Sec. 12-184. - Coastal high hazard areas (V-zones).

Located within the areas of special flood hazard established in division 2, section 12-126, are areas designated as coastal high hazard areas (V-zones). These areas have special flood hazards associated with wave action and storm surge; therefore, the following provisions shall apply, in addition to the standards of division 4:

(1) All new construction and substantial improvements of existing structures shall be located landward of the reach of the mean high tide.

(2) All new construction and substantial improvements of existing structures shall be elevated on piles, columns, or shear walls parallel to the flow of water so that:

a. The bottom of the lowest supporting horizontal structural member (excluding pilings or columns) is located no lower than one (1) foot above the base flood elevation level. All space below the lowest supporting member shall remain free of obstruction.

b. Open lattice work, breakaway walls, or decorative screening may be permitted for aesthetic purposes only and built in accordance with division 4, section 12-184(5) below.

c. All pile and column foundations and the structures attached thereto shall be anchored to resist flotation, collapse, and lateral movement due to the combined effects of wind and water loads acting simultaneously on all building components, both (non-structural and structural). Water loading values shall equal or exceed those of the base flood. Wind loading values shall be in accordance with the most current edition of the state building code.

(3) All new construction and substantial improvements of existing structures shall be securely anchored on pilings, columns, or shear walls.

(4) A registered professional engineer shall certify that the design, specifications and plans for construction are in full compliance with the provisions contained in division 4, section 12-184(2)—(4) herein.

(5) For all new construction and substantial improvements in VE zones, the space below the lowest horizontal-supporting member must remain free of obstruction. As an alternative, the space may be constructed with non-supporting breakaway walls, open wood or vinyl latticework, or insect screening which must be designed to break away or collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. The following design specifications are required:

a. No solid walls shall be allowed, and;

b. Material shall consist of lattice or mesh screening only.

c. If aesthetic lattice work, breakaway walls, or screening is utilized, any enclosed space shall not be used for human habitation but shall be designed to be used only for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises.

d. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of twenty (20) pounds per square foot (either by design or when so required by local codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

1. Breakaway wall collapse shall result from water load less than that which would occur during the base flood, and;

2. The effects of wind and water loads acting simultaneously on all building components (structural and nonstructural) must be taken into account. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those requirements by state or local building codes.

(6) Enclosures below elevated buildings shall be useable solely for storage, parking of vehicles, or building access. Such space will not be used for human habitation and not finished or partitioned into separate rooms.

(7) All construction materials used below the base flood elevation shall be unfinished and/or constructed of flood damage resistant materials.

(8) Prior to construction, plans for any structure using lattice, breakaway walls, or decorative screening must be submitted to the floodplain administrator for approval.

(9) Any alteration, repair, reconstruction or improvement to any structure shall not enclose the space below the lowest floor except with lattice-work, breakaway walls, or decorative screening, as provided in this section.

(10) In coastal AE zones, property owners shall be required to execute an elevation certificate with an affidavit acknowledging that all openings in breakaway walls will be maintained as flood vents, and that the elimination or alteration of the openings in any way will violate the requirements of division 4, section 12-179(3).

(11) Property owners shall be required to execute a non-conversion agreement declaring that the area below the lowest floor of the structure or the detached accessory building shall not be improved, finished or otherwise converted; the city will have the right to inspect the enclosed area as described in division 4, section 12-179(3)f.

(12) Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in VE zones. The floodplain administrator shall maintain a record of all such information.

(13) The floodplain administrator shall approve design plans for landscaping/aesthetic fill only after the applicant has provided an analysis by an engineer, architect, and/or soil scientist, which demonstrates that the following factors have been fully considered:

a. Particle composition of fill material does not have a tendency for excessive natural compaction;

b. Volume and distribution of fill will not cause wave deflection to adjacent properties; and

c. Slope of fill will not cause wave run-up or ramping.

d. Site hardscape such as, but not limited to, landscape walls, blocks, or terracing is prohibited.

(14) Under the buildings or structures, no fill may be used except for minor site grading for drainage purposes. Nonstructural fill may be used on coastal building sites for minor landscaping and site grading for drainage purposes to the extent that the fill does not interfere with the free passage of floodwaters and debris underneath the building or cause changes in flow direction during coastal storms. Changes to site grades, other than those prescribed, must be avoided as they can cause additional damage to buildings on the site or to adjacent buildings.

Fill placed in VE zones should be similar (compatible) to the natural soils in the area and not contain large rocks or debris, organic materials, or clay. Minor site grading is to be limited to one (1) foot of coastal zone compatible soils and may be used only for minimum required lot grading for landscaping including, but not limited to, sod, planting of flora, etc.

(15) Prohibit man-made alteration of sand dunes or mangrove stands which would increase potential flood damage.

(16) Prohibit the placement of manufactured homes (mobile homes), except in an existing manufactured homes park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring and elevation standards of division 4, section 12-179(4) are met.

(17) Permit recreational vehicles in VE zones if they meet all of the requirements of division 4, section 12-179(4)d.

(18) Swimming pools must be constructed in accordance with information provided in FEMA Technical Bulletin 5- Free of Obstruction Requirements (August 2008).

(Ord. No. 1643, art. 4(§ G), 3-25-19)