

STRUCTURES INSPECTION FIELD REPORT

BR. DEPT. NO.

C-05-010

2-DIST 01 B.I.N. 0EQ

ROUTINE INSPECTION

CITY/TOWN CHARLEMONT	8-STRUCTURE NO. C05010-0EQ-MUN-NBI	11-Kilo. POINT 041.520	41-STATUS A:OPEN	90-ROUTINE INSP. DATE JUN 19, 2017
07-FACILITY CARRIED ST 8 A/W HWLEY RD	MEMORIAL NAME/LOCAL NAME	27-YR BUILT 1944	106-YR REBUILT 0000	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER DEERFIELD RIVER	26-FUNCTIONAL CLASS Major Collector	DIST. BRIDGE INSPECTION ENGINEER L. A. Briggs <i>L. A. Briggs</i>		
43-STRUCTURE TYPE 402 : Steel continuous Stringer/Girder	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER M. A. Adorno <i>M. A. Adorno</i>	
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER Rain	TEMP. (air) 25°C	TEAM MEMBERS R. MANCARI <i>RM</i>	

<b>ITEM 58</b>	<b>5</b>	
<b>DECK</b>		DEF
1. Wearing Surface	3	S-A
2. Deck Condition	5	M-P
3. Stay in place forms	N	-
4. Curbs	7	-
5. Median	N	-
6. Sidewalks	N	-
7. Parapets	N	-
8. Railing	6	-
9. Anti Missile Fence	N	-
10. Drainage System	5	M-P
11. Lighting Standards	5	M-P
12. Utilities	N	-
13. Deck Joints	3	S-A
14.	N	-
15.	N	-
16.	N	-

E 240 W 240  
CURB REVEAL (In millimeters)

<b>APPROACHES</b>		DEF
a. Appr. Pavement Condition	6	-
b. Appr. Roadway Settlement	7	-
c. Appr. Sidewalk Settlement	N	-
d.	N	-

<b>OVERHEAD SIGNS</b> (Attached to bridge)	(Y/N)	N
		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

<b>ITEM 59</b>	<b>6</b>	
<b>SUPERSTRUCTURE</b>		DEF
1. Stringers	N	-
2. Floorbeams	N	-
3. Floor System Bracing	N	-
4. Beams	6	-
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	5	M-P
10. Diaphragms	7	-
11. Rivets & Bolts	7	-
12. Welds	N	-
13. Member Alignment	7	-
14. Paint	6	-
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

<b>ITEM 60</b>	<b>6</b>	
<b>SUBSTRUCTURE</b>		DEF
<b>1. Abutments</b>	Dive Cur	6
a. Pedestals	N N	-
b. Bridge Seats	N 6	M-P
c. Backwalls	N 6	-
d. Breastwalls	7 6	M-P
e. Wingwalls	N 7	-
f. Slope Paving/Rip-Rap	N N	-
g. Pointing	N N	-
h. Footings	N H	-
i. Piles	N N	-
j. Scour	7 8	-
k. Settlement	8 8	-
l.	N N	-
m.	N N	-
<b>2. Piers or Bents</b>		6
a. Pedestals	N N	-
b. Caps	N N	-
c. Columns	N N	-
d. Pierwalls	6 7	-
e. Pointing	N N	-
f. Footing	H 7	-
g. Piles	N N	-
h. Scour	6 6	-
i. Settlement	8 8	-
j. Sheeting	6 7	-
k.	N N	-
<b>3. Pile Bents</b>		N
a. Pile Caps	N N	-
b. Piles	N N	-
c. Diagonal Bracing	N N	-
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 ( ) Minor (X) Moderate ( ) Severe ( )

I-60 (Dive Report): 6 I-60 (This Report): 6

93B-U/W (DIVE) Insp 09/08/2015

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

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**ITEM 61** 6

**CHANNEL & CHANNEL PROTECTION.**

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

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

ITEM 61 (Dive Report): 6 ITEM 61 (This Report): 6

93b-U/W INSP. DATE: 09/08/2015

**ITEM 36 TRAFFIC SAFETY**

	36	COND	DEF
A. Bridge Railing	0	6	-
B. Transitions	0	7	-
C. Approach Guardrail	0	7	-
D. Approach Guardrail Ends	1	7	-

**WEIGHT POSTING** Not Applicable

H 3 3S2 Single  
Actual Posting: N N N N

Recommended Posting: N N N N

Waived Date: 02/06/1984 EJDMT Date: 00/00/0000

At bridge: N S Other Advance: N S

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

**CLEARANCE POSTING**

Not  X

	E		W		meter
	ft	in	ft	in	
Actual Field Measurement		0		0	
Posted Clearance		0		0	

At bridge: E W Advance: E W

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	N	N
Waders	P	N
Inspector 50	Y	Y
Rigging	N	N
Staging	N	N
Traffic Control	Y	Y
RR Flagger	N	N
Police	P	Y
Other:		
TWOXPOLICE	Y	Y

**TOTAL HOURS** 20

**PLANS (Y/N):** Y

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

**TAPE#:** \_\_\_\_\_

List of field tests performed:

**RATING**

Rating Report (Y/N): Y

Date: 02/01/1984

Inspection data at time of existing rating  
1 58: 6 1 59: 7 1 60: 7 Date :06/09/1980

**(To be filled out by DBIE)**

Request 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).

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## REMARKS

### BRIDGE ORIENTATION

State Route 8A (West Hawley Road) travels north and south. The Deerfield River flows from west to east. This four span structure consists of five continuous steel beams supporting a reinforced concrete deck with an epoxy wearing surface. The spans and piers are numbered from north to south, in accordance with the plans. The bays and beams are numbered from west to east, upstream to downstream, for ease of inspection. See photos 1 & 2.

### ITEM 58 - DECK

#### Item 58.1 - Wearing Surface

The wearing surface has failed exposing 90% the deck. See photos 1 & 3.

#### Item 58.2 - Deck Condition

##### Topside:

The exposed deck has numerous potholes and with exposed rebar throughout the wearing surface, up to 3" diameter x 2" deep. Some of the potholes have been patched. See photos 1 & 3.

##### Underside:

Throughout both deck overhangs, the concrete is spalling with exposed rebar, up to full width x 3" deep. These spalls occur primarily around the deck drains. See photos 4 & 5.

There is full width transverse hairline cracks with efflorescence throughout the deck, mainly in bay 1 of all spans.

Several of the bays have hairline mapcracking with efflorescence, full length and width of the bays.

All spans have random hollow soundings, primarily in patched areas.

##### Span 1:

Bay 1 is spalled at 20' from the north abutment, 2' wide x 8" long x 1" deep.

Bay 2 has a spalled area at 20' from the north abutment, 8" long x 2' wide, with a full width transverse hairline crack and hollow areas surrounding. Also, bay 2 is cracked and spalled full width x 6" long above the pier.

There is scaling along the south end of beam 2, 2' long x 6" wide x 1" deep.

Bay 3 has a spall at the center, 16" diameter x 2" deep.

Bay 4 has a spall between diaphragms 1 & 2, north of pier 1, 16" diameter x 2" deep.

##### Span 2:

Bay 3, near the third diaphragm from pier 1, there is a patch that is delaminating, 20" diameter x 2" deep.

Bay 4 is cracked and spalled above pier 1, full width x 6" long x 1" deep. There is also minor scaling at the south end of bay 4.

##### Span 3:

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## REMARKS

### Item 58.2 - Deck Condition (Cont'd)

There is minor scaling throughout all the bays in span 3, primarily along the top flanges of the beams and over the diaphragms.

Bay 4 has a spall between diaphragms 1 and 2 from the north, 1' diameter x 2" deep.

#### Span 4:

In all bays, between the south breastwall and diaphragm 2, there is moderate hairline mapcracking with efflorescence with moderate scaling up to 1" deep. The scaling is located mostly around transverse cracks.

### Item 58.4 - Curbs

There is minor spalling where the curbs meet the deck, up to 3' long x 4" wide x 2" deep, typically near the drains.

### Item 58.8 - Railing

There are vertical cracks forming near some of the spalled scuppers on the underside of the rail bases.

Throughout both railings, the paint is dull, faded and peeling.

### Item 58.10 - Drainage System

Along both curblines, the drain holes are spalling. This spalling extends into the deck underside. See photos 4 & 5.

### Item 58.11 - Lighting Standards

At all lighting standards, the baseplate anchor bolt nuts have severe corrosion and section loss, up to 100%. See photo 6.

### Item 58.13 - Deck Joints

The south compression joint seal has failed allowing leakage and debris to fall onto the seat below. See photos 7 & 8.

The north joint seal has several areas cuts, as a result of plow damage, and minor debris.

## APPROACHES

### Approaches a - Appr. Pavement Condition

Both approaches have areas of sealed and unsealed mapcracking, full roadway width. See photo 1.

## ITEM 59 - SUPERSTRUCTURE

### Item 59.4 - Beams

The top flanges of both fascia beams have minor to moderate peeling paint and minor rusting with delamination near the spalled deck drains.

In spans 1 & 2, on beams 1 & 5, the web splice connection have minor rust along the bottom edges.

In span 2, the bottom flange splice plates for beam 3 have moderate rusting with efflorescence.

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## REMARKS

### Item 59.4 - Beams (Cont'd)

In span 4, at the south abutment, there is a heavy buildup of debris around the ends of beams 2 - 4. There is moderate rusting with minor section loss in the bottom of the webs in these areas. See photo 8.

### Item 59.9 - Bearing Devices

#### Flood Keepers:

At both abutments and at pier 1, in bay 1, the keepers have severe corrosion with large holes. See photos 9 & 10.

#### South Abutment Bearings:

All bearings have debris from the failed joint above and moderate rusting. See photo 8.

Bearing 1 is undermined at the northwest corner, 12" long x 2" deep (along the north edge) and 4" long x 1" deep (along the west edge). Refer to item 60.1.b - Bridge Seats, for related condition. See photos 11 & 12.

Bearings 1, 3, & 4 are missing both anchor bolts.

Bearing 2 is missing the west anchor bolt and the east anchor bolt is bent.

At bearing 5, both anchor bolts are bent toward the backwall and the bearing has shifted toward the backwall and to the west, 1-1/4".

#### North Abutment Bearings:

All bearings have moderate rusting.

Bearings 1, 3 & 5 are missing anchor both bolts.

Bearing 2 is missing the west anchor bolt and the east anchor bolt is bent toward the backwall.

Bearing 4 is missing the east anchor bolt and the west anchor bolt is bent toward the backwall.

At bearing 5, the sole plate has shifted toward the backwall and now overhangs the masonry plate, 1/2".

### Item 59.14 - Paint

Both fascia beams, below the deck drains, and all beam end as the south abutment, have areas of failing paint. The remainder of the paint is dull and chalking. See photos 2 & 8.

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## REMARKS

### ITEM 60 - SUBSTRUCTURE

#### Item 60.1 - Abutments

##### Item 60.1.b - Bridge Seats

###### South Seat:

At the west end, the seat is scaled, 42" wide x 24' long x 3" deep. This scaling has undermined bearing 1. See photos 11 & 12.

The remainder of the seat has a buildup of dirt and debris from the failed joint above. See photo 8.

###### North Seat:

Both ends are scaled, 1' wide x 1' long x 2" deep.

##### Item 60.1.c - Backwalls

###### South Backwall:

Bay 2 has a full height vertical crack, up to 1/8" wide. The remainder of the backwall has light scaling and mapcracking throughout. The most severe scaling is concentrated along the construction joint.

###### North Backwall:

Bay 4 has a diagonal hairline crack, full height.

##### Item 60.1.d - Breastwalls

###### South Breastwall:

The west end is scaled, 18" high x 3' wide x 2" deep. See photo 12.

###### North Breastwall:

At the west end, the top is scaled, 30" high x 1' wide x up to 2" deep.

At the east end, the top is scaled, 1' high x 18" wide x 1" deep.

Bay 1 has a vertical hairline crack, 20" long, top down.

##### Item 60.1.e - Wingwalls

The wingwalls have random areas of minor scaling, isolated minor spalls, and areas of hairline mapcracking with efflorescence.

##### Item 60.1.h - Footings

The footings are hidden by design.

#### Item 60.2 - Piers

##### Item 60.2.d - Pierwalls

Refer to the Underwater Inspection Report, dated 09/08/2015, for comment.

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## REMARKS

### Item 60.2.f - Footing

#### Pier 1:

The pier is founded on ledge. The footing is exposed, full length x full height.

#### Pier 2:

The steel sheeting surrounding the footing is exposed, full length x up to 2' high at the east end. There is an accumulation of gravel and cobbles between the steel sheeting and the pier wall.

#### Pier 3:

The footing is hidden by design.

### Item 60.2.h - Scour

Refer to the item 60.2.f - Footing, and the Underwater Inspection Report, dated 09/08/2015, for comments.

### SubStructure Scour Notes

Refer to the 09/08/2015 Underwater Inspection Report.

## ITEM 61 - CHANNEL AND CHANNEL PROTECTION

### Item 61.1 - Channel Scour

Refer to the item 60.2.f - Footing, for related condition.

### Item 61.3 - Debris

There are several trees lodged against the west nose of pier 2. See photo 13.

### Item 61.4 - Vegetation

Below span 4, the ground is overgrown with trees and brush.

Downstream of pier 1, the gravel bar has minor vegetation growth. See photo 14.

### Item 61.7 - Aggradation

There is a buildup of gravel upstream and downstream of pier 1. The upstream gravel bar is approximately 30' wide x 300' long x 1' high. The downstream gravel bar is approximately 20' wide x 150' long x up to 4' high. See photo 14.

## TRAFFIC SAFETY

### Item 36a - Bridge Railing

The bridge railing consist of one steel channel rail not tied into the blunt concrete end posts and mounted on steel I-posts bolted to the concrete rail base. Refer to item 58.8 - Railing, for condition.

### Item 36b - Transitions

The south transitions consist of single steel W-beam panels, not tied into the bridge rails, mounted on steel posts with plastic blockouts. The post spacing is 6'.

The northwest transition consists of W-beam panels, not tied into the bridge rails, mounted on steel posts with steel blockouts. The post spacing is 6'.

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## REMARKS

### Item 36b - Transitions (Cont'd)

The northeast transition consists of nested W-beam panels, not tied into the bridge rails, mounted on steel posts with steel blockouts. The post spacing is 6'.

### Item 36c - Approach Guardrail

The south approach guardrails consist of W-beam panels mounted on steel posts with plastic blockouts. The post spacing is 6'.

The north approach guardrails consist of W-beam panels mounted on steel posts with steel blockouts. The post spacing is 6'.

### Item 36d - Approach Guardrail Ends

All approach guardrails have swept terminal ends.

### Photo Log

- Photo 1 : General topside view, looking north.
- Photo 2 : Typical underside view, span 3 looking north shown.
- Photo 3 : Typical condition at the deck topside with numerous spalls and patches. Note failed wearing surface.
- Photo 4 : Typical spalling around the deck drains, before concrete removal, span 1 east overhang shown.
- Photo 5 : Typical spalling around the deck drains, after concrete removal, span 1 east overhang shown.
- Photo 6 : Lighting standard baseplate with severely corroded anchor bolt nuts.
- Photo 7 : South compression joint seal failed.
- Photo 8 : South compression joint seal failed allowing debris buildup on the seat, bay 3 shown.
- Photo 9 : North abutment, bay 1, flood lock with section loss and holes
- Photo 10 : South abutment, bay 1, flood lock with section loss and holes
- Photo 11 : South abutment, bearing 1 with undermining.
- Photo 12 : South abutment, below beam 1, with scaling of the seat and breastwall.
- Photo 13 : Debris lodged against pier nose.
- Photo 14 : Aggradation bar downstream.

