

Chapter 51

FLOOD DAMAGE PREVENTION*

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***Cross references**—Buildings and building regulations, ch. 47; minimum floor elevation for buildings constructed after February 3, 1975, § 47.011; restoration of electrical service to flooded structures, § 47.012.

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ARTICLE I. IN GENERAL

Sec. 51.01. Findings of fact.

The city commission finds and declares that:

- (1) The flood hazard areas of the city are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and
- (2) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

(Code 1980, § 146.002)

Sec. 51.02. Purpose of chapter.

It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters;

- (4) Control filling, grading, dredging and other development which may increase erosion or flood damage; and
- (5) Prevent or regulate the construction of flood barriers which may unnaturally divert floodwaters or which may increase flood hazards to other lands.

(Code 1980, § 146.003)

Sec. 51.03. Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Addition (to an existing building) means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common loadbearing wall other than a firewall. Any walled and roofed addition which is connected by a firewall or is separated by independent perimeter loadbearing walls is new construction.

Appeal means a request for a review of the building official's interpretation of any provision of this chapter or a request for a variance.

Area of shallow flooding means a designated AO or VO zone on the flood insurance rate map (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard means the land in the floodplain within the city subject to a one percent or greater chance of flooding in any given year. The area may be designated on the FHBM as zone A. After detailed ratemaking has been completed in preparation for publication of the FIRM, zone A is usually refined into zones A, AO, A1-99, VO and V1-30.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation and *BFE* mean the elevation above mean sea level as shown in the Flood Insurance Study.

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Basement means that portion of a building having its floor subgrade, i.e., below ground level, on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

Building means any structure built for support, shelter or enclosure for any occupancy or storage.

Building official means the building official of the city within the meaning of the building code adopted for enforcement within the city.

City engineer means the city engineer of the city.

Coastal high hazard area means the area subject to high velocity waters, including but not limited to hurricane wave wash. The area may be designated on a FIRM as zone V1-30, VE or V.

Development means any manmade change to improved or unimproved real property, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling or storage of materials.

Elevated building means a nonbasement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation, perimeter walls, pilings, columns, posts, piers, shear walls or breakaway walls.

Elevation means elevation in relation to mean sea level.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads, was completed before December 31, 1974.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for

servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

Flood and flooding mean a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters or from the unusual and rapid accumulation or runoff of surface waters from any source.

Flood hazard boundary map and *FHBM* mean an official map of the city, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as zone A.

Flood insurance rate map and *FIRM* mean an official map of the city on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the applicable risk premium zones.

Flood insurance study means the official report provided by the Federal Emergency Management Agency which contains profiles, the flood boundary floodway map and the water surface elevation of the base flood.

Floodway means the channel of a river or other water course and the adjacent land areas that must be reserved in order to discharge the base flood without increasing the water surface elevation by a designated height of one foot.

Floor means the top surface of an enclosed area in a building (including basement), e.g., top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as but not limited to a boat docking or port facility, shipbuilding, or ship repair. The term does not include long term storage, manufacture, sales or service facilities.

Habitable floor means any floor usable for living purposes, including working, eating, sleeping, cooking or recreation, or a combination thereof,

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such as but not limited to bedrooms, living rooms, laundry rooms, bathrooms, workshops, dens and studies. The term does not include a floor used only for storage or vehicle parking purposes.

Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

Lowest floor means the lowest floor of the lowest enclosed area (including a 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 nonelevation design requirements.

Mangrove stand means an assemblage of mangrove trees which is mostly low trees noted for a copious development of interlacing adventitious roots above the ground and which contain one or more of the following species: black mangrove (*Avicennia nitida*); red mangrove (*Rhizophora mangle*); white mangrove (*Languncularia racemosa*); and buttonwood (*Conocarpus erecta*).

Manufactured home means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a recreational vehicle.

