

LEAK INVESTIGATION: NO. 1

PROJECT: 2023 Building Envelope Review and Leak Investigation

PROPERTY: Sunset United Church

ADDRESS: 177 Sunset Drive, Regina, SK.

CLIENT NAME: Element Construction

MATTER NO.: 100201586 PERMIT INFO: N/A

OBSERVER: Denis Deschamps CONTRACTOR:

REVIEWER: Jason Bloch WORKER COUNT:

ISSUED DATE: February 13, 2023 VISIT DATE: Feb 07, 2023

DISTRIBUTION & ATTENDANCE: *

Organization	Contact	Phone	Email	Present
Element Construction	Justin Otte	306-530-3650	Justin@elementconstruction.ca	<input checked="" type="checkbox"/>

*Observation report emailed to all parties listed above.

WEATHER CONDITIONS:

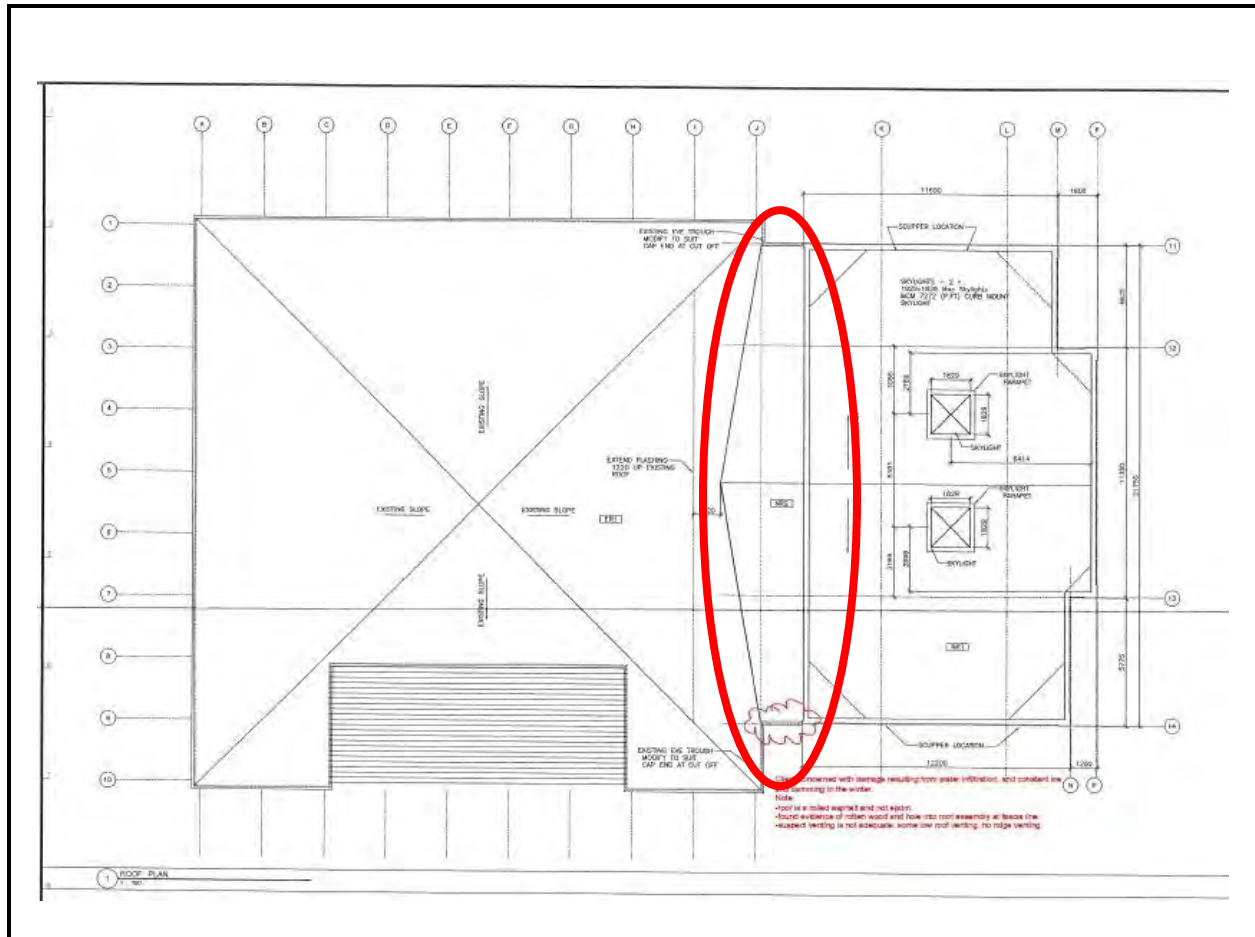
Observed at time of visit the temperature outside was -5C, partially cloudy.

