



Project Title: Roof Replacement
Building 20
Central Experimental Farm (CEF), Ottawa (Ontario)

Solicitation No: 14-1109

August 21, 2014

The following changes in the tender documents are effective immediately. This addendum will form part of the contract documents

Q & A

Q1. Can you provide the existing roof assembly composition?

A1. The existing roof assembly composition is:

- 4 ply BUR from previous inverted roof membrane
- 2" Styrofoam rigid XPS insulation
- 4-ply BUR membrane
- 4.5" (2 layers) Styrofoam rigid XPS insulation
- 2 layers of ½" fireboard
- 2 applications of 4 ply BUR membrane
- 2" Styrofoam rigid XPS insulation
- Filter fabric
- Ballast

Q2. Can you provide which 3" insulation is required on the ducts and the type of membrane to be installed? Maybe complete details outlining the duct waterproofing should be provided?

A2. See included modifications to the specifications in answer to this question.

Q3. Can you confirm it is the Contractors responsibility to remove and re-install the security camera?

A3. It is the Contractors responsibility to remove and re-install the security camera as stated on the roof plan.

Q4. Can you provide details for the electrical roof penetrations?

A4. Electrical Socket Post Flashing will be used to waterproof electrical penetrations on the roof deck. Refer to the below included modifications to the specifications for all details.

Q5. Would it be possible to re-visit the work site with subcontractors for verification of the mechanical part of this requirement?

A5. In order to accommodate all Bidders present at the Mandatory Site Visit, a second site visit has been arranged (see below Invitation to Tender modifications).

INVITATION TO TENDER

1. At the cover page "Invitation to Tender", Solicitation Closes:

Delete: Tuesday, August 26

Replace with: Friday August 29



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2. At SI03 of the Special Instructions to Bidders (SI):

Add: Second Site Visit

Arrangements have been made for a second tour of the work site for the Bidders or a representative of the Bidders, present at the August 14, 2014 Mandatory Site Visit. The second site visit will be held on **Tuesday August 26, 2014 at 10:00 am** local time. Interested bidders are to meet at the **main entrance of K.W. Neatby building, 960 Carling Avenue, Ottawa, Ontario**. Bidders who do not attend will not be given an alternative appointment.

SPECIFICATIONS

1. At the Table of Content, Division 23 – Heating, Ventilating and Air Conditioning (HVAC):

Add: SECTION 23 07 13 - Duct Insulation

2. At Section 07 55 20, Part 2 “Products”:

Add:

2.15 Roof Details for Electrical Penetrations

- .1 Post Flashing shall consist of a 300 mm high 0.080 seamless spun aluminum base riveted to a rigid PVC electrical socket or switch cover.
- .2 Post Flashing shall be installed by the Contractor in accordance with manufacturer's installation instructions.
- .3 All electrical work shall be completed and tested by certified electrician.

3. At Section 07 55 20, article 2.7.1.1:

Delete: The surface is covered with a thermofusible plastic film, the underside is sanded.

Replace with: Both surfaces are covered with thermofusible plastic film.

4. At Division 23 – Heating, Ventilating and Air Conditioning (HVAC):

Add Section (attached): 23 07 13 – Duct Insulation.

5. At Annex A “Photographic Details:

Add: 5) Electrical Socket Post Flashings

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME

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5) Electrical Socket Post Flashings



Part 1 General

1.1 DEFINITIONS:

- .1 Supply labour, materials, plant, tools and equipment to complete the Work as shown on the Drawings and as specified herein including, but not limited to the following
 - .1 Materials and installation methods supplementing primary air/vapour barrier material assemblies.
 - .2 Duct Sealer.
 - .3 Foil faced insulation.

1.2 SUBMITTALS:

- .1 Submit in writing, a document stating that the applicator of the primary membranes specified in this Section is recognized by the manufacturer as suitable for the execution of the Work.
- .2 Prior to commencing the Work submit copies of manufacturers' current ISO certification. Membrane, primers, sealants, adhesives and associated auxiliary materials shall be included.
- .3 Prior to commencing the Work submit references clearly indicating that the membrane manufacturer has successfully completed projects on an annual basis of similar scope and nature for a minimum of fifteen years.