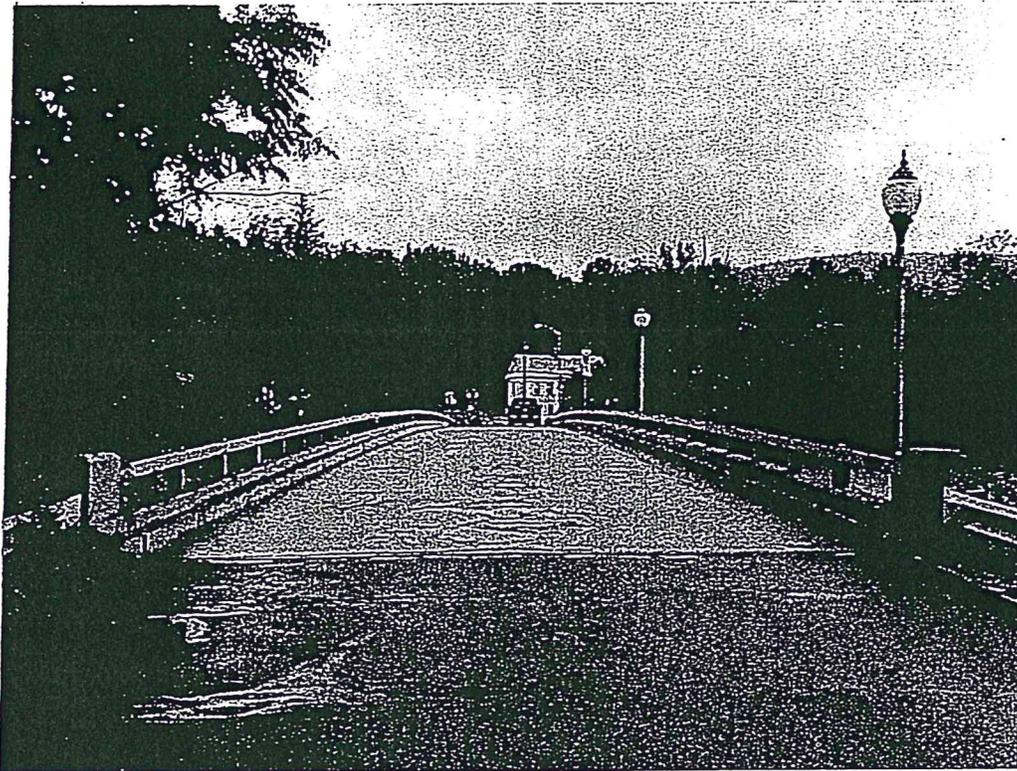
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Photo 1: General topside view, looking north.



Photo 2: Typical underside view, span 3 looking north shown.

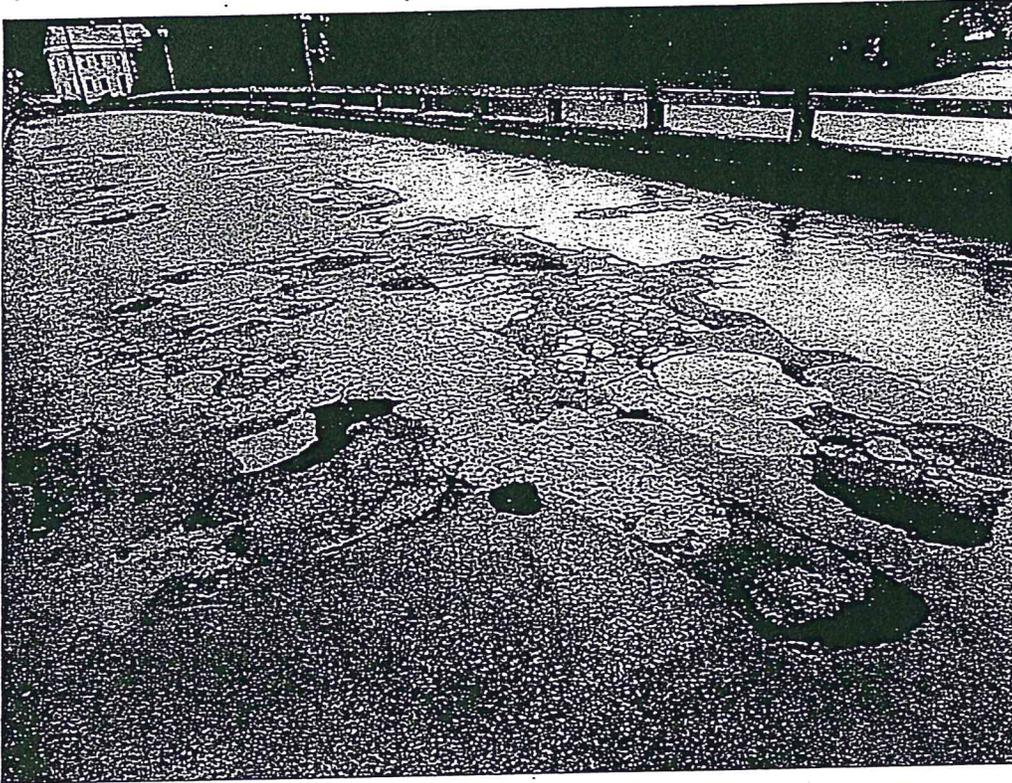
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Photo 3: Typical condition at the deck topside with numerous spalls and patches. Note failed wearing surface.

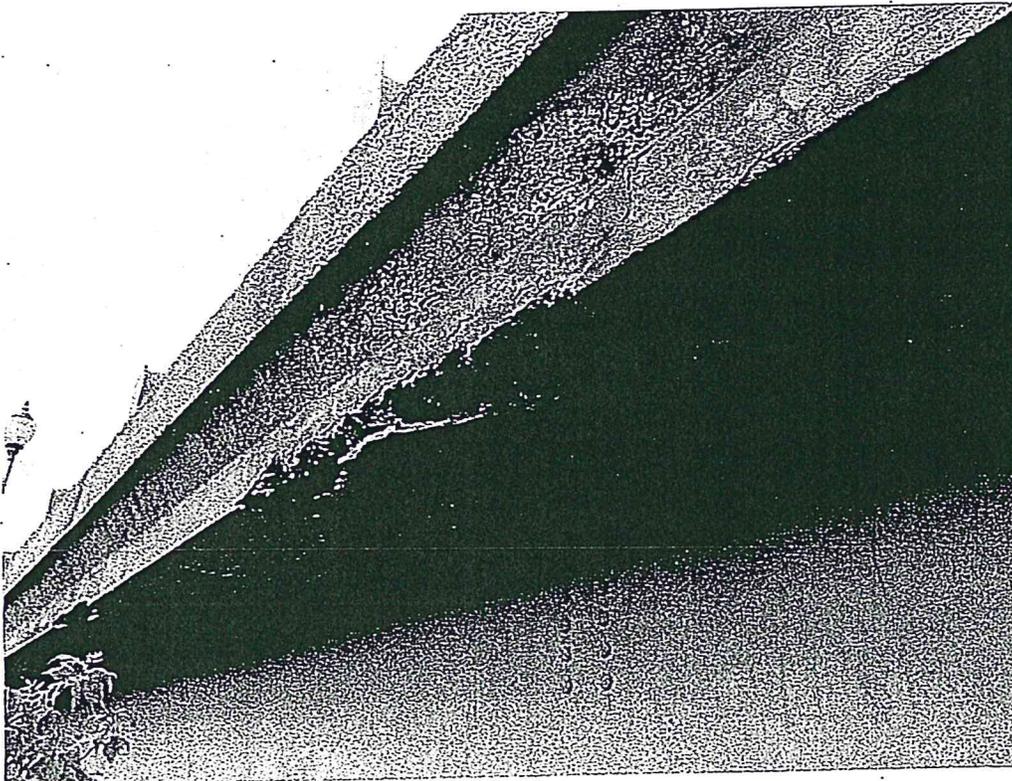


Photo 4: Typical spalling around the deck drains, before concrete removal, span 1 east overhang shown.

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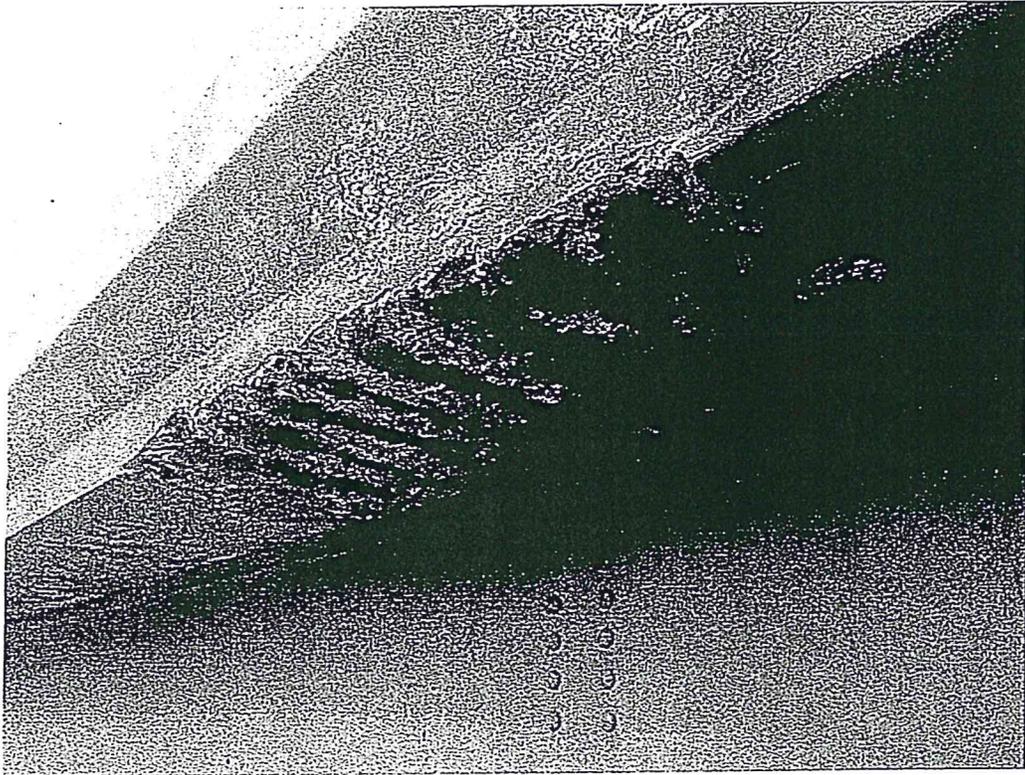
**PHOTOS**

Photo 5: Typical spalling around the deck drains, after concrete removal, span 1 east overhang shown.

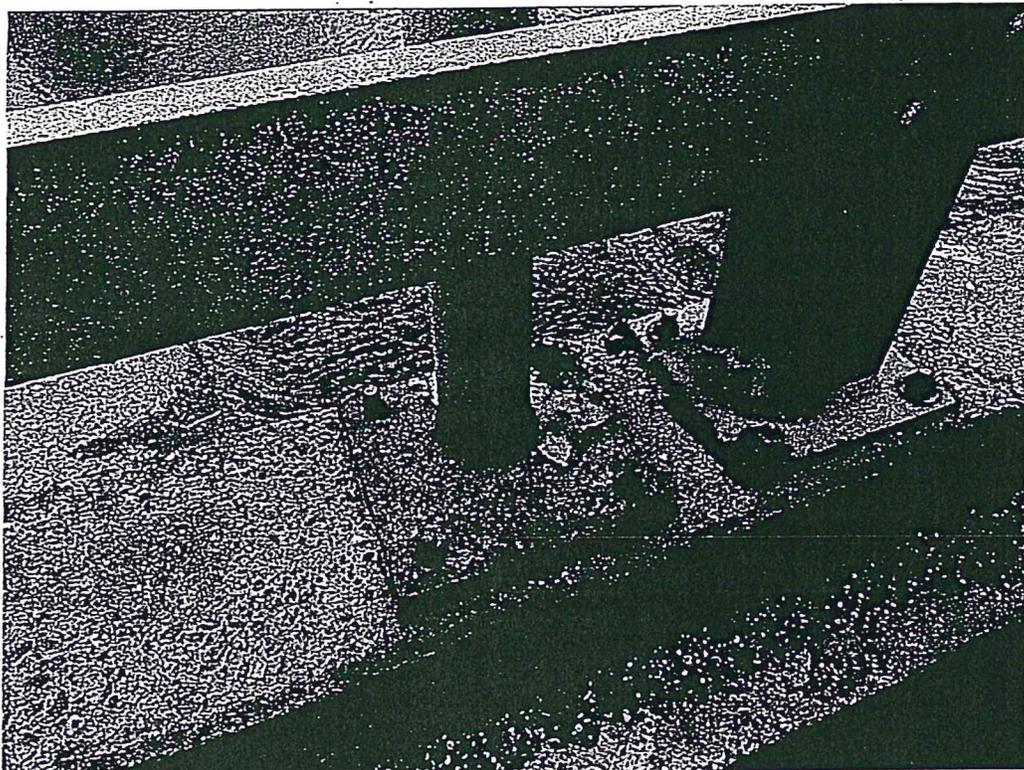


Photo 6: Lighting standard baseplate with severely corroded anchor bolt nuts.

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## PHOTOS

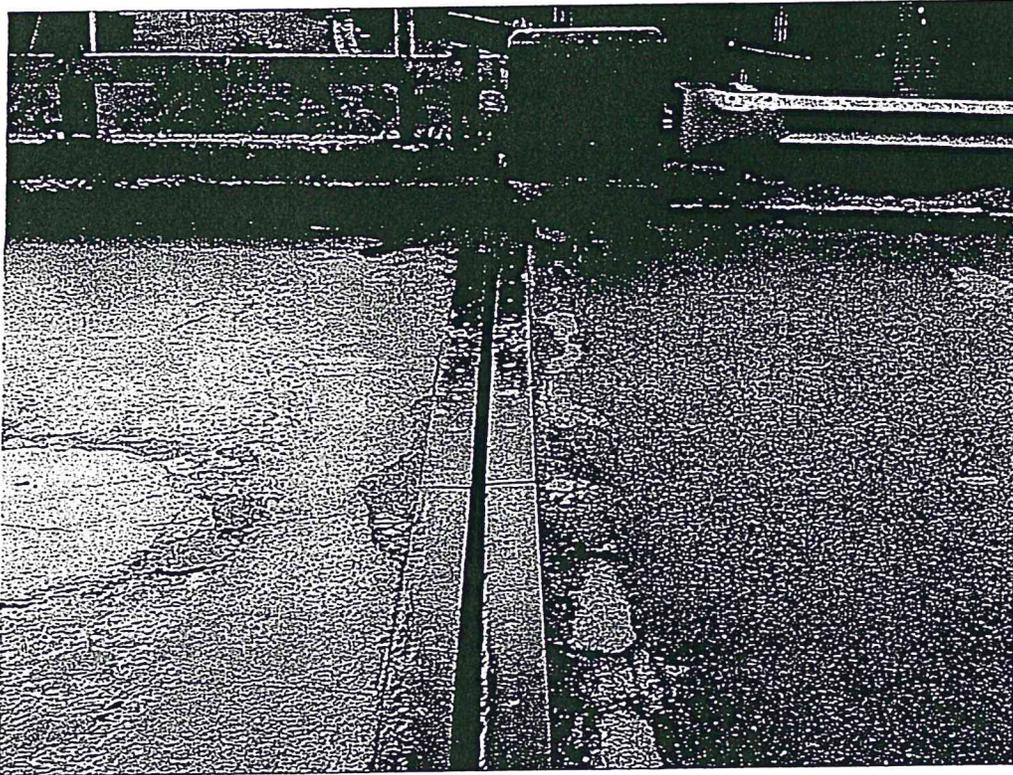


Photo 7: South compression joint seal failed.

