

053

Agenda Item B(-7)

Date: Aug 19 2026

REPORT FOR 2026 OSIM INSPECTION

Prepared For:

Township of Johnson

Prepared By:

R&R ENGINEERING SERVICE

Date: 31 July 2026



647-745-4083



6117 Biamonte Parkway
Niagara Falls, ON, L2E 1Y8



www.rrengineering.ca
info@rrengineering.ca

Township of Johnson
2026 OSIM Inspection
Report

2026-07-31	A	Draft	R&R Engineering Team	Roshan Upadhyaya	Roshan Upadhyaya
Date	Rev.	Status	Prepared By	Checked By	Approved By

DISCLAIMER STATEMENT

This report represents the work product of R&R Engineering Service prepared exclusively for the benefit of Township of Johnson in fulfillment of our professional services agreement. The authority and responsibility to share or disclose any portion of this report rests solely with Township of Johnson. The conclusions, recommendations, and opinions expressed herein are formulated based upon the scope of information, data, and site conditions observable and available to R&R Engineering Services during this engagement.

In the event that any third party obtains access to, relies upon, or bases decisions on the contents of this report, such third party acknowledges and accepts complete responsibility for all consequences of such use or reliance. R&R Engineering Services explicitly disclaims all responsibility or liability for damages, losses, or adverse consequences experienced by third parties arising from actions taken or decisions made based upon this report. This statement of limitations is deemed an essential and non-severable element of this report.

Table of Contents

1.0) Introduction.....	1
2.0) Structure Inspection Methodology	2
2.1) Inspection Approach.....	2
2.2) Bridge Condition Index (BCI).....	2
2.1.1) BCI summary for structures	3
3.0) Inspection Observation and Recommendations	5
3.1) Gordon Lake Road — Oikari (Structure No. B-1).....	5
3.1.1) Element-by-Element Observations	5
3.1.2) Recommendations Summary	6
3.1.3) Overall Summary - Gordon Lake Road — Oikari (Structure No. B-1).....	6
3.2) Gordon Lake Road — Sudaby Park Road Bridge (Structure No. B-2)	7
3.2.1) Element-by-Element Observations	7
3.2.1) Recommendations Summary	8
No specific rehabilitation work is recommended at this time. All structural elements require only routine maintenance, which should include continued removal of sand accumulation and vegetation growth as part of regular upkeep. The guide rail posts showing decay should be monitored during future inspections to determine if replacement becomes necessary. Overall, the bridge continues to perform satisfactorily and requires no immediate corrective action.	8
3.2.3) Overall Summary - Gordon Lake Road — Sudaby Park Road (Structure No. B-2)	8
3.3) Fisher Road Culvert (Structure No. B-3)	9
3.3.1) Element-by-Element Observations	9
3.3.2) Recommendations Summary	10
3.3.3) Overall Summary — Fisher Road Culvert (Structure B-3)	10
3.4) Old Mill Road Bridge (Structure No. B-4)	11
3.4.1) Element-by-Element Observations	11
3.4.2) Recommendations Summary	13
3.4.3) Overall summary - Old Mill Road Bridge (Structure No. B-4)	14
3.5) Government Road Bridge (Structure No. B-5)	15
3.5.1) Element-by-Element Observations	15
3.5.2) Recommendations Summary	16
3.5.3) Overall summary - Government Road Bridge (Structure No. B-5)	17
3.6) Suddaby Park Bridge (Structure No. B-6)	18
3.6.1) Element-by-Element Observations	18
3.6.2) Recommendations Summary	19
3.6.3) Overall summary - Suddaby Park Bridge (Structure No. B-6)	19
3.7) Kensington Road Culvert (Structure No. C-1).....	20
3.7.1) Element-by-Element Observations	20
3.7.2) Recommendations Summary	21
3.7.3) Overall summary - Kensington Road Culvert (Structure No. C-1).....	22
New 3.8) Government Road Culvert (Structure No. C-2).....	22
3.8.1) Element-by-Element Observations	22
3.8.2) Recommendations Summary	23
3.8.3) Overall summary - Government Road Culvert (Structure No. C-2)	23
3.9) Government Road Culvert by Dump (Structure No. C-3)	24
3.9.1) Element-by-Element Observations	24
3.9.2) Recommendations Summary	25

3.9.3) Overall summary - Government Road Culvert by Dump (Structure No. C-3)	25
3.10) Puddingstone Road Culvert (Structure No. C-4)	26
3.10.1) Element-by-Element Observations	26
3.10.2) Recommendations Summary	27
3.10.3) Overall summary - Puddingstone Road Culvert (Structure No. C-4)	27
3.11) MacDonald Drive Culvert (Structure No. C-5)	28
3.11.1) Element-by-Element Observations	28
3.11.2) Recommendations Summary	29
3.11.3) Overall summary - MacDonald Drive Culvert (Structure No. C-5)	30
3.12) Government Road – East of Fisher Road (Structure No. C-6)	31
3.12.1) Element-by-Element Observations	31
3.12.2) Recommendations Summary	32
3.12.3) Overall summary - Government Road – East of Fisher Road (Structure No. C-6)	33
APPENDIX A: OSIM INSPECTION FORMS & PHOTOGRAPHS	34
Table 2-1: Bridge Condition Index (BCI) ranges	3
Table 3-1: Fisher Road Culvert - Maintenance and Repair/Rehabilitation Need	10
Table 3-2: Old Mill Road Bridge (Structure No. B-4)- Maintenance and Repair/Rehabilitation Need	13
Table 3-3: Government Road Bridge (Structure No. B-5)- Maintenance and Repair/Rehabilitation Need	16
Table 3-4: Kensington Road Culvert (Structure No. C-1)-Maintenance and Repair/Rehabilitation Need	21
Table 3-5: Government Road Culvert by Dump (Structure No. C-3)- Maintenance and Repair/Rehabilitation Need	25
Table 3-6: Puddingstone Road Culvert - Maintenance and Repair/Rehabilitation Need	27
Table 3-7: MacDonald Drive Culvert (Structure No. C-5)- Maintenance and Repair/Rehabilitation Need	29
Table 3-8: Government Road – East of Fisher Road (Structure No. C-6) - Maintenance and Repair/Rehabilitation Need	32

1.0) Introduction

R&R Engineering was retained by the Township of Johnson to undertake detailed visual inspections of the municipally owned bridges and culverts within their Municipal jurisdiction. In accordance with Ontario Regulation 104/97 - Standards for Bridges, the structural integrity, safety and condition of every bridge shall be determined through the performance of at least one inspection in every second calendar year under the direction of a professional engineer (O. Reg. 472/10, s. 2). The Township's requirement was that the inspections be in accordance with the Ontario Structure Inspection Manual (OSIM).

Following structures were inspected as part of this assignment

Structure No.	Structure Name	Location	Year Built
B-1	Gordon Lake Road — Oikari	350m south of Gordon lake	2006
B-2	Gordon Lake Road — Suddaby Park Road	80m south of Suddaby Park Road	2009
B-3	Fisher Road Culvert	500m south of Government Road	2022
B-4	Old Mill Road Bridge	200m North of Gordon Lake Road	1913
B-5	Government Road — by School	10m west of Gordon Lake Road	1937
B-6	Suddaby Park Bridge	80m south of Suddaby Park Road	2009
C-1	Kensington Road — South of CASS	400m south of Hwy 17	1980
C-2	Government road east of Desbaratas	East of Desbarats	2014
C-3	Government Road by Dump	1.9km W of Lk Huron Dr.	1980
C-4	Puddingstone Road Culvert	2.1km N of Government Road.	2000
C-5	Macdonald Drive — across from CASS	400m North of Hwy 17	2000
C-6	Government Road — east of Fisher Road	400m E of Fisher Road	1980

The goal of the inspections is to ensure that an acceptable standard is being maintained for each culvert in terms of public safety, comfort, and convenience. The objectives of the inspections are as follows:

- To identify critical maintenance, rehabilitation, and/or replacement needs of the structures;
- To protect and prolong the useful life of the structures; and,
- To provide a basis for scheduling and funding of the maintenance, rehabilitation repairs, or replacement of the structures.

