

Chapter 18 FLOODS

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ARTICLE I. IN GENERAL

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Sec. 18-1. Definitions.

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

Accessory structure means a structure having minimal value and used for parking, storage and other non-habitable uses, such as garages, carports, storage sheds, pole barns, hay sheds and the like.

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 load-bearing wall other than a firewall. Any walled and roofed addition, which is connected by a firewall or is separated by an independent perimeter load-bearing wall, shall be considered "new construction."

Appeal means a request for a review of the city clerk's interpretation of any provision of this chapter.

Area of shallow flooding means a designated AO or AH Zone on a community'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 is the land in the floodplain within a community 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 local community and referenced in [section 18-7](#).

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

Base flood elevation (BFE) means the elevation shown on the flood insurance rate map for zones AE, AH, A1-A30, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO, V1-V30, and VE that indicates the water surface elevation resulting from a flood that has a one percent chance of equaling or exceeding that level in any given year.

Basement means that portion of a building having its floor sub grade (below ground level) on all sides.

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

Critical facility means any public or private facility, which, if flooded, would create an added dimension to the disaster or would increase the hazard to life and health. Critical facilities include:

- (1) Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic, or water-reactive materials;
- (2) Hospitals and nursing homes, and housing for the elderly, which are likely to contain occupants who may not be sufficiently mobile to avoid the loss of life or injury during flood and storm events;
- (3) Emergency operation centers or data storage centers which contain records or services that may become lost or inoperative during flood and storm events; and
- (4) Generating plants, and other principal points of utility lines.

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, excavating, drilling operations, and permanent storage of materials or equipment.

Elevated building means a non-basement 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, for the purposes of determining rates, structures for which the start of construction commenced before April 1, 1977, the effective date of the initial FIRM for that community.

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 April 1, 1977, the effective date of the first floodplain management regulations adopted by a community.

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:

- (1) The overflow of inland or tidal waters; or

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood hazard boundary map (FHBM) means an official map of a community, issued by the Federal Insurance Administration, where the boundaries of areas of special flood hazard have been defined as zone A.

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

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

Floodplain means any land area susceptible to flooding.

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.

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.

Freeboard means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

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

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.

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 considered 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 Code.

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.

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.

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 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.

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, for the purposes of determining insurance rates, structures for which the "start of construction" commenced after April 1, 1977, the effective date of the initial FIRM, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced after April 1, 1977, the effective date of the first floodplain management ordinance adopted by the community, 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 after April 1, 1977, the effective date of the first floodplain management regulations adopted by a community.

North American Vertical Datum (NAVD) has replaced the National Geodetic Vertical Datum of 1929 in existing and future FEMA Flood Modernization Maps.

Recreational vehicle means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred square feet or less 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.

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 either the first placement of permanent construction of a 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 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 buildings appurtenant to the permitted structure, such as garages or sheds not occupied as dwelling units or not part of the main structure. (Note: accessory structures are not exempt from any chapter requirements.) 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 aboveground, a manufactured home, or a gas or liquid storage tank.

Subdivision means the division of a single lot into two or more lots for the purpose of sale or development.

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

value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during a five-year period, in which the cumulative cost equals or exceeds 50 percent of the market value of the structure prior to the "start of construction" of the improvement. Note: The market value of the structure should be:

- (1) The appraised value of the structure prior to the start of the initial repair or improvement; or
- (2) In the case of damage, the value of the structure prior to the damage occurring. This term includes structures which have incurred substantial damage, regardless of the actual amount of repair work performed.

For the purposes of this definition, the term "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 "substantial improvement" does not, however, include:

- (1) Those improvements of a structure required to comply with existing violations of state or local health, sanitary, or safety code specifications which are solely necessary to ensure safe living conditions and which have been identified by the code enforcement official, and not solely triggered by an improvement or repair project; or
- (2) 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 is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance is a grant of relief from the requirements of this chapter, which permits construction in a manner otherwise prohibited by this chapter.

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, or other certifications, or other evidence of compliance required by this chapter is presumed to be in violation until such time as that documentation is provided.

(Ord. No. 50, art. 6, 7-7-2009)

Sec. 18-2. Statutory authorization.

Ga. Const. art. IX, § II and O.G.C.A. § 36-1-20(a) have delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council does ordain the provisions of this chapter.