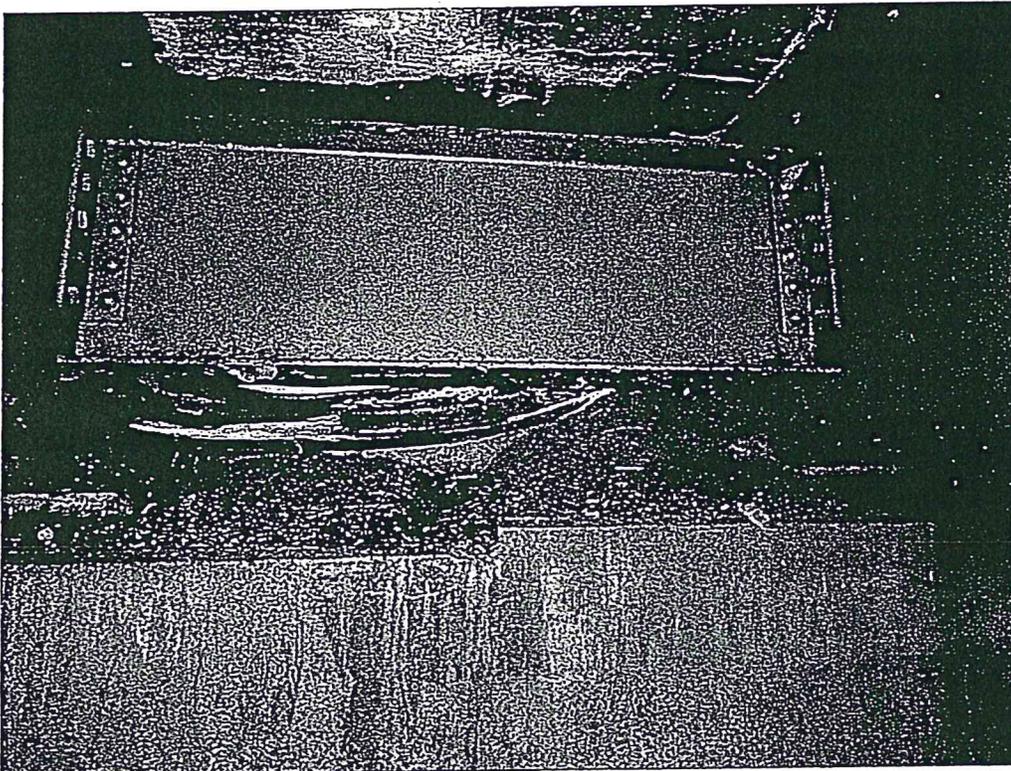


Photo 8: South compression joint seal failed allowing debris buildup on the seat, bay 3 shown.

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## PHOTOS

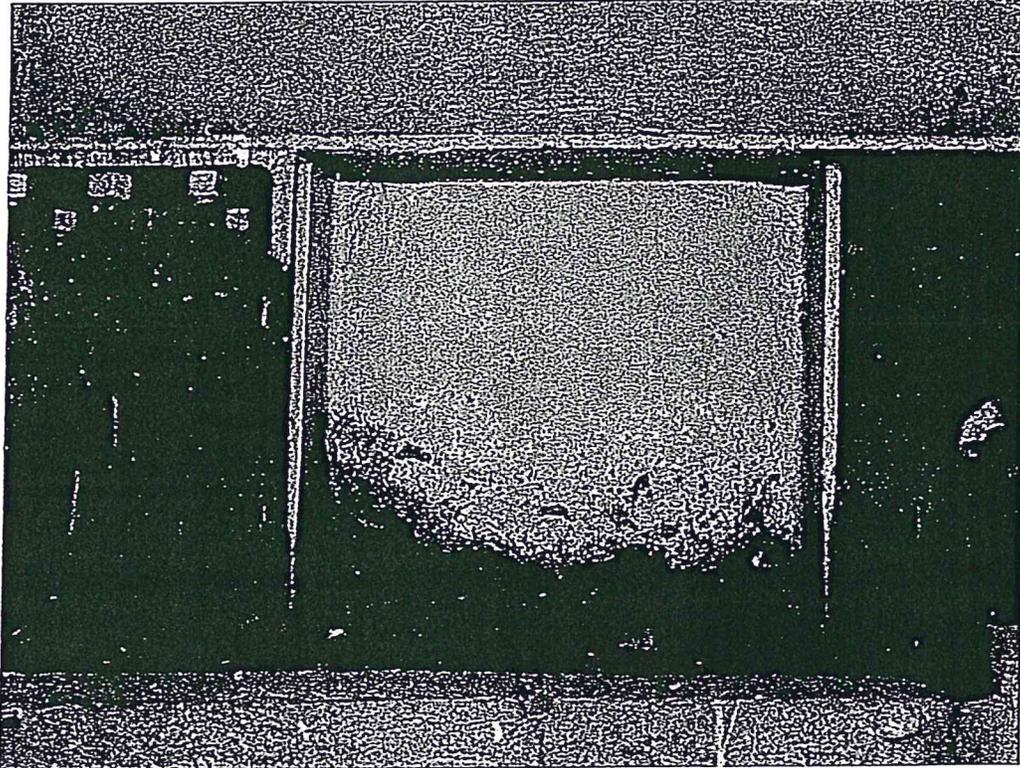


Photo 9: North abutment, bay 1, flood lock with section loss and holes

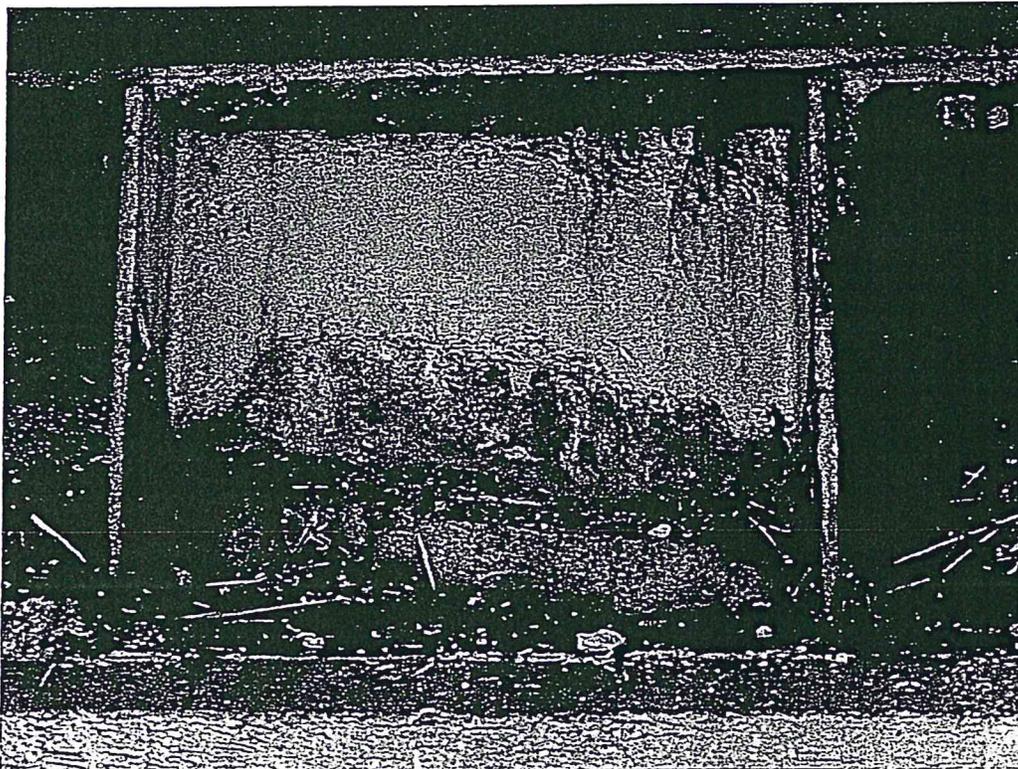


Photo 10: South abutment, bay 1, flood lock with section loss and holes

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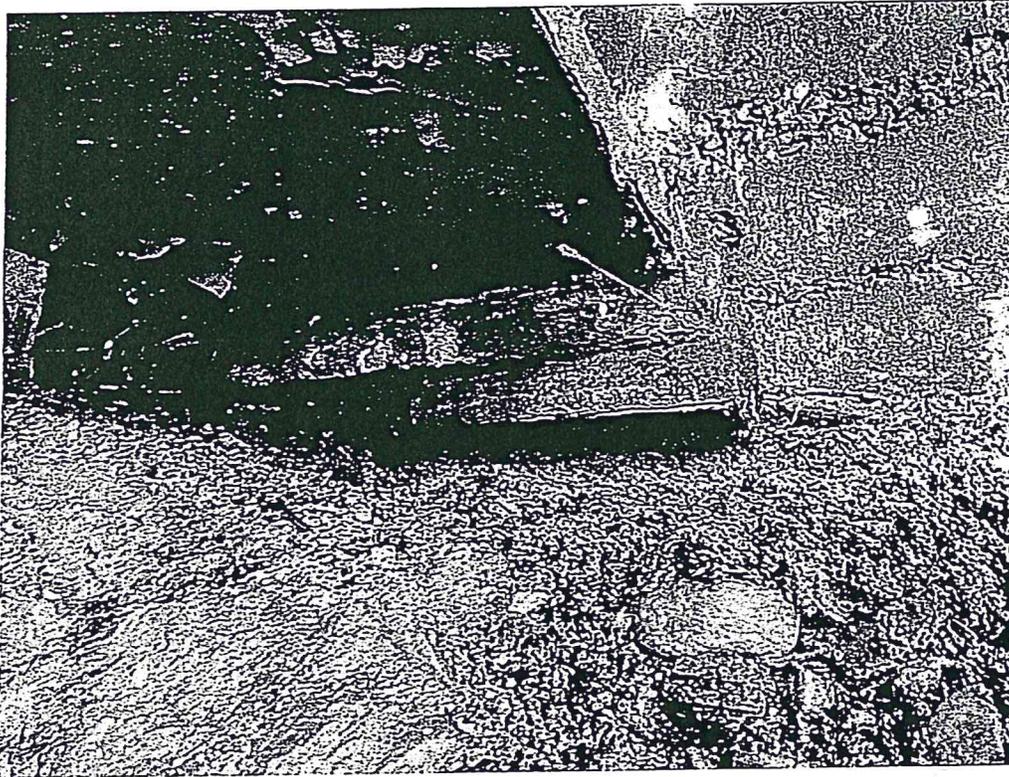
**PHOTOS**

Photo 11: South abutment, bearing 1 with undermining.

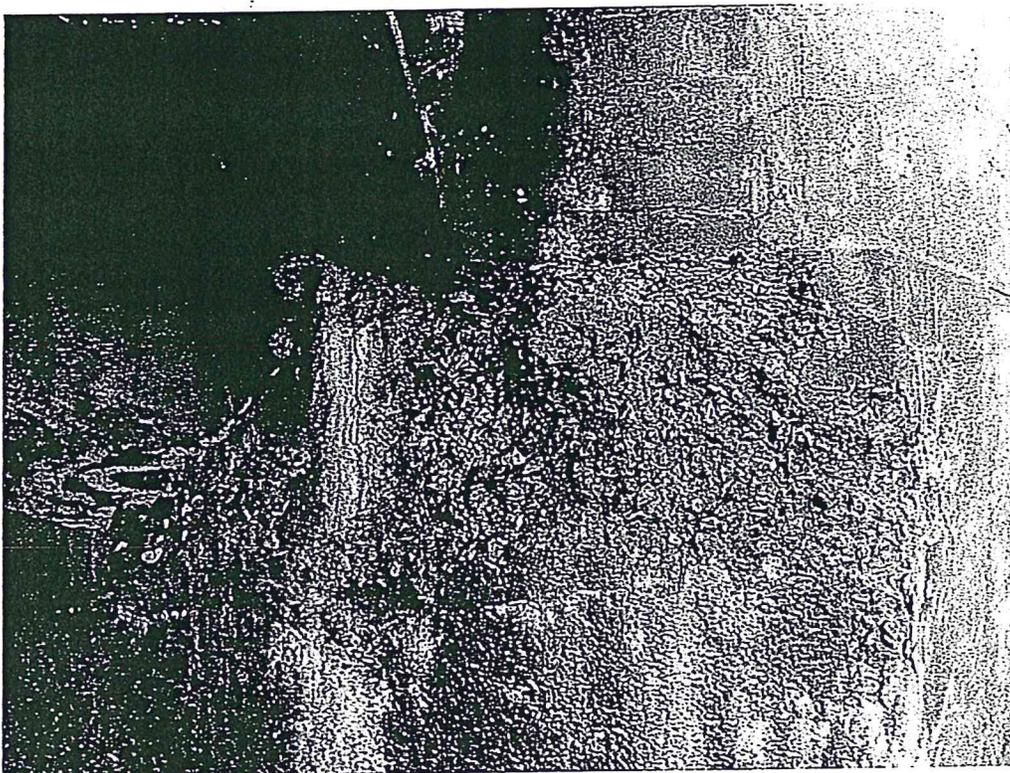


Photo 12: South abutment, below beam 1, with scaling of the seat and breastwall.

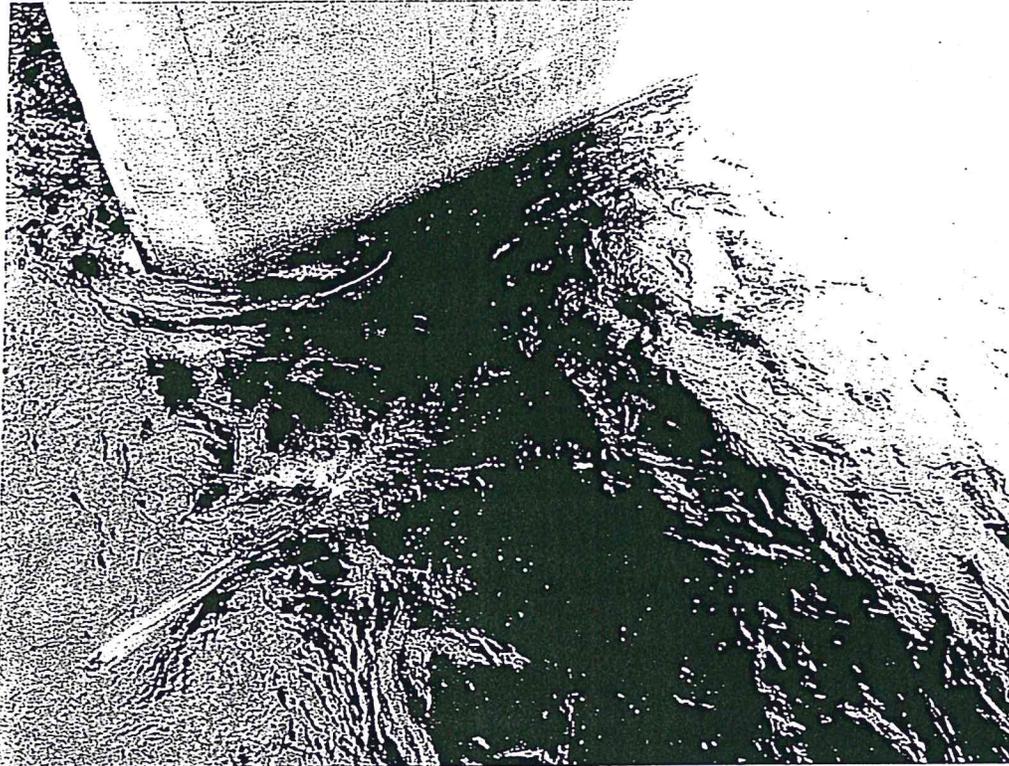
CITY/TOWN  
CHARLEMONTB.I.N.  
0EQBR. DEPT. NO.  
C-05-0108-STRUCTURE NO.  
C05010-0EQ-MUN-NBIINSPECTION DATE  
JUN 19, 2017**PHOTOS**

Photo 13: Debris lodged against pier nose.

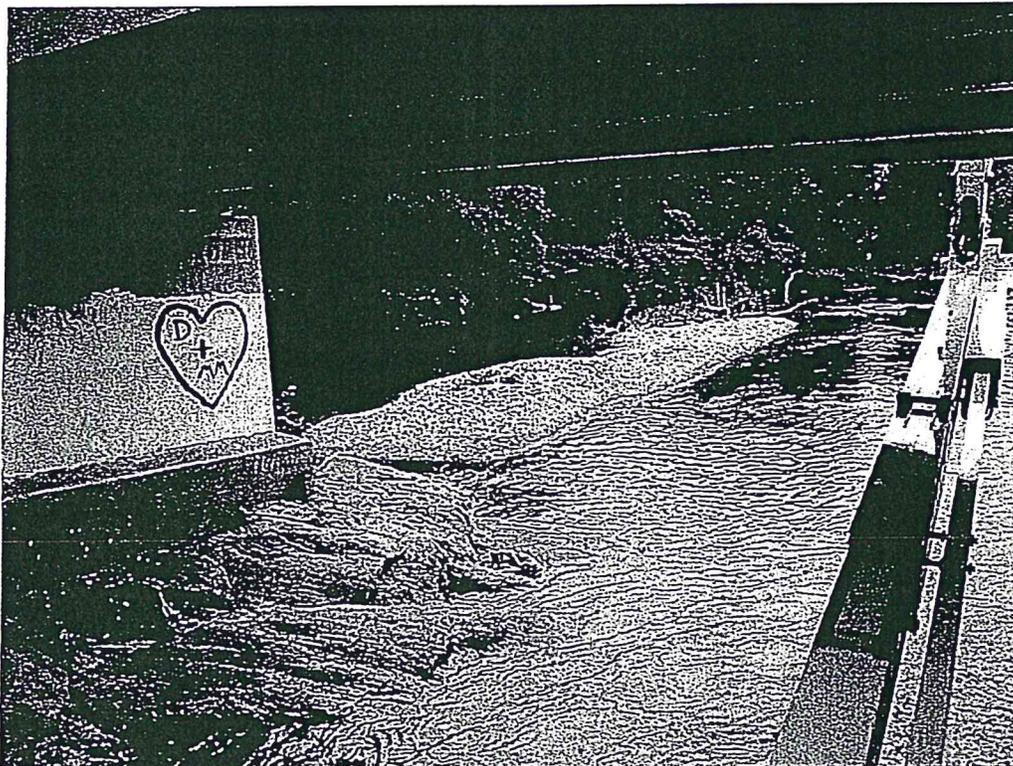


Photo 14: Aggradation bar downstream.



STRUCTURES INSPECTION FIELD REPORT

2-DIST  
01

B.I.N.  
AL6

**ROUTINE INSPECTION**

BR. DEPT. NO.  
C-05-029

CITY/TOWN CHARLEMONT	8.-STRUCTURE NO. C05029-AL6-MUN-NBI	11-Kilo. POINT 001.207	41-STATUS A:OPEN	90-ROUTINE INSP. DATE JUN 5, 2017
07-FACILITY CARRIED HWY MAXWELL RD	MEMORIAL NAME/LOCAL NAME	27-YR BUILT 2001	106-YR REBUILT 0000	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER MAXWELL BROOK	26-FUNCTIONAL CLASS Rural Local	DIST. BRIDGE INSPECTION ENGINEER L. A. Briggs <i>L. A. Briggs</i>		
43-STRUCTURE TYPE 302 : Steel Stringer/Girder	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER M. P.E. McCabe <i>M. McCabe</i>	
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER Cloudy	TEMP. (air) 18°C	TEAM MEMBERS D. STOKES <i>D. Stokes</i>	

<b>ITEM 58</b>	<b>7</b>	
<b>DECK</b>		DEF
1.Wearing surface	7	-
2.Deck Condition	7	-
3.Stay in place forms	7	-
4.Curbs	7	-
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	N	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

<b>ITEM 59</b>	<b>7</b>	
<b>SUPERSTRUCTURE</b>		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	7	-
8.Cover Plates	N	-
9.Bearing Devices	7	-
10.Diaphragms/Cross Frames	7	-
11.Rivets & Bolts	7	-
12.Welds	7	-
13.Member Alignment	7	-
14.Paint/Coating	7	-
15.	N	-

<b>ITEM 60</b>	<b>7</b>			
<b>SUBSTRUCTURE</b>		DEF		
1. Abutments	Dive	Cur	7	
a. Pedestals	N	N		-
b. Bridge Seats	N	7		-
c. Backwalls	N	7		-
d. Breastwalls	N	7		-
e. Wingwalls	N	7		-
f. Slope Paving/Rip-Rap	N	7		-
g. Pointing	N	N		-
h. Footings	N	H		-
i. Piles	N	N		-
j. Scour	N	7		-
k. Settlement	N	7		-
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			N	
a. Pile Caps	N	N		-
b. Piles	N	N		-
c. Diagonal Bracing	N	N		-
d. Horizontal Bracing	N	N		-
e. Fasteners	N	N		-

CURB REVEAL (In millimeters)    E    W  
180    180

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

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):    7

93B-U/W (DIVE) Insp    00/00/0000

X=UNKNOWN

N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE

R=REMOVED

CITY/TOWN CHARLEMONT	B.I.N. AL6	BR. DEPT. NO. C-05-029	8-STRUCTURE NO. C05029-AL6-MUN-NBI	INSPECTION DATE JUN 5, 2017
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**ITEM 61** 7

**CHANNEL & CHANNEL PROTECTION**

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

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

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

93b-UW INSP. DATE:

**ITEM 36 TRAFFIC SAFETY**

	36	COND	DEF
A. Bridge Railing	1	7	-
B. Transitions	0	7	-
C. Approach Guardrail	1	7	-
D. Approach Guardrail Ends	0	7	-

**WEIGHT POSTING** Not Applicable  X

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

Waived Date:  EJDMT Date:

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

**CLEARANCE POSTING**

	E		W		meter
Not	ft	in	ft	in	
Actual Field Measurement		0		0	
Posted Clearance		0		0	

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

**ACCESSIBILITY (Y/N/P)**

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	N	N
Waders	Y	Y
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** 8

**PLANS (Y/N):** Y

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

**TAPE#:** \_\_\_\_\_

List of field tests performed:

**RATING**

Rating Report (Y/N):  Y

Date:

Inspection data at time of existing rating  
I 58: 9 I 59: 9 I 60: 9 Date :06/13/2001

(To be filled out by DBIE)

Request 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 CHARLEMONT	B.I.N. AL6	BR. DEPT. NO. C-05-029	8.-STRUCTURE NO. C05029-AL6-MUN-NBI	INSPECTION DATE JUN 5, 2017
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## REMARKS

### BRIDGE ORIENTATION

Maxwell Road travels north and south. Maxwell Brook flows east to west. This single span structure consists of four weathering steel beams with a composite reinforced concrete deck and an asphalt wearing surface. The bays and beams are numbered from south to north, downstream to upstream, in accordance with the plans. See photos 1 & 2.

### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

The wearing surface in the northbound lane has a transverse crack, 6' long x 1/4" wide, extending from the north saw cut.

The wearing surface has moderate accumulation of sand and vegetation along both curbs

#### Item 58.2 - Deck Condition

In the deck overhangs, below the rail expansion joints, there are minor transverse cracks, full width of the deck overhang.

#### Item 58.4 - Curbs

Both curbs have random vertical hairline cracks.

#### Item 58.8 - Railing

Both rail bases have random vertical hairline cracks.

### APPROACHES

#### Approaches a - Appr. pavement condition

The north approach pavement has moderate accumulation of sand.

### ITEM 59 - SUPERSTRUCTURE

#### Item 59.14 - Paint/Coating

The superstructure is weathering steel.

### ITEM 60 - SUBSTRUCTURE

#### Item 60.1 - Abutments

##### Item 60.1.h - Footings

The footings are hidden by design.

### TRAFFIC SAFETY

#### Item 36a - Bridge Railing

The rails consist of Texas style reinforced concrete rails. Refer to item 58.8 - Railings, for comments.

#### Item 36b - Transitions

The transitions consist of nested three-beam panels, mounted on steel posts with timber blockouts, which are tied into the tapered concrete rail ends. The post spacing is 18" apart.

CITY/TOWN CHARLEMONT	B.I.N. AL6	BR. DEPT. NO. C-05-029	8.-STRUCTURE NO. C05029-AL6-MUN-NBI	INSPECTION DATE JUN 5, 2017
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**REMARKS****Item 36c - Approach Guardrail**

The approach guardrails consist of single steel W-beam panels mounted on steel posts with timber blockouts.

The northwest, southwest, and southeast sections have minor plow damage to the timber blockouts and panels.

**Item 36d - Approach Guardrail Ends**

The southeast approach guardrail has a terminal end swept away from traffic.

The remaining approach guardrails have buried ends not swept away from traffic.

**Photo Log**

Photo 1 : General topside looking south.

Photo 2 : General underside looking south.

CITY/TOWN CHARLEMONT	B.I.N. AL6	BR. DEPT. NO. C-05-029	8.-STRUCTURE NO. C05029-AL6-MUN-NBI	INSPECTION DATE JUN 5, 2017
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**PHOTOS**



Photo 1: General topside looking south.

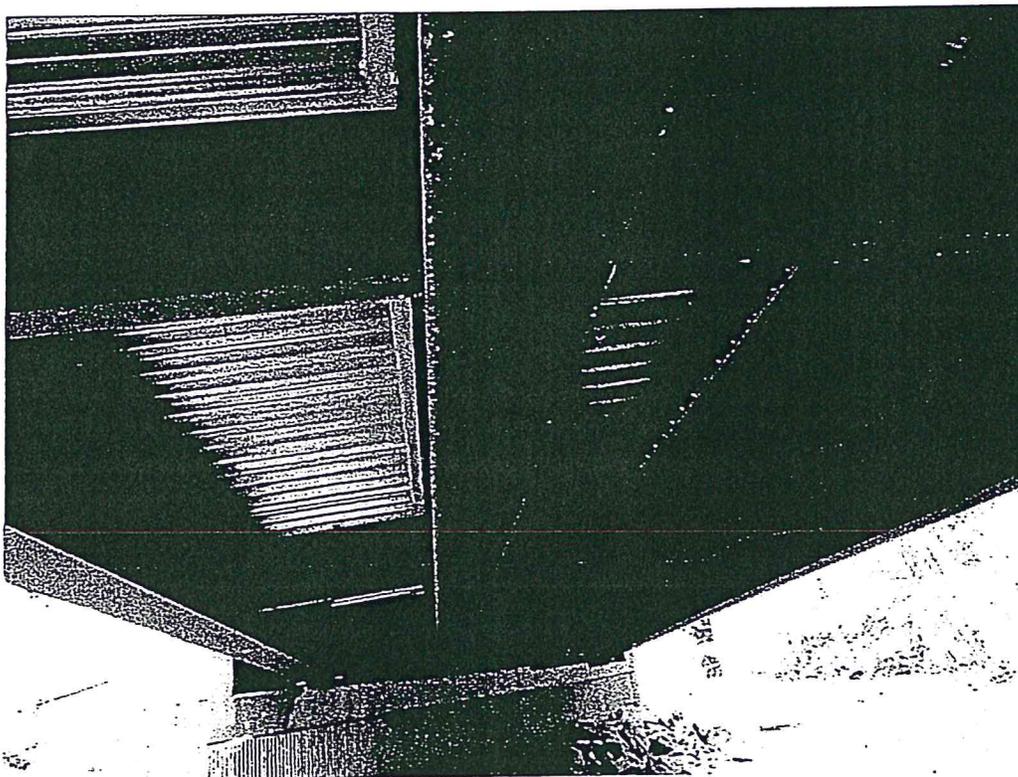


Photo 2: General underside looking south.



STRUCTURES INSPECTION FIELD REPORT

2-DIST 01 B.I.N. AY1

ROUTINE ARCH INSPECTION

BR. DEPT. NO. C-05-049

CITY/TOWN CHARLEMONT	8-STRUCTURE NO. C05049-AY1-MUN-NBI	11-KILO. POINT 000.515	41-STATUS A:OPEN	90-ROUTINE INSP. DATE JUN 5, 2017
07-FACILITY CARRIED HWY BURRINGTON RD	MEMORIAL NAME/LOCAL NAME No. 38 Kinney Lower	27-YR BUILT 2003	106-YR REBUILT 0000	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER HARTWELL BROOK	26-FUNCTIONAL CLASS Rural Local	DIST. BRIDGE INSPECTION ENGINEER L. A. Briggs <i>L. A. Briggs</i>		
43-STRUCTURE TYPE 107 : Concrete Frame	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER M. P.E. McCabe <i>M. McCabe</i>	
107-DECK TYPE N : Not applicable	WEATHER Cloudy	TEMP. (air) 18°C	TEAM MEMBERS D. STOKES <i>D. Stokes</i>	

**ITEM 58** N

**DECK** DEF

1. Wearing surface	7	-
2. Deck Condition	N	-
3. Spandrel Fill	H	-
4. Curbs	7	-
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	N	-
13 Deck Joints	N	-
14	N	-
15	N	-
16	N	-

**ITEM 59** 6

**SUPERSTRUCTURE** DEF

1. Arch/Arch Ring	6	-
2. Keystone Area	N	-
3. Stringers	N	-
4. Floorbeams	N	-
5. Spandrel Walls	8	-
6. Spring Lines	8	-
7. Diaphragms/Cross Frames	N	-
8. Conn Plt's, Gussets & Angles	N	-
9. Pin & Hangers	N	-
10 Masonry Joints	N	-
11. Rivets & Bolts	N	-
12 Welds	N	-
13 Deformation/Flattening	8	-
14 Member Alignment	7	-
15 Paint/Coating	N	-
16	N	-

**ITEM 60** 8

**SUBSTRUCTURE** DEF

<b>1. Abutments</b>		Dive	Cur	8	
a. Pedestals	N	N			-
b. Bridge Seats	N	N			-
c. Backwalls	N	N			-
d. Breastwalls	N	N			-
e. Wingwalls	N	7			-
f. Slope Paving/Rip-Rap	N	7			-
g. Pointing	N	N			-
h. Footings	N	H			-
i. Piles	N	H			-
j. Scour	N	8			-
k. Settlement	N	8			-
l.	N	N			-
m.	N	N			-
<b>2. Piers or Bents</b>				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			-
<b>3. Pile Bents</b>				N	
a. Pile Caps	N	N			-
b. Piles	N	N			-
c. Diagonal Bracing	N	N			-
d. Horizontal Bracing	N	N			-
e. Fasteners	N	N			-

CURB REVEAL (In millimeters) N 190 S 190

**APPROACHES** DEF

a. Appr. pavement condition	7	-
b. Appr. Roadway Settlement	6	M-P
c. Appr. Sidewalk Settlement	N	-
d.	N	-

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

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

Year Painted N

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

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

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

Any Fracture Critical Member: (Y/N) N

Any Cracks: (Y/N) N

UNDERMINING (Y/N) If YES please explain N

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

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

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

CITY/TOWN CHARLEMONT	B.I.N. AY1	BR. DEPT. NO. C-05-049	8-STRUCTURE NO. C05049-AY1-MUN-NBI	INSPECTION DATE JUN 5, 2017
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**ITEM 61** 8

**CHANNEL & CHANNEL PROTECTION**

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

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

ITEM 61 (Dive Report):  N    ITEM 61 (This Report):  8

93b-U/W INSP. DATE:

**ITEM 36 TRAFFIC SAFETY**

	36	COND	DEF
A. Bridge Railing	1	8	-
B. Transitions	0	8	-
C. Approach Guardrail	1	8	-
D. Approach Guardrail Ends	0	6	-

**WEIGHT POSTING**    Not Applicable  X

	H	3	3S2	Single
Actual Posting	<input type="checkbox"/> N	<input type="checkbox"/> N	<input type="checkbox"/> N	<input type="checkbox"/> N
Recommended Posting	<input type="checkbox"/> N	<input type="checkbox"/> N	<input type="checkbox"/> N	<input type="checkbox"/> N

Waived Date:     EJDMT Date:

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

At bridge		Other Advance	
E	W	E	W
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CLEARANCE POSTING**    N    S

Not	ft	in	ft	in	meter
<input checked="" type="checkbox"/> X		0		0	
Actual Field Measurement		0		0	
Posted Clearance		0		0	

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

At bridge		Advance	
N	S	N	S
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**ACCESSIBILITY (Y/N/P)**

	Needs	Used
Lift Bucket	N	N
Ladder	P	N
Boat	N	N
Waders	P	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** 6

**PLANS (Y/N):**  Y

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

**TAPE#:** \_\_\_\_\_

*List of field tests performed:*

**RATING**

Rating Report (Y/N):  Y

Date:

Inspection data at time of existing rating  
 I 58: - I 59: 9 I 60: 9    Date :04/02/2004

(To be filled out by DBIE)

Request 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	Advance 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	Advance 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.

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**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 CHARLEMONT	B.I.N. AY1	BR. DEPT. NO. C-05-049	8.-STRUCTURE NO. C05049-AY1-MUN-NBI	INSPECTION DATE JUN 5, 2017
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## REMARKS

### BRIDGE ORIENTATION

Burrington Road travels east and west. Hartwell Brook flows north to south. This structure consists of four precast concrete rigid arch sections supporting gravel spandrel fill with an asphalt wearing surface. The arch sections are numbered from north to south, upstream to downstream, for ease of inspection. See photos 1 & 2.