This report contains completed OSIM inspection forms, relevant photographs, suggested maintenance and capital repairs, and estimated capital costs for major repairs at each site.

2.0) Structure Inspection Methodology

2.1) Inspection Approach

The structures were inspected in accordance with the Ontario Structure Inspection Manual (OSIM), published by the Ministry of Transportation of Ontario (MTO). The inspection program was designed to achieve the objectives of this assignment through a systematic, element-by-element visual assessment of each structure. This approach identifies material defects, performance deficiencies, and maintenance needs, and supports the development of prioritized rehabilitation recommendations and cost estimates.

The "severity and extent" methodology, as outlined in the Preface of the OSIM, was applied to streamline the use of inspection data in estimating bridge rehabilitation needs and associated costs. Under this approach, each element is assessed based on the severity of observed defects and the extent (percentage or quantity) of the element affected.

The inspections were conducted on May 15, 2026, by Roshan Upadhyaya, P.Eng with assistance from Raunak Upadhyaya, P.Eng.

The inspection team employed Unmanned Aerial Vehicle (UAV), binoculars, cameras, tape measures, steel chains, small boat, chest waders, flotation vests, hammers, paint markers, and additional equipment specified in Clause 1.4 of Section 1 under Part 2 of the OSIM to carry out the visual inspection.

2.2) Bridge Condition Index (BCI)

The **Bridge Condition Index (BCI)** is an asset management tool used to quantify the overall condition of a bridge based on the remaining economic worth of its elements. The BCI supports **repair and maintenance planning**; it is **not** an indicator of structural safety.

A newly constructed structure receives a BCI value of 100, which decreases over time. By tracking the rate of BCI deterioration and comparing it against projected decline rates, the Municipality can obtain valuable information for long-term planning and asset management purposes. Theoretically, the reduction in BCI depends on numerous factors, including traffic volume, commercial truck usage, application of de-icing chemicals, environmental exposure, and structural type. Each bridge deteriorates at its own unique rate; however, it is generally expected that the decline starts gradually and intensifies as the structure ages.

As noted, the BCI for a structure range from 0 to 100, and municipal bridge infrastructure can be categorized into several rating ranges as follows:

Table 2-1: Bridge Condition Index (BCI) ranges

BCI Range	Evaluation	Comment
100 - 70	Good	A bridge with a Bridge Condition Index (BCI) exceeding 70 is typically classified as being in good to excellent condition, indicating that repair or rehabilitation efforts are generally not necessary within the forthcoming five years. However, routine maintenance activities, including sweeping, cleaning, and washing, are still advisable.
50 - 70	Fair	A bridge with a BCI between 50 and 70 is typically regarded as being in good to fair condition. It is advisable to schedule any necessary repair or rehabilitation work within the next five years. From an economic standpoint, this timeframe is optimal for conducting major repairs on larger or critical structures. Completing repairs while the bridge falls within this BCI range can significantly enhance the structure's service life.
Less than 50	Poor	A bridge with a Building Condition Index (BCI) rating below 50 is typically classified as being in poor condition, with lower ratings indicating that the structure is approaching the end of its service life. The optimal timeframe for completing necessary repairs or rehabilitation of such structures is approximately one year. However, if it is assessed that replacing the structure would be a more viable, practical, or cost-effective solution than repairing it, the structure may be designated for ongoing monitoring and scheduled for replacement within a timeframe of one to ten years. Priority for replacement increases as the BCI decreases within this timeframe.

Note: The BCI is a planning tool for asset management and budget prioritization. A low BCI does not necessarily indicate that a structure is unsafe. Structural safety is evaluated separately through structural analysis and engineering judgment.

2.1.1) BCI summary for structures

The following summary presents the BCI results for the inspected structures within Johnson Township, organized by condition category from Excellent to Very Poor / Critical. These ratings provide a clear, objective basis for identifying maintenance priorities, allocating rehabilitation resources, and planning future capital investments.

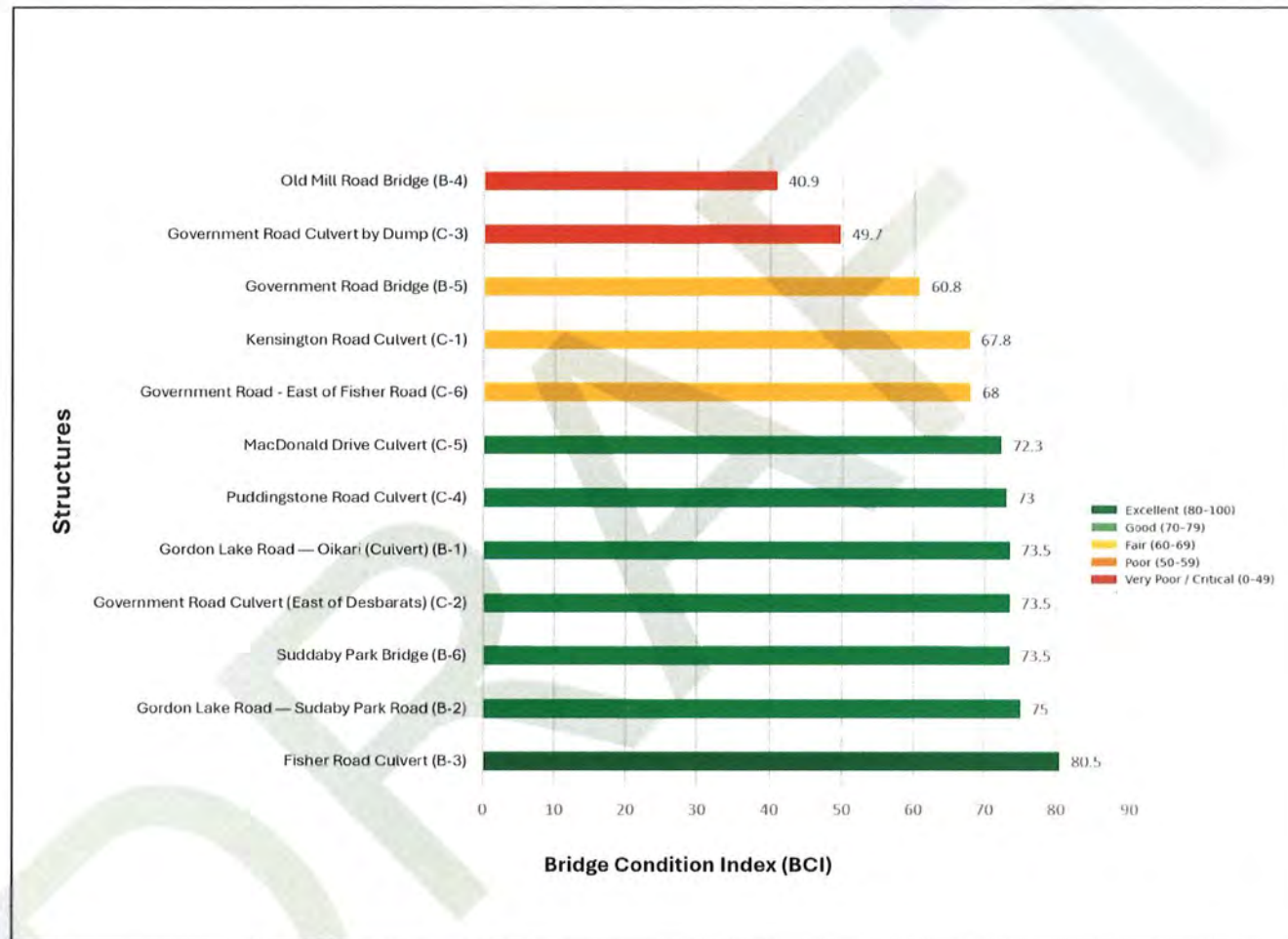


Figure 1: BCI summary for inspected structures

3.0) Inspection Observation and Recommendations

3.1) Gordon Lake Road — Oikari (Structure No. B-1)

