



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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November 2012 Motions for Rule Making Actions

Main Motion: Adopt 2012 Energy Code as proposed in WAC 51-11R and 51-11C; repeal WAC 51-11

Amendment to the main motion:

Amend Table A103.3.7.1(2) to include footnotes:

TABLE A103.3.7.1(2)
Default U-Factors for Concrete and Masonry Walls^{a, b, c, d}

Framing Type and Depth	Rated R-Value of Insulation Alone	Assembly U-Factors for Solid Concrete Walls	Assembly U-Factors for Concrete Block Walls: Solid Grouted	Assembly U-Factors for Concrete Block Walls: Partially Grouted (cores uninsulated except where specified)
(Table Values Remain As Proposed)				

Notes for Default Table A103.3.7.1(2)

- a. It is acceptable to use the U-factors in Table A103.3.7.1(2) for all concrete and masonry walls, provided that the grouting is equal to or less than that specified.
 - For ungrouted walls, use the partially-grouted column.
 - For metal studs and z-furring, use the continuous-metal-framing category.
 - For discontinuous metal clips 1 inch square or smaller, use the metal-clip category.
 - For insulation that is attached without any framing members (e.g. glued), use the continuous-insulation uninterrupted-by-framing category. Continuous insulation may be installed on the interior or exterior of masonry walls, or between stand-alone walls in multi-layer masonry walls, or on the interior or exterior of the concrete.
- b. For Table A103.3.7.1(2), the U-factor includes R-0.17 for exterior air film and R-0.68 for interior air film -vertical surfaces. For insulated walls, the U-factor also includes R-0.45 for 0.5 in. gypsum board. U-factors are provided for the following configurations:
 - 1) Concrete wall: 8-in. normal weight concrete wall with a density of 145 lb/ft³.

- 2) Solid grouted concrete block wall: 8-in. medium weight ASTM C90 concrete block with a density of 115 lb/ft³ and solid grouted cores.
- 3) Partially grouted concrete block wall: 8-in. medium weight ASTM C90 concrete block with a density of 115 lb/ft³ having reinforcing steel every 32 in. vertically and every 48 in. horizontally, with cores grouted in those areas only. Other cores are filled with insulating material only if there is no other insulation.
- c. For walls with insulation contained in a framing layer, the U-factors in Table A103.3.7.1(2) assume contact (and thermal bridging) between the mass wall and other framing. For wall assemblies with multiple layers where the wood or metal framing layer does not contact the concrete or masonry layer (i.e. walls with an airspace between the stud wall layer and the mass wall layer), it is acceptable to use the appropriate wood or metal frame wall default U-factors in Tables A103.3.1 or A103.3.6.1. Note it is acceptable to use this approach where the insulation extends beyond the framing and is in contact with the mass wall layer (e.g. a nominal four-inch metal stud containing insulation that is nominally six inches thick and therefore extends two inches beyond the back of the metal stud).
- d. Except for wall assemblies qualifying for note 3, if not taken from Table A103.3.7.1(2), mass wall U-factors shall be determined in accordance with ASHRAE 90.1-2010, Appendix A, Section A3.1 and Tables A3.1A to A3.1D, or Section A9.4.

Rationale: Proposal for Table A103.3.7.1(2) did not include the footnotes contained in the Seattle Energy Code. These should be provided for guidance.