

# Highway Bridge Inspection Report

**VARNEYS  
VINE STREET  
over  
GREAT WORKS RIVER**



**Inspection Date:** 10/29/2015

**Inspected By:** Steve Harris

**Inspection Type(s):** Routine

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**Inspector:** Steve Harris

**Inspection Date:** 10/29/2015

**Structure Number:** 3312

**Facility Carried:** VINE STREET

## Highway Bridge Inspection Report

### Executive Summary

**Inspector:** Steve Harris

**Inspection Date:** 10/29/2015

**Structure Number:** 3312

**Facility Carried:** VINE STREET

## Highway Bridge Inspection Report

### Location Map

# National Bridge Inventory

Status: 1 - SD

Bridge Name: VARNEYS

Sufficiency Rating: 39.0

## Inspections

(90) INSPECTION DATE	& (91) DESIGNATED INSPECTION FREQUENCY	24	10/29/2015
(92) CRITICAL FEATURE INSPECTION	& (93) CFI DATE		
(92A) FRACTURE CRITICAL DETAIL		N	
(92B) UNDERWATER INSPECTION		N	
(92C) OTHER SPECIAL INSPECTION		N	24

## Identification

(1) STATE CODE	231 - Maine
(8) STRUCTURE NUMBER	3312
(5) INVENTORY ROUTE	
(5A) RECORD TYPE	1: Route carried "on" the structure
(5B) ROUTE SIGNING PREFIX	5 - CITY STREET
(5C) DESIGNATED LEVEL OF SERVICE	0 - None
(5) INVENTORY ROUTE	0
(5) INVENTORY ROUTE	0 - NOT APPLICABLE
(2) HIGHWAY AGENCY DISTRICT	01 - Southern
(3) COUNTY CODE	031 York
(4) PLACE CODE	70030
(6) FEATURES INTERSECTED	GREAT WORKS RIVER
(7) FACILITY CARRIED	VINE STREET
(9) LOCATION	0.7 MI S JCT 236
(11) MILEPOINT	0
(12) BASE HIGHWAY NETWORK	Inventory Route is not on the Base Network
(13) LRS INVENTORY ROUTE, SUBROUTE	
(13A) LRS INVENTORY ROUTE	0003100629
(13B) SUBROUTE NUMBER	00
(16) LATITUDE	43.218661111 1111
(17) LONGITUDE	70.810808333 3333
(98A) BORDER BRIDGE CODE	
(98B) PERCENT RESPONSIBILITY	0
(99) BORDER BRIDGE STRUCT NO.	n/a

## Structure Type and Material

(43) STRUCTURE TYPE, MAIN	
(43A) KIND OF MATERIAL/DESIGN	3 - Steel
(43B) TYPE OF DESIGN/CONSTR	02 - Stringer/Multi-beam or Girder
(44) STRUCTURE TYPE, APPROACH SPANS	
(44A) KIND OF MATERIAL/DESIGN	1 - Concrete
(44B) TYPE OF DESIGN/CONSTRUCTION	04 - Tee Beam
(45) NUMBER OF SPANS IN MAIN UNIT	6
(46) NUMBER OF APPROACH SPANS	3
(107) DECK STRUCTURE TYPE	1 - Concrete Cast-in-Place
(108) WEARING SURFACE/PROTECTIVE SYSTEMS	
(108A) WEARING SURFACE	2 - Integral Concrete (separate non-modified layer of concrete added to
(108B) DECK MEMBRANE	0 - None
(108C) DECK PROTECTION	0 - None

## Age of Service

(27) YEAR BUILT	1955
(106) YEAR RECONSTRUCTED	-4
(42) TYPE OF SERVICE	
(42A) TYPE OF SERVICE ON BRIDGE	1 - Highway
(42B) TYPE OF SERVICE UNDER BRIDGE	5 - Waterway
(28) LANES	
(28A) LANES ON THE STRUCTURE	02
(28B) LANES UNDER THE STRUCTURE	00
(29) AVERAGE DAILY TRAFFIC	61
(30) YEAR OF AVERAGE DAILY TRAFFIC	2014
(109) AVERAGE DAILY TRUCK TRAFFIC	5
(19) BYPASS DETOUR LENGTH	1

