

Green Building Energy Sustainability

2015 IECC Air Sealing Requirements

Component	Air Barrier Criteria	Insulation Criteria
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed	Air-permeable insulation shall not be used as a sealing method
Ceiling/attic	The air barrier in any drop ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access opening, drop down stairways, or knee wall doors to unconditioned attic spaces shall be sealed	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of the exterior wall shall be sealed. Knee walls shall be sealed	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of <u>R-3 per inch</u> minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier
Windows, skylights, and doors	The space between window/door jambs and framing and skylights and framing shall be sealed.	
Rim Joist	Rim joist shall include the air barrier	Rim Joist shall be insulated
Floors (including above garage and cantilevered floors)	The air barrier shall be at any exposed edge of insulation	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subflooring, or floor framing cavity insulation shall be permitted to be in contact with the top side of the sheathing or continuous insulation on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class 1 vapor retarder with overlapping joints taped	Where provided instead of floor insulation, insulation shall be permanently attached to the crawl space walls.

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Shaft, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed	
Narrow Cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space
Garage separations	Air sealing shall be provided between the garage and conditioned spaces	
Recessed Lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be airtight and IC rated.
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls or insulation that on installation readily conforms to available space shall extend behind piping and wiring
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated
Electrical/phone box on exterior walls	The air barrier shall be installed behind the electrical or communication boxes or air-sealed boxes shall be sealed	
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall	
Concealed sprinklers	When required to be sealed, concealed fire sprinkler shall be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings	