PAGE 1 OF 5

2-DIST B.I.N. 05 43B

# STRUCTURES INSPECTION FIELD REPORT

**ROUTINE INSPECTION** 

BR. DEPT. NO. E-07-004

CITY/TOWN	8ST	3STRUCTURE NO. 11-Kile				Kilo. POINT 41-STATUS A:OPEN		90-ROUTINE INSP. DATI			P. DATE				
EDGARTOWN				E07004-43B-MUN-NBI 00				1.046	A.OPEN	S	EP	16,	2003		
07-FACILITY CARRIED  HWY DIKE RD				MEMORIAL NAM	E/LOC	'AL NA	ME		27-1	YR BUILT 1995	106-YR REBUILT <b>0000</b>	YR F		B'D (NO	ON 106)
															,
06-FEATURES INTERSECTED				26-FUNCTIONAL		S		DIST. I	BRIDG	E INSPECTI	ON ENGINEER	D. A.	Palme	r	
WATER POUCHA	POND			Rural Loca	ıl										
43-STRUCTURE TYPE				22-OWNER Town Agency		AINTAI <b>/n Ag</b> (		TEAM	LEAD	ER <b>T. J. Mc</b> l	Kenna				
Timber Stringer/Gi	rder			, iouni, igono,	100	ni Agʻ	спсу								
107-DECK TYPE <b>Timber</b>				weather sunny		P. (air) <b>70°C</b>	;	TEAM <b>S. R</b>	MEMI						
ITEM 58	8		ITE	M 59			9	1		ITEM	60		8		
DECK		DEF	SUPI	ERSTRUCTUI	RE	L		] DE	F	SUBST	RUCTURE	L			DEF
1.Wearing Surface	N	-	1.Stri	ngers			9	-		1. Abut	ments	Dive	Cur	8	
2.Deck Condition	8	-	2.Flo	orbeams			N	-		a. Pedes	tals	N	N		-
3.Stay in Place Forms	N	_	3.Flo	or System Braci	ing		N	1 .		b. Bridge	N	N		-	
4. Curbs	N			ders or Beams			N		_	c. Backw		N	N 8		
			5.Trusses - General N			╢.	_	e. Wingv		N	8		-		
5.Median	N	-	a. Upper Chords N			' <del>                                    </del>	_	l — -	Paving/Rip-Rap	N	N		-		
6.Sidewalks	N	-	a. Upper Chords N b. Lower Chords N				-	_	g. Pointi		N	N		-	
7.Parapets	7.Parapets N							-	-	h. Footin	gs	N	H		
8.Railing	c. Web Members N			-	•	j. Scour			Н		-				
9.Anti Missile Fence	d. Lateral Bracing N e. Sway Bracings N			-	_	7.0			9		-				
10.Drainage System	N	_	е. 3	Sway Bracings				-		<i>l.</i> m.		N	N N		
	N		f. I	Portals		N					or Bents	14	1,4	N	_
11.Lighting Standards		-	g. l	End Posts		N			•	a. Pedes		N	N		_
12.Utilities	9	-	6.Pin	& Hangers			N	-	•	b. Caps		N	N		-
13.Deck Joints	N	-	7.Cor	n Plt's, Gusset	s & A	ngles	N			c. Colum		N	N		-
14.	N	-	8.Cov	er Plates			N		•	d. Stems e. Pointi	/Webs/Pierwalls	N	N		-
15.	N	-	9.Bea	ring Devices			N			f. Footin		N	N		
16.	N	_	10. Di	aphragms/Cros	s Fra	mes	N	١ .		g. Piles	-	N	N		-
10.	IN .		11. Ri	vets & Bolts			N	١ .		h. Scour		N	N		-
	N .	s	12. W	elds			N	١.	.	i. Settlei	nent	N	N N		
CURB REVEAL (In millimeters)	N	N	13. Me	ember Alignmer	nt		9	╫.	_	k.		N	N		
				int/Coating			N			3. Pile I	Bents			8	
APPROACHES		DEF	15.				N			a. Pile Ca	aps	N	8		-
a. Appr. pavement condition	N			1				ļ		b. Piles	nal Bra-!	N	8		-
b. Appr. Roadway Settlement	6	-	Year	Painted		N					nal Bracing ontal Bracing	N	8 N		
c. Appr. Sidewalk Settlement	N	-	COLLI	SION DAMAGE:	Pleas	e evnla	in			e. Faster		N	N		-
d	N	_		(X) Minor ( )				vere (	)	UNDER	INING (V/N) 1534				14
a.			LOAD	DEFLECTION:	Pleas	e expla	in			UNDERM	INING (Y/N) If Y	⊏S ple	ease e	xpiain	N
OVERHEAD SIGNS (Y/N) N (Attached to bridge)				e ( <b>X</b> ) Minor ( )	Mode	erate (	) Se	vere (	)	_	ON DAMAGE:				
DEF LOA				VIBRATION:		e expla				None (X	Minor ( ) M	odera	te (	) Sev	rere ( )
a. Condition of Welds N -				None (X) Minor ( ) Moderate ( ) Severe ( )				)	SCOUR: Please explain None (X) Minor ( ) Moderate ( ) Severe ( )				rere ( )		
				ny Fracture Critical Member: (Y/N)			I-60 (Dive Report): N I-60 (This Report):			t): 8					
c. Condition of Signs N - Any				Any Cracks: (Y/N) N 93B-U/W (DIVE) Insp 00/00/00					000						
X=UNKNO		N-	NOT APPLIC	ADI				UINI	ACCECC	VIDLE				OVED	

CITY/	CITY/TOWN B.I.N. BR. DEPT. NO. 8STRUCTURE NO. INSPECTION DATE															
EDGA					431		1				MUN-N	ВΙ		SEP 1		
T (N)	EM 61		—		$\dashv$	T	TEM 36 TRAFFIC SAL	FETY	7			A	CCESSIB	ILITY	, (Y/N	V/P)
	NNE			'	9			36	CONE	<b>D</b>	DEF	-	CCLOSIL		Neede	,
		L & L PROTECTION	N				Bridge Railing	0		_	-	Li	ift Bucket		N	N
C11	11112	MOILCIIC.					Transitions	0		_	-	Lí	adder		N	N
<b> </b>			T	Cur	DEF		Approach Guardrail	0	_	_	-	В	oat		Y	Υ
1.Cha	annel	Scour	N	Н		D.	Approach Guardrail Ends	0	8		-	<b>-</b>	/aders		N	N
2.Em	bankn	ment Erosion	N	9	-	WE	EIGHT POSTING		\pplical		X		spector 50		N	N
3.Deb	oris		N	9			Н	3	3S2	Singl	e		igging		N	N
4.Veç	getatio	on .	N	9	-	Ac	ctual Posting N	N	N	N			taging		N	N
5.Util	lities		N	х	_	Re	ecommended Posting N	N	N	N		-	raffic Contr	ol	N	N
6.Rip	-Rap/	Slope Protection	N	N	_	│ <sub>Wa</sub>	aived Date: 00/00/0000 E	JDMT I	Date:	00/0	00/0000		R Flagger		N N	N
	gradat	-	N	9	_		At bridge		L		vance	1	olice		IN	N
	nder S		N	N	<u> </u>		gns In Place EB	WB	E		WB		ther: /ds Hole Cl	hanny For	Υ	Y
0.1 0	luei o	/Steili	-	14	<del>-</del>	Y= NR	=Yes,N=No, R=NotRequired)						as Hole Ci	парру геі		
<b> </b>			+	+'	<del>  </del>		gibility/					T	OTAL HO	OURS	,	14
<b> </b>			<del></del>	<u> </u>	1		,	NB		SB		$\vdash$			<u> </u>	
				'			ot Applicable X	in	ft		in meter	P	LANS	(Y/N):	Υ	
CTDE							tual Field Measurement	0	1		0	H			$\equiv$	
		OW VELOCITY:	/	\ No	, ,		sted Clearance	0			0	(V	/.C.R.)	(Y/N):	N	
lidai ()	( ) High	h ( ) Moderate ( ) L	_ow (	) Noi	ie ( )		At bridg			Advar		<sub>T/</sub>	APE#:	_		
ITEM 61 (Dive Report): N   ITEM 61 (This Report): 9   Signs in Place (Y=Yes.N=No.																
NR=Not Required)  List of field tests performed:																
93b-U/W INSP. DATE: 00/00/0000 Legibility/ Visibility																
RATI	NG		$\Box$						If YES	S plea	se give prid	ority:	:			
Rating	Repo	ort (Y/N): <b>N</b>	R	econ	nmend fc	r Rat	ting or Rerating (Y/N):	ı			) MEDIUM (					
Date:		00/00/0000					· · ·									
Date.	<u> </u>	10/00/0000		REASC	)N:											_
							CONDITION RA	ATIN	$G \overline{G}$	UII	Œ					
							(For Items 58, 59, 6	0 and 6	31)							
	CODE	CONDITION					DEFECTS									
	N	NOT APPLICABLE	$\top$													
G	9	EXCELLENT	E	Exceller	nt condition.											
G	8	VERY GOOD	N	10 prob	olem noted.											
G	7	GOOD	S	3ome m	ninor problem	ns.										
F	6	SATISFACTORY	S'	3tructura	al elements	show s	some minor deterioration.									
F	5	FAIR	A'	All prime	ary structura!	l eleme	ents are sound but may have minor sec	ction loss	s, crackino	g, spal	ling or scour.					
Р	4	POOR					terioration, spalling or scour.	- atad pri		-trol		' cool	f-ilimes are not	!ble Fatigue er	- alsa	
P	3	SERIOUS					on, spalling or scour have seriously affo concrete may be present.	ectea biii	mary stru	Cturai	components.	LOCai	failures are pos	sible. Fatigue Cra	acks	
С	2	CRITICAL	A.	dvance	ed deteriorat	ion of p	primary structural elements. Fatigue cr port. Unless closely monitored it may b	acks in s	teel or sh	ear cra	acks in concre	te ma	y be present or	scour may have		
			_ M	Major de	eterioration o	or section	ion loss present in critical structural cor	mponents	s or obvio						lility.	
С	1	"IMMINENT" FAILURE	Br	ridge is	closed to tr	affic bu	ut corrective action may put it back in li	ght servi	ice.							
	0	FAILED	0	Jut of se	ervice - beyo	and cor	rrective action.									
							DEFICIENCY REP	ORI	ING	GU	IIDE					
DEFI	CIENC	Y: A defect in a stru	ructure	that re	auires corre				7	<u> </u>						
		ES OF DEFICIENC														
					or in nature, ge	nerally d	do not impact the structural integrity of the bride ogged drainage, etc.	ge and cou	uld easily be	e repaire	ed. Examples incl	lude bu	ut are not limited to	: Spalled concrete, N	Minor pot	
S- So		holes, Minor	corrosio	ion of ste	el, Minor scour	ring, Clo	ogged drainage, etc.	renair, Ex	ramples incl	ude but	are not limited to	· Mode	erate to major deter	rioration in concrete.	Evnosed	d and
			orroded i	rebais, C	Considerable s	sememen	ent, Considerable scouning of undermining, Mo-	derate to e	extensive co	mosion	to structural stee	ei with H	neasurable loss of	section, etc.		
C-S=	Critica	d Structural Deficie	-	or the	е впаде.		element of a bridge that poses an extreme uns									
С-Н=	Critic	al Hazard Deficienc		A deficie	ency in a compo		or element of a bridge that poses an extreme had Loose concrete hanging down over traffic or pe									
				etc.							•					
	ENCY ( mediate	OF REPAIR:	iately co	ontact Di	otrict Bridge In	-nection	Engineer (DBIE) to report the Deficiency and	to receive	further insti	ruction f	rom him/hor]					
A = AS			-				Engineer or the Responsible Party (if not a Stat				-	n Repoi	rt].			
n n	ioritize-		District.				e Responsible Party (if not a State owned bride					ower ir	a accellable!			1

## REMARKS

## **GENERAL REMARKS**

**ORIENTATION** Based on the compass the bridge has east and west abutments.

## **ITEM 36 TRAFFIC SAFETY FEATURE**

Bridge rail is timber post and rail, transitions are bolted connections with timber pile and rail approachs, terminals are tapered.

#### Item 58.2 - Deck Condition

Deck is made up of single ply timber, the top of the deck planks are covered with sand, and starting to wear, see photo #1.

## Approaches b - Appr. Roadway Settlement

Sand roadway is rutted, and sand is being tracked up onto the bridge, see photo #1.

## Item 60.1.d - Breastwalls

There is heavy marine growth on the under water portion of both breastwalls.

# Item 60.3.b - Piles

There is heavy marine growth built up on the under water portion of the piles.

#### Photo Log

Photo 1: Build up of sand on wearing surface, minor settlement and rutting at both approaches

Photo 2: Build up of marine growth along both breastwalls

Photo 3: Sixth cap from west, south end, split

Photo 4: Build up of marine growth on all cross frames at high water mark down



Photo 1: Build up of sand on wearing surface, minor settlement and rutting at both approaches



Photo 2: Build up of marine growth along both breastwalls



Photo 3: Sixth cap from west, south end, split



Photo 4: Build up of marine growth on all cross frames at high water mark down

2-DIST B.I.N. **43B** 

# UNDERWATER OPERATIONS TEAM ROUTINE UNDERWATER INSPECTION REPORT

PAGE 1 OF 4

BR. DEPT. NO.

E-07-004

CITY/TOWN 8-STRUCTURE NO. LEVEL OF INSPECTION 93B-DATE INSPECTED **EDGARTOWN** E07004-43B-MUN-NBI **JUN 16, 2004** Ш 07-FACILITY CARRIED ACCESS TO BRIDGE UNDERWATER OPERATIONS ENGINEER **HWY DIKE RD BOAT** JOHN B. DESMOND 06-FEATURES INTERSECTED DEPTH VISIBILITY TEAM LEADER (DIVE MASTER) Report submitted by: WATER POUCHA POND RANDI E. BONICA 3 m 3 m BOTTOM CONDITION CURRENT TEAM MEMBERS W. J. COLLERAN, J. W. SHUTT, G. BROZ **BOULDERS, SAND TIDAL** ITEM 60 **ITEM 61** ITEM 62 CHANNEL & 7 7 Ν SUBSTRUCTURE **CULVERTS** CHANNEL PROTECTION DEF DEF DEF 1. Abutments 7 Ν 1. Channel Scour 1 Roof N N a. Pedestals 7 2. Embankment Erosion 2. Floor Ν 8 b. Bridge Seats Ν 3. Debris 3. Walls N 8 c. Backwalls Ν 4. Vegetation 4. Headwall 8 d. Breastwalls 5. Utilities Ν 5. Wingwall Ν 8 e. Wingwalls 8 Ν 6. Rip-Rap/Slope Protection 6. Pipe Ν f. Slope Paving/Rip-Rap 8 Ν 7. Aggradation 7. Protective Coating N g. Pointing 8. Fender System Ν 8. Embankment Ν Ν h. Footings Ν Ν 9. Wearing Surface a. Piles 8 i. Piles Ν Ν b. Diagonal Bracing 10. Railing 7 i. Scour c. Horizontal Bracing N 11. Sidewalks N 8 k. Settlement Ν Ν d. Wales 12. Utilities Ν N N e. Fasteners 13. Member Alignment 2. Piers or Bents Ν Ν Ν f. Ladders 14. Deformation Ν Ν a. Pedestals Ν 15. Scour N b. Caps Ν ITEM 59 SUPERSTRUCTURE 16. Settlement DEF N Ν c. Columns 17. d. Stems/Webs/Pierwalls Ν N 18. Ν Ν e. Pointing N UNDERMINING (Y/N) Ν f. Footing DEFICIENCY REPORTING GUIDE Ν g. Piles A defect in a structure that requires corrective action Ν h. Scour **CATEGORIES OF DEFICIENCIES:** Ν i. Settlement M= Minor Deficiency- - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor scouring, etc. Ν į. S= Severe/Major Deficiency
Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroding rebars, Deteriorated timber piles, Considerable settlement, Considerable scouring or undermining, etc. N 3. Pile Bents 8 C-S= Critical Structural Deficiency- Adeficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity N a. Pile Caps of the bridge. A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples C-H= Critical Hazard Deficiency-8 b. Piles include but are not limited to: Any part of piles or fender system which are projecting outward and may become a safety hazard for the navigational traffic, etc. c. Diagonal Bracing 8 URGENCY OF REPAIR: Ν d. Horizontal Bracing [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive I=Immediate-7 e. Fasteners further instruction from him/her.] [Action/Repair should be initiated by District Maintenance Engineer or the responsible party (if not a State owned bridge) upon receipt of the Inspection Report.] A=ASAP-Ν UNDERMINING (Y/N) P=Prioritize-[Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available.

## REMARKS

### **GENERAL REMARKS**

#### General:

The timber deck bridge is a timber pile bent structure with two pile abutments and seven pile bents. Each bent and abutment has three piles below the timber cap and one pile at upstream and downstream ends that support the bridge rails. Timber diagonal bracing is between piles in each bent.

Both abutments have timber piles and timber planks. Wingwalls are also timber piles and timber planks.

#### Orientation:

Abutments are labeled left (West) and right (East), looking downstream. Bents are numbered from left to right.

#### **ITEM 60 SUBSTRUCTURE**

#### 3. Pile Bents:

#### b. Piles:

Pressure treated timber piles are in good condition with no problems noted.

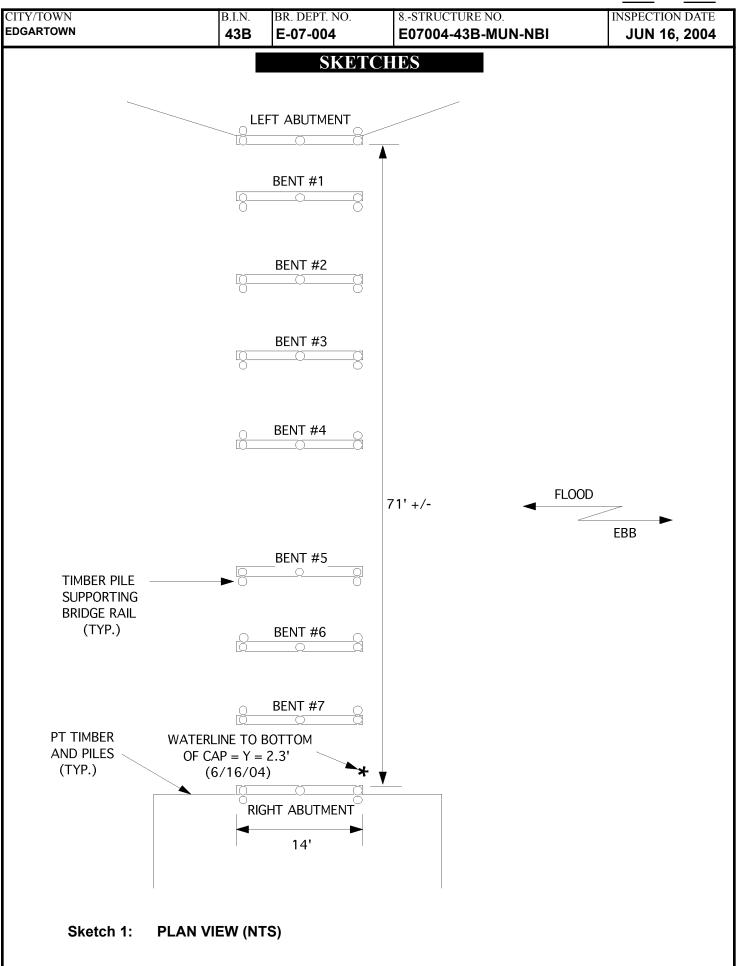
#### e. Fasteners

Fasteners below the waterline are slightly rusted.

## Sketch / Chart Log

Sketch 1: PLAN VIEW (NTS)

Chart 1: SCOUR MONITORING CHART



CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	JUN 16, 2004

# CHARTS

# SCOUR MONITORING CHART DOWNSTREAM END

	6/16/04
LEFT ABUTMENT	2.8'
BENT #1	4.3'
BENT #2	6.8'
BENT #3	9.2'
BENT #4	9.9'
BENT #5	10.8'
BENT #6	11.1'
BENT #7	9.8'
RIGHT ABUTMENT	7.6'
Υ	2.3'
CORRECTION FACTOR	

## NOTES:

- 1. WATERLINE TO BOTTOM OF RIGHT ABUTMENT CAP, DOWNSTREAM END = Y = 2.3' (6/16/04).
- 2. SOUNDINGS ADJUSTED TO 6/16/04 WATERLINE WITH CORRECTION FACTOR.

PAGE 1 OF 6

2-DIST B.I.N. 05 43B

# STRUCTURES INSPECTION FIELD REPORT **ROUTINE INSPECTION**

BR. DEPT. NO. E-07-004

CITY/TOWN EDGARTOWN	8ST	E07004-43B-MUN-NBI 00					00	1.046	<sup>41</sup> -STATUS <b>B:OPEN</b>	S	EP	14,	SP. DATE <b>2005</b>		
07-FACILITY CARRIED  HWY DIKE RD			. –	MEMORIAL NAM	E/LOCA	AL NAMI	Ξ			r built 1995	106-YR REBUILT <b>0000</b>	YR R		3'D (N	ON 106)
06-FEATURES INTERSECTED WATER POUCHA F	OND	)		26-FUNCTIONAL Rural Loca				DIST. BR	IDGE	E INSPECTI	ON ENGINEER	D. A.	Palme	r	
43-STRUCTURE TYPE Timber Stringer/Gi	rder			22-OWNER Town Agency		INTAINI n <b>Age</b> r		TEAM LE	EADE	ER P. Dufres	sne				
107-DECK TYPE <b>Timber</b>				weather sunny	ТЕМР. <b>2</b>	(air) 21°C		ТЕАМ М <b>D. A.</b>		BERTS	8				
ITEM 58	8		ITE	M 59		Г	<del>-</del>	]		ITEM	60		7		
DECK	•	DEF	SUP	ERSTRUCTU	RE	L'	_	DEF		SUBST	RUCTURE		'		DEF
1.Wearing surface	7	M-P	1.Stri	ngers			9	-		1. Abut	ments	Dive	Cur	8	
2.Deck Condition	8	-	2.Flo	orbeams			N	-		a. Pedes	tals	N	N		-
3.Stay in Place Forms	N	-	3.Flo	or System Braci	ing		N	-		b. Bridge c. Backw		N	N		-
4.Curbs	N	-	4.Gire	ders or Beams			N	-		d. Breas		8	8		-
5.Median	N	-	5.Trusses - General				N	-		e. Wingv		8	8		-
6.Sidewalks	N	_	a. Upper Chords N			N		-		g. Pointi	Paving/Rip-Rap ng	N	N		-
7.Parapets	N	_	b. Lower Chords N			N		-		h. Footin		N	N		-
•	8		c. Web Members N			N		-		i. Piles		8 7	H		-
ontaining -				d. Lateral Bracing N				-		j. Scour k. Settlei		8	8		-
				e. Sway Bracings N				-		I.		N	N		_
10.Drainage System	N	-	f.	f. Portals N				-		m.		N	N		-
11.Lighting Standards	N	-	g.	End Posts		N		-		2. Piers	or Bents	1		N	
12.Utilities	9	-	6.Pin	& Hangers			N	-		a. Pedes b. Caps	tals	N N	N		-
13.Deck Joints	N	-	7.Cor	nn Plt's, Gusset	s & An	gles	N	_		c. Colum	ıns	N	N		-
14.	N	_	8.Cov	er Plates			N	-	$-\ $		/Webs/Pierwalls	N	N		-
15.	N		9.Bea	ring Devices			N	_	$-\ $	e. Pointing	•	N N	N N		-
				aphragms/Cros	s Fram	nes	N	_	$-\ $	g. Piles	9	N	N		-
16.	N	-		vets & Bolts		+	N			h. Scour		N	N		-
N	N	S	12.W				N	_		i. Settlei	ment	N	N		-
CURB REVEAL (In millimeters)	1	N		ember Alignmer	nf	_	9	-		j. k.		N	N		
(				int/Coating			N			3. Pile I	Bents		,	8	
APPROACHES		DEF	15.				N	-		a. Pile Ca	aps	N	8		-
a. Appr. pavement condition	7	-						<u>-</u>		b. Piles		8	8		-
b. Appr. Roadway Settlement	7	-	Year	Painted		N					nal Bracing ontal Bracing	8 N	8 N		-
c. Appr. Sidewalk Settlement	N	-	COLL	ISION DAMAGE:	Please	exnlain			$\neg 1$	e. Faster		7	8		-
d.	N	-	None	e( <b>X</b> ) Minor()	Moder	ate (	Se	vere ( )		UNDERM	IINING (Y/N) If Y	ES ple	ase e	xplair	N
OVERVIE AR GLOVG				<b>DEFLECTION</b> : e( <b>X</b> ) Minor()		explain		vere ( )		0011101					
(Attached to bridge)								· · · · · /	$\exists 1$	_	ON DAMAGE:  ( ) Minor ( ) M	oderat	te (	) Se	vere ( )
DEF I				LOAD VIBRATION: Please explain None ( ) Minor ( X ) Moderate ( ) Severe ( )				Ш	SCOUR:	Please explain  ( ) Minor ( ) M					
b. Condition of Bolts	Any F	ny Fracture Critical Member: (Y/N)							Judidi	(	, 56				
c Condition of Signs N -				Any Fracture Critical Member: (Y/N)  Any Cracks: (Y/N)  N					I-60 (Dive Report): 7 I-60 (This Re			-	8eport): 8 6/2004		
										93B-U/\	N (DIVE) Insp		00/	10/2	.004
A-IINKNO	VA/NI		NI-	NOT APPLIC	ADI	= U-	ш	DEN	INIA	CCESS	IDI E		D_E	) E N	OVED

CITY/	CITY/TOWN B.I.N. BR. DEPT. NO. 8STRUCTURE NO. INSPECTION DATE													
EDGA					431					B-MUN-NI	ВІ	SEP 1		
	EM 61		_	—	$\dashv$	T	TEM 36 TRAFFIC SAF	FETY			ACCESSIE	BILITY	(Y/N	<b>J/P)</b>
	INNE			'	7			36	COND		1200	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Neede	
		L & L PROTECTION	N				Bridge Railing	0	8	M-P	Lift Bucket		N	N
	111	7111012011					Transitions	0	8	M-P	Ladder		N	N
				Cur	DEF	1 I 🗁	Approach Guardrail	0	8	M-P	Boat		Y	Y
	annel (		7	Х	-	╙	Approach Guardrail Ends	0	8	M-P	Waders		N	N
2.Em	bankn	nent Erosion	7	8	-	WE			pplicab		Inspector 50	)	N	N
3.Deb	oris		8	8	-		H			Single	Rigging		N	N
4.Veç	getatio	n	8	8	-	Ac	ctual Posting N	N	N	N	Staging Traffic Contr		N N	N
5.Util	lities		N	N		Re	ecommended Posting 09	14	21	N	Traffic Conti	roi	N	N
6.Rip	-Rap/	Slope Protection	8	8		Wa	aived Date: 00/00/0000 E	JDMT [	Date: (	00/00/0000	Police		N	N
7.Ag	gradat	ion	8	Х	-		At bridge		1	r Advance	Other:			
8.Fer	nder S	ystem	N	N	_	(Y=	gns In Place E =Yes,N=No,	W	E	W	Wds Hole C	happy Fer	Υ	Υ
		·				NR:	R=NotRequired)	N	N	N			<del>                                     </del>	=
				+			gibility/ sibility				TOTAL HO	OURS	'	14
<b> </b>			$\vdash$	+-		CLI	EARANCE POSTING	N		S			_	
<u> </u>			<u> </u>			Nc	ot Applicable X	in	ft	in meter	PLANS	(Y/N):	Υ	
STRE	AM FL	OW VELOCITY:				Acti	tual Field Measurement	0			arc D)	27/81).		
		h ( ) Moderate ( ) L	Low (	) No	ne ( )	Pos	sted Clearance	0		0	(V.C.R.)	(Y/N):	N	
At bridge Advance  TAPE#:  TITEM 61 (Dive Report): 7   ITEM 61 (This Report): 7   (Y=Yes N=No														
ITEM 61 (Dive Report): 7 ITEM 61 (This Report): 7 (Y=Yes,N=No, NR=Not Required) List of field tests performed:														
NR=Not Required)  NR=Not Required)  List of field tests performed:  Legibility/														
	Visibility Visibility													
RATII Rating		ort (Y/N): <b>Y</b>					aran N			please give pric				
Kamy			Re	ecom			ting or Rerating (Y/N):		HIGH	I ( ) MEDIUM (	) LOW ( )			
Date:		01/01/2005	R	REASC	ON:	√ D.P	۶.							_
├──			<u> —</u>	—		—	CONDITION DA	TIN	CCI	ШТ				
							CONDITION RA			ענעווע				
<b> </b>	2205	CONSTITUTION	$\overline{}$				(For Items 58, 59, 60	J and 6	1)					
<b> </b>  '	CODE	CONDITION	+				DEFECTS							
G	N 9	NOT APPLICABLE EXCELLENT		Cycoller	nt condition.									
G	8	VERY GOOD			olem noted.									
G	7	GOOD	_		ninor problem									
F	6	SATISFACTORY	_				some minor deterioration.							
F	5	FAIR					ents are sound but may have minor sec	tion loss	, cracking	, spalling or scour.				
Р	4	POOR	A	Advance	ed section lo	ıss, det	terioration, spalling or scour.							
Р	3	SERIOUS					on, spalling or scour have seriously affection concrete may be present.	cted prin	mary struc	tural components. I	ocal failures are pos	ssible. Fatigue cra	acks	
╟┯╵	-		A	Advance	ed deteriorati	tion of p	primary structural elements. Fatigue cra	acks in st	teel or she	ear cracks in concret	e may be present or	r scour may have		
С	2	CRITICAL	M				port. Unless closely monitored it may be ion loss present in critical structural com						lility	
С	1	"IMMINENT" FAILURE					ut corrective action may put it back in lig			IS VEHICAL OF HOHZON	Lai movement ancou	Ing Structure stab	Шіту.	
	0	FAILED	С	Out of s	ervice - bey	ond cor	rrective action.			<u> </u>				
							DEFICIENCY REP	ORT	ING	CUIDE				
DEEL	CIENC	Y: A defect in a stru		- that re	auires corre			<u> </u>	II V G	UUIDL				
						Jlive ac	JUOII.							
		ES OF DEFICIENCE  Deficiency - Deficiencies			or in nature, ge	nerally d	to not impact the structural integrity of the bride	ne and cou	ıld easily be	renaired. Examples incl	ude but are not limited to	o: Spalled concrete, !	Minor pot	
N1- 141	IIIIVI D	holes, Minor	corrosi	ion of ste	el, Minor scou	ring, Clo	do not impact the structural integrity of the bridg ogged drainage, etc.	ir Evr			**=====to to major date		Finnes	
			orroded	u rebais, c	Considerable s	settlemen	in nature and need more planning and effort to ent, Considerable scouring or undermining, Mod	derate to ex	xtensive con	rosion to structural steel	with measurable loss of	i section, etc.		
C-S=	Critica	ıl Structural Deficie	ency ·	- A defi	ficiency in a strue	uctural e	element of a bridge that poses an extreme unsa	afe condition	on due to the	e failure or imminent fail	ure of the element which	n will affect the structi	ural integr	ity
С-Н=	Critic	al Hazard Deficienc		A deficie	ency in a comp		or element of a bridge that poses an extreme had Loose concrete hanging down over traffic or peo							
	-··ov			etc.	——————————————————————————————————————									
	ENCY ( mediate	OF REPAIR:  [Inspector(s) immedian	'-+alv cc	tact Dir	-t-iot Bridge In	noiton	Engineer (DBIE) to report the Deficiency and to	'- raceive f	r+her instru	ties from him/her].				
A = AS		,			-		Engineer or the Responsible Party (if not a State			=	Report].			
n - r	ioritize-	for all based and address dis-	District.				e Responsible Party (if not a State owned bridge				aa.ia aailabla1			l l

## REMARKS

#### **BRIDGE ORIENTATION**

Bridge carries Dyke road over Poucha Pond with East and West abutments.

## ITEM 58 - DECK

## Item 58.1 - Wearing surface

The wearing surface-deck is one layer of timber planking. The upper portion has wheel path wear with nails slightly lifted, see photo.

## **APPROACHES**

## Approaches a - Appr. pavement condition

The approach roadway is gravel-sand.

#### **ITEM 59 - SUPERSTRUCTURE**

## **SuperStructure Load Vibration Notes**

minor vibration

#### TRAFFIC SAFETY

# Item 36a - Bridge Railing

Timber post and rail non standard.

### <u>Item 36b - Transitions</u>

Continued post and rail non standard.

## <u>Item 36c - Approach Guardrail</u>

Continued post and rail non standard.

#### Item 36d - Approach Guardrail Ends

Blunt ends non standard.

#### Photo Log

Photo 1: West view of pile bents from channel.

Photo 2: North view of main span.

Photo 3: Sixth cap from West South nose split.

Photo 4: East abutment

Photo 5: Roadway wheel path nails lifting.



Photo 1: West view of pile bents from channel.



Photo 2: North view of main span.

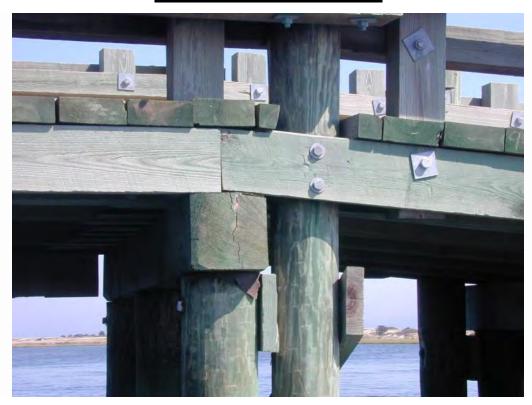


Photo 3: Sixth cap from West South nose split.



Photo 4: East abutment



Photo 5: Roadway wheel path nails lifting.

