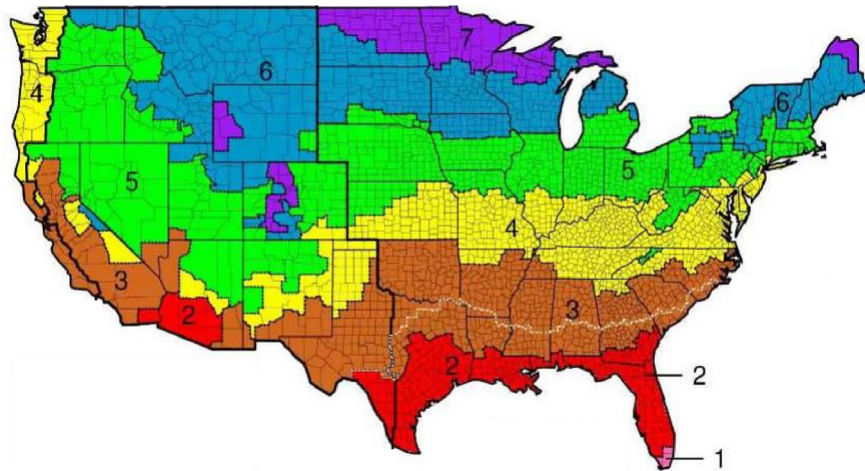


Perma Form & the 2012 International Energy Code

Many states have or are in the process of implementing the 2012 International Energy Code (IECC). This bulletin will briefly describe the details of the code as it pertains to the foundation, crawlspace and basement of your new home or addition. If you are constructing an addition, you will be required to meet the code for the new portion but the existing portion will be grandfathered in unless you are altering the existing structure.

Climate Zone Map

Use to determine the code requirements of your area.



R-value code requirements for foundations:

Zone	Crawl Space	Basement ^a	Mass Wall ^c	Slab ^b
1	0	0	3/4	0
2	0	0	4/6	0
3	5/13	5/13	8/13	0
4 except marine	10/13	10/13	8/13	10---2' down
5 & 4 marine	15/19	15/19	13/17	10---2' down
6	15/19	15/19	15/20	10---4' down
7 & 8	15/19	15/19	19/21	10---4' down

The first number in the chart above, e.g."5/13", is the R-value that needs to be met if continuous insulation is used and the second number needs to be met if no continuous insulation is used.

a: “15/19” for zone 5 above means R-15 continuous insulation on interior or exterior of foundation or R-19 cavity on interior of the basement wall. “15/19” shall be permitted to be met with R-13 cavity insulation on the interior of basement wall and R-5 continuous insulation on the interior or exterior of the wall. “10/13” means R-10 continuous insulation on interior or exterior of wall or R-13 on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall.

b: R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or the required amount above.

c: The second R-value applies when more than half the insulation is on the interior of the mass wall.

Crawl Space:

Crawl space walls must be insulated to the proper R-value in the chart. Crawl space ground surface must be covered with an approved vapor retarder such as plastic sheeting. They must be mechanically ventilated or heated and cooled as part of the living space. Perma Form Vertical satisfies this part of the energy code when the foundation is poured!

Basement Walls:

Basement walls are defined as 50% or more of the wall is below grade. The wall must be insulated to a depth of 10’ or from the footing to the top of the wall. Perma Form Vertical satisfies this part of the energy code when the foundation is poured!

Mass Walls:

Mass walls are concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth, and solid timber/logs and are usually above grade. If more than 50% of a wall is exposed above ground level, it is considered a “Mass Wall”. Perma Form Vertical satisfies this part of the energy code when the foundation is poured!

Slab floors:

Slab floors apply when a concrete floor is less than 12” below grade. The footing insulation must extend downward from the top of the slab to a minimum depth of 24” for zones 4 & 5 or 48” for zones 6,7 and 8. The insulation may be installed vertically on the interior or exterior, or extend horizontally under the slab or out from the building. Insulation extending outward must be under 10” of soil or pavement. An additional R-5 is required for heated slabs. Perma Form Vertical satisfies this part of the energy code when the foundation is poured!

For further information on the energy code, go to: energycodes.gov