

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	<b>BRIDGE INSPECTION REPORT</b> <b>B09102021-5</b>	
<b>Date:</b> 8/26/2021	<b>Inspected By:</b> Mike Button	<b>Category:</b> Office - Bridge Office	
<b>BRIDGE INFORMATION</b>			
<b>Site:</b>	1-059 - QUARRY BROOK BRIDGE		
<b>Route:</b>	10	<b>Overall Length:</b>	11.3 m
<b>Year Built:</b>	1967	<b>Est: No</b>	<b>Overall Width:</b> 10.6 m
<b>Year Last Rehab.:</b>	1980	<b>Est: Yes</b>	<b>Roadway Width:</b> 6.1 m
<b>Region:</b>	AVALON PENINSULA		<b>Sidewalk Width:</b> 0.75 m
<b>Jurisdiction:</b>	Provincial		<b>Clearance to R.D. or N.W.L.:</b> 1.7 m
<b>Type of Structure:</b>	02 - Double Tee		<b>Max Depth of N.W.L.:</b> 0.3 m
<b>Purpose of Structure:</b>	04 - Over Non-Navigable Waters		<b>Spans:</b>
<b>Type of Handrail:</b>	01 - Aluminum Rail		<u>Span No.:</u> <u>Length</u> <u>Span No.:</u> <u>Length</u>
<b>Roadway Surface:</b>	02 - Asphalt	1	6    4    0
<b>Alignment Vertical:</b>	01 - Good	2	0    5    0
<b>Alignment Horizontal:</b>	01 - Good	3	0    6    0
<b>Restrictions:</b>	No		
<b>BRIDGE PHOTOS</b>			
<b>SUBSTRUCTURE</b>			
<b>Condition:</b>	P3 - Poor	<b>Bearings:</b>	U - Uninspectable
		<b>Bearing Seat:</b>	U - Uninspectable
<b>Comments:</b>	- Southeast wingwall (location of holes under approach/exit curb on the southeast side) has med-heavy deterioration to wingwall concrete. - Both abutment faces have heavy-wide horizontal cracks throughout with efflorescence. - Efflorescence is running down the face of the north abutment, indicating leaking behind the diaphragms from the deck/expansion joints above. Substructure P3.		
<b>SUPERSTRUCTURE</b>			
<b>Condition:</b>	P1 - Poor	<b>Expansion Joints:</b>	U - Uninspectable
<b>Comments:</b>	- Hole visible through the deck through an old patched deck drain location on the southwest side. Hole mushrooms out below the surface and has made a medium sized cavity between the bottom and top of the deck, P1. An additional hole is also visible through the deck in an old patched deck drain location on the northwest side. Hole mushrooms out below the surface and has made a small sized cavity between the bottom and top of the deck, P1. All other deck drains headed down the same path just less severe at this time. - Heavy leakage/stalactites can be seen between double tee pre-cast panels on the underside of the deck indicating cracking throughout deck concrete, P3. Double tees themselves are still in F1 condition at this time except for the southwest bearing area double tee. This area is extremely deteriorated through the upper portion of the web and through to the bottom with about 1m of the pre-stressing strand exposed on the bottom fiber, P1. Area below a hole in deck.		
<b>DECK</b>			
<b>Condition:</b>	P1 - Poor	<b>Curbs:</b>	P1 - Poor
<b>Hand Rail:</b>	P3 - Poor	<b>Roadway Condition:</b>	P1 - Poor

<b>Approach Rail:</b>	F1 - Fair
<b>Comments:</b>	- Asphalt has medium cracking with potholes forming, F1. - Approach/exit rail in decent condition and attached to end blocks, hazard markers in place. - Southwest end block has been impacted. A tilt toward the west is easily visible. Adjacent handrail also bent and out of position. Fascia and curb also cracked below, P3. - East/west fascias heavily weathered with light cracking, F1. - Curbs have light spalls and light cracking throughout, F1. - Two erosion holes under curb approach/exit on southeast side, curb and end block still supported by large boulders but all fines are washed away below, P1. - See notes from "Superstructure" section of report.

**HYDROLOGY**

<b>Water Velocity:</b>	0.3 m/s	<b>Ice Problem:</b>	P - Possible Problem
<b>Water Depth:</b>	0.3 m	<b>Scour Problem:</b>	P - Possible Problem
<b>Waterway:</b>	01 - Adequate	<b>Debris Problem:</b>	P - Possible Problem
<b>Comments:</b>	- No comment.		

**REPLACEMENT/REHABILITATION**

<b>Next Rehab. Date:</b>		<b>Replacement Year:</b>	2025
<b>Antic. Rehab. Cost:</b>	\$0	<b>Replacement Cost:</b>	\$800000
<b>Recommendations:</b>	- Consider a replacement of the structure. Abutments heavily cracked, heavy leaking between double tee pre-cast panels indicating a cracked and leaking deck. Holes in the deck, a damaged end block with cracked fascia, erosion holes under the southeast curb and a heavily damaged double tee on the southwest side. - Replace with a box culvert, very little flow here.		

**OBSERVATIONS**

<b>Overall Condition:</b>	P1 - Poor	<b>Requires Further Inspection:</b>	No
<b>Additional Observations:</b>	- P3 abutments, upstream handrail, and suspected leaks through deck. - P1 holes in deck, holes under curb, southwest double tee. - F1 remainder. - Several properties/homes around the structure. - Monitor holes in deck. - Hazards, traffic and mild slopes.		

**LEGEND:**

<b>Condition Definitions:</b>			<b>Problem Definitions:</b>	<b>Category Definitions:</b>
1 - *Good - [discontinued code].	F2 - Fair.	C - Unsafe (Closed to Public).	N - No Problem.	Maint. - Maintenance.
2 - *Fair - [discontinued code].	F1 - Fair.	U - Uninspectable.	P - Possible Problem.	Eng. - Engineering.
3 - *Poor - [discontinued code].	P3 - Poor.	I - Inapplicable.	K - Known Problem.	Office - Bridge Office.
4 - *Unsafe - [discontinued code].	P1 - Poor.		NA - Not Applicable.	
G - Good.	P - Poor.			

**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**