



COUNTY OF YORK

DIVISION OF BUILDING REGULATION

BUILDING CONSTRUCTION REQUIREMENTS IN A FLOOD ZONE

Building construction in “Designated Flood Zone Areas” have special requirements that are covered in the Virginia Residential Code and Section 24.1-373 of the York County Code. The following information is a guideline for residential building construction in a designated flood zone area and does not contain all the interpretations and requirements that may be applicable in all situations.

The following requirements apply to all residential construction which includes single family homes, attached single family homes, duplexes, attached garages and residential accessory structures such as garages, workshops and storage sheds.

- **Flood Zones** are determined by the **National Flood Insurance Program** and shown on the **FIRM (Flood Insurance Rate Map)**.
 - **V Zone Construction Requirement:**
Properties located in **V Zones** are **coastal high hazard areas** that are subject to **flooding and velocity wave actions**. All building constructions in V Zones are **required** to be designed and certified by a registered professional architect or engineer licensed in Virginia.
 - **AE Zone Construction Requirement:**
Properties located in AE Zones are within areas subject to inundation by the 100-Year Flood which require specific designs for foundation and elevation of the structure.
1. The **base flood elevation** is a term that describes the minimum elevation as determined by the Flood Insurance Rate Map (FIRM).
 2. The elevation of the lowest floor of the structure, including basements, shall be constructed with a freeboard at least one and one-half feet (1½') above the base flood elevation or, in the case of non-residential structure's, flood-proofing to at least that level shall be required. The use of enclosed areas below the base flood elevation is limited to parking, building access, and limited storage. All construction below the base flood elevation shall consist of **flood-resistant materials**. FEMA/FIA-TB-2
 3. All electrical distribution panels be installed with a freeboard at least three feet (3') above the base flood elevation or otherwise designed and located so as to prevent inundation.
 4. All new and replacement electrical equipment shall be installed with a freeboard at least one and one-half feet (1½') above the base flood elevation or otherwise designed and located so

as to prevent water from entering or accumulating within the system. This would also include all electrical wiring, junction boxes, receptacles, and disconnects or *listed for use in a wet location* as defined by the National Electrical Code.

5. All mechanical, heating and air conditioning equipment shall be installed with a freeboard at least one and one-half feet (1½') above the base flood elevation or otherwise designed and located so as to prevent water from entering or accumulating within the system. This would also include the ductwork in the crawl space area.
6. The requirements for mechanical and electrical equipment to be located with a freeboard at least one and one-half feet (1½') above the base flood elevation applies also to the equipment outside the house such as; gas pack furnaces and air conditioning condensing units. The equipment in attached/detached garages such as; furnaces, water heaters, clothes washers and clothes dryers, well pumps and water softeners are also required to be located with a freeboard at least one and one-half feet (1½') above the base flood elevation.
7. The architect/engineer or the builder/owner must ascertain in the early planning stages if the property is located within a designated Flood Zone as this determines the design.
8. On property's that have part in and out of the designated Flood Zone areas the surveyor shall locate the building entirely outside the designated Flood Zone. If any part of the building encroaches in to the designated Flood Zone the **entire** building shall comply with the Flood Zone requirements.
8. Buildings constructed with enclosures below the base flood elevation such as foundation walls are required to have openings to allow floodwaters to reach equal levels on both sides of the walls to lessen the potential for damage from hydrostatic pressure. The building code requires a minimum of 2 openings on different sides of the enclosed area to allow the passage of floodwater. These openings shall be **no more than 12 inches above the finished exterior grade. The flood vents shall be a fixed opening and of a non-closeable design.** Standard foundation vents **do not** comply with the code since they can be closed and have a small net free open *area*; which may require so many vents that they may weaken the structural integrity of the foundation. It is recommended that wood or plastic louvered flood vents be provided for flood openings. The flood vents are required to provide **1 square inch** of net free opening for **each square foot** of enclosed area. There are manufactured automatic flood vents, which comply with the flood vent requirements. These vents may be permitted when approved by the Building Code Official. Garage doors do not meet the opening requirements since human intervention is required to open the garage door when flooding threatens. The automatic flood vents are typically used in garages.

The Division of Building Regulation requires an Elevation Certificate prior to the foundation inspection. This certificate of elevation shall be based on actual construction and have a designated point of reference on the structure such as the top of the foundation wall. In addition, prior to requesting a final building inspection an Elevation Certificate is required based on final construction and grade.