

**BUILDING GUIDE TO A  
BASEMENT FINISH  
SINGLE FAMILY RESIDENTIAL ONLY**

Provide **TWO complete sets of plans.** Plans are to include the following elements:

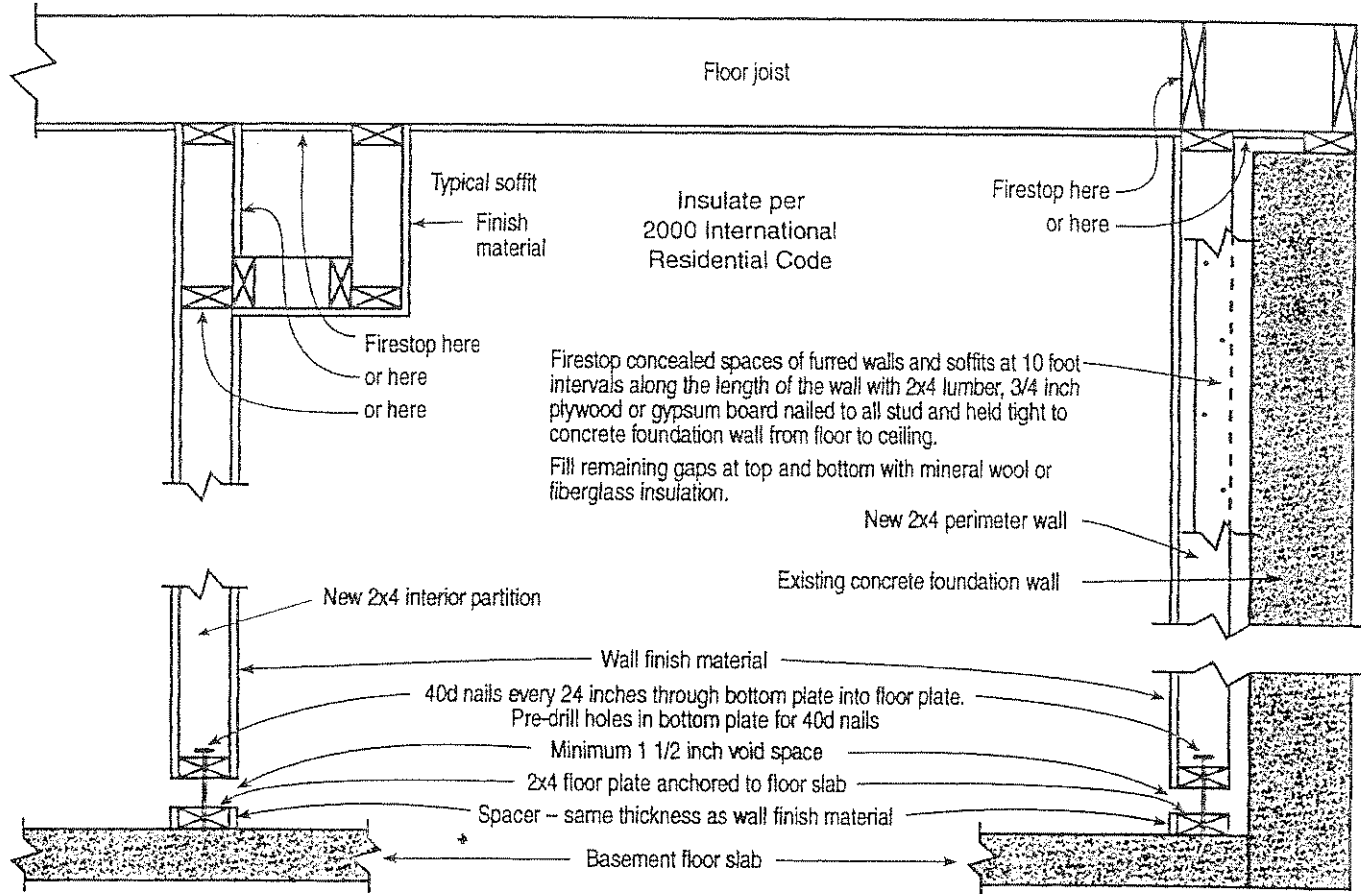
1. A floor plan with dimensions of each room, drawn to scale, showing the layout of the entire basement. Label the use of each room.
2. Indicate the location of each window in the basement and the size and type of window (i.e. slider, single hung, double hung, casement). Identify emergency escape and rescue windows (at least one required in the basement; one required in each bedroom) and size and depth of egress window wells, and window well ladders (see page 4).
3. Indicate the height of the window sill in all bedrooms.
4. Identify modifications to existing structural members such as posts, beams, and floor joists.
5. Indicate new walls to be added. Differentiate from existing walls by highlighting or striping the new wall. Indicate any walls that currently have open framing but are now being enclosed.
6. Indicate how new walls will be constructed, exterior and interior (i.e. exterior walls with wood studs 2 x 4 @ 24" o.c. spaced out ½" from the concrete walls, with pressure treated baseplate; ½" sheetrock; or other methods).
  - a. Exterior walls must be insulated; R-13 cavity insulation (between framing members); or R-10 continuous insulation.
7. Indicate the height of the ceiling and how the ceiling will be finished (i.e. 5/8" sheetrock applied directly to the floor/ceiling joist above, suspended ceiling, etc.). Show dropped soffit or chase locations and height to bottom of soffit or chase.
8. Show electrical such as receptacles, lights, switches, fans, smoke detectors, carbon monoxide detectors, etc.
9. Show new plumbing fixtures and identify any plumbing modifications. Identify sump pumps and backflow preventors.
10. Indicate how each room will be heated. Ensure the heat source is adequately sized.
11. Show the location of any gas appliances in the basement (i.e. furnace, water heaters . . .); indicate the BTU's of each appliance on the plan (input rating). Unless the appliances are direct vent/sealed combustion, indicate how combustion air will be provided.

