

## BASEMENT INTERIOR FINISH ALTERATIONS For Single and Multi-Family Residential Dwellings

When applying for a plan approval to do alterations in the basement of an existing residence, there are a few items that must be documented to review for code compliance. These items need to appear on the construction documents submitted with the application form for plan approval. They are related to requirements in the Residential Code of Ohio 2019 edition, National Electric Code 2023, Ohio Mechanical Code 2024. A copy of these codes are available for reference at the Engineering and Building Department.

A building plan approval is required for basement finishing or remodeling where new full-height partitions are proposed and/or the electric panel is altered. A plan approval submission consists of two (2) copies of the construction documents **drawn to scale** with accompanying notes describing the construction materials and items (see the following notes), dimensions, and a completed plan approval application form.

1. The finished exterior foundation walls below grade must have dampproofing or waterproofing applied either to the exterior or interior of the walls. This may have been applied during construction by the homebuilder. (RCO section 406)
2. Identify the finished room uses on the plans (family rooms, bedrooms, etc.). Basement sleeping rooms (bedrooms) must have egress windows or doors directly to the exterior with a minimum net clear opening of 5 square feet, a minimum net clear opening height of 24 inches, a minimum net clear opening width of 20 inches, and a sill height of not more than 44 inches from the floor to the window opening. Show the type (double hung, casement, etc.) and sizes of the egress windows. (RCO section 310)
3. Provide a section showing the wall and ceiling materials, ceiling height, wall stud size and spacing, bottom plate anchored to the slab, insulation types and R-values (RCO 1102), vapor barrier, fireblocking (RCO 302), etc. The minimum ceiling height required is 6 feet 8 inches, except for furred areas under beams and ducts where the minimum is 6 feet 4 inches (RCO 305). The maximum allowed stud spacing is 24 inches center-to-center. Pressure-treated wood is required where it is in contact with the basement slab or foundation walls. See the attached sample wall section for guidance. If the sample represents your project, then it can be used as part of your construction drawings. (RCO sections 302, 305, & 1102)
4. Show all new electric outlets and devices including smoke alarms (required inside and outside of new or altered sleeping rooms) and CO detectors (required outside of new or altered sleeping rooms RCO 314 & 315). Receptacles are required on all wall spaces over 24" long. They must be placed a maximum of 6 feet from the wall openings with a maximum of 12 feet between receptacles. (N.E.C. article 210.52(A)(2)). GFCI receptacles are required in all bathrooms, unfinished basement areas and within 6 feet of all sinks (N.E.C. 210-8). At least one GFCI receptacle is required in each unfinished area of the basement per (N.E.C. 210-8(A)(5)). Arc Fault Circuit Interrupter (AFCI) protection is required for all 120V 15–20-amp branch circuits supplying electrical outlets in finished areas per (N.E.C. article 210.12). Tamper-resistant receptacles are required for new 120V 15–20-amp receptacle outlets per (N.E.C. 406.12)
5. At all enclosed accessible spaces under stairs provide ½-inch gypsum board on the inside face of the walls and on the under-stair surfaces. (RCO section 302.7)
6. Show ventilation air for the basement in one of the following ways: By windows and/or doors directly to the outside that have openings at least 4% of the floor area of the room they serve (natural ventilation) [e.g.- A room that is 100 square feet in floor area must have at least 4 square feet of openable window or door area.], or by providing mechanical ventilation. Mechanical ventilation can be provided by either an outdoor air duct connected to the return side of the HVAC unit (typically 3" diameter with a manual damper), or by installing a bathroom exhaust fan in the house that runs continuously at 50 cfm minimum. The exhaust fan must exhaust directly to the exterior of the house. (RCO 303 & OMC table 403.3)
7. Provide combustion air for the non-high-efficiency gas furnaces and water heaters when they are to be enclosed by new walls. For combustion air to water heaters, either provide a louvered door into the water heater room or provide two vents in one of the walls surrounding the water heater room. Provide one opening within 12" of the top and one within 12 inches of the bottom of the wall. Each opening shall have a minimum free area of 100 square inches. Gas valves, sump pumps, electrical bonding connections and panels need access through the new walls. Vent-free fireplaces require outside combustion air unless the manufacturer's instructions state otherwise. (RCO 1700 & 2407)
8. Plumbing work requires a plan approval from the **Plumbing Division of the Warren County Health Dept.** (513.695.1476).

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