

PROPOSED SCOPE OF WORK

Lanark Highlands Arena – Roof Replacement

1. SCOPE OF WORK

This document outlines the scope of work for the roof replacement at Lanark Highlands Arena located at 67 Princess St. in the Village of Lanark, Ontario. All replacement work will be completed as lump sum price unless noted otherwise. Work generally includes, but is not limited to the following:

Main Roofing:

- To supply and install
 - Wood blocking around the perimeter
 - 1.5" EPS insulation between the ribs
 - 1.5" Polyisocyanurate overlayment.
 - Fully adhered EPDM.

Entrance, Dressing Rooms and Rear Roofs

- To remove existing metal roofing
- To supply and install
 - 1/2" plywood over existing strapping.
 - 2 rows of high-temperature resistant ice-and-water shield at the eaves and valleys
 - Synthetic underlay on the remainder of the deck.
 - Drip edge and barge trim
 - 26ga metalvalleys.
 - 28ga prefinished galvanized metal roofing and ridge cap
 - Vented aluminum soffit and fascia on back roof, and zamboni room.
- To remove and replace all associated wall flashings

Full specifications are provided in Section 4 below.

2. DOCUMENTS

- Proposed Scope of Work..... 7 Pages
- Tender Submission Form..... 2 Pages

3. GENERAL PROJECT NOTES

1. All work covered by this scope of work shall be completed to the satisfaction of the Owner. Any deficiencies to the new work or damage to existing building components designated to remain shall be repaired or replaced at no additional cost to the Owner.
2. Provide uninhibited access to the Owner for the duration of the work.
3. The Contractor will be permitted to work between 8:00 a.m. and 5:00 p.m. Monday to Friday, with the exception of statutory holidays.
4. Coordinate access to building and area of work with the Owner.

5. Maintain record drawing set on-site, along with all other contract documentation.
6. Workmanship shall be the best quality, executed by workers experienced and skilled in the respective duties for which they are employed. Do not employ any unfit person or anyone unskilled in their required duties. In cases of dispute decisions as to the quality or fitness of workmanship rest solely with the Owner, whose decision is final.
7. No substitutions for the specified materials will be permitted without prior written approval of the Owner.
8. The Contractor is responsible to obtain and pay for all required permits necessary to complete the work (including but not limited to building permit).
9. Provide and maintain barricades, signage and construction hoarding to enclose the area of work at all times. Design, erect and maintain overhead protection overtop of all public sidewalks, walkways, building entrances/exits and delivery areas located below the area of work. Provide construction signage to redirect pedestrian traffic away from area of work and to notify the public of overhead work.
10. Take precautions to protect openings made in the building from entry of elements and of persons during the construction and to protect existing structure and finishes from damage resulting from construction work. Work damaged or defaced due to failure to provide such protection shall be removed and replaced, or repaired, as directed by the Owner at no additional cost to the Owner.
11. The Contractor shall provide all necessary means to protect the base building, interior finishes, permanent installations and landscaping from damage for the duration of the project. Make good all items damaged during Construction at no additional cost to the Owner. Damaged landscape elements due to Contractor's equipment, operations or vehicles shall be repaired at no cost to the Owner. Damaged grassed areas shall be reinstated with top soil and sod.
12. Make no holes in any structural component without written approval by the Owner.
13. Work will be reviewed by the Owner to evaluate general conformance with the Contract Documents. The Contractor is responsible to maintain quality control over all aspects of the Work.
14. Contractor is responsible to keep the site in a clean and orderly condition at all times. Clean up the site to the satisfaction of the Owner at the end of each working day. Upon completion of the work, perform final cleaning of all new and existing building elements affected by the work to the satisfaction of the Owner.
15. Maintain operational all fire exits and maintain access to all exterior fire hydrants, gas valves and standpipe connections.
16. Localized repairs shall be reviewed and approved with the Owner prior to replacement to allow for documentations and recording of quantities.
17. Work not indicated on a part of the drawings, but reasonably implied to be similar to that shown at corresponding places shall be repeated as part of the lump sum price. All work and material must be performed and provided in strict accordance with the following codes and standards:
 - a. Ontario Building Code (OBC) 2012.
 - b. Occupational Health and Safety Act and Regulations for Construction Projects.

4. MATERIAL SPECIFICATIONS AND EXECUTION

4.1 SUBMITTALS

1. Contractor to submit for approval by Owner technical data sheets of all materials listed in this section. Submit with reasonable promptness and in orderly sequence so as to not cause delay in work.

4.2 MATERIALS

1. SLOPED METAL ROOF

1. Steel Cladding:

1. Factory preformed, pre-finished galvanized steel, 26 GA (0.54 mm) minimum thickness in accordance with CAN/CGSB 93.2.
2. Profile to be approved by the Owner
3. Colour to match existing, to be approved by the Owner

2. Flashings:

1. Zinc coated steel sheet, thickness as indicated on drawings, commercial quality to ASTM A653/A653M, with Z275 designation zinc coating
2. Class F1S
3. Factory applied paint system for exterior exposure, to CAN/CGSB-93.3-M91
4. Colour to match steel cladding.

3. Fasteners:

1. Galvanized, compatible with material to be fastened and suitable for flashing and application. All exposed fasteners to have rubber backed washers.
2. Metal to Metal: Stainless steel self-drilling screws with neoprene washer.

4. Touch-up Paint: as recommended by prefinished material manufacturer.

5. Waterproofing membrane: Self-adhering, self-sealing bituminous membrane with glass mat reinforcement suitable for high temperature service. Approved membranes include:

1. LASTOBOND SHIELD HT manufactured by Soprema
2. HIGH TEMPERATURE LASTOBOND PRO HT-N manufactured by Resisto
3. Blueskin PE200HT manufactured by Henry.

6. Sheathing:

1. 16mm plywood panels: to CAN/CSA-0325.0
2. Nails: to CSA B111, of galvanized steel, sufficient length to penetrate 19mm into deck.

2. EPDM ROOF

1. Insulation

1. Polyisocyanurate, ship lapped, closed cell foam core to CAN/ULC 704-11
2. 1.5" minimum thickness

2. Ethylene propylene diene monomer (EPDM sheet membrane): to CGSB 37 GP 52M.

1. Pre-approved Manufacturers:

- a. Firestone
- b. Duro-Last
- c. Johns Manville

2. Reinforced

3. 60 mil Thickness
4. Colour to be: White
5. Self curing, EPDM based membrane for use as flashing as required by the membrane manufacturer.

3. Adhesive:

1. As recommended by the roofing manufacturer.

4. Fasteners

1. Fasteners. Cadmium plated flat head, self-tapping, Type A or AB screws. Sufficient length to provide minimum required pull-out strength.
2. Pressure Distribution Plates. 50 mm round barbed stress plates with circular stampings or otherwise specified by the manufacturer to meet wind uplift requirements.

5. Chimney Collar:

1. One-piece aluminum chimney collar with mechanically fastened collar attachment ring, size to suit chimney

4.3 **INSTALLATION**

1. SLOPED METAL ROOF

1. Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
2. Fasten metal cladding to plywood substrate with fasteners at a maximum spacing of 400mm o.c.
3. Attach components in manner not restricting thermal movement

2. EPDM ROOF

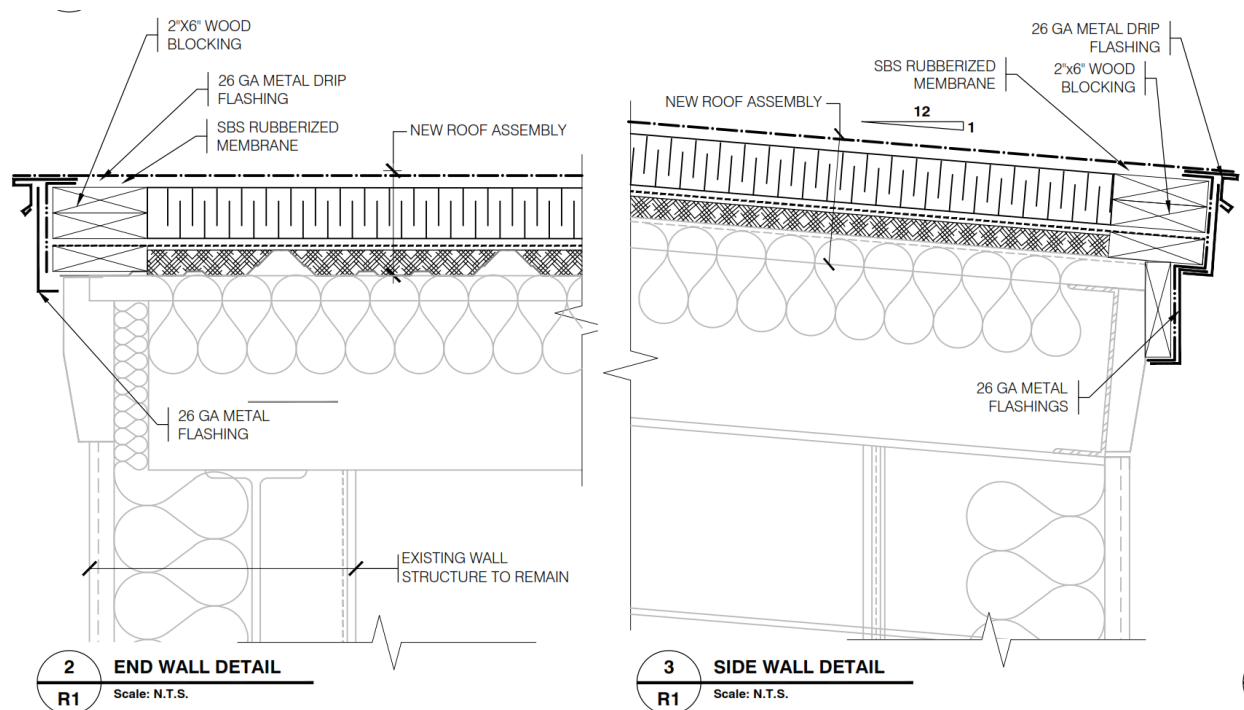
1. Insulation (Adhered)