**Geometric Data**

(48) LENGTH OF MAXIMUM SPAN (ft.)	28.0
(49) STRUCTURE LENGTH (ft.)	240
(50) CURB/SIDEWALK WIDTHS	
(50A) LEFT CURB SIDEWALK (ft.)	0.4
(50B) RIGHT CURB SIDEWALK (ft.)	0.4
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	20.3
(52) DECK WIDTH, OUT-TO-OUT (ft.)	23.1
(32) APPROACH ROADWAY WIDTH (ft.)	20
(33) BRIDGE MEDIAN	0 - No median
(34) SKEW (deg.)	0
(35) STRUCTURE FLARED	0 - No flare
(10) INV RTE, MIN VERT CLEARANCE (ft.)	328.05
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	19.0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	327.76
(54) MIN VERTICAL UNDERCLEARANCE	
(54A) REFERENCE FEATURE	N - Feature not a highway or railroad
(54B) MIN VERTICAL UNDERCLENREANCE (ft.)	0
(55) MIN LATERAL UNDER CLEARANCE RIGHT	
(55A) REFERENCE FEATURE	N - Feature not a highway or railroad
(55B) MIN LATERAL UNDER CLEARANCE RIGHT (ft.)	327.76
(56) MIN LATERAL UNDER CLEARANCE (ft.)	99.9

**Classification**

(112) NBIS BRIDGE LENGTH	Yes
(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0 - Structure/Route is NOT on NHS
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	19 - Urban - Local
(100) STRAHNET HIGHWAY DESIGNATION	Not a STRAHNET route
(101) PARALLEL STRUCTURE DESIGNATION	N - No parallel structure
(102) DIRECTION OF TRAFFIC	2-way traffic
(103) TEMP STRUCTURE	
(105) FEDERAL LANDS HIGHWAYS	Not Applicable
(110) DESIGNATED NATIONAL NETWORK	Inventory route not on network
(20) TOLL	3 - On Free Road
(21) MAINTENANCE RESPONSIBILITY	01 - State Highway Agency
(22) OWNER	01 - State Highway Agency
(37) HISTORICAL SIGNIFICANCE	5 - Not eligible

**Condition**

(58) DECK	5 - Fair Condition (minor section loss)
(59) SUPERSTRUCTURE	5 - Fair Condition (minor section loss)
(60) SUBSTRUCTURE	1 - Imminent Failure Condition (bridge closed,
(61) CHANNEL & CHANNEL PROTECTION	6 - Bank slump. widespread minor damage
(62) CULVERT	N - Not Applicable

**Load Rating and Posting**

(31) DESIGN LOAD	2 - H 15
(63) METHOD USED TO DETERMINE OPERATING RATING	2 - Allowable Stress (AS)
(64) OPERATING RATING	47.2
(65) METHOD USED TO DETERMINE INVENTORY RATING	2 - Allowable Stress (AS)
(66) INVENTORY RATING	31.8
(70) BRIDGE POSTING	5 - Equal to or above legal
(41) STRUCTURE OPEN/POSTED/CLOSED	K - Closed

**Appraisal**

(67) STRUCTURAL EVALUATION	0
(68) DECK GEOMETRY	5
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(71) WATERWAY ADEQUACY	8 - Bridge Above Approaches
(72) APPROACH ROADWAY ALIGNMENT	7 - Better than present minimum criteria
(36) TRAFFIC SAFETY FEATURE	
36A) BRIDGE RAILINGS:	0 - Does not meet acceptable standards/safety feature is required
36B) TRANSITIONS:	1 - Meets acceptable standards
36C) APPROACH GUARDRAIL	1 - Meets acceptable standards
36D) APPROACH GUARDRAIL ENDS	0 - Does not meet acceptable standards/safety feature is required
(113) SCOUR CRITICAL BRIDGES	8 - Stable for scour conditions

**Proposed Improvements**

(75) TYPE OF WORK	
(75A) TYPE OF WORK PROPOSED	34 - Widening - With Deck
(75B) WORK DONE BY	1 - Work to be done by
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)	240.2
(94) BRIDGE IMPROVEMENT COST (\$K)	250000
(95) ROADWAY IMPROVEMENT COST (\$K)	25000
(96) TOTAL PROJECT COST	375000
(97) YEAR OF IMPROVEMENT COST ESTIMATE	2004
(114) FUTURE ADT	92
(115) YEAR OF FUTURE ADT	2034

