

Bridge 20859 Inspection Report



Latitude:34.01632, Longitude:-91.18872

Route:299 Section:00 Log:3.65

Arnold Road ID:1xBENZALLNx0xA, Arnold Log mile:3.61

District 02, 1 - Arkansas County

Owner: 21 - Other State Agencies

Inspection Direction: 4 - W to E

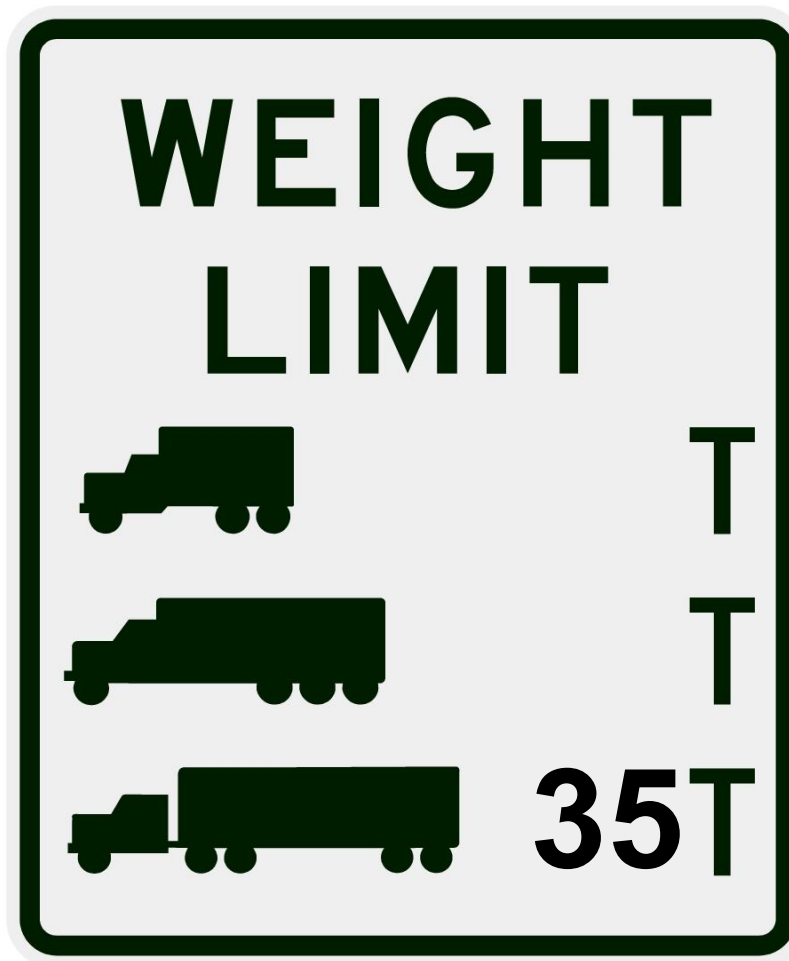
Bridge Posting Information

41 - Structure Open/Posted/Closed: K - Bridge closed to all traffic

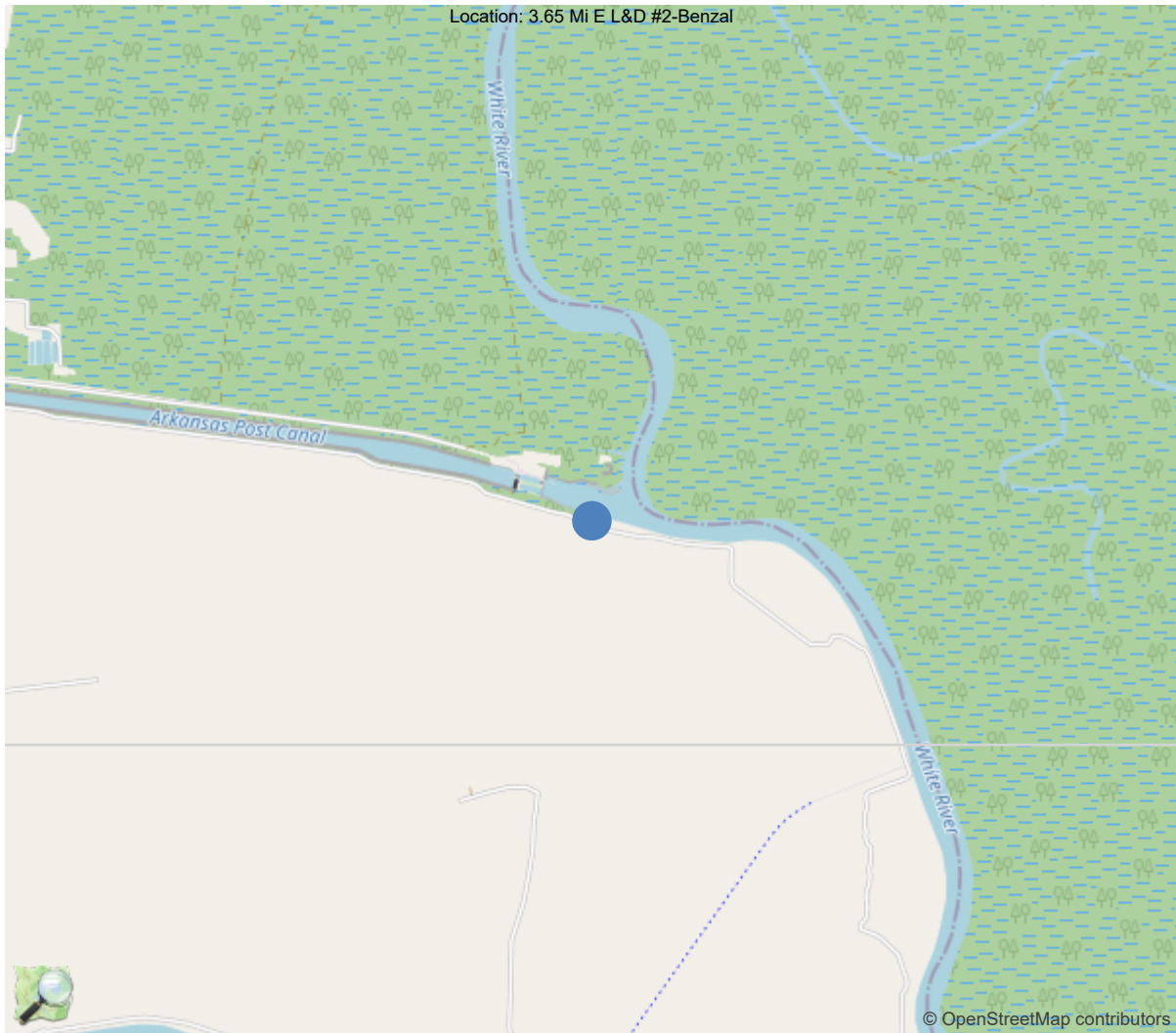
70 - Bridge Posting: 3 - 10.0 - 19.9 % below

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	22		
Code 9 (31 Tons)	31		
Code 5 (40 Tons)	35	35	35

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



34.01632, -91.18872

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	20859
(5) Inventory Route	1
(2) Highway Agency District	02 - District 02
(3) County Code	1 - Arkansas County
(4) Place Code	0
(6) Features Intersected	Menard Bayou
(7) Facility Carried	Benzal Lane-GFC
(9) Location	3.65 Mi E L&D #2-Benzal
(11) Mile Point	3.65 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	34.0163199689499
(17) Longitude	-91.1887237638897
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4 - Steel continuous
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	3 - Open Grating
(108) Wearing Surface/Protective System	
Type of Wearing Surface	9 - Other
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	2004
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	1
Under	0
(29) Average Daily Traffic	2
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	1 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	37 ft
(49) Structure Length	96.5 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	11.4 ft