Manufactured home park or subdivision means a parcel or contiguous parcels of land divided into two or more lots for rent or sale as manufactured home sites.

Market value of the structure means the appraised value of the structure, not including land, driveways, sidewalks, landscaping, swimming pools and other similar improvements not related to the basic structure, prior to the start of repair or improvement or, in the case of damage, prior to the damage occurring.

Mean sea level means the average height of the sea for all stages of the tide. It is used as reference for establishing various elevations within the

floodplains. For purposes of this chapter, the term is synonymous with National Geodetic Vertical Datum (NGVD).

New construction means structures for which the start of construction commenced on or after December 31, 1974.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including at a minimum the installation of utilities, the site grading or the pouring of concrete pads, is completed on or after December 31, 1974.

Nonconforming structure means a structure in any area of special flood hazard within the city which is not elevated or floodproofed to National Flood Insurance Program standards, as set forth in 44 CFR 59 and 60.

North American Vertical Datum and *NAVD*, as corrected in 2003, mean a vertical control used as a reference for establishing varying elevations within the floodplain.

Ready for highway use, as applied to a recreational vehicle, means that the recreational vehicle is on its wheels or jacking system, is attached to the site only by quick disconnect type of utilities and security devices, and has no permanently attached additions.

Recreational vehicle means a vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Sand dunes means naturally occurring accumulations of sand in ridges or mounds landward of the high-water line on the beach.

Start of construction, for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P. L. 97-348), means substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction

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or improvement was within 180 days of the permit date. The actual start of construction means the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; installation of streets or walkways; excavation for a basement, footings, piers or foundations or the erection of temporary forms; or the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

Structure means a walled and roofed building that is principally above ground, a manufactured home, or a gas or liquid storage tank.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means with respect to any property located in an area of special flood hazard reconstruction, rehabilitation, addition or other improvement of a structure during a one-year period, the cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement.

For the purposes of this definition, construction is considered to have started when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include any project for improvement of a structure to correct existing violations of health, sanitary or safety code specifications which have been identified by the building official and which are the minimum necessary to ensure safe living conditions. The term does not include any alteration of a structure listed

on the National Register of Historic Places or the state inventory of historic places, provided that the alteration will not preclude the structure's continued designation as a historic structure on such National Register or state inventory.

Variance means a grant of relief from the requirements of this chapter which permits construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary and exceptional hardship. (Code 1980, § 146.004; Ord. No. 5124, § 1, 9-5-91; Ord. No. 5265, § 1, 9-17-92; Ord. No. 6987-02, § 1, 6-6-02; Ord. No. 7213-03, § 1, 11-20-03)

Sec. 51.04. Interpretation of chapter.

In the interpretation and application of this chapter all provisions shall be considered as minimum requirements and deemed neither to limit nor repeal any other powers granted under state laws.

(Code 1980, § 146.11)

Sec. 51.05. Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based upon scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not be deemed to create liability on the part of the city or any officer or employee thereof for any flood damages that may result notwithstanding reliance on this chapter or any administrative decision made thereunder.

(Code 1980, § 146.12)

Sec. 51.06. Penalties for violation of chapter.

A failure to comply with the provisions of this chapter or any of its requirements, including conditions and safeguards established in connection with grants of variances, shall constitute a

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violation. Any person who violates this chapter or fails to comply with any of its requirements shall, upon a finding of such violation, be fined not more than \$500.00. Each day a violation continues shall be considered a separate offense. Nothing contained in this section shall prevent the city from taking such other lawful action as is necessary to prevent or remedy any violation.
(Code 1980, § 146.13)

Sec. 51.07. Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazard within the city.
(Code 1980, § 146.005)

Sec. 51.08. Adoption of maps and study.

Federal Emergency Management Agency maps entitled "Flood Insurance Rate Map and Floodway", and the accompanying study entitled "Flood Insurance Study -Clearwater", all effective September 3, 2003, and any subsequent revisions, shall be used to provide the database for this chapter.
(Code 1980, § 146.001; Ord. No. 7182-03, § 1, 8-21-03; Ord. No. 7213-03, § 1, 11-20-03)

Sec. 51.09. Development permit required.

