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## ITEM 61 — CHANNEL & CHANNEL PROTECTION — 5

| | Dive | Cur | DEF |
|---|---|---|---|
| 1.Channel Scour | N | 5 | M-P |
| 2.Embankment Erosion | N | 7 | - |
| 3.Debris | N | 7 | - |
| 4.Vegetation | N | 6 | - |
| 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 ( X ) Low ( ) None ( )

***ITEM 61 (Dive Report):*** N ***ITEM 61 (This Report):*** 5

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

## 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 | 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:** 00/00/0000 **EJDMT Date:** 00/00/0000

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

## CLEARANCE POSTING

***Not*** X Actual Field Measurement

Posted Clearance

| | N ft | N in | S ft | S in | meter |
|---|---|---|---|---|---|
| | | 0 | | 0 | |
| | | 0 | | 0 | |

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

## 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** 12

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

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

**TAPE#:** _____

***List of field tests performed:***

## RATING

Rating Report (Y/N): N

Date: 00/00/0000

Inspection data at time of existing rating

I 58: - I 59: - I 60: - 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 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].

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# REMARKS

**BRIDGE ORIENTATION**
Baptist Corner Road travels east and west. Drakes Brook flows from north to south. This single span structure consists of a stone masonry arch, which has been widened to the south with a concrete slab, supporting fill, with an asphalt wearing surface. Report notes are taken from south to north, downstream to upstream, in accordance with the 2015 Bridge Inspection Handbook. **See Sketch 1 and Photos 1 & 2.**

**ITEM 58 - DECK**

**Item 58.3 - Spandrel Fill**
The spandrel fill is hidden by design.

**Item 58.8 - Railing**
In the south railing, the west post is tipped towards the road, with a gap under the baseplate, up to 1-1/4" high. **See Photo 3.**

**ITEM 59 - SUPERSTRUCTURE**

**Item 59.1 - Arch/Arch Ring**
Throughout the arch, there are damp areas and widespread efflorescence along the mortar joints.

At 10' from the north end, there is a transverse crack through the mortar joints, full culvert width x 1/16" wide, that extends into the breastwalls. **See Photo 4.**

**Item 59.2 - Keystone Area**
Refer to Item 59.1 - Arch/Arch Ring.

**Item 59.10 - Masonry Joints**
Refer to Items 59.1 - Arch/Arch Ring and 60.1.d - Breastwalls.

**Item 59.16 - Concrete Slab**
On the south fascia, there is moderate scaling, full length x up to full height x 1" deep, with heavy efflorescence. **See Photo 5.**

**ITEM 60 - SUBSTRUCTURE**

**Item 60.1 - Abutments**
**Item 60.1.d - Breastwalls**
Both breastwalls have areas of cracked and missing mortar, leaving voids, up to 22" deep, and loose stones. The worst areas are along the bottoms of the breastwalls. **See Photo 6.**

**Item 60.1.e - Wingwalls**
Both north wingwalls are dry stacked stone. There are areas of minor to moderate bulging. **See Photo 7.**

Both south wingwalls are cast in place concrete. Along the top, there are areas of moderate to severe scaling, up to 2" deep (isolated). At the interface with the breastwalls, at the bottom there is moderate abrasion. **See Photo 5.**

In the southwest wingwall, there is a full height vertical crack, 1/8" wide. Throughout the remaining wall, there is hairline cracking, with efflorescence.

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# REMARKS

**Item 60.1.g - Pointing**
Refer to Item 59.10 - Masonry Joints.

**Item 60.1.h - Footings**
The footings along the concrete breastwalls and both south wingwalls have moderate to severe abrasion. **See Photos 5 & 8.**

**Item 60.1.j - Scour**
Both concrete breastwall footings are exposed, full length. The west is exposed up to 12" high. **See Photo 8.** The east is flush with the streambed.

At the outfall, there is a cast in place concrete weir / sill that is undermined on the downstream face, full width x up to 12" high x up to 24" penetration. **See Photo 5.** The weir has moderate abrasion.

At the downstream end, both concrete wingwall footings are exposed, full length x up to full height. **See Photo 5.** Adjacent to the outfall, the west footing has undermining, 6' wide x up to 4" high x up to 11" penetration. The east footing has undermining, 4' wide x up to 1" high x up to 11" penetration.

