



VILLAGE OF PORT ALICE  
PUBLIC WORKS COMMITTEE MEETING AGENDA  
TO BE HELD THURSDAY APRIL 4, 2024, AT 4:00 PM  
IN ROOM 101 AT THE COMMUNITY CENTRE

**(1) CALL TO ORDER**

**(2) ADOPTION OF AGENDA**

*THAT the Agenda for the Public Works Committee Meeting be approved; AND THAT all delegations, reports, correspondence, and other information set to the agenda be received for information.*

**(3) MINUTES:**

a. *THAT the minutes from the February 1, 2024, Public Works Committee Meeting be approved as presented.*

**(4) REPORTS:**

- a. Public Works Foreman's Monthly Report – February  
March 5, 2024, Report from Jason Yunker, Public Works Foreman
  
- b. Public Works Foreman's Monthly Report – March  
March 29, 2024, Report from Jason Yunker, Public Works Foreman
  
- c. Sea Walk  
April 2, 2024, Report from Ryan Nicholson, Ec Dev Officer

**(4) COMMUNICATIONS:**

**(5) FOR DISCUSSION:**

- a. Marina and Mill Bridge 2024 Reports

**(6) ADJOURNMENT:**

*THAT the meeting of the Village of Port Alice Public Works Committee held April 4, 2024, be adjourned.*



VILLAGE OF PORT ALICE COUNCIL COMMITTEE  
MEETING MINUTES Thursday February 1, 2024  
In the MUNICIPAL COUNCIL CHAMBERS  
Public Works Committee Meeting



Present Mayor Kevin Cameron  
Councillor Sean Watson  
Councillor Russell Murray  
Councillor Holly Aldis

Absent Councillor Dave Stewart

Staff Bonnie Danyk CAO / CFO  
Jason Yunker, Public Works Foreman

**CALL TO ORDER**

Mayor Kevin Cameron called the meeting to order at 4:00 pm

PW 04/24  
Agenda

**APPROVAL OF AGENDA**

Moved, seconded and CARRIED

***THAT the Agenda for the Public Works Committee be approved; AND THAT all delegations, reports, correspondence, and other information set to the agenda be received for information.***

PW 05/24  
Minutes  
2024-01-04

**MINUTES:**

Moved, seconded and CARRIED

***THAT the Minutes of the Public Works Committee meeting on January 4, 2024, be approved.***

**REPORTS:**

a) Public Works Foreman's Monthly Report – January

January 29, 2024 Report from Jason Yunker, Public Works Foreman

PW 06/24  
Letter to BC Hydro

Moved, seconded and CARRIED

***THAT The Village of Port Alice write a letter to BC Hydro regarding reconnecting the well shed.***

**ADJOURNMENT:**

PW 07/24  
Adjourn

Moved, seconded and CARRIED

***THAT the Public Works Committee meeting of the Village of Port Alice held February 1, 2024 be adjourned at 4:20 pm.***

I hereby certify the preceding to be a true and correct account of the Regular meeting of the Public Works Committee Meeting held February 1, 2024.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Chief Administrative Officer





## VILLAGE OF PORT ALICE REPORT TO COUNCIL

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**To:** Mayor & Council  
**From:** Jason Yunker, Public Works Foreman  
**Date:** Feb 29, 2024  
**Subject:** Public Works Monthly Report

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Pretty standard month. Met with contractors for quotes. We finally had the gas hot water tank installed in the Community Centre. Melan roofing came and fixed damaged roof drains at the Fire Hall and at Public Works. They submitted a quote for the Fire Hall roof replacement. We have finally started the electrical service for Well#3, KCC is wrapping up insulation and interior finishes as I type this. We are almost at the finish line for the rebuild. Once we got power we can start rewiring and get this job finished.

### **Water**

- Water samples taken to Port McNeil.
- Wells were checked and meters read daily.
- Begun installation of new electrical service at Well#3

### **Sewer Sys/ Treatment Plant**

- Effluent samples were shipped to Courtney monthly.
- Seawater samples submitted
- Regular daily/weekly maintenance was performed for STP.
- Lift stations were cleaned and inspected weekly.

### **Transfer Station**

- Transfer Station was cleaned daily/weekly.
- Garbage cans in town were cleaned(weekly)
- Hauled 2 loads of recyclables (E-waste, cardboard, tires) to 7-mile.
- Hauled 1 blue bin of garbage to 7-mile.
- Hauled 1 metal bin.
- Hauled 1 wood bin.

### **Equipment**

- Generators were tested(monthly)
- Weekly inspections carried out on Play structures/Parks/Marina/Water Tanks
- Serviced saws, weed eaters

### **Roads**

- Clear CB's
- Salt n sand roads

## **Facilities**

- Gas hot water tank finally installed at Community Centre
- Damaged panels on Marina dock were replaced.
- Leaking roof drains fixed at Fire Hall and Public Works by Melan roofing.

## **General**

- Tidy shop

Respectfully submitted by,

*Jason Yunker*

Jason Yunker  
Public Works Foreman



## VILLAGE OF PORT ALICE REPORT TO COUNCIL

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**To:** Mayor & Council  
**From:** Jason Yunker, Public Works Foreman  
**Date:** March 29, 2024  
**Subject:** Public Works Monthly Report

---

Well #3 is still a work in progress. Last week BC Hydro finally got their service line installed. We managed to get a base coat of paint on the walls, just waiting on Tex Electric to start their installation of components. Our sanders were cleaned, greased and put to bed for the season. Spring cleanup went off without a hitch and we swapped out a pump in Lift Station #3. As I type this, we are dusting off the big mower and gearing up for the spring/summer marathon of grass cutting.

### **Water**

- Water samples taken to Port McNeill.
- Wells were checked and meters read daily.

### **Sewer Sys/ Treatment Plant**

- Effluent samples were shipped to Courtney monthly.
- Regular daily/weekly maintenance was performed for STP.
- Lift stations were cleaned and inspected weekly.
- Swapped out pump in Lift Station #3

### **Transfer Station**

- Transfer Station was cleaned daily/weekly.
- Garbage cans in town were cleaned(weekly)
- Hauled 2 loads of recyclables (E-waste, cardboard, tires) to 7-mile.
- Hauled 1 blue bin of garbage to 7-mile.
- Hauled 1 metal bin.
- Hauled 1 wood bin.

### **Equipment**

- Generators were tested(monthly)
- Weekly inspections carried out on Play structures/Parks/Marina/Water Tanks
- New rear tires installed on Back-hoe

### **Roads**

- Clear debris from Mill Road.

### **Facilities**

- Swapped out a bunch of lights at Community Centre.
- Swapped out locks at Public Works

**General**

-Tidy shop

Respectfully submitted by,

*Jason Yunker*

Jason Yunker  
Public Works Foreman





## VILLAGE OF PORT ALICE REPORT TO COUNCIL

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**To:** Mayor & Council  
**From:** Ryan Nicholson, Economic Development Officer  
**Date:** April 2, 2024  
**Subject:** Sea Walk sign

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Last week I was approached by a citizen with concerns over the condition of the Sea Walk sign across from the RV park. I went and checked the sign, and the 2 main posts are very rotten directly at the bottom where the posts contact the concrete. This has made the sign extremely wobbly and at a high risk of falling over.

As we are about to start construction on other trailhead signs using some of the fir lumber we have on hand, this could be an ideal time to replace the sea walk sign as well.

The current Sea Walk sign has a burl with the words "Port Alice Seawalk" carved into it, along with a large number of small plaques showing names of companies and people that have donated to the community, along with some plaques being "in memory" of people. I am confident that the carved burl could be removed from the current sign and incorporated into a new sign frame, however a significant number of the plaques have become very discoloured and unreadable.

As we have plans to create or replace several sign frames around the village, it would be nice to have these frames all matching wherever possible to keep things visually appealing. I'm concerned that simply moving the old, discoloured plaques to a new sign would look unattractive, and many are unreadable anyway.

One idea would be to create 1 new larger plaque with these names for the new sign.

This could possibly qualify for the RDMW signage grant.

Respectfully submitted by:

Ryan Nicholson  
Ec Dev Officer



THANK-YOU FOR INVESTING IN OUR COMMUNITY

# PORT ALICE SEAWALK

THE PORT ALICE SEAWALK WAS BUILT BY THE PORT ALICE COMMUNITY AND WAS DEDICATED ON 10/1/2010. THE SEAWALK IS A GREAT PLACE TO ENJOY THE VIEW AND TAKE A WALK. IT IS A GREAT PLACE TO TAKE A PICTURE OR JUST ENJOY THE VIEW. THE SEAWALK IS A GREAT PLACE TO TAKE A WALK. IT IS A GREAT PLACE TO TAKE A PICTURE OR JUST ENJOY THE VIEW.







# MARINE DRIVE – PORT ALICE MARINA BRIDGE

**2024 BRIDGE INSPECTION**

**February 8, 2024**

Prepared For:



Prepared By:



Document Code: 24-003A1  
Revision: R0

2218-B Airport Drive  
Campbell River, BC  
(778) 346-1818  
stonecroftengineering.ca

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# 1 BACKGROUND

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On January 26, 2024, Brian Peeters, P.Eng of StoneCroft Engineering Ltd. (StoneCroft) completed a close proximity inspection of the Marine Drive Marina Bridge located in the town of Port Alice. The bridge has been termed “Marina Bridge” due to its proximity to the Marina. The inspection was completed visually.