# Pontis BMS Element Inspection

09/14/2005 BDEPT# E-07-004 Date

B.I.N. **43B** District Bridge Inspection Eng'r Daniel A. Palmer

Item 8 E07004-43B-MUN-NBI

Inspecting Mass. Highway Dept. Span Group 1 Agency

Town Edgartown Team **Peter Dufresne** Leader District 5

> Team Member(s)

E1#	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Timber, Bare	EA/SF	3	1,151.7	<b>X</b> %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged Pile, Timber	EA	3	45.0	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap, Timber	LF	3	134.5	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
332	Bridge Railing, Timber	LF	3	150.9	<b>%</b>	100.0 %	0.0 %	0.0 %		

# Pontis BMS Element Inspection

В	DEPT#	E-07-004				Previ	ous Inspection		Current Inspe	ection	
	B.I.N.	43B			Date	09/14	1/05				
	Item 8	E07004-43B-MUN-NBI			District Bridge	Dani	el A. Palmer				
Spar	n Group	1			nspection Eng'r		ci A. i aillici				
		Edgartown			Inspecting Agency		s. Highway De	ept.			
	District	5			Team Leader	Peter					
					Team						
El#	Element 1	Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Tir	nber, Bare	EA/SF	0.0 %	0.0 %	0.0 %					
111	Open Gir	der, Timber	LF	3	531.5	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutmen	t, Timber	LF	3	59.1	∑ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerge	ed Pile, Timber	EA	3	45.0	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap,	Timber	LF	3	134.5	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
332	Bridge R	ailing, Timber	LF	3	150.9	፟ %	100.0 %	0.0 %	0.0 %		
	1				I					· · · · · · · · · · · · · · · · · · ·	

2-DIST B.I.N. **05 43B** 

# UNDERWATER OPERATIONS TEAM ROUTINE UNDERWATER INSPECTION REPORT

PAGE 1	OF	4	
--------	----	---	--

BR. DEPT. NO.

E-07-004

CITY/TOWN 8-STRUCTURE NO. LEVEL OF INSPECTION 93B-DATE INSPECTED **EDGARTOWN** JUN 28, 2007 E07004-43B-MUN-NBI Ш 07-FACILITY CARRIED ACCESS TO BRIDGE UNDERWATER OPERATIONS ENGINEER **HWY DIKE RD BOAT** JOHN B. DESMOND 06-FEATURES INTERSECTED DEPTH VISIBILITY TEAM LEADER (DIVE MASTER) Report submitted by: WATER POUCHA POND RANDI E. BONICA 3 m 1.5 m BOTTOM CONDITION CURRENT TEAM MEMBERS G. BROZ, J. DONAHUE, J. B. DESMOND **BOULDERS, SAND TIDAL** ITEM 60 **ITEM 61** ITEM 62 CHANNEL & 7 7 Ν SUBSTRUCTURE **CULVERTS** CHANNEL PROTECTION DEF DEF DEF 1. Abutments 7 Ν 1. Channel Scour 1 Roof N N a. Pedestals 7 2. Embankment Erosion 2. Floor Ν b. Bridge Seats 8 Ν 3. Debris 3. Walls N 8 c. Backwalls Ν 4. Vegetation 4. Headwall 8 d. Breastwalls 5. Utilities Ν 5. Wingwall Ν 8 e. Wingwalls 6 Ν 6. Rip-Rap/Slope Protection 6. Pipe Ν f. Slope Paving/Rip-Rap 8 Ν 7. Aggradation 7. Protective Coating N g. Pointing 8. Fender System Ν 8. Embankment Ν Ν h. Footings Ν N 9. Wearing Surface a. Piles 8 i. Piles Ν Ν b. Diagonal Bracing 10. Railing 7 i. Scour c. Horizontal Bracing N 11. Sidewalks N 8 k. Settlement d. Wales Ν Ν 12. Utilities Ν N N e. Fasteners 13. Member Alignment 2. Piers or Bents Ν Ν Ν f. Ladders 14. Deformation N Ν a. Pedestals Ν 15. Scour N b. Caps Ν ITEM 59 SUPERSTRUCTURE 16. Settlement DEF N Ν c. Columns 17. d. Stems/Webs/Pierwalls Ν N 18. Ν Ν e. Pointing N UNDERMINING (Y/N) Ν f. Footing DEFICIENCY REPORTING GUIDE Ν g. Piles A defect in a structure that requires corrective action Ν h. Scour **CATEGORIES OF DEFICIENCIES:** Ν i. Settlement M= Minor Deficiency- - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor scouring, etc. Ν į. S= Severe/Major Deficiency
Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroding rebars, Deteriorated timber piles, Considerable settlement, Considerable scouring or undermining, etc. N 3. Pile Bents 8 C-S= Critical Structural Deficiency- Adeficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity N a. Pile Caps of the bridge. A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples C-H= Critical Hazard Deficiency-8 b. Piles include but are not limited to: Any part of piles or fender system which are projecting outward and may become a safety hazard for the navigational traffic, etc. c. Diagonal Bracing 8 URGENCY OF REPAIR: N d. Horizontal Bracing [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive I=Immediate-7 e. Fasteners further instruction from him/her.] [Action/Repair should be initiated by District Maintenance Engineer or the responsible party (if not a State owned bridge) upon receipt of the Inspection Report.] A=ASAP-Ν UNDERMINING (Y/N) P=Prioritize-[Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available.

# REMARKS

#### **GENERAL REMARKS**

The timber deck bridge is a timber pile bent structure with two pile abutments and seven pile bents. Each bent and abutment has three piles below the timber cap and one pile at upstream and downstream ends that support the bridge rails. Timber diagonal bracing is between piles in each bent.

Both abutments have timber piles and timber planks, which act as bulkheads. Wingwalls are also timber piles and timber planks.

**Note:** Bridge is best inspected at high tide. Access to the bridge is very shallow, even at high tide.

#### **Orientation:**

Abutments are labeled left (West) and right (East), looking downstream. Bents are numbered from left to right.

#### ITEM 60 - SUBSTRUCTURE

#### Item 60.3 - Pile Bents

#### Item 60.3.b - Piles

Pressure treated timber piles are in good condition with no problems noted.

#### Item 60.3.e - Fasteners

Fasteners below the waterline are slightly rusted.

#### ITEM 61 - CHANNEL AND CHANNEL PROTECTION

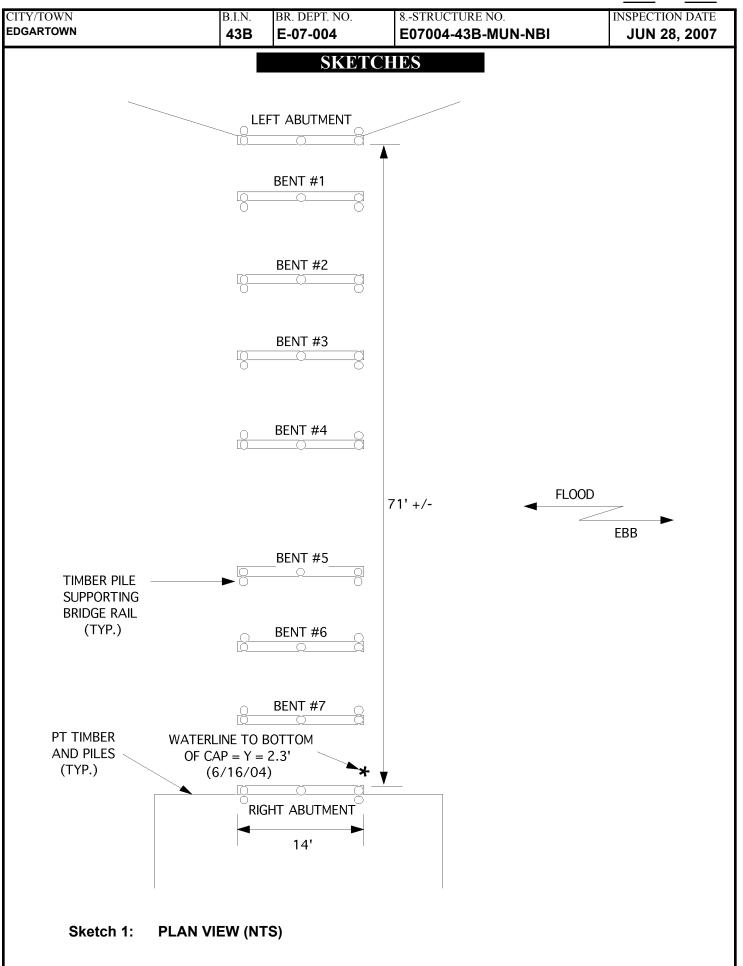
## <u>Item 61.6 - Rip-Rap/Slope Protection</u>

At the right (East) side, at the end of the newer pressure treated piles and timber plank bulkheads, are original piles and timber planks along the sides of the roadway. The piles are dry with some delamination and the vertical timbers are dry with some deterioration, up to 100% section loss. These bulkheads are not part of the bridge.

#### Sketch / Chart Log

Sketch 1: PLAN VIEW (NTS)

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)



CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	JUN 28, 2007

# CHARTS

# SCOUR MONITORING CHART DOWNSTREAM END

	6/16/04	6/28/07
LEFT ABUTMENT	2.8'	2.9'
BENT #1	4.3'	4.5'
BENT #2	6.8'	6.8'
BENT #3	9.2'	9.2'
BENT #4	9.9'	9.7'
BENT #5	10.8'	10.8'
BENT #6	11.1'	11.0'
BENT #7	9.8'	9.9'
RIGHT ABUTMENT	7.6'	7.7'
Υ	2.3'	2.5'
CORRECTION FACTOR		+0.2'

#### NOTES:

- 1. WATERLINE TO BOTTOM OF RIGHT ABUTMENT CAP, DOWNSTREAM END = Y = 2.3' (6/16/04).
- 2. SOUNDINGS ADJUSTED TO 6/16/04 WATERLINE WITH CORRECTION FACTOR.

PAGE 1 OF 6

2-DIST B.I.N. **05 43B** 

# STRUCTURES INSPECTION FIELD REPORT ROUTINE INSPECTION

BR. DEPT. NO. **E-07-004** 

EDGARTOWN									o. POINT 41-STATUS B:OPEN		90-ROUTINE INSP. DATE <b>SEP 25, 2007</b>			
07-FACILITY CARRIED  HWY DIKE RD				MEMORIAL NAM	E/LOCAL 1	NAME		27-	7R BUILT 1995	106-YR REBUILT <b>0000</b>	YR R		B'D (NO	ON 106)
06-FEATURES INTERSECTED				26-FUNCTIONAL	CLASS		DIST. E	.↓ BRIDG	E INSPECT	ION ENGINEER	D. A.	Palme	r	
WATER POUCHA P	OND	)		Rural Loca	al									
43-STRUCTURE TYPE Timber Stringer/Gi	rder			22-OWNER Town Agency	21-MAIN Town A	TAINER Agency	TEAM	LEAD	ER <b>J. S. Dal</b>	ton				
107-DECK TYPE <b>Timber</b>				WEATHER Sunny	TEMP. (ai	*	TEAM S. R							
ITEM 58	7		ITR	ZM 59	-	8			ITEM	60		7		
DECK	′	DEF	SUP	ERSTRUCTU	RE	<u> </u>	] DE	F	SUBST	RUCTURE		′		DEF
1.Wearing surface	6	M-P		ingers		8	1 -		1. Abut		Dive	Cur	8	DEI
2.Deck Condition	7	-	l —	orbeams		N	<b> </b>	=	a. Pedes	tals	N	N		-
3.Stay in Place Forms	N	_	3.Flo	or System Brac	ing	N	1		b. Bridge		N	N		-
4. Curbs	N	_	<b>I</b>	ders or Beams		N	<b> </b>	_	c. Backv d. Breas		N 8	N 8		-
	N		5.Tru	sses - General		N	<u> </u>	=	e. Wingv	valls	8	8		-
5. Median			a.	Upper Chords	ı	1	<b>-</b>		· ·	Paving/Rip-Rap	N	N		
6.Sidewalks	N		b.	Lower Chords	ı	1	<b>—</b>		g. Pointi h. Footir		N	N N		
7.Parapets	N	-		Web Members		J			i. Piles	.90	8	8		-
8.Railing	8	-		Lateral Bracing		_	<u> </u>		j. Scour		7	Н		-
9.Anti Missile Fence	N	-		Sway Bracings			-	_	k. Settle	ment	8	8	-	-
10.Drainage System	N	-		Portals			-	_	m.		N N	N N		-
11.Lighting Standards	N	-				N		_	2. Piers	or Bents			N	
12.Utilities	9	_		End Posts & Hangers	r	N	1 -	_	a. Pedes	tals	N	N		-
13.Deck Joints	N			nn Plt's, Gusset	c & Anal		- -	_	b. Caps c. Colun	200	N	N		-
				ver Plates	s & Allyli	N	-	_		:/Webs/Pierwalls	N	N		
14.	N	-				N	-	_	e. Pointi	ng	N	N		-
15.	N	-		aring Devices			-	_	f. Footin	ng	N	N		-
16.	N	-		iaphragms/Cros	s Frames		<b>-</b>	_	g. Piles h. Scour	•	N	N		-
	N	s		ivets & Bolts		N	-		i. Settle		N	N		-
CURP DEVEAL	<u>,</u>	N	12.W	elds		N	-		j.		N	N		-
(In millimeters)	<b>'</b>	IN	13. M	ember Alignmer	nt	9	-	.	<i>k.</i> 3. Pile 1	Donta	N	N		-
APPROACHES		DEF	14. Pa	aint/Coating		N	-				NI.	0	8	
a. Appr. pavement condition	N	_	15.			N	-	.	a. Pile C b. Piles	aps	N 8	8		
			Voar	Painted	N	_				nal Bracing	8	8		-
b. Appr. Roadway Settlement	6	M-P	Teal	railited						ontal Bracing	N	N		-
c. Appr. Sidewalk Settlement	N	-		ISION DAMAGE:		-	(		e. Faste	ners	7	7	L	-
d.	N	-		DEFLECTION:			vere (	)	UNDERN	MINING (Y/N) If Y	ES ple	ase e	xplain	N
OVERHEAD SIGNS (Attached to bridge)	Y/N)	N DEF	None	PUBRATION:  e(X) Minor()  VIBRATION:  e() Minor(X)	Please ex	plain		)	None (	ON DAMAGE:	odera	te (	) Sev	ere ( )
a. Condition of Welds	N	-	L			. , 50	- \		SCOUR: <u>Please explain</u> None ( <b>X</b> ) Minor ( ) Moderate ( )			) Sev	ere ( )	
b. Condition of Bolts	N	-	Any I	Fracture Critical	itical Member: (Y/N)					o /=: ·	De:	t): 8		
c. Condition of Signs N -			Cracks: (Y/N)				re Report):			i): o				
			,		IN				93B-U/	W (DIVE) Insp		06/	28/20	007
V-UNIKNO														0\/ED

CITY/	TOWN	V			B.I.1	N.	BR. DEPT. NO. 8	STRU	JCTU:	RE NO.		INSPECTIO	N DA	ATE
	ARTO				43					B-MUN-NE	31	SEP 2		
TUNI	EM 61				ightharpoonup		TEM 36 TRAFFIC SAF	FTY			ACCESSIE	RILITY	(Y/N	J/P)
					7		TRAFFIC SAF	36	COND	DEF	ACCESSIE		Veeded	
	NNE	L & L PROTECTION	A.T			Α.	Bridge Railing	0	8		Lift Bucket		N	N
СПА	IVIVE	LPKUIECIIO	٧			B. '	Transitions	0	8		Ladder		N	N
<u> </u>			Dive	Cur	DEF	C.	Approach Guardrail	0	8		Boat		Υ	Υ
1.Ch	annel	Scour	7	Н		D.	Approach Guardrail Ends	0	8		Waders		N	N
2.Em	bankn	nent Erosion	7	8	<u> </u>	WE	EIGHT POSTING	Not A	pplica	ble	Inspector 50		N	N
3.Del	bris		8	8	_		Н	3	3S2	Single	Rigging		N	N
4.Veg	getatio	n	8	8	-	Ac	ctual Posting 09	14	21	N	Staging		N	N
5.Util			N	N	_	Re	ecommended Posting 09	14	21	N	Traffic Conti	ol	N	N
		Slope Protection	6	8	_			UDMT Da		00/00/0000	RR Flagger		N	N
_	gradat	-	8	Н	-	VVG	At bridge			er Advance	Police		N	N
	•		N	N	<del>-</del> -		gns In Place E	W	E	W	Other:		- NI	NI NI
ð.Fei	nder S	ystem	N	IN	<del>-</del>	(Y=	=Yes,N=No, R=NotRequired)	Υ	N	N			N	N
<b> </b>			<u> </u>			Leg	gibility/	8			TOTAL HO	OURS	,	12
<b> </b>				<u> </u>			,			<u> </u>				
						CLE No		N in	ft	S in meter	PLANS	(Y/N	1): [	Υ
CTD5							tual Field Measurement	0		0	TIOD)			
		OW VELOCITY:	,				sted Clearance	0			(V.C.R.)	(Y/N):	N	
Tidal (	X) Higr	n ( ) Moderate ( ) L	.ow (	) Nor	1e ( )		At bridge			Advance	TAPE#:			
ITEM 61	(Dive R	eport): <b>7</b> ITEM 61	l (This	s Repo	ort): 8	(Y=	gns In Place =Yes,N=No,	S	N	s				
	•					NR	R=Not Required)			$\exists \vdash \exists \sqcup$	List of field tes	ts performed:		
93b-U	J/W IN	<b>SP. DATE:</b> 06	5/28/	/2007	7		gibility/ sibility							
RATI	NG.						<del></del>			If YE	S please give pr	iority:		
Rating	Repo	rt (Y/N): <b>Y</b>			ı	Rec	ommend for Rating or Rerat	ing (Y/	N):		H( ) MEDIUM		)	
Date:		01/01/2005			I			•	, <sub>_</sub>			·		
		on data at time of e	vistir	na ra	tina	REA	ASON: √D.P.							
	•			_	6/2003									
							- COMPUTION DA			TDE .				
	T		$\overline{}$				CONDITION RA	IING	GU	(For	Items 58, 59, 60	and 61)		
	CODE	CONDITION	$\perp$				DEFECTS							
<u> </u>	N	NOT APPLICABLE	4											
G	9	EXCELLENT	-		nt condition.									
G	8	VERY GOOD	-		lem noted. ninor problen									
G	7	GOOD	-				some minor deterioration.							
F	5	SATISFACTORY	_				ents are sound but may have minor sect	ion loss. (	cracking	enalling or scour.				
P	4	POOR	+				terioration, spalling or scour.	OII 1000, .	oracin	, spanning or coca				
P	3	SERIOUS	Lo	oss of s	section, dete	erioratio	on, spalling or scour have seriously affect	cted prima	ary struc	tural components. L	ocal failures are pos	ssible. Fatigue cra	icks	
	3	SERIOUS					concrete may be present.  primary structural elements. Fatigue cra	oke in ste	al or she	ear cracks in concrete	may be present or	scour may have		
С	2	CRITICAL	re	emoved	d substructui	re supp	port. Unless closely monitored it may be	necessar	ry to clos	se the bridge until cor	rective action is tak	en.		
С	1	"IMMINENT" FAILURE					ion loss present in critical structural com ut corrective action may put it back in lig			us vertical or horizont	al movement affecti	ng structure stabl	lity.	
	0	FAILED		Out of s	ervice - bey	and cor	rrective action.							
		FAILED				7110 00			NG (					
DEEL	CIENC	Y: A defect in a stru	rotura	that re	equires corre	ctive at	DEFICIENCY REPO	<u>)KIIII</u>	NG	GUIDE				
						Ulive ac	Cuon.							
		ES OF DEFICIENC Deficiency - Deficiencies			ır in nature, ge	nerally d	do not impact the structural integrity of the bridge	and could	easily be	renaired. Examples inclu	de but are not limited to	Snalled concrete, N	Minor pot	
		noies, ivilnor	COHOSI	ion of ste	eei, iviirior scou	iring, Cio	ogged drainage, etc.							
		- 00	noded	rebars, C	Considerable s	settlemen	in nature and need more planning and effort to rent, Considerable scouring or undermining, Mode	erate to exte	ensive cor	rosion to structural steel	with measurable loss of	section, etc.		
							element of a bridge that poses an extreme unsaf							
С-Н=	: Critic	al Hazard Deficienc	:y -	A deficie	ency in a comp	onent or	or element of a bridge that poses an extreme haz	ard or unsa	afe condition	on to the public, but does	not impair the structura	Il integrity of the bridg	je. Exam	ples
				etc.					110.0 2		injunioo to perraise .,	villouing document		g,
		OF REPAIR:		to at Dia	: 1-4 Dildes In		To the Control of the Deficiency and to			Confirmation to the second				
A = AS	mediate SAP-	,	-		-		Engineer (DBIE) to report the Deficiency and to Engineer or the Responsible Party (if not a State			=	Report].			
	ioritize-						e Responsible Party (if not a State owned bridge							

## REMARKS

#### **BRIDGE ORIENTATION**

Dyke Road over Poucha Pond has an east/west orientation.

#### **GENERAL REMARKS**

The weight posting signs at the bridge are improperly placed. See Photos 1 and 2. There are no advance posting signs. However, the east approach is now a dead end because of the breach at south beach.

#### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

The deck/wearing surface consists of a single course of 4x10 pressure treated timbers. There is sand on the bridge contributing to the wear in the wheel paths, causing the deck nails to protrude above the level of the wearing surface. The nails could get pulled out if the bridge was plowed. The deck timbers are still tight but the tops are uneven, resulting in a minor washboard effect. See Photos 3 - 5.

#### **Item 58.2 - Deck Condition**

See Item 58.1 Wearing Surface. The deck is in very good condition except for the wear on top.

#### **APPROACHES**

## Approaches b - Appr. Roadway Settlement

The gravel approaches are rutted at both ends of the bridge.

#### TRAFFIC SAFETY

#### Item 36a - Bridge Railing

Timber rails on piles, nonstandard.

## <u>Item 36b - Transitions</u>

Continuation of the timber rails on piles, nonstandard.

#### Item 36c - Approach Guardrail

Timber rails on piles, nonstandard.

#### Item 36d - Approach Guardrail Ends

Blunt ends, nonstandard.

#### Photo Log

Photo 1: West approach showing weight posting sign on left approach rail

Photo 2: East approach showing weight posting sign on left

Photo 3: South elevation looking west

Photo 4: Wearing surface Photo 5: Wheel path wear



Photo 1: West approach showing weight posting sign on left approach rail



Photo 2: East approach showing weight posting sign on left



Photo 3: South elevation looking west



Photo 4: Wearing surface



Photo 5: Wheel path wear

# Pontis BMS Element Inspection

09/25/2007 BDEPT# E-07-004 Date

B.I.N. **43B** Daniel A. Palmer

District Bridge Inspection Eng'r Item 8 **E07004-43B-MUN-NBI** 

Inspecting Mass. Highway Dept. Span Group 1 Agency

Town Edgartown Team James S. Dalton Leader District 5

Team Member(s)

El#	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Timber, Bare	EA/SF	3	1,151.7	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged Pile, Timber	EA	3	45.0	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap, Timber	LF	3	134.5	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
332	Bridge Railing, Timber	LF	3	150.9	<b>%</b>	100.0 %	0.0 %	0.0 %		

# Pontis BMS Element Inspection

В	DEPT#	E-07-004				Previ	ous inspection	•	Current Inspe	ection	
	B.I.N.	43B			Date	09/25	5/07				
	Item 8	E07004-43B-MUN-NBI			District Bridge		el A. Palmer				
Spar	Group	1	Inspection Eng'r  Inspecting Mass. Highway De								
	Town District	Edgartown 5			Inspecting Agency		. Highway De	pt.			
	District	3									
					Team Member(s)						
El#	Element	Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Tir	nber, Bare	EA/SF	3	1,151.7	∑ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Gir	der, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber			3	59.1	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerge	ed Pile, Timber	EA	3	45.0	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap,	Timber	LF	3	134.5	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
332	Bridge R	ailing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		
	l			l							

PAGE 1 OF 7

2-DIST B.I.N. 05 43B

# STRUCTURES INSPECTION FIELD REPORT

**ROUTINE INSPECTION** 

BR. DEPT. NO. E-07-004

CITY/TOWN	STRUCTURE NO. 11-Kil					P:POSTED 90-ROUTH				ΓΙΝΕ INSP. DATE					
EDGARTOWN				E07004-43	B-M	IUN-I	NBI		00	1.046	1.103125	S	EP	10,	2009
07-FACILITY CARRIED  HWY DIKE RD				MEMORIAL NAM	E/LOC	AL NAN	Æ.		27-	YR BUILT 1995	106-YR REBUILT <b>0000</b>	YR F		3'D (N	ON 106)
				26-FUNCTIONAL	CLASS	ı		DIST E	PRIDG			D A	Palme		
				Rural Loca		•		D131. L	KIDO	E INSI ECTI	ON ENGINEER	D. A.	i ainic		
	UND					A DITA D	IED	TEAN	LEAD	ED D D C					
702 : Timber String	jer/Gi	rder		22-OWNER Town Agency		aintain n <b>Age</b>		IEAM	LEAD	ER <b>P. Dufre</b>	sne				
107-DECK TYPE 8 : Timber				weather sunny	TEMP	<sup>2. (air)</sup> 20°C		TEAM <b>W. F</b>							
ITEM 58	7		me	M 59			8			ITEM	60		7		
DECK		DEF	SUP	ERSTRUCTUI	RE			] DE	F	SUBST	RUCTURE				DEF
1.Wearing surface	6	M-P	1.Stri	ngers			N	-		1. Abut	ments	Dive	Cur	8	
2.Deck Condition	7	-	2.Flo	orbeams			N	-		a. Pedes		N	N		-
3.Stav in Place Forms	N	-	3.Flo	or System Braci	ng		N	_		b. Bridge c. Backy		N	N		-
	N	_	4.Gird	ders or Beams			8	-	.	d. Breas		8	8		-
		<u> </u>	5.Tru	sses - General			N	-		e. Wingv		8	8		-
			а.	Upper Chords	N		'   <u> </u>	-	I	Paving/Rip-Rap	N	N N		-	
		-		Lower Chords		N		_	_	g. Pointi		N	N		-
7.Parapets		-	c.	Web Members	N		_		i. Piles		8	8		-	
8.Railing	8	-	d.	Lateral Bracing N					_	j. Scour		7 8	Н		-
9.Anti Missile Fence		-	-	Sway Bracings N						k. Settlement			8 N	-	-
10.Drainage System	N	-		Portals	N					m.		N N	N		-
11.Lighting Standards	N	-	g. End Posts			N			_	2. Piers			N		
12 Utilities	9	-	<u> </u>	& Hangers		N			_	a. Pedes	tals	N	N		-
	N	_			Pit's, Gussets & Angles N			-	_	b. Caps c. Colum	N N	N			
				er Plates				-	_	d. Stems	N	N			
	N	-						-	_	e. Pointi	N	N		-	
15.	N	-	<b>3</b>					-	_	f. Footin	N	N		-	
16.	N	-					N	-	_	g. Piles h. Scour	N	N		-	
	u .	s		vets & Bolts			N	-	_	i. Settle		N	N		-
CURR DEVEAL		N	12.W				N	-	_	j.		N	N		-
(In millimeters)	<u>'</u>		13. Me	ember Alignmer	nt		9	-		<i>k.</i> 3. Pile I	Rents	N	N	•	-
APPROACHES		DEF	14. Pa	int/Coating			N	-		a. Pile C		N	8	8	
		15.					N	-		b. Piles	aps	8	8		-
	_	_		Year Painted N			]	c. Diagonal Bracing			8	8		-	
, ,		IVI-F									ontal Bracing	7	N 7		-
		-	_	SION DAMAGE: e(X) Minor()						e. Faster	iers	1	1	ļ	
d.	-				e explai		vere (	_	UNDERN	IINING (Y/N) If Y	ES ple	ease e	xplain	N	
OVERHEAD SIGNS	Y/N)	N		e( <b>X</b> ) Minor( )		•		vere (	)	COLLISIO	ON DAMAGE:				-
(Attached to bridge)	, ,		LOAD	VIBRATION:	Please	e explai	in				() Minor ( ) Me	odera	te (	) Sev	rere ( )
a. Condition of Welds N		DEF -	None ( ) Minor ( X ) Moderate				) Se	vere (	SCOUR: <u>Please explain</u> None ( <b>X</b> ) Minor ( ) Moderate ( ) Severe					rere ( )	
b. Condition of Bolts	N	-	Any F	racture Critical	Meml	ber: (Y	′/N)	N					oderate ( ) Severe		
c. Condition of Signs	N	-	-	Cracks: (Y/N)	N	¬ `	•	14			e Report): 7	<i>I-6</i>	0 (This		
WATER POUCHA PONI  43-STRUCTURE TYPE 702: Timber Stringer/G  107-DECK TYPE 8: Timber  ITEM 58 DECK  1. Wearing surface 2. Deck Condition 3. Stay in Place Forms 4. Curbs N 5. Median N 6. Sidewalks N 7. Parapets N 8. Railing 9. Anti Missile Fence 10. Drainage System N 11. Lighting Standards N 12. Utilities 9 13. Deck Joints N 14. N 15. N 16. N CURB REVEAL (In millimeters)  APPROACHES  a. Appr. pavement condition b. Appr. Roadway Settlement d. N OVERHEAD SIGNS (Attached to bridge)  a. Condition of Welds b. Condition of Bolts N										93 <i>B-U/</i>	N (DIVE) Insp	L	U6/	28/2	UU <i>1</i>
V-UNIKNO		NI.	NOT ADDI IC	ADI	_		יסכי	L/INI	ACCESSIBLE R=REMOVED						

CITY/						I.N.		3STRUCTURE 1			INSPECTIO						
EDGA	\RTO	WN			43	3B		E07004-43B-	-MUN-NE	3I	SEP 1	0, 20	)09				
ITF	EM 61	1		1	7	1	ITEM 36 TRAFFIC SAF	ETY	5	ACCESSI	BILITY	<b>(Y/</b> I	N/P)				
CHANNEL &						⊒ال	. Bridge Railing	36 COND 8	DEF -	Lift Bucket		Needed					
CHANNEL PROTECTION							3. Transitions		N	N							
			Dive	e Cur	DEF		C. Approach Guardrail	0 8	<u> </u>	Ladder		N	N				
1 Ch	annel	I Scour	7	H		$\neg$ $\vdash$ $\vdash$	). Approach Guardrail Ends	0 8	!	Boat		Y N	Y				
		ment Erosion	7	8	<del>-</del>	⊣ ا	- ' '			Waders Inspector 5		N	N				
		Ment Erosion	+ -	_	<del>-</del>	-	EIGHT POSTING H	Not Applicable 3 3S2 Singl		Rigging	, <del>U</del>	N	N				
3.Deb			8	8	-	_   _	Actual Posting 09	3 352 Singi		Staging		N	N				
_	getatio	on	8	8	-	_			=	Traffic Con	ntrol	N	N				
5.Util			N	N	<u> </u>	_   R	Recommended Posting 09			RR Flagger		N	N				
6.Rip	-Rap/	/Slope Protection	6	8	-	_   w	Vaived Date: 00/00/0000 E.	JDMT Date: 00/0	00/0000	Police		N	N				
7.Ag	grada	ation	8	Н	-		At bridge			Other:							
8.Fer	nder S	System	N	N	<b>—</b>	(Y	igns In Place Y=Yes,N=No,	W	w	Contact tov	wn	N	N				
						_   NF	IR=NotRequired)	Y   Y   8	Y       8			+	<del></del>				
						Vis	isibility 8	8 8 8	8 8	TOTAL H	OURS		12				
								N S	in meter	PLANS	(Y/N	N):	Υ				
			_				VOI		in meter				<u> </u>				
		LOW VELOCITY:					ctual Field Measurement		0	(V.C.R.)	(Y/N):	N	Í				
Tidal (	X) Hig	gh ( ) Moderate ( ) L	_ow (	) Nor	ne ( )	' ~	osted ClearanceAt bridge			TAPE#:							
'TEM 61	· (Dive	Report): 7 ITEM 61	— ⁴ /Thi	- Repc	ort): 8		igns In Place N	SN	S	IAFETT.							
II⊑m √.	(DIV.	reports.		Kep	<i>ry.</i>	_   NF	Y=Yes,N=No, IR=Not Required)	N N	N	List of field to	ests performed:	l:					
93b-L	J/W IN	<b>NSP. DATE</b> : 06	3/28/	/2007	7		egibility/ isibility										
RATI						T			If YE	S please give p	priority:						
Rating	Repo	ort (Y/N): <b>Y</b>				Rec	Recommend for Rating or Rerating (Y/N): N HIGH( ) MEDIUM( ) LOW( )										
Date:		01/01/2005				RE	REASON: √dp										
Ir		tion data at time of e	existi	ing ra	ting	/ \	ASUN. Y UP										
	•			_	6/2003			-									
	—		—	—			CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)										
	CODE	E CONDITION	$\top$				DEFECTS	Modern	(FUI	Items 58, 59, 60	) and 61)						
<u> </u>	CODE	NOT APPLICABLE	+				DEFECTS										
G	9	EXCELLENT		ler	nt condition												
G	8	VERY GOOD	_		olem noted.												
G	7	GOOD			ninor proble												
F	6	SATISFACTORY					v some minor deterioration.										
F	5	FAIR					ments are sound but may have minor sec	tion loss, cracking, spa	alling or scour.								
P	4	POOR	_				leterioration, spalling or scour.										
Р	3	SERIOUS	Lo	Loss of s	section, de	leteriorati	ation, spalling or scour have seriously affer concrete may be present.	cted primary structural	components. L	ocal failures are p	ossible. Fatigue cr	acks					
С	2	CRITICAL	A	Advance	ed deteriora	ration of	of primary structural elements. Fatigue cra pport. Unless closely monitored it may be	acks in steel or shear cr	racks in concrete	e may be present	or scour may have	<del>,</del>					
С	1	"IMMINENT" FAILURE	_ М	Major de	leterioration	n or sect	ction loss present in critical structural com- but corrective action may put it back in lig	nponents or obvious ver				lility.					
	0	FAILED					corrective action.	TR SCI FICE.									
							DEFICIENCY REP	ADTING GI	TINE .								
DEFI	CIENC	CY: A defect in a stru	ructure	that re	aquires cor	rrective		Division of the second	שענווו								
		RIES OF DEFICIENC			<del></del>												
		Deficiency - Deficiencies	s which a	are minor	or in nature,	generally	y do not impact the structural integrity of the bridg	e and could easily be repair	red. Examples incli	ude but are not limited	d to: Spalled concrete,	Minor pot	t				
		noies, willor	or corrosi	sion of ste	teer, ivillior sco	couring, Ci	Clogged drainage, etc.										
		- 00	orroded	rebais, C	Considerable	ne sememe	tensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.										
C-S=	Critic	al Structural Deficie	-	or the	e briage.		uctural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity										
С-Н=	Critic	ical Hazard Deficienc	· J	A deficie	iency in a con	nponent o	or element of a bridge that poses an extreme has c: Loose concrete hanging down over traffic or peo	eard or unsafe condition to the destrians, A hole in a sideway	the public, but does alk that may cause	a not impair the structurinjuries to pedestrians	ural integrity of the bridges, Missing section of br	ige. Exam ridge railir	ıples ng,				
URGI	ENCY	OF REPAIR:															
I = Im	ımediate	te- [Inspector(s) immedia	-		_		on Engineer (DBIE) to report the Deficiency and to		=								
A = AS P = Pri	SAP- rioritize	- ·					Engineer or the Responsible Party (if not a State	= : : :									
I - 11.	10TIUZV	5- Shall be phonized b.	Jy Disur.	of Manne	anance ⊑ngii	neer or un	the Responsible Party (if not a State owned bridge	and repairs made when to	unas anu/or manpo	JWEF IS available].							