**SubStructure Undermining Notes**
Refer to Item 60.1.j - Scour.

**SubStructure Scour Notes**
Refer to Item 60.1.j - Scour.

**ITEM 61 - CHANNEL AND CHANNEL PROTECTION**

**Item 61.1 - Channel Scour**
The downstream channel has a scour pool, approximately 20' diameter x up to 3' deep. This scour pool is causing undermining. **See Photo 5.** Refer to Item 60.1.j - Scour.

For channel profile readings, **refer to Chart 1.**

**Item 61.4 - Vegetation**
In the downstream channel, there is heavy vegetation growth.

There is moderate vegetation growing along the tops of both south wingwalls.

Behind the southeast wingwall, there is a 3' diameter tree.

**TRAFFIC SAFETY**

**Item 36a - Bridge Railing**
The bridge railings consist of single steel W-beam panels, continuous with the approach guardrails, and mounted on steel posts with steel blockouts, bolted to concrete rail bases, and spaced at 6'. **Refer to Item 58.8 - Railing.**

**Item 36b - Transitions**
The transitions consist of single steel W-beam panels, mounted on steel posts with steel blockouts, spaced at 6'.

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# REMARKS

**Item 36c - Approach Guardrail**

The approach guardrail consist of single steel W-beam panels, mounted on steel posts with steel blockouts, spaced at 6'.

**Item 36d - Approach Guardrail Ends**

The northeast and southwest approach guardrails have steel terminal ends not swept away from traffic.

The southeast and northwest approach guardrails have steel terminal ends swept away from traffic.

**Sketch / Chart / Photo Log**

Sketch 1 : Framing Plan.
Chart 1 : Channel profile readings.
Photo 1 : General topside, looking west.
Photo 2 : General underside, looking south.
Photo 3 : Railing post tipped.
Photo 4 : Masonry arch with continuous cracks through mortar and stones.
Photo 5 : Downstream channel with scour pool. Also note scaling in slab fasca and at the top of the wingwalls.
Photo 6 : West masonry breastwall with voids and missing mortar (typical).
Photo 7 : Northeast wingwall with minor bulged areas.
Photo 8 : Exposed west footing in concrete slab section.

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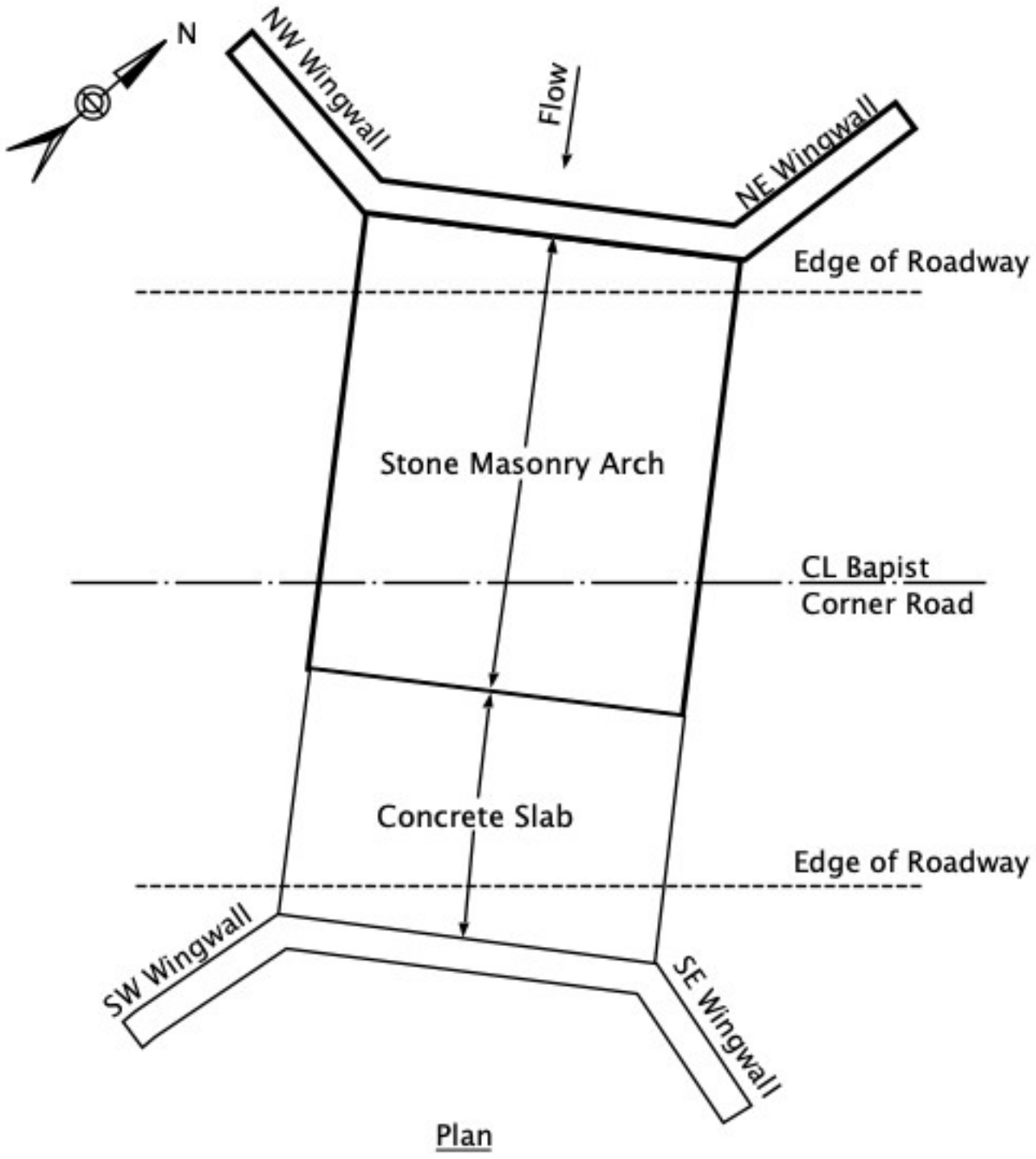
## SKETCHES