(52) Deck Width Out to Out	12.5 ft
(32) Approach Roadway Width (W/Shoulders)	12.1 ft
(33) Bridge Median	0 - No median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	11.5 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	0 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	9 - Rural Local
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exists
(102) Direction of Traffic	3 - One lane bridge for 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 structure
(21) Maintain	21 - Other State Agencies
(22) Owner	21 - Other State Agencies
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	7
(59) Superstructure	6
(60) Substructure	7
(61) Channel & Channel Protection	8
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	0 - Other or Unknown
(63) Operating Rating Method	3
(64) Operating Rating	
Type	3 - Load and Resistance Factor(LRFR)
Rating	24
(65) Inventory Rating Method	3 - Load and Resistance Factor
(66) Inventory Rating	
Type	
Rating	18
(70) Bridge Posting	3 - 10.0 - 19.9 % below
(41) Structure Open/Posted/Closed	K - Bridge closed to all traffic
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	3
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	4
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	0 - Inspected feature does not meet
(113) Scour Critical Bridges	5 - Bridge foundations determined to
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$
(96) Total Project Cost	\$
(97) Year of Improvement Cost Estimate	
(114) Future ADT	58
(115) Year of Future ADT	2007

INSPECTIONS *			
(90) Inspection Date	08/26/2024		
(91) Frequency	12		
(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.			

Team Lead: Greg Loomis, Inspection Date: 08/26/2024

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	20859
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	18827
B.W.01 Year Built	2004

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	1 - Arkansas County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	02 - District 02
B.L.05 Latitude	34.0163199689499
B.L.06 Longitude	-91.1887237638897
B.L.07 Border Bridge Number	
B.L.08 Border Bridge State or Country Code	
B.L.09 Border Bridge Insp. Resp.	
B.L.10 Border Bridge Designated Lead State	
B.L.11 Bridge Location	3.65 Mi E L&D #2-Benzal
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	SX - Other State agency
B.CL.02 Maint. Responsibility	SX - Other State agency
B.CL.03 Federal or Tribal Land Access	N - Not Applicable
B.CL.04 Historic Significance	N - Bridge is not eligible for the
B.CL.05 Toll	N - Bridge does not carry a toll ro
B.CL.06 Emergency Evacuation Designation	

ROADSIDE HARDWARE	
B.RH.01A Bridge Railing Type	
B.RH.01B Bridge Railing Year (YY)	
B.RH.01C Bridge Railing Test Level	
B.RH.02A Transition Type	
B.RH.02B Transition Year (YY)	
B.RH.02C Transition Test Level	

BRIDGE GEOMETRY	
B.G.01 NBIS Bridge Length	91.9
B.G.02 Total Bridge Length	96.5
B.G.03 Max Span Length	37.1
B.G.04 Min Span Length	27.3
B.G.05 Bridge Width Out-to-Out	12.5
B.G.06 Bridge Width Curb-to-Curb	11.5
B.G.07 Left Curb or Sidewalk Width	0
B.G.08 Right Curb or Sidewalk Width	0
B.G.09 Approach Roadway Width	12.1

B.G.10 Bridge Median	0 - No median
B.G.11 Skew	0
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	19
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	1202.5

LOADS AND LOAD RATING	
B.LR.01 Design Load	U - Unknown
B.LR.02 Design Method	
B.LR.03 Load Rating Date	
B.LR.04 Load Rating Method	LRFR - Load and Resistance Factor R
B.LR.05 Inventory Load Rating Factor	0.5
B.LR.06 Operating Load Rating Factor	0.67
B.LR.07 Controlling Legal Load Rating Factor	
B.LR.08 Routine Permit Loads	

INSPECTION REQUIREMENTS	
B.IR.01 NSTM Inspection Required	N - NSTM inspection not required.
B.IR.02 Fatigue Details	Y - E/E' details are present
B.IR.03 UW Inspection Required	N - Underwater inspection not requi
B.IR.04 Complex Feature	N - Bridge does not have complex fe

COMPONENT CONDITION RATINGS	
B.C.01 Deck Condition Rating	6 - SATISFACTORY - Widespread
B.C.02 Superstructure Condition	6 - SATISFACTORY - Widespread
B.C.03 Substructure Condition	7 - GOOD - Some minor defects.
B.C.04 Culvert Condition	N - NOT APPLICABLE - Component
B.C.05 Bridge Railing Condition	6 - SATISFACTORY - Widespread
B.C.06 Bridge Railing Transitions Condition	N - NOT APPLICABLE - Component
B.C.07 Bridge Bearings Cond.	N - NOT APPLICABLE - Component
B.C.08 Bridge Joints Condition	N - NOT APPLICABLE - Bridge do
B.C.09 Channel Condition Rating	8 - VERY GOOD - Inherent defec
B.C.10 Channel Protection Condition	8 - VERY GOOD - Some inherent
B.C.11 Scour Condition Rating	9 - No scour.
B.C.12 Bridge Condition Classification	F - Fair
B.C.13 Lowest Condition Rating	6 - SATISFACTORY - Widespread
B.C.14 NSTM Insp. Condition	N - NOT APPLICABLE - Component
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	P - Poor
B.AP.02 Overtopping Likelihood	1 - Remote - once every 100 years o
B.AP.03 Scour Vulnerability	AB-T - TEMP - Stable for scour, pos
B.AP.04 Scour Plan of Action	0 - A scour POA is not required.
B.AP.05 Seismic Vulnerability	0 - Seismic evaluation not complete

