

REQUEST FOR PROPOSALS (RFP)

WATER AND WASTEWATER FACILITIES OPERATION AND MAINTENANCE SERVICES

The Corporation of the Town of Moosonee

RFP Posted: June 26st, 2023

Electronic Proposal submission close date: July 24th

Town Contact:

Trevor Keefe, Public Works Manager at

trevorkeefe@moosonee.ca

Summary:

The Town of Moosonee invites qualified firms to submit proposals for municipal bridge inspections and repairs. This RFP seeks to identify a qualified contractor to perform necessary repairs on bridges within the municipality, as outlined in the attached OSIM bridge inspection report.

Appendix A:

OSIM Bridge Report 2022 - Attached

Scope of Work:

A. Repair Execution: Performing the necessary repairs as per the guidelines and specifications provided in the attached OSIM bridge inspection report and in compliance with relevant regulations and industry standards.

B. Quality Assurance: Implementing quality control measures to ensure the repairs meet the required standards and specifications. This may include testing, documentation, and any necessary follow-up inspections.

C. Project Management: Efficiently managing the project timeline, resources, and coordination with other stakeholders to ensure timely completion of the repairs.

D. Additional Repairs: The contractor will also address any other necessary repairs or maintenance tasks identified during the completion of the repairs, once discussed, and agreed upon by the municipality.

- 1. Butler Creek Bridge:
 - Location: Review attached OSIM report
 - Repairs Needed:
 - Tighten sway braces.
 - Re-torque all transom clamps.
 - Inspect abutments and bearings.
- 2. Ferguson Road Bridge:
 - Location: Review attached OSIM report
 - Repairs Needed:
 - Repair embankment and slope protection on the northwest quadrant. Erosion control measures are required.
 - Inspect expansion joints and replace missing nuts.
 - •
- 3. Quarry Road Bridge:

- Location: Review attached OSIM report
- Repairs Needed:
 - Restraint horizontal movement of the abutments/superstructure.
 - Clean seals, drains, and conduct inspections.
 - Repair top rail on the west side.
 - Repair embankment in the northwest quadrant.
 - ٠
- 4. Atim Road Bridge:
 - Location: Review attached OSIM report
 - Repairs Needed:
 - Repair attenuator on the southeast side.

Proposal Submission: Interested bidders are required to submit the following documents:

- 1. Cover Letter: Introduce your firm, outline your qualifications, and express your interest in this project.
- 2. Technical Proposal: Describe your approach to conducting bridge inspections and repairs, including your methodology, quality control measures, and any specialized equipment or techniques used.
- 3. Qualifications and Experience: Provide details of your firm's relevant experience, including previous bridge inspection and repair projects, certifications, and qualifications of key personnel.
- 4. Project Schedule: Present a detailed timeline outlining the key milestones, tasks, and deliverables for both inspections and repairs.
- 5. Cost Proposal: Provide a comprehensive breakdown of the proposed fees, including labor, materials, and any additional costs or expenses.

Evaluation Criteria: Proposals will be evaluated based on the following criteria:

- 1. Experience and qualifications of the firm and its personnel.
- 2. Technical approach and methodology.
- 3. Capacity to meet project timelines.
- 4. Cost-effectiveness and value for money.

Timeline:

1. RFP Release Date: June 21, 2023

- 2. Bid Submission Deadline: July 24, 2023
- 3. Evaluation of Proposals: July 30, 2023
- 4. Contract Award: August 15, 2023

Contact Information:

For any clarifications or inquiries regarding this RFP, please contact:

Trevor Keefe Public Works Manager <u>trevorkeefe@moosonee.ca</u> 705-336-8640

Submission of Proposals: Proposals must be submitted electronically to <u>info@moosonee.ca</u> no later than the bid submission deadline specified above. Late submissions will not be accepted.

Note: The Town of Moosonee reserves the right to reject any or all proposals, waive irregularities or formalities, and award the contract(s) based on the evaluation of the proposals received.

Thank you for your interest in this project.



2022 Municipal Bridge Inspections Butler Creek, Ferguson Road, Quarry Road and Atim Road Bridges in Moosonee, Ontario

Final Report

Prepared by: AECOM 300 Water Street Whitby, ON, Canada L1N 9J2 905 668 0221 fax www.aecom.com

905 215 1400 tel

Project Number: 60692533

Date: May, 2023

particular de la companya de la comp



Distribution List

# of Hard Copies	PDF Required	Association / Company Name
	Yes	Town of Moosonee

Revision Log

Revision #	Revised By	Date	Issue / Revision Description			

AECOM Signature	S	S. J. WILLIAMS 100173254 2023-05-03
Report Prepared By:	Shane Williams, P.Eng. Project Engineer, Transportation	D.E.J. ADAMSON
Report Reviewed By:	Daniel Adamson, M.Sc., P.Eng, PE Senior Project Manager, Transportation	2023-05-03



Table of Contents

1	INT	RODUCTION1	l
2	STR	UCTURE LOCATION 1	
3	AVA	AILABLE INFORMATION	ŀ
4	HIST	TORICAL INFORMATION	ŀ
	4.1 4.2 4.3 4.4	No. 001 – Butler Creek Bridge (Airport Road Bridge)	555
5	BRI	DGE DESCRIPTION	5
	5.1 5.2 5.3 5.4	No. 001 – Butler Creek Bridge (Airport Road Bridge)	
6	BRI	DGE CONDITION7	1
	6.1 6.2 6.3 6.4	No. 001 – Butler Creek Bridge (Airport Road Bridge)	, , ,
7	REC	OMMENDATIONS	3
	7.1 7.2 7.3 7.4	No. 001 – Butler Creek Bridge (Airport Road Bridge)	} } }

Appendices

Appendix A – Inspection Forms

1 Introduction

AECOM was retained by the Town of Moosonee for Professional Services related to the inspection of Butler Creek, Ferguson Road, Quarry Road and Atim Road Bridges in accordance with the Ontario Structure Inspection Manual. This report summarizes the findings of the 2022 inspections including updated municipal structure inspection forms with recommendations for required bridge maintenance, rehabilitation and/or replacements.

2 Structure Location

The existing structures are situated at various locations in Moosonee, Ontario, as shown on the following Key Plans (Figure 1-5).



Figure 1. Key Plan



Figure 2. Key Plan – Butler Creek Bridge



Figure 3. Key Plan – Ferguson Road Bridge



Figure 4. Key Plan – Quarry Road Bridge



Figure 5. Key Plan – Atim Road Bridge

3 Available Information

The following reference drawings were available:

- SUD-00014028 Dwg. No. 1 of 2 Butler Creek Bridge Rehabilitation General Arrangement
- SUD-00014028 Dwg. No. 2 of 2 Butler Creek Bridge Rehabilitation Plan Section and Details
- SUD-00014028 Dwg. No. 1 of 1 Fergusion Rd Bridge Rehabilitation General Arrangement
- SUD-00014023 Dwg. No. S-1 Atim Rd Bridge Rehabilitation General Arrangement
- SUD-00014023 Dwg. No. S-2 Atim Rd Bridge Rehabilitation Pile Bent Repair
- SUD-00014023 Dwg. No. S-3 Atim Rd Bridge Rehabilitation Sidewalk Details
- SUD-00014023 Dwg. No. C-1 Atim Rd Bridge Rehabilitation Erosion Protection Plan & Profile
- 91-020 Dwg. No. A-1 Store Creek Bridge Replacement Horizontal and Vertical Control
- 91-020 Dwg. No. A-2 Store Creek Bridge Replacement Sediment Control Plan
- 91-020 Dwg. No. A-3 Store Creek Bridge Replacement Utility & Removals
- 91-020 Dwg. No. 1 Store Creek Bridge General Arrangement
- 91-020 Dwg. No. 2 Store Creek Bridge Foundation Layout & Pilecap Reinforcement
- 91-020 Dwg. No. 3 Store Creek Bridge Abutments
- 91-020 Dwg. No. 4 Store Creek Bridge Abutments Reinforcement
- 91-020 Dwg. No. 5 Store Creek Bridge Piers
- 91-020 Dwg. No. 6 Store Creek Bridge Structural Steel I
- 91-020 Dwg. No. 7 Store Creek Bridge Structural Steel II
- 91-020 Dwg. No. 8 Store Creek Bridge Structural Steel III
- 91-020 Dwg. No. 9 Store Creek Bridge Deck Details
- 91-020 Dwg. No. 10 Store Creek Bridge Joint Anchorage and Armouring
- 91-020 Dwg. No. 11 Store Creek Bridge Railing
- 91-020 Dwg. No. 12 Store Creek Bridge 6000 mm Approach Slab
- 91-020 Dwg. No. 13 Store Creek Bridge Standard Details I
- 91-020 Dwg. No. 14 Store Creek Bridge Standard Details II

The following previous inspection reports were available:

• 2020 Municipal Bridge Inspections

4 Historical Information

4.1 No. 001 – Butler Creek Bridge (Airport Road Bridge)

The Butler Creek bridge was built in 1970. The bridge was rehabilitated in 2014 and 2015, and consisted of the following:

- Welding repairs of the steel plates on the deck steel grating
- New timber deck on the cantilever sidewalk
- Gabion retaining wall at the Southwest corner
- Installation of narrow bridge sign at both approaches
- Installation of a triple load posting sign of 20, 27 and 34 tonnes

The last bridge inspection was done in 2020.

4.2 No. 002 – Ferguson Road Bridge

The Ferguson Road bridge was built in 1995. The bridge was rehabilitated in 2010, 2014 and 2015, and consisted of the following:

- Timber deck wearing surface replacement
- Welding repairs of the steel plates on the deck steel grating
- New timber deck on the cantilever sidewalk
- Gabion retaining wall at the Southwest corner
- Installation of narrow bridge sign at both approaches
- Installation of a triple load posting sign of 20, 27 and 34 tonnes

The last bridge inspection was done in 2020.

4.3 No. 003 – Quarry Road Bridge

The Quarry Road bridge was built in 1974. Since its construction, some rehabilitation works have been done to the bridge, however none were recorded. Nevertheless, the 2015 inspection report noted a change in 1998 with new slope protection on the east abutment.

The last bridge inspection was done in 2020.

4.4 No. 004 – Atim Road Bridge

The Atim Road bridge construction date is unknown. The bridge was rehabilitated in 2010, 2014 and 2015, and consisted of the following:

- Injection in concrete deck cracks
- Replacement of damaged bridge railing
- Replacement of expansion joints seals
- Repaired unsound concrete on the fascia
- Rock fill for scoured and eroded area under the bridge
- Steel H piles coated with a coal tar epoxy system
- H-piles steel repairs
- New drainage ditches Northeast and Southwest corners
- Northeast approach sidewalk
- New energy attenuating terminals at the approaches
- Installation of a triple load posting sign of 16, 29 and 40 tonnes

The last bridge inspection was done in 2020.

5 Bridge Description

5.1 No. 001 – Butler Creek Bridge (Airport Road Bridge)

The Butler Creek bridge crosses Butler Creek in the town of Moosonee. The bridge is a single span Bailey Bridge with Double Double reinforced construction and 64 mm thick steel grating deck. The Bailey bridge is divided into 15 bays with 2 transoms in each bay. The entire length of the bridge measures 45.7 m. The roadway consists of a single lane riding surface, 3.81m wide. There is a cantilever sidewalk on the south side of the bridge.

5.2 No. 002 – Ferguson Road Bridge

The Ferguson Road bridge crosses Store Creek in the town of Moosonee. The bridge is a three-span continuous steel girder bridge with a transverse laminated timber deck. The bridge is divided into 3 unequal spans of 16.3m, 31.1m and 19.6m, the entire length of the bridge measures 67.5m from north to south. The roadway single lane, timber riding surface of 4.9m wide consists of a series of 2" x12" timber. There is a 1.57m timber deck sidewalk on the south side of the bridge.

The superstructure is made up of 3 welded plate girders at 2.3m spacing with a timber deck. Diaphragms at the bearings consist of steel plate while the intermediate diaphragms consist of steel K-frames.

The substructure consists of reinforced concrete abutments and piers consisting of steel tube pile bents with concrete pile caps.

5.3 No. 003 – Quarry Road Bridge

The Quarry Road bridge crosses Maidman's Creek south of the town of Moosonee. The bridge is a single-span steel girder bridge with a concrete deck. The bridge length is 21.4m, measured center to center at the bearings. The roadway consists of two lanes of concrete riding surface of 7.9m wide. On the deck, there are 0.6m wide curbs on the East and West sides.

The superstructure is made up of 4 welded plate girders at 2.4m spacing with a cast-in-place concrete deck. Diaphragms at the bearings consist of steel I-sections and the intermediate diaphragms consist of steel channels.

The substructure consists of reinforced concrete abutments.

5.4 No. 004 – Atim Road Bridge

The Atim Road bridge crosses Store Creek in the town of Moosonee. The bridge is a nineteen-span continuous wood-concrete composite deck bridge. The entire length of the bridge measures approximately 122m and is divided into 19 spans of lengths varying between 5.4m and 6.9m. The roadway consists of two lanes concrete riding surface of 8.0m wide. On the deck, there is a 1.25m wide curb on the East side and a 0.35 wide curb on the West side.

The superstructure is built with a timber deck soffit and concrete deck top.

The substructure consists of steel H-pile bents which act as the piers and abutments.

6 Bridge Condition

6.1 No. 001 – Butler Creek Bridge (Airport Road Bridge)

The Butler Creek bridge is in generally fair condition. There are safety issues with the cantilever walkway (height and close opening) and a missing bottom panel. At the Northeast and Southeast quadrants, the steel Flex Beam Guide Rails are damaged from vehicle impact. On the deck surface grating, longitudinal welds on both sides of the two (2) steel plates are cracked. All the transom clamps and 50 % of the swaybraces are loose. Could not inspect abutments and bearings due to them being covered with dirt and gravel.

The current condition of the bridge is considered for the calculated 2022 Bridge Condition Index (BCI). The 2022 BCI is 68.12 with an increase from the 2020 BCI. This increase in BCI is a result of adding missing elements for foundations, streams/waterways, embankments and slope protection, and also, discrepancies in element condition ratings for the stringers, bracing and railing systems.

6.2 No. 002 – Ferguson Road Bridge

The Ferguson road bridge is in fair to good condition. There is some severe damage to the longitudinal and transverse timber wearing surface in the middle span and approaches. Furthermore, the timber is deteriorating with no connection to the lower layer of the deck. The laminated transverse timber deck soffit is showing signs of deterioration with discoloration and wet areas. There is a missing nut at the north abutment diaphragm tie-down. Could not fully inspect expansion joints, sidewalk and deck top due to them being covered with dirt and gravel.

The current condition of the bridge is considered for the calculated 2022 Bridge Condition Index (BCI). The 2022 BCI is 71.99 and is a decrease from the 2020 BCI.

6.3 No. 003 – Quarry Road Bridge

The Quarry road bridge is in generally good condition. It is noted that the superstructure is not connected laterally or longitudinally to the substructure. There are localised signs of leaking on the ballast walls and bearing seats below the expansion joints. The embankment in the northwest quadrant is severely eroded. There are potholes on the approaches. Could not fully inspect expansion joints, curbs, deck top and deck drains due to them being covered with dirt and gravel.

The current condition of the bridge is considered for the calculated 2022 Bridge Condition Index (BCI). The 2022 BCI is 74.15 and is a decrease from the 2020 BCI.

6.4 No. 004 – Atim Road Bridge

The Atim road bridge is in generally good condition. There is a localised deformation on one of the pier H-piles in the creek probably from ice/debris impact. There are localised signs of leaking on the ballast walls and bearing seats below the expansion joints. There are potholes on the approaches and a damaged attenuator in the Southeast quadrant. The stream is partially blocked with debris. Could not fully inspect expansion joints, curbs and deck top due to them being covered with dirt and gravel.

The current condition of the bridge is considered for the calculated 2022 Bridge Condition Index (BCI). The 2022 BCI is 71.56 and is a decrease from the 2020 BCI.

7 Recommendations

7.1 No. 001 – Butler Creek Bridge (Airport Road Bridge)

Maintenance Needs:

- Replace the Northeast and Southeast approach steel flex beam guide rails.
- Remove dirt and gravel on the abutments and bearings.
- Replace missing bottom panel on handrail.
- Re-torque all transom clamps.
- Tighten swaybraces and re-torque raker bolts as per manufacturer's instruction.

Rehab/Repair Recommendations:

- Repair longitudinal welds on the deck plates.
- Replace or modify the walkway railing to meet bridge code requirement.

7.2 No. 002 – Ferguson Road Bridge

Maintenance Needs:

• Remove dirt and gravel on the deck.

Rehab/Repair Recommendations:

- Replace missing nut on North abutment diaphragm uplift tie-down.
- Remove and replace timber deck wearing surface.
- Replacement of laminated transverse timber deck soffit should be considered at the same time.

7.3 No. 003 – Quarry Road Bridge

Maintenance Needs:

- Repair embankment in Northwest quadrant and place rock protection.
- Repair top rail of guide rail.
- Remove dirt and gravel on the deck.
- Repair potholes on approaches.

Rehab/Repair Recommendations:

• Restrain horizontal movement of the superstructure.

7.4 No. 004 – Atim Road Bridge

Maintenance Needs:

- Repair potholes on approaches.
- Remove dirt and gravel on the deck.
- Remove debris in stream.
- Repair attenuator in Southeast quadrant.

Monitoring Requirements:

• Deformations from ice/debris impacts on river piers.

Appendix A

Inspection Forms

- Butler Creek Bridge
- Ferguson Creek Bridge
- Quarry Road Bridge
- Atim Road Bridge

Summary Action Report Structure 001 (MTO Site No. 639-0002) Butler Creek Bridge

Inspection Date	e	10-21-2022	mm/dd/yyyy			Condition I	ndex Value	(BCI) 68.12
Next Biennial II	nspection	10-21-2024	mm/dd/yyyy			Current Re	p. Value	\$945,263
Additional Inve	stigations							
Investigation			Priority	Cost	Investigation		Priori	ty Cost
No additional inve	estigations re	equired.						
Performance D	eficiencies	5						
Element Group	Elen	nent		Pe	erformance Deficienc	ÿ		
Barriers	Hand	d Railings		Pe	edestrian/vehicular haz	zard		
Barriers	Raili	ng Systems		Pe	edestrian/vehicular haz	zard		
Bracing	Brac	ing		Lo	bad carrying capacity			
Maintenance N	eeds							
Element Group	Element			Mainten	ance Required	Priority	Comment	
Bracing	Bracing			Bailey br	idges - Maintenance	Urgent	Tighten sway torque all rake	braces and re- er bolts.
Barriers	Railing Sys	tems		Bridge H	andrail Maintenance	2 yr	Repair damag	ged guide rail.
Abutments	Bearings			Bridge C	leaning	2 yr	Clean off dirt	and gravel
Abutments	Abutment V	Valls		Bridge C	leaning	2 yr	Clean off dirt	and gravel.
Barriers	Hand Railir	igs		Bridge H	andrail Maintenance	Urgent	Replace miss panel.	ing bottom
Beams/MLE's	Floor Beam	IS		Bailey br	idges - Maintenance	Urgent	Re-torque all clamps.	transom
Repair/Rehabil	itation							
Element Group	Element			Repair/R	ehabilitation		Priority	Cost
Decks	Deck Top			Rehab	Repair welds.		1-5 yrs	\$5,000
Barriers	Hand Railir	igs		Rehab	Increase railing opening to cod	height and close e requirement pri walk to public	e 1-5 yrs ior	\$10,000
					Total F	Repair/Rehabilit	ation Cost	\$15,000

 Town of Moosonee
 100%
 \$15,000.00
 Total Associated Work Cost
 \$0

 %

 Total Cost
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000
 \$15,000

Overall Comments

Bridge is in generally fair condition. There are safety issues with the cantilever walkway (height and close opening) and a missing bottom panel. At the Northeast and Southeast quadrants, the steel Flex Beam Guide Rails are damaged from vehicle impact. On the deck surface grating, longitudinal welds on both sides of the two (2) steel plates are cracked. All the transom clamps and 50 % of the swaybraces are loose. Could not inspect abutments and bearings due to them being covered with dirt and gravel.



