

# Bridge Inspection Report

NBI Structure Number: 006502010002500

Dover 201/025

**Date of Inspection:** 07/26/2023  
**Date Report Sent:** 06/01/2023  
Owner: Tpk Bureau, NHDOT  
Bridge Inspection Group: C-Team  
Bridge Maintenance Crew: 11  
**Bridge also in:** Newington, New Hampshire

**US 4,NH 16,TPK NB**  
over

**LITTLE BAY,RD**  
**Eastern Turnpike Bridge**

**Interstate Bridge Number: 002**

### Recommended Postings:

Weight: **No Posting Required**

Weight Sign OK

Width: **Not Required**

Width Sign OK

Primary Height Sign Recommendation: *None*  
Optional Centerline Height Sign Rec: *None*

**Clearances:** Over: 99.99  
(Feet) Under: 23.17  
Route: 99.99

Height Sign OK

### Condition:

Red List Status: Not on the Redlist

Deck: 8 Very Good

Superstructure: 8 Very Good

Substructure: 7 Good

Culvert: N N/A (NBI)

Sufficiency Rating: 85 %

Bridge Rail: Meets Standards  
Rail Transition: Meets Standards  
Bridge Approach Rail: Meets Standards  
Approach Rail Ends: Meets Standards

### Structure Type and Materials:

Number of Main Spans: 9

Number of Approach Spans: 0

#### **Main Span Material and Design Type**

Steel Continuous/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: Unknown

Curb Reveal: 7 in

Plan Location: 3-10-2-1, 119-4-1

Total Bridge Length: 1,598.0ft

Right Curb/Sidewalk Width: 0.5ft

Total Bridge Width: 75.0ft

Median: No median

Bridge Skew: 0.00°

Year Built/Rebuilt: 1966/2018

### Bridge Dimensions:

Length Maximum Span: 275.0ft

Left Curb/Sidewalk Width: 0.0ft

Width Curb to Curb: 71.5ft

Approach Roadway Width: 72.0ft  
(W/Shoulders)

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## Bridge Service:

Type of Service on Bridge: Highway

Type of Service Under: Highway and Waterway

Lanes on Bridge: 4

Lanes Under: 2

AADT: 33,527

Percent Trucks: 8%

Year of AADT: 2022

Future AADT: 49,619

Year of Future AADT: 2042

Federal or State Definition Bridge: Fed-Definition Bridge

National Highway System: NHS Roadway on Bridge

Roadway Functional Class: Urban, Principal Arterial - Other Freeways or Expressways

New Hampshire Bridge Tier: 1

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

Traffic Direction: 1-way traffic

## National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 7 Above Min Criteria

Underclearances: 9 Above Desirable

Approach Alignment: 8 Equal Desirable Crit

Structural Evaluation: 7 Above Min Criteria

Channel/Channel Protection: 7 Minor Damage

Waterway Adequacy: 9 Above Desirable

Bridge Scour Critical Status: 8 Stable Above Footing

Riprap Condition: Good Condition

Debris Present: No Debris Present

Channel Notes: TIDAL: COBBLES, BOULDERS, AND BEDROCK BOTTOM. HEAVY MARINE GROWTH. MINOR SCOUR AT THE EAST AND WEST ENDS OF THE PIERS

