

# Bridge Inspection Report

NBI Structure Number: 020801080011600

Peterborough 108/116

Date of Inspection: 11/05/2021

US202,NH123

Date Report Sent: 01/19/2022

over

Owner: NHDOT

CONTOOCOOK RIVER

Bridge Inspection Group: D-Team

Bridge Maintenance Crew: 07

### Recommended Postings:

Weight: **No Posting Required**

Weight Sign OK

Width: **Not Required**

Width Sign OK

Primary Height Sign Recommendation: *None*

**Clearances:** Over: 99.99  
(Feet) Under: 0.00  
Route: 99.99

Height Sign OK

Optional Centerline Height Sign Rec: *None*

### Condition:

Red List Status: State Redlist

Deck: 4 Poor

Superstructure: 5 Fair

Substructure: 4 Poor

Culvert: N N/A (NBI)

Sufficiency Rating: 54 %

Bridge Rail: Substandard

Rail Transition: Substandard

Bridge Approach Rail: Substandard

Approach Rail Ends: Substandard

### Structure Type and Materials:

Number of Main Spans: 2

Number of Approach Spans: 0

### Main Span Material and Design Type

Steel/Stringer/Girder

NH Bridge Type: IB-C (I Beams w/ Concrete Deck)

Deck Type: Concrete-Cast-in-Place

Wearing Surface: Bituminous

Membrane: Other

Deck Protection: None

Curb Reveal: Not Measured

Plan Location: 2-7-2-4

Total Bridge Length: 176.0 ft

Right Curb/Sidewalk Width: 0.6 ft

Total Bridge Width: 52.0 ft

Median: No median

Bridge Skew: 50.00°

Year Built/Rebuilt: 1942/1974

### Bridge Dimensions:

Length Maximum Span: 88.0 ft

Left Curb/Sidewalk Width: 5.0 ft

Width Curb to Curb: 44.0 ft

Approach Roadway Width: 44.0 ft  
(W/Shoulders)

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## Bridge Service:

Type of Service on Bridge: Highway and Pedestrian

Type of Service Under: Waterway

Lanes on Bridge: 2

Lanes Under: 0

AADT: 6,130

Percent Trucks: 7%

Year of AADT: 2020

Future AADT: 9,072

Year of Future AADT: 2042

Federal or State Definition Bridge: Fed-Definition Bridge

National Highway System: Bridge does not carry NHS

Roadway Functional Class: Rural, Minor Arterial

New Hampshire Bridge Tier: 2

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

Traffic Direction: 2-way traffic

## National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 6 Equal Min Criteria

Underclearances: N Not applicable (NBI)

Approach Alignment: 8 Equal Desirable Crit

Structural Evaluation: 4 Minimum Tolerable

Channel/Channel Protection: 7 Minor Damage

Waterway Adequacy: 8 Equal Desirable

Bridge Scour Critical Status: 3 SC - Unstable

Riprap Condition: Good Condition

Debris Present: No Debris Present

Channel Notes: LIGHT EMBANKMENT EROSION DOWNSTREAM. DAM 200 FEET UPSTREAM.