Municipal Structure Inspection Form

Structure Number:

Inventory Data								
Structure Name	Butler Creek Bridge				Hwy No.	1 Key	Photo	
Cross. Type Over	✓Road □ Rail	🗌 Ped 🗌 Nav	. Water	Nater 🗌 Non-Nav. Wat. 🗌 Other				
Cross. Type Under	Road Rail	🗌 Ped 🗹 Nav	. Water	r 🗌 Non-N	lav. Wat.	Other		ATTEN NO.
Road Name	Airport Road							
Structure Location	Over Butler Creek					and a state		
Latitude	51.28417 Long	itude 80.61639	C	ur. Rep.Val	ue \$	945,263	2	
Owner(s)/	Town of Moosonee		100	%		**		A Contraction
% Share				% Heritag	ge Status	Not Considere	d for Designation	n
MTO Region				Road S	Side Env.	Rural		
MTO District				Road C	Class	Freeway		
Old County				Lane T	уре			
Geographic Twp.				Posted	I Speed	15	No. of Lanes	1
Structure Type	Bailey Panel			AADT		400	Pct. Trucks	
Structure Material	Structural Steel			Inspec	tion Route	Sequence		
Articulation				Interchange Number				
Total Deck Length	45.7 m F	load Width	3.81	m Interch	erchange Structure Number			
Overall Width	6.1 m V	/ert. Clear.	0	m Detour	Length	0 km	Skew Angle	0 °
Total Deck Area	278.77 m ²	lo. of Spans	1	Fill on	Structure	0 m	Struct. Dir.	North/South
Special Routes	Transit Schoo	Truck	Bicycle	e Insp. D	ouration	hr		
Spans	** Current Replacemen	t Value is based on in planning should consi	kind rep der site s	placement of t specific cost f	the existing s actors and re	tructure and calcu quirements for wi	lated using benchm dening or lengtheni	nark costs. Capital ng of the structure.
Span Name		Span Length	Span N	Name		Ş	Span Length	
1		45.7 m					m	
		m		m				
		m					m	
Historical Data								
Year Built	1970	уууу	Year o	of Last Maj	or Rehab	20	14 уууу	
Last OSIM Inspection	n 09-07-2020	mm/dd/yyyy	Contra	act No. Wh	en Built]
Last Enhanced OSIN	1	mm/dd/yyyy	Last E	Evaluation			mm/dd/yyyy	_
Last Enhanced Acce	ss	mm/dd/yyyy	Curre	nt Load Lir	nit	20 t 27	7 t 34 t	
Last Underwater Ins	p.	mm/dd/yyyy	Load	Limit By-La	aw No.		mm/dd/yyyy	
Last Condition Surve	ey	mm/dd/yyyy	By-La	w Expiry D	ate		mm/dd/yyyy	
Rehab History								
Rehab Date R	ehab Description							
2014-01-01 R ga to	eplaced timber decki abion retaining wall a nnes.	ng of cantilever bri t SW of bridge. Po	dge sid osted bi	lewalk, repa ridge for trip	ired steel d le load pos	leck grating and ting of 20, 27 a	installed nd 34	



Municipal	Structure	Inspection	Form	Stru

001

Field Inspection Information:							
Inspection Date	10-21-2022 mm/dd/yyyy □ Multi Day Inspection ✓ OSIM □ Enhanced OSIM BCI 68.12						
Inspector	S. Williams Eng. Responsible D. Adamson						
Others in Party	O. Zhychkovska						
Access Equip.	Lift Ladder Boat Bridge Master Other						
Other Equip.	Camera, Hammer, Other Hand Tools						
Weather	RainTemperature2°C						

Additional Investigations Required:

Investigation		Priority			Estimated Cost
	None	Normal	Urgent		
Detailed Deck Condition Survey					\$0
Delamination Survey of Asphalt-Covered Deck					\$0
Concrete Substructure Condition Survey					\$0
Detailed Coating Condition Survey					\$0
Detailed Timber Investigation					\$0
Post-Tensioned Strand Investigation					\$0
Underwater Investigation					\$0
Fatigue Investigation					\$0
Seismic Investigation					\$0
Structure Evaluation					\$0
Monitoring of Deformations, Movements and Settlements					\$0
Monitoring of Crack Widths					\$0
Investigation Notes				Total Cost	\$0

Overall Structure Notes:								
Recommended	Work on Structure	None None	✓ Rehab	Replace	Remove			
Timing of Reco	ommended Work	None None	Now	✓ 1 to 5 years	6 to 10 years			
Overall Comments	Bridge is in generally fair compared with the decompared of the decompany of the decompany of the transom clamps and 50 being covered with dirt and the decompared withe dirt and the decompar	ondition. There a le Northeast and k surface grating % of the swayb gravel.	are safety issues I Southeast quad J, longitudinal wel rraces are loose.	with the cantilever wa rants, the steel Flex ds on both sides of t Could not inspect at	alkway (height and close opening) and a Beam Guide Rails are damaged from he two (2) steel plates are cracked. All outments and bearings due to them			
BCI Change Justification	ICI Change Added missing elements.							
Next Inspectio	n 10-21-2024 mm	/dd/yyyy	Es	timated Load Limit	20 t 27 t 34 t			



Municipal Structure Inspection Form

001

BCI History						
Insp. Date	BCI	Inspector	BCI History			
21-Oct-22	68.12	S. Williams	Don matory			
			100			
			90			
			70			
			60			
			50			
			40			
			30			
			30			
			20			
			0 +			
			2022-10-21			

All BCI values are based on the MTO BCI methodology published in April 2008. As a result, BCI values for 2007 and earlier are approximate only, with potential discrepancies resulting from changes (over time) in the way quantities for certain elements are calculated.

Standard Codes

Suspected Performance Deficiencies

- 00 None
- 01 Load carrying capacity
- Excessive deformations (deflections/rotations) 02
- 03 Continuing settlement
- 04 Continuing movements
- 05 Seized bearings

Maintenance Needs

- Lift and Swing Bridge Maintenance 01
- 02 Bridge Cleaning
- 03 Bridge Handrail Maintenance
- 04 Painting Steel Bridge Structures
- 05 Bridge Deck Joint Repair
- 06 Bridge Bearing Maintenance

- Bearing not uniformly loaded/unstable 06
- 07 Jammed expansion joint
- Pedestrian/vehicular hazard 08
- Rough riding surface 09
- 10 Surface ponding
- 11 Deck drainage
- Repair to Structural Steel Repair of Bridge Concrete 07
- 08
- Repair of Bridge Timber 09
- 10 Bailey Bridges - Maintenance Animal/Pest Control 11
- 12
 - Bridge Surface Repair

- 12
- Slippery surfaces Flooding/channel blockage 13
- Undermining of foundation 14
- 15 Unstable embankments
- 16 Other
- Erosion Control at Bridges 13
- Concrete Sealing 14
- 15 Rout and Seal
- 16 Bridge deck Drainage
- Scaling (Loose Concrete or ACR Steel) 17
- 18 Other

Municipal Structure Inspection Form

Element Data							
Decks - Deck Top							
Element Group	Decks			Length 45.70 Width 4.45			
Element Name	Deck Top			Height 0.06 Count 0.00			
Location				Total Quantity 203.37			
Material	Steel			Limited Inspection			
Element Type	Metal Grid		Environment				
Protection System				Benign			
Condition Data	Units Exc	ell. Good F	air Poor	Moderate			
Comments	sq. m	0.00 75.00	128.37 0.00	Severe			
Welds are cracked on	steel plates.						
Performance Deficien	icies	Maintenance Needs	Priority	Comments			
None							
Rehab/Repair Recom	mendations	Priority Cost	Comments				
Rehab		1-5 yrs \$5,000	Repair welds.				
Sidewalks/curbs	- Sidewalks/M	ledians					
Element Group	Sidewalks/curbs	;		Length 45.70 Width 1.06			
Element Name	Sidewalks/Media	ans		Height 0.20 Count 1.00			
Location	East Side			Total Quantity 57.58			
Material	Timber			Limited Inspection			
Element Type				Environment			
Protection System				Benign			
Condition Data	Units Exc	ell. Good F	air Poor	☐ Moderate			
	sq. m	0.00 57.58	0.00 0.00	Severe			
Comments							
Performance Deficien	ncies	Maintenance Needs	Priority	Comments			
None							
		Driority Orac	Commerte				
<u>кепар/кераіг кесот</u>	mendations	Priority Cost	Comments				
AECOM		Janua	ry 10, 2023	Page 5 of 2			



Town of Moosonee Municipal Structure Inspection Form Structure Number: 001 **Barriers - Railing Systems Element Group** Barriers Length 50.00 Width 2.00 **Element Name Railing Systems** Height Count North Side and South Side **Total Quantity** 100.00 Location □ Limited Inspection Material Steel Steel Flex Beam over Bailey Bridge **Element Type** Environment **Protection System** Benign Good Moderate **Condition Data** Units Excell. Fair Poor 7.00 m 0.00 0.00 93.00 Severe Comments Impact damage at northeast, southeast and centre of west side. **Performance Deficiencies Maintenance Needs** Priority **Comments** Pedestrian/vehicular hazard Bridge Handrail Maintenance 2 yr Repair damaged guide rail. **Rehab/Repair Recommendations** Priority Cost Comments **Barriers - Hand Railings** 45.70 Width **Element Group** Barriers Length 1.00 **Element Name** Hand Railings Height Count 45.70 Location East Side **Total Quantity** Limited Inspection Material Steel **Element Type** Environment **Protection System** Hot dip galvanizing Benign **Condition Data** Units Excell. Good Fair Poor Moderate m 0.00 43.70 2.00 0.00 Severe Comments Railing height/opening do not meet bridge code requirements. Missing bottom panel. **Performance Deficiencies** Maintenance Needs Priority **Comments** Pedestrian/vehicular hazard Bridge Handrail Maintenance Replace missing bottom panel. Urgent **Rehab/Repair Recommendations** Priority Cost Comments Rehab Increase railing height and close opening to 1-5 yrs \$10,000 code requirement prior to opening sidewalk to public.



Municipal Struc	ture Insp	ection F	Form	Stru	cture Nu	umber:	00)1	
Beams/MLE's - F	loor Beams	5							
Element Group	Beams/MLE	s				Length	Wid	h	
Element Name	Floor Beams	;				Height	Cou	nt	31.00
Location							Total Quanti	ty	31.00
Material	Steel					🗌 Limit	ed Inspection		
Element Type						Environr	nent		
Protection System						🗌 Benig	jn		
Condition Data	Units	Excell.	Good	Fair	Poor	✓ Mode	erate		
0	Each	0.00	20.00	11.00	0.00	Seve	re		
Structure has large vib	rations and de	flection durir	ng vehicle load	ding. Light sur	face corrosic	on.			
Performance Deficien	cies	Mainte	enance Needs	6	Priority	Comments			
None		Bailey	bridges - Mair	ntenance	Urgent	Re-torque a	Il transom clamps	-	
Rehab/Repair Recom	mendations	Prio	ority C	ost Commei	nts				
Beams/MLE's - S	tringers								
Element Group	Beams/MLE	S				Length	Wid	th	
Element Name	Stringers					Height	Cou	nt 2 ⁻	70.00
Location							Total Quanti	ty 2 ⁻	70.00
Material	Steel					Limit	ed Inspection		
Element Type						Environr	nent		
Protection System						🗌 Benig	jn		
Condition Data	Units	Excell.	Good	Fair	Poor	✓ Mode	erate		
Comments	Each	0.00	270.00	0.00	0.00	Seve	re		
Structure has large vib	rations and de	flection durir	ng vehicle load	ding.					
Performance Deficien	cies	Mainte	enance Needs	6	Priority	Comments]
None									
Rehab/Repair Recom	mendations	Prio	ority C	ost Commei	nts				
Rehab/Repair Recom	mendations	Prio	ority C	ost Commei	<u>nts</u>				



Town of Moosonee	
------------------	--

Municipal Stru	cture Ins	pection F	Form	Strue	cture Nu	mber:	001	
Trusses/Arches	- Top Cho	ords						
Element Group	Trusses/A	rches				Length	Width	
Element Name	Top Chord	ls				Height	Count	120.00
Location							Total Quantity	120.00
Material	Steel					Limited I	nspection	
Element Type						Environmen	t	
Protection System	Hot dip gal	lvanizing				Benign		
Condition Data	Units	Excell.	Good	Fair	Poor	Moderate	9	
Commonto	Each	0.00	100.00	20.00	0.00	Severe		
Performance Deficie	ncies	Mainte	enance Needs		Priority	Comments		
Performance Deficie None Rehab/Repair Recon	ncies	Mainte	enance Needs prity Co	ost Commen	Priority	Comments		
Performance Deficie None Rehab/Repair Recon Bracing - Bracin	ncies nmendations	<u>Mainte</u>	enance Needs prity Co	ost Commen	Priority	Comments		
Performance Deficie None Rehab/Repair Recon Bracing - Bracin Element Group	ncies nmendations Ig Bracing	Mainte	enance Needs prity Co	ost Commen	Priority	Comments Length	5.10 Width	
Performance Deficie None Rehab/Repair Recon Bracing - Bracin Element Group Element Name	ncies nmendations Ig Bracing Bracing	Mainte	enance Needs prity Co	ost Commer	Priority nts	Comments	5.10 Width	30.00
Performance Deficie None Rehab/Repair Recon Bracing - Bracin Element Group Element Name Location	ncies nmendations Ig Bracing Bracing	Mainte	enance Needs ority Cc	ost Commen	Priority nts	Comments	5.10 Width Count Total Quantity	30.00
Performance Deficie None Rehab/Repair Recon Bracing - Bracin Element Group Element Name Location Material	ncies nmendations Ig Bracing Bracing Steel	Mainte	enance Needs	ost Commer	Priority nts	Comments	5.10 Width Count Total Quantity nspection	30.00
Performance Deficie None Rehab/Repair Recon Bracing - Bracin Element Group Element Name Location Material Element Type	ncies nmendations Ig Bracing Bracing Steel	Mainte	enance Needs prity Cc	ost Commer	Priority	Comments	5.10 Width Count Total Quantity nspection	30.00
Performance Deficie None Rehab/Repair Recon Bracing - Bracin Element Group Element Name Location Material Element Type Protection System	ncies	Mainte	enance Needs prity Cc	ost Commer	Priority	Comments	5.10 Width Count Total Quantity nspection	30.00
Performance Deficie None Rehab/Repair Recon Bracing - Bracin Element Group Element Name Location Material Element Type Protection System Condition Data	ncies	Excell.	enance Needs ority Cc	ost Commer	Priority nts	Comments Length Height Limited I Environmen Benign V Moderate	5.10 Width Count Total Quantity nspection	30.00

50% of swaybraces are loose.

Performance Deficiencies	Maintenance Ne	eeds	Priority	Comments
Load carrying capacity	Bailey bridges - I	Maintenance	Urgent	Tighten swaybraces and re-torque all raker bolts.
Rehab/Repair Recommendations	Priority	Cost Comment	ts	



Town of Moosonee Municipal Structure Inspection Form Structure Number: 001 **Abutments - Abutment Walls Element Group** Abutments Length 0.00 Width 6.00 2.00 Abutment Walls 0.50 Count **Element Name** Height East Side and West Side **Total Quantity** 6.00 Location ✓ Limited Inspection Wood Material **Element Type** Environment **Protection System** Benign **Condition Data** ✓ Moderate Units Excell. Good Fair Poor 0.00 0.00 6.00 0.00 sq. m Severe Comments Silt and gravel from roadway being tracked onto the bridge is accumulating on the abutments and bearings which prevents any visual inspection. Comments **Performance Deficiencies Maintenance Needs** Priority Clean off dirt and gravel. None **Bridge Cleaning** 2 yr Priority **Rehab/Repair Recommendations** Cost Comments **Abutments - Bearings** 0.00 0.00 Width **Element Group** Abutments Length 4.00 **Element Name** Bearings Height 0.00 Count **Total Quantity** 4.00 Location All ✓ Limited Inspection Material Steel **Element Type** Environment **Protection System** Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor Each 0.00 0.00 4.00 0.00 Severe Comments Medium corrosion, less than 10% section loss. Buried in sand. **Performance Deficiencies Maintenance Needs** Priority **Comments Bridge Cleaning** 2 yr Clean off dirt and gravel None **Rehab/Repair Recommendations** Priority Cost Comments



Municipal Struc	ture Inspec	tion Form	Str	ucture Nu	imber:	001	
Foundations - Fo	oundations (be	elow ground lev	vel)				
Element Group	Foundations				Length	0.00 Width	0.00
Element Name	Foundations (be	low ground level)			Height	0.00 Count	0.00
Location	West Abutment	and Piers				Total Quantity	0.00
Material					✓ Limite	d Inspection	
Element Type					Environm	ent	
Protection System					Benig	n	
Condition Data	Units Exc	ell. Good	Fair	Poor	Mode	rate	
Comments	All				Sever	e	
No deficiencies observe	ed.						
Performance Deficien	cies	Maintenance Nee	ds	Priority	Comments		
None			45	, nony	Commente		
Rehab/Repair Recomr	mendations	Priority	Cost Comn	nents			
Embankments & S	Streams - Str	eams & Waterw	ays				
Element Group	Embankments 8	Streams			Length	0.00 Width	0.00
Element Name	Streams & Wate	rways			Height	0.00 Count	0.00
Location	Under Bridge					Total Quantity	1.00
Material					Limite	d Inspection	
Element Type					Environm	ent	
Protection System					Benig	n	
Condition Data	Units Exc	ell. Good	Fair	Poor	Mode	rate	
Comments	All	0.00 1.00	0.00	0.00	Sever	е	
Performance Deficient None Rehab/Repair Recomr	cies mendations	Maintenance Nee	ds Cost Comn	Priority	Comments		



Municipal Struc	ture Inspec	tion Form	Structure Nu	mber:	001
Embankments &	Streams - Em	bankments			
Element Group	Embankments &	Streams		Length	0.00 Width 0.00
Element Name	Embankments			Height	0.00 Count 2.00
Location	In Front of Abut	ments			Total Quantity 2.00
Material				Limited	Inspection
Element Type				Environme	ent
Protection System				🗸 Benign	
Condition Data	Units Exc	ell. Good	Fair Poor	Modera	ate
•	Each	0.00 2.00	0.00 0.00	Severe	
Comments					
Performance Deficier	ncies	Maintenance Needs	Priority	Comments	
None					
Deheh/Deneir Deeem	mondationo	Priority Coot	Commonto		
Kenab/Repair Recom	mendations	Phonty Cost	Comments		
Embankmonts &	Stroome - Slo	no Protection			
Element Group	Embankments &	Streams		Length	0.00 Width 0.00
Element Name	Slope Protection			Height	0.00 Count 2.00
Location	In Front of Abut	ments			Total Quantity 2.00
Material	Vegetation				
Flement Type	Vegetation			Environme	ant and
Brotoction System					211L
Condition Data	Linito Exc	oll Cood	Eair Boor		ato
Condition Data	Each	0.00 2.00	0.00 0.00		
Comments		2.00			·
Performance Deficier	ncies	Maintenance Needs	Priority	Comments	
None					
Rehab/Repair Recom	mendations	Priority Cost	Comments		



