

# Bridge Inspection Report

NBI Structure Number: 000801430007700

Andover 143/077

Date of Inspection: 04/05/2019

US 4

Date Report Sent: 05/22/2019

over

Owner: NHDOT

**BLACKWATER RIVER**

Bridge Inspection Group: B-Team

Bridge Maintenance Crew: 03

### Recommended Postings:

Weight: **No Posting Required**

Weight Sign OK

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: State Redlist

Deck: 4 Poor

Superstructure: 4 Poor

Substructure: 5 Fair

Culvert: N N/A (NBI)

Sufficiency Rating: 41 %

### Structure Type and Materials:

Number of Main Spans: 1

Number of Approach Spans: 0

#### Main Span Material and Design Type

Steel/Girder-Floorbeam

Bridge Rail: Meets Standards

Rail Transition: Meets Standards

Bridge Approach Rail: Meets Standards

Approach Rail Ends: Meets Standards

NH Bridge Type: TPG (Thru Plate Girder)

Deck Type: Concrete-Cast-in-Place

Wearing Surface: Bituminous

Membrane: None

Deck Protection: None

Curb Reveal: Not Measured

Plan Location: N-3

Total Bridge Length: 75.0 ft

Right Curb/Sidewalk Width: 0.3 ft

Total Bridge Width: 26.7 ft

Median: No median

Bridge Skew: 0.00 °

Year Built/Rebuilt: 1933

### Bridge Dimensions:

Length Maximum Span: 67.0 ft

Left Curb/Sidewalk Width: 0.3 ft

Width Curb to Curb: 24.0 ft

Approach Roadway Width: 24.0 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

AAADT: 2,362

Percent Trucks: 4%

Year of AADT: 2017

Future AADT: 3,495

Year of Future AADT: 2039

Federal or State Definition Bridge: Fed-Definition Bridge

National Highway System: Bridge does not carry NHS

Roadway Functional Class: Rural, Major Collector

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: 2 Intolerable - Replace

Underclearances: N Not applicable (NBI)

Approach Alignment: 8 Equal Desirable Crit

Structural Evaluation: 4 Minimum Tolerable

Channel/Channel Protection: 7 Minor Damage

Waterway Adequacy: 5 Above Tolerable

Bridge Scour Critical Status: 8 Stable Above Footing

Riprap Condition: Fair Condition

Debris Present: No Debris Present

Channel Notes:

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**Element Details (see disclaimer below)**

No.	Description	Material Notes and Condition Notes:
12	Reinforced Concrete Deck	FEW CRACKS IN ASPHALT, HEAVILY CRACKED AND SETTLED AT EAST DECKEND. HOLE AT SOUTHWEST DECK END PATCHED. CURB FASCIA SPALLED AT NORTHEAST AND SOUTHWEST. SPALLS AT SOFFIT EXTERIORS. LARGE SPALL WITH REBAR EXPOSED AT SOUTH EDGE OF SOFFIT. CRACKS, EFFLORESCENCE, SPALLS AND DETERIORATION AT SOFFIT.
L 510	Wearing Surfaces	FEW CRACKS IN ASPHALT, HEAVILY CRACKED AND SETTLED AT EAST DECKEND.
L 1080	Delamination/Spall/Patched Area	DELAMINATIONS, SPALLS AND DETERIORATION AT SOFFIT. LARGE SPALL WITH REBAR EXPOSED AT SOUTH EDGE OF SOFFIT. FEW MODERATE TO LARGE SPALLS AT SOFFIT/GIRDER JOINT. SEVERAL MINOR DELAMINATIONS AND SPALLS AT TOP FLANGES OF FLOOR BEAMS.
L 1090	Exposed Rebar	REBAR EXPOSED AND RUSTING IN FEW SPALLS.
L 1120	Efflorescence/Rust Staining	AREAS OF LIGHT TO MODERATE EFFLORESCENCE AT SOFFIT, FEW AREAS OF RUST STAINING.
L 1130	Cracking (RC and Other)	FINE TO MODERATE CRACKS AT SOFFIT.
107	Steel Open Girder/Beam	STEEL PLATES INSTALLED AT BOTTOM FLANGE OF BOTH GIRDERS. HOLES IN BOTH GIRDER WEBS AT WEST. BOTH GIRDERS HAVE SECTION LOSS AT BOTTOM OF DECK WHERE CONCRETE MEETS STEEL. SURFACE RUST IN AREAS ON INTERIOR OF BEAMS, AREAS OF LIGHT SECTION LOSS.
L 515	Steel Protective Coating	PAINT CHALKING AND PEELING IN AREAS.
L 1000	Corrosion	GIRDER # 1 - WEST END BAY 1 - TWO SMALL HOLES. BAY 2 - FIVE SMALL TO MEDIUM HOLES. BAY 3 - FIVE HOLES ONE LARGE HOLE 3 in. X 2 in. BOTTOM INTERIOR FLANGE HAS HEAVY SECTION LOSS AND HOLED AREAS, NEW STEEL PLATE INSTALLED. GIRDER # 2 - WEST END BAY 2 - THREE LARGE HOLES, MEASURING 8" X 1.5", 10" X 2" AND 4" X 1" . HOLE STARTED AT OUTSIDE OF WEB, EAST SIDE OF STIFFENER # 3. NEW STEEL PLATE INSTALLED AT BOTTOM FLANGE. BOTH GIRDERS HAVE SECTION LOSS AT BOTTOM OF DECK WHERE CONCRETE MEETS STEEL. SURFACE RUST IN AREAS ON INTERIOR OF BEAMS, AREAS OF LIGHT SECTION LOSS.
152	Steel Floor Beam	AREAS OF PAINT PEELING. SURFACE RUST, LIGHT SECTION LOSS AT WEBS, TOP AND BOTTOM FLANGES.
L 515	Steel Protective Coating	AREAS OF PAINT PEELING.
L 1000	Corrosion	SURFACE RUST, LIGHT SECTION LOSS AT WEBS, TOP AND BOTTOM FLANGES.
215	Reinforced Concrete Abutment	SEVERAL PATCHED AREAS. CRACKS AND SPALLS IN ABUTMENTS AND BRIDGE SEATS. SMALL SPALL AT WATERLINE AT WEST.
L 1080	Delamination/Spall/Patched Area	SPALLS IN ABUTMENTS AND BRIDGE SEATS PATCHED. SMALL SPALL AT WATERLINE AT WEST.
L 1130	Cracking (RC and Other)	FINE TO LIGHT CRACKS.
311	Movable Bearing	LIGHT RUST AND ROCKERS TIPPED.
L 515	Steel Protective Coating	PAINT PEELING.
L 1000	Corrosion	LIGHT RUST
L 2210	Movement	ROCKERS TIPPED.
313	Fixed Bearing	LIGHT RUST.