## GUIDELINES

1. **Egress windows** (one in each bedroom) must have a min. of 5.7 s.f. net clear opening (5 s.f. for grade floor openings) with a min. clear width of 20", a min. clear height of 24" and a maximum sill height of 44". See page 4. *Be aware that not all 3 x 4 windows (12 s.f.) will have a net clear opening of 5.75 s.f. Check with the manufacturer before purchasing.*
2. **Smoke alarms** must be installed in all new and existing sleeping rooms, hallways ,or other rooms giving access to the sleeping rooms, and on each floor of the house. Smoke alarms are to receive their primary power from the building wiring (exception: existing areas that do not have a attic, crawl spaces or basement available which could provide access for hard wiring without the removal of interior finishes). Smoke alarms are to be interconnected in such a manner that the actuation of one alarm will activate all of the other alarms in the unit (exception: existing areas that do not have a attic, crawl spaces or basement available which could provide access for hard wiring without the removal of interior finishes).
3. **Carbon Monoxide Alarms** are to be installed outside of each separate sleeping area (in the immediate vicinity of the bedrooms) in dwelling units that have fuel-fired appliances in the dwelling or dwelling units with attached garages. (IRC 315.1; WMCA 15.04)
4. **Ceiling heights** are generally to be a minimum of 7' (with exceptions for beams, girders, ducts or other obstructions; bathrooms; and 50% of a room with sloped ceilings).
5. **Fuel burning appliances.** A minimum of 30" clear working space is required in front of the furnaces and water heaters. Maintenance or removal of each appliance must be possible without removing the other appliance or disturbing walls, piping, valves, wiring and junction boxes. A fuel-burning appliance cannot be located in a bedroom or bathroom unless appliances are installed in a dedicated enclosure in which all combustion air is taken directly from outdoors, and a weather stripped solid door equipped with an approved self closing device is installed.
6. **Firestopping** must be installed in concealed spaces of wood-furred walls at the ceiling level, at 10-foot intervals along the length of the wall and at all interconnections of concealed vertical and horizontal spaces such as intersections of stud walls and soffits or dropped ceilings. A detail of typical firestopping is included on the following page of this handout. Firestops may be constructed of 1-1/2 inch lumber, ¾ inch plywood or particle board, gypsum board or fiberglass insulation, securely fastened.
7. If the **space under the stairs** is used for storage or other purposes, the walls and the ceiling of the space must be protected on the enclosed side with ½" gypsum board.
8. **Bathrooms** must be provided with a minimum of 24" in front of the toilet and 15" between the center of the toilet and any sidewall or other obstruction. Showers must have a minimum inside dimension of 1024 square inches and shall also be capable of encompassing a 30" circle and be finished 70" above the drain with non-absorbent materials.
9. **Lighting and ventilation** are required for finished portions of the basement.

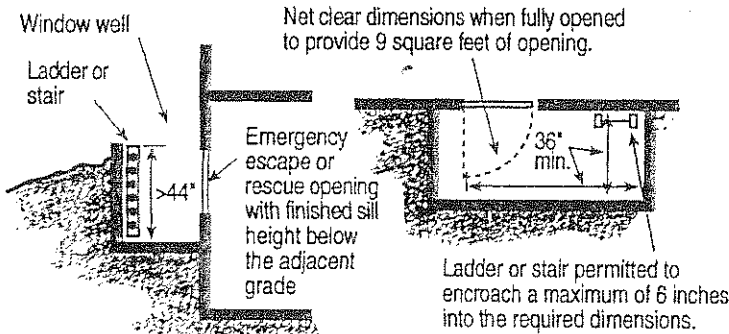
# Single Family Residential Basement Finish

## Basement Finish Details



## Emergency Escape & Rescue Window Well

Emergency Escape And Rescue window wells must provide a minimum area of 9 square feet with a minimum dimension of 36 inches and shall enable the window to open fully. If the depth of the window well exceeds 44 inches, a permanently affixed ladder must be provided. The ladder must not interfere with the operation of the window.



## Emergency Escape & Rescue Window

Emergency Escape And Rescue Windows must meet the following criteria:

- A minimum total openable area of not less than 5.7 square feet
- A minimum clear openable height of not less than 24 inches
- A minimum clear openable width of not less than 20 inches.
- A finished sill height of not more than 44 inches above the floor and should be operable from the inside without the use of separate tools, knowledge or effort.

### Examples of Complying Height & Width Combinations

