

### Project

28 Federal Street

Energy Code:
Location:
Construction Type:
Project Type:
Climate Zone:
Permit Date:
Permit Number:

Construction Site: 28 Federal Street Portland, ME 4101 2009 IECC Portland, Maine Multi-family Addition 6 (7378 HDD)

> Owner/Agent: Liv Chase Sunny Time Solar P.O. Box 15372 Portland, ME 04112 2075224345 livchase@yahoo.com

Maximum UA: 612

Designer/Contractor: Hiroko Lindsey Lindsey Architects, LLC 4 Market Place Drive Suite 201B York, ME 03109 2076419739 hiroko@lindseyarchitects.com

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

Compliance: 12.7% Better Than Code

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 1: Flat Ceiling or Scissor Truss	968	49.0	0.0	0.026	25
Wall 1: Wood Frame, 16" o.c.	4,713	21.0	0.0	0.057	219
Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E	649			0.260	169
Door 1: Glass	224			0.260	58
Floor 1: Slab-On-Grade:Unheated Insulation depth: 4.0'	92		10.0	0.684	63

Your UA: 534

*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 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title

Signature

Date

# REScheck Software Version 4.6.2 Inspection Checklist

Energy Code: 2009 IECC

Requirements: 0.0% 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] <sup>1</sup> ©	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			□Complies □Does Not □Not Observable □Not Applicable	
103.2, 403.7 [PR3] <sup>1</sup>	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	
403.6 [PR2] <sup>2</sup>	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	

Additional Comments/Assumptions:

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO1] <sup>1</sup>	Slab edge insulation R-value.	R Unheated Heated	R Unheated Heated	□Complies □Does Not □Not Observable □Not Applicable	<i>See the Envelope Assemblies table for values.</i>
303.2, 402.2.8 [FO2] <sup>1</sup>	Slab edge insulation installed per manufacturer's instructions.			□Complies □Does Not □Not Observable □Not Applicable	
402.1.1 [FO3] <sup>1</sup>	Slab edge insulation depth/length.	ft	ft	□Complies □Does Not □Not Observable □Not Applicable	<i>See the Envelope Assemblies table for values.</i>
303.2.1 [FO11] <sup>2</sup>	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	
403.8 [FO12] <sup>2</sup>	Snow- and ice-melting system controls installed.			□Complies □Does Not □Not Observable □Not Applicable	

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

Section	Framing / Dough In Increation	Plans Verified	Field Verified	Complias2	Commonte/Accountions
# & Req.ID	Framing / Rough-In Inspection	Value	Value	Complies?	Comments/Assumptions
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] <sup>1</sup>	Glazing U-factor (area-weighted average).	U	U	□Complies □Does Not □Not Observable □Not Applicable	<i>See the Envelope Assemblies table for values.</i>
303.1.3 [FR4] <sup>1</sup> ③	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	
402.4.4 [FR20] <sup>1</sup>	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	
402.4.5 [FR16] <sup>2</sup>	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate $\leq$ 2.0 cfm leakage at 75 Pa.			□Complies □Does Not □Not Observable □Not Applicable	
403.2.1 [FR12] <sup>1</sup> ③	Supply ducts in attics are insulated to $\geq$ R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to $\geq$ R-6.	R R	R R	□Complies □Does Not □Not Observable □Not Applicable	
403.2.2 [FR13] <sup>1</sup> ③	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	
403.2.3 [FR15] <sup>3</sup>	Building cavities are not used for supply ducts.			Complies Does Not Not Observable Not Applicable	
403.3 [FR17] <sup>2</sup>	HVAC piping conveying fluids above 105 $^{\circ}$ F or chilled fluids below 55 $^{\circ}$ F are insulated to $\geq$ R- 3.	R	R	□Complies □Does Not □Not Observable □Not Applicable	
403.4 [FR18] <sup>2</sup>	Circulating service hot water pipes are insulated to R-2.	R	R	□Complies □Does Not □Not Observable □Not Applicable	
403.5 [FR19] <sup>2</sup>	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			□Complies □Does Not □Not Observable □Not Applicable	

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] <sup>2</sup>	All installed insulation is labeled or the installed R-values provided.			□Complies □Does Not □Not Observable □Not Applicable	
402.1.1, 402.2.4, 402.2.5 [IN3] <sup>1</sup>	Wall insulation R-value. If this is a mass wall with at least $\frac{1}{2}$ 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] <sup>1</sup> ©	Wall insulation is installed per manufacturer's instructions.			□Complies □Does Not □Not Observable □Not Applicable	

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2 [FI1] <sup>1</sup>	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 <sup>2</sup> 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] <sup>1</sup> ©	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft <sup>2</sup> .			Complies Does Not Not Observable	
402.2.3 [FI3] <sup>1</sup> <sup>(2)</sup>	Attic access hatch and door insulation $\geq$ R-value of the adjacent assembly.	R	R	□Complies □Does Not □Not Observable □Not Applicable	
402.4.2, 402.4.2.1 [FI17] <sup>1</sup>	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	
403.2.2 [FI4] <sup>1</sup>	Post construction duct tightness test result of $\leq 8$ cfm to outdoors, or $\leq 12$ cfm across systems. Or, rough-in test result of $\leq 6$ cfm across systems or $\leq 4$ cfm without air handler. Rough-in test verification may need to occur during Framing Inspection.	cfm	cfm	□Complies □Does Not □Not Observable □Not Applicable	
403.1.1 [FI9] <sup>2</sup>	Programmable thermostats installed on forced air furnaces.			Complies Does Not Not Observable Not Applicable	
403.1.2 [FI10] <sup>2</sup>	Heat pump thermostat installed on heat pumps.			Complies Does Not Not Observable Not Applicable	
403.4 [FI11] <sup>2</sup>	Circulating service hot water systems have automatic or accessible manual controls.			Complies Does Not Not Observable Not Applicable	
404.1 [FI6] <sup>1</sup> ම	50% of lamps in permanent fixtures are high efficacy lamps.			Complies Does Not Not Observable Not Applicable	
401.3 [FI7] <sup>2</sup>	Compliance certificate posted.			Complies Does Not Not Observable Not Applicable	
303.3 [FI18] <sup>3</sup> ම	Manufacturer manuals for mechanical and water heating equipment have been provided.			Complies Does Not Not Observable Not Applicable	

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

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

# 2009 IECC Energy Efficiency Certificate

Insulation Rating	R-Value	
Above-Grade Wall	21.00	
Below-Grade Wall	0.00	
Floor	10.00	
Ceiling / Roof	49.00	
Ductwork (unconditioned spaces):		
Glass & Door Rating	U-Factor	SHGC
Window	0.26	
Door	0.26	
Heating & Cooling Equipment	Efficiency	
Heating System:		
Cooling System:		
Water Heater:		
Name:	Date:	
Comments		