### ITEM 58 - DECK

#### Item 58.3 - Spandrel Fill

The spandrel fill is hidden by design.

#### Item 58.4 - Curbs

Both curbs have random areas of minor scaling and vertical hairline cracks.

### APPROACHES

#### Approaches b - Appr. Roadway Settlement

The northeast approach embankment, at the concrete rail end, has an area of erosion, 1' wide x 3' long x 1' deep.

### ITEM 59 - SUPERSTRUCTURE

#### Item 59.1 - Arch/Arch Ring

The underside has evidence of leakage between the arch sections.

All four arch sections have several transverse hairline cracks at mid-span. At the fascias, these cracks run vertically up the arch ring. See photo 3.

Both the east and west ends have minor chipping and scaling around the picking holes.

#### Item 59.14 - Member Alignment

Between sections 1 & 2, there is minor horizontal and vertical displacement.

### ITEM 60 - SUBSTRUCTURE

#### Item 60.1 - Abutments

##### Item 60.1.e - Wingwalls

The northwest wingwall has one vertical hairline crack above the weep hole, 3' high.

The southeast wingwall, at the bottom, near the center, has a vertical hairline crack, 6' high.

The northeast wingwall, at the bottom, near the center, has a vertical hairline crack, 42" high.

The southwest wingwall has a vertical hairline crack, 30" high.

##### Item 60.1.h - Footings

The footings are hidden by design.

CITY/TOWN CHARLEMONT	B.I.N. AY1	BR. DEPT. NO. C-05-049	8.-STRUCTURE NO. C05049-AY1-MUN-NBI	INSPECTION DATE JUN 5, 2017
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## REMARKS

### Item 60.1.i - Piles

The piles are hidden by design.

### TRAFFIC SAFETY

### Item 36a - Bridge Railing

The bridge rails consist of concrete Texas style railings. Refer to item 58.8 - Railings, for comments.

### Item 36b - Transitions

The transitions consist of nested steel thrie-beam panels, which are tied into the tapered concrete bridge rails and mounted on steel posts with timber blockouts. The post spacing is 18" apart.

### Item 36c - Approach Guardrail

The approach guardrails consist of a single steel W-beam panels, which are mounted on steel posts with timber blockouts. The post spacing is 6' apart.

### Item 36d - Approach Guardrail Ends

The east approach guardrails have steel terminal ends, which are not swept away from traffic.

The west approach guardrails have buried ends, which are not swept away from traffic. Both of the buried ends have minor collision damage.

### Photo Log

- Photo 1 : General topside looking east.
- Photo 2 : General underside looking west.
- Photo 3 : Typical transverse cracking in the arch panels.

CITY/TOWN  
CHARLEMONT

B.I.N.  
AY1

BR. DEPT. NO.  
C-05-049

8-STRUCTURE NO.  
C05049-AY1-MUN-NBI

INSPECTION DATE  
JUN 5, 2017

**PHOTOS**

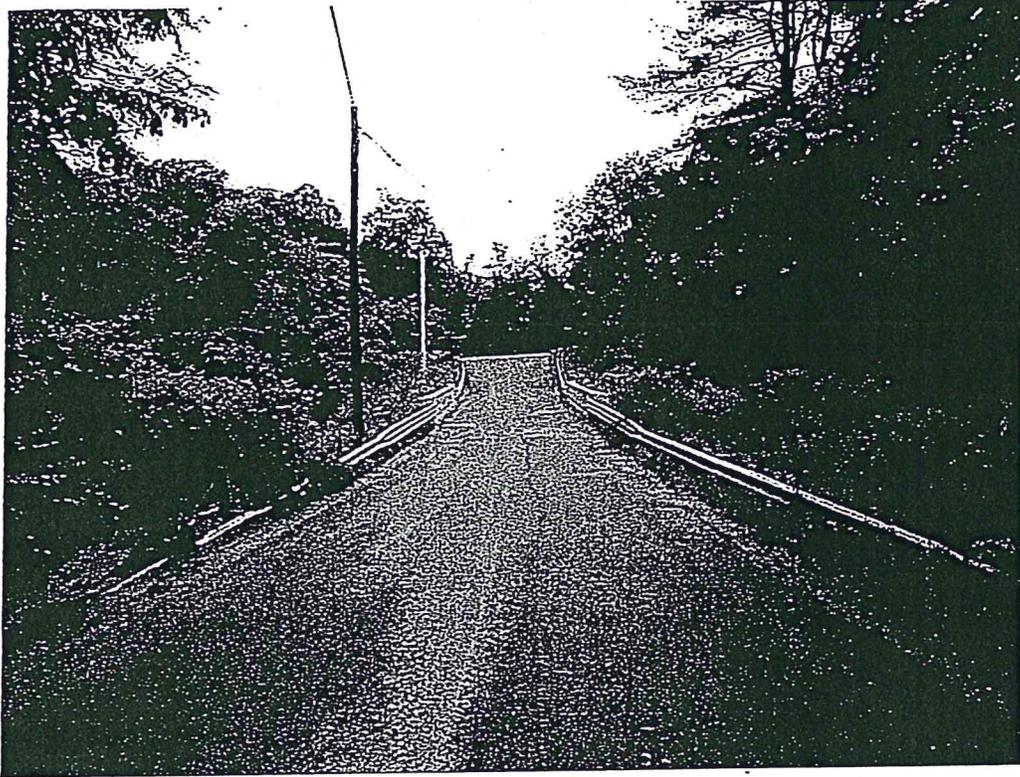


Photo 1: General topside looking east.

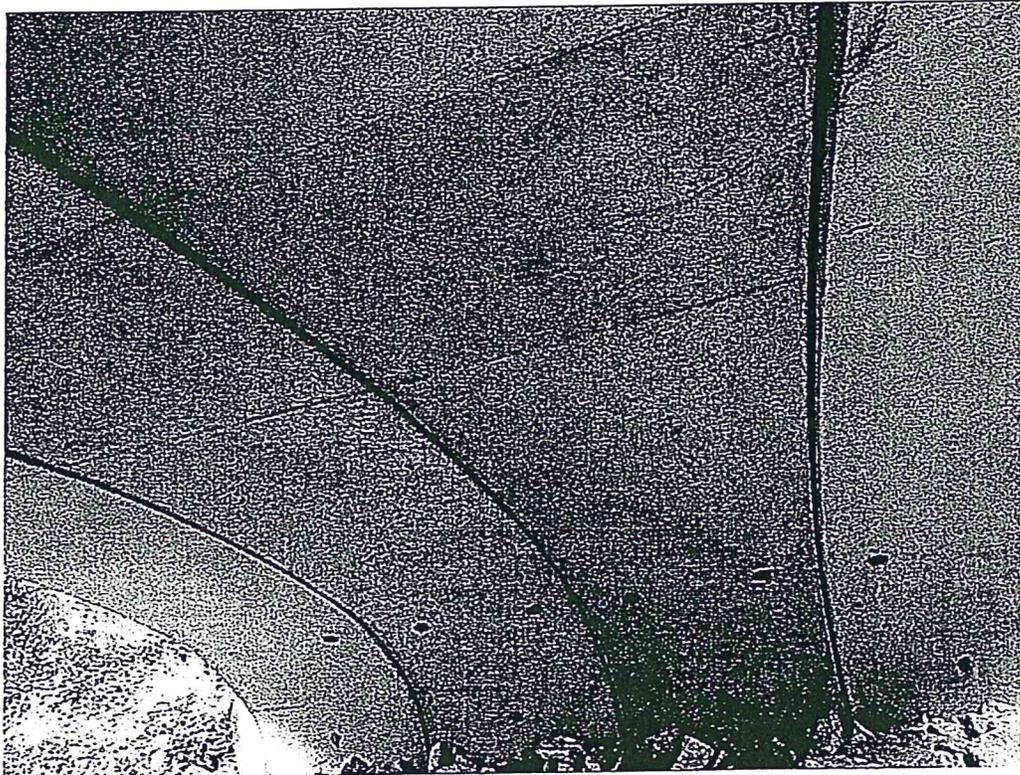


Photo 2: General underside looking west.

CITY/TOWN CHARLEMONT	B.I.N. AY1	BR. DEPT. NO. C-05-049	8.-STRUCTURE NO. C05049-AY1-MUN-NBI	INSPECTION DATE JUN 5, 2017
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**PHOTOS**



Photo 3: Typical transverse cracking in the arch panels.



Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Stephanie Pollack, Secretary & CEO  
Jonathan L. Gulliver, Acting Highway Administrator



September 27, 2017

RECEIVED  
OCT 03 2017

Town of Charlemont  
Board of Selectmen  
P.O. Box 677 / 157 Main St.  
Charlemont, MA 01339

Attn: Gordon Hathaway, Highway Superintendent

SUBJECT: BRI - BRIDGE INSPECTION REPORTS

C-05-028 (53F)

MAXWELL RD / MAXWELL BROOK

Dated: 06/13/17

C-05-030 (5DK)

MAXWELL RD / MAXWELL BROOK

Dated: 06/05/17

Dear Mr. Hathaway:

Massachusetts General Laws Chapter 85 Section 35 considers any structure on a public highway that has a span in excess of ten feet to be a bridge. Structures that meet the Massachusetts definition of a bridge but not the FHWA definition (i.e. greater than 10 feet up to and including 20 feet) have a designation of BRI in the bridge inventory and have been recently included as part of the Massachusetts Bridge Inspection Program.

MassDOT - Highway Division has performed inspections of the above referenced "BRI" bridges. Copies of the recent bridge inspection field reports are enclosed for your records for the referenced municipally owned bridges.

Repair, rehabilitation or reconstruction of any bridges to address the deficiencies reported is the owner/custodian's responsibility. Chapter 90 funds may be used for these purposes.

Questions regarding the content of the reports may be directed to the District Bridge Inspection Engineer, Laurie A. Briggs, at (413) 637-5783.

Sincerely,

Francisca R. Heming  
District 1 Highway Director

LAB/lab  
cc: AKB, LAB, BridgeLen  
Enclosure

SECRET

NOV 19 1950

---

2-DIST 01 B.I.N. 53F

**STRUCTURES INSPECTION FIELD REPORT**  
**CLOSED/REHABILITATION INSPECTION**

BR. DEPT. NO. C-05-028

CITY/TOWN CHARLEMONT	8-STRUCTURE NO. C05028-53F-MUN-BRI	11-Kilo. POINT 001.802	90-ROUTINE INSP. DATE JUN 13, 2017	93*- INSPECTION DATE JUN 13, 2017	
07-FACILITY CARRIED HWY MAXWELL RD	MEMORIAL NAME/LOCAL NAME		27-YR BUILT 1939	106-YR REBUILT 0000.	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER MAXWELL BROOK	26-FUNCTIONAL CLASS Rural Local	DIST. BRIDGE INSPECTION ENGINEER L. A. Briggs <i>Lance A. Briggs</i>			
43-STRUCTURE TYPE 302 : Steel Stringer/Girder	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER, M. RE. McCabe <i>Michael McCabe</i>		
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER Sunny	TEMP: (air) 25°C	TEAM MEMBERS David Stokes		

<b>ITEM 58</b> DECK	4	<b>ITEM 41</b> STRUCTURE OPEN, POSTED OR CLOSED			
<b>ITEM 59</b> SUPERSTRUCTURE	3	K:CLOSED		Date:	12/29/2015
<b>ITEM 60</b> SUBSTRUCTURE	6	<b>ITEM 36</b> TRAFFIC SAFETY			
<b>ITEM 60</b> - (From U/W Report)	N			TOTAL HOURS	6
<b>ITEM 61</b> CHANNEL	6			PLANS (Y/N)	N
<b>ITEM 61</b> - (From U/W Report)	N			(V.C.R.) (Y/N)	N
<b>ITEM 62</b> CULVERT	N			TAPE#:	
<b>ITEM 62</b> - (From U/W Report)	N				
		Pedestrian Access (Y/N) <input checked="" type="checkbox"/>		Barricades In Place (Y/N) <input checked="" type="checkbox"/>	
		Roadway Abandoned (Y/N) <input type="checkbox"/>		TYPE: JERSEY	

**SIGNS** Not Applicable

Legend: Bridge Closed

Signs In Place (Y=Yes, N=No, NR=Not Required)

Legibility/Visibility

At bridge		Advance	
N	S	N	S
N	N	N	Y
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*To be filled out by District Bridge Inspection Engineer*

1) This bridge is scheduled for:

Replacement ( ) Rehabilitation ( ) Repair ( ) Removal ( ) Unknown (X)

2) If under construction please answer the following:

Contract Number:	Amount:	Completion Date:
Contractor:		Resident Engineer:
Scope of Work:		
Remarks:		

**ACCESSIBILITY** (Y/N)

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

CITY/TOWN CHARLEMONT	B.I.N. 53F	BR. DEPT. NO. C-05-028	8-STRUCTURE NO. C05028-53F-MUN-BRI	INSPECTION DATE JUN 13, 2017
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## REMARKS

### BRIDGE ORIENTATION

Maxwell Road travels north and south. Maxwell Brook flows from west to east. This single span structure consists of six steel beams, spaced at 36", with a 5.5" thick reinforced concrete deck. The beams and bays are numbered from west to east, upstream to downstream, for ease of inspection.

### GENERAL REMARKS

The south "Advanced Warning" sign consists of a steel 2' x 3' "BRIDGE CLOSED" sign. See photo 1.

The south advanced barrier is approximately 50' past the last driveway before the closed structure. The previously noted "Advanced Warning" sign, consisting of a paper "Road Closed" sign stapled to one of the wooden barricades in this area, is missing. See photo 2.

The previously noted north "Advanced Warning" sign, consisting of a cardboard "Road Closed" sign stapled to a wooden barricade, is missing. See photo 3.

The previously noted north "At Bridge" sign, consisting of a paper "Road Closed" sign stapled to a wooden barricade, is missing. See photo 4.

The "At Bridge" barrier consists of a single Jersey Barrier placed on the structure at mid-span. See photo 4.

### TRAFFIC SAFETY

#### Item 36a - Bridge Railing

The bridge railing consists of single W-beam panels mounted on steel posts and plastic spacers.

The east railing, at the north end, is detached from the first post on the structure. The W-beam panels are dented and bent in this area.

#### Item 36b - Transitions

The transitions consist of single W-beam panels mounted on steel posts and plastic spacers. The post spacing is 6'.

The northeast panels are disconnected from the posts and bent.

#### Item 36c - Approach Guardrail

The approach guardrails consist of single W-beam panels mounted on steel posts and plastic spacers. The post spacing is 6'.

The northeast panels are disconnected from the posts and bent.

#### Item 36d - Approach Guardrail Ends

The approach guardrail ends consist of terminal ends.

The northeast end is disconnected from the last post and bent up and away.

CITY/TOWN CHARLEMONT	B.I.N. 53F	BR. DEPT. NO. C-05-028	8.-STRUCTURE NO. C05028-53F-MUN-BRI	INSPECTION DATE JUN 13, 2017
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**REMARKS****Photo Log**

- Photo 1 : South advanced signage at the Maxwell Road / Route 8A intersection.
- Photo 2 : South advance barrier and wooden barricade. Note, vehicle tracks around the barricade.
- Photo 3 : North advance barricades at the Maxwell Road / Hicks Road intersection. Note the missing signage.
- Photo 4 : North "At Bridge" barrier placed on structure. Note the missing signage.

CITY/TOWN CHARLEMONT	B.I.N. 53F	BR. DEPT. NO. C-05-028	8-STRUCTURE NO. C05028-53F-MUN-BRI	INSPECTION DATE JUN 13, 2017
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**PHOTOS**

Photo 1: South advanced signage at the Maxwell Road / Route 8A intersection.