1.3 QUALITY ASSURANCE:

- .1 Perform Work in accordance with the printed requirements of the membrane manufacturer and this specification. Advise Consultant or Owner of any discrepancies prior to commencement of the Work.
- .2 Maintain one copy of manufacturers' literature on site throughout the execution of the Work.
- .3 At the beginning of the Work and at all times during the execution of the Work, allow access to site by the membrane manufacturers' representative.
- .4 Materials used in this Section, including weather barrier membranes, primers, mastics, adhesives and sealants shall be fully compatible and shall be sourced from one manufacturer.

- .5 At the request of the Consultant, submit copies of the membrane manufacturers' current certification to ISO 9000.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver materials to the job site in undamaged and original packaging indicating the name of the manufacturer and product.
- .2 Store role materials on end in original packaging.
- .3 Store adhesives and primers at temperatures of 5 degree Celsius and above to facilitate handling.
- .4 Keep solvent away from open flame or excessive heat.
- .5 Protect rolls from direct sunlight until ready for use.

1.5 COORDINATION

- .1 Ensure continuity of the seal throughout the scope of this section.

Part 2 Product

2.1 GENERAL

- .1 Components and materials must be obtained as a single source from the membrane manufacturer to ensure total system compatibility and integrity.

2.2 INSULATION

- .1 Foil faced insulation: Rigid extruded polyurethane insulation with aluminum facer.
- .2 Thickness: 75 mm (3").
- .3 LTTR (long-term thermal resistance) values determined in accordance with CAN/ULC-S770 and ASTM C 1289.

2.3 MEMBRANE

- .1 Weather barrier membrane (Self-Adhering): SBS modified bitumen, self-adhering sheet membrane complete with a reflective foil surface, and having the following physical properties:
 - .1 Thickness: 1.0 mm (40 mils).

- .2 Vapour permeance: 2.8 ng/Pa.m².s (0.05 perms) to ASTM E96;
- .3 Low temperature flexibility: -30 degree Celsius to CGSB 37-GP-56M;
- .4 Elongation: 40% to ASTM D412-modified;

2.4 DUCT SEALER

- .1 Duct sealer in compliance with CAN/ULC-S102.

2.4 MEMBRANE TERMINATION SEALANT

- .1 Membrane termination sealant in compliance with CAN/CGSB 37.29

2.4 EXPOSED SEALANT

- .1 A moisture cure, medium modulus polymer modified sealing compound having the following physical properties:
 - .1 Compatible with sheet air barrier, roofing and waterproofing membranes and substrate,
 - .2 Complies with Fed. Spec. TT-S-00230C, Type II, Class A,
 - .3 Complies with ASTM C 920, Type S, Grade NS, Class 25,
 - .4 Elongation: 450 – 550%,
 - .5 Remains flexible with aging,
 - .6 Seals construction joints up to 25mm wide.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify that surfaces and conditions are ready to accept the Work of this section. Notify Consultant or Owner in writing of any discrepancies. Commencement of the work or any parts thereof shall mean acceptance of the prepared substrate.

3.2 PREPARATION

- .1 All surfaces must be sound, dry, clean and free of oil, grease, dirt, or other contaminants.
- .2 Seal all joints in ductwork with duct sealer to prevent air leakage.

- .3 Install foil faced insulation over ducts and mechanically fasten using weld pins and washers or cup head pins welded to ductwork.
- .4 Cover washer or cup head pin with a 100mm (4") strip of membrane.
- .5 Install additional insulation blocks as required to ensure positive slope (on the upper surface of the duct) to prevent the occurrence of ponding water.

3.3 WEATHER BARRIER MEMBRANE

- .1 Insulated Ductwork
 - .1 Position membrane for alignment, and begin application of membrane on bottom of insulated ductwork, returning up sides a minimum of 100mm (4").
 - .2 Install sections of membrane on sides of duct and return on to the top a minimum of 100mm(4").
 - .3 Finally install top section, lapping down the sides 100mm (4").
 - .4 Membrane applied to the underside of the substrate wider than 600mm (2') requires mechanical fastening. Fasten immediately after installation of membrane and seal with a 100x100 mm (4" x 4") patch of membrane.
 - .5 When membrane is entirely in place, roll membrane including seams with a counter top roller or apply pressure using a plastic tape applicator to ensure full contact.

3.4 CLEANING

- .1 Remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION