

A SPRAYED INSULATION

Apply sprayed insulation to all insulated soffits instead of batt insulation. Apply directly to the underside of the deck to a depth that maintains the same R-Value as the current design. See the revised Specification Section 07214-Sprayed Insulation attached.

B GAS INLET PRESSURE

The required inlet pressure to the rooftop units must be between 7 and 14 inches of water column. This is a measurement of pressure. As for outlet pressure, there is no gas outlet relating to the RTU, only inlet.

C FOURTH REVISION TO TENDER FORM

See the fourth revision to the Tender Form attached to exclude Cairn`s roofing from the flat roof portion of the roofing Work.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closed Cell Spray Foam Insulation.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 06100 – Rough Carpentry
- C. Section 07100 - Dampproofing and Waterproofing: Insulation installed with waterproofing systems
- D. Section 09250 - Plaster and Gypsum Board: Insulation installed in conjunction with interior wall and ceiling finish systems.

1.3 REFERENCES

- A. CAN/ULC S705.1-01 – Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Material – Specification, Includes Amendments 1,2.
- B. CAN/ULC S705.2-05 – Standard for Thermal insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Application.
- C. CAN/ULC S770-09 – Standard Test Method for Determination of Long-term Thermal Resistance of Closed-Cell Thermal Insulating Foams.
- D. CAN/ULC S774-03 – Standard Laboratory Guide for the Determination of Volatile Organic Compound Emissions from Polyurethane Foam.
- E. ASTM C 1338 - Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings.
- F. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.
- G. ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- H. ASTM D 1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
- I. ASTM D 1622 - Standard Test Method for Apparent Density of Rigid Cellular Plastics.
- J. ASTM D 1623 - Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
- K. ASTM D 2126 - Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
- L. ASTM D 2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics.

1.4 PERFORMANCE REQUIREMENTS

- A. Conform to applicable code for flame and smoke, concealment, and over coat requirements.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer with a minimum of ten years experience manufacturing products in this section shall provide all products listed.
- B. Installer Qualifications: Products listed in this section shall be installed by a single organization with at least five years experience successfully installing insulation on projects of similar type and scope as specified in this section.
- C. Sprayed polyurethane foam (SPF) installer certificate: Submit name of SPF installer with copy of certification card verifying that the SPF installer is licensed by the source manufacturer.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Storage: Store materials in dry locations with adequate ventilation, protected from freezing rain, direct sunlight and excess heat and in such a manner to permit easy access for inspection and handling. Store at temperature between 55 and 80 degrees F (12.7 to 26.6 degrees C).
- C. Handling: Handle materials to avoid damage.

0660 June 2, 2010 (Revised June 9, 2011)

**SECTION 07214-
SPRAYED INSULATION**

1.8 PRE-APPLICATION MEETINGS

- A. Convene minimum two weeks prior to starting work of this section.

1.9 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.10 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not apply insulation when substrate temperatures are under minus 10 degrees prior to installation.
- C. Surfaces must be dry prior to application of spray foam. Excess humidity may cause poor adhesion, and result in product failure.
- D. To avoid overspray, product should not be applied when conditions are windy.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: BASF Canada as represented by Building Resource Inc. 1-866-533-0233.
- B. CertainTeed Corp., Insulation Group, which is located at: 750 E. Swedesford Rd. P. O. Box 860 ; Valley Forge, PA 19482-0860; Toll Free Tel: 800-233-8990; or equal (Polarfoam)
- C. Substitutions: Not permitted.
- D. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 SPRAY FOAM INSULATION

- A. Insulation: HFC-blown type Closed Cell Foam: BASF Walltite ECO V2 or CertainTeed CertaSpray Closed Cell Foam is a medium-density, MDI-based polyurethane thermoset rigid foam conforming to CAN/ULC S705.1, closed cell, spray-applied rigid cellular polyurethane foam air barrier and thermal insulation, medium density.
- B. Minimum Recycled Content: Eco Logo certified: 5% by weight.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify that all exterior and interior wall, partition, and floor/ceiling assembly construction has been completed to the point where the insulation may correctly be installed.
- C. Verify that substrate and cavities are dry and free of any foreign material that will impede application.
- D. Verify that mechanical and electrical services in ceilings, walls and floors have been installed and tested and, if appropriate, verify that adjacent materials are dry and ready to receive insulation.
- E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Mask and protect adjacent surfaces from overspray or dusting.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions and the standard CAN/ULC S705.2. Product must be installed according to local code, and must be applied by a qualified applicator.
- B. Apply insulation by spray method, to uniform monolithic density without voids.
- C. Apply to minimum cured thickness as indicated on the Drawings or as scheduled at the end of this Section.
- D. Apply to minimum cured thickness of 6 inches.
- E. Apply to achieve thermal resistance R-Value of 35.6.
- F. Apply insulation to seal voids at truss ends to prevent wind scouring of ceiling insulation.
- G. Seal plumbing stacks, electrical wiring and other penetrations into attic to control air leakage.
- H. Apply insulation to fill voids around bathtubs to point of accessibility.
- I. Do not install spray foam insulation in areas where it will be in contact with equipment or materials with operating temperatures of 180 degrees F (82 degrees C) or greater.
- J. Apply insulation in unvented roof spaces and cathedral ceiling areas.

