

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	BRIDGE INSPECTION REPORT B11172021-4	
Date: 10/22/2021	Inspected By: Mike Button	Category: Office - Bridge Office	
BRIDGE INFORMATION			
Site:	1-206 - PLACENTIA JUNCTION CNR OVERPASS		
Route:	100	Overall Length:	36 m
Year Built:	1967	Est: No	Overall Width: 14.5 m
Year Last Rehab.:		Est: No	Roadway Width: 12.9 m
Region:	AVALON PENINSULA	Sidewalk Width:	0.8 m
Jurisdiction:	Provincial	Clearance to R.D. or N.W.L.:	7.5 m
Type of Structure:	05 - Pre-stressed Concrete Slab	Max Depth of N.W.L.:	0 m
Purpose of Structure:	02 - Highway Railway Separation	Spans:	
Type of Handrail:	02 - Concrete Rail	<u>Span No.:</u>	<u>Length</u>
Roadway Surface:	02 - Asphalt	1	12.6
Alignment Vertical:	01 - Good	2	0
Alignment Horizontal:	01 - Good	3	0
Restrictions:	No	4	0
		5	0
		6	0
BRIDGE PHOTOS			
			
SUBSTRUCTURE			
Condition:	P3 - Poor	Bearings:	U - Uninspectable
		Bearing Seat:	P3 - Poor
Comments:	- Northwest wingwall/side of abutment has mild map cracking with efflorescence. The bearing seat/back wall corner has a small spall, and vegetation growth with visible leakage. - Northeast bearing seat/back wall corner has a small spall with and a spall to the corner of the deck. - Southwest wingwall/side of abutment has severe map cracking with efflorescence. The bearing seat/back wall corner has a medium spall undermining the deck, and vegetation growth with visible leakage. - Southeast wingwall/side of abutment is in fair condition with light cracking and efflorescence. - Damage to all wingwalls/sides of abutments/bearing seat/backwall has been caused by leaking expansion joints and no chaulking through the curbs. - The south abutment face has mild map cracking throughout, F1. - The north abutment has mild-medium map cracking with light efflorescence throughout, F1. A heavy rusty solution is coming from the bearing seat and depositing on the face. The northeast side of the abutment is undermined from roadway runoff exposing the piles, P3. Piles have moderate-severe corrosion. - Both pier footings have mild map cracking throughout with heavy graffiti.		
SUPERSTRUCTURE			

Condition:	F1 - Fair	Expansion Joints:	P3 - Poor
Comments:	- Bottom of the deck between the north abutment and first set of piers has an area of light spalling, and cracking with light efflorescence and heavy rust stains. Bottom of the deck between both sets of piers has a two locations of moderate rust staining. Bottom of the deck between the south abutment and second set of piers has a couple locations with light cracking and efflorescence. Bottom of deck in fair condition overall, F1. - All pier columns and caps have very light map cracking throughout. - Both the north and south expansion joints are heavily leaking. Based on the rusty solution coming from the bearing, suspect severe corrosion to end/abutment back wall, P3.		

DECK

Condition:	P3 - Poor	Curbs:	F1 - Fair
Hand Rail:	F1 - Fair	Roadway Condition:	P3 - Poor
Approach Rail:	P3 - Poor		
Comments:	- Various guiderail posts split, tipped and broken and guiderail is wavy due to various dents and tipped posts on the northwest side, P3. F1 remainder. Guiderail connected to end blocks on the south side and not connected on the north. No energy dampening posts prior to end blocks on either approach. All hazard markers missing. - Asphalt heavily cracked over expansion joints, several potholes over the deck and approaches, P3. - Concrete handrail in fair condition with minor spalls and light cracking, F1. - Roadway curbs have various small spalls and cracking throughout. No chaulking through curb expansion joint and water/salts free to run behind the post tensioned deck/abutment back wall joint. Medium spall to the curb in the expansion joint area on the northeast corner. - The west fascia and soffit have various medium cracks with medium efflorescence primarily focused over the pier caps. The fascia over the south pier has wide cracks and heavy efflorescent deposits with efflorescence running down over the pier cap, P3. - The east fascia has medium cracks with medium-severe efflorescence in various locations. Efflorescence is also visible coming through the deck/curb construction joint, indicating a corrosion path through the structure, P3. The soffit on the northeast corner has several wide crack without efflorescence.		

HYDROLOGY

Water Velocity:	n/a m/s	Ice Problem:	NA - Not Applicable
Water Depth:	n/a m	Scour Problem:	NA - Not Applicable
Waterway:	03 - Not Applicable	Debris Problem:	NA - Not Applicable
Comments:	- Severe shoulder erosion on the northeast corner of the structure continues. - Railway bed below.		

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2024	Replacement Year:	2030
Antic. Rehab. Cost:	\$225,000	Replacement Cost:	\$2,000,000
Recommendations:	- Replace northwest guiderail, connect all guiderail to end blocks complete with energy dampening posts and hazard markers. Remove sand and vegetation growth from roadway curbs. Install chaulking through curbs. Replace expansion joints and repair disintegrated concrete around/below them once the area has been chipped out. - Repair abutment/wingwall corners and exterior bearing seats. Inject various cracks. Infill the northeast corner of the north abutment and redirect future runoff. Resurface the deck and approaches. If a major rehab is done, structures life will be extended beyond the year quoted. Evaluate a replacement.		

OBSERVATIONS

Overall Condition:	P3 - Poor	Requires Further Inspection:	No
Additional Observations:	- Hazards, steep slopes, and heavy traffic. - P3 abutment corners/backwall/bearing exteriors, expansion joints, sections of the soffit and fascia, northwest guiderail, asphalt and undermining of northeast corner of the abutment. F1 remainder.		

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

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