Structure Description

The Oikari Culvert (Structure No. B1) is located on Gordon Lake Road approximately 350 m south of Gordon Lake. The structure is an open floor corrugated steel arch culvert (CPS ACH) with concrete headwalls on each end, constructed in 2006. The culvert has a maximum height of 2.5 m, a culvert length of 18 m, and a cell/span width of 3.8 m.

The Oikari Culvert (Structure No. B-1) has an overall Bridge Condition Index (BCI) of **73.5**, indicating **good** overall condition.

3.1.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in good condition. No performance deficiencies were identified.

- **Approaches — Wearing Surface (Approach)**

The approach wearing surfaces on the east and west sides are in good to fair condition. Potholes and a longitudinal crack were observed at the south approach. No performance deficiencies or rehabilitation needs were identified.

- **Culverts — Barrels**

The corrugated steel arch culvert barrel is in good to fair condition. The structure consists of one cell with a width of 6 m and a barrel length of 10.67 m. No perforations or structural deformation were observed. The invert was partially submerged with minor debris/branch accumulation; no significant scour was visible. No performance deficiencies were identified.

- **Culverts — Inlet Components**

The cast-in-place concrete inlet headwall is in good condition. Minor weathering/staining and light surface pitting were observed on the exposed face, with no significant spalling or cracking. No performance deficiencies were identified.

- **Culverts — Outlet Components**

The cast-in-place concrete outlet headwall is in good condition. Minor weathering/staining and light surface pitting were observed on the exposed face, with no significant spalling or cracking. No performance deficiencies were identified.

- **Coatings — Structural Steel**

The galvanised coating on the culvert barrel structural steel is in good to fair condition. The lower third of the barrel exhibits coating loss, surface rust, and light pitting from the normal water line to the invert. The upper barrel retains coating and remains in good condition. No performance deficiencies were identified.

- **Barriers — Railing Systems**

The steel flex beam barrier systems on the west and south sides are in good condition. Several wooden posts are decayed, and a number of offset blocks have become misaligned. No performance deficiencies were identified.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the east and west sides is in good to fair condition. Stone is generally in place with no significant displacement, voids, or undermining visible. The slope profile appears stable with no active erosion, rilling, or slumping. No filter fabric exposure or washout is evident. No performance deficiencies were identified.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good condition. Water flow is from east to west. No performance deficiencies were identified.

- **Accessories — Signs**

The object marker signs at the north and south approaches are in good condition however they are improperly placed, snowplough wing indicators are missing.

3.1.2) Recommendations Summary

Fisher Road Culvert (Structure No. B-3)					
	Element	Recommended Work	Priority	Estimate Cost (Class D)	Remarks
1	Approach wearing surface	Repair potholes seal the transverse cracks	1--5 years	\$500	
3	Accessories — Signs	Correct the position of hazard sign and install snowplow sign.	Urgent	\$1,500	
Total Estimated Construction Cost (Class D)				\$2,000	

3.1.3) Overall Summary - Gordon Lake Road — Oikari (Structure No. B-1)

Overall, the structure is in good condition with a **BCI of 73.5**. The culvert's main framework remains in sound condition, although minor rust staining and light corrosion are visible at the waterline and along the bottom invert. The pavement at the approach shows some transverse cracking and a few shallow potholes. Routine maintenance should be continued. The culvert itself is a corrugated

steel pipe fitted with concrete end walls; while there is some surface rust near the water level, it does not compromise the structure's integrity. The asphalt overlay above is generally in good shape, with only isolated hairline cracks. Side slopes are stable overall, with just slight erosion noted, and the adjacent watercourse appears undisturbed.

However, several non-structural items require attention. The guide rail system shows various issues: hazard markers are improperly placed, snowplow wing indicators are missing, several wooden posts are decayed, and a number of offset blocks have become misaligned. Vegetation is beginning to encroach onto shoulders and railings, and accumulated sand along the edges may hinder effective drainage.

3.2) Gordon Lake Road — Sudaby Park Road Bridge (Structure No. B-2)

Structure Description

The Suddaby Park Road Bridge (Structure No. B-2) is located on Gordon Lake Road approximately 80 m south of Suddaby Park Road. The structure is a precast concrete box culvert, constructed in 2018. The structure has a single span and supports a single lane surface-treated road.

The Suddaby Park Road Bridge (Structure No. B-2) has an overall Bridge Condition Index (BCI) of **75.0**, indicating **good** overall condition.

3.2.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in good condition with minor cracks noted. No performance deficiencies were identified.

- **Approaches — Wearing Surface (Approach)**

The approach wearing surfaces on the east and west sides are in good to fair condition. A longitudinal crack was observed at the south approach. No performance deficiencies or rehabilitation needs were identified.

- **Culverts — Barrels**

The cast-in-place concrete culvert barrel is in good condition. The structure consists of one cell with a width of 5 m. No structural deformation was observed. The invert was partially submerged. No performance deficiencies were identified.

- **Culverts — Inlet Components**

The cast-in-place concrete inlet wingwall is in good condition. Minor weathering and staining were observed. No performance deficiencies were identified.

- **Culverts — Outlet Components**

The gabion basket wingwall at the west side is in good condition. No performance deficiencies were identified.

- **Barriers — Railing Systems**

The steel flex beam barrier systems on the east and west sides are in good condition. No performance deficiencies were identified.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the east and west sides is in good to fair condition. Stone is generally in place with no significant displacement, voids, or undermining visible. The slope profile appears stable with no active erosion or slumping. No filter fabric exposure or washout is evident. No performance deficiencies were identified.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good condition. Water flow is from east to west. No performance deficiencies were identified.

- **Accessories — Signs**

The object marker signs at the north and south approaches are in good condition. A minor dent was noted on the sign at the south-east side. No performance deficiencies were identified.

3.2.1) Recommendations Summary

No specific rehabilitation work is recommended at this time. All structural elements require only routine maintenance, which should include continued removal of sand accumulation and vegetation growth as part of regular upkeep. The guide rail posts showing decay should be monitored during future inspections to determine if replacement becomes necessary. Overall, the bridge continues to perform satisfactorily and requires no immediate corrective action.

3.2.3) Overall Summary - Gordon Lake Road — Sudaby Park Road (Structure No. B-2)

Overall, Bridge 2 is in good condition with a **BCI of 75.0**. The cast-in-place concrete culvert barrel, gravel wearing surface, concrete wingwalls, and approaches are all in good to fair condition, with only minor sand and gravel accumulation at the shoulders and slight erosion at the ends of the wing walls. The upstream and downstream channels are clear, and the rip-rap slope protection on the stream embankment, along with the gabion basket retaining walls, all appear in good condition. The steel flex-beam guide rail systems are complete with safety end treatments on all approach quadrants, though several guide rail posts show signs of decay. Hazard markers and snowplow wing markers are installed at all four quadrants, and the object marker signs are in good condition.