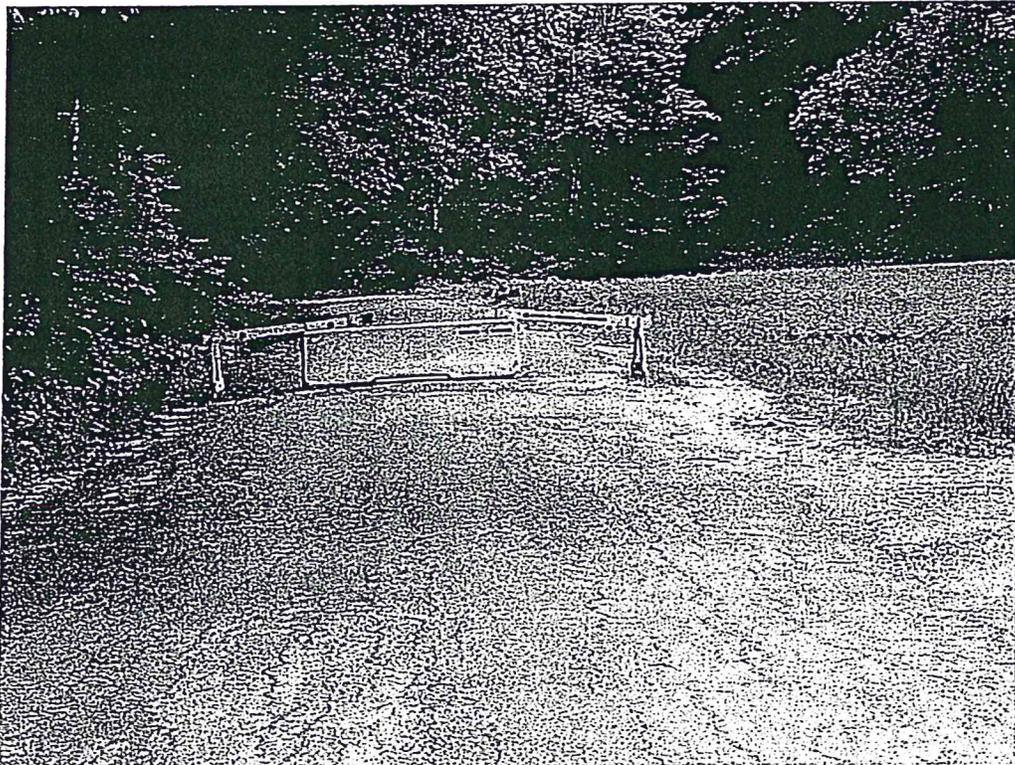
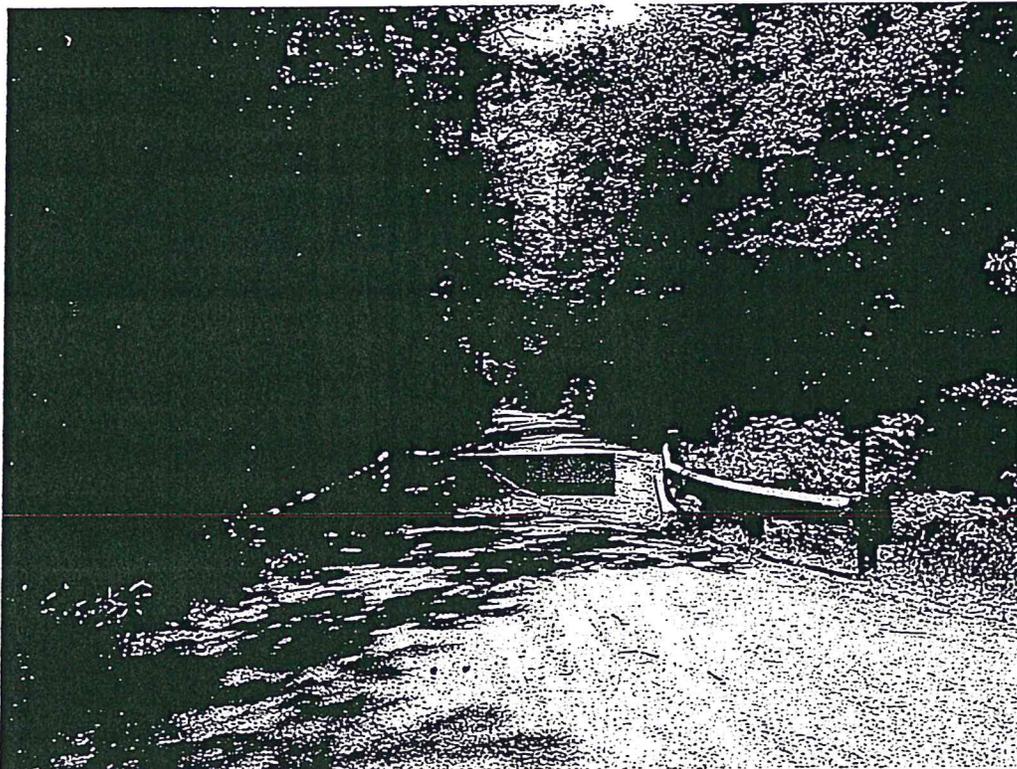


Photo 2: South advance barrier and wooden barricade. Note, vehicle tracks around the barricade.

CITY/TOWN CHARLEMONT	B.I.N. 53F	BR. DEPT. NO. C-05-028	8.-STRUCTURE NO. C05028-53F-MUN-BRI	INSPECTION DATE JUN 13, 2017
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**PHOTOS**

**Photo 3:** North advance barricades at the Maxwell Road / Hicks Road intersection. Note the missing signage.



**Photo 4:** North "At Bridge" barrier placed on structure. Note the missing signage.



2-DIST 01 B.I.N. 5DK

**STRUCTURES INSPECTION FIELD REPORT**  
**ROUTINE & SPECIAL MEMBER INSPECTION**

BR. DEPT. NO. C-05-030

CITY/TOWN CHARLEMONT		8-STRUCTURE NO. C05030-5DK-MUN-BRI		11-Kilo. POINT 000.837	41-STATUS A:OPEN	90-ROUTINE INSP. DATE JUN 5, 2017
07-FACILITY CARRIED HWY MAXWELL RD		MEMORIAL NAME/LOCAL NAME		27-YR BUILT 1939	106-YR REBUILT 0000	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER MAXWELL BROOK		26-FUNCTIONAL CLASS Rural Local		DIST. BRIDGE INSPECTION ENGINEER L. A. Briggs <i>L. A. Briggs</i>		
43-STRUCTURE TYPE 302 : Steel Stringer/Girder		22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER M. P. E. McCabe <i>Michael McCabe</i>		
107-DECK TYPE 1 : Concrete Cast-in-Place		WEATHER Cloudy	TEMP. (air) 18°C	TEAM MEMBERS D. STOKES <i>D. Stokes</i>		

**ITEM 58** 6

**DECK** DEF

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

E      W

CURB REVEAL (In millimeters) 180 180

**ITEM 59** 3

**SUPERSTRUCTURE** DEF

1. Stringers	N	-
2. Floorbeams	N	-
3. Floor System Bracing	N	-
4. Girders or Beams	3	S-A
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	4	S-A
10. Diaphragms/Cross Frames	6	-
11. Rivets & Bolts	N	-
12. Welds	N	-
13. Member Alignment	7	-
14. Paint/Coating	4	S-P
15.	N	-

Year Painted X

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

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

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

Any Fracture Critical Member: (YIN) N

Any Cracks: (YIN) N

**ITEM 60** 4

**SUBSTRUCTURE** DEF

<b>1. Abutments</b>		Dive	Cur	4	DEF
a. Pedestals	N	N			-
b. Bridge Seats	N	N	7		-
c. Backwalls	N	N	6		-
d. Breastwalls	N	N	6		-
e. Wingwalls	N	N	6		-
f. Slope Paving/Rip-Rap	N	N			-
g. Pointing	N	N			-
h. Footings	N	N	6		-
i. Piles	N	N			-
j. Scour	N	N	4		S-A
k. Settlement	N	N	4		S-A
l.	N	N			-
m.	N	N			-
<b>2. Piers or Bents</b>				N	DEF
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			-
<b>3. Pile Bents</b>				N	DEF
a. Pile Caps	N	N			-
b. Piles	N	N			-
c. Diagonal Bracing	N	N			-
d. Horizontal Bracing	N	N			-
e. Fasteners	N	N			-

UNDERMINING (YIN) If YES please explain Y

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

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

I-60 (Dive Report): N I-60 (This Report): 4

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

**APPROACHES** DEF

a. Appr. pavement condition	5	M-P
b. Appr. Roadway Settlement	6	-
c. Appr. Sidewalk Settlement	N	-
d.	N	-

**OVERHEAD SIGNS** (YIN) N

(Attached to bridge)

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

CITY/TOWN CHARLEMONT	B.I.N. 5DK	BR. DEPT. NO. C-05-030	8-STRUCTURE NO. C05030-5DK-MUN-BRI	INSPECTION DATE JUN 5, 2017
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**ITEM 61** 4

**CHANNEL & CHANNEL PROTECTION**

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

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

ITEM 61 (Dive Report):  N    ITEM 61 (This Report):  4

93b-U/W INSP. DATE:

**ITEM 36 TRAFFIC SAFETY**

	36 COND		DEF
A. Bridge Railing	0	2	S-A
B. Transitions	0	0	S-A
C. Approach Guardrail	0	0	S-A
D. Approach Guardrail Ends	0	0	S-A

**WEIGHT POSTING**    *Not Applicable*  X

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

Waived Date:  EJDMT Date:

At bridge    Other Advance  
Signs In Place (Y=Yes, N=No, NR=Not Required):  

N	S

N	S

Legibility/Visibility:

**CLEARANCE POSTING**    E    W    meter

Not  X    ft    in    ft    in    meter  
Actual Field Measurement:       
Posted Clearance:

At bridge    Advance  
Signs In Place (Y=Yes, N=No, NR=Not Required):  

E	W

E	W

Legibility/Visibility:

**ACCESSIBILITY (Y/N/P)**

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

**TOTAL HOURS**

**PLANS (Y/N):**  Y

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

**TAPE#:** \_\_\_\_\_

List of field tests performed:

**RATING**

Rating Report (Y/N):  Y

Date:

Inspection data at time of existing rating  
158: 6 159: 3 160: 4 Date :12/28/2015

**(To be filled out by DBIE)**

Request 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].

STRUCTURES INSPECTION FIELD REPORT

ROUTINE & SPECIAL MEMBER INSPECTION

2-DIST 01 B.I.N. 5DK

BR. DEPT. NO. C-05-030

CITY/TOWN CHARLEMONT	8.-STRUCTURE NO. C05030-5DK-MUN-BRI	11-Kilo. POINT 000.837	90-ROUTINE INSP. DATE Jun 5, 2017	93*-SPEC. MEMB. INSP. DATE Jun 5, 2017	
07-FACILITY CARRIED HWY MAXWELL RD	MEMORIAL NAME/LOCAL NAME		27-YR BUILT 1939	106-YR REBUILT 0000	*YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER MAXWELL BROOK	26-FUNCTIONAL CLASS Rural Local	DIST. BRIDGE INSPECTION ENGINEER L. A. Briggs			
43-STRUCTURE TYPE 302 : Steel Stringer/Girder	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER M. P.E. McCabe <i>Michael McCabe</i>		
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER Cloudy	TEMP. (air) 18°C	TEAM MEMBERS D. STOKES		

WEIGHT POSTING *Not Applicable*  X

Actual Posting:  N  N  N  N

Recommended Posting:  N  N  N  N

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

At bridge:  N  S

Advance:  N  S

Signs In Place (Y=Yes, N=No, NR=Not Required):

Legibility/Visibility:

PLANS (Y/N):  Y

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

TAPE#: \_\_\_\_\_

RATING

Rating Report (Y/N):  Y Date: 10/01/2016

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

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

Inspection data at time of existing rating  
I 58: 6 I 59: 3 I 60: 4 I 62: - Date: 12/28/2015

REASON: \_\_\_\_\_

SPECIAL MEMBER(S):

	MEMBER	CRACK (Y/N):	WELD'S CONDITION (0-9)	LOCATION OF CORROSION, SECTION LOSS (%), CRACKS, COLLISION DAMAGE, STRESS CONCENTRATION, ETC.	CONDITION		INV. RATING OF MEMBER FROM RATING ANALYSIS			Deficiencies
					PREVIOUS	PRESENT	H-20	3	3S2	
					(0-9)	(0-9)				
A	Item 59.4 - Girders or Beams	N		See remarks in comments section.	3	3	82	123	195	S-A
B	Item 60.1.j - Scour	N		See remarks in comments section.	4	4	Not Rated			S-A
C	Item 60.1.k - Settlement	N		See remarks in comments section.	4	4	Not Rated			S-A
D										
E										

List of field tests performed: \_\_\_\_\_

(Overall Previous Condition)

I-58	I-59	I-60	I-62
6	3	4	-

(Overall Current Condition)

I-58	I-59	I-60	I-62
6	3	4	-

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

CATEGORIES OF DEFICIENCIES:

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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].

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## REMARKS

### BRIDGE ORIENTATION

Maxwell Road travels north and south. Maxwell Brook flows west to east. This structure consists of six steel beams supporting a reinforced concrete deck with a bituminous wearing surface. The beams and bays are numbered west to east, upstream to downstream, for the ease of inspection. See photos 1 & 2.

### GENERAL REMARKS

There is one concrete Jersey barrier in place along the west curb restricting traffic from beam 1. The horizontal roadway clearance is 12' 6" wide. See photo 1.

### ITEM 58 - DECK

#### Item 58.1 - Wearing surface

The wearing surface has cracking and patched areas, full width x full length. See photo 1.

#### Item 58.2 - Deck Condition

The underside of the deck, has minor spalls and hairline cracks with efflorescence, in various areas.

#### Item 58.8 - Railing

All the wood rails are missing. See photo 1.

The southeast concrete corner post is broken off. The southwest post is cracked at the bottom and is loose. See photo 1.

### APPROACHES

#### Approaches a - Appr. pavement condition

Both approaches have cracking and patched areas, full width x full length. See photo 1.

#### Approaches b - Appr. Roadway Settlement

Both approaches have minor wheel rutting.

### ITEM 59 - SUPERSTRUCTURE

#### Item 59.4 - Girders or Beams

The beam ends, at both abutments, are encased in the concrete backwall, full height.

Beams 1 & 4, at the south end, were not accessible due to water depth from scour. There is severe delamination in the web and flanges, visible from mid-span.

On beams 1 & 6, the bottom flanges are knife edge, full length. In the web, near mid-span at the top, there are areas of holes, up to 1" high x 4' long. See sketches 1 & 6 and photos 3 & 4.

Beams 3 - 5, at both ends, have holes in the bottom and top of the web, extending out up to 24" long. Some have holes along the backwall encasement, full height. See sketches 3 - 5 and photo 5.

#### Item 59.9 - Bearing Devices

All bearings have severe rusting and section loss.

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## REMARKS

### Item 59.10 - Diaphragms/Cross Frames

All concrete diaphragms have minor scaling in various areas.

### Item 59.14 - Paint/Coating

The protective coating is no longer effective.

## ITEM 60 - SUBSTRUCTURE

### Item 60.1 - Abutments

#### Item 60.1.c - Backwalls

The backwalls have minor scaling in various areas.

#### Item 60.1.d - Breastwalls

The south breastwall, under beam 4, has a diagonal crack, 1/2" wide at the bottom to hairline at the top. See photo 6.

#### Item 60.1.e - Wingwalls

The wingwalls have various areas of moderate mapcracking with efflorescence.

The southwest cheekwall, at the top, has a horizontal crack, 1" wide x full width.

The northeast wingwall, in the cheekwall area, has an area of minor scaling, 1" high x 8" long.

#### Item 60.1.h - Footings

The north footing is hidden by design.

The south footing is exposed full length. Under bay 1, there is a vertical crack, 3/4" wide x full height. See photos 6 & 7.

#### Item 60.1.j - Scour

The south abutment footing is exposed, full length x up to full height under beams 1 - 3. See photos 6 & 7.

#### Item 60.1.k - Settlement

Refer to Items 60.1.d - Breastwalls and 60.1.h - Footings for comments.

### SubStructure Undermining Notes

The south footing is undermined, from the nose of the west wingwall, to under bay 4. The undermining exceeds the 36" probe that was used. An exact measurement could not be determined due to limited accessibility because of the water depth. See photos 6 & 7.

### SubStructure Scour Notes

Refer to Item 60.1.j - Scour for comments.