## REMARKS

#### **BRIDGE ORIENTATION**

Dyke Road over Poucha Pond has an east/west orientation.

## ITEM 58 - DECK

#### Item 58.1 - Wearing surface

The deck/wearing surface consists of a single course of 4x10 pressure treated timbers. There is sand on the bridge contributing to the wear in the wheel paths, causing the deck nails to protrude above the level of the wearing surface. The deck timbers are still tight but the tops are uneven, resulting in a minor washboard effect. See Photos 4 and 5.

#### Item 58.2 - Deck Condition

See Item 58.1 Wearing Surface. The deck is in very good condition except for the wear on top.

#### **APPROACHES**

## Approaches b - Appr. Roadway Settlement

The gravel approaches are rutted at both ends of the bridge, see photo 3.

## TRAFFIC SAFETY

#### Item 36a - Bridge Railing

Timber rails on piles, nonstandard.

#### **Item 36b - Transitions**

Continuation of the timber rails on piles, nonstandard.

#### Item 36c - Approach Guardrail

Timber rails on piles, nonstandard.

## <u>Item 36d - Approach Guardrail Ends</u>

Blunt ends, nonstandard.

#### Photo Log

Photo 1: West at bridge weight posting sign. Photo 2: East at bridge weight posting sign.

Photo 3: West approach settlement.

Photo 4: Timber wearing surface abrasion.

Photo 5: Two bent nails only.

Photo 6: General underside main span.

Photo 7: Southwest pile bents. Photo 8: Southeast pile bents.



Photo 1: West at bridge weight posting sign.



Photo 2: East at bridge weight posting sign.



Photo 3: West approach settlement.



Photo 4: Timber wearing surface abrasion.



Photo 5: Two bent nails only.



Photo 6: General underside main span.



Photo 7: Southwest pile bents.



Photo 8: Southeast pile bents.

# Pontis BMS Element Inspection

09/10/2009 BDEPT# E-07-004 Date

B.I.N. **43B** District Bridge Inspection Eng'r Daniel A. Palmer

Item 8 E07004-43B-MUN-NBI

Inspecting Mass. Highway Dept. Span Group 1 Agency

Town Edgartown Team **Peter Dufresne** Leader District 5

> Team Member(s)

Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
Deck, Timber, Bare	EA/SF	3	1,151.7	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
Open Girder, Timber	LF	3	531.5	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
Abutment, Timber	LF	3	59.1	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
Submerged Pile, Timber	EA	3	45.0	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
Pier Cap, Timber	LF	3	134.5	%	100.0 %	0.0 %	0.0 %	0.0 %	
Bridge Railing, Timber	LF	3	150.9	<b>%</b>	100.0 %	0.0 %	0.0 %		
	Element Name  Deck, Timber, Bare  Open Girder, Timber  Abutment, Timber  Submerged Pile, Timber  Pier Cap, Timber  Bridge Railing, Timber	Deck, Timber, Bare  EA/SF  Open Girder, Timber  LF  Abutment, Timber  LF  Submerged Pile, Timber  EA  Pier Cap, Timber  LF	Deck, Timber, Bare  EA/SF 3  Open Girder, Timber  LF 3  Abutment, Timber  LF 3  Submerged Pile, Timber  EA 3  Pier Cap, Timber  LF 3	Deck, Timber, Bare  EA/SF 3 1,151.7  Open Girder, Timber  LF 3 531.5  Abutment, Timber  LF 3 59.1  Submerged Pile, Timber  EA 3 45.0  Pier Cap, Timber  LF 3 134.5	Deck, Timber, Bare EA/SF 3 1,151.7	Deck, Timber, Bare         EA/SF         3         1,151.7	Deck, Timber, Bare         EA/SF         3         1,151.7	Deck, Timber, Bare         EA/SF         3         1,151.7         ⋈         100.0 %         0.0 %         0.0 %           Open Girder, Timber         LF         3         531.5         ⋈         100.0 %         0.0 %         0.0 %           Abutment, Timber         LF         3         59.1         ⋈         100.0 %         0.0 %         0.0 %           Submerged Pile, Timber         EA         3         45.0         ⋈         100.0 %         0.0 %         0.0 %           Pier Cap, Timber         LF         3         134.5         ⋈         100.0 %         0.0 %         0.0 %	Deck, Timber, Bare         EA/SF         3         1,151.7         ⋈         100.0 %         0.0 %         0.0 %           Open Girder, Timber         LF         3         531.5         ⋈         100.0 %         0.0 %         0.0 %         0.0 %           Abutment, Timber         LF         3         59.1         ⋈         100.0 %         0.0 %         0.0 %         0.0 %           Submerged Pile, Timber         EA         3         45.0         ⋈         100.0 %         0.0 %         0.0 %         0.0 %           Pier Cap, Timber         LF         3         134.5         ⋈         100.0 %         0.0 %         0.0 %         0.0 %

# Pontis BMS Element Inspection

В	DEPT#	E-07-004				1161	ous mspection		Current msp	ection	
	B.I.N.	43B			Date	09/10	0/09				
Spar	Item 8 Group	E07004-43B-MUN-NBI 1			District Bridge nspection Eng'r		el A. Palmer				
	Town District	Edgartown 5			Inspecting Agency						
					Team Leader		Dufresne				
					Team Member(s)						
El#	Element 1	Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Tir	nber, Bare	EA/SF	3	1,151.7	⊠ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Gir	der, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutmen	t, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerge	ed Pile, Timber	EA	3	45.0	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap,	Timber	LF	3	134.5	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
						$ \Box $					
332	Bridge R	ailing, Timber	LF	3	150.9	⊠ %	100.0 %	0.0 %	0.0 %		
	ĺ			l							

2-DIST **05** 

B.I.N. **43B** 

# UNDERWATER OPERATIONS TEAM ROUTINE UNDERWATER INSPECTION REPORT

BR. DEPT. NO. **E-07-004** 

CITY/TOWN EDGARTOWN			8-STRUCTURE N	o. <b>1-43B-MUN</b> -	NRI	LEVEL C	OF INSPECTION		93B-DATE INSPECTED <b>JUL 14, 2010</b>		
07-FACILITY CARRIED			ACCESS TO BRII			RWATER OPERATIONS ENGINEER				.010	
HWY DIKE RD			BOAT	JGE			PERALIONS ENGIN DESMOND	EEK			
06-FEATURES INTERSECTED			DEPTH	VISIBILITY			/E MASTER)	Report submitted	bv:		
WATER POUCHA PON	ND		3 m	1 m		DON BI	· · · · · · · · · · · · · · · · · · ·				
BOTTOM CONDITION		CURRI		TEAM MEMBERS	3						
BOULDERS, SAND		TID	AL	R. E. BON	ICA, W.	J. CO	LLERAN, J.	B. DESMO	ND		
ITEM 60			ITEM 61	CHAN	NEL &	<b>-</b>	ITEM 62			-	
SUBSTRUCTURE		7 DEF		L PROTECTI		7 DEF	CULVERTS	3		N DEF	
1. Abutments	7		1. Channel	Scour	7	-	1. Roof		N	-	
a. Pedestals	N	-	2. Embankn	nent Erosion	6	-	2. Floor		N	-	
b. Bridge Seats	N	-	3. Debris		8	-	3. Walls		N	-	
c. Backwalls	N	-	4. Vegetatio	n	8	-	4. Headwall		N	-	
d. Breastwalls	8	-	5. Utilities		N	-	5. Wingwall		N	-	
e. Wingwalls	8	-	6. Rip-Rap/S	Slope Protection	6	-	6. Pipe		N	-	
f. Slope Paving/Rip-Rap	N	-	7. Aggradat		8	-	7. Protective	Coating	N	-	
g. Pointing	N	-	8. Fender S		N	-	8. Embankme		N	-	
h. Footings	N	-	a. Piles		N	-	9. Wearing Su	rface	N	-	
i. Piles	7	-	b. Diagon	al Bracing	N	-	10. Railing		N	-	
i. Scour	7	-	c. Horizor	ntal Bracing	N	-	11. Sidewalks		N	-	
k. Settlement	8	-	d. Wales		N	-	12. Utilities		N	-	
I.	N	-	e. Fastene	ers	N	-	13. Member A	ignment	N	-	
2. Piers or Bents	N		f. Ladders	s	N	-	14. Deformation	on	N	-	
a. Pedestals	N	-	9.		N	-	15. Scour		N	-	
b. Caps	N	-	ITEM 59	SUPERSTR	UCTUR	E	16. Settlement	t	N	-	
c. Columns	N	-			N	DEF	17.		N	-	
d. Stems/Webs/Pierwalls	N	-			N	-	18.		N	-	
e. Pointing	N	-			N	-	UNDEDMINING (	AZAD	i	N	
f. Footing	N	_					UNDERMINING (	•	1		
g. Piles	N	-					EPORTING	GUIDE			
h. Scour	N	_	DEFICIENC			requires corr	ective action.				
i. Settlement	N	_		<i>IES OF DEFICIE</i> Deficiency <sup>Deficie</sup>	ncies which are	minor in nature,	generally do not impact the	structural integrity of the	e bridge and	l could	
j.	N	-		easily t	oe repaired. Exa	imples include b	ut are not limited to: Spalled	I concrete, Minor scourii	ng, etc.		
k.	N	_	S= Severe/N	Aajor Deficiency-	include but a	re not limited to:	extensive in nature and nee Moderate to major deterior iles, Considerable settleme	ation in concrete, Expose	ed and corro	oding	
3. Pile Bents	7		C 8- C	al Structural Def			structural element of a brid			0.	
a. Pile Caps	N	-	C-S- Critic	aı sıructurai Dei	* (		or imminent failure of the e				
b. Piles	7	-	C-H= Critic	cal Hazard Defici	cond	dition to the publ	nponent or element of a brid ic, but does not impair the s	tructural integrity of the b	bridge. Exar	nples	
c. Diagonal Bracing	8	-	_				mited to: Any part of piles o safety hazard for the naviga		e projecting	outward	
d. Horizontal Bracing	N	-	URGENCY	OF REPAIR:							
e. Fasteners	6	_	_ I=Immediate	<ul> <li>[Inspector(s) immediate</li> <li>further instruction from</li> </ul>		rict Bridge Inspe	ection Engineer (DBIE) to re	port the Deficiency and t	o receive		
. 2010.1010			A=ASAP-	[Action/Repair should bridge) upon receipt o			nce Engineer or the respons	sible party (if not a State	owned		
UNDERMINING (Y/N)		N	P=Prioritize-	[Shall be prioritized by made when funds and			or the Responsible Party (if	not a State owned bridg	e) and repai	irs	

#### REMARKS

#### **GENERAL REMARKS**

The timber deck bridge is a timber pile bent structure with two pile abutments and seven pile bents. Each bent and abutment has three piles below the timber cap and one pile at upstream and downstream ends that support the bridge rails. Timber diagonal bracing is between piles in each bent.

Both abutments have timber piles and timber planks, which act as bulkheads. Wingwalls are also timber piles and timber planks.

**Note:** Bridge is best inspected at high tide. Access to the bridge is very shallow, even at high tide.

#### Orientation:

Abutments are labeled left (West) and right (East), looking downstream. Bents are numbered from left to right.

#### ITEM 60 - SUBSTRUCTURE

#### Item 60.3 - Pile Bents

#### Item 60.3.b - Piles

Pressure treated timber piles are in good condition with no problems noted.

#### Item 60.3.e - Fasteners

Fasteners below the waterline have minor rust.

#### ITEM 61 - CHANNEL AND CHANNEL PROTECTION

#### <u>Item 61.2 - Embankment Erosion</u>

At the (West) side, upstream and downstream, there is moderate erosion at the end of the wingwalls.

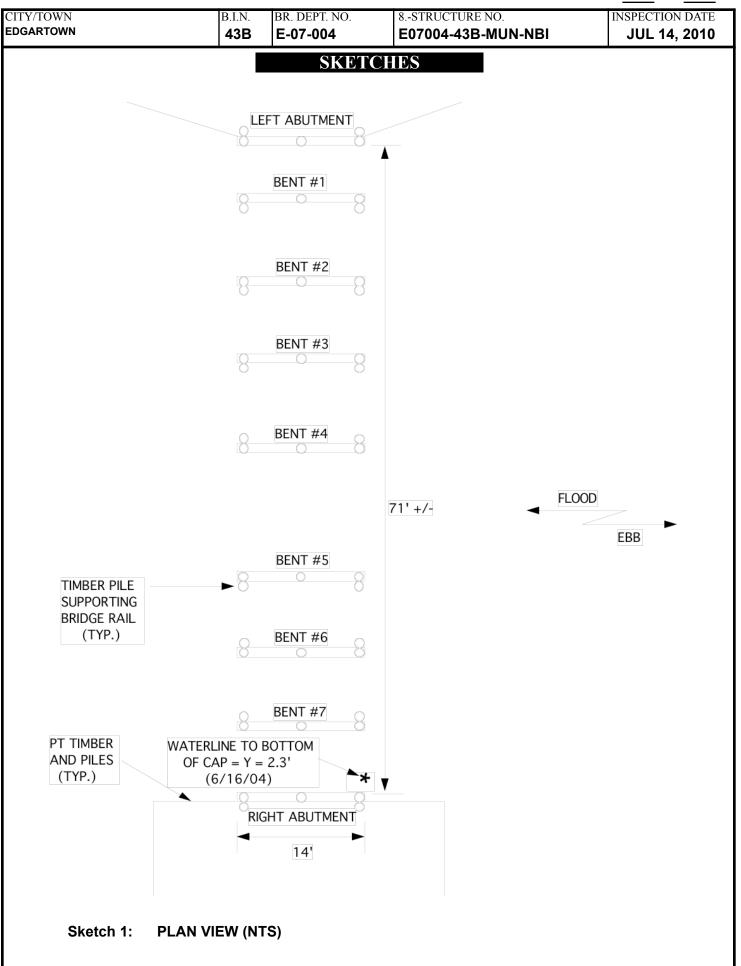
#### Item 61.6 - Rip-Rap/Slope Protection

At the right (East) side, at the end of the newer pressure treated piles and timber plank bulkheads, are original piles and timber planks along the sides of the roadway. The piles are dry with some delamination and the vertical timbers are dry with some deterioration, up to 100% section loss. These bulkheads are not part of the bridge.

#### Sketch / Chart Log

Sketch 1: PLAN VIEW (NTS)

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)



CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	JUL 14, 2010

## CHARTS

# SCOUR MONITORING CHART DOWNSTREAM END

	6/16/04	6/28/07	7/14/10
LEFT ABUTMENT	2.8'	2.9'	3.0'
BENT #1	4.3'	4.5'	4.9'
BENT #2	6.8'	6.8'	7.9'
BENT #3	9.2'	9.2'	9.2'
BENT #4	9.9'	9.7'	10.2'
BENT #5	10.8'	10.8'	11.4'
BENT #6	11.1'	11.0'	11.1'
BENT #7	9.8'	9.9'	9.0'
RIGHT ABUTMENT	7.6'	7.7'	7.0'
Υ	2.3'	2.5'	1.9'
CORRECTION FACTOR		+0.2'	-0.4'

#### NOTES:

- 1. WATERLINE TO BOTTOM OF RIGHT ABUTMENT CAP, DOWNSTREAM END = Y = 2.3' (6/16/04).
- 2. SOUNDINGS ADJUSTED TO 6/16/04 WATERLINE WITH CORRECTION FACTOR.

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)

2-DIST B.I.N. 05 43B

## STRUCTURES INSPECTION FIELD REPORT **ROUTINE INSPECTION**

BR. DEPT. NO. E-07-004

CITY/TOWN EDGARTOWN			8ST	RUCTURE NO. <b>E07004-43</b>	B-MU	JN-NB				1.046	P:POSTED				SP. DATE <b>2011</b>
07-FACILITY CARRIED  HWY DIKE RD				MEMORIAL NAM	IE/LOCAI	L NAME		2		т виігт 1995	106-YR REBUILT <b>0000</b>	YR F		3'D (N	ON 106)
06-FEATURES INTERSECTED				26-FUNCTIONAL	CLASS		DIST.	. BRII	DGE	E INSPECTI	ON ENGINEER	D. A.	Palme	r	
WATER POUCHA F	POND			Rural Loca	al										
43-STRUCTURE TYPE 702: Timber String	ger/Gi	irder		22-OWNER Town Agency		NTAINER Agenc		M LEA	ADE	ER <b>J. Spiezi</b>	0				
107-DECK TYPE  8: Timber				weather sunny	TEMP. (	(air)		м мв <b>D. F</b>			RGAST				
ITEM 58	7		III	M 59		8	1			ITEM	60		7		
DECK [	′	DEF	SUP	ERSTRUCTU	RE	0	⅃ ,	DEF		SUBST	RUCTURE		7		DEF
1.Wearing surface	6	M-P		ngers		N	7	<b>.</b>	$\neg$	1. Abut		Dive	Cur	8	
	7		I	orbeams		N	$\dashv \vdash$	_	-	a. Pedes		N	N		-
2.Deck Condition	N		1	or System Brac	ina	N	-	-	$-\parallel$	b. Bridge	Seats	N	N		-
3.Stay in Place Forms		-		ders or Beams	iiig	8	+	-	-	c. Backu		N	N		-
4.Curbs	N	-						-	$-\ $	d. Breast e. Wingw		8	8		-
5.Median	N	-		sses - General		N	<b>⊿</b>	-	$-\ $		Paving/Rip-Rap	N	N		-
6.Sidewalks	N	-		Upper Chords		N		-	-	g. Pointi		N	N		-
7.Parapets	N	-		Lower Chords		N		-	_	h. Footin	gs	N 7	N 8		-
8.Railing	8	_	c.	Web Members		N		-	_	i. Piles i. Scour		7	Н		-
	N	_	d.	Lateral Bracing		N		-		k. Settle		8	8		-
9.Anti Missile Fence			e.	Sway Bracings		N		-		I.		N	N		-
10.Drainage System	N	-	f.	Portals		N		-		m.	or Bents	N	N		-
11.Lighting Standards	N	-	g.	End Posts		N		-				١		N	
12.Utilities	8	-	6.Pin	& Hangers		N		-		a. Pedes b. Caps	tals	N	N		
13.Deck Joints	N	-	7.Co	nn Plt's, Gusset	s & Ang	gles N		-		c. Colum	ıns	N	N		-
14.	N	_	8.Co	er Plates		N	+	_			/Webs/Pierwalls	N	N		-
15.	N		9.Bea	aring Devices		N	1	_	-	e. Pointin	-	N N	N		-
		-		aphragms/Cros	s Fram	es N	-	_	-	g. Piles	9	N	N		-
16.	N	-		vets & Bolts		N	_		-	h. Scour		N	N		-
1	N	s	12.W			N	-		-	i. Settlei	ment	N	N		-
CURB REVEAL (In millimeters)	N	N			-4		4	_	_	j. k.		N	N		-
(III millimeters)				ember Alignmer	nt	9	_	-		3. Pile I	Bents	11	- 14	8	-
APPROACHES		DEF		aint/Coating		N	_	•	_	a. Pile Ca	aps	N	8		_
a. Appr. pavement condition	N	_	15.			N		-	╝	b. Piles	•	7	8		-
b. Appr. Roadway Settlement	6	M-P	Year	Painted		N			ı		nal Bracing	8	8		-
c. Appr. Sidewalk Settlement	N								٦1	e. Faster	ontal Bracing	N 6	N 7		-
		<u> </u>		ISION DAMAGE: e(X) Minor()			evere (	,		c. r uster	1013		<u>'</u>		
d.	N	-		DEFLECTION:	Please		3,010 (	,	<b>┤</b> ┃	UNDERM	IINING (Y/N) If Y	ES ple	ease e	xplain	N
OVERHEAD SIGNS (Attached to bridge)	(Y/N)	N	None	e( <b>X</b> ) Minor()	Modera	ate ( ) S	severe (	)		_	ON DAMAGE:	odera	te (	) Sev	vere ( )
		DEF		VIBRATION: e( ) Minor(X)	Please of Modera	-	evere (	)	$\ $		Please explain		\	, 50	\ /
a. Condition of Welds b. Condition of Bolts	N N	-		Fracture Critical					$\dashv$	1	() Minor ( ) Mo	odera	te (	) Sev	vere ( )
c. Condition of Signs	N	-						1		I-60 (Div	e Report):	<i>I</i> -6	0 (This	Repo	rt): 7
			Any (	Cracks: (Y/N)	N					93 <b>B-U</b> /l	N (DIVE) Insp		07/	14/2	010
A-HNKNO	NA/NI			NOT APPLIC							, , ,				OVED

CITY/TOWN			B.I.		BR. DEPT. NO.	8STRUC		<b>.</b> .	INSPECTION		
EDGARTOWN			43		E-07-004		-43B-MUN-NI		SEP 12,		
ITEM 61			7	11	TEM 36 TRAFFIC SA	1 <i>FETY</i> 36 C	OND DEF	ACCESSIE	·	Y/N/P	_
CHANNEL &		L		Α. Ι	Bridge Railing	0	8 -	Lift Bucket		eded Us	
CHANNEL PROTECTIO	N			В. Т	Transitions	0	8 -	Ladder		N N	
	Dive	Cur	DEF	C. /	Approach Guardrail	0	8 -	Boat		YY	
1.Channel Scour	7	н	-	D. /	Approach Guardrail Ends	0	8 -	Waders		N N	1
2.Embankment Erosion	6	8	-	WE	IGHT POSTING	Not Appl	icable	Inspector 50	)	N N	1
3.Debris	8	8	-		H	3 382	? Single	Rigging		N N	
4.Vegetation	8	8	-	Act	tual Posting 0	9 14 21	N	Staging		N N	_
5. Utilities	N	N	-	Red	commended Posting 0	9 14 21	N	Traffic Cont		N N	_
6.Rip-Rap/Slope Protection	6	8	-	Wai	ved Date: 00/00/0000	EJDMT Date:	00/00/0000	Police		N N	_
7.Aggradation	8	н	-		At brid	ge C	Other Advance	Other:			-
8.Fender System	N	N	-	(Y=	ns In Place Yes,N=No,		NR NR	Contact tow	n	N N	1
				NR:	PostRequired)	Y	NR NR	TOTAL III	MIDC		二
					bility 8	<u>8</u>		TOTAL HO	JUKS	12	
					ARANCE POSTING	N	S motor	PLANS	(Y/N):	: <b>Y</b>	,
				No A at	t X and the state of the state		ft in meter				_
STREAM FLOW VELOCITY:					ted Clearance			(V.C.R.)	(Y/N): N	I	
Tidal ( X ) High ( ) Moderate ( )	_ow (	) None	e()	l	At brid		Advance	TAPE#: _			
ITEM 61 (Dive Report): 7 ITEM 6	1 (This	Report	t): <b>7</b>	(Y=	ns In Place N Yes,N=No,		N S	List of field tes	oto norformodi		
93b-U/W INSP. DATE: 0	7/1/1	2010			=Not Required)  ibility/			List of field tes	sis periorinea:		
	// 14/	2010		Visi	bility						
RATING Rating Report (Y/N): Y				_				S please give p		٦	
3 3 17 1 ( )				Reco	ommend for Rating or Re	rating (Y/N):	. N HIC	GH() MEDIUM	( ) LOW ( )		
Date: 01/01/2005				REA	SON:						
Inspection data at time of 0 158: <b>8</b> 159: <b>9</b> 160: <b>8</b> Da		ng rati )9/16/	•								—
100. <b>0</b> 100. <b>0</b> 100. <b>0</b> E		19/10/	2003								
					CONDITION R		(For	Items 58, 59, 60	and 61)		
CODE CONDITION	_				DEFECTS						
N NOT APPLICABLE G 9 EXCELLENT		vcellent	condition.								
G 8 VERY GOOD	_		em noted.								—
G 7 GOOD	_		nor probler	ns.							
F 6 SATISFACTORY	s	tructura	l elements	show so	ome minor deterioration.						
F 5 FAIR	А	ll primar	y structura	l elemei	nts are sound but may have minor s	ection loss, crac	king, spalling or scour.				
P 4 POOR					erioration, spalling or scour.	ffeeted wrimen	ate est real common anta. I	and failures are no	asible Fatigue erael		
P 3 SERIOUS	in	steel o	r shear cra	cks in c	n, spalling or scour have seriously a oncrete may be present.		•	·		(S	
C 2 CRITICAL					rimary structural elements. Fatigue ort. Unless closely monitored it may						
C 1 "IMMINENT" FAILURE					n loss present in critical structural c t corrective action may put it back ir		ovious vertical or horizon	tal movement affect	ing structure stablility	y.	
0 FAILED	C	out of se	rvice - bey	ond corr	rective action.						
					DEFICIENCY RE	PORTING	CHIDE				
<b>DEFICIENCY:</b> A defect in a str	ucture	that req	uires corre	ctive ac		CATIN	JUIDE				
CATEGORIES OF DEFICIEN											$\neg$
M= Minor Deficiency - Deficiencies	which a	are minor on of stee	in nature, ge	nerally do	o not impact the structural integrity of the brigged drainage, etc.	idge and could easi	ly be repaired. Examples incl	ude but are not limited to	o: Spalled concrete, Mino	or pot	
holes, Mino				tensive in	nature and need more planning and effort	to repair. Examples	include but are not limited to	Moderate to major dete	rioration in concrete, Ex	posed and	·
S= Severe/Major Deficiency -	eficienc	ies which	onsiderable	settlemen							
S= Severe/Major Deficiency - [	orroded	_ A defic	iency in a str	settlemen	i, Considerable scouring or undermining, is	loderate to extensiv				integrity	
S= Severe/Major Deficiency -	ency ·	A deficient A deficient	ciency in a str bridge. ncy in a comp	ructural el	ement of a bridge that poses an extreme u element of a bridge that poses an extreme	nsafe condition due hazard or unsafe co	to the failure or imminent fail	ure of the element which	will affect the structural	Examples	
S= Severe/Major Deficiency - C C-S= Critical Structural Defici C-H= Critical Hazard Deficien	ency -	A deficient A deficient	ciency in a str bridge. ncy in a comp	ructural el	ement of a bridge that poses an extreme u	nsafe condition due hazard or unsafe co	to the failure or imminent fail	ure of the element which	will affect the structural	Examples	
S= Severe/Major Deficiency - 5 C-S= Critical Structural Defici C-H= Critical Hazard Deficien  URGENCY OF REPAIR:	ency -	A defice of the I	ciency in a str bridge. ncy in a comp ut are not lim	ructural el conent or ited to: Lo	ement of a bridge that poses an extreme u element of a bridge that poses an extreme	nsafe condition due hazard or unsafe co pedestrians, A hole	to the failure or imminent fail andition to the public, but doe in a sidewalk that may cause	ure of the element which	will affect the structural	Examples	

#### REMARKS

#### **BRIDGE ORIENTATION**

Dyke Road over Poucha Pond has an east/west orientation.

#### **GENERAL REMARKS**

There are at bridge posting weight restriction signs, 9, 14, 21, on the east and west approaches, see photos #1 & #4.

#### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

The deck/wearing surface consists of a single course of 4 x 10 pressure treated timbers. The timber deck wearing surface was found to be in satisfactory condition with slight washboard effect in the wearing surface. Sand on the bridge wearing surface contributing to the wear in the wheel paths, see photos #1 - #5. In addition, the deck nails protrude slightly above the level of the wearing surface. The deck timbers are tight and still transfer loads as designed.

#### Item 58.2 - Deck Condition

The deck is in good condition except for the wearing surface, see Item 58.1 wearing surface.

#### Item 58.12 - Utilities

There is PVC conduit in bay #5, in all spans.

#### **APPROACHES**

#### Approaches b - Appr. Roadway Settlement

The gravel approaches are rutted at both ends of the bridge, see photos #1 - #4.

#### **ITEM 59 - SUPERSTRUCTURE**

#### Item 59.4 - Girders or Beams

Photo #8.

#### **ITEM 60 - SUBSTRUCTURE**

#### Item 60.1 - Abutments

#### Item 60.1.d - Breastwalls

Marine growth is @ and below the tidal zone, see photo #6.

#### <u>Item 60.3 - Pile Bents</u>

#### Item 60.3.a - Pile Caps

There is islolated +/-1/8" wide timber checking at the end of timber bent pier cap #6, see photo #9.

#### Item 60.3.c - Diagonal Bracing

Marine growth is @ and below the tidal zone, see photo #7.

### REMARKS

#### TRAFFIC SAFETY

#### Item 36a - Bridge Railing

Timber rails on piles, nonstandard.

#### **Item 36b - Transitions**

Continuation of the timber rails on piles, nonstandard.

#### Item 36c - Approach Guardrail

Timber rails on piles, nonstandard.

#### <u>Item 36d - Approach Guardrail Ends</u>

Blunt ends, nonstandard.

#### **Photo Log**

Photo 1: West at bridge weight posting sign.

Photo 2: View west appro. and deck span #1, sand debris.

Photo 3: View east appro. and deck span #8, +/-2" deep sand debris.

Photo 4: View east approach at bridge posting. Photo 5: General wearing surface looking south.

Photo 6: View pile/bent #1 @ west abut.

Photo 7: Pile/bent #2, east diagonal marine growth.

Photo 8: View underside typ. design/condition.

Photo 9: South end timber pier cap #6, +/-1/8" wide checking.

Photo 10: South elevation.



Photo 1: West at bridge weight posting sign.



Photo 2: View west appro. and deck span #1, sand debris.



Photo 3: View east appro. and deck span #8, +/-2" deep sand debris.



Photo 4: View east approach at bridge posting.



Photo 5: General wearing surface looking south.



Photo 6: View pile/bent #1 @ west abut.



Photo 7: Pile/bent #2, east diagonal marine growth.



Photo 8: View underside typ. design/condition.



Photo 9: South end timber pier cap #6, +/-1/8" wide checking.



Photo 10: South elevation.