3.3) Fisher Road Culvert (Structure No. B-3)

Structure Description

The Fisher Road Culvert (Structure No. B-3) is a two-cell corrugated steel pipe culvert situated on Fisher Road, 500 m south of Government Road, within the Township of Johnson in the Sault Ste. Marie MTO District. Constructed at an unknown date, the structure carries a local rural gravel road over a non-navigable waterway-oriented north-south. The main barrel is a 2.29 m diameter pipe arch (Cell 1) with a 24 m barrel length, supplemented by a 0.6 m diameter round relief pipe (Cell 2).

The Fisher Road Culvert (Structure No. B-3) has an overall Bridge Condition Index (BCI) of **80.5**, indicating **good to excellent** overall condition.

3.3.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in good condition. No performance deficiencies were identified.

- **Culverts — Barrels**

The corrugated steel culvert barrels are in good to excellent condition. The structure consists of two cells: a main Cell 1 (2.29 m diameter pipe arch) and relief Cell 2 (0.6 m diameter round pipe), with a total barrel length of 24 m. The main barrel is in good condition with a minor deformation noted at the inlet end. The relief barrels are in excellent to good condition. No performance deficiencies were identified.

- **Coatings — Structural Steel**

The hot-dip galvanized coating on the culvert barrel structural steel is in excellent condition. Minor rust staining was observed at the invert. No performance deficiencies were identified.

- **Barriers — Railing Systems**

No barrier systems are present on the structure. Water hazards are located immediately adjacent to the travelled way, presenting a severe roadside hazard consistent with MTO barrier warrant criteria. Installation of an appropriate barrier system should be evaluated by the township.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the north and south sides is in good condition. No performance deficiencies were identified.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good condition. No performance deficiencies were identified.

- **Accessories — Signs**

Warning signs are not present on either side of the roadway. Installation of warning signs and signposts at each end of the culvert is recommended.

3.3.2) Recommendations Summary

The following table summarizes the recommended work, priorities, and estimated costs for the Fisher Road Culvert:

Table 3-1: *Fisher Road Culvert - Maintenance and Repair/Rehabilitation Need*

Fisher Road Culvert (Structure No. B-3)					
	Element	Recommended Work	Priority	Estimate Cost (Class D)	
1	Barriers — Railing Systems	Evaluate for the need for barrier system and signage at both approaches	With in 1 year	\$500	
Total Estimated Construction Cost (Class D)				\$500	

3.3.3) Overall Summary — Fisher Road Culvert (Structure B-3)

Overall, the structure is in good to excellent condition with a **BCI of 80.5**. The corrugated steel culvert barrels, coating system, gravel wearing surface, and slope protection are all in good to excellent condition; however, the culvert itself shows light corrosion staining throughout, has small dent at upstream and slightly out of round, and its outlet is slightly perched and undermined. The gravel road surface appears in good condition, and the upstream and downstream channels are clear. No guide rails or warning signs are currently installed, and the primary recommendations are for the township to evaluate and install a barrier system on both the north and south sides, as well as install warning signs with signposts at each end of the culvert. While the overall condition remains good, these corrective actions along with continued routine maintenance are advised to address the structural deficiencies and improve site safety.

3.4) Old Mill Road Bridge (Structure No. B-4)

Structure Description

The Old Mill Road Bridge (Structure No. B4) is located on Old Mill Road approximately 200 m north of Gordon Lake Road. The structure is a triple span concrete bridge with concrete deck, constructed in approximately 1913. The bridge consists of three spans with a total deck length of 28 m and deck width of 6 m, supporting a single lane gravel road. The bridge is posted with a 10-tonne load limit.

The Old Mill Road Bridge (Structure No. B4, 38S-151) has an overall Bridge Condition Index (BCI) of **40.9**, indicating **poor** overall condition.

3.4.1) Element-by-Element Observations

- Abutments — Abutment Walls (North & South)**
 The cast-in-place concrete abutment walls on both sides are in good to fair condition. No performance deficiencies were identified.
- Beams/(MLE) — Girders**
 The four cast-in-place concrete T-girders 12 in total in 3 spans are rated in **fair to poor condition**. Significant deterioration is evident, including extensive spalling, concrete disintegration, and exposed reinforcing steel with advanced corrosion, particularly concentrated at the end girders. Consequently, the affected girders and beams exhibit a **reduced load-carrying capacity**, posing a structural performance deficiency that requires immediate remediation.
- Piers — Shafts/Columns/Pile Bents**
 The eight concrete rectangular columns with cap beam are in fair condition. Moderate spalling, minor section loss, surface deterioration, medium cracks, effloresces and exposed reinforcement were observed. Both pier caps are in poor condition with sever spall, concrete disintegration and severally corroded expose reinforcement bars.
- Foundation — Foundation (Below Ground Level)**
 The pier spread foundations are in poor condition. Prominent concrete spalling, erosion, surface deterioration, and undermining concentrated at the waterline were observed. This is a significant structural concern.
- Decks — Soffit (Thin Slab)**
 The deck soffit is in fair with medium cracks and condition with some stained spots surface deterioration, medium cracks, effloresces noted.
- Decks — Drainage System**
 The six deck drains are in fair condition.
- Decks — Wearing Surface**
 The asphalt wearing surface is in fair condition, with minor debris accumulated at the shoulder.

- **Approaches — Wearing Surface (Approach)**

The gravel approach surfaces on the north and south sides are in fair condition, exhibiting widespread surface distress including potholes, patches, and ravelled gravel.

- **Sidewalks/Curbs — Sidewalk and Medians**

The cast-in-place concrete curbs on the east and west sides are in fair to poor condition, with spalls and concrete decentration at the south ends, debris accumulated around the curb.

- **Barriers — Railing Systems**

The barrier system doesn't meet code requirement and in poor condition. The 3-rail metal steel railing systems on the north and south sides are in poor condition with severely deteriorated posts and bent and missing rails.

- **Barriers — Posts**

The 20 cast-in-place concrete posts on the east and west sides are in poor condition. Eight posts are severely deteriorated and damaged, creating a pedestrian/vehicular hazard. There is no guard rail at all four quadrants.

- **Barriers — Guard rails**

There is no guard rails at both approaches.

- **Accessories — Signs**

The four object warning signs on the east and west sides are in poor condition signs are leaning and dented on both sides. A pedestrian/vehicular hazard was identified.

- **Embankments & Streams — Slope Protection**

The hand-laid riprap slope protection on the north and south sides is in good condition.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good condition.

3.4.2) Recommendations Summary

The following table summarizes the recommended work, priorities, and estimated costs for the Puddingstone Road Culvert:

Table 3-2: *Old Mill Road Bridge (Structure No. B-4)- Maintenance and Repair/Rehabilitation Need*

Old Mill Road Bridge (Structure No. B-4)					
	Element	Recommended Work	Priority	Estimate Cost (Class D)	Remarks
1	Substructure rehabilitation, including, abutments, piers, columns, pier caps, foundations	Complete rehabilitation of all the concrete and foundation elements	Urgent	\$600,000.00	
2	Super structure rehabilitation, including beams/girders, thin slab, barriers and curbs	Complete rehabilitation of super structure, including, beams/girders, thin slab, roadside barrier and installation of guard rails system	Urgent	\$400,000.00	
3	Bridge Structure	Performed detailed investigation including, enhanced inspection, deck condition survey and perform load analysis of the structure to find out current load carrying capacity	Urgent	\$61,000.00	
4	Overall Structure	Replace	1 to 5 years	\$1,500,000.0	Modular Bridge can be used to replace the structure using existing abutments

3.4.3) Overall summary - Old Mill Road Bridge (Structure No. B-4)

The Old Mill Road Bridge, a 113-year-old reinforced concrete T-beam structure, is in poor overall condition with a **BCI of 40.9**, indicating it is likely beyond its serviceable life. While the abutments, deck soffit, drainage, and slope protection are in relatively acceptable condition, critical deficiencies are present in the primary load-bearing elements. The cast-in-place concrete girders and pier caps are in poor condition with significant concrete spalls, cracking and exposed, corroded reinforcing steel, and the concrete soffit exhibits widespread efflorescence, spalling, and cracking. These structural issues are compounded by foundation erosion and undermining at the waterline. Additionally, the steel tube railings with concrete posts have failed and require immediate attention, and the approaches lack necessary guide rails—a serious safety hazard given the sharp curve at the north approach.

