


	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	<b>BRIDGE INSPECTION REPORT</b> <b>B12142021-1</b>	
<b>Date:</b> 10/31/2021	<b>Inspected By:</b> Mike Button	<b>Category:</b> Office - Bridge Office	
<b>BRIDGE INFORMATION</b>			
<b>Site:</b>	5-026 - ASHUNIPI RIVER BRIDGE		
<b>Route:</b>	500	<b>Overall Length:</b>	145.5 m
<b>Year Built:</b>	1985	<b>Est:</b> No	<b>Overall Width:</b> 10.3 m
<b>Year Last Rehab.:</b>		<b>Est:</b> No	<b>Roadway Width:</b> 8.5 m
<b>Region:</b>	LABRADOR	<b>Sidewalk Width:</b>	0 m
<b>Jurisdiction:</b>	Provincial	<b>Clearance to R.D. or N.W.L.:</b>	0 m
<b>Type of Structure:</b>	08 - Steel Bridge	<b>Max Depth of N.W.L.:</b>	1.6 m
<b>Purpose of Structure:</b>	03 - Over Navigable Waters	<b>Spans:</b>	
<b>Type of Handrail:</b>	01 - Aluminum Rail	<u>Span No.:</u>	<u>Length</u>
<b>Roadway Surface:</b>	01 - Concrete	1	48
<b>Alignment Vertical:</b>	01 - Good	2	0
<b>Alignment Horizontal:</b>	01 - Good	3	0
<b>Restrictions:</b>	No	<u>Span No.:</u>	<u>Length</u>
		4	0
		5	0
		6	0
<b>BRIDGE PHOTOS</b>			
<div style="display: flex; justify-content: space-around;">    </div>			
<b>SUBSTRUCTURE</b>			
<b>Condition:</b>	F2 - Fair	<b>Bearings:</b>	U - Uninspectable
		<b>Bearing Seat:</b>	U - Uninspectable
<b>Comments:</b>	- East abutment has a cold joint below the bearing seat on the southeast corner. River side face concrete generally in good condition. Wingwalls have light to mild map cracking. - Both piers in fair condition. Mild waterline erosion to concrete exposing some aggregates. Nose steel in good condition with mild corrosion. Inspection limited to binoculars from the shoreline. - West abutment has moderate width vertical cracks propagating from the abutment drains towards the bearing seat. River side face concrete generally in good condition. Wingwalls have light to mild map cracking with an opening construction joint. - A patch on the southeast surface of the east abutment bearing seat appears to be delaminating looking from below. Bearings and bearing seats generally too high for inspection on both abutments and piers.		
<b>SUPERSTRUCTURE</b>			
<b>Condition:</b>	F2 - Fair	<b>Expansion Joints:</b>	P3 - Poor
	- Six girders and their braces have light to moderate surface corrosion. Girders and braces painted over		

**Comments:** abutments with moderate corrosion through flaking paint. Full moment connections have no missing bolts on abutment to pier spans. No access to pier to pier span. - Expansion joint seals broken/pushed through over both abutments. All exterior curb expansion joint gaps have no/damaged chaulking. - Bottom of deck and soffit in good condition. No access under deck for pier to pier span. - Fascia's have mild hairline map cracking across the structure on both the north and south sides.

**DECK**

<b>Condition:</b>	F2 - Fair	<b>Curbs:</b>	F2 - Fair
<b>Hand Rail:</b>	P3 - Poor	<b>Roadway Condition:</b>	F1 - Fair
<b>Approach Rail:</b>	P3 - Poor		

**Comments:** - Approach/exit rails have isolated damage to rails with several damaged/split posts. Posts are burnt on the northwest exit (vehicle fire). All bolts are missing (never drilled) to connect rails to end blocks. Hazard markers in place on the west side and missing on the east side. Rails do not have collision dampening posts prior to end blocks. - End blocks have mild map cracking and some spalling to their tops. - Asphalt in fair condition on the approach to the structure. Asphalt joint to approach slab opened up on each side of the structure and forming pot holes, P3. Asphalt burnt on northwest exit. No asphalt over structure or approach slabs. - Deck concrete in fair condition, aggregate colors showing throughout. Structure has deck drains. - Roadway curbs in fair condition with several small spalls and scrapes from the flyer. - Structure handrail has scrapes and dents throughout. Rail detached from posts on the northwest and southwest corners. Four posts torn and twisted near mid span on the north side. Several rail joiners missing.

**HYDROLOGY**

<b>Water Velocity:</b>	0.5 m/s	<b>Ice Problem:</b>	N - No Problem
<b>Water Depth:</b>	Deep m	<b>Scour Problem:</b>	P - Possible Problem
<b>Waterway:</b>	01 - Adequate	<b>Debris Problem:</b>	N - No Problem

**Comments:** - Water about 5-6m below structure. East abutment out of water by several meters with heavy brush growth between it and the river. West abutment marginally out of water with just enough room to walk between the concrete and water. Rip-rap needs repair on southwest corner. Piers are a potential candidate for a diving inspection.

**REPLACEMENT/REHABILITATION**

<b>Next Rehab. Date:</b>	2022	<b>Replacement Year:</b>	2050
<b>Antic. Rehab. Cost:</b>	\$75,000	<b>Replacement Cost:</b>	\$5,000,000

**Recommendations:** - Replace both expansion joint seals. Install chaulking on all exterior curb expansion gaps (missing or severely cracked). Fill asphalt crevasse/foundation at approach slab joints. Install extra posts/collision dampening posts prior to end blocks and connect the guiderail to the end blocks. Replace other guiderail and posts as required. Replace east hazard markers. Replace cracked handrail posts, and replace/re-secure handrail sections as required.

**OBSERVATIONS**

<b>Overall Condition:</b>	F2 - Fair	<b>Requires Further Inspection:</b>	No
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**Additional Observations:** - Hazards, mild slopes and traffic. East pier has remnants of a birds nest on the south side. Inspection limited to shoreline and walking across the deck.

**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**

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Department of Transportation and Infrastructure, Government of Newfoundland and Labrador 2021.