

## SINGLE FAMILY HOUSE REQUIREMENTS

Below are listed some of the commonly asked about specifications for new construction and renovation work in site built single and two family buildings, and townhouses (manufactured buildings go by different standards):

1. **Window sizes** - In new unsprinklered buildings, habitable rooms other than kitchens and bathrooms must have at least one window, operable from the inside without tools, with a clear opening when opened at least 20" in width, 24" in height, and at least 5.7 sq. ft. in area, with the sill no more than 44" above the floor, unless the room has a door directly to the outside or a way out of the room independent of the primary means. Note that 20" x 24" is not 5.7 sq. ft. The 22" and 24" dimensions are minimums. This requirement supersedes any window specifications that might be on plans. There are several exceptions to this but they are complicated. Window size requirements in sprinklered buildings are available from the codes officer. If you need further information, ask.

Where the opening of an operable window is located more than 6' above the grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. For windows that are lower than 24" to the floor, operable sections of the window shall not permit openings that allow passage of a 4" diameter sphere, unless the window is equipped with an approved fall prevention device. These windows can be equipped with an approved opening limiting device that can be released for egress purposes.

2. **Smoke detectors** - New houses, or houses for which a building permit is issued for interior work, must be equipped with at least one smoke detector on each level (typically basement, 1st and 2nd floors), and a detector in each bedroom, interconnected so that if one operates, they all do, installed per the manufacturer's instructions. Detectors must be powered by the building's electrical system, with battery backup, except that interconnecting and hardwiring of detectors is not required in an existing building where the alterations do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space, or basement available which could provide access for hard wiring and interconnection without removing interior finishes. Detectors cannot be closer than 4" to a wall/ceiling interface, and the top of detectors on walls can be no more than 12" below the ceiling. Avoid locating detectors near kitchens and bathroom doors if the room has a tub or shower, to minimize false alarms. Detectors located within 20' of a kitchen or a bathroom with a tub, shower, or tub/shower must be of the photoelectric type.
3. **Carbon Monoxide Detectors** – New houses must have a carbon monoxide detector or detectors in the areas leading to the bedroom(s), installed per the manufacturer's instructions. Any building for which a building permit is issued, that has an attached garage or fuel fired equipment in it, must have a carbon monoxide detector installed. The detectors must be powered by the building electrical system and battery backup, installed per the manufacturer's instructions. It's often convenient to accomplish this in conjunction with the smoke detector requirements required per item 2.
4. **Attached garages** - An attached garage must be separated from the rest of the building by a layer of 1/2" sheetrock on the garage side of a common wall, or a layer of 5/8" sheetrock on the garage ceiling (if the garage is below the living space), with all joints and screwheads taped and finished. There can be no door between a garage and a sleeping room. Doors in walls between the garage and house must be 20 minute rated, metal clad, or a solid wood door at least 1 3/8" thick, and cannot have glass in them unless it's fire rated. The garage floor must be non combustible, and sloped toward a drain or the vehicle door(s).
5. **Egress** –Each dwelling unit must have at least one **exit door** that's at least 36" X 6' – 8". A landing at least 3' x 3' is required on the outside of this door. The floor on the outside of an exterior door can be up to 7 3/4" below the inside floor level. For other exterior doors, a landing is not required at the top of stairs of two or fewer risers, unless the door swings over the stairs. Screen/storm doors are allowed to swing over stairs and landings. **Stairs** must be at least 3' wide. Steps must have a minimum tread depth of 10" (exclusive of the nosing), and a maximum riser height of 7 3/4". Risers must be solid or built such that a 4" sphere cannot pass through them if the total rise of the stairs is over 30". Winder treads must have a minimum depth of 6", and must be at least 10"

deep 12" from the narrow end. The total rise of a flight of stairs cannot exceed 12'. The largest tread or riser has to be within 3/8" of the smallest one. Stairs must have a floor or landing at the top and bottom, at least as wide as the stair is, and at least 36" deep, except that a landing is not required at the top of an interior set of stairs as long as a door does not swing over the stairs. Stairs must have a **handrail**, located above all portions of the treads, between 34" and 38" above the tread nosing, continuous between floors, with ends terminating at wall or newel post so as not to snag clothing. Circular handrails must be between 1.25" and 2" in diameter. Other shapes with a perimeter dimension between 4" and 6.25" with no cross sectional dimension greater than 2 1/4" are acceptable. Rails with a perimeter greater than 6.25" must have a finger grip routed in both sides. Ask for details. Edges must be rounded. Open sides of ramps, landings, porches, walkways, etc. over 30" above adjacent the floor or ground within 36" of the walking surface must have a **guardrail** at least 36" high. Guards on stairs can be as low as 34". Required guards shall have balusters or other members arranged so that a 4" sphere cannot pass through them, except that the triangular opening formed by the guard, tread, and riser can be such that a 6" sphere cannot pass through it, and railings on the open sides of stairs can be such that a 4 3/8" sphere cannot pass through them. **Basements** must have a bulkhead with stairs leading to grade, or an egress window. The stairs up to the inside of the house cannot be the only egress from the basement. There are rules for the size of window wells. Ask for them if your project has them.

6. **Insulation**-There are minimum insulation requirements for new houses and additions. Ask for them. Foam plastic insulation on the inside of the house requires a thermal barrier, unless it's tested and approved by a nationally recognized agency for use without one.
7. **Radon** – If a radon mitigation system, passive or active, is installed, it must be installed per ASTM Standard 1465-08.
8. **Codes** – Houses must be built in conformance with the 2009 International Residential Code, and the 2009 International Energy Conservation Code, with Maine amendments, plus applicable State mechanical codes (plumbing, heating, electrical, ventilation, etc.).
9. **Unfinished Buildings** - People often want to move into unfinished buildings. This is acceptable as long as code required septic, water, egress, smoke & carbon monoxide detection, light, and heat (if applicable) facilities are in place. Unused/incomplete electrical connections must such that someone cannot touch live parts. Doors without completed steps, stoops, decks, etc. must be secured so that the door cannot be readily opened.