

# Office of Building Department

## Town of Southington, Connecticut

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### ENVELOPE REQUIREMENTS

The following are the prescriptive envelope component criteria for additions to and replacement windows for existing detached one and two family dwellings in the Town of Southington which has an annual heating degree rating for Climate Zone 5.

Window :	Maximum fenestration U – factor .32
Ceiling:	R-value – R.49 (Sunrooms – R-24)
Wall:	R-value – R-20 or 13 + 5 Insulation Sheathing (Sunrooms – R-19)
Floor:	R-value – R-30
Basement Walls:	R-value – R-15 +R5 continuous or R-19 cavity Full wall heights
Slab Perimeter:	R-value and depth R-10, 2 feet unheated
Crawl Space Wall:	R-value –R-15 +R5 continuous or R-19 cavity

Reference: 2015 International Residential Code portion of  
2018 Connecticut State Building Code

Alternative: Perform full home system analysis, chapter 4 (Res-Check) which  
may reduce requirements.

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## AIR BARRIER AND INSULATION INSPECTION

### TABLE N1102.1.2

Air barrier & thermal barrier:	Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier. Breaks or joints in the air barrier are filled or repaired. Air-permeable insulation is not used as a sealing material.
Ceiling/attic:	Air barrier in any dropped ceiling/soffit is substantially aligned with insulation and any gaps are sealed. Attic access (except unvented attic), knee wall door or drop down stair is sealed.
Walls:	Corners and headers are insulated. Junction of foundation and sill plate is sealed.
Windows & doors:	Space between window/door jambs and framing is sealed.
Rim joists:	Rim joists are insulated and include an air barrier.
Floors (including above garage & cantilevered floors)	Insulation is installed to maintain permanent contact with underside of subfloor decking. Air barrier is installed at any exposed edge of floor.
Crawlspace walls:	Insulation is permanently attached to walls. Exposed earth in unvented crawlspaces is covered with Class I Vapor retarder with overlapping joints taped.
Shafts, penetrations:	Duct shafts, utility penetrations, knee walls and flue shafts opening to exterior or unconditioned space are sealed.
Narrow cavities:	Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.
Garage separation:	Air sealing is provided between the garage and conditioned space.

Recessed lighting:	Recessed light fixtures are airtight, IC rated and sealed to drywall. EXCEPTION: Fixtures in condition space.
Plumbing & Wiring:	Insulation is placed between outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.
Shower/tub on exterior wall:	Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.
Electrical/phone box on exterior wall:	Air barrier extends behind boxes or air sealed type boxes are installed.
Common wall:	Air barrier is installed in common wall between dwelling unit.
HVAC register boots:	HVAC register boots that penetrate building envelope are sealed.
Fireplace:	Fireplace walls include an air barrier.

**R308.4 Hazardous locations.** The following shall be considered specific hazardous locations for the purposes of glazing:

1. Glazing in swinging doors except jalousies.
2. Glazing in fixed and sliding panels of sliding door assemblies and panels in sliding and bi-fold closet door assemblies.
3. Glazing in storm doors.
4. Glazing in all unframed swinging doors.
5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface.
6. Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24 inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface.
7. Glazing in an individual fixed or operable panel, other than those locations described in Item 5 and 6 above, that meets all of the following conditions:
  - 7.1 Exposed area of an individual pane greater than 9 square feet;
  - 7.2 Bottom edge less than 18 inches above the floor;
  - 7.3 Top edge greater than 36 inches above the floor; and
  - 7.4 One or more walking surfaces within 36 inches horizontally of the glazing.
8. All glazing in railings regardless of an area or height above a walking surface. Included are structural baluster panels and non-structural in fill panels.
9. Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where the bottom edge of the glazing is less than 60 inches above a walking surface and within 60 inches horizontally of the water's edge. This shall apply to single glazing and all panes in multiple glazing.

10. Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glass is less than 60 inches above the plane of the adjacent walking surface.
11. Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60 inches above the nose of the tread.

**Exception:** The following products, materials and uses are exempt from the above hazardous locations:

1. Openings in doors through which a 3 inch sphere is unable to pass.
2. Decorative glass in Items 1, 6 or 7.
3. Glazing in Section R308.4, Item 6, when there is an intervening wall or other permanent barrier between the door and the glazing.
4. Glazing in Section R308.4, Item 6, in walls perpendicular to the plane of the door in a closed position or where access through the door is to a closed or storage area 3 feet or less in-depth. Glazing in these applications shall comply with Section R308.4, Item 7.
5. Glazing in Section R308.4, Items 7 and 10, when a protective bar is installed on the accessible side(s) of the glazing 36 inches +/- 2 inches above the floor. The bar shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1 ½ inches in height.
6. Outboard panes in insulating glass units and other multiple glazed panels in Section R308.4, Item 7, when the bottom edge of the glass is 25 feet or more above grade, a roof, walking surface, or other horizontal [within 45 degrees of horizontal] surface adjacent to the glass exterior.
7. Louvered windows and jalousies complying with the requirements of Section R308.2.
8. Mirrors and other glass panels mounted or hung on a surface that provides a continuous backing support.
9. Safety glazing in Section R308.4, Item 10 and 11 is not required where:
  - 9.1 The side of stairway, landing or ramp has a guardrail or handrail, including balusters or in fill panels. Complying with the provisions of Sections 1012 and 1607.7 of the International Building Code; and
  - 9.2 The plane of the glass is greater than 18 inches from the railing.