

ARTICLE I. IN GENERAL

Secs. 46-1—46-30. Reserved.

ARTICLE II. FLOOD DAMAGE PREVENTION

DIVISION 1. GENERALLY

Sec. 46-31. Definitions.

The following words, terms and phrases, when used in this article, 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 fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by an independent perimeter loadbearing wall shall be considered new construction.

Appeal means a request for a review of the building inspector's interpretation of any provision of this article.

Area of shallow flooding means a designated AO or AH zone on the city's flood insurance rate map (FIRM) with base flood depths from one to three feet, and/or 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. In the absence of official designation by the Federal Emergency Management Agency, areas of special flood hazard shall be those designated by the city and referenced in section 46-37.

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

Basement means that portion of a building having its flood subgrade (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.

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

Development means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, and permanent storage of equipment or materials.

Elevated building means a nonbasement building built to have the lowest floor of the lowest enclosed area elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns, piers or shear walls adequately anchored so as not to impair the structural integrity of the building during a base flood event.

Existing construction means any structure for which the start of construction commenced before the effective date of the first floodplain management code or ordinance adopted by the city as a basis for the city's participation in the National Flood Insurance Program (NFIP).

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 final site grading or the pouring of concrete pads) is completed before the effective date of the first floodplain management regulations adopted by the city.

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

Flood hazard boundary map (FHBM) means an official map of the city, issued by the Federal Emergency Management Agency, where the boundaries of areas of special flood hazard have been designated as zone A.

Flood insurance rate map (FIRM) means an official map of a community, issued by the Federal Emergency Management Agency, delineating the areas of special flood hazard and/or risk premium zones applicable to the city.

Flood insurance study means the official report by the Federal Emergency Management Agency evaluating flood hazards and containing flood profiles and water surface elevations of the base flood.

Floodplain means any land area susceptible to flooding.

Floodway (regulatory floodway) means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

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 a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding or ship repair facilities. The term does not include long-term storage, manufacture, sales or service facilities.

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

Historic structure means any structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the secretary of the interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the secretary of the interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the secretary to qualify as a registered historic district;
- (3) Individually listed on a state inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the secretary of the interior; or
- (4) Individually listed on a local inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the secretary of the interior; or
 - b. Directly by the secretary of the interior in states without approved programs.

Levee means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

Levee system means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, used solely for parking of vehicles, building access or storage in an area other than a basement, is not consid-

ered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of other provisions of this article.

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 building, transportable in one or more sections, built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.

Mean sea level means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this article, the term is synonymous with National Geodetic Vertical Datum (NGVD) of 1929 or other datum.

National Geodetic Vertical Datum (NGVD) as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means any structure for which the start of construction commenced after June 1, 1998, and includes any subsequent improvements to such structures.

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 construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after June 1, 1998.

Recreational vehicle means a vehicle which is:

- (1) Built on a single chassis;
- (2) No more than 400 square feet when measured at the largest horizontal projection;

- (3) Designed to be self-propelled or permanently towable by a light-duty truck; and
- (4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Repetitive loss means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

Sand dunes means naturally occurring accumulations of sand in ridges or mounds landward of the beach.

Start of construction means the date the development permit was issued, provided the actual start of construction, repair, reconstruction or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of the structure such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation, and includes the placement of a manufactured home on a foundation. Permanent construction does not include initial land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of a building appurtenant to the permitted structure, such as garages or sheds not occupied as dwelling units or part of the main structure. (Note: Accessory structures are not exempt from any requirements of this article.) For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building that is principally above ground, a manufactured home, 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 damage also means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

Substantial improvement means any reconstruction, rehabilitation, addition or other improvement of a structure the cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred repetitive loss or substantial damage, regardless of the actual repair work performed. The market value of the building should be the appraised value of the structure prior to the start of the initial repair or improvement or, in the case of damage, the value of the structure prior to the damage's occurring. This term includes structures which have incurred substantial damage, regardless of the actual amount of repair work performed. For the purpose of this definition, substantial improvement is considered to occur 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 building. The term does not, however, include either any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the city code enforcement official and which are the minimum necessary to assure safe living conditions or any alteration of an historic structure, provided that the alteration will not preclude the structure's continued designation as an historic structure.

Substantially improved existing manufactured home parks or subdivisions means repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads that equals or exceeds

50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance means a grant of relief from the requirements of this article which permits construction in a manner otherwise prohibited by this article.

(Ord. No. 98-5, art. 6, 5-7-1998)

Cross reference—Definitions generally, § 1-2.

Sec. 46-32. Statutory authorization.

The legislature has in tit. 11, ch. 19, sections 1—24; ch. 52, sections 1—84; and tit. 41, ch. 9, section 166 of the Code of Alabama, 1975 (Code of Ala. 1975, §§ 11-19-1 et seq., 11-52-1 et seq., 41-9-166), authorized local government units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the council ordains the provisions of this article.

(Ord. No. 98-5, art. 1, § A, 5-7-1998)

Sec. 46-33. Findings of fact.

(a) The flood hazard areas of the city are subject to periodic inundation, which results in loss of life and commerce and governmental services, extraordinary public expenditures for flood relief and protection, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are caused by the occupancy in flood hazard areas of uses vulnerable to floods, which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages, and by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities.

(Ord. No. 98-5, art. 1, § B, 5-7-1998)

Sec. 46-34. Statement of purpose.

It is the purpose of this article 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) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

- (2) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion;
 - (3) Control filling, grading, dredging and other development which may increase flood damage or erosion;
 - (4) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and
 - (5) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters.
- (Ord. No. 98-5, art. 1, § C, 5-7-1998)

Sec. 46-35. Objectives.

The objectives of this article are to:

- (1) Protect human life and health;
 - (2) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
 - (3) Help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize flood blight areas;
 - (4) Minimize expenditure of public money for costly flood control projects;
 - (5) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - (6) Minimize prolonged business interruptions; and
 - (7) Ensure that potential home buyers are notified that property is in a flood area.
- (Ord. No. 98-5, art. 1, § D, 5-7-1998)

Sec. 46-36. Lands to which this article applies.

This article shall apply to all areas of special flood hazard within the jurisdiction of the city.
(Ord. No. 98-5, art. 2, § A, 5-7-1998)

Sec. 46-37. Basis for area of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency in its flood insurance study (FIS), dated January 3, 1986, with accompanying maps and other supporting data and any revision thereto, are adopted by reference and declared a municipality through annexation, the current effective FIS and data for the unincorporated county are hereby adopted by reference. Areas of special flood hazard may also include those areas known to have flooded historically or defined through standard engineering analysis by governmental agencies or private parties but not yet incorporated in an FIS.
(Ord. No. 98-5, art. 2, § B, 5-7-1998)

Sec. 46-38. Establishment of development permit.

A development permit shall be required in conformance with the provisions of this article prior to the commencement of any development activities.
(Ord. No. 98-5, art. 2, § C, 5-7-1998)

Sec. 46-39. Compliance.

No structure or land shall after the effective date of the ordinance from which this chapter is derived be located, extended, converted or altered without full compliance with the terms of this article and other applicable regulations.
(Ord. No. 98-5, art. 2, § D, 5-7-1998)

Sec. 46-40. Abrogation and greater restrictions.

This article is not intended to repeal, abrogate or impair any existing ordinance, easements, covenants, or deed restrictions. However, where this

article and another ordinance conflict or overlap, whichever imposes the more stringent restriction shall prevail.

(Ord. No. 98-5, art. 2, § E, 5-7-1998)

Sec. 46-41. Interpretation.

In the interpretation and application of this article, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the city; and
- (3) Deemed neither to limit nor repeal any other powers granted under statute.

(Ord. No. 98-5, art. 2, § F, 5-7-1998)

Sec. 46-42. Warning and disclaimer of liability.

The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur; flood heights may be increased by manmade or natural causes. This article 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 article shall not create liability on the part of the city or by any officer or employee of the city for any flood damages that result from reliance on this article or any administrative decision lawfully made under this article.

(Ord. No. 98-5, art. 2, § G, 5-7-1998)

Secs. 46-43—46-60. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT*

Sec. 46-61. Penalties for violation.

Violation of the provisions of this article or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this article or

fails to comply with any of its requirements shall upon conviction be subject to section 1-9 and in addition shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing contained in this section shall prevent the city from taking such other lawful actions as is necessary to prevent or remedy any violation.

(Ord. No. 98-5, art. 2, § H, 5-7-1998)

Sec. 46-62. Designation of administrator.

The building inspector is appointed to administer and implement the provisions of this article.

(Ord. No. 98-5, art. 3, § A, 5-7-1998)

Sec. 46-63. Permit procedures.

(a) *Application stage.* Application for a development permit shall be made to the building inspector on form furnished by the city prior to any development activities and may include but is not limited to plans in duplicate drawn to scale showing the elevations of the area in question and the nature, location and dimensions of existing or proposed structures, earthen fill placement, storage of materials or equipment, and drainage facilities. Specifically, the following information is required:

- (1) Elevation in relation to mean sea level (or highest adjacent grade) of the regulatory lowest floor level, including basement, of all proposed structures;
- (2) Elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;
- (3) Design certification from a registered professional engineer or architect that any proposed nonresidential floodproofed structure will meet the floodproofing criteria of sections 46-92 and 46-94;
- (4) Design certification from a registered professional engineer or architect that any new construction or substantial improvement placed in a coastal high-hazard area will meet the criteria of section 46-95; and
- (5) Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development.