Team Lead: Greg Loomis, Inspection Date: 08/26/2024

SPAN SETS			
M1			
B.SP.02 # of Spans	3	B.SP.08 Deck Interaction	CU - Composite - unshored cons
B.SP.03 # of Beam Lines	4	B.SP.09 Deck Material and Type	S01 - Steel - open grid
B.SP.04 Span Material	S02 - Steel - welded	B.SP.10 Wearing Surface	0 - None
B.SP.05 Span Continuity	2 - Continuous	B.SP.11 Deck Protective System	C01 - Coating - paint
B.SP.06 Span Type	G02 - Girder/beam - I-shaped s	B.SP.12 Deck Reinforcing Protective System	0 - None
B.SP.07 Span Protective System	C01 - Coating - paint	B.SP.13 Deck Stay-In-Place Forms	0 - None

SUBSTRUCTURE SETS			
A1			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	P03 - Pile - concrete, cast-in
B.SB.04 Substructure Type	A03 - Abutment - open/spill th	B.SB.07 Foundation Protective System	0 - None
P1			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	P03 - Pile - concrete, cast-in
B.SB.04 Substructure Type	B03 - Bent - pile	B.SB.07 Foundation Protective System	0 - None

HIGHWAY FEATURES			
H1			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	2
B.F.03 Feature Name	Benzal Lane-GFC	B.H.10 Annual ADTT	0
B.H.01 Functional Classification	7 - Local	B.H.11 Year of Annual ADT	2018
B.H.02 Urban Code	99999	B.H.12 Highway Max Usable Vertical Clearance	99.9
B.H.03 NHS Designation	N - Non-NHS	B.H.13 Highway Min Vertical Clearance	99.9
B.H.04 National Highway Freight Network	N - Not on the NHFN	B.H.14 Highway Min Horizontal Clearance, Left	
B.H.05 STRAHNET Designation	N - Not a STRAHNET route	B.H.15 Highway Min Horizontal Clearance, Right	
B.H.06 LRS Route ID		B.H.16 Highway Max Usable Surface Width	11.4
B.H.07 LRS Mile Point	3.65	B.H.17 Bypass Detour Length	1
B.H.08 Lanes On Highway	1	B.H.18 Crossing Bridge Number	

HIGHWAY ROUTES					
Highway Parent	B.RT.01 Route Designation	B.RT.02 Route Number	B.RT.03 Route Direction	B.RT.04 Route Type	B.RT.05 Service Type
H1	1	299	2-T - TEMP - Two-way traffic - NS or EW	7 - State lands road	1 - Mainline



Team Lead: Greg Loomis, Inspection Date: 08/26/2024

WATERWAY FEATURES

W1

B.F.02 Feature Location	B - Below bridge	B.N.03 Movable Bridge Max Navigation Vertical Clearance	
B.F.03 Feature Name	Menard Bayou	B.N.04 Navigation Channel Width	
B.N.01 Navigable Waterway	N - Not navigable waters	B.N.05 Navigation Channel Min Horizontal Clearance	
B.N.02 Navigation Min Vertical Clearance		B.N.06 Substructure Navigation Protection	

POSTING STATUS DATA

B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date
(Inactive) (Inactive) PP-T - T	

LOAD EVALUATION AND POSTING

B.EP.01 Legal Load Configuration	B.EP.02 Legal Load Rating Factor	B.EP.03 Posting Type	B.EP.04 Posting Value
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Inspection Notes

General Observation

Bridge is logged from west to east.

Inspection of this structure can be performed by foot - a ladder may be used for closer access to some overhead elements. Normal water level requires use of waders - a boat may be required during high-water.

For river elevations at bridge: <http://www.swl-wc.usace.army.mil/pages/data/tabular/htm/I01.htm>

Bridge elevation - 142'

41 - Structure Open/Posted/Closed - Retired (K)

Bridge is currently closed to traffic using movable barricades.
A detour road has been constructed approximately 225' to the southwest
(Pipe culverts under detour road are not a bridge-length structure.)