The bridge is a two lane, single span simply supported 7.6m long pre-stressed concrete box girder bridge with an asphalt deck. The girders bear on treated timber caps with abutments consisting of cast-in-place inverted T-footings with riprap armouring at the base. An upstream pedestrian walkway is attached to the girder using galvanized steel members with a timber walking deck. Record drawings are not available to confirm girder dimensions, load capacity or construction date.

Structure spans a design channel which drains an uphill debris mitigation berm.

# 2 SUMMARY

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The bridge overall is in fair condition. The asphalt deck is relatively uncracked, but the approaches have signs of settling with cracked and settled asphalt. The treated timber caps are in fair condition with minimal checking. The superstructure is in good condition with no signs of water egressing through the girder joints and efflorescence along the bottom side of the girders.

The abutments appear stable, but the riprap along both abutments is minimal with some riprap movement exposing the concrete footing. There is a moderate chance of scouring the footings and should continue to be monitored. The channel appears to have incised at the outlet with a riprap weir noticeable, scour of this riprap weir could undermine the downstream side of the footings destabilizing the bridge potentially requiring closure.

The abutments do not have wide enough return walls which has led to over steepened fill slopes adjacent to the abutment which has led to bank scour and could be a contributing factor to the approach settlement noted in the road surface.

The structure does not have Ministry of Transportation and Infrastructure (MOTI) current guard railing, delineators, and no approach barriers.

# 3 INSPECTION RESULTS

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## 3.1 Approaches

The bridge approaches have signs of settling at both abutments due to what appears to be settling fill at the girder ends. Additional asphalt appears to have been added to reduce the

dip/impact. Both approaches are free of brush with the corners of the bridge visible, but no standard concrete approach barriers are present.

### 3.2 Deck

The concrete superstructure is overlaid with an asphalt deck, its unknown if a waterproof membrane was installed at time of the asphalt overlay. The current measured asphalt thickness was 150mm, this is typically more than MOTI standards. Additional asphalt should not be added without confirming with record drawings or load rating bridge for additional dead load.

The barrier consists of steel I-section posts bolted to exterior girder flanges are present at both sides of the bridge with additional poorly constructed butt welded I-sections raising the height of the post. Guard rail consists of flexible W-beam with timber posts at either end of the bridge. The guard rail is not connected to approach barriers.

The upstream guard posts are extended below the girder to allow a cantilevered steel I-section to support the timber plank pedestrian walkway. These guard posts will reduce the overall hydraulic clearance due to their height below the soffit of the girders.

The pedestrian walkway is supported by untreated D.Fir timber stringers and transverse plank decking. The timber stringers are in poor condition and the plank decking is in poor condition. Barrier height between road and pedestrian walkway is lower than MOTI specified.

### 3.3 Abutments

The cast-in-place concrete inverted T-footing abutments are in good condition with no indication of settlement or cracking. The treated 300mm x 300mm timber cap is in fair condition with minimal checking or rot at ends.

The connection of the girders to the abutments is not known. Typically, they would be doweled and grouted to the abutments with steel rods in knockouts in the girder ends. The bridge appears to not be seismically sufficient for lateral and transverse loads due to a lack of transverse shear keys or sufficient bearing length.

Minimal riprap is present along the bridge footings with the downstream end of both abutment footings exposed. The thickness of the abutment footing is unknown and is susceptible to scour and frost heave.

The abutments do not have wide enough return walls extending back into the banks, this has caused the fill slopes within this region to become over steepen and cause settlement and raveling of the banks.

Utility lines run longitudinally and transverse under the bridge, these lines are poorly supported and susceptible to tampering.



### 3.4 Girders

The girders are generally in good condition, there are no signs of cracking, joint seepage or efflorescence which can be an indicator of water seepage within cracks. Record drawings should be located to confirm load rating.

## 4 RECOMMENDATIONS

Table 1 – List of Maintenance / Repair Items

Item No.	Description	Priority
1	Install concrete approach barriers on all bridge approaches (upstream and downstream sides of bridge).	High
2	Stabilize raveling banks at corner of bridge through additional retaining walls.	Low
3	Replace pedestrian plank decking and stringers and handrails.	Moderate
4	Raise barrier rail height between pedestrian and vehicle to meet MOTI combination pedestrian/vehicle specifications.	High
5	Install MOTI specified delineators at all corners of the bridge.	High
6	Replace rotting timber posts supporting W-beam flex railing at ends of bridge within approach fill.	Low
7	Upgrade barrier system to meet current MOTI standards and integrate with approach barriers.	Moderate
8	Locate bridge record drawings	Low

**Table 2 – List of Monitoring Items**

<b>Item No.</b>	<b>Description</b>	<b>Priority</b>
1	Scour at left and right bank abutments	Moderate
2	Scour at riprap weir downstream	Low
3	Approach settlement at girder ends	Low

## 5 CLOSURE

We trust you will find this information meets your requirements. If you have any questions or concerns, please feel free to contact Brian Peeters at [brian@stonecroftengineering.ca](mailto:brian@stonecroftengineering.ca) or phone (778)-346-1818 at your convenience.

