

Project

| Energy Code: | 2021 IECC |
|--------------------|--------------------------|
| Location: | Ocean County, New Jersey |
| Construction Type: | Single-family |
| Project Type: | Addition |
| Climate Zone: | 4 (5499 HDD) |
| Permit Date: | |
| Permit Number: | |

Construction Site:

Owner/Agent: Addition Designer/Contractor: Architectural Plans

Compliance: Passes using UA trade-off

 Compliance:
 0.5% Better Than Code
 Maximum UA:
 197
 Your UA:
 196
 Maximum SHGC:
 0.40
 Your SHGC:
 0.25

 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.
 It option
 It option

Slab-on-grade tradeoffs are no longer considered in the UA or performance compliance path in REScheck. Each slab-on-grade assembly in the specified climate zone must meet the minimum energy code insulation R-value and depth requirements.

Envelope Assemblies

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Prop. U-Factor | Req. U-Factor | Prop. UA | Req. UA |
|--|-------------------------------|-------------------|------------------|-------------------|------------------|-------------|------------|
| Ceiling area of home forming top of insulation envelope: Flat Ceiling or Scissor Truss | 1,701 | 60.0 | 0.0 | 0.024 | 0.024 | 41 | 41 |
| Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c. | 1,570 | 30.0 | 0.0 | 0.049 | 0.045 | 61 | 56 |
| Energy efficient door unit: Solid Door (under 50% glazing) | 21 | | | 0.200 | 0.300 | 4 | 6 |
| 20 min fire door: Solid Door (under 50% glazing) | 21 | | | 0.200 | 0.300 | 4 | 6 |
| Energy efficient door unit: Glass Door (over 50% glazing) SHGC: 0.25 | 42 | | | 0.300 | 0.300 | 13 | 13 |
| Window area of home using energy efficient units: Vinyl Frame SHGC: 0.25 | 251 | | | 0.290 | 0.300 | 73 | 75 |
| Floor area over unconditioned space forming the bottom of the insulation envelope.: Slab-On-Grade (Unheated) Insulation depth: 4.0' | 170 | | 10.0 | 0.640 | 0.640 | 0 | 0 |

Insulation position: Horizontal Insulation

Additional Efficiency Package(s)

Not applicable

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 2021 IECC requirements in REScheck Version : REScheck-Web and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Name - Title

Signature

Date

REScheck Software Version : REScheck-Web Inspection Checklist

Energy Code: 2021 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 |
|--|---|--|--|--|----------------------|
| 103.1, 103.2 [PR1] ¹ @ | Construction drawings and documentation demonstrate energy code compliance for the building envelope. Thermal envelope and energy compliance path represented on construction documents. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 103.1, 103.2, 403.8 [PR3] ¹ 9 | 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)

| 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 | <i>See the Envelope Assemblies table for values.</i> |
| 303.2, 402.2.10 [FO2] ¹ © | Slab edge insulation installed per manufacturer's instructions. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 402.1.2 [FO3] ¹ | 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] 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 | |
| 403.9 [FO12] ² | Snow and ice-melting system controls installed to shut off system when pavement temperature > 50F and no precipitation. | | | □Complies □Does Not □Not Observable □Not Applicable | |

1 High Impact (Tier 1) 2

2 Medium Impact (Tier 2)

| Section # & Reg.ID | Framing / Rough-In Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|--|-------------------------|-------------------------|--|--|
| 402.1, 402.3.4 [FR1] ¹ | Door U-factor. | U | U | □Complies □Does Not | See the Envelope Assemblies table for values. |
| 0 | | | | □Not Observable □Not Applicable | |
| 402.1, 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 | <i>See the Envelope Assemblies table for values.</i> |
| 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 | |
| 402.4.1.1 [FR23] ¹ | Air barrier and thermal barrier installed per manufacturer's instructions. | | | Complies Does Not Not Observable Not Applicable | |
| 402.4.3 [FR20] ¹ (3) | 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] ² | 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 | |
| 403.3.1 [FR12] ¹ ③ | Supply and return ducts in attics insulated >= R-8 where duct is >= 3 inches in diameter and >= R-6 where < 3 inches. | | | Complies Does Not Not Observable Not Applicable | |
| 403.3.4 [FR13] ¹ (3) | Ducts, air handlers and filter boxes are sealed with joints/seams compliant with International Mechanical Code or International Residential Code, as applicable. | | | Complies Does Not Not Observable Not Applicable | |
| 403.3.7 [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 $^{\circ}$ F or chilled fluids below 55 $^{\circ}$ F are insulated to \geq R- 3. | R | R | □Complies □Does Not □Not Observable □Not Applicable | |
| 403.4.1 [FR24] ¹ ③ | Protection of insulation on HVAC piping. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 402.4.6 [FR29] ³ | Electrical and communication boxes installed in the thermal boundary of the envelope sealed to limit air leakage between conditioned and unconditioned spaces. | | | Complies Does Not Not Observable Not Applicable | |

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

| Section # & Req.ID | Framing / Rough-In Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|--------------------------------|---|-------------------------|-------------------------|--|----------------------|
| 403.5.2 [FR18] ² | Hot water pipes are insulated to ≥R-3. | R | R | □Complies □Does Not | |
| 0 | | | | □Not Observable □Not Applicable | |
| 403.6 [FR19] ² | Automatic or gravity dampers are installed on all outdoor air intakes and exhausts for mechanical ventilation systems. | | | Complies Does Not Not Observable Not Applicable | |
| 403.6.1 [FR30] ² | Ventilation systems in climate zones 7 & 8 shall utilize heat or energy recovery | | | 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] ² | All installed insulation is labeled or the installed R-values provided. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 402.1, 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 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 | |

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, 402.2.1, 402.2.2, 402.2.6 [FI1] ¹ | Ceiling insulation R-value. | 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 ft ² . | | | Complies Does Not Not Observable Not Applicable | |
| 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 | |
| 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 | |
| 402.4.1.3 [FI17] ¹ | Blower door test @ 50 Pa. <=5.0 ach in Climate Zones 1-2, and <=3.0 ach in Climate Zones 3-8. | ACH 50 = | ACH 50 = | □Complies □Does Not □Not Observable □Not Applicable | |
| 403.3.5 [FI27] ¹ | Ducts are pressure tested in accordance with ANEI/RESNET/ICC 380 or ASTME1554 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. | cfm/100 ft ² | cfm/100 ft ² | Complies Does Not Not Observable Not Applicable | |
| 403.3.6 [FI4] ¹ | Duct tightness test result of <=4 cfm/100 ft2 across the system or <=3 cfm/100 ft2 without air handler @ 25 Pa. Duct tightness <= 8 cfm/100 ft2 for ducts within thermal envelope. For rough-in tests, verification may need to occur during Framing Inspection. | cfm/100 ft ² | cfm/100 ft ² | □Complies □Does Not □Not Observable □Not Applicable | |
| 403.3.4.1 [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 | |
| 403.5.1 [FI11] ² | Circulating service hot water systems have automatic or accessible manual controls. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| | 1 High Impact (Tier | 1) 2 Medium | Impact (Tier 2) | 3 Low Impact (Ti | er 3) |

| Section # & Req.ID | Final Inspection Provisions | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|--|--|-------------------------|-------------------------|--|----------------------|
| 403.2 [FI26] ² | Hot water boilers supplying heat through one- or two-pipe heating systems have automatic outdoor setback control to lower boiler water temperature based on outdoor temperature, indoor temperature or water temperature sensing. | | | □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 thermos- syphon 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 | |
| 403.5.3 [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 | |
| 403.6.2 [FI25] ² | All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits per Table R403.6.2. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 403.6.3 [FI33] ² | Mechanical ventilation systems tested and verified to meet the minimum flow rates required by Section R403.6. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 403.5.1.1. 1 [FI32] ² | Demand recirculation water systems have automatic controls to start pump when hot water is requested. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 404.1 [FI6] ¹ | 100% of permanent fixtures have high efficacy lamps. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 404.1.2 [FI23] ³ | Fuel gas lighting systems have no continuous pilot light. | | | □Complies □Does Not □Not Observable □Not Applicable | |

1 High Impact (Tier 1)

2 Medium Impact (Tier 2) 3

| Section # & Req.ID | Final Inspection Provisions | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|--------------------------------|---|-------------------------|-------------------------|--|----------------------|
| 404.1.1 [FI35] ³ | Exterior lighting for multifamily buildings shall comply with Section C405.4. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 404.2 [FI36] ³ | Permanent interior lighting shall be controlled with either a dimmer, occupancy sensor or other control built into the fixture. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 404.3 [FI37] ³ | Exterior lighting >= 30 watts shall have the following controls: manual on/off switch with automatic shut-off, automatic shut-off in daylight hours, and controls that override automatic shutoff that returns to automatic control within 24 hours. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 401.3 [FI7] ² | Compliance certificate posted with building specifications and compliance path and results. | | | □Complies □Does Not □Not Observable □Not Applicable | |
| 303.3 [FI18] ³ | Manufacturer manuals for mechanical and water heating systems have been provided. | | | □Complies □Does Not □Not Observable □Not Applicable | |

1 High Impact (Tier 1) 2

2 Medium Impact (Tier 2)



| Insulation Rating | R-Value | |
|----------------------------------|-----------------|------|
| Above-Grade Wall | 30.00 | |
| Below-Grade Wall | 0.00 | |
| Floor | 10.00 | |
| Ceiling / Roof | 60.00 | |
| Ductwork (unconditioned spaces): | | |
| Glass & Door Rating | U-Factor | SHGC |
| Window | 0.29 | 0.25 |
| Door | 0.30 | 0.25 |
| Heating & Cooling Equipment | Efficiency | |
| Heating System: | | |
| Cooling System: | | |
| Water Heater: | | |
| | | |
| Name: | Date: | |
| Comments | | |