

Dry Floodproof Your Building

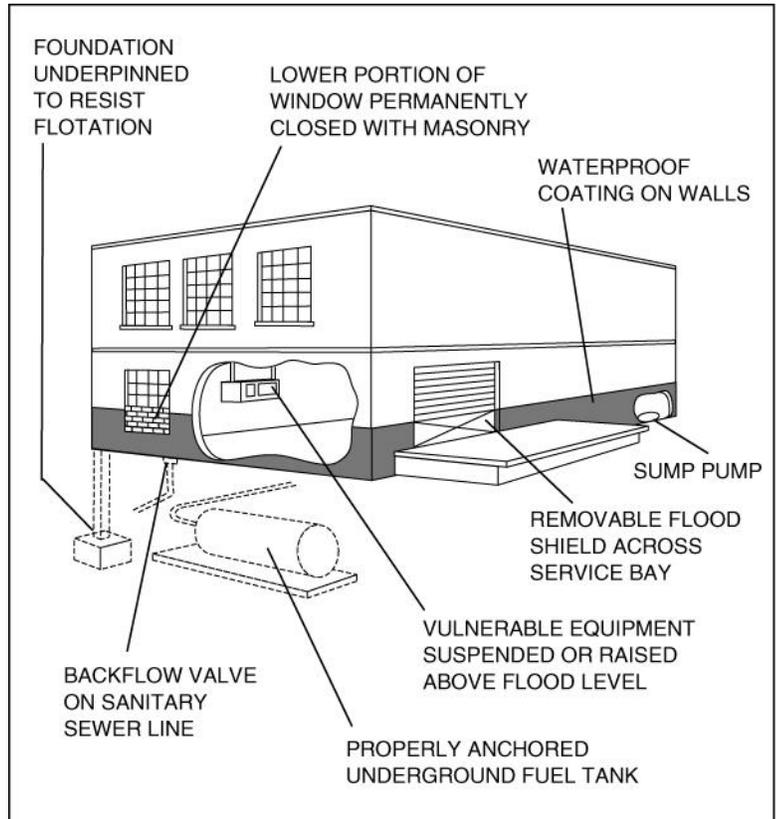


FEMA

PROTECTING YOUR PROPERTY FROM FLOODING

One way to protect a structure and its contents from flood damage is to seal the building so that flood waters cannot enter. This method, referred to as “dry floodproofing,” encompasses a variety of measures (see “Other Sources of Information” section):

- Applying a waterproof coating or membrane to the exterior walls of the building
- Installing watertight shields over doors, windows, and other openings
- Anchoring the building as necessary so that it can resist flotation
- Installing backflow valves in sanitary and storm sewer lines
- Raising utility system components, machinery, and other pieces of equipment above the flood level
- Anchoring fuel tanks and other storage tanks to prevent flotation
- Installing a sump pump and foundation drain system
- Strengthening walls so that they can withstand the pressures of flood waters and the impacts of floodborne debris



BENEFITS OF UTILIZING THIS MITIGATION STRATEGY

- Helps to prevent damage to a structure and its contents

TIPS

Keep these points in mind when you dry floodproof:

- ✓ Dry floodproofing is appropriate primarily for slab-on-grade buildings with concrete or solid masonry walls. Concrete and masonry are easier to seal, more resistant to flood damage, and stronger than other conventional construction materials.
- ✓ If you dry floodproof a “substantially damaged” or “substantially improved” building (as defined by the National Flood Insurance Program [NFIP] regulations) or a newly constructed building, and if the building’s lowest floor (including any basement) is below the base flood elevation (BFE) shown on the Flood Insurance Rate Map (FIRM) for your community, your dry floodproofing must be certified as providing

protection from the BFE. To obtain this certification, you must floodproof your building to a height at least 1 foot above the BFE. Check with your local floodplain manager or building official for more information.

- ✓ The height of your dry floodproofing should not exceed 3 feet. The pressures exerted by deeper water can cause walls to buckle or collapse. Before you use dry floodproofing to protect against greater flood depths, have a structural engineer evaluate the strength of your walls.
- ✓ If your dry floodproofing measures require human intervention before flood waters arrive, such as placing shields over doors and windows, you should have an operations and maintenance plan that describes all the actions that must be taken and lists the persons who are responsible. It must also include a schedule of periodic maintenance that states how often the dry floodproofing measures will be inspected and who will perform the inspections.

ESTIMATED COST

The cost of individual dry floodproofing measures will vary with the size, condition, and use of your building; the dry floodproofing height; and the extent to which you use contractors and engineers.

OTHER SOURCES OF INFORMATION

Anchor Fuel Tanks fact sheet, FEMA, April 2008, <http://www.fema.gov/plan/prevent/howto/index.shtm>.

FEMA 102, *Floodproofing for Non-Residential Structures*, 1986, <http://www.fema.gov/library/viewRecord.do?id=1413>.

FEMA 499, *Home Builder's Guide to Coastal Construction*, Technical Fact Sheets No. 4 and No. 9, August 2005, <http://www.fema.gov/library/viewRecord.do?id=1570>.

FEMA Technical Bulletin 3-93, *Non-Residential Floodproofing – Requirements and Certification for Buildings Located in Special Flood Hazard Areas*, April 1993, <http://www.fema.gov/library/viewRecord.do?id=1716>.

Install Sewer Backflow Valves fact sheet, FEMA, April 2008, <http://www.fema.gov/plan/prevent/howto/index.shtm>.

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