Given the advanced state of deterioration, **replacement or full rehabilitation of the entire structure must be prioritized**. To inform this decision, we strongly recommend performing an **enhanced inspection and bridge load analysis immediately** to determine the current load-carrying capacity of the structure. In the interim, the current 10-tonne load limit must be strictly maintained and potentially reduced if deterioration accelerates. Furthermore, the **severely deteriorated bridge barrier which no longer meets code requirements must be replaced without delay**, and **guardrail systems should be installed at all four quadrants of the bridge** to address the approach hazards. Routine maintenance, such as removing sand accumulation from the deck, should continue, and the structure must be closely monitored through the biennial inspection cycle to track the progression of its critical deficiencies.

3.5) Government Road Bridge (Structure No. B-5)

Structure Description

The Government Road Bridge (Structure No. B4) is located on Government Road approximately 10 m west of Gordon Lake Road. The structure is a single span cast-in-place concrete bridge with concrete deck and asphalt pavement wearing surface, constructed in 1937. The bridge has a span length of 9 m, a deck width of 6 m, and supports a single lane gravel road.

The Government Road Bridge (Structure No. B5, 38S-307) has an overall Bridge Condition Index (BCI) of **60.8**, indicating **fair** overall condition.

3.5.1) Element-by-Element Observations

- **Abutments — Abutment Walls (East & West)**

The cast-in-place concrete abutment walls on both sides are in good to fair condition. Some erosion was noted at the northeast corner of the west abutment and minor spalls at the water line. There is sign of water abrasion exposing coarse aggregate at the both abutments near water line. No performance deficiencies were identified.

- **Beams/(MLE) — Girders**

The four cast-in-place concrete T-type girders are in good to fair condition. No performance deficiencies were identified.

- **Decks — Soffit (Thin Slab)**

The deck soffit is in fair to good condition. Minor spall noted at some isolated spots. No performance deficiencies were identified.

- **Decks — Drainage System**

The four deck drains are in good condition. No performance deficiencies were identified.

- **Decks — Wearing Surface**

The asphalt wearing surface is in good to fair condition. No performance deficiencies were identified.

- **Approaches — Wearing Surface (Approach)**

The asphalt approach surfaces on the east and west sides are in fair to good condition. No performance deficiencies or rehabilitation needs were identified.

- **Sidewalks/Curbs — Sidewalk and Medians**

The cast-in-place concrete curbs on the north and south sides are in good to fair condition. A crack was noted on the south side of the curb, probably due to vehicle impact. Sand and debris accumulated on the south and north curbs. Bridge cleaning is recommended within 1-5 years.

- **Barriers — Railing Systems**

- The steel flex beam railing systems on the north and south sides are in good to fair condition. Minor vehicle impact marks noted on guiderails. No performance deficiencies were identified.

- **Barriers — Posts**

The 18 steel posts on the south and north sides are in fair to poor condition. Three(3) of the steel posts on the south side is bent and damaged due to vehicle impact and 2 more has minor dents. The damage barrier and posts have leaned outward and need to be repaired.

- **Accessories — Signs**

The four object warning signs on the east and west sides are in fair condition signs are leaning on both sides.

- **Embankments & Streams — Slope Protection**

The vegetated slope protection on the north and south sides is in good to fair condition. Moderate vegetation growth (woody shrubs/grass) was observed, with some erosion noted around the abutment ends.

- **Embankments & Streams — Streams & Waterways**

The upstream channel has debris accumulation, while the downstream channel is in good condition. A flooding/channel blockage performance deficiency was identified.

- **Foundation — Foundation (Below Ground Level)**

The foundation was not fully visible during inspection. The visible portion above water appears to be in fair condition. No performance deficiencies were identified.

3.5.2) Recommendations Summary

The following table summarizes the recommended work, priorities, and estimated costs for the Puddingstone Road Culvert:

Table 3-3: *Government Road Bridge (Structure No. B-5)- Maintenance and Repair/Rehabilitation Need*

Government Road Bridge (Structure No. B-5)					
	Element	Recommended Work	Priority	Estimate Cost (Class D)	
1	Barriers — Posts	Repair damaged steel posts (south side)	1-5 years	\$4,000	
2	Accessories — Signs	Repair signposts and warning signs	1-5 years	\$2,000	

Government Road Bridge (Structure No. B-5)					
3	Embankments & Streams — Streams & Waterways	Remove debris from upstream side	1-5 years	\$2,000	
4	Embankments & Streams — Slope protection	Remove vegetation	1-5 years	\$2,000	
5	Approach guide rails	Install approach guide rails	Within 1 year	\$20,000	
Total Estimated Construction Cost (Class D)				\$30,500	

3.5.3) Overall summary - Government Road Bridge (Structure No. B-5)

The single-span cast-in-place concrete bridge, featuring a concrete deck with an asphalt wearing surface, is rated in **fair condition overall (BCI: 60.8)**. Most structural components including the reinforced concrete girders, abutment walls, deck soffit, drainage system, wearing surface, and approaches are in **good to fair condition** with no performance deficiencies identified. However, notable deficiencies exist in the barrier system: steel flex beam guide rails are present on both sides, but the south-side steel posts (without offset blocks) show impact damage, and three posts are bent with two more dented, causing outward lean.

Additionally, no guide rails are installed on the approaches, and erosion is evident at abutments, particularly at the northeast corner of the west abutment and at water lines where coarse aggregate is exposed. The upstream channel has debris accumulation posing a flooding/blockage risk, while the downstream channel remains clear. Minor issues include cracked curbs (south side, likely vehicle impact), leaning object warning signs, moderate vegetation growth on slopes, and sand/debris buildup along curbs requiring cleaning.

3.6) Suddaby Park Bridge (Structure No. B-6)

Structure Description

The Suddaby Park Bridge (South) (Structure No. B-6) is located on Gordon Lake Road approximately 80 m south of Suddaby Park Road. The structure is a precast concrete box culvert, constructed in 2018. The structure has a single span and supports a single lane surface-treated road. Steel flex beam guide rail with safety end treatments is present on all approach quadrants. The guide rail system includes additional upper bike rail channels at the bridge.

The Suddaby Park Bridge (Structure No. B-6) has an overall Bridge Condition Index (BCI) of **73.5**, indicating **good** overall condition.

3.6.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in good condition. No performance deficiencies were identified.

- **Approaches — Wearing Surface (Approach)**

The asphalt approach wearing surfaces on the east and west sides are in good condition. No performance deficiencies or rehabilitation needs were identified.

- **Culverts — Barrels**

The cast-in-place concrete culvert barrel is in good to fair condition. The structure consists of one cell (5 m width), with a total barrel length of 5.90 m. No structural deformation was observed; the invert is partially submerged. No performance deficiencies were identified.

