Generated by RES*check-Web* Software

# Compliance Certificate

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

Project 5 Monument Street

| | |
|---|---|
| Energy Code: | **2009 IECC** |
| Location: | **Portland, Maine** |
| Construction Type: | **Single-family** |
| Project Type: | **New Construction** |
| Conditioned Floor Area: | **475 ft2** |
| Glazing Area | **28%** |
| Climate Zone: | **6 (7378 HDD)** |
| Permit Date: | |
| Permit Number: | |

Construction Site: Owner/Agent: Designer/Contractor:

**Compliance: Passes using UA trade-off**

Compliance: **19.2% Better Than Code** Maximum UA: **146** Your UA: **118**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

## Envelope Assemblies

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | U-Factor | UA |
|---|---|---|---|---|---|
| Ceiling: Cathedral | 465 | 55.0 | 49.0 | 0.010 | 4 |
| Skylight: Vinyl Frame, 2 Pane w/ Low-E | 40 | | | 0.550 | 22 |
| Wall: Wood Frame, 16in. o.c. | 631 | 29.2 | 23.1 | 0.021 | 10 |
| Window: Vinyl Frame, 2 Pane w/ Low-E | 138 | | | 0.350 | 48 |
| Door: Glass | 37 | | | 0.350 | 13 |
| Basement: Solid Concrete or Masonry<br>Wall height: 6.0'<br>Depth below grade: 6.0'<br>Insulation depth: 6.0' | 475 | 10.0 | 8.0 | 0.044 | 21 |

*Compliance Statement:* The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in RES*check* Version 5.5.0 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title Signature Date

## RES*check* Software Version 5.5.0

# Inspection Checklist

Energy Code: 2009 IECC

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

Requirements: 100.0% were addressed directly in the RES*check* software

Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| Section # & Req.ID | Pre-Inspection/Plan Review | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| 103.2 [PR1][1] | Construction drawings and documentation demonstrate energy code compliance for the building envelope. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 103.2, 403.7 [PR3][1] | Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the commercial code. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.6 [PR2][2] | Heating and cooling equipment is sized per ACCA Manual S based on loads per ACCA Manual J or other approved methods. | Heating: Btu/hr_____ Cooling: Btu/hr_____ | Heating: Btu/hr_____ Cooling: Btu/hr_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |
|---|---|---|---|---|---|

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

| Section # & Req.ID | Foundation Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/As |
|---|---|---|---|---|---|
| 402.1.1 [FO4][1] | Conditioned basement wall insulation R-value. Where interior insulation is used, verification may need to occur during Insulation Inspection. Not required in warm-humid locations in Climate Zone 3. | R-_____ | R-_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope A table for values.* |
| 303.2 [FO5][1] | Conditioned basement wall insulation installed per manufacturer's instructions. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 402.2.7 [FO6][1] | Conditioned basement wall insulation depth of burial or distance from top of wall. | _____ ft | _____ ft | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope Assemblies table for values.* |
| 303.2.1 [FO11][2] | A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.8 [FO12][2] | Snow- and ice-melting system controls installed. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement is not applicable. |

**Additional Comments/Assumptions:**

| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |
|---|---|---|---|---|---|

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

| Section # & Req.ID | Framing / Rough-In Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/As |
|---|---|---|---|---|---|
| 402.1.1, 402.3.1, 402.3.3, 402.5 [FR2][1] | Glazing U-factor (area-weighted average). | U-_____ | U-_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope A table for values.* |
| 303.1.3 [FR4][1] | U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 402.1.1, 402.3.3, 402.5 [FR5][1] | Skylight U-factor. | U-_____ | U-_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope Assemblies table for values.* |
| 402.4.4 [FR20][1] | Fenestration that is not site built is listed and labeled as meeting AAMA/WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 402.4.5 [FR16][2] | IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement is not applicable. |
| 403.2.1 [FR12][1] | Supply ducts in attics are insulated to ≥R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6. | R-_____ R-_____ | R-_____ R-_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.2.2 [FR13][1] | All joints and seams of air ducts, air handlers, filter boxes, and building cavities used as return ducts are sealed. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.2.3 [FR15][3] | Building cavities are not used for supply ducts. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.3 [FR17][2] | HVAC piping conveying fluids above 105 ºF or chilled fluids below 55 ºF are insulated to ≥R-3. | R-_____ | R-_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.4 [FR18][2] | Circulating service hot water pipes are insulated to R-2. | R-_____ | R-_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.5 [FR19][2] | Automatic or gravity dampers are installed on all outdoor air intakes and exhausts. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

