GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR
Department of Transportation and Infrastructure

BRIDGE INSPECTION REPORT
B12082021-1

Date: 10/29/2021 **Inspected By:** Mike Button **Category:** Office - Bridge Office

BRIDGE INFORMATION

Site:	5-074 - CHURCHILL RIVER BRIDGE		
Route:	500	**Overall Length:**	320 **m**
Year Built:	2006 **Est:** No	**Overall Width:**	9.5 **m**
Year Last Rehab.:	**Est:** No	**Roadway Width:**	7.35 **m**
Region:	LABRADOR	**Sidewalk Width:**	0 **m**
Jurisdiction:	Provincial	**Clearance to R.D. or N.W.L.:**	6.5 **m**
Type of Structure:	10 - Callender-Hamilton or Other Stress Truss Bridge	**Max Depth of N.W.L.:**	25 **m**
Purpose of Structure:	03 - Over Navigable Waters	**Spans:**	
Type of Handrail:	06 - None		
Roadway Surface:	04 - Steel		
Alignment Vertical:	01 - Good		
Alignment Horizontal:	01 - Good		
Restrictions:	No		

Span No.:	Length	Span No.:	Length
1	120	**4**	0
2	120	5	0
3	120	**6**	0

BRIDGE PHOTOS

SUBSTRUCTURE

Condition:	F2 - Fair	**Bearings:**	F2 - Fair
		Bearing Seat:	F2 - Fair

Comments: - Both concrete piers appear in fair condition looking through the deck grating and looking from the abutment level with binoculars. Assumed condition of sub-surface concrete. - North abutment bearing seat has a small spall on the northwest side. Grout pads under pot bearings cracking and forming small spalls. North abutment concrete and wingwalls in fair condition. - South abutment bearing seat covered in roadway sand. Concrete in fair condition.

SUPERSTRUCTURE

Condition:	G - Good	**Expansion Joints:**	G - Good

Comments: - Expansion joint slip plates appear to be in working order. - The top of two handrail posts were impacted/twisted on the northwest corner of the bridge. This caused the associated stringers to twist below as well. - 1 nut loose on the top chord splice plate near the west side 10th node from the north abutment. - 1 bolt/nut missing from the horizontal cross bracing in bay 5 from the north abutment. - 1 bolt/nut missing at bottom chord node 16 on the

west side from the south abutment. - Inspected all visible elements of the “through truss” bridge walking across the deck looking up at the truss members and top chord, looking below through the decking at the girder/stringer connections, looking over the handrails at the bottom chords and by using binoculars from below at the abutment levels. All gusset plates/batten plates/splice plates/bolts/nuts, stringer to girder connections, and the various types of members used were found to be in good condition unless otherwise noted above.

DECK

Condition:	G - Good	**Curbs:**	I - Inapplicable
Hand Rail:	G - Good	**Roadway Condition:**	F1 - Fair
Approach Rail:	P3 - Poor		

Comments: - Approach/exit guiderail has lost corrugation in several sections, has several split posts and the south side guiderail ends are heavily damaged, are connected to end blocks, have collision dampening posts prior to end blocks, and are complete with hazard markers. - End block jersey barriers have light cracking and are covered in graffiti. - Structure handrail/post damaged on the northwest corner of the bridge. Top of post impacted and twisted. - Steel deck grating has isolated locations of damage. - No curbs. - Approach asphalt in fair condition, heavy map cracking on the south exit.

HYDROLOGY

Water Velocity:	1 **m/s**	**Ice Problem:**	P - Possible Problem
Water Depth:	Deep **m**	**Scour Problem:**	P - Possible Problem
Waterway:	01 - Adequate	**Debris Problem:**	N - No Problem

Comments: - North pier has a trench in the rip-rap around most of the pier, water depth plunges in the trench coming back up to good rip-rap before tapering back off to the river. South pier has no visible surface rip-rap and vortex currents seen all around the pier.

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2022	**Replacement Year:**	2080
Antic. Rehab. Cost:	$15,000	**Replacement Cost:**	$10,000,000

Recommendations: - Replace sections of guiderail as required. - Replace/tighten bolts in various locations as indicated in Superstructure section of the report. - Remove sand from south bearing seat. - Consider replacing twisted handrail posts/stringers.

OBSERVATIONS

Overall Condition:	G - Good	**Requires Further Inspection:**	No

Additional Observations: - Hazards, heavy traffic, slopes and traversing rip-rap. Inspection limited below structure with use of binoculars. Traffic control needed for inspection.

LEGEND:

Condition Definitions:

1 - *Good - [discontinued code].	F2 - Fair.	C - Unsafe (Closed to Public).
2 - *Fair - [discontinued code].	F1 - Fair.	U - Uninspectable.
3 - *Poor - [discontinued code].	P3 - Poor.	I - Inapplicable.
4 - *Unsafe - [discontinued code].	P1 - Poor.	
G - Good.	P - Poor.	

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