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

Deck is in good condition with some minor corrosion and a couple of connection issues.

59 - Superstructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Superstructure is in satisfactory condition with some connection issues at pinned connections.

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

Substructure is in good condition with some abrasion.

61 - Channel/Channel Protection (8 - Banks are protected or well vegetated. River control devices such as spur dikes and embankment protection are not required or are in a stable condition.)

Channel is in very good condition with no notable problems.

B.IR.02 - Fatigue Prone Details (Y)

Cover plates on bottom of bottom flanges at locations near pins.

B.C.10 Channel Protection Condition Rating (8 - VERY GOOD - Some inherent defects.)

Rock rip-rap on both end-slopes.

A-B.C.11 - B.C.11 Scour Condition Rating (New NBIS) (9 - No Scour.)

No scour.



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
28	Steel Deck Open Grid	SF	1180	911	269	0	0
1000	Corrosion	SF	261	0	261	0	0
1020	Connection	SF	8	0	8	0	0
515	Steel Protective Coating	SF	1180	0	1180	0	0
3440	Effectiveness (Steel Protective Coatings)	SF	1180	0	1180	0	0
(28) Deck: 12'-6" wide x 94'-5" long = 1180 SF total. Little or no paint left in place, but only very light surface rust forming in various locations. 261 SF CS2 Corrosion A couple access panels are a little loose and rattle under traffic, especially Span 2 left @ midspan. 6 SF CS2 Connection							
107	Steel Open Girder/Beam	LF	380	300	0	80	0
1020	Connection	LF	80	0	0	80	0
515	Steel Protective Coating	SF	2090	0	2090	0	0
3440	Effectiveness (Steel Protective Coatings)	SF	2090	0	2090	0	0
(107) Girders: Spans 1-3 (29' - 37' - 28'-5" = 94'-5" = 95') / 4 per span = 380 LF total. Coating/paint: 5.5 square feet per linear feet of girder = 2090 SF total. Scattered small spots of surface rust beginning - very little pitting or section loss. Posts for railing were welded to top flange of outside girders at one time - some minor damage or distortion at weld locations. NOTE: Wear through years of use + slack in design for pinned connections is allow flexing and movement of girder sections under traffic loads, especially at Span 2 mid-span. 5 locations each girder x 4 girders x 4' each location = 80 LF CS2 Connection							
215	Reinforced Concrete Abutment	LF	28	28	0	0	0
(215) Abutments: Bents 1 & 4 / 14' each = 28 LF total.							
227	Reinforced Concrete Pile	EA	4	0	4	0	0
1190	Abrasion/Wear (PSC/RC)	EA	4	0	4	0	0
(227) Piling: Bents 2 & 3 / 2 per bent = 4 piles total. All pile have some very light abrasion. 4 EA CS2 Abrasion							
234	Reinforced Concrete Pier Cap	LF	28	28	0	0	0
(234) Caps: Bents 2 & 3 / 14' each = 28 LF total. Both caps have very light abrasion. (Still CS1 - Abrasion defect not available)							
330	Metal Bridge Railing	LF	192	192	0	0	0
515	Steel Protective Coating	SF	480	0	480	0	0
3410	Chalking (Steel Protective Coatings)	SF	480	0	480	0	0
(330) Railing: 96' each side = 192 LF total. Coating: 2.5 square feet per linear feet of railing = 480 SF total. Steel railing with metal posts. Railing is dirty and dull from time spent submerged.							

Inspection Photos and Notes



Elevation - Right side view



Load posting sign - Beginning



Load posting sign - End



Road closed - West end



Road closed - East end



New/detour road



Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	No
A-55 - Deck Washing Needed	No
A-56 - Joint Cleaning/Flushing Needed	No
A-57 - Beam End and Bearing Paint Needed	No
A-58 - Cap Cleaning/Flushing Needed	No
A-59 - Joint Repair Needed	No
A-60 - Full Beam Painting Needed	No
A-61 - Polymer Overlay Advised	No
A-62 - Hydro and LMC Advised	No
A-63 - Missing/Incorrect Log Mile Signage	No
A-64 - Vegetation Removal Requested	No
A-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

A-54 - Sealable Deck Cracks (No)

A-55 - Deck Washing Needed (No)

A-56 - Joint Cleaning/Flushing Needed (No)



A-57 - Girder End and Bearing Painting Needed (No)

A-58 - Cap Cleaning/Flushing Needed (No)

A-59 - Joint Repair Needed (No)

A-60 - Full Girder Painting Needed (No)

A-61 - Polymer Overlay Advised (No)

A-62 - Hydro and LMC Advised (No)

A-63 - Missing/Incorrect Log Mile Signage (No)

A-64 - Vegetation Removal Requested (No)

A-65 - Clogged deck drains?



