

Project Summit 14R

Energy Code:

Location:

Construction Type:

Project Type:

2015 IECC

Huntsville, Utah

Single-family

New Construction

Conditioned Floor Area: **1,586 ft2** Glazing Area **61%**

Climate Zone: 5 (8065 HDD)

Permit Date: Permit Number:

Construction Site:

Ridge Nest 14 at Summit Powder

Mountain Eden, UT 84310 Owner/Agent: Ciprian Morar 60 Water Street Brooklyn, NY 11201 650.380.8261

ciprian@lateral-inc.com

Designer/Contractor: Hunter Gundersen Imbue Design 741 S 400 W

Salt Lake City, UT 84101 801.631.6911 hunter@imbue.design

Compliance: Passes using UA trade-off

Compliance: 16.1% Better Than Code Maximum UA: 508 Your UA: 426

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
Wall: Upper North: Wood Frame, 16" o.c.	310	20.4	12.0	0.033	0
Window 1: Wood Frame:Double Pane with Low-E	300			0.280	84
Wall: Upper East: Wood Frame, 16" o.c.	204	20.4	12.0	0.033	0
Windows 2 + 3: Wood Frame:Double Pane with Low-E	160			0.280	45
Door 1: Glass	32			0.320	10
Wall: Upper South: Wood Frame, 16" o.c.	310	20.4	12.0	0.033	10
Wall: Upper West: Wood Frame, 16" o.c.	312	20.4	12.0	0.033	5
Window 4 + 4A + 5: Wood Frame:Double Pane with Low-E	151			0.280	42
Wall: Upper Below Grade East: Solid Concrete or Masonry Wall height: 8.0' Depth below grade: 6.5' Insulation depth: 8.0'	142	20.4	0.0	0.046	7
Wall: Upper Below Grade South: Solid Concrete or Masonry Wall height: 8.0' Depth below grade: 8.0' Insulation depth: 8.0'	312	20.4	0.0	0.041	13
Wall: Upper Below Grade West: Solid Concrete or Masonry Wall height: 8.0' Depth below grade: 3.0' Insulation depth: 8.0'	76	20.4	0.0	0.055	4

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Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Wall: Lower North: Solid Concrete or Masonry:Interior Insulation	323	20.4	0.0	0.057	5
Window 7 + 8 + 9: Wood Frame:Double Pane with Low-E	204			0.280	57
Door 4: Glass	24			0.320	8
Wall: Lower Below Grade East: Solid Concrete or Masonry Wall height: 9.0' Depth below grade: 6.0' Insulation depth: 9.0'	200	20.4	0.0	0.048	10
Wall: Lower Below Grade South: Solid Concrete or Masonry Wall height: 9.0' Depth below grade: 9.0' Insulation depth: 9.0'	323	20.4	0.0	0.040	13
Wall: Lower Below Grade West: Solid Concrete or Masonry Wall height: 9.0' Depth below grade: 4.5' Insulation depth: 9.0'	200	20.4	0.0	0.052	10
Window 6: Wood Frame:Double Pane with Low-E	16			0.280	4
Floor: Upper at Overhangs: All-Wood Joist/Truss:Over Outside Air	101	60.0	0.0	0.018	2
Floor: Basement Slab: Slab-On-Grade:Heated Insulation depth: 6.0'	120		16.0	0.649	78
Ceiling: Upper: Cathedral Ceiling	882	60.0	6.0	0.016	14
Ceiling: Lower: Cathedral Ceiling	325	60.0	6.0	0.016	5

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 2015 IECC requirements in REScheck Version 4.6.4 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Hunter Gundersen - Designer		6.22.18
Name - Title	Signature	Date

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REScheck Software Version 4.6.4 Inspection Checklist Energy Code: 2015 IECC

Requirements: 42.0% 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
103.1, 103.2 [PR1] ¹	Construction drawings and documentation demonstrate energy code compliance for the building envelope. Thermal envelope represented on construction documents.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. Location on plans/spec: A3.2 / A, A3.2 / B, A3.2 / C
103.1, 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 IECC Commercial Provisions.			□Complies □Does Not □Not Observable □Not Applicable	
302.1, 403.7 [PR2] ²	Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official.	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) 3 Low Impact (Tier 3)

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Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.2 [FO1] ¹	Slab edge insulation R-value.	R Unheated Heated	R Unheated Heated	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
402.1.2 [FO3] ¹	Slab edge insulation depth/length.	ft	ft	□Complies □Does Not □Not Observable □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	R R	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies 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. Location on plans/spec: A3.2 - note 8
402.2.9 [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	Exception: Requirement is not applicable.
403.9 [FO12] ²	Snow- and ice-melting system controls installed.			□Complies □Does Not □Not Observable □Not Applicable	

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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.1, 402.3.3, 402.3.6, 402.5 [FR2] ¹	Glazing U-factor (area-weighted average).	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: A2.2 - note 8
402.4.1.1 [FR23] ¹	Air barrier and thermal barrier installed per manufacturer's instructions.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. Location on plans/spec: A3.2 - note 4.
402.4.3 [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. Location on plans/spec: E1.0 - note 19, E1.1 note 19
403.2.1 [FR12] ¹	Supply and return ducts in attics insulated >= R-8 where duct is >= 3 inches in diameter and >= R-6 where < 3 inches. Supply and return ducts in other portions of the building insulated >= R-6 for diameter >= 3 inches and R-4.2 for < 3 inches in diameter.			□Complies □Does Not □Not Observable □Not Applicable	
403.3.3.5 [FR15] ³	Building cavities are not used as ducts or plenums.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.4 [FR17] ²	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to ≥R- 3.	R	R	□Complies □Does Not □Not Observable □Not Applicable	
403.4.1 [FR24] ¹	Protection of insulation on HVAC piping.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.5.3 [FR18] ²	Hot water pipes are insulated to ≥R-3.	R	R	□Complies □Does Not □Not Observable □Not Applicable	
403.6 [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. Location on plans/spec: M1.0 - note 19

