

Office of Building Department

Town of Southington, Connecticut

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BASIC REQUIREMENTS OF THE BUILDING CODE: RESIDENTIAL ONE- AND TWO-FAMILY (New Construction or Addition)

Building permit applications for new houses and for additions to existing houses must include two sets of complete construction documents ("plans") that clearly show all the information required by the Residential Code portion of the State Building Code.

Selected sections of the Residential Code are reproduced below for information:

R105.1 Required. Any *owner* or *owner's* authorized agent who intends to construct, enlarge, alter, *repair*, move, demolish or change the occupancy of a *building* or structure, or to move a *lot line* that will affect any existing *building* or structure, or to erect, install, enlarge, alter, *repair*, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be performed, *shall* first make application to the *building official* **AND** obtain the required permit.

R105.1.1 By Whom Application Is Made. Pursuant to section 29-263 of the Connecticut General Statutes, application for a permit shall be made by the owner or by an authorized agent. If the authorized agent is a contractor, such contractor shall follow the provisions of section 20-338b of the Connecticut General Statutes. The applicant shall include the full names and addresses of the owner, agent and the responsible officers, if the owner or agent is a corporate body.

R105.1.2 Permit Issuance to a Home Improvement Contractor. No permit shall be issued to a contractor who is required to be registered pursuant to chapter 400 of the Connecticut General Statutes, for work to be performed by such contractor, unless the name, business address and Department of Consumer Protection registration number of such contractor is clearly marked on the application for permit, and the contractor has presented such contractor's certificate of registration as a home improvement contractor.

R105.7 Placement of Permit. The building permit or a copy shall be kept on the site of the work until the completion of the project.

Section R106 Construction Documents

R106.1 Submittal Documents. Submittal documents consisting of construction documents, and other data shall be submitted in two or more sets, or in a digital format where allowed by the building official, with each application for a permit. The construction documents shall be

prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.

NOTE: Connecticut does not require a licensed architect to design a single-family residence. However, the Building Code requirements for construction documents to completely and clearly show what is to be built and that the work will comply with code requirements still applies. If you are not capable of producing clear and complete construction drawings, it is recommended that you hire a licensed architect or a qualified and experienced professional home designer to generate the plans and related construction documents.

R106.1.1 Information on Construction Documents. Construction documents shall be drawn upon suitable material. Electronic media documents are permitted to be submitted where approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official. **When the quality or arrangement of materials is essential for conformity to this code, specific information shall be given to establish such quality or arrangement, and this code shall not be cited, or terms such as "legal," "per code," or their equivalent used as a substitute for specific information.**

R106.1.2 Manufacturer's Installation Instructions. Manufacturer's installation instructions, as required by this code, shall be available on the job site at the time of inspection.

R106.1.3 Information on Braced Wall Design. For buildings and structures utilizing braced wall design, and where required by the building official, braced wall lines shall be identified on the construction documents. Pertinent information including, but not limited to, bracing methods, location and length of braced wall panels and foundation requirements of braced wall panels at top and bottom shall be provided.

R106.1.4 Information for Construction in Flood Hazard Areas. For buildings and structures located in whole or in part in flood hazard areas as established by Table R301.2, construction documents shall include:

1. Delineation of flood hazard areas, floodway boundaries and flood zones and the design flood elevation, as appropriate.
2. The elevation of the proposed lowest floor, including basement; in areas of shallow flooding (AO Zones), the height of the proposed lowest floor, including basement, above the highest adjacent grade.
3. The elevation of the bottom of the lowest horizontal structural member in coastal high-hazard areas (V Zone) and in Coastal A Zones where such zones are delineated

on flood hazard maps identified in Table R301.2 or otherwise delineated by the jurisdiction.

4. If design flood elevations are not included on the community's Flood Insurance Rate Map (FIRM), the building official and the applicant shall obtain and reasonably utilize any design flood elevation and floodway data available from other sources.

R106.1.5 Information on Storm Shelters. Construction documents for storm shelters shall include the information required in ICC 500.

R106.2 Site Plan or Plot Plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing the size and location of new construction and existing structures on the site and distances from lot lines. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan where the application for permit is for alteration or repair or where otherwise warranted.

NOTE: The code has specific requirements for the slope of the ground surrounding a residence. Therefore, the site plan has to include either spot elevations or contours so the Building Department can verify during the plan review that the proposed grading will satisfy this requirement:

R401.3 Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall not fewer than 6 inches (152 mm) within the first 10 feet (3048 mm).

R106.2.1 Private Sewage Disposal System. The site plan shall indicate the location of a private or public sewage disposal system. Private sewage disposal systems shall be designed and installed in accordance with the requirements of the Public Health Code adopted under authority of section 19a-36 of the Connecticut General Statutes. All technical and soil data required by the Public Health Code shall be submitted with the site plan. Approval of such systems shall be by the local authority having jurisdiction. When such approval is required by the local authority having jurisdiction, written proof of such approval shall be submitted to the building official prior to issuance of a building permit.

NOTE: The local authority having jurisdiction regarding private sewage disposal systems is the South-Central Health District. The Health District is a separate department from the Building Department. All questions relating to private sewage disposal systems (septic tanks) should be directed to the Health Department at (860) 276-6275.

Section R109 Inspections

R109.1 Types of Inspections. For on-site construction, from time to time the building official, upon notification from the permit holder or his agent, shall make or cause to be made any necessary inspections and shall either approve that portion of the construction as completed or

shall notify the permit holder or his or her agent wherein the same fails to comply with this code.

- Prior to requesting any inspections, the House Number (not the lot number) must be posted on site.
- Please plan accordingly when scheduling your inspections as our availability varies. Inspections are scheduled by calling the main number at (860) 276-6242. Voicemail and email requests for inspections are not acceptable, you must speak directly with someone in the office.

Required Inspections:

- A. Formed footings and slabs, including reinforcement and vapor barrier, prior to pouring concrete. If you are planning to use the rebar as a concrete encased grounding (Ufer Ground), the Building Department must be made aware of this when scheduling.
- B. Formed foundation walls with reinforcement (when specified) installed prior to pouring concrete.
- C. Helical piers require certified engineering report following installation.
- D. Foundation walls, damp proofing or waterproofing, drainage and insulation prior to backfill.
- E. Underground/Trench for Electric Service - before backfilling.
- F. Underground/Trench for Plumbing (water service) - before backfilling.
- G. Underground/Trench for Gas Service or Propane - before backfilling.
- H. Radon mitigation system – before covering.
- I. Rough inspection of Plumbing, Mechanical, Gas and Electrical systems shall be made **prior to covering or concealment**, before fixtures or appliances are set or installed, and prior to framing inspection.
 - Rough Plumbing
 - Rough HVAC
 - Gas piping
 - Gas pressure test
 - Rough Electric
- J. Framing inspection: All fire blocking must be installed. All rough utility penetrations must be fire sealed. Sheathing must be installed, but house wrap NOT applied to allow inspection of sheathing and braced wall fastening. Windows and doors installed, taped, and sill pan flashing visible.

Note: A framing inspection may be scheduled prior to the installation of mechanicals for means of identifying items potentially not in compliance. The inspection will be marked as “Fail” and notated as “Framing OK, but no MEP’s installed at this time”.

- K. Rough structural, insulation, and air sealing prior to covering.
 - All rough utility inspections must have passed before the insulation inspection can be scheduled. Shell must be weathertight (roofing, doors, and windows installed) before insulation is installed.
- L. Roofing – Pictures are required before wall sheathing inspection.
Required pictures for roofing in lieu of on-site inspections:
 - 1) The seams in the sheathing taped on all slopes.
 - 2) The ice water shield at all eaves.
 - 3) The completed underlayment covering the entire roof.
 - 4) All valley and step flashings including skylights, chimneys and plumbing vent boots as they are being installed before installation of upslope shingles.
- M. All fire-resistive gypsum wallboard (“sheet rock”) must be inspected before taping covers up the markings and fasteners. This applies to walls between houses and attached garages, garage ceilings, and basements and crawlspaces with trusses or I-joists for floor framing.
- N. Masonry bearing, attachment, flashing, and weep hole installation.
- O. Fireplace throat inspection and final inspection.
- P. Final Electric, final Plumbing, and final HVAC inspections.
- Q. Certificate of Occupancy or Certificate of Approval inspection.
 - Must have the following before the final inspection can be scheduled:
 - Blower door test - with a pass rating
 - Duct blast test - with a pass rating
 - IECC Energy Certificate must be posted on the electrical panel
 - Final Zoning sign-off