## Pontis BMS Element Inspection

09/12/2011 BDEPT# E-07-004 Date

District Bridge Inspection Eng'r B.I.N. **43B** Daniel A. Palmer

Item 8 **E07004-43B-MUN-NBI** 

Inspecting Mass. Highway Dept. Span Group 1 Agency

Town Edgartown Team John Spiezio Leader District 5

Team Member(s)

El#	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Timber, Bare	EA/SF	3	1,151.7	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	<b>X</b> %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged Pile, Timber	EA	3	45.0	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap, Timber	LF	3	134.5	<b>X</b> %	100.0 %	0.0 %	0.0 %	0.0 %	
332	Bridge Railing, Timber	LF	3	150.9	<b>%</b>	100.0 %	0.0 %	0.0 %		

# Pontis BMS Element Inspection

В	DEPT#	E-07-004				Previ	ous inspection	•	Current Inspe	ection	
	B.I.N.	43B			Date	09/12	2/11				
	Item 8	E07004-43B-MUN-NBI			District Bridge		el A. Palmer				
Spar	Group	1		I	nspection Eng'r						
	Town District	Edgartown 5			Inspecting Agency						
	District	3			Team Leader		Spiezio				
					Team Member(s)						
E1#	Element 1	Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Tir	nber, Bare	EA/SF	3	1,151.7	∑ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Gir	der, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutmen	t, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerge	ed Pile, Timber	EA	3	45.0	፟ %	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap,	Timber	LF	3	134.5	⊠ %	100.0 %	0.0 %	0.0 %	0.0 %	
332	Bridge R	ailing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		
	I			l							

2-DIST **05** 

B.I.N. **43B** 

# UNDERWATER OPERATIONS TEAM ROUTINE UNDERWATER INSPECTION REPORT

BR. DEPT. NO. **E-07-004** 

CITY/TOWN		8-STRUCTURE NO. LEVEL OF INSPECTION 93B-DATE INSPECTED						)	
EDGARTOWN			E07004	1-43B-MUN-	NBI		II	SEP 5, 2	013
07-FACILITY CARRIED			ACCESS TO BRII	OGE	UNDE	RWATER O	PERATIONS ENGINE	EER	
HWY DIKE RD			BOAT		RA	NDI E.	BONICA		
06-FEATURES INTERSECTED			DEPTH	VISIBILITY		,	VE MASTER)	Report submitted by:	
WATER POUCHA PON	ID		3 m	1 m	GORE	OON B	ROZ		
BOTTOM CONDITION		CURRE		TEAM MEMBERS		1 00	LIEDAN D	EITZCEDALD	
BOULDERS, SAND		TID	AL	R. E. BUN	ICA, VV.	J. CO	LLEKAN, b.	FITZGERALD	
ITEM 60		7	ITEM 61	<b>CHAN</b>	NEL &	7	<b>ITEM 62</b>		N
SUBSTRUCTURE	<b>.</b>	DEF	CHANNE	L PROTECTI	ON	DEF	CULVERTS		DEF
1. Abutments	7		1. Channel	Scour	7	-	1. Roof	N	-
a. Pedestals	N	-	2. Embankn	nent Erosion	6	-	2. Floor	N	-
b. Bridge Seats	N	-	3. Debris		8	-	3. Walls	N	-
c. Backwalls	7	-	4. Vegetatio	n	8	-	4. Headwall	N	-
d. Breastwalls	N	-	5. Utilities		N	-	5. Wingwall	N	-
e. Wingwalls	8	-	6. Rip-Rap/S	Slope Protection	6	-	6. Pipe	N	-
f. Slope Paving/Rip-Rap	N	-	7. Aggradat	ion	8	-	7. Protective C	coating N	-
g. Pointing	N	-	8. Fender S	ystem	N	-	8. Embankmer	nt N	-
h. Footings	N	-	a. Piles		N	-	9. Wearing Sui	rface N	-
i. Piles	7	-	b. Diagon	al Bracing	N	-	10. Railing	N	-
i. Scour	7	-	c. Horizor	ntal Bracing	N	-	11. Sidewalks	N	-
k. Settlement	8	-	d. Wales		N	-	12. Utilities	N	-
I.	N	-	e. Fastene	ers	N	-	13. Member Ali	ignment N	-
2. Piers or Bents	N		f. Ladders	s	N	-	14. Deformatio	n N	-
a. Pedestals	N	-	9.		N	-	15. Scour	N	-
b. Caps	N	-	ITEM 59	SUPERSTR	UCTUR		16. Settlement	N	-
c. Columns	N	-			N	DEF	17.	N	-
d. Stems/Webs/Pierwalls	N	-			N		18.	N	-
e. Pointing	N	-			<del></del>	-		<b></b>	N
f. Footing	N	-			N		UNDERMINING (Y		
g. Piles	N	-	_		RICIE	NCY R	EPORTING	GUIDE	
h. Scour	N	-	DEFICIENC			requires corr	rective action.		
i. Settlement	N	-		IES OF DEFICIE Deficiency - Deficie		minor in nature	. generally do not impact the	structural integrity of the bridge an	d could
į.	N	-		easily t	oe repaired. Exa	mples include b	out are not limited to: Spalled	concrete, Minor scouring, etc.	
k.	N	-	S= Severe/N	Major Deficiency-	include but ar	e not limited to	: Moderate to major deteriora	d more planning and effort to repair tion in concrete, Exposed and corr t, Considerable scouring or underr	roding
3. Pile Bents	7			10				-	
a. Pile Caps	N	-	C-S= Critic	al Structural Def	d			e that poses an extreme unsafe co ement which will affect the structur	
b. Piles	7	-	C-H= Critic	cal Hazard Defici	cond	ition to the pub	lic, but does not impair the st	ge that poses an extreme hazard or ructural integrity of the bridge. Exa	mples
c. Diagonal Bracing	7	_	-		inclu	de but are not l		fender system which are projecting	
d. Horizontal Bracing	N	_	URGENCY	OF REPAIR:					
e. Fasteners	6	_	- I=Immediate	<ul> <li>[Inspector(s) immediate further instruction from</li> </ul>		rict Bridge Inspe	ection Engineer (DBIE) to rep	ort the Deficiency and to receive	
			A=ASAP-		be initiated by D		nce Engineer or the respons	ible party (if not a State owned	
UNDERMINING (Y/N)		N	P=Prioritize-	[Shall be prioritized by made when funds and			or the Responsible Party (if r	not a State owned bridge) and repa	airs

#### REMARKS

#### **GENERAL REMARKS**

The timber deck bridge is a timber pile bent structure with two pile abutments and seven pile bents. Each bent and abutment has three piles below the timber cap and one pile at upstream and downstream ends that support the bridge rails. Timber diagonal bracing is between piles in each bent.

Both abutments have timber piles and timber planks, which act as bulkheads. Wingwalls are also timber piles and timber planks.

**Note:** Bridge is best inspected at high tide. Access to the bridge is very shallow, even at high tide.

#### Orientation:

Abutments are labeled left (West) and right (East), looking downstream. Bents are numbered from left to right.

#### ITEM 60 - SUBSTRUCTURE

#### Item 60.3 - Pile Bents

#### Item 60.3.b - Piles

Pressure treated timber piles are in good condition with no problems noted.

#### Item 60.3.e - Fasteners

Fasteners below the waterline have minor rust.

### ITEM 61 - CHANNEL AND CHANNEL PROTECTION

#### Item 61.2 - Embankment Erosion

At the (West) side, upstream and downstream, there is moderate erosion at the end of the wingwalls.

#### Item 61.6 - Rip-Rap/Slope Protection

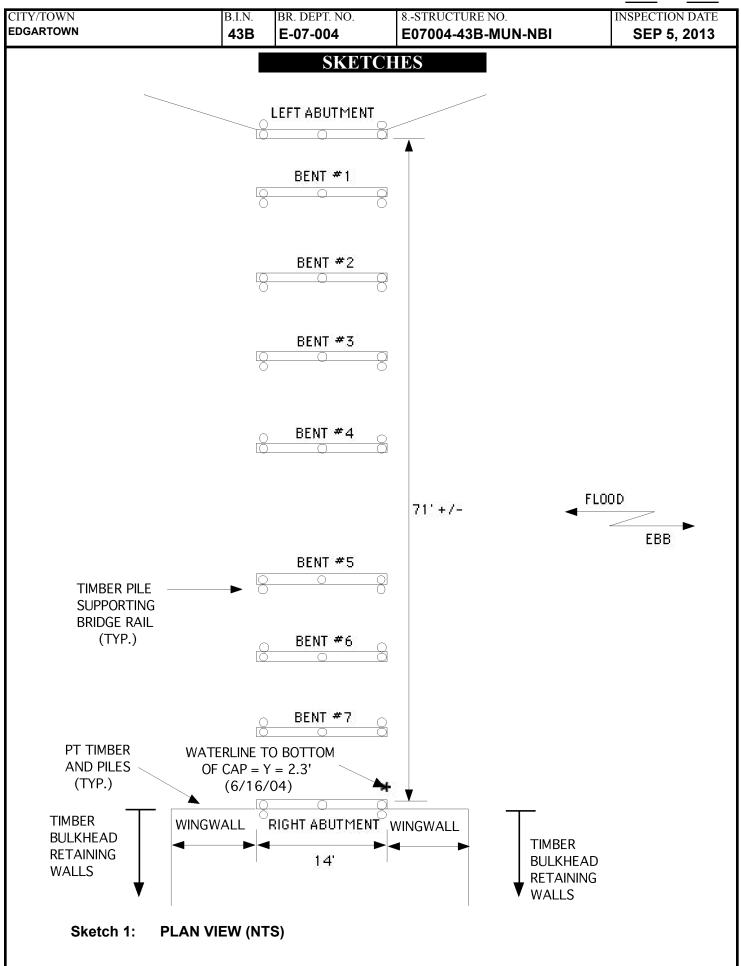
In the pressure treated bulkhead retaining walls at the right (East) side there is some rot in the vertical backwall timbers with penetrations up to 0.3'.

At the right (East) side, at the end of the newer pressure treated piles and timber plank bulkheads, are original piles and timber planks along the sides of the roadway. The piles are dry with some delamination and the vertical timbers are dry with some deterioration, up to 100% section loss. These bulkheads are not part of the bridge.

#### Sketch / Chart Log

Sketch 1: PLAN VIEW (NTS)

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)



CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 5, 2013

## **CHARTS**

# SCOUR MONITORING CHART DOWNSTREAM END

	6/16/04	6/28/07	7/14/10	9/5/13
LEFT ABUTMENT	2.8'	2.9'	3.0"	3.1'
BENT #1	4.3'	4.5'	4.9'	4.8'
BENT #2	6.8'	6.8'	7.9'	7.5'
BENT #3	9.2'	9.2'	9.2'	9.2'
BENT #4	9.9'	9.7'	10.2'	10.4'
BENT #5	10.8'	10.8'	11.4'	11.5'
BENT #6	11.1'	11.0'	11.1'	10.8'
BENT #7	9.8'	9.9'	9.0'	9.7'
RIGHT ABUTMENT	7.6'	7.7'	7.0'	7.6'
Y	2.3'	2.5'	1.9'	1.3'
CORRECTION FACTOR		+0.2'	-0.4'	-1.0'

#### NOTES:

- 1. WATERLINE TO BOTTOM OF RIGHT ABUTMENT CAP, DOWNSTREAM END = Y = 2.3' (6/16/04).
- 2. SOUNDINGS ADJUSTED TO 6/16/04 WATERLINE WITH CORRECTION FACTOR.

2-DIST B.I.N. 05 43B

## STRUCTURES INSPECTION FIELD REPORT **ROUTINE INSPECTION**

BR. DEPT. NO. E-07-004

CITY/TOWN EDGARTOWN							POINT P:POSTED 90-ROUTINE INS								
07-FACILITY CARRIED  HWY DIKE RD	MEMORIAL NAME/LOCAL NAME 27						106-YR REBUILT <b>0000</b>	YR REHAB'D (NON 106)  0000							
06-FEATURES INTERSECTED				26-FUNCTIONAL	CLASS		DIST. I	BRIDO	GE INSPECTI	ION ENGINEER	D. A.	Palme	r		
WATER POUCHA F	POND			Rural Loca	al										
43-STRUCTURE TYPE 702: Timber String	ger/Gi	irder		22-OWNER Town Agency 21-MAINTAINER Town Agency				TEAM LEADER J. Spiezio							
107-DECK TYPE  8: Timber				weather sunny TEMP. (air) 20°C			J. M		BERS MELO						
ITEM 58	6		III	CM 59	+	8	1		ITEM	60		7			
DECK		DEF	SUP	ERSTRUCTU	RE			≣F	SUBST	RUCTURE		'		DEF	
1.Wearing surface	6	M-P	1.Stri	ingers		N	1		1. Abut	ments	Dive	Cur	8		
2.Deck Condition	6	M-P	2.Flo	orbeams		N	Π.	-	a. Pedes	tals	N	N		-	
	N	_	3.Flo	or System Brac	ing	N	1		b. Bridge		N N	N N		-	
Stay III Flace Forms				ders or Beams		8	1 -		d. Breas		8 8	8 8	-	-	
	N	_	5.Tru	sses - General		N	╽╴.		e. Wingv		8	8		-	
5. Median			a.	Upper Chords		N	┦┈.		I	Paving/Rip-Rap	N	N		-	
6.Sidewalks	N	-		Lower Chords		N			g. Pointi		N	N		-	
Parapets N -				c. Web Members N					i. Piles	.90	7	8		-	
Railing 7 -				d. Lateral Bracing N					j. Scour		7	Н		-	
9 Anti Missile Fence N - I				e. Sway Bracings N				_	k. Settle	ment	8 N	8 N		-	
10.Drainage System	0 Drainage System N -				c. oway Bracings			_	m.		N	N		-	
11.Lighting Standards	Si di di N			i. i ortais			-	_	2. Piers	or Bents			N		
12.Utilities	8	_	I — —	End Posts		N	- I	-	a. Pedes	tals	N	N		-	
	N			& Hangers	- 0 4		╢.	-	b. Caps		N	N		-	
13.Deck Joints				nn Pit's, Gusset	s & Ang		╢	•	c. Colum	ns: /Webs/Pierwalls	N	N		-	
14.	N	-		ver Plates		N	<b>↓</b>	•	e. Pointi		N	N		-	
15.	N	-		aring Devices		N	1		f. Footin	ng	N	N		-	
16.	N	-		iaphragms/Cros	s Frame			•	g. Piles h. Scour		N	N		-	
	·		11. Ri	ivets & Bolts		N	]	•	i, Settle		N	N		-	
CUBB BEVEAL	N [	S	12.W	elds		N	-	•	j.		N	N		-	
(In millimeters)	N	N	13. M	ember Alignmer	nt	8	1	•	k.	D 4	N	N		-	
APPROACHES		DEF	14. Pa	aint/Coating		N	1	•	3. Pile I		١	•	8		
			15.			N	1	•	a. Pile C	aps	N 7	8		-	
a. Appr. pavement condition	N	-	Vaar	Deinted		N	1		I	nal Bracing	8	8		-	
b. Appr. Roadway Settlement	6	S-P	rear	Painted		•				ontal Bracing	N	N		-	
c. Appr. Sidewalk Settlement	N	-		ISION DAMAGE:					e. Faster	ners	6	7	[		
∥ <sup>a.</sup>     -       -       -         -           -				e ( <b>X</b> ) Minor ( )			evere (	)	UNDERN	IINING (Y/N) If Y	ES ple	ase e	xplain	N	
OVERHEAD SIGNS (Attached to bridge)	(Y/N)	N	None	DEFLECTION: e(X) Minor( )		te ( ) Se	evere (	)		ON DAMAGE:	odora	to (	) Sov	oro ( )	
DEF				LOAD VIBRATION: Please explain None ( ) Minor ( <b>X</b> ) Moderate ( ) Severe ( )						Please explain	oueid	(	, 360	0.6( )	
a. Condition of Welds N - b. Condition of Bolts N -		-		Fracture Critical				<u> </u>		( ) Minor ( ) M	odera	te (	) Sev	ere ( )	
c. Condition of Signs	N	_	1			7. (1/N)	N		I-60 (Div	re Report):	<i>I</i> -6	0 (This	Repor	t): 8	
			Any (	Cracks: (Y/N)	N				93B-U/	W (DIVE) Insp		07/	14/2	010	
A-HNKNO	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			NOT APPLIC						. , ,				OVED	

CITY/	TOW	1			B.I.	N.	BR. DEPT. NO. 8	STRU	JCTU	RE NO.		INSPECTIO	N D	ATE	
EDGARTOWN 43											BI SEP 23, 2013				
14 N	TM 61				$\perp$	1	TEM 36 TRAFFIC SAF	FFTV			ACCESSIE	III ITV	(Y/N	J/P)	
	EM 61	<del></del> '			7	-	TEMI 30 TRAFFIC SAI	36	COND	DEF	ACCESSII		Veeded		
CHANNEL & CHANNEL PROTECTION					Α.	Bridge Railing	0	8		Lift Bucket		N	N		
CHANNEL PROTECTION					В.	Transitions	0	8		Ladder		N	N		
Dive Cur DEF					C	Approach Guardrail	0	8		Boat		Р	Υ		
1.Ch	annel	Scour	7	н	-	D	Approach Guardrail Ends	0	8	_	Waders		N	N	
2.Em	bankn	nent Erosion	6	7	-	WE	EIGHT POSTING	Not A	pplica	ble	Inspector 50	)	N	N	
3.Del	bris		8	8	_		_ н			Single	Rigging		N	N	
4 Vec	getatio	n	8	8	_	Ac	ctual Posting 09	14	21	N	Staging		N	N	
5.Uti			N	N		RA	ecommended Posting 09	14	21	N	Traffic Cont	rol	N	N	
		Nama Baata attan									RR Flagger		N	N	
		Slope Protection	6	7	-	Wa		JDMT D		00/00/0000	Police		N	N	
	gradat		8	Н	-	Sin	At bridge	W	Othe	er Advance W	Other:				
8.Fer	nder S	ystem	N	N	-	(Y=	Yes,N=No,	Y	NF		CONTACTTO	OWN	N	N	
							R=NotRequired)	===			TOTAL HO	MIRS		40	
							sibility 8	8			TOTALIK	JUKS		12	
						CLE		N		S	PLANS	(Y/N	1):	Υ	
						No	ot X ft	in	ft	in meter			, L		
STRE	AM FL	OW VELOCITY:					tual Field Measurement	0		0	(V.C.R.)	(Y/N):	N		
Tidal (	<b>X</b> ) High	( ) Moderate ( ) L	.ow (	) Nor	ne ( )	Pos	sted Clearance At bridge	0		0   Advance		`			
		. 🖃		_	. 🖃	Sig	gns In Place N	S	N		TAPE#: _				
ITEM 61	(Dive R	eport): 7 ITEM 61	(This	Repoi	rt): 7	(Y=	=Yes,N=No, R=Not Required)				List of field tes	sts performed			
93b-l	J/W IN	SP. DATE: 07	7/14/	2010	)	Leg	gibility/								
D 1 m	210					Vis	sibility								
RATI		rt (Y/N): <b>Y</b>				_			Г		S please give p				
Raung	Repo	I (1/N). I				Reco	ommend for Rating or Rera	ting (Y	/N):	N HIG	SH() MEDIUM	( ) LOW (	)		
Date:	(	01/01/2005				REA	ISON:								
		on data at time of e		•	•										
I 58: <b>8</b>	<b>3</b> 159	: <b>9</b> 160: <b>8</b> Da	te :0	9/16	/2003										
							CONDITION RA	TING	GU	(For	Items 58, 59, 60	and 61)			
	CODE	CONDITION					DEFECTS				,,	,			
	N	NOT APPLICABLE	+												
G	9	EXCELLENT	E	xcellen	t condition.										
G	8	VERY GOOD	N	lo probl	em noted.										
G	7	GOOD	s	ome m	inor probler	ns.									
F	6	SATISFACTORY	s	tructura	al elements	show s	some minor deterioration.								
F	5	FAIR	А	II prima	ry structura	l eleme	ents are sound but may have minor sec	tion loss,	cracking	, spalling or scour.					
Р	4	POOR	А	dvance	d section lo	ss, dete	terioration, spalling or scour.								
Р	3	SERIOUS	Lo	oss of s	section, det or shear cra	erioratio	on, spalling or scour have seriously affe	cted prim	ary struc	ctural components. L	ocal failures are po	ssible. Fatigue cra	acks		
		ODITIOAL					primary structural elements. Fatigue cra								
С	2	CRITICAL					oort. Unless closely monitored it may be on loss present in critical structural com		,				lility		
С	1	"IMMINENT" FAILURE					ut corrective action may put it back in liq			us vertical of Horizoni	iai movemeni aneci	ing structure stab	iiity.		
	0	FAILED	0	ot of se	ervice - bey	ond cor	rrective action.								
							DEFICIENCY REP	<b>ADTI</b>	NC (	CHIDE					
DEFI	CIENC	Y: A defect in a stru	ucture	that red	quires corre	ctive ac		JKII	NG						
		 ES OF DEFICIENC			•										
		eficiency - Deficiencies	which a	are mino	r in nature, ge	nerally de	do not impact the structural integrity of the bridg	e and could	easily be	repaired. Examples inclu	ide but are not limited to	o: Spalled concrete, N	/linor pot		
		noies, iviinor	COTTOSI	on or ste	ei, iviirior scot	iring, Cio	ogged drainage, etc.  n nature and need more planning and effort to a								
		- 60	moded	rebars, c	Jonsiderable	settlerner	nt, Considerable scouring or undermining, Mod	erate to ext	ensive cor	rosion to structural steel	with measurable loss o	i section, etc.			
							element of a bridge that poses an extreme unsa								
С-Н=	- Critic	al Hazard Deficienc	-	include t	ncy in a comp out are not lim	onent or ited to: L	r element of a bridge that poses an extreme han cose concrete hanging down over traffic or peo	zard or unsa lestrians, A	afe conditi hole in a s	on to the public, but does sidewalk that may cause	s not impair the structura injuries to pedestrians,	al integrity of the brid Missing section of bri	ge. Exam dge railir	iples ig,	
	-NOV	OF DEDAID		etc.											
	ENCY mediate	OF REPAIR:	italy cor	ntact Dis	trict Bridge In	nection	Engineer (DRIE) to report the Deficiency and to	receive fu	rther inetri	uction from him/herl					
A = AS			-		-		Engineer (DBIE) to report the Deficiency and to ingineer or the Responsible Party (if not a State				Report].				
P = Pr	ioritize-	(Shall be prioritized by	v Distric	t Mainte	nance Engine	er or the	Responsible Party (if not a State owned bridge	e) and repai	rs made v	when funds and/or manno	wer is available.				

#### REMARKS

#### **BRIDGE ORIENTATION**

Dyke Road over Poucha Pond has an east/west orientation.

#### **GENERAL REMARKS**

There are at bridge posting weight restriction signs, 9, 14, 21, on the east and west approaches, see photos 1 & 4.

#### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

The deck/wearing surface consists of a single course of 4 x 10 pressure treated timbers. The timber deck wearing surface was found to be in satisfactory condition with slight washboard effect and wheel rutting in vehicular wheel path. Sand debris on the bridge wearing surface is contributing to the timber wear in the vehicular wheel path, see photos 1 - 5. In addition, the top of deck nail heads protrude 1" above the worn sections of wearing surface, photo 11. Several broken and or bent tops of deck nail heads.

#### Item 58.2 - Deck Condition

See Item 58.1 wearing surface.

#### Item 58.12 - Utilities

There is PVC conduit in bay #5, in all spans.

#### **APPROACHES**

#### Approaches b - Appr. Roadway Settlement

The gravel approaches are rutted at both ends of the bridge, see photos 1 - 4. The west approach gravel in the westbound lane has a 3' x 3' x 5" deep pothole, photo 1, this condition is applying undue impact upon the fascia deck timbers, photo 1.

#### ITEM 59 - SUPERSTRUCTURE

#### <u>Item 59.4 - Girders or Beams</u>

Isolated misguided dek nails, photo #8.

#### **SuperStructure Load Vibration Notes**

Minor vibration experienced under live vehicular loadings.

#### ITEM 60 - SUBSTRUCTURE

#### Item 60.1 - Abutments

Also see latest underwater dive report dated 9.5.2013.

#### Item 60.1.d - Breastwalls

Marine growth is @ and below the tidal zone, see photo 6. Also see latest underwater dive report dated 9.5.2013.

#### Item 60.1.e - Wingwalls

Also see latest underwater dive report dated 9.5.2013.

#### REMARKS

#### Item 60.1.i - Piles

Also see latest underwater dive report dated 9.5.2013.

#### Item 60.1.j - Scour

See latest underwater dive report dated 9.5.2013.

#### Item 60.1.k - Settlement

Also see latest underwater dive report dated 9.5.2013.

#### Item 60.3 - Pile Bents

Also see latest underwater dive report dated 9.5.2013.

#### Item 60.3.a - Pile Caps

There is islolated +/-1/8" wide timber checking at the end of timber bent pier cap 6, see photo 9.

#### Item 60.3.b - Piles

Also see latest underwater dive report dated 9.5.2013.

#### <u>Item 60.3.c - Diagonal Bracing</u>

Marine growth is @ and below the tidal zone, see photo #7. Also see latest underwater dive report dated 9.5.2013.

#### Item 60.3.e - Fasteners

Also see latest underwater dive report dated 9.5.2013.

#### ITEM 61 - CHANNEL AND CHANNEL PROTECTION

#### Item 61.1 - Channel Scour

Also see latest underwater dive report dated 9.5.2013.

#### Item 61.2 - Embankment Erosion

Also see latest underwater dive report dated 9.5.2013.

#### Item 61.3 - Debris

Also see latest underwater dive report dated 9.5.2013.

#### Item 61.4 - Vegetation

Also see latest underwater dive report dated 9.5.2013.

#### Item 61.6 - Rip-Rap/Slope Protection

Also see latest underwater dive report dated 9.5.2013.

### Item 61.7 - Aggradation

Also see latest underwater dive report dated 9.5.2013.

#### **TRAFFIC SAFETY**

#### Item 36a - Bridge Railing

Timber rails on piles, nonstandard.

### REMARKS

### <u>Item 36b - Transitions</u>

Continuation of the timber rails on piles, nonstandard.

#### <u>Item 36c - Approach Guardrail</u>

Timber rails on piles, nonstandard.

#### Item 36d - Approach Guardrail Ends

Blunt ends, nonstandard.

#### Photo Log

Photo 1: West at bridge posting sign.

Photo 2: View west approach surface at span 1, 3' x 3' x 5" erosion/pothole.

Photo 3: View east approach and deck span 8, 1/2" deep sand debris.

Photo 4: View east approach at bridge posting sign.

Photo 5: General view wearing surface and A.D.T. meter.

Photo 6: View pile bent 1 at west abutment.
Photo 7: View pile bent 2, marine growth.
Photo 8: Typical underside of deck condition.

Photo 9: South end of timber pier cap 6, 1/8" wide splitting.

Photo 10: South elevation.

Photo 11: Common 1" spacings between top of nail heads and wheel rutting wear.

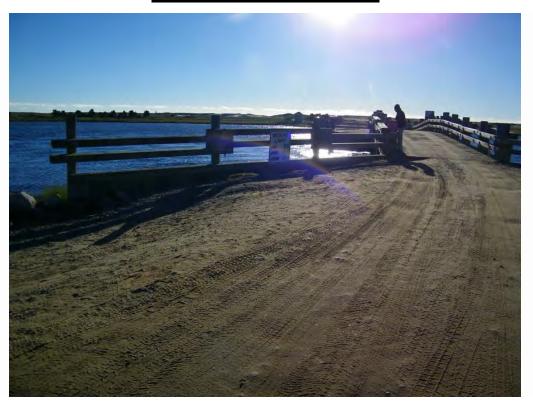


Photo 1: West at bridge posting sign.



Photo 2: View west approach surface at span 1, 3' x 3' x 5" erosion/pothole.



Photo 3: View east approach and deck span 8, 1/2" deep sand debris.



Photo 4: View east approach at bridge posting sign.



Photo 5: General view wearing surface and A.D.T. meter.



Photo 6: View pile bent 1 at west abutment.



Photo 7: View pile bent 2, marine growth.



Photo 8: Typical underside of deck condition.



Photo 9: South end of timber pier cap 6, 1/8" wide splitting.



Photo 10: South elevation.



Photo 11: Common 1" spacings between top of nail heads and wheel rutting wear.

# Pontis BMS Element Inspection

09/23/2013 BDEPT# E-07-004 Date

District Bridge Inspection Eng'r B.I.N. **43B** Daniel A. Palmer

Item 8 **E07004-43B-MUN-NBI** 

Inspecting Mass. Highway Dept. Span Group 1 Agency

Town Edgartown Team John Spiezio Leader District 5

Team Member(s)

El#	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4	State 5
31	Deck, Timber, Bare	EA/SF	3	1,151.7	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged Pile, Timber	EA	3	45.0	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
235	Pier Cap, Timber	LF	3	134.5	<b>%</b>	100.0 %	0.0 %	0.0 %	0.0 %	
332	Bridge Railing, Timber	LF	3	150.9	<b>X</b> %	100.0 %	0.0 %	0.0 %		

2-DIST B.I.N. 05 43B

## STRUCTURES INSPECTION FIELD REPORT **ROUTINE INSPECTION**

BR. DEPT. NO. E-07-004

EDGARTOWN										1.046 P:POSTED			90-ROUTINE INSP. DATE <b>SEP 22, 2015</b>					
07-FACILITY CARRIED  HWY DIKE RD	MEMORIAL NAM	E/LOCAL		к виіст 1995	106-YR REBUILT <b>0000</b>	YR REHAB'D (NON 106)  0000												
06-FEATURES INTERSECTED WATER POUCHA F	26-FUNCTIONAL Rural Loca		I RIDGE	EINSPECTI	ON ENGINEER	G. Sin	npson											
43-STRUCTURE TYPE 702: Timber String		22-OWNER Town Agency	TAINER <b>Agency</b>		EADE	ER <b>J. Hanle</b>	y											
107-DECK TYPE  8: Timber				WEATHER Cldy	TEMP. (a	ir) P°C	ТЕАМ N		ERS SHALL									
ITEM 58 6			Im	ITEM 59			1		ITEM	60		7						
DECK	0	DEF	SUP	ERSTRUCTUI	RE	8	DEF	.	SUBST	RUCTURE		′		DEF				
1.Wearing surface	6	M-P		ingers		N	-		1. Abuti	ments	Dive	Cur	8					
2.Deck Condition	6	M-P		orbeams		N	- I		a. Pedes	tals	N	N		-				
3.Stay in Place Forms	N	-	3.Flo	or System Braci	ing	N	-		b. Bridge		N N	N N	-	-				
4.Curbs	N	_	4.Gir	ders or Beams		8	-		d. Breast		N	8	-	-				
5.Median	N	_	5. Tru	sses - General		N	-		e. Wingu		8	7		-				
6.Sidewalks	N	_	a.	Upper Chords		N	-		f. Slope g. Pointii	Paving/Rip-Rap na	N	N		-				
7.Parapets	N	_	b.	Lower Chords		N	-		h. Footin		N	N		-				
•	7		c.	Web Members		N	-		i. Piles		7	7 H		-				
8. Railing		-	d.	Lateral Bracing	N	-		j. Scour k. Settlei		8	8		-					
9.Anti Missile Fence	N	-	e.	Sway Bracings N		N	-		I. Faster		N	6		-				
10.Drainage System	N	-	f.	Portals	N	-		m.	an Danta	N	N		-					
11.Lighting Standards	N	-	g.	End Posts		N	-			or Bents	N	NI.	N					
12.Utilities	8	-	6.Pin	& Hangers		N	-		a. Pedes b. Caps	tais	N	N		-				
13.Deck Joints	N	-	7.Co	nn Pit's, Gusset	s & Ang	les 7	-		c. Colum		N	N		-				
14.	N	-	8.Co	ver Plates		N	<b>-</b>			/Webs/Pierwalls	N	N N	-	-				
15.	N	_	9.Bea	aring Devices		N	<b> </b>		e. Pointii f. Footin	-	N	N		-				
16.	N	_	10. Di	aphragms/Cros	s Frame	s N	-		g. Piles		N	N		-				
10.			11. Ri	vets & Bolts		N	-		h. Scour		N	N N		-				
CUBB BEVEAL	N .	S	12.W	elds		N	-		i. Settler i.	ment	N	N		-				
(In millimeters)	١	N	13. M	ember Alignmer	nt	8	<b> </b>		k.		N	N		-				
APPROACHES		255	14. Pa	aint/Coating		N	<b>-</b>		3. Pile I			ı	7					
	1	DEF	15.			N	-		a. Pile Ca	aps	7 7	7		-				
a. Appr. pavement condition	N	-	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Delete d	N		-   			nal Bracing	7	8	-	-				
b. Appr. Roadway Settlement	6	S-A	Year	Painted						ntal Bracing	N	N		-				
c. Appr. Sidewalk Settlement	N	-		ISION DAMAGE:					e. Faster	ners	6	6		- ]				
d.	N	-		e ( <b>X</b> ) Minor ( )			evere (	)	UNDERM	IINING (Y/N) If Y	ES ple	ase e	xplain	N				
				None (X) Minor ( ) Moderate ( ) Severe ( )						ON DAMAGE:		. ,						
		OAD VIBRATION: Please explain  None ( ) Minor ( <b>X</b> ) Moderate ( ) Severe ( )						None (X) Minor ( ) Moderate ( ) Severe ( )  SCOUR: Please explain										
a. Condition of Welds b. Condition of Bolts	N N	-	A						None ( <b>X</b> ) Minor ( ) Moderate (					( ) Severe ( )				
c. Condition of Signs	N	-	1	Fracture Critical		r: (Y/N) ]	N	╛┃	I-60 (Div	e Report):	<i>I</i> -6	0 (This	Repoi	t): 7				
<u>-</u>			Any	Any Cracks: (Y/N) N						93B-U/W (DIVE) Insp				09/05/2013				
X=UNKNO	NA/NI		NI-	NOT APPLIC	ADLE	Ц-ЦІ	DDEN	/INLA	CCESS	NDI E		D-1	) EM	OVED				

CITY/TOWN B.I						N.	BR. DEPT. NO.	8STR	UCTU	JRE NO.	INSPECTI	INSPECTION DATE			
					431					3B-MUN-NI	RI				
							ITEM 36 TRAFFIC SAFETY								
TEM 61 7					يا	NEM 36 IKAFFIC SAL	FETY 36	COND	D DEF	ACCE	ESSIBILITY	,	N/P)		
	INNE			,	ــــــا	A.	. Bridge Railing	0		7	Lift Bud	- steak	Needed	d Used	
CHANNEL PROTECTION						. Transitions	0	7	-	Ladder		N	N		
	_		Dive	Cur	DEF	C.	. Approach Guardrail	0	7	1 <u>-</u>	Boat		P	Y	
1.Ch	annel	Scour	7	Н	_	1   -	. Approach Guardrail Ends	0	8	<b>-</b>	Waders	·c	N	N	
2.Em	ıbank	ment Erosion	6	7	_	╟╧	EIGHT POSTING	Not /	Applica	ahla 💮	Inspect		N	N	
3.Del		1	8	8	-		н	NOL A		Single	Rigging		N	N	
	getatio		8	8	-	Ac	ctual Posting 09	14	21	N	Staging		N	N	
5.Util		<u>m</u>	N	N		.	ecommended Posting 09	14	21	N		Control	N	N	
						1			╵──┌		RR Flag		N	N	
_		/Slope Protection	6	7		Wa		EJDMT C		00/00/0000	Police		N	N	
	gradat		8	Н	-	Sic	At bridg	ge W	Othe E	er Advance W	Other:				
8.Fer	nder S	System	N	N	-	(Y=	Y=Yes,N=No,	Y	E		CONTA	ACTTOWN	N	N	
				<u></u>		Leg	egibility/	8			TOTA	L HOURS	干	10	
	_			Τ '			sibility 8	<u></u>			101	LHOUKS		12	
		+				CLF	EARANCE POSTING	N .		S	PLAN	NS (Y/I	/N):	Υ	
			_	—		No		in	ft	in meter		,		<u> </u>	
STRE	EAM FL	LOW VELOCITY:					ctual Field Measurement	0	<b>↓  </b>	0	(V.C.R	<b>R.</b> ) (Y/N):	N	[	
Tidal (	<b>X</b> ) Hig	gh ( ) Moderate ( ) L	Low (	) No	ne ( )	Pos	osted Clearance	0		0 Advance		, , ,		ı	
						Siç	gns In Place At bridg	ge S	A N	Advance I S	TAPE#:	:	_		
ITEM 61	1 (Dive R	Report): 7 ITEM 61	l (This	s Repor	ort): 7	(Y=	Y=Yes,N=No, R=Not Required)	N	N		List of fi	ield tests performed	d:		
93b-(	11/W	<b>NSP. DATE:</b> 09	9/05	5/2013	3	Leg	egibility/ /						-		
					<u></u>	Vis	sibility				<u> </u>				
RATI		ort (Y/N): Y			!	1	- · <b>-</b>		. Г			give priority:			
					!	Reco	commend for Rating or Rera	ating (Y	//N): _	N HIC	3H ( ) ME	IEDIUM ( ) LOW (	)		
Date:		01/01/2005			!	RE/	ASON:								
	•	ion data at time of e		•	~	ĺ									
I 58: <b>8</b>	J 159	9: <b>9</b> 160: <b>8</b> Da	ıte :0	)9/16	6/2003	1							_		
<del></del>							CONDITION RA	ATIN	c GU	(For	· Items 58.	59, 60 and 61)			
	CODE	CONDITION	$\top$				DEFECTS	<u> </u>	•	, -	Remo co,	J9, 00 and 0.,	-	-	
<b>!</b> ├──'	N	NOT APPLICABLE	+												
G	9	EXCELLENT	_	Exceller	nt condition.	—									
G	8	VERY GOOD	_		olem noted.										
G	7	GOOD	_		ninor problem	ms.									
F	6	SATISFACTORY	- 1				some minor deterioration.								
F	5	FAIR	A	All prima	ary structura	al eleme	nents are sound but may have minor se	ction loss	, cracking	ு, spalling or scour.	-				
Р	4	POOR	A	Advance	ed section Ic	oss, det	eterioration, spalling or scour.					-			
Р	3	SERIOUS	Lo	Loss of s	section, dete	erioratio	tion, spalling or scour have seriously aff concrete may be present.	ected prin	mary struc	ctural components. I	_ocal failures	s are possible. Fatigue c	racks		
			A	Advance	ed deteriorat	ition of p	primary structural elements. Fatigue cr						/e		
С	2	CRITICAL	re	removed	d substructur	ıre supp	port. Unless closely monitored it may b	be necessa	sary to clos	se the bridge until co	orrective actio	ion is taken.			
С	1	"IMMINENT" FAILURE					tion loss present in critical structural co- out corrective action may put it back in I			us vertical or nonzon	tal movemen	it affecting structure stat	olility.		
	0	FAILED	С	Out of s	ervice - bey	ond cor	prrective action.					-			
		I ALLE						TODA		STATISTIC					
DEF	ICIENC	CY: A defect in a stru	ture	that re	ires corre	active a	DEFICIENCY REP	<u>Ukt</u>	NG	GUIU				-	
					Julies co	Clive a.	.ction.								
		Deficiency Deficiencies			in nature, ge	-perally (	do not impact the structural integrity of the brid	and cor	od vlizee h	- repaired Examples incl	".de hut are no	t limited to: Snalled concrete	Minor pc		
	linoi 1	Jeffciency - boles, Minor	corrosi	ion of ste	eel, Minor scou	uring, Clo	do not impact the structural integrity of the brid logged drainage, etc.	Je anu	.0 tasıı,	repaired. Example:	ide pur a.s.	Ilfriiteu to. Opunos carre	Minor		
			orroded	rebais, C	Considerable s	sememer	in nature and need more planning and effort to ent, Considerable scouring or undermining, Mo	oderate to ex	extensive cor	prosion to structural steel	i with measurab	ible loss of section, etc.			
C-S=	Critic	al Structural Deficie	ency	_ A def	iciency in a str	ructural e	element of a bridge that poses an extreme uns	safe condition	on due to th	ne failure or imminent fail	ure of the elem-	ent which will affect the struc	ctural inteç	grity	
		cal Hazard Deficienc	cv -	of the A deficie	e bridge. ency in a comp	ponent or	or element of a bridge that poses an extreme ha	nazard or uns	nsafe condition	tion to the public, but does	es not impair the	e structural integrity of the brid	ridge. Exam	mples	
1				include betc.	out are not IIIIII	ted to: L	Loose concrete hanging down over traffic or pe	destrians, A	A hole in a s	sidewalk that may cause	injuries to peae	estrians, Missing section or b	ridge rann	ng, 	
		OF REPAIR:													
	nmediate	, ,			-		n Engineer (DBIE) to report the Deficiency and			=	-11				
A = AS	SAP- rioritize-						Engineer or the Responsible Party (if not a State Responsible Party (if not a State owned bridge)					nle)			

#### REMARKS

#### **BRIDGE ORIENTATION**

Dyke Road over Poucha Pond has an east/west orientation, see sketch 1.