OBSERVATIONS AND COMMENTS:

Rimkus was engaged by Element Construction to review roof leak occurring at canopy roof area. The following items were noted.

WORK AREA PLAN:

1. Observations were performed at the roof areas highlighted and noted below.



AREAS REVIEWED:

1. Canopy roof areas with reported leak including wall details and intersecting slopes.

OBSERVATIONS: Canopy Roof Area

1. Roof was covered in snow and ice throughout at time of review. Snow drifted along the ridge of the canopy roof; snow was approximately 36" deep at the ridge at time of review.
2. Ice dams were noted at South and North eaves above doorways.
3. The ventilation does not appear to be adequate for the attic space below. At time of review the intake vents appeared to be blocked by insulation. There appears to be air intakes but no means for exits. The specification had called out a mechanical fan to be installed at the ridge. No means of mechanical vent was noted at time of review.

4. The roof to wall detail has incapsulated the EFIS wall assembly. The roof membrane has tied into the exterior face of the EFIS assembly. This is concerning since the EFIS assembly is design to allow any water/moisture to drain. The EFIS assembly is now draining into the roof system. The original drawings detailed the EFIS to be cut up the wall to allow the roof membrane and metal flashings to be installed directly to the substrate.
5. Thermal anomalies were noted in the attic space. Insulation does not appear to be adequate and is allowing excessive heat loss. The heat loss is causing the snow to melt and refreeze creating the ice dams noted.

GENERAL COMMENTS:

1. Numerous discrepancies were noted between the drawings and on-site conditions. The specifications called mechanical ventilation to be installed at the ridge, which does not appear to have been installed. The original membrane called out was a Fully Adhered EPDM roof system but a combination of shingles and SBS membranes were noted.
2. Roof to wall detail was not installed as per specifications. The way this detail was installed will allow water to infiltrate the roof system.
3. Thermal anomalies noted in the attic space will allow excessive heat loss, resulting in the snow melting, and freezing, which is contributing to the ice dams.

Conclusion:

1. The main cause of the roof leakage would be the excessive heat loss and lack of ventilation which causes the freeze thaw cycles and continual ice damming. Due to the low heights and clearances of the adjacent roofs and upstand wall proper ventilation cannot be achieved. The water is backing up from the ice damming and entering the building through substandard details on the roof and the wall. RIMKUS recommends a multiple phase approach.
 - a. Address the thermal losses by adding spray foam to the underside of the roof deck. The spray foam will also address vapour retarder at the same time.
 - b. The roof area is considered as low slope roof and should be treated accordingly. The installation of a high-performance low slope roof membrane with proper design and quality assurance is recommended.

End of Observation Report No. 1

Review and comments provided are limited to construction results, means, and methods, visible and being performed at the time of our visit. The Contractor is solely responsible for all health and safety requirements at the site, fire hazard management, construction techniques, and compliance with all applicable laws and regulations. While workplace safety is not part of the scope of our work or this report, Rimkus may note unsafe conditions for Contractor action.

Should you need any additional information, please feel free to contact us.



Denis Deschamps, RSE TQ
Project Coordinator



Jason Bloch, RSE TQ
Technician

Attachments: Photographs

Photograph 1

Snow has drifted over the ridge. Entire roof was blanketed with ice an snow.



Photograph 2

The intake ventilation appears to be block not allowing adequate air flow. Eave troughs were full of ice. Eave edge of roof was covered in ice.



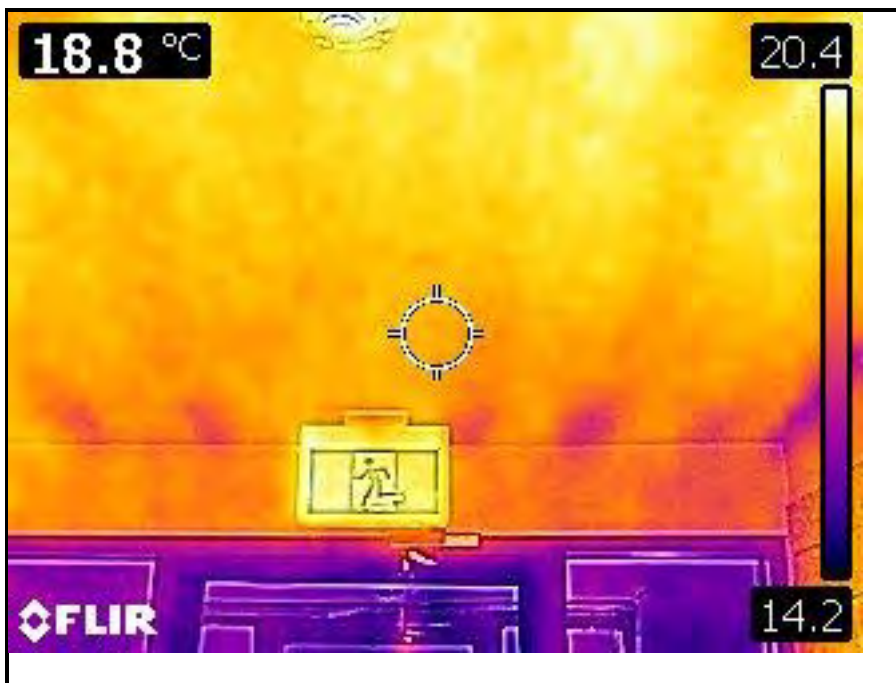
Photograph 3

The roof to wall detail has encapsulated the EFIS wall system. Wall system drains into roof system.



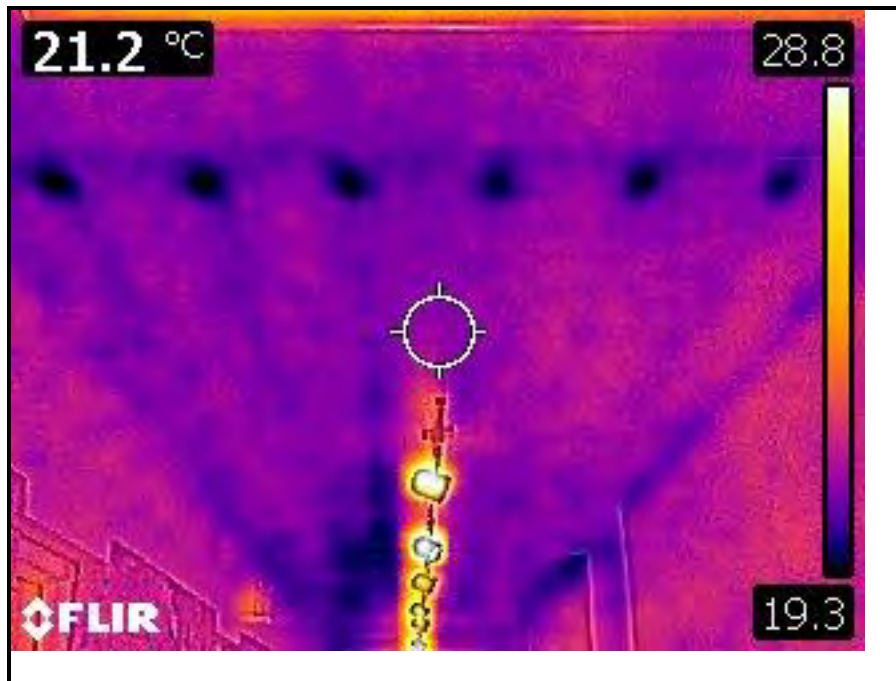
Photograph 4

Thermal anomalies were noted at the ice dam locations.



