Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/02/17

Generated by RES*check-Web* Software

Compliance Certificate

Project 380 Danforth St.

Energy Code:	**2009 IECC**
Location:	**Portland, Maine**
Construction Type:	**Multi-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 0 deg. from North**
Conditioned Floor Area:	**4,286 ft2**
Glazing Area	**53%**
Climate Zone:	**6 (7378 HDD)**
Permit Date:	
Permit Number:	

Construction Site: Owner/Agent: Designer/Contractor:

Compliance: Passes using UA trade-off

Compliance: **11.2% Better Than Code** Maximum UA: **627** Your UA: **557**

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: Flat or Scissor Truss	1,678	60.0	0.0	0.024	38
Skylight: Vinyl Frame, Double Pane	76			0.420	32
Ceiling: Cathedral	787	56.0	0.0	0.019	15
Floor: All-Wood Joist/Truss Over Uncond. Space	2,312	21.8	0.0	0.043	99
Wall: Wood Frame, 24in. o.c. Orientation: Unspecified	2,077	33.7	0.0	0.044	43
Window: Vinyl Frame, Double Pane Orientation: Unspecified	1,017			0.300	305
Door: Glass Orientation: Unspecified	92			0.270	25

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

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RES*check* Software Version 5.5.0

Inspection Checklist

Energy Code: 2009 IECC

Requirements: 96.0% 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. **Location on plans/spec:** R-values and pertinent information identified in Assembly notes of detail drawings.
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. **Location on plans/spec:** Sizing to be finalized by installer through a Design/Build process

Additional Comments/Assumptions:

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

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	Foundation Inspection	Complies?	Comments/Assumptions
	. protective covering is installed to rotect exposed exterior insulation and extends a minimum of 6 in. below grade.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** N/A. Please refer to section drawings. The only exposed insulation is located below the concrete slab and at interior face of footlings.
403.8 [FO12][2]	Snow- and ice-melting system controls installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.

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	raming / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.3.3, 402.5 [FR2][1]	lazing U-factor (area-weighted verage).	U-_____	U-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies 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. **Location on plans/spec:** Refer to window/door schedule for basis of design window U-factors. Final doors are yet to be selected, however, the target U-value is 0.27min.
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	Requirement will be met.
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	**Location on plans/spec:** Dampers not required

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	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
	ll installed insulation is labeled r the installed R-values provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
402.1.1, 402.2.5, 402.2.6 [IN1][1]	Floor insulation R-value.	R-_____ ☐ Wood ☐ Steel	R-_____ ☐ Wood ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2, 402.2.6 [IN2][1]	Floor insulation installed per manufacturer's instructions, and in substantial contact with the underside of the subfloor.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** See A-4.0
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-_____ ☐ Wood ☐ Mass ☐ Steel	R-_____ ☐ Wood ☐ Mass ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2 [IN4][1]	Wall insulation is installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
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 Assemblies 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. **Location on plans/spec:** Location identified on A-1.2. Hatch specified Basis of Design: E-Z Hatch Access Door Standard R-50
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. **Location on plans/spec:** 0.60 ACH50 is the project's target air tightness per our specifications
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. **Location on plans/spec:** Lighting supplier quote/specification list can be submitted upon request.
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.

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2009 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
Above-Grade Wall	33.70
Below-Grade Wall	0.00
Floor	21.80
Ceiling / Roof	60.00
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
Window	0.30	
Door	0.27	
Skylight	0.42	

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

Name: _____ **Date:**_____

Comments