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## Element Details

No.	Description	Material Notes and Condition Notes:
12	Reinforced Concrete Deck	CURB ON SOUTH- TWO SPALLS BEHIND RAIL. SIDEWALK ON NORTH- SPALLED ALONG GRANITE FACING. TWO GRATES RUSTED OFF ON DECK DRAIN NEAR CENTER OF BRIDGE. UNDERSIDE OF DECK- MODERATE LEAKING, LIGHT SPALLING, DELAMINATIONS WITH REBAR EXPOSED.
L 510	Wearing Surfaces	ASPHALT- SEVERAL CRACKS.
L 1080	Delamination/Spall/Patched Area	DELAMINATIONS IN SPAN #1, BAYS #2 AND #3. DELAMINATIONS IN SPAN #2, BAYS #2, #3 AND #4.
L 1090	Exposed Rebar	REBAR EXPOSED IN SPAN #1, BAY #2.
L 1120	Efflorescence/Rust Staining	EFFLORESCENCE AND RUST STAINS UNDER CURBS AND DECK.
107	Steel Open Girder/Beam	BEAMS- PAINT PEELING AND CHALKING. MINOR SECTION LOSS AT TOP AND BOTTOM FLANGES WITH PACK RUST DEVELOPING. LIGHT SECTION LOSS AT BEAM ENDS, DIAPHRAGMS HEAVILY RUSTED WITH SECTION LOSS FROM JOINT LEAKAGE. MODERATE RUST DEVELOPING ON CANTILEVERED SUPPORT BRACKETS TO UNDERSIDE OF CURB OVER PIER ON SOUTH.
L 515	Steel Protective Coating	
L 1000	Corrosion	CORROSION HAS INITIATED ON TOP FLANGES. APPROXIMATELY 1/2" OF PACK RUST ON GIRDERS #1 AND #4 AT MIDSPAN, SPAN #2. MINOR SECTION LOSS AT TOP AND BOTTOM FLANGES OF GIRDER #4 AT WEST, TYPICAL OF GIRDER #2. BASE OF DIAPHRAGM CONNECTION PLATE TO GIRDER # 4 HOLED OVER PIER. HEAVY SCALE, LIGHT TO MODERATE SECTION LOSS ON BOTTOM FLANGE, BEAM #4 OVER EAST ABUTMENT; 1/4".
L 1900	Distortion	LOWER CONNECTION PLATE FROM DIAPHRAGM #3 AT MIDSPAN TO BOTTOM OF SOUTH GIRDER IN SPAN #2 BUCKLED, TYPICAL OF A FEW.
210	Reinforced Concrete Pier Wall	WEST SIDE OF PIER SPALLED WITH REBAR EXPOSED.
L 1090	Exposed Rebar	ONE 3'X2' AND FOUR 2'X2' AREAS OF REBAR EXPOSED ON WEST SIDE OF PIER.
215	Reinforced Concrete Abutment	ABUTMENTS- DELAMINATIONS, MINOR TO MODERATE SPALLS, LEAKING AND EXPOSED REBAR WITH LIGHT SECTION LOSS. BACKWALL SPALLED UNDER JOINT BETWEEN GIRDERS #3 AND #4 ON WEST.
L 1090	Exposed Rebar	REBAR EXPOSED ON EAST ABUTMENT, MINOR SECTION LOSS ON SPALL NEAR SOUTHEAST BASE. BACKWALL SPALLED ON WEST.
300	Strip Seal Expansion Joint	JOINTS PAVED OVER, ASPHALT MISSING IN AREAS.
L 2310	Leakage	LIGHT LEAKAGE.
302	Compression Joint Seal	JOINT PAVED OVER WITH ASPHALT, POTHOLES PATCHED. JOINT ARMOR ON UNDERSIDE, HEAVY LEAKING CAUSING CORROSION WITH HEAVY SCALE AND STOP BARS DOWN OVER PIER IN BAY #1, #2 AND #3.
L 2310	Leakage	MODERATE LEAKAGE CAUSING CORROSION.
311	Movable Bearing	MOVEABLE BEARING #6 ON NORTHEAST ABUTMENT TIPPED, TYPICAL OF #5. RUSTED FROM LEAKAGE; #4 OVER PIER AND EAST ABUTMENT.
L 515	Steel Protective Coating	
313	Fixed Bearing	RUSTED UNDER LEAKAGE.
L 515	Steel Protective Coating	

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330	Metal Bridge Railing	3 BAR ALUMINUM.  MINOR SCRAPES, GOUGES AND LIGHT DAMAGE. ANCHOR BOLTS BROKEN ON FOUR POST, SOUTH.
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## Element States

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
12	Reinforced Concrete Deck	9,152	sq.ft	89%	10%	0%	0%
└ 510	Wearing Surfaces	---	---	80%	20%	0%	0%
└ 1080	Delamination/Spall/Patched Area	40	sq.ft	0%	0%	100%	0%
└ 1090	Exposed Rebar	4	sq.ft	0%	100%	0%	0%
└ 1120	Efflorescence/Rust Staining	926	sq.ft	0%	100%	0%	0%
107	Steel Open Girder/Beam	996	ft	96%	2%	2%	0%
└ 515	Steel Protective Coating	---	---	100%	0%	0%	0%
└ 1000	Corrosion	40	ft	0%	50%	50%	0%
└ 1900	Distortion	3	ft	0%	100%	0%	0%
210	Reinforced Concrete Pier Wall	98	ft	89%	11%	0%	0%
└ 1090	Exposed Rebar	11	ft	0%	100%	0%	0%
215	Reinforced Concrete Abutment	95	ft	82%	16%	2%	0%
└ 1090	Exposed Rebar	17	ft	0%	88%	12%	0%
300	Strip Seal Expansion Joint	98	ft	0%	100%	0%	0%
└ 2310	Leakage	98	ft	0%	100%	0%	0%
302	Compression Joint Seal	49	ft	0%	80%	20%	0%
└ 2310	Leakage	49	ft	0%	80%	20%	0%
311	Movable Bearing	12	each	50%	50%	0%	0%
└ 515	Steel Protective Coating	---	---	100%	0%	0%	0%
313	Fixed Bearing	6	each	67%	33%	0%	0%
└ 515	Steel Protective Coating	---	---	100%	0%	0%	0%
330	Metal Bridge Railing	98	ft	100%	0%	0%	0%

### Bridge Notes:

SERVI-LIFT USED- 08/14/06, 4/19/10, 8/20/14, 8/28/18.  
HIGH WATER ON 3/9/11. FLOOD EVENT 8/28 & 29/2011. POST FLOOD SCOUR CRITICAL INSPECTION 8/31/11.  
5/22/12- ADDED TO STATE RED LIST.