0660 June 2, 2010 (Revised June 9, 2011)

**SECTION 07214-
SPRAYED INSULATION**

- K. Where building is designed to meet the specific air tightness standards of the Energy Star Program, apply insulation as recommended by manufacturer to provide airtight construction. Apply sealant to joints between structural assemblies as specified in Division 7.
- L. Patch damaged areas.

3.4 FIELD QUALITY CONTROL

- A. Inspection will include verification of insulation and density.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.6 SCHEDULES

- A. For the following locations, apply the average cured thickness indicated.
 - 1. Thermal insulation around main drain: 6 inches.
 - 2. Unvented roof spaces: 6 inches.
 - 3. Voids in overhangs such as bay windows and cantilevered floors: 6 inches.
 - 4. Exterior above grade wall cavities as shown on drawings: 6 inches.
 - 5. Floor headers: 6 inches.

END OF SECTION

ADDITION & ALTERATIONS
EGAN FUNERAL HOME
265 QUEEN STREET SOUTH
BOLTON, ONTARIO

GEORGE ROBB ARCHITECT

0660

June 2, 2010 (*Revised June 9, 2011*)

TENDER FORM

PART ONE OF TWO

Submitted by:

_____ Date: _____

1. Having examined the Specifications, including addenda up to and including #_____, and the drawings, all as prepared by George Robb Architect, for:

**Addition and Alterations
Egan Funeral Home
203 Queen Street South
Bolton, Ontario**

We hereby offer to provide all labour, material and plant required for the execution of the work in accordance with the true intent of the contract documents for a Stipulated Price as follows:

Total Scope of Work	\$
Contingency Allowance (Section 00801)	\$150,000.00
Inspection & Testing Allowance (Section 01450)	\$8,000.00
Steel Railing Brackets (Section 05500)	\$3,000.00
Cabinet Hardware Allowance (Section 06200)	\$8,000.00
Finishing Hardware & Washroom Accessories Allowance (Section 08710)	\$42,000.00
Total Stipulated Price	\$

The Stipulated Price excludes HST in the Amount of: \$ _____

ADDITION & ALTERATIONS
EGAN FUNERAL HOME
265 QUEEN STREET SOUTH
BOLTON, ONTARIO

GEORGE ROBB ARCHITECT

0660

June 2, 2010 (*Revised June 9, 2011*)

TENDER FORM

2. Separate Prices

Further, we offer to provide all labour, material and plant required for the execution of the work related to the following Separate Prices:

1. Separate Price No. 1 – The additional Cost to provide Asphalt Paving for the Funeral Home Site as described as the Phase I separate price and the associated irrigation work as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

2. Separate Price No. 2 – The additional Cost to provide Asphalt Paving for the additional residential properties to the north as described as the Phase II separate price and the associated irrigation work as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

3. Separate Price No. 3 – The additional Cost to provide the irrigation system for the Funeral Home Site as the designated Zone 1 on the irrigation drawings as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

4. Separate Price No. 4 – The additional Cost to provide the irrigation system for the residential properties to the north as the designated Zone 2 and Zone 3 on the irrigation drawings as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

3. Separate Prices (Continued)

5. Separate Price No. 5 – The additional Cost to provide a new 15 ton RTU Unit over the Casket Display Room which includes the removal of the existing and placement of the new unit, the disconnect and reconnection of the gasline and the disconnect and the reconnection of the electrical connections as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

6. Separate Price No. 6 – The additional Cost to provide a new 7.5 ton RTU Unit over the Chapel in lieu of the existing 6.5 ton unit, which includes the removal of the existing 6.5 ton unit and the placement of the new 7.5 ton unit, the disconnect and the reconnection of the gasline and the disconnect and the reconnection of the electrical connections as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

7. Separate Price No. 7 – The additional Cost to provide the conduits and pull wires for the new buried electrical supply lines to the south boulevard and the north side of the property to for the provision of new capped electrical feeds for the future new parking lot lighting as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

8. Separate Price No. 8 – The additional Cost to provide new lighting bases, poles, conduit and wiring for the new parking lot lights as outlined in Section 01010 – Scope of Work as follows:

\$ _____

HST TO BE ADDED \$ _____

ADDITION & ALTERATIONS
EGAN FUNERAL HOME
265 QUEEN STREET SOUTH
BOLTON, ONTARIO

GEORGE ROBB ARCHITECT

0660

June 2, 2010 (Revised June 9, 2011)

TENDER FORM

4. The following is a list of architectural unit prices applicable to additions and deletions to the Work. Prices are to include for both the supply and installation of work.