Photograph 5

Thermal anomalies were noted in throughout the attic space.





Flynn Canada Ltd.

202 Solomon Drive
Regina, SK S4N5A8

Quotation Contract

Quote#: 001-003744-QQQ

Date Feb 21, 2023

To

Sunset United Church
177 Sunset Dr
Regina, SK S4S 6Y7

Project

Sunset United Church PM Repairs and Downspout Install
Sunset United Church
177 Sunset Dr
Regina, SK S4S 6Y7

**FLYNN IS PLEASED TO PROVIDE THIS QUOTE FOR THE FOLLOWING WORK AT THE ABOVE NOTED LOCATION
Roof System: SBS**

Roof Seam Repair - 2 Locations:

- At Fish Mouth Location, cut out fish mouth and dispose of
- At Blister Near Fish mouth, cut out blister and dispose of
- Repair noted locations, using new sbs cap membrane and seal using compatible sealant

Eave Trough Repair - 1 Location:

- At South Entrance location, reseal eave trough corner joint using peel and seal
- Coat peel and seal using brush applied sealant

Downspout Install - 1 Location:

- At South Entrance location, install additional downspout at pooling location to all for drainage
- Seal downspout using compatible sealant

**OUR PRICE TO COVER THE ABOVE:
TWO THOUSAND NINE HUNDRED FORTY TWO DOLLARS**

\$2,942.00

Please Note:

- Above price does not include taxes; all taxes are extra.
- All work to be completed during normal working hours.
- Contractor / Owner shall provide proper access and working areas as required.

The acceptance of this Offer shall be signified by the return of a copy hereof duly accepted. If any of the work is proceeded with, it shall be deemed that the work is being done subject to the terms and conditions hereof even if no formal acceptance has been received. This quotation is subject to conditional acceptance. General Conditions form part of this contract.

Sunset United Church

Flynn Canada Ltd.

Accepted this _____ day of _____ A.D. _____

Jon Federko



202 Solomon Drive
Regina, SK S4N5A8

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GENERAL CONDITIONS

Definitions: Sunset United Church hereinafter referred to as "Customer". Flynn Canada Ltd. hereinafter referred to as "Issuer".

Contract Form: Acceptance of this quote by Customer shall constitute a binding contract. In the event the Customer issues its own form of purchase order or contract, the terms and conditions contained herein shall be incorporated and form part of such purchase order or contract.

Credit: Approval of Customer's credit by the Issuer is required notwithstanding Customer's acceptance of this quote.

Expiry: Notwithstanding the above, this quote shall expire unless accepted by Customer within 30 days from the date shown on first page.

Terms of payment : All payments shall be made by Customer in Canadian funds within 30 days of invoice date payable, without set- off, deduction or back- charges other than holdbacks required by lien legislation. Where material or labour referenced in this quote forms part of a contract in which progress payments are to be made, such progress payments shall be made by the Customer to the Issuer for the full amount of the labour and materials supplied by the Issuer to the end of the previous month less any holdback required pursuant to applicable lien legislation. Holdbacks shall be paid within the timeframe and in accordance with applicable lien legislation. Customers shall pay interest on all invoice amounts not paid within 30 days of the date of invoice at a rate of 18% per annum calculated on a daily basis from such date.

Force Majeure: The Issuer is not responsible for delays in providing the services, material or labour caused in whole or in part from transportation tie- ups or delays, priorities, strikes, picketing, boycotts, labour disputes, inclement weather, accidents, riots, war, acts of God, or other causes beyond the Issuer's control. **The Issuer shall be entitled to vary the price quote herein in the event of unforeseen escalation in the prices of materials. Should the Issuer provide notice of this occurring, the Customer shall be entitled to terminate the contract herein.**

Insurance : The Customer, at its sole expense and throughout the period in which the services are performed until the Issuer has been paid in full, shall maintain all risks insurance coverage for the full value of the work and materials set forth in the quote, naming the Issuer as an additional insured. The Customer shall provide certified copies of any such policy of insurance upon the Issuer's request. Any loss covered under such policies of insurance shall be paid to the Customer and the Issuer as their respective interests may appear. Any such loss shall not affect the rights and obligations of the parties hereto, and the Issuer shall be entitled to a reasonable extension of time in which to complete the work.

