MASSACHUSETTS HIGHWAY DEPARTMENT
STRUCTURES INSPECTION FIELD REPORT
ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	A:OPEN	SEP 16, 2003

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	D. A. Palmer

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
Timber Stringer/Girder	Town Agency	Town Agency	T. J. McKenna

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
Timber	sunny	70°C	S. R. WARN

ITEM 58 — DECK — 8

		DEF
1.Wearing Surface	N	-
2.Deck Condition	8	-
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	8	-
9.Anti Missile Fence	N	-
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)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	-
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N) N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE — 9

			DEF
1.Stringers		9	-
2.Floorbeams		N	-
3.Floor System Bracing		N	-
4.Girders or Beams		N	-
5.Trusses - General		N	-
a. Upper Chords	N		-
b. Lower Chords	N		-
c. Web Members	N		-
d. Lateral Bracing	N		-
e. Sway Bracings	N		-
f. Portals	N		-
g. End Posts	N		-
6.Pin & Hangers		N	-
7.Conn Plt's, Gussets & Angles		N	-
8.Cover Plates		N	-
9.Bearing Devices		N	-
10. Diaphragms/Cross Frames		N	-
11. Rivets & Bolts		N	-
12. Welds		N	-
13. Member Alignment		9	-
14. Paint/Coating		N	-
15.		N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

Any Fracture Critical Member: **(Y/N)** N

Any Cracks: **(Y/N)** N

ITEM 60 — SUBSTRUCTURE — 8

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	N	N		-
d. Breastwalls	N	8		-
e. Wingwalls	N	8		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	N	H		-
j. Scour	N	H		-
k. Settlement	N	9		-
l.	N	N		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			8	
a. Pile Caps	N	8		-
b. Piles	N	8		-
c. Diagonal Bracing	N	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	N	N		-

UNDERMINING (Y/N) If YES please explain — N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): N ***I-60 (This Report):*** 8

93B-U/W (DIVE) Insp 00/00/0000

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 16, 2003

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 9

	Dive	Cur	DEF
1.Channel Scour	N	H	-
2.Embankment Erosion	N	9	-
3.Debris	N	9	-
4.Vegetation	N	9	-
5.Utilities	N	X	-
6.Rip-Rap/Slope Protection	N	N	-
7.Aggradation	N	9	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): N ***ITEM 61 (This Report):*** 9

93b-U/W INSP. DATE: 00/00/0000

ITEM 36 — TRAFFIC SAFETY

	36	COND	DEF
A. Bridge Railing	0	8	-
B. Transitions	0	8	-
C. Approach Guardrail	0	8	-
D. Approach Guardrail Ends	0	8	-

WEIGHT POSTING

Not Applicable X

	H	3	3S2	Single
Actual Posting	N	N	N	N
Recommended Posting	N	N	N	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge		Other Advance	
	EB	WB	EB	WB
Signs In Place (Y=Yes,N=No, NR=NotRequired)				
Legibility/ Visibility				

CLEARANCE POSTING

Not Applicable X

	NB ft	NB in	SB ft	SB in	meter
Actual Field Measurement		0		0	
Posted Clearance		0		0	

	At bridge		Advance	
	NB	SB	NB	SB
Signs In Place (Y=Yes,N=No, NR=Not Required)				
Legibility/ Visibility				

ACCESSIBILITY (Y/N/P)

	Neede	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
Wds Hole Chappy Fer	Y	Y

TOTAL HOURS 14

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:

RATING

Rating Report (Y/N): N

Date: 00/00/0000

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: _____

CONDITION RATING GUIDE

(For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 16, 2003**

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

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 16, 2003

PHOTOS

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**

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 16, 2003

PHOTOS

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

MASSACHUSETTS HIGHWAY DEPARTMENT

UNDERWATER OPERATIONS TEAM
ROUTINE UNDERWATER INSPECTION REPORT

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8-STRUCTURE NO.	LEVEL OF INSPECTION	93B-DATE INSPECTED
EDGARTOWN	E07004-43B-MUN-NBI	II	JUN 16, 2004

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	3 m	3 m	RANDI E. BONICA	

BOTTOM CONDITION	CURRENT	TEAM MEMBERS
BOULDERS, SAND	TIDAL	W. J. COLLERAN, J. W. SHUTT, G. BROZ

ITEM 60 *SUBSTRUCTURE* — **7**

		DEF
1. Abutments	7	
a. Pedestals	N	-
b. Bridge Seats	N	-
c. Backwalls	N	-
d. Breastwalls	8	-
e. Wingwalls	8	-
f. Slope Paving/Rip-Rap	N	-
g. Pointing	N	-
h. Footings	N	-
i. Piles	8	-
j. Scour	7	-
k. Settlement	8	-
l.	N	-
2. Piers or Bents	N	
a. Pedestals	N	-
b. Caps	N	-
c. Columns	N	-
d. Stems/Webs/Pierwalls	N	-
e. Pointing	N	-
f. Footing	N	-
g. Piles	N	-
h. Scour	N	-
i. Settlement	N	-
j.	N	-
k.	N	-
3. Pile Bents	8	
a. Pile Caps	N	-
b. Piles	8	-
c. Diagonal Bracing	8	-
d. Horizontal Bracing	N	-
e. Fasteners	7	-
UNDERMINING (Y/N)		N

ITEM 61 *CHANNEL & CHANNEL PROTECTION* — **7**

		DEF
1. Channel Scour	7	-
2. Embankment Erosion	7	-
3. Debris	8	-
4. Vegetation	8	-
5. Utilities	N	-
6. Rip-Rap/Slope Protection	8	-
7. Aggradation	8	-
8. Fender System	N	-
a. Piles	N	-
b. Diagonal Bracing	N	-
c. Horizontal Bracing	N	-
d. Wales	N	-
e. Fasteners	N	-
f. Ladders	N	-
9.	N	-

ITEM 59 *SUPERSTRUCTURE*

		DEF
	N	-
	N	-
	N	-

ITEM 62 *CULVERTS* — **N**

		DEF
1. Roof	N	-
2. Floor	N	-
3. Walls	N	-
4. Headwall	N	-
5. Wingwall	N	-
6. Pipe	N	-
7. Protective Coating	N	-
8. Embankment	N	-
9. Wearing Surface	N	-
10. Railing	N	-
11. Sidewalks	N	-
12. Utilities	N	-
13. Member Alignment	N	-
14. Deformation	N	-
15. Scour	N	-
16. Settlement	N	-
17.	N	-
18.	N	-
UNDERMINING (Y/N)		N

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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.

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.

C-S= Critical Structural Deficiency- A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency- 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 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.

URGENCY OF REPAIR:

I=Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her.]

A=ASAP- [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.]

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.]

X=UNKNOWN **N=NOT APPLICABLE** **H=HIDDEN/INACCESSIBLE** **R=REMOVED**

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

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.

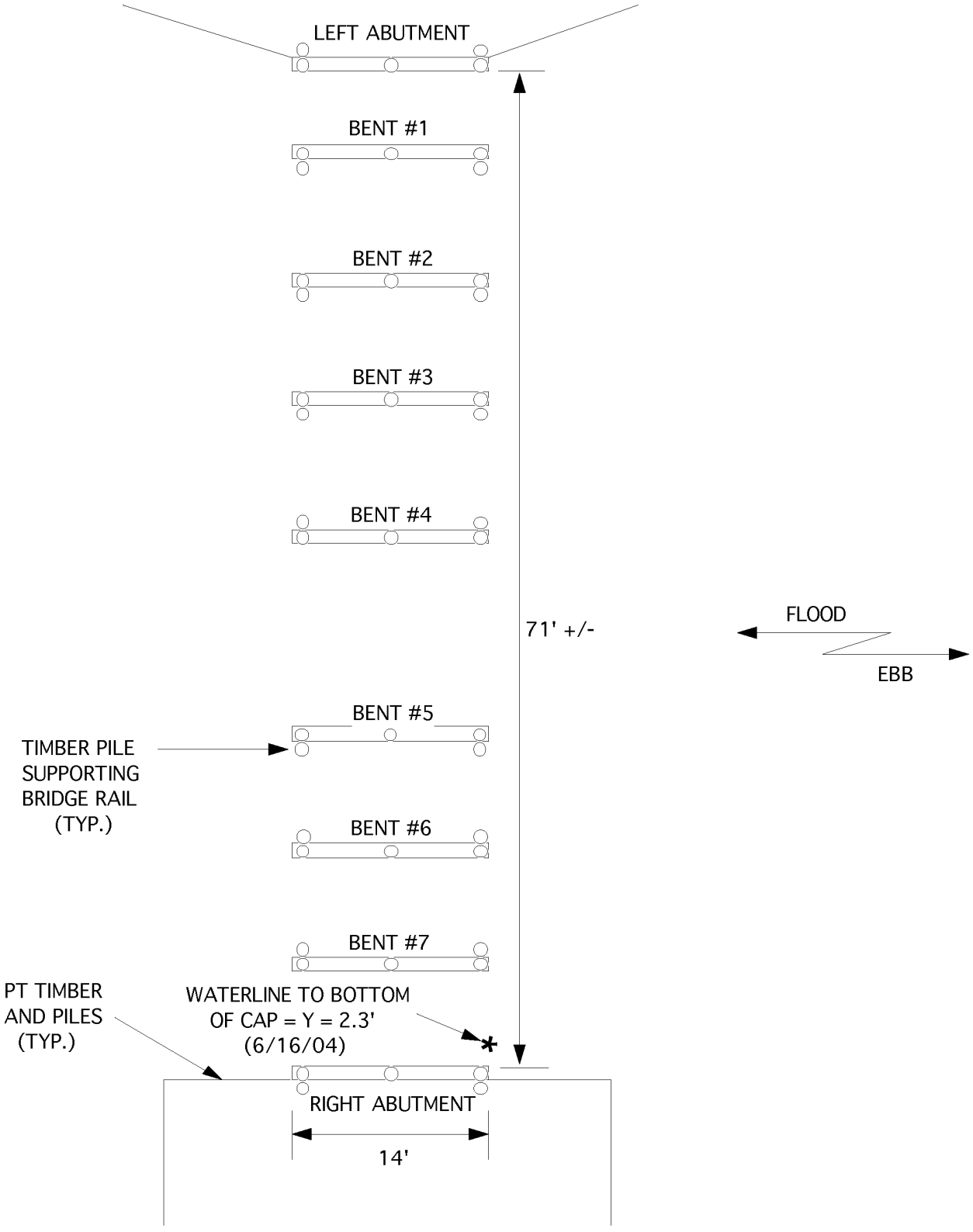
e. Fasteners:
Fasteners below the waterline are slightly rusted.

Sketch / Chart Log

Sketch 1 : PLAN VIEW (NTS)
Chart 1 : SCOUR MONITORING CHART

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

SKETCHES



Sketch 1: PLAN VIEW (NTS)

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE 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'
Y	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.

Chart 1: SCOUR MONITORING CHART

MASSACHUSETTS HIGHWAY DEPARTMENT
STRUCTURES INSPECTION FIELD REPORT
ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	B:OPEN	SEP 14, 2005

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	D. A. Palmer

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
Timber Stringer/Girder	Town Agency	Town Agency	P. Dufresne

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
Timber	sunny	21°C	D. A. ROBERTS

ITEM 58 — DECK — 8

		DEF
1. Wearing surface	7	M-P
2. Deck Condition	8	-
3. Stay in Place Forms	N	-
4. Curbs	N	-
5. Median	N	-
6. Sidewalks	N	-
7. Parapets	N	-
8. Railing	8	-
9. Anti Missile Fence	N	-
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)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	7	-
b. Appr. Roadway Settlement	7	-
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N) N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE — 9

			DEF
1. Stringers		9	-
2. Floorbeams		N	-
3. Floor System Bracing		N	-
4. Girders or Beams		N	-
5. Trusses - General		N	-
a. Upper Chords	N		-
b. Lower Chords	N		-
c. Web Members	N		-
d. Lateral Bracing	N		-
e. Sway Bracings	N		-
f. Portals	N		-
g. End Posts	N		-
6. Pin & Hangers		N	-
7. Conn Plt's, Gussets & Angles		N	-
8. Cover Plates		N	-
9. Bearing Devices		N	-
10. Diaphragms/Cross Frames		N	-
11. Rivets & Bolts		N	-
12. Welds		N	-
13. Member Alignment		9	-
14. Paint/Coating		N	-
15.		N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: **(Y/N)** N

Any Cracks: **(Y/N)** N

ITEM 60 — SUBSTRUCTURE — 7

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	N	N		-
d. Breastwalls	8	8		-
e. Wingwalls	8	8		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	8	H		-
j. Scour	7	H		-
k. Settlement	8	8		-
l.	N	N		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			8	
a. Pile Caps	N	8		-
b. Piles	8	8		-
c. Diagonal Bracing	8	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	7	8		-

UNDERMINING (Y/N) If YES please explain N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 8

93B-U/W (DIVE) Insp 06/16/2004

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 14, 2005

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 7

	Dive	Cur	DEF
1.Channel Scour	7	X	-
2.Embankment Erosion	7	8	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	8	8	-
7.Aggradation	8	X	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 ***ITEM 61 (This Report):*** 7

93b-U/W INSP. DATE: 06/16/2004

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	8	M-P
B. Transitions	0	8	M-P
C. Approach Guardrail	0	8	M-P
D. Approach Guardrail Ends	0	8	M-P

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	N	N	N	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

Signs In Place (Y=Yes,N=No, NR=NotRequired)	At bridge E	At bridge W	Other Advance E	Other Advance W
	N	N	N	N
Legibility/ Visibility				

CLEARANCE POSTING — *Not Applicable* X

	N ft	N in	S ft	S in	meter
Actual Field Measurement		0		0	
Posted Clearance		0		0	

Signs In Place (Y=Yes,N=No, NR=Not Required)	At bridge N	At bridge S	Advance N	Advance S
Legibility/ Visibility				

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
Wds Hole Chappy Fer	Y	Y

TOTAL HOURS 14

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: √ D.P.

CONDITION RATING GUIDE

(For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 14, 2005**

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.

Item 36b - Transitions

Continued post and rail non standard.

Item 36c - Approach Guardrail

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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 14, 2005

PHOTOS

Photo 1: West view of pile bents from channel.

Photo 2: North view of main span.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 14, 2005

PHOTOS

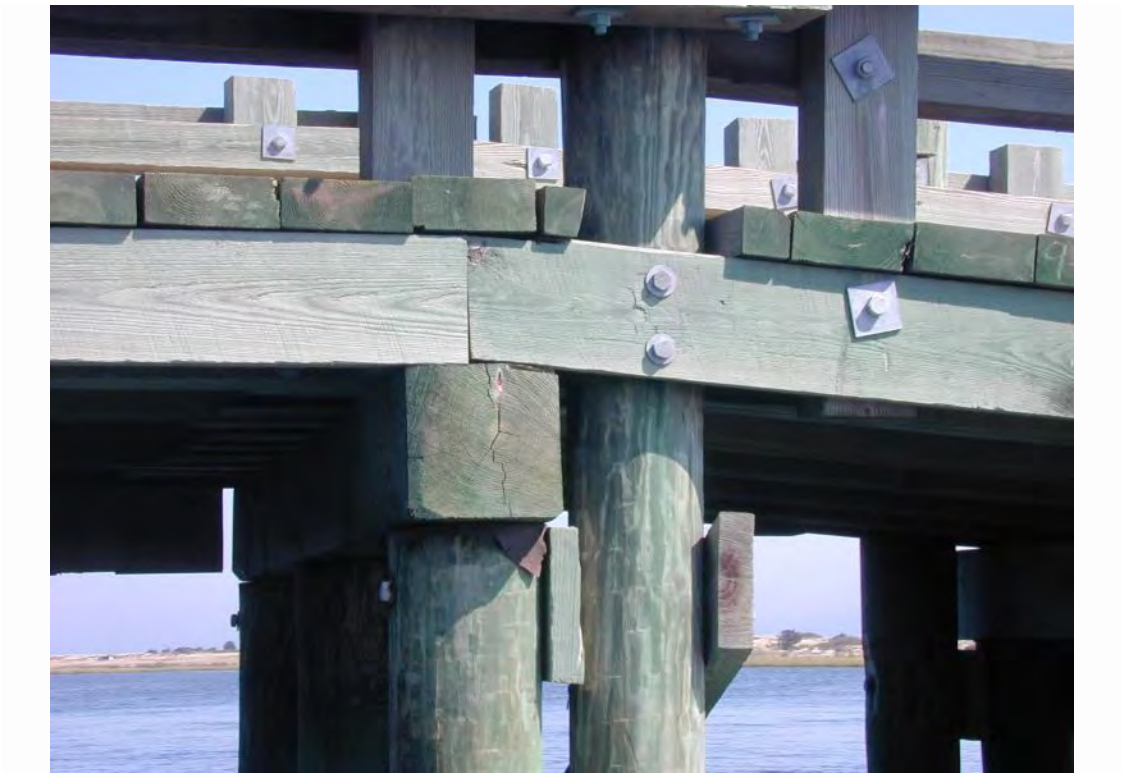


Photo 3: Sixth cap from West South nose split.

