



**TABLE N1101.1(2)  
ADDITIONAL MEASURES**

MEASURE NUMBER	MEASURE DESCRIPTION
1	<b>HIGH-EFFICIENCY HVAC SYSTEM<sup>a</sup></b> a. Gas-fire furnace or boiler AFUE 94 percent, or b. Air source heat pump HSPF 10.0/14.0 SEER cooling or 8.5 HSPF2/ 15.0 SEER2, or c. Ground-source heat pump COP 3.5 or ENERGY STAR rated
2	<b>HIGH-EFFICIENCY WATER HEATING SYSTEM</b> a. Natural gas/propane water heater with minimum 0.90 UEF, or b. Electric heat pump water heater with minimum 3.45 UEF, or c. Natural gas/propane tankless/instantaneous heater with minimum 0.80 UEF and drain water heat recovery unit installed on a minimum of one shower/tub-shower.
3	<b>WALL INSULATION UPGRADE</b> Exterior walls- U-0.045/R-21 conventional framing with R-5.0 continuous insulation
4	<b>ADVANCED ENVELOPE</b> Windows - U-0.21 (Area-weighted average), and Flat ceiling <sup>b</sup> - U-0.017/R-60, and Framed floors -- U-0.026/R-38 or slab edge insulation to F-0.48 or less (R-10 for 48"; R-15 for 36" or R-5 fully insulated slab)
5	<b>DUCTLESS HEAT PUMP (Dwelling units with all-electric heat)</b> a. Provide ductless heat pump of minimum HSPF 10.0 or HSPF2 9.0 in primary zone replaces zonal electric heat sources, and b. Provide programmable thermostat for all heaters in bedrooms
6	<b>HIGH-EFFICIENCY THERMAL ENVELOPE UA<sup>c</sup></b> Proposed UA is 8 percent lower than the code UA
7	<b>2.75 ACH AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION</b> Achieve a maximum of 2.75 ACH50 whole-house air leakage when third-party tested and provide a whole-house ventilation system, including heat recovery with a minimum sensible heat recovery efficiency of not less than 66 percent and total fan efficacy of 1.6 CFM/Watt (combined input for supply and exhaust).

For SI: 1 square foot = 0.093 m<sup>2</sup>, 1 watt per square foot = 10.8 W/m<sup>2</sup>

- a. Appliances located within the building thermal envelope shall have sealed combustion air installed. Combustion air shall be ducted directly from the outdoors.
- b. The maximum vaulted ceiling surface area shall not be greater than 50 percent of the total heated space floor area unless vaulted area has a *U*-factor not greater than U-0.026.
- c. In accordance with Table N1104.1(1), the Proposed UA total of the Proposed Alternative Design shall be a minimum 8 percent less than the Code UA total of the Standard Base Case.