Sincerely,

**StoneCroft Engineering Ltd.**



Brian Peeters, P.Eng  
Senior Bridge Engineer

Permit to Practice No. 1001856

# APPENDIX A: 2024 INSPECTION FORM

Location: " N " W **LEVEL 1 INSPECTION - STEEL / CONCRETE BRIDGE** Clear Form

Road Name: Marine Drive Structure #: Fabricated by: Unknown Fabricated Year: Unknown

Station: Bridge Name: Marina Bridge Installed by: Unknown Install Year: Unknown

Conceptual Design: Unknown Serial Number:

Structural Design: Unknown

Construction Assurance on File?

**Creek Description:** Creek Name:

**Gradient:** Highwater Clearance: 2.7

**Upstream width:** 3 Total Clearance: 3.4

**Energy:** Moderate

**Debris Load:** Low Branches

**Sediment Load:** Moderate Gravel

**Creek Channel:** Relatively Stable Debris Cone

**Substrate:** Cobble / Gravel

**Stream Class:** Unknown Known  Assumed

**Water User:** N/A

**Abutments skew:** 0 °

**Approaches:**

**Grades:** Camp 0 %, Deck 0 %, Woods 0 %

Description:	Comment:
<b>Alignment Horizontal:</b> Straight	
<b>Alignment Vertical:</b> Uniform	
<b>Surface Runoff:</b> Good	
<b>Visibility:</b> Clear	
<b>Approach Fill:</b> Minor settlement cra	
<b>Approach Barriers:</b> None	0/4
<b>Delineators:</b> Small	3/4
<b>Bridge Ahead:</b>	N/R

15cm asphalt overlay. No approach barriers.

**Creek Comments:**  
Historic debris flows. Outlet perched on riprap with steep creek gradient change.

**Deck:** Description Condition

**Road Width:** 8.5

**Running Width:** 7x1.215 = 8.5m

**Deck Type:** Asphalt

Bullrail Type:	W-Beam	Size	Condition
<b>Risers:</b>	Steel	Per Side 4	Fair / Poor
<b>Bolts Per Riser:</b>	2		Fair
<b>Ties (w x h):</b>	NA	@	Treated <input type="checkbox"/>
<b>Sub Deck:</b>	NA		Treated <input type="checkbox"/>
<b>Running Deck:</b>	NA		Treated <input type="checkbox"/>

**Joints:** No visible.

**Pots:**

**Shear Connectors:** Not visible

**Gravel Depth:**

**Girders:**

**Structure Type:** Prestressed box girder

**Overall Length:** 7.6 # of Spans: 1

**COB Span:** # of Girders: 7

**Total Girder Height (o/o):** Girder Spacing:

**Top Flange Width:** Top Flange Thickness:

**Web Height:** Web Thickness:

**Bottom Flange Width:** Bottom Flange Thickness:

**Steel Coating:**

**Bolted Splice Plate:**

**Concrete Girder Depth:** 50cm Glulam Lamination Thickness:

**Concrete Girder Width:** 1.215m Glulam Lamination Width:

Abutment:	North	Description:	Condition:
<b>Abutment Description:</b>		CIP inverted T footing. Wall 47cm the, wing 25cm	
<b>Girder-Abut. Connection:</b>		None assumed	
<b>Abutment Connection:</b>		None assumed	
<b>Cap:</b>		Treated Timber, 12x12	Fair
<b>Ballast Wall:</b>		None	
<b>Riprap:</b>		Minimal	Poor
<b>Quality of Construction:</b>			Poor
<b>Overall Condition:</b>			Fair
<b>Footing Founded On:</b>		Coarse Granular	Fair
<b>Scour:</b>		None, footing base exposed but not undermined	
<b>Indicators of Settlement:</b>		None	
<b>Encroaching:</b>		Yes	

Abutment:	South	Description:	Condition:
<b>Abutment Description:</b>		CIP inverted T footing. Wall 47cm the, wing 25cm	
<b>Girder-Abut. Connection:</b>		None assumed	
<b>Abutment Connection:</b>		None assumed	
<b>Cap:</b>		Treated Timber, 12x12	Fair
<b>Ballast Wall:</b>		None	
<b>Riprap:</b>		Minimal	Poor
<b>Quality of Construction:</b>			Poor
<b>Overall Condition:</b>			Fair
<b>Footing Founded On:</b>		Coarse Granular	Fair
<b>Scour:</b>		None, footing base exposed but not undermined	
<b>Indicators of Settlement:</b>		None	
<b>Encroaching:</b>		Yes	