### Inspection Notes: 11/05/2021

NJL inspection comments-  
DECK: ASPHALT- SEVERAL CRACKS. CURB ON SOUTH- TWO SPALLS BEHIND RAIL. SIDEWALK ON NORTH- SPALLED ALONG GRANITE FACING. TWO GRATES RUSTED OFF ON DECK DRAIN NEAR CENTER OF BRIDGE. UNDERSIDE OF DECK- MODERATE LEAKING, LIGHT SPALLING, DELAMINATIONS WITH REBAR EXPOSED. JOINTS- ALL JOINTS PAVED OVER, ASPHALT MISSING IN AREAS.

SUPERSTRUCTURE: BEAMS- PAINT PEELING AND CHALKING. MINOR SECTION LOSS AT TOP AND BOTTOM FLANGES WITH PACK RUST DEVELOPING. LIGHT SECTION LOSS AT BEAM ENDS, DIAPHRAGMS HEAVILY RUSTED WITH SECTION LOSS FROM JOINT LEAKAGE. MODERATE RUST DEVELOPING ON CANTILEVERED SUPPORT BRACKETS TO UNDERSIDE OF CURB OVER PIER ON SOUTH.

SUBSTRUCTURE: PIER / ABUTMENTS - CRACKED, DELAMINATIONS AND MINOR TO MODERATE SPALLS. CHEEK WALL SPALLED ON SOUTHEAST, 1' IN WIDTH BY 4' IN HEIGHT.

PICTURES: D263-  
48. WEST APPROACH.  
49. SOUTH ELEVATION.

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**Previous Inspection Notes:** 03/11/2021

NJL inspection comments-

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SUPERSTRUCTURE: BEAMS- PAINT PEELING AND CHALKING. MINOR SECTION LOSS AT TOP AND BOTTOM FLANGES OF GIRDER #4 AT WEST, TYPICAL OF GIRDER #2. RUSTED UNDER JOINTS. BASE OF DIAPHRAGM CONNECTION PLATE TO GIRDER #4 HOLED OVER PIER. LOWER CONNECTION PLATE FROM DIAPHRAGM #3 AT MIDSPAN TO BOTTOM OF SOUTH GIRDER IN SPAN #2 BUCKLED, TYPICAL OF A FEW. MODERATE RUST DEVELOPING ON CANTILEVERED SUPPORT BRACKETS TO UNDERSIDE OF CURB OVER PIER ON SOUTH.

SUBSTRUCTURE: PIER / ABUTMENTS - CRACKED, DELAMINATIONS AND MINOR TO MODERATE SPALLS. CHEEK WALL SPALLED ON SOUTHEAST, 1' IN WIDTH BY 4' IN HEIGHT.

PICTURES: D252-

39. (ALL JOINTS PAVED OVER), JOINT #1 POTHOLED EXPOSING ARMOR ON SOUTHWEST, TYPICAL OF JOINT #3 ON SOUTHEAST. SRL  
40. TWO GRATES RUSTED OFF ON DECK DRAIN NEAR CENTER OF BRIDGE. SRL

**Approach and Roadway Notes:**

APPROACH ASPHALT- FEW CRACKS. APPROACH W-BEAM RAIL- MODERATE DAMAGE ON NORTHEAST AND NORTHWEST.

**Unusual or experimental features:**

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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		
11/05/2021	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/11/2021	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/04/2020	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/11/2020	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/04/2019	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/07/2019	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
08/28/2018	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/19/2018	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/02/2017	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/03/2017	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/08/2016	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/11/2016	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
10/01/2015	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/18/2015	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
08/20/2014	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/21/2014	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	6	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
10/31/2013	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	6	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/15/2013	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	6	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/13/2012	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	6	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
05/22/2012	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	6	4	N	<input checked="" type="checkbox"/>	No Posting Req'd
08/31/2011	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	5	N	<input type="checkbox"/>	No Posting Req'd
03/09/2011	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	5	N	<input type="checkbox"/>	No Posting Req'd
03/07/2011	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	5	N	<input type="checkbox"/>	No Posting Req'd
04/19/2010	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	5	N	<input type="checkbox"/>	No Posting Req'd
07/09/2008	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	5	N	<input type="checkbox"/>	No Posting Req'd
08/14/2006	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	5	N	<input type="checkbox"/>	No Posting Req'd
08/06/2004	FNM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	6	N	<input type="checkbox"/>	No Posting Req'd
06/25/2002	FNM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	7	6	N	<input type="checkbox"/>	No Posting Req'd
04/01/1998		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6	7	6	N	<input type="checkbox"/>	No Posting Req'd
10/01/1996		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6	7	6	N	<input type="checkbox"/>	No Posting Req'd
07/01/1994		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6	7	6	N	<input type="checkbox"/>	No Posting Req'd
10/01/1992		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	7	6	N	<input type="checkbox"/>	No Posting Req'd

Inspection Frequency (mo.)			
NBI	Elem	FCM	U/W
8	8	N/A	N/A