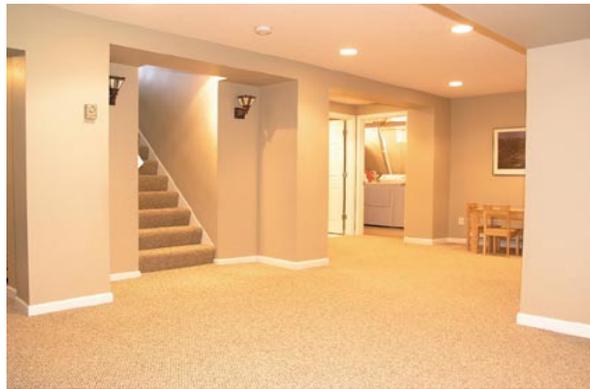


**DEPARTMENT OF COMMUNITY SERVICES
CARMEL, INDIANA**



www.carmel.in.gov

**BUILDING GUIDE AND PLAN REVIEW FOR
SINGLE FAMILY BASEMENT**



**For a quick response to questions please call or visit the
Building and Code Services Office:**

Main Office – 317-571-2444

Hours: Monday-Friday 8:00 am – 5:00 pm

Inspector-On-Call – 317-571-2481

Hours: Monday – Friday 8:00 am – 9:00 am

This pamphlet is a guide to the most common questions, issues and common oversights. It is not intended nor shall it be considered a complete set of requirements.

The purpose of this Guide is to help facilitate the plan review process

To monitor progress of your permit and to check inspection results please go to:

www.carmel.in.gov

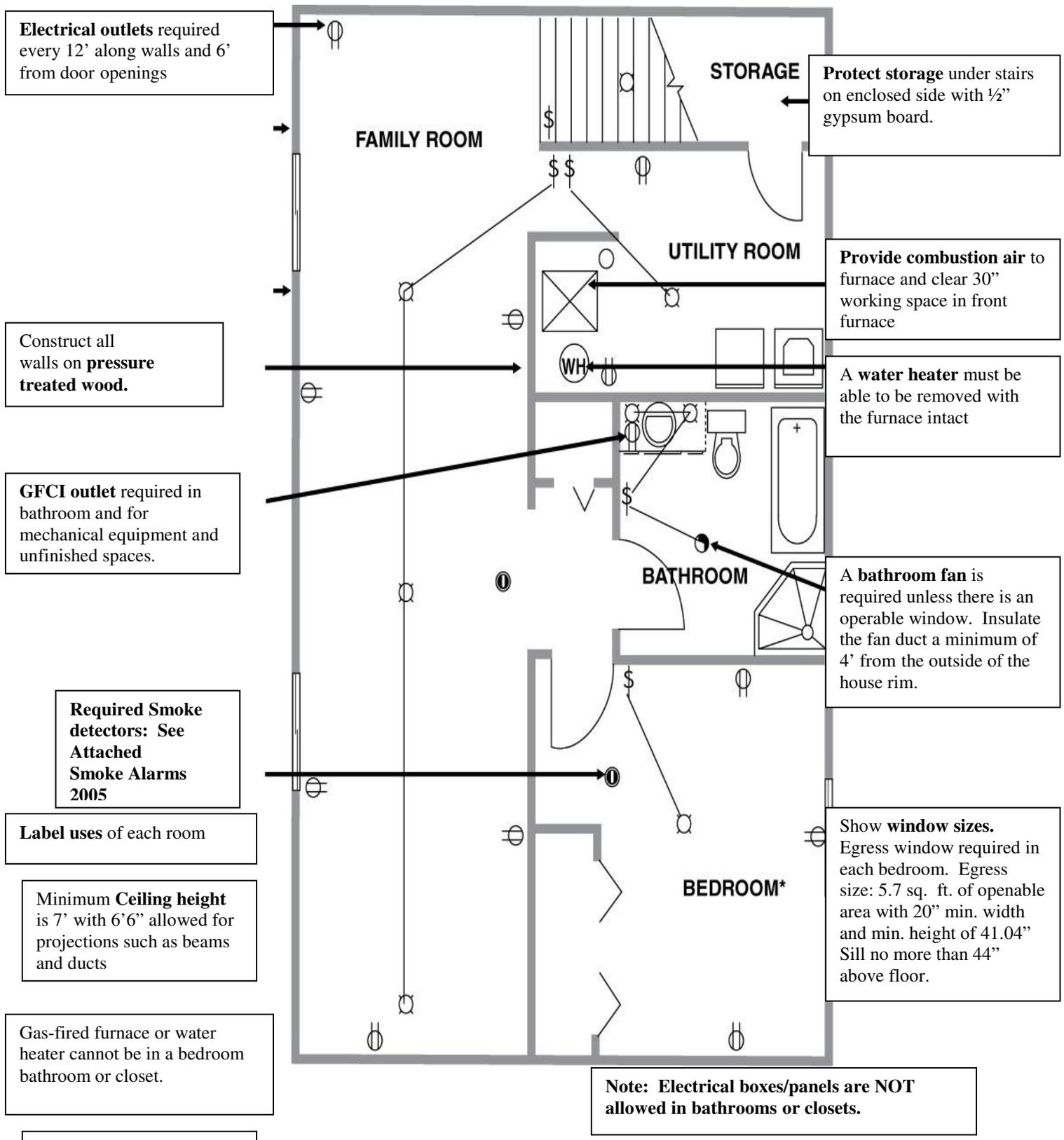
Then follow the steps listed below.

