



Compliance Certificate

Project Ansel Residence

Energy Code: **2009 IECC**
 Location: **Portland, Maine**
 Construction Type: **Single-family**
 Project Type: **Addition**
 Climate Zone: **6 (7378 HDD)**
 Permit Date:
 Permit Number: **2015-00370**

Construction Site:
 11 Orchard Street
 Portland, ME 04101

Owner/Agent:
 Elise Ansel
 5 Orchard Street
 Portland, ME 04101
 (207) 837-0825
 eliseansel@gmail.com

Designer/Contractor:
 Mark Mueller Architects
 100 Commercial Street
 Suite 205
 Portland, ME 04101
 207.774.9057
 rfi@muellerarchitects.com

Compliance: Passes using UA trade-off

Compliance: **15.2% Better Than Code** Maximum UA: **607** Your UA: **515**

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
1st Floor Walls: Wood Frame, 16" o.c.	1,614	28.0	0.0	0.050	63
1st Floor Windows: Wood Frame:Double Pane with Low-E	221			0.280	62
1st Floor Swing Doors: Glass	42			0.320	13
1st Floor Lift & Slide Door: Glass	96			0.290	28
2nd Floor Walls: Wood Frame, 16" o.c.	499	28.0	0.0	0.050	20
2nd Floor Windows: Wood Frame:Double Pane with Low-E	105			0.280	29
Basement Walls: Solid Concrete or Masonry Wall height: 8.5' Depth below grade: 8.4' Insulation depth: 8.5'	1,607	21.0	0.0	0.040	57
Basement Windows: Wood Frame:Double Pane with Low-E	36			0.280	10
Basement Swing Door: Solid	21			0.320	7
Overhead Door: Solid	126			0.210	26
New Conc. Slab: Slab-On-Grade:Unheated Insulation depth: 6.0'	113		10.0	0.684	77
1st Floor System: All-Wood Joist/Truss:Over Unconditioned Space	1,614	31.0	0.0	0.032	52
2nd Floor Ceiling: Cathedral Ceiling	1,614	42.0	0.0	0.025	38
Skylight 1: Metal Frame:Double Pane with Low-E	75			0.440	33

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 REScheck Version 4.6.1 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Name - Title

Signature

Date



Inspection Checklist

Energy Code: 2009 IECC

Requirements: 51.0% were addressed directly in the REScheck 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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
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 _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO1] ¹	Slab edge insulation R-value.	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2, 402.2.8 [FO2] ¹	Slab edge insulation installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.1.1 [FO3] ¹	Slab edge insulation depth/length.	____ ft	____ ft	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
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-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2 [FO5] ¹	Conditioned basement wall insulation installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement is not applicable.
403.8 [FO12] ²	Snow- and ice-melting system controls installed.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1] ¹	Door U-factor.	U-____	U-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] ¹	Glazing U-factor (area-weighted average).	U-____	U-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.1.1, 402.3.3, 402.5 [FR5] ¹	Skylight U-factor.	U-____	U-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.3 [FR15] ³	Building cavities are not used for supply ducts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.3 [FR17] ²	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to ≥R-3.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [FR18] ²	Circulating service hot water pipes are insulated to R-2.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.5 [FR19] ²	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] ²	All installed insulation is labeled or the installed R-values provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.1.1, 402.2.5, 402.2.6 [IN1] ¹	Floor insulation R-value.	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.1.1, 402.2.4, 402.2.5 [IN3] ¹	Wall insulation R-value. If this is a mass wall with at least 1/2 of the wall insulation on the wall exterior, the exterior insulation requirement applies.	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2 [IN4] ¹	Wall insulation is installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2 [F11] 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 ft ² or 20% (whichever is less) where sufficient space is not available.	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.1.1.1, 303.2 [F12] ¹	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft ² .			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.2.3 [F13] ¹	Attic access hatch and door insulation ≥R-value of the adjacent assembly.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.4.2, 402.4.2.1 [F17] 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 = ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
403.2.2 [F14] 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	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.1 [F19] ²	Programmable thermostats installed on forced air furnaces.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.2 [F110] ²	Heat pump thermostat installed on heat pumps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [F111] ²	Circulating service hot water systems have automatic or accessible manual controls.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
404.1 [F16] ¹	50% of lamps in permanent fixtures are high efficacy lamps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
401.3 [F17] ²	Compliance certificate posted.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
303.3 [F118] ³	Manufacturer manuals for mechanical and water heating equipment have been provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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2009 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
Above-Grade Wall	28.00
Below-Grade Wall	21.00
Floor	31.00
Ceiling / Roof	42.00
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
Window	0.28	
Door	0.21	
Skylight	0.44	

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

Name: _____ Date: _____

Comments