#### **GENERAL REMARKS**

There are at bridge posting weight restriction signs, 9, 14, and 21 Tons on the east and west approaches, see photos 7 and 10. See photo 22 for overview of current ADT counters mounted on the bridge. The sign over the north face of the navigation channel is damaged, see photo 23.

#### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

See photo 1 for general topside of bridge.

The deck/wearing surface consists of a single course of 4" x 10" pressure treated timbers. The timber deck wearing surface has a slight washboard effect and wheel rutting (section loss) in the vehicular wheel path up to 3/4" deep. Sand debris on the bridge wearing surface is contributing to the timber wear in the vehicular wheel path. In addition, the top of deck nail heads protrude up to 3/4" above the worn sections of wearing surface. Several broken and or bent tops of deck nail heads, see photos 2, 3, and 4.

#### Item 58.2 - Deck Condition

See photo 5 for general underside and item Item 58.1 for wearing surface.

#### Item 58.12 - Utilities

There is PVC conduit in bay #5, in all spans, see photo 6.

#### **APPROACHES**

#### Approaches b - Appr. Roadway Settlement

See photos 7 and 10 for overview of east and west gravel approaches, respectively. In general the gravel approaches have settlement all along the perimeter exposing the top of the old bulkheads.

### SA - At the east approach there is isolated exposed wingwall tie rod, see photos 7 and 8.

Adjacent to bridge there is general minor to moderate rutting, see photo 9 for typical. At the SW there is an isolated minor sink hole, see photo 11. At the NW, the approach has been filled in since the inspection, see photo 12.

#### ITEM 59 - SUPERSTRUCTURE

#### Item 59.4 - Girders or Beams

See photo 5 for general underside.

Isolated misguided deck nails, protruding out the side of beams, as-built condition.

#### Item 59.7 - Conn Plt's, Gussets & Angles

Some beam connecting angles have some areas light scale, see photo 6 for example.

#### **SuperStructure Load Vibration Notes**

Minor vibration experienced under live vehicular loadings.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 22, 2015

#### REMARKS

#### **ITEM 60 - SUBSTRUCTURE**

#### <u>Item 60.1 - Abutments</u>

#### Item 60.1.d - Breastwalls

Marine growth is at and below the tidal zone, see photo 14 for typical view. Also see latest underwater dive report dated 9/5/2013.

#### Item 60.1.e - Wingwalls

See photo 15 for typical view of wingwall. In general there is evidence of some slight bulging between timber piles, could be as-built. There is an isolated crack in a horizontal timber at the NE wingwall, see photo 16. Also see item "Approach Settlement" and latest underwater dive report dated 9/5/2013.

#### Item 60.1.i - Piles

See photos 14 and 15 for typical piles along the wingwalls and breastwalls.

Also see latest underwater dive report dated 9/5/2013.

#### Item 60.1.j - Scour

See latest underwater dive report dated 9/5/2013.

#### Item 60.1.k - Settlement

Also see latest underwater dive report dated 9/5/2013.

#### Item 60.1.I - Fasteners

All of the fasteners in the tidal zone have some surface rust and scale.

#### Item 60.3 - Pile Bents

Also see latest underwater dive report dated 9/5/2013.

#### Item 60.3.a - Pile Caps

There is isolated 1/8" wide timber checking at the end of timber bent pier cap 6, see photo 18.

#### Item 60.3.b - Piles

See photo 17 for typical view of typical piles and diagonal bracing.

Also see latest underwater dive report dated 9/5/2013.

#### <u>Item 60.3.c - Diagonal Bracing</u>

Marine growth is at and below the tidal zone, see photo 17. Also see latest underwater dive report dated 9/5/2013.

#### Item 60.3.e - Fasteners

All of the fasteners in the tidal zone have some surface rust. Some scattered areas of corrosion and some section loss, see photos 19, 20, and 21 for examples.

Also see latest underwater dive report dated 9/5/2013.

#### **ITEM 61 - CHANNEL AND CHANNEL PROTECTION**

#### Item 61.1 - Channel Scour

Also see latest underwater dive report dated 9/5/2013.

#### REMARKS

#### Item 61.2 - Embankment Erosion

Also see latest underwater dive report dated 9/5/2013.

#### Item 61.3 - Debris

Also see latest underwater dive report dated 9/5/2013.

#### Item 61.4 - Vegetation

Also see latest underwater dive report dated 9/5/2013.

#### Item 61.6 - Rip-Rap/Slope Protection

Also see latest underwater dive report dated 9/5/2013.

#### Item 61.7 - Aggradation

Also see latest underwater dive report dated 9/5/2013.

#### TRAFFIC SAFETY

#### Item 36a - Bridge Railing

Timber rails on piles, nonstandard.

#### Item 36b - Transitions

Continuation of the timber rails on piles, nonstandard.

#### Item 36c - Approach Guardrail

Timber rails on piles, nonstandard.

#### Item 36d - Approach Guardrail Ends

Blunt ends, nonstandard.

#### Sketch / Photo Log

Sketch 1: Plan view sketch from Underwater Inspection Report 9/5/2013. Sketch revised as noted

Photo 1: General topside looking east

Photo 2: Overview of rutting

Photo 3: Close up of previous photo. Rutting and nails protruding up to 3/4"

Photo 4: Typical washing boarding

Photo 5 : General underside Photo 6 : Typical utility bay

Photo 7: Overview of east approach

Photo 8: Close up of previous photo. Isolated exposed tie rod

Photo 9: Typical settlement/rutting in wheel path at approach to bridge up 1-1/2"

Photo 10: Overview of west approach

Photo 11: SW approach isolated sinkhole 2' W by 3' L by 1' D

Photo 12: Overview of NW approach. Area has been filled in, since previous inspection

Photo 13: North elevation

Photo 14: Typical pile and bulkhead along abutments

Photo 15: Typical wingwall and fasteners

Photo 16: NE wingwall, isolated crack in lower timber

Photo 17: Typical overview of pile bents and diagonal bracing

Photo 18: South end of timber pier cap 6. Isolated splitting up to 1/8" wide. No notable change

PAGE 6 OF 19

 CITY/TOWN
 B.I.N.
 BR. DEPT. NO.
 8.-STRUCTURE NO.
 INSPECTION DATE

 EDGARTOWN
 43B
 E-07-004
 E07004-43B-MUN-NBI
 SEP 22, 2015

#### REMARKS

#### Sketch / Photo Log (Cont'd)

Photo 19: North bent fastener, isolated head of bolt starting to mushroom

Photo 20: Isolated bolt starting to neck near nut

Photo 21: Some bolts showing some corrosion, scale, and start of section loss

Photo 22: Overview of ADT counter. Previous and existing counter to the left (Count reads 37,668). New

counter to the right, not connected up yet

Photo 23: Sign over north face of navigation channel is damaged

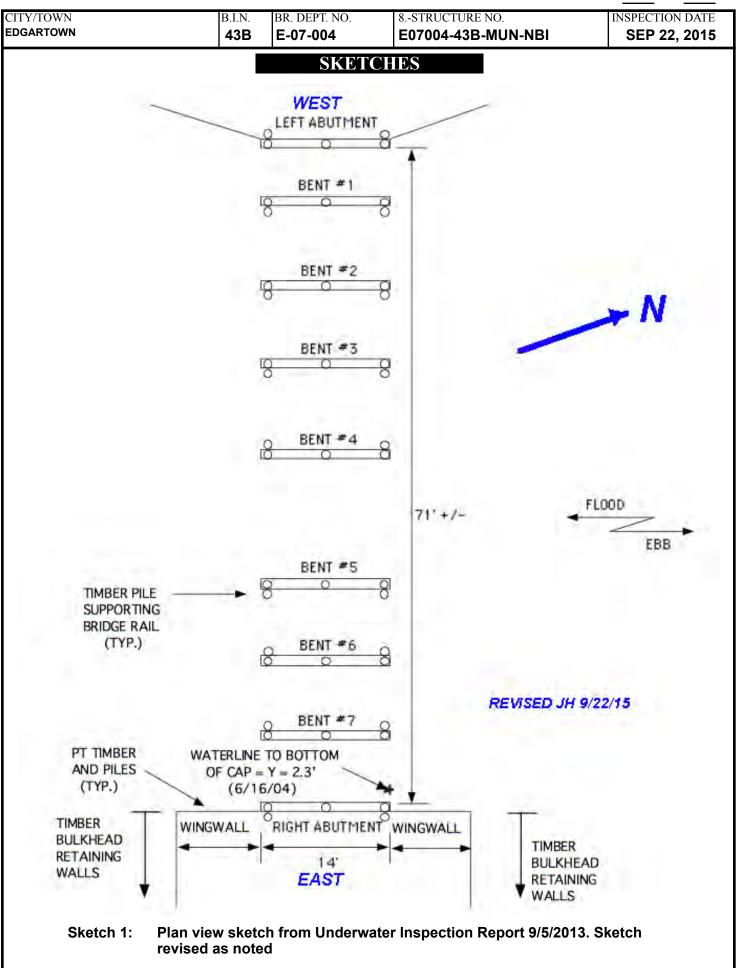




Photo 1: General topside looking east



Photo 2: Overview of rutting



Photo 3: Close up of previous photo. Rutting and nails protruding up to 3/4"



Photo 4: Typical washing boarding



Photo 5: General underside



Photo 6: Typical utility bay



Photo 7: Overview of east approach



Photo 8: Close up of previous photo. Isolated exposed tie rod



Photo 9: Typical settlement/rutting in wheel path at approach to bridge up 1-1/2"



Photo 10: Overview of west approach



Photo 11: SW approach isolated sinkhole 2' W by 3' L by 1' D



Photo 12: Overview of NW approach. Area has been filled in, since previous inspection



Photo 13: North elevation



Photo 14: Typical pile and bulkhead along abutments



Photo 15: Typical wingwall and fasteners



Photo 16: NE wingwall, isolated crack in lower timber



Photo 17: Typical overview of pile bents and diagonal bracing



Photo 18: South end of timber pier cap 6. Isolated splitting up to 1/8" wide. No notable change

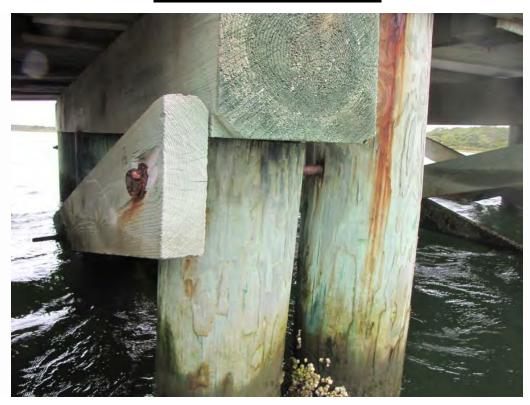


Photo 19: North bent fastener, isolated head of bolt starting to mushroom



Photo 20: Isolated bolt starting to neck near nut



Photo 21: Some bolts showing some corrosion, scale, and start of section loss



Photo 22: Overview of ADT counter. Previous and existing counter to the left (Count reads 37,668). New counter to the right, not connected up yet



Photo 23: Sign over north face of navigation channel is damaged

## National Bridge Element Inspection

BDEPT#	E-07-004					Date	e 09/22/201	09/22/2015			
B.I.N.	43B			District B	ridge Ins	spection Eng'	r Grant Si	mpson			
Item 8	E07004-43B-MUN-NBI				Inspe	ecting Agency	Mass. Hi	Mass. Highway Dept.			
Span Group	1					Team Leader	r John Ha	John Hanley			
Town	Edgartown	Team									
District	Member(s)										
E1 #	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4		
31	Timber Deck	sq feet	3	1,151.738	<b>\ </b> \  \  \  \  \  \  \	1,151.738					
Notes:											

feet

feet

each

feet

feet

Timber Open Girder

Timber Abutment

Timber Pile

Timber Pier Cap

Timb Bridge Railing

Notes : **216** 

Notes : **228** 

Notes : **235** 

Notes : **332** 

Notes:

3

3

3

3

531.496

59.055

45

134.514

150.918

531.496

59.055

45

134.514

150.918

2-DIST **05** 

B.I.N. **43B** 

## UNDERWATER OPERATIONS TEAM ROUTINE UNDERWATER INSPECTION REPORT

BR. DEPT. NO. **E-07-004** 

CITY/TOWN			8-STRUCTURE N	О.		LEVEL OF INSPECTION 93B-DATE INSPECTED							
EDGARTOWN			E07004-43B-MUN-NBI				II	OCT 6,	2016				
07-FACILITY CARRIED			ACCESS TO BRII	OGE	UNDERWATER OPERATIONS ENGINEER								
HWY DIKE RD			BOAT RAN				NDI E. BONICA						
06-FEATURES INTERSECTED	.D		DEPTH	VISIBILITY		EADER (DIVE MASTER)  Report submitted by:							
WATER POUCHA PON	שו		4 m	3 m		DI E. BC	DI E. BONICA						
BOULDERS, SAND		CURRE	_/SWIFT	G. BROZ,		OLLER	AN, B. FITZ	GERALD					
ITEM 60 SUBSTRUCTURE		7	ITEM 6	011111	NEL &	7	N						
1. Abutments	7	DEF		EL PROTECT.	10N   7	DEF	CULVERTS	N	<b>DEF</b>				
	N	_	1. Channel		7	-	1. Roof	N	-				
a. Pedestals	N			nent Erosion	8	-	2. Floor	N	- I				
b. Bridge Seats	7	_	3. Debris			-	3. Walls		-				
c. Backwalls	N		4. Vegetatio	n	8	-	4. Headwall	N	-				
d. Breastwalls	7	<u> </u>	5. Utilities		N	-	5. Wingwall	N N	-				
e. Wingwalls	N	_	1	Slope Protection	6	-	6. Pipe	N	-				
f. Slope Paving/Rip-Rap	N	-	7. Aggradat		8	-	7. Protective (	-	-				
g. Pointing	N	-	8. Fender S	ystem	N N	-	8. Embankme		-				
h. Footings			a. Piles		N	-	9. Wearing Su		-				
i. Piles	7	-	b. Diagon	al Bracing	N	-	10. Railing	N	-				
i. Scour	7	-	C. Horizor	ntal Bracing	N	-	11. Sidewalks		-				
k. Settlement	8	-	d. Wales		N	-	12. Utilities	N	-				
I.	N	-	e. Fastene	ers	N	-	13. Member A	lignment N	-				
2. Piers or Bents	N		f. Ladders	s	N	-	14. Deformation	on N	-				
a. Pedestals	N	-	9.		N	-	15. Scour	N	-				
b. Caps	N	-	ITEM 59	SUPERSTR	RUCTUR	E DEF	16. Settlement		-				
c. Columns	N	-	-		N	- DEF	17.	N	-				
d. Stems/Webs/Pierwalls	N	-	_		N	_	18.	N	-				
e. Pointing	N	-	_		N	_	UNDERMINING (	Y/N)	N				
f. Footing	N	-		DI		NCV DI	EPORTING						
g. Piles	N	-	DEFICIENC		structure that			GUIDE					
h. Scour	N	-		IES OF DEFICI		requires corre	ective action.						
i. Settlement	N	-		Deficiency Defici	encies which are	minor in nature,	generally do not impact the	e structural integrity of the bridge	and could				
j.	N	-						d concrete, Minor scouring, etc.	ata Essentia				
k.	N	-	S= Severe/N	Major Deficiency	include but a	re not limited to: I	Moderate to major deterior	ed more planning and effort to rep ation in concrete, Exposed and c nt, Considerable scouring or under	orroding				
3. Pile Bents	7		C-S= Critic	al Structural De	ficiency-	A deficiency in a s	structural element of a brid	ge that poses an extreme unsafe	condition				
a. Pile Caps	N	-	C-5 CHIL	an Structurar De	neichey			element which will affect the struc					
b. Piles	7	-	C-H= Critic	cal Hazard Defic	cond	dition to the public	c, but does not impair the s	dge that poses an extreme hazard structural integrity of the bridge. E	xamples				
c. Diagonal Bracing	7	-	1				nited to: Any part of piles o afety hazard for the naviga	r fender system which are project tional traffic, etc.	ung outward				
d. Horizontal Bracing	N	-	URGENCY	OF REPAIR:									
e. Fasteners	5	-	I=Immediate	[Inspector(s) immediation from		rict Bridge Inspec	ction Engineer (DBIE) to re	port the Deficiency and to receive					
			A=ASAP-	[Action/Repair should bridge) upon receipt			ice Engineer or the respons	sible party (if not a State owned					
UNDERMINING (Y/N)		N	P=Prioritize-	[Shall be prioritized be made when funds an			or the Responsible Party (if	not a State owned bridge) and re	epairs				

#### REMARKS

#### **GENERAL REMARKS**

The timber deck bridge is a timber pile bent structure with two pile abutments and seven pile bents. Each bent and abutment has three piles below the timber cap and one pile at upstream and downstream ends that support the bridge rails. Timber diagonal bracing is between piles in each bent.

Both abutments have timber piles and timber planks, which act as bulkheads. Wingwalls are also timber piles and timber planks.

#### Orientation:

Abutments are labeled left (west) and right (east), looking downstream. Bents are numbered from left to right.

**Note:** Bridge is best inspected at high tide. Access to the bridge is very shallow, even at high tide.

#### ITEM 60 - SUBSTRUCTURE

#### Item 60.3 - Pile Bents

#### Item 60.3.b - Piles

Pressure treated timber piles are in good condition with no problems noted.

#### <u>Item 60.3.c - Diagonal Bracing</u>

There is some deterioration at the lower ends of the diagonal bracing.

#### Item 60.3.e - Fasteners

Fasteners below the waterline have minor to moderate rust.

#### ITEM 61 - CHANNEL AND CHANNEL PROTECTION

#### Item 61.2 - Embankment Erosion

At the left (west) side, upstream and downstream, there is minor erosion at the end of the wingwalls.

#### Item 61.6 - Rip-Rap/Slope Protection

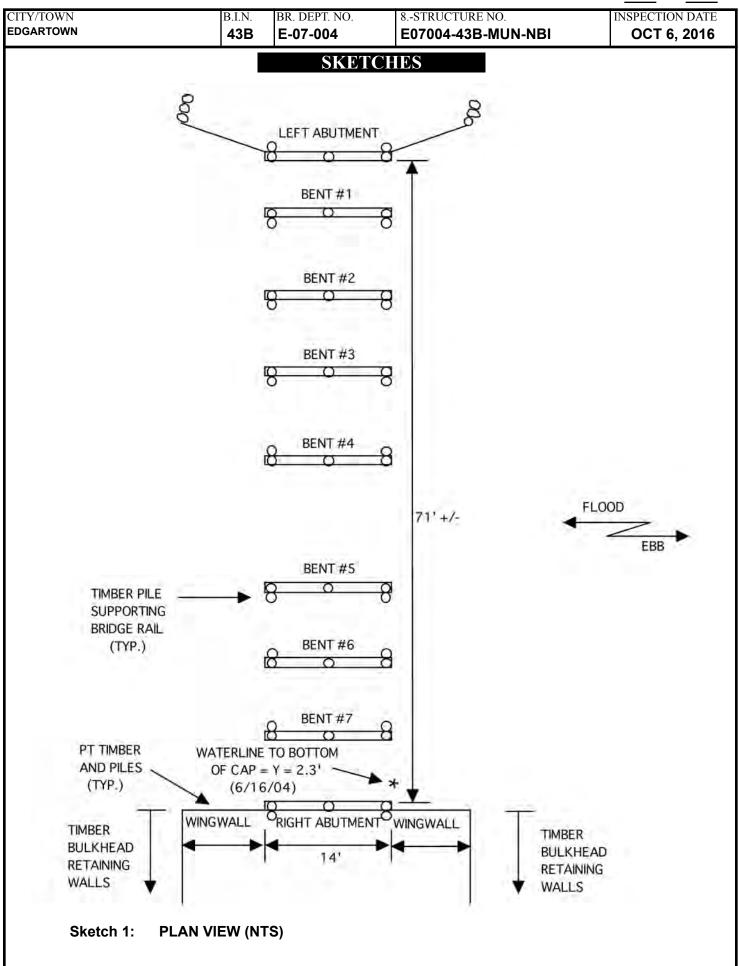
There was previously rot in the vertical timbers at the pressure treated bulkhead retaining walls at the right (east) side. This area has been patched with plywood.

At the right (east) side, at the end of the newer pressure treated piles and timber plank bulkheads are original piles and timber planks along the sides of the roadway. The piles are dry with some delamination and the vertical timbers are dry with some deterioration, up to 100% section loss. These bulkheads are not part of the bridge.

#### Sketch / Chart Log

Sketch 1: PLAN VIEW (NTS)

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)



CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	OCT 6, 2016

## CHARTS

# SCOUR MONITORING CHART DOWNSTREAM END

	6/16/04	6/28/07	7/14/10	9/5/13	10/6/16
LEFT ABUTMENT	2.8'	2.9'	3.0'	3.1'	2.9'
BENT #1	4.3'	4.5'	4.9'	4.8'	4.2'
BENT #2	6.8'	6.8'	7.9'	7.5'	7.6'
BENT #3	9.2'	9.2'	9.2'	9.2'	9.0'
BENT #4	9.9'	9.7'	10.2'	10.4'	10.0'
BENT #5	10.8'	10.8'	11.4'	11.5'	11.2'
BENT #6	11.1'	11.0'	11.1'	10.8'	11.1'
BENT #7	9.8'	9.9'	9.0'	9.7'	9.6'
RIGHT ABUTMENT	7.6'	7.7'	7.0'	7.6'	7.6'
Υ	2.3'	2.5'	1.9'	1.3'	1.9'
CORRECTION FACTOR		+0.2'	-0.4'	-1.0'	-0.4'

#### NOTES:

- 1. WATERLINE TO BOTTOM OF RIGHT ABUTMENT CAP, DOWNSTREAM END = Y = 2.3' (6/16/04).
- 2. SOUNDINGS ADJUSTED TO 6/16/04 WATERLINE WITH CORRECTION FACTOR.

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)

2-DIST B.I.N. **05 43B** 

# STRUCTURES INSPECTION FIELD REPORT ROUTINE INSPECTION

BR. DEPT. NO. **E-07-004** 

CITY/TOWN EDGARTOWN	8ST						1.046	P:POSTED				P. DATE <b>2017</b>			
07-FACILITY CARRIED  HWY DIKE RD				MEMORIAL NAM	E/LOCAL N	IAME		-, -	т виігт 1995	106-YR REBUILT <b>0000</b>	YR R		B'D (NO	ON 106)	
06-FEATURES INTERSECTED				26-FUNCTIONAL CLASS DIST. BRIDG				BRIDGE	E INSPECTI	ON ENGINEER	G. Sin	npson			-
WATER POUCHA P	OND	)		Rural Local											
43-STRUCTURE TYPE 702: Timber String	er/Gi	irder		22-OWNER Town Agency 21-MAINTAINER TEAM LEADI				ER <b>J. Spiezi</b>	0						
107-DECK TYPE  8: Timber							теам <b>К. Н</b>			NTHARA					
ITEM 58	6		m	M 59		0	1		ITEM	60		7			-
DECK	6	DEF	SUP	<b>ERSTRUCTU</b>	RE	8	] DE		SUBST	RUCTURE		7		DEF	
1.Wearing surface	6	M-P		ingers		N			1. Abut		Dive	Cur	8	DEF	ı
2.Deck Condition	6	M-P		orbeams		N	-		a. Pedes		N	N		-	١
		IVI-I	<u> </u>	or System Brac	ina	N	╢		b. Bridge	Seats	N	N		-	
3.Stay in Place Forms	N	-		ders or Beams	iiig	8	- -	_	c. Backu		7	8		-	
4.Curbs	N	-				+	- -		d. Breast e. Wingw		N 7	8 7	-		
5.Median	N	-		sses - General	N.	N	<u>-</u>	_		Paving/Rip-Rap	N	N		-	
6.Sidewalks	N	-		Upper Chords	N	_	-		g. Pointi		N	N		-	
7.Parapets	N	-	b.	Lower Chords	N	_	-		h. Footin	gs	N 7	N 7	-	-	
8.Railing	7	-	c.	Web Members	N	_	-		i. Scour		7	H	-		
	N	_	d.	Lateral Bracing	N		-		k. Settle		8	8		-	
9.Anti Missile Fence			e.	Sway Bracings	N		-		I. Faster	ners	N	6		-	
10.Drainage System	N	-	f.	Portals	N		-		m.	an Danta	N	N		=	ı
11.Lighting Standards	N	-	g.	End Posts	N		-			or Bents			N		١
12.Utilities	8	-	6.Pin	& Hangers		N	1 -		a. Pedes b. Caps	tals	N	N	-		
13.Deck Joints	N	-	7.Coi	nn Plt's, Gusset	s & Angle	s 7	╽		c. Colum	nns	N	N			
14.	N	_	8.Co	ver Plates		N	<del>                                     </del>		d. Stems	/Webs/Pierwalls	N	N		-	
15.			9 Bea	aring Devices		N	<del>                                     </del>		e. Pointi	•	N	N		-	
15.	N	-		aphragms/Cros	e Eramos		<del>                                     </del>		f. Footing. Piles	g	N	N	-		
16.	N	-			5 Frances		- -		h. Scour		N	N			
N	l	s		vets & Bolts		N	<u> </u>		i. Settlei		N	N		-	
CURB REVEAL		N	12.W			N	<u> </u>		j.		N	N		-	
(In millimeters)	<u> </u>	11	13. M	ember Alignmer	nt	8	<u> </u>		<i>k.</i> 3. Pile I	Panto	N	N	_	-	ı
APPROACHES		DEF	14.Pa	aint/Coating		N	-		a. Pile Ca		N	8	7		١
a. Appr. pavement condition	N		15.			N	-		b. Piles	aps	7	7		<u> </u>	
	+		Voor	Painted	N				c. Diago	nal Bracing	7	8		-	
b. Appr. Roadway Settlement	6	S-A	Tear	rainteu			]			ontal Bracing	N	N			
c. Appr. Sidewalk Settlement	N	-		ISION DAMAGE:	-				e. Faster	ners	5	6		-	]
d.	N	-		e( <b>X</b> ) Minor( )		-	vere (	)	UNDERM	IINING (Y/N) If YI	ES ple	ase e	xplain	N	
OVERHEAD SIGNS		DEFLECTION: e(X) Minor()	Please exp		voro (		2011101								
(Attached to bridge)	Y/N)	N					veie (			ON DAMAGE: ( ) Minor ( ) Me	oderat	e (	) Sev	rere ( )	
		DEF		VIBRATION: e( ) Minor(X)	Please exp Moderate		vere (	,		Please explain		- (	, 500	\ /	1
a. Condition of Welds	N	-	None ( ) Minor ( <b>X</b> ) Moderate ( ) Severe ( )						1		oderat	e (	) Sev	ere ( )	
b. Condition of Bolts	N	-	Any F	racture Critical	Member:	(Y/N)				D	<b>7</b>	1			
c. Condition of Signs	N	-	Any (	Cracks: (Y/N)	N		I-60 (Dive Report): 7			керог	eport): 7				
	, ,		~",		IN				93B-U/W (DIVE) Insp 10/06/2			06/2	016		
V-UNIVNO									00500				) F N/I		ĺ

CITY/TC EDGAR											TION DATE  7 14, 2017			
				43		E-07-004								
ITEM			!	7		TEM 36 TRAFFIC SA	AFETY 36 COND	D DEF	ACCESSIE		(Y/N	,		
CHAN!		<b>A</b> T	ı		A.	Bridge Railing	0 7		Lift Bucket		Needed	d Used N		
CHAIN	NEL PROTECTION	V				Transitions	0 7		Ladder		N	N		
		1	Cur	DEF	1 I 💳	Approach Guardrail	0 7	_	Boat		Р	Υ		
1.Chan	inel Scour	7	Н		╢┶═	Approach Guardrail Ends	8 0		Waders		N	N		
2.Emba	ankment Erosion	7	7	-	WF	EIGHT POSTING	Not Applica		Inspector 50	0	N	N		
3.Debris	is	8	8	-		Н		Single	Rigging		N	N		
4. Veget	tation	8	8	<u> </u>	Ac	ctual Posting 09		N	Staging Traffic Cont		N	N		
5.Utilitie	es	N	N	-	Re	ecommended Posting 09	9 14 21	N	Traffic Cont		N	N		
6.Rip-R	Rap/Slope Protection	6	7	-	Wa	aived Date: 00/00/0000	EJDMT Date:	00/00/0000	Police		N	N		
7.Aggra	adation	8	Н	<u>-</u> '		At brid		er Advance	Other:		<del>                                      </del>			
8.Fende	er System	N	N	[ - <u>'</u>	(Y=	gns In Place E =Yes,N=No,	W E		CONTACTTO	OWN	Р	Υ		
	-				NR:	R=NotRequired)	Y NF	R NR			一	<del></del>		
						sibility 8	8 8	<u> </u>	TOTAL HO	JURS		12		
<b> </b>			+			EARANCE POSTING	N	S	PLANS	(Y/N	N):	Υ		
					No		in ft				<del>'</del>			
STREAM	M FLOW VELOCITY:	_	_			ctual Field Measurement		0	(V.C.R.)	(Y/N):	N	í		
Tidal (X)	) High ( ) Moderate ( ) L	_ow (	) Nor	ne ( )	r oc	osted Clearance At brid		Advance	TAPE#:	_				
TEM 61 (D	ive Report): 7 ITEM 61	 1 (Thi∈	is Repo	ort): 7		gns In Place N	SN							
II En	. ,, ,				NR:	=Yes,N=No, R=Not Required)		<u> </u>		ests performed:	:			
93b-U/V	W INSP. DATE: 10	)/06/	3/2016	3	Leç Vis	egibility/ sibility			Visual and T	actile.				
RATINO		_	_		<del>                                     </del>			If YE	I ES please give p	riority:				
Rating R	Report (Y/N):			ı	Rec	commend for Rating or Rer	rating (Y/N):		GH() MEDIUM		)			
Date:	01/01/2005			ı	RE/	ASON:					_			
Insp	pection data at time of e	existi	ing ra	iting	-									
			•	5/2003										
			_			CONDITION R	ATING GU	(For	Items 58, 59, 60	and 61)				
C	CONDITION				-	DEFECTS		,	nomo 11, . ,	una c.,				
	N NOT APPLICABLE	+												
G	9 EXCELLENT	E	Exceller	nt condition.										
G	8 VERY GOOD	N	No probl	olem noted.										
	7 GOOD	_		ninor problen										
	6 SATISFACTORY	_				some minor deterioration.	· white							
	5 FAIR	_				ents are sound but may have minor so	ection loss, cracking	J, spalling or scour.						
	4 POOR	Lo	Loss of s	section, dete	terioratio	eterioration, spalling or scour. ion, spalling or scour have seriously a	affected primary stru	ictural components.	Local failures are pr	ossible. Fatigue cr	acks			
P	3 SERIOUS	in	in steel o	or shear cra	acks in c	concrete may be present.		•	·					
С	2 CRITICAL	re	removed	d substructu	ure supp	primary structural elements. Fatigue of port. Unless closely monitored it may	be necessary to clos	ose the bridge until co	orrective action is tak	iken.				
С	1 "IMMINENT" FAILURE					tion loss present in critical structural co out corrective action may put it back in		us vertical or horizon	tal movement affect	ting structure stab	lility.			
	0 FAILED	c	Out of s	ervice - bey	ond cor	prrective action.								
						DEFICIENCY REI	DODTING	CHIDE						
DEFICIE	ENCY: A defect in a stru	ucture	e that re	quires corre	ective a		William							
CATEGO	ORIES OF DEFICIENC	CIES	S:											
	nor Deficiency - Deficiencies	s which a	are minor	or in nature, ge	enerally d	do not impact the structural integrity of the bri logged drainage, etc.	idge and could easily be	a repaired. Examples incli	ude but are not limited t	to: Spalled concrete, !	Minor pot	į		
	re/Major Deficiency - De	eficienci	sion of ster	ch are more ext	xtensive in	in nature and need more planning and effort t	to repair. Examples inclu	lude but are not limited to:	: Moderate to major dete	terioration in concrete,				
	- COI	orrodea	u rebars, c	Considerable	settlemer	ent, Considerable scouring or undermining, M element of a bridge that poses an extreme ur	vioderate to extensive cor	orrosion to structural steel	i with measurable loss o	or section, etc.				
		-	or the	е впаде.		element of a bridge that poses an extreme ur or element of a bridge that poses an extreme								
C-H-C	Critical Hazard Deficienc	٠,				or element of a bridge that poses an extreme Loose concrete hanging down over traffic or p								
URGEN	ICY OF REPAIR:	-												
I = Immed		-		_		n Engineer (DBIE) to report the Deficiency and								
A = ASAF P = Priori						Engineer or the Responsible Party (if not a St	= : :	receipt of the Inspection	Report].					