## ITEM 61 - CHANNEL AND CHANNEL PROTECTION

### Item 61.1 - Channel Scour

The stream favors the south side of the channel. The channel has severe scour along the southwest wingwall to below bay 2, up to 6' deep, in comparison with the plans. See photo 7.

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## REMARKS

### Item 61.2 - Embankment Erosion

The southwest embankment has eroded, 30' long x 5' high x up to 4' deep.

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

At the northwest embankment, some of the rip-rap has fallen into the channel.

### Item 61.7 - Aggradation

The north half of the channel, under the bridge, has gravel buildup, up to 2' high x full length. See photo 7.

## TRAFFIC SAFETY

### Item 36a - Bridge Railing

The bridge rails consist of reinforced concrete posts. The timber rails are missing. Refer to Item 58.8 Railing for comments. See photo 8.

### Item 36b - Transitions

The transitions consist of reinforced concrete posts, many are tipped or broken off. The timber rails are missing. See photo 8.

### Item 36c - Approach Guardrail

There are no approach guardrails in place.

### Item 36d - Approach Guardrail Ends

There are no approach guardrail ends in place.

## Sketch / Photo Log

- Sketch 1 : Beam 1.
- Sketch 2 : Beam 2.
- Sketch 3 : Beam 3.
- Sketch 4 : Beam 4.
- Sketch 5 : Beam 5.
- Sketch 6 : Beam 6.
- Photo 1 : General topside looking north.
- Photo 2 : General underside looking south.
- Photo 3 : Deterioration of beam 1 at mid span.
- Photo 4 : Deterioration of beam 6.
- Photo 5 : Typical beam end deterioration. Beam 5 at the north end shown.
- Photo 6 : South abutment settlement cracks in the wall and footing.
- Photo 7 : Overall view of the south abutment scour.
- Photo 8 : Condition of the approach guardrails and bridge rails.

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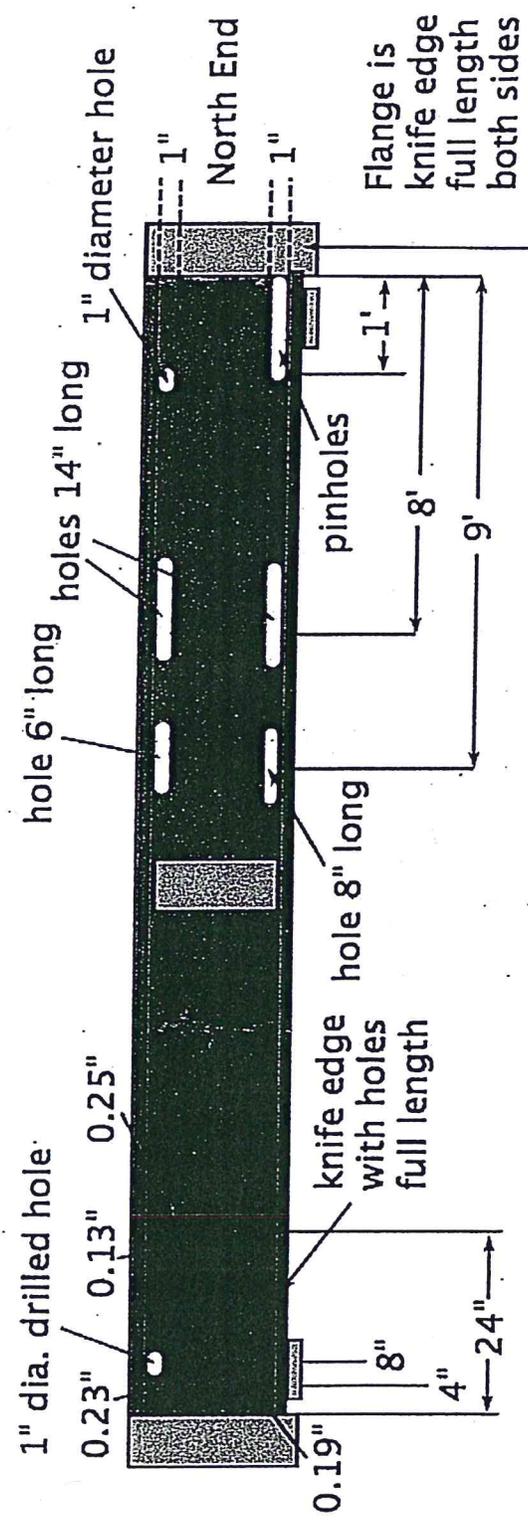
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SKETCHES

# Beam 1 East Elevation



Original Section = 21" WF 59#  
 Original Flange = 0.58"  
 Original Web = 0.39"  
 Not to Scale

Reinforced Concrete  
 encasement (typical at both beam ends)  
 full height x 8" wide x full width of the bay

Sketch 1: Beam 1.

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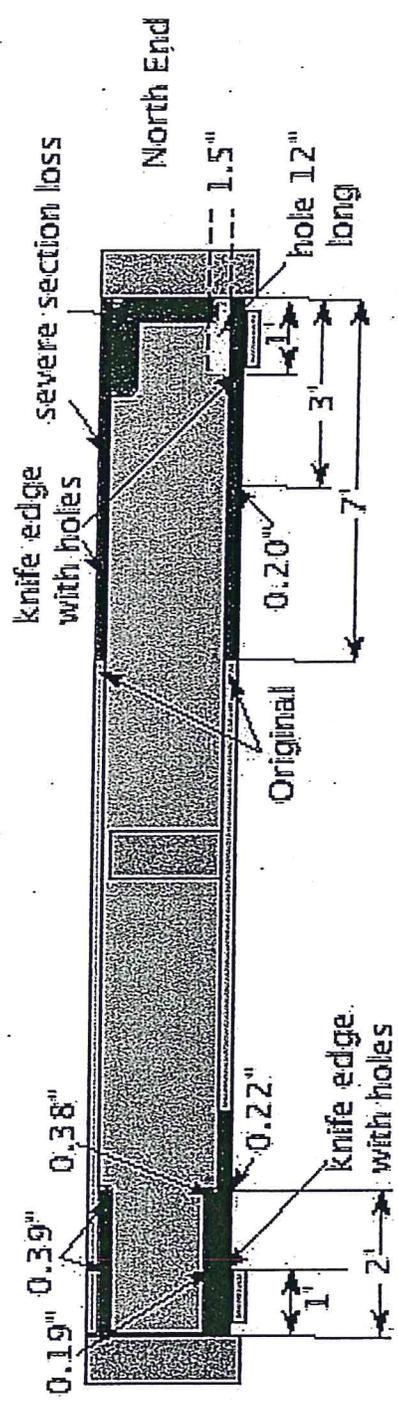
BR. DEPT. NO.  
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**SKETCHES**

**Beam 2  
East Elevation**



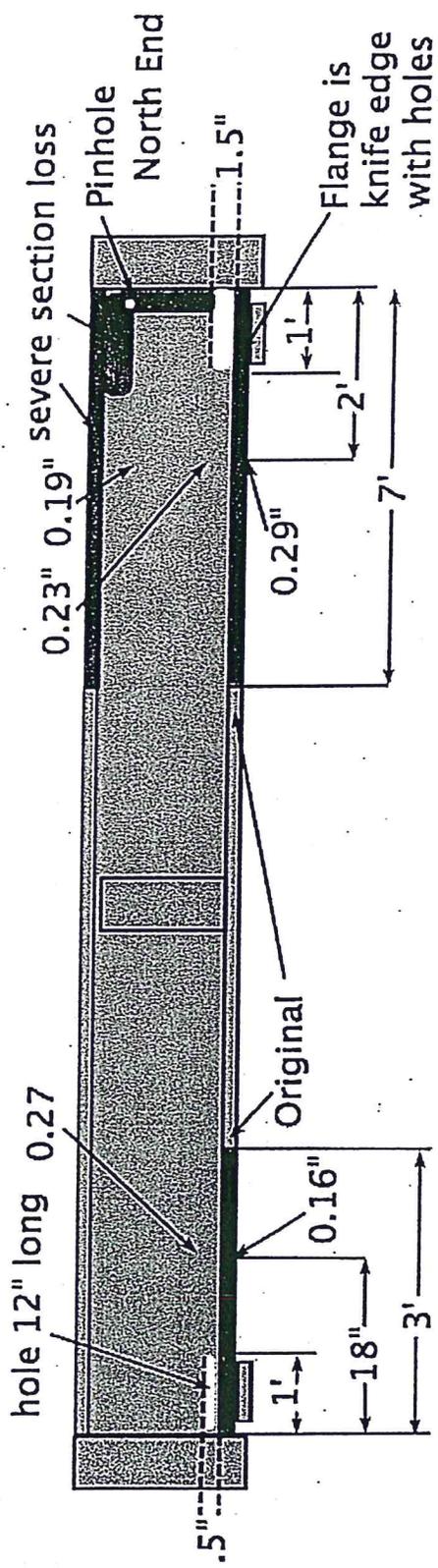
Original Section = 21" WF 59#  
 Original Flange = 0.58"  
 Original Web = 0.39"  
 Not to Scale

Sketch 2: Beam 2.

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**SKETCHES**

### Beam 3 East Elevation



Original Section = 21" WF 59#  
 Original Flange = 0.58"  
 Original Web = 0.39"  
 Not to Scale

Sketch 3: Beam 3.

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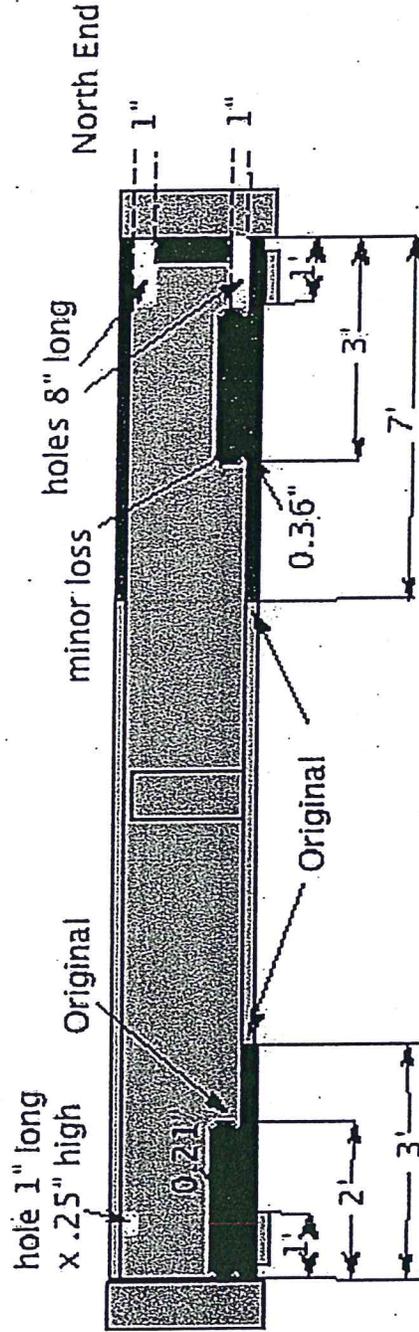
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**SKETCHES**

**Beam 4  
West Elevation**



Both flanges knife edge  
with holes @ bearing face

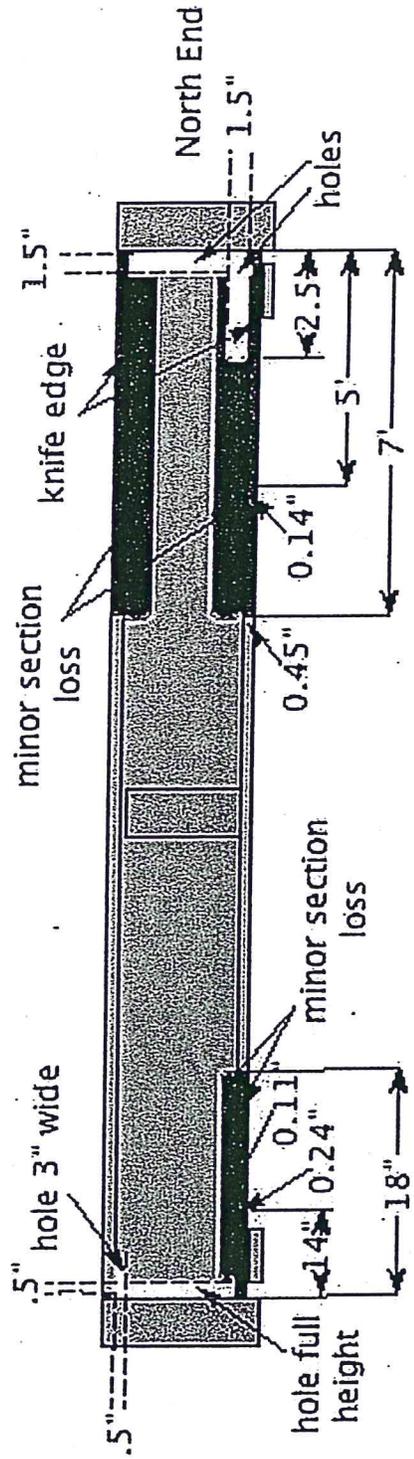
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Original Flange = 0.58"  
Original Web = 0.39"  
Not to Scale

Sketch 4: Beam 4.

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**SKETCHES**

**Beam 5  
West Elevation**



Original Section = 21" WF 59#  
 Original Flange = 0.58"  
 Original Web = 0.39"  
 Not to Scale

Sketch 5: Beam 5.



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**PHOTOS**



Photo 1: General topside looking north.

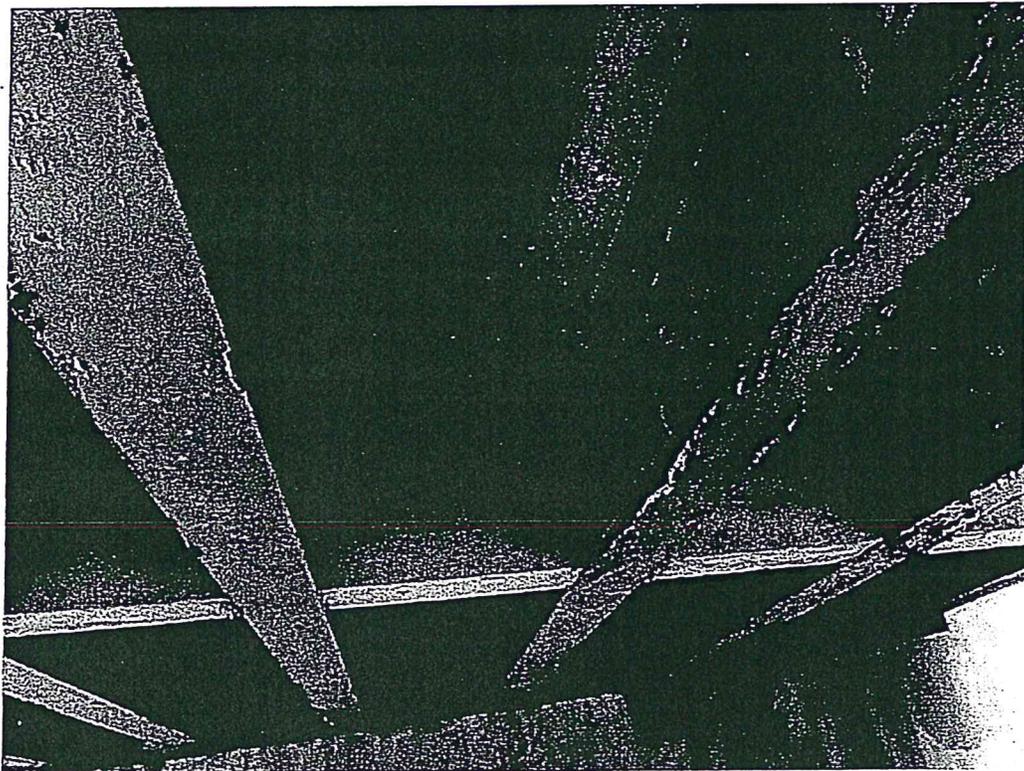


Photo 2: General underside looking south.