ITEM	ADD PRICE \$	DELETE PRICE \$	UNIT OF MEASURE
(1) Cost to excavate and dispose for footings and subgrade material at all exterior excavations.			Per Cu. Yd.
(2) Cost to excavate and dispose for footings and subgrade materials at all interior excavation locations.			Per Cu. Yd.
(3) Cost to supply and install additional concrete for foundation walls.			Per Cu. Yd.
(4) Cost to supply and install additional reinforcing bars for concrete work.			Per Ton
(5) Cost for supply and placement of additional fill at foundation walls and slabs.			Per Cu. Yd.

5. If changes to the work are to be valued by the cost and percentage fee method, we will require a fee, expressed as a percentage of the cost of the work, of:

(_____ %)

6. If we are notified of the acceptance of this tender within sixty (60) days of the date of this submission, we will:
- .1 Execute a contract with the Owners on the Standard Form of Agreement Between Owner and Contractor, CCDC #2, and,
 - .2 Furnish a general analysis of the cost of the work, and, Complete, substantially, all work in accord with the Contract Documents, in a period of _____ weeks following commencement.
7. Within 48 hours of submitting the tender submission, provide a complete list of subtrade contractors being carried to undertake the work.

ADDITION & ALTERATIONS
EGAN FUNERAL HOME
265 QUEEN STREET SOUTH
BOLTON, ONTARIO

GEORGE ROBB ARCHITECT

0660

June 2, 2010 (*Revised June 9, 2011*)

TENDER FORM

8. Within 24 hours of submitting the tender submission, provide the Part Two – Subtrades Portion of the Tender Form that follows on the next page. This submission can be provided by email or fax to the offices of George Robb Architect on or before Wednesday, June 8th, 2011 before 2:00 pm local time. (email to dscott@gra.ca) or (fax to (416) 596-1508).

In submitting this Tender, we recognize the right of the Owner to accept any tender or to reject all tenders.

Signed: _____

Witness: _____

PART TWO OF TWO – SUBTRADES

The following Part Two Portion of the Tender Form is provided as a requirement to complete the Part One Section of this Tender Submission. This submission can be provided by email or fax to the offices of George Robb Architect on or before Wednesday, June 8th, 2011 before 2:00 pm local time. (email to dscott@gra.ca) or (fax to (416) 596-1508).

1. Alternate Prices

Further, we offer to provide all labour, material and plant required for the execution of the work related to the following Alternate Prices:

1. Alternate Price No. 1 – Difference in the Cost to provide a cut stone fireplace surround, in lieu of the Base Bid precast concrete fireplace surround as supplied by Solus under Section 11010 – Gas Fireplace Unit as follows:

\$ _____

HST TO BE ADDED \$ _____

2. Alternate Price No. 2 – Difference in the Cost to provide the alternate Modified Bitumen Flashing in lieu of the Base Bid Elastomeric Flashing as outlined in Article 2.6 & 2.7 of Section 07510 – Built Up Bituminous Roofing & Waterproofing as follows:

\$ _____

HST TO BE ADDED \$ _____

3. Alternate Price No. 3 – Difference in the Cost to provide the alternate Tri Fab 451T Series Aluminum Entrance Screen as manufactured by Kawneer, in lieu of the Base Bid Aluminum Entrance Screen Assembly to be Kawneer Aluminum Curtain Wall System, 1600 Wall System with 2 1/2" x 6" sections as outlined in Section 08413 – Aluminum Entrance Screen as follows:

\$ _____

GST TO BE ADDED \$ _____

ADDITION & ALTERATIONS
EGAN FUNERAL HOME
265 QUEEN STREET SOUTH
BOLTON, ONTARIO

GEORGE ROBB ARCHITECT

0660

June 2, 2010 (*Revised June 9, 2011*)

TENDER FORM

2. Subtrades

Subtrade Division	Included in Base Bid	Subtrade Contractor	Difference in Cost Extra or (Credit)
Mechanical – HVAC		Rosetown Central Refrigeration & Air Conditioning	
Mechanical – Plumbing		Glen the Plumber	
Electrical Subcontractor		Bolton Electric	
Roofing – Asphalt Shingles		Cairns Roofing	
Asphalt Paving		York Paving & Asphalt	
Granular & Concrete		James Dick & Co. Ltd.	

In submitting this Part Two Section of the Tender Form we recognize the right of the Owner to accept any tender or to reject all tenders.

Signed: _____

Witness: _____