

Garland Canada Inc.

Roof Asset Management Program



R A M P.

Stayner Tourism Building Roof Report 2024

Prepared By
Andrew Kukkonen

Prepared For
Terry Vachon

September 09, 2024

Table of Contents

Township of Clearview / Client Data.....	3
Stayner Tourism Building / Facility Summary.....	4
Stayner Tourism Building / Facility Drawing.....	5
Stayner Tourism Building / Entire Roof / Construction Details.....	6
Stayner Tourism Building / Entire Roof / Roof Section Photo.....	7
Stayner Tourism Building / Entire Roof / Roof Section Drawing.....	8
Stayner Tourism Building / Entire Roof / Inspection: Sep 4, 2024.....	9
Stayner Tourism Building / Entire Roof / Photo Report: Sep 4, 2024 - Roof Inspection.....	10
Stayner Tourism Building / Entire Roof / Solution: Sep 9, 2024.....	24
Yearly Budget Summary.....	25
Executive Summary.....	26
Cost Estimate.....	27
Priority Summary.....	28



Client Data

Client: Township of Clearview

Client Data

Name	Township of Clearview		
Address 1	217 Gideon Street		
City	Stayner	Province	Ontario
Postal	L0M 1S0	Country	Canada

Contact Info

Contact Person	Terry Vachon	Title	General Manager Parks, Culture & Recreation
Mobile Phone:	705-790-3746	Office Phone:	705-428-6013
Email:	tvachon@clearview.ca		



Facility Summary

Client: Township of Clearview

Facility: Stayner Tourism Building



Facility Data

Address 1	220 Huron Street
City	Stayner
Province	Ontario
Postal	LOM 1S0
Type of Facility	Municipal
Contact Person	Terry Vachon

Asset Information

Name	Date Installed	Square Footage	Roof Access
Entire Roof		6,500	Ladder Needed





Construction Details

Client: Township of Clearview

Facility: Stayner Tourism Building

Roof Section: Entire Roof



Information

Year Installed	-	Square Footage	6,500
Slope Dimension	4" : 12" Approx	Eave Height	16'+
Roof Access	Ladder Needed	System Type	Metal

Details

Drain System	Gutter System
---------------------	---------------







Inspection Report

Client: Township of Clearview

Facility: Stayner Tourism Building

Report Date: 09/04/2024

Roof Section: Entire Roof

Inspection Information

Inspection Date	09/04/2024	Core Data	No
Inspection Type	Visual Inspection	Leakage	Yes

Overall

Rating	Poor
Condition	



Photo Report

Client: Township of Clearview

Facility: Stayner Tourism Building

Roof Section: Entire Roof

Report Date: 09/04/2024

Title: Roof Inspection

Widespread fastener back-out and seam openings were noted during inspection. This roof could be restored, which would extend its lifespan approx. 10 - 15 years.

Localized repairs are not recommended, as fastener back-out and open seams are widespread throughout the entire roof area.

Fastener Back-Out: This is a very common condition on this type of metal roof. When the metal expands and contracts the pressure causes the fasteners to create pressure on the panel increasing the size of the fastener penetrations. This coupled with thermal bridging causes the fasteners to back out of the metal. In this case water can then enter the building and walls causing leaks and in some cases damage to the mortar or concrete existing in the wall.

Exposed Fasteners: The amount of fasteners on this roof is a great concern. As can be seen here fasteners are in a state of corrosion as well as showing signs of backing out due to thermal bridging. This roof system is of a poor design for the Canadian climate. Also note, that this roof system was not designed with continuous metal sheets. Metal expands and contracts during climate temperature change. This over time causes the laps to break their seal allowing for direct water entry in to the roof system.



Photo 1

Foam closures are present at the ridge.



Photo 2

Fastener Back-Out: This is a very common condition on this type of metal roof. When the metal expands and contracts the pressure causes the fasteners to create pressure on the panel increasing the size of the fastener penetrations. This coupled with thermal bridging causes the fasteners to back out of the metal. In this case water can then enter the building and walls causing leaks and in some cases damage to the mortar or concrete existing in the wall.

This is a poor design for the Canadian climate due to the large temperature shifts as a result of seasonal changes. The fasteners must be fastened through to a structural member such as a purlin. When the fastener backs out, water will leak inside, straight onto the purlin or structural member. Over time, this can compromise the structure.



Photo 3

Peeling of the existing coating is very minor.



Photo 4

Fasteners backing out at the ridge.



Photo 5

Transition to the remainder of the roof.



