

City of Bellaire

ORDINANCE NO. 19-018

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF BELLAIRE, TEXAS, AMENDING CHAPTER 9, BUILDINGS, ARTICLE II-A, FLOOD DAMAGE PREVENTION, OF THE CODE OF ORDINANCES OF THE CITY OF BELLAIRE, TEXAS, FOR THE PURPOSE OF MODIFYING THE DEFINITION OF SUBSTANTIAL IMPROVEMENT; ADDING ADDITIONAL REQUIREMENTS FOR PERMITS FOR FLOOD REPAIRS; AND CODIFYING THE CITY'S REPAIR PERMIT PROCESS FOLLOWING FLOODING EVENTS.

WHEREAS, the City Council (the "City Council") of City of Bellaire, Texas (the "City") has previously adopted a Flood Hazard Mitigation Plan (the "Plan") with the City's regulatory focus as one of the City's three major themes for flood mitigation efforts; and

WHEREAS, the City intends to implement the flood mitigation actions suggested in the Plan by providing clear regulatory guidelines for the City and public; and

WHEREAS, the Building and Standards Commission has reviewed the proposed flood regulation amendments and agrees with the Flood Hazard Mitigation Task Force recommendation for changes to the flood damage prevention codes.

NOW, THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BELLAIRE, TEXAS, THAT:

Section 1. *Chapter 9, Buildings, Article II-A, Flood Damage Prevention*, of the *Code of Ordinances of the City of Bellaire, Texas ("City's Code")*, is hereby amended for the purpose of modifying the definition of substantial improvement, adding additional requirements for permits for flood repairs, and codifying the City's repair permit process following flooding events. The amended *Article II-A, Flood Damage Prevention* shall read as set out in Appendix A, attached hereto. All other portions of *Chapter 9, Buildings, Article II-A, Flood Damage Prevention* of the *City's Code* not specifically amended hereby shall remain in full force and effect.

Section 2. If any word, phrase, clause, sentence, paragraph, section or other part of this Ordinance or the application thereof to any person or circumstance, shall ever be held to be invalid or unconstitutional by any court of competent jurisdiction, neither the remainder of this Ordinance, nor the application of such word, phrase, clause, sentence, paragraph, section or other part of this Ordinance to any other persons or circumstances, shall be affected thereby.

Section 3. The City Council officially finds, determines and declares that a sufficient written notice of the date, hour, place and subject of each meeting at which this Ordinance was discussed, considered or acted upon was given in the manner required by the Texas Open Meetings Act, as amended, and that each such meeting has been open to the public as required by law at all times during such discussion, consideration and action. The City Council ratifies, approves and confirms such notices and the contents and posting thereof.

Section 4. This Ordinance shall be effective immediately upon its passage and adoption.

PASSED, APPROVED and ADOPTED this, the 18th day of March 2019.

SIGNED:

Andrew S. Friedberg
Mayor

ATTEST:

Tracy L. Dutton, TRMC
City Clerk

APPROVED AS TO FORM:

Alan P. Petrov
City Attorney

Appendix A

(Language to be added shown by underline, language to be deleted shown by strike-out)

ARTICLE II-A. - FLOOD DAMAGE PREVENTION

DIVISION 1. - STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND METHODS

Sec. 9-70.1. - Statutory authorization.

The Legislature of the state has, in V.T.C.A., Water Code §§ 16.311—16.319 delegated the responsibility to local governmental units to adopt regulations designed to minimize flood losses. Therefore, the city council, does ordain as set out in the following sections.

Sec. 9-70.2. - Findings of fact.

- (a) 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, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.
- (b) These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed or otherwise protected from flood damage.

Sec. 9-70.3. - 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) Protect human life and health;
- (2) Minimize expenditure of public money for costly flood control projects;
- (3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) Minimize prolonged business interruptions;
- (5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
- (6) Help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize future flood blight areas; and
- (7) Insure the potential buyers are notified that property is in a flood area.

Sec. 9-70.4. - Methods of reducing flood losses.

In order to accomplish its purpose, this article uses the following methods:

- (1) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases 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 flood damage;

- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

DIVISION 2. - DEFINITIONS

Sec. 9-70.5. - Definitions.