Summary of Comments

**Structural:**

Priority Low

T footings appear stable, base of footings appear very close to channel grade, no signs of settlement.  
Girders are in good condition with no signs of shear joint leaking.  
Unknown girder section details, structural drawings not available.  
Treated timber cap is not crushing, ends appear sound with minimal checking.  
Connection of girder to abutment is unknown

**Environmental:**

Priority Moderate

Riprap and embankment slopes very steep and inlet and outsides of bridge abutments.  
A large gradient change "weir" is noticeable at outlet by natural channel aggradation, this is causing near vertical banks downstream approx 5 to 20m downstream, banks should be pulled back to stabilize slopes and armoured with riprap.  
Riprap and creek scour should be monitored as footings as susceptible to scour and settlement.

**Maintenance:**

Priority High

15cm asphalt overlay is more than typical  
Sidewalk in poor condition. 3x12" untreated fir decking. Timber 2-4x12" stringer in poor condition. Timber components should be replaced.  
Moti approached approach barriers and physical connection to current outdated guard rail should be completed, high consequence downstream.  
Additional asphalt overlays should not be added to bridge.

**Safety:**

Priority High

Approach barriers and current bridge guard rail should be addressed as per maintenance section.

**General Comments:**

Approaches have settled relative to bridge which apparent by asphalt patches at both approaches. This is likely due to very steep embankment fills. Either side of wing wall returns.

Inspected by: Brian Peeters

Inspection Date: January 26, 2024 9:48 am

Next Inspection: 2027

Current Load Rating:  
Estimated Replacement Schedule:

Design Load Rating:

Previous Load Rating:

Year

Post Load Limit Sign:

Reviewing Professional Engineer: Seal



01 - Approach from North Facing South



02 - Approach from South Facing North



03 - Looking Upstream



04 - Looking Downstream



05 - Downstream Barrier



06 - Upstream Barriers



07 - Upstream Barrier Post, typ.



08 - Fill Settling Sound Abutment



09 - Fill Settling North Abutment



10 - Downstream Riprap Weir



11 - North Abutment



12 - South Abutment





12 - Typ. Timber Cap



13 - Typ. Girder Spoff



14 - Typ. Upstream Ballast Wall at Pedestrian Walkway



15 - Walkway Stringers



16 - Walkway Decking



17 - Upstream Profile Looking Downstream



18 - Downstream Profile Looking Upstream



# MARINE DRIVE – PULP MILL BRIDGE

## 2024 BRIDGE INSPECTION

February 8, 2024

Prepared For:



Prepared By:



Document Code: 24-003A2  
Revision: R0

2218-B Airport Drive  
Campbell River, BC  
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<p align="center"><b>MARINE DRIVE – PORT ALICE PULP MILL BRIDGE</b></p>	
<p align="center"><b>2024 BRIDGE INSPECTION</b></p>	

# 1 BACKGROUND

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On January 26, 2024, Brian Peeters, P.Eng of StoneCroft Engineering Ltd. (StoneCroft) completed a close proximity inspection of the Marine Drive Pulp Mill Bridge located in the town of Port Alice. The bridge has been termed “Pulp Mill Bridge” due to its proximity to the historic pulp mill. The bridge has been assumed to have been constructed in 1980 based on the bridge number cast in the headwall. The inspection was completed visually.

The bridge is a two lane, single span simply supported 30.5m long cast in place composite girder bridge with four girders complete with a concrete deck. The girders bear on pot bearings and concrete plinths. The abutments appear to be cast-in-place concrete on bedrock.

# 2 SUMMARY

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The bridge overall is in good condition. Deck drains should be regularly checked and cleaned to prevent clogging during typical maintenance of brushing of approach barriers and cleaning of bearings.

The abutments appear stable with minimal scour potential due to the bedrock canyon. The return walls on the abutments are sufficient length to prevent erosion of granular banks entering the stream channel or being placed on the bridge bearings.

The coating on the steel girders has signs of flaking which has caused portions of the flanges and bearings to begin scaling. Red paint was noticed under the blue topcoat, which could be a sign of lead-based primer.

# 3 INSPECTION RESULTS

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## 3.1 Approaches

The bridge approaches consist of asphalt lane ways and a concrete bridge deck. The structure does not appear to have approach slabs, which is leading to asphalt failure at the ends of the bridge deck. Expansion joints are not visible at the ends of the bridge and appear to have asphalt paved to the concrete deck. This asphalt at the concrete deck joint is deteriorating and breaking away. Asphalt patching compound should be added at the ends of the bridge to prevent spalling of the concrete deck.