*Cross reference—Administration, ch. 2.

(b) *Construction stage.*

- (1) *Required certification.* For all new construction and substantial improvements, the permit holder shall provide to the administrator an as-built certification of the regulatory floor elevation of floodproofing level using appropriate FEMA elevation or floodproofing certificate immediately after the lowest floor or floodproofing is completed. Where a structure is subject to the provisions applicable to coastal high-hazard areas, after placement of the lowest horizontal structural members. Any regulatory floor certification made relative to mean sea level shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by the surveyor or engineer. When floodproofing is utilized for nonresidential structures, certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by the engineer or architect.
- (2) *Work undertaken prior to submission of certification.* Any work undertaken prior to submission of these certifications shall be at the permit holder's risk. The building inspector shall review the certification data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being allowed to proceed. Failure to submit certification or failure to make the required corrections shall be cause to issue a stop work order for the project.

(Ord. No. 98-5, art. 3, § B, 5-7-1998)

Sec. 46-64. Duties and responsibilities of the building inspector.

(a) Duties of the building inspector shall include but are not limited to:

- (1) Review all development permits to assure that the permit requirements of this article have been satisfied.
- (2) Review proposed developments to assure that all necessary permits have been re-

ceived from governmental agencies from which approval is required by federal or state law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 USC 1334; require that copies of such permits be provided and maintained on file.

- (3) When base flood elevation data or floodway data have not been provided in accordance with section 46-37, the building inspector shall obtain, review and reasonably utilize any base flood elevation and floodway data available from federal, state or other sources in order to administer the provisions of division 3 of this article.
- (4) Verify and record the actual elevation in relation to mean sea level (or highest adjacent grade) of the regulatory floor level, including basement, of all new construction or substantially improved structures in accordance with section 46-63.
- (5) Verify and record the actual elevation, in relation to mean sea level, to which any new or substantially improved structures have been floodproofed, in accordance with sections 46-92 and 46-94.
- (6) When floodproofing is utilized for a structure, obtain certification of design criteria from a registered professional engineer or architect in accordance with section 46-63 and section 46-92 or section 46-94.
- (7) Obtain design certification from a registered professional engineer or architect that any new construction or substantial improvement placed in a coastal high-hazard area will meet the criteria of section 46-95.
- (8) Notify adjacent communities and the state department of natural resources prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency (FEMA), and the Alabama Emergency Management Agency (AEMA).
- (9) For any altered or relocated watercourse, submit engineering data/analysis within six months to FEMA and the state to

ensure accuracy of community flood maps through the letter of map revision process; assure flood-carrying capacity of any altered or relocated watercourse is maintained.

- (10) Where interpretation is 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), make the necessary interpretation. Any person contesting location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.

(b) All records pertaining to this article shall be maintained in the office of the building inspector and shall be open for public inspection. (Ord. No. 98-5, art. 3, § C, 5-7-1998)

Sec. 46-65. Variance procedures.

(a) The board of adjustment as established by the zoning ordinance (hereafter referred to as ZBA) shall hear and decide requests for appeals or variance from the requirements of this article.

(b) The ZBA shall hear and decide appeals when it is alleged an error in any requirement, decision or determination is made by the building inspector in the enforcement or administration of this article.

(c) Any person aggrieved by the decision of the ZBA may appeal such decision to the circuit court of the county.

(d) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the variance is the minimum to preserve the historic character and design of the structure.

(e) Variances may be issued for development necessary for the conduct of a functionally dependent use, provided the criteria of this article are met, no reasonable alternative exists, and the development is protected by methods that minimize flood damage during the base flood and create no additional threats to public safety.

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

(g) In reviewing such requests, the ZBA shall consider all technical evaluations, relevant factors and all standards specified in this article.

(h) Conditions for variances are as follows:

- (1) A variance shall be issued only when there is:
 - a. A finding of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship; and
 - c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety or extraordinary public expense; create a nuisance; cause fraud on or victimization of the public; or conflict with existing local laws or ordinances.
- (2) The provisions of this article are minimum standards for flood loss reduction; therefore, any deviation from the standards must be weighed carefully. 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 an historic structure, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
- (3) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation of the proposed lowest floor and stating that the cost of flood insurance will be commensurate with the increased risk to life and property resulting from the reduced lowest floor elevation.
- (4) The building inspector shall maintain the records of all appeal actions and report

any variances to the federal and state emergency management agencies upon request.