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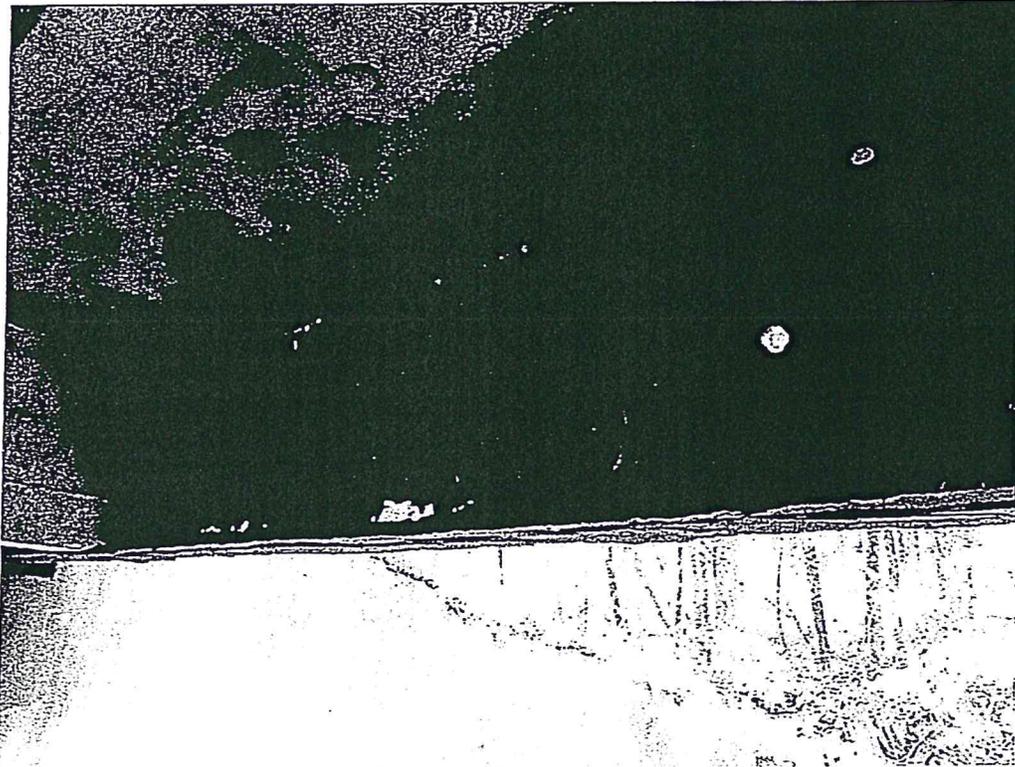
**PHOTOS**

Photo 3: Deterioration of beam 1 at mid span.

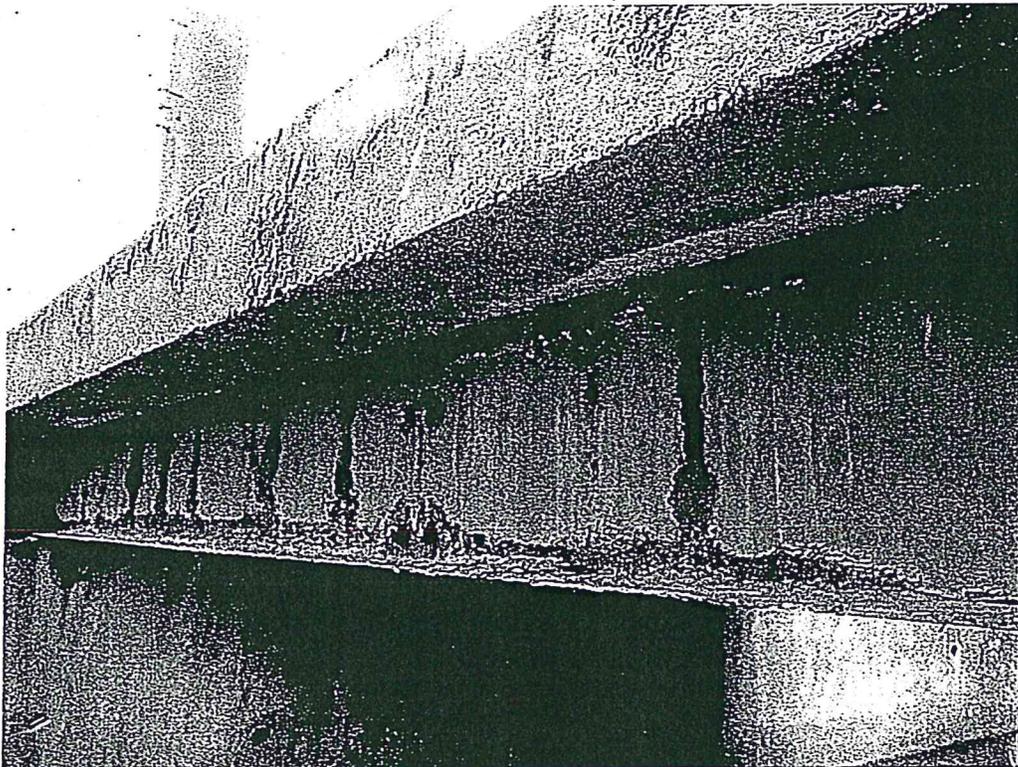


Photo 4: Deterioration of beam 6.

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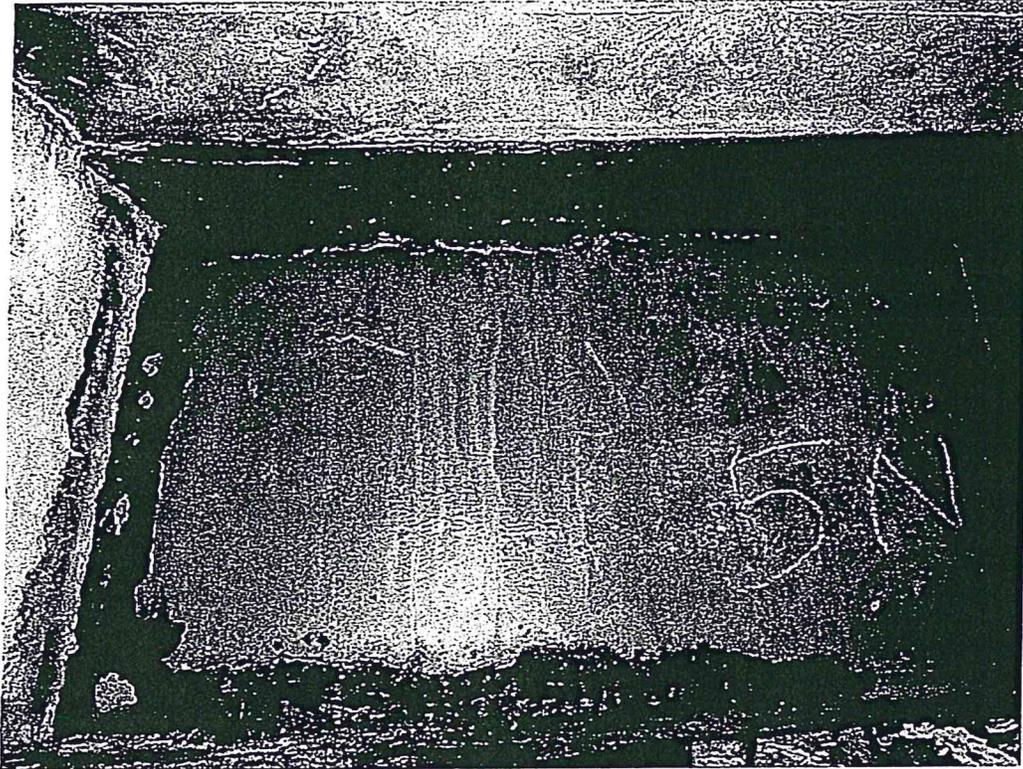
**PHOTOS**

Photo 5: Typical beam end deterioration. Beam 5 at the north end shown.



Photo 6: South abutment settlement cracks in the wall and footing.

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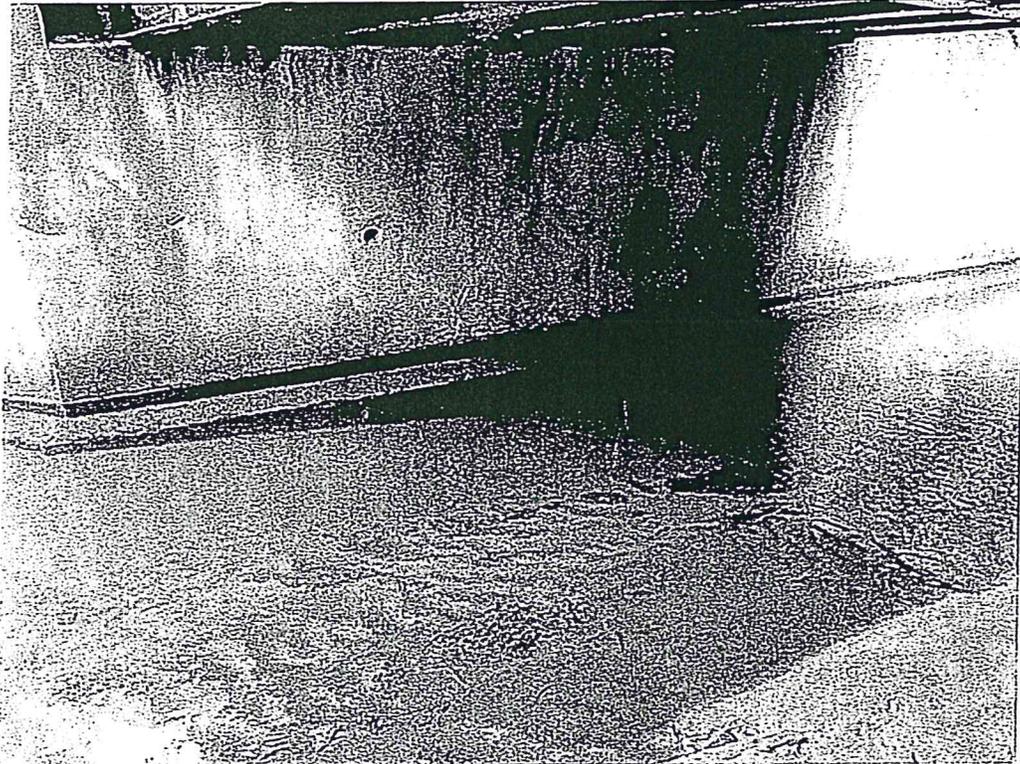
**PHOTOS**

Photo 7: Overall view of the south abutment scour.

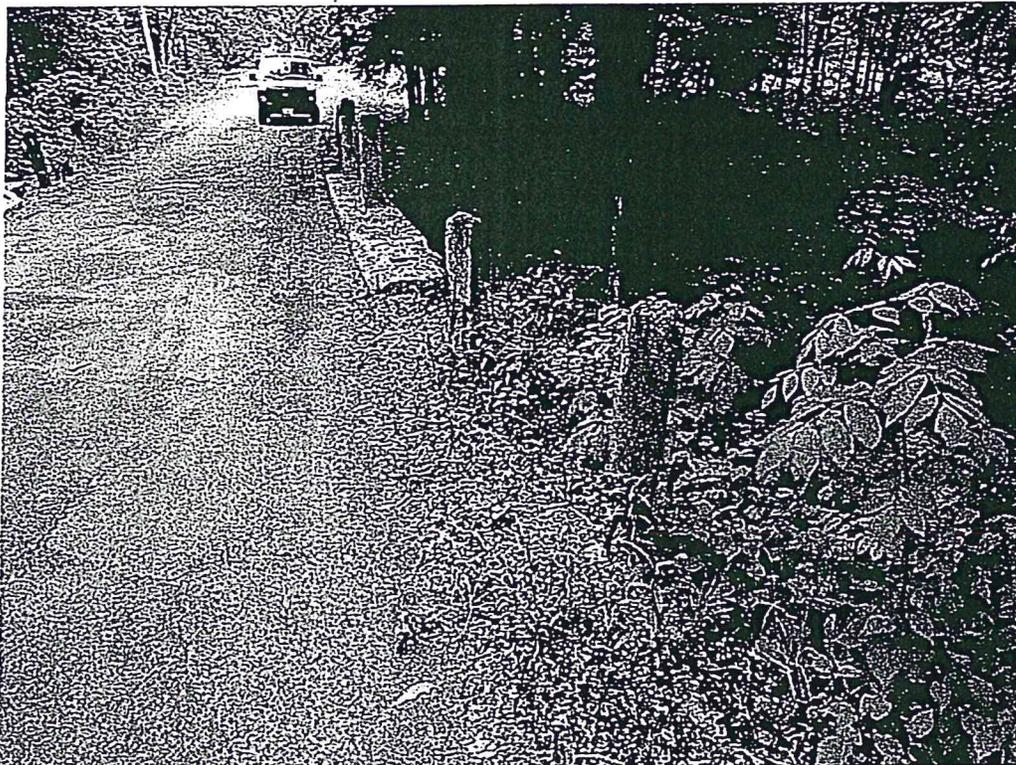


Photo 8: Condition of the approach guardrails and bridge rails.

**administrator@townofcharlemont.org**

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**From:** Sarah <sarah.reynolds@townofcharlemont.org>  
**Sent:** Thursday, September 28, 2017 11:39 AM  
**To:** administrator@townofcharlemont.org  
**Subject:** Firefighters grants

Peg-

Doug was saying the other night that he thought whoever we were going to get to replace him should be the one doing the grants and planning as soon as possible, we also had a great discussion with the department as to the possibility of seeing if someone like the town of Heath would be ok with a shared chief for administrative duties etc, if e have grant opportunities that we need to submit before then we should add that to the October 16th agenda and see what we can come up with for a process - I am in meetings and have an event today so it is hard to call- thanks Sarah

Sent from my iPhone



**administrator@townofcharlemont.org**

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**From:** marguerite.willis@townofcharlemont.org  
**Sent:** Sunday, October 8, 2017 1:07 PM  
**To:** administrator@townofcharlemont.org  
**Cc:** selectboard@townofcharlemont.org  
**Subject:** Re: appoint a Historical Commission member

Plz place on next agenda the location of the hut. I spoke w/Bill Harker as mentioned at 10-6 meeting. I am prepared to share his thoughts.

Marguerite

On 2017-10-06 09:32, administrator@townofcharlemont.org wrote:

> Relative to the conversation around where to place the broadband hut  
> at the joint budget meeting was whether the Historical Commission  
> wants to chime in on the location. Because of the two vacancies,  
> adding appoint Historical Commission member to the Select Board  
> agenda.  
>  
> Peg Dean, MPA  
>  
> Town Administrator  
>  
> PROUDLY SERVING THE TOWN OF CHARLEMONT  
>  
> (413) 339-4335 X 8  
>  
> administrator@townofcharlemont.org  
>  
> www.charlemont-ma.us [1]  
>  
> \_Please be advised that the Secretary of the Commonwealth has  
> determined that all email messages and attached content sent from and  
> to this email address are public records unless qualified as an  
> exemption under the Massachusetts Public Records Law (MGL c.4 §  
> 7(26)).\_  
>  
>  
>  
> Links:  
> -----  
> [1] <http://www.charlemont-ma.us/>



**administrator@townofcharlemont.org**

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**From:** Edmund Donnelly <donna1y@masstech.org>  
**Sent:** Wednesday, October 11, 2017 4:03 PM  
**To:** Bob Handsaker  
**Cc:** Larkin, Peter (SEA); Ennen, William (EOHED); selectboard@charlemont-ma.us  
**Subject:** MBI's Flexible Grant Program  
**Attachments:** Charlemont Town Opt In Letter 10-10-17.pdf

Bob,

I hope this email finds you well. As you know, MBI published a Notice of Funding Availability through a targeted Flexible Grant Program on October 5<sup>th</sup>. Please find attached a copy of a letter to your town relative to this program and your town's potential participation in it. A hard copy of this letter was mailed yesterday. If you or any other Selectboard members have any questions after reviewing this letter, please do not hesitate to contact me, Peter Larkin or Bill Ennen, both of whom I have copied on this email.

Best,  
Ed

Edmund Donnelly  
Massachusetts Broadband Institute  
A Division of the Massachusetts Technology Collaborative  
75 North Drive, Westborough, MA 01581  
(508) 870-0312 ext. 443

