



THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



February 3, 2017

Victoria F. Sheehan
Commissioner

William Cass, P.E.
Assistant Commissioner

Town of Effingham

FEB 08 2017

Received

Claudia Lamphier, Chair
Effingham Selectboard
68 School Street
Effingham, NH 03882

RE: BIENNIAL INSPECTION OF MUNICIPALLY OWNED BRIDGES
TOWN OF EFFINGHAM

Dear Ms. Lamphier:

Enclosed are copies of biennial bridge inspection reports for three municipally owned bridges in the Town of Effingham. Included are a bridge location map and bridge-listing sheet. Approved bridge railing options and details are available at:

<http://www.nh.gov/dot/org/projectdevelopment/bridgedesign/detailsheets/index.htm>

Please note that Red List bridges are in bold type.

<u>Bridge #</u>	<u>Location</u>	<u>Recommended Posting</u>
097/088	Drake Road over Wilkinson Brook	"Weight Limit 6 Tons" and "One Lane Bridge"
165/112	Snow Road over South River	"E2" (until evaluated for certified loads)
166/082	Granite Road over South River	"Bridge Closed" and Barricaded

Please note if there are any changes in the recommended weight posting or lack of postings for your bridges. Even though a bridge may be recommended for a weight posting or closure by the State, the decision to properly post or close the structure is the responsibility of the municipal officials. It is in the best interest of the municipality to post or sign your bridges in accordance with these recommendations. A failure to warn motorists of potential bridge hazards could result in tort liability claims.

Bridge Inspection Report

Effingham 165/112

NBI Element FC U/W Special

Date of Inspection: 12/01/2016

SNOW ROAD

Date Report Sent: 1/25/2017

Over

Picture taken during inspection

SOUTH RIVER

Owner: Municipality

Bridge deficiency sent 8/26/2015 due to ongoing corrosion-related deterioration.

Recommended Postings:

Weight: E2

Weight Sign OK

SIGNED "E-2" 12/1/16.

Width: Not Required

Width Sign OK

Primary Height Sign Recommendation: None

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

Height Signs OK

Optional Centerline Height Sign Rec: None

Condition: Municipal Redlist

Structure Type and Materials:

Deck: N N/A (NBI)

Number of Spans Main Unit: 4

Superstructure: N N/A (NBI)

Number of Approach Spans: 0

Substructure: N N/A (NBI)

Main Span Material and Design Type

Culvert: 4 Poor

Steel Culvert

Sufficiency Rating: 70%

NBI Status: Structurally Deficient

Bridge Rail: Substandard

NH Bridge Type: Metal Pipe

Rail Transition: Substandard

Deck Type: No Deck (N/A - NBI)

Bridge Approach Rail: Substandard

Wearing Surface: No Deck (N/A - NBI)

Approach Rail Ends: Substandard

Membrane: No Deck (N/A - NBI)

Deck Protection: No Deck (N/A - NBI)

Pavement thickness: 5.0 in

Curb Reveal: 0.0 in

Plan Location: Unknown

Bridge Dimensions:

Length Maximum Span: 6.0 ft

Total Bridge Length: 32.0 ft

Left Curb/Sidewalk Width: 0.0 ft

Right Curb/Sidewalk Width: 0.0 ft

Width Curb to Curb: 0.0 ft

Total Bridge Width: 0.0 ft

Approach Roadway Width (W/ Shoulders): 20.0 ft

Median: No median

Bridge Skew: 0.00 °

Bridge Service:

Type of Service on Bridge: Highway

Year Built: 1972

Type of Service under: Waterway

Year Rebuilt: Not Rebuilt

Lanes on bridge: 2

Detour Length: 2.0 mi

Lanes Under: NA

AADT: 80

Percent Trucks: 0%

Year of AADT: 2015

Future AADT: 118

Year of Future AADT: 2035

Bridge Inspection Report

Effingham 165/112

NBI Element FC U/W Special

Federal or State Definition Bridge: Fed. Definition Bridge

Roadway Functional Class: Rural Local

New Hampshire Highway System and Class: Municipal Highway

Eligibility for the National Register of Historic Places: Possibly eligible

Traffic Direction: Two-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: Not Applicable (NBI)

Underclearances: Not Applicable (NBI)

Approach Alignment: Equal Desirable Criteria

Structural Evaluation: Minimum Tolerable

Channel/Channel Protection: Protection Undermined

Waterway Adequacy: Above Minimum Criteria

Bridge Scour Critical Status: Stable for extreme flood

Riprap Condition: Fair Condition

Debris Present: No Debris Present

SCOUR HOLE AT OUTLET.

Date of Underwater Inspection: Not Applicable

AASHTO CoRe Element Condition State Data:

No.	Description	Env.	Material Notes and Condition Notes
240	Culvert (includes Steel, Aluminum and Galvanized)	Moderate	4 @ 6'-2" CLEAR SPAN ROUND PIPE. 2-2/3" X 1/2" X 8/64" CORRUGATIONS. GALVANIZED STEEL WITH BITUMINOUS COATING. HEAVILY RUSTED AND PITTED WITH SCATTERED PERFORATIONS, TYPICAL OF ALL 4 MPS. FEW SMALL TEARS AT INLET ENDS. FEW DENTS AND LIGHT DISTORTION. HEADWALL STONE DROPPED AT SOUTH. STONES MISSING AND LOOSE / UNSTABLE AT NORTH. EROSION BEHIND WING AT NORTHEAST. BEAVER DEBRIS IN ALL PIPES AT INLET ENDS.
334	Coated Metal Bridge Railing	Moderate	FLOW DAMAGE MINOR RUSTING BROKEN WELDS NORTHWEST TIPPED DOWN
363	Section Loss Condition Warning Flag	Moderate	Element record added 2015-08-24. MPS ARE THIN AND PITTED WITH SCATTERED PERFORATIONS, 30% SECTION LOSS.