(1) A development permit shall be required in conformance with the provisions of this chapter prior to the commencement of any development activities.

(2) No structure or land shall be located, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations.
(Code 1980, § 146.006)

Sec. 51.10. Administration, permit procedures, duties of building official.

(1) *Designation of building official.* The building official is hereby appointed to administer and implement the provisions of this chapter.

(2) *Permit procedures.* An application for a development permit shall be made to the building official on forms furnished by him prior to any development activities, and shall include but not be limited to plans drawn to scale showing the

nature, location, dimensions and elevations of the property; existing or proposed structures; fill; storage of materials; drainage facilities; and the location of the foregoing. Specifically, the following information is required:

(a) *Application stage.*

1. Elevation of the proposed lowest floor, including basement, of all structures.
2. Elevation to which any nonresidential structure will be floodproofed.
3. Certificate from a state registered professional engineer or architect that the nonresidential floodproofed structure will meet the floodproofing criteria in section 51.32(2).
4. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
5. For all additions to or alterations of any structure, an appraisal of the market value of the structure from an MAI (Member, Appraisal Institute) or SRPA (Senior Real Estate Appraiser) designated appraiser may be provided, along with information showing all costs involved in the proposed work, including but not limited to materials and labor. If an appraisal is not provided, then the appraisal of the value of the structure as determined by the county property appraiser will be used.
6. For all additions to or alterations of any nonconforming structure, information showing all of the costs of the proposed work shall be provided to the building official.
7. Elevation certificate of the property showing lowest floor and grade elevations duly certified by a state registered land surveyor.

(b) *Construction stage.* Provide a floor elevation or floodproofing certification after the lowest floor is completed, or, in instances where the structure is subject to the reg-

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ulations applicable to coastal high hazard areas, after placement of the horizontal structural members of the lowest floor. Upon placement of the lowest floor or floodproofing by whatever construction means, or upon placement of the horizontal structural members of the lowest floor, whichever is applicable, it shall be the duty of the permit holder to submit to the building official a certificate of the elevation of the lowest floor, floodproofed elevation, or the elevation of the lowest portion of the horizontal structural members of the lowest floor, whichever is applicable, as built, in relation to mean sea level. The certification shall be prepared by or under the supervision of a state registered land surveyor or, when floodproofing is utilized for a particular building, the certification shall be prepared by or under the supervision of a state registered professional engineer or architect, and shall be certified and sealed. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The building official shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the certification or failure to make the corrections required hereby shall be cause to issue a stop work order for the project.

(3) *Duties of the building official.* The duties of the building official shall include but not be limited to:

- (a) Reviewing all development permit applications to ensure that the permit requirements of this chapter have been satisfied;
- (b) Advising applicants that additional federal or state permits may be required and, if specific federal or state permit requirements are known, requiring that copies of such permits are provided and maintained on file with the development permit;
- (c) Notifying adjacent communities and the state assistance office for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submitting evidence of such notification to the Federal Emergency Management Agency;
- (d) Ensuring that maintenance is provided within the altered or relocated portion of a watercourse so that the flood-carrying capacity is not diminished;
- (e) Obtaining a certification of the actual elevation of the lowest floor, including the basement, of all new or substantially improved structures, when certification is required;
- (f) Obtaining a certification of the actual elevation to which the new or substantially improved structures have been floodproofed, when certification is required;
- (g) For coastal high hazard areas, obtaining a certification from a state registered professional engineer or architect that the structure is designed to be securely anchored to adequately anchored pilings or columns in order to withstand velocity waters and hurricane wave wash;
- (h) For coastal high hazard areas, reviewing plans for adequacy of breakaway walls in accordance with section 51.32(5);
- (i) When floodproofing is utilized for a particular structure, obtaining a certification from a state registered professional engineer or architect, when certification is required;
- (j) Making any interpretations which may be needed as to the exact location of boundaries of the areas of special flood hazard, for example, where there appears to be a conflict between a mapped boundary and actual field conditions;
- (k) Obtaining, reviewing and reasonably utilizing any base flood elevation and floodway data available from a federal, state or

