Building Guide

Single Family Residential
Basement Finish

How to Use this Guide
Provide two sets of the required documents and complete the following:

1. Review this Building Guide
2. Provide 2 Floor Plans
3. Fill out a Building Permit Application

The majority of permit applications are processed with little delay. The submitted
documents will help determine if the project is in compliance with building safety
codes, zoning ordinances and other applicable laws.

Smoke alarms are required to be hardwired and interconnected
in new and existing bedrooms, halls and on each level unless
removal of interior wall or ceiling finishes would be required.
In this case, battery operated devices are acceptable.

Carbon monoxide alarms shall be installed outside of each separate
sleeping area in the immediate vicinity of the bedrooms in dwelling
units within which fuel-fired appliances are installed and in dwelling
units that have attached garages.
Directions
1. Submit two complete sets of required information.
2. Draw a floor plan with dimensions drawn to scale, showing the layout of the entire basement. Label the use for all of the rooms.
4. List window sizes and types, identify emergency escape and rescue windows, and egress window wells with ladder.
5. Identify modifications to the existing structure such as posts, beams and floor joists.
6. Indicate height of dropped ceiling areas less than 7 feet.

Floor Plan

NAME:
ADDRESS:
PHONE NUMBER:
PERMIT NUMBER: DATE:
Basement Finish Requirements

1. Ceiling Heights:
   If the finished ceiling will be less than 7’, please consult your Building Department.

2. Emergency Escapes:
   All sleeping rooms must have an emergency escape window or exterior door. Emergency escape windows with a sill height below grade must be provided with an emergency escape window well and ladder. (For emergency escape window and window well requirements, see page 4.)

3. Smoke Alarm and Carbon Monoxide Detectors:
   Smoke alarms are required to be hardwired and interconnected in new and existing bedrooms, halls and on each level unless removal of interior wall or ceiling finishes would be required.
   In this case, battery operated devices are acceptable.
   Carbon monoxide alarms shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units wherein fuel-fired appliances are installed and in dwelling units that have attached garages.

4. Fuel Burning Appliances:
   Furnaces and water heaters 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. If the furnace and water heater are being enclosed, adequate combustion air must be provided for these appliances to operate properly.
   For maintenance purposes, a minimum of 30 inches clear working space must be provided in front of furnaces and water heaters. Maintenance or removal of each appliance must be possible without removing the other or disturbing walls, piping, valves, wiring and junction boxes.

5. Walls:
   Walls on concrete floors are to have pressure-treated sill plates.
   Non-bearing walls are to be secured 32” o. c. with concrete fasteners or for bearing walls, secure over footing with 1/2” anchorbolts 6” o. c.

6. Firestopping:
   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 intersection 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, 3/4 inch plywood or particle board, gypsum board or fiberglass insulation, securely fastened.

7. Insulation:
   Check with your Building Department for insulation requirements.

8. Space Under Stairs:
   If access to the area or space under the basement stairs is provided for storage or other uses, the walls and ceiling of this enclosed space must be protected on the inside.

9. Bathrooms:
   Toilets must be provided with a minimum of 24 inches in front of the toilet and 15 inches between the center of the toilet and any sidewall or other obstruction. Showers shall have a minimum inside dimension of 1,024 square inches, capable of encompassing a 30 inch circle and be finished 70 inches above the drain with non-absorbent materials.
   A ventilation fan is required in toilet rooms with unopenable windows and bathrooms with a tub or shower. The fan must be vented to the exterior of the building.

10. Lighting & Ventilation:
    Lighting and ventilation are required for any finished portion of the basement. Contact your Building Department for specific requirements.

   The Building Department staff can help you determine what is necessary to meet minimum safety requirements.
**Basement Finish Details**

- Firestop concealed spaces of furred walls and soffits at 10 foot intervals along the length of the wall with 2x4 lumber, 3/4 inch plywood or gypsum board nailed to all stud and held tight to concrete foundation wall from floor to ceiling.
- Fill remaining gaps at top and bottom with mineral wool or fiberglass insulation.

**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 Windows**

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**

- Minimum size window for 24" clear height
- Minimum size window for 20" clear width

**Diagram Details**

- New 2x4 perimeter wall
- Existing concrete foundation wall
- New 2x4 interior partition
- Floor joist
- Insulate per Local Requirements
- Typical soffit Finish material
- Firestop here or here
- Fill remaining gaps at top and bottom with mineral wool or fiberglass insulation.
- 2x4 floor plate anchored to floor slab pressure treated
- Basement floor slab
- Wall finish material
- Minimum 1 inch void space or use treated studs
- Emergency escape or rescue opening with finished sill height below the adjacent grade
- 36" min
- Ladder or stair permitted to encroach a maximum of 6 inches into the required dimensions.

**Permit Information**

- **NAME:**
- **ADDRESS:**
- **PHONE NUMBER:**
- **PERMIT NUMBER:**
- **DATE:**