



Montgomery County Building Regulations

Prescriptive Energy Code Requirements for 1, 2 and 3 Family Dwellings

Based upon 2006 Residential Code of Ohio,

Revised effective January 1, 2009

Job Name _____ Date _____

Job Address _____ Township/City _____

Step 1. Determine percent of glass in the exterior wall envelope:

A= Gross exterior wall area, including window and door rough openings.

A= _____ Sq. Ft.

B= Total area of windows, skylights and glass doors rough openings.

B= _____ Sq. Ft.

Formula to determine percent of window area = $(B \div A) \times 100$

$$B \div A = \quad = \quad \times 100 = \quad \%$$

Example: $300 \div 1500 = .2 \times 100 = 20\%$ (must be 21% or less to use this form)

RCO SECTION R1104 TABLE 1

Ohio Residential Prescriptive energy Requirement Table ^a		
Thermal Envelope		R or U values
1.	Attic Insulation	R-30 min
2.	Wall Insulation	R-13 min
3.	Floor insulation	R-19 min
4.	Band board/Band joist/Rim joist ^c	R-19 min
5.	Conditioned Basement-Walls ^d , Conditioned Crawlspace walls ^f	R-5 (R-13 ^e) min
6.	Slab Perimeter (when above frost line) ^g	R-10 min
7.	Glazing ^h (Submit manufacturer's data confirming U-Value)	U-0.35 max
8.	Exterior Doors	U-0.57 max
9.	Ductwork ⁱ	R-6 min
10.	Maximum window to wall ratio	21% max
HVAC Efficiencies		
1.	Furnace ^j	90 % min
2.	Air Conditioning ^k	13 min
Air Infiltration		
1.	Refer to infiltration requirements of Table 2	Not applicable

Footnotes:

- a. R-values represent the insulation only (i.e. not entire wall floor or ceiling assembly).
- b. Not used
- c. Includes sill sealer, compressible gasketing, or caulking for air infiltration sealing.
- d. Insulated from top plate to 32" below grade.
- e. Walls that are more than 50% above grade shall be insulated as a wall- R-13.
- f. The crawlspace wall R-Value requirements are for walls of conditioned crawl spaces (i.e. not directly vented to the outside). The crawlspace wall insulation must extend from the top of the plate to the top of the footing or crawlspace slab.
- g. Insulation depth/length 24 inches
- h. Skylights shall have a u-factor of 0.60.
- i. Duct sealing is required by code. Recommend burying attic ducts in ceiling insulation.
- j. AFUE rating; heat pumps shall have an HSPF efficiency rating of a minimum 7.2
- k. SEER rating

RCO SECTION R1104 TABLE 2

AIR INFILTRATION REQUIREMENTS	
These items are required when using the Ohio Residential Prescriptive Energy Requirements	
1. Overall Air and Thermal Barrier Alignment	• Insulation shall be installed in full contact with sealed interior and exterior air barrier.
	A - Overall alignment throughout dwelling without gaps or compression
	B - Garage band joist air barrier adjoining conditioned space
	C - Attic eave baffles
2. Walls Adjoining Exterior Walls or Unconditioned Space	D - Slab-edge insulation
	• Fully insulated walls align with air barrier at interior and exterior; Continuous top and bottom plates or sealed blocking.
	A - Wall behind shower/tub
	B - Wall behind furnace
	C - Insulated attic slopes for unvented attic spaces
	D - Attic knee walls
	E - Skylight shaft walls
	F - Walls adjoining porch roofs
G - Staircase walls	
3. Floors Between Conditioned and Unconditioned Spaces	H - Double walls
	• Air barrier installed at any exposed insulation edges; Insulation installed to maintain permanent contact with sub-floor above and air barrier below.
4. Shafts	A - Insulated floor above garage
	B - Insulated cantilevered floor
	• Openings to unconditioned space fully sealed with solid blocking or flashing and gaps are fully sealed with caulking or foam (fire-rated collars and caulking where required)
5. Attic/Ceiling interface	A - Duct shafts and penetrations
	B - Piping shafts and penetrations
	C - Flue shafts
	• All attic penetrations and dropped ceilings include full interior air barrier aligned with insulation; gaps fully sealed with caulking or foam; Moveable insulation fits snugly in opening and air barriers fully gasketed
	A - Attic access panel fully gasketed and insulated
	B - Attic drop-down stairs fully gasketed and insulated
6. Common Walls Between Dwelling Units	C - Dropped ceiling/soffit - air barrier aligned with insulation
	D - Recessed lighting fixtures IC-AT (Insulation Contact- Air Tight) labeled & sealed to drywall
	E - Whole-house fan insulated cover gasketed to the opening
	• Gaps between drywall shaft wall (common wall) and structural framing between units sealed at all exterior boundary conditions
	A - Common walls between dwelling units

Prepared by _____ Phone _____