

This information is the most common for how to obtain the necessary permits for your project and is not representative of all the conditions you may encounter.

## Building Development Agencies

The Herrity Building  
12055 Government Center Pkwy  
Fairfax, VA 22035

- ▶ Permit Application Center  
2nd floor, 703-222-0801
- ▶ Site Application Center  
2nd floor, 703-222-0801
- ▶ Building Division  
3rd floor, 703-631-5101
- ▶ Zoning Review  
2nd floor, 703-222-1082
- ▶ Residential Inspections  
3rd floor, 703-631-5101

### Hours of Operation

Monday–Thursday: 8 a.m.–4 p.m.  
Friday: 9:15 a.m.–4 p.m.

### Health Department

10777 Main Street  
Fairfax, VA 22030  
703-246-2201

### Website

*Publications, forms and other useful information can be found at [fairfaxcounty.gov/buildingpermits](http://fairfaxcounty.gov/buildingpermits)*

All telephone numbers are accessible in TTY by calling 711.

This document is available in alternative formats and languages. Please call 703-222-0801 for more information.



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## NEW HOMES, ADDITIONS, SUNROOMS

Consider the following when complying with the energy conservation requirements of the 2012 Virginia Residential Code.

- ▶ A **conditioned space** is an area within a building that is heated or cooled or has a fixed opening to an area that is heated or cooled.
- ▶ A **basement wall** is more than 50 percent below grade and encloses a conditioned space.
- ▶ Windows, skylights and glass doors are considered **glazing**.
- ▶ An **R-value** is a measurement of a material's thermal resistance (the higher, the better).
- ▶ A **U-factor** measures the ability of a material (glass) or assembly (window) to transfer heat (the lower the better).
- ▶ Use the table on the Page 2 to determine your insulation and glazing value requirements or submit your own energy design using RESCheck (see below).

### Have a Sunroom?



To use the sunroom design values on Page 2, all of the following conditions must be met:

- ▶ One-story structure added to an existing home.
- ▶ Glazing area exceeds 40 percent of the exterior walls and roof area.
- ▶ Sunroom is served by separate and independently-controlled heating and/or cooling system.
- ▶ A closeable door separates the sunroom from the rest of the house.

### Determining your own R-values and U-factors?

If you wish to use R-values and U-factors other than those prescribed on Page 2, you may manually design your house, addition or sunroom using RESCheck from the U.S. Department of Energy. For more information, go to [energycodes.gov](http://energycodes.gov).



## DESIGN VALUES

The table below provides the R-value and U-factor requirements for insulation and glazing, respectively. Higher insulation R-values are permitted provided their dimensions properly fit in the intended cavity without compacting its thickness. Glazing with lower U-factors than required are also permitted.

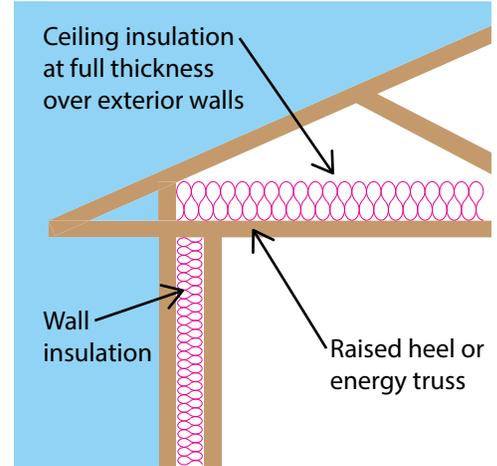
| Element                        | New Homes, Additions | Sunrooms           |
|--------------------------------|----------------------|--------------------|
| U-factor (maximum)             |                      |                    |
| Windows <sup>1</sup>           | 0.35                 | 0.45               |
| Doors <sup>1</sup>             | 0.35                 | 0.45               |
| Skylights <sup>1</sup>         | 0.55                 | 0.70               |
| R-value (minimum)              |                      |                    |
| Ceilings                       | 38 <sup>2</sup>      | 19                 |
| Walls (wood framed)            | 15                   | 13                 |
| Walls (concrete, CMU)          | 8/13 <sup>3</sup>    | 8/13 <sup>3</sup>  |
| Floors                         | 19                   | 19                 |
| Basement Walls                 | 10/13 <sup>4</sup>   | 10/13 <sup>4</sup> |
| Slab-on-grade <sup>5</sup>     | 10                   | 10                 |
| Crawl Space Walls <sup>6</sup> | 10/13 <sup>2</sup>   | 10/13 <sup>2</sup> |

- <sup>1</sup> Windows, doors and skylights shall have a maximum solar heat gain coefficient (SHGC) of 0.40.
- <sup>2</sup> R-30 can be substituted for R-38 with a raised heel or energy truss where the full height of the insulation is maintained over the entire ceiling footprint and the exterior wall. See figure right.
- <sup>3</sup> Use R-8 when insulation is applied to the exterior; use R-13 when insulation is applied on the interior.
- <sup>4</sup> Use R-10 when applied continuously against the wall; use R-13 when applied between studs or furring strips.
- <sup>5</sup> Insulation must extend from the slab edge to a length of 24 inches vertically and/or horizontally; see figure below.
- <sup>6</sup> Use insulation on crawl space walls in unvented-conditioned crawl spaces with no floor insulation above.

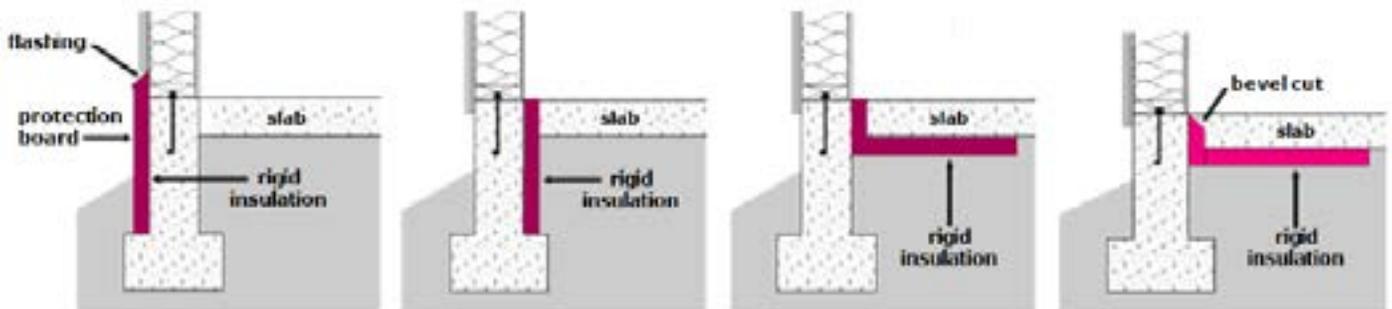
How do I show compliance on the plans?

**Approved**

Clearly indicate on the drawings the required R-values and U-factors from the table to the left or from a RESCheck computation (see Page 1). Attach the RESCheck Compliance Certificate to each set of your construction plans when used.



Insulation at Raised Heel Truss



### Slab-on-Grade Insulation Requirements

(Insulation must extend from slab edge to a length of 24 inches vertically and/or horizontally.)