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other source whenever base flood elevation data or floodway data have not been provided as required;

- (l) Maintaining all records pertaining to the administration of the provisions of this chapter;
- (m) Promulgating administrative policies and procedures for determining eligible and ineligible costs for construction or renovation of a structure in the floodplain, consistent with this chapter and applicable state and federal law. Such administrative policies and procedures shall be issued before February 1, 1990, and may be amended from time to time thereafter as circumstances require. Copies thereof shall be provided without cost to all applicants for building permits in any area of special flood hazard within the city. A current copy shall be conspicuously posted in a public area of the building official's office and a current copy shall also be filed in the office of the city clerk.

(Code 1980, § 146.007)

Sec. 51.11. Variances from chapter.

(1) The building/flood board of adjustment and appeals shall hear and decide appeals from decisions of the building official pursuant to this chapter and requests for variances from the requirements of this chapter. A decision of the board shall be final, subject to judicial review by common law certiorari in circuit court.

(2) Variances may be granted for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places, if the proposed reconstruction, rehabilitation or restoration will not result in the structure losing its historical designation.

(3) In passing upon such applications, the board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter; and:

- (a) The danger that materials may be swept onto other lands to the injury of others;

- (b) The danger to life and property due to flooding or erosion damage;
 - (c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the owner;
 - (d) The importance of the services provided by the proposed facility to the community;
 - (e) The necessity of the facility to a waterfront location, in the case of a functionally dependent facility;
 - (f) The availability of alternative locations not subject to flooding or erosion damage for the proposed use;
 - (g) The compatibility of the proposed use with existing and anticipated development;
 - (h) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - (i) The safety of access to the property in times of flood for emergency and nonemergency vehicles;
 - (j) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
 - (k) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
- (4) Conditions for variances:
- (a) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and, in the instance of a historical building, upon a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
 - (b) Variances shall only be issued upon a showing of good and sufficient cause, a determination that failure to grant the

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variance would result in unnecessary and exceptional hardship, and a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, the creation of a nuisance or a conflict with existing local laws or ordinances.

- (c) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(5) Upon consideration of the factors listed above, and the purposes of this chapter, the board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

(6) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

(7) The building official shall maintain the records of all appeal actions and shall report any variances to the Federal Emergency Management Agency upon request.
(Code 1980, § 146.10)

ARTICLE II. FLOOD HAZARD REDUCTION*

Sec. 51.31. General standards.

In all areas of special flood hazard, the following standards are required, and compliance with those standards relating to structural stability shall be certified by an engineer or architect registered in this state:

- (1) New construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

***Cross references**—Buildings and building regulations generally, ch. 47; floodproofing certification for the coastal construction zones, § 47.010.

- (2) Manufactured homes shall be anchored to prevent flotation, collapse or lateral movement. Methods of anchoring may include but are not limited to use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces.
- (3) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (4) New construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (5) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be located at or above the base flood elevation or shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (6) New and replacement water supply systems shall be designed to minimize or eliminate the infiltration of floodwaters into the system.
- (7) New and replacement sanitary sewage systems shall be designed to minimize or eliminate the infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
- (8) Onsite waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (9) Any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this chapter shall meet the requirements of new construction as contained in this chapter.

(Code 1980, § 146.008(a))

Sec. 51.32. Specific standards.

