

Bridge Inspection Report

NBI Structure Number: 007400800011300

Effingham 080/113

Date of Inspection: 08/16/2019
Date Report Sent: 01/17/2020
Owner: Municipality
Bridge Inspection Group: C-Team
Bridge Maintenance Crew: OTHER

ELM STREET
over
PINE RIVER

Recommended Postings:

Weight: **E-2**

SIGNS IN PLACE 8/16/2019.

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: 0.00
Route: 99.99

Height Sign OK

Condition:

Red List Status: Not on the Redlist
Deck: 7 Good
Superstructure: 6 Satisfactory
Substructure: 7 Good
Culvert: N N/A (NBI)
Sufficiency Rating: 80 %

Structure Type and Materials:

Number of Main Spans: 1
Number of Approach Spans: 0
Main Span Material and Design Type
Steel/Stringer/Girder

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

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: 4 in
Plan Location: 4-13-2-4
Total Bridge Length: 62.0 ft
Right Curb/Sidewalk Width: 0.0 ft
Total Bridge Width: 27.0 ft
Median: No median
Bridge Skew: 30.00°
Year Built/Rebuilt: 1983

Bridge Dimensions:

Length Maximum Span: 58.0 ft
Left Curb/Sidewalk Width: 0.0 ft
Width Curb to Curb: 24.1 ft
Approach Roadway Width: 24.0 ft
(W/Shoulders)

FEB - 4 REC'D

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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: 1,363

Percent Trucks: 4%

Year of AADT: 2017

Future AADT: 2,017

Year of Future AADT: 2040

Federal or State Definition Bridge: Fed-Definition Bridge

National Highway System: Bridge does not carry NHS

Roadway Functional Class: Rural, Local

New Hampshire Bridge Tier: 5

Eligibility for the National Register of Historic Places: Not eligible for NRHP

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: 6 Equal Min Criteria

Channel/Channel Protection: 7 Minor Damage

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 (see disclaimer below)

No.	Description	Material Notes and Condition Notes:
12	Reinforced Concrete Deck	ASPHALT IS HEAVILY CRACKED, MOST CRACKS ARE SEALED. SMALL PATCHED AREA AT NORTH. CURBS HAVE FINE CRACKS, SMALL SPALL AT WEST EXTERIOR. SOFFIT - FINE CRACKS AND MINOR LEAKING WITH EFFLORESCENCE. FEW MINOR RUST STAINS AT EAST EXTERIOR.
L 510	Wearing Surfaces	
L 1080	Delamination/Spall/Patched Area	
L 1120	Efflorescence/Rust Staining	
L 1130	Cracking (RC and Other)	
107	Steel Open Girder/Beam	4- I- BEAMS WEATHERING STEEL IS BROWN IN COLOR WITH A GRANULAR TEXTURE. MODERATE TO HEAVY RUST AND SCALE TO GIRDER ENDS AT NORTH UNDER LEAKAGE.
L 517	Weathering Steel Protective Coating	
L 1000	Corrosion	
215	Reinforced Concrete Abutment	BACKWALL IS CRACKED, MINOR SPALLS AND LEAKING WITH EFFLORESCENCE. LARGE DELAMINATION AT NORTHEAST CORNER.
L 1080	Delamination/Spall/Patched Area	
L 1120	Efflorescence/Rust Staining	
L 1130	Cracking (RC and Other)	
302	Compression Joint Seal	DAMAGED AND LEAKING; DEBRIS FILLED.
L 2310	Leakage	
L 2350	Debris Impaction	
311	Movable Bearing	HEAVILY RUSTED WITH SCALE UNDER LEAKAGE.
L 515	Steel Protective Coating	
L 1000	Corrosion	
313	Fixed Bearing	RUSTED UNDER LEAKAGE.
L 515	Steel Protective Coating	
330	Metal Bridge Railing	** 2-Bar Aluminum ** MINOR DAMAGE, SCRAPED AND GOUGED.