#### REMARKS

#### **BRIDGE ORIENTATION**

Dyke Road over Poucha Pond has an east/west orientation, see sketch 1.

#### **GENERAL REMARKS**

<u>Access:</u> Travel to and from Martha's Vineyard Island (Ferry) through coordination with district 5 Taunton headquarters. Travel to and from Edgartowne to Chappaquiddick Island (Ferry) through coordination with Edgartowne DPW, phone 508-627-4004. Vehicle staging at the northwest corner of the bridge. Topside walkthrough inspection, underside inspection performed with a kayak, launched from the northwest corner.

Curb Reveals: No curbs on the structure.

#### Average Daily Traffic:

There is a live vehicle counter mounted on the bridge rail system, the counter displayed a count of 26669, photo 6. Previous readings as follows:

- 2011 = 45125
- -2013 = 12101(5)
- -2017 = 26669

Assuming the reading is yearly, an average ADT was derived as 27965, and 3% truck traffic due to bridge weight posting, limited roadway width, and limited practicability on the east side of the bridge, photo 12.

#### Postings:

Bridge weight restriction posting signs, 9, 14, and 21 Tons on the east and west approaches, see photo 3 as typical.

Previously reported damaged sign over the north face of the navigation channel no longer exists, photo 12.

#### ITEM 58 - DECK

#### <u>Item 58.1 - Wearing surface</u>

Wearing surface is comprised of single coursed 4" x 10" transversely fastened timber planks, deficiencies as follows, photos 4 - 6:

- Weathering and surface checks throughout.
- Unevenness(Displacement) between planks.
- Section loss(Wheel Rutting) up to 3/4" deep in vehicle wheel paths.
- Nominal wear in the nail heads, and nail heads appear raised due to peripheral section loss in the timber wearing surfaces.
- Sand debris, up to 1/2" deep at the east end.
- Several broken/bent tops of deck nail heads.

#### Item 58.2 - Deck Condition

See general underside inventory photo, and Item 58.1 - wearing surface condition comments.

#### Item 58.12 - Utilities

PVC conduit in bay 5, in all spans.

#### REMARKS

#### <u>APPROACHES</u>

#### Approaches b - Appr. Roadway Settlement

The approach roadways are comprised of gravel and loose sand. In general, the gravel approaches have settlement along the perimeters exposing some tops of the original bulkheads, photo 3. Worse case deficiencies as follows:

#### West approach:

- S/A: 7'L x 2'W x 10" deep at the southwest corner, photo 1.
- Adjacent to bridge, minor to moderate rutting in vehicle wheel paths.
- Scattered shallow potholes.

#### East approach:

- S/A: 3'L x 20"W x 14" deep at the southwest corner, photo 2.

#### Note: Discovered with board coverings, and replaced with the same board coverings upon exiting.

- Isolated exposed wingwall tie rod(Beyond bridge limits).
- Adjacent to bridge, minor to moderate rutting in vehicle wheel paths.
- Scattered shallow potholes.

#### <u>ITEM 59 - SUPERSTRUCTURE</u>

#### Item 59.4 - Girders or Beams

Scattered misguided deck nails protruding out the side of beams, photo 7.

#### <u>Item 59.7 - Conn Pit's, Gussets & Angles</u>

Some beam connecting angles have some areas light scale.

#### SuperStructure Load Vibration Notes

Minor vibration experienced under live vehicular loadings.

#### ITEM 60 - SUBSTRUCTURE

#### <u>Item 60.1 - Abutments</u>

#### Item 60.1.c - Backwalls

Photo 9.

#### Item 60.1.d - Breastwalls

Marine growth at and below the tidal zone, see photo 9 for typical view.

#### Item 60.1.e - Wingwalls

Overall, there is evidence of some slight bulging between timber piles. There is an isolated crack in a horizontal timber at the NE wingwall. Also see item "Approach Settlement" and latest underwater dive report dated 10/6/2016.

#### Item 60.1.i - Piles

See photo 9 for typical piles along the wingwalls and breastwalls.

Also see latest underwater dive report dated 10/6/2016.

#### Item 60.1.j - Scour

See latest underwater dive report dated 10/6/2016.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 14, 2017

#### REMARKS

#### Item 60.1.k - Settlement

Also see latest underwater dive report dated 10/6/2016.

#### Item 60.1.I - Fasteners

All of the fasteners in the tidal zone have some surface rust and scale, photo 8.

#### Item 60.3 - Pile Bents

Also see latest underwater dive report dated 10/6/2016.

#### Item 60.3.a - Pile Caps

There is isolated 1/8" wide timber surface check at the end of timber bent pier cap 6.

#### Item 60.3.b - Piles

See photo 12 for typical view of typical piles and diagonal bracing. Bent 1, top of southwest pile exhibits timber rot 8" x 4" x 4" deep, photo 4.

Also see latest underwater dive report dated 10/6/2016.

#### <u>Item 60.3.c - Diagonal Bracing</u>

Marine growth is at and below the tidal zone, see photo 11. Also see latest underwater dive report dated 10/6/2016.

#### Item 60.3.e - Fasteners

All of the fasteners in the tidal zone have some surface rust. Some scattered areas of corrosion and some section loss, see photo 8 for example.

Also see latest underwater dive report dated 10/6/2016.

#### ITEM 61 - CHANNEL AND CHANNEL PROTECTION

#### Item 61.1 - Channel Scour

Also see latest underwater dive report dated 10/6/2016.

#### Item 61.6 - Rip-Rap/Slope Protection

Also see latest underwater dive report dated 10/6/2016.

#### TRAFFIC SAFETY

#### Item 36a - Bridge Railing

Timber rails on piles, nonstandard.

#### Item 36b - Transitions

Continuation of the timber rails on piles, nonstandard. There is a 1' - 6" space between the lower horizontal timber rail and the rail base, this measurement appears to be greater than industry safety standards, photo 3.

#### <u>Item 36c - Approach Guardrail</u>

Timber rails on piles, nonstandard. There is a 1' - 6" space between the lower horizontal timber rail and the rail base, this measurement appears to be greater than industry safety standards, photo 3.

#### Item 36d - Approach Guardrail Ends

Blunt ends, nonstandard.

PAGE 6 OF 13

 CITY/TOWN
 B.I.N.
 BR. DEPT. NO.
 8.-STRUCTURE NO.
 INSPECTION DATE

 EDGARTOWN
 43B
 E-07-004
 E07004-43B-MUN-NBI
 SEP 14, 2017

#### REMARKS

#### Sketch / Photo Log

Sketch 1: Orientation sketch from Underwater Inspection Report 9/5/2013.

Photo 1: West approach, southwest corner erosion hole 7' x 2' x 10".

Photo 2: East approach, southeast corner erosion hole 3' x 20" x 14".

Photo 3: Southeast approach, minor erosion along retaining wall. Photo 4: Looking east, general wearing surface condition.

Photo 5: Close up view wearing surface rutting in the wheel path.

Photo 6: Midspan south rail, active traffic counter.

Photo 7: Scattered deck spikes puncturing side of beams.

Photo 8: Common rusting fastening hardware conditions in the tidal zone.

Photo 9: View west breastwall and pier 1 center column.

Photo 10: View timber backwall.

Photo 11: South end bent 7, southeast pile, notable abrasion/splintering in the tidal zone.

Photo 12: North elevation, channel sign missing, and truck traffic.

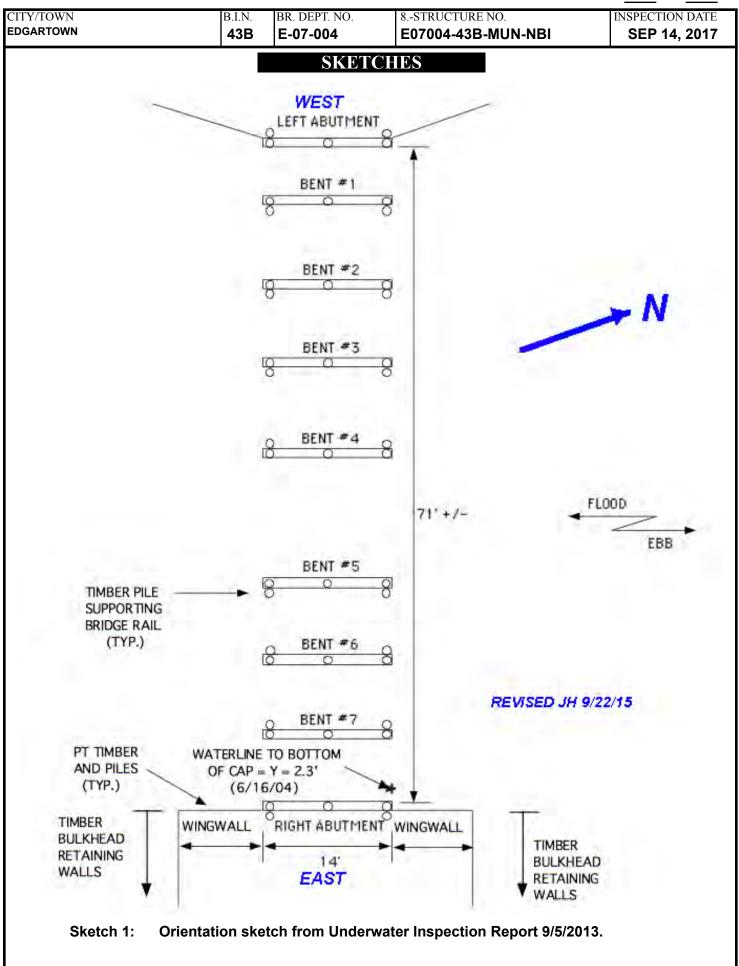




Photo 1: West approach, southwest corner erosion hole 7' x 2' x 10".



Photo 2: East approach, southeast corner erosion hole 3' x 20" x 14".



Photo 3: Southeast approach, minor erosion along retaining wall.



Photo 4: Looking east, general wearing surface condition.



Photo 5: Close up view wearing surface rutting in the wheel path.



Photo 6: Midspan south rail, active traffic counter.



Photo 7: Scattered deck spikes puncturing side of beams.



Photo 8: Common rusting fastening hardware conditions in the tidal zone.



Photo 9: View west breastwall and pier 1 center column.



Photo 10: View timber backwall.



Photo 11: South end bent 7, southeast pile, notable abrasion/splintering in the tidal zone.



Photo 12: North elevation, channel sign missing, and truck traffic.

## National Bridge Element Inspection

09/14/2017

Date

126.000

142.000

BDEPT# E-07-004

235

Notes : **332** 

Notes:

Timber Pier Cap

Timb Bridge Railing

B.I.N.	43B			District B	ridge Ins	spection Eng'r	Grant Si	Grant Simpson				
Item 8	E07004-43B-MUN-NBI				Inspe	ecting Agency	Mass. Hi	ighway Dept.				
Span Group	1					Team Leader	John Spi	John Spiezio				
Town	Edgartown					Team						
District	5					Member(s)						
El#	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4			
31	Timber Deck	sq feet	3	958.500	<b>\  \  \  \  \  \  \  \  \  \  \  \  \  \</b>	958.500						
Notes:	- 1							•				
111	Timber Open Girder	feet	3	355.000	<b>\ </b> \  \  \  \  \  \  \  \  \  \  \  \  \	355.000						
Notes:	- 1							•				
216	Timber Abutment	feet	3	50.000	<u></u> %	50.000						
Notes:	•	•	•						•			
228	Timber Pile	each	3	45	<u></u> %	45						
Notes:	•	•			•			•				

3

feet

feet

126.000

142.000

2-DIST B.I.N. 05 43B

## STRUCTURES INSPECTION FIELD REPORT **ROUTINE INSPECTION**

BR. DEPT. NO. E-07-004

CITY/TOWN EDGARTOWN			8ST					o. POINT P:POSTED		90-ROUTINE INSP. DATE <b>SEP 10, 2019</b>					
							) 								
07-FACILITY CARRIED  HWY DIKE RD				MEMORIAL NAM	E/LOCA	L NAME				r built <b>1995</b>	106-YR REBUILT <b>0000</b>	YRF		3'D (N <b>)00</b> (	ON 106) <b>D</b>
06-FEATURES INTERSECTED				26-FUNCTIONAL	CLASS			DIST. BR	IDGI	E INSPECTI	ON ENGINEER	G. Sin	npson		
WATER POUCHA P	OND	)		Rural Local											
43-STRUCTURE TYPE 702: Timber String	jer/Gi	irder		22-OWNER Town Agency Town Agency Team Leads				ER <b>J. Gonsa</b>	lves						
107-DECK TYPE 8 : Timber				WEATHER TEMP. (air) CLEAR 20°C				теам м <b>Р. AD</b>							
ITEM 58	6		ITE	M 59		7	$\overline{}$			ITEM	60		7		
DECK	0	DEF	SUPI	ERSTRUCTUI	RE			DEF	,	SUBST	RUCTURE		1		DEF
1.Wearing surface	6	M-P		ngers			N	_		1. Abuti		Dive	Cur	6	
2.Deck Condition	6	M-P		orbeams			N	_	-	a. Pedes	tals	N	N		-
	N		3.Floo	or System Braci	na		N	_	-	b. Bridge		N	N		-
3.Stay in Place Forms				ders or Beams	5		7	_	$-\ $	c. Backw		7 N	6 N		M-P
4. Curbs	N	-		sses - General			, N			e. Wingv		7	6		S-A
5.Median	N	-		Upper Chords		N	1	<u> </u>	$-\ $	f. Slope	Paving/Rip-Rap	N	N		-
6.Sidewalks	N	-		Lower Chords		N		<u> </u>		g. Pointi		N	N		-
7.Parapets	N	-	-	Web Members		N		<u> </u>		h. Footin	gs	7	7		-
8.Railing	7	-	-			N		-		j. Scour		7	Н		-
9.Anti Missile Fence	N	-		Lateral Bracing		N		-		k. Settlei		8	7		-
10.Drainage System	N	_		Sway Bracings				-		I. Faster m.	ners	N N	6 N		M-P
	N		f. I	Portals		N		-			or Bents			N	
11.Lighting Standards				End Posts		N		-		a. Pedes	tals	N	N		-
12.Utilities	8	-		& Hangers			N	-		b. Caps		N	N		-
13.Deck Joints	N	-	7.Cor	n Plt's, Gussets	s & Ang	gles	N	-		c. Colum		N	N		-
14.	N	-	8.Cov	er Plates			N	-		e. Pointi	/Webs/Pierwalls	N	N		-
15.	N	-	9.Bea	ring Devices			N	-		f. Footin	•	N	N		-
16.	N	_	10. Di	aphragms/Cros	s Fram	es	N	-		g. Piles		N	N		-
			11. Ri	vets & Bolts			N	-		h. Scour		N N	N N		-
CUDD DEVEAL	1	S	12.W	elds			N	-		j. Settiei	ment	N	N		-
CURB REVEAL (In millimeters)	1	N	13. Me	ember Alignmen	nt		8	-		k.		N	N		-
1000 0 1 GYYDG			14. Pa	int/Coating			N	_		3. Pile I	Bents			7	
APPROACHES		DEF	15.				N	<b>-</b>	$-\ $	a. Pile C	aps	N	7		-
a. Appr. pavement condition	N	-		T			_			b. Piles	nal Bracing	7	7		-
b. Appr. Roadway Settlement	6	M-P	Year	Painted		N					ontal Bracing	N	N		-
c. Appr. Sidewalk Settlement	N	-	COLLI	SION DAMAGE:	Please	explain				e. Faster	ners	5	6		M-P
d.	N	-	None	<b>(X</b> ) Minor ( )	Modera	-	Sev	rere (	)	UNDERM	IINING (Y/N) If Y	ES ple	ease e	xplain	N
OVERHEAD SIGNS (	Y/N)	N		( <b>X</b> ) Minor ( )			Sev	rere (	)	COLLISIO	ON DAMAGE:				
(Attached to bridge)		DEF		VIBRATION:		explain	Sev	vere (	,	None (X	Minor() M	odera	te (	) Sev	vere ( )
a. Condition of Welds	N	-	INOTIC	, , iviiiloi ( A )	WIOUGI	a.c ( )	061	010 (	<u>′</u>		Please explain  Minor ( ) M	odera	te (	) Sev	vere ( )
b. Condition of Bolts	N	-	Any Fracture Critical Member: (Y/N)										<u> </u>		
c. Condition of Signs	N	-	Any C	Cracks: (Y/N)	N						e Report): 7	<i>I-6</i>	0 (This	Repo	·
										93B-U/I	N (DIVE) Insp		10/	JU/2	010
X=UNKNO	WN		N=	NOT APPLIC	ARI F	H=	<u> </u>	DEN/	INA	CCESS	SIBI F		R=F	2EM	IOVED

CITY/	TOW	N		_	B.I.1	N.	BR. DEPT. NO.	8STR	UCTU	RE NO.		INSPECTION	ON D	ATE
EDGA					431		I I			B-MUN-NE	BI	SEP 1		
			—							,				
	EM 61	<del></del>		,	7		TEM 36 TRAFFIC SAI	FETY 36	COND	DEF_	ACCES	SIBILITY	•	N/P)
	INNE		- <b>-</b>	,		A.	Bridge Railing	0	7	M-P	Lift Buck		Needed	d Used
СНА	NNL	EL PROTECTION	V			B.	Transitions	0	7	M-P	Ladder	eı	N	N
l			Dive	Cur	DEF	C.	. Approach Guardrail	0	7	M-P	Boat		Y	Y
1.Ch	annel	Scour	7	Н		D.	. Approach Guardrail Ends	0	7	M-P	Waders		N	N
2.Em	ıbankı	ment Erosion	7	7	_	WF	EIGHT POSTING	Not /	Applical	hla	Inspecto	r 50	N	N
3.Del			8	8			H	3	3S2	Single	Rigging		N	N
I	getatio		8	8	-	Ac	ctual Posting 09	14	21	N	Staging		N	N
5.Util		)II	N	N		.	ecommended Posting 09	14	21	N	Traffic Co		N	N
			+			1					RR Flagg	jer	N	N
<u> </u>		Slope Protection	6	7		Wa		EJDMT D		00/00/0000	Police		N	N
	grada		8	Н	-	Sic	At bridge gns In Place E	e W	Othe E	er Advance W	Other:			
8.Fer	nder S	System	N	N		(Y=	eric in Place =Yes,N=No, R=NotRequired)	Y	N		CONTAC	TTOWN	Υ	Υ
						Leg	egibility/	7		<u> </u>	TOTAL	HOURS		12
				T_'		Vis	sibility 7	4			101	HOURS		12
							EARANCE POSTING	N		S	PLANS	(Y/N	N):	Υ
			_	_		No		in	]   ft	in meter				
STRE	EAM FL	LOW VELOCITY:					ctual Field Measurement	0	<b>∦</b>		(V.C.R.)	(Y/N):	N	ĺ
Tidal (	<b>X</b> ) Hig	gh ( ) Moderate ( ) L	Low (	) Nor	ne ( )	Pue	osted Clearance  At bridge		كا لا	<b>0</b>    Advance	TABE#.			
		7 ITEM 6'	Thi	7226	. 7		gns In Place N	S	N		TAPE#:			
ITEM 01	1 (Dive R	Report): 7 ITEM 61	l (T Nio	: Repui	ort): 7	(Y=	Y=Yes,N=No, IR=Not Required) List of field tests performed:							
93b-l	IJ/W IN	ISP. DATE: 10	D/06/	/2016	6	Leg	egibility/				Visual and	d Tactile.		
				_		Vis	sibility				Щ.			
RATI Rating		ort (Y/N): Y			!		I C - Butting or Borr	·· · - ^	<u>-</u>		ES please giv			
<b>l</b>		()			!	Rec	commend for Rating or Rera	ting (1	′/N): _	IN DIE	H( ) ME∩	DIUM ( ) LOW (	_)_	
Date:		01/01/2005			!	RE4	4SON:							
	•	ion data at time of e		•	•	1								
l 58: o	158	9: <b>9</b> 160: <b>8</b> Da	.te ∶∪	J9/1 <sub>b</sub>	5/2003	<b>_</b>								
			_				CONDITION RA	TIN	G GU	IDE (For	Items 58, 59,	, 60 and 61)		
	CODE	CONDITION		_	_	_	DEFECTS	_					_	
	N	NOT APPLICABLE	$\top$											
G	9	EXCELLENT	E	Exceller	nt condition.									
G	8	VERY GOOD	N	lo prob'	olem noted.	_								
G	7	GOOD	S	ome m	ninor problem	ns.								
F	6	SATISFACTORY	S	structura	al elements	show s	some minor deterioration.						_	
F	5	FAIR	A	dl prima	ary structura	ıl eleme	ents are sound but may have minor sec	ction loss,	, cracking,	, spalling or scour.				
Р	4	POOR					eterioration, spalling or scour.		-4-110	·	15 90000	" Foliano c		
P	3	SERIOUS					ion, spalling or scour have seriously affection concrete may be present.	ected prin	nary struc	tural components. L	_ocal failures ai	e possible. Fatigue u	acks	
С	2	CRITICAL					primary structural elements. Fatigue craport. Unless closely monitored it may be						,	
			. M	Major de	eterioration o	or section	tion loss present in critical structural con	mponents	s or obviou	•			blility.	
С	1	"IMMINENT" FAILURE					out corrective action may put it back in li							
	0	FAILED	0	Jut of se	ervice - beyo	ond cor	prrective action.							
						T	DEFICIENCY REP	ORT)	ING (	GUIDE				
DEFI	CIENC	CY: A defect in a stru	ucture	that re	quires corre	ctive ar		<u></u>	<u>*************************************</u>					
		IES OF DEFICIENC												
M=N	Ainor I	Deficiency - Deficiencies holes, Minor	which a	are mino	or in nature, ger	nerally d	do not impact the structural integrity of the bridg logged drainage, etc.	ge and coul	ld easily be	repaired. Examples incli	ude but are not lim	ited to: Spalled concrete,	Minor pot	ţ
$  _{S=S_{\epsilon}}$	evere/N	Major Deficiency - De	Deficienci	cies which	ch are more ext	tensive in	in nature and need more planning and effort to	repair. Exar	amples includ	ude but are not limited to:	: Moderate to majo	or deterioration in concrete	e, Expose	d and
		- 60	orroded	rebars, C	Considerable s	sememer	ent, Considerable scouring or undermining, Modelement of a bridge that poses an extreme unsa	derate to ex	xterisive con	rrosion to structural steel	i with measurable i	loss of section, etc.		
			-	or the	е впаде.									
С-н=	· Critic	cal Hazard Deficienc	c, i	A deficie include b etc.	but are not lim	onen: 0: ited to: L	or element of a bridge that poses an extreme ha Loose concrete hanging down over traffic or pe	zard or uno destrians, /	safe conunc A hole in a s	on to the public, but doc. sidewalk that may cause	s not impair trie su injuries to pedestr	rians, Missing section of b	Jge. Exan ıridge railir	iples ing,
IIRG	FNCY	OF REPAIR:		etc.										
	imediate		ately co	ontact Dis	strict Bridge In:	spection	n Engineer (DBIE) to report the Deficiency and t	to receive f	urther instru	action from him/her].				
A = AS		[Action/Repair should	d be initia	tiated by [	District Mainter	enance Er	Engineer or the Responsible Party (if not a State	te owned bri	ridge) upon r	receipt of the Inspection				
P = Pr	.i. witing	for all be a selected to	and District	at Malat	ononce Engine	oor or the	e Responsible Party (if not a State owned bridg	re) and ren-	w ahem arie.	when funds and/or mann	ower is available].			1

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 10, 2019

#### REMARKS

#### **BRIDGE ORIENTATION**

Dyke Road over Poucha Pond on Chappaquiddick Island has an east/west orientation with tidal flow from south (flood) to north (ebb). Bents & Spans are numbered from the west, and Beams & Bays numbered from the south, see sketches 1-3.

#### **GENERAL REMARKS**

Bridge roadway is one lane for 2-way traffic with no traffic signals or signage.

Ferry service from Downtown Edgartown to Chappaquiddick Island was coordinated & supplied by Edgartown Highway Department (Contact Superintendent, Allan deBettencourt, 508-627-4004).

Underside inspection was performed during a receding tide (2hrs after +1.0ft High Tide) for the Wasque Point tide station utilizing a motorized 9.4ft skiff launched at the northwest embankment. Freeboard was 54" measured midspan at south fascia board in Span 5.

The Trustees of Reservations operate a live traffic counter that is attached to the south rail at Bent 5. Park Rangers informed the inspection team that the numeric display is a yearly per axle count that is reset every April.

S/A - West at-bridge weight posting sign has compromised visibility due to inadequate height, see photo 1. Both advances lack weight posting signs to inform traffic of the restriction.

Previously installed navigation channel indicator sign attached to the north fascia board in Span 5 is broken and missing, see photo 2.

#### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

Wearing surface is comprised of single coursed 4" x 10" transversely fastened timber decking planks, see photos 3 & 4. Rating of this item is limited to only the top side of the decking planks.

Specific deficiencies as follows:

- Minor to moderate weathering and checking throughout.
- Differential elevation of planks ≤1/2"H.
- Abrasion/section loss in wheel paths ≤1"D.
- ≈40% of fasteners are protruding ≤1/2"H with nominal wear, predominately in abraded wheel paths.
- Moderate to severe sand accumulation throughout, worst in abraded wheel paths.

#### Item 58.2 - Deck Condition

Minor mildew staining throughout deck planking soffit, see photo 5.

See item 58.1 - Wearing Surface for top side deficiencies.

#### Item 58.12 - Utilities

Two PVC conduits in bay 5, in all spans, see photo 5.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 10, 2019

#### REMARKS

#### **APPROACHES**

#### Approaches b - Appr. Roadway Settlement

The approach roadways are comprised of gravel and loose sand with scattered minor vegetation growth, see photo 1. Both approaches exhibit moderate rutting in wheel paths, and scattered typical gully erosion. This item is limited to the extent of the wingwall bulkheads outlined as "PHASE I" in the construction plans, see sketch 1.

#### Specific deficiencies as follows:

#### West approach:

- Previously reported erosion at southwest immediate approach has been filled, 6'L x 2'W x ≤3"D minor erosion remains, see photo 6.

#### East approach:

- Previously reported erosion at southeast immediate approach has been filled, 3'L x 20"W x ≤9"D erosion remains, see photo 7.
- Previously reported erosion at east approach along south wingwall bulkhead has been filled, 10'L x 2'W x 10"D erosion remains, see photo 8.
- Erosion along both wingwall bulkhead perimeters exposing tiebacks and tops of abandoned bulkheads 16"W x ≤6"D, see photo 9.

See items 60.1.c - Backwalls & 60.1.e - Wingwalls for associated bulkhead deficiencies.

#### <u>ITEM 59 - SUPERSTRUCTURE</u>

#### <u>Item 59.4 - Girders or Beams</u>

Rating based on the condition of the five interior  $10" \times 10"$  timber beams,  $3" \times 10"$  fascia boards are not structural components, see sketch 3.

#### Specific deficiencies as follows:

- Scattered barn swallow nests throughout faces of beams, see photo 5.
- Scattered minor top edge splits from misguided deck nails (as-built), see photo 10.
- Span 7 Beam 2 south face, isolated minor horizontal checking ≤1/16"W, see photo 11.

#### Item 59.13 - Member Alignment

See photo 12 for typical vertical alignment of spans.

#### **SuperStructure Load Vibration Notes**

Minor vibration experienced under live vehicular loadings.

#### **ITEM 60 - SUBSTRUCTURE**

#### Item 60.1 - Abutments

Rating of this item is based on the condition of the abutment & wingwall bulkhead systems which function as approach roadway retaining walls and are not structural components of the bridge.

See item 60.3. - Pile Bents for condition of abutment bents.

#### REMARKS

#### Item 60.1.c - Backwalls

Condition of this item is based on the timber tongue & groove vertical sheathing and wale systems of the abutment bulkheads to the corner/interface with the wingwall bulkheads. Concrete deadman systems and associated tiebacks are hidden under approach roadways, only exterior tieback cleat boards are accessible.

- Both abutment bulkheads exhibit minor to moderate mildew staining above tidal zone, and moderate to heavy marine growth within tidal zone, see photo 13.
- East abutment bulkhead, bulging/bowing 1" seaward, see photo 14.

#### Item 60.1.e - Wingwalls

Condition of this item is based on the timber tongue & groove vertical sheathing and wale systems of the wingwall bulkheads. Tiebacks are hidden under approach roadways, only exterior tieback cleat boards are accessible. See item Approaches b - Appr. Roadway Settlement for exposed tiebacks.

- All wingwall bulkheads exhibit minor mildew staining above tidal zone, and moderate to heavy marine growth within tidal zone, see photo 15.
- Both east wingwall bulkheads exhibit bulging/bowing ≤2" seaward and gaps between sheathing & wales, worst at northeast wingwall bulkhead at first tieback from west, see photo 16.
- Northeast wingwall bulkhead between 1st & 2nd piles from west, split middle wale, see photo 15.
- S/A : Northeast wingwall bulkhead at interface with abutment bulkhead, ≤1/2" gap allowing fill loss, see photo 14.

#### Item 60.1.i - Piles

Condition rating based on the 10" timber piles attached to the abutment & wingwall bulkheads.

#### Item 60.1.I - Fasteners

Condition rating based on all steel fasteners, and tieback plates associated with abutment & wingwall bulkheads.

- All exposed fasteners and plates exhibit minor to moderate corrosion, see photo 15.

#### Item 60.3 - Pile Bents

#### Item 60.3.a - Pile Caps

Bent 5 south face of cap, full height vertical end check ≤1/16"W, see photo 17.

#### Item 60.3.b - Piles

Rating based on the condition of the 3 piles per bent supporting the cap, the longer piles that function as part of the bridge rail system are not structural components, see sketch 2.

-Scattered irregular pile cutoffs reducing bearing area & creating 1/2" gaps between cap, see photo 18. -Bent 1 southwest pile, minor wane with rust staining, previously reported rot was not observed, see photo 19.

#### Item 60.3.c - Diagonal Bracing

Moderate to heavy marine growth in tidal zone with scattered rust staining from fasteners, see photo 20.

#### Item 60.3.e - Fasteners

Condition based on diagonal bracing hardware and beam keeper system.

All fasteners and angles exhibit minor to moderate corrosion, see photos 20 & 21.

BR. DEPT. NO. 8.-STRUCTURE NO. INSPECTION DATE CITY/TOWN B.I.N. **EDGARTOWN** E-07-004 43B E07004-43B-MUN-NBI **SEP 10, 2019** 

#### REMARKS

#### TRAFFIC SAFETY

#### <u>Item 36a - Bridge Railing</u>

Bridge railing consists of two 6" x 8" horizontal members bolted to 6" x 8" vertical posts with ≈6' spacing, and 12" piles at bents see photo 3, non-standard.

#### Item 36b - Transitions

Approach guardrail system attached directly to piles at abutment bents with no change in post spacing, nonstandard. Flared at west & perpendicular at east, see sketch 1 and photos 1 & 9.

#### Item 36c - Approach Guardrail

Approach guardrail system consists of two 6" x 8" horizontal members bolted to wingwall bulkhead piles with ≈10' spacing, non-standard, see photo 9. System configuration creates a 1.5'H opening between the lower horizontal and top of wingwall bulkhead sheathing.

#### Item 36d - Approach Guardrail Ends

East approach quadrail ends are beyond bridge limits, blunt end at west, non-standard.

#### Sketch / Photo Log

Sketch 1:	Plan View	from	1994 Construction Plans
CINCION I.	I IUII VICTV,	11 0111	100 i Odiloti dottori i idilo

- Sketch 2: South Elevation View, from 1994 Construction Plans
- Sketch 3: Cross Section looking west, Section A-A from 1994 Construction Plans
- Photo 1: West approach, at-bridge weight posting sign installed at inadequate height Photo 2:
- Span 5 north elevation, broken & missing navigation channel indicator sign
- Photo 3: General wearing surface looking west, sand accumulation in abraded wheel paths
- Photo 4: North wheel path looking east (Level @ Bent 4), abraded wheel path w/ sand accumulation & protruding fasteners
- General underside Span 5 looking east, minor mildew staining throughout soffit Photo 5:
- Southwest immediate approach roadway, corrective action taken since last inspection only Photo 6: minor erosion remains
- Photo 7: Southeast immediate approach roadway, corrective action taken since last inspection only minor erosion remains
- East approach along south wingwall bulkhead, correction action taken since last inspection Photo 8: moderate erosion remains
- Photo 9: East approach along north wingwall bulkhead, erosion along abandoned bulkhead exposing tiebacks
- Span 2 Beam 2 north face, top edge split from misguided deck fastener Photo 10:
- Photo 11: Span 7 Beam 2 south face, horizontal checking
- Photo 12: South elevation, typical vertical alignment of spans
- General view of west abutment bent & bulkhead, mildew staining & marine growth throughout Photo 13:
- North corner of east abutment bulkhead looking south, bulging/bowing & gap w/ wingwall Photo 14: bulkhead
- Photo 15: Northeast wingwall bulkhead between 1st & 2nd piles from west, split in middle wale
- Northeast wingwall bulkhead at first tieback from west, bulging/bowing w/ gaps between Photo 16: sheathing & wales
- Bent 5 south face of cap, vertical end check Photo 17:
- Bent 2 center pile east face, irregular cutoff w/ gap between cap Photo 18:
- Photo 19: Bent 1 south piles, minor wane w/ rust staining
- Photo 20: Bent 7 north end of east diagonal bracing, corrosion of fastener hardware
- Bent 2 Beam 3 south keeper, corrosion to fastener hardware & angle Photo 21:

CITY/TOWN B.I.N. BR. DEPT. NO. 8.-STRUCTURE NO. INSPECTION DATE **EDGARTOWN** 43B E-07-004 E07004-43B-MUN-NBI **SEP 10, 2019 SKETCHES** CONCRETE DEADMAN (TYPICAL) EXISTING EXISTING TIMBER TIMBER WINGWALL WINGWALL PROPOSED TIMBER WINGWALL PROPOSED ~ TIMBER WINGWALL · MLW = -0.9 WEST ABUTMENT BENT BENT #1 BENT #2 POCHA BENT #3 POND BENT #4 TO CAPE POGE BAY (TIDAL) BENT #5 E88 BENT #6 FLOW PROPOSED BENT #7 NEW TIMBER EAST ABUTMENT BENT BRIDGE ABUTMENT PROPOSED TIMBER BULKHEAD MLW= -0.9 PROPOSED EXISTING TIMBER BULKHEAD TIEBACK (TYP.) (TO BE REPLACED) 50 MLW = -0.9 CONCRETE EXISTING TIMBER BULKHEAD DEADMAN PHASE I

Plan View, from 1994 Construction Plans

Sketch 1:



Photo 1: West approach, at-bridge weight posting sign installed at inadequate height

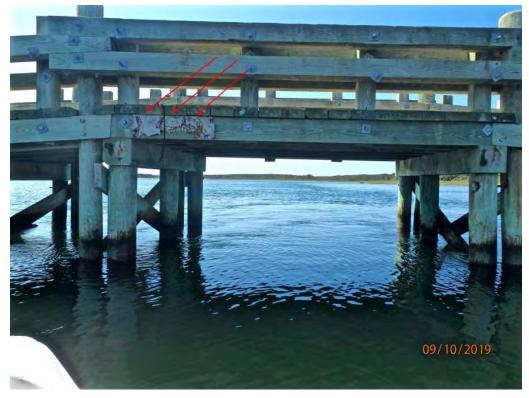


Photo 2: Span 5 north elevation, broken & missing navigation channel indicator sign

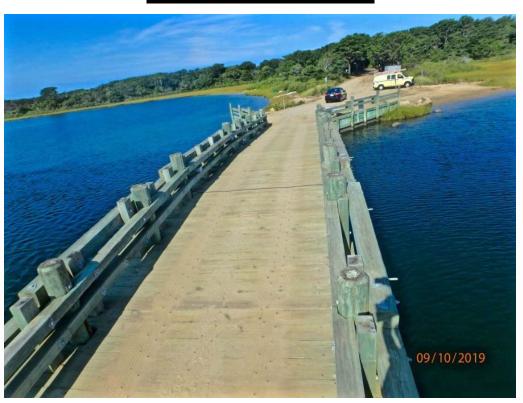


Photo 3: General wearing surface looking west, sand accumulation in abraded wheel paths



Photo 4: North wheel path looking east (Level @ Bent 4), abraded wheel path w/ sand accumulation & protruding fasteners



Photo 5: General underside Span 5 looking east, minor mildew staining throughout soffit



Photo 6: Southwest immediate approach roadway, corrective action taken since last inspection only minor erosion remains



Photo 7: Southeast immediate approach roadway, corrective action taken since last inspection only minor erosion remains



Photo 8: East approach along south wingwall bulkhead, correction action taken since last inspection moderate erosion remains



Photo 9: East approach along north wingwall bulkhead, erosion along abandoned bulkhead exposing tiebacks



Photo 10: Span 2 Beam 2 north face, top edge split from misguided deck fastener



Photo 11: Span 7 Beam 2 south face, horizontal checking



Photo 12: South elevation, typical vertical alignment of spans

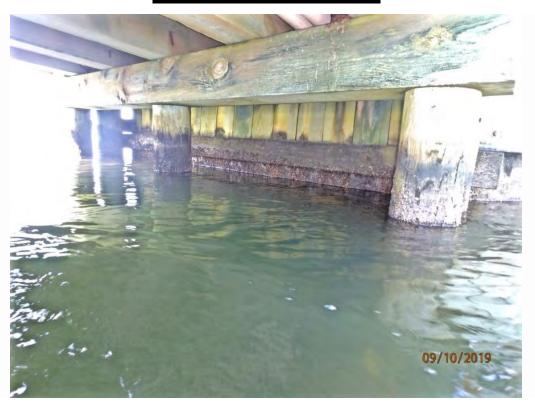


Photo 13: General view of west abutment bent & bulkhead, mildew staining & marine growth throughout



Photo 14: North corner of east abutment bulkhead looking south, bulging/bowing & gap w/ wingwall bulkhead



Photo 15: Northeast wingwall bulkhead between 1st & 2nd piles from west, split in middle wale



Photo 16: Northeast wingwall bulkhead at first tieback from west, bulging/bowing w/ gaps between sheathing & wales



Photo 17: Bent 5 south face of cap, vertical end check



Photo 18: Bent 2 center pile east face, irregular cutoff w/ gap between cap



Photo 19: Bent 1 south piles, minor wane w/ rust staining



Photo 20: Bent 7 north end of east diagonal bracing, corrosion of fastener hardware



Photo 21: Bent 2 Beam 3 south keeper, corrosion to fastener hardware & angle

# National Bridge Element Inspection

BDEPT# E-07-004 09/10/2019 Date B.I.N. **43B** District Bridge Inspection Eng'r **Grant Simpson** Item 8 E07004-43B-MUN-NBI Inspecting Agency Mass. Highway Dept. Span Group 1 Team Leader **Jake Gonsalves** Town Edgartown Team Member(s) District 5

Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4
Timber Deck	sq feet	3	958.500	<u></u> %	745.500	213.000		
•	•							
Timber Open Girder	feet	3	355.000	<b>\ </b> \ \ \ \ \	335.000	20.000		
•	'	•						
Split/Delamination (Timber)	feet	3	20.000	<b>\ </b> \  \  \  \  \  \  \  \  \  \  \  \  \		20.000		
•	•				•		•	
Timber Pile	each	3	45	<b>\ </b> \  \  \  \  \  \  \  \  \  \  \  \  \	45			
•	•							
Timber Pier Cap	feet	3	126.000	<u></u> %	125.000		1.000	
•	•	•				•		•
Timb Bridge Railing	feet	3	142.000	<b>\ </b> \  \  \  \  \  \  \  \  \  \  \  \  \	142.000			
•	•	•				•		•
Split/Delamination (Timber)	feet	3	1.000	<b>\ </b> \  \  \  \  \  \  \  \  \  \  \  \  \			1.000	
1						1		1
Abrasion	sq feet	3	213.000	<b>\ </b> \  \  \  \  \  \  \  \  \  \  \  \  \		213.000		
•	•						•	•
	Timber Deck  Timber Open Girder  Split/Delamination (Timber)  Timber Pile  Timber Pier Cap  Timb Bridge Railing  Split/Delamination (Timber)	Timber Open Girder feet    Split/Delamination (Timber) feet    Timber Pile each	Timber Deck sq feet 3   Timber Open Girder feet 3   Split/Delamination (Timber) feet 3   Timber Pile each 3   Timber Pier Cap feet 3   Split/Delamination (Timber) feet 3	Timber Deck         sq feet         3         958.500           Timber Open Girder         feet         3         355.000           Split/Delamination (Timber)         feet         3         20.000           Timber Pile         each         3         45           Timber Pier Cap         feet         3         126.000           Split/Delamination (Timber)         feet         3         1.000	Timber Deck         sq feet         3         958.500         %           Timber Open Girder         feet         3         355.000         %           Split/Delamination (Timber)         feet         3         20.000         %           Timber Pile         each         3         45         %           Timber Pier Cap         feet         3         126.000         %           Split/Delamination (Timber)         feet         3         1.000         %	Timber Deck         sq feet         3         958.500         %         745.500           Timber Open Girder         feet         3         355.000         %         335.000           Split/Delamination (Timber)         feet         3         20.000         %         45           Timber Pile         each         3         45         %         45           Timber Pier Cap         feet         3         126.000         %         125.000           Timb Bridge Railing         feet         3         142.000         %         142.000           Split/Delamination (Timber)         feet         3         1.000         %	Timber Deck         sq feet         3         958.500         %         745.500         213.000           Timber Open Girder         feet         3         355.000         %         335.000         20.000           Split/Delamination (Timber)         feet         3         20.000         %         45           Timber Pile         each         3         45         %         45           Timber Pier Cap         feet         3         126.000         %         125.000           Split/Delamination (Timber)         feet         3         1.000         %         142.000	Timber Deck         sq feet         3         958.500         %         745.500         213.000           Timber Open Girder         feet         3         355.000         %         335.000         20.000           Split/Delamination (Timber)         feet         3         20.000         %         45           Timber Pile         each         3         126.000         %         125.000         1.000           Timb Bridge Railing         feet         3         142.000         %         142.000         1.000           Split/Delamination (Timber)         feet         3         1.000         %         1.000

2-DIST **05** 

B.I.N. **43B** 

# UNDERWATER OPERATIONS TEAM ROUTINE UNDERWATER INSPECTION REPORT

BR. DEPT. NO. **E-07-004** 

CITY/TOWN			8-STRUCTURE NO.				OF INSPECTION	93B-DATE INSPECTED		
EDGARTOWN			E07004-43B-MUN-NBI				II	SEP 25, 2019		
07-FACILITY CARRIED						DERWATER OPERATIONS ENGINEER				
HWY DIKE RD			BOAT RA			RANDI E. BONICA				
06-FEATURES INTERSECTED						`	VE MASTER)	Report submitted by:		
WATER POUCHA POND			4 m	2 m		ON B	ROZ			
BOTTOM CONDITION		CURRI		TEAM MEMBERS		J COI	II FRAN R	FITZGERALD		
BOULDERS, SAND		TIDA	L/SWIFT	<u></u>		<del></del>	<u> </u>	THEOLINALD		
ITEM 60		7	ITEM 6	011111	NEL &	7	ITEM 62		N	
SUBSTRUCTURE		DEF	CHANNE	EL PROTECTI	ION	DEF	CULVERTS	5	DEF	
1. Abutments	7		1. Channel	Scour	7	-	1. Roof	N	-	
a. Pedestals	N	-	2. Embankr	nent Erosion	7	-	2. Floor	N	-	
b. Bridge Seats	N	-	3. Debris		8	-	3. Walls	N	-	
c. Backwalls	7	-	4. Vegetation	n	8	-	4. Headwall	N	-	
d. Breastwalls	N	-	5. Utilities		N	-	5. Wingwall	N	-	
e. Wingwalls	7	-	6. Rip-Rap/s	Slope Protection	6	-	6. Pipe	N	-	
f. Slope Paving/Rip-Rap	N	-	7. Aggradat	tion	8	-	7. Protective	Coating N	-	
g. Pointing	N	-	8. Fender S	ystem	N	-	8. Embankme	nt N	-	
h. Footings	N	-	a. Piles		N	-	9. Wearing Su	rface N	-	
i. Piles	7	-	b. Diagon	al Bracing	N	-	10. Railing	N	-	
i. Scour	7	-	c. Horizoi	ntal Bracing	N	-	11. Sidewalks	N	-	
k. Settlement	8	-	d. Wales	-	N	-	12. Utilities	N	-	
l.	N	-	e. Fasten	ers	N	-	13. Member A	lianment N	-	
2. Piers or Bents	N		f. Ladder	rs ·	N	-	14. Deformation	-	-	
a. Pedestals	N	-	9.	<u>-                                      </u>	N	-	15. Scour	N	-	
b. Caps	N	-		SUPERSTR		7	16. Settlement	N	1 -	
c. Columns	N	-		SUILKSIK		DEF	17.	N	-	
d. Stems/Webs/Pierwalls	N	-	_		N	-		N	- I	
e. Pointing	N	-			N	-	18.		N.	
f. Footing	N	-			N	-	UNDERMINING (	Y/N)	N	
g. Piles	N	-		DE	FICIEN	NCY R	EPORTING	GUIDE		
h. Scour	N	-	DEFICIEN	CY: A defect in a	structure that r	equires corr	ective action.			
i. Settlement	N	_		IES OF DEFICIE						
	N		M= Minor	Deficiency Deficie easily I	encies which are r be repaired. Exan	ninor in nature, nples include b	, generally do not impact the out are not limited to: Spalled	e structural integrity of the bridge d concrete, Minor scouring, etc.	and could	
j.   k.		_	_   S= Severe/!	Major Deficiency-				ed more planning and effort to rep		
3. Pile Bents	N 7	-						ation in concrete, Exposed and c nt, Considerable scouring or und		
	-		C-S= Critic	cal Structural Def				ge that poses an extreme unsafe lement which will affect the struc		
a. Pile Caps	N	-	-     C II - C '*'	III ID.C.	of	the bridge.		dge that poses an extreme hazar		
b. Piles	7	-	_   C-H= Criti	cal Hazard Defici	condi	tion to the publi le but are not li	lic, but does not impair the s imited to: Any part of piles o	structural integrity of the bridge. E r fender system which are projec	xamples	
c. Diagonal Bracing	7	-			and n	nay become a	safety hazard for the naviga	tional traffic, etc.		
d. Horizontal Bracing	N	-		OF REPAIR:	Anhana e i = i	u Data		and the Defit		
e. Fasteners	5	-	I=Immediate	further instruction from	n him/her.]			port the Deficiency and to receive	9	
LINDEDMINIO OVAD	,	N	A=ASAP-	bridge) upon receipt o	of the Inspection F	Report.]		sible party (if not a State owned	angire	
UNDERMINING (Y/N)			P=Prioritize-	. [Shall be prioritized by made when funds and			or the Responsible Party (if	not a State owned bridge) and re	spall 8	

#### REMARKS

#### **GENERAL REMARKS**

The timber deck bridge is a timber pile bent structure with two pile abutments and seven pile bents. Each bent and abutment has three piles below the timber cap and one pile at upstream and downstream ends that support the bridge rails. Timber diagonal bracing is between piles in each bent.

Both abutments have timber piles and timber planks, which act as bulkheads. Wingwalls are also timber piles and timber planks.

#### Orientation:

Abutments are labeled left (west) and right (east), looking downstream. Bents are numbered from left to right.

**Note:** Bridge is best inspected at high tide. Access to the bridge is very shallow, even at high tide.

#### **ITEM 60 - SUBSTRUCTURE**

#### Item 60.1 - Abutments

#### Item 60.1.c - Backwalls

Both abutments have timber piles and timber planks, which act as bulkheads. The abutment limits are considered to be aligned directly with the bridge structure. See Sketch

#### Item 60.1.e - Wingwalls

Both abutments have timber piles and timber planks, which act as bulkheads. The abutment limits are considered to be aligned directly with the bridge structure. The wingwall limits are from the bridge structure to the upstream and downstream corners of the approach roadway. See Sketch

#### **Right Abument:**

There is rot at the mudline of the pressure treated timber wingwall bulkhead upstream of the upstream double piles measuring  $0.2' \text{ W} \times 1' \text{ H} \times 0.4' \text{ P}$ .

#### Item 60.3 - Pile Bents

#### Item 60.3.b - Piles

Pressure treated timber piles are in good condition. There was some evidence of marine borer activity at the mudline.

#### Item 60.3.c - Diagonal Bracing

There is some deterioration at the lower ends of the diagonal bracing.

#### Item 60.3.e - Fasteners

Fasteners below the waterline have minor to moderate rust.

#### ITEM 61 - CHANNEL AND CHANNEL PROTECTION

#### Item 61.2 - Embankment Erosion

At the left (west) side, upstream and downstream, there is minor erosion at the end of the wingwalls.

#### Item 61.6 - Rip-Rap/Slope Protection

The approach roadways have pressure treated timber piles and vertical timber planks, which act as bulkheads. The pressure treated timber piles and timber planks are a repair and were installed in front of the original creosote timber bulkheads. These bulkheads are not part of the bridge.

#### Left (West) Side:

The pressure treated timber piles and vertical timber planks extend from the corners of the abutments to approximately 34' along the roadway on the upstream and downstream side.

#### REMARKS

#### <u>Item 61.6 - Rip-Rap/Slope Protection (Cont'd)</u>

The pressure treated timber piles and vertical timber planks are generally in good condition.

#### Right (East) Side:

The pressure treated timber piles and vertical timber planks extend from the corners of the wingwalls to approximately 120' along the roadway on the upstream side and 112' along the roadway on the downstream side. The original creosote timber bulkhead continues beyond the pressure treated timber piles and vertical timber planks.

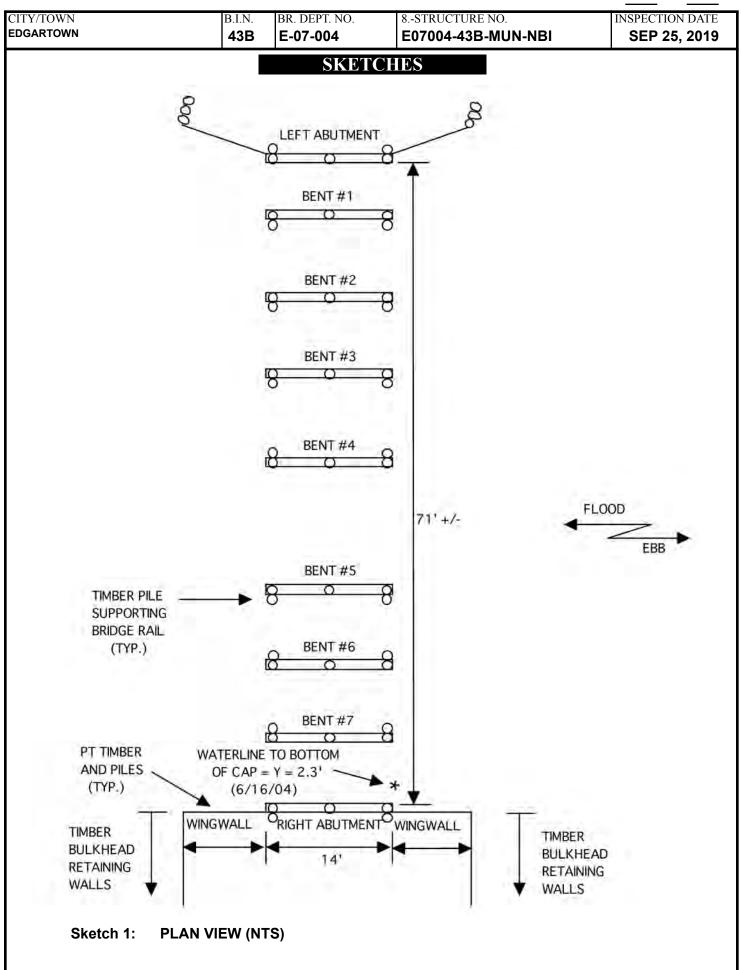
At the end of the pressure treated timber piles and vertical timber plank bulkheads are original creosote piles and timber planks along the sides of the roadway. The piles are dry rotted with some delamination and the vertical timbers are dry rotted with some deterioration, up to 100% section loss. Several areas of previously reported rot in the vertical timbers have been patched with plywood.

There is rot at the mudline of the pressure treated timber bulkhead between the 6th and 7th pile, from the upstream wingwall angle point, measuring 0.6' W x 1.5' H x 0.4' P.

#### Sketch / Chart Log

Sketch 1: PLAN VIEW (NTS)

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)



## **CHARTS**

## SCOUR MONITORING CHART DOWNSTREAM END

	6/16/04	6/28/07	7/14/10	9/5/13	10/6/16	9/25/19
LEFT ABUTMENT	2.8'	2.9'	3.0'	3.1'	2.9'	4.0'
BENT #1	4.3'	4.5'	4.9'	4.8'	4.2'	4.0'
BENT #2	6.8'	6.8'	7.9'	7.5'	7.6'	7.2'
BENT #3	9.2'	9.2'	9.2'	9.2'	9.0'	9.4'
BENT #4	9.9'	9.7'	10.2'	10.4'	10.0'	9.9'
BENT #5	10.8'	10.8'	11.4'	11.5'	11.2'	11.1'
BENT #6	_ 11.1' _	11.0'	11.1'	10.8'	11.1'	11.6'
BENT #7	9.8'	9.9'	9.0'	9.7'	9.6'	10.2'
RIGHT ABUTMENT	7.6'	7.7'	7.0'	7.6'	7.6'	8.5'
Υ	2.3'	2.5'	1.9'	1.3'	1.9'	1.8'
CORRECTION FACTOR		+0.2'	-0.4'	-1.0'	-0.4'	-0.3'

## NOTES:

- 1. WATERLINE TO BOTTOM OF RIGHT ABUTMENT CAP, DOWNSTREAM END = Y = 2.3' (6/16/04).
- 2. SOUNDINGS ADJUSTED TO 6/16/04 WATERLINE WITH CORRECTION FACTOR.

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)

## 2-DIST B.I.N. STRUCTURES INSPECTION FIELD REPORT

05 43B			ROUTINE INS	PECTION		-	E	-07-00	)4
CITY/TOWN EDGARTOWN			8STRUCTURE NO. <b>E07004-43B-M</b>	IUN-NBI	11-Kilo. POINT <b>001.04</b> 6	PPOSTED	)	UTINE IN	
07-FACILITY CARRIED  HWY DIKE RD			MEMORIAL NAME/LOC	AL NAME	27-YR BUIL <b>1995</b>	106-YR REBUILT <b>0000</b>	YR RI	000 EHAB	,
06-FEATURES INTERSECTED WATER POUCHA I	POND		26-FUNCTIONAL CLASS  Rural Local	26-FUNCTIONAL CLASS DIST. BRIDGE INSPE  Rural Local			Girim	pson Vo	
43-STRUCTURE TYPE 702: Timber String	ger/Gi	irder	22-OWNER 21-M/ Town Agency Tow	AINTAINER TEA	AM LEADER <b>J. S</b> pi	azio ( Don A	od o	- ;	
107-DECK TYPE  8: Timber			WEATHER TEMP		AM MEMBERS DOWNING	AD	Spr	J	,
ITEM 58 DECK	6	DEF	ITEM 59 SUPERSTRUCTURE	7	DEF SUBS	M 60 STRUCTURE	7		DEF
1.Wearing surface	6	M-P	1.Stringers	N	- 1. Ab	utments	Dive	Cur 6	
2.Deck Condition	6	M-P	2.Floorbeams	N	a. Ped	lestals	N	N	-
3.Stay in Place Forms	N	-	3.Floor System Bracing	N	j	ige Seats kwalis	N 7	N 6	- M-P
4.Curbs	N	-	4.Girders or Beams	7		astwalls	N	6	IVI-P
5.Median	N	-	5.Trusses - General	N	• ; <b> </b>	gwalls	7	6	S-A
6.Sidewalks	N	<u>-</u>	a. Upper Chords	N :	f. Sloj g. Poli	ne Paving/Rip-Rap	N N	N N	*
	N		b. Lower Chords	N	- g. Fon		N	N	-
7.Parapets		. =	c. Web Members	N	i, Pile	S	7	7	-
8.Railing	7	-	d. Lateral Bracing	N	j. Sco		7	H	-
9.Anti Missile Fence	N	-	e. Sway Bracings	N	- k. Sett	lement teners	8 N	7 6	<u>-</u> М-Р
10.Drainage System	N	-	f. Portals	N	, us		N	N	-

16.		N	-		
·	N		s		
CURB REVEAL (In millimeters)	·N		N		
APPROACHES			DEF		
a. Appr. pavement condition	n	N	-		
b. Appr. Roadway Settleme	nt	6	M-P		

Ν 8

N

Ν

Ν

11.Lighting Standards

c. Appr. Sidewalk Settlement

12.Utilities

14.

15.

13.Deck Joints

N	-
(Y/N)	N
	DEF
N	-
N	-
N	-

THEM SY	7	
SUPERSTRUCTURE		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	7	-
5.Trusses - General	N	-
a. Upper Chords	١	-
b. Lower Chords	1	-
c. Web Members	١ .	-
d. Lateral Bracing	١	-
e. Sway Bracings	١	
f. Portals	1	-
g, End Posts N	1	-
6.Pin & Hangers	N	
7.Conn Pit's, Gussets & Angle	es N	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10. Diaphragms/Cross Frames	s N	-
11. Rivets & Bolts	N	-
12.Welds	N	-
13. Member Alignment	8	-
14. Paint/Coating	N	-
15.	N	-
Year Painted N		
COLLISION DAMAGE: Please ex None (X) Minor ( ) Moderate		ere ( )
LOAD DEFLECTION: Please ex None (X) Minor ( ) Moderate		ere ( )
LOAD VIBRATION: Please ex None ( ) Minor ( X ) Moderate		ere ( )
Any Fracture Critical Member:	: (Y/N)	N

NV						
ITEM 60		7				
SUBSTRUCTURE	al .			DEF		
1. Abutments	Dive	Cur	6			
a. Pedestals	N	N				
b. Bridge Seats	N	N		<u>-</u>		
c. Backwalls	7	6		M-P		
d. Breastwalls	N	6	. :	-		
e. Wingwalls	7	6		S-A		
f. Slope Paving/Rip-Rap	N	N				
g. Pointing	N	N		-		
h. Footings	N	N		-		
i, Piles	7	7		-		
j. Scour	7	Н		-		
k. Settlement	8	7	:	-		
I. Fasteners	N	6	[	M-P		
т.	N	N		-		
2. Piers or Bents			N			
a. Pedestals	N	N				
b. Caps	N	N		-		
c. Columns	N	N		-		
d. Stems/Webs/Pierwalls	N	N		-		
e. Pointing	N	N		-		
f. Footing	N	N		-		
g. Piles	N	N		-		
h. Scour	N	N		-		
i, Settlement	N	N		-		
<i>i.</i>	N	N		-		
k.	N	N		_		
3. Pile Bents			7			
a. Pile Caps	N	7		-		
b. Piles	7	7		-		
c. Diagonal Bracing	7	7		-		
d. Horizontal Bracing	N	N	Ī	-		
e. Fasteners	5	6		M-P		
UNDERMINING (Y/N) If Y	UNDERMINING (Y/N) If YES please explain N					
COLLISION DAMAGE: None (X) Minor ( ) Moderate ( ) Severe ( )						
SCOUR: Please explain None (X) Minor ( ) Moderate ( ) Severe ( )						

7

I-60 (Dive Report):

93B-U/W (DIVE) Insp

Ν

Any Cracks: (Y/N)

09/25/2019

I-60 (This Report):

7

CITY/TOWN EDGARTOWN			B.I.N <b>43E</b>		8STRUCTUF E07004-43			CTION DAT P 29, 202
ITEM 61				ITEM 36 TRAFFIC SA		<b>D</b> 111 1 1.	ACCESSIBILITY	
CHANNEL &		L	7		36 COND	DEF	AUSTONIA	Needed Us
CHANNEL & CHANNEL PROTEC	TION	_	,	A. Bridge Railing	0 7	M-P	Lift Bucket	N N
			!	B. Transitions	0 7	M-P	Ladder	N N
	Dive (	Г Т	DEF	C. Approach Guardrail	0 7	M-P	Boat	ΥY
1.Channel Scour		Н	-	D. Approach Guardrail Ends	0 7	M-P	Waders	N N
2.Embankment Erosion	1 7	7	и	WEIGHT POSTING	Not Applicat		Inspector 50	N N
3.Debris	8	8	-	1		Single	Rigging Staging	N N
4.Vegetation	8	8			09 14 21	N	Traffic Control	N N
5.Utilities	N	N	-	Recommended Posting 0	09 14 21	N	RR Flagger	N N
6.Rip-Rap/Slope Protec	ction 6	7	-	Waived Date: 00/00/0000	EJDMT Date: 0	00/00/0000	Police	N N
7.Aggradation	8	Н	-	At bric		r Advance	Other:	
8.Fender System	N	N	-	Signs In Place E (Y=Yes,N=No, Y	W E N	W N	CONTACTTOWN	YY
CAMPAN SAN AND COLOR AND				NR=NotRequired) Legibility/ 6	7   N		TOTAL HOURS	
		1		Visibility 7	4		IUIALHUUM	12
				CLEARANCE POSTING		S	PLANS	(Y/N): Y
				Not X ft		in meter	# Office of the Control of the Contr	(1117)
STREAM FLOW VELOCITY	<u>/:</u>			Actual Field Measurement	0	0	(V.C.R.) (Y/N)	): N
Tidal (X) High ( ) Moderate	( ) Low (	) None	( ) 1	Posted Clearance At brid		0 dvance	TAPE#:	,
EM 61 (Dive Report): 7	ITEM 61 (This F	Penort)	): 7	Signs In Place N	S N	S	IAPE#;	
EM 01 (Dive Report).	/EN 0/ (//// .	керо, у.	· !	(Y=Yes,N=No, NR=Not Required)			List of field tests perfor	rmed:
93b-U/W INSP. DATE:	09/25/2	2019	'	Legibility/ Visibility			Visual and Tactile.	
RATING						If YE	L ES please give priority:	
	Υ			Recommend for Rating or Re	erating (Y/N):		GH( ) MEDIUM( ) LO	W ( )
Date: 01/01/2005			1	_	_ , , <u></u>			
Inspection data at tim	e of existin	ng ratir		REASON:				
58: <b>8</b>   159: <b>9</b>   160: <b>8</b>	-			***************************************				***************************************
				CONDITION R	ATING GUI	IN (For	Items 58, 59, 60 and 61)	
CODE CONDITIO	N			DEFECTS		(10)	Items 50, 59, 60 and 617	
N NOT APPLICA	ABLE	***************************************						
G 9 EXCELLENT		cellent c	condition.			THE PROPERTY AND ADDRESS OF THE PARTY OF THE		
G 8 VERY GOOD	No	o problem	n noted.			ANNOUNCE OF THE PARTY OF THE PA		
G 7 GOOD	Sor	me minc	or problems	S				
F 6 SATISFACTO				show some minor deterioration.				
F 5 FAIR				elements are sound but may have minor s	section loss, cracking,	spalling or scour.		
P 4 POOR				ss, deterioration, spalling or scour. rioration, spalling or scour have seriously a	offected primary struc	eral components. I	Local failurae are nossible. Fati	ann arache
P 3 SERIOUS	in s	steel or s	shear crack	cks in concrete may be present.		, 		
C 2 CRITICAL	Adv rer	vanced of moved s	deteriorationation deterioration	ion of primary structural elements. Fatigue e support. Unless closely monitored it may	cracks in steel or sher y be necessary to clos	ar cracks in concrete the bridge until co	e may be present or scour may prrective action is taken.	have
C 1 "IMMINENT" FA	Maj	ajor deter	erioration or	r section loss present in critical structural of affic but corrective action may put it back in	components or obvious			e stablility.
	DIK				I light service.			
0 FAILED	Vui	it of serv	ice - Deyu	and corrective action.				
				DEFICIENCY RE	PORTING C	TUIDE		
	in a structure th		ires coneci	tive action.				
CATEGORIES OF DEFIC M= Minor Deficiency - Defi	ficiencies which are	re minor in	- nature, ger	nerally do not impact the structural integrity of the b	des and could easily be	entrod Evarnoles inclu	to but are not limited to: Spalled cor	Minor nat
- note	es, Minor corrosion	on of Steel, I	, Minor scouni	ierally do not impact the structural integrity of the b ring, Clogged drainage, etc. ensive in nature and need more planning and effort				
5	corroded rel	ebars, Con	nsiderable se	ettlement, Considerable scouring or undermining, N	Moderate to extensive como	osion to structural steel	I with measurable loss of section, etc.	
	=	of the pre	nage.	ictural element of a bridge that poses an extreme u				
C-H= Critical Hazard Def	ficiency - Ac	A deficiency	cy in a compor	onent or element of a bridge that poses an extreme ted to: Loose concrete hanging down over traffic or				
URGENCY OF REPAIR:								
I = Immediate- [Inspector(s)	immediately conta			pection Engineer (DBIE) to report the Deficiency ar				
A = ASAP- [Action/Repa	ir should be initiat	ted by Dis'	trict Mainten	nance Engineer or the Responsible Party (if not a S	tate owned bridge) upon r	aceipt of the Inspection	Report].	

#### REMARKS

#### **BRIDGE ORIENTATION**

Orientation as follows:

- Dyke Road over Poucha Pond on Chappaquiddick Island has an east/west orientation.
- Tidal flow from south (Flood) to north (Ebb).
- Bents(7) & Spans(8) are numbered from the west.
- Beams(5) & Bays(4) numbered from the south, see sketches 1-3.

#### **GENERAL REMARKS**

Bridge roadway is one lane for 2-way traffic with no traffic signals or signage.

Chappy Ferry service from Downtown Edgartown to Chappaquiddick Island was coordinated & supplied by Edgartown Highway Department (Contact Superintendent, Allan DeBettencourt, 508-627-4004).

Underside inspection was performed during a receding tide (2hrs after +1.0ft High Tide) for the Wasque Point tide station utilizing a watercraft launched at the northwest embankment.

The Hytoi Trustees of Reservations operate a live traffic counter that is attached to the south rail at Bent 5 and the numeric display is a yearly per axle count that is reset every April.

S/A - West at-bridge weight posting sign has compromised visibility due to inadequate height, see photo 1. Both advances lack weight posting signs to inform traffic of the restriction.

Previously installed navigation channel indicator sign attached to the north fascia board in Span 5 is broken and missing, see photo 2.

#### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

Wearing surface is comprised of single coursed 4" x 10" transversely fastened timber decking planks, see photos 3 & 4. Inspection of this item is limited to only the top side of the decking planks.

Specific deficiencies as follows:

- Minor to moderate weathering and surface checking (≤1/16"W) throughout.
- Differential elevation of planks ≤1/2"H.
- Abrasion/section loss in wheel paths ≤1"D.
- ≈40% of fasteners are protruding ≤1/2"H with nominal wear, predominately in abraded wheel paths.
- Moderate to severe sand accumulation throughout, worst in abraded wheel paths.

#### REMARKS

#### Item 58.2 - Deck Condition

Minor mildew staining throughout deck planking soffit, see photo 5.

Also see item 58.1 - Wearing Surface for top side deficiencies.

#### Item 58.12 - Utilities

Two PVC conduits in bay 5, in all spans, see photo 5.

#### **APPROACHES**

#### Approaches b - Appr. Roadway Settlement

The approach roadways are comprised of gravel and loose sand with scattered minor vegetation growth, see photo 1. Both approaches exhibit moderate rutting in wheel paths, and scattered typical gully erosion. This item is limited to the extent of the wingwall bulkheads outlined as "PHASE I" in the construction plans, see sketch 1.

#### Specific deficiencies as follows:

#### West approach:

- Southwest immediate approach exhibits a 10'L x 5'W x ≤2'D erosion hole, see photo 6.

#### East approach:

- Southeast immediate approach exhibits 5'L x 16"W x ≤10"D erosion hole, see photo 7.
- East approach along south wingwall bulkhead displays a 25'L x 2'W x ≤2'D erosion hole, see photo 8.
- Erosion along both wingwall bulkhead perimeters exposing tiebacks and tops of abandoned bulkheads 16"W x ≤6"D, see photo 9.

See items 60.1.c - Backwalls & 60.1.e - Wingwalls for associated bulkhead deficiencies.

#### ITEM 59 - SUPERSTRUCTURE

#### Item 59.4 - Girders or Beams

Rating based on the condition of the five interior 10"  $\times$  10" timber beams, 3"  $\times$  10" fascia boards are not structural components, see sketch 3.

#### Specific deficiencies as follows:

- Scattered bird nests throughout faces of beams.
- Scattered minor top edge splits from misguided deck nails (as-built), see photo 10.
- Span 7 Beam 2 south face, isolated horizontal surface checking ≤1/16"W, see photo 11.

#### Item 59.13 - Member Alignment

See photo 12 for typical vertical alignment of spans.

#### SuperStructure Load Vibration Notes

Minor vibration experienced under live vehicular loadings.

#### REMARKS

#### ITEM 60 - SUBSTRUCTURE

#### Item 60.1 - Abutments

#### Item 60.1.c - Backwalls

Inspection and condition rating of this item is based on the timber tongue & groove vertical sheathing and wale systems of the abutment bulkheads to the corner/interface with the wingwall bulkheads. Concrete deadman systems and associated tiebacks are hidden under approach roadways, only exterior tieback cleat boards are accessible.

#### Deficiencies as follows:

- Both abutment bulkheads exhibit minor to moderate mildew staining above tidal zone, and moderate to heavy marine growth within tidal zone, see photo 13.
- East abutment bulkhead, bulging/bowing 1" seaward, see photo 14.

#### Item 60.1.d - Breastwalls

Inspection and condition rating of this item is based on the condition of the pile caps at both abutments.

#### Item 60.1.e - Wingwalls

Condition rating of this item is based on the timber tongue & groove vertical sheathing and wale systems of the wingwall bulkheads. Tiebacks are hidden under approach roadways, only exterior tieback cleat boards are accessible. See item Approaches b - Approach Roadway Settlement for exposed tiebacks.

#### Deficiencies as follows:

- All wingwall bulkheads exhibit minor mildew staining above tidal zone, surface checks and moderate to heavy marine growth within tidal zone, see photo 15.
- Both east wingwall bulkheads exhibit bulging/bowing ≤2" seaward and gaps between sheathing & wales, worst at northeast wingwall bulkhead at first tieback from west, see photo 16.
- Northeast wingwall bulkhead between 1st & 2nd piles from west, split middle wale, see photo 15.
- S/A : Northeast wingwall bulkhead at interface with abutment bulkhead, ≤1/2" gap allowing fill loss, see photo 14.

#### Item 60.1.i - Piles

Condition rating based on the 10" timber piles attached to the wingwall bulkheads.

#### Item 60.1.I - Fasteners

Condition rating based on all steel fasteners, and tieback plates associated with abutment & wingwall bulkheads.

- All exposed fasteners and plates exhibit minor to moderate corrosion, see photo 15.

#### Item 60.3 - Pile Bents

#### Item 60.3.a - Pile Caps

Bent 5 south face(End) of cap, FH and FW irregular surface checking ≤1/16"W, see photo 17.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 29, 2021

### REMARKS

#### Item 60.3.b - Piles

Rating based on the condition of the 3 piles per bent supporting the cap, the longer piles that function as part of the bridge rail system are not structural components, see sketch 2.

Deficiencies as follows:

- Scattered irregular pile cut offs reducing bearing area & creating ≤1/2" gaps between cap, see photo 18.
- Bent 1 southwest pile, minor wane with rust staining, see photo 19.

#### Item 60.3.c - Diagonal Bracing

Moderate to heavy marine growth in tidal zone with scattered rust staining from fasteners, see photo 20.

#### Item 60.3.e - Fasteners

Condition based on diagonal bracing hardware and beam keeper system.

All fasteners and angles exhibit minor to moderate corrosion, see photos 20 & 21.

#### TRAFFIC SAFETY

#### <u>Item 36a - Bridge Railing</u>

Bridge railing consists of two 6" x 8" horizontal members bolted to 6" x 8" vertical posts with ≈6' spacing, and 12" piles at bents see photo 3, non-standard. See item 58.8 for condition comments.

#### Item 36b - Transitions

Approach guardrail system attached directly to piles at abutment bents with no change in post spacing, non-standard. Flared at west & perpendicular at east, see sketch 1 and photos 1 & 9.

#### Item 36c - Approach Guardrail

Approach guardrail system consists of two 6" x 8" horizontal members bolted to wingwall bulkhead piles with ≈10' spacing, non-standard, see photo 9. System configuration creates a 1.5'H opening between the lower horizontal and top of wingwall bulkhead sheathing.

#### Item 36d - Approach Guardrail Ends

East approach guardrail ends are beyond bridge limits, blunt end at west, non-standard.

#### Sketch / Photo Log

Sketch 1: Plan View, from 1994 Construction Plans

Sketch 2: South Elevation View, from 1994 Construction Plans

Sketch 3: Cross Section looking west, Section A-A from 1994 Construction Plans

Photo 1: West approach, at-bridge weight posting sign installed at inadequate height. Photo 2: Span 5 north elevation, broken & missing navigation channel indicator sign.

Photo 3: General wearing surface looking west, sand accumulation in abraded wheel paths.

Photo 4: North wheel path looking east (Level @ Bent 4), abraded wheel path w/ sand accumulation &

protruding fasteners.

Photo 5: General underside Span 5 looking west, minor mildew staining throughout soffit.

Photo 6: Southwest immediate approach roadway, erosion hole.

Photo 7: Southeast immediate approach roadway, erosion hole.

Photo 8: East approach along south wingwall bulkhead, moderate erosion.

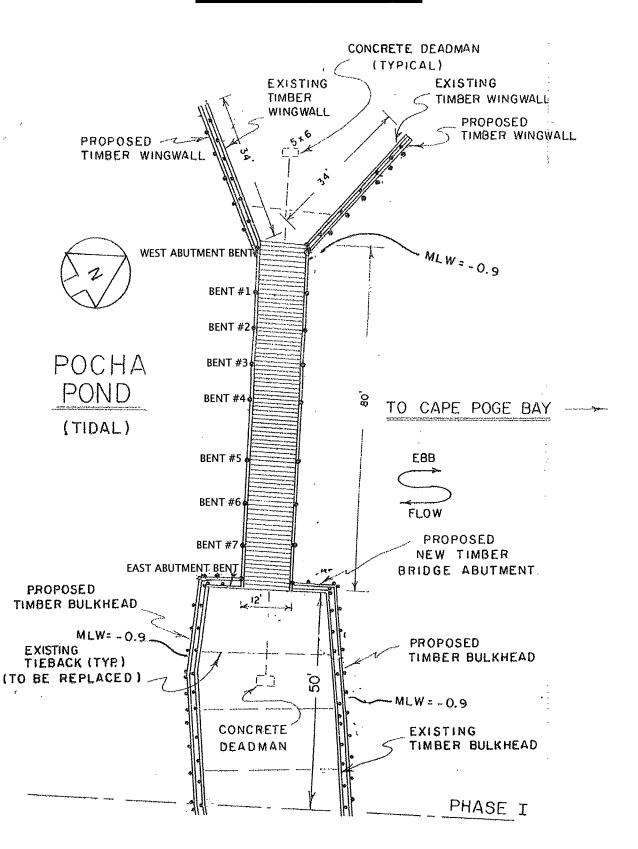
#### REMARKS

#### Sketch / Photo Log (Cont'd)

- Photo 9: East approach along north wingwall bulkhead, erosion along abandoned bulkhead exposing tiebacks.
- Photo 10: Span 2 Beam 2 north face, top edge split from misguided deck fastener.
- Photo 11: Span 7 Beam 2 south face, horizontal surface checking.
- Photo 12: South elevation, typical vertical alignment of spans.

  Photo 13: General view of west abutment bent & bulkhead, mildew staining & marine growth throughout.
- Photo 14: North corner of east abutment bulkhead looking south, bulging/bowing & gap w/ wingwall bulkhead.
- Photo 15: Northeast wingwall bulkhead between 1st & 2nd piles from west, split in middle wale.
- Photo 16: Northeast wingwall bulkhead at first tieback from west, bulging/bowing w/ gaps between sheathing & wales.
- Photo 17: Bent 5 south face of cap, vertical end surface checks.
- Photo 18: Bent 1 center pile east face, irregular cut off w/ gap between cap.
- Photo 19: Bent 1 south piles, minor wane w/rust staining.
- Photo 20: Bent 7 north end of east diagonal bracing, corrosion of fastener hardware.
- Photo 21: Bent 2 Beam 3 south keeper, corrosion to fastener hardware & angle.

## **SKETCHES**



Sketch 1: Plan View, from 1994 Construction Plans

CITY/OWN	BIN	RR DEPT NO		S-STRIICTHRE NO	INSPECTION DATE
EDGARTOWN	43B	E-07-004		JN-NBI	SEP 29, 2021
		SKET	CHES		
ALL PILE CAPS ABOVE THE DECK TO BE CHAMFERED AT			12 - 0		
45° AND CAPPED WITH FIBERGLASS	GLASS THE				
	<b>(9)</b>		<b>Y</b> ,	2 PVC CONDUITS * 10 x 10 STRINGER	
		BEAM BEAM #1 #2	BEAM #3	4 x 10 DECKING  M BEAM BEAM #5	
				Noo X	
3×10 FASCIA BOARD (TYPICAL)	3	(TYP.)		x 21	X 12 PILE CAP
1' Ø GALV. STEEL BOLT W/NUTS AND WASHERS (TYPICAL)			· <del></del>	BEAM # 4	
12" Ø PILE (TYPICAL)	1		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3 x 10 CROSS BRACE	
	, 0 /				
	Í	18 0	SECTION A-A LOOKING WEST	A-A WEST	
Sketch 3:	Cross Se	ction looking west, S	Section A-A	Cross Section looking west, Section A-A from 1994 Construction Plans	

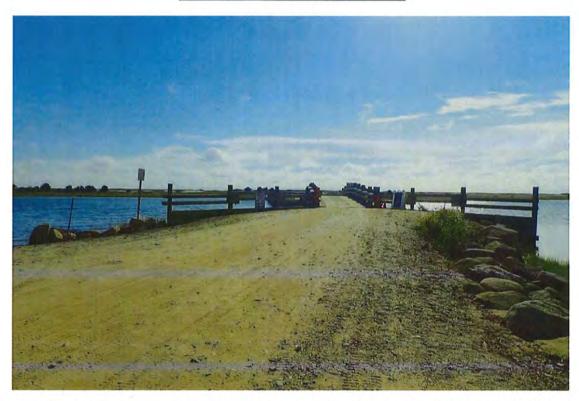


Photo 1: West approach, at-bridge weight posting sign installed at inadequate height.



Photo 2: Span 5 north elevation, broken & missing navigation channel indicator sign.

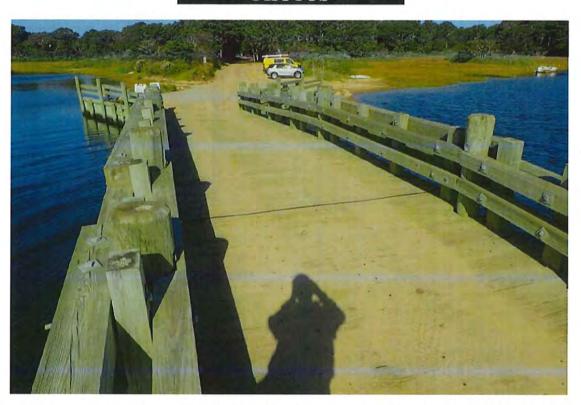


Photo 3: General wearing surface looking west, sand accumulation in abraded wheel paths.



Photo 4: North wheel path looking east (Level @ Bent 4), abraded wheel path w/ sand accumulation & protruding fasteners.

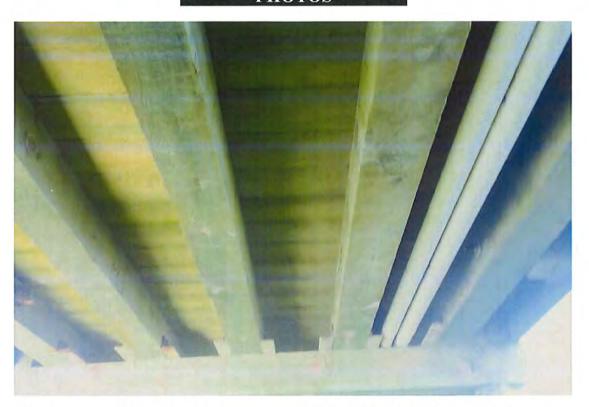


Photo 5: General underside Span 5 looking west, minor mildew staining throughout soffit.



Photo 6: Southwest immediate approach roadway, erosion hole.

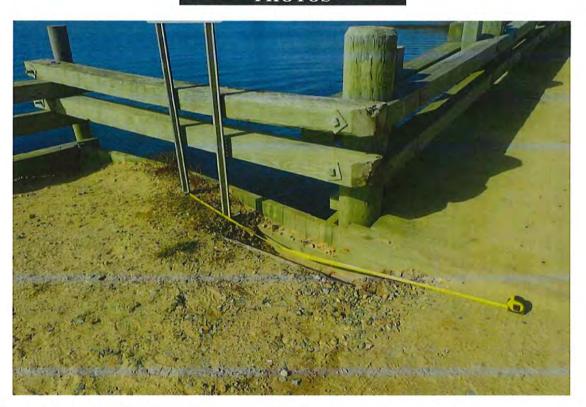


Photo 7: Southeast immediate approach roadway, erosion hole.



Photo 8: East approach along south wingwall bulkhead, moderate erosion.

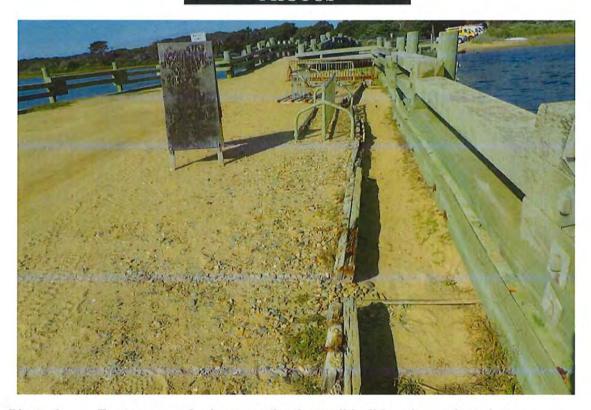


Photo 9: East approach along north wingwall bulkhead, erosion along abandoned bulkhead exposing tiebacks.



Photo 10: Span 2 Beam 2 north face, top edge split from misguided deck fastener.



Photo 11: Span 7 Beam 2 south face, horizontal surface checking.



Photo 12: South elevation, typical vertical alignment of spans.

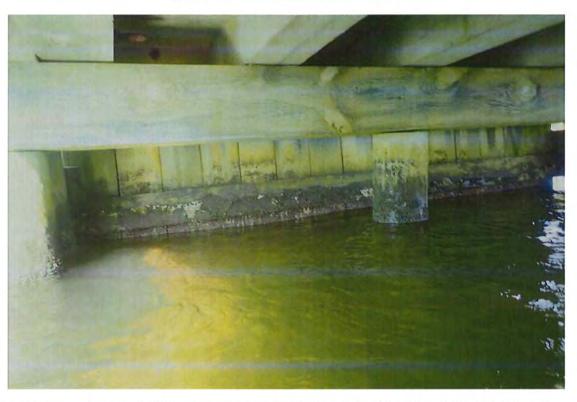


Photo 13: General view of west abutment bent & bulkhead, mildew staining & marine growth throughout.



Photo 14: North corner of east abutment bulkhead looking south, bulging/bowing & gap w/ wingwall bulkhead.

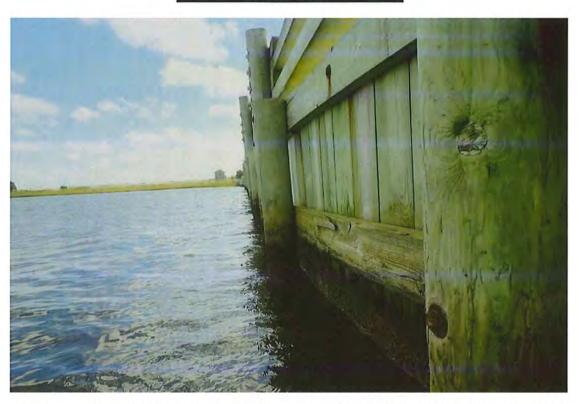


Photo 15: Northeast wingwall bulkhead between 1st & 2nd piles from west, split in middle wale.



Photo 16: Northeast wingwall bulkhead at first tieback from west, bulging/bowing w/ gaps between sheathing & wales.

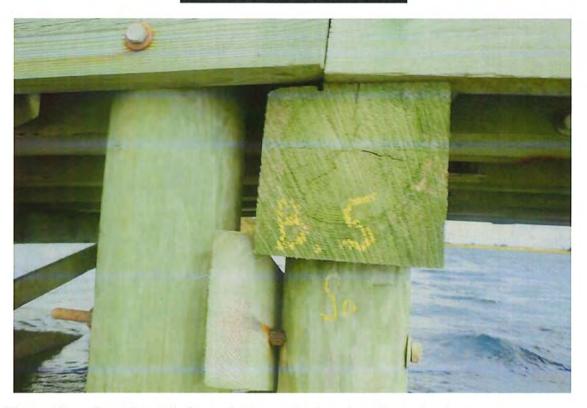


Photo 17: Bent 5 south face of cap, vertical end surface checks.



Photo 18: Bent 1 center pile east face, irregular cut off w/ gap between cap.



Photo 19: Bent 1 south piles, minor wane w/rust staining.



Photo 20: Bent 7 north end of east diagonal bracing, corrosion of fastener hardware.



Photo 21: Bent 2 Beam 3 south keeper, corrosion to fastener hardware & angle.

# National Bridge Element Inspection

BDEPT# E-07-004 Date 09/29/2021 B.I.N. **43B** District Bridge Inspection Eng'r **Grant Simpson** Item 8 E07004-43B-MUN-NBI Inspecting Agency Mass. Highway Dept. Span Group 1 Team Leader John Spiezio Town Edgartown Team **Alexander Downing** Member(s)

District 5

El#	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4
31	Timber Deck	sq feet	3	958.500	%	745,500	213,000		
Notes:	The state of the s					in sting contact, such contact	Assistant Marketine		4.5 cm v 20.00000 ee 100-0
> 1180	Abrasion	sq feet	3	213.000	%		213.000		
Notes:		L					<u> </u>	L	<u> </u>
111	Timber Open Girder	feet	3	355.000	%	335.000	20.000		
Notes:		I:	<b>1</b> 1		1				
> 1170	Split/Delamination (Timber)	feet	3	20.000			20.000		
Notes :	L	L ,	اا		11				<u> </u>
228	Timber Pile	each	3	45	%	45			
Notes:	*********							1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	I service to the first to the first
235	Timber Pier Cap	feet	3	126.000		125.000		1.000	
Notes:									<u> </u>
> 1170	Split/Delamination (Timber)	feet	3	1.000	<b>\ </b> \ \ \ \ \ \ \			1.000	·
Notes:		I	I		1				
332	Timb Bridge Railing	feet	3	142.000	<b>\ </b> \	142.000			
Notes :		L	1				<u> </u>		

BDEPT#= E07004 State Informa			THE RESIDENCE OF THE PARTY OF T	Classification	-	Code		
Town= Edgartown	Agency Br.No.	L.O.	(112) NBIS Bridge Length			Y N		
B.I.N= 43B		TO= 042.7	(104) Highway System	Dural Local		- 6		
RANK= 3362 H.I.= 98.5 %	FHWA Select Lis	484 L 33330	(26) Functional Class - (100) Defense Highway	Rural Local		09		
Identificati	on		(101) Parallel Structure			N		
(8) Structure Number	E070	0443BMUNNBI 151000000	(102) Direction of Traffic -	One	lane for 2-way tra			
(5) Inventory Route								
State Highway Department District     Ounty Code     007     (4) Place code	e	05 21150	(105) Federal Lands Highways			0		
6) Features Intersected		UCHA POND	(110) Designated National Netv	ork		N		
7) Facility Carried	HV	VY DIKE RD	(20) Toll - On free ro	ad		3		
(9) Location	.7MI E OF	WILLETT LANE	(21) Maintain - Town	Agency		03		
(11) Kilometerpoint		0001.046		Agency		03		
(12) Base Highway Network		N	(37) Historical Significance	built afte	er 1949 presumed	to be not eligi Z		
(13) LRS Inventory Route & Subroute	00000000000			Condition _	S. A. L. L. C.	Code		
(16) Latitude	41 DEG 22 MIN	24.25 SEC	(58) Deck			6		
17) Longitude	70 DEG 27 MIN	13.15 SEC	(59) Superstructure			7		
98) Border Bridge State Code	Sha	are %	(60) Substructure	94		7		
99) Border Bridge Structure No. #			(61) Channel & Channel Protecti (62) Culverts	on		7 N		
Structure Type and				oad Rating and Po	osting	Code		
43) Structure Type Main: Timber	Code	702	H. PEAD of Security Street Co.	)=M 9	osting	1		
	less bridge type: Not	applicable	(63) Operating Rating Method -	Allowable Stres	s (AS)	2		
44) Structure Type Appr:			(64) Operating Rating		335	20.1		
Other	Code		(65) Inventory Rating Method -	Allowable Stres	is (AS)	2		
45) Number of spans in main unit		008	(66) Inventory Rating			14.2		
46) Number of approach spans		0000	(70) Bridge Posting	d for tond		1		
107) Deck Structure Type - Timber		Code 8	(41) Structure - Poste	d for load Appraisal		P Code		
108) Wearing Surface / Protective System:		W. L. 4	(67) Structural Evaluation	, Appleiser		4		
A) Type of wearing surface - Timber		Code 7	(68) Deck Geometry			2		
B) Type of membrane - None		5131 . 3	(69) Underclearances, vert. and	hóriz.		N		
C) Type of deck protection - None  Age and Ser	vice	Code 0	(71) Waterway adequacy			7		
27) Year Built	Aice -	1995	(72) Approach Roadway Alignme	nt		7		
106) Year Reconstructed		0000	(36) Traffic Safety Features			0 0 0 0		
42) Type of Service: On - Highwa	W.	0000	(113) Scour Critical Bridges	Inspections		5		
Under - Waterway		Code 15	(90) Inspection Date 09/0		(91) Frequency	24 M		
28) Lanes: On Structure 01	Under structure		(92) Critical Feature Inspection:	0.0000000000000000000000000000000000000	4-1-1-1-1-1	(93) CFI DATE		
29) Average Daily Traffic	3770 (2773)	000150	(A) Fracture Critical Detail	N	00 MO A)	00/00/0		
H1.000000000000000000000000000000000000	ruck ADT	03 %	(B) Underwater Inspection	Y	36 MOB)	09/25/1		
19) Bypass, detour length		199 KM	(C) Other Special Inspection	N	00 MO C)	00/00/0		
Geometric D	ata	201000	(*) Other Inspection ()	N	00 MO *)	00/00/0		
48) Length of maximum span		0004.3 M	(*) Closed Bridge	N	00 MO *)	00/00/0		
49) Structure Length	WAA A	00023.2 M	(*) UW Special Inspection	N	00 MO*)	00/00/0		
50) Curb or sidewalk: Left	00.0 M Rigi		(*) Damage Inspection	Rating Loads	MO *)	00/00/0		
51) Bridge Roadway Width Curb to Curb		003.4 M	Report Date 01/01/05	H20	Type 3 Type :	3S2 Type HS		
52) Deck Width Out to Out		004.6M	Operating	12.0	19.0 30.			
32) Approach Roadway Width (w/shoulders)	<u> </u>	010.4 M	Inventory	9.0	14.0 22.	0 16.0		
33) Bridge Median - No median	Co.			Field Posting		10000		
	cture Flared	N oo oo M	Status POSTED	4.7.		3/09/05		
10) Inventory Route MIN Vert Clear 47) Inventory Route Total Horiz Clear		99.99 M 03.4 M	2 Axle Actual 09	3 Axle 14	5 Axle 21	Single		
53) Min Vert Clear Over Bridge Rdwy		99.99 M	Recommended 09	14	21			
54) Min Vert Underclear ref	N	00.00 M	Missing Signs N		77			
55) Min Lat Underclear RT ref	N	00.00M		Misc.				
56) Min Lat Underclear LT	25	00.0M	Bridge Name	0.000	Q Grant	at Jour		
Navigation D	ata	VVIVIII		N Acrow Panel	N Joint	ess Bridge		
8) Navigation Control - No navigation cont		Code 0	Freeze/Thaw N : Not Applicab	le cessibility (Needed	d/Used)			
111) Pier Protection	A STATE OF THE STA	Code		N / N Rigging		Other		
39) Navigation Vertical Clearance	M0.000		N/N Staging	1,3,5,1	ACTTOWN			
16) Vert-lift Bridge Nav Min Vert Clear	M		N/N Traffic Con	itrol				
		2222 242				Inspection		
Navigation Horizontal Clearance		M0.0000	N/N Wader	N/N RR Flagper	rson	Hours: 012		

Report Date: November 17, 2021 State Information Classification Code BDEPT#= E07004 Agency Br.No. (112) NBIS Bridge Length Town= Edgartown L.O. Ν (104) Highway System B.I.N= 43B AASHTO= 042.7 (26) Functional Class -09 Rural Local FHWA Select List= Y (6/21/17) RANK= 3362 H.I.= (100) Defense Highway 0 Identification (101) Parallel Structure E0700443BMUNNBI (8) Structure Number (102) Direction of Traffic -One lane for 2-way traffic 151000000 (5) Inventory Route (103) Temporary Structure (2) State Highway Department District (4) Place code 21150 (105) Federal Lands Highways (3) County Code WATER POUCHA POND (110) Designated National Network (6) Features Intersected HWY DIKE RD (7) Facility Carried (20) Toll -On free road 3 (9) Location .7MI E OF WILLETT LANE (21) Maintain -Town Agency 03 (11) Kilometerpoint 0001.046 (22) Owner -Town Agency 03 (12) Base Highway Network N (37) Historical Significance built after 1949 presumed to be not eligi Z (13) LRS Inventory Route & Subroute 00000000000 (58) Deck (16) Latitude 41 DEG 22 MIN 24.25 SEC (59) Superstructure 7 70 DEG 27 MIN (17) Longitude 13.15 SEC 7 (60) Substructure (98) Border Bridge State Code Share 7 (61) Channel & Channel Protection (99) Border Bridge Structure No. # (62) Culverts Structure Type and Material Load Rating and Posting Code (43) Structure Type Main: Timber Code (31) Design Load -H 10=M 9 Stringer/Girder Jointless bridge type: Not applicable (63) Operating Rating Method -Allowable Stress (AS) 2 (44) Structure Type Appr: (64) Operating Rating 20.1 Other Code (65) Inventory Rating Method -Allowable Stress (AS) 2 (45) Number of spans in main unit 800 (66) Inventory Rating 14.2 (46) Number of approach spans 0000 (70) Bridge Posting 1 8 (41) Structure -Posted for load Þ (107) Deck Structure Type -Timber Code \_ Appraisal . (108) Wearing Surface / Protective System: (67) Structural Evaluation A) Type of wearing surface -Timber Code 7 (68) Deck Geometry 2 B) Type of membrane -None Code (69) Underclearances, vert. and horiz. 0 C) Type of deck protection -None Code (71) Waterway adequacy Age and Service (72) Approach Roadway Alignment (27) Year Built 1995 (36) Traffic Safety Features 0 0 0 0 (106) Year Reconstructed 0000 (113) Scour Critical Bridges 5 (42) Type of Service: On -Highway Inspections (90) Inspection Date 09/29/21 (91) Frequency 24 MO Under -15 Waterway Code (92) Critical Feature Inspection: (93) CFI DATE (28) Lanes: On Structure 01 Under structure 00 00/00/00 (A) Fracture Critical Detail 00 MO A) Ν 000150 (29) Average Daily Traffic (B) Underwater Inspection 36 MO B) 09/25/19 (30) Year of ADT 2019 (109) Truck ADT 03 % (C) Other Special Inspection 00 MO C) 00/00/00 Ν (19) Bypass, detour length 199 KM Geometric Data (\*) Other Inspection () N 00 MO \*) 00/00/00 (48) Length of maximum span 0004.3 M (\*) Closed Bridge 00 MO \*) 00/00/00 Ν (49) Structure Length 00023.2 M (\*) UW Special Inspection 00 MO \*) 00/00/00 Ν (50) Curb or sidewalk: Left 00.0 M Right 00.0M (\*) Damage Inspection MO \*) 00/00/00 Rating Loads (51) Bridge Roadway Width Curb to Curb 003.4 M Report Date 01/01/05 Type 3 Type 3S2 Type HS H20 (52) Deck Width Out to Out 004.6 M Operating 12.0 22.0 19.0 30.0 (32) Approach Roadway Width (w/shoulders) 010.4 M Inventory 9.0 14.0 22.0 16.0 (33) Bridge Median -No median Code 0 Field Posting (34) Skew 00 DEG (35) Structure Flared Ν Status POSTED Posting Date 03/09/05 (10) Inventory Route MIN Vert Clear 99.99 M 2 Axle 3 Axle 5 Axle Sinale (47) Inventory Route Total Horiz Clear 03.4M Actual 09 14 21 Recommended 09 14 21 (53) Min Vert Clear Over Bridge Rdwy 99.99 M Missing Signs M 00.00 (54) Min Vert Underclear ref Ν Misc. (55) Min Lat Underclear RT ref Ν M 0.00 Bridge Name (56) Min Lat Underclear LT M 0.00 N Anti-missile fence N Acrow Panel N Jointless Bridge Navigation Data = Freeze/Thaw N: Not Applicable 0 (38) Navigation Control -Code No navigation control on waterway Accessibility (Needed/Used) Code (111) Pier Protection N/N Rigging N / N Liftbucket Y/Y Other (39) Navigation Vertical Clearance M 0.000 N/N Ladder N/NStaging CONTACTTOWN (116) Vert-lift Bridge Nav Min Vert Clear М Y/YBoat N/NTraffic Control Inspection (40) Navigation Horizontal Clearance 0000.0M N/N Wader N / N RR Flagperson 012 Hours: N / N Inspector 50 N/N Police