

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	BRIDGE INSPECTION REPORT B11152021-1	
Date: 10/19/2021	Inspected By: Mike Button	Category: Office - Bridge Office	
BRIDGE INFORMATION			
Site:	1-103 - NEW CHELSEA BRIDGE		
Route:		Overall Length:	19 m
Year Built:	1970	Est: No	Overall Width: 10.4 m
Year Last Rehab.:		Est: No	Roadway Width: 6.5 m
Region:	AVALON PENINSULA	Sidewalk Width:	0 m
Jurisdiction:	Provincial	Clearance to R.D. or N.W.L.:	2.8 m
Type of Structure:	02 - Double Tee	Max Depth of N.W.L.:	0.4 m
Purpose of Structure:	04 - Over Non-Navigable Waters		
Type of Handrail:	02 - Concrete Rail		
Roadway Surface:	02 - Asphalt	Spans:	
Alignment Vertical:	01 - Good	Span No.:	Length
Alignment Horizontal:	01 - Good	Span No.:	Length
Restrictions:	No	1	5.3
		2	0
		3	0
		4	0
		5	0
		6	0
BRIDGE PHOTOS			
			
SUBSTRUCTURE			
Condition:	P3 - Poor	Bearings:	U - Uninspectable
		Bearing Seat:	P3 - Poor
Comments:	- The east abutment face has mild cracking throughout. The sloped footing face to vertical abutment transition joint has medium efflorescent leakage on the southeast side. The vertical footing face has a longitudinal cavity the full length of the footing with medium erosion just above the waterline. On the sloped portion of the footing, there is also a cold joint with mild deterioration. On the southeast corner of the footing, water has disintegrated a large section of the footing, P3. - The west abutment face has mild cracking throughout with several cold joints with mild erosion. The vertical footing face has a longitudinal cavity the full length of the footing with medium erosion just above the waterline. The Southwest bearing seat has a small spall beginning to undermine the exterior double tee, monitor progression on future inspections, P3.		
SUPERSTRUCTURE			
Condition:	P3 - Poor	Expansion Joints:	F1 - Fair
	- Concrete around old and new deck drain holes is severely disintegrated at every corner of the structure. The old		

Comments: deck drain holes have corroded through the rebar and stressing cables. The old holes have a piece a sheet metal laid over them and appear to have been paved over, P3. The newer, functioning deck drains are leaking around the PVC sleeve installed, placing the double tees below in an extreme environment. However, the double tees below the drains are in fair condition, F1. - Double tees have stirrups showing in various locations due to low cover, F1. - Mild leakage/rust staining between double tee precast sections in isolated locations. - Expansion joint locations have no visible leakage.

DECK

Condition:	P3 - Poor	Curbs:	F1 - Fair
Hand Rail:	F1 - Fair	Roadway Condition:	F1 - Fair
Approach Rail:	I - Inapplicable		
Comments:	- No guiderail, or hazard markers. - Handrails have local areas of small spalls, F1. Northeast corner handrail, lower handrail concrete has disintegrated to rebar only, P1. - Asphalt has various cracks and ruts on the east approach, F1. - Roadway curbs have small localized spalls. Heavy gravel build up with vegetation growth along curb/asphalt joint, F1. - Exterior curb fascia has a mild spall over the northwest corner along the expansion joint. Other areas in fair condition with some mild honeycombing from construction.		

HYDROLOGY

Water Velocity:	0.3 m/s	Ice Problem:	N - No Problem
Water Depth:	0.6 m	Scour Problem:	K - Known Problem
Waterway:	01 - Adequate	Debris Problem:	N - No Problem
Comments:	- Area has medium-large concrete disintegration around the waterline, especially on the southeast corner. - Hydraulic rip-rap at corners of structure insufficient and migrating down slopes.		

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2024	Replacement Year:	2035
Antic. Rehab. Cost:	\$100,000	Replacement Cost:	\$1,000,000
Recommendations:	- Install guiderail complete with additional energy dampening posts to end blocks and hazard markers. Chip out and patch deck drain locations. Repair all concrete defects around the waterline and bearing seats. Install new rip rap.		

OBSERVATIONS

Overall Condition:	P3 - Poor	Requires Further Inspection:	No
Additional Observations:	- Mild traffic in area. Utility poles directly upstream of structure. - On the south side of the structure there is an extension to the bearing seat, appears as if the original abutment or pre-cast section was built outside design dimensions. - P3 on items indicated. 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