Default: If the Customer fails to make any payments as provided for herein or in any invoice or progress draw request of the Issuer, or otherwise breaches this contract, or if this contract is frustrated, or if the Customer should become insolvent, be petitioned into or have a petition filed for the purposes of bankruptcy or other debt relief legislation, or have a receiver appointed, then the Issuer may, in its sole discretion cease work immediately and shall be entitled to recover payment in full for the unpaid material and labour provided plus damages for loss of profit for the entire amount of the contract. Any failure by the Issuer to insist upon a strict performance of any of the terms herein shall not be deemed a waiver of any rights or remedies that the Issuer may have and shall not be deemed a waiver of any subsequent breach or default in the terms contained herein.

Liability : The Customer hereby indemnifies and holds the Issuer and its employees, subcontractors, suppliers and agents harmless from and against all liability, loss, damage, costs or expenses (including legal expenses) which the Issuer or such parties may suffer relating to: (a) all loss or damage to the materials including the finished work and the Issuer's equipment used to complete the services, resulting from theft, misuse, fire, water damage, flood, direct or indirect wind damage, hail, lightning, explosion, riots, impact by vehicles, damage by other trades, smoke damage and any hazard or risk not caused by the Issuer's employees or agents; (b) all claims, demands, actions, suits, penalties or proceedings ("Claims") arising out of or resulting from the presence of toxic or hazardous substances or materials not previously disclosed to the Issuer; and (c) all Claims for liquidated damages or otherwise by the Customer or third parties (including the owner) or for indirect or consequential damages, loss of profits, delay of use or occupancy other than direct damages to physical property or injury to persons directly attributable to the sole negligence of the Issuer. Notwithstanding anything contained herein, in no event shall the Issuer's aggregate liability to the Customer and third parties for any single or series of incidents exceed \$2,000,000.

Installation : The Issuer's method of installation shall be consistent with the specifications set out for the project by the Customer for which the materials and labour are provided. A suitable load bearing surface is not the responsibility of the Issuer. The Customer hereby warrants that, once commenced, the services may be completed without interruption by the Issuer and that lighting and electrical will be supplied by the Customer at no expense to the Issuer except as may be specified in writing. If the Customer requires variations to the materials or labour for the project or if the Issuer's work is delayed by an act or omission of the Customer or by a stop work order not attributable to the Issuer, then the Issuer shall be paid for such variations or the reasonable costs resulting from such delay.

Compliance with Laws: Where additional subcontractors or trades are performing work on the job site, the general contractor or the owner, as the case may be shall coordinate all activities and assume responsibility for complying with health and safety legislation. The Issuer shall not be responsible for any damages or costs resulting from specifications not conforming to laws, bylaws, building codes, regulations or ordinances. Unless otherwise indicated, the contractor or owner shall be responsible for all approvals, permits and easements for the work.

Job Site Storage: Adequate access to and storage at the job site and operating area shall be provided to the Issuer at no cost to the Issuer.

Notice of Commencement of Work: Customer shall provide the Issuer with at least 2 weeks written notice before buildings are ready for application of the Issuer's materials. Such notice shall be provided after the Issuer has received approval of erection detail. Customer shall be responsible for reimbursing the Issuer for all additional expenses incurred by the Issuer as a result of incorrect notification of readiness.

Roofing Warranty: Provided that the Issuer has received full payment for the materials and labour supplied, the Issuer warrants the workmanship and materials in accordance with the CRCA Standard Form of Guarantee (two years on roofing membrane and one year on related metal flashings) or the standard warranty of the local provincial roofing association, whichever is specified as applicable.

Customer Initials



ESTIMATE DATE
FIRST AND LAST NAME:
JOB ADDRESS:
CITY:
POSTAL CODE:
PHONE NUMBER:
PHONE NUMBER:
EMAIL:

March 7th 2023
 Sunset United Church (Ken Fenson)
 177 Sunset Drive
 Regina
 306-209-8366
kenandgail47@gmail.com

WORK REQUESTED:
 Leaking at lowslope over front entrance.

