

# **Highway Bridge Inspection Report**

**SOUADABSCOOK EAST NB**

**I 95 NB**

**over**

**SOUADABSCOOK STREAM**

**Inspection Date:** 09/01/2015

**Inspected By:** Carl Edwards

**Inspection Type(s):** Underwater

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**Inspector:** Carl Edwards

**Inspection Date:** 09/01/2015

**Structure Number:** 5949

**Facility Carried:** I 95 NB

## Highway Bridge Inspection Report

### Executive Summary

**Inspector:** Carl Edwards

**Inspection Date:** 09/01/2015

**Structure Number:** 5949

**Facility Carried:** I 95 NB

**Highway Bridge Inspection Report**

**Location Map**

# National Bridge Inventory

Status: 1 - SD

Bridge Name: SOUADABSCOOK EAST NB

Sufficiency Rating: 84.1

## Inspections

(90) INSPECTION DATE	& (91) DESIGNATED INSPECTION FREQUENCY	24	05/07/2015
(92) CRITICAL FEATURE INSPECTION	& (93) CFI DATE		
(92A) FRACTURE CRITICAL DETAIL		N	
(92B) UNDERWATER INSPECTION		Y	60
(92C) OTHER SPECIAL INSPECTION		N	09/01/2015

## Identification

(1) STATE CODE	231 - Maine
(8) STRUCTURE NUMBER	5949
(5) INVENTORY ROUTE	
(5A) RECORD TYPE	1: Route carried "on" the structure
(5B) ROUTE SIGNING PREFIX	3 - STATE HIGHWAY
(5C) DESIGNATED LEVEL OF SERVICE	1 - MAINLINE
(5) INVENTORY ROUTE	95
(5) INVENTORY ROUTE	1 - NORTH
(2) HIGHWAY AGENCY DISTRICT	04 - Eastern
(3) COUNTY CODE	019 Penobscot
(4) PLACE CODE	30795
(6) FEATURES INTERSECTED	SOUADABSCOOK STREAM
(7) FACILITY CARRIED	I 95 NB
(9) LOCATION	3.3 MI E TL / 95 MI 177.9
(11) MILEPOINT	176.310
(12) BASE HIGHWAY NETWORK	Inventory Route is on the Base Network
(13) LRS INVENTORY ROUTE, SUBROUTE	
(13A) LRS INVENTORY ROUTE	000000095X
(13B) SUBROUTE NUMBER	00
(16) LATITUDE	44.764938888 8889
(17) LONGITUDE	68.894219444 4444
(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	4 - Steel continuous
(43B) TYPE OF DESIGN/CONSTR	02 - Stringer/Multi-beam or Girder
(44) STRUCTURE TYPE, APPROACH SPANS	
(44A) KIND OF MATERIAL/DESIGN	0 - Other
(44B) TYPE OF DESIGN/CONSTRUCTION	00 - Other
(45) NUMBER OF SPANS IN MAIN UNIT	3
(46) NUMBER OF APPROACH SPANS	0
(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	1961
(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	12090
(30) YEAR OF AVERAGE DAILY TRAFFIC	2014
(109) AVERAGE DAILY TRUCK TRAFFIC	11
(19) BYPASS DETOUR LENGTH	4

**Geometric Data**

(48) LENGTH OF MAXIMUM SPAN (ft.)	50
(49) STRUCTURE LENGTH (ft.)	135
(50) CURB/SIDEWALK WIDTHS	
(50A) LEFT CURB SIDEWALK (ft.)	0.2
(50B) RIGHT CURB SIDEWALK (ft.)	0.2
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	40
(52) DECK WIDTH, OUT-TO-OUT (ft.)	42.4
(32) APPROACH ROADWAY WIDTH (ft.)	40
(33) BRIDGE MEDIAN	0 - No median
(34) SKEW (deg.)	15
(35) STRUCTURE FLARED	0 - No flare
(10) INV RTE, MIN VERT CLEARANCE (ft.)	328.05
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	40
(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 UNDERCLEARANCE (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	1 - Structure/Route is on NHS
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	01 - Rural - Principal Arterial - Interstate
(100) STRAHNET HIGHWAY DESIGNATION	Is on an Interstate STRAHNET route
(101) PARALLEL STRUCTURE DESIGNATION	R - Right structure (North or East)
(102) DIRECTION OF TRAFFIC	1-way traffic
(103) TEMP STRUCTURE	
(105) FEDERAL LANDS HIGHWAYS	Not Applicable
(110) DESIGNATED NATIONAL NETWORK	Inventory route on National Truck Network
(20) TOLL	3 - On Free Road
(21) MAINTENANCE RESPONSIBILITY	01 - State Highway Agency
(22) OWNER	01 - State Highway Agency
(37) HISTORICAL SIGNIFICANCE	4 - Not determinable