Unless specifically defined below, words or phrases used in this article shall be interpreted to give them the meaning they have in common usage and to give this article its most reasonable application.

- (1) *Alluvial fan flooding* means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and unpredictable flow paths.
- (2) *Apex* means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.
- (3) *Appeal* means a request for a review of the floodplain administrator's interpretation of any provision of this article or a request for a variance.
- (4) *Appurtenant structure* means a structure that is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.
- (5) *Area of future conditions flood hazard* means the land area that would be inundated by the one percent annual chance (100-year) flood based on future conditions hydrology.
- (6) *Area of shallow flooding* means a designated AO, AH, or VO zone on a community's flood insurance rate map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.
- (7) *Area of special flood hazard* is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as zone A on the flood hazard boundary map (FHB). After detailed ratemaking has been completed in preparation for the publication of the FIRM, zone A usually is refined into zones A, AE, AH, AO, A1-99, VO, V1-30, VE or V.
- (8) *Base flood* means the flood having a one percent chance of being equaled or exceeded in any given year.
- (9) *Basement* means any area of the building having its floor subgrade (below ground level) on all sides.
- (10) *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 supporting foundation system.
- (11) *Critical feature* means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.
- (12) *Development* means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.
- (13) *Elevated building* means a non-basement building: (i) built, in the case of a building in zones A1-30, AE, A A99, AO, AH, B, C, X, and D, to have the top of the elevated floor, or in the case of a building in zones V1-30, VE, or V, to have the bottom of the lowest horizontal structure members of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the floor of the water, and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A1-30, AE, A, A99, AO, AH, B, C, X, D, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters. In the case of Zones V1-30, VE, or V, "elevated building" also

includes a building otherwise meeting the definition of "elevated building," even though the lower area is enclosed by means of breakaway walls if the breakaway walls meet the standards of Section 60.3(e)(5) of the National Flood Insurance Program regulations.

- (14) *Existing construction* means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures."
- (15) *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) is completed before the effective date of the floodplain management regulations adopted by a community.
- (16) *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).
- (17) *Flood or flooding* means a general and temporary condition of partial or complete inundation of normally dry land areas from:
 - a. The overflow of inland or tidal waters;
 - b. The unusual and rapid accumulation or runoff of surface waters from any source.
- (18) *Flood elevation study* means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevation, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.
- (19) *Flood insurance rate map (FIRM)* means an official map of a community on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
- (20) *Flood insurance study (FIS)* is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, water surface elevation of the base flood, as well as the flood boundary-floodway map.
- (21) *Floodplain or flood-prone area* means any land area susceptible to being inundated by water from any source (see definition of flooding).
- (22) *Floodplain management* means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.
- (23) *Floodplain management regulations* means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.
- (24) *Floodproofing* means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.
- (25) *Flood protection system* means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. The specialized flood modifying works are those constructed in conformance with sound engineering standards.

- (26) *Floodway (regulatory floodway)* means the channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.
- (27) *Functionally dependent use* means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.
- (28) *Highest adjacent grade* means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
- (29) *Historic structure* means any structure that is:
- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - (b) 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;
 - (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
 - (d) Individually listed on a local inventory or historic places in communities with historic preservation programs that have been certified either:
 - (1) By an approved state program as determined by the Secretary of the Interior; or
 - (2) Directly by the Secretary of the Interior in states without approved programs.
- (30) *Levee* means a man-made 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.
- (31) *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.
- (32) *Lowest floor* means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, used solely for parking vehicles, building access or storage in an area other than the 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 non-elevation design requirement of Section 60.3 of the National Flood Insurance Program regulations. For residential structures without a basement, the lowest floor elevation shall be measured as follows: a) for concrete slab construction, the lowest floor elevation shall be measured by the surface of the lowest point on the exterior perimeter of the slab, excluding any ledges solely for the purpose of attaching a facade; and b) for crawl space (pier and beam) construction, the lowest floor elevation shall be measured by the top of the wood sub-flooring. For residential structures with a basement, the lowest floor elevation shall be measured by the top surface of the basement floor at the lowest point. For the purpose of this regulation, wine cellars and elevator pits are regarded as basements.
- (33) *Manufactured home* means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle."
- (34) *Manufactured home park or subdivision* means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
- (35) *Mean sea level* means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.