The concrete approach barriers are well cleaned with the end noses painted yellow. The barriers are not connected to the bridge barriers for continuity.

Timber end posts for the W-beam barrier railing are rotten and should be replaced.

### 3.2 Deck

The bridge does not have an asphalt overlay, but the cast-in-place deck makes up the traveled surface and is in good condition. Deck drains are located throughout the structure on either side of the bridge adjacent to the elevated curb. At the time of inspection multiple deck drains were plugged with sediment, these drains partially cleaned during the inspection. Routine maintenance should be cleaning the deck drains and bearings.

On the downstream side of bridge, 3m from the south abutment exposed rebar was noted on the soffit of the cantilevered portion of the deck, this rebar has begun to corrode and spall concrete along the length of corrosion. This should be repaired to prevent further rebar corrosion and concrete spalling.

### 3.3 Abutments

Both abutments consist of cast-in-place concrete on what appears to be intact bedrock. No signs of cracking or settlement were noted during the inspection. The bridge bears on pot bearings and concrete plinths, with an integrated concrete headwall. No lateral shear keys are present, the bearings are secured laterally with embedded steel dowels that are likely insufficient for seismic loading.

The bearing masonry and sole plates are poorly coated with exposed steel. The exposed steel is rusting and starting to flake of coating and steel material. These steel plates should be sufficiently cleaned, prepared, and re-coated to prevent bearing replacement or further corrosion.

### 3.4 Girders

The girders and bracing are generally in good condition. On average, it was estimated 95% of the coating is remaining, with surface staining and portions of the flanges starting to corrode. The bridge is currently 45 years old which has likely exceeded the expected service life of the coating. The type of coating system is unknown, but the rate of coating loss should be monitored.

## 4 RECOMMENDATIONS

<b>Table 1 – List of Maintenance / Repair Items</b>		
<b>Item No.</b>	<b>Description</b>	<b>Priority</b>
1	Replace timber end posts for barrier railing	Moderate
2	Clean deck and drains of sediments	Low

<b>MARINE DRIVE – PORT ALICE PULP MILL BRIDGE</b>	
<b>2024 BRIDGE INSPECTION</b>	

3	Installed standard MOTI delineators	Moderate
4	Repair asphalt and ends of bridge at concrete deck	Moderate
5	Clean and repair exposed rebar on underside of deck	Moderate
6	Clean, prepare and re-coat bearing plates	Low

Table 2 – List of Monitoring Items		
Item No.	Description	Priority
1	Monitor coating loss	Low

## 5 CLOSURE


We trust you will find this information meets your requirements. If you have any questions or concerns, please feel free to contact Brian Peeters at [brian@stonecroftengineering.ca](mailto:brian@stonecroftengineering.ca) or phone (778)-346-1818 at your convenience.

Sincerely,

**StoneCroft Engineering Ltd.**



Brian Peeters, P.Eng  
Senior Bridge Engineer  
Permit to Practice No. 1001856

<b>MARINE DRIVE – PORT ALICE PULP MILL BRIDGE</b>	
<b>2024 BRIDGE INSPECTION</b>	

# APPENDIX A: 2024 INSPECTION FORM





Location: " N " W **LEVEL 1 INSPECTION - STEEL / CONCRETE BRIDGE** Clear Form  
 Road Name: Marine Drive Structure #: Fabricated by: Unknown Fabricated Year: Unknown  
 Station: Bridge Name: Pulp Mill bridge Installed by: Unknown Install Year: 1980  
 Conceptual Design: Unknown Serial Number:  
 Structural Design: Unknown  
 Construction Assurance on File?

**Creek Description:** Creek Name:  
**Gradient:** >25 **Highwater Clearance:**  
**Upstream width:** 5 **Total Clearance:** >5  
**Energy:** Moderate  
**Debris Load:** Moderate Branches  
**Sediment Load:** Moderate Cobble  
**Creek Channel:** Stable Confined  
**Substrate:** Bedrock / Boulders / Cobble  
**Stream Class:** Unknown Known  Assumed   
**Water User:**  
**Abutments skew:** 0 °  
**Creek Comments:**

**Approaches:**  
**Grades:** Camp 2 %, Deck 2 %, Woods 2 %  
**Description:** **Comment:**  
**Alignment Horizontal:** Minor Corner  
**Alignment Vertical:** Uniform  
**Surface Runoff:** Good  
**Visibility:** Clear  
**Approach Fill:**  
**Approach Barriers:** Concrete No-Post 4/4  
**Delineators:** Small 2/4  
**Bridge Ahead:**  
 Add current delineators