DESCRIPTION OF ESTIMATE	TOTAL
*Co-ordinate with insulation company (remove sheathing of low slope for them to gain access)	
Wood Replacement Per Sheet (\$50.00)	
Re-Sheet of Entire Low Slope if Needed	\$ 2,030.00
Redo lowslope in two ply system cap sheet, Redo counter flashing along lowslope wall & Shingle in 4/12 panel tying into lowslope cap sheet	\$ 9,045.00
ONLY VALID FOR 14 DAYS FROM DATE OF INITAL ESTIMATE STATED AT THE TOP OF THIS FORM PLEASE CONTACT US TO UPDATE IF REQUIRED	
All estimates are subject to change based on inventory availability. This estimate is based on what can be seen from above the roof deck any changes or unforseen issues may occur at the homeowners expense.	
SUBTOTAL	\$ 11,075.00
TAX(GST/PST)	\$ 1,218.25
QUOTE TOTAL	\$ 12,293.25

ALL-PRO ROOFING INC. LIMITED SERVICE WARRANTY

All-Pro Roofing Inc.' 5 Year Workmanship Warranty covers labour defects of the installation of your roofing project and is limited to the work specified on the contract only. Should any damage occur to the homeowners property caused by All-Pro during construction or due to a labour defect All-Pro Roofing Inc. limits the liability to repair the effected area only. All-Pro Roofing Inc. is not responsible for any material or manufactures defects. Homeowner is responsible for roof maintenance and upkeep.

If labour defects appear during the first 5 years which causes a leak we will repair the defected area including materials at no charge. The work must be completed by All-Pro Roofing Inc. for warranty coverage. When repairing your roof covered under our warranty we will use the equivalent color and quality of materials used. However due discontinuation's and color variations we reserve the right to repair areas with the closest color and quality available.

To not hold All-Pro Roofing Inc. responsible for any of the following: cracks in ceilings/walls, nails pops in the drywall that could result during the construction process. Any damage/waviness in the finished appearance of the install as a result of structure, settlement, distortion, cracking or movement of the roof deck walls or foundation of the building. Any property damage, physical injury, economic loss resulting directly or indirectly from an installation defect. Any damage to shingles caused by traffic on the roof or impact foreign objects. Any damage to stucco due to lack of stucco stops or soffit and fascia that is installed over existing shingles or difficult access areas.

Skylights are only covered under warranty if both lid and flashing have been replaced. Sun Tunnels are only covered under warranty if whole assembly is replaced. Leakage at existing skylight/sun tunnel is not covered. Chimneys are only covered under warranty if complete reflashed performed.

Wind warranty is only applied when the complete slope has been replaced. Blow off, patch work, non complete slopes or damaged to shingles caused by winds up to but not exceeding 90 km/per hr or any damage to the shingles caused by work performed on or to the roof or surrounding areas are not covered.

Vent and Plumbing stack installs are covered under warranty. Homeowner will be responsible to ensure insulation and vapour barrier are up to code. We will not assume liability due to any issues or leakage caused by inadequate vapour barrier's, insulation or ventilation (ex. ice dams and condensation).

All-Pro Roofing Inc. reserves the right to withdraw the labour warranty should any other person or person(s) perform repairs or alterations to the roofing system without written consent from All-Pro Roofing Inc. Warranty begins at completion date and is only valid when invoice is paid in full.

All-Pro Roofing Inc. collects and uses personal information for the purpose of estimating and providing construction activity to fulfill the terms of the contract and may be used to register warranties. This consent will allow us to use and keep personal information on file until you specifically revoke it.

PLEASE PRINT, SIGN AND RETAIN THIS COPY AND INVOICE ALONG WITH RECEIPT FOR WARRANTY VALIDATION.

I agree there is a convenience fee if paying credit card subject to change at any time.
 I agree payment will be collected on site upon completion of job. (unless prior arragments have been made)
 I agree any unpaid balances will result in late payment charges.

Customer Name (Print): _____
 Customer Signature: _____
 Date: _____



Prepared For

Sunset United Church c/o Ken Fenson
177 Sunset Drive
Regina, Sk
(306) 209-8366

Ultimate Renovations Inc.