Photo 6

A closer look. Note the fasteners backing out throughout the area.



Photo 7

Some fasteners are in a state of corrosion.



Photo 8

Many of the nails that were used on this section are backing out. Fasteners should be used instead of nails.

Photo 9

There is a gap here; a storm collar should be installed. It might be first necessary to disconnect and move the wire.

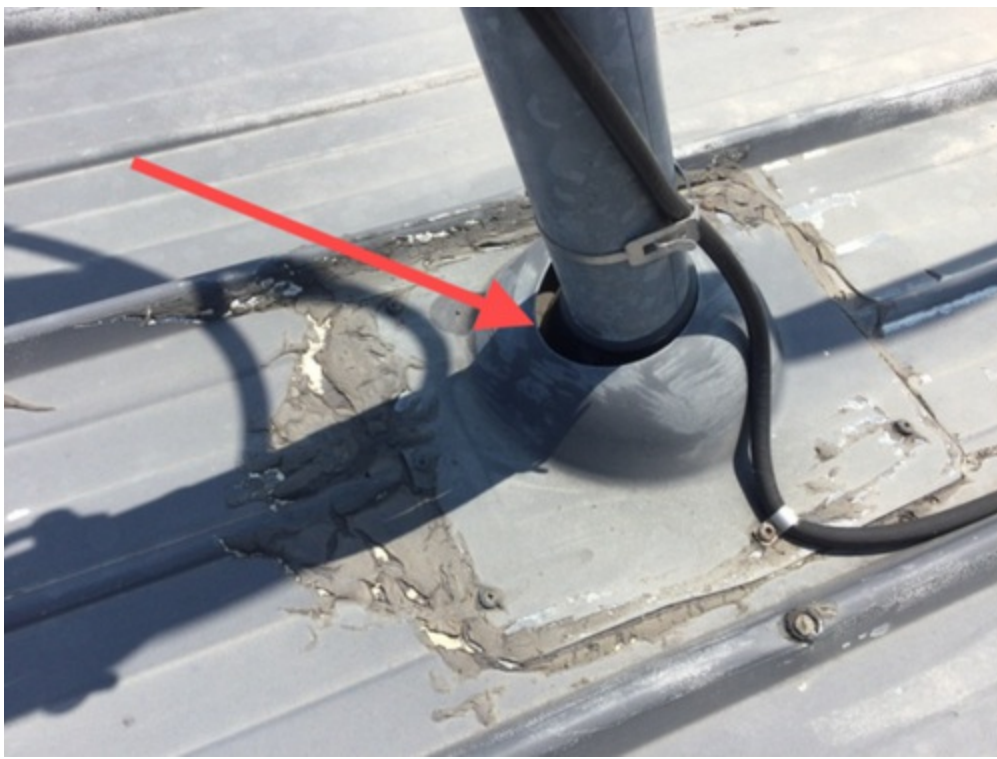


Photo 10

This soil stack is missing a rubber boot.





Photo 11

Close-up of a backing out nail.



Photo 12

A view of the gray metal panels.



Photo 13

Same as previous.



Photo 14

Overview of this section of the roof.



Photo 15

New fastener added next to the hole where an old one backed out.



Photo 16

Fastener back-out at the ridge.

Photo 17

Ridge cap sealed with butyl.



Photo 18

Gaps present at the ridge cap.





Photo 19

Widespread fastener back-out here.



Photo 20

A closer look. Most of these improperly installed nails are backing out.



Photo 21

Old backed out fasteners at the bottom corner here have been repaired in the past by others.



Photo 22

Gaps in seams.

Photo 23

Same as previous.



Photo 24

Backed out nails.