**Condition**

(58) DECK	4 - Poor Condition (advanced deterioration)
(59) SUPERSTRUCTURE	6 - Satisfactory Condition (minor deterioration)
(60) SUBSTRUCTURE	6 - Satisfactory Condition (minor deterioration)
(61) CHANNEL & CHANNEL PROTECTION	6 - Bank slump, widespread minor damage
(62) CULVERT	N - Not Applicable

**Load Rating and Posting**

(31) DESIGN LOAD	6 - HS 20+Mod
(63) METHOD USED TO DETERMINE OPERATING RATING	8 - Load and Resistance Factor
(64) OPERATING RATING	1.08
(65) METHOD USED TO DETERMINE INVENTORY RATING	8 - Load and Resistance Factor
(66) INVENTORY RATING	0.83
(70) BRIDGE POSTING	5 - Equal to or above legal
(41) STRUCTURE OPEN/POSTED/CLOSED	A - Open

**Appraisal**

(67) STRUCTURAL EVALUATION	6
(68) DECK GEOMETRY	7
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(71) WATERWAY ADEQUACY	9 - Bridge Above Flood Water Elevations
(72) APPROACH ROADWAY ALIGNMENT	8 - Equal to present desirable criteria
(36) TRAFFIC SAFETY FEATURE	
36A) BRIDGE RAILINGS:	1 - Meets acceptable standards
36B) TRANSITIONS:	1 - Meets acceptable standards
36C) APPROACH GUARDRAIL	1 - Meets acceptable standards
36D) APPROACH GUARDRAIL ENDS	1 - Meets acceptable standards
(113) SCOUR CRITICAL BRIDGES	8 - Stable for scour conditions

**Proposed Improvements**

(75) TYPE OF WORK  
    (75A) TYPE OF WORK PROPOSED  
    (75B) WORK DONE BY  
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)  
(94) BRIDGE IMPROVEMENT COST (\$K)  
(95) ROADWAY IMPROVEMENT COST (\$K)  
(96) TOTAL PROJECT COST  
(97) YEAR OF IMPROVEMENT COST ESTIMATE  
(114) FUTURE ADT 16926  
(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: 5949

Structure Name: SOUADABSCOOK EAST NB

Owner: 1 State DOT

Town: Hampden

Co-Owner: N Not applicable

Town2:

Region: 04 Eastern

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: 2 Continuous

Composite: 1 Non Composite

Moveable: 0 No

Deck Area: 5724.28507560 (SF)  
000000

Curb Reveal Lt: 7.9 (in)

Curb Reveal Rt: 7.8 (in)

#### Approach Span

Type: \_

Sub Type: \_

Construction: \_

Material: \_

Continuity: \_

Composite: \_

Moveable: \_

### Repairs Done:

Year How

Scope



**Substructures**

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

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

**Roadway**

Road/Route Name	<b>I 95 NB</b>
Abut-Abut Detour	<b>83.952102424000000</b>
Corridor Priority	<b>1</b>

## Inspection Notes

Structure Number: 5949

Town: Hampden

Structure Name: SOUADABSCOOK EAST NB

Inspection Date: 05/07/2015

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### Structure Notes

Three span steel painted girders. Concrete deck, abutments, piers, wings and wearing surface.

### Wearing Surface

Did not chain wearing surface due to heavy traffic, but observed approximately 25% cracking and patched areas. Isolated transverse cracking.

### Deck

**NBI Item 58:** 4

Bottom of deck has spalling at blocking and joint areas and large areas of staining. Approximately 20% complete seal failure with additional leakage.

### Superstructure

**NBI Item 59:** 6

Approximately 25% paint system distress with moderate rusting at exterior beam end areas (see photos). Recommend painting of beam ends & repairs to damaged bridge rail bars & posts. Several bearing anchor bolts are missing.

### Substructure

**NBI Item 60:** 6

See 2011 dive report for substructure and channel details. Moderate cracking, staining and scaling of abutment bridge seats & back-walls. West pier has a full height crack that is 1/8" wide at the top down to fine cracking at the bottom.

### Culvert

**NBI Item 62:** N

**Channel**

**NBI Item 61: 6**

**Other**

**Special Inspection**

**Monitoring**

**Pontis Notes**

Inspector: Carl Edwards  
 Inspection Date: 09/01/2015

Structure Number: 5949  
 Facility Carried: I 95 NB

Highway Bridge Inspection Report

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
<b>12 - Reinforced Concrete Deck</b>	2 - Low	5724	sq. ft.	0	5724		
<b>107 - Steel Open Girder/Beam</b>	2 - Low	810	ft.	760	50		
515 - Steel Protective Coating		810	sq. ft.	710	100		
<b>210 - Reinforced Concrete Pier Wall</b>	2 - Low	85	ft.	75	5	5	
<b>215 - Reinforced Concrete Abutment</b>	2 - Low	102	ft.	42	10	10	40
<b>302 - Compression Joint Seal</b>	2 - Low	85	ft.	51	34	51	
<b>311 - Movable Bearing</b>	2 - Low	12	each	6	6		
515 - Steel Protective Coating		12	sq. ft.	6			6
<b>313 - Fixed Bearing</b>	2 - Low	12	each	6	6		
515 - Steel Protective Coating		12	sq. ft.	6			6
<b>801 - Beam End</b>	2 - Low	12	each	6		6	
<b>843 - Rigid Wearing Surface</b>	2 - Low	5400	sq. ft.	4300	1000	100	
<b>861 - Beam End – Protective Coating</b>	2 - Low	12	each	6		6	