The following are items that are required during the Final Certificate of Occupancy or Certificate of Approval inspection List:

- House number (Min 4” high) on the House or Mailbox.
- Exterior grading is pitched away from the house.
- Roof drains are properly connected.
- Decks are complete and graspable handrails are installed.
- All garage penetrations are sealed.
- Garage door to house is self-closing/latching.
- Garage door safeties are working properly.
- Safety glazing is installed where required.
- Child safety locks are installed where required.
- Whole house (or other ventilation system) is operational.
- Anti-tip bracket is installed on freestanding stoves.
- Range hood is installed and CFM does not exceed 400CFM or exceed 600 CFM without make-up air or is exempt as indicated.
- Basement slab to wall is sealed.
- Radon pipe is labeled.
- Energy Label is filled out and attached to Electrical Panel.

BASIC DESIGN CONSIDERATIONS

1. Stairs (8¼" max. rise 9" min. run). Open sides of stairs with 30" rise or more to have guard rails. Stairs four risers or more to have hand rail minimum of one side. Stairs with over 30" rise to have risers closed to <4".
2. Decks, landings, and balconies 30" and over in height above grade must have a minimum 36" high rail with no openings that will allow a 4-inch diameter sphere to pass through.
3. Ceiling Height – Minimum ceiling height per Connecticut Amendment R305.1. (Minimum 7'-0" for habitable spaces, hallways, and habitable portions of basements. Existing basements being converted to habitable space 6'-8" minimum.) Minimum headroom on all stairways is 6'-8".
4. Ground fault interrupters and arc fault interrupters shall be installed in accordance with the 2020 National Electrical Code. 210.12.
5. Smoke detectors must be powered by 120 Volt with battery backup (AC/DC). Detectors must be provided in sleeping rooms, outside of each separate sleeping area, and on all levels per Connecticut Amendment R314 and carbon monoxide detector installed outside bedrooms and each additional habitable level per Connecticut Amendment R315.
6. Any bathroom or lavatory (half bath) that does not have a readily accessible window that provides a minimum opening of 1.5 sq. ft., must have an exhaust fan that is capable of exhausting at least 50 cfm and must be ducted to the outside air with its own louver at the end of the duct.
7. Roll up doors must be provided with safety cables to keep spring in place in event of failure.
8. One emergency escape and rescue opening is required (IRC 2021 R310.1) in each sleeping room and basements with habitable space. Emergency escape and rescue openings must be 5.7 sq. ft. open area minimum, 5.0 sq. ft. at grade floor. Minimum clear width of egress shall be 20 inches, minimum height opening is 24 inches. Opening sill shall not be over 44 inches from floor.
9. Footings for buildings, additions, or attached decks must be 42 inches below grade.
10. Foundations must be damp proofed per R406.1 or must be waterproofed per R406.2 from footing to finished grade, using an approved waterproofing method.
11. Roof truss construction must comply with T.P.I. or other approval agency.
12. LVL or other engineered lumber require Spec Sheets for each location.
13. Insulation Requirement – Insulate per the Residential portion of the 2021 International Energy Conservation Code or Chapter 11 of the 2021 International Residential Code, or alternate thermal design supported by a HERS rating or a passing RES-Check report.

14. Fire stopping to be performed per IRC 2021 R302.11- to cut off concealed draft openings. Sealant to be rated and approved for use.
15. **RESIDENTIAL GARAGE – FIRE SEPARATION REQUIREMENTS:**
 - A. ATTACHED – No living area above: -Minimum 1/2” drywall walls and ceiling or full gable wall to underside of roof sheathing. Door to home — minimum 1 3/8” solid core wood or honeycomb core steel, self-closing.
 - B. ATTACHED — Living area above: Minimum 5/8” Type X (“Fire Code”) drywall walls, ceiling and combustible structural supports. Door to home – minimum 1 3/8” solid core wood or honeycomb steel, self-closing.
16. **OCCUPANCY OR USE OF ANY NEW STRUCTURE OR ADDITION PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY IS A VIOLATION OF THE CONNECTICUT STATE BUILDING CODE.**

Effective October 1, 2022, Revised March 7, 2024