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**STAFF REPORT: Community Services**



**REPORT TO:** Council  
**MEETING DATE:** July, 11, 2016  
**REPORT NO.:** CSPW.16.106  
**SUBJECT:** Public Library Roof Repairs  
**PREPARED BY:** Aaron McMullen, Facilities Manager / Building Maintenance Coordinator

**A. Recommendations**

THAT Council receive Staff Report CSPW.16.106 entitled “Public Library Roof Repairs”;

AND THAT Council approve the completion of roof repairs and internal roof membrane works as an unbudgeted capital project in 2016 as outlined in this report;

AND THAT Council approve an upset limit of \$300,000 to complete the roofing and internal works at the Library;

AND THAT Council authorize the Director of Community Services to utilize negotiated procurement with Engineering Firms to act as the consultant to develop specifications and drawings for the Tender and to provide project management for the project;

AND THAT Council authorize the Director of Community Services to negotiate with Breathe Easy to act as the consultant to provide project management and general contractor services for the interior remediation project;

AND THAT Council provide the CAO signing authority to execute the agreement with the successful bidder, based on a recommendation from the Tender Award Proposal Committee.

**B. Background**

Staff requested Garland Canada Inc. to inspect the roof at L. E. Shore Memorial Library due to concerns regarding indoor air quality. These inspections were initiated as a follow up action item to a monthly Health and Safety inspection completed by Library Staff in January of 2016. This inspection noted a musty smell in the area of the Bruce Street entrance which continues to be a concern.

In late March of 2016, Municipal Staff began the process of providing Facility Maintenance for the L.E. Shore Memorial Library. After reviewing the Health and Safety inspections and speaking to Library Staff, Facility Maintenance Staff deemed the air quality concerns to be of the highest priority and began the process to determine the appropriate steps required to rectify the concern.

The process began with an on grade visual inspection by Facility Maintenance Staff. The wood structured ceiling of the Bruce Street vestibule showed signs of water marking. On the exterior of the vestibule, signs of deteriorated caulking, joint expanded

flashings and efflorescence (migration of salt to porous material) of the brick work detailed that failures may be present within the roofing components. The visual inspection on the roof showed signs of a build-up of organics and moss, roof drains were blocked and full of materials and there were obvious signs of little to no preventative maintenance.

Facility Maintenance Staff contacted Garland Canada, a roofing supplier who has provided services at the Beaver Valley Community Centre and the Craighleith Wastewater Treatment Plant. Garland Canada provides detailed inspection reports outlining findings from taking roof core samples and also completing thermal imaging and moisture probing of the roof components. During the original site visit with Andrew Kukkonen of Garland Canada, it was recommended that all organics needed to be removed from each of the 4 flat roof structures to perform a proper Thermal Imaging inspection. While on site, Andrew Kukkonen took 4 core samples from the areas of concern and found that under the roof membrane, the insulation showed signs of having damp to wet conditions.

To complete the removal of organics from the roof, Facility Maintenance Staff contracted Thom Construction. During the removal process, Facility Maintenance Staff also requested the contractor clear all roof drains to ensure organics had not clogged the drainage pipes. In excess of 50 garbage bags of organics were removed from the 4 flat roof structures.

With the organics removed, Thermal Imaging scans and Moisture Probe inspections were performed by Garland Canada. The findings, as shown in Attachment 1 diagram, identify 2 major areas of concern.

Section #1 - shows signs of dampness and wet conditions in a significant area. The wet areas were at the top of the scale.

Section #2 – shows signs of dampness in the area of air quality concern in the Bruce Street vestibule.

During the review process, Staff found that in 2009 remediation works were performed in the area of section 8 (the stone exterior reading room) as a result of a substantial leak. A report was completed by CC Tatham Engineering that identified a lack of flashing on the stonework above the membrane was the cause of the leak. Existing signs of efflorescence of the interior stone, stained ceiling tiles and results of the air quality testing may mean that the problem still exists.

Staff recommend that remediation of all flat sections of the L.E. Shore Memorial Library roof occur in the fall of 2016. The recent inspections recommend replacement of the flat portions of roof. Results of the air quality testing indicate that no safety concerns are present at this time. However, it is expected conditions will worsen without any remediation. It is also identified that during roof replacement and remediation of the insulation and membrane in the core of the roofing structure, that there is the strong potential of mould particles be disturbed and becoming airborne within the interior of the building. The closure of the L.E. Shore Memorial Library during remediation works is

required. It has been identified by the CEO of the L.E. Shore Memorial Library that the best timing for these works and closure is mid-to late September through October.

### **C. The Blue Mountains' Strategic Goals**

Goal #1 - Create opportunities for sustainability

Goal #2 - Engage our communities and partners

Goal #5 - Ensure that our infrastructure is sustainable

### **D. Environmental Impacts**

All efforts will be made to ensure works completed use best practices for protection of the environment.