(i) Upon consideration of the factors listed in subsection (h) of this section and the purposes of this article, the ZBA may attach such conditions to the granting of variances as it deems necessary to further the purposes of this article.
(Ord. No. 98-5, art. 5, 5-7-1998)

Secs. 46-66—46-90. Reserved.

DIVISION 3. FLOOD HAZARD REDUCTION

Sec. 46-91. General standards.

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

- (1) New construction and substantial improvements of existing structures shall be anchored to prevent flotation, collapse or lateral movement of the structure.
- (2) New construction and substantial improvements of existing structures shall be constructed with materials and utility equipment resistant to flood damage.
- (3) New construction or substantial improvements of existing structures shall be constructed by methods and practices that minimize flood damage.
- (4) In the case of elevated buildings, all new construction or substantial improvements of existing structures that include any fully enclosed area located below the lowest floor formed by the foundation and other exterior walls shall be designed so as to be an unfinished or flood-resistant enclosure. The enclosure shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater. This subsection is not applicable in coastal high-hazard areas.
 - a. Designs for complying with this requirement must either be certified

by a 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 floodwater in both directions.
- b. So as not to violate the lowest floor criteria of this article, the unfinished or flood-resistant enclosure shall only be used for parking of vehicles, limited storage of maintenance equipment used in connection with the premises, or entry to the elevated area.
 - c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- (5) All heating and air conditioning equipment and components, all electrical, ventilation, plumbing and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
 - (6) 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.
 - (7) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

- (8) New and replacement sanitary sewer systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
- (9) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (10) Any alteration, repair, reconstruction or improvement to a structure which is not compliant with the provisions of this article shall be undertaken only if the non-conformity is not furthered, extended or replaced.

(Ord. No. 98-5, art. 4, § A, 5-7-1998)

Sec. 46-92. Specific standards.

In all areas of special flood hazard designated as A1—30, AE, AH, A (with estimated BFE), the following provisions are required:

- (1) *New construction and substantial improvements.* Where base flood elevation data are available, new construction or substantial improvement of any structure or manufactured home shall have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 46-91.
- (2) *Nonresidential construction.* New construction or substantial improvement of any nonresidential structure located in A1—30, AE or AH zones, may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be watertight to one foot above the base flood elevation, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect

shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting these provisions and shall provide such certification to the official as set forth above and in section 46-64.

- (3) *Standards for manufactured homes and recreational vehicles.* Where base flood elevation data are available:

- a. All manufactured homes placed or substantially improved on:
 - 1. Individual lots or parcels;
 - 2. In new or substantially improved manufactured home parks or subdivisions;
 - 3. In expansions to existing manufactured home parks or subdivisions; or
 - 4. On a site in an existing manufactured home park or subdivision where a manufactured home has incurred substantial damage as the result of a flood;

must have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation.

- b. Manufactured homes placed or substantially improved in an existing manufactured home park or subdivision may be elevated so that either:
 - 1. The lowest floor of the manufactured home is elevated no lower than one foot above the level of the base flood elevation; or
 - 2. The manufactured home chassis is elevated and supported by reinforced piers (or other foundation elements of at least an equivalent strength) of no less than 36 inches in height above grade.
- c. All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. (Refer to section 46-91.)

d. All recreational vehicles placed on sites must either:

1. Be on the site for fewer than 180 consecutive days, fully licensed and ready for highway use if it is licensed, on its wheels or jacking system, attached to the site only by quick-disconnect-type utilities and security devices, and have no permanently attached structures or additions; or
2. The recreational vehicle must meet all the requirements for new construction, including the anchoring and elevation requirements of subsection (3)a. and c. of this section.

(4) *Floodway.* Located within areas of special flood hazard established in section 46-37, are areas designated as floodway. A floodway may be an extremely hazardous area due to the velocity of floodwaters, debris or erosion potential. In addition, the area must remain free of encroachments in order to allow for the discharge of the base flood without increased flood heights. Therefore, the following provisions shall apply:

- a. Encroachments are prohibited, including earthen fill, new construction, substantial improvements or other development within the regulatory floodway. Development may be permitted however, provided it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the encroachment shall not result in any increase in flood levels or floodway widths during a base flood discharge. A registered professional engineer must provide supporting technical data and certification.
- b. Only if subsection (4)a. is satisfied, then any new construction or substantial improvement shall comply

with all other applicable flood hazard reduction provisions of this division.

(Ord. No. 98-5, art. 4, § B, 5-7-1998)

Sec. 46-93. Building standards for streams without established base flood elevations and/or floodway (A zones).