- (36) *New construction* means, for floodplain management purposes, structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community.
- (37) *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 the effective date of floodplain management regulations adopted by a community.
- (38) *Recreational vehicle* means a vehicle which is:
- (i) Built on a single chassis;
 - (ii) Four hundred (400) square feet or less when measured at the largest horizontal projections;
 - (iii) Designed to be self-propelled or permanently towable by a light duty truck; and
 - (iv) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
- (39) *Riverine* means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.
- (40) *Start of construction* (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the 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, streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, include 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. 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.
- (41) *Structure* means a walled and roofed building, including a gas or liquid storage tank, which is principally above ground, as well as a manufactured home.
- (42) *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.
- (43) *Substantial improvement* means any repair, 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 work to be permitted is started, or a combination of repair, reconstruction, rehabilitation, addition or other improvement of a structure over an improvement period for permits after two flooding events, the cost of which equals or exceeds 50 percent of the market value of the structure before the work to be permitted is started. "start of construction" of the improvement. The improvement period is that period of time from the current permit application date back to the first flooding event, but not to exceed ten years. This term applies to includes structures which that have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:
- (1) 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 local code enforcement official and which are the minimum necessary conditions; or
 - (2) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a 'historic structure.'

- (44) *Variance* is a grant of relief to a person from the requirements of this article when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this article. (For full requirements, see Section 60.6 of the National Flood Insurance Program regulations.)
- (45) *Violation* means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4) or (e)(5) of the National Flood Insurance Program regulations is presumed to be in violation until such time as that documentation is provided.
- (46) *Water surface elevation* means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

DIVISION 3. - GENERAL PROVISIONS

Sec. 9-70.6. - Lands to which this article applies.

This article shall apply to all areas of special flood hazard within the jurisdiction of the city.

Sec. 9-70.7. - Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for the City of Bellaire, Texas," dated June 28, 2007, with accompanying flood insurance rate maps and flood boundary-floodway maps (FIRM and FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this article.

Sec. 9-70.8. - Establishment of development permit.

A development permit shall be required in the floodplain to ensure conformance with the provisions of this article.

Sec. 9-70.9. - Compliance.

No structure or land shall hereafter be located, altered or have its use changed without full compliance with the terms of this article and other applicable regulations.

Sec. 9-70.10. - Abrogation and greater restrictions.

This article is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this article and another ordinance conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

Sec. 9-70.11. - 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 governing body; and
- (3) Deemed neither to limit nor repeal any other powers granted under state statutes.

Sec. 9-70.12. - 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. On rare occasions greater floods can and will occur and flood heights may be increased by man-made or natural causes. This article does not imply that land outside the areas of special flood hazards or uses permitted within such areas will not be free from flooding or flood damages. This article shall not create liability on the part of the community or

any official or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made hereunder.

DIVISION 4. - ADMINISTRATION

Sec. 9-70.13. - Designation of the floodplain administrator.

The ~~building official~~ Development Services Director is hereby appointed the floodplain administrator to administer and implement the provisions of this article and other appropriate sections of 44 CFR (National Flood Insurance Program regulations) pertaining to floodplain management.

Sec. 9-70.14. - Duties and responsibilities of the floodplain administrator.

Duties and responsibilities of the floodplain administrator shall include, but not be limited to, the following:

- (1) Maintain and hold open for public inspection all records pertaining to the provisions of this article;
- (2) Review permit applications to determine whether proposed building sites will be reasonably safe from flooding;
- (3) Review, approve or deny all applications for development permits required by adoption of this article;
- (4) Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies (including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 USC 1334) from which prior approval is required;
- (5) Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), the floodplain administrator shall make the necessary interpretation;
- (6) Notify, in riverine situations, adjacent communities and the state coordinating agency which is [the] Texas Commission on Environmental Quality, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency;
- (7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;
- (8) When base flood elevation data has not been provided in accordance with section 9-70.7, the floodplain administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from federal, state or other source, in order to administer the provisions of division 5;
- (9) When a regulatory floodway has not been designated, the floodplain administrator must require that no new construction, substantial improvements or other development (including fill) shall be permitted within zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any one point within the community;
- (10) Under the provisions of 44 CFR chapter 1, § 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in zones A1-30, AE, AH, on the community's FIRM which increases the water surface elevation of the base flood by more than one foot, provided that the community first applies for a conditional FIRM revision through FEMA.