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

- (1) *Residential construction (A zone)*. New construction or substantial improvement

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- of any residential structure shall have the lowest floor, including the basement, elevated at or above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the automatic equalization of flood hydrostatic forces on exterior walls shall be provided in accordance with the standards set forth in subsection (3) of this section.
- (2) *Nonresidential construction (A zone)*. New construction or substantial improvement of any commercial, industrial or non-residential structure shall have the lowest floor, including the basement, elevated at or above the base flood elevation. Structure located in all A zones may be floodproofed in lieu of being elevated, provided that all areas of the structure, together with attendant utilities, below the required elevation are watertight with walls substantially impermeable to the passage of water and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A state registered professional engineer or architect shall certify that the standards of this subsection are satisfied.
- (3) *Elevated buildings (A zone)*. New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by the foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.
- (a) Designs for complying with this requirement shall either be certified by a state registered professional engineer or architect or meet the following minimum criteria:
1. Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 2. The bottom of all openings shall be no higher than one foot above grade; and
 3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
- (b) Electrical, plumbing and other utility connections are prohibited below the base flood elevation except as may be required by other codes, or where there is a more practical location consistent with the intent of another code, and approved by the building official.
- (c) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door), limited storage of maintenance equipment used in connection with the premises (standard exterior door), and entry to the living area (stairway or elevator).
- (d) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- (4) *Manufactured homes and RV requirements*.
- (a) New and existing manufactured home parks and subdivisions, new and existing manufactured homes not located within a new or existing manufactured home park and subdivision, and recreational vehicles that are located or placed or substantially improved in either areas of special flood hazard or in coastal high hazard areas as defined in this chapter shall conform to all requirements of 44 CFR 59 and 60, effective November 1, 1989, and for the purpose of this chapter such definitions and requirements as are contained therein are adopted in this section by reference unless specifically set forth in this section.

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- (b) No floodplain management regulations will apply to a recreational vehicle if the recreational vehicle was onsite for fewer than 180 consecutive days or was fully licensed as a motor vehicle and ready for highway use.
- (5) *Floodways*. Located within areas of special flood hazard are areas designated as floodways. Because the floodway is an extremely hazardous area due to the velocity of floodwaters and erosion potential, the following standards shall apply in any floodway:
 - (a) Encroachments, including fill, new construction, substantial improvements and other developments, are prohibited unless certification, with supporting technical data, by a state registered professional engineer is provided demonstrating that the encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
 - (b) All new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.
 - (c) The placement of manufactured homes is prohibited except in an existing manufactured home park or subdivision; however, a replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring standards and the elevation standards set forth in this section are met.
- (6) *Coastal high hazard areas (V zones)*. Located within the areas of special flood hazard are areas designated as coastal high hazard areas. Because these areas have special flood hazards associated with wave wash, the following standards are required:
 - (a) All buildings or structures shall be located landward of the coastal construction control line.
 - (b) All buildings or structures shall be elevated so that the bottom of the lowest supporting horizontal structural member, excluding pilings or columns, is located at or above the base flood elevation level, with all space below the lowest supporting member open so as not to impede the flow of water. Breakaway walls may be permitted if designed to wash away in the event of abnormally high tides or wave action and in accordance with subsection (6)(h) of this section.
 - (c) All buildings or structures shall be securely anchored on pilings or columns.
 - (d) All pilings and columns and the attached structures shall be anchored to resist flotation, collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. The anchoring and support system shall be designed with wind and water loading values which equal or exceed the 100-year mean recurrence interval or one percent annual chance flood.
 - (e) A state registered professional engineer or architect shall certify that the design, specifications and plans for construction are in compliance with the provisions of subsections (6)(b), (c) and (d) of this section.
 - (f) There shall be no fill used as structural support. Limited noncompacted fill may be used around the perimeter of a building for landscaping or aesthetic purposes provided the fill will wash out from storm surge, thereby rendering the building free of obstruction, prior to generating excessive loading forces, ramping effects or wave deflection. The building official shall approve design plans for landscaping/aesthetic fill only after the applicant has provided an analysis by an engineer, architect or

