GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR
Department of Transportation and Infrastructure

BRIDGE INSPECTION REPORT
B08202021-2

Date: 8/12/2021 **Inspected By:** Mike Button **Category:** Office - Bridge Office

BRIDGE INFORMATION

Site:	1-087 - BISHOP'S COVE BRIDGE		
Route:	70	**Overall Length:**	7.4 **m**
Year Built:	1970 **Est:** Yes	**Overall Width:**	9.4 **m**
Year Last Rehab.:	**Est:** No	**Roadway Width:**	7.2 **m**
Region:	AVALON PENINSULA	**Sidewalk Width:**	1.2 **m**
Jurisdiction:	Provincial	**Clearance to R.D. or N.W.L.:**	1.1 **m**
Type of Structure:	02 - Double Tee	**Max Depth of N.W.L.:**	0.5 **m**
Purpose of Structure:	04 - Over Non-Navigable Waters	**Spans:**	
Type of Handrail:	04 - Steel Rail		
Roadway Surface:	02 - Asphalt		
Alignment Vertical:	01 - Good		
Alignment Horizontal:	01 - Good		
Restrictions:	No		

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

BRIDGE PHOTOS

SUBSTRUCTURE

Condition: P - Poor **Bearings:** U - Uninspectable

Bearing Seat: F2 - Fair

Comments: - Southeast wing wall has a large spall under the waterline and has a large wide crack running from the spall to the footing (adjacent to CJ). - Northwest wingwall has lost ~90% of its bearing capability due to undermining/scour (P). - Bearing area looks ok, no spalls under double tee bearing areas. - Most diaphragm formwork remains in place between double tees. - Both abutments have medium erosion to footing construction joint, both have narrow cracking in both the vertical and horizontal directions and mild reinforcement staining along their river side faces. (P) Northwest wingwall, F1 remainder.

SUPERSTRUCTURE

Condition: P1 - Poor **Expansion Joints:** U - Uninspectable

Comments: - Underside of deck around the upstream deck drains have circumferential spalls, with exposed reinforcement with medium-severe corrosion. Possible exposed stressing strand. Leakage running down over double tees causing cracks/spalls (P1). - All other double tees have stirrups showing randomly across them (F1). - Mild cracks

with efflorescence between double tees on the underside of the deck.

DECK

Condition:	F1 - Fair	**Curbs:**	F1 - Fair
Hand Rail:	P - Poor	**Roadway Condition:**	F1 - Fair
Approach Rail:	I - Inapplicable		

Comments: - Curb has some small spalls with light narrow-cracks. East handrail on southeast corner of the structure has a post cracked off. Poor construction methods were used for both the east and west handrails (back of HSS torched off to promote bolting). - Asphalt has two cracks the full width of structure over both expansion joints. Medium cracking elsewhere with potholes starting. - Deck drains clogged, downstream deck drains patched over (permanently sealed). - Both fascia's in good condition with light weathering & narrow horizontal cracks. - No end blocks. - No approach/exit rail (nor is it possible).

HYDROLOGY

Water Velocity:	0.5 **m/s**	**Ice Problem:**	N - No Problem
Water Depth:	0.5 **m**	**Scour Problem:**	K - Known Problem
Waterway:	01 - Adequate	**Debris Problem:**	N - No Problem

Comments: - Water too deep to inspect north abutment footing for scour. South abutment footing mostly out of water and no scour visible. - Northwest wingwall has lost ~90% of its bearing capability due to undermining/scour.

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2022	**Replacement Year:**	2035
Antic. Rehab. Cost:	$100000	**Replacement Cost:**	$650000

Recommendations: - Replace northwest wing wall or repair with trimming concrete as soon as possible. – Install hazard markers. - Repair all concrete defects around deck drains and all other areas. - Clean upstream deck drains. Re-open downstream deck drains. Extend deck drains below structure by 500mm. - Cut down vegetation on downstream side of structure (bamboo?)

OBSERVATIONS

Overall Condition:	F1 - Fair	**Requires Further Inspection:**	Yes

Additional Observations: - Waterline on downstream side of structure. - P northwest retaining wall and handrail. - F1 remainder. - Installation of approach/exit rail not possible due to many properties around this structure. - Lots of vegetation growth on downstream side of structure. - Low traffic, steep slopes.

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