Residential Inspection High Impact Checklist

Determine the Compliance Path for the project:

- Projects using the Prescriptive Path and using the U-factor alternative or Total UA alternative (R402.1.4 (5) must have documentation in the project file that provides the calculated insulation and window efficiencies.
- Projects using the R405 Simulated Performance Path or the R406 Energy Rating Index path must have a Compliance Report including Performance Path or ERI inspection checklists in the project files.
- If the alternative compliance documentation was not submitted and approved at Plan Review, the inspector must inspect the project as a prescriptive compliance project using the checklist below.

Phase	Code Requirement	What to look for
1. Plan Review	Construction drawings and documentation demonstrate energy code compliance for the building envelope, lighting and mechanical systems.	• For the correct code edition. • Review for unusual items like unusually high SEER ratings and HVAC efficiencies, wall and ceiling R-values over 15 & 38 respectively, unusually low SGHC and U-factors, unusually low duct leakage and blower door leakage values, <800 sq. ft. per ton of cooling, or other irregularities.
2. Plumbing Rough-in	Hot water lines insulated with minimum R-3. N1103.5/R403.5	• Inspect for insulation on hot water lines - 3/4" in diameter or larger, or any lines buried, under slab, supplying a recirculation system, piping to a manifold, or outside conditioned space.
3. Framing / Insulation Inspection	Window SGHC & U-factor, Door U-factor.	Check SGHC and U-factor numbers on NFRC labels. • In Climate Zone 2 you are looking for a U-factor ≤.40 and a SHGC ≤.25. • In Climate Zone 3 -U-factor ≤.35 and a SHGC ≤.25. • In Climate Zone 4 - U-factor ≤.35 and a SHGC ≤.40.
	Air and thermal barrier installed correctly and as per Table N1102.4.1.1/R402.4.1.1	• Air barrier must be continuous, with all penetrations sealed. If you can see daylight through the wall from the inside of the house, the air barrier is not sealed. • Attic "hot/knee walls" must have an approved air barrier on the attic side. • Base plates must be sealed to the floor, with foam used in headers, penetrations through top plate sealed, and gaps around the perimeter of windows sealed. • Can lights must be gasketed, air-tight and IC rated. • Corners and Ts must allow for insulation (California corners and ladder framed T's)

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	Insulation installed correctly. Table N1102.4.1.1/R402.4.1.1	• Check for proper R-value, no gaps, voids, compression of batts or misalignment. • Double check insulation is properly cut around wiring and other obstacles. • Blown-in fiberglass in walls should be firm to the touch. • HVAC walkways and other ceiling areas where blown may not reach are properly insulated, • Rim joists must be insulated, baffles installed at soffit vents. • Check that attic access hatches are sealed and insulated. • See this video for proper batt insulation installation: https://www.youtube.com/watch?v=OXSV1Ws-HCc
	Supply duct at least R-8, return duct at least R-6	• See that ducts are properly sealed, supported and installed per manufacturer's instructions • See this for more info: http://www.flexibleduct.org/images/ADC~IR5E.pdf
	Combustion air IRC G2407	• Check for outdoor combustion air to all fuel burning appliances and fireplaces.
4. Final	Ceiling insulation R-values and depth markers N1103.1.1/R303.1.1 Table N1102.1.2/R402.1.2	Confirm that the insulation corresponds with the R-value listed on permit documents: • In Climate Zones 2 & 3 R-38 minimum. • In Climate Zone 4 – R49 minimum. • Confirm eave baffles at vented rafter bays • Check for insulation certificate.
	Envelope and Duct Leakage Tests N1102.4/R402.4 N1103.3.3/R403.3.3	• Testing for leakage to outside is not acceptable for code compliance. • Envelope Leakage – Code requires ≤5ACH 50 in CZ2, and 3 ACH50 in CZ 3&4. • Duct leakage – Code requires total leakage ≤4 cfm per 100 square feet of conditioned floor area.
	Lighting N1104.1.1/R404.1.1	• At least 75% installed lighting high efficacy.
	HVAC and Water Heating Efficiency N1103.7?R403.7	• Check that HVAC and Water Heating equipment meets minimum national standards. • Confirm that installed equipment efficiency is the same as on plan submittal documents and on the mandatory posted certificate.
	Slab edge Insulation Table N1102.1.2/R402.1.2	• Climate Zone 4 requires a minimum R10 to depth of 2 feet .
	Energy Certificate N1103.1/R403.1	• Confirm that an Energy Certificate, completed and signed by builder or registered design professional, is posted.