(Ord. No. 50, art. 1, § A, 7-7-2009)

Sec. 18-3. 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, 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. 50, art. 1, § B, 7-7-2009)

Sec. 18-4. Statement of purpose.

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

- (1) 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 flood waters 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. 50, art. 1, § C, 7-7-2009)

Sec. 18-5. Objectives.

The objectives of this chapter are:

- (1) To protect human life and health;
- (2) To 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) To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas;
- (4) To minimize expenditure of public money for costly flood control projects;
- (5) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (6) To minimize prolonged business interruptions; and
- (7) To ensure that potential homebuyers are notified that property is in a flood area.

(Ord. No. 50, art. 1, § D, 7-7-2009)

Sec. 18-6. Lands to which this chapter applies.

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

(Ord. No. 50, art. 2, § A, 7-7-2009)

Sec. 18-7. Basis for area of special flood hazard.

- (a) The areas of special flood hazard identified by the Federal Emergency Management Agency in its Flood Insurance Study (FIS), dated September 25, 2009, with accompanying maps and other

supporting data and any revision thereto, are adopted by reference and declared a part of this chapter.

- (b) For those land areas acquired by a municipality through annexation, the current effective FIS dated September 25, 2009, with accompanying maps and other supporting data and any revision thereto, for the county are hereby adopted by reference.
- (c) 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.
- (d) The repository for public inspection of the Flood Insurance Study (FIS), accompanying maps and other supporting data is located: Ray City-City Hall at 8151 Main St., Ray City, Georgia, 31645.

(Ord. No. 50, art. 2, § B, 7-7-2009)

Sec. 18-8. Establishment of development permit.

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

(Ord. No. 50, art. 2, § C, 7-7-2009)

Sec. 18-9. Compliance.

No structure or land shall hereafter be located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations.

(Ord. No. 50, art. 2, § D, 7-7-2009)

Sec. 18-10. Abrogation and greater restrictions.

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

(Ord. No. 50, art. 2, § E, 7-7-2009)

Sec. 18-11. Interpretation.

In the interpretation and application of the provisions of this chapter 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.

(Ord. No. 50, art. 2, § F, 7-7-2009)

Sec. 18-12. Warning and disclaimer of liability.

The degree of flood protection required by this chapter 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 chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or

flood damages. This chapter shall not create liability on the part of city or by any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

(Ord. No. 50, art. 2, § G, 7-7-2009)

Sec. 18-13. Penalties for violation.

Failure to comply with the provisions of this chapter with grants of variance or special exceptions shall constitute a violation.

(Ord. No. 50, art. 2, § H, 7-7-2009)

Secs. 18-14—18-34. Reserved.

ARTICLE II. ADMINISTRATION

[Sec. 18-35. Designation of ordinance administrator.](#)

[Sec. 18-36. Permit procedures.](#)

[Sec. 18-37. Duties and responsibilities of the administrator.](#)

[Secs. 18-38—18-58. Reserved.](#)

Sec. 18-35. Designation of ordinance administrator.

The city clerk is hereby appointed to administer and implement the provisions of this chapter.

(Ord. No. 50, art. 3, § A, 7-7-2009)

Sec. 18-36. Permit procedures.

- (a) *Application for development permit.* Application for a development permit shall be made to the city clerk on forms furnished by the community prior to any development activities, and may include, but not be limited to the following: 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.
- (b) *Required information.* Specifically, the following information is required:
 - (1) *Application stage.*
 - a. Elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all proposed structures;
 - b. Elevation in relation to mean sea level to which any non-residential structure will be floodproofed;
 - c. Design certification from a registered professional engineer or architect that any proposed non-residential floodproofed structure will meet the floodproofing criteria of [section 18-60\(2\)](#);
 - d. Description of the extent to which any watercourse will be altered or relocated as a result of

a proposed development; and

(2) *Construction stage.*

- a. For all new construction and substantial improvements, the permit holder shall provide to the administrator an as-built certification of the regulatory floor elevation or floodproofing level immediately after the lowest floor or flood proofing is completed. Any lowest 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 same. When flood proofing is utilized for nonresidential structures, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same.
- b. Any work undertaken prior to submission of these certifications shall be at the permit holder's risk.
- c. The city clerk shall review the submitted certification data referenced in this subsection.
- d. 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 said corrections required hereby shall be cause to issue a stop-work order for the project.

(Ord. No. 50, art. 3, § B, 7-7-2009)

Sec. 18-37. Duties and responsibilities of the administrator.

Duties of the city clerk shall include, but shall not be limited to:

- (1) Review proposed development to ensure that the permit requirements of this article have been satisfied.
- (2) Review proposed development to ensure that all necessary permits have been received 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) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding.
- (4) When base flood elevation data or floodway data have not been provided in accordance with [section 18-7](#), then the city clerk 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 article III of this chapter.
- (5) Review and record the actual elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all new or substantially improved structures in accordance with [section 18-7\(a\)](#).
- (6) Review 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 [section 18-36\(b\)](#).
- (7) When floodproofing is utilized for a structure, the city clerk shall obtain certification of design criteria from a registered professional engineer or architect in accordance with sections [18-36\(b\)\(1\)\(c\)](#) and [18-60\(2\)](#) or [18-62\(2\)](#).
- (8) Make substantial damage determinations following a flood event or any other event that causes damage to structures in flood hazard areas.
- (9) 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).

- (10) For any altered or relocated watercourse, submit engineering data/analysis within six months to the FEMA to ensure accuracy of community flood maps through the letter of map revision process. Ensure flood carrying capacity of any altered or relocated watercourse is maintained.
- (11) 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), the city clerk shall make the necessary interpretation. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this chapter.
- (12) All records pertaining to the provisions of this chapter shall be maintained in the office of the city clerk and shall be open for public inspection.

(Ord. No. 50, art. 3, § C, 7-7-2009)

Secs. 18-38—18-58. Reserved.

ARTICLE III. PROVISIONS FOR FLOOD HAZARD REDUCTION

[Sec. 18-59. General standards.](#)

[Sec. 18-60. Specific standards.](#)

[Sec. 18-61. Building standards for streams without established base flood elevations and/or floodway \(A-zones\).](#)

[Sec. 18-62. Standards for areas of special flood hazard \(zones AE\) with established base flood elevations without designated floodways.](#)

[Sec. 18-63. Standards for areas of shallow flooding \(AO zones\).](#)

[Sec. 18-64. Standards for subdivisions.](#)

[Sec. 18-65. Standards for critical facilities.](#)

[Secs. 18-66—18-84. Reserved.](#)

Sec. 18-59. 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) Elevated buildings. All new construction or substantial improvements of existing structures that include any fully enclosed area located below the lowest floor formed by 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.

- 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 chapter, 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; and
 - 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 (including ductwork), 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 sewage 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; and
 - (10) Any alteration, repair, reconstruction or improvement to a structure, which is not compliant with the provisions of this chapter, shall be undertaken only if the non-conformity is not furthered, extended or replaced.

(Ord. No. 50, art. 4, § A, 7-7-2009)

Sec. 18-60. Specific standards.

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

- (1) *New construction and/or substantial improvements.* Where base flood elevation data are available, new construction and/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 equalization of flood hydrostatic forces on both sides of exterior walls shall be provided in accordance with standards of [section 18-59\(4\)](#), elevated buildings. All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing, and other service facilities shall be elevated at or above one foot above the base flood elevation.
- (2) *Non-residential construction.* New construction and/or the substantial improvement of any

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 water tight 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 the provisions of this section, and shall provide such certification to the official as set forth in this section and in [section 18-37\(6\)](#).

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

- a. All manufactured homes placed and/or substantially improved on:
 1. Individual lots or parcels;
 2. In new and/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 and/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.
- d. All recreational vehicles placed on sites must either:
 1. Be on the site for fewer than 180 consecutive days;
 2. Be fully licensed and ready for highway use, (a recreational vehicle is 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 has no permanently attached structures or additions); or
 3. The recreational vehicle must meet all the requirements for new construction, including the anchoring and elevation requirements of in subsection (3)a and c of this section.

(4) *Floodway.* Located within areas of special flood hazard established in [section 18-7](#) are areas designated as floodways. A floodway may be an extremely hazardous area due to velocity floodwaters, debris or erosion potential. In addition, the area must remain free of encroachment 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 and 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 thereof.

- b. Only if subsection (4)(a) of this section is satisfied, then any new construction or substantial improvement shall comply with all other applicable flood hazard reduction provisions of this article.

(Ord. No. 50, art. 4, § B, 7-7-2009)

Sec. 18-61. 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 18-7](#), 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 18-7](#), then the city clerk 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 article. Only if data is not available from these sources, then the following 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 20 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 more than a one foot 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. (Note: require the lowest floor to be elevated one foot above the estimated base flood elevation in A-zone areas where a limited detail study has been completed.) Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of [section 18-59](#)(4), elevated buildings.
- (4) All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing, and other service facilities shall be elevated no less than three feet above the highest adjacent grade at the building site.
- (5) The city clerk shall certify the lowest floor elevation level and the record shall become a permanent part of the permit file.

(Ord. No. 50, art. 4, § C, 7-7-2009)

Sec. 18-62. Standards for areas of special flood hazard (zones AE) with established base flood elevations without designated floodways.

Located within the areas of special flood hazard established in [section 18-7](#), where streams with base flood elevations are provided but no floodways have been designated, (zones AE) the following provisions apply:

- (1) No encroachments, including fill material, new structures or substantial improvements shall be located within areas of special flood hazard, unless certification by a registered professional engineer is provided demonstrating 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 point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

- (2) New construction or substantial improvements of buildings shall be elevated or floodproofed to elevations established in accordance with [section 18-60](#)

(Ord. No. 50, art. 4, § D, 7-7-2009)

Sec. 18-63. Standards for areas of shallow flooding (AO zones).

Areas of special flood hazard established in [section 18-7](#), may include designated AO, shallow flooding areas. These areas have base flood depths 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 non-residential 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 flood waters shall be provided in accordance with standards of [section 18-59\(4\)](#), elevated buildings. The city clerk 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 one foot 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 the provisions of this section, and shall provide such certification to the official as set forth in this subsection and as required in [section 18-36](#)
- (3) Drainage paths shall be provided to guide floodwater around and away from any proposed structure.

(Ord. No. 50, art. 4, § E, 7-7-2009)

Sec. 18-64. Standards for subdivisions.

- (a) All subdivision and/or development proposals shall be consistent with the need to minimize flood damage.
- (b) All subdivision and/or development 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 and/or development proposals shall have adequate drainage provided to reduce exposure to flood hazards.
- (d) For subdivisions and/or developments greater than 50 lots or five acres, whichever is less, base flood elevation data shall be provided for subdivisions and all other proposed development, including manufactured home parks and subdivisions. Any changes or revisions to the flood data adopted herein and shown on the FIRM shall be submitted to FEMA for review as a conditional letter of map revision (CLOMR) or conditional letter of map amendment (CLOMA), whichever is applicable. Upon completion of the project, the developer is responsible for submitting the "as-built" data to FEMA in

order to obtain the final LOMR.

(Ord. No. 50, art. 4, § F, 7-7-2009)

Sec. 18-65. Standards for critical facilities.

- (a) Critical facilities shall not be located in the 100-year floodplain or the 500-year floodplain.
- (b) All ingress and egress from any critical facility must be protected to the 500-year flood elevation.

(Ord. No. 50, art. 4, § G, 7-7-2009)

Secs. 18-66—18-84. Reserved.

ARTICLE IV. VARIANCE PROCEDURES

[Sec. 18-85. Appeals or variance from requirements.](#)

Sec. 18-85. Appeals or variance from requirements.

- (a) The city council shall hear and decide requests for appeals or variance from the requirements of this article.
- (b) The board shall hear and decide appeals when it is alleged an error in any requirement, decision, or determination is made by the city clerk in the enforcement or administration of this article.
- (c) Any person aggrieved by the decision of the city council may appeal such decision to the Superior Court of Berrien County, as provided in O.C.G.A. § 5-4-1.
- (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 a 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 city council shall consider all technical evaluations, relevant factors, and all standards specified in this and other sections of this article.
- (h) Conditions for variances:
 - (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, extraordinary public expense, create 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 city clerk shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.
- (i) Upon consideration of the factors listed in this section and the purposes of this article, the city council may attach such conditions to the granting of variances as it deems necessary to further the purposes of this article.

(Ord. No. 50, § 5, 7-7-2009)