



TOWN OF VASSALBORO MAINE

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New Requirements of the International Energy Conservation Code for Residential Homes

Maine has adopted the 2015 IECC starting July 1, 2021. Maine has been using the 2009 IECC. This requires new measures in insulation and air sealing.

1. The insulation requirement for wood frame walls is R-20 now is changing to R-20+5 or R-13+10. The first value is cavity insulation of the amount between wall studs. The second value is continuous insulation or insulation which covers everything including the wall studs. The continuous insulation typically is one inch rigid foam installed on the building exterior under the siding. It can also be one inch rigid foam installed in the building interior under the drywall.
2. The insulation requirement for a basement or crawl space wall is R-10 now is changing to R 15/19 or R-15 continuous insulation on the interior or exterior of the foundation wall or R-19 cavity insulation on the interior of the foundation wall. Continuous insulation can be 3" rigid foam or 2" of spray foam. Foam insulation installed on the inside has to be fire protected with 15 minute paint, drywall or the use of thermax insulation. Cavity insulation typically requires wood framing adjacent to the foundation wall.
3. A blower door test is required to assure that air leakage from the home does not exceed 3 air exchanges per hour. You will have to hire an independent qualified professional to do this test. A written report of the results of the test shall be signed by the professional and provided to the Town's Building Inspector. Satisfactory results of this test is necessary before you can obtain authorization for residence / certificate of occupancy.
4. Table 402.4.1.1 (Air Barrier and Insulation Installation) from the IECC is provided to aid in the achievement of the air exchange rate of < 3 exchanges per hour.
5. A Whole House Mechanical Ventilation System is required by the 2015 International Residential Building Code due to the air exchange rate being less than 5 air exchanges per hour. This can possibly be achieved by retrofitting your bathroom(s) fans with timers. The party doing your blower door test may have some good advice on this issue.

**TABLE R402.4.1.1
AIR BARRIER AND INSULATION INSTALLATION**

COMPONENT	AIR BARRIER CRITERIA ^a	INSULATION INSTALLATION 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 material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs 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 exterior walls 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 R-3 per inch 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 joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
Floors (including above garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed 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 I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace walls.
Shafts, 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 separation	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 air tight 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 electrical or communication boxes or air-sealed boxes shall be installed.	
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 sprinklers shall only 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.	

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.