Located within the areas of special flood hazard established in section 46-37, where streams exist but no base flood data have been provided (A zones), or where base flood data have been provided but a floodway has not been delineated, the following provisions apply:

- (1) When base flood elevation data or floodway data have not been provided in accordance with section 46-37, the building inspector shall obtain, review and reasonably utilize any scientific or historic base flood elevation and floodway data available from a federal, state or other source, in order to administer the provisions of this division. Only if data are not available from these sources, then the provisions of subsections (2) and (3) of this section shall apply.
- (2) No encroachments, including structures or fill material, shall be located within an area equal to the width of the stream or 25 feet, whichever is greater, measured from the top of the stream bank, unless certification by a registered professional engineer is provided demonstrating that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (3) In special flood hazard areas without base flood elevation data, new construction and substantial improvements of existing structures shall have the lowest floor of the lowest enclosed area (including basement) elevated no less than three feet above the highest adjacent grade at the building site. Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with section 46-91. The building inspector

shall certify the lowest floor elevation level, and the record shall become a permanent part of the permit file.

(Ord. No. 98-5, art. 4, § C, 5-7-1998)

Sec. 46-94. Standards for areas of shallow flooding (AO zones).

Areas of special flood hazard established in section 46-37 may include designated AO shallow flooding areas. These areas have a base flood depth of one to three feet above ground, with no clearly defined channel. The following provisions apply:

- (1) All new construction and substantial improvements of residential and nonresidential structures shall have the lowest floor, including basement, elevated to the flood depth number specified on the flood insurance rate map (FIRM) above the highest adjacent grade. If no flood depth number is specified, the lowest floor, including basement, shall be elevated at least three feet above the highest adjacent grade. Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with section 46-91. The building inspector shall certify the lowest floor elevation level, and the record shall become a permanent part of the permit file.
- (2) New construction or the substantial improvement of a nonresidential structure may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be watertight to the specified FIRM flood level plus two feet above highest adjacent grade, with walls substantially impermeable to the passage of water and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting these provisions, and shall

provide such certification to the official as set forth above and as required in section 46-63(a)(3) and section 46-63(b).

- (3) Drainage paths shall be provided to guide floodwater around and away from any proposed structure.

(Ord. No. 98-5, art. 4, § D, 5-7-1998)

Sec. 46-95. Coastal high-hazard areas (V zones).

Located within the areas of special flood hazard established in section 46-37 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:

- (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 the bottom of the lowest supporting horizontal structural member (excluding pilings or columns) is located no lower than one foot above the base flood elevation level. All space below the lowest supporting member shall remain free of obstruction. Open lattice work or decorative screening may be permitted for aesthetic purposes only and must be designed to wash away in the event of abnormal wave action and be in accordance with subsection (6) of this section.
- (3) All new construction and substantial improvements of existing structures shall be securely anchored on pilings, columns or shear walls.
- (4) All pile and column foundations and attached structures 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 nonstructural 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 Standard Building Code.

- (5) A registered professional engineer or architect shall certify that the design, specifications and plans for construction are in full compliance with the provisions contained in subsections (2), (3) and (4).
- (6) All space below the lowest horizontal supporting member must remain free of obstruction. Open lattice work or decorative screening may be permitted for aesthetic purposes only and must be designed to wash away in the event of abnormal wave action without causing structural damage to the supporting foundation or elevated portion of the structure. The following design specifications are allowed:
 - a. No solid walls shall be allowed.
 - b. Material shall consist of lattice or mesh screening only.
 - c. If aesthetic lattice work 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.
- (7) Prior to construction, plans for any structure using lattice or decorative screening must be submitted to the building inspector for approval.
- (8) Any alteration, repair, reconstruction or improvement to any structure shall not enclose the space below the lowest floor except with lattice work or decorative screening, as provided in this section.
- (9) There shall be no fill material used as structural support. Noncompacted fill may be used around the perimeter of a building for landscaping/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 inspector 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 runup or ramping.
- (10) There shall be no alteration of sand dunes or mangrove stands which would increase potential flood damage.
 - (11) The placement of manufactured homes (mobile homes) is prohibited 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 this section are met.
- (Ord. No. 98-5, art. 4, § E, 5-7-1998)

Sec. 46-96. Standards for subdivisions.

(a) All subdivision proposals shall be consistent with the need to minimize flood damage.

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

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

(d) Base flood elevation data shall be provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions, greater than 50 lots or five acres, whichever is less.

(Ord. No. 98-5, art. 4, § F, 5-7-1998)

Cross reference—Subdivisions, ch. 70.

Chapters 47—49

RESERVED