**Deck:** **Description** **Condition**  
**Road Width:**  
**Running Width:** +/-7.0m  
**Deck Type:** Concrete  
**Bullrail Type:** W-Beam **Size**  
**Risers:** Steel **Per Side** 19 **Good**  
**Bolts Per Riser:** 4  
**Ties (w x h):** NA @ Treated   
**Sub Deck:** NA Treated   
**Running Deck:** NA Treated   
**Joints:** Asphalt breaking at deck **Fair**  
**Pots:** NA  
**Shear Connectors:** NA  
**Gravel Depth:** NA

**Girders:**  
**Structure Type:** Steel Composite  
**Overall Length:** 30.45 **# of Spans:** 1  
**COB Span:** **# of Girders:** 4  
**Total Girder Height (o/o):** **Girder Spacing:** 2.14  
**Top Flange Width:** **Top Flange Thickness:**  
**Web Height:** **Web Thickness:** 9.5  
**Bottom Flange Width:** 410 **Bottom Flange Thickness:** 32  
**Steel Coating:** Blue paint, red primer under  
**Bolted Splice Plate:**  
**Concrete Girder Depth:** **Glulam Lamination Thickness:**  
**Concrete Girder Width:** **Glulam Lamination Width:**  
 Simply supported, no approach slab. Deck overhangs abutment.

**Abutment:** North **Description:** **Condition:**  
**Abutment Description:** CIP concrete on bedrock  
**Girder-Abut. Connection:** Pot bearing and dowels **Good / Fair**  
**Abutment Connection:** Unknown  
**Cap:** NA  
**Ballast Wall:** Concrete **Good**  
**Riprap:** NA  
**Quality of Construction:** **Good**  
**Overall Condition:** **Good**  
**Footing Founded On:** Bedrock **Good**  
**Scour:** None  
**Indicators of Settlement:** None  
**Encroaching:** No

**Abutment:** South **Description:** **Condition:**  
**Abutment Description:** CIP concrete on bedrock  
**Girder-Abut. Connection:** Pot bearing and dowels **Good / Fair**  
**Abutment Connection:** Unknown  
**Cap:** NA  
**Ballast Wall:** Concrete **Good**  
**Riprap:** NA  
**Quality of Construction:** **Good**  
**Overall Condition:** **Good**  
**Footing Founded On:** Bedrock **Good**  
**Scour:** None  
**Indicators of Settlement:** None  
**Encroaching:** No

**Summary of Comments**

**Structural:**

**Priority** Low

No issues  
Structure appears to have inadequate transverse shear keys, likely susceptible to seismic.

**Environmental:**

**Priority** Low

Deck drains plugging at deck, sediment building up under bridge.

**Maintenance:**

**Priority** Moderate

Downstream deck has minor - moderate cracking on cantilever deck. 3m from south end has exposed bar and corroding  
Deck drains plugged at deck, opened up during inspection. Deck drains to be cleaned during regular maintenance.  
Girder paint in good condition, at plate edges and bolts paint peeling and exposing red paint primer. Some corrosion a longer girders approx. 5% paint loss.  
Pot bearings in good condition, but masonry plate has moderate steel scaling, recommend removing scaling and applying paint.  
Treated timber posts at end of bridge connecting w-beam to bridge guard rails are rotten and some split, replace.

**Safety:**

**Priority** Low

Approach no barriers are not connected to bridge guard rails.