- **Culverts — Outlet Components**

The concrete wing wall at the outlet is in good condition. A slight 2-inch displacement was noted at the top of the wing wall at the north-west end. Continuing movement was identified as a performance deficiency. Monitoring of the wing wall movement at the west side is recommended.

- **Culverts — Inlet Components**

The concrete inlet components are in good condition. No performance deficiencies or rehabilitation needs were identified.

- **Coatings**

No coating system is present on the concrete culvert

- **Barriers — Railing Systems**

The steel flex beam railing systems on both the east and west sides are in good condition. Each side has approximately 45 m of steel flex beam on steel posts. No performance deficiencies or rehabilitation needs were identified.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the east and west sides is in good to fair condition. An animal burrow and minor gravel washout were observed on the north-east side.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good condition. Water flow is from east to west. No performance deficiencies were identified.

- **Accessories — Signs**

The object marker signs at the north and south approaches are in good condition. A minor dent was noted on the sign at the north-east side. No performance deficiencies were identified.

3.6.2) Recommendations Summary

Monitor the wing wall movement during the next inspection cycle; otherwise, continue regular maintenance work. All other elements are in good condition and require no immediate rehabilitation.

3.6.3) Overall summary - Suddaby Park Bridge (Structure No. B-6)

The Suddaby Park Bridge (Structure No. B-6), a precast concrete box culvert constructed in 2018, is in **good overall condition (BCI: 73.5)**. The gravel wearing surface, asphalt approaches, concrete barrel, inlet components, steel guide rails (with bike rail channels), and channels are all in good condition with no performance deficiencies. Rock slope protection is good to fair, with minor animal burrowing and gravel washout on the northeast side. The only notable deficiency is a slight 2-inch displacement at the northwest wing wall monitoring is recommended. Routine maintenance, including embankment repair, is otherwise sufficient.

3.7) Kensington Road Culvert (Structure No. C-1)

Structure Description

The Kensington Point Road Culvert is located on Kensington Point Road approximately 400 m south of Highway 17. The structure is a structural plate corrugated steel pipe arch with bevelled ends, constructed in approximately 1980. The culvert has a maximum height of 5.8 m, a culvert length of 68 m, and approximately 700 mm of cover over the culvert.

The Kensington Road Culvert (Structure No. C-1) has an overall Bridge Condition Index (BCI) of **67.8**, indicating **good to fair** overall condition.

3.7.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in good condition. No performance deficiencies were identified.

- **Approaches — Wearing Surface (Approach)**

The asphalt approach wearing surfaces on the east and west sides are in good condition. No performance deficiencies or rehabilitation needs were identified.

- **Culverts — Barrels**

The corrugated steel culvert barrel is in good to fair condition. The structure consists of one round cell (approximately 3.0 m diameter), with a total barrel length of 20.0 m. Vertical deflection (sag) was observed along the barrel longitudinal profile; the crown was slightly displaced downward toward midspan. The invert was covered with water and not visible during inspection. Continuing movement was identified as a performance deficiency.

Monitoring of the sag at midspan is recommended.

- **Coatings — Structural Steel**

The hot-dip galvanized coating on the culvert barrel structural steel is in good to fair condition. Surface rust is evident on interior metal surfaces; no advanced section loss was visible from photos, but coating failure is progressing. No performance deficiencies were identified.

- **Barriers — Railing Systems**

No barrier systems are present on the structure. Water hazards are located immediately adjacent to the travelled way on both the east and west sides. This configuration presents a severe roadside hazard consistent with MTO barrier warrant criteria. Installation of an appropriate barrier system should be evaluated by the township.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the north and south sides is in good to fair condition. No performance deficiencies or rehabilitation needs were identified.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good condition. No performance deficiencies were identified.

- **Accessories — Signs**

Warning signs are not present on either side of the roadway. A pedestrian/vehicular hazard was identified.

3.7.2) Recommendations Summary

The following table summarizes the recommended work, priorities, and estimated costs for the Kensington Road Culvert (Structure No. C-1):

Table 3-4: *Kensington Road Culvert (Structure No. C-1)-Maintenance and Repair/Rehabilitation Need*

Kensington Road Culvert (Structure No. C-1)					
	Element	Recommended Work	Priority	Estimate Cost (Class D)	
1	Culverts — Barrels	Monitor the sag at midspan	Monitor during next OSIM cycle.	\$1000	
2	Barriers — Railing Systems (East)	Evaluate and install barrier system (40 m)	1--5 years	\$15,000	
3	Barriers — Railing Systems (West)	Evaluate and install barrier system (40 m)	1--5 years	\$15,000	
4	Accessories — Signs	Install warning signs at east and west approaches	1--5 years	\$2,000	
Total Estimated Construction Cost (Class D)				\$33,000	

3.7.3) Overall summary - Kensington Road Culvert (Structure No. C-1)

Overall, the structural plate corrugated steel pipe arch culvert is in good to fair condition, with moderate to severe corrosion observed and an invert not visible due to turbid water. The culvert has bevelled ends and approximately 700 mm of cover, while the surface-treated road, road embankments, and stream all appear stable and in good condition. Routine maintenance is recommended, including repairing and installing new warning signs with signposts at each end of the culvert. Additionally, the township should evaluate the installation of a guide rail barrier system along the length of the culvert and monitor the sag noted at midspan.

3.8) Government Road Culvert (Structure No. C-2)

Structure Description

The Government Road Culvert (East of Desbarats) is located on Government Road approximately 220 m west of Desbarats Lake Road. The structure consists of two round, polymer-coated, corrugated steel pipes (CST PR) reportedly installed in approximately 2014. The main barrel is 3.0 m in diameter, and the relief barrel is 1.2 m in diameter, with a total culvert length of 23.0 m. The 3 m pipe has step bevelled ends.

The Government Road Culvert (Structure No. C-2) has an overall Bridge Condition Index (BCI) of 73.5, indicating good overall condition.

3.8.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in good condition. No performance deficiencies were identified.

- **Approaches — Wearing Surface (Approach)**

The asphalt approach wearing surfaces are in good condition. No performance deficiencies or rehabilitation needs were identified.

- **Culverts — Relief Barrels (Cell 1)**

The corrugated steel culvert barrel (Cell 1) is in good condition. The cell has a diameter of approximately 1.2 m and a length of 15.50 m. Corrugation profile remains uniform with no significant deflection, out-of-roundness, or structural deformation observed. No performance deficiencies were identified.

- **Culverts — Barrels (Cell 2)**

The main culvert barrel (Cell 2) is in good condition. The cell has a diameter of approximately 3.0 m, and a length of 18.0 m. Corrugation profile remains uniform with no significant deflection, out-of-roundness, or structural deformation observed. The invert is partially submerged under standing water; full invert condition could not be verified at time of inspection. Minor sediment accumulation along invert was noted. No performance deficiencies were identified.

- **Coatings — Structural Steel**

The coating on the culvert barrel structural steel is in good to fair condition. Minor coating wear is evident along the flow line where visible above water level. No performance deficiencies were identified.

- **Barriers — Railing Systems**

The steel flex beam railing systems on both the north and south sides are in good condition. Each side has approximately 45 m of steel flex beam on steel posts. Some wooden offset blocks were noted as rotated. No performance deficiencies were identified.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the north and south sides is in good condition. Embankment slopes are protected with angular riprap stone from shoulder to toe. Stone is generally in place with no significant displacement, voids, or undermining visible. Slope profile appears stable with no active erosion, or slumping. Minor vegetation growth was noted on the south side. No performance deficiencies were identified.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good condition. Water flow is from west to east. No performance deficiencies were identified.