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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.			□Complies □Does Not	Requirement will be met.
•				□Not Observable □Not Applicable	
402.1.1, 402.2.6 [IN1] ¹	Floor insulation R-value.	R ☐ Wood ☐ Steel	R Wood Steel	□Complies □Does Not □Not Observable	See the Envelope Assemblies table for values.
•				□Not Applicable	
303.2, 402.2.7 [IN2] ¹	Floor insulation installed per manufacturer's instructions and in substantial contact with the underside of the subfloor, or floor framing cavity insulation is in			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. Location on plans/spec: A3.2 - note 10
	contact with the top side of sheathing, or continuous insulation is installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.				
402.1.1, 402.2.5, 402.2.6 [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 (FR10).	R	R	□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. Location on plans/spec: A3.2 - note 11

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2, 402.2.6 [FI1] ¹	Ceiling insulation R-value.	R	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 ft ² .			Complies Does Not Not Observable Not Applicable	Requirement will be met. Location on plans/spec: A3.2 - note 12
402.2.3 [FI22] ²	Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Exception: Requirement is not applicable.
402.2.4 [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: N/A
402.4.1.2 [FI17] ¹	Blower door test @ 50 Pa. <=5 ach in Climate Zones 1-2, and <=3 ach in Climate Zones 3-8.	ACH 50 =	ACH 50 =	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. Location on plans/spec: G1.1 - note 15
402.4.2 [FI8] ²	Wood-burning fireplaces have tight fitting flue dampers and outdoor air for combustion.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. Location on plans/spec: G1.1 - note 17, M1.0 - note 20
403.2.3 [FI4] ¹	Duct tightness test result of <=4 cfm/100 ft2 across the system or <=3 cfm/100 ft2 without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection.	cfm/100 ft ²	cfm/100	□Complies □Does Not □Not Observable □Not Applicable	
403.3.2 [FI27] ¹	Ducts are pressure tested to determine air leakage with either: Rough-in test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the system including the manufacturer's air handler enclosure if installed at time of test. Postconstruction test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the entire system including the manufacturer's air handler enclosure.	ft ² cfm/100	tt ² cfm/100	□Complies □Does Not □Not Observable □Not Applicable	
403.3.2.1 [FI24] ¹	Air handler leakage designated by manufacturer at <=2% of design air flow.			□Complies □Does Not □Not Observable □Not Applicable	
403.1.1 [FI9] ²	Programmable thermostats installed for control of primary heating and cooling systems and initially set by manufacturer to code specifications.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.1.2 [FI10] ²	Heat pump thermostat installed on heat pumps.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.5.1 [FI11] ²	Circulating service hot water systems have automatic or accessible manual controls.			□Complies □Does Not □Not Observable □Not Applicable	
403.6.1 [FI25] ²	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.			□Complies □Does Not □Not Observable □Not Applicable	
403.2 [FI26] ²	Hot water boilers supplying heat through one- or two-pipe heating systems have outdoor setback control to lower boiler water temperature based on outdoor temperature.			□Complies □Does Not □Not Observable □Not Applicable	
403.5.1.1 [FI28] ²	Heated water circulation systems have a circulation pump. The system return pipe is a dedicated return pipe or a cold water supply pipe. Gravity and thermossyphon circulation systems are not present. Controls for circulating hot water system pumps start the pump with signal for hot water demand within the occupancy. Controls automatically turn off the pump when water is in circulation loop is at set-point temperature and no demand for hot water exists.			□Complies □Does Not □Not Observable □Not Applicable	
403.5.1.2 [FI29] ²	Electric heat trace systems comply with IEEE 515.1 or UL 515. Controls automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping.			□Complies □Does Not □Not Observable □Not Applicable	
403.5.2 [FI30] ²	Water distribution systems that have recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold water supply pipe have a demand recirculation water system. Pumps have controls that manage operation of the pump and limit the temperature of the water entering the cold water piping to 104°F.			□Complies □Does Not □Not Observable □Not Applicable	
403.5.4 [FI31] ²	Drain water heat recovery units tested in accordance with CSA B55.1. Potable water-side pressure loss of drain water heat recovery units < 3 psi for individual units connected to one or two showers. Potable water-side pressure loss of drain water heat recovery units < 2 psi for individual units connected to three or more showers.			□Complies □Does Not □Not Observable □Not Applicable	
404.1 [FI6] ¹	75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps. Does not apply to low-voltage lighting.			□Complies □Does Not □Not Observable □Not Applicable	
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404.1.1 [FI23] ³	Fuel gas lighting systems have no continuous pilot light.			☐Complies ☐Does Not ☐Not Observable	
401.3	Compliance certificate posted.			□Not Applicable □Complies	Requirement will be met.
[FI7] ²				□Does Not □Not Observable □Not Applicable	Location on plans/spec: A3.2 - A
303.3 [FI18] ³	Manufacturer manuals for mechanical and water heating systems have been provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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Insulation Rating	R-Value	
Above-Grade Wall	32.35	
Below-Grade Wall	20.35	
Floor	16.00	
Ceiling / Roof	66.00	
Ductwork (unconditioned spaces):		
Glass & Door Rating	U-Factor	SHGC
Window	0.28	
Door	0.32	
Heating & Cooling Equipment	Efficiency	
Heating System:		
Cooling System:	_	
Water Heater:		
Name:	Date:	

Comments