Photo 4: East abutment

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 14, 2005**

PHOTOS

Photo 5: Roadway wheel path nails lifting.

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

Date **09/14/2005**

District Bridge Inspection Eng'r **Daniel A. Palmer**

Inspecting Agency **Mass. Highway Dept.**

Team Leader **Peter Dufresne**

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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

	Previous Inspection	Current Inspection
Date	**09/14/05**	
District Bridge Inspection Eng'r	**Daniel A. Palmer**	
Inspecting Agency	**Mass. Highway Dept.**	
Team Leader	**Peter Dufresne**	
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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		
					☐					

MASSACHUSETTS HIGHWAY DEPARTMENT

UNDERWATER OPERATIONS TEAM
ROUTINE UNDERWATER INSPECTION REPORT

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8-STRUCTURE NO.	LEVEL OF INSPECTION	93B-DATE INSPECTED
EDGARTOWN	E07004-43B-MUN-NBI	II	JUN 28, 2007

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	3 m	1.5 m	RANDI E. BONICA	

BOTTOM CONDITION	CURRENT	TEAM MEMBERS
BOULDERS, SAND	TIDAL	G. BROZ, J. DONAHUE, J. B. DESMOND

ITEM 60 *SUBSTRUCTURE*

		DEF
1. Abutments	7	
a. Pedestals	N	-
b. Bridge Seats	N	-
c. Backwalls	N	-
d. Breastwalls	8	-
e. Wingwalls	8	-
f. Slope Paving/Rip-Rap	N	-
g. Pointing	N	-
h. Footings	N	-
i. Piles	8	-
j. Scour	7	-
k. Settlement	8	-
l.	N	-
2. Piers or Bents	N	
a. Pedestals	N	-
b. Caps	N	-
c. Columns	N	-
d. Stems/Webs/Pierwalls	N	-
e. Pointing	N	-
f. Footing	N	-
g. Piles	N	-
h. Scour	N	-
i. Settlement	N	-
j.	N	-
k.	N	-
3. Pile Bents	8	
a. Pile Caps	N	-
b. Piles	8	-
c. Diagonal Bracing	8	-
d. Horizontal Bracing	N	-
e. Fasteners	7	-
UNDERMINING (Y/N)		N

ITEM 61 *CHANNEL & CHANNEL PROTECTION*

		DEF
1. Channel Scour	7	-
2. Embankment Erosion	7	-
3. Debris	8	-
4. Vegetation	8	-
5. Utilities	N	-
6. Rip-Rap/Slope Protection	6	-
7. Aggradation	8	-
8. Fender System	N	-
a. Piles	N	-
b. Diagonal Bracing	N	-
c. Horizontal Bracing	N	-
d. Wales	N	-
e. Fasteners	N	-
f. Ladders	N	-
9.	N	-

ITEM 59 *SUPERSTRUCTURE*

	DEF
N	-
N	-
N	-

ITEM 62 *CULVERTS*

		DEF
1. Roof	N	-
2. Floor	N	-
3. Walls	N	-
4. Headwall	N	-
5. Wingwall	N	-
6. Pipe	N	-
7. Protective Coating	N	-
8. Embankment	N	-
9. Wearing Surface	N	-
10. Railing	N	-
11. Sidewalks	N	-
12. Utilities	N	-
13. Member Alignment	N	-
14. Deformation	N	-
15. Scour	N	-
16. Settlement	N	-
17.	N	-
18.	N	-
UNDERMINING (Y/N)		N

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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.

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.

C-S= Critical Structural Deficiency- A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency- 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 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.

URGENCY OF REPAIR:

I=Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her.]

A=ASAP- [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.]

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.]

X=UNKNOWN **N=NOT APPLICABLE** **H=HIDDEN/INACCESSIBLE** **R=REMOVED**

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

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.

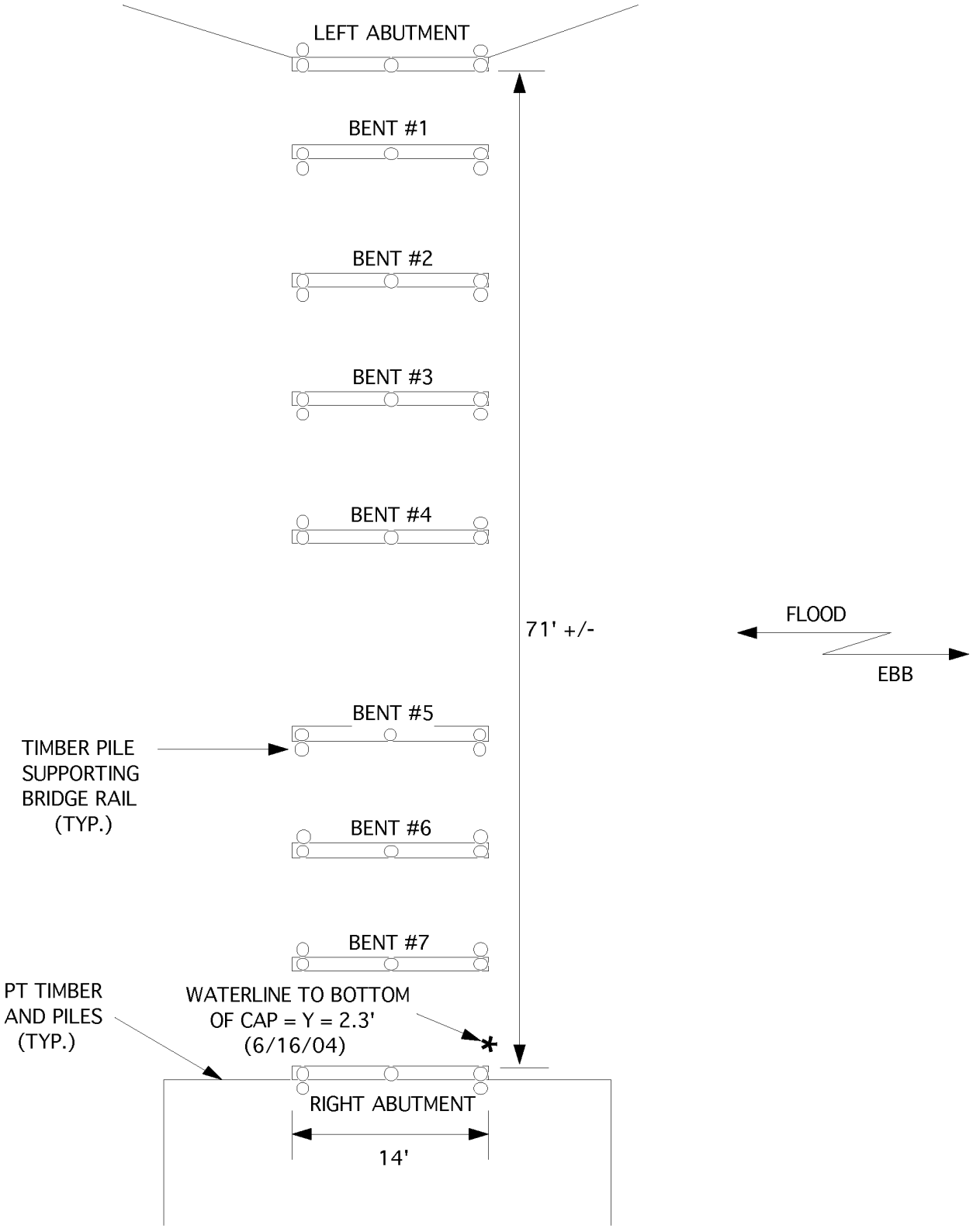
ITEM 61 - CHANNEL AND CHANNEL PROTECTION

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.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	JUN 28, 2007

SKETCHES



Sketch 1: PLAN VIEW (NTS)

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE 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'
Y	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.

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)

MASSACHUSETTS HIGHWAY DEPARTMENT
STRUCTURES INSPECTION FIELD REPORT
ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	B:OPEN	SEP 25, 2007

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	D. A. Palmer

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
Timber Stringer/Girder	Town Agency	Town Agency	J. S. Dalton

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
Timber	Sunny	24°C	S. R. WARN

ITEM 58 — DECK — 7

		DEF
1. Wearing surface	6	M-P
2. Deck Condition	7	-
3. Stay in Place Forms	N	-
4. Curbs	N	-
5. Median	N	-
6. Sidewalks	N	-
7. Parapets	N	-
8. Railing	8	-
9. Anti Missile Fence	N	-
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)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	M-P
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N) N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE — 8

		DEF
1. Stringers	8	-
2. Floorbeams	N	-
3. Floor System Bracing	N	-
4. Girders or Beams	N	-
5. Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6. Pin & Hangers	N	-
7. Conn Plt's, Gussets & Angles	N	-
8. Cover Plates	N	-
9. Bearing Devices	N	-
10. Diaphragms/Cross Frames	N	-
11. Rivets & Bolts	N	-
12. Welds	N	-
13. Member Alignment	9	-
14. Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: **(Y/N)** N

Any Cracks: **(Y/N)** N

ITEM 60 — SUBSTRUCTURE — 7

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	N	N		-
d. Breastwalls	8	8		-
e. Wingwalls	8	8		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	8	8		-
j. Scour	7	H		-
k. Settlement	8	8		-
l.	N	N		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			8	
a. Pile Caps	N	8		-
b. Piles	8	8		-
c. Diagonal Bracing	8	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	7	7		-

UNDERMINING (Y/N) If YES please explain **N**

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 ***I-60 (This Report):*** 8

93B-U/W (DIVE) Insp 06/28/2007

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 25, 2007

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	7	8	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	8	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 ***ITEM 61 (This Report):*** 8

93b-U/W INSP. DATE: 06/28/2007

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	8	-
B. Transitions	0	8	-
C. Approach Guardrail	0	8	-
D. Approach Guardrail Ends	0	8	-

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	N	N
Legibility/ Visibility	8 / 8	8 / 8	/	/

CLEARANCE POSTING

	N ft	N in	S ft	S in	meter
Not Actual Field Measurement X					
Posted Clearance		0		0	
		0		0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)				
Legibility/ Visibility	/	/	/	/

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
	N	N

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating
I 58: **8** I 59: **9** I 60: **8** Date : 09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: √ D.P.

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 25, 2007**

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.

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.

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

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 25, 2007

PHOTOS

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

Photo 2: East approach showing weight posting sign on left

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 25, 2007

PHOTOS

Photo 3: South elevation looking west

Photo 4: Wearing surface

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 25, 2007

PHOTOS

Photo 5: Wheel path wear

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

Date **09/25/2007**

District Bridge Inspection Eng'r **Daniel A. Palmer**

Inspecting Agency **Mass. Highway Dept.**

Team Leader **James S. Dalton**

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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

	Previous Inspection	Current Inspection
Date	**09/25/07**	
District Bridge Inspection Eng'r	**Daniel A. Palmer**	
Inspecting Agency	**Mass. Highway Dept.**	
Team Leader	**James S. Dalton**	
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	☒ % ☐	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	☒ % ☐	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	☒ % ☐	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ % ☐	100.0 %	0.0 %	0.0 %		

MASSACHUSETTS HIGHWAY DEPARTMENT
STRUCTURES INSPECTION FIELD REPORT
ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	P:POSTED	SEP 10, 2009

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	D. A. Palmer

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
702 : Timber Stringer/Girder	Town Agency	Town Agency	P. Dufresne

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
8 : Timber	sunny	20°C	W. FERRY

ITEM 58 — DECK: 7

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	7	-
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	8	-
9.Anti Missile Fence	N	-
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)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	M-P
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N): N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE: 8

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	8	-
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	N	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10. Diaphragms/Cross Frames	N	-
11. Rivets & Bolts	N	-
12. Welds	N	-
13. Member Alignment	9	-
14. Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: (Y/N) N

Any Cracks: (Y/N) N

ITEM 60 — SUBSTRUCTURE: 7

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	N	N		-
d. Breastwalls	8	8		-
e. Wingwalls	8	8		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	8	8		-
j. Scour	7	H		-
k. Settlement	8	8		-
l.	N	N		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			8	
a. Pile Caps	N	8		-
b. Piles	8	8		-
c. Diagonal Bracing	8	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	7	7		-

UNDERMINING (Y/N) If YES please explain: N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 8

93B-U/W (DIVE) Insp 06/28/2007

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 10, 2009

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	7	8	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	8	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 ***ITEM 61 (This Report):*** 8

93b-U/W INSP. DATE: 06/28/2007

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	8	-
B. Transitions	0	8	-
C. Approach Guardrail	0	8	-
D. Approach Guardrail Ends	0	8	-

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	Y	Y
Legibility/ Visibility	8/8	8/8	8/8	8/8

CLEARANCE POSTING — *Not* ☐ Actual Field Measurement / Posted Clearance

	N ft	N in	S ft	S in	meter
Actual Field Measurement		0		0	
Posted Clearance		0		0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)	N	N	N	N
Legibility/ Visibility				

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
Contact town	N	N

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating
I 58: **8** I 59: **9** I 60: **8** Date : 09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: √ dp

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 10, 2009**

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.

Item 36d - Approach Guardrail Ends

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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 10, 2009

PHOTOS

Photo 1: **West at bridge weight posting sign.**

Photo 2: **East at bridge weight posting sign.**

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 10, 2009

PHOTOS

Photo 3: West approach settlement.

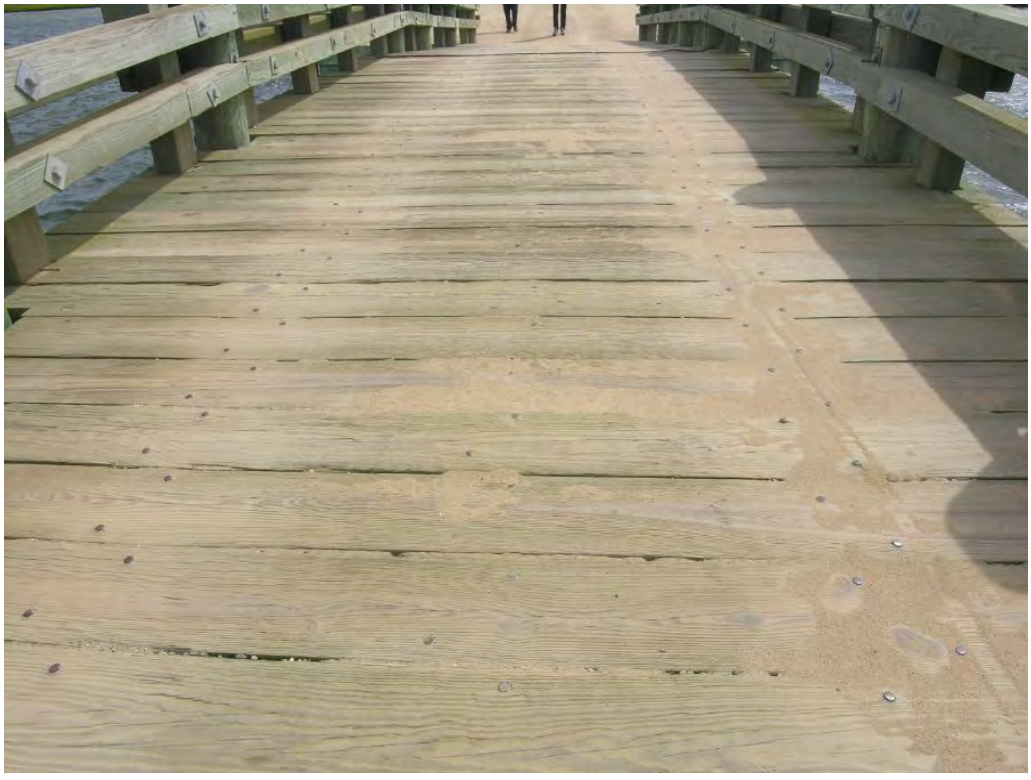


Photo 4: Timber wearing surface abrasion.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 10, 2009

PHOTOS

Photo 5: Two bent nails only.

