

FLOOD DAMAGE PREVENTION ORDINANCE STANLY COUNTY, NORTH CAROLINA

ARTICLE 1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES.

SECTION A. STATUTORY AUTHORIZATION.

The Legislature of the State of North Carolina has in Parts 3, 5, and 8 Article 19 of Chapter 160A; and Article 8 of Chapter 160A of N.C. General Statutes, 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 Board of Commissioners of the County of Stanly, North Carolina does ordain as follows:

SECTION B. FINDINGS OF FACT.

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

SECTION C. STATEMENT OF PURPOSE.

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

- (1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) Control the alteration of natural flood plains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;
- (4) Control filling, grading, dredging and other development which may increase erosion or flood damage; and
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

SECTION D. OBJECTIVES.

The Objectives of this ordinance are:

- (1) to protect human life and health;
- (2) to minimize expenditure of public money for costly flood control projects;
- (3) to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) to minimize prolonged business interruptions;
- (5) to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in flood plains;
- (6) 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; and
- (7) to insure that potential home buyers are notified that property is in a flood area.

ARTICLE 2. DEFINITIONS.

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

“Appeal” means a request from a review of the local administrator’s interpretation of any provision of this ordinance or a request for a variance.

“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 fire wall. Any walled or roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

“Area of shallow flooding” means a designated AO or VO Zone on a community’s Flood Insurance Rate Map (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

“Area of special flood hazard” is the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year.

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

“Basement” means that lowest level or story which has its floor subgrade on all sides.

“Breakaway wall” means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system. A breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. A wall with loading resistance of more than 20 pounds per square foot requires an architect or professional engineer’s certificate.

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

“Development” means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operation.

“Elevated building” means a non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shear walls, or breakaway walls.

“Existing manufactured home park or manufactured home subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed (including at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of this ordinance.

“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;
- (2) the unusual and rapid accumulation of runoff of surface waters from any source.

“Flood Hazard Boundary Map (FHBM)” means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as Zone A.

“Flood Insurance Rate Map (FIRM)” means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

“Flood Insurance Study” is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Boundary Floodway Map and the water surface elevation of the base flood.

“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 one foot.

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

“Functionally dependent facility” means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

“Highest Adjacent Grade” means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

“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.

“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 and engineering practices.

“Lowest floor” means the lowest floor of the enclosed area (including basement). An unfinished or floor resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building’s lowest floor provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

“Manufactured home” means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term 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 flood plain. For purposes of this ordinance, the term is synonymous with National Geodetic vertical Datum (NGVD).

“National Geodetic Vertical Datum (NCVD)” as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the flood plain.

“New construction” means structures for which the “start of construction” commenced on or after the effective date of this ordinance.

“Remedy a violation” means to bring the structure or other development into compliance with State or local flood plain management regulation, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected developments from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other developments.

“Start of construction” includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; 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 accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

“Structure” means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other man-made facilities or infrastructures.

“Substantial improvement” means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure, either (1) before the improvement or repair is started, or (2) if the structure has been damaged and is being restored, before the damage occurred. Effects of substantial improvement shall be cumulative for a period of 20 years. For the purposes of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

“Variance” is a grant of relief to a person from the requirements of this ordinance which permits construction in a manner otherwise prohibited by this ordinance where specific enforcement would result in unnecessary hardship.

“Violation” means the failure of a structure or other development to be fully compliant with the community’s flood plain management regulation. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Articles 4 and 5 is presumed to be in violation until such time as that documentation is provided.

ARTICLE 3. GENERAL PROVISIONS.

SECTION A. LANDS TO WHICH THIS ORDINANCE APPLIES.

This ordinance shall apply to all areas of special flood hazard within the jurisdiction of Stanly County.

SECTION B. BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD.

The areas of special flood hazard identified by the Federal Emergency Management Agency in its “Flood Insurance Study for Stanly County” dated June 1, 1981, with accompanying maps and other supporting data, and any revision thereto are adopted by reference and declared to be a part of this ordinance.

SECTION C. ESTABLISHMENT OF DEVELOPMENT PERMIT.

A Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities.

SECTION D. COMPLIANCE.

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

SECTION E. ABROGATION AND GREATER RESTRICTIONS.

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

SECTION F. INTERPRETATION.

In the interpretation and application of this ordinance 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.

SECTION G. WARNING AND DISCLAIMER OF LIABILITY.

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This ordinance 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 ordinance shall not create liability on the part of Stanly County or by any officer or employee thereof for administrative decision lawfully made thereunder.

SECTION H. PENALTIES FOR VIOLATION.

Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$50.00 or imprisoned for not more than 30 days, or both, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent Stanