Table N1104.1(1): Prescriptive Compliance for Residential Buildings

TABLE N1104.1(1)
PRESCRIPTIVE COMPLIANCE PATHS FOR RESIDENTIAL BUILDINGS[a,b,c]

Building Components	Path 1	Path 2 Sun tempered[d]	Path 3	Path 4 Sun tempered[d]	Path 5	Path 6 Sun tempered[d]	Path 7 Sun tempered[d]	Path 8 House size limited[e]	Path 9 Log homes/ solid timber	Path 10
Maximum allowable window area[f]	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	12%	No Limit	No Limit
Window class[g]	U=0.40	U=0.40	U=0.50	U=0.50	U=0.60	U=0.60	U=0.60	U=0.40	U=0.40	U=0.35
Exterior doors	U=0.20[h]	U=0.20[h]	U=0.20	U=0.20	U=0.20	U=0.20	U=0.20[h]	U=0.20	U=0.54	U=0.20[h]
Wall insulation[i]	R-21[j]	R-15	R-21A[k]	R-15A[k]	R-24A[k]	R-21A[k]	R-21A[k]	R-15	[c]	R-15
Underfloor insulation	R-25	R-21	R-25	R-21	R-30	R-21	R-25	R-21	R-30	R-30
Flat ceilings	R-38	R-49	R-49A[k]	R-38	R-49A[k]	R-49A[k]	R-49A[k]	R-49	R-49	R-49
Vaulted ceilings[l]	R-30[m]	R-30[m]	R-30[m]	R-38	R-38	R-38	R-38	R-38	R-38	R-38
Skylight class[g]	U=0.50	U=0.50	U=0.50	U=0.50	U=0.50	U=0.50	U=0.50	U=0.50	U=0.50	U=0.50
Skylight area[n]	<2%	<2%	<2%	<2%	<2%	<2%	<2%	<2%	<2%	<2%
Below-grade wood, concrete or masonry walls[o]	R-15	R-15	R-15	R-15	R-15	R-15	R-15	R-15	R-15	R-15
Slab floor edge insulation	R-15	R-15	R-15	R-15	R-15	R-15	R-15	R-15	R-15	R-15
Forced air duct insulation	R-8	R-8	R-8	R-8	R-8	R-8	R-8	R-8	R-8	R-8

[a] Path 1 is based on cost effectiveness. Paths 2-7 are based on energy equivalence with Path 1. Cost effectiveness of Paths 2-9 not evaluated.

[b] As allowed in current Section N1104.1, thermal performance of a component may be adjusted provided that overall heat loss does not exceed the total resulting from conformance to the required *U*-factor standards. Calculations to document equivalent heat loss shall be performed using the procedure and approved *U*-factors contained in Table N1104.1(2).

[c] *R*-values used in this table are nominal, for the insulation only and not for the entire assembly. The wall component for Path 9 shall be a minimum solid log or timber wall thickness of 3.5 inches (90 mm).

[d] The sun-tempered house shall have one lot line which borders on a street within 30 degrees of true east-west and 50 percent or more of the total glazing for the heated space on the south elevation. An approved alternate to street orientation based on solar design and access shall be accepted by the building official.

[e] Path 8 applies only to residential buildings with less than 1,500 sq. ft. heated floor space AND glazing area less than 12 percent of heated space floor area.

[f] Reduced window area may not be used as a trade-off criterion for thermal performance of any component, except as noted in Table N1104.1(2).

[g] Window and skylight *U*-factors shall not exceed the number listed. *U*-factors may also be listed as "class" on some windows and skylights (i.e., CL40 is same as U=0.40).

[h] A maximum of 28 square feet (2.6 m^2) of exterior door area per dwelling unit can have a U-factor of 0.54 or less.

[i] Wall insulation requirements apply to all exterior wood framed, concrete or masonry walls that are above grade. This includes cripple walls and rim joist areas.

[j] R-19 Advanced Frame or 2 x 4 wall with rigid insulation may be substituted if total nominal insulation *R*-value is 18.5 or greater.

[k] A=advanced frame construction as defined in Section N1104.5.1 for walls, and Section N1104.6 for ceilings.

[l] Insulation levels for ceilings that have limited attic/rafter depth such as dormers, bay windows or similar architectural features totaling not more than 150 square feet (13.9 m^2) in area may be reduced to not less than R-21. When reduced, the cavity shall be filled (except for required ventilation spaces), and a 0.5 perm (dry cup) vapor retarder installed.

[m] Vaulted area, unless insulated to R-38, may not exceed 50 percent of the total heated space floor area.

[n] The skylight area is a percentage of the heated space floor area. Any glazing in the roof/ceiling assembly above the conditioned space shall be considered a skylight.

[o] Below-grade wood, concrete or masonry walls includes all walls that are below grade and does not include those portions of such wall that extend more than 24 inches above grade.

Information presented in this publication supports the Oregon Residential Specialty Code, or Chapter 13 of the Oregon Structural Specialty Code. This publication does not include all code requirements. Refer to the code and check with your code official for additional requirements. If information in this publication conflicts with code or your local officials, follow requirements of code and your local officials.

For more information about the residential energy code, call the Building Codes Division at (503)378-4133 or the Oregon Dept of Energy (503)378-4040 in Salem or toll-free, 1-800-221-8035.

This publication was prepared by Bryan Boe, Oregon State University Extension Energy Program and updated and revised by Alan Seymour, Oregon Dept of Energy for the Oregon Building Codes Division. Illustrations are by Gene Stevenson. Funding was provided by Northwest Energy Efficiency Alliance, Portland General Electric, Northwest Natural Gas, Pacific Power and Light, Bonneville Power Administration, Cascade Natural Gas. WP Natural Gas. and Idaho Power.

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