1. Click on **Department of Community Services**.
2. On drop down screen click on first box indicating **Department of community Services**.
3. Under **Quick Links**.
 - a. Click on **“One Stop Shop”**
4. Click on **Permit Status**. This brings you to **“On-Line Permitting & Code Enforcement.”**
5. Left side of screen, click on **Permit Status**.
6. Type in **Permit Number** and/or **Street Address**.
7. Click on **Permit Number** box.
8. Click on **Search**.
9. This is **Permit Details Screen**.
 - a. Click on the **More Information** screen.
10. On the left side of the screen click on area of information needed i.e., **Inspections**.

The Most Common Overlooked Building/Safety Codes

1. Fire blocking incomplete or inadequate.
2. GFCI's not installed.
3. Bored holes too close to bottom or top of floor joists.
4. Handrails not installed/returned to wall.
5. Cover plates for switches/outlets need to be installed.
6. Metal junction boxes not grounded.
7. Ladder not permanently installed for egress in window well area.
8. Romex too close to edge of studs and need to have nail plates installed.
9. Smoke detector required near basement stairs, interconnected with all others and meet code.
10. Toilet flanges not secured to concrete with fasteners.

SAMPLE FLOOR PLAN



SINGLE FAMILY BASEMENT REMODEL

Requirements:

Ceiling Heights:

Finished ceiling height shall be a minimum of 7'-0" from finished floor. Please consult the building department for regulations regarding pipes/ducts and headroom.

Emergency Egress Openings:

Sleeping rooms shall be provided with an emergency egress by means of a window or exterior door. An emergency egress located below grade shall be provided with a window well and ladder.

WINDOW ESCAPE SPECIFICS

5.7 S.F. X 144" = 820.80"

Minimum width is 20"

Minimum height is 22"

Maximum sill height is 44"

Please check which box is applicable:

20" wide = 41.04" tall

22" wide = 32.27" tall

24" wide = 34.18" tall

26" wide = 31.54" tall

28" wide = 29.29" tall

30" wide = 27.33" tall

32" wide = 25.63" tall

34" wide = 24.12" tall

36" wide = 22.77" tall

38" wide = 21.58" tall

40" wide = 20.52" tall

Other: _____

Lighting and Ventilation:

Finished basements are required to be provided with adequate lighting and ventilation, either by natural or mechanical means. Please contact the City of Carmel Building Services Department for specific details.

Insulation:

Basement walls shall be provided with a minimum R-10 insulation. The box or rim joist cavity shall be provided with a minimum R-22 insulation.

Space Under Stairs:

Enclosed accessible space under stairs shall have the walls, under stair surface and ceiling protected on the enclosed side with ½" gypsum board.

Stairway Illumination:

Stairways shall be provided with a means to light the stairs, including the landings and treads. A switch located at the top and bottom of the stairway shall activate lights.

Firestopping:

Firestopping shall be installed at all concealed spaces of wood-furred walls, at the ceiling level and at the interconnections of concealed vertical and horizontal spaces such as occur at the intersection of stud walls and soffits (bulkheads) or suspended ceilings. Firestops may be constructed of 1 ½" lumber, ¾" plywood or particleboard, ½" gypsum board or un-faced fiberglass insulation which extends 16" vertically and fills the entire cavity.

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 the 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 a 30" 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, pipes, valves etc.

Bathrooms:

Toilets must be provided with a minimum of 21" in front of the toilet and 15" between the center of the toilet and any sidewall or other obstruction. Showers shall have a minimum inside dimension of 900 square inches, capable of encompassing a 30" circle and be finished 7" above the drain with non-absorbent materials.

A ventilation fan is required in toilet rooms with inoperable windows and bathroom with a tub or shower. The fan must be vented to the exterior of the building.

City of Carmel

When are smoke alarms required?

Definitions:

Living Space: A space protected from the weather, used all year long and that has heating, insulation and all required electrical convenience receptacles and lights.

Addition: Adding living space to an existing home, which requires a foundation, roof and walls, heat, insulation and electrical receptacles and light(s). Windows may be required.
A Building Permit and Smoke Alarms are required.

Example: Unfinished basement to living space;
attic to living space;
new addition of living space onto existing home;
porch or patio to living space;
conversion of any room to a bedroom;
living space over a detached or attached garage.

Remodel: Any removal of drywall, plaster, paneling, change in structural or non-structural walls. Relocation of bathroom and/or kitchen plumbing fixtures. Adding new bathroom, kitchen, bedroom.
Changing weight bearing capacity or any floor, roof or wall. Or, any other work for which a permit is required.
Any structure damaged by fire, wind, lightning, storm or other accident.
Building permit and smoke alarms required.

Smoke Alarms MUST be installed in each bedroom and on each floor.

Smoke alarms are to be powered from the home's electrical system and must be interconnected. Refer to City of Carmel Smoke Alarms 2005 document in this packet. (Indiana One and Two family Dwelling Code Section 313)

Exception: Where there is no access to the attic and/or basement because of finished ceilings or floors (crawl space not included). A battery operated system in accordance with the Indiana One and Two Family Dwelling Code Section 313 can be used.

The following projects **DO NOT** require smoke alarms.

Kitchen Remodel Change of cabinets and counter top, sink bowl, faucet and disposal in existing locations. Replacement of wood or vinyl floor covering. No walls added or removed, no island work station. All receptacles to be GFCI protected.
No plan review and no permit required. Home Owners Statement required.

Bath Remodel Change of existing plumbing fixtures, floor covering and wall cabinet.
No plumbing fixtures relocated. No walls moved. No window(s) added or removed.
No receptacles or light fixtures added. No hydro massage bathtub.
All receptacles must be GFCI protected.
No plan review and no permit required. Home Owners Statement Required.

Enclosed Porch: Also known as; **Sun Room or 3 Season Room.**
A porch that has a roof. Walls are being installed or altered to hold screen and/or window and doors, **AND, is completed separated from the house by doors and/or walls and windows.**
Ceiling fan/light with switch permitted.
No heating system or connection to existing heating system.
No added electrical receptacles.
Plan Review and Building Permit required.

