

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	BRIDGE INSPECTION REPORT B11252021-2	
Date: 10/27/2021	Inspected By: Mike Button	Category: Office - Bridge Office	
BRIDGE INFORMATION			
Site:	5-027 - ST. CHARLES RIVER BRIDGE		
Route:	510	Overall Length:	0 m
Year Built:	1990	Est: Yes	Overall Width: 8.6 m
Year Last Rehab.:		Est: No	Roadway Width: 7.8 m
Region:	LABRADOR	Sidewalk Width:	0 m
Jurisdiction:	Provincial	Clearance to R.D. or N.W.L.:	5.5 m
Type of Structure:	10 - Callender-Hamilton or Other Stress Truss Bridge	Max Depth of N.W.L.:	0 m
Purpose of Structure:	03 - Over Navigable Waters	Spans:	
Type of Handrail:	04 - Steel Rail	<u>Span No.:</u>	<u>Length</u>
Roadway Surface:	03 - Timber	1	60.96
Alignment Vertical:	01 - Good	2	0
Alignment Horizontal:	01 - Good	3	0
Restrictions:	No	4	0
		5	0
		6	0
BRIDGE PHOTOS			
			
SUBSTRUCTURE			
Condition:	F2 - Fair	Bearings:	U - Uninspectable
		Bearing Seat:	U - Uninspectable
Comments:	- Both concrete abutments have rust staining on the concrete faces from the expansion joint above. - All wingwalls in good condition with light hairline cracks in isolated locations with mild erosion along their slopes. - Bearing seats covered in road sand/gravels. Grout plinths visible and in fair condition.		
SUPERSTRUCTURE			
Condition:	F2 - Fair	Expansion Joints:	F2 - Fair
Comments:	- North expansion joint steel/transition plate from concrete to timber is unsecure and visibly tipped. When a wheel hits the plate, it pivots and impacts the abutment. South expansion joint in fair condition. - First set of main structural bottom chord nodes from the north abutment bearings have several loose bolts and were painted orange. Most western exterior node 1 bolt, first interior 1 bolt, second interior/middle 3 bolts, third interior 2 bolts, most eastern 0 bolts. - In the first bay on the south side of the bridge there are various bolts loose and missing on braces (see photos and painted areas in the field). - Light corrosion to top chord of the main trusses and top		

chord braces from the constant state of moisture. - Inspection visible nodes (bolts/gusset plates), main members, and braces. Superstructure in fair condition, F2.

DECK

Condition:	F2 - Fair	Curbs:	F1 - Fair
Hand Rail:	F2 - Fair	Roadway Condition:	F2 - Fair
Approach Rail:	F2 - Fair		
Comments:	- Approach/exit rails old with numerous splits, F1. No end blocks or energy dampening posts prior to bridge approaches. Northeast hazard marker swung out of position, rest ok. - Structure handrail ok, missing several bolts securing the guiderail to the posts. - Approach asphalt in good condition. - Timber curbs in good fair condition. - Timber wearing surface in fair condition, only minor splits in longitudinal members. Transverse 6x6 timber decking very damp looking from below, no major splits/cracks observed. Timbers staging to show age, F1.		

HYDROLOGY

Water Velocity:	n/a m/s	Ice Problem:	N - No Problem
Water Depth:	n/a m	Scour Problem:	N - No Problem
Waterway:	01 - Adequate	Debris Problem:	N - No Problem
Comments:	- Bridge un-affected by the river. Abutments/bottom chord of the trusses are at least 5m above the waterline. - Mild erosion on along all four wingwalls.		

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2028	Replacement Year:	2060
Antic. Rehab. Cost:	\$30,000	Replacement Cost:	\$3,000,000
Recommendations:	- Secure the north expansion transition steel plate if possible. Replace old/split guiderail posts. Have maintenance replace/tighten bolts on the trusses and bridge handrail, fix northeast hazard marker, remove gravel from the bearing seats & truss members. - 6x6 deck replacement likely within the next 10 years.		

OBSERVATIONS

Overall Condition:	F2 - Fair	Requires Further Inspection:	No
Additional Observations:	- Traffic control required for inspection. Hazards, head bangers (truss members), steep slopes and traffic. Inspection limited to binoculars from the north and south abutment areas.		

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