

Bridge Inspection Report

NBI Structure Number: 000601710016200

Alton 171/162

Date of Inspection: 05/16/2024

NH140

Date Report Sent: 06/25/2024

over

Owner: NHDOT

MERRYMEETING RIVER

Bridge Inspection Group: C-Team

Bridge Maintenance Crew: 03

Recommended Postings:

Weight: **E-2**

Weight Sign OK

SIGNS IN PLACE 5/16/2024.

Width: **Not Required**

Width Sign OK

Primary Height Sign Recommendation: *None*

Clearances: Over: 99.99

Height Sign OK

Optional Centerline Height Sign Rec: *None*

(Feet) Under: 0.00

Route: 99.99

Condition:

Red List Status: Not on the Redlist

Deck: 5 Fair

Superstructure: 5 Fair

Substructure: 6 Satisfactory

Culvert: N N/A (NBI)

Sufficiency Rating: 77.7 %

Bridge Rail: Meets Standards

Rail Transition: Meets Standards

Bridge Approach Rail: Meets Standards

Approach Rail Ends: Substandard

Structure Type and Materials:

Number of Main Spans: 1

Number of Approach Spans: 0

Main Span Material and Design Type

Concrete/Slab

NH Bridge Type: CS (Concrete Slab)

Deck Type: Concrete-Cast-in-Place

Wearing Surface: Bituminous

Membrane: None

Deck Protection: None

Curb Reveal: 5 in

Plan Location: 2-5-2-10

Total Bridge Length: 27.0 ft

Right Curb/Sidewalk Width: 0.0 ft

Total Bridge Width: 34.6 ft

Median: No median

Bridge Skew: 0.00 °

Year Built/Rebuilt: 1940

Bridge Dimensions:

Length Maximum Span: 24.0 ft

Left Curb/Sidewalk Width: 0.0 ft

Width Curb to Curb: 31.0 ft

Approach Roadway Width: 21.0 ft

(W/Shoulders)

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Bridge Service:

Type of Service on Bridge: Highway

Type of Service Under: Waterway

Lanes on Bridge: 2

Lanes Under: 0

AADT: 2,433

Percent Trucks: 4%

Year of AADT: 2022

Future AADT: 3,600

Year of Future AADT: 2042

Federal or State Definition Bridge: Fed-Definition Bridge

National Highway System: Bridge does not carry NHS

Roadway Functional Class: Urban, Collector

New Hampshire Bridge Tier: 3

Eligibility for the National Register of Historic Places: Possibly eligible for

Traffic Direction: 2-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 4 Tolerable

Underclearances: N Not applicable (NBI)

Approach Alignment: 8 Equal Desirable Crit

Structural Evaluation: 5 Above Min Tolerable

Channel/Channel Protection: 5 Bank Prot Eroded

Waterway Adequacy: 8 Equal Desirable

Bridge Scour Critical Status: 8 Stable Above Footing

Riprap Condition: Good Condition

Debris Present: No Debris Present

Channel Notes:

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Element Details

No.	Description	Material Notes and Condition Notes:
38	Reinforced Concrete Slab	ASPHALT IS HEAVILY CRACKED WITH DEPRESSED AREAS. CURBS HAVE FINE CRACKS, LIGHT SPALLED AREAS. SOFFIT HAS FINE AND LIGHT CRACKS WITH EFFLORESCENCE. LARGE DELAMINATIONS AND SPALLED WITH REBAR EXPOSED.
L 510	Wearing Surfaces	
L 1080	Delamination/Spall/Patched Area	
L 1090	Exposed Rebar	SOFFIT SPALLED REBAR EXPOSED.
L 1120	Efflorescence/Rust Staining	
L 1130	Cracking (RC and Other)	
217	Masonry Abutment	STONE MASONRY HAS 25% MORTAR LOSS BELOW WATERLINE WITH VOIDS AND 6" PENETRATION. SMALL SPALLS AND LEAKING WITH EFFLORESCENCE AND FEW RUST STAINS AT EXTERIORS.
L 1120	Efflorescence/Rust Staining	SOUTHWEST ABUTMENT CRACKED, EFFLORESCENCE.
L 1610	Mortar Breakdown (Masonry)	
L 1620	Split/Spall (Masonry)	
330	Metal Bridge Railing	**W-Beam on steel posts** MINOR DAMAGE AND RUSTING.

Element States

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
38	Reinforced Concrete Slab	936	sq.ft	81%	17%	2%	0%
L 510	Wearing Surfaces	---	---	40%	35%	25%	0%
L 1080	Delamination/Spall/Patched Area	30	sq.ft	0%	100%	0%	0%
L 1090	Exposed Rebar	17	sq.ft	0%	0%	100%	0%
L 1120	Efflorescence/Rust Staining	70	sq.ft	0%	100%	0%	0%
L 1130	Cracking (RC and Other)	50	sq.ft	0%	100%	0%	0%
217	Masonry Abutment	69	ft	0%	28%	73%	0%
L 1120	Efflorescence/Rust Staining	5	ft	0%	100%	0%	0%
L 1610	Mortar Breakdown (Masonry)	50	ft	0%	0%	100%	0%
L 1620	Split/Spall (Masonry)	2	ft	0%	100%	0%	0%
330	Metal Bridge Railing	52	ft	42%	58%	0%	0%

Bridge Notes:

UNDERWATER INSPECTION 11/5/2012, 7/26/17.

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Inspection Notes: 05/16/2024

MAS - inspection comments -

DECK / SUPERSTRUCTURE: ASPHALT - HEAVILY CRACKED WITH DEPRESSED AREAS. CURBS - FINE CRACKS AND LIGHT SPALLING IN AREAS. RAIL - MINOR DAMAGE AND RUSTING. SOFFIT - FINE AND LIGHT CRACKS AND LEAKING WITH EFFLORESCENCE. LARGE DELAMINATIONS AND SPALLED WITH REBAR EXPOSED.

SUBSTRUCTURE: CONCRETE - FINE CRACKS AND LIGHT LEAKING WITH EFFLORESCENCE AND FEW SMALL RUST STAINS. SMALL SPALLS AT CORNERS. LIGHT SCALING BELOW WATERLINE. STONE MASONRY - 25% MORTAR LOSS BELOW WATERLINE WITH UP TO 6" PENETRATION. 2' OF FREEBOARD.

PICTURE: C648-

53. ASPHALT IS HEAVILY CRACKED, DEPRESSED IN AREAS.

KLM Colins dive inspection 6/16/22

1. Light marine growth (algae) was observed on both abutments.
2. Light to medium scaling on both abutments was noted below the waterline.
3. Hammer soundings of the concrete were performed along the full length of both abutments, no areas of unsound concrete were noted.
4. Masonry abutment was found to be in fair condition, with up to 25% mortar loss the full height of the masonry wall. No visible signs of settlement or shifting of the masonry units. Penetration of the joints was less than 6" in depth.
5. 2 Longitudinal cracks was noted along center line of substructure on underside of deck. The cracks runs from west abutment to the center of the deck around a previous repair of distressed concrete which is approximately 8 feet in length by 3 feet in width. Large spalling approximately 9 feet long by 1.5 feet wide by 1 inch deep noted along south edge of previously repaired area. Spall contained exposed reinforcing steel with up to 15% section loss corrosion. Delaminated area noted adjacent to prior repairs is approximately 8 feet long by 2 feet wide.
6. The abutments consisted primarily of masonry construction with reinforced concrete around the perimeters. Concrete was located around the outside each abutment with masonry blocks beginning approximately 1 foot into the bridge at both openings.

Previous Inspection Notes: 06/16/2022

KLM Colins dive inspection 6/16/22

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4. Masonry abutment was found to be in fair condition, with up to 25% mortar loss the full height of the masonry wall. No visible signs of settlement or shifting of the masonry units. Penetration of the joints was less than 6" in depth.
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6. The abutments consisted primarily of masonry construction with reinforced concrete around the perimeters. Concrete was located around the outside each abutment with masonry blocks beginning approximately 1 foot into the bridge at both openings.

KJT - inspection comments 5/2/22-

DECK / SUPERSTRUCTURE: ASPHALT - CRACKED. CURBS - FINE CRACKS AND LIGHT SPALLING IN AREAS. RAIL - GOOD CONDITION. SOFFIT - FINE AND LIGHT CRACKS AND LEAKING WITH EFFLORESCENCE. LARGE DELAMINATION AND SPALLED WITH REBAR EXPOSED.

SUBSTRUCTURE: CONCRETE - FINE CRACKS AND LIGHT LEAKING WITH EFFLORESCENCE AND FEW SMALL RUST STAINS. LIGHT SCALING BELOW WATERLINE. STONE MASONRY - GROUT LOSS BELOW WATERLINE. 2' OF FREEBOARD.

Approach and Roadway Notes:

ASPHALT - (5) CRACKS AND DEPRESSED AREAS AT EAST, (7) GOOD CONDITION AT WEST.

W- BEAM RAIL - MINOR DAMAGE AND DECAY.

MODERATE POISON IVY.

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Inspection History

Inspection Date	Inspector Initials	Inspection Type(s) Performed				Major Element Ratings				Red list	Posting
		NBI	Elem	FCM	U/W	Deck	Super	Sub	Culvert		
05/16/2024	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	E-2
06/16/2022	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	E-2
05/02/2022	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	E-2
05/22/2020	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	E-2
05/25/2018	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	E-2
07/26/2017	KLM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	E-2
05/25/2016	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
05/01/2014	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
11/05/2012	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
05/08/2012	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
05/25/2010	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
05/07/2008	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
06/28/2006	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
12/02/2005	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	7	N	<input type="checkbox"/>	E-2
03/21/2005	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
10/21/2004	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
03/29/2004	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
10/17/2003	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
03/31/2003	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
10/17/2002	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
04/04/2002	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
09/04/2001	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
04/06/2001	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	7	N	<input checked="" type="checkbox"/>	E-2
10/27/2000	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	7	N	<input checked="" type="checkbox"/>	E-2
06/02/2000	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	7	N	<input checked="" type="checkbox"/>	E-2
07/17/1998	FNM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	7	N	<input type="checkbox"/>	E-2
08/01/1996		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5	5	7	N	<input type="checkbox"/>	E-2
06/01/1994		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5	5	8	N	<input type="checkbox"/>	E-2
04/01/1992		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8	8	8	N	<input type="checkbox"/>	E-2

Inspection Frequency (mo.)			
NBI	Elem	FCM	U/W
24	24	N/A	60