Sec. 9-70.15. - Permit procedures.

- (a) Application for a development permit in the floodplain shall be presented to the floodplain administrator on forms furnished by him and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions and elevation of proposed landscape alterations, existing and proposed structures, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:
- (1) Elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures;
 - (2) Elevation in relation to mean sea level to which any nonresidential structure shall be floodproofed;
 - (3) A certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of section 9-70.18(2);
 - (4) Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development;
 - (5) Maintain a record of all such information in accordance with 9-70.14(1).
- (b) Approval or denial of a development permit by the floodplain administrator shall be based on all of the provisions of this article and the following relevant factors:
- (1) The danger to life and property due to flooding or erosion damage;
 - (2) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (3) The danger that materials may be swept onto other lands to the injury of others;
 - (4) The compatibility of the proposed use with existing and anticipated development;
 - (5) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (6) The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
 - (7) 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;
 - (8) The necessity to the facility of a waterfront location, where applicable;
 - (9) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (10) The relationship of the proposed use to the comprehensive plan for that area.
- (c) The floodplain administrator shall deny any application for a substantial improvement unless one of the following conditions is met:
- (1) The applicant provides an Elevation Certificate showing that the finished floor of the building is in compliance with the City's current elevation standard; or
 - (2) The applicant elevates the structure into compliance with the City's current elevation standard; or
 - (3) The applicant provides an appraisal of the property, performed by a state licensed appraiser, which shows the construction cost to be below 50% of the market value of the structure.
- (d) Following a flooding event, the following emergency procedures for repair permits shall be followed:
- (1) The applicant shall submit:

(i) an application showing the address, property owner's name, contractor's name, and cost of construction;

(i) the valuation of the structure as determined by the Harris County Appraisal District;
and

(iii) an itemized cost of repairs, including labor and materials.

(2) If the repairs qualify as a substantial improvement based on the market value of the structure as determined by the Harris County Appraisal District and cost of repairs, the City shall calculate its own market value of the structure, based on square footage, age, and depreciation.

(3) Following the City's market value calculation of the structure, if the repairs still qualify as a substantial improvement based on the market value of the structure per the City's calculation and the cost of repairs, the Building Official shall make an inspection of the structure and evaluate the damage to the structure to create a repair assessment based on the inspection, evaluation, and average repair costs for the area.

(4) Following the Building Official's repair assessment, if the repairs still qualify as a substantial improvement based on the cost of repairs in the Building Official's repair assessment and the greater of the market value of the structure per the City's market value calculation or determination by the Harris County Appraisal District, the Building Official shall deny the application for repair permits.

(5) Applications under this subsection for repairs found not to be substantial improvements may be issued a repair permit if all other requirements for permits are met.

Sec. 9-70.16. - Variance procedures.

- (a) The building and standards commission, as established by the city, shall hear and render judgment on requests for variances from the requirements of this article.
- (b) The building and standards commission shall hear and render judgment on an appeal only when it is alleged there is an error in any requirement, decision or determination made by the floodplain administrator in the enforcement or administration of this article.
- (c) Any person or persons aggrieved by the decision of the building and standards commission may appeal such decision in the courts of competent jurisdiction.
- (d) The building official shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.
- (e) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places, without regard to the procedures set forth in the remainder of this article.
- (f) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in section 9-70.15(b) have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.
- (g) Upon consideration of the factors noted above and the intent of this article, the building and standards commission may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this article (section 9-70.3).
- (h) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

- (i) 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 a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (j) Prerequisites for granting variances:
 - (1) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (2) Variances shall only be issued upon:
 - (i) Showing a good and sufficient cause,
 - (ii) A determination that failure to grant the variance would result in exceptional hardship to the applicant, and
 - (iii) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws, this Code or other ordinances.
 - (3) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
- (k) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:
 - (i) The criteria outlined in subsections (a) through (i) are met, and
 - (ii) The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

DIVISION 5. - PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 9-70.17. - General standards.