Accessories - Si	gns								
Element Group	Accessorie	es				Length	0.00 W	lidth	0.00
Element Name	Signs					Height	0.00 C	ount 1	2.00
Location	East Side	and West Side	e				Total Qua	intity 1	2.00
Material						Limite	ed Inspection		
Element Type						Environn	nent		
Protection System						🗌 Benig	In		
Condition Data	Units	Excell.	Good	Fair	Poor	✓ Mode	rate		
Commonto	Each	0.00	12.00	0.00	0.00	Seve	re		
None Rehab/Repair Recon	nmendations	Pric	ority Co	st Commei	nts				
None Rehab/Repair Recom Approaches - W	nmendations earing Sur	Pric	ority Co	st Commei	nts				
None Rehab/Repair Recom Approaches - W Element Group	earing Sur	Pric Pric	ority Co	st Commei	nts	Length	3.00 W	/idth	3.50
None Rehab/Repair Recom Approaches - W Element Group Element Name	earing Sur Approache Wearing S	Pric Pric	ority Co	st Commei	nts	Length Height	3.00 W	Vidth	3.50
None Rehab/Repair Recom Approaches - W Element Group Element Name Location	earing Sur Approache Wearing S East Side	Price Price Price Price Price Price Price Price Price Price Price Price Price Price Price Price	prity Co	st Commei		Length Height	3.00 W	Vidth ount	3.50 2.00 2.00
None Rehab/Repair Recom Approaches - W Element Group Element Name Location Material	earing Sur Approache Wearing S East Side Steel	Price Pric Price Price Pric Price Price Pric Price Pri	prity Co	st Commei	nts	Length Height	3.00 W Co Total Qua ed Inspection	Vidth ount	3.50
None Rehab/Repair Recom Approaches - W Element Group Element Name Location Material Element Type	earing Sur Approache Wearing S East Side Steel	Pric Price es urface and West Side	ority Co	st Commei	nts	Length Height	3.00 W Co Total Qua ed Inspection nent	Vidth ount untity	3.50
None Rehab/Repair Recom Approaches - W Element Group Element Name Location Material Element Type Protection System	earing Sur Approache Wearing S East Side Steel	Price es urface and West Side	prity Co	st Commei	nts	Length Height	3.00 W Ca Total Qua ed Inspection nent	Vidth ount	3.50 2.00 2.00
None Rehab/Repair Recom Approaches - W Element Group Element Name Location Material Element Type Protection System Condition Data	earing Sur Approache Wearing S East Side Steel Units	Price Pric Price Price Price Price Price Price P	Good	st Commen	Poor	Length Height	3.00 W Total Qua ed Inspection nent n	Vidth ount Intity	3.50 2.00 2.00
None Rehab/Repair Recom Approaches - W Element Group Element Name Location Material Element Type Protection System Condition Data	Approache Wearing Sur East Side Steel Units Each	Price Pric Price Price Price Price P	Drity Co	st Commen Fair 2.00	nts	Length Height Limite Environn Benig Mode	3.00 W Total Qua ed Inspection nent in rate re	/idth ount intity	3.50
None Rehab/Repair Recom Approaches - W Element Group Element Name Location Material Element Type Protection System Condition Data Approach ramps are b	earing Sur Approache Wearing S East Side Steel Units Each	Price Pric Price Price Price P	Control Contro	st Commen	nts	Length Height □ Limite Environn □ Benig □ Mode V Sever	3.00 W Total Qua ed Inspection ment in rate re	Vidth	3.50
None Rehab/Repair Recom Approaches - W Element Group Element Name Location Material Element Type Protection System Condition Data Approach ramps are b Performance Deficie	Approache Wearing Sur Vearing S East Side Steel Units Each Duried and not	Price	Derity Co Image: Constraint of the second of the	st Commen	nts Poor 0.00 Priority	Length Height Limite Environn Benig Mode V Sever	3.00 W 3.00 Co Total Qua ad Inspection ment in rate re	Vidth	2.00

Municipal Structure Inspection Form

Structure Number:

001

Repair/Reh	abilitation Required			
Element Group	Element	Repair/Rehabilitation	Priority	Cost
Decks	Deck Top	Rehab	1-5 yrs	\$5,000
Barriers	Hand Railings	Rehab	1-5 yrs	\$10,000
		Total Repair/Rehabilita	tion Cost	\$15,000

Associated Work

	Comments	Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control		\$0
Utilities		\$0
Right-of-Way		\$0
Environmental Study		\$0
Other		\$0
Contingencies	%	** \$0
Engineering	%	** \$0
** If based on a percenta	ge calculated values rounded-up to the Total Associated Work Cost	\$0
nearest thousand dollars	Total Repair/Rehabilitation Cost	\$15,000
	Total Cost	\$15,000
	Town of Moosonee Share @ 100%	\$15,000
Justification		

Municipal Structure Inspection Form

Structure Number:



Looking North at Bridge



Looking South at Bridge



Structure Number:

001



East Elevation



West Elevation



Structure Number:



North Approach



South Approach



Structure Number:



Impact Damage to Guiderail in Northeast Quadrant



Impact Damage to Guiderail in Southwest Quadrant



Structure Number:



Impact Damage to Centre of West Guiderail



Typical Signs on Approach



Municipal Structure Inspection Form Structure Number:



Typical Double Truss Member of Bailey Bridge



Welds Cracked at decking steel plates



Structure Number:



Looking South at Cantilevered Walkway



Missing Bottom Panel on Exterior Handrail


Structure Number:



Abutment Bearings Buried in Sand



North Abutment



Structure Number:



South Abutment



Typical Soffit



Structure Number:





Typical Light Corrosion on Floor Beam



Typical Stringers



Structure Number:





Typical Bracing



South Embankment



Summary Action Report Structure 002 (MTO Site No. 639-0003) Ferguson Road Bridge - Store Creek East

Inspection Date	10-21-2022	mm/dd/yyyy			Condition Index Valu	ie (BCI)	71.99
Next Biennial Inspection	10-21-2024	mm/dd/yyyy			Current Rep. Value		
Additional Investigations					L		
Investigation		Priority	Cost	Investigation	Pri	iority	Cost
No additional investigations re	equired.						
Performance Deficiencies	S						
No Performance Deficiencies							

Maintenance Needs

Element Group	Element		Maintenance Required	Priority	Comment
Joints	Armouring/Retaining Devices		Bridge Cleaning	1 yr	Remove sand and gravel.
Joints	Concrete End Dams		Bridge Cleaning	1 yr	Remove sand and gravel.
Joints	Seals/Sealants		Bridge Cleaning	1 yr	Remove sand and gravel.
Sidewalks/curbs	Sidewalks/Medians		Bridge Cleaning	1 yr	Remove sand and gravel.
Decks	Deck Top		Bridge Cleaning	1 yr	Remove sand and gravel.
Decks	Deck Top		Repair of Bridge Timber	1 yr	Replace rotten/broken transverse deck boards.
Decks	Deck Top		Bridge Cleaning	1 yr	Remove sand and gravel.
Beams/MLE's	Diaphragms	End	Repair to Structural Steel	2 yr	Replace missing nut.

Repair/Rehabilitation

Element Group	Element		Repair/Ref	nabilitation	Priority	Cost
Decks	Deck Top		Rehab	Consider replacement of deck.	1-5 yrs	
Decks	Deck Top		Rehab	Consider replacement of deck.	1-5 yrs	
				Total Repair/Rehabilitati	on Cost	
Town of Moosone	e	100%	\$0.00	Total Associated	Work Cost	\$0
		%			Total Cost	<u>\$0</u>

Overall Comments

Bridge is in generally good condition. There is some severe damage to the running planks in the middle span and approaches. Furthermore, the timber is deteriorating with no connection to the lower layer of the deck. There is a missing nut at the north abutment diaphragm tie-down. Could not fully inspect expansion joints, sidewalk and deck top due to them being covered with dirt and gravel.



Town of Moosonee

Municipal Structure Inspection Form

Structure Number:

Inventory Data									
Structure Name	Fergu	son Road Br	ridge - Store Cree	ek East		Hwy No.	Ferguso Ke	ey Photo	
Cross. Type Over	✓ Roa	ad 🗌 Rail	🗌 Ped 🗌 I	Nav. Wa	ter 🗌 Noi	n-Nav. Wat.	Other		
Cross. Type Under	Ro	ad 🗌 Rail	🗌 Ped 🖌 I	Nav. Wa	ter No	n-Nav. Wat.	Other		+
Road Name	Fergu	son Road							
Structure Location	Over S	Store Creek						La part	TETAL AND
Latitude	51.	27083 Lor	ngitude 80.64	333	Cur. Rep.	Value			The second
Owner(s)/	Town	of Moosone	e	10	0 %		**		607(2)/2002.
% Share					% Heri	tage Status	Not Conside	ed for Designatio	n
MTO Region					Roa	d Side Env.			
MTO District					Roa	d Class	Collector		
Old County					Lan	е Туре			
Geographic Twp.					Pos	ted Speed	1:	No. of Lanes	1
Structure Type					AAD	т	400	Pct. Trucks	
Structure Material	Wood				Insp	ection Route	Sequence		
Articulation					Inte	rchange Num	ber		
Total Deck Length		67.5 m	Road Width	4	.9 m inte	rchange Stru	cture Number		
Overall Width		6.95 m	Vert. Clear.		0 m Deto	our Length	1.5 ki	ⁿ Skew Angle	0 °
Total Deck Area	4	69.13 m ²	No. of Spans		3 Fill	on Structure	m	Struct. Dir.	North/South
Special Routes	Tra	nsit 🗌 Sch	ool Truck	Bicy	cle Insp	. Duration	h	r	
Spans	** Curre	nt Replaceme	ent Value is based c planning should co	n in kind onsider sit	replacement te specific co	of the existing s ost factors and re	tructure and calc equirements for v	ulated using benchn videning or lengtheni	nark costs. Capital ng of the structure.
Span Name			Span Length	Spar	n Name			Span Length	
1			16.3 m	2				31.1 m	
3			19.6 m						
Historical Data									
Year Built		199	5 уууу	Yea	r of Last M	lajor Rehab		уууу	
Last OSIM Inspectio	n	09-07-202	0 mm/dd/yyyy	Cor	tract No.	When Built			7
Last Enhanced OSIN	1		mm/dd/yyyy	Las	t Evaluatio	on		mm/dd/yyyy	_
Last Enhanced Acce	ess		mm/dd/yyyy	Cur	rent Load	Limit	t	t t	
Last Underwater Ins	р.		mm/dd/yyyy	Loa	d Limit By	/-Law No.		mm/dd/yyyy	
Last Condition Surv	ey		mm/dd/yyyy	By-	Law Expir	y Date		mm/dd/yyyy	
Rehab History									
Rehab Date R	ehab D	escription							
2010-01-01 R	eplace	d wearing str	rips.						
2014-01-01 R W	eplaceo /A-24 N	d missing Ha larrow at ea	andrails at North ch approach. Co	East side at Steel	e. Installed Tube Pile	d New Single L Bents.	₋ane Signs, W	A-241 and	



Municipal Structure Inspection Form

Field Inspecti	on Information:
Inspection Date	10-21-2022 mm/dd/yyyy 🗌 Multi Day Inspection 🔽 OSIM 🗌 Enhanced OSIM BCI 71.9
Inspector	S. Williams Eng. Responsible D. Adamson
Others in Party	O. Zhychkovska
Access Equip.	Lift Ladder Boat Bridge Master Other
Other Equip.	Camera, Hammer, Other Hand Tools
Weather	RainTemperature4°C

Additional Investigations Required:					
Investigation		Priority			Estimated Cost
	None	Normal	Urgent		
Detailed Deck Condition Survey					\$0
Delamination Survey of Asphalt-Covered Deck					\$0
Concrete Substructure Condition Survey					\$0
Detailed Coating Condition Survey					\$0
Detailed Timber Investigation					\$0
Post-Tensioned Strand Investigation					\$0
Underwater Investigation					\$0
Fatigue Investigation					\$0
Seismic Investigation					\$0
Structure Evaluation					\$0
Monitoring of Deformations, Movements and Settlements					\$0
Monitoring of Crack Widths					\$0
Investigation Notes				Total Cost	\$0

Overall Str	ucture Notes:				
Recommended	Work on Structure	None None	✓ Rehab	Replace	Remove
Timing of Reco	ommended Work	None None	Now	✓ 1 to 5 years	6 to 10 years
Overall Comments	Bridge is in generally good approaches. Furthermore, missing nut at the north ab due to them being covered	condition. There the timber is det utment diaphrag with dirt and gra	e is some severe eriorating with no m tie-down. Cou avel.	damage to the runnin connection to the lo ld not fully inspect ex	ng planks in the middle span and wer layer of the deck. There is a xpansion joints, sidewalk and deck top
BCI Change Justification					
Next Inspectio	n 10-21-2024 mn	n/dd/yyyy	Es	timated Load Limit	t t



Municipal Structure Inspection Form

002

sp. Date	BCI	Inspector	BCI History	
21-Oct-22	71.99	S. Williams		
			100	
			70	
			60	
			50	
			50	
			40	
			30	
			20	
			10	
			0 +	
			2022-10-21	

All BCI values are based on the MTO BCI methodology published in April 2008. As a result, BCI values for 2007 and earlier are approximate only, with potential discrepancies resulting from changes (over time) in the way quantities for certain elements are calculated.

Standard Codes

Suspected Performance Deficiencies

- 00 None
- 01 Load carrying capacity
- Excessive deformations (deflections/rotations) 02
- 03 Continuing settlement
- 04 Continuing movements

05 Seized bearings

Maintenance Needs

- Lift and Swing Bridge Maintenance 01
- 02 Bridge Cleaning
- 03 Bridge Handrail Maintenance
- 04 Painting Steel Bridge Structures
- 05 Bridge Deck Joint Repair
- 06 Bridge Bearing Maintenance

- Bearing not uniformly loaded/unstable 06
- 07 Jammed expansion joint
- Pedestrian/vehicular hazard 08
- Rough riding surface 09
- 10 Surface ponding
- 11 Deck drainage
- Repair to Structural Steel Repair of Bridge Concrete 07
- 08
- Repair of Bridge Timber 09
- 10 Bailey Bridges - Maintenance Animal/Pest Control 11
- 12 Bridge Surface Repair

- 12
- Slippery surfaces Flooding/channel blockage 13 14
- Undermining of foundation 15 Unstable embankments
- 16 Other
- Erosion Control at Bridges 13
- Concrete Sealing 14
- 15 Rout and Seal
- 16 Bridge deck Drainage
- Scaling (Loose Concrete or ACR Steel) 17
- 18 Other

Municipal Structure Inspection Form

Element Data							
Decks - Deck Top)						
Element Group	Decks			Length	67.00 Width	0.61	
Element Name	Deck Top			Height	0.00 Count	2.00	
Location	2 - 2"x12" longitu	udinal running strips		[Total Quantity	40.87	
Material	Wood			✓ Limited	Inspection		
Element Type	Laminated Woo	d Decking - Longitudinal		Environme	nt		
Protection System				Benign			
Condition Data	Units Exc	ell. Good	Fair Poor	Moderat	e		
Comments	sq. m	0.00 30.87	10.00 0.00	✓ Severe			
Covered with sand and	gravel. Light to m	edium checks and edge	wearing.				
Performance Deficien	cies	Maintenance Needs	Priority	Comments			
None		Bridge Cleaning	1 yr	Remove sand	and gravel.		
		U U	·		Ū		
Rehab/Repair Recom	mendations	Priority Cost	Comments				
Rehab		1-5 yrs	Consider replacen	nent of deck.			
Decks - Deck Top)						
Element Group	Decks			Length	67.00 Width	4.23	
Element Name	Deck Top			Height	Count	0.00	
Location	2"x12" transvers	e laminated			Total Quantity	283.41	
Material	Wood			Limited Inspection			
Element Type	Laminated Woo	d Decking - Transverse		Environment			
Protection System				🗌 Benign			
Condition Data	Units Exc	ell. Good	Fair Poor	Moderat	e		
Comments	sq. m	0.00 153.41	100.00 30.00	Severe			
Covered with sand and	gravel. Transver	se deck boards rotten and	d broken along east side	ewalk.			
Porformance Deficier	oioo	Maintonanaa Naada	Driarite	Commerte			
None	cies	Bridge Cleaning	1 vr	Remove sand	and gravel		
		Repair of Bridge Timbe	r 1 yr	Replace rotten	/broken transverse	e deck	
Rehab/Repair Recom	nendations	Priority Cost	Comments	boards.			
Rehab		1-5 yrs	Consider replacen	nent of deck.			
		,					



Aunicipal Struc	cture Inspec	tion Form	Structure Nu	mber:	002
Decks - Soffit - T	hin Slab				
Element Group	Decks			Length	67.00 Width 6.00
Element Name	Soffit - Thin Slal			Height	0.00 Count 0.00
_ocation	Dimensional lun	nber (2"x12")			Total Quantity 402.00
Material	Wood			🗌 Limit	ed Inspection
Element Type				Environr	nent
Protection System				🗌 Benig	ŋn
Condition Data	Units Exc	ell. Good F	air Poor	✓ Mode	erate
Commonto	sq. m	0.00 342.00	60.00 0.00	Seve	re
Wet areas.					
Performance Deficier	ncies	Maintenance Needs	Priority	Comments	
None					
Rehab/Renair Recom	mendations	Priority Cost	Comments		
	mendations	Thomy Cost	oomments		
loints - Seals/Se	alants				
Element Group	Joints			Length	6.95 Width 0.0
Element Name	Seals/Sealants			Height	0.00 Count 2.00
ocation	North Side and	South Side			Total Quantity 2.0
Material				✓ Limit	ed Inspection
Element Type	Strip Seal			Environr	nont
Protection System					nem
Condition Data	Linits Evo	ell Good E	air Poor		
Condition Data	Each	0.00 2.00	0.00 0.00		re
Comments					
	gravei.				
Performance Deficier	ncies	Maintenance Needs	Priority	Comments	
None		Bridge Cleaning	1 yr	Remove sa	nd and gravel.
		Defention 0	0		
Kenab/Kepair Kecom	mendations	Phonty Cost	Comments		



