

HERS Training and Technical Manual V.5.1

Addendum 1 – Basement Rating Guidelines

In: Section 4.6.b.8 (1): Defining Conditioned and Unconditioned Spaces

Basements in particular are a challenging space to define as either conditioned or unconditioned. The chart below, developed by Peter Harding of Home Energy Technologies, clearly defines under what circumstances a basement is considered conditioned or unconditioned and when to include volume and/or conditioned floor area in the rating file.

TABLE 4.6.(8)a Basement Rating Guidelines

Reference	1	2	3	4	5
Insulation	Uninsulated	Insulated	Insulated	Insulated	Insulated
Conditioning	Unconditioned	Indirectly conditioned	Semi-conditioned (<10 Btu/hr-sf heating)*	Fully-conditioned (>10 Btu/hr-sf heating)*	Conditioned
Finishing	Unfinished	Unfinished	Unfinished	Unfinished	Finished
Thermal & Pressure Boundary	Floor over basement	Basement walls	Basement walls	Basement walls	Basement walls
IECC 2009 (C25)					
Basement ceiling	R30	NA	NA	NA	NA
Basement walls	NA	R10/13	R10/13	R10/13	R10/13
Slab	NA	R10/2'	R10/2'	R10/2'	R10/2'
REM Building Info Inputs					
Area of Conditioned Space	Bsmt not included	Bsmt not included	Bsmt not included	Bsmt area included (Eligible for SAF exclusion)	Bsmt area included (Eligible for SAF exclusion)
Volume of Conditioned Space	Bsmt not included	Bsmt included	Bsmt included	Bsmt included	Bsmt included
Basement Type	Unconditioned Basement	Conditioned Basement	Conditioned Basement	Conditioned Basement	Conditioned Basement
REM Model inputs					
Frame floor over basement	Yes	No	No	No	No
Basement walls	Yes	Yes	Yes	Yes	Yes
Rim Joist	No	Yes	Yes	Yes	Yes
Slab floor	No	Yes	Yes	Yes	Yes
Basement stair walls and door	Yes	No	No	No	No
Bsmt mechanicals location	Unconditioned bsmt	Conditioned area	Conditioned area	Conditioned area	Conditioned area
Bsmt duct location	Unconditioned bsmt	Conditioned bsmt	Conditioned bsmt	Conditioned bsmt	Conditioned bsmt
Blower Door Test Setup					
Basement door	Closed (gasketed door)	Open	Open	Open	Open
Duct Leakage to Outside Setup					
Basement door	Closed	Open	Open	Open	Open
Basement window	Open	Closed	Closed	Closed	Closed

*RESNET Standards define directly conditioned space as an enclosed space with an installed intentional heating capacity of > 10 Btu/hr-sf. If the actual Btu/hr of air registers in an unfinished space is unknown the space shall be excluded from the CFA if the supply air flow is < 15 CFM/100sf.