No.	Description	Env.	Quantity	Units	State 1	State 2	State 3	State 4	State 5
240	Culvert (includes Steel, Aluminum and Galvanized)	Moderate	98	(LF)	0 %	0 %	100 %	0 %	
334	Coated Metal Bridge Railing	Moderate	64	(LF)	80 %	0 %	10 %	10 %	0 %
363	Section Loss Condition Warning Flag	Moderate	1	(EA)	0 %	100 %	0 %	0 %	

Bridge Notes:

ADDED TO THE MUNICIPAL RED LIST 8/24/2015.
HIGH WATER 12/1/16.

Bridge Inspection Report

Effingham 165/112

NBI Element FC U/W Special

Inspection Notes: 12/01/2016

KJT - inspection comments -

CULVERT: ASPHALT - HEAVILY CRACKED, DEPRESSED AND PATCHED. METAL PIPE - HEAVY RUSTING AND PITTING WITH SCATTERED PERFORATIONS. THIN IN AREAS AND FEW SMALL TORN AREAS. FEW DENTS AND LIGHT DISTORTION. HEADWALL STONES ARE MISSING WITH VOIDS AND APPEAR UNSTABLE; EROSION BEHIND WING AT NORTHEAST. BEAVER DAM DEBRIS IN ALL BARRELS. RAIL - PLOW DAMAGE, MINOR RUSTING.

PICTURES: C562.

85. ASPHALT PATCHES.

Approach and Roadway Notes: ASPHALT- (5) CRACKS, SETTLED, POTHOLED AND PATCHED.
W-BEAM RAIL - HEAVILY DAMAGED AT NORTHEAST AND SOUTHWEST.
EMBANKMENT WASHED WITH EROSION BEHIND WING AT NORTHEAST.

Inspection History:

Inspection Date	Inspector	Major Element Condition Ratings
12/01/2016	KJT	Deck: N Super: N Substr: N Culvert: 4
08/24/2015	MAS	Deck: N Super: N Substr: N Culvert: 4
08/16/2013	MAS	Deck: N Super: N Substr: N Culvert: 5
10/12/2012	KJT	Deck: N Super: N Substr: N Culvert: 5
10/22/2010	KJT	Deck: N Super: N Substr: N Culvert: 5
08/27/2008	KJT	Deck: N Super: N Substr: N Culvert: 5
09/27/2006	RLM	Deck: N Super: N Substr: N Culvert: 5
08/25/2004	DPC	Deck: N Super: N Substr: N Culvert: 5
10/03/2002	DPC	Deck: N Super: N Substr: N Culvert: 5
10/19/2000	DPC	Deck: N Super: N Substr: N Culvert: 5
10/02/1998	DPC	Deck: N Super: N Substr: N Culvert: 6
08/01/1996	Not Available	Deck: N Super: N Substr: N Culvert: 6
09/01/1994	Not Available	Deck: N Super: N Substr: N Culvert: 6
09/01/1992	Not Available	Deck: N Super: N Substr: N Culvert: N

Copy Distribution:

- (2) Bureau of Municipal Hghways
- (3) Bureau of Municipal Hghways
- Bureau of Tumpikes

- Border State
- Bureau of Rail and Transit
- Army Corps Of Engineers
- Railroad

- Dept. of Res. and Econ. Dev.
- Dept. of Environmental Services
- USDA Forest Service
- Bureau of Traffic

BRIDGE CAPACITY SUMMARY

TOWN: EFFINGHAM
 BRIDGE NUMBER: 165/112
 RATED BY: NBG DATE: 8/26/2015
 CHECK BY: JH DATE: 8/26/15
 OVER: SOUTH RIVER

DESIGN LOAD: UNKNOWN DESIGN METHOD: UNKNOWN
 RATING METHOD: LOAD FACTOR PLAN FILE: UNKNOWN
 ROUTE: SNOW ROAD

RATED MEMBER	LONGITUD. EFFECTIVE SPAN LENGTH	REQUIRED CAPACITY (HS Tons)		AVAILABLE CAPACITY (HS Tons)			
		CURRENT LEGAL LOADS	CERTIFIED VEHICLES	MULTIPLE LANES LOADED		SINGLE LANES LOADED	
		SINGLE UNIT	MULTIPLE UNIT	INVENTORY	POSTING	INVENTORY	POSTING
Corrugated Metal Pipes (1'-6" of fill, 30% losses)	3'-0"	HS 14.0	HS 15.4	HS 23.4	HS 39.1	HS 23.4	HS 39.1
				Rating Method (Op.) 63. LF (Inv.) 65. LF		English Tons 64. (Op.) 70.4 66. (Inv.) 42.2	
						Metric Tons 63.8 38.2	



RECOMMENDED POSTING: E-2

EFFINGHAM 165/112
SNOW ROAD over SOUTH RIVER

Thursday, December 01, 2016

ASPHALT PATCHES. (RL)



C562 85