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└ 515	Steel Protective Coating	PAINT PEELING IN AREAS.
└ 1000	Corrosion	LIGHT RUST.
330	Metal Bridge Railing	MINOR SCRAPES AT W-BEAM.
└ 7000	Damage	MINOR SCRAPES AT W-BEAM.

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**Element States (see disclaimer below)**

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
12	Reinforced Concrete Deck	2,002	sq.ft	48%	15%	37%	0%
└ 510	Wearing Surfaces	---	---	80%	20%	0%	0%
└ 1080	Delamination/Spall/Patched Area	400	sq.ft	0%	25%	75%	0%
└ 1090	Exposed Rebar	25	sq.ft	0%	80%	20%	0%
└ 1120	Efflorescence/Rust Staining	100	sq.ft	0%	75%	25%	0%
└ 1130	Cracking (RC and Other)	200	sq.ft	25%	50%	25%	0%
107	Steel Open Girder/Beam	151	ft	35%	30%	20%	15%
└ 515	Steel Protective Coating	---	---	75%	25%	0%	0%
└ 1000	Corrosion	75	ft	0%	60%	40%	0%
152	Steel Floor Beam	348	ft	55%	45%	0%	0%
└ 515	Steel Protective Coating	---	---	80%	20%	0%	0%
└ 1000	Corrosion	150	ft	0%	100%	0%	0%
215	Reinforced Concrete Abutment	138	ft	85%	15%	0%	0%
└ 1080	Delamination/Spall/Patched Area	12	ft	0%	100%	0%	0%
└ 1130	Cracking (RC and Other)	15	ft	67%	33%	0%	0%
311	Movable Bearing	2	each	0%	100%	0%	0%
└ 515	Steel Protective Coating	---	---	80%	20%	0%	0%
└ 1000	Corrosion	1	each	0%	100%	0%	0%
└ 2210	Movement	1	each	0%	100%	0%	0%
313	Fixed Bearing	2	each	50%	50%	0%	0%
└ 515	Steel Protective Coating	---	---	85%	15%	0%	0%
└ 1000	Corrosion	2	each	50%	50%	0%	0%
330	Metal Bridge Railing	151	ft	0%	100%	0%	0%
└ 7000	Damage	50	ft	0%	100%	0%	0%

Element Disclaimer: NHDOT is transitioning from CoRe elements to AASHTO elements. The AASHTO element data shown above is the product of the automated element migration routine from the AASHTOWare BrM software. This migrated data has undergone limited field verification. Adequate quality control of this element data is not expected to be achieved until the conclusion of the 2020 inspection season. Please utilize element data with caution.

**Bridge Notes:**

ADDED TO STATE RED LIST 5/30/2014.  
 LIFT INSPECTION: 6/23/2014. 6/7/2016. 6/18/2018.  
 "WEIGHT LIMIT 20 TONS" POSTING AVERTED BY IMPLEMENTING ALTERNATING ONE-WAY TRAFFIC ON 8/26/2014.  
 "TEMPORARY" designation coded to capture the restricted roadway width (temporary traffic signals & barrels) (NBG 8/26/2014)  
 STEEL PLATES INSTALLED AT BOTTOM FLANGES OF BOTH GIRDERS. SPALLS AT EAST ABUTMENT, SOUTHWEST BACKWALL  
 PATCHED BY BOBM 10/2014.  
 BRIDGE OPEN, NO RESTRICTIONS, 11/2014.

**Inspection Notes:** 04/05/2019

MTC - inspection comments -  
 BRIDGE RAIL: MINOR SCRAPES.  
 DECK: CRACKS IN WEARING SURFACE, HEAVILY CRACKED AND SETTLED AT EAST DECKEND. MINOR SPALLS AT CURB FASCIAS.  
 LARGE SPALL WITH REBAR EXPOSED AT SOUTH EDGE OF SOFFIT. CRACKS, EFFLORESCENCE, SPALLS AND DETERIORATION AT SOFFIT.  
 SUPERSTRUCTURE: GIRDER # 1 HOLED IN WEB AT WEST END IN BAYS 1-3 AND AT BOTTOM OF DECK. GIRDER # 2 THREE HOLES AT LOWER WEB IN BAY 2. INTERIOR OF WEBS ON GIRDERS HAVE SURFACE RUST AND SECTION LOSS. HEAVY SECTION LOSS AT BOTTOM INTERIOR FLANGE AT SOUTH AND HOLED, RIVET HEAD LOSS INTERIOR BOTTOM FLANGE. STEEL PLATES INSTALLED AT BOTTOM FLANGES OF BOTH GIRDERS. INTERIOR OF WEBS ON GIRDERS HAVE SURFACE RUST AND SECTION LOSS AT BOTTOM OF DECK WHERE EDGE OF DECK MEETS STEEL. AREAS OF SURFACE RUST, ON FLOOR BEAMS.  
 SUBSTRUCTURE: EAST BACKWALL SPALLS AT TOP PATCHED. CRACKS AND SPALLS AT ABUTMENTS. SPALL AT WEST WATERLINE.

PICTURES: B609  
 80. NORTH CURB SPALLED.

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**Previous Inspection Notes:** 12/03/2018

MHC - inspection comments -

BRIDGE RAIL: MINOR SCRAPES.

DECK: CRACKS IN WEARING SURFACE, HEAVILY CRACKED AND SETTLED AT EAST DECKEND. MINOR SPALLS AT CURB FASCIAS. LARGE SPALL WITH REBAR EXPOSED AT SOUTH EDGE OF SOFFIT. CRACKS, EFFLORESCENCE, SPALLS AND DETERIORATION AT SOFFIT.

SUPERSTRUCTURE: GIRDER # 1 HOLED IN WEB AT WEST END IN BAYS 1-3 AND AT BOTTOM OF DECK. GIRDER # 2 THREE HOLES AT LOWER WEB IN BAY 2. INTERIOR OF WEBS ON GIRDERS HAVE SURFACE RUST AND SECTION LOSS. HEAVY SECTION LOSS AT BOTTOM INTERIOR FLANGE AT SOUTH AND HOLED, RIVET HEAD LOSS INTERIOR BOTTOM FLANGE. STEEL PLATES INSTALLED AT BOTTOM FLANGES OF BOTH GIRDERS. INTERIOR OF WEBS ON GIRDERS HAVE SURFACE RUST AND SECTION LOSS AT BOTTOM OF DECK WHERE EDGE OF DECK MEETS STEEL. AREAS OF SURFACE RUST, ON FLOORBEAMS.

SUBSTRUCTURE: EAST BACKWALL SPALLS AT TOP PATCHED. CRACKS AND SPALLS AT ABUTMENTS. SPALL AT WEST WATERLINE.

PICTURES: B607

64. ASPHALT HEAVILY CRACKED AND SETTLED AT EAST DECKEND.

**Approach and Roadway Notes:**

ASPHALT- HEAVILY CRACKED AT EAST APPROACH. LIGHT CRACKS AT WEST.

W-RAIL IN GOOD CONDITION.

**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		
04/05/2019	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
12/03/2018	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
06/18/2018	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/08/2017	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/14/2017	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/08/2016	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
06/07/2016	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/07/2016	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/17/2015	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/20/2015	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/21/2014	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
06/23/2014	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
05/30/2014	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	4	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
05/09/2012	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	No Posting Req'd
05/18/2010	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	5	7	N	<input type="checkbox"/>	No Posting Req'd
06/26/2008	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	5	7	N	<input type="checkbox"/>	No Posting Req'd
07/12/2006	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	6	7	N	<input type="checkbox"/>	No Posting Req'd
06/28/2004	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	No Posting Req'd
04/09/2002	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	7	N	<input type="checkbox"/>	No Posting Req'd
06/27/2000	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	7	N	<input type="checkbox"/>	No Posting Req'd
09/17/1998	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	6	7	N	<input type="checkbox"/>	No Posting Req'd
05/01/1996		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	6	7	N	<input type="checkbox"/>	No Posting Req'd
08/01/1994		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	6	7	N	<input type="checkbox"/>	No Posting Req'd
07/01/1992		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	6	7	N	<input type="checkbox"/>	No Posting Req'd

Inspection Frequency (mo.)			
NBI	Elem	FCM	U/W
8	8	24	N/A