Other: Detached garage. Attached garage. Porch. A deck that is more than 30 inches above the ground. Pool, spa or hot tub. Pool House.
Plan Review and Building Permit required.
Replacement of windows, 30 inches or less, deck, bathroom or kitchen remodel.

SMOKE ALARMS 2005

Section R313; smoke alarms. **Each smoke alarm shall be listed:**

R313.2 Required smoke alarm locations. At least one smoke alarm shall be installed in each of the following locations:

1. In the living area remote from the kitchen and cooking appliances. Smoke alarms located within 20 feet horizontally of a cooking appliance must incorporate a temporary silencing feature or be photoelectric type.
2. In each room designed for sleeping.
3. On the ceiling of the upper level near the top or above each stairway, other than a basement stairway, in any multistory dwelling. The alarm shall be located so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction. One on each floor is required.
4. On the basement ceiling near the stairway.

R313.2.1 Alterations and additions. When interior alterations or additions requiring a permit occur, **OR** when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be provided with smoke alarms.

The Alarms shall be located in the same places as required for new dwellings. The smoke alarms shall be interconnected and hard wired.

R313.5.2 Interconnection. When more than one smoke alarm is required to be installed within an individual dwelling unit, the alarm devices shall be **interconnected** in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

EXCEPTIONS:

1. Smoke alarms in existing areas shall not be required to meet the requirements where the alterations do not result in the removal of the interior wall or ceiling finishes exposing the structure **unless**, there is an attic, crawlspace, or basement available that could provide access for hard wiring and interconnection without the removal of interior finishes.
2. Repairs are exempt from the requirements of this section.

R313.3 Prohibited smoke alarm locations. A smoke alarm required under this section shall not be placed:

1. Within 3 feet from any grille moving conditioned air within the living space or
2. In any location or environment that is prohibited by the terms of the listing.

R313.4 Mounting requirements. Smoke alarms according to their listing installation instructions and the requirements of this section.

R313.4.1 Flat Ceilings. In rooms with flat, peaked sloping or single slope ceilings with a slope of less than 1.5/12, smoke alarms shall be mounted either:

1. On the ceiling at least 4 inches from each wall; or
2. On a wall with the top of the alarm not less than 4 inches below the ceiling and not farther from the ceiling than 12 inches or the distance from the ceiling specified in the smoke alarm manufacture's listing and installation instructions, whichever is less.

R313.4.2 Peaked Sloping Ceilings. In rooms with peaked sloping ceilings with a slope of 1.5/12 or greater, smoke alarms shall be:

1. Mounted on the ceiling or wall within 3 feet measured horizontally, from the peak of the ceiling;
2. At least 4 inches measured vertically, below the peak of the ceiling; and
3. At least 4 inches from any projecting structural element.

R313.4.3 Single Slope Ceilings. In rooms with single slope ceilings with a slope of 1.5/12 or greater, smoke alarms shall be:

1. Mounted on the ceiling or wall within 3 feet measured horizontally, of the high point of the ceiling; and
2. Not closer than 4 inches from any adjoining wall surfaces or any projecting structural element.

R313.4.4, 313.4.1, 313.3.2 Visible and tactile notification appliances. SEE CODE.

R313.5 Connection to Power Source. Each smoke alarm shall be powered from:

1. The electrical system of the home as the primary power source and a battery as a secondary power source; or
2. A battery rated for a 10 year life, provided the smoke alarm is listed for use with a 10 year battery if approved by the building official.

R313.5.1 Circuitry. Each smoke alarm whose primary power source is the home electrical system shall be mounted on an electrical outlet box and be connected by a permanent wiring method to a general branch circuit.

SINGLE FAMILY RESIDENTIAL BASEMENT FINISH

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.
3. Show electrical outlets, smoke detectors, lighting, furnace and water heater locations.
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

A large, empty rectangular box with a thin black border, intended for the student to draw the basement floor plan. The box is currently blank.