

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	BRIDGE INSPECTION REPORT B11182021-1	
Date: 10/22/2021	Inspected By: Mike Button	Category: Office - Bridge Office	
BRIDGE INFORMATION			
Site:	1-278 - BEAVER FALLS BROOK BRIDGE		
Route:	100-10	Overall Length:	22.1 m
Year Built:	1972	Est: No	Overall Width: 10 m
Year Last Rehab.:		Est: No	Roadway Width: 8.4 m
Region:	AVALON PENINSULA	Sidewalk Width:	0.8 m
Jurisdiction:	Provincial	Clearance to R.D. or N.W.L.:	2.3 m
Type of Structure:	02 - Double Tee	Max Depth of N.W.L.:	0.5 m
Purpose of Structure:	04 - Over Non-Navigable Waters	Spans:	
Type of Handrail:	02 - Concrete Rail	Span No.:	Length
Roadway Surface:	01 - Concrete	Span No.:	Length
Alignment Vertical:	02 - Adequate	1	10.2
Alignment Horizontal:	02 - Adequate	2	10.2
Restrictions:	No	3	0
		4	0
		5	0
		6	0
BRIDGE PHOTOS			
			
SUBSTRUCTURE			
Condition:	P3 - Poor	Bearings:	P3 - Poor
		Bearing Seat:	P3 - Poor
Comments:	- Southeast wingwall has mild horizontal cracking with efflorescence, F1. The southeast side and corner of the abutment has mild spalling under the creep block with mild cracking with efflorescence throughout, F1. - Southwest wingwall has severe map cracking with efflorescence and a large wide vertical crack appearing to have split the wingwall in half, P3. The construction joint with the abutment has a small corner spall near the top. - The south abutment face is heavily leaking efflorescence through all extension construction joints and from the bearing seat above. Mild vertical cracking also exists throughout the face, P3. - Northeast wingwall has severe cracking with efflorescence throughout with severe disintegration to the top of the wingwall, P3. The northeast side and corner of the abutment has medium spalling undermining the creep block with visible leakage from above, P3. - Northwest wingwall has extreme concrete disintegration and extreme map cracking with efflorescence on the remaining concrete, P1. The northwest side and corner of the abutment has efflorescent deposits along the face but is in fair condition. - The north abutment face has moderate cracking with efflorescence throughout the face, P3. Both faces of the pier have moderate arch like cracking with efflorescence throughout. Upstream and downstream extension joints are opening up. The upstream corbel extension has		

moderate disintegration throughout the nose face. The downstream corbel extension has moderate spalling throughout the tail face with moderate to severe map cracking with efflorescence. The bearing seat has various spalls along the exterior edge. Whole superstructure is in poor condition, P3.

SUPERSTRUCTURE

Condition: F1 - Fair **Expansion Joints:** P3 - Poor
Comments: - Double tees have stirrups showing throughout due to low cover. No visible leakage between panel joints, F1. All expansion joints leaking, P3.

DECK

Condition: F1 - Fair **Curbs:** P3 - Poor
Hand Rail: P3 - Poor **Roadway Condition:** P1 - Poor
Approach Rail: I - Inapplicable
Comments: - No asphalt on structure or approaches. Most of the concrete deck is not visible due to heavy gravel build up on the deck, no visible potholes in the concrete. Gravel on the deck has numerous potholes with significant standing water over the structure, P1. - Heavy gravel build up with mild vegetation growth along and over the curbs which has blocked several deck drains, P1. Roadway curb condition cannot be clearly viewed. - No approach/exit guiderail or hazard markers. - End blocks in fair condition with mild spalls. - Original concrete handrail has several spalls and heavy cracking to both the post and rail, P3. - Both the upstream and downstream fascia's are in fair condition with isolated locations of cracking and efflorescence.

HYDROLOGY

Water Velocity: .6 m/s **Ice Problem:** N - No Problem
Water Depth: .4 m **Scour Problem:** N - No Problem
Waterway: 01 - Adequate **Debris Problem:** N - No Problem
Comments: - No rip-rap on all four structure corners.

REPLACEMENT/REHABILITATION

Next Rehab. Date: **Replacement Year:** 2025
Antic. Rehab. Cost: \$ **Replacement Cost:** \$1,500,000
Recommendations: - Substructure deterioration is extensive and not repairable. Replace the bridge.

OBSERVATIONS

Overall Condition: P3 - Poor **Requires Further Inspection:** No
Additional Observations: - Extension on this structure is upstream, downstream and vertical. Bridge is in a constant state of moisture due to ponding on the bridge deck. - Hazards, mild traffic, steep slopes and negotiating heavy brush.

LEGEND:

Condition Definitions:

- 1 - *Good - [discontinued code].
- 2 - *Fair - [discontinued code].
- 3 - *Poor - [discontinued code].
- 4 - *Unsafe - [discontinued code].
- G - Good.

- F2 - Fair.
- F1 - Fair.
- P3 - Poor.
- P1 - Poor.
- P - Poor.

- C - Unsafe (Closed to Public).
- U - Uninspectable.
- I - Inapplicable.

Problem Definitions:

- N - No Problem.
- P - Possible Problem.
- K - Known Problem.
- NA - Not Applicable.

Category Definitions:

- Maint. - Maintenance.
- Eng. - Engineering.
- Office - Bridge Office.

PHOTO GUIDELINES:

Inspection Photos:

- Please provide photos using guidelines below:
- Any item which inspector feels should be documented by photograph
 - All items noted above as being P3, P1, P, or C
 - Any evidence of known ice, scour, debris, waterway problems

INSPECTION PHOTOS