Joints - Concrete End Dams Length 5.45 Width 0.5 Element Name Concrete End Dams Length 5.45 Width 0.5 Element Name Concrete End Dams Villented Inspection 4.0 Location Both Ends Villented Inspection Environment Protection System Environment Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Severe Severe Severe Severe Comments Covered with sand and gravel. Bridge Cleaning 1 yr Remove sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments Covered with sand and gravel. Bridge Cleaning 1 yr Remove sand and gravel. Benign 1 yr Remove sand and gravel. 0.00 0.00 0.00 Length 5.45 Width 0.0 0.00 0.00 0.00 Length 5.45 Width 0.0 0.00 0.00 0.00 0.00 Length 5.45 Width <	Aunicipal Struc	cture Inspec	tion Form	Structure Nu	imber:	002	
Element Group Joints Length 5.45 Width 0.55 Element Name Concrete End Dams Meight 0.00 Count 4.0 Location Both Ends Total Quantity 10.9 Material Cast-in-place concrete Imited Inspection Environment Protection System Benign Benign Doments Condition Data Units Excell. Good Fair Poor Moderate Comments Severe Severe Severe Severe Severe Contest each Regain Recommendations Priority Comments Severe Severe Doints - Armouring/Retaining Devices Element Group Joints Length 5.45 Width 0.00 Element Name Armouring/Retaining Devices Element Seed V Limited Inspection 4.0 Coation Both Sides Total Quantity 21.8 Severe Severe 21.8 Codition Data Units Excell. Good Fair Poor Moderate Severe Seteel Seteel Severe	Joints - Concrete	e End Dams					
Element Name Concrete End Dams Height 0.00 Count 40 Location Both Ends Total Quantity 10.90 Atterial Cast-in-place concrete ✓ Limited Inspection Element Type Environment Environment Protection System Benign Moderate Contrete End Dams 0.00 Fair Poor Moderate Moderate Severe Severe Comments 0.00 10.90 0.00 Severe Contrete End Dams 11.90 0.00 Severe Severe Comments Bridge Cleaning 1 yr Remove sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments Counting/Retaining Devices Element Group Joints Length 5.45 Width 0.00 Coation Both Sides Total Quantity 21.80 0.00 Count 4.00	Element Group	Joints			Length	5.45 Width	0.5
cocation Both Ends Total Quantity 10.9 Atterial Cast-in-place concrete ✓ Limited Inspection Element Type	Element Name	Concrete End D	ams		Height	0.00 Count	4.0
taterial Cast-in-place concrete Imited Inspection istement Type Environment istement Type Benign condition Data Units Excell. Good Fair Poor Moderate comments Benign Maintenance Needs Priority Comments covered with sand and gravel. Bridge Cleaning 1 yr Remove sand and gravel. tehab/Repair Recommendations Priority Cost Comments Bildee Priority Cost Comments Identities Length 5.45 Width 0.00 Identities Length 5.45 Width 0.00 coation Both Sides Total Quantity 21.8 itement Type Environment Environment itement Type Environment Benign 0.00 Count 4.0 coation Both Sides Total Quantity 21.8 Total Quantity 21.8 itement Type Environment Benign Severe Benign Severe cononents Oon Quantity	ocation	Both Ends				Total Quantity	10.9
Itement Type Environment indition Data Units Excell. Good Fair Poor Moderate isondition Data Units Excell. Good Fair Poor Moderate isondition Data Units Excell. Good Fair Poor Moderate comments Sq.m 0.00 10.90 0.00 0.00 Image: Severe Covered with sand and gravel. Bridge Cleaning 1 yr Remove sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Idement Name Armouring/Retaining Devices Image: Second	laterial	Cast-in-place co	ncrete		✓ Limited	Inspection	
Performance Deficiencies Maintenance Needs Priority Comments Downents Bridge Cleaning 1 yr Remove sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Deficiencies Maintenance Needs Priority Comments Doints - Armouring/Retaining Devices - - Bridge Steel	Element Type				Environme	ent	
Condition Data Units Excell. Good Fair Poor Moderate Comments Sq. m 0.00 10.90 0.00 0.00 Severe Comments Octovered with sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Identities Armouring/Retaining Devices Length 5.45 Width 0.00 Element Rooup Joints Length 5.45 Width 0.00 Count 4.0 Accation Both Sides Image: Severe Total Quantity 21.8 Identitial Steel Image: Severe Moderate Moderate Protection System Benign 0.00 0.00 V Severe Comments 0.00 21.80 0.00 0.00 V Severe Convered with sand and gravel. Bridge Cleaning 1 yr Remove sand and gravel. Environments Convered with sand and gra	Protection System				🗌 Benign		
Sq. m 0.00 10.90 0.00 0.00 Severe Comments Severed with sand and gravel. Maintenance Needs Priority Comments Severe None Bridge Cleaning 1 yr Remove sand and gravel. Severe Severe Rehab/Repair Recommendations Priority Cost Comments Count 4.0 Identities Length 5.45 Width 0.0 0.00 Count 4.0 Identities Length Steel Image: Cleaning Image: Cleaning V Limited Inspection Environment Cleani	Condition Data	Units Exc	ell. Good	Fair Poor	Modera	ite	
Contracts Maintenance Needs Priority Comments Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Identity Armouring/Retaining Devices Length 5.45 Width 0.00 Identity Joints Length 5.45 Width 0.00 0.00 4.00 Location Both Sides Total Quantity 21.80 Total Quantity 21.80 Idement Type Environment Benign Benign Benign Benign Severe Condition Data Mits Excell. Good Fair Poor Moderate Severe Convered with sand and gravel. Severe Severe Severe Severe Severe Severe Severe Convered with sand and gravel. Bridge Cleaning 1 yr Remove sand and gravel. Severe Retab/Repair Recommendations Priority Cost Comments Severe Severe Severe Severe		sq. m	0.00 10.90	0.00 0.00	✓ Severe		
Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Ioints - Armouring/Retaining Devices Ioints Length 5.45 Width 0.0 Idement Name Armouring/Retaining Devices Ioints Ioints Count 4.0 Idement Name Armouring/Retaining Devices Ioints Ioints Ioints 0.00 Count 4.0 Idement Name Armouring/Retaining Devices Ioints Ioints Ioints 4.0 Idement Name Armouring/Retaining Devices Ioints Ioints 4.0 Idement Name Armouring/Retaining Devices Ioints Ioints 4.0 Idement Name Armouring/Retaining Devices Ioints Ioints Ioints 4.0 Idement Name Both Sides Ioints Ioints <td>Covered with sand and</td> <td>d gravel.</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Covered with sand and	d gravel.					
Internative Vecus Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Remove sand and gravel. Length 5.45 Width 0.0 Remove sand and gravel. Length 5.45 Width 0.0 Remove sand and gravel. Length 5.45 Width 0.0 Remove sand and gravel. Steel Length 5.45 Width 0.0 Remove sand and gravel. Steel V Limited Inspection Environment Protection System Environment Benign Moderate Severe Condition Data Units Excell. Good Fair Poor Moderate Comments Maintenance Needs Priority Comments Severe Severe None Bridge Cleaning 1 yr Remove sand and gravel. Severe Severe Severe <th>Performance Deficier</th> <th></th> <th>Maintenance Needs</th> <th>Priority</th> <th>Comments</th> <th></th> <th></th>	Performance Deficier		Maintenance Needs	Priority	Comments		
Rehab/Repair Recommendations Priority Cost Comments Ioints Armouring/Retaining Devices Element Group Joints Joints Length 5.45 Width 0.00 Count 4.0 idement Name Armouring/Retaining Devices Idement Type Environment Protection System Benign Idements Idement Condition Data Units Immodel 0.00 21.80 0.00 Output Severe Priority Comments Covered with sand and gravel. Priority Cost Comments None Bridge Cleaning Indig Cleaning 1 yr Remove sand and gravel.			Bridge Cleaning	1 vr	Remove sand	and gravel	
Rehab/Repair Recommendations Priority Cost Comments Joints - Armouring/Retaining Devices Length 5.45 Width 0.0 Element Group Joints Length 5.45 Width 0.0 Element Name Armouring/Retaining Devices Height 0.00 Count 4.0 Location Both Sides Total Quantity 21.8 Aaterial Steel Imited Inspection Element Type Environment Protection System Benign Condition Data Units Excell. Good Fair Poor Moderate Comments 0.00 21.80 0.00 0.00 V Severe Severe Covered with sand and gravel. Bridge Cleaning 1 yr Remove sand and gravel. Remove sand and gravel.	None		Bridge Cleaning	i yi	Itemove sand	and gravel.	
Joints Element Group Joints Element Group Joints Length 5.45 Width 0.0 Element Name Armouring/Retaining Devices Height 0.00 Count 4.0 Location Both Sides Total Quantity 21.8 Aterial Steel ✓ Limited Inspection Element Type	Rehab/Repair Recom	mendations	Priority Cost	Comments			
Joints Length 5.45 Width 0.0 Element Group Joints Length 5.45 Width 0.0 Element Name Armouring/Retaining Devices Height 0.00 Count 4.0 Location Both Sides Total Quantity 21.8 Material Steel ✓ Limited Inspection Element Type Environment Protection System Benign Condition Data Units Excell. Good Fair Poor Moderate Comments O.00 21.80 0.00 0.00 V Severe Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel.							
Element Group Joints Length 5.45 Width 0.0 Element Name Armouring/Retaining Devices Height 0.00 Count 4.0 Location Both Sides Total Quantity 21.8 Aterial Steel ✓ Limited Inspection Element Type Environment Environment Protection System Benign Moderate Condition Data Units Excell. Good Fair Poor Moderate Comments 0.00 21.80 0.00 0.00 V Severe Covered with sand and gravel. Maintenance Needs Priority Comments Comments None Bridge Cleaning 1 yr Remove sand and gravel. Remove sand and gravel.	Joints - Armouri	ng/Retaining I	Devices				
Element Name Armouring/Retaining Devices Both Sides Material Steel Element Type Environment Protection System Condition Data Units Excell. Good Fair Poor Moderate m 0.00 21.80 0.00 V Severe Performance Deficiencies None Bridge Cleaning 1 yr Remove sand and gravel.	lement Group	Joints			Length	5.45 Width	0.0
Both Sides Total Quantity 21.8 Material Steel ✓ Limited Inspection Element Type Environment Benign Condition Data Units Excell. Good Fair Poor Moderate Condition Data Units Excell. Good Fair Poor Moderate Comments 0.00 21.80 0.00 0.00 V Severe Covered with sand and gravel. Maintenance Needs Priority Comments Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments	Element Name	Armouring/Reta	ining Devices		Height	0.00 Count	4.0
Material Steel Imited Inspection Element Type Environment Protection System Benign Condition Data Units Excell. Good Fair Poor Moderate Moderate comments 0.00 21.80 0.00 0.00 V Severe Covered with sand and gravel. Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments	ocation	Both Sides				Total Quantity	21.8
Element Type Environment Protection System Benign Condition Data Units Excell. Good Fair Poor Moderate m 0.00 21.80 0.00 0.00 V Severe Covered with sand and gravel. Performance Deficiencies None Bridge Cleaning 1 yr Remove sand and gravel. Remove sand and gravel.	Naterial	Steel			✓ Limited	Inspection	
Protection System □ Benign Condition Data Units Excell. Good Fair Poor Moderate m 0.00 21.80 0.00 0.00 V Severe Comments Covered with sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel.	Element Type				Environme	ent	
Condition Data Units Excell. Good Fair Poor Moderate m 0.00 21.80 0.00 0.00 0.00 V Severe Comments Covered with sand and gravel. Image: Covered with sand and gravel. Image: Covered with sand and gravel. Image: Covered with sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments	Protection System				Benign		
m 0.00 21.80 0.00 0.00 Image: Severe Covered with sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments	Condition Data	Units Exc	ell. Good	Fair Poor	Modera	ite	
Comments Comments Comments Comments Covered with sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments		m	0.00 21.80	0.00 0.00	Severe		
Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments	Comments						
None Bridge Cleaning 1 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments	Performance Deficier	ncies	Maintenance Needs	Priority	Comments		
Rehab/Repair Recommendations Priority Cost Comments	None		Bridge Cleaning	1 yr	Remove sand	and gravel.	
Renad/Repair Recommendations Priority Cost Comments	Dekek/Devein Deeew		Duiovitu Coot	0			
		linendations	Filonity Cost	Comments			



Town of Moosonee

Comments

Municipal Strue	cture Ins	pection	Form	Structure Number:			002	
Sidewalks/curbs	- Sidewall	ks/Media	ns					
Element Group	Sidewalks/	curbs				Length	67.00	Width
Element Name	Sidewalks/I	Medians				Height	0.00	Count
Location	East Side						Total C	luantity
Material	Wood					✓ Limite	ed Inspecti	on
Element Type						Environn	nent	
Protection System						🗌 Benig	ŋn	
Condition Data	Units	Excell.	Good	Fair	Poor	Mode	erate	

0.00

sq. m

Covered with sand and gravel. Minor impact damage and deformation to edge plate. Localised abrasion and wearing at north expansion joint.

0.00

99.50

1.00

Severe

Performance Deficiencies	Maintenance Ne	eds		Priority	Comments
None	Bridge Cleaning			1 yr	Remove sand and gravel.
Rehab/Repair Recommendations	Priority	Cost	Comments		

Barriers - Railing Systems										
Element Group	Barriers					Length	67.00 Width	0.00		
Element Name	Railing S	ystems				Height	0.90 Count	2.00		
Location	Both Side	Both Sides					Total Quantity	134.00		
Material	Steel	Steel					Limited Inspection			
Element Type	Steel Flex	Steel Flex Beam on steel post					nent			
Protection System	Hot dip g	alvanizing				🗌 Benig	n			
Condition Data	Units	Excell.	Good	Fair	Poor	Mode	rate			
Comments	m	0.00	134.00	0.00	0.00	Sever	e			
Comments										
None										

Rehab/Repair Recommendations

Cost Comments

Priority



002

1.50 1.00

100.50

Iunicipal Struc	cture Inspec	tion Form	Structure N	umber:	002		
Beams/MLE's - C	Girders			· · ·			
Element Group	Beams/MLE's			Length	3.00 Width 0.2		
Element Name	Girders	E	nd	Height	1.13 Count 3.0		
ocation	South Side				Total Quantity 28.1		
laterial	Steel			Limited	Inspection		
lement Type	I-type			Environme	ent		
Protection System				Benign			
Condition Data	Units Exc	ell. Good	Fair Poor	Modera	ate		
	sq. m	0.00 28.17	0.00 0.00	Severe			
Performance Deficier	ncies	Maintenance Needs	Priority	Comments			
None ∢ehab/Repair Recom	mendations	Priority Co	st Comments				
	N:						
				L an ath	2.00 With 0.2		
lement Group	Beams/MLE's		- 4	Length	3.00 Width 0.2		
	Girders	E	nd	Height	1.13 Count 3.0		
ocation	North Side			□ □ ••••••	Total Quantity 28.1		
laterial	Steel						
Element Type	I-type			Environme	ent		
Protection System				Benign			
Condition Data	Units Exc	ell. Good	Fair Poor	Modera	ate		
Comments	Sq. m	28.17	0.00	Severe			
Performance Deficier	ncies	Maintenance Needs	Priority	Comments			
None							
Rehab/Repair Recom	mendations	Priority Co	st Comments				

Municipal Struc	ture Inspec	tion Form	Structure Nu	mber:	002		
Beams/MLE's - G	Birders						
Element Group	Beams/MLE's			Length	61.00 Width	0.36	
Element Name	Girders	Mid	dle	Height	1.50 Count	3.00	
Location	All				Total Quantity	746.64	
Material	Steel			Limite	d Inspection		
Element Type	I-type			Environm	ient		
Protection System				🖌 Benig	n		
Condition Data	Units Exc	ell. Good	Fair Poor	Moder	rate		
Commonto	sq. m	0.00 695.14	51.50 0.00	Sever	е		
Some minor pitting alo	ng bottom flanges						
Performance Deficier	ncies	Maintenance Needs	Priority	Comments			
None							
Rehab/Repair Recommendations Priority Cost Comments							
Beams/MLE's - D	Diaphragms			· [
Element Group	Beams/MLE's			Length	2.30 Width	0.25	
Element Name	Diaphragms	Enc	1	Height	0.66 Count	4.00	
Location	North Side and	South Side			Total Quantity	4.00	
Material	Steel			Limited Inspection			
Element Type	I-type			Environm	ent		
Protection System				Benign			
Condition Data	Units Exc	cell. Good	Fair Poor	Moder	rate		
Comments	Each	0.00 4.00	0.00 0.00	Sever	e		
Nut missing on north a	ibutment uplift tie-	down.					
Performance Deficier	ncies	Maintenance Needs	Priority	Comments			
None		Repair to Structural Ste	el 2 yr	Replace mis	sing nut.		
Rehab/Repair Recom	mendations	Priority Cost	Comments				

Town of Moosonee **Municipal Structure Inspection Form** Structure Number: 002 Beams/MLE's - Diaphragms Length **Element Group** Beams/MLE's 0.00 Width 0.00 4.00 0.00 Count **Element Name** Diaphragms Intermediate Height Middle **Total Quantity** 4.00 Location □ Limited Inspection Material Steel **Element Type** Cross Type Environment **Protection System** Benign Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 0.00 Each 4.00 0.00 Severe Comments Light surface patina. **Performance Deficiencies Maintenance Needs** Priority Comments None Priority Cost Comments **Rehab/Repair Recommendations Coatings - Structural Steel** 0.00 0.00 Width **Element Group** Coatings Length 0.00 **Element Name** Structural Steel Height 0.00 Count **Total Quantity** 24.48 Location Girder Ends Limited Inspection Material **Element Type** Environment **Protection System** Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 23.48 1.00 0.00 sq. m Severe Comments Edge defects. **Performance Deficiencies** Maintenance Needs Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments

Town of Moosonee **Municipal Structure Inspection Form** Structure Number: 002 **Abutments - Abutment Walls** Length **Element Group** Abutments 0.00 Width 7.40 2.00 2.01 Count **Element Name** Abutment Walls Height North Side and South Side **Total Quantity** 29.75 Location □ Limited Inspection Material Cast-in-place concrete **Element Type** Environment **Protection System** Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 0.00 sq. m 29.75 0.00 Severe Comments **Performance Deficiencies Maintenance Needs** Priority Comments None Priority Cost Comments **Rehab/Repair Recommendations Abutments - Ballast Walls** 7.40 Abutments 0.00 Width **Element Group** Length 1.00 **Element Name** Ballast Walls Height 1.70 Count **Total Quantity** 12.58 Location South Side Limited Inspection Material Cast-in-place concrete **Element Type** Environment **Protection System** Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor sq. m 0.00 12.58 0.00 0.00 Severe Comments **Performance Deficiencies** Maintenance Needs Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments

Town of Moosonee Municipal Struc	ture Inspec	tion Form	Structure Nu	imber:	002			
Abutments - Ballast Walls								
Element Group	Abutments			Length	0.00 Width 7.40			
Element Name	Ballast Walls			Height	1.55 Count 1.00			
Location	North Side				Total Quantity 11.47			
Material	Cast-in-place co	ncrete		✓ Limited	Inspection			
Element Type				Environme	ent			
Protection System				🗌 Benign				
Condition Data	Units Exc	ell. Good F	air Poor	✓ Modera	ate			
Comments	sq. m	0.00 11.47	0.00 0.00	Severe				
Performance Deficien	cies	Maintenance Needs	Priority	Comments				
None								
Rehab/Repair Recom	mendations	Priority Cost	Comments					
· · ·		•						
Abutments - Win	gwalls							
Element Group	Abutments			Length	3.80 Width			
Element Name	Wingwalls			Height	1.55 Count 2.00			
Location	North Side				Total Quantity 11.78			
Material	Cast-in-place co	ncrete		Limited	Inspection			
Element Type				Environme	ent			
Protection System				Benign				
Condition Data	Units Exc	ell. Good F	air Poor	✓ Modera	ate			
Commonts	sq. m	0.00 11.78	0.00 0.00	Severe				
Light honeycombing th	roughout.							
Performance Deficien	cies	Maintenance Needs	Priority	Comments				
None								
Rehab/Repair Recom	mendations	Priority Cost	Comments					