**Sketch 1: Framing Plan.**

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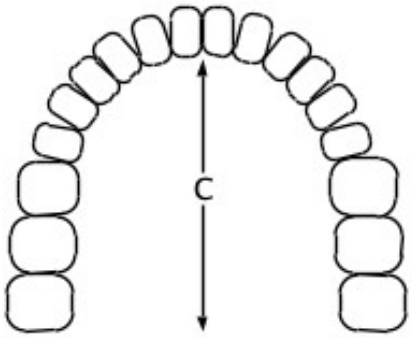
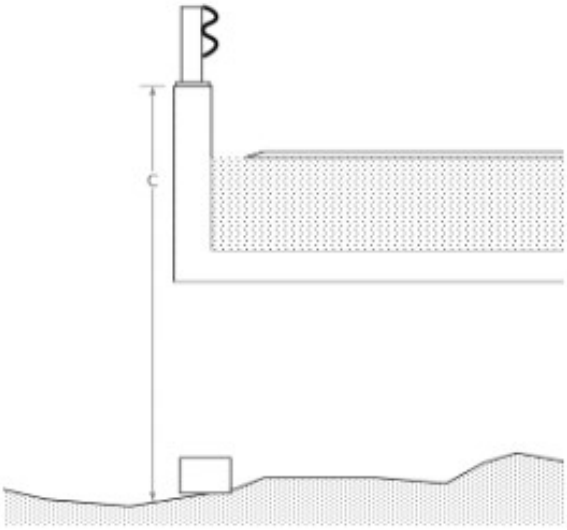
# CHARTS

| DATE | A13041 Channel Profile Readings (ft) | | | |
|---|---|---|---|---|
| | South End | | | North End |
| | West Abutment | Mid-Span | East Abutment | Mid-Span |
| | C | C | C | C |
| **3/21/25** | 17.3 | 17.3 | 17.2 | 11.5 |
| | | | | |
| | | | | |
| | | | | |

Notes:
C = clearance
S = scour
U = undermining




North Elevation
Stone Masonry Arch




South End
Concrete Slab with Weir

**Chart 1: Channel profile readings.**

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# PHOTOS

**Photo 1: General topside, looking west.**

**Photo 2: General underside, looking south.**

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# PHOTOS

**Photo 3: Railing post tipped.**

**Photo 4: Masonry arch with continuous cracks through mortar and stones.**

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# PHOTOS

**Photo 5:** **Downstream channel with scour pool. Also note scaling in slab fasca and at the top of the wingwalls.**

**Photo 6:** **West masonry breastwall with voids and missing mortar (typical).**

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# PHOTOS

**Photo 7: Northeast wingwall with minor bulged areas.**

**Photo 8: Exposed west footing in concrete slab section.**