In all areas of special flood hazards, the following provisions are required for all new construction and substantial improvements:

- (1) All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (2) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- (3) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;
- (4) All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from the system into floodwaters; and
- (7) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

Sec. 9-70.18. - Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in section 9-70.7, section 9-70.14(8), or 9-70.19(d), the following provisions are required:

- (1) *Residential construction.* New construction and substantial improvement of any residential structure shall have the lowest floor (including basement) elevated as a minimum, to one foot above the highest of the base flood elevation shown on the effective FIRM and the flood hazard recovery data map. A registered professional engineer, architect or land surveyor shall submit a certification to the floodplain administrator that the standard of this subsection, as proposed in section 9-70.15(a)(1), is satisfied.
- (2) *Nonresidential construction.* New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to one foot above the highest of the base flood elevation shown on the effective FIRM and the flood hazard recovery data map or, together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure 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. A registered professional engineer or architect shall develop and/or review structural design, specifications and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the floodplain administrator.
- (3) *Enclosures.* New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and hydrostatic flood forces on exterior walls by allowing for the entry and exit by a registered professional engineer or architect or meet or exceed the following minimum criteria:
 - a. 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 shall be provided;
 - b. The bottom of all openings shall be no higher than four inches above grade;
 - c. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- (4) *Manufactured homes.*
 - a. Require that all manufactured homes to be placed within zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purpose of this requirement, manufactured homes must be elevated and anchored to resist 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 requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
 - b. Require that manufactured homes that are placed or substantially improved within zones A1-30, AH, and AE on the community's FIRM on sites: (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
 - c. Require that all manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision with Zones A1-30, AH and AE on the community's FIRM that are not subject to the provision of subsection (4) be elevated so that either:
 - (i) The manufactured home shall have the lowest floor elevated as a minimum, to one foot above the highest of the base flood elevation shown on the effective FIRM and the flood hazard recovery data maps flood elevation, or
 - (ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height

above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- (5) *Recreational vehicles.* Require that recreational vehicles placed on sites within zones A1-30, AH, and AE on the community's FIRM either: (i) be on the site for fewer than 180 consecutive days, (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements of article 4, section C(1), and the elevation and anchoring requirements for "manufactured homes" in subsection (4). A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

Sec. 9-70.19. - Standards for subdivision proposals.

- (a) All subdivision proposals including manufactured home parks and subdivisions shall be consistent with sections 9-70.2, 9-70.3 and 9-70.4.
- (b) All proposals for the development of subdivisions including manufactured home parks and subdivisions shall meet development permit requirements of section 9-70.8, section 9-70.15 and the provisions of division 5 of this article.
- (c) Base flood elevation data shall be generated for subdivision proposals and other proposed development including manufactured home parks and subdivisions which is greater than 50 lots or five acres, whichever is lesser, if not otherwise provided pursuant to section 9-70.7 or section 9-70.14(8).
- (d) All subdivision proposals including manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.
- (e) All subdivision proposals including manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

Sec. 9-70.20. - Standards for areas of shallow flooding (AO/AH Zones).

Located within the areas of special flood hazard established in section 9-70.7, the areas designated as shallow flooding. 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 where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified).
- (2) All new construction and substantial improvements of nonresidential structures:
 - a) Have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified); or
 - b) Together with attendant utility and sanitary facilities be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy;
- (3) A registered professional engineer or architect shall submit a certification to the floodplain administrator that the standards of this section, as proposed in section 9-70.15(a)(1), are satisfied;
- (4) Require within zones AH or AO adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

Sec. 9-70.21. - Penalties for noncompliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this article and other applicable regulations. Violations of the provisions of this article by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this article or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$500.00 per day for each violation, and in addition shall pay all costs and expenses involved in the case. Each day that a violation continues shall be considered a separate violation. Nothing herein contained shall prevent the city from taking such other lawful action as is necessary to prevent or remedy any violation.

Secs. 9-71—9-76. - Reserved.