FEMA

Fact Sheet

Federal Insurance and Mitigation Administration

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Residential Safe Rooms

Every year, tornadoes, hurricanes, and other extreme windstorms injure and kill people, and cause millions of dollars worth of property damage in the United States. Most homes, even new ones constructed according to current building codes, do not provide adequate protection for occupants seeking refuge from these events.

Having a safe room built for your home can help provide near-absolute protection for you and your family.

What is a Safe Room?

A safe room is a room or structure specifically designed and constructed to resist wind pressures and wind-borne debris impacts during an extreme-wind event, like tornadoes and hurricanes, for the purpose of providing life-safety protection.

A tornado or hurricane can cause much greater wind and wind-borne debris loads on your house than those on which building code requirements are based. Only specially designed and constructed safe rooms, which are voluntarily built above the minimum code requirements, can protect you from these risks.

Does Your Family Need a Safe Room?

To help you with this decision FEMA has developed guidance within FEMA P-320, *Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business* (2014). This publication helps individuals determine their need for a safe room and how to work with their builder/contractor to plan and build one.

Types of Residential Safe Rooms

There are a number of potential locations to construct a safe room within a home, and safe rooms can also be constructed outside of a home either as a detached structure or adjacent to the home. If a safe room is installed as a detached structure, it should still be located within 150 feet of the nearest entrance of the residence so that it can be accessed quickly in an emergency. Guidance is available in FEMA P-320.

Above-Ground, In-Ground, and Basement Safe Rooms

Safe rooms are also classified as either *in-ground, above-ground,* or within a *basement*. While *in-ground* safe rooms provide the inherent missile protection afforded by the surrounding soil coverage, above-ground safe rooms are required to be rigorously tested to ensure that they can also provide missile impact protection. Therefore, all properly constructed safe rooms offer life safety protection when properly designed and constructed.

Above-ground residential safe room that was in the garage of a home hit by an EF5 tornado (Joplin, MO).

What does it Cost?

The basic cost to design and construct a safe room as shown in the design drawings of FEMA P-320 during the construction of a new home ranges from approximately $8,000 to $9,500 for an 8-foot x 8-foot safe room and between $14,000 and $17,000 for a 14-foot x 14-foot safe room. In general, safe rooms installed in existing homes will be more expensive than those done during new construction. More details on factors that influence the cost of the safe room can be found in Section 3.10 of FEMA P-320.

An above-ground safe room constructed as an addition to a slab-on-grade home in a way that matches the aesthetics of the home (Tuscaloosa, AL).

Federal Funding for Safe Room Construction

Federal programs that provide funds for safe room construction include U.S. Department of Housing and Urban Development (HUD) Block Grant funds, Federal Housing Administration (FHA) mortgage insured financing, and the FEMA Hazard Mitigation Grant Program (HMGP), and Pre-Disaster Mitigation (PDM) grant program.

Individual homeowners do not apply directly to FEMA for safe room funding. To find out about potential federal funding for safe rooms, contact your State Emergency Manager and/or State Hazard Mitigation Officer. FEMA provides Hazard Mitigation Assistance (HMA) funding to eligible states, tribes, and territories that, in turn, provide the funding to local governments to assist in reducing overall risk to people and property.

Additionally, many states have developed initiatives for the construction of residential, public, and private safe rooms, including safe rooms in hospitals, emergency operations centers, first-responder facilities, schools, day care centers, manufactured home parks, private residences, community centers, senior centers, and campgrounds.

For more information about safe room funding and initiatives, visit this link: http://www.fema.gov/safe-rooms/residential-safe-rooms.

Safe Rooms and Flooding Hazards

Safe rooms should not be constructed where flood waters have the potential to endanger occupants. Safe rooms in areas where flooding may occur during hurricanes should not be occupied during a hurricane. However, occupying such a safe room during a tornado may be acceptable if the safe room will not be flooded by rains associated with other storm and tornado events. More information on acceptable flood hazard areas – and flood elevation criteria – can be found in Section 3.2 of FEMA P-320.

Consult your local building official or local National Flood Insurance Program (NFIP) representative to determine whether your home, or a proposed stand-alone safe room site, is susceptible to local, riverine, or coastal flooding.

Registering Your Safe Room with Local Officials

FEMA recommends that the local fire department, local emergency management agency (EMA), and other relevant local officials be given the location of the safe room. Providing the latitude and longitude coordinates of the entrance to the safe room to local officials can be vital in post-disaster recovery efforts. In the event that debris is surrounding or on top of the safe room, this will allow them to check on the safe room to make sure the occupants are not trapped inside.

Charles Prewitt of Tuscaloosa, AL has his exterior safe room registered with the local Fire Department.

Emergency Supply Kits and Weather Radios

FEMA P-320 includes information on preparing a family emergency plan and an emergency supply kit for a safe room. Further, all individuals living or working in tornado-prone areas should have a battery-powered weather radio in their home or place of work.

For more information about weather radios, see information provided by the National Oceanic and Atmospheric Association (NOAA) at http://www.nws.noaa.gov/nwr/.

Useful Links and Resources

Safe Room Helpline: Saferoom@fema.dhs.gov
Safe Room Helpline: 1-866-927-2104

FEMA's Hazard Mitigation Assistance (HMA) policy guide has information on how funding grants for safe rooms may be available in your state, visit: https://www.fema.gov/hazard-mitigation-assistance.

State Hazard Mitigation Officers
http://www.fema.gov/state-hazard-mitigation-officers.

Safe Room information for Families, Builders, Employers and First Responders: http://highwindsaferooms.org/.

Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business (FEMA P-320), December 2014, 4th Edition https://www.fema.gov/media-library/assets/documents/2009.

ICC/NSSA Standard for the Design and Construction of Storm Shelters, International Code Council and the National Storm Shelter Association (ICC 500), December 2014 http://shop.iccsafe.org/standards/icc-standards/icc-500-2014-icc-nssa-standard-for-the-design-and-construction-of-storm-shelters.html.

Additional information from FEMA Building Science can be found at http://www.fema.gov/building-science and http://www.fema.gov/safe-rooms.

For more information on Emergency Kits visit: http://www.ready.gov/build-a-kit.

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