



# Finishing Basements

## Frequently Asked Questions:

### **Do I need a permit?**

Yes, you need a permit to finish or partially finish a residential basement.

### **Is there anything special for a bedroom?**

Yes,

- Bedrooms, like every habitable room, must have an area of at least 70 square feet and cannot be less than 7 feet in any dimension;
- Bedrooms, habitable rooms, hallways, etc. must have a minimum ceiling height of 7 feet;
- Bedrooms are also required to have an emergency escape window. It shall be operable from the inside without the use of any special knowledge, tool, or extra force, beyond that required for normal window operation. The window must meet the following requirements:
  - ☑ Maximum height to clear opening of window: 44 inches
  - ☑ Minimum clear opening width: 20 inches
  - ☑ Minimum clear opening height: 24 inches
  - ☑ Minimum clear opening area: 5 square feet at grade floor level; 5.7 square feet at all other grades;
- Window wells shall be 9 square feet and project a minimum of 36 inches. Wells deeper than 12 inches require a protective grill or cover that is removable from the inside without the use of a key, tool, or excessive force.
- A smoke detector must be located immediately outside all bedroom entrance doors and inside each bedroom. If the rest of the detectors throughout the house are interconnected, this smoke detector must also be interconnected;
- A carbon monoxide detector is required within 15 linear feet of all bedroom entrance doors on each level of the home where sleeping rooms are present.

### **What are the stairway guidelines?**

Often, existing stairways need to be modified:

- Risers must be solid or have a toe board which limits the riser opening to less than 4 inches;
- A continuous graspable handrail shall be provided along one side of the stair located 34 inches to 38 inches above the nosing.

### **Is there anything else I should know?**

Yes,

- All plumbing, mechanical and electrical work must be performed in accordance with the International Building Codes, Illinois Plumbing Code, and City of Troy ordinances. If hiring outside help, plumbers must be licensed by the state of Illinois and must complete a Certificate of Code Compliance provided by the city.

- On basement renovations, it is very important to identify both existing and new construction. Show basement room layout, identify use of each room/space by name and indicate both new and existing walls, as well as, furred and insulated concrete foundation walls. Rooms which resemble a bedroom, or that could easily be converted to a bedroom in the future, will be reviewed for bedroom requirements regardless of the room name presented on the drawing.

### **What is the next step?**

Next, you need to:

- Complete and submit your permit application;
- Submit a basic floor plan. Other details may be required depending on the scope of the proposed project;
- Pay the permit fee.

## **Requirements/Guidelines:**

These requirements/guidelines are intended to provide the homeowner/contractor with basic information needed to finish or partially finish most residential basements.

### ***Insulation:***

- Concrete foundation walls shall be furred out and insulated. A minimum of R-9 insulation must be extended down to the basement floor slab on walls less than 50% above grade; R-13 insulation is the minimum on walls more than 50% above grade.

### ***Ventilation and natural light:***

- Glass area in habitable rooms shall not be less than 8% of the floor area served.
- One-half of this area must be available to unobstructed ventilation with screens included.
- Artificial lights and/or mechanical ventilation may be used as an alternative if the existing windows are of inadequate size.

### ***Ventilation, heating and air conditioning, and general mechanical:***

- Combustion air-gas appliances located in closets or utility room spaces whose volume is less than 40 cubic feet/1000 BTU/hour input rating shall have combustion and ventilation air provided.
  - Minimum clearance from combustibles is 18 inches or per manufacturer's specifications.
- Finished rooms without adequate windows require artificial ventilation to be supplied at a rate of 0.35 air changes per hour or 15 cubic feet per minute per person, whichever is greater.
- Forced air and returns are required in habitable rooms.
- Inside air – 1 square inch shall be provided/1000 BTU/hour each opening.
  - Opening shall not be less than 100 square inches.
  - One opening shall be provided within 12 inches of the ceiling and within 12 inches above the finished floor.
- Clothes dryers shall be independent of all other systems and exhaust to the exterior.
- Bathrooms without windows shall exhaust 50 CFM minimum to the exterior.

### **Safety glazing:**

- Fully tempered, laminated safety approved wired glass or approved shatter-resistant plastic must be used in doors intended for human passage, patio doors, windows within 24 inches of a door, and shower/bathtub enclosure walls.

### **Ceiling/floor draftstopping**

- Dropped ceilings below wood joists or attached directly to wood floor trusses shall be draftstopped with ½ inch drywall or ¾ inch plywood at 1000 square feet intervals and parallel to framing members.

### **Stairs serving finished basements**

- Stairs serving basements must be protected from the underside by means of enclosing the area with drywall. If the area under the stairs is to be used for storage, protect the bottom of the risers with drywall (no exposed wood).

### **Firestopping**

- Firestopping consisting of 2 inch lumber, minimum 23/32 inch structural paneling, or approved non-combustible materials shall be provided at the ceiling line in concealed spaces of stud walls/partitions including furred or studded-off spaces of concrete foundation walls, and at soffits, openings around pipes, dropped ceilings and similar spaces.

### **Electrical**

- **GFCI's** are required for receptacles and/or circuits installed in the following locations: Receptacles to serve counter top surfaces, bathrooms, and unfinished basement spaces (except laundry circuit and single sump pump receptacles). **Receptacles** are required in the following area: all habitable rooms so that no space along a wall is more than 6 feet from a receptacle (all wall areas at least 2 feet wide), hallways of 10 feet or more in length, adjacent to the basin in bathrooms, and at least 1 in the laundry area and 1 in the basement unfinished area (in addition to the laundry receptacle).
- **Lighting** is required in the following areas: at least 1 wall lighting switch in every habitable room (bathroom, hallway, stairway, and exterior doors), interior stairways at each floor level that are separated by 6 or more steps, and at least 1 lighting outlet in each unfinished basement space (located at point of entry).
  - **Lighting in closets:** incandescent fixtures not completely enclosed in lamps and the use of pendant fixtures is prohibited without proper clearance.
    - Fixtures must be surface-mounted. Incandescent fixtures need a 12 inch minimum clearance and florescent or recessed fixtures need a 6 inch minimum clearance from edge of closet shelving.
- **Electrical Panels:** circuit breaker panels shall not be concealed and electrical panels are not permitted in bathrooms or clothes closets. Lighting is required in the vicinity of the electrical panel. A minimum 3 inches clearance is required in front of existing electrical panels.

**PLEASE NOTE:** *These requirements apply to most simple residential basement finishing projects. However, there are sometimes unusual circumstances that dictate the need for additional information on a particular project. It should also be emphasized that especially on interior renovation projects many Code requirements are verified through the inspection process and are not necessarily reflected within the approved plan documents. Contact the Building and Zoning Dept. with any questions or concerns.*