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## Element Details

No.	Description	Material Notes and Condition Notes:
12	Reinforced Concrete Deck	8.5" THICK DECK W/3.5" PARTIAL DEPTH PRESTRESSED PANELS, 5" C.I.P. OVER POUR, EPOXY BARS.
L 510	Wearing Surfaces	ASPHALT IS IN GOOD CONDITION. CURB HAS FINE CRACKS, SOME SEALED. SOFFIT IS IN EXCELLENT CONDITION. 2.5" PAVEMENT WITH WELDED BY TORCH MEMBRANE.
L 1130	Cracking (RC and Other)	
107	Steel Open Girder/Beam	CONTINUOUS HAUNCHED PLATE GIRDERS, 4 REUSED AT EAST, 5 NEW AT WEST.
L 517	Weathering Steel Protective Coating	PAINIT IS PEELING IN AREAS AND MINOR RUSTING ON BEAMS 6, 7 AND 8. G1-G5: AASHTO M270 GR. 50W, G6-G9: ASTM A588.
L 1000	Corrosion	
205	Reinforced Concrete Column	TAPERED COLUMNS FOR HAMMERHEAD PIER CAPS.
L 6000	Scour	NEW CONCRETE PATCHES ON PIER COLUMNS. 5' SCOUR ONEAST NOSE OF BENT 7 PIER.
210	Reinforced Concrete Pier Wall	MASONRY FACED R/C PIER WALLS BEARING ON BEDROCK.  PIERS ABOVE THE FOOTINGS ARE GRANITE VENEER WITH LEADED JOINTS WHICH ARE IN GOOD CONDITION. THE CONCRETE FOOTINGS HAVE ISOLATED MINOR VOIDS ALONG THE CONSTRUCTION JOINTS. A MINOR BAND OF EROSION EXISTS AT THE BASE OF EACH PIER AND AT THE BASE OF EACH FOOTING. STEEL SHEET PILE COFFERDAM IS NON STRUCTURAL BUT CONTAINS SOME HEAVY RUSTING. SEVERAL AREAS OF HOLES ABOVE THE SEAL LINE.
215	Reinforced Concrete Abutment	R/C/ ABUTMENTS ON STEEL H-PILES.
L 1130	Cracking (RC and Other)	FINE TO LIGHT VERTICAL CRACKS.
234	Reinforced Concrete Pier Cap	R/C HAMMERHEAD PIER CAPS, EACH SUPPORTING 4 GIRDERS.  GOOD CONDITION.
303	Assembly Joint With Seal	MODULAR JOINT WITH STRIP SEALS AT ABUTMENTS.
L 2350	Debris Impaction	DEBRIS FILLED IN AREAS, MOSTLY AT EAST SIDES OF JOINTS.
310	Elastomeric Bearing	STEEL-REINFORCED ELASTOMERIC BEARINGS AT PIER 4 AND 5.
314	Pot Bearing	UNI- AND MULTI-DIRECTIONAL HLMR BEARINGS AT ALL SUPPORTS EXCEPT PIER 4&5.
L 515	Steel Protective Coating	
330	Metal Bridge Railing	GALV. T2 RAIL WITH CHAIN LINK FENCE  GOOD CONDITION.
331	Reinforced Concrete Bridge Railing	SINGLE SLOPE C.I.P. CONCRETE BARRIER AT WEST (MEDIAN SIDE) AND AT EAST WITH CHAIN LINK FENCE FOR SIDEWALK ADDITION.  GOOD CONDITION, FEW FINE CRACKS.
L 1130	Cracking (RC and Other)	

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## Element States

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
12	Reinforced Concrete Deck	119,300	sq.ft	100%	0%	0%	0%
└ 510	Wearing Surfaces	---	---	100%	0%	0%	0%
└ 1130	Cracking (RC and Other)	600	sq.ft	67%	33%	0%	0%
107	Steel Open Girder/Beam	14,310	ft	99%	1%	0%	0%
└ 517	Weathering Steel Protective Coating	---	---	100%	0%	0%	0%
└ 1000	Corrosion	100	ft	0%	100%	0%	0%
205	Reinforced Concrete Column	32	each	97%	3%	0%	0%
└ 6000	Scour	5	each	80%	20%	0%	0%
210	Reinforced Concrete Pier Wall	416	ft	100%	0%	0%	0%
215	Reinforced Concrete Abutment	240	ft	98%	2%	0%	0%
└ 1130	Cracking (RC and Other)	4	ft	0%	100%	0%	0%
234	Reinforced Concrete Pier Cap	510	ft	100%	0%	0%	0%
303	Assembly Joint With Seal	151	ft	87%	13%	0%	0%
└ 2350	Debris Impaction	20	ft	0%	100%	0%	0%
310	Elastomeric Bearing	18	each	100%	0%	0%	0%
314	Pot Bearing	72	each	100%	0%	0%	0%
└ 515	Steel Protective Coating	---	---	100%	0%	0%	0%
330	Metal Bridge Railing	1,598	ft	100%	0%	0%	0%
331	Reinforced Concrete Bridge Railing	3,196	ft	100%	0%	0%	0%
└ 1130	Cracking (RC and Other)	400	ft	100%	0%	0%	0%

### Bridge Notes:

Eastern Turnpike Bridge; Chapter 223, Session of 1963.  
UNDERWATER INSPECTION 11/01/2011.  
CWIP 4/22/2015.

### Inspection Notes: 07/26/2023

KLM- 7/26/23 Dive inspection comments-  
Footing 5.5' below water with 36" horizontal exposure typical. Sheet pile exposed typically 20" below footing. Concrete typical eroded up to 30" below the steel sheet pile. Up to 5% mortar loss in isolated areas at waterline and below water. Erosion between interface of footing and wall approx 2"H x 1.5"D. Poorly consolidated tremie concrete present between the steel sheet pile and the concrete pier typical. 5' scour on east nose of bent 7 pier. Maximum vertical exposure of steel sheet pile was approximately 15'. Maximum vertical exposure of concrete pier was approximately 16'.

KJT- inspection comments - 4/12/23

DECK: ASPHALT - GOOD CONDITION. CURBS - FINE CRACKS, SOME SEALED. JOINTS - PARTIALLY DEBRIS FILLED. RAIL - GOOD CONDITION, CONCRETE HAS FINE CRACKS. SOFFIT - EXCELLENT CONDITION.  
SUPERSTRUCTURE: WEATHERING STEEL COATING - YELLOW ORANGE IN COLOR AND TIGHTLY ADHERED. PAINT - PEELING IN AREAS. GIRDERS - MINOR RUSTING IN AREAS OF PEELING PAINT ON BEAMS #6, #7 AND #8. BEARINGS - GOOD CONDITION.  
SUBSTRUCTURE: ABUTMENTS HAVE FINE AND LIGHT VERTICAL CRACKS. PIERS - OLD GRANITE BASES WITH NEW STEMS AND PIER CAPS, GOOD CONDITION. SEE UNDERWATER INSPECTION REPORT.

### Previous Inspection Notes: 04/12/2023

KJT- inspection comments -  
DECK: ASPHALT - GOOD CONDITION. CURBS - FINE CRACKS, SOME SEALED. JOINTS - PARTIALLY DEBRIS FILLED. RAIL - GOOD CONDITION, CONCRETE HAS FINE CRACKS. SOFFIT - EXCELLENT CONDITION.  
SUPERSTRUCTURE: WEATHERING STEEL COATING - YELLOW ORANGE IN COLOR AND TIGHTLY ADHERED. PAINT - PEELING IN AREAS. GIRDERS - MINOR RUSTING IN AREAS OF PEELING PAINT ON BEAMS #6, #7 AND #8. BEARINGS - GOOD CONDITION.  
SUBSTRUCTURE: ABUTMENTS HAVE FINE AND LIGHT VERTICAL CRACKS. PIERS - OLD GRANITE BASES WITH NEW STEMS AND PIER CAPS, GOOD CONDITION. SEE UNDERWATER INSPECTION REPORT.

### Approach and Roadway Notes:

ASPHALT - (8) GOOD CONDITION.  
W- BEAM - GOOD CONDITION.  
CONCRETE BARRIER - GOOD CONDITION.

### 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		
07/26/2023	KLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	No Posting Req'd
04/12/2023	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	8	N	<input type="checkbox"/>	No Posting Req'd
04/29/2021	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	8	N	<input type="checkbox"/>	No Posting Req'd
04/24/2019	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	9	8	N	<input type="checkbox"/>	No Posting Req'd
07/31/2018	NBG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9	9	8	N	<input type="checkbox"/>	No Posting Req'd
03/30/2018	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	9	8	N	<input type="checkbox"/>	No Posting Req'd
04/26/2017	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	7	N	<input type="checkbox"/>	No Posting Req'd
04/22/2015	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	7	N	<input type="checkbox"/>	No Posting Req'd
04/15/2013	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	7	N	<input type="checkbox"/>	No Posting Req'd
12/19/2011	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	7	N	<input type="checkbox"/>	No Posting Req'd
11/01/2011	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5	7	7	N	<input type="checkbox"/>	No Posting Req'd
10/19/2010	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	7	N	<input type="checkbox"/>	No Posting Req'd
09/10/2008	DMB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	No Posting Req'd
07/02/2007	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	No Posting Req'd
11/17/2004	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	No Posting Req'd
12/02/1999	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	No Posting Req'd
05/01/1997		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	No Posting Req'd
06/01/1995		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	No Posting Req'd
04/01/1994		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	7	7	N	<input type="checkbox"/>	No Posting Req'd
09/01/1991		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	8	7	N	<input type="checkbox"/>	No Posting Req'd

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