

# DEFINITION OF LOWEST FLOOR

## PROBLEM

There has been some confusion about what constitutes the "lowest floor" elevation for purposes of rating a flood insurance policy and for floodplain management purposes. Lowest floor is defined by the National Flood Insurance Program (NFIP) as:

*the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Section 60.3.*

## FLOODPLAIN MANAGEMENT

The lowest floor of new and substantially improved post-FIRM buildings must be located at or above the 100-year flood elevation or base flood elevation (BFE). In Maryland, one foot of freeboard is added to the BFE, to bring it to the flood protection elevation (FPE). However, certain enclosed areas below the FPE may be permitted in A-zones, provided they meet certain criteria:

1. Enclosed areas may not be subgrade on all four sides, thereby creating a basement, which is not permitted in the floodplain.
2. The area must be strictly limited in use to parking of vehicles, limited storage, and/or access to the building.
3. No electrical or mechanical equipment may be located below the FPE, including, but not limited to, heating and cooling equipment, hot water heaters, pressure tanks, electrical junction boxes or circuit breaker panels, washers, dryers, freezers, toilets, and sinks.
4. All interior wall, floor, and ceiling materials located below the FPE must be resistant to flood damage or left unfinished.
5. An enclosed area must be supplied with at least two water equalizing vents on different walls. The bottoms of the vents may be no more than one foot above grade. These vents must have a total effective open area of one square inch for each square foot of enclosed area below the FPE, and operate to allow **automatic** entry and exit of flood waters.

If any of the above criteria are not met, the structure is not compliant with Section 60.3 and is in violation of the permit (assuming it was issued properly). The elevation certificate must certify the top of the floor of the enclosed area below the FPE. The community that issued the permit must take action to correct the violation to maintain good standing in the NFIP.

Floodplain construction design standards are intended to reduce damage during flooding. The venting requirement for A-zone construction, which addresses the structural integrity of the support system of the entire building, is especially important if construction cannot be avoided. Proper venting, along with the requirement that the building be securely anchored to an adequate foundation system, will prevent most severe damage usually encountered during flooding.

The use of building materials normally associated with living areas above the FPE is prohibited in enclosed areas below the FPE. However, materials necessary to meet applicable fire resistance codes are permitted. Also, machinery and electrical equipment may be located in enclosed, vented area subject to flooding, as long as they are installed at or above the FPE. Electrical distribution panel boxes must be 2 feet above the FPE. A minimal area to serve as an entry foyer and stairs to the elevated floor above may be finished off.

An attached garage or storage area, if it meets the criteria above and has one side at or above grade, is not the lowest floor. However, these areas must be vented properly and have no electrical or mechanical devices installed below the FPE. If these provisions are not met, the floor of the garage or storage area must be considered the lowest floor and it will be in violation of the floodplain management ordinance.

On the Elevation Certificate, the top of the floor is certified as the lowest floor in A-zones and must be at or above the FPE. The bottom of lowest horizontal member supporting the floor system is certified in V-zones and must be at or above the FPE. In V-zones, the area below the FPE is usually left open, but may be enclosed by "breakaway walls". These walls are designed to collapse under pressures of 10 to 20 pounds per square foot, without causing damage to the support system for the elevated portion of the building. Breakaway walls need not be vented, but are permissible only in V-zones.

### **FLOOD INSURANCE RATING**

From an insurance rating standpoint, a determination of a structure's lowest floor provides a mechanism for defining the exposure to risk, and thus allows application of appropriate actuarial rates. In all cases except one, the lowest floor for rating purposes is the same as for flood management purposes. The one case, in which the lowest floor used for rating is not consistent with the floodplain management regulations is in V-zones. The floodplain management ordinance allows breakaway wall enclosures below the BFE without regard to the size of the enclosed area. For insurance rating purposes, however, the floor will be considered the lowest floor if the enclosed area exceeds 300 square feet. The 300 square foot limit was established because of the risk of excessive loading on the foundation system as the size of the enclosure increases. Upon certification of an adequate foundation system, however, lower rates can be provided.

The placement of an enclosure, such as an attached garage, below the BFE does not result in the garage's floor becoming the lowest floor for insurance rating, provided that the design standards required for floodplain management purposes are met. In other words, if the garage is constructed as prescribed by the ordinance, the floor of the principal structure is the lowest floor for rating purposes. A violation of the ordinance requires an elevation certificate to certify the floor of the garage as the lowest floor, resulting in much higher premiums for flood insurance. In extreme cases, the NFIP may deny flood insurance on structures that remain in violation of state or local laws and ordinances.

**Note: The State of Maryland recognizes that development in tidal floodplains is unavoidable. The foregoing discussion of enclosed areas below the FPE should not be construed as endorsing floodprone development.**