Town of Moosonee Municipal Struc	ture Inspec	tion Form		Struct	ture Nu	mber:		002	
Abutments - Win	gwalls								
Element Group	Abutments					Length	3.75	Width	
Element Name	Wingwalls					Height	1.70	Count	2.00
Location	South Side						Total Q	uantity	12.75
Material	Cast-in-place co	ncrete				🗌 Limit	ed Inspecti	on	
Element Type						Environr	nent		
Protection System						🗌 Benig	gn		
Condition Data	Units Exc	ell. Good	1	Fair	Poor	✓ Mode	erate		
0	sq. m	0.00 12	.75	0.00	0.00	Seve	re		
Light honeycombing th	nroughout.								
Porformanco Deficior		Maintonanco I	Noods		Priority	Comments			
None		Maintenance	veeus		FIIOIIty	Comments			
None									
Rehab/Repair Recom	mendations	Priority	Cost	Comment	S				
Abutments - Bea	rings						· · · · · · · · · · · · · · · · · · ·		
Element Group	Abutments					Length	0.00	Width	0.00
Element Name	Bearings					Height	0.00	Count	3.00
Location	North Side					_	Total Q	uantity	3.00
Material	Rubber					🗌 Limit	ed Inspecti	on	
Element Type	Elastomeric pad					Environr	nent		
Protection System						🗌 Benię	gn		
Condition Data	Units Exc	ell. Good	1	Fair	Poor	✓ Mode	erate		
Comments	Each	0.00 3	8.00	0.00	0.00	Seve	re		
Performance Deficier	ncies	Maintenance I	Needs		Priority	Comments			
None									
Rehab/Repair Recom	mendations	Priority	Cost	Comment	s				

Town of Moosonee **Municipal Structure Inspection Form** Structure Number: 002 **Abutments - Bearings** Length **Element Group** Abutments 0.00 Width 0.00 3.00 0.00 Count **Element Name** Bearings Height South Side **Total Quantity** 3.00 Location □ Limited Inspection Material Rubber **Element Type** Elastomeric pad Environment **Protection System** Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 0.00 Each 3.00 0.00 Severe Comments **Performance Deficiencies Maintenance Needs** Priority Comments None Priority Cost Comments **Rehab/Repair Recommendations** Piers - Shafts/Columns/Pile Bents 0.25 0.25 Width **Element Group** Piers Length 4.00 **Element Name** Shafts/Columns/Pile Bents Height 3.10 Count **Total Quantity** 9.74 Location South Side Limited Inspection Material Steel **Element Type** Steel tube piles with capping beam Environment **Protection System** Coal tar epoxy ✓ Benign Moderate **Condition Data** Units Excell. Good Fair Poor sq. m 0.00 8.24 1.50 0.00 Severe Comments **Performance Deficiencies** Maintenance Needs Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments



Structure	Number:
-----------	---------

Municipal Struc	unicipal Structure Inspection Form Structu						002	
Piers - Shafts/Columns/Pile Bents								
Element Group	Piers					Length	0.25 Width	0.25
Element Name	Shafts/Columns	/Pile Bents				Height	3.50 Count	3.00
Location	North Side						Total Quantity	8.25
Material	Steel					🗌 Limit	ed Inspection	
Element Type	Steel tube piles	with capping	beam			Environ	nent	
Protection System	Coal tar epoxy					🖌 Beni	gn	
Condition Data	Units Exc	ell. G	ood	Fair	Poor	Mode	erate	
Comments	sq. m	0.00	8.25	0.00	0.00	Seve	re	
Performance Deficien	cies	Maintenar	ce Needs		Priority	Comments		
None								
Rehab/Repair Recommendations Priority Cost Comments								
Piers - Caps								
Element Group	Piers					Length	0.65 Width	6.10
Element Name	Caps					Height	0.90 Count	1.00
Location	South Side						Total Quantity	20.08
Material	Cast-in-place co	oncrete				L Limit	ed Inspection	
Element Type						Environ	nent	
Protection System						V Beni	ŋn	
Condition Data	Units Exc	ell. G	ood	Fair	Poor	Mode	erate	
Comments	sq. m	0.00	20.08	0.00	0.00	Seve	re	
Minor construction defe	Minor construction defects, rust stains and wet areas.							
Performance Deficien None	cies	<u>Maintenar</u>	ice Needs		Priority	Comments		
Rehab/Repair Recom	nendations	Priority	Cos	st Comment	s			

Town of Moosonee								
Municipal Struc	ture Ins	spection F	orm	Stru	cture Nu	mber:	002	
Piers - Caps						`		
Element Group	Piers					Length	0.65 Width	6.10
Element Name	Caps					Height	0.90 Count	1.00
Location	North Side					Total Quantity	20.08	
Material	Cast-in-place concrete				Limite	d Inspection		
Element Type						Environm	ent	
Protection System						🖌 Benigi	n	
Condition Data	Units	Excell.	Good	Fair	Poor	Moder	ate	
Comments	sq. m	0.00	20.08	0.00	0.00	Sever	e	
		ans and wet a	eas.					
Performance Deficien	icies	Mainte	nance Need	S	Priority	Comments		
None								
Rehab/Repair Recom	mendation	s Prio	ority C	ost Comme	ents			
Piers - Bearings								
Element Group	Piers					Length	0.00 Width	0.00
Element Name	Bearings					Height	0.00 Count	6.00
Location	Piers					_	Total Quantity	6.00

Material	Rubber			Limited Inspection	
Element Type	Elastomeric pac	1		Environment	
Protection System					✓ Benign
Condition Data	Units Exc	cell. Good	Fair	Poor	Moderate
Commonts	Each	0.00 6.00	0.00	0.00	Severe
Performance Deficien	cies	Maintenance Need	ls	Priority	Comments
None					
Rehab/Repair Recomr	nendations	Priority (Cost Comment	Ś	



Municipal Structure Inspection Form

Structure Number:

002

Repair/Rehabilitation Required									
Element Group	Element	Repair/Rehabilitation	Priority	Cost					
Decks	Deck Top	Rehab	1-5 yrs						
Decks	Deck Top	Rehab	1-5 yrs						
	Total Repair/Rehabilitation Cost								

Associated Work

	Comments	Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control		\$0
Utilities		\$0
Right-of-Way		\$0
Environmental Study		\$0
Other		\$0
Contingencies	%	** \$0
Engineering	%	** \$0
** If based on a percentage	ge calculated values rounded-up to the Total Associated Work Cost	\$0
nearest thousand donars.	Total Repair/Rehabilitation Cost	\$0
	Total Cost	\$0
	Town of Moosonee Share @ 100%	\$0
Justification		
L		



Municipal Structure Inspection Form

002



Looking North at Bridge



East Elevation







West Elevation



Looking North at North Approach



Structure Number:





Looking South at South Approach



Looking North at Deck from Centre of Bridge



Structure Number:



Looking South at Deck from Centre of Bridge



Looking North at East Sidewalk



Structure Number:



Typical Sand and Gravel Covering Deck



Rotten and Broken Transverse Deck Boards along East Sidewalk



Structure Number:





Impact Damage to Edge Plate and Localised Abrasion/Wear near North Expansion Joint.



Looking West at South Expansion Joint



Structure Number:



Looking West at North Expansion Joint



Missing End Cap on Handrail



Structure Number:



Missing Anchor Bolt on Handrail



Typical Soffit



Structure Number:

002



Wet Areas on Soffit



North Abutment



Structure Number:



South Abutment



Typical Abutment Diaphragm



Structure Number:



Missing Nut at North Abutment Tie-Down



Typical Abutment Bearing



Structure Number:





Typical Wingwall



Typical Pier



Structure Number:



Typical Pier Diaphragm



Typical Intermediate Diaphragm



Structure Number:



Typical Pier Bearing



Wet Areas on Pier Cap


Structure Number:





Edge Defect in Coating at Girder End

Summary Action Report Structure 003 (MTO Site No. 639-0006) Quarry Road Bridge

Inspection Date	e 1	0-21-2022	2 mm/dd	/уууу				Condition I	ndex Valu	ue (BCI)	74.15
Next Biennial II	nspection 1	0-21-2024	mm/dd	/уууу				Current Re	p. Value		
Additional Inve	stigations								- L		
Investigation			Prior	ity	Cost	Inves	stigation		Pr	iority	Cost
No additional inve	estigations req	uired.									
Performance D	eficiencies										
Element Group	Eleme	ent			Pe	erform	ance Deficiency				
Abutments	Bearin	ngs			Ot	her					
Approaches	Weari	ng Surface			Ro	ough ri	ding surface				
Embankments & Streams	Emba	nkments			Ur	nstable	embankments				
Embankments & Streams	Slope	Protection			Ur	nstable	embankments				
Maintenance N	eeds										
Element Group	Element			N	Maintena	ance F	Required	Priority	Commen	t	
Embankments & Streams	Slope Protec	tion		E	Erosion (Control	at Bridges	1 yr	Repair em Northwest	nbankmer t quadran	nt in t.
Embankments & Streams	Embankmen	ts		E	Erosion (Control	at Bridges	1 yr	Repair err Northwest	nbankmer t quadran	nt in t
Sidewalks/curbs	Curbs			E	Bridge Cl	leaning	9	2 yr	Remove s	and and	gravel.
Barriers	Railing Syste	ems		E	Bridge Ha	andrail	Maintenance	2 yr	Repair top	o rail.	
Joints	Seals/Sealar	nts		E	Bridge Cl	leaning)	2 yr	Clean sea	ıls.	
Approaches	Wearing Surf	face		E	Bridge Su	urface	Repair	2 yr	Repair po	tholes.	
Decks	Deck Top			E	Bridge Cl	leaning	9	2 yr	Remove s	and and	gravel.
Decks	Drainage			E	Bridge Cl	leaning	9	2 yr	Clean dra	ins.	
Repair/Rehabili	itation										
Element Group	Element			R	epair/Re	ehabili	itation		Priori	ity Cost	
Abutments	Bearings			R	ehab		Restraint horizon	tal movement	None		\$10,000
							Total Re	pair/Rehabilit	ation Cost		\$10,000
Town of Moosone	e		100%	\$10,	000.00	7	т	otal Associate	ed Work C	ost	\$0
			%						- Total C	ost	\$10,000

Overall Comments

Bridge is in generally good condition. It is noted that the superstructure is not connected laterally or longitudinally to the substructure. There are localised signs of leaking on the ballast walls and bearing seats below the expansion joints. The embankment in the northwest quadrant is severely eroded. There are potholes on the approaches. Could not fully inspect expansion joints, curbs, deck top and deck drains due to them being covered with dirt and gravel.



Municipal Structure Inspection Form

Structure Number:

003

Inventory Data							
Structure Name	Quarry Road Bride	ge		Hwy No	. Quarry	Key Photo	
Cross. Type Over	Road Rail	Ped 🔲 Na	av. Wate	er 🔲 Non-Nav. Wat.	Other		
Cross. Type Under	Road Rail	Ped 🗌 Na	av. Wate	er 🖌 Non-Nav. Wat.	Other		
Road Name	Quarry Road						
Structure Location	Overy Maidman's	Creek				12. July -	The real
Latitude	51.22167 Lor	ngitude -80.7000	00 C	ur. Rep.Value		A spin of	
Owner(s)/	Town of Moosone	e	100	%	**		The second second
% Snare				% Heritage Status			
MTO Region				Road Side Env.			
MTO District				Road Class	Collector		
Old County				Lane Type			
Geographic Twp.				Posted Speed		No. of Lanes	2
Structure Type				AADT	2	200 Pct. Trucks	
Structure Material				Inspection Rou	te Sequence		
Articulation				Interchange Nu	mber		
Total Deck Length	22.3 _m	Road Width	7.9	m Interchange Str	ucture Numb	ber	
Overall Width	9.32 m	Vert. Clear.		m Detour Length		km Skew Angle	0 °
Total Deck Area	207.84 m ²	No. of Spans	0	Fill on Structure	e 0	m Struct. Dir.	North/South
Special Routes	Transit Sch	nool Truck	Bicycl	e Insp. Duration		hr	
Spans	** Current Replacement	ent Value is based on planning should con	in kind re sider site	placement of the existing specific cost factors and	structure and c requirements for	alculated using benchr or widening or lengthen	nark costs. Capital ing of the structure.
Span Name		Span Length	Span I	Name		Span Length	
1		21.4 m					
Historical Data							
Year Built	197	74 уууу	Year	of Last Major Rehab		уууу	
Last OSIM Inspectio	n 09-07-202	20 mm/dd/yyyy	Conti	ract No. When Built			
Last Enhanced OSIM	1	mm/dd/yyyy	Last	Evaluation		mm/dd/yyyy	
Last Enhanced Acce	ss	mm/dd/yyyy	Curre	ent Load Limit	t	t t	
Last Underwater Ins	p.	mm/dd/yyyy	Load	Limit By-Law No.		mm/dd/yyyy	,
Last Condition Surve	ey	mm/dd/yyyy	By-La	aw Expiry Date		mm/dd/yyyy	

Rehab History

	Municipal	Structure	Inspection	Form
--	-----------	-----------	------------	------

on Information:
10-21-2022 mm/dd/yyyy □ Multi Day Inspection ✓ OSIM □ Enhanced OSIM BCI 74.15
S. Williams Eng. Responsible D. Adamson
O. Zhychkovska
Lift Ladder Boat Bridge Master Other
Camera, Hammer, Other Hand Tools
RainTemperature3°C

Additional Investigations Required:					
Investigation	None	Priority Normal	Urgent		Estimated Cost
Detailed Deck Condition Survey					\$0
Delamination Survey of Asphalt-Covered Deck					\$0
Concrete Substructure Condition Survey					\$0
Detailed Coating Condition Survey					\$0
Detailed Timber Investigation					\$0
Post-Tensioned Strand Investigation					\$0
Underwater Investigation					\$0
Fatigue Investigation					\$0
Seismic Investigation					\$0
Structure Evaluation					\$0
Monitoring of Deformations, Movements and Settlements					\$0
Monitoring of Crack Widths					\$0
Investigation Notes				Total Cost	\$0

Overall Str	ucture Notes:				
Recommended	Work on Structure	None None	✓ Rehab	Replace	Remove
Timing of Reco	ommended Work	None None	Now	✓ 1 to 5 years	6 to 10 years
Overall Comments	Bridge is in generally good substructure. There are loc embankment in the northw inspect expansion joints, c	condition. It is n calised signs of le est quadrant is s urbs, deck top ar	oted that the sup eaking on the ball everely eroded. T nd deck drains du	erstructure is not cor ast walls and bearin There are potholes o le to them being cov	nnected laterally or longitudinally to the g seats below the expansion joints. The n the approaches. Could not fully ered with dirt and gravel.
BCI Change Justification					
Next Inspectio	n 10-21-2024 mn	n/dd/yyyy	Es	timated Load Limit	t t



Municipal Structure Inspection Form

BCI Histo	ory		
Insp. Date	BCI	Inspector	BCI History
21-Oct-22	74.15	S. Williams	
			100 90 80 70 60 50 40 30 20 10 0 2022-10-21

All BCI values are based on the MTO BCI methodology published in April 2008. As a result, BCI values for 2007 and earlier are approximate only, with potential discrepancies resulting from changes (over time) in the way quantities for certain elements are calculated.

Standard Codes

Suspected Performance Deficiencies

- 00 None
- 01 Load carrying capacity
- Excessive deformations (deflections/rotations) 02
- 03 Continuing settlement
- 04 Continuing movements

05 Seized bearings

Maintenance Needs

- Lift and Swing Bridge Maintenance 01
- 02 Bridge Cleaning
- 03 Bridge Handrail Maintenance
- 04 Painting Steel Bridge Structures
- 05 Bridge Deck Joint Repair
- 06 Bridge Bearing Maintenance

- Bearing not uniformly loaded/unstable 06
- 07 Jammed expansion joint
- Pedestrian/vehicular hazard 08
- Rough riding surface 09
- 10 Surface ponding
- 11 Deck drainage
- Repair to Structural Steel Repair of Bridge Concrete 07
- 08
- Repair of Bridge Timber 09
- 10 Bailey Bridges - Maintenance Animal/Pest Control 11
- 12 Bridge Surface Repair

- 12
- Slippery surfaces Flooding/channel blockage 13
- Undermining of foundation 14
- 15 Unstable embankments
- 16 Other
- Erosion Control at Bridges 13
- Concrete Sealing 14
- 15 Rout and Seal 16
 - Bridge deck Drainage Scaling (Loose Concrete or ACR Steel)
- 17
- 18 Other

Municipal Structure Inspection Form

Structure Number:

Element Data									
Decks - Deck Top	C								
Element Group	Decks					Length	22.30 Width	9.32	
Element Name	Deck Top					Height	0.00 Count	0.00	
Location	All						Total Quantity	207.84	
Material	Cast-in-pla	ace concrete				🗹 Limit	ed Inspection		
Element Type						Environr	nent		
Protection System						🗌 Benig	jn		
Condition Data	Units	Excell.	Good	Fair	Poor	Mode	erate		
Commonto	sq. m	0.00	197.84	10.00	0.00	Seve	re		
Covered with sand and	l gravel.								
Performance Deficien	cies	Maint	enance Need	s	Priority	Comments			
None		Bridge	Cleaning		2 yr	Remove sar	nd and gravel.		
Rehab/Repair Recom	mendations	Pri	ority C	Cost Commen	ts				
Decks - Soffit - T	hin Slab								
Element Group	Decks					Length	6.00 Width	8.28	
Element Name	Soffit - Thi	Soffit - Thin Slab				Height	0.00 Count	0.00	
Location	Both Ends						Total Quantity	49.68	
Material	Cast-in-pla	ace concrete				Limit	ed Inspection		
Element Type						Environr	nent		
Protection System						Benign			
Condition Data	Units	Excell.	Good	Fair	Poor	✓ Mode	erate		
Comments	sq. m	0.00	49.68	0.00	0.00	Seve	re		
					Deientee	2			
	CIES		enance Need	5	Priority	comments			
NOTE									
Rehab/Repair Recom	mendations	Pri	ority C	Cost Commen	ts				
AECOM				May 3, 2023				Page 5 of 27	



Town of Moosonee Municipal Struc	ture Inspec	tion Form	Structure Nu	mber:		003	
Decks - Soffit - T	hin Slah						
Element Group	Decks			Length	16.30	Width	1.80
Element Name	Soffit - Thin Slat		terior	Height	0.00	Count	0.00
Location	East Side and V	/est Side		noight	Total Q	uantity	29.34
Material	Cast-in-place co	ncrete		🗌 Limit	ed Inspectio	on	
Element Type				Environ	mont		
Protection System					an		
Condition Data	linits Evo	ell Good	Fair Poor		erate		
	sq. m	0.00 28.34	0.00 1.00		ere		
Comments	cracks						
Performance Deficien None Rehab/Repair Recom	ncies	Maintenance Needs Priority Cos	Priority t Comments	Comments			
Decks - Soffit - T	hin Slab						
Element Group	Decks			Length	16.30	Width	6.48
Element Name	Soffit - Thin Slal	o Inte	erior	Height	0.00	Count	0.00
Location	Under Roadway	Jnder Roadway				uantity	105.62
Material	Cast-in-place co	Cast-in-place concrete				on	
Element Type				Environ	ment		
Protection System				✓ Benign			
Condition Data	Units Exc	ell. Good	Fair Poor				
Comments	sq. m	0.00 105.62	0.00 0.00	Seve	ere		
Performance Deficien	cies	Maintenance Needs	Priority	Comments			
Rehab/Repair Recom	mendations	Priority Cos	t Comments				