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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	1,679	sq.ft	93%	6%	1%	0%
L 510	Wearing Surfaces	---	---	0%	99%	1%	0%
L 1080	Delamination/Spall/Patched Area	1	sq.ft	0%	100%	0%	0%
L 1120	Efflorescence/Rust Staining	15	sq.ft	0%	33%	67%	0%
L 1130	Cracking (RC and Other)	100	sq.ft	0%	100%	0%	0%
107	Steel Open Girder/Beam	249	ft	0%	94%	6%	0%
L 517	Weathering Steel Protective Coating	---	---	0%	85%	0%	15%
L 1000	Corrosion	249	ft	0%	94%	6%	0%
215	Reinforced Concrete Abutment	135	ft	78%	22%	0%	0%
L 1080	Delamination/Spall/Patched Area	12	ft	0%	100%	0%	0%
L 1120	Efflorescence/Rust Staining	3	ft	0%	100%	0%	0%
L 1130	Cracking (RC and Other)	15	ft	0%	100%	0%	0%
302	Compression Joint Seal	36	ft	0%	72%	28%	0%
L 2310	Leakage	10	ft	0%	0%	100%	0%
L 2350	Debris Impaction	15	ft	0%	100%	0%	0%
311	Movable Bearing	4	each	0%	100%	0%	0%
L 515	Steel Protective Coating	---	---	0%	100%	0%	0%
L 1000	Corrosion	4	each	0%	100%	0%	0%
313	Fixed Bearing	4	each	100%	0%	0%	0%
L 515	Steel Protective Coating	---	---	0%	100%	0%	0%
330	Metal Bridge Railing	223	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:

Inspection Notes: 08/16/2019

MAS - inspection comments -
 DECK: ASPHALT - HEAVILY CRACKED, MOST CRACKS ARE SEALED. SMALL PATCHED AREA AT NORTH. CURBS - FINE CRACKS; SMALL SPALL AT WEST EXTERIOR. JOINT - DAMAGED AND LEAKING, DEBRIS FILLED. RAIL - SCRAPED AND GOUGED. SOFFIT - FINE CRACKS AND MINOR LEAKING WITH EFFLORESCENCE. FEW MINOR RUST STAINS AT EAST EXTERIOR.
 SUPERSTRUCTURE: WEATHERING STEEL COATING - BROWN IN COLOR WITH A GRANULAR TEXTURE. GIRDERS - MODERATE TO HEAVY RUST AND SCALE UNDER LEAKAGE. BEARINGS - RUSTED UNDER LEAKAGE.
 SUBSTRUCTURE: FINE CRACKS AND MINOR LEAKING WITH EFFLORESCENCE, MINOR SPALLS AT BACKWALLS. LARGE DELAMINATION AT NORTHEAST CORNER.

PICTURE: C599-
 54. RUSTING WITH SCALE AT BEAM #4, LARGE DELAMINATION AT NORTHEAST ABUTMENT.

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Previous Inspection Notes: 08/28/2017

MAS - inspection comments -

DECK: ASPHALT - HEAVILY CRACKED, CRACKS ARE SEALED. CURBS - FINE CRACKS. JOINT - DAMAGED AND LEAKING, DEBRIS FILLED. RAIL - SCRAPED AND GOUGED. SOFFIT - FINE CRACKS AND MINOR LEAKING WITH EFFLORESCENCE. FEW MINOR RUST STAINS AT EAST EXTERIOR.

SUPERSTRUCTURE: WEATHERING STEEL COATING - BROWN IN COLOR WITH A GRANULAR TEXTURE. GIRDERS - MODERATE TO HEAVY RUST AND SCALE UNDER LEAKAGE. BEARINGS - RUSTED UNDER LEAKAGE.

SUBSTRUCTURE: FINE CRACKS AND MINOR LEAKING WITH EFFLORESCENCE, MINOR SPALLS AT BACKWALLS. LARGE DELAMINATION AT NORTHEAST CORNER.