1322 Elliott St.
Regina, Sk S4N3G3
Phone: (306) 205-7366
Email: service@ultimateinsulation.ca
Fax: (306) 205-7364
Web: www.ultimateinsulation.ca

Estimate # 6697
Date 15/02/2023
Business / Tax # GST# 836588657 WCB# A574053

Description	Rate	Quantity	Total
Attic Inspection/Assessment Jean and Bob Cameron referral Monday Feb 27 @ 9:30 am	\$150.00	0	\$0.00
Fellowship Hall 1979 Study Area 2670 Total Gross Area 6,176 square feet Footprint 6,176 square feet			
Jordan from Better Interiors (306) 533-4660 Remove and replace drywall and re finish Remove, replace, tape, mud, sand, feather, re finish, texture	\$6,500.00	1	\$6,500.00
Remove mouse insulation Vermin contamination insulation	\$3.50	420	\$1,470.00

PLEASE NOTE: The above items are our recommendations. The items only address mechanical, structural and building envelope.

These recommendations come with years of experience and expertise. We leverage technology to come to this conclusion. It is important that this quote be accepted as a whole, due to the numerous interactions each item in the quote has within the building envelope in its entirety. We highly suggest to accept the quote as a whole and not pick/choose specific items from it. Choosing only parts of the quote may compromise the effectiveness of the repair/build.

As a homeowner you must keep up with regular maintenance and behaviour such as, but not limited to:

- Running bathroom fans for a minimum of 20 minutes after showering.
- Running kitchen exhaust fans for the entire duration of cooking.
- Ensuring you keep house humidity under control during winter months.
- In winter months make sure that your windows and doors have a tight seal and do not leak air into the soffit.
- The team will endeavour to address the issues that affect the attic, however if the home undergoes any other changes or modifications, the work we have done may not prevent future attic issues.
- We recommend any future upgrades to the home or its systems need to keep in mind the potential affect that may have on the attic.
- *Upon discovery of potential asbestos OR asbestos contaminated materials work will cease and you will be informed of occupational health and safety requirements to move forward.*
- *Warranty, implied or written only covers the materials we (Ultimate Renovations inc.) have installed. If the product fails due to outside circumstances we will not provide liability coverage.

ESTIMATE TERMS:

Estimates are valid for 60 days from issue due to the volatile pricing of fibreglass insulation from conditions outside of our control. Cancellations and re-bookings must be made 48 hours prior to arrival time. A re-booking and or travel fee may be applied.

Residential Invoices must be paid upon receipt. Commercial Invoices due 28 days from work completion. 2% monthly interest fee applies. Interest accumulates at 24% annually.

Non asbestos

Dumpster Disposal Fee	\$595.00	1	\$595.00
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Sprayfoam UP by Derrick of SaskProFoam 306-949-0466	\$9.75	500	\$4,875.00
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Sprayfoam installed to the roof deck 3 inches

May require a permit, mechanical etc.

Shop supplies	\$145.00	1	\$145.00
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Particulate Suits, N-95 Masks, VB Tape, Gun Cleaner, Drop Sheets, Cap Nails, Ridgid Foam, Gasket Seal, Nitrile Gloves. Etc

Wheatland service call (306) 924-4277	\$0.00	1	\$0.00
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Wheatland to provide quote and billing

Subtotal	\$13,585.00
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GST	\$679.25
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PST	\$815.10
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Total	\$15,079.35
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Notes:

During my inspection, humidity levels were at 26%, with an outdoor temperature of -10°C

The building has high efficient systems, however, humidity levels are in a normal range

The space between the two main components of the building, a breezeway/adjoining hallway. Is where the problem is occurring, we have a almost flat roof with a torch on membrane roof, which we are having ice dams issues with.

The existing insulation is fiber-based, and this is a non-vented assembly, there are some soffit vents added at the doors, but there is no exhaust system. My recommendation is to remove the ceiling in the areas that are perpendicular to the roof, this will give us access to remove the existing insulation and change it to polyurethane spray foam.

The main portion that is flat roof, could retain some of the ceiling to reduce some costs.