Asset #20859(Routine)

Benzal Lane-GFC over Menard Bayou

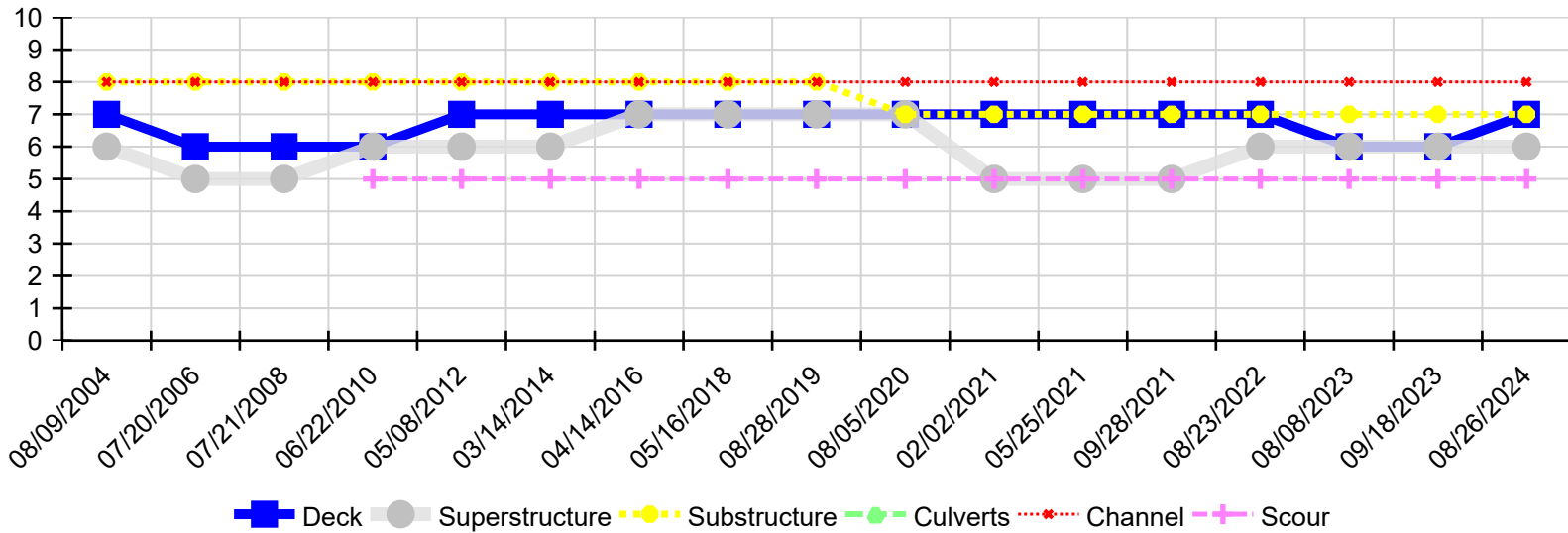
Location: 3.65 Mi E L&D #2-Benzal

Team Lead: Greg Loomis Inspection Date: 08/26/2024

A-66 - Approach minor pothole/leveling needed



Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
08/26/2024	7	6	7	N	8	5
09/18/2023	6	6	7	N	8	5
08/08/2023	6	6	7	N	8	5
08/23/2022	7	6	7	N	8	5
09/28/2021	7	5	7	N	8	5
05/25/2021	7	5	7	N	8	5
02/02/2021	7	5	7	N	8	5
08/05/2020	7	7	7	N	8	5
08/28/2019	7	7	8	N	8	5
05/16/2018	7	7	8	N	8	5
04/14/2016	7	7	8	N	8	5
03/14/2014	7	6	8	N	8	5
05/08/2012	7	6	8	N	8	5
06/22/2010	6	6	8	N	8	5
07/21/2008	6	5	8	N	8	N
07/20/2006	6	5	8	N	8	N
08/09/2004	7	6	8	N	8	N