| | | | | | |
|---|---|---|---|---|---|
| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

| Section # & Req.ID | Insulation Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/As |
|---|---|---|---|---|---|
| 303.1 [IN13][2] | All installed insulation is labeled or the installed R-values provided. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | Requirement will |
| 402.1.1, 402.2.4, 402.2.5 [IN3][1] | Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies. | R-_____<br>☐ Wood<br>☐ Mass<br>☐ Steel | R-_____<br>☐ Wood<br>☐ Mass<br>☐ Steel | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | *See the Envelope Assemblies table for values.* |
| 303.2 [IN4][1] | Wall insulation is installed per manufacturer's instructions. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

| | | | | | |
|---|---|---|---|---|---|
| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

| Section # & Req.ID | Final Inspection Provisions | Plans Verified Value | Field Verified Value | Complies? | Comments/As |
|---|---|---|---|---|---|
| 402.1.1, 402.2.1, 402.2.2 [FI1][1] | Ceiling insulation R-value. Where > R-30 is required, R-30 can be used if insulation is not compressed at eaves. R-30 may be used for 500 ft² or 20% (whichever is less) where sufficient space is not available. | R-_____ ☐ Wood ☐ Steel | R-_____ ☐ Wood ☐ Steel | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope A table for values.* |
| 303.1.1.1, 303.2 [FI2][1] | Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft². | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 402.2.3 [FI3][1] | Attic access hatch and door insulation ≥R-value of the adjacent assembly. | R-_____ | R-_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 402.4.2, 402.4.2.1 [FI17][1] | Building envelope tightness verified by blower door test result of <7 ACH at 50 Pa. This requirement may instead be met via visual inspection, in which case verification may need to occur during Insulation Inspection. | ACH 50 =_____ | ACH 50 =_____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.2.2 [FI4][1] | Post construction duct tightness test result of ≤8 cfm to outdoors, or ≤12 cfm across systems. Or, rough-in test result of ≤6 cfm across systems or ≤4 cfm without air handler. Rough-in test verification may need to occur during Framing Inspection. | _____ cfm | _____ cfm | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.1.1 [FI9][2] | Programmable thermostats installed on forced air furnaces. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement is not applicable. |
| 403.1.2 [FI10][2] | Heat pump thermostat installed on heat pumps. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 403.4 [FI11][2] | Circulating service hot water systems have automatic or accessible manual controls. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 404.1 [FI6][1] | 50% of lamps in permanent fixtures are high efficacy lamps. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 401.3 [FI7][2] | Compliance certificate posted. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| 303.3 [FI18][3] | Manufacturer manuals for mechanical and water heating equipment have been provided. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

| | | | | | |
|---|---|---|---|---|---|
| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

| | | | | | |
|---|---|---|---|---|---|
| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/12/17

# 2009 IECC Energy Efficiency Certificate

| Insulation Rating | R-Value |
|---|---|
| Above-Grade Wall | 52.30 |
| Below-Grade Wall | 18.00 |
| Floor | 0.00 |
| Ceiling / Roof | 104.00 |
| Ductwork (unconditioned spaces): | _____ |

| Glass & Door Rating | U-Factor | SHGC |
|---|---|---|
| Window | 0.35 | |
| Door | 0.35 | |
| Skylight | 0.55 | |

| Heating & Cooling Equipment | Efficiency |
|---|---|
| Heating System:_____ | _____ |
| Cooling System:_____ | _____ |
| Water Heater:_____ | _____ |

**Name:** _____ **Date:**_____

**Comments**