- **Accessories — Signs**

The object marker signs are in good condition on the south side. A minor scratch was noted on the sign at the north-west end. No performance deficiencies were identified.

3.8.2) Recommendations Summary

Continue regular maintenance for the culvert, including periodic monitoring of the steel barrel coatings for progressive wear along the flow line and clearing any sediment accumulation at the invert as needed. All other elements are in good condition and require no immediate rehabilitation.

3.8.3) Overall summary - Government Road Culvert (Structure No. C-2)

The Government Road Culvert (Structure No. C-2) is in good overall condition with a BCI of 73.5. The gravel deck and asphalt approaches are in good condition, and both culvert barrels a 1.2 m diameter relief barrel and a 3.0 m diameter main barrel show no structural deformation, though minor sediment is present in the main barrel. Steel coatings are in good to fair condition with minor flow-line wear, and the flex beam railings are in good condition despite some rotated offset blocks. Rock slope protection and stream channels are stable, and signs are in good condition with only a minor scratch. Routine maintenance, including coating monitoring and sediment removal, is recommended; no immediate rehabilitation is required.

3.9) Government Road Culvert by Dump (Structure No. C-3)

Structure Description

The Government Road Culvert (West of Desbarats) is located on Government Road approximately 1.9 km west of Lake Huron Drive. The structure is a galvanized structural plate corrugated steel pipe (CPS PR) with unknown year of construction. The culvert has a span of 15 m

The Government Road by Dump Culvert (Structure No. C-3) has an overall Bridge Condition Index (BCI) of **49.7**, indicating **poor** overall condition.

3.9.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in poor condition. A transverse crack was observed in the asphalt wearing surface directly above the culvert barrel. The crack ran perpendicular to the roadway centerline and was confined to the culvert influence zone.

- **Approaches — Wearing Surface (Approach)**

The approach wearing surfaces on the east and west sides are in good condition. No performance deficiencies or rehabilitation needs were identified.

- **Culverts — Barrels**

The corrugated steel culvert barrel is in fair to poor condition. The structure consists of one cell with a 3.0 m diameter, and a total barrel length of 20.0 m. Vertical deflection (sag) was observed along the barrel longitudinal profile. The crown was displaced downward toward midspan. Deformations were also observed at the barrel north end and debris was present on the north end. Replacement of the structure is recommended.

- **Coatings — Structural Steel**

The hot-dip galvanized coating on the culvert barrel structural steel is in fair condition. Minor rusting was observed on the lower sidewalls and invert.

- **Barriers — Railing Systems**

No barrier systems are present on the north and south sides of the structure. Water hazards are located immediately adjacent to the travelled way, presenting a severe roadside hazard. Installation of appropriate barrier systems on both sides should be evaluated by the Township.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the north and south sides is in fair condition. Minor erosion was noted on the north side.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good to fair condition. No performance deficiencies were identified.

- **Accessories — Signs**

Warning signs are not present on either side of the roadway. This presents a pedestrian/vehicular hazard. Installation of warning signs on both sides is recommended as an urgent priority.

3.9.2) Recommendations Summary

Table 3-5: Government Road Culvert by Dump (Structure No. C-3)- Maintenance and Repair/Rehabilitation Need

Government Road Culvert by Dump (Structure No. C-3)					
Element		Recommended Work	Priority	Estimate Cost (Class D)	
1	Signs and guide rails	Install Guide rails and signs	Urgent	\$25,000	
2	Overall Structure	Replace	1 to 5 years	\$350,000	
Total Estimated Construction Cost (Class D)				\$375,000	

3.9.3) Overall summary - Government Road Culvert by Dump (Structure No. C-3)

This structure overall is in poor condition (**BCI 49.7**). The corrugated steel barrel is noticeably deflected with a sag at midspan and deformations at the north end, where debris accumulation was also present. Moderate to severe corrosion was evident throughout the length below the waterline. The gravel wearing surface above the barrel showed a transverse crack, indicating ongoing settlement. Safety deficiencies are significant: no guide rails or warning signs are installed, creating a roadside hazard next to open water. Embankments and stream channels appeared stable.

The primary recommendation is to replace the culvert barrel within 1 to 5 years. I also strongly urge immediate installation of barrier systems and warning signs on both approaches as urgent safety priorities.

3.10) Puddingstone Road Culvert (Structure No. C-4)

Structure Description

The Puddingstone Road Culvert (Structure No. C4) is located on Puddingstone Road approximately 2.1 km north of Government Road. This is a boundary culvert shared with the neighbouring Township of Tarbutt. The structure is an open-bottom structural plate corrugated steel arch founded on concrete foundations, constructed in 2000. Approximately 800 mm of fill is provided over the culvert.

The Puddingstone Road Culvert (Structure No. C-4) has an overall Bridge Condition Index (BCI) of **73.0**, indicating a **good** overall condition.

3.10.1) Element-by-Element Observations

- **Wearing Surface (Deck)**
The gravel wearing surface is in good condition. No performance deficiencies or rehabilitation needs were identified.
- **Approach Wearing Surface**
The east and west approach wearing surfaces are in good condition. No performance deficiencies or rehabilitation needs were identified.
- **Culvert Barrels**
The culvert barrel is in good condition. The corrugation profile remains uniform with no significant deflection, out-of-roundness, or structural deformation. The invert was partially submerged under standing water, and the full invert condition could not be verified at the time of inspection.
- **Coatings – Structural Steel**
The hot-dip galvanized coating on the culvert barrel is in good to fair condition. Minor coating wear was evident along the flow line where visible above the water level.
- **Barriers -- Railing Systems (East Side)**
The three-cable guide rail with wooden posts is in good condition. No impact damage, missing posts, or broken cables were observed.
- **Barriers -- Railing Systems (West Side)**
The three-cable guide rail with wooden posts is in good condition. No impact damage, missing posts, or broken cables were observed.
- **Slope Protection**
Rock slope protection is in good condition. The embankment slope is protected with angular riprap stone from shoulder to toe. Stone is generally in place with no significant displacement, voids, or undermining visible. The slope profile appears stable with no active erosion, rilling, or slumping. No filter fabric exposure or washout is evident.
- **Streams & Waterways**

Water flow is from west to east. Both the upstream and downstream channels are in good condition. No performance deficiencies or rehabilitation needs were identified.

- **Signs**

The object marker signs are missing on both the east and west sides, presenting a pedestrian/vehicular hazard. Installation of OM3-type object marker signs on both sides is recommended.

3.10.2) Recommendations Summary

The following table summarizes the recommended work, priorities, and estimated costs for the Puddingstone Road Culvert:

Table 3-6: *Puddingstone Road Culvert - Maintenance and Repair/Rehabilitation Need*

Puddingstone Road Culvert (Structure No. C-4)					
Element		Recommended Work	Priority	Estimate Cost (Class D)	
1	Signs	Install OM3-type object marker signs on both sides	1--5 years	\$2,000	
Total Estimated Construction Cost (Class D)				\$2,000	

3.10.3) Overall summary - Puddingstone Road Culvert (Structure No. C-4)

Overall, the culvert is in good condition with **BCI of 73**. The primary concern is the missing object marker signs on both sides of the culvert, which should be replaced with OM3-type signs to address the pedestrian/vehicular hazard. All other elements are in good condition with routine maintenance sufficient. We recommend installing OM-3 type Object Marker sign.

3.11) MacDonald Drive Culvert (Structure No. C-5)

Structure Description

The MacDonald Drive Culvert (Structure No. C5) is located on MacDonald Drive approximately 400 m north of Highway 17. The structure is a structural plate corrugated steel arch (CPS ACH) with an open bottom, constructed in 2000. The culvert has a maximum height of 20 m and a culvert length of 20 m.

The MacDonald Drive Culvert (Structure No. C-5) has an overall Bridge Condition Index (BCI) of **72.3**, indicating **good** overall condition.

3.11.1) Element-by-Element Observations

- **Decks — Wearing Surface**

The gravel deck wearing surface is in good condition. No performance deficiencies were identified.

- **Approaches — Wearing Surface (Approach)**

The gravel approach wearing surfaces on the east and west sides are in good condition. No performance deficiencies or rehabilitation needs were identified.

- **Culverts — Barrels**

The corrugated steel culvert barrel is in good condition. The structure consists of one cell (pipe arch) with a width of 5.5 m and height of 2.1 m, and a total barrel length of 14.3 m. Bolted seams are intact, the crown holds shape, and no deformation was observed. The invert was partially submerged and not visible; an underwater investigation is recommended at low water to verify the invert condition.

- **Coatings — Structural Steel**

The hot-dip galvanized coating on the culvert barrel structural steel is in good to fair condition. The surface is weathered but no advanced corrosion is visible.

- **Barriers — Railing Systems**

No barrier systems are present on the north and south sides of the structure. Water hazards are located immediately adjacent to the travelled way, presenting a severe roadside hazard. Installation of appropriate barrier systems on both sides is recommended.

- **Embankments & Streams — Slope Protection**

The rock slope protection at the north and south sides is in good to fair condition. The north end is in good condition; minor erosion was noted at the southwest end due to a drainage issue associated with a nearby storm water drain.

- **Embankments & Streams — Streams & Waterways**

The upstream and downstream channels are in good to fair condition. No performance deficiencies were identified.

- **Accessories — Signs**

Warning signs are not present on either side of the roadway. This presents a pedestrian/vehicular hazard. Installation of warning signs on both sides is recommended as an urgent priority.

3.11.2) Recommendations Summary

The following table summarizes the recommended work, priorities, and estimated costs for the Puddingstone Road Culvert:

Table 3-7: *MacDonald Drive Culvert (Structure No. C-5)- Maintenance and Repair/Rehabilitation Need*

MacDonald Drive Culvert (Structure No. C-5)					
Element	Recommended Work	Priority	Estimate Cost (Class D)		
1 Culverts — Barrels	Underwater investigation at low water	1--5 years	\$6,000		
2 Barriers — Railing Systems	Install barrier system (north side, 40 m)	1--5 years	\$14,000		
3 Barriers — Railing Systems	Install barrier system (south side, 40 m)	1--5 years	\$14,000		
4 Accessories — Signs	Install warning signs	Urgent	\$1,500		
Total Estimated Construction Cost (Class D)			\$35,500		



Agenda Item B (8)
 Date: Aug 19 2026

Advertising Opportunities

Central Algoma Playground – Second Edition / October 1, 2026 to January 31, 2027

"Every advertisement tells visitors one more reason to stop, stay and explore."

Your advertisement reaches:

- ✓ Visitors planning their trip
- ✓ Travellers already exploring the region
- ✓ Local residents looking to shop locally
- ✓ Seasonal property owners
- ✓ Families searching for places to visit and things to do

Your Participation Helps:

- Promote Central Algoma
- Support local businesses
- Encourage visitors to stay longer
- Strengthen our regional economy
- Showcase what makes our communities special

Why Advertise in *Central Algoma's Playground*?

1. Because visitors can't support businesses they don't know about. *Central Algoma's Playground* connects people with the places to shop, dine, stay, explore and experience throughout our region.
2. Your business will be featured in a professionally designed regional publication that celebrates Central Algoma while connecting residents and visitors with the businesses, attractions, events and experiences that make our communities unique.

Publication Highlights

- Full Colour Publication
- Fall/Winter 2026–27 Edition
- Distributed throughout Central Algoma on or before the first week of October
- Available at accommodations, restaurants, marinas, visitor centres, attractions and local businesses
- Read by visitors and residents alike
- Unlike many brochures, Central Algoma's Playground is designed to be kept and referred to throughout the season.
- Approximately 5,000 copies distributed throughout Central Algoma and beyond.

NOTE: A Third Edition for Winter/Spring 2027 is slated for release at the end of January, beginning of February. Deadline to advertise will be January 4th, 2027. Rates are not guaranteed for future editions.

Advertising Registration Form - Central Algoma Playground

SECOND EDITION / OCTOBER 1, 2026, TO JANUARY 31, 2027

RESERVE YOUR SPACE TODAY!

Advertising Deadline: FRIDAY, AUGUST 28, 2026

Choose the opportunity that best suits your business and budget.

_____ Half Page Ad	11.5" x 10.5"	\$375 + hst
_____ Quarter Page Ad	11.5" x 5.25"	\$190 + hst
_____ 1/8 Page	5.25" x 5.25"	\$ 95 + hst
_____ Directory Listing (who, what, when, where, time, contact)	\$25 + hst	
_____ Enhanced Directory Listing (same as above plus a 30word description)	\$50 + hst	

Don't have an advertisement? We'll professionally design one for only **\$50+ hst** _____ (Initial)

Creating your ad? Please submit artwork before September 8th. _____ (Initial)

- Ensure the artwork is high quality; min. 300dpi;
- Use True Black for text/lines - CMYK 00-00-00-100 (printing on newsprint)
- All ad sizes are as stated above. If requesting ¼ Page AD, please produce in both Horizontal and Vertical (5.25" x 10.5") format.

FREE COMMUNITY EVENT LISTINGS: Planning a community event this fall or winter? Church Supper, Christmas Market, Craft Show, Concert, Parade, Fundraiser, Festival/Community Celebration? **We'll list all qualifying events FREE. Submit all events for this 4-month period as well as the month of February-2027. Supply: Name of event, who, what, where, contact, times, etc.**

Name – Business or Organization: _____

Contact Name: _____ Phone#: _____

E-mail: _____ Website/Facebook: _____

Address: _____ P.O.Box: _____

Town/City: _____ Postal Code: _____

Directory, Enhanced or Event Listing:

Event Name: _____ Contact: (if different than above) _____

Description: _____

Add more information if needed in a separate email. (contact 3sinc.solutions@gmail.com)

Thank you for supporting local businesses, local events and the continued growth of Central Algoma.

Agenda Item G 1Date: Aug 19 2026

The Corporation of
THE TOWNSHIP OF JOHNSON
By-Law 2026-1182

BEING A BY-LAW to confirm, adopt and ratify the proceedings of the meeting of Council on August 19, 2026

WHEREAS Section 5(3) of the Municipal Act, R.S.O. 2001, as amended requires a municipal council to exercise its power by by-law except where otherwise provided;

AND WHEREAS in many cases, action which is taken or authorized to be taken by a Council or a Committee of Council does not lend itself to an individual by-law;

THE COUNCIL OF THE CORPORATION OF JOHNSON TOWNSHIP HEREBY ENACTS AS FOLLOWS:

1. THAT the action of the Council at its August 19, 2026 meeting, in respect to each motion, resolution and other action passed and taken by the Council at its said meeting, is, except where prior approval of the Ontario Municipal Board is required, hereby adopted, ratified and confirmed.
2. THAT the Mayor and the proper officers of the Township are hereby authorized and directed to do all things necessary to give effect to the said action or to obtain approvals where required, and to execute all documents as may be necessary and directed to affix the Corporate Seal to all such documents as required.

READ and passed in open Council this 19th day of August, 2026

 Reg McKinnon, Mayor

 Janet Maguire, Clerk/CAO