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soil scientist which demonstrates that the following factors have been fully considered:

1. Particle composition of fill material does not have a tendency for excessive natural compaction.
 2. Volume and distribution of fill will not cause wave deflection to adjacent properties.
 3. Slope of fill will not cause wave runoff or ramping.
- (g) There shall be no alteration of sand dunes or mangrove stands which would increase potential flood damage.
- (h) Nonsupporting breakaway walls, open wood latticework or mesh screening shall be allowed below the base flood elevation provided they are not part of the structural support of the building and are designed so as to break away, under abnormally high tides or wave action, without damage to the structural integrity of the building on which they are to be used and provided the following design specifications are met:
1. Design safe loading resistance of each wall shall be not less than ten nor more than 20 pounds per square foot; or
 2. If more than 20 pounds per square foot, a state registered professional engineer or architect shall certify that the design wall collapse would result from a water load less than that which would occur during the base flood event, and the elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement or other structural damage due to the effects of wind and water loads acting simultaneously on all building components during the

base flood event. Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equalled or exceeded in any given year or 100-year mean recurrence interval.

- (i) If breakaway walls are utilized, such enclosed space shall not be designed to be usable for human habitation but shall be designed to be usable only for parking of vehicles, building access or limited storage of maintenance equipment used in connection with the premises.
- (j) Prior to construction, plans for any structures that will have breakaway walls shall be submitted to the building official for approval.
- (k) Any alteration, repair, reconstruction or improvement to a structure shall not enclose the space below the lowest floor except with breakaway walls.
- (l) The placement of manufactured homes is prohibited except in an existing manufactured home park or subdivision; however, a replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring standards and the elevation standards set forth in this section are met.

(Code 1980, § 146.008(b); Ord. No. 5558-94, § 1, 5-5-94; Ord. No. 7213-03, § 1, 11-20-03)

Sec. 51.33. Streams without established base flood elevations or floodways.

(1) Within the areas of special flood hazard where small streams exist where base flood data have been provided but where no floodways have been provided, the following standards apply:

No encroachments, including fill material or structures, shall be located less than 20 feet from the top of the stream bank unless certification by a state registered professional engi-

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neer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(2) Within the areas of special flood hazard where small streams exist but where no base flood data have been provided and where no floodways have been provided, the following standards apply:

New construction or substantial improvements of structures shall be elevated or floodproofed to elevations established by the building official utilizing data available from a federal, state or other source.

(Code 1980, § 146.008(c); Ord. No. 7213-03, § 1, 11-20-03)

Sec. 51.34. Subdivision proposals.

All proposed subdivisions, including but not limited to manufactured home parks and subdivisions and other proposed developments consisting of at least 50 lots or five acres, or both, shall be reviewed by the city engineer to determine that the following requirements have been or will be satisfied:

- (1) All subdivision proposals shall be consistent with the need to minimize flood damage.
- (2) All subdivision proposals shall have public utilities and facilities, such as sewer, gas, electrical and water systems, located and constructed so as to minimize flood damage.
- (3) All subdivision proposals shall have adequate drainage provided so as to reduce exposure to flood hazards.
- (4) Base flood elevation data shall be provided.

(Code 1980, § 146.008(d))

Sec. 51.35. Areas of shallow flooding (AO zones).

Located within the areas of special flood hazard are areas designated as shallow flooding areas. Because these areas have special flood hazards associated with base flood depths of one

to three feet, where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate, the following standards are required:

- (1) All new construction and substantial improvements of residential structures shall have the lowest floor, including the basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including the basement, shall be elevated at least two feet above the highest adjacent grade.
- (2) All new construction and substantial improvements of nonresidential structures shall:
 - (a) Have the lowest floor, including the basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including the basement, shall be elevated at least two feet above the highest adjacent grade; or
 - (b) Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(Code 1980, § 146.008(e))