PICTURES: C574-

20. ASPHALT IS CRACK SEALED.

21. LARGE DELAMINATION AT NORTHEAST ABUTMENT.

Approach and Roadway Notes:

ASPHALT - (6) CRACKS, SOME SEALED, DEPRESSED AND PATCHED AREAS.

ALUMINUM RAIL - SCRAPED AND GOUGED.

W- BEAM RAIL - DAMAGED AND TORN. POSTS DECAYED.

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		
08/16/2019	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	6	7	N	<input type="checkbox"/>	E-2
08/28/2017	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	6	7	N	<input type="checkbox"/>	E-2
08/13/2015	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	6	7	N	<input type="checkbox"/>	E-2
08/16/2013	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	7	7	N	<input type="checkbox"/>	E-2
10/05/2012	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
10/26/2010	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
08/28/2008	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
09/27/2006	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
08/26/2004	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
10/04/2002	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
10/20/2000	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
10/02/1998	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
08/01/1996		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	7	N	<input type="checkbox"/>	E-2
09/01/1994		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	8	N	<input type="checkbox"/>	E-2
09/01/1992		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	8	8	N	<input type="checkbox"/>	E-2

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

N.H. D.O.T.

TOWN Effingham

BRIDGE CAPACITY SUMMARY

BRIDGE NUMBER 080/113

DESIGN LOAD H5-20

DESIGN METHOD ASD - 1977

RATED BY MS

DATE 12-88

RATING METHOD By Inspection from Plans

4-13-2-4

CHECKED BY

DATE

RATED MEMBER	EFFECTIVE SPAN LENGTH	REQUIRED CAPACITY			AVAILABLE CAPACITY							
		CURRENT LEGAL LOADS	CERTIFIED VEHICLES		MULTIPLE LANES LOADED		SINGLE LANE LOADED		POSTING	INVENTORY	OPERATING	POSTING
			SINGLE UNIT	MULTIPLE UNIT	INVENTORY	OPERATING	INVENTORY	OPERATING				
Deck	1'-0"				HS 20	HS 28.0			HS 20	HS 28		
Stringers	58'-0"				HS 20	HS 27.7			HS 25.4	HS 35.5		

RECOMMENDED POSTING: Post "E2" until evaluated for certified loads.

64. (Op.) 250

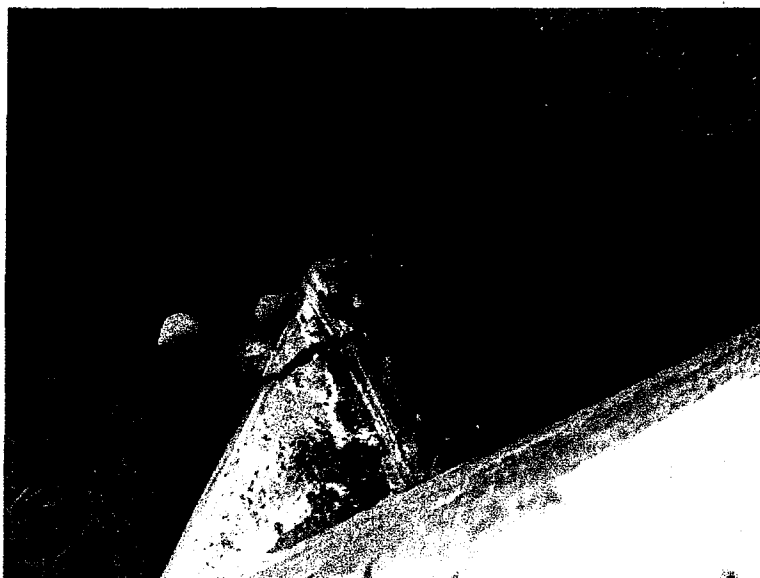
66. (Inv.) 236

EFFINGHAM 080/113
ELM STREET over PINE RIVER

Owner: Municipality
Inspection Team: C

Friday, August 16, 2019

RUSTING WITH SCALE AT
BEAM #4, LARGE
DELAMINATION AT
NORTHEAST ABUTMENT.



C599 54