Municipal Struc	ture Inspec	tion Form	Struc	ture Nu	mber:		003	
Decks - Drainage	!							
Element Group	Decks				Length	0.00 V	Vidth	0.00
Element Name	Drainage				Height	0.00	ount	2.00
Location	All					Total Qua	antity	2.00
Material	Steel				🗌 Limit	ted Inspection	1	
Element Type	Drain Pipe with	Basins			Environ	ment		
Protection System	None				Beni	gn		
Condition Data	Units Exc	cell. Good	Fair	Poor	Mod	erate		
Comments	Each	0.00 0.00	2.00	0.00	✓ Seve	ere		
Gravel on deck blockin	g drains.							
Derfermenes Deficien		Maintananaa Naada		Driority	Commonto			
None	CIES	Bridge Cleaning		2 vr	Clean drain			
None		Bridge Oleaning		2 yi	Olean drain			
Rehab/Repair Recom	nendations	Priority Co	ost Commen	ts				
Joints - Seals/Sea	alants							
Element Group	Joints				Length	9.30 V	Vidth	0.00
Element Name	Seals/Sealants				Height	0.00	ount	2.00
Location	All					Total Qua	antity	2.00
Material					🗹 Limit	ted Inspection	1	
Element Type	Strip Seal				Environment			
Protection System	None				Beni	gn		
Condition Data	Units Exc	cell. Good	Fair	Poor	Mod	erate		
Comments	Each	0.00 0.00	2.00	0.00	✓ Seve	ere		
Signs of leaking below.	Seals covered in	n sand and gravel.						
Derfermen Deficier				Dulaulta	0			
None	Cles	Bridge Cleaning		2 yr	Clean seals			
NONE		Bridge Cleaning		Z yi	Clean Seals			
Rehab/Repair Recom	nendations	Priority Co	ost Commen	ts				

Sidewalks/curbs - Curbs Element Group Sidewalks/curbs Length 28.30 Wichth 0.00 Element Name Curbs Total Quantity 33 Material Cast-in-place concrete Environment Protection System None Benign 0.00 31.96 1.00 1.000 ✓ Severe Comments None Severe Moderate ✓ Severe Severe Narrow to medium cracks, small spalls. Covered in sand and gravel. 1.000 ✓ Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Severe None Bridge Cleaning 2 yr Remove sand and gravel. Barriers - Railing Systems Length 28.30 Width 0 Element Type Barriers Length 28.30 Width 0 Element Raing Systems Length 28.30 Width 0 Element Type Steel Flex Beam on steel post Total Quantity 56 Material Steel Good Fair Poor Moderate Condition Data Units <td< th=""><th>Iunicipal Struc</th><th>ture Inspec</th><th>tion Form</th><th>Stru</th><th>cture Nu</th><th>ımber:</th><th>003</th><th></th></td<>	Iunicipal Struc	ture Inspec	tion Form	Stru	cture Nu	ımber:	003		
Element Group Sidewalks/curbs Length 28.30 Width 0 Element Name Curbs Height 0.00 Count 2 Location East Side and West Side Total Quantity 33 Material Cast-in-place concrete V Limited Inspection Element Type Environment Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Severe Severe Severe Severe Severe Narrow to medium cracks, small spalls. Covered in sand and gravel. Severe Severe Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 2 yr Remove sand and gravel. Barriers - Railing Systems Length 28.30 Width 0 Element Group Barriers Length 28.30 Width 0 Element Group Barriers Length 28.30 Width 0 Location Both Sides Total Quantity 56 Material S	Sidewalks/curbs	- Curbs							
Element Name Curbs Height 0.00 Count 2 Location East Side and West Side Total Quantity 33 Waterial Cast-in-place concrete Imited Inspection Environment Protection System None Benign Benign Comments Sq.m 0.00 31.86 1.00 1.00 V Severe Comments Sq.m 0.00 31.86 1.00 V Severe Severe Comments Sq.m 0.00 31.86 1.00 V Severe Severe Narrow to medium cracks, small spalls. Covered in sand and gravel. V Severe Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Severe None Bridge Cleaning 2 yr Remove sand and gravel. Severe Rehab/Repair Recommendations Priority Cost Comments Severe Barriers - Railing Systems Length 28.30 Width O Element Name Railing Systems Length 0.80 Count 2 Cocation	Element Group	Sidewalks/curbs	i			Length	28.30 Width	0.60	
cocation East Side and West Side Total Quantity 33 Atterial Cast-in-place concrete ✓ Limited Inspection istement Type Environment Benign condition Data Units Excell. Good Fair Poor Moderate comments sq.m 0.00 31.96 1.00 1.00 ✓ Severe varrow to medium cracks, small spalls. Covered in sand and gravel. ✓ Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Total Quantity Severe None Barriers Railing Systems Ength 0.80 Count 2 cocation Both Sides Environment Environment Environment Environment itement Type <td< td=""><td>lement Name</td><td>Curbs</td><td></td><td></td><td></td><td>Height</td><td>0.00 Count</td><td>2.0</td></td<>	lement Name	Curbs				Height	0.00 Count	2.0	
Initial Cast-in-place concrete Imited Inspection Element Type Environment Protection System None Condition Data Units Excell. Good Fair Poor Moderate Somments Servere Maintenance Needs Priority Comments Narrow to medium cracks, small spalls. Covered in sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 2 yr Remove sand and gravel. Barriers - Railing Systems Element Group Barriers Length 28.30 Element Type Steel Steel Total Quantity 56 Material Steel Steel Environment 2 Condition Data Units Excell. Good Fair Poor Total Quantity 56 Idement Name Railing Systems Environment Environment 2 Total Quantity 56 Idement Type Steel Flex Beam on steel post Environment Environment Environment Environment Environment Environment	ocation	East Side and V	/est Side				Total Quantity	33.9	
Bennent Type Environment Protection System None Sondition Data Units Excell. Good Fair Poor Moderate Sondition Data Units Excell. Good Fair Poor Moderate Sondition Data Units Excell. Good Fair Poor Moderate Somments Somments 1.00 1.00 V Severe Varrow to medium cracks, small spalls. Covered in sand and gravel. Vertex Severe Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 2 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Barriers Barriers Length 28.30 Width 0 Element Name Railing Systems Height 0.80 Count 2 Idement Name Railing Systems Limited Inspection Environment Environment Protection System Hot dip galvanizing Environment Environment Environment	Naterial	Cast-in-place co	ncrete			✓ Limit	ed Inspection		
Protection System None Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Sq. m 0.00 31.96 1.00 1.00 Image: Severe Name 0.00 31.96 1.00 1.00 Image: Severe Severe Varrow to medium cracks, small spalls. Covered in sand and gravel. Priority Comments Severe None Bridge Cleaning 2 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Barriers - Railing Systems Length 28.30 Width 0 Element Group Barriers Length 28.30 Width 0 Steel Steel Element Steel Element Steel Element Protection Environment Protection System Hot dip galvanizing Benign Benign Severe Comments 0.00 53.80 0.00 3.00 Severe Two sections of top rail deformed from impact on west side. Severe Severe Severe None Maintenance Ne	Element Type					Environ	ment		
Condition Data Units Excell. Good Fair Poor Moderate Comments Sq. m 0.00 31.96 1.00 1.00 Image: Severe Narrow to medium cracks, small spalls. Covered in sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 2 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Barriers - Railing Systems	Protection System	None				🗌 Benig	gn		
Sq. m 0.00 31.96 1.00 1.00 ✓ Severe Narrow to medium cracks, small spalls. Covered in sand and gravel. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 2 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Barriers - Railing Systems	Condition Data	Units Exc	ell. Good	Fair	Poor	Mode	erate		
Maintenance Needs Priority Comments Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 2 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Barriers - Railing Systems Itength 28.30 Width 0 Element Group Barriers Length 28.30 Width 0 Scation Both Sides Total Quantity 56 Material Steel Element on steel post Environment Protection System Hot dip galvanizing Beingn Beingn Condition Data Units Excell. Good Fair Poor Moderate Comments 0.00 53.60 0.00 3.00 Y Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Environments None Bridge Handrail Maintenance 2 yr Repair top rail. Environ	Commonts	sq. m	0.00 31.96	1.00	1.00	✓ Seve	re		
Performance Deficiencies Maintenance Needs Priority Comments None 2 yr Remove sand and gravel. Rehab/Repair Recommendations Priority Cost Comments Sarriers - Railing Systems	Narrow to medium cra	cks, small spalls.	Covered in sand and g	ravel.					
Performance Deficiencies Maintenance Needs Priority Comments None Bridge Cleaning 2 yr Remove sand and gravel. tehab/Repair Recommendations Priority Cost Comments Barriers - Railing Systems Image: Cleaning in the system in									
None Bridge Cleaning 2 yr Remove sand and gravel. Bridge Cleaning 2 yr Remove sand and gravel. Barriers - Railing Systems Length 28.30 Width 0 Berriers - Railing Systems Length 28.30 Width 0 Iement Group Barriers Length 28.30 Width 0 Iement Name Railing Systems Height 0.80 Count 2 ocation Both Sides Total Quantity 56 Iaterial Steel Limited Inspection Iement Type Steel Flex Beam on steel post Environment rotection System Hot dip galvanizing Benign ondition Data Units Excell. Good Fair Poor Moderate omments 0.00 53.60 0.00 3.00 V Severe 'wo sections of top rail deformed from impact on west side. Priority Comments None Maintenance Needs Priority Comments	erformance Deficier	ncies	Maintenance Needs		Prioritv	Comments			
Rehab/Repair Recommendations Priority Cost Comments Barriers Length 28.30 Width 0 Barriers Length 28.30 Width 0 Element Group Barriers Length 28.30 Width 0 Steement Name Railing Systems Height 0.80 Count 2 Location Both Sides Total Quantity 56 Ataerial Steel Limited Inspection Element Type Steel Flex Beam on steel post Environment Protection System Hot dip galvanizing Benign Condition Data Units Excell. Good Fair Poor Moderate Comments 0.00 53.60 0.00 3.00 Severe Two sections of top rail deformed from impact on west side. Priority Comments None Maintenance Needs Priority Comments None Maintenance 2 yr Repair top rail.	None		Bridge Cleaning	·	2 yr	Remove sa	nd and gravel.		
Rehab/Repair Recommendations Priority Cost Comments Barriers Length 28.30 Width 0 Barriers Length 28.30 Width 0 Berniers Length 28.30 Width 0 Cocation Both Sides Total Quantity 56 Aterial Steel Steel Environment Protection System Hot dip galvanizing Environment Protection System Hot dip galvanizing Benign Condition Data Units Excell. Good Fair Poor Moderate Comments 0.00 53.60 0.00 3.00 V Severe Wo sections of top rail deformed from impact on west side. Priority Comments None Maintenance 2 yr Repair top rail.			0 0				J.		
Barriers - Railing Systems Length 28.30 Width 0 Element Group Barriers Length 28.30 Width 0 Element Name Railing Systems Out 2 Location Both Sides Total Quantity 56 Aaterial Steel Limited Inspection Element Type Steel Flex Beam on steel post Environment Protection System Hot dip galvanizing Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Two sections of top rail deformed from impact on west side. Priority Comments Performance Deficiencies Maintenance Needs Priority Comments None Maintenance 2 yr Repair top rail.	Rehab/Repair Recom	mendations	Priority Co	ost Comme	nts				
Barriers - Railing Systems Length 28.30 Width 0 Element Group Barriers Length 28.30 Width 0 Element Name Railing Systems Height 0.80 Count 2 Location Both Sides Total Quantity 56 Aaterial Steel Limited Inspection Element Type Steel Flex Beam on steel post Environment Protection System Hot dip galvanizing Benign Condition Data Units Excell. Good Fair Poor Moderate Comments m 0.00 53.60 0.00 3.00 ✓ Severe Two sections of top rail deformed from impact on west side. Maintenance Needs Priority Comments Enderstand None Maintenance Needs Priority Comments Bridge Handrail Maintenance 2 yr Repair top rail.									
Element Group Barriers Length 28.30 Width 0 Element Name Railing Systems Image: Control of the state is a state in the state is a state i	Barriers - Railing	J Systems							
Element Name Railing Systems Height 0.80 Count 2 cocation Both Sides Total Quantity 56 Itaterial Steel Steel Limited Inspection Element Type Steel Flex Beam on steel post Environment Protection System Hot dip galvanizing Benign Scondition Data Units Excell. Good Fair Poor Moderate m 0.00 53.60 0.00 3.00 Severe Two sections of top rail deformed from impact on west side. Performance Deficiencies Maintenance Needs Priority Comments Bridge Handrail Maintenance 2 yr Repair top rail.	lement Group	Barriers				Length	28.30 Width	0.0	
Action Both Sides Total Quantity 56 Material Steel Limited Inspection Element Type Steel Flex Beam on steel post Environment Protection System Hot dip galvanizing Benign Condition Data Units Excell. Good Fair Poor Moderate m 0.00 53.60 0.00 3.00 V Severe Two sections of top rail deformed from impact on west side. Performance Deficiencies Maintenance Needs Priority Comments None Maintenance Needs Priority Comments	lement Name	Railing Systems	Railing Systems			Height	0.80 Count	2.0	
Material Steel Steel Limited Inspection Element Type Steel Flex Beam on steel post Environment Protection System Hot dip galvanizing Benign condition Data Units Excell. Good Fair Poor Moderate comments 0.00 53.60 0.00 3.00 ✓ Severe comments Five sections of top rail deformed from impact on west side. Severe Severe Performance Deficiencies Maintenance Needs Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.	ocation	Both Sides				Total Quantity	56.6		
Element Type Steel Flex Beam on steel post Environment Protection System Hot dip galvanizing Benign Condition Data Units Excell. Good Fair Poor Moderate m 0.00 53.60 0.00 3.00 Severe For sections of top rail deformed from impact on west side. Performance Deficiencies Maintenance Needs Priority Comments Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.	laterial	Steel				🗌 Limit	ed Inspection		
Protection System Hot dip galvanizing Benign Condition Data Units Excell. Good Fair Poor Moderate m 0.00 53.60 0.00 3.00 Image: Severe Comments Fivo sections of top rail deformed from impact on west side. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.	lement Type	Steel Flex Bean	on steel post			Environ	nent		
Condition Data Units Excell. Good Fair Poor Moderate m 0.00 53.60 0.00 3.00 Image: Comments Imag	Protection System	Hot dip galvaniz	ing			🗌 Benig	gn		
m 0.00 53.60 0.00 3.00 ✓ Severe Two sections of top rail deformed from impact on west side. Impact on west side. Impact on west side. Impact on west side. Performance Deficiencies Maintenance Needs Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.	Condition Data	Units Exc	ell. Good	Fair	Poor	Moderate			
Comments Comments Two sections of top rail deformed from impact on west side. Performance Deficiencies None Bridge Handrail Maintenance 2 yr Repair top rail.		m	0.00 53.60	0.00	3.00	✓ Seve	re		
Performance Deficiencies Maintenance Needs Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.	Comments	il deformed from in	apact on west side						
Verformance Deficiencies Maintenance Needs Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.	wo sections of top rai		ipact off west side.						
Performance Deficiencies Maintenance Needs Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.									
Performance Deficiencies Maintenance Needs Priority Comments None Bridge Handrail Maintenance 2 yr Repair top rail.									
None Bridge Handrail Maintenance 2 yr Repair top rail.	Performance Deficier	icies	Maintenance Needs	;	Priority	Comments			
	None		Bridge Handrail Main	tenance	2 yr	Repair top r	ail.		
Rehab/Repair Recommendations Priority Cost Comments	Rehab/Repair Recom	mendations	Priority Co	ost Comme	nts				



Iunicipal Struc	ture Inspec	tion Form	Structure Nu	imber:	003	
Beams/MLE's - C	Girders					
Element Group	Beams/MLE's			Length	6.00 Width	0.41
Element Name	Girders	En	d	Height	0.84 Count	4.00
Location	North Side and	South Side			Total Quantity	69.84
Material	Weathering stee	el		Limited	d Inspection	
Element Type	I-type			Environmo	ent	
Protection System				Benign	1	
Condition Data	Units Exc	ell. Good	Fair Poor	Modera	ate	
Comments Minor pitting.	sq. m	0.00 69.84	0.00 0.00	Severe	9	
Performance Deficier	ncies	Maintenance Needs	Priority	Comments		
Rehab/Repair Recom	mendations	Priority Cos	t Comments			
Beams/MLE's - C	Birders					
Element Group	Beams/MLE's			Length	15.70 Width	0.41
Element Name	Girders	Mid	ddle	Height	0.84 Count	4.00
Location	Middle				Total Quantity	182.75
Material	Weathering stee	əl		Limited	d Inspection	
Element Type	I-type			Environme	ent	
Protection System				🖌 Benign	1	
Condition Data	Units Exc	ell. Good	Fair Poor	Modera	ate	
Comments	sq. m	0.00 182.75	0.00 0.00	Severe	9	
Minor pitting.						
Performance Deficier	ncies	Maintenance Needs	Priority	Comments		
None						
Rehab/Repair Recom	mendations	Priority Cos	t Comments			

Town of Moosonee **Municipal Structure Inspection Form** Structure Number: 003 Beams/MLE's - Diaphragms Length **Element Group** Beams/MLE's 2.40 Width 80.0 6.00 **Element Name** Diaphragms Intermediate Height 0.40 Count Middle **Total Quantity** 6.00 Location Limited Inspection Material Steel **Element Type** Environment **Protection System** Hot dip galvanizing Benign Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 Each 0.00 6.00 0.00 Severe Comments **Performance Deficiencies Maintenance Needs** Priority Comments None Cost Comments **Rehab/Repair Recommendations** Priority Beams/MLE's - Diaphragms 0.18 Beams/MLE's 2.40 Width **Element Group** Length End 6.00 **Element Name** Diaphragms Height 0.35 Count **Total Quantity** 6.00 Location Both Ends Limited Inspection Material Steel **Element Type** I-type Environment **Protection System** Hot dip galvanizing Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor Each 0.00 0.00 0.00 6.00 Severe Comments **Performance Deficiencies** Maintenance Needs Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments



Town of Moosonee Municipal Structure Inspection Form Structure Number: 003 **Abutments - Abutment Walls Element Group** Abutments Length 0.00 Width 9.13 2.00 **Element Name** Abutment Walls Height 2.40 Count North Side and South Side **Total Quantity** 43.82 Location □ Limited Inspection Material Cast-in-place concrete **Element Type** Environment **Protection System** None Benign **Condition Data** Fair ✓ Moderate Units Excell. Good Poor 0.00 0.00 42.82 1.00 sq. m Severe Comments Some honeycombing with hairline cracking on both abutments. Graffiti noted on north abutment. **Performance Deficiencies Maintenance Needs** Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments **Abutments - Ballast Walls** 9.13 Abutments 0.00 Width **Element Group** Length 2.00 **Element Name** Ballast Walls Height 0.85 Count **Total Quantity** 15.52 Location North Side and South Side Limited Inspection Material Cast-in-place concrete **Element Type** Environment **Protection System** None Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 1.00 0.00 sq. m 14.52 Severe Comments Wet areas. **Performance Deficiencies** Maintenance Needs Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments

Town of Moosonee Municipal Structure Inspection Form Structure Number: 003 **Abutments - Wingwalls Element Group** Abutments Length 3.30 Width 0.00 4.00 1.70 Count **Element Name** Wingwalls Height North Side and South Side **Total Quantity** 22.44 Location □ Limited Inspection Material Cast-in-place concrete **Element Type** Environment **Protection System** None Benign Fair ✓ Moderate **Condition Data** Units Excell. Good Poor 0.00 0.00 22.44 0.00 sq. m Severe Comments Minor surface defects from casting. Light map cracking on Northeast wingwall. **Performance Deficiencies Maintenance Needs** Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments **Abutments - Bearings** 0.00 0.00 Width **Element Group** Abutments Length 8.00 **Element Name** Bearings Height 0.00 Count North Side and South Side **Total Quantity** 8.00 Location Limited Inspection Material Rubber **Element Type** Elastomeric pad Environment **Protection System** None Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor Each 0.00 8.00 0.00 0.00 Severe Comments No horizontal restraint provided for superstructure. **Performance Deficiencies** Maintenance Needs Priority Comments Other **Rehab/Repair Recommendations** Priority Cost Comments Rehab None \$10,000 Restraint horizontal movement

Embankments & Streams & Waterways Element Group Embankments & Streams Element Name Streams & Waterways Location All Material Imited Inspection Element Type Environment Protection System Ø Benign Condition Data Units Excell. Good Fair Poor Comments Ø Benign Condition Data Units Excell. Good 0.00 0.00 0.00 None All 0.00 1.00 0.00 Performance Deficiencies Maintenance Needs Priority Comments None Priority Cost Comments None Priority Cost Comments Element Group Embankments & Streams Length 0.00 Element Sone Priority Cost Comments Location Both Sides Total Quantity 6 Location Both Sides Environment Priority Protection System Ø Benign Condition Data Units Ex	Municipal Struc	cture Inspec	tion Form	Structure Nu	imber:	003
Element Group Embankments & Streams Length 0.00 Width 0 Element Name Streams & Waterways Height 0.00 Count 0 Location All Image: Count of the spectron	Embankments &	Streams - Str	eams & Waterways			
Element Name Streams & Waterways Height 0.00 Count 0 Location All Total Quantity 1 Material Imited Inspection Environment Protection System Streams & Count 0 0.00 0.00 0.00 Condition Data Units Excell. Good Fair Poor Moderate Comments All 0.00 1.00 0.00 0.00 Severe Performance Deficiencies Maintenance Needs Priority Comments Severe None Rehab/Repair Recommendations Priority Cost Comments Element Group Embankments & Streams Length 0.00 Good Element Type Embankments Height 0.00 Count 6 Location Both Sides Environment Environment Environment Protection System Environment Environment Environment Environment Protection System Each 0.00 5.00 0.00 1.00 Severe Comments Each <t< td=""><td>Element Group</td><td>Embankments &</td><td>Streams</td><td></td><td>Length</td><td>0.00 Width 0</td></t<>	Element Group	Embankments &	Streams		Length	0.00 Width 0
Location All Total Quantity 1 Material Limited Inspection Environment Protection System Image: Condition Data Units Excell. Good Fair Poor Moderate Comments All 0.00 1.00 0.00 0.00 Severe Performance Deficiencies Maintenance Needs Priority Comments Rehab/Repair Recommendations Priority Cost Comments Element Group Embankments Length 0.00 Width 0 Location Both Sides Total Quantity 6 Material Image: Cost Comments Environment Protoction System Image: Cost Comments Environment Element Type Environment Environment Environment Protoction System Image: Cost Good Fair Poor Comments Severe Severe Severe Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant.	Element Name	Streams & Wate	erways		Height	0.00 Count 0
Material	Location	All				Total Quantity 1
Element Type Environment Protection System V Benign Condition Data Units Excell. Good Fair Poor Moderate Comments All 0.00 1.00 0.00 0.00 Severe Performance Deficiencies Maintenance Needs Priority Comments None Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Element Group Embankments & Streams Length 0.00 Width 0 Element Type Element Total Quantity 6 Material Imited Inspection Environment Protection System V Benign Contenate Condition Data Units Excell. Good Fair Poor Moderate Comments Severe Severe Severe Severe Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant.	Material				Limited	Inspection
Protection System Image: Severe Image: Severe Comments All 0.00 1.00 0.00 0.00 Severe Comments All 0.00 1.00 0.00 0.00 Severe Performance Deficiencies Maintenance Needs Priority Comments None Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Element Group Embankments & Streams Length 0.00 Width 0 Element Store Endenkments Imited Inspection Endenkment Condition Both Sides Total Quantity 6 Material Imited Inspection Environment Protection System Imited Inspection Severe Comments Scool 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant.	Element Type				Environmer	nt
Condition Data Units Excell. Good Fair Poor Moderate Comments All 0.00 1.00 0.00 0.00 Severe Performance Deficiencies Maintenance Needs Priority Comments None Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams Length 0.00 Width 0 Element Group Embankments Length 0.00 Width 0 Location Both Sides Total Quantity 6 Material	Protection System				✓ Benign	
All 0.00 1.00 0.00 0.00 Severe Performance Deficiencies Maintenance Needs Priority Comments None Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams Length 0.00 Width 0 Element Group Embankments Streams Length 0.00 Count 6 Location Both Sides Total Quantity 6 Material Itimited Inspection Environment Protection System Imited and the severe Severe Comments Severe Severe Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant.	Condition Data	Units Exc	ell. Good H	Fair Poor	Moderate	e
Performance Deficiencies Maintenance Needs Priority Comments None Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams Length 0.00 Width 0 Element Group Embankments Length 0.00 Width 0 Element Name Embankments Length 0.00 Count 6 Location Both Sides Total Quantity 6 Material Imited Inspection Environment Protection System V Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Severe Severe Severe Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Severe Performance Deficiencies Maintenance Needs 1 yr Repair embankment in Northwest quadrant.	Commonto	All	0.00 1.00	0.00 0.00	Severe	
Performance Deficiencies Maintenance Needs Priority Comments None Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams Length 0.00 Width 0 Element Group Embankments Length 0.00 Width 0 Element Name Embankments Length 0.00 Count 6 Location Both Sides Total Quantity 6 Material Imited Inspection Environment Protection System Imited Scool Severe Moderate Comments Each 0.00 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant. Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant.	comments					
Performance Deficiencies Maintenance Needs Priority Comments Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams - Embankments Element Group Embankments & Streams Length 0.00 Element Group Embankments Height 0.00 Count 6 Location Both Sides Total Quantity 6 Location Both Sides Environment 6 Protection System Imits Excell. Good Fair Poor Moderate Condition Data Units Excell. Good Fair Poor Severe Comments Severe Severe Severe Severe Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant.						
Performance Deficiencies Maintenance Needs Priority Comments Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams Length 0.00 Width 0 Element Group Embankments & Streams Length 0.00 Width 0 Element Name Embankments Height 0.00 Count 6 Location Both Sides Total Quantity 6 Material						
Performance Deficiencies Maintenance Needs Priority Comments None Priority Cost Comments Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams Length 0.00 Width 0 Element Group Embankments Length 0.00 Width 0 Element Name Embankments Length 0.00 Count 6 Location Both Sides Total Quantity 6 Material Limited Inspection Environment Protection System Image: Severe Moderate 0.00 5.00 0.00 1.00 Severe Condition Data Units Excell. Good Fair Poor Moderate Comments 0.00 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant. Performance Deficiencies Maintenance Needs Priority Comments Erosion Control at Bridges 1 yr Rehab/Renair Recommendations Priorit						
None Priority Cost Comments Embankments & Streams - Embankments Element Group Embankments & Streams Length 0.00 Width 0 Element Group Embankments & Streams Length 0.00 Width 0 Element Name Embankments Height 0.00 Count 6 Location Both Sides Total Quantity 6 Material Limited Inspection Environment Protection System Ø Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Each 0.00 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant.	Performance Deficie	ncies	Maintenance Needs	Priority	Comments	
Rehab/Repair Recommendations Priority Cost Comments Embankments & Streams Length 0.00 Width 00 Element Group Embankments & Streams Length 0.00 Width 00 Element Name Embankments Height 0.00 Count 66 Location Both Sides Total Quantity 66 Material Element Type Environment Protection System Imited Inspection Environment Condition Data Units Excell. Good Fair Poor Moderate Comments Severe erosion in Northwest quadrant. Severe Severe Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Severe Severe Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	None					
Embankments & Streams - Embankments Element Group Embankments & Streams Length 0.00 Width 0 Element Name Embankments Location Both Sides Material Imited Inspection Element Type Environment Protection System Imited Inspection Condition Data Units Excell. Good Fair Poor Moderate Each 0.00 Severe erosion in Northwest quadrant. Severe	Rehab/Repair Recom	mendations	Priority Cost	Comments		
Embankments & Streams Length 0.00 Width 0 Element Group Embankments & Streams Length 0.00 Width 0 Element Name Embankments Height 0.00 Count 6 Location Both Sides Total Quantity 6 Material Limited Inspection Element Type Environment Protection System V Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Severe 0.00 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Maintenance Needs Priority Comments Performance Deficiencies Maintenance Needs 1 yr Repair embankment in Northwest quadrant.						
Element Group Embankments & Streams Length 0.00 Width 0 Element Name Embankments Height 0.00 Count 6 Location Both Sides Total Quantity 6 Material Limited Inspection Element Type Environment Protection System Image: Stream (Stream) Image: Stream (Stream) Condition Data Units Excell. Good Fair Poor Moderate Comments Each 0.00 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	Embankments &	Streams - Em	bankments			
Element Name Embankments Height 0.00 Count 6 Location Both Sides Total Quantity 6 Material Limited Inspection Element Type Environment Protection System V Benign Condition Data Units Excell. Good Fair Poor Moderate Comments Each 0.00 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	Element Group	Embankments &	Streams		Length	0.00 Width 0
Location Both Sides Total Quantity 6 Material Limited Inspection Element Type Environment Protection System Image: Benight State St	Element Name	Embankments			Height	0.00 Count 6
Material □ Limited Inspection Element Type Environment Protection System ✓ Benign Condition Data Units Excell. Good Fair Poor Moderate Each 0.00 Comments Severe Severe erosion in Northwest quadrant. Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	Location	Both Sides				Total Quantity 6
Element Type Environment Protection System Image: Benign Condition Data Units Excell. Good Fair Poor Moderate Each 0.00 5.00 0.00 1.00 Severe Comments Severe erosion in Northwest quadrant. Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	Material				Limited	Inspection
Protection System Image: Condition Data Units Excell. Good Fair Poor Moderate Comments Each 0.00 5.00 0.00 1.00 Severe Comments Severe erosion in Northwest quadrant. Image: Comments Severe Severe Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	Element Type				Environmer	
Condition Data Units Excell. Good Fair Poor Moderate Each 0.00 5.00 0.00 1.00 Severe Comments Severe erosion in Northwest quadrant. Maintenance Needs Priority Comments Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	Protection System				Benjan	
Comments Each 0.00 5.00 0.00 1.00 Severe Severe erosion in Northwest quadrant. Severe erosion in Northwest quadrant. Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadrant	Condition Data	linits Evo	ell Good I	air Poor	Moderati	٩
Comments	Condition Data	Each	0.00 5.00	0.00 1.00		6
Severe erosion in Northwest quadrant. Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadr Rehab/Repair Recommendations Priority Cost Comments	Comments					
Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadr Rebab/Repair Recommendations Priority Cost Comments	Severe erosion in Nor	thwest quadrant.				
Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadr Rebab/Repair Recommendations Priority Cost Comments						
Performance Deficiencies Maintenance Needs Priority Comments Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadr Rehab/Repair Recommendations Priority Cost Comments						
Unstable embankments Erosion Control at Bridges 1 yr Repair embankment in Northwest quadr	Performance Deficie	ncies	Maintenance Needs	Priority	Comments	
Rehab/Renair Recommendations Priority Cost Comments	Unstable embankmer	nts	Erosion Control at Bridge	s 1 yr	Repair embank	ment in Northwest quadr
Rehab/Renair Recommendations Priority Cost Comments						
	Rehab/Repair Recom	mendations	Priority Cost	Comments		



Municipal Struc	ture Inspec	tion Form	Structure Nu	imber:	003	
Embankments &	Streams - Slo	pe Protection				
Element Group	Embankments &	& Streams		Length	0.00 Width	0.00
Element Name	Slope Protection	۱		Height	0.00 Count	6.00
Location	Both Sides				Total Quantity	6.00
Material	Vegetation			Limite	d Inspection	
Element Type				Environm	ent	
Protection System				🖌 Benigi	n	
Condition Data	Units Exc	ell. Good F	Fair Poor	Moder	rate	
Comments	Each	0.00 5.00	0.00 1.00	Sever	е	
Severe erosion in North	hwest quadrant.					
Performance Deficien	cies	Maintenance Needs	Priority	Comments		
Unstable embankmen	ts	Erosion Control at Bridge	s 1 yr	Repair emba	nkment in Northwest qu	adrant.
Rehab/Repair Recom	mendations	Priority Cost	Comments			_
Element Group	Approaches	•		Length	6.00 Width	7.90
Element Name	Wearing Surfac	e		Height	0.00 Count	2.00
Location	North Side and	South Side		- L	Total Quantity	94.80
Material	Gravel			Limite	d Inspection]
Element Type				Environm	ent	
Protection System				🗌 Benigi	n	
Condition Data	Units Exc	ell. Good F	- air Poor	Moder	rate	
Commente	sq. m	0.00 90.80	0.00 4.00	Sever	e	
Potholes.						
Performance Deficien	cies	Maintenance Needs	Priority	Comments		
Rough riding surface		Bridge Surface Repair	2 yr	Repair potho	les.	
Rehab/Repair Recom	mendations	Priority Cost	Comments			

Municipal Structure Inspection Form

Structure Number:

Abutments B	oarings	•	011	Priority	Cost
	eannys	Rehab		None	\$10,000
			Total Repair/Rehabilita	tion Cost	\$10,000
Associated W	Vork				
	Comments			Esti	imated Cos
Approaches					\$0
Detours					\$0
raffic Control					\$0
Jtilities					\$0
Right-of-Way					\$0
Environmental Stu	dy				\$0
Other					\$0
Contingencies				% **	\$0
Engineering				% **	\$0
* If based on a perc	centage calculated values round	led-up to the	Total Associated Work Co	st	\$0
earest thousand do	ollars.		Total Repair/Rehabilitation Co	st	\$10,000
			Total Co	ost	\$10,000
		т	own of Moosonee Share @ 100%	, o	\$10,000

Municipal Structure Inspection Form

Structure Number:



Looking South at Bridge



East Elevation



Structure Number:

003



West Elevation



Looking North at North Approach



Structure Number:



Looking South at South Approach



Looking North at Deck Top



Structure Number:



Pothole on Approach



Looking West at South Expansion Joint



Structure Number:



Looking West at North Expansion Joint



Deck Drain Catch Basin Filled with Debris



Structure Number:



Curb Covered with Sand and Gravel



Small Spall on Curb



Structure Number:





Deformation of Top Rail of Guide Rail



Deformation of Top Rail of Guide Rail



Structure Number:





North Abutment



South Abutment



Structure Number:



Light Honeycombing on Abutment



Wet Areas on Ballast Wall



Structure Number:



Typical Abutment Bearing



Typical Soffit



Structure Number:



Typical Abutment Diaphragm



Typical Intermediate Diaphragm



Structure Number:





Efflorescence Stained Crack on Exterior Soffit



Severe Erosion in Northwest Quadrant



Summary Action Report Structure 004 (MTO Site No. 39N-8) Atim Road Bridge - Store Creek West

Inspection Date	a 10-21-2022	mm/dd/yyyy			Condition	Index Value (BCI) 7 ⁻	1.56
Next Biennial Ir	nspection 10-21-2024	mm/dd/yyyy			Current Re	p. Value	
Additional Inve	stigations					•	
Investigation		Priority	Cost	Investigation		Priority C	ost
Monitoring of Def	ormations, Movements and	Normal	\$0				
Additional investig	gations required see page 3	for details.					
Performance D	eficiencies						
Element Group	Element		Р	erformance Deficiency			
Approaches	Wearing Surface		R	ough riding surface			
Maintenance N	eeds						
Element Group	Element		Mainten	ance Required	Priority	Comment	
Approaches	Wearing Surface		Bridge S	Surface Repair	2 yr	Repair potholes.	
Sidewalks/curbs	Curbs		Bridge C	Cleaning	2 yr	Remove sand and grave	el.
Embankments & Streams	Streams & Waterways		Stream	debris removal	1 yr	Remove debris in stream	n.
Barriers	Railing Systems		Bridge H	landrail Maintenance	2 yr	Repair attenuator.	
Decks	Deck Top		Bridge C	Cleaning	2 yr	Remove sand and grave	el.
Joints	Seals/Sealants		Bridge C	Cleaning	2 yr	Clean seals.	
Repair/Rehabili	tation						

No Repair/Rehabilitation Requirements

Town of Moosonee	100	%	\$0.00	Total Associated Work Cost	\$0
		%		Total Cost	<u>\$0</u>

Overall Comments

Bridge is in generally good condition. There is a localised deformation on one of the pier H-piles in the creek probably from ice/debris impact. There are localised signs of leaking on the ballast walls and bearing seats below the expansion joints. There are potholes on the approaches and a damaged attenuator in the Southeast quadrant. The stream is partially blocked with debris. Could not fully inspect expansion joints, curbs and deck top due to them being covered with dirt and gravel.

Municipal Structure Inspection Form

Structure Number:

Inventory Data							
Structure Name	Atim Road Bridge	- Store Creek W	est	Hwy No.	Atim Rd Key	Photo	
Cross. Type Over	✓Road □ Rail	Ped	Nav. Wate	r 🗌 Non-Nav. Wat. 🛛	Other	Ale K	
Cross. Type Under	Road Rail	Ped 🗸	Nav. Wate	r 🗌 Non-Nav. Wat. 🛛	Other	r l	
Road Name	Atim Road						
Structure Location	Over Store Creek				1944	WIND DA	TO STATE
Latitude	51.27278 Lor	n gitude - 80.64	917 C	ur. Rep.Value			
Owner(s)/	Town of Moosone	e	100]%	**	198 1. 1889	007//21/2022
% Share				% Heritage Status			
MTO Region				Road Side Env.			
MTO District				Road Class	Local		
Old County				Lane Type			
Geographic Twp.				Posted Speed	50	No. of Lanes	2
Structure Type				AADT	400	Pct. Trucks	
Structure Material	Timber-Concrete	Composite		Inspection Route	e Sequence		
Articulation				Interchange Num	nber		
Total Deck Length	121.57 m	Road Width	8	m Interchange Stru	cture Number		
Overall Width	9.57 m	Vert. Clear.		m Detour Length	1.5 km	Skew Angle	0 °
Total Deck Area	1163.42 m ²	No. of Spans	19	Fill on Structure	0 m	Struct. Dir.	North/South
Special Routes	Transit Sch	ool Truck	Bicycl	e Insp. Duration	hr		
Spans	** Current Replaceme	ent Value is based o planning should c	on in kind re onsider site	placement of the existing s specific cost factors and re	structure and calcula equirements for wide	ated using benchm ening or lengthenii	ark costs. Capital ng of the structure.
Span Name		Span Length	Span I	Name	S	pan Length	
1		5.4 m	2			6.8 m	
3		6.7 m	4			6.6 m	
5		5.6 m	6			5.5 m	
7		7.0 m	8			6.4 m	
9		6.8 m	10			6.9 m	
11		6.7 m	12			6.5 m	
13		6.7 m	14			5.7 m	
15		5.4 m	16			6.6 m	
17		6.6 m	18			6.8 m	
19		5.3 m					
Historical Data							
Year Built	197	76 уууу	Year	of Last Major Rehab		уууу	
Last OSIM Inspectio	n 09-07-202	22 mm/dd/yyyy	Conti	act No. When Built		·]
Last Enhanced OSIN	Λ	mm/dd/yyyy	Last	Evaluation		mm/dd/yyyy	-
Last Enhanced Acce	ess	mm/dd/yyyy	Curre	ent Load Limit	16 t 29	t 40 t	
Last Underwater Ins	p.	mm/dd/yyyy	Load	Limit By-Law No.		mm/dd/yyyy	
		<u> </u>	Ма	v 3. 2023		 ,,,,,,,	Page 2 of 27



Municipal Structure Inspection Form

mm/dd/yyyy

Structure Number:

004

Last Condition Survey

By-Law Expiry Date

Rehab History

Rehab Date	Rehab Description
2000-01-01	Water pipe hung from west side.
2014-01-01	 Repaired corroded H-piles, coated all piles with coat tar epoxy system Repaired cracks on dck surface by injection, and repaired deteriorated concretes, Replaced damaged railing on bridge, installed new concrete curb and approach steel beam guide rail energy attenuating terminal at all four corners, Repaired scouring and erosion areas on river bank with clean rock fills, constructed new drainage ditches on NE and SW corners.

004

on Information:
10-21-2022 mm/dd/yyyy 🗌 Multi Day Inspection 🗹 OSIM 🗌 Enhanced OSIM BCI 71.56
S. Williams Eng. Responsible D. Adamson
O. Zhychkovska
Lift Ladder Boat Bridge Master Other
Camera, Hammer, Other Hand Tools
RainTemperature2°C

Additional Investigations Required:

Investigation		Priority		I	Estimated Cost
	None	Normal	Urgent		
Detailed Deck Condition Survey					\$0
Delamination Survey of Asphalt-Covered Deck					\$0
Concrete Substructure Condition Survey					\$0
Detailed Coating Condition Survey					\$0
Detailed Timber Investigation					\$0
Post-Tensioned Strand Investigation					\$0
Underwater Investigation					\$0
Fatigue Investigation					\$0
Seismic Investigation					\$0
Structure Evaluation					\$0
Monitoring of Deformations, Movements and Settlements		\checkmark			\$0
Monitoring of Crack Widths					\$0
Investigation Notes				Total Cost	\$0
Monitor movement at north end.					

Overall Str	ucture Notes:				
Recommended	I Work on Structure	None None	✓ Rehab	Replace	Remove
Timing of Reco	ommended Work	None None	Now	✓ 1 to 5 years	6 to 10 years
Overall Comments	Bridge is in generally good from ice/debris impact. Th joints. There are potholes partially blocked with debri dirt and gravel.	l condition. There nere are localised on the approache s. Could not fully	e is a localised de I signs of leaking es and a damage y inspect expansi	formation on one of on the ballast walls a d attenuator in the S on joints, curbs and	the pier H-piles in the creek probably and bearing seats below the expansion outheast quadrant. The stream is deck top due to them being covered with
BCI Change Justification					
Next Inspectio	n 10-21-2024 mr	n/dd/yyyy	Es	timated Load Limit	16 t 29 t 40 t



Municipal Structure Inspection Form

004

nsp. Date	BCI	Inspector		BCI History	
21-Oct-22	71.56	S. Williams			
			100		
			90	99	
			80		
			70	•	
			60		
			50		
			50		
			40		
			30		
			20		
			10		
			0 +		
				2022-10-21	

All BCI values are based on the MTO BCI methodology published in April 2008. As a result, BCI values for 2007 and earlier are approximate only, with potential discrepancies resulting from changes (over time) in the way quantities for certain elements are calculated.

Standard Codes

Suspected Performance Deficiencies

- 00 None
- 01 Load carrying capacity
- Excessive deformations (deflections/rotations) 02
- 03 Continuing settlement
- 04 Continuing movements

05 Seized bearings

Maintenance Needs

- Lift and Swing Bridge Maintenance 01
- 02 Bridge Cleaning
- 03 Bridge Handrail Maintenance
- 04 Painting Steel Bridge Structures
- 05 Bridge Deck Joint Repair
- 06 Bridge Bearing Maintenance

- Bearing not uniformly loaded/unstable 06
- 07 Jammed expansion joint
- Pedestrian/vehicular hazard 08
- Rough riding surface 09
- 10 Surface ponding
- 11 Deck drainage
- Repair to Structural Steel Repair of Bridge Concrete 07
- 08
- Repair of Bridge Timber 09
- 10 Bailey Bridges - Maintenance Animal/Pest Control 11
- 12
- Bridge Surface Repair

- 12
- Slippery surfaces Flooding/channel blockage 13
- Undermining of foundation 14
- 15 Unstable embankments
- 16 Other
- Erosion Control at Bridges 13
- Concrete Sealing 14
- 15 Rout and Seal
- 16 Bridge deck Drainage
- Scaling (Loose Concrete or ACR Steel) 17
- 18 Other

Municipal Structure Inspection Form

Structure Number:

Element Data							
Decks - Deck Top	C						
Element Group	Decks				Length	122.00 Width	8.00
Element Name	Deck Top		Height	0.00 Count	0.00		
Location	All					Total Quantity	976.00
Material	Cast-in-place c	oncrete			✓ Limited	I Inspection	
Element Type					Environme	ent	
Protection System	None				🗌 Benign		
Condition Data	Units Ex	cell. Good	Fair	Poor	Modera	ate	
Commonto	sq. m	0.00 826.00	150.00	0.00	Severe		
Light scaling, longitudir	nal and transverse	e narrow to medium cra	acks. Covered v	vith sand an	d gravel.		
Performance Deficien	cies	I Maintenance Needs	5	Priority	Comments		
None		Bridge Cleaning		2 yr	Remove sand	and gravel.	
		0 0				Ū	
Rehab/Repair Recom	mendations	Priority Co	ost Commen	ts			
Decks - Soffit - T	hin Slab						
Element Group	Decks				Length	122.00 Width	9.52
Element Name	Soffit - Thin Sla	b		Height	0.00 Count	0.00	
Location	All					Total Quantity	1161.44
Material	Timber				Limited	I Inspection	
Element Type					Environme	ent	
Protection System	Creosote				🖌 Benign		
Condition Data	Units Ex	cell. Good	Fair	Poor	Modera	ate	
Comments	sq. m	0.00 681.44	480.00	0.00	Severe		
General weathering, m	ore on outside ec	lges.					
Performance Deficien	cies	Maintenance Needs	6	Priority	Comments		
None							
Rehah/Renair Pecom	mendations	Priority C	ost Commen	fe			
				-			
AECOM			May 3, 2023				Page 6 of 27

Municipal Stru	ucture Inspection Form	Structure Number:	004
Decks - Draina	ge		
Element Group	Decks	Lengt	h 0.00 Width
Element Name	Drainage	Heigh	t 0.00 Count
Location	All		Total Quantity
Material	Steel	🗌 Lin	ited Inspection
Element Type		Enviro	nment

Protection System Condition Data Units Excell. Good Fair Each 0.00 18.00 Comments

Performance Deficiencies	Maintenance N	leeds	Priority	Comments	
None					
Rehab/Repair Recommendations	Priority	Cost	Comments		

0.00

Joints - Seals/Se	ealants								
Element Group	Joints					Length	0.00	Width	0.00
Element Name	Seals/Sealants	3				Height	0.00	Count	2.00
Location	All						Total Q	uantity	2.00
Material						🗹 Limit	ed Inspecti	on	
Element Type	Strip Seal					Environment			
Protection System						🗌 Benig	gn		
Condition Data	Units Ex	cell. Good	1	Fair	Poor	Mode	erate		
Comments	Each	0.00	.00	2.00	0.00	✓ Seve	re		
		rieaking below.							
Performance Deficie	ncies	Maintenance	Needs		Priority	Comments			
None		Bridge Cleanin	g		2 yr	Clean seals			
Rehab/Repair Recom	nmendations	Priority	Cost	Comment	ts				



004

Benign Moderate

✓ Severe

Poor

0.00

0.00

18.00

18.00

Nunicipal Struc	ture Inspe	ction Form	Structure I	Number:	004		
Sidewalks/curbs	- Curbs						
Element Group	Sidewalks/curb	S		Length	121.57 Width	0.79	
Element Name	Curbs			Height	0.30 Count	2.00	
Location	Both Sides				Total Quantity	263.81	
Material	Cast-in-place c	oncrete		Limit	ed Inspection		
Element Type				Environ	nent		
Protection System				Beni	gn		
Condition Data	Units Ex	cell. Good	Fair Poor	Mode	erate		
Commente	sq. m	0.00 260.81	2.00 1.	00 🗸 Seve	re		
Narrow to wide cracks	. spalls and delan	ninations. Covered with s	and and gravel.				
Performance Deficier	ncies	Maintenance Needs	Priori	ty Comments			
None		Bridge Cleaning	2 yr	Remove sa	nd and gravel.		
					-		
Rehab/Repair Recom	mendations	Priority Cos	t Comments				
Barriers - Railing	g Systems						
Element Group	Barriers			Length	122.00 Width	0.00	
Element Name	Railing System	s		Height	1.00 Count	2.00	
Location	Both Sides			Total Quantity	244.00		
Material	Steel		Limit	ed Inspection			
Element Type	Steel Flex Bear	n on steel post		Environ	nent		
Protection System	Hot dip galvani	zing		🗌 Beni	gn		
Condition Data	Units Ex	cell. Good	Fair Poor	Mode	Moderate		
Comments	m	0.00 241.00	0.00 3.	00 🗸 Seve	re		
Impact damage to Sou	utheast attentuato	r.					
Performance Deficier	ncies	Maintenance Needs	Priori	ty Comments			
None		Bridge Handrail Mainte	enance 2 yr	Repair atter	nuator.		
Rehab/Repair Recom	mendations	Priority Cos	st Comments				
Town of Moosonee Municipal Structure Inspection Form Structure Number: 004 **Coatings - Structural Steel** Length **Element Group** Coatings 0.00 Width 0.00 0.00 0.00 Count **Element Name** Structural Steel Height Piers **Total Quantity** 653.40 Location Limited Inspection Material **Element Type** Coal tar epoxy Environment **Protection System** Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 0.00 sq. m 653.40 0.00 Severe Comments **Performance Deficiencies Maintenance Needs** Priority Comments None Cost Comments **Rehab/Repair Recommendations** Priority **Abutments - Abutment Walls** 9.75 Abutments 0.00 Width **Element Group** Length 1.00 **Element Name** Abutment Walls Height 0.40 Count South Side **Total Quantity** 3.90 Location ✓ Limited Inspection Material Steel **Element Type** Environment **Protection System** None Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 1.50 2.00 0.40 sq. m Severe Comments Light corrosion. Bottom flange covered with debris. **Performance Deficiencies** Maintenance Needs Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments



Town of Moosonee Municipal Structure Inspection Form Structure Number: 004 **Abutments - Abutment Walls Element Group** Abutments Length 0.00 Width 9.75 1.00 Abutment Walls **Element Name** Height 0.40 Count North Side **Total Quantity** 3.90 Location ✓ Limited Inspection Steel Material **Element Type** Environment **Protection System** None Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.40 0.00 1.50 2.00 sq. m Severe Comments Light corrosion. Bottom flange covered with debris. **Performance Deficiencies Maintenance Needs** Priority Comments None **Rehab/Repair Recommendations** Priority Cost Comments Piers - Shafts/Columns/Pile Bents 0.30 0.30 Width **Element Group** Piers Length 66.00 **Element Name** Shafts/Columns/Pile Bents Height 5.50 Count **Total Quantity** 653.40 Location All Limited Inspection Material Steel **Element Type** Steel H piles with capping beam Environment **Protection System** Coal tar epoxy Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 652.40 0.00 1.00 sq. m Severe Comments Localized deformation from ice/debris impact on river pier.. **Performance Deficiencies** Maintenance Needs **Priority Comments** None **Rehab/Repair Recommendations** Priority Cost Comments



Town of Moosonee			_	_		_		
Municipal Struc	cture In	spection	Form	Stru	cture Nu	imber:	004	
Piers - Caps								
Element Group	Piers					Length	0.37 Width	9.75
Element Name	Caps					Height	0.35 Count	20.00
Location	All						Total Quantity	285.98
Material	Steel					Limited	Inspection	
Element Type						Environme	ent	
Protection System	Coal tar	ероху				Benign		
Condition Data	Units	Excell.	Good	Fair	Poor	✓ Modera	te	
Commonts	sq. m	0.00	246.00	39.98	0.00	Severe		
Light to medium surface	ce rusting.							
	0							
Performance Deficier	ncies	Main	tenance Need	s	Priority	Comments		
None								
Pahah/Panair Paaam	mondation		iority (Saat Commo				
Kenab/Repair Recom	mendation	15 PT		Jost Comme	ints			
Embankments &	Streams	- Streams	& Waterwa	avs				
Element Group	Embankı	ments & Strea	ms	.,		Length	0.00 Width	0.00
Element Name	Streams	& Waterways				Height	0.00 Count	0.00
		a materia je				g	Total Quantity	1 00
Material						Limited	Inspection	
Flomont Type								
Element Type						Environme	int	
Protection System						Senign		
		- "	• •	F - 1 -	D		1.	
Condition Data	Units	Excell.	Good	Fair	Poor	Modera	te	
Condition Data	Units All	Excell. 0.00	Good	<i>Fair</i> 1.00	Poor 0.00	ModeraSevere	te	
Condition Data Comments Debris partially blockir	Units All	Excell. 0.00	Good	<i>Fair</i> 1.00	Poor 0.00	Modera Severe	te	
Condition Data Comments Debris partially blockir	Units All ng stream.	Excell. 0.00	Good	<i>Fair</i>	Poor	Modera Severe	te	
Condition Data Comments Debris partially blockir	Units All	Excell.	Good	<i>Fair</i>	Poor	Modera Severe	te	
Condition Data Comments Debris partially blockir Performance Deficier	Units All ng stream.	Excell.	Good 0.00 tenance Need	<i>Fair</i> 1.00	Poor 0.00 Priority	Modera Severe Comments	te	
Condition Data Comments Debris partially blockir Performance Deficier None	Units All ag stream.	Excell. 0.00	Good 0.00 tenance Need m debris remo	<i>Fair</i> 1.00	<i>Poor</i> 0.00 <i>Priority</i> 1 yr	Modera Severe Comments Remove debri	s in stream.	
Condition Data Comments Debris partially blockir Performance Deficier None	Units All ag stream.	Excell. 0.00	Good 0.00 tenance Need m debris remo	<i>Fair</i> 1.00	Poor 0.00 Priority 1 yr	Modera Severe Comments Remove debri	s in stream.	



Town of Moosonee

Municipal Struc	ture Inspec	tion Form	Structure Nu	mber:	004
Embankments &	Streams - Em	bankments			
Element Group	Embankments &	Streams		Length	0.00 Width 0.00
Element Name	Embankments			Height	0.00 Count 6.00
Location	Under Bridge			Total Quantity 6.00	
Material			Limite	ed Inspection	
Element Type				Environn	nent
Protection System	Rock/Vegetation)		🖌 Benig	n
Condition Data	Units Exc	ell. Good	Fair Poor	Mode	rate
Comments	Each	0.00 6.00	0.00 0.00	Seve	re
Performance Deficien	cies	Maintenance Needs	Priority	Comments	
Rehab/Repair Recom	mendations	Priority Cost	Comments		
Embankments &	Streams - Slo	pe Protection			
Element Group	Embankments &	Streams		Length	0.00 Width 0.00
Element Name	Slope Protection	1		Height	0.00 Count 2.00
Location	Under Bridge			_	Total Quantity2.00
Material	Rock			Limite	ed Inspection
Element Type	Rock protection			Environn	nent
Protection System				V Benig	n
Condition Data	Units Excell. Good Fair Poor			Mode	rate
Comments	Each	0.00 2.00	0.00 0.00	Sever	re
Performance Deficien	cies	Maintenance Needs	Priority	Comments	
None					
Rehab/Repair Recom	mendations	Priority Cost	Comments		

Nunicipal Struc	ture Inspec	tion Form	Structure Nu	mber:	004	
Accessories - Ele	ectrical					
Element Group	Accessories			Length	0.00 Width 0.00	
Element Name	Electrical			Height	0.00 Count 3.00	
Location	East Side				Total Quantity 3.00	
Material	Steel		🗌 Limite	ed Inspection		
Element Type				Environn	nent	
Protection System				🗌 Benig	ŋn	
Condition Data	Units Exc	ell. Good	Fair Poor	✓ Mode	erate	
Commonto	Each	0.00 3.00	0.00 0.00	Seve	re	
3 light poles attached t	o east deck fascia					
Performance Deficion	cies	Maintenance Needs	Priority	Comments		
None		Maintenance Neeus	Thomy	Comments		
Rehab/Repair Recom	mendations	Priority Cost	Comments			
Accessories - Uti	lities					
Element Group	Accessories			Length	0.00 Width 0.00	
Element Name	Utilities			Height	0.00 Count 1.00	
Location	West Side				Total Quantity 1.00	
Material				Limite	ed Inspection	
Element Type	Utilities			Environn	nent	
Protection System				Benign		
Condition Data	Units Exc	ell. Good	Fair Poor	✓ Mode	erate	
Comments	Each	0.00 1.00	0.00 0.00	Seve	re	
Comments						
Performance Deficien	cies	Maintenance Needs	Priority	Comments		
None						
Rehab/Repair Recommendations		Priority Cost	Comments			
· · · · ·		-				

Aunicipal Stru	Form	Structure Number:		umber:	004			
Approaches - W	earing Su	rface						
Element Group	Approach	es				Length	6.00 Width	8.00
Element Name	Wearing	Wearing Surface					0.00 Count	2.00
Location	Both End	S					Total Quantity	96.00
Material	Gravel					Limite	d Inspection	
Element Type						Environm	nent	
Protection System						🗌 Benig	n	
Condition Data	Units	Excell.	Good	Fair	Poor	Mode	rate	
Comments	sq. m	0.00	93.00	3.00	0.00	✓ Sever	e	
Potholes.								
Performance Deficiencies Maintenance Needs					Priority	Comments		
Rough riding surface		Bridge	Surface Repa	ir	2 yr	Repair potho	les.	

Repair/Rehabilitation Required

Associated Work		
Comments		Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control		\$0
Utilities		\$0
Right-of-Way		\$0
Environmental Study		\$0
Other		\$0
Contingencies	%	** \$0
Engineering	%	** \$0
** If based on a percentage calculated values rounded-up to the	Total Associated Work Cost	\$0
	Total Repair/Rehabilitation Cost	\$0
	Total Cost	\$0
	Town of Moosonee Share @ 100%	\$0
Justification		







Looking South at Bridge



East Elevation



Town of Moosonee

Municipal Structure Inspection Form

Structure Number:

004



West Elevation



Looking North at North Approach



Structure Number:





Looking South at South Approach



Looking South at Deck Top



Structure Number:





Looking West at South Expansion Joint



Looking West at North Expansion Joint



Structure Number:



Transverse Crack in Deck Top



Longitudinal Crack in Deck Top



Structure Number:



Impact Damage to Attenuator in Southeast Quadrant



Wide Crack in Curb



Structure Number:



Delamination on Curb



Small spall on Curb



Structure Number:



Typical Deck Drain



North Abutment



Structure Number:





South Abutment



Typical Pier



Structure Number:



Typical Soffit



Weathering of Exterior Soffit



Structure Number:





Deformation of Bottom Flange of Pier Cap Beam



Deformation of H-Pile in Stream



Structure Number:





Debris in Stream under Bridge

