Approach #1

Add definition as follows:

**COMPLIANCE DOCUMENTS.** Documents created to demonstrate compliance, that must be developed and reviewed prior to the issuance of the building permit or before certificate of occupancy is released.

**R101.5.1 Compliance materials.** The code official shall be permitted to approve specific computer software, worksheets, compliance manuals and other similar materials that meet the intent of this code.

Add new Section as Follows:

**R101.5.2 Compliance Documentation.** The *code official* is authorized to require *compliance documentation*, certificates, or reports prior to issuance of the building permit, the certificate of occupancy, or prior to passing inspection. The production of these documents shall be in support of demonstrating compliance with the applicable requirements, construction installation methods, or the energy compliance path being proffered.

**Modify the following section as follows:**

**R303.1.1 Building thermal envelope insulation.** An *R*-value identification mark shall be applied by the manufacturer to each piece of *building thermal envelope* insulation that is 12 inches (305 mm) or greater in width. Alternatively, the insulation installers shall provide a compliance certificate ~~ion~~ that indicates the type, manufacturer and *R*-value of insulation installed in each element of the *building thermal envelope*. For blown-in or sprayed fiberglass and cellulose insulation, the initial installed thickness, settled thickness, settled *R*-value, installed density, coverage area and number of bags installed shall be indicated on the certification. For sprayed polyurethane foam (SPF) insulation, the installed thickness of the areas covered, and the *R*-value of the installed thickness shall be indicated on the certification. For reflective insulation, the number of reflective sheet(s), the number and thickness of the enclosed reflective air space(s) and the R-value for the installed assembly, shall be listed on the certification. For insulated siding, the *R*-value shall be on a label on the product’s package and shall be indicated on the compliance certificate ~~ion~~. The insulation installer shall sign, date and post the compliance certificate ~~ion~~ in a conspicuous location on the job site for inspection.

**R303.1.2 Insulation mark installation.** Insulating materials shall be installed such that the manufacturer’s *R*-value mark is readily observable at inspection. For insulation materials that are installed without an observable manufacturer’s *R*-value mark, such as blown or draped products, an insulation compliance certificate complying with **Section R303.1.1** shall be left immediately after installation by the installer, in a conspicuous location for inspection within the building, to certify the installed *R*-value of the insulation material.

**Exception:** For roof insulation installed above the deck, the R-value shall be labeled as specified by the material standards in Table 1508.2 of the *International Building Code* or Table R906.2 of the *International Residential Code*, as applicable.

**R401.3 Compliance Certificate.** A permanent compliance certificate shall be completed by the builder or other *approved* party and posted on a wall in the space where the furnace is located, a utility room or an *approved* location inside the *building for inspection and as a permanent record*. Where located on an electrical panel, the compliance certificate shall not cover orobstruct the visibility of the circuit directory *label*, service disconnect *label* or other required labels. The compliance certificate shall indicate the following:

**R402.1.5 Component performance alternative.** Where the proposed total *building*

*thermal envelope thermal conductance*, is less than or equal to the required total building thermal envelope conductance using U-factors in **Table R402.1.2**, the *building* shall be considered to be in compliance with **Table R402.1.2**. The total thermal conductance shall be determined in accordance with Equation 4-1. Proposed *U*-factors and slab-on-grade *F*-factors shall be taken from ANSI/ASHRAE/IES Standard 90.1 Appendix A or determined using a method consistent with the ASHRAE *Handbook of Fundamentals* and shall include the thermal bridging effects of framing materials. In addition to UA total thermal conductance compliance, the SHGC requirements of **Table R402.1.2** and the maximum fenestration *U*-factors of **Section R402.6** shall be met.

