

Finished Basement or Bonus Room

How about a finished basement or bonus room? Yes, whenever you create additional habitable space or rooms a permit is required. We will need a plan showing what the spaces are going to be used for with dimensions and how it is going to be heated. Bring in a scaled drawing showing the entire level with the locations of all utilities such as the boiler/furnace, water heater, electrical panel(s), stairs, bulkhead and windows. This document is to be used as a guide only and cannot possibly cover all situations, nor is it intended to do so. If you have any questions, please contact the Building Official at 860-228-5971 ext. 142 or jsummers@hebronct.com

Minimum Requirements

Construction Document Requirements

- Floor plan of entire basement or attic area with dimensions
- Uses of all spaces are identified
- Location of all utilities such as; boiler/furnace, electrical panel(s), sewer, water, water heater, windows, doors and stairs
- Clearly distinguish new work from existing
- Indicate framing type to be used
- Indicate insulation methods and values
 - Basement walls shall have minimum R-13 cavity insulation or R-10 continuous (N1102.2.7)
 - Wood framed exterior walls shall have minimum R-20 cavity insulation or R-13 cavity insulation with R-5 continuous insulation (N1102.1)
 - Attics shall have minimum R-38 cavity insulation or R-30 cavity insulation, limited to 500 square feet of ceiling area (N1102.2.2)
- Ceiling height and type of ceiling
- Type and location of permanent heat source
- Make-up air and combustion air will need to be addressed for fuel-burning appliances (furnace/boiler and gas dryers) provide the input BTU ratings

Smoke Alarms and CO Detectors

- Smoke alarm – shall be installed in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the dwelling (R314.3)
- Carbon monoxide alarms – shall be installed outside of each sleeping area in the immediate vicinity of the bedrooms and on each additional habitable level of the dwelling unit except for dwellings units not containing a fuel-burning appliance, fireplace or attached garage (CT Amd 315.1)
- Alterations, repairs and additions shall require smoke and CO alarms in all areas stated above (CT Amd R314.3.1, Ct Amd R315.2)

Electrical Requirements

- Unfinished basement areas shall have a minimum one GFCI protected receptacle (E3901.9, E3902.5)

- Habitable rooms shall have receptacles installed so that no point measured horizontally along the floor line in any wall space is more than 6 feet from a receptacle outlet (E3901.2.1)
- Wall space is any space that is 2 feet or more in width, including around corners and that is unbroken along the floor line by doorways, fireplaces, and similar openings (E3901.2.2)
- Bedroom outlets shall be AFCI protected (CT Amd E3902.11) (NEC 210.12)
- Receptacles shall be of the tamper-resistant type, except if located more than 5.5 feet above the floor, part of a luminaire or appliance or dedicated for the appliance served (CT Amd E4002.14) (NEC 406.12)

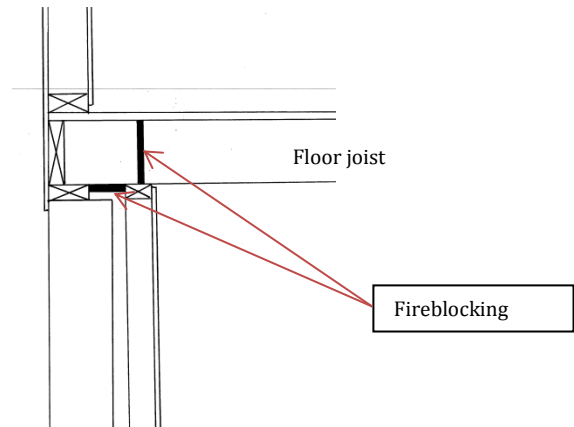
Existing stairs

- Width: 32" clear width at all points above the permitted handrail height and below the required headroom height (CT Amd R311.7.1, exception #2)
- Handrail – Required on at least one side on flights with 4 or more risers, minimum 1 ½" clearance required between handrail and wall and shall be mounted not less than 34" and not more than 38" from the sloped plane (R311.7.7)
- Risers – Maximum riser for existing stairs shall be 9" with the greatest to smallest height not to exceed more than 3/8" (CT Amd R311.7.4.1)
- Treads – Minimum tread for existing stairs shall be 8" with the greatest to smallest shall not exceed more than 3/8" (CT Amd R311.7.4.2)
- Nosings – Opening between treads shall not permit the passage of a 4"-diameter sphere. Nosings shall not be less than ¾" but not more than 1 ¼" with the greatest projection from the smallest shall not exceed 3/8" (R311.7.4.3)
- Headroom – Existing stairways shall be 6'-6" measured vertically from the sloped plan adjoining the tread nosing (CT Amd R311.7.2, exception #2)
- Landings – 36"x36" landing required at the top and bottom of the stairs, landing not required at the top of the stairs provided a door does not swing over the stairs. (R311.7.5)
- Illumination – Capable of illuminating treads and landings to levels not less than 1 foot-candle (11 lux) measured at the center of treads and landings with a light switch at each level (R303.6)

Finished Rooms

- Requires a permanent heat source that is capable of maintaining a temperature of 68°F, 36" above the floor, 24" from the exterior wall in all habitable areas (R303.8).
- 7'-0" minimum in any horizontal dimension (R304.3)
- Ceiling height – 6'-10" clearance, except under beams, girders, pipes, ducts or other obstructions shall be minimum 6'-4" (CT Amd R305.1, exception #5)
- Under stair protection – enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with ½" gypsum board (R302.7)
- Habitable rooms shall have an aggregate glazing area of not less than 8% of the floor area with the minimum openable area to the outdoors shall be 4% of the floor area, exceptions: (R303.1)
 - Mechanical ventilation system capable of producing 0.35 ACH or whole-house ventilation system capable of supplying outdoor air at the rate of 15 cfm per occupant.
 - Glazed area not required if artificial lighting is provided capable of producing an average of 6 footcandles (65 lux) over the area of the room at a height of 30" above the floor and mechanical ventilation installed

- ¾" particle board with joints backed by ¾" particle board
- ½" gypsum board
- ¼" cement-based millboard
- Batts or blankets of mineral wool or glass fiber or other approved materials installed in such a manner as to be securely retained in place
 - Unfaced fiberglass used as fireblocking shall fill the entire cross section of the wall cavity to a minimum height of 16" measured vertically (R302.11.1.2)



Emergency escape and rescue opening

- Sleeping rooms – shall have a sill height of not more than 44" above the floor, (CT Amd R310.1)
- Rescue opening shall be operational from the inside of the room without the use of a key or tool (CT Amd R310.1.4)
- Minimum opening area – 5.7 square feet, except grade openings shall have a minimum opening of 5 square feet (R310.1.1)
- Minimum net clear opening height shall be 24" (R310.1.2)
- Minimum net clear opening width shall be 20" (R310.1.3)
- Window wells are permitted (R310.2)
- Emergency escape windows under decks and porches shall provide a path not less than 36" in height to a yard or court (R310.5)

Draftstopping

- Usable space above and below concealed space of floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1,000 square feet and areas shall be approximately equal areas (R302.12).

Acceptable materials

- ½" Gypsum board
- 3/8" WSP
- Other approved materials

Fireblocking

- Shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire barrier between stories (R302.11).

Acceptable materials are;

- 2x nominal lumber
- Two thicknesses of 1-inch nominal lumber
- 23/32" wood structural panels with joints backed by 23/32" WSP