### **E. Financial Impact**

The chart below outlines the expected costs for the roof replacement and the remediation work necessary inside the Library facility:

Roofing Budget	\$125,000
Contingency	\$25,000
Internal Remediation <sup>(1)</sup>	\$120,000
External Project Management (15%)	\$30,000
Total Estimated Budget	\$300,000

<sup>(1)</sup> At this time the internal remediation budget is an estimate; Staff will not have a full understanding of exactly what work needs to be done until the existing roof is removed and a visual inspection can be made.

Due to the complexity of the project, being both roofing and remediation work, Staff are recommending that a consultant with knowledge of this type of project be brought in to manage this project.

Presently Staff are not recommending any funding sources for this project, until there is a better understanding of what the final costs will be. As Staff work through 2016 and continue with capital projects, certain projects may come in under-budget or may not be completed. By the end of 2016 Staff will have a good understanding of what taxation was not spent on the capital projects that it was initially allocated to and then can be used to fund this project. It is the intention of Staff that this project be fully funded by year-end 2016.

**F. In Consultation With**

Senior Management Team

Manager of Purchasing and Risk Management

Director of Financial and IT Services/Treasurer

Manager of Accounting and Budgets/Deputy Treasurer

The Blue Mountains Library CEO

**G. Attached**

1. Garland Canada Final Report – Roof Layout Diagram
2. Proposed Capital Project Sheet

Respectfully submitted,

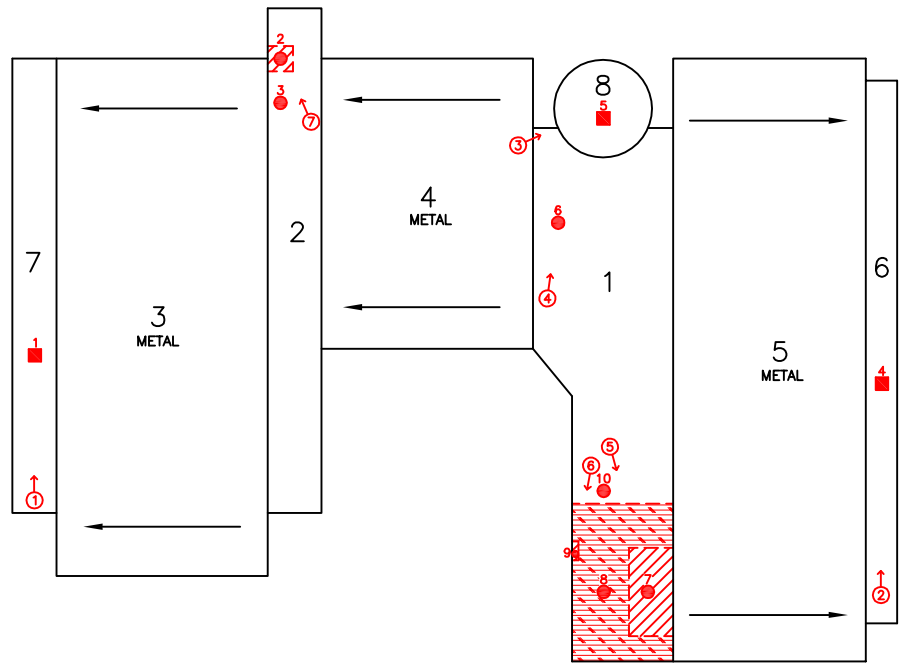
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Aaron McMullen, Facilities Manager /  
Building Maintenance Coordinator

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Shawn Everitt, Director of Community  
Services

For more information, please contact:  
Shawn Everitt  
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**NOTES**

TOTAL SQUARE FOOTAGE  
SCANNED: 3,348  
TOTAL SQUARE FOOTAGE  
WET: 416  
ROOF AREAS SCANNED:  
SECTIONS 1, 2, 6, 7 & 8.

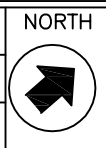
**LEGEND**

- WET INSULATION
- DAMP INSULATION
- MOISTURE LADEN MEMBRANE
- PONDED AREAS
- UNEVEN AREAS OF MOISTURE
- MOISTURE PROBE
- CORE CUT
- V-CUT
- PHOTO VANTAGE POINT
- BUILDING OUTLINE
- ANOMALY OUTLINE
- EXPANSION JOINT
- DRAIN
- HVAC UNIT
- POWER VENT
- CAPPED CURB
- PIPE



ALL DIMENSIONS TO BE VERIFIED  
BY THE CONTRACTOR

JOB NUMBER:  
SC2414616  
SCANNED:  
MAY 12, 2017  
VERIFIED:  
MAY 24, 2016



CUSTOMER:  
TOWN OF THE BLUE MOUNTAINS

LOCATION:  
L. E. SHORE MEMORIAL LIBRARY  
173 BRUCE STREET SOUTH  
CITY: THORNBURY, ON. | DRAWN BY: K. WAINWRIGHT | SCALE: 1" = 10'-0"