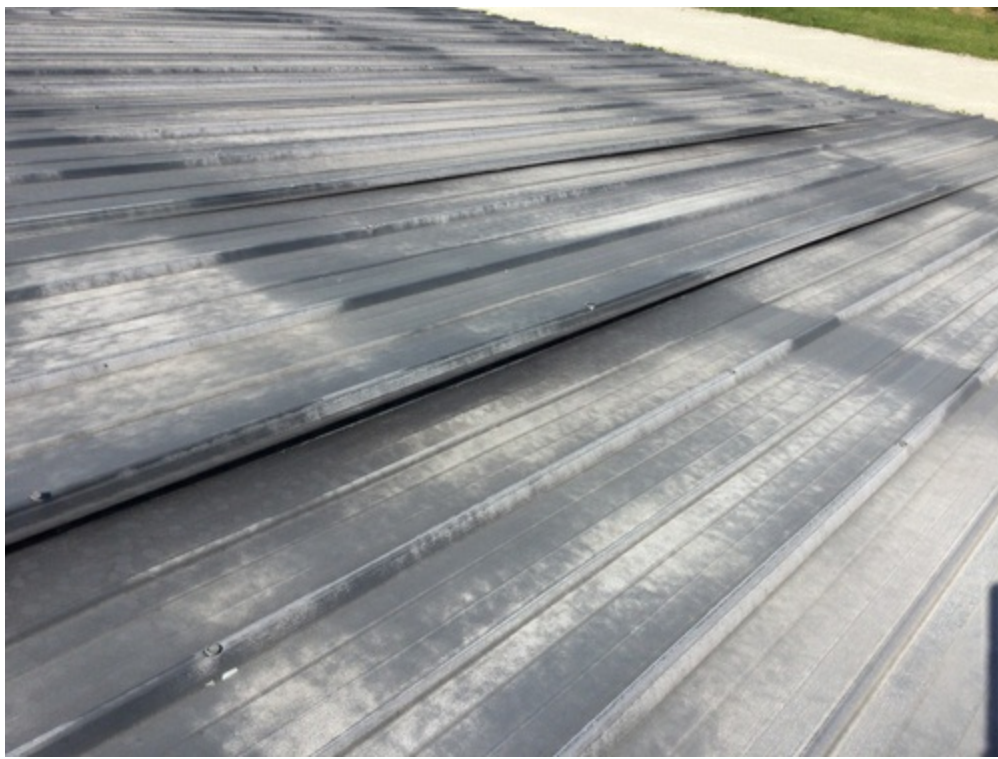


Photo 25

More gaps.



Photo 26

Gutters are clear.



Solution Options

Client: Township of Clearview

Facility: Stayner Tourism Building

Roof Section: Entire Roof

Restore Options

Solution Option:	Restore	Action Year:	2025
Square Footage:	6,500	Expected Life (Years):	15
Budget:	\$120,000.00		

Roof Restoration 10 Year Warranty 15 Year Life Cycle

Please note the above cost is a budget number not a firm price. A firm price would be determined by a bid process. This repair includes the following and is performed by a contractor:

- Removal and reinstallation of the solar panels not included.
- Power wash and clean entire roof surface.
- Replace any missing fasteners and tighten backed out fasteners where needed.
- Apply sealant along fasteners where required.
- Apply one coating of Metal Roof Coating along entire roof at a rate of 3 gallons/100 linear feet and allow to cure.
- Embed polyester fabric with an 80% bleed out rate.
- Apply one coating of Metal Roof Coating along entire roof at a rate of 2 gallons/100 linear feet and allow to cure.
- Apply one coat of non-fibered reflective aluminum coating along entire roof.
- Install rubber boot for soil stack.
- Install storm collar at pipe/boot penetration.



Yearly Budget Summary

Client: Township of Clearview

Facility *	Asset Type	Asset *	Recommendation	Cost	Expected Life
Year: 2025					
Stayner Tourism Building	Roof Section	Entire Roof	Restore	\$120,000.00	15 Year(s)
Total for 2025:				\$120,000.00	

****Note:** This report may contain numbers which have been derived as an average from a budget range. Please refer to solution reports to see the full budget range and details.



Executive Summary

Client: Township of Clearview

Facility *	Asset Type *	Asset *	System Type	Age(years)	Square Footage	Leakage	Rating	Recommendation	Action Year
Stayner Tourism Building	Roof Section	Entire Roof	Metal	N/A	6,500	Yes	Poor	Restore	2025
Stayner Tourism Building Total:					6,500				
Client Total:					6,500				



Cost Estimate

Client: Township of Clearview

Facility *	Asset *	System Type	Age(years)	Rating	Square Footage	Recommendation	Action Year	Cost Estimate	Expected Life
Stayner Tourism Building	Entire Roof	Metal	N/A	Poor	6,500	Restore	2025	\$120,000.00	15
Stayner Tourism Building Total:					6,500			\$120,000.00	
Client Total:					6,500			\$120,000.00	

****Note:** This report may contain numbers which have been derived as an average from a budget range. Please refer to solution reports to see the full budget range and details.



Priority Summary

Client: Township of Clearview

Facility *	Asset *	System Type	Age(years)	Leakage	Rating
Poor					
Stayner Tourism Building	Entire Roof	Metal	N/A	Yes	Poor