1. The insulation will be adhered to the vapour barrier in a manner to resist wind uplift force and in accordance with the manufacturer's instructions.
2. The ambient temperature shall be above 10°C, and the adhesive temperature shall be a minimum of 21°C at the point of membrane application.
3. Apply adhesive to clean, dry and prepared compatible substrates as required to ensure full adhesion. Follow the adhesive manufacturer's requirements for application rates to ensure wind uplift requirements are met.
4. Apply a uniform application of membrane adhesive at the application rate published on the manufacturer's product data sheet.
5. Install the insulation before the adhesive begins to skin over. Once adhesive skins over, the membrane ply will not adhere.

3. Membrane (Adhered)

1. Position membrane over insulation starting at highest point.
2. Allow membrane to relax for 1/2 hour.
3. Apply adhesive to membrane and substrate in accordance with manufacturer's written instructions.

Typical Details as follows:



5. CONTRACT & INSURANCE

5.1 INSURANCE

1. Submit to the Owner proof of insurance and furnish a certificate of good standing with the Workplace Safety and Insurance Board within 10 days of project award and with each submission for payment.

2. General Liability insurance naming both Keller Engineering and the Township of Lanark Highlands.

5.2 FORM OF AGREEMENT AND GENERAL CONDITIONS

1. Form of Agreement will be a Lanark Highlands standard template agreement for services.

6. SAFETY

6.1 CONSTRUCTION SAFETY MEASURES

1. Observe construction safety measures of the National Building Code 2010 Part 8, Provincial Government, Workplace Safety and Insurance Board, and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.
2. Comply with the requirements of the Occupational Health and Safety Act and Regulations for Construction Projects.
3. For the purpose of the Occupational Health and Safety Act the Contractor will, with respect to the work, be designated the 'constructor' as therein defined, and the Contractor shall assume the responsibilities of the constructor as set out in the Act and its Regulations, including the implementation of such precautions and safeguards as will protect all workers and other persons from any adverse effects caused by designated substances and/or hazardous materials originating at, or brought onto the site.
4. If the Contractor encounters any of the designated substances defined in the Occupational Health and Safety Act he shall stop all work and notify the Owner prior to undertaking any further work.
5. Supply, maintain, and strictly follow a health and safety plan throughout the duration of the Contract. Train and indoctrinate all personnel who will be involved in the work. Perform all work in a workmanlike manner with due regard for the safety of workers and public.
6. Provide full hoarding and enclosures as made necessary by the work to protect the public, workers, and public and private property from injury or damage. Provide fenced enclosures to all work areas.
7. Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labeling and provision of material safety data sheets (MSDS) acceptable to Labour Canada and Health and Welfare Canada.
8. Deliver copies of WHMIS data sheets to the Owner on delivery of materials.

7. SCHEDULE

Work will be awarded within 30 days following bid submission. Within ten (10) working days following award of contract, submit a schedule clearly indicating the following:

- Project start date
- Submission dates for all requested samples, product data, shop drawings, etc
- Start and completion dates for all major elements of work,
- Total completion of the project.

The work is to begin as soon as possible. The Contractor agrees that time shall be "The essence of the Contract" and that once work has begun on site, it will be continued until substantial completion is achieved without stoppage in the work.

8. PROGRESS CLAIMS AND BILLING

Progress claims for completed work can be submitted monthly to the Owner for review and processing. A detailed breakdown of the lump sum price, describing the major elements of work, will be required if work is expected to continue beyond one billing period. Submit an updated and revised schedule with each claim for payment.

The Owner will make payments to the Contractor as follows:

1. 90% of the invoiced amount submitted by the Contractor to the Owner, through the Owner, prior to substantial performance and not more frequently than monthly for completed portions of the work and services performed to the satisfaction of the Payment Certifier.
2. 10% of the amounts invoiced prior to substantial performance and held back pursuant to the Construction Lien Act, 1990, within a reasonable time after the expiration of the applicable lien period following the date of publication of the Certificate of Substantial Performance if there are no claims outstanding pursuant to the Construction Lien Act, 1990, and the work and services performed are to the satisfaction of the Payment Certifier/Owner.

9. WARRANTY

The warranty period with regard to the Contract is **two (2) years** from the date of Substantial Performance of the Work. The Owner shall promptly give the Contractor Notice in Writing of observed defects and deficiencies which occur during the two year warranty period. The Contractor shall promptly, at the Contractors expense, repair defects or deficiencies in the Work which appear prior to and during the two year warranty period. The warranty is transferable to subsequent homeowners during the warranty period.