Photo 6: General underside main span.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 10, 2009

PHOTOS

Photo 7: Southwest pile bents.

Photo 8: Southeast pile bents.

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

Date **09/10/2009**

District Bridge Inspection Eng'r **Daniel A. Palmer**

Inspecting Agency **Mass. Highway Dept.**

Team Leader **Peter Dufresne**

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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

	Previous Inspection	Current Inspection
Date	**09/10/09**	
District Bridge Inspection Eng'r	**Daniel A. Palmer**	
Inspecting Agency	**Mass. Highway Dept.**	
Team Leader	**Peter Dufresne**	
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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		
					☐					

2-DIST	B.I.N.
05	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	E07004-43B-MUN-NBI	II	JUL 14, 2010

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	3 m	1 m	GORDON BROZ	

BOTTOM CONDITION	CURRENT	TEAM MEMBERS
BOULDERS, SAND	TIDAL	R. E. BONICA, W. J. COLLERAN, J. B. DESMOND

ITEM 60 *SUBSTRUCTURE* — 7

		DEF
1. Abutments	7	
a. Pedestals	N	-
b. Bridge Seats	N	-
c. Backwalls	N	-
d. Breastwalls	8	-
e. Wingwalls	8	-
f. Slope Paving/Rip-Rap	N	-
g. Pointing	N	-
h. Footings	N	-
i. Piles	7	-
j. Scour	7	-
k. Settlement	8	-
l.	N	-
2. Piers or Bents	N	
a. Pedestals	N	-
b. Caps	N	-
c. Columns	N	-
d. Stems/Webs/Pierwalls	N	-
e. Pointing	N	-
f. Footing	N	-
g. Piles	N	-
h. Scour	N	-
i. Settlement	N	-
j.	N	-
k.	N	-
3. Pile Bents	7	
a. Pile Caps	N	-
b. Piles	7	-
c. Diagonal Bracing	8	-
d. Horizontal Bracing	N	-
e. Fasteners	6	-
UNDERMINING (Y/N)		N

ITEM 61 *CHANNEL & CHANNEL PROTECTION* — 7

		DEF
1. Channel Scour	7	-
2. Embankment Erosion	6	-
3. Debris	8	-
4. Vegetation	8	-
5. Utilities	N	-
6. Rip-Rap/Slope Protection	6	-
7. Aggradation	8	-
8. Fender System	N	-
a. Piles	N	-
b. Diagonal Bracing	N	-
c. Horizontal Bracing	N	-
d. Wales	N	-
e. Fasteners	N	-
f. Ladders	N	-
9.	N	-

ITEM 59 *SUPERSTRUCTURE*

		DEF
	N	-
	N	-
	N	-

ITEM 62 *CULVERTS* — N

		DEF
1. Roof	N	-
2. Floor	N	-
3. Walls	N	-
4. Headwall	N	-
5. Wingwall	N	-
6. Pipe	N	-
7. Protective Coating	N	-
8. Embankment	N	-
9. Wearing Surface	N	-
10. Railing	N	-
11. Sidewalks	N	-
12. Utilities	N	-
13. Member Alignment	N	-
14. Deformation	N	-
15. Scour	N	-
16. Settlement	N	-
17.	N	-
18.	N	-
UNDERMINING (Y/N)		N

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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.

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.

C-S= Critical Structural Deficiency- A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency- 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 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.

URGENCY OF REPAIR:

I=Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her.]

A=ASAP- [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.]

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.]

X=UNKNOWN **N=NOT APPLICABLE** **H=HIDDEN/INACCESSIBLE** **R=REMOVED**

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

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

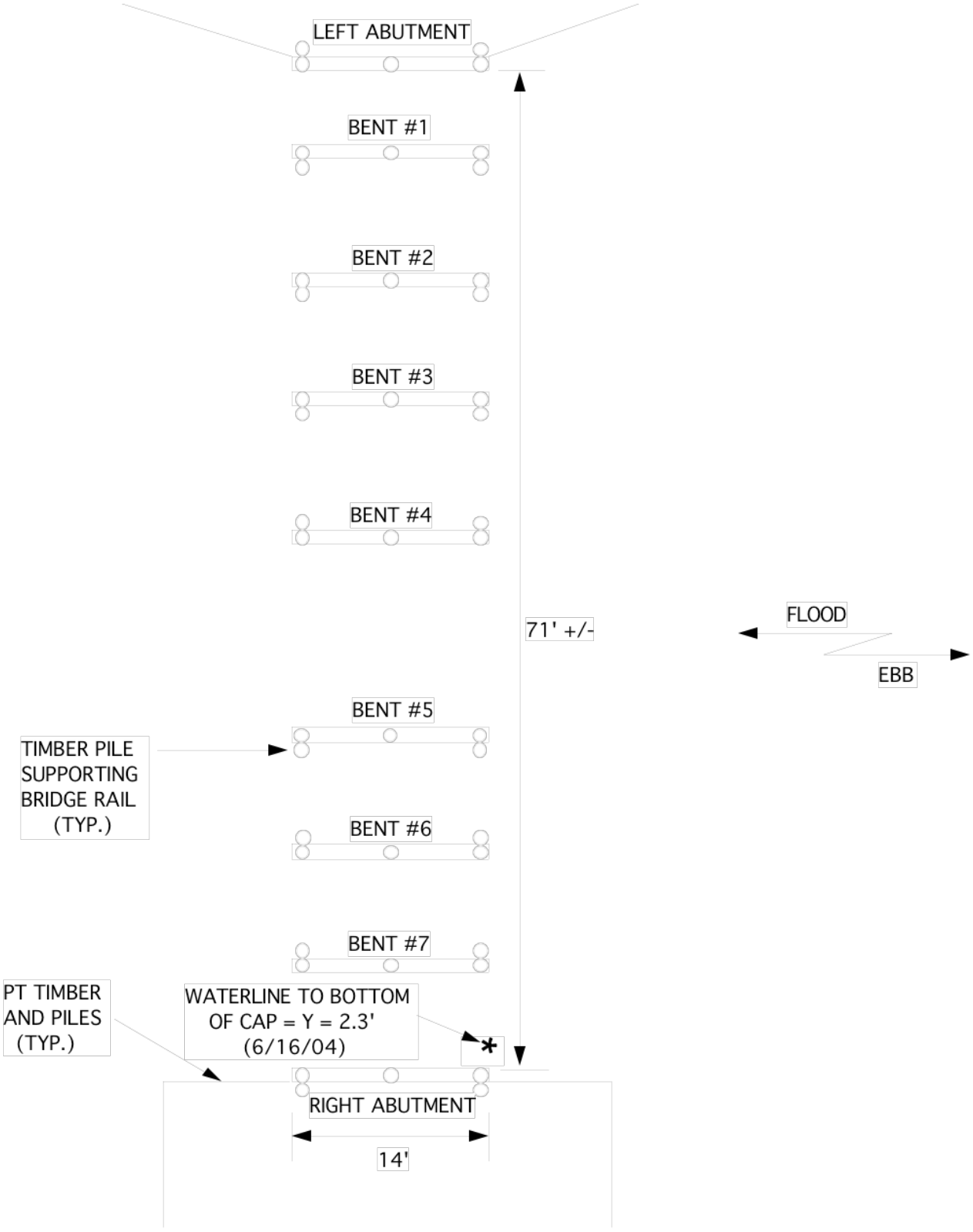
Item 61.2 - Embankment Erosion
At the (West) side, upstream and downstream, there is moderate erosion at the end of the wingwalls.

Item 61.6 - Rip-Rap/Slope Protection
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.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	JUL 14, 2010

SKETCHES



Sketch 1: PLAN VIEW (NTS)

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE 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'
Y	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)

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

STRUCTURES INSPECTION FIELD REPORT

ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	P:POSTED	SEP 12, 2011

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	D. A. Palmer

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
702 : Timber Stringer/Girder	Town Agency	Town Agency	J. Spiezio

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
8 : Timber	sunny	20°C	C. D. PRENDERGAST

ITEM 58 — DECK: 7

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	7	-
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	8	-
9.Anti Missile Fence	N	-
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	8	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	M-P
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N): N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE: 8

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	8	-
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	N	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10.Diaphragms/Cross Frames	N	-
11.Rivets & Bolts	N	-
12.Welds	N	-
13.Member Alignment	9	-
14.Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: (Y/N) N

Any Cracks: (Y/N) N

ITEM 60 — SUBSTRUCTURE: 7

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	N	N		-
d. Breastwalls	8	8		-
e. Wingwalls	8	8		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	7	8		-
j. Scour	7	H		-
k. Settlement	8	8		-
l.	N	N		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			8	
a. Pile Caps	N	8		-
b. Piles	7	8		-
c. Diagonal Bracing	8	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	6	7		-

UNDERMINING (Y/N) If YES please explain: N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 7

93B-U/W (DIVE) Insp 07/14/2010

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 12, 2011

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	6	8	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	8	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 ***ITEM 61 (This Report):*** 7

93b-U/W INSP. DATE: 07/14/2010

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	8	-
B. Transitions	0	8	-
C. Approach Guardrail	0	8	-
D. Approach Guardrail Ends	0	8	-

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	NR	NR
Legibility/ Visibility	8	8		
	8	8		

CLEARANCE POSTING

	N ft	N in	S ft	S in	meter
Not Actual Field Measurement (X)					
Posted Clearance		0		0	
		0		0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)				
Legibility/ Visibility				

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
Contact town	N	N

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating

I 58: **8** I 59: **9** I 60: **8** Date : 09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: _____

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 12, 2011**

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.

Item 60.3 - Pile Bents

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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 12, 2011**

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.

Item 36d - Approach Guardrail Ends
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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 12, 2011

PHOTOS

Photo 1: **West at bridge weight posting sign.**

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

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 12, 2011

PHOTOS

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

Photo 4: View east approach at bridge posting.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 12, 2011

PHOTOS

Photo 5: General wearing surface looking south.

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

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 12, 2011

PHOTOS

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

Photo 8: View underside typ. design/condition.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 12, 2011

PHOTOS

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

Photo 10: South elevation.

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

Date **09/12/2011**

District Bridge Inspection Eng'r **Daniel A. Palmer**

Inspecting Agency **Mass. Highway Dept.**

Team Leader **John Spiezio**

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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

	Previous Inspection	Current Inspection
Date	**09/12/11**	
District Bridge Inspection Eng'r	**Daniel A. Palmer**	
Inspecting Agency	**Mass. Highway Dept.**	
Team Leader	**John Spiezio**	
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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
					☐					
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		
					☐					

2-DIST	B.I.N.
05	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	E07004-43B-MUN-NBI	II	SEP 5, 2013

07-FACILITY CARRIED	ACCESS TO BRIDGE	UNDERWATER OPERATIONS ENGINEER
HWY DIKE RD	BOAT	RANDI E. BONICA

06-FEATURES INTERSECTED	DEPTH	VISIBILITY	TEAM LEADER (DIVE MASTER)	*Report submitted by:*
WATER POUCHA POND	3 m	1 m	GORDON BROZ	

BOTTOM CONDITION	CURRENT	TEAM MEMBERS
BOULDERS, SAND	TIDAL	R. E. BONICA, W. J. COLLERAN, B. FITZGERALD

ITEM 60 *SUBSTRUCTURE* — 7

		DEF
1. Abutments	7	
a. Pedestals	N	-
b. Bridge Seats	N	-
c. Backwalls	7	-
d. Breastwalls	N	-
e. Wingwalls	8	-
f. Slope Paving/Rip-Rap	N	-
g. Pointing	N	-
h. Footings	N	-
i. Piles	7	-
j. Scour	7	-
k. Settlement	8	-
l.	N	-
2. Piers or Bents	N	
a. Pedestals	N	-
b. Caps	N	-
c. Columns	N	-
d. Stems/Webs/Pierwalls	N	-
e. Pointing	N	-
f. Footing	N	-
g. Piles	N	-
h. Scour	N	-
i. Settlement	N	-
j.	N	-
k.	N	-
3. Pile Bents	7	
a. Pile Caps	N	-
b. Piles	7	-
c. Diagonal Bracing	7	-
d. Horizontal Bracing	N	-
e. Fasteners	6	-
UNDERMINING (Y/N)		N

ITEM 61 *CHANNEL & CHANNEL PROTECTION* — 7

		DEF
1. Channel Scour	7	-
2. Embankment Erosion	6	-
3. Debris	8	-
4. Vegetation	8	-
5. Utilities	N	-
6. Rip-Rap/Slope Protection	6	-
7. Aggradation	8	-
8. Fender System	N	-
a. Piles	N	-
b. Diagonal Bracing	N	-
c. Horizontal Bracing	N	-
d. Wales	N	-
e. Fasteners	N	-
f. Ladders	N	-
9.	N	-

ITEM 59 *SUPERSTRUCTURE*

		DEF
	N	-
	N	-
	N	-

ITEM 62 *CULVERTS* — N

		DEF
1. Roof	N	-
2. Floor	N	-
3. Walls	N	-
4. Headwall	N	-
5. Wingwall	N	-
6. Pipe	N	-
7. Protective Coating	N	-
8. Embankment	N	-
9. Wearing Surface	N	-
10. Railing	N	-
11. Sidewalks	N	-
12. Utilities	N	-
13. Member Alignment	N	-
14. Deformation	N	-
15. Scour	N	-
16. Settlement	N	-
17.	N	-
18.	N	-
UNDERMINING (Y/N)		N

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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.

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.

C-S= Critical Structural Deficiency- A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency- 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 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.

URGENCY OF REPAIR:

I=Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her.]

A=ASAP- [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.]

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.]

X=UNKNOWN **N=NOT APPLICABLE** **H=HIDDEN/INACCESSIBLE** **R=REMOVED**

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

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.

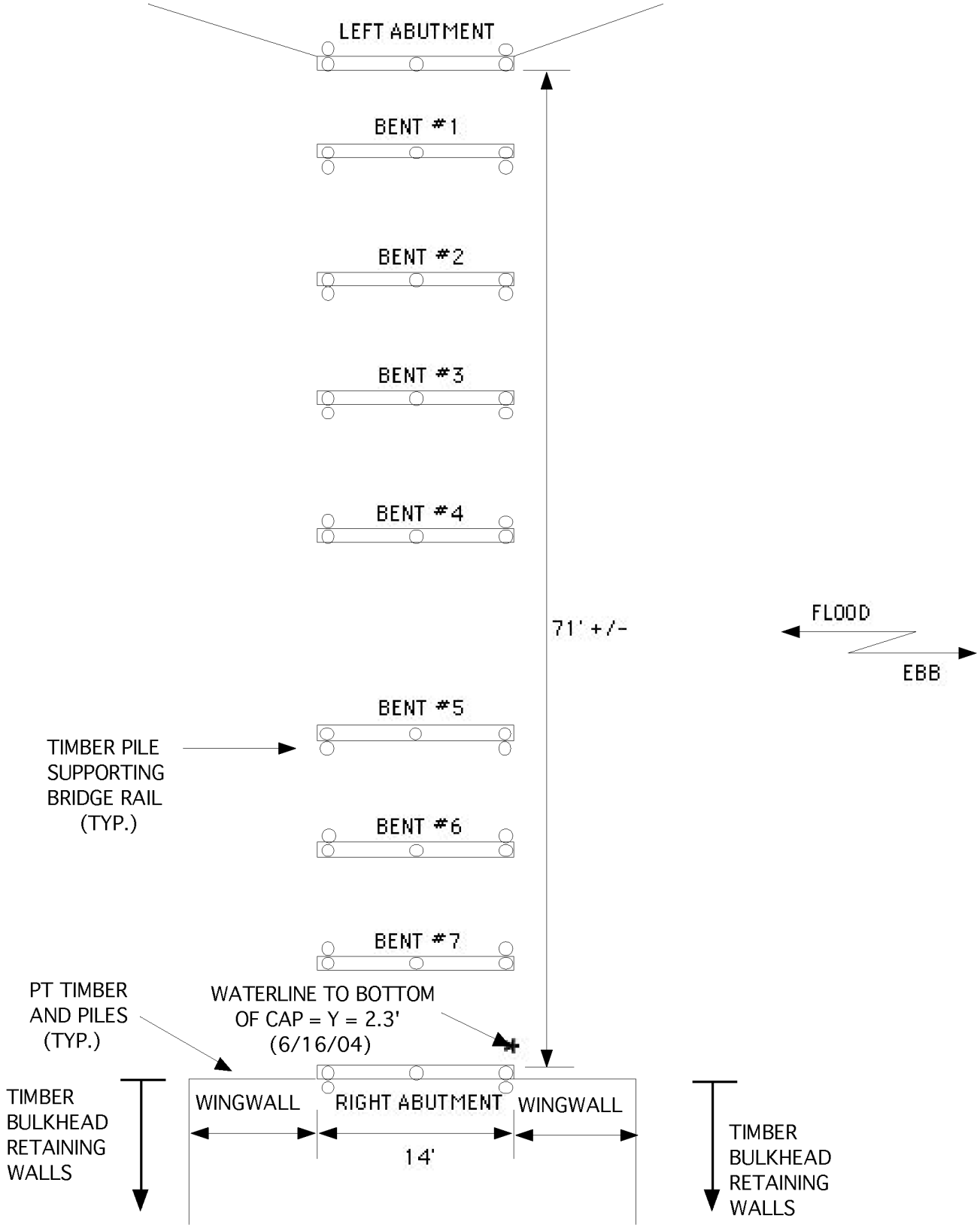
Item 61.6 - Rip-Rap/Slope Protection
In the pressure treated bulkhead retaining walls at the right (East) side there is some rot in the vertical backwall timbers with penetrations up to 0.3'.

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.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 5, 2013

SKETCHES



Sketch 1: PLAN VIEW (NTS)

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

Chart 1: SCOUR MONITORING CHART (DOWNSTREAM END)

STRUCTURES INSPECTION FIELD REPORT

ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	P:POSTED	SEP 23, 2013

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	D. A. Palmer

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
702 : Timber Stringer/Girder	Town Agency	Town Agency	J. Spiezio

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
8 : Timber	sunny	20°C	J. MARMELO

ITEM 58 — DECK: 6

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	6	M-P
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	7	-
9.Anti Missile Fence	N	-
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	8	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	S-P
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N): N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE: 8

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	8	-
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	N	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10.Diaphragms/Cross Frames	N	-
11.Rivets & Bolts	N	-
12.Welds	N	-
13.Member Alignment	8	-
14.Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: (Y/N) N

Any Cracks: (Y/N) N

ITEM 60 — SUBSTRUCTURE: 7

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	N	N		-
d. Breastwalls	8	8		-
e. Wingwalls	8	8		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	7	8		-
j. Scour	7	H		-
k. Settlement	8	8		-
l.	N	N		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			8	
a. Pile Caps	N	8		-
b. Piles	7	8		-
c. Diagonal Bracing	8	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	6	7		-

UNDERMINING (Y/N) If YES please explain: N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 8

93B-U/W (DIVE) Insp 07/14/2010

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 23, 2013

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	6	7	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	7	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 ***ITEM 61 (This Report):*** 7

93b-U/W INSP. DATE: 07/14/2010

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	8	-
B. Transitions	0	8	-
C. Approach Guardrail	0	8	-
D. Approach Guardrail Ends	0	8	-

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	NR	NR
Legibility/ Visibility	8 / 8	8 / 8	/	/

CLEARANCE POSTING

	N ft	N in	S ft	S in	meter
Not Actual Field Measurement (X)					
Posted Clearance		0		0	
		0		0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)				
Legibility/ Visibility	/	/	/	/

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	P	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
CONTACTTOWN	N	N

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating

I 58: **8** I 59: **9** I 60: **8** Date : 09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: _____

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 23, 2013**

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

Item 59.4 - Girders or Beams

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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 23, 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.

Item 60.3.c - Diagonal Bracing
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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 23, 2013**

REMARKS

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.

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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 23, 2013

PHOTOS

Photo 1: **West at bridge posting sign.**

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

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 23, 2013

PHOTOS

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

Photo 4: View east approach at bridge posting sign.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 23, 2013

PHOTOS

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

Photo 6: View pile bent 1 at west abutment.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 23, 2013

PHOTOS

Photo 7: View pile bent 2, marine growth.

Photo 8: Typical underside of deck condition.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 23, 2013

PHOTOS

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

Photo 10: South elevation.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 23, 2013

PHOTOS

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

Pontis BMS Element Inspection

BDEPT# **E-07-004**

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

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

Span Group **1**

Town **Edgartown**

District **5**

Date **09/23/2013**

District Bridge Inspection Eng'r **Daniel A. Palmer**

Inspecting Agency **Mass. Highway Dept.**

Team Leader **John Spiezio**

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	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
111	Open Girder, Timber	LF	3	531.5	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
216	Abutment, Timber	LF	3	59.1	☒ %	100.0 %	0.0 %	0.0 %	0.0 %	
228	Submerged 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 Railing, Timber	LF	3	150.9	☒ %	100.0 %	0.0 %	0.0 %		

STRUCTURES INSPECTION FIELD REPORT

ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	P:POSTED	SEP 22, 2015

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	G. Simpson

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER J. Hanley
702 : Timber Stringer/Girder	Town Agency	Town Agency	

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
8 : Timber	Cldy	19°C	M. MARSHALL

ITEM 58 — DECK: 6

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	6	M-P
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	7	-
9.Anti Missile Fence	N	-
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	8	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	S-A
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N): N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE: 8

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	8	-
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	7	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10.Diaphragms/Cross Frames	N	-
11.Rivets & Bolts	N	-
12.Welds	N	-
13.Member Alignment	8	-
14.Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: **(Y/N)** N

Any Cracks: **(Y/N)** N

ITEM 60 — SUBSTRUCTURE: 7

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	N	N		-
d. Breastwalls	N	8		-
e. Wingwalls	8	7		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	7	7		-
j. Scour	7	H		-
k. Settlement	8	8		-
l. Fasteners	N	6		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			7	
a. Pile Caps	N	8		-
b. Piles	7	7		-
c. Diagonal Bracing	7	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	6	6		-

UNDERMINING (Y/N) If YES please explain: N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 7

93B-U/W (DIVE) Insp 09/05/2013

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

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

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	6	7	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	7	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 ***ITEM 61 (This Report):*** 7

93b-U/W INSP. DATE: 09/05/2013

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	7	-
B. Transitions	0	7	-
C. Approach Guardrail	0	7	-
D. Approach Guardrail Ends	0	8	-

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	NR	NR
Legibility/ Visibility	8 / 8	8 / 8	/	/

CLEARANCE POSTING — *Not* ☐

	N ft	N in	S ft	S in	meter
Actual Field Measurement		0		0	
Posted Clearance		0		0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)	N	N	N	N
Legibility/ Visibility	/	/	/	/

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	P	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
CONTACTTOWN	N	N

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating

I 58: **8** I 59: **9** I 60: **8** Date : 09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: _____

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

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

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.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 22, 2015**

REMARKS

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments

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.l - 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.

Item 60.3.c - Diagonal Bracing

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.

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

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

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**

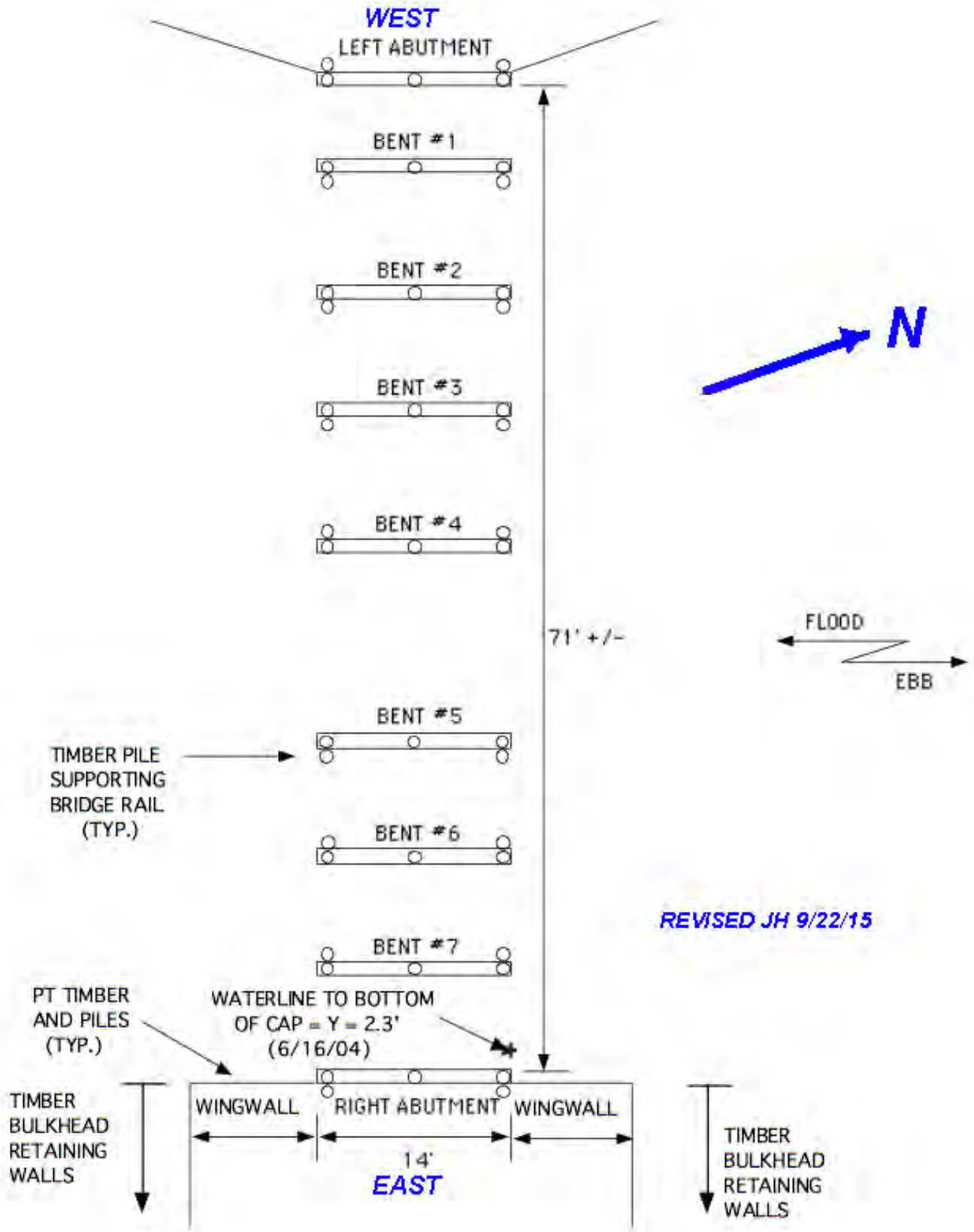
REMARKS

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

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

SKETCHES



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

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

PHOTOS

Photo 1: General topside looking east

Photo 2: Overview of rutting

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

PHOTOS

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

Photo 4: Typical washing boarding

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

PHOTOS

Photo 5: General underside

Photo 6: Typical utility bay

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

PHOTOS

Photo 7: **Overview of east approach**

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

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

PHOTOS

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

Photo 10: **Overview of west approach**

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

PHOTOS

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

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

PHOTOS

Photo 13: North elevation

Photo 14: Typical pile and bulkhead along abutments

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

PHOTOS

Photo 15: Typical wingwall and fasteners

Photo 16: NE wingwall, isolated crack in lower timber

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

PHOTOS

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

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

PHOTOS

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

Photo 20: Isolated bolt starting to neck near nut

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

PHOTOS

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

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

PHOTOS

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

National Bridge Element Inspection

BDEPT#	**E-07-004**	Date	**09/22/2015**
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 Hanley**
Town	**Edgartown**	Team 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	1,151.738	☐ %	1,151.738			
Notes :									
111	**Timber Open Girder**	feet	3	531.496	☐ %	531.496			
Notes :									
216	**Timber Abutment**	feet	3	59.055	☐ %	59.055			
Notes :									
228	**Timber Pile**	each	3	45	☐ %	45			
Notes :									
235	**Timber Pier Cap**	feet	3	134.514	☐ %	134.514			
Notes :									
332	**Timb Bridge Railing**	feet	3	150.918	☐ %	150.918			
Notes :									

2-DIST	B.I.N.
05	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	E07004-43B-MUN-NBI	II	OCT 6, 2016

07-FACILITY CARRIED	ACCESS TO BRIDGE	UNDERWATER OPERATIONS ENGINEER
HWY DIKE RD	BOAT	RANDI E. BONICA

06-FEATURES INTERSECTED	DEPTH	VISIBILITY	TEAM LEADER (DIVE MASTER)	*Report submitted by:*
WATER POUCHA POND	4 m	3 m	RANDI E. BONICA	

BOTTOM CONDITION	CURRENT	TEAM MEMBERS
BOULDERS, SAND	TIDAL/SWIFT	G. BROZ, W. J. COLLERAN, B. FITZGERALD

ITEM 60 *SUBSTRUCTURE* — 7

		DEF
1. Abutments	7	
a. Pedestals	N	-
b. Bridge Seats	N	-
c. Backwalls	7	-
d. Breastwalls	N	-
e. Wingwalls	7	-
f. Slope Paving/Rip-Rap	N	-
g. Pointing	N	-
h. Footings	N	-
i. Piles	7	-
j. Scour	7	-
k. Settlement	8	-
l.	N	-
2. Piers or Bents	N	
a. Pedestals	N	-
b. Caps	N	-
c. Columns	N	-
d. Stems/Webs/Pierwalls	N	-
e. Pointing	N	-
f. Footing	N	-
g. Piles	N	-
h. Scour	N	-
i. Settlement	N	-
j.	N	-
k.	N	-
3. Pile Bents	7	
a. Pile Caps	N	-
b. Piles	7	-
c. Diagonal Bracing	7	-
d. Horizontal Bracing	N	-
e. Fasteners	5	-
UNDERMINING (Y/N)		N

ITEM 61 *CHANNEL & CHANNEL PROTECTION* — 7

		DEF
1. Channel Scour	7	-
2. Embankment Erosion	7	-
3. Debris	8	-
4. Vegetation	8	-
5. Utilities	N	-
6. Rip-Rap/Slope Protection	6	-
7. Aggradation	8	-
8. Fender System	N	-
a. Piles	N	-
b. Diagonal Bracing	N	-
c. Horizontal Bracing	N	-
d. Wales	N	-
e. Fasteners	N	-
f. Ladders	N	-
9.	N	-

ITEM 59 *SUPERSTRUCTURE*

		DEF
	N	-
	N	-
	N	-

ITEM 62 *CULVERTS* — N

		DEF
1. Roof	N	-
2. Floor	N	-
3. Walls	N	-
4. Headwall	N	-
5. Wingwall	N	-
6. Pipe	N	-
7. Protective Coating	N	-
8. Embankment	N	-
9. Wearing Surface	N	-
10. Railing	N	-
11. Sidewalks	N	-
12. Utilities	N	-
13. Member Alignment	N	-
14. Deformation	N	-
15. Scour	N	-
16. Settlement	N	-
17.	N	-
18.	N	-
UNDERMINING (Y/N)		N

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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.

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.

C-S= Critical Structural Deficiency- A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency- 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 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.

URGENCY OF REPAIR:

I=Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her.]

A=ASAP- [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.]

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.]

X=UNKNOWN **N=NOT APPLICABLE** **H=HIDDEN/INACCESSIBLE** **R=REMOVED**

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

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.

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

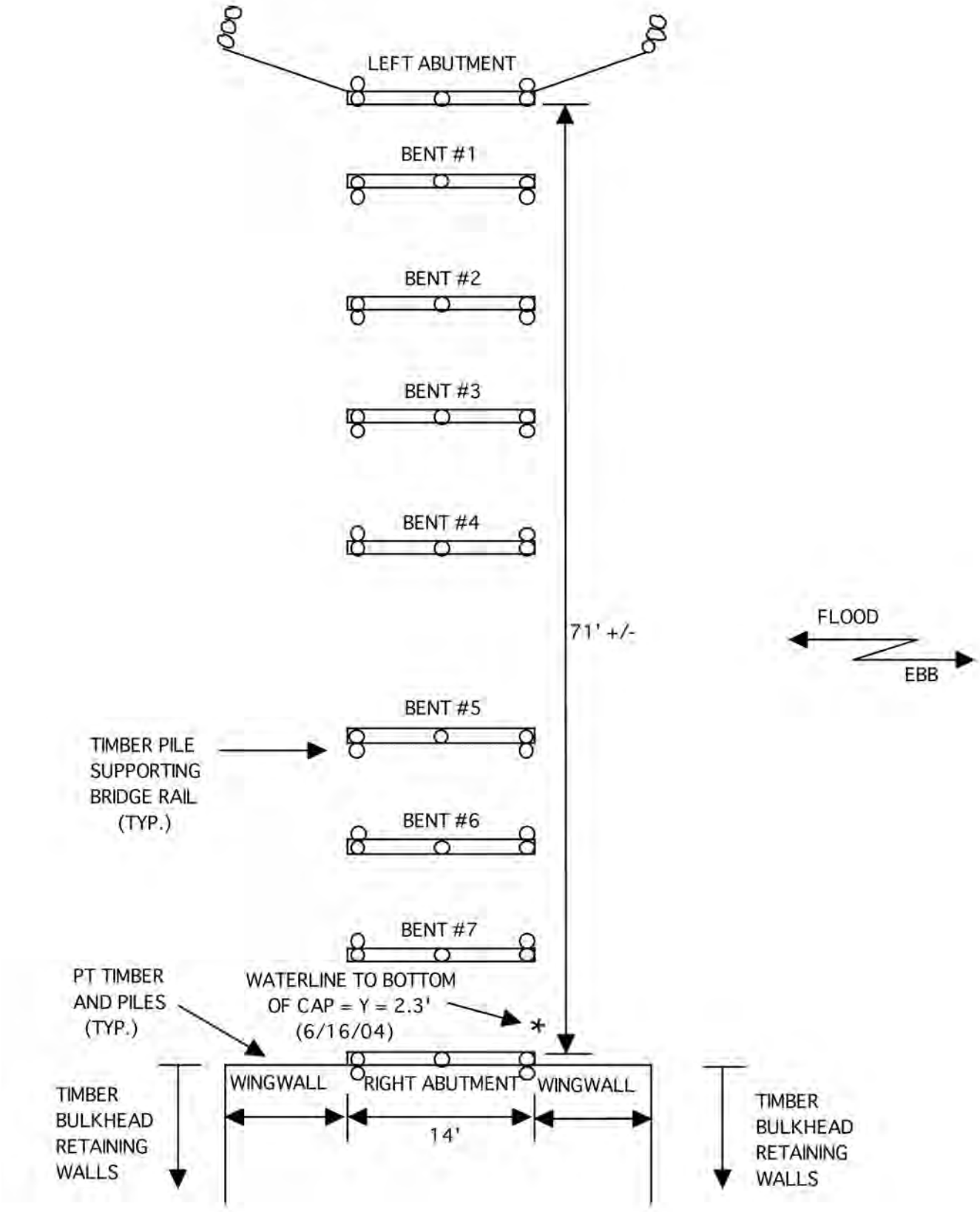
Item 61.2 - Embankment Erosion
At the left (west) side, upstream and downstream, there is minor erosion at the end of the wingwalls.

Item 61.6 - Rip-Rap/Slope Protection
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.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	OCT 6, 2016

SKETCHES



Sketch 1: PLAN VIEW (NTS)

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE 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'
Y	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)

STRUCTURES INSPECTION FIELD REPORT

ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	P:POSTED	SEP 14, 2017

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	G. Simpson

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
702 : Timber Stringer/Girder	Town Agency	Town Agency	J. Spiezio

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
8 : Timber	Cloudy	23°C	K. HOUATCHANTHARA

ITEM 58 — DECK: 6

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	6	M-P
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	7	-
9.Anti Missile Fence	N	-
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	8	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	S-A
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N): N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE: 8

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	8	-
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	7	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10.Diaphragms/Cross Frames	N	-
11.Rivets & Bolts	N	-
12.Welds	N	-
13.Member Alignment	8	-
14.Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: **(Y/N)** N

Any Cracks: **(Y/N)** N

ITEM 60 — SUBSTRUCTURE: 7

	Dive	Cur		DEF
1. Abutments			8	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	7	8		-
d. Breastwalls	N	8		-
e. Wingwalls	7	7		-
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	7	7		-
j. Scour	7	H		-
k. Settlement	8	8		-
l. Fasteners	N	6		-
m.	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		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			7	
a. Pile Caps	N	8		-
b. Piles	7	7		-
c. Diagonal Bracing	7	8		-
d. Horizontal Bracing	N	N		-
e. Fasteners	5	6		-

UNDERMINING (Y/N) If YES please explain: N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 7

93B-U/W (DIVE) Insp 10/06/2016

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

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

ITEM 61 — CHANNEL & CHANNEL PROTECTION — 7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	7	7	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	7	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 ***ITEM 61 (This Report):*** 7

93b-U/W INSP. DATE: 10/06/2016

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	7	-
B. Transitions	0	7	-
C. Approach Guardrail	0	7	-
D. Approach Guardrail Ends	0	8	-

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	NR	NR
Legibility/ Visibility	8 / 8	8 / 8	/	/

CLEARANCE POSTING

	N ft	N in	S ft	S in	meter
Not Actual Field Measurement X					
Posted Clearance		0 / 0		0 / 0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)				
Legibility/ Visibility	/	/	/	/

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	P	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
CONTACTTOWN	P	Y

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:
Visual and Tactile.

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating
I 58: **8** I 59: **9** I 60: **8** Date : 09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: _____

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

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

BRIDGE ORIENTATION

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

GENERAL REMARKS

Access : 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

Item 58.1 - Wearing surface

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.

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

APPROACHES

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.

ITEM 59 - SUPERSTRUCTURE

Item 59.4 - Girders or Beams

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

Item 59.7 - Conn Plt's, Gussets & Angles

Some beam connecting angles have some areas light scale.

SuperStructure Load Vibration Notes

Minor vibration experienced under live vehicular loadings.

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments

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.	8.-STRUCTURE 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.l - 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.

Item 60.3.c - Diagonal Bracing
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.

Item 36c - Approach Guardrail
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.

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**

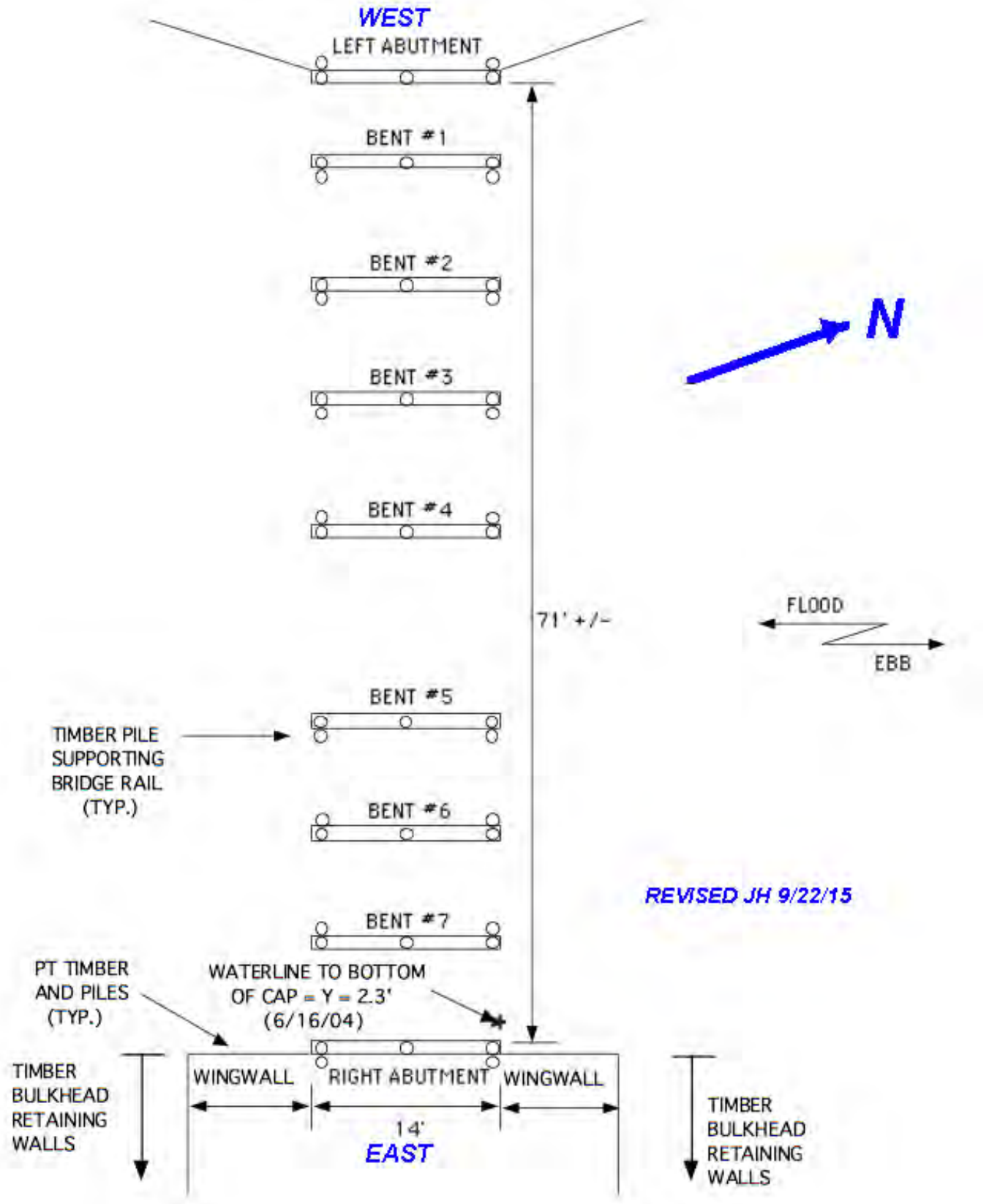
REMARKS

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.

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

SKETCHES



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

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

PHOTOS

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".**

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

PHOTOS

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

Photo 4: **Looking east, general wearing surface condition.**

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

PHOTOS

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

Photo 6: Midspan south rail, active traffic counter.

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

PHOTOS

Photo 7: **Scattered deck spikes puncturing side of beams.**

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

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

PHOTOS

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

Photo 10: **View timber backwall.**

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

PHOTOS

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

BDEPT#	**E-07-004**	Date	**09/14/2017**
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 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	☐ %	958.500			
Notes :									
111	**Timber Open Girder**	feet	3	355.000	☐ %	355.000			
Notes :									
216	**Timber Abutment**	feet	3	50.000	☐ %	50.000			
Notes :									
228	**Timber Pile**	each	3	45	☐ %	45			
Notes :									
235	**Timber Pier Cap**	feet	3	126.000	☐ %	126.000			
Notes :									
332	**Timb Bridge Railing**	feet	3	142.000	☐ %	142.000			
Notes :									

STRUCTURES INSPECTION FIELD REPORT

ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	P:POSTED	SEP 10, 2019

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	G. Simpson

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
702 : Timber Stringer/Girder	Town Agency	Town Agency	J. Gonsalves

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
8 : Timber	CLEAR	20°C	P. ADDAI

ITEM 58 — DECK: 6

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	6	M-P
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	7	-
9.Anti Missile Fence	N	-
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	8	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	M-P
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N): N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE: 7

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	7	-
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	N	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10.Diaphragms/Cross Frames	N	-
11.Rivets & Bolts	N	-
12.Welds	N	-
13.Member Alignment	8	-
14.Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: (Y/N) N

Any Cracks: (Y/N) N

ITEM 60 — SUBSTRUCTURE: 7

	Dive	Cur		DEF
1. Abutments			6	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
c. Backwalls	7	6		M-P
d. Breastwalls	N	N		-
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	H		-
k. Settlement	8	7		-
l. Fasteners	N	6		M-P
m.	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		-
j.	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		-
e. Fasteners	5	6		M-P

UNDERMINING (Y/N) If YES please explain: N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 7

93B-U/W (DIVE) Insp 10/06/2016

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

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

ITEM 61 — CHANNEL & CHANNEL PROTECTION

7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	7	7	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	7	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (**X**) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): **7** ***ITEM 61 (This Report):*** **7**

93b-U/W INSP. DATE: 10/06/2016

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	0	7	M-P
B. Transitions	0	7	M-P
C. Approach Guardrail	0	7	M-P
D. Approach Guardrail Ends	0	7	M-P

WEIGHT POSTING

Not Applicable ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	N	N
Legibility/ Visibility	6 / 7	7 / 4	/	/

CLEARANCE POSTING

Not Actual Field Measurement X

Posted Clearance

	N ft	N in	S ft	S in	meter
		0		0	
		0		0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)				
Legibility/ Visibility	/	/	/	/

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
CONTACTTOWN	Y	Y

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#: _____

List of field tests performed:
Visual and Tactile.

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating
I 58: **8** I 59: **9** I 60: **8** Date : 09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: _____

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

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**

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.	8.-STRUCTURE 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.

ITEM 59 - SUPERSTRUCTURE

Item 59.4 - Girders or Beams

Rating based on the condition of the five interior 10" x 10" timber beams, 3" x 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.

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**

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.l - 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.

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**

REMARKS

TRAFFIC SAFETY

Item 36a - Bridge Railing
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, 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.

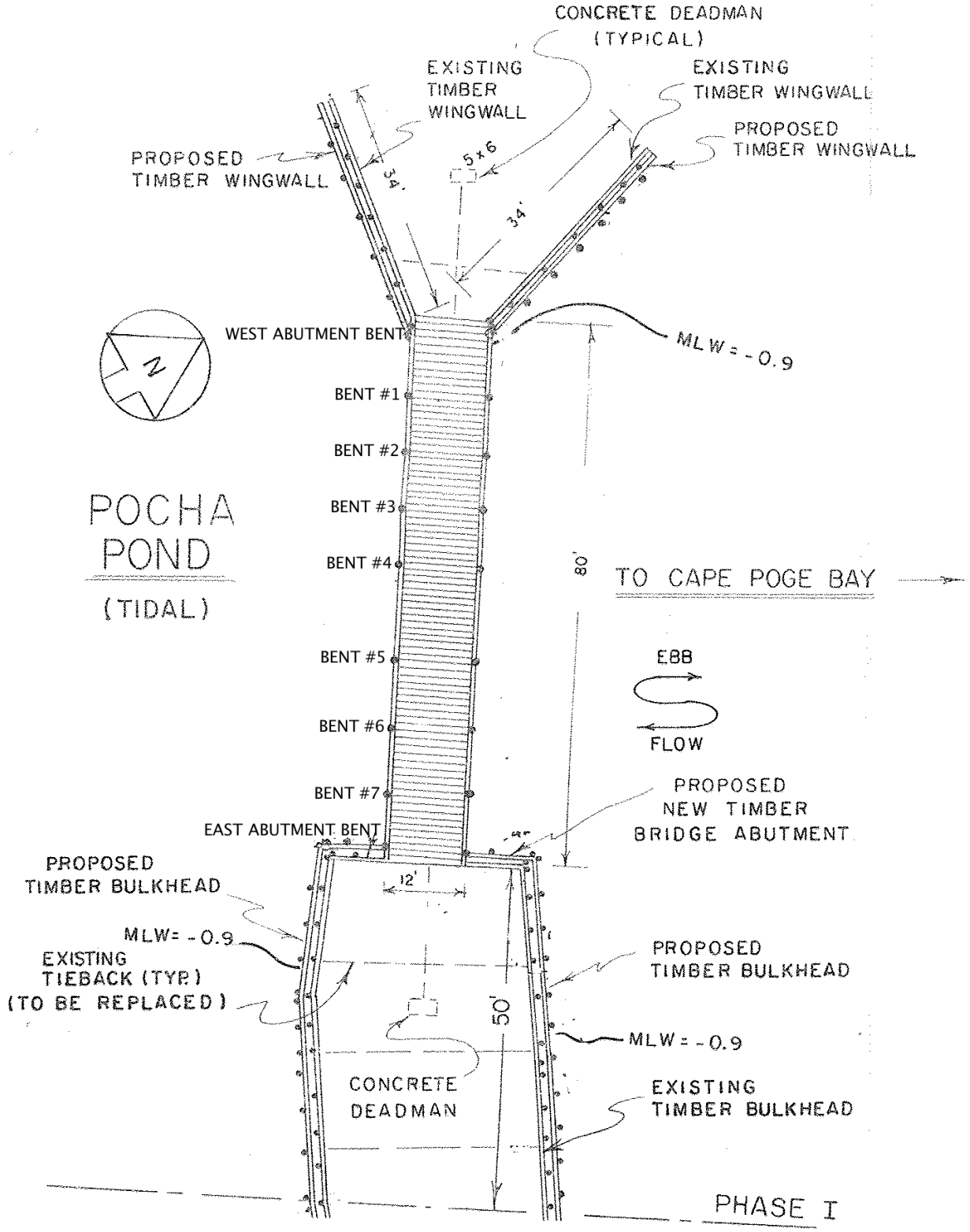
Item 36d - Approach Guardrail Ends
East approach guadrail ends are beyond bridge limits, blunt end at west, non-standard.

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 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

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

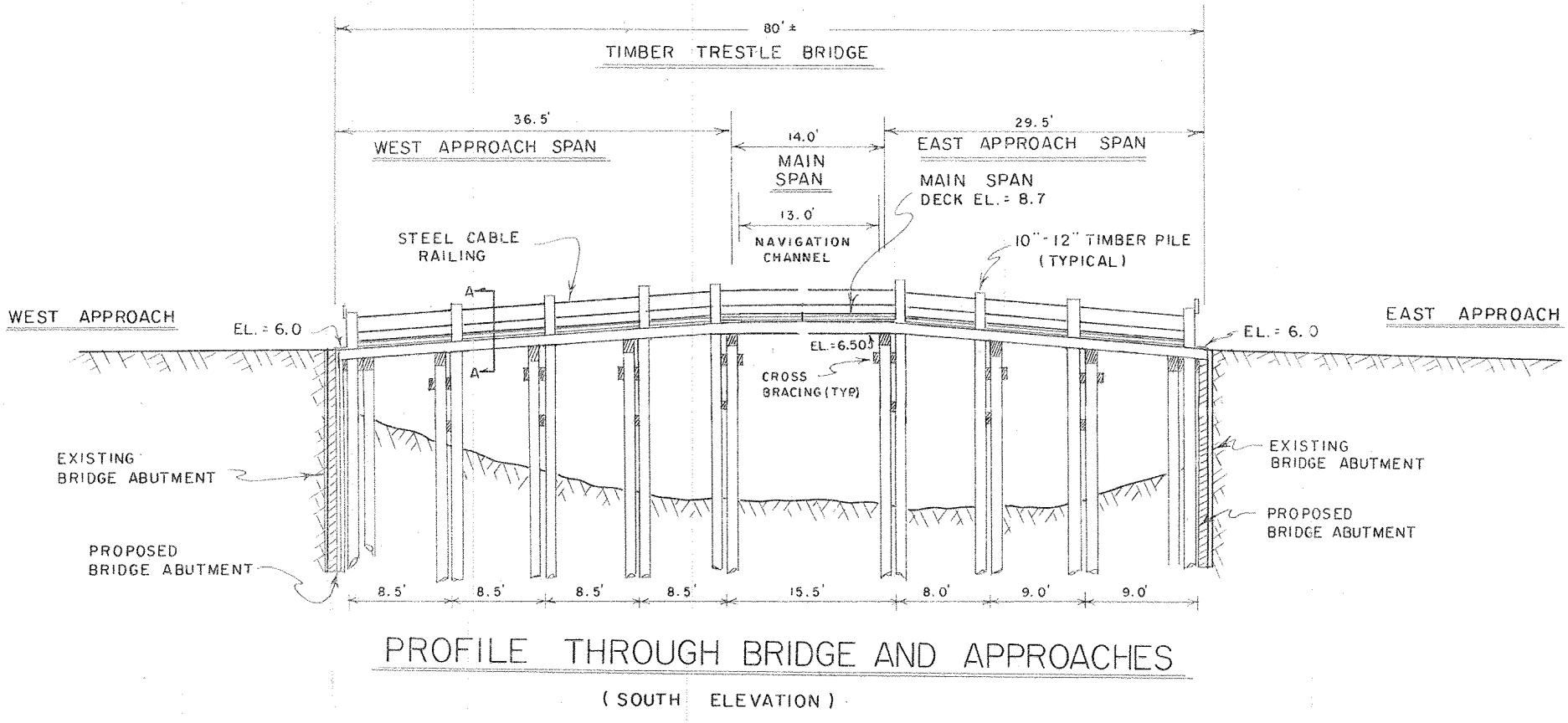
SKETCHES



Sketch 1: Plan View, from 1994 Construction Plans

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



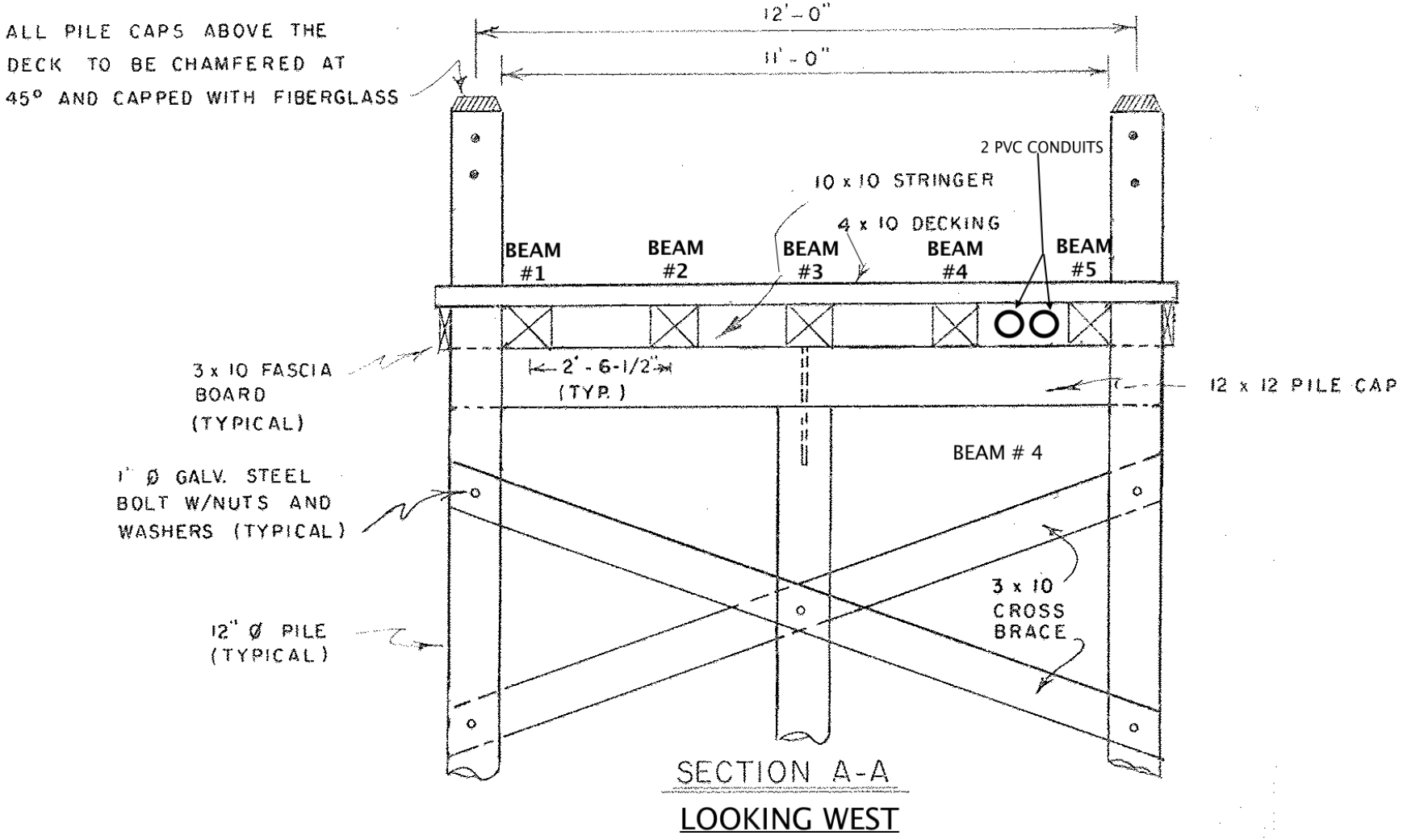
PROFILE THROUGH BRIDGE AND APPROACHES

(SOUTH ELEVATION)

Sketch 2: South Elevation View, from 1994 Construction Plans

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



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

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

PHOTOS

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

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

PHOTOS

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

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

PHOTOS

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

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

PHOTOS

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**

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

PHOTOS

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

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

PHOTOS

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

Photo 12: South elevation, typical vertical alignment of spans

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

PHOTOS

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

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

PHOTOS

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

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

PHOTOS

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

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

PHOTOS

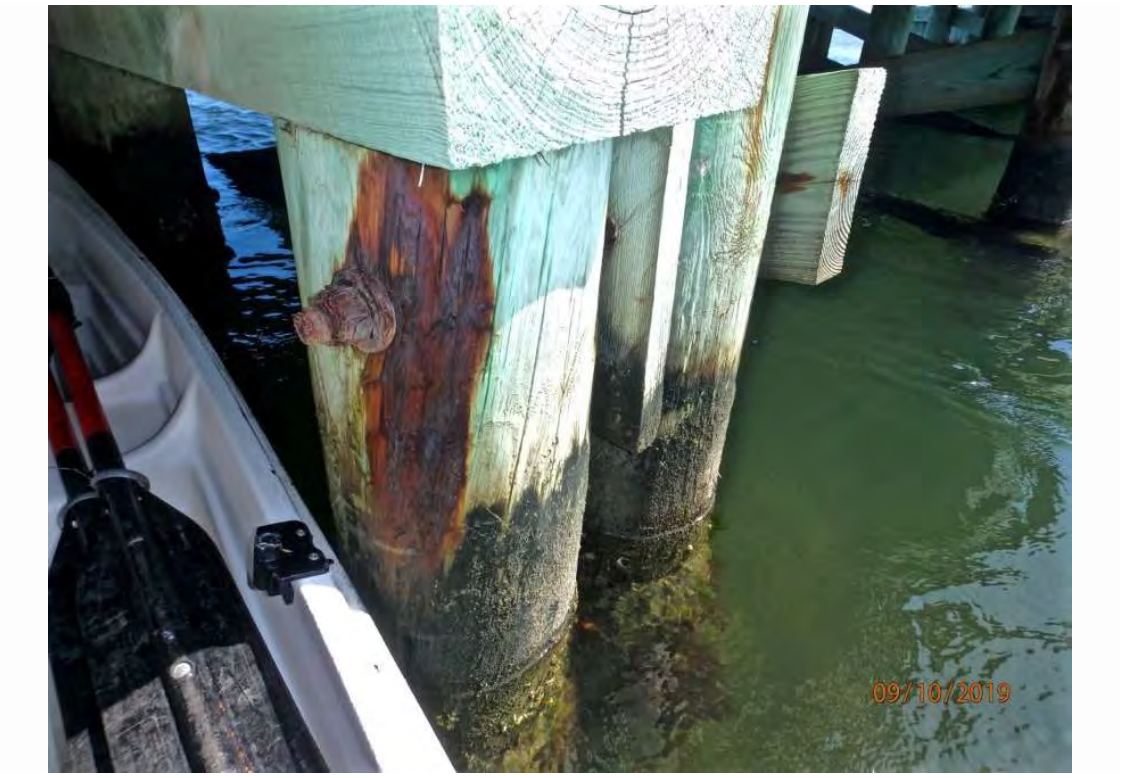


Photo 19: Bent 1 south piles, minor wane w/ rust staining

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

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

PHOTOS

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

National Bridge Element Inspection

BDEPT# **E-07-004**
B.I.N. **43B**
Item 8 **E07004-43B-MUN-NBI**
Span Group **1**
Town **Edgartown**
District **5**

Date **09/10/2019**
District Bridge Inspection Eng'r **Grant Simpson**
Inspecting Agency **Mass. Highway Dept.**
Team Leader **Jake Gonsalves**
Team 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	☐ %	745.500	213.000		
Notes :									
111	**Timber Open Girder**	feet	3	355.000	☐ %	335.000	20.000		
Notes :									
> 1170	*Split/Delamination (Timber)*	feet	3	20.000	☐ %		20.000		
Notes :									
228	**Timber Pile**	each	3	45	☐ %	45			
Notes :									
235	**Timber Pier Cap**	feet	3	126.000	☐ %	125.000		1.000	
Notes :									
332	**Timb Bridge Railing**	feet	3	142.000	☐ %	142.000			
Notes :									
> 1170	*Split/Delamination (Timber)*	feet	3	1.000	☐ %			1.000	
Notes :									
> 1180	*Abrasion*	sq feet	3	213.000	☐ %		213.000		
Notes :									

2-DIST	B.I.N.
05	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	E07004-43B-MUN-NBI	II	SEP 25, 2019

07-FACILITY CARRIED	ACCESS TO BRIDGE	UNDERWATER OPERATIONS ENGINEER
HWY DIKE RD	BOAT	RANDI E. BONICA

06-FEATURES INTERSECTED	DEPTH	VISIBILITY	TEAM LEADER (DIVE MASTER)	*Report submitted by:*
WATER POUCHA POND	4 m	2 m	GORDON BROZ	

BOTTOM CONDITION	CURRENT	TEAM MEMBERS
BOULDERS, SAND	TIDAL/SWIFT	R. E. BONICA, W. J. COLLERAN, B. FITZGERALD

ITEM 60 *SUBSTRUCTURE* — 7

		DEF
1. Abutments	7	
a. Pedestals	N	-
b. Bridge Seats	N	-
c. Backwalls	7	-
d. Breastwalls	N	-
e. Wingwalls	7	-
f. Slope Paving/Rip-Rap	N	-
g. Pointing	N	-
h. Footings	N	-
i. Piles	7	-
j. Scour	7	-
k. Settlement	8	-
l.	N	-
2. Piers or Bents	N	
a. Pedestals	N	-
b. Caps	N	-
c. Columns	N	-
d. Stems/Webs/Pierwalls	N	-
e. Pointing	N	-
f. Footing	N	-
g. Piles	N	-
h. Scour	N	-
i. Settlement	N	-
j.	N	-
k.	N	-
3. Pile Bents	7	
a. Pile Caps	N	-
b. Piles	7	-
c. Diagonal Bracing	7	-
d. Horizontal Bracing	N	-
e. Fasteners	5	-
UNDERMINING (Y/N)		N

ITEM 61 *CHANNEL & CHANNEL PROTECTION* — 7

		DEF
1. Channel Scour	7	-
2. Embankment Erosion	7	-
3. Debris	8	-
4. Vegetation	8	-
5. Utilities	N	-
6. Rip-Rap/Slope Protection	6	-
7. Aggradation	8	-
8. Fender System	N	-
a. Piles	N	-
b. Diagonal Bracing	N	-
c. Horizontal Bracing	N	-
d. Wales	N	-
e. Fasteners	N	-
f. Ladders	N	-
9.	N	-

ITEM 59 *SUPERSTRUCTURE*

		DEF
	N	-
	N	-
	N	-

ITEM 62 *CULVERTS* — N

		DEF
1. Roof	N	-
2. Floor	N	-
3. Walls	N	-
4. Headwall	N	-
5. Wingwall	N	-
6. Pipe	N	-
7. Protective Coating	N	-
8. Embankment	N	-
9. Wearing Surface	N	-
10. Railing	N	-
11. Sidewalks	N	-
12. Utilities	N	-
13. Member Alignment	N	-
14. Deformation	N	-
15. Scour	N	-
16. Settlement	N	-
17.	N	-
18.	N	-
UNDERMINING (Y/N)		N

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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.

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.

C-S= Critical Structural Deficiency- A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency- 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 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.

URGENCY OF REPAIR:

I=Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her.]

A=ASAP- [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.]

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.]

X=UNKNOWN **N=NOT APPLICABLE** **H=HIDDEN/INACCESSIBLE** **R=REMOVED**

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 25, 2019**

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' W x 1' H x 0.4' 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.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	**43B**	**E-07-004**	**E07004-43B-MUN-NBI**	**SEP 25, 2019**

REMARKS

Item 61.6 - Rip-Rap/Slope Protection (Cont'd)

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.

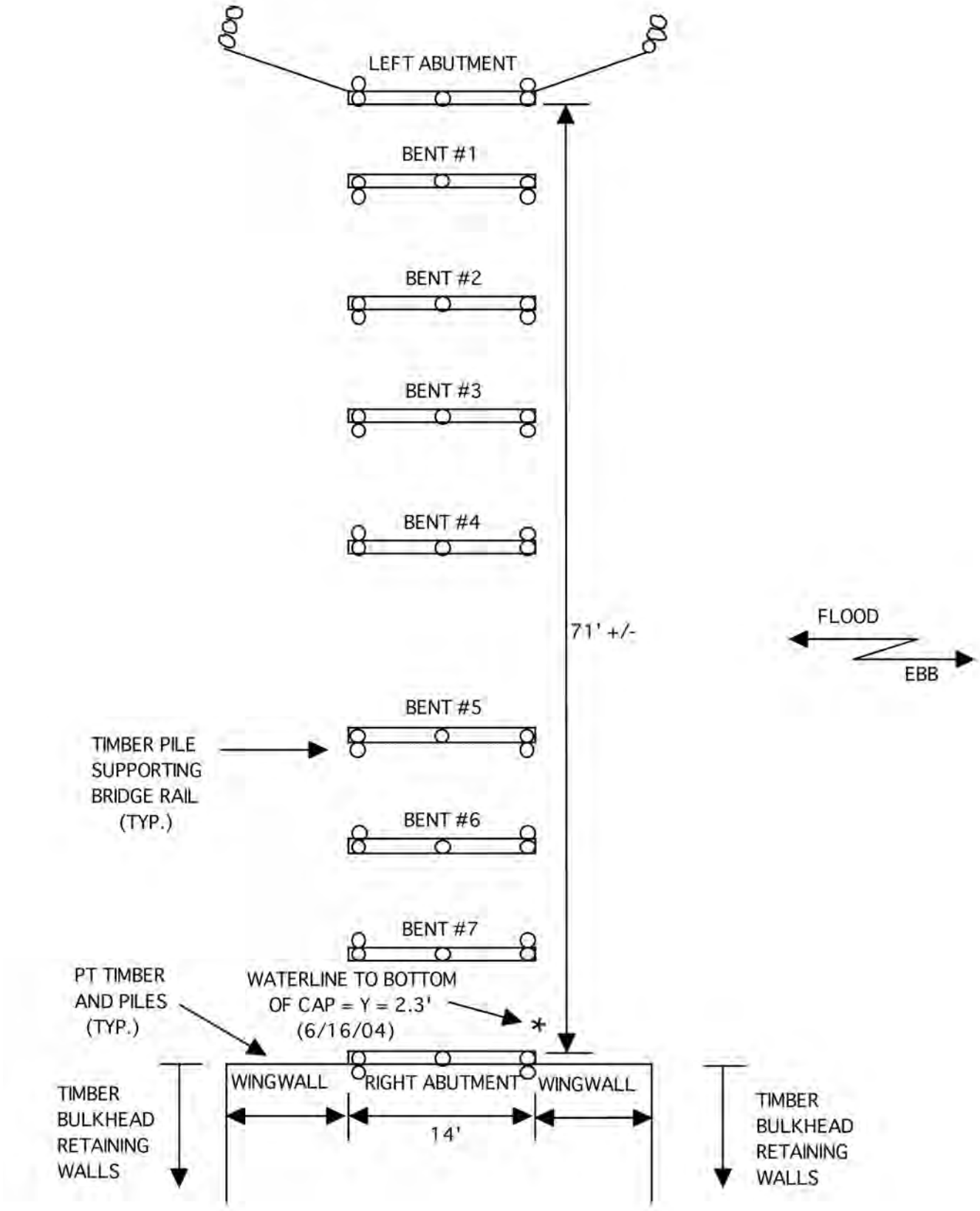
At the end of the pressure treated timber piles and vertical timber plank bulkheads are original creosote piles and timber planks along the sides of the roadway. The piles are dry rotted with some delamination and the vertical timbers are dry rotted with some deterioration, up to 100% section loss. Several 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)

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 25, 2019

SKETCHES



Sketch 1: PLAN VIEW (NTS)

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
EDGARTOWN	43B	E-07-004	E07004-43B-MUN-NBI	SEP 25, 2019

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'
Y	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)

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
STRUCTURES INSPECTION FIELD REPORT
ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	43B	E-07-004

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
EDGARTOWN	E07004-43B-MUN-NBI	001.046	P:POSTED	SEP 29, 2021

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY DIKE RD		1995	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER POUCHA POND	Rural Local	G. Simpson

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER J. Spiezio
702 : Timber Stringer/Girder	Town Agency	Town Agency	John F. Spiezio

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
8 : Timber	Sunny	10°C	A. DOWNING AD

ITEM 58 — DECK — 6

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	6	M-P
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	7	-
9.Anti Missile Fence	N	-
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	8	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	N	N

APPROACHES

		DEF
a. Appr. pavement condition	N	-
b. Appr. Roadway Settlement	6	M-P
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N) N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE — 7

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	7	-
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	N	-
8.Cover Plates	N	-
9.Bearing Devices	N	-
10.Diaphragms/Cross Frames	N	-
11. Rivets & Bolts	N	-
12.Welds	N	-
13.Member Alignment	8	-
14.Paint/Coating	N	-
15.	N	-

Year Painted: N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

Any Fracture Critical Member: (Y/N) N

Any Cracks: (Y/N) N

ITEM 60 — SUBSTRUCTURE — 7

	Dive	Cur		DEF
1. Abutments			6	
a. Pedestals	N	N		-
b. Bridge Seats	N	N		-
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	H		-
k. Settlement	8	7		-
l. Fasteners	N	6		M-P
m.	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		-
j.	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		-
e. Fasteners	5	6		M-P

UNDERMINING (Y/N) If YES please explain: N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): 7 *I-60 (This Report):* 7

93B-U/W (DIVE) Insp 09/25/2019

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

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

ITEM 61 — CHANNEL & CHANNEL PROTECTION: 7

	Dive	Cur	DEF
1.Channel Scour	7	H	-
2.Embankment Erosion	7	7	-
3.Debris	8	8	-
4.Vegetation	8	8	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	6	7	-
7.Aggradation	8	H	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:
Tidal (X) High ( ) Moderate ( ) Low ( ) None ( )

ITEM 61 (Dive Report): 7 *ITEM 61 (This Report):* 7

93b-U/W INSP. DATE: 09/25/2019

ITEM 36 — TRAFFIC SAFETY

	36	COND	DEF
A. Bridge Railing	0	7	M-P
B. Transitions	0	7	M-P
C. Approach Guardrail	0	7	M-P
D. Approach Guardrail Ends	0	7	M-P

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	09	14	21	N
Recommended Posting	09	14	21	N

Waived Date: 00/00/0000 EJDMT Date: 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	Y	N	N
Legibility/ Visibility	6 / 7	7 / 4		

CLEARANCE POSTING

	N ft	N in	S ft	S in	meter
Not X					
Actual Field Measurement		0		0	
Posted Clearance		0		0	

	At bridge N	At bridge S	Advance N	Advance S
Signs In Place (Y=Yes,N=No, NR=Not Required)				
Legibility/ Visibility				

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	Y	Y
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:		
CONTACTTOWN	Y	Y

TOTAL HOURS 12

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#:

List of field tests performed:
Visual and Tactile.

RATING

Rating Report (Y/N): Y

Date: 01/01/2005

Inspection data at time of existing rating
I 58: 8 I 59: 9 I 60: 8 Date :09/16/2003

Recommend for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON:

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

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 pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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 corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency 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 of the bridge.

C-H= Critical Hazard Deficiency - 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 include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [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].

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].

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

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.

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

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" x 10" timber beams, 3" x 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.

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

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.l - 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.	8.-STRUCTURE 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

Item 36a - Bridge Railing
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.

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

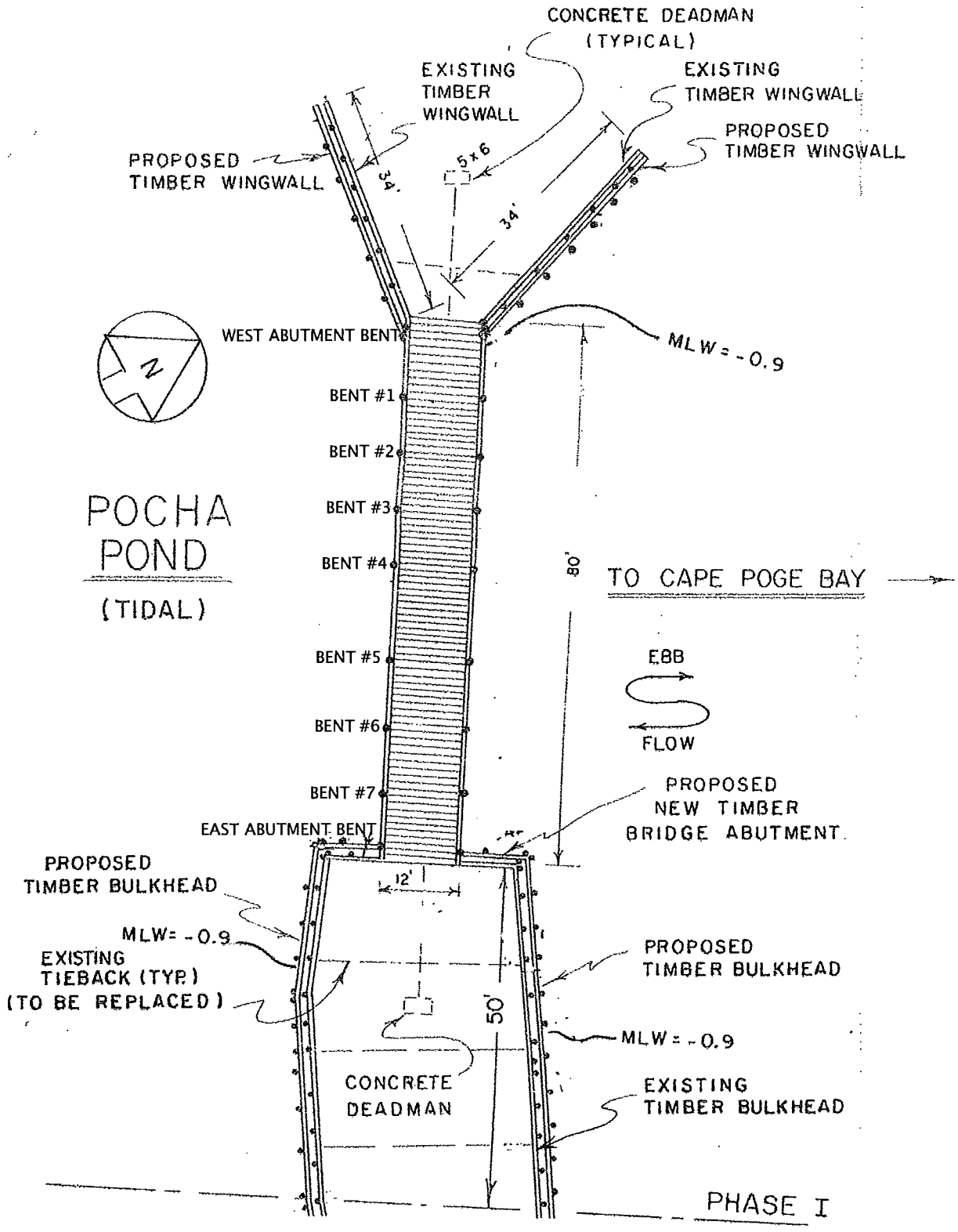
REMARKS

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.

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

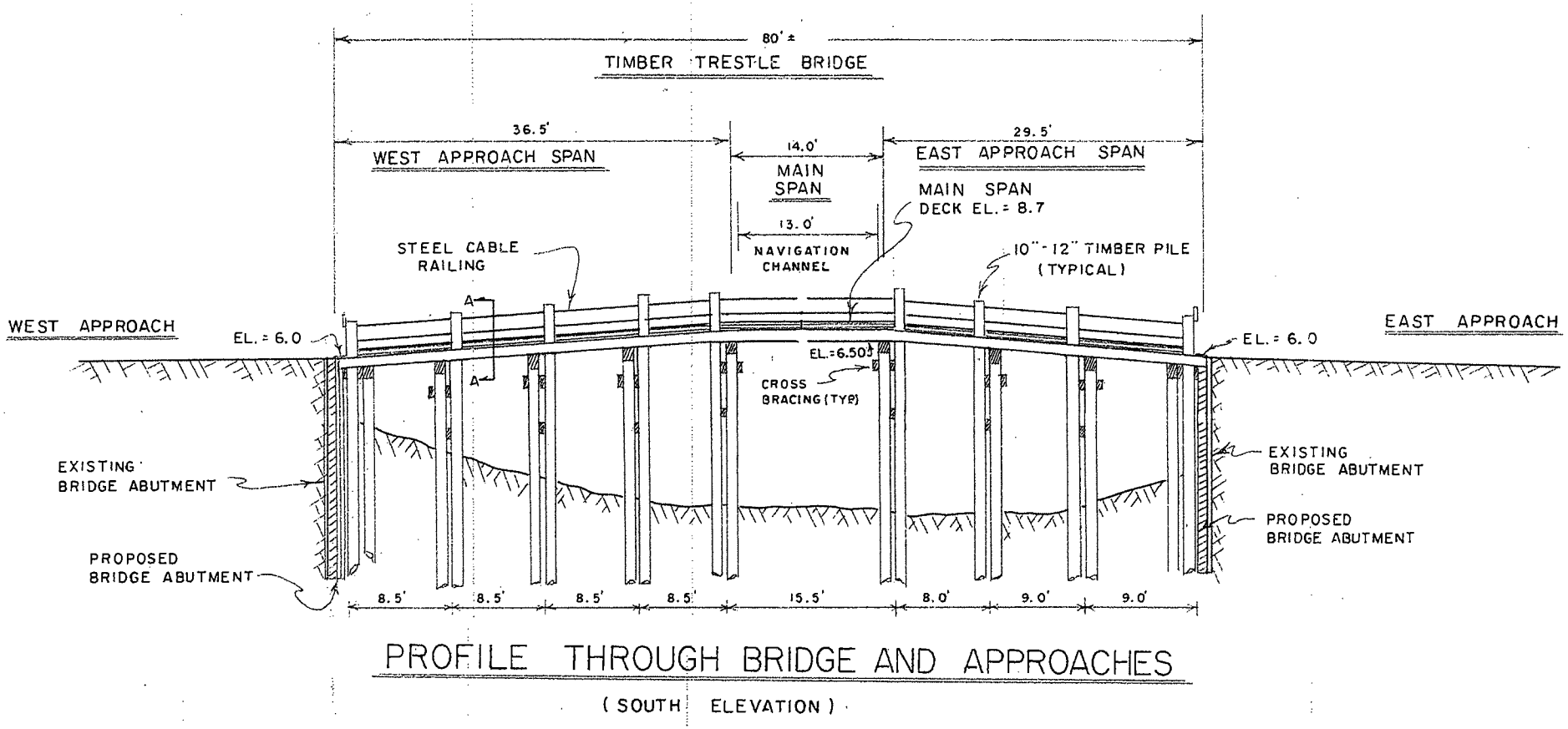
SKETCHES



Sketch 1: Plan View, from 1994 Construction Plans

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

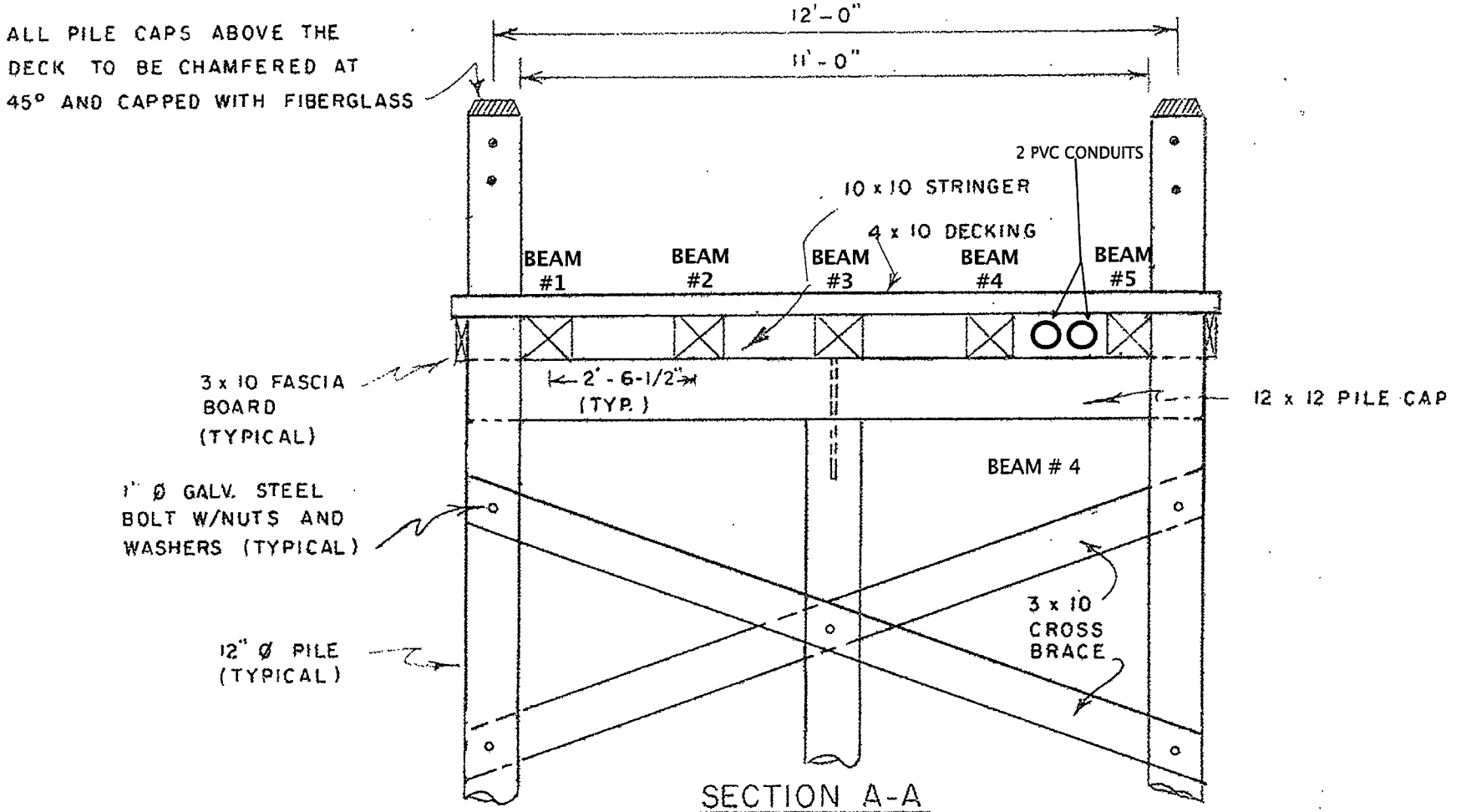
SKETCHES



Sketch 2: South Elevation View, from 1994 Construction Plans

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

SKETCHES



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

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

PHOTOS

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.

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

PHOTOS

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.

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

PHOTOS

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

Photo 6: Southwest immediate approach roadway, erosion hole.

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

PHOTOS

Photo 7: Southeast immediate approach roadway, erosion hole.

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

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

PHOTOS

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.

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

PHOTOS

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

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

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

PHOTOS

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.

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

PHOTOS

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.

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

PHOTOS

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.

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

PHOTOS

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.

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

PHOTOS

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

National Bridge Element Inspection

BDEPT# **E-07-004**
B.I.N. **43B**
Item 8 **E07004-43B-MUN-NBI**
Span Group **1**
Town **Edgartown**
District **5**

Date **09/29/2021**
District Bridge Inspection Eng'r **Grant Simpson**
Inspecting Agency **Mass. Highway Dept.**
Team Leader **John Spiezio**
Team Member(s) **Alexander Downing**

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 :									
> 1180	*Abrasion*	sq feet	3	213.000	☐ %		213.000		
Notes :									
111	**Timber Open Girder**	feet	3	355.000	☐ %	335.000	20.000		
Notes :									
> 1170	*Split/Delamination (Timber)*	feet	3	20.000	☐ %		20.000		
Notes :									
228	**Timber Pile**	each	3	45	☐ %	45			
Notes :									
235	**Timber Pier Cap**	feet	3	126.000	☐ %	125.000		1.000	
Notes :									
> 1170	*Split/Delamination (Timber)*	feet	3	1.000	☐ %			1.000	
Notes :									
332	**Timb Bridge Railing**	feet	3	142.000	☐ %	142.000			
Notes :									

Report Date: September 29, 2021

State Information

BDEPT#= E07004 Agency Br.No.

Town= Edgartown L.O.

B.I.N= 43B AASHTO= 042.7

RANK= 3362 H.I.= 98.5 % FHWA Select List= Y (6/21/17)

Identification

(8) Structure Number	E0700443BMUNNBI
(5) Inventory Route	151000000
(2) State Highway Department District	05
(3) County Code 007 (4) Place code	21150
(6) Features Intersected	**WATER POUCHA POND**
(7) Facility Carried	**HWY DIKE RD**
(9) Location	.7MI E OF WILLETT LANE
(11) Kilometerpoint	0001.046
(12) Base Highway Network	N
(13) LRS Inventory Route & Subroute	000000000000
(16) Latitude	41 DEG 22 MIN 24.25 SEC
(17) Longitude	70 DEG 27 MIN 13.15 SEC
(98) Border Bridge State Code	Share %
(99) Border Bridge Structure No. #	

Structure Type and Material

(43) Structure Type Main: Timber	Code 702
Stringer/Girder	Jointless bridge type: Not applicable
(44) Structure Type Appr:	
Other	Code 000
(45) Number of spans in main unit	008
(46) Number of approach spans	0000
(107) Deck Structure Type - Timber	Code 8
(108) Wearing Surface / Protective System:	
A) Type of wearing surface - Timber	Code 7
B) Type of membrane - None	Code 0
C) Type of deck protection - None	Code 0

Age and Service

(27) Year Built	1995
(106) Year Reconstructed	0000
(42) Type of Service: On - Highway	
Under - Waterway	Code 15
(28) Lanes: On Structure 01	Under structure 00
(29) Average Daily Traffic	000150
(30) Year of ADT 2019 (109) Truck ADT	03 %
(19) Bypass, detour length	199 KM

Geometric Data

(48) Length of maximum span	0004.3 M
(49) Structure Length	00023.2 M
(50) Curb or sidewalk: Left 00.0 M	Right 00.0 M
(51) Bridge Roadway Width Curb to Curb	003.4 M
(52) Deck Width Out to Out	004.6 M
(32) Approach Roadway Width (w/shoulders)	010.4 M
(33) Bridge Median - No median	Code 0
(34) Skew 00 DEG (35) Structure Flared	N
(10) Inventory Route MIN Vert Clear	99.99 M
(47) Inventory Route Total Horiz Clear	03.4 M
(53) Min Vert Clear Over Bridge Rdwy	99.99 M
(54) Min Vert Underclear ref N	00.00 M
(55) Min Lat Underclear RT ref N	00.0 M
(56) Min Lat Underclear LT	00.0 M

Navigation Data

(38) Navigation Control - No navigation control on waterway	Code 0
(111) Pier Protection	Code
(39) Navigation Vertical Clearance	000.0 M
(116) Vert-lift Bridge Nav Min Vert Clear	M
(40) Navigation Horizontal Clearance	0000.0 M

ADT = Covid - 19 Controlled.

Classification

	Code
(112) NBIS Bridge Length	Y
(104) Highway System	N
(26) Functional Class - Rural Local	09
(100) Defense Highway	0
(101) Parallel Structure	N
(102) Direction of Traffic - One lane for 2-way traffic	3
(103) Temporary Structure	N
(105) Federal Lands Highways	0
(110) Designated National Network	N
(20) Toll - On free road	3
(21) Maintain - Town Agency	03
(22) Owner - Town Agency	03
(37) Historical Significance built after 1949 presumed to be not eligi	Z

Condition

	Code
(58) Deck	6
(59) Superstructure	7
(60) Substructure	7
(61) Channel & Channel Protection	7
(62) Culverts	N

Load Rating and Posting

	Code
(31) Design Load - H 10=M 9	1
(63) Operating Rating Method - Allowable Stress (AS)	2
(64) Operating Rating	20.1
(65) Inventory Rating Method - Allowable Stress (AS)	2
(66) Inventory Rating	14.2
(70) Bridge Posting	1
(41) Structure - Posted for load	P

Appraisal

	Code
(67) Structural Evaluation	4
(68) Deck Geometry	2
(69) Underclearances, vert. and horiz.	N
(71) Waterway adequacy	7
(72) Approach Roadway Alignment	7
(36) Traffic Safety Features	0 0 0 0
(113) Scour Critical Bridges	5

Inspections

(90) Inspection Date 09/10/19 9/29/2021 (91) Frequency 24 MO

(92) Critical Feature Inspection:				(93) CFI DATE
(A) Fracture Critical Detail	N	00	MO A)	00/00/00
(B) Underwater Inspection	Y	36	MO B)	09/25/19
(C) Other Special Inspection	N	00	MO C)	00/00/00
(*) Other Inspection ()	N	00	MO *)	00/00/00
(*) Closed Bridge	N	00	MO *)	00/00/00
(*) UW Special Inspection	N	00	MO *)	00/00/00
(*) Damage Inspection			MO *)	00/00/00

Rating Loads

Report Date 01/01/05	H20	Type 3	Type 3S2	Type HS
Operating	12.0	19.0	30.0	22.0
Inventory	9.0	14.0	22.0	16.0

Field Posting

Status POSTED Posting Date 03/09/05

	2 Axle	3 Axle	5 Axle	Single
Actual	09	14	21	
Recommended	09	14	21	

Missing Signs N

Misc.

Bridge Name

N Anti-missile fence N Acrow Panel N Jointless Bridge

Freeze/Thaw N : Not Applicable

Accessibility (Needed/Used)

N / N Liftbucket	N / N Rigging	Y / Y Other
N / N Ladder	N / N Staging	CONTACTTOWN
Y / Y Boat	N / N Traffic Control	
N / N Wader	N / N RR Flagperson	Inspection Hours: 012
N / N Inspector 50	N / N Police	

Report Date: November 17, 2021

State Information

BDEPT#= E07004 Agency Br.No.

Town= Edgartown L.O.

B.I.N= 43B AASHTO= 042.7

RANK= 3362 H.I.= 98.5 % FHWA Select List= Y (6/21/17)

Identification

(8) Structure Number	E0700443BMUNNBI
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(2) State Highway Department District	05
(3) County Code 007 (4) Place code	21150
(6) Features Intersected	**WATER POUCHA POND**
(7) Facility Carried	**HWY DIKE RD**
(9) Location	.7MI E OF WILLETT LANE
(11) Kilometerpoint	0001.046
(12) Base Highway Network	N
(13) LRS Inventory Route & Subroute	000000000000
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(98) Border Bridge State Code	Share %
(99) Border Bridge Structure No. #	

Structure Type and Material

(43) Structure Type Main: Timber	Code 702
Stringer/Girder	Jointless bridge type: Not applicable
(44) Structure Type Appr:	
Other	Code 000
(45) Number of spans in main unit	008
(46) Number of approach spans	0000
(107) Deck Structure Type - Timber	Code 8
(108) Wearing Surface / Protective System:	
A) Type of wearing surface - Timber	Code 7
B) Type of membrane - None	Code 0
C) Type of deck protection - None	Code 0

Age and Service

(27) Year Built	1995
(106) Year Reconstructed	0000
(42) Type of Service: On - Highway	
Under - Waterway	Code 15
(28) Lanes: On Structure 01	Under structure 00
(29) Average Daily Traffic	000150
(30) Year of ADT 2019 (109) Truck ADT	03 %
(19) Bypass, detour length	199 KM

Geometric Data

(48) Length of maximum span	0004.3M
(49) Structure Length	00023.2M
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(51) Bridge Roadway Width Curb to Curb	003.4M
(52) Deck Width Out to Out	004.6M
(32) Approach Roadway Width (w/shoulders)	010.4M
(33) Bridge Median - No median	Code 0
(34) Skew 00 DEG (35) Structure Flared	N
(10) Inventory Route MIN Vert Clear	99.99M
(47) Inventory Route Total Horiz Clear	03.4M
(53) Min Vert Clear Over Bridge Rdwy	99.99M
(54) Min Vert Underclear ref N	00.00M
(55) Min Lat Underclear RT ref N	00.0M
(56) Min Lat Underclear LT	00.0M

Navigation Data

(38) Navigation Control - No navigation control on waterway	Code 0
(111) Pier Protection	Code
(39) Navigation Vertical Clearance	000.0M
(116) Vert-lift Bridge Nav Min Vert Clear	M
(40) Navigation Horizontal Clearance	0000.0M

Classification

	Code
(112) NBIS Bridge Length	Y
(104) Highway System	N
(26) Functional Class - Rural Local	09
(100) Defense Highway	0
(101) Parallel Structure	N
(102) Direction of Traffic - One lane for 2-way traffic	3
(103) Temporary Structure	N
(105) Federal Lands Highways	0
(110) Designated National Network	N
(20) Toll - On free road	3
(21) Maintain - Town Agency	03
(22) Owner - Town Agency	03
(37) Historical Significance built after 1949 presumed to be not eligi	Z

Condition

	Code
(58) Deck	6
(59) Superstructure	7
(60) Substructure	7
(61) Channel & Channel Protection	7
(62) Culverts	N

Load Rating and Posting

	Code
(31) Design Load - H 10=M 9	1
(63) Operating Rating Method - Allowable Stress (AS)	2
(64) Operating Rating	20.1
(65) Inventory Rating Method - Allowable Stress (AS)	2
(66) Inventory Rating	14.2
(70) Bridge Posting	1
(41) Structure - Posted for load	P

Appraisal

	Code
(67) Structural Evaluation	4
(68) Deck Geometry	2
(69) Underclearances, vert. and horiz.	N
(71) Waterway adequacy	7
(72) Approach Roadway Alignment	7
(36) Traffic Safety Features	0 0 0 0
(113) Scour Critical Bridges	5

Inspections

(90) Inspection Date 09/29/21 (91) Frequency 24 MO

(92) Critical Feature Inspection:				(93) CFI DATE
(A) Fracture Critical Detail	N	00	MO A)	00/00/00
(B) Underwater Inspection	Y	36	MO B)	09/25/19
(C) Other Special Inspection	N	00	MO C)	00/00/00
(*) Other Inspection ()	N	00	MO *)	00/00/00
(*) Closed Bridge	N	00	MO *)	00/00/00
(*) UW Special Inspection	N	00	MO *)	00/00/00
(*) Damage Inspection			MO *)	00/00/00

Rating Loads

Report Date 01/01/05	H20	Type 3	Type 3S2	Type HS
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Inventory	9.0	14.0	22.0	16.0

Field Posting

Status POSTED Posting Date 03/09/05

	2 Axle	3 Axle	5 Axle	Single
Actual	09	14	21	
Recommended	09	14	21	

Missing Signs N

Misc.

Bridge Name

N Anti-missile fence N Acrow Panel N Jointless Bridge

Freeze/Thaw N : Not Applicable

Accessibility (Needed/Used)

N / N Liftbucket	N / N Rigging	Y / Y Other
N / N Ladder	N / N Staging	CONTACTTOWN
Y / Y Boat	N / N Traffic Control	
N / N Wader	N / N RR Flagperson	Inspection Hours: 012
N / N Inspector 50	N / N Police	