**R402.1.5.1 *Compliance Documentation***. A proposed area weighted U-factor *compliance document* shall be produced and submitted to obtain the building permit. A confirmed area weighted U-factor *compliance document* shall be produced and submitted to obtain the certificate of occupancy. The *Compliance documentation* shall be signed by the builder or approved 3rd party who created the document. The document shall list the following:

1. Building street address, or other building site identification.
2. Declaration of the component performance alternative path on the title page of the energy report and the title page of the building plans.
3. The name and version of the compliance software tool.
4. A proposed report indicating compliance based on produced construction documents complies with Section R402.1.5.
5. A confirmed report and a statement indicating that the confirmed rated design of the built home complies with Section R402.1.5. The report shall report the energy features that were confirmed to be in the home, including component-level insulation *R*-values or *U*-factors.
6. Compliance document reports shall be signed by the individual performing the analysis and generating the report.

**R402.5.1.2 Testing.** The *building* or each *dwelling unit* in the building shall be tested for air leakage. The maximum air leakage rate for any *building* or *dwelling unit* under any compliance path shall not exceed 4.0 air changes per hour or 0.22 cfm/ ft2(1.1 L/s x m2) of building or dwelling unit enclosure area. Testing shall be conducted in accordance with **ANSI/RESNET/ICC 380**, **ASTM E779**, **ASTM E1827,** or ASTM E3158, and reported at a pressure differential of 0.2 inch water gauge (50 Pa). Where required by the *code official*, testing shall be conducted by an *approved* third. ~~A written~~ *Compliance documentation* ~~report~~ of the results of the test shall be signed by the party conducting the test and provided to the *code official.* Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope* have been sealed.

**R403.3.5 Duct system testing.** Each ducts system shall be tested for air leakage in accordance with **ANSI/RESNET/ICC 380** or **ASTM E1554** Total leakage shall be measured with a pressure differential of 0.1 inch w.g.(25 Pa) across the system. Registers shall be sealed during the test. A written Compliance report of the test results shall be signed by the party conducting the test and provided to the *code official*. Duct system leakage testing at either rough-in or post-construction shall be permitted.

**R403.3.6 Duct system leakage.** The total measured duct system leakage shall not be greater than the values in Table R403.3.6. For buildings complying with Section R405 or R406, where duct system leakage to outside is tested in accordance with ANSI/RESNET/ICC 380 or ASTM E1554, the leakage to outside value shall not be used for compliance with this section, but shall be permitted to be used in the calculation procedures of Section R405 and R406. A written Compliance report of the test results shall be signed by the party conducting the test and provided to the *code official*.

**R403.6.3 Testing.** Mechanical ventilation systems shall be tested and verified to provide the minimum ventilation flow rates required by **Section R403.6**, in accordance with ANSI//ICC 380. Where required by the code official, testing shall be conducted by an *approved* third party. A written compliance report of the results of the test shall be signed by the party conducting the test and provided to the code official.

**Exceptions:**

1. Kitchen range hoods that are ducted to the outside with 6-inch (152 mm) or larger

duct and not more than one 90-degree (1.57 rad) elbow or equivalent in the duct run, a length of 10ft (3048 mm) or less, and not more than two 90° elbows or equivalent shall not require testing.

2. A third-party test shall not be required where the ventilation system has an integrated diagnostic tool used for airflow measurement, programmable airflow settings, and a user interface that communicates the installed airflow rate. If such a system is used it shall be noted on the *compliance documentation* that is provided to the code official

**R404.4 Renewable energy certificate (REC) documentation** Where renewable energy generation is used to comply with this code, the *Compliance documentation* shall be provided to the *code* *official* by the property owner or owner’s authorized agent which demonstrates that where RECs or EACs are associated with that portion of renewable energy used to comply with this code, the RECs or EACs shall be retained, or retired, on behalf of the property owner.

**R405.3.2 *Compliance Documentation* ~~report~~.** Compliance software tools shall generate a Compliance report that documents that the *proposed design* complies with **Section R405.3**. A compliance report on the *proposed design* shall be submitted with the application for the building permit. Upon completion of the building, a confirmed compliance report based on the confirmed condition of the building shall be submitted to the *code official* before a certificate of occupancy is issued. Compliance reports shall include information in accordance with **Sections R405.3.2.1** and **R405.3.2.2**.