**Navigation Data**

(38) NAVIGATION CONTROL	0 - No navigation control on waterway (bridge
(111) PIER OR ABUTMENT PROTECTION	
(39) NAV VERT CLEARANCE	0
(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE	0
(40) NAV HORIZONTAL CLEARANCE	0

## General Bridge Data

Structure Number: 3312

Structure Name: VARNEYS

Owner: 1 State DOT

Town: South Berwick

Co-Owner: N Not applicable

Town2:

Region: 01 Southern

Maintainer: 1 State DOT

Bridge Plans: ☐

Co-Maintainer: N Not applicable

### Structure Type

#### Main Span

Type: 1 Girder

Sub Type: 1 Deck

Construction: 1 Rolled

Material: 1 Steel

Continuity: 1 Non Continuous

Composite: 1 Non Composite

Moveable: 0 No

Deck Area: 5544.01127840 (SF)  
000000

Curb Reveal Lt: 0.65616800000 (in)  
0000

Curb Reveal Rt: 0.66601052000 (in)  
0000

#### Approach Span

Type: 1 Girder

Sub Type: 1 Deck

Construction: 0 Not Applicable

Material: 2 Concrete

Continuity: 1 Non Continuous

Composite: 2 Composite

Moveable: 0 No

### Repairs Done:

Year

How

Scope



**Substructures**

	Shaft	Notes
<b>Abutment 1</b>		
<b>Pier</b>		
<b>Pier</b>		
<b>Pier</b>		
<b>Abutment 2</b>		

	Foundation	Notes
<b>Abutment 1</b>		
<b>Pier</b>		
<b>Pier</b>		
<b>Pier</b>		
<b>Abutment 2</b>		

**Roadway**

Road/Route Name	<b>VINE STREET</b>
Abut-Abut Detour	<b>10.560039708000000</b>
Corridor Priority	<b>6</b>

## Inspection Notes

Structure Number: 3312

Town: South Berwick

Structure Name: VARNEYS

Inspection Date: 10/29/2015

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### Structure Notes

Total of 9 spans. Six spans are steel painted girders, concrete deck, piers, abutments and wings with a bituminous wearing surface. Three spans are concrete girders, deck, piers, abutment & wing walls. Complete upstream of structure is a dam. Southerly span superstructure is uninspectable due to utility housing area. 2007 - PIERS WERE INSPECTED WITH UNDERBRIDGE CRANE AND FOUND TO HAVE SEVERE SECTION LOSS IN THIN PIERS. BRIDGE WAS CLOSED AND PROCESS FOR REMOVAL HAS BEGUN. - BWF

### Wearing Surface

BRIDGE CLOSED

### Deck

NBI Item 58: 5

BRIDGE CLOSED

### Superstructure

NBI Item 59: 5

BRIDGE CLOSED

### Substructure

NBI Item 60: 1

BRIDGE CLOSED

### Culvert

NBI Item 62: N

Other

Special Inspection

Monitoring

**Pontis Notes**

2012 - STRUCTURE IS CURRENTLY CLOSED TO ALL TRAFFIC ALONG WITH .2 MILE OF THE APPROACH AT THE SOUTH END DUE TO WASHOUTS. 2013 - Closed to all traffic. 2014 - Closed to traffic. Signed as closed 500' & 100' back along with the start of the raod.

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## Highway Bridge Inspection Report

### Element Inspection

## MaineDOT Load Rating and Posting

Structure Number: 3312

Town 1: South Berwick

Bridge Name: VARNEYS

Town 2:

Owner: 1 State DOT

### Design Load

Vehicle:

Operating Rating:

Inventory Rating:

HL-93

47.2

31.8

HL-93 Modified

### Legal Load

Configuration:

Axles:

Weight (Tons):

Rating:

Tons:

1

6

50

2

6

47

3

5

44

4

5

44

5

5

44

6

4

38

7

3

29.

8

2

58.

7

### Routine Permit Loads

Configuration:

Axles:

Weight (Tons):

Rating:

Tons:

Tractor w/semi trailer

4

60

### Load Rating

TEDOC Reference:

Controlling Member:

Controlling Stress:

### Posting Committee

Discussion:

TEDOC Reference:

### Load Test

Type:

Load Test Date:

TEDOC Reference:

Load Test Results:

### Posting Status

☒ Posted

Weight in tons: 0

☐ Posted for one truck at a time

☐ Posted for 4 axle

☐ Posted for spacing

## Underwater Dive Inspection Report

**Structure Number:** 3312  
**Town 1:** 31250 - South Berwick  
**Division:** Scarborough  
**Location:** .7 MI S JCT 236  
**Tide Information:**  
**Dive Entry Location:**  
**Scour:**  
**Comments/Hazards:**

**Bridge Name:** VARNEYS BRIDGE  
**Town 2:**  
**DiveID:** 3024

☐ Tidal:

**Photos:**

**Streambed Description:**

**Channel Description:**

**Substructure Description:**

**Inspection Team:**

**Role:**

**Dive Conditions:**

Time: Entry: AM/PM

Time: Exit: AM/PM

Water Temp:

Visibility (ft):

Max Depth (ft):

Current:

Weather:

Underwater Inspection Date:

Channel Condition:

Substr/Culvert Condition:

Inspection Cycle:

**Ratings Comments:**

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### Highway Bridge Inspection Report

#### Pictures



PHOTO 2

Description 3312\_2015\_p02 Topside view closed

### Maintenance Work Items

Structure Number: 3312

Structure Name: VARNEYS

Town 31250  
:

Owner: Harris, Steve

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Type	Work Item	Priority	Notes
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## MaineDOT NBIS Bridge Safety Inspection JSA

Inspector: Harris, Steve

Structure Number: 3312

Inspection Date: 01/28/2016

Structure Name: VARNEYS

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**Team Leader:** Steve Harris

**Additional Team Members/Visitors:**

- 1.)
- 2.)
- 3.)
- 4.)
- 5.)
- 6.)
- 7.)
- 8.)
- 9.)

**Job being performed:**

**Hazard:**

- ☒ Exposure to traffic

**Control:**

- ☒ Parked off road with strobe
- ☒ Less than 1 hour on bridge
- ☒ Wear standard reflective clothing and hard hat
- ☐ Spotter
- ☐ Traffic Control Crew

**Hazard:**

- ☐ Steep slopes and uneven working areas (rip rap, mud, loose fill, etc)

**Control:**

- ☒ Wear appropriate, prudent footwear
- ☐ Rope or fall protection

**Hazard:**

- ☐ Chipped Concrete or Steel (hand tools only)

**Control:**

- ☐ Wear appropriate, prudent eye/hand protection

**Hazard:**

- ☐ 6' Vertical drops

**Control:**

- ☐ Stay away from areas

**Hazard:**

☐ Water Hazards

**Control:**

☐ Evaluate conditions. Wear appropriate, prudent PPE

**Hazard:**

☐ Insects, Poison Ivy, or other environmental hazards

**Control:**

☐ Apply insect repellent and/or sunscreen

☐ Protect skin with appropriate, prudent clothing

**Hazard:**

☐ Lead paint and Avian excrement

**Control:**

☐ Wear gloves, do not scrape

**Hazard:**

☐ Heavy Manual Lifting

**Control:**

☐ Ask for assistance in donning dive gear, lifting equipment

**Hazard:**

☐ DCS, Lung Expansion

**Control:**

☐ Ascend slowly, use computers, Safety Stops (15' mark for 3 min.)

**Hazard:**

☐ Entanglement U/W

**Control:**

☐ Use knife, Comm gear

**Hazard:**

☐ Boat Traffic

**Control:**

☐ Fly Dive Flag, use spotter, contact bridge on Chan. 13

**Hazard:**

☐ Cold Water

**Control:**

☐ Use adequate dry suit underwear for water temperature

**Hazard:**☐ Live Boating**Control:**☐ Keep track of divers, avoid powering during drop-off/pick-up**Other Hazards****Other Controls****Safety Equipment Required:**☒ Hard hat☒ Vest☒ Glasses☒ Gloves☐ PFD☐ Rain Gear☐ Bug Spray☐ Sunscreen☐ First Aid☐ O2☐ AED☐ Comm Gear☐ Cell Phone**Other Safety Equipment:****Emergency Action Plan:**☒ Call 911☒ First Aid Kit☐ Fall Rescue Plan☐ Water Rescue Plan☐ Dan 1-919-684-9111☐ USCG 741-5465**Other Emergency Action Plan:**

I certify that the MaineDOT NBIS Bridge Safety Inspection JSA has been completed according to all proper procedures required by the Maine Department of Transportation.

☒ Complete

Steve Harris