

# BUILDING MATERIALS EVALUATION COMMISSION (BMEC) AUTHORIZATION REPORT

DATE OF AUTHORIZATION  
BMEC REFERENCE  
DATE OF AMENDMENT

July 31, 1997  
BMEC 97-05-214  
November 29, 2012

## ENCLOSURE CONDITIONED HOUSING (ECHO™) DESIGN

### 1. Applicant

Indoor Air Technologies Inc.  
2344 Haddington Crescent  
Ottawa, Ontario  
K1H 8J4

### 2. Description

The Enclosure Conditioned Housing (ECHO™) DESIGN is comprised of ventilated, depressurized, drained and insulated foundation perimeter walls and may include a ventilated, depressurized and drained subfloor floor system above a concrete slab on ground. It is constructed in situ, the sealed wall/floor spaces are ventilated and depressurized by a low flow exhaust fan, regulated by the ECHO™ control panel.

The design provides interior foundation wall drainage and cavity dehumidification ventilation.

### 3. Authorization Requested

The applicant sought authorization for the use of the ECHO™ design as an innovative means to provide an alternative to the materials serving as a drainage layer and installed adjacent to the exterior surface of a foundation wall.

### 4. Assessment

Reports and assessments provided by the applicant show that if the ECHO™ design is installed, tested and commissioned in accordance with the limitations and conditions stated in this authorization, it will provide the level of performance that would be achieved by conformance with the Ontario Building Code as an alternative for exterior foundation drainage layer described at Sentence 9.14.2.1.(2.1).

## **5. Authorization**

The ECHO™ design is authorized for use within a building as a basement finishing system comprising foundation wall drainage and insulation as required by the Ontario Building Code, as amended or remade from time to time, subject to the following terms and conditions:

### **A. SPECIFIC TERMS AND CONDITIONS:**

1. The use of the ECHO™ design must comply with the Building Code Act, 1992, as amended or re-enacted from time to time and, except as specifically authorized herein with the Ontario Building Code as amended or remade from time to time.
2. A copy of this Authorization shall be included with an application for a permit and shall be kept and maintained on the site of the construction with the building permit. A copy of the Illustrated Construction Plans, which form the basis for the design will be furnished to the Chief Building Official.
3. Construction of an ECHO™ design shall be by Indoor Air Technologies Inc. or its licensed contractors only and shall be in accordance with the "Illustrated Construction Plans" supplied by the applicant.
4. On completion, Indoor Air Technologies Inc. or its licensed contractor shall test and balance the ECHO™ design, complete the commissioning certificate, provide a copy to the owner(s) and forward a copy to the Chief Building Official. The commissioning certificate to attest the design provides depressurisation throughout by at least 1Pa by a continuous duty blower exhausting to the outside at a rate of no more than 40 l/s (85 CFM).
5. Indoor Air Technologies Inc. or its licenced contractor shall provide written operating instructions and a demonstration on the operation of the ECHO™ design to the building owner(s).

### **B. GENERAL CONDITIONS**

1. The BMEC may amend or revoke this Authorization where it determines that:
  - (a) any change has been made to:
    - (i) the material, system or building design that is the subject matter of this Authorization;
    - (ii) the address of the applicant specified in Section 1 of this Authorization; or,
    - (iii) the ownership of the applicant specified in Section 1 of this Authorization.

- (b) the use of the material, system or building design authorized herein;
  - (i) does not comply with the Building Code Act, 1992 or any relevant legislation as they may be amended or re-enacted from time to time; or
  - (ii) provides an unsatisfactory level of performance, in situ; or
  - (c) any Ontario Building Code provision relevant to this Authorization has been amended or remade.

Dated at Toronto this 31st day of July 1997.

**BUILDING MATERIALS EVALUATION COMMISSION**

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per: Scott Richardson, Chairman