## Underwater Dive Inspection Report

**Structure Number:** 5949

**Bridge Name:** SOUADABSCOOK EAST NB

**Town 1:** 19280 - Hampden

**Town 2:**

**Division:** Bangor

**DiveID:** 5158

Tidal:

**Location:** 3.3 MI E TL / 95 MI 177.9

**Tide Information:**

**Photos:**

**Dive Entry Location:** Either end - usually from trailing edge of bridge, DS side of lft pier.

none

**Scour:**

**Comments/Hazards:**

swim down from SB bridge.

**Streambed Description:**

Ledge covered with silt.

**Channel Description:**

Irregular bottom contour

**Substructure Description:**

2 piers on ledge in good condition. Inspected with SB bridge. No significant change in exposed footing. Piers on ledge per plans. 2011: No major changes. Exposed footing similar to previous report. 2015: Exposed footings. Lft pier exposed 8'. Right pier exposed 7'. No changes.

**Inspection Team:**

Edwards

**Role:**

TL,SD

**Dive Conditions:**

Time: Entry: 3:40 AM/PM PM

Merrithew

D

Time: Exit: 4:00 AM/PM PM

Amero

SD

Water Temp: 70

Hannum

D

Visibility (ft): 1

T

Max Depth (ft): 10

Current: slight

Weather: sunny

Underwater Inspection Date: 09012015

Channel Condition: 6

Substr/Culvert Condition: 6

Inspection Cycle: Y60

**Ratings Comments:**

footers exposed

**Inspector:** Carl Edwards

**Inspection Date:** 09/01/2015

**Structure Number:** 5949

**Facility Carried:** I 95 NB

**Highway Bridge Inspection Report**

**Pictures**

### Maintenance Work Items

Structure Number: 5949

Structure Name: SOUADABSCOOK EAST NB

Town 19280

Owner: Edwards, Carl

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Type	Work Item	Priority	Notes
Maintenance	Stabilize Substructure	3	Grout Bag

## MaineDOT NBIS Bridge Safety Inspection JSA

Inspector: Edwards, Carl

Structure Number: 5949

Inspection Date: 03/02/2016

Structure Name: SOUADABSCOOK EAST NB

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**Team Leader:** Carl Edwards

**Additional Team Members/Visitors:**

- 1.) Tim Merrithew
- 2.) Dennis Amero
- 3.) Jamie Hannum
- 4.)
- 5.)
- 6.)
- 7.)
- 8.)
- 9.)

**Job being performed:**

Underwater Bridge inspection

**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

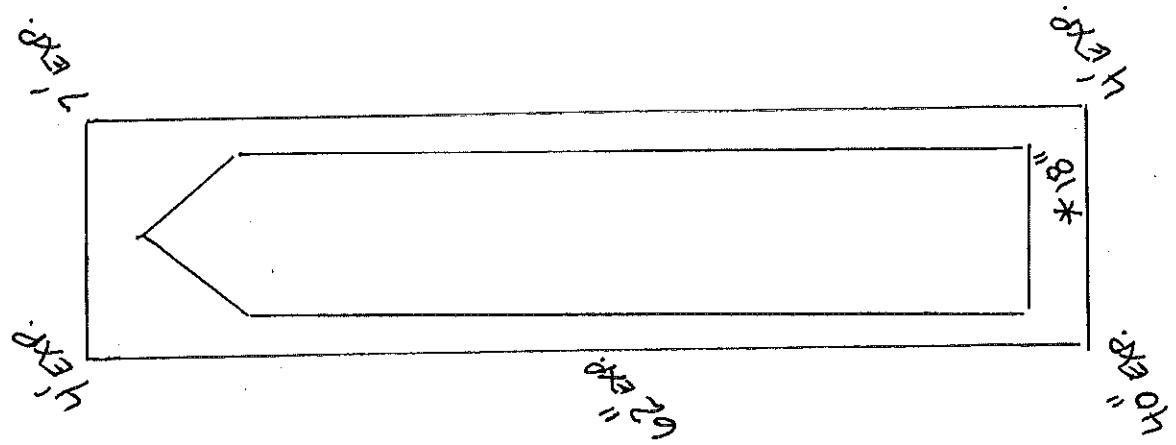
USCG 741-5465

**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      Carl Edwards

\* = WATER DEPTH  
 EXP. = EXPOSED FOOTING



I-95 NB

