efflorescence/Rust Staining	SF	30	0	30	0	0
1130	Cracking (RC and Other)	SF	30	0	30	0	0
(16) Deck cracks with efflorescence on bottom side deck..ALL DECK CRACKS SEALED ALL SPANS.							
110	Reinforced Concrete Open Girder/Beam	LF	560	560	0	0	0
205	Reinforced Concrete Column	EA	6	6	0	0	0
215	Reinforced Concrete Abutment	LF	135	135	0	0	0
234	Reinforced Concrete Pier Cap	LF	205	202	3	0	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1120	Efflorescence/Rust Staining	LF	2	0	2	0	0
301	Pourable Joint Seal	LF	120	50	50	20	0
2320	Seal Adhesion	LF	70	0	50	20	0
331	Reinforced Concrete Bridge Railing	LF	331	331	0	0	0

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	3654	3594	60	0	0
1120	Efflorescence/Rust Staining	SF	30	0	30	0	0
1130	Cracking (RC and Other)	SF	30	0	30	0	0

(16) Deck cracks with efflorescence on bottom side deck..ALL DECK CRACKS SEALED ALL SPANS.

58 - Deck (7 - GOOD CONDITION - some minor problems.)

Comment: Joints: Some ..Parapet: BM & name plate top wall..Wearing Surface: Some cracks sealable..Underside of Deck: Cracks on bottom side has efflorescence....04/2022. Minor cracking on deck surface. Cracks on bottom of deck have efflorescence

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
110	Reinforced Concrete Open Girder/Beam	LF	560	560	0	0	0

59 - Superstructure (7 - GOOD CONDITION - some minor problems.)

Comment: Girders/Beams: CONCRETE TEE BEAMS…04/2022. Minor cracking and efflorescence at various locations

Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	6	6	0	0	0
215	Reinforced Concrete Abutment	LF	135	135	0	0	0
234	Reinforced Concrete Pier Cap	LF	205	202	3	0	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1120	Efflorescence/Rust Staining	LF	2	0	2	0	0

60 - Substructure (7 - GOOD CONDITION - some minor problems.)
Comment: Other: SEE PLANS FOR PILES AT ABUTMENTS.
Slope Protection: Good
Columns: CONCRETE
Pier Cap: CONCRETE
Footing: CONCRETE FOOTINGS SEE PLANS # 03922
04/2022… Concrete caps have cracking and efflorescence at various locations

Asset **#06415**(Routine)

District: 03, **County:** 61 - Howard County

Team Lead: John King, **Inspection Date:** 04/11/2022

04/2022… Elevation

04/2022… Elevation

04/2022… Alignment

04/2022… Alignment

Deck

Underside of deck typical all spans

Alignment

Asset **#06415**(Routine)

District: 03, **County:** 61 - Howard County

Team Lead: John King, **Inspection Date:** 04/11/2022

SS

AL

DECK PHOTO

Deck cracks sealed all spans..

Asset **#06415**(Routine)
District: 03, **County:** 61 - Howard County
Team Lead: John King, **Inspection Date:** 04/11/2022

BOTTOM OF DECK TYPICAL ALL SPANS.

Elevation

Bent 2

Bent 2

04/2022.. typical deck photo aLl spans

04/2022.. cracking in deck various locations

04/2022… underside of deck typical all spans

04/2022… efflorescence underside of deck

Cracking and efflorescence at various locations

Bent 2

Spall at LT side of bent 2

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

Maintenance Needs

Date Reported: 04/24/2020

Priority: C - Important

Status: Open

Type of Work: Repair (General)

Component: Approach

Deficiency Description

Erosion under LT shoulder at Bent 1 bridge end, approx. 3 ft wide X 1 ft deep…04/11/2022. Erosion is still under LT shoulder at bent 1 bridge end, reopened maintenance need

Remarks

Bent 1 LT side

Bent 1 LT side

Bent 1 LT side

04/2022… erosion LT side bent 1

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

04/2022… erosion LT side bent 1

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

Maintenance Needs

Date Reported: 04/12/2022

Priority: D- Routine

Status: Open

Type of Work: (Inactive) (Inactive) 1 - Clean

Component: Channel

Deficiency Description

Large tree at Bent 2 needs removed from channel.

Remarks

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	
A-56 - Joint Cleaning/Flushing Needed	
A-57 - Beam End and Bearing Paint Needed	
A-58 - Cap Cleaning/Flushing Needed	
A-59 - Joint Repair Needed	
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	
A-63 Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	

A-54 - Sealable Deck Cracks

A-55 - Deck Washing Needed

A-56 - Joint Cleaning/Flushing Needed

A-57 - Beam End and Bearing Painting Needed

A-58 - Cap Cleaning/Flushing Needed

A-59 - Joint Repair Needed

A-60 - Full Beam Painting Needed

A-61 - Polymer Overlay Advised

A-62 - Hydro and LMC Advised

A-63 - Missing/Incorrect Log Mile Signage

A-64 - Vegetation Removal Requested

Asset #06415(Routine)

US 278- 03- 6.63 over MESSER CREEK

Location: 6.6 M S OF DIERKS

Team Lead: John King, **Inspection Date:** 04/11/2022

Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
04/11/2022	7	7	7	N	7	5
04/23/2020	7	7	8	N	7	5
04/18/2018	7	7	8	N	7	5
04/19/2016	7	7	8	N	7	5
04/15/2014	7	7	8	N	7	5
05/31/2012	7	7	8	N	7	5
06/02/2010	7	7	8	N	7	5
06/03/2008	7	7	8	N	7	5
05/24/2006	8	8	8	N	7	5
06/08/2004	8	8	8	N	7	5
06/04/2002	8	8	8	N	8	5
05/01/2000	8	8	8	N	8	5