**R405.3.2.1 *Compliance* *Documentation* ~~report~~ for permit application.** A compliance report submitted with the application for building permit shall include the following:

1. Building street address, or other *building site* identification.

2. The name of the individual performing the analysis and generating the *compliance documentation* report.

3. The name and version of the compliance software tool.

4. Documentation of all inputs entered into the software used to produce the results for reference design and/or the rated home.

5. A certificate indicating that the proposed design complies with **Section R405.3**. The certificate shall document the building components’ energy specifications that are included in the calculation including: component-level insulation *R*-values or *U*-factors; duct system and building envelope air leakage testing assumptions; and the type and rated efficiencies of proposed heating, cooling, mechanical ventilation and service water-heating equipment to be installed. If on-site renewable energy systems will be installed, the compliance certificate shall report the type and production size of the proposed system.

6. Where a site-specific report is not generated, the proposed design shall be based on the worst-case orientation and configuration of the rated home.

**R405.3.2.2 *Compliance Documentation* ~~report~~ for certificate of occupancy.** A compliance report submitted for obtaining the certificate of occupancy shall include the following:

1. Building street address, or other building site identification.

2. Declaration of the simulated building performance path on the title page of the energy report and the title page of the building plans.

3. A statement, bearing the name of the individual performing the analysis and

generating the compliance report, indicating that the as-built building complies with **Section R405.3**.

4. The name and version of the compliance software tool.

5. A site-specific energy analysis report that is in compliance with **Section R405.3**.

6. A final confirmed compliance certificate indicating compliance based on inspection, and a statement indicating that the confirmed rated design of the built home complies with **Section R405.3**. The compliance certificate shall report the energy features that were confirmed to be in the home, including component-level insulation *R*-values or *U*-factors; results from any required duct system and building envelope air leakage testing; and the type and rated efficiencies of the heating, cooling, mechanical ventilation and service water-heating equipment installed.

7. When on-site renewable energy systems have been installed, the certificate shall report the type and production size of the installed system.

**R406.7 *Compliance Documentation*.** Documentation of the software used to determine the ERI and the parameters for the *residential building* shall be in accordance with **Sections R406.7.1** through **R406.7.4**.

**R406.7.1 Compliance software tools.** Software tools used for determining ERI shall be *Approved* Software Rating Tools in accordance with **RESNET/ICC 301**.

**R406.7.2 Compliance report.** Compliance software tools shall generate a *compliance documentation* ~~report~~ that documents that the home and the ERI score of the *rated design* complies with **Sections R406.2**, **R406.3** and **R406.4**. *Compliance documentation* shall be created for the proposed design and shall be submitted with the application for the building permit. Confirmed compliance documentation of the built *dwelling unit* shall be created and submitted to the code official for review before a certificate of occupancy is issued. Compliance reports shall include information in accordance with **Sections R406.7.2.1** and **R406.7.2.2**.

**R406.7.2.1 Proposed *compliance documentation* ~~report~~ for permit application.** *Compliance documentation* ~~reports~~ submitted with the application for a building permit shall include the following:

1. Building street address, or other *building site* identification.

2. Declare ERI on title page and building plans.

3. The name of the individual performing the analysis and generating the *compliance documentation* ~~report~~.

4. The name and version of the compliance software tool.

5. Documentation of all inputs entered into the software used to produce the results for the reference design and/or the rated home.

6. A certificate indicating that the proposed design has an ERI less than or equal to the appropriate score indicated in **Table R406.5** when compared to the ERI reference design. The certificate shall document the building component energy specifications that are included in the calculation, including: component level insulation *R-*values or *U*-factors; assumed duct system and building envelope air leakage testing results; and the type and rated efficiencies of proposed heating, cooling, mechanical ventilation, and service water-heating equipment to be installed. If on-site renewable energy systems will be installed, the certificate shall report the type and production size of the proposed system.

7. When ~~a~~ site-specific *Compliance Documentation* ~~report~~ is ~~not~~ generated, the proposed design shall be based on the worst-case orientation and configuration of the rated home.

**RB103.10 ~~Construction~~ *Compliance documentation* certificate.** A permanent compliance certificate, indicating the solar-ready zone and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.

**RC101.4 Compliance Certificate** [no change, same as R401.3]