**General Comments:**

**Inspected by:** Brian Peeters

**Inspection Date:** January 26, 2024 12:37 pm

**Next Inspection:**

**Current Load Rating:**  
**Estimated Replacement Schedule:**

**Design Load Rating:**

**Previous Load Rating:**

**Year**

**Post Load Limit Sign:**

**Reviewing Professional Engineer:** Seal



01 - Approach from North Facing South



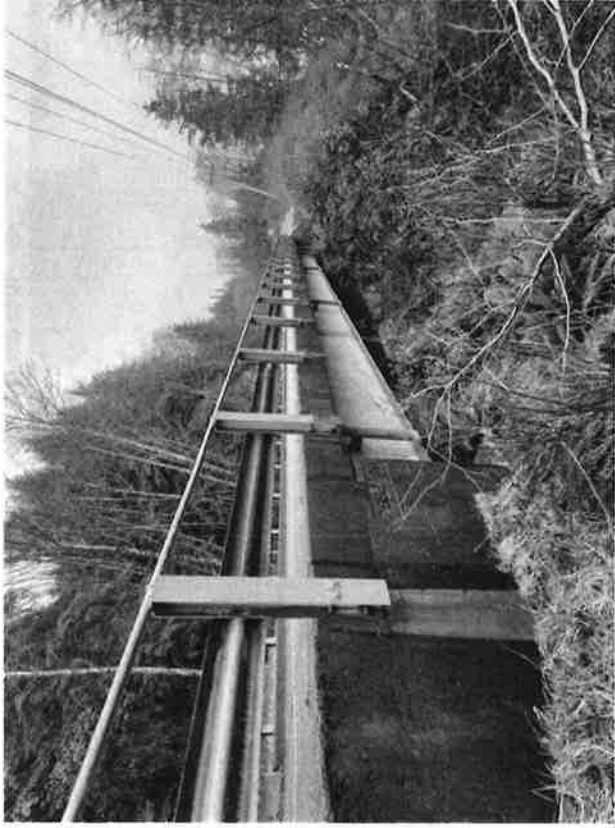
02 - Approach from South Facing North



03 - Looking Upstream



04 - Looking Downstream



05 - Profile from Downstream Looking Upstream



06 - Deck Drain, Typ.



07 - Approach Barrier Connection



08 - Bridge ID- 7662-80



08 - Deck Joint, Typ.



09 - Rebar Corrosion



10 - Rebar Corrosion



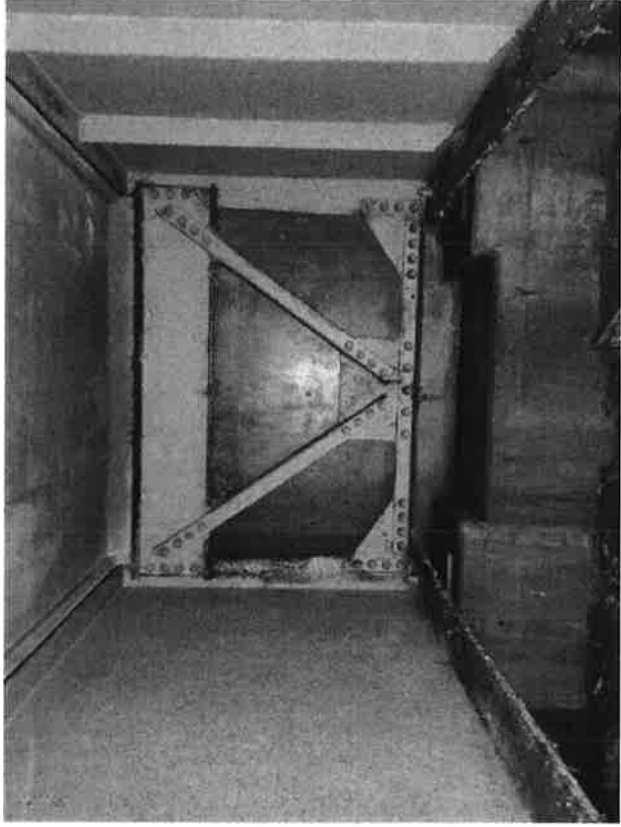
11 - Typical Bracing



12 - Typical Bearing Corrosion



12 - Typical Bearing



13 - Typical Diaphragm



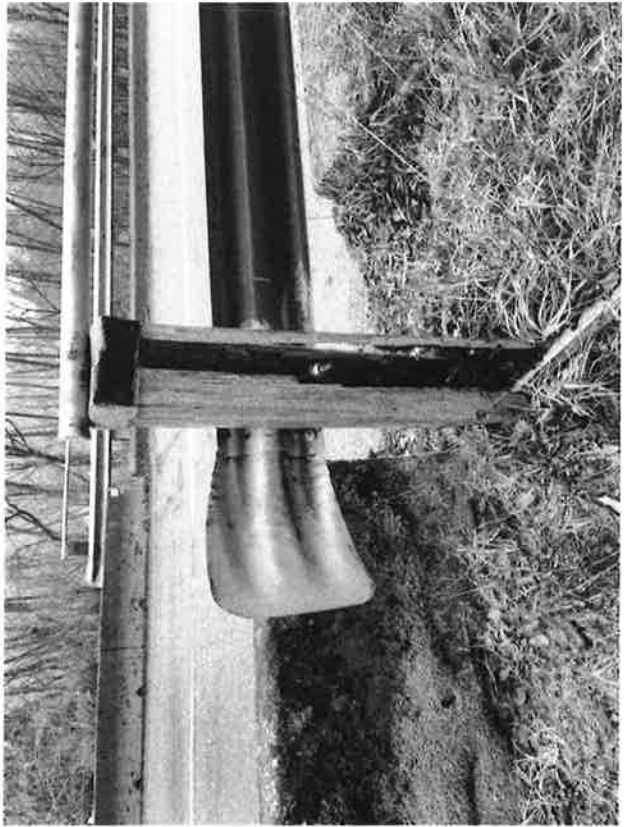
14 - North Abutment



15 - South Abutment



16 - Typical Underside of Deck



17 - Rotten End Posts

