

ARTICLE V. PROVISION FOR FLOOD HAZARD REDUCTION

Sec. 12.2-50. Standards of construction

In all areas of special flood hazards, the following standards are required:

(a) Anchoring.

(1) All new construction and substantial improvements shall be adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

(2) All manufactured homes shall meet the anchoring standards of Section 12.2-50.

(b) Construction Materials and Methods.

(1) All new construction and substantial improvements including manufactured homes shall be constructed with materials and utility equipment resistant to flood damage.

(2) All new construction and substantial improvements including manufactured homes shall be constructed using methods and practices that minimize flood damage.

(3) All new construction and substantial improvements including manufactured homes shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(4) Within Zones AH and AO, and VO, adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures shall be constructed.

(c) Elevation and Flood proofing.

(1) New construction and substantial improvements of any residential structure shall have the lowest floor, including basement, elevated at least one foot above the base flood elevation. Upon the completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered professional engineer or surveyor, or verified by the building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator.

(2) New construction and substantial improvement of any residential structure in Zone AO or VO shall have the lowest floor, including basement, elevated above the highest adjacent grade as follows: at least one foot higher than the depth number specified in feet, on the FIRM, or, if no depth number is specified on the FIRM, at least three feet. Upon the completion of the structure, the elevation of the lowest floor,

including basement, shall be certified by a registered professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator.

(3) All new construction or substantial improvements of nonresidential construction shall either be elevated in conformance with Section 12.2-50(C)(1), or 12.2-50(C)(2), or together with attendant utility and sanitary facilities:

(A) Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

(B) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(C) Be certified by a registered civil engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the floodplain administrator.

(4) For all new construction and substantial improvements, fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking vehicles, building access or storage, that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must either be certified by a registered civil engineer or architect, or meet or exceed the following minimum criteria: either a minimum of two openings on different sides having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided and the bottom of all openings shall be no higher than one foot above grade. Openings may be quipped with screens, louvers, valves, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwater; and buildings with more than one enclosed area must have openings on exterior walls for each area to allow flood water to directly enter.

(5) Manufactured homes shall also meet the standards in Section 12.2-53.

(6) Attached garages.

(A) A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry of flood waters. Areas of the garage below the BFE must be constructed with flood resistant materials.

(B) A garage attached to a nonresidential structure must meet the above requirements or be dry flood proofed. For guidance on below grade parking areas, see FEMA Technical Bulletin TB-6.

(7) Detached garages and accessory structures.

“Accessory structures” used solely for parking (2 car detached garages or smaller) or limited storage (small, low-cost sheds) may be constructed such that its floor is below the base flood elevation (BFE), provided the structure is designed and constructed in accordance with the following requirements:

- (A) Use of the accessory structure must be limited to parking or limited storage;
- (B) The portions of the accessory structure located below the BFE must be built using flood-resistant materials;
- (C) The accessory structure must be adequately anchored to prevent flotation, collapse and lateral movement;
- (D) Any mechanical and utility equipment in the accessory structure must be elevated or flood proof to or above the BFE;
- (E) The accessory structure must comply with floodplain encroachment provisions in section 12.2-54; and
- (F) The accessory structure must be designed to allow for the automatic entry of flood waters in accordance with section 12.2-50(4).

Detached garages and accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in section 12.2-50.

(Ord. No. 1427, §1; Ord. No. 1506, §3; Ord. No. 1700, §10)

Sec. 12.2-51. Standards for utilities

- (a) All new replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.
- (b) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(Ord. No. 1427, §1)

Sec. 12.2-52. Standards for subdivisions

- (a) All new subdivision proposals including manufactured home parks and subdivisions, greater than 50 lots or 5 acres, whichever is the lesser, shall identify the special flood (SFHA) hazard area and the elevation of the base flood (BFE).
- (b) All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base flood, the final pad elevation shall be certified by a registered civil engineer or licensed surveyor and provided as part of an application for a Letter of Map Revision based on Fill (LOMR-F) to the floodplain administrator.

(c) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

(d) All subdivisions shall provide adequate drainage to prevent increased exposure to flood hazards.

(e) All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.

(Ord. No. 1427, §1; Ord. No. 1700, §11)

Sec. 12.2-53. Standards for manufactured homes and recreational vehicles

(a) All manufactured homes that are placed or substantially improved, on sites located:

(1) Outside of a manufactured home park or subdivision;

(2) In a new manufactured home park or subdivision;

(3) In an expansion to an existing manufactured home park or subdivision; or

(4) In an existing manufactured home park or subdivision upon which a manufactured home has incurred “substantial damage” as the result of a flood, shall:

(A) Within Zones A1-30, AH, and AE on the community’s Flood Insurance Rate Map, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(B) Within Zones V1-30, V, and VE on the community’s Flood Insurance Rate Map, meet the requirements of 12.2-55.

(b) All manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, AE, V1-30, and VE on the community’s Flood Insurance Rate Map that are not subject to the provisions of section 12.2-53(a) will be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement, and be elevated so that either the:

(1) Lowest floor of the manufactured home is at or above the base flood elevation; or

(2) Manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade.

(c) All recreational vehicles placed in Zones A1-30, AH, AE, V1-30, and VE will either:

(1) Be on the site for fewer than 180 consecutive days; or

(2) Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or

(3) Meet the permit requirements of Article IV of this ordinance and the elevation and anchoring requirements for manufactured homes in section 12.2-53(a).

(4) Recreational vehicles placed on sites within Zones V1-30, V, and VE on the community's Flood Insurance Rate Map will meet the requirements of Section 12.2-53(c)(1)(2)(3) and Section 12.2-55.

(Ord. No. 1427, §1; Ord. No. 1700, §12)

Sec. 12.2-54. Floodways

Since the floodways are an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

(a) Encroachments, including fill, new construction, substantial improvements and other development, unless certification by a registered civil engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge, shall be prohibited.

(b) If Section 12.2-54(A) is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of Article V.

(Ord. No. 1427, §1; Ord. No. 1700, §13)

Sec. 12.2-55. Coastal high hazard areas

Within coastal high hazard areas, Zones V, V1-30, and VE, as established under Section 12.2-31, the following standards shall apply:

(a) All new residential and non residential construction, including substantial improvement/damage, shall be elevated on adequately anchored pilings or columns and securely anchored to such pilings or columns so that the bottom of the lowest horizontal

structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards.

(b) All new construction and other development shall be located on the landward side of the reach of mean high tide.

(c) All new construction and substantial improvement shall have the space below the lowest floor free of obstructions or constructed with breakaway walls as defined in 12.2-20 of this ordinance. Such enclosed space shall not be used for human habitation and will be usable solely for parking of vehicles, building access or storage.

(d) Fill shall not be used for structural support of buildings.

(e) Man-made alteration of sand dunes which would increase potential flood damage is prohibited.

(f) The Floodplain Administrator shall obtain and maintain the following records:

(1) Certification by a registered engineer or architect that a proposed structure complies with 12.2-55(a); and

(2) The elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest flood (excluding pilings or columns) of all new and substantially improved structures, and whether such structures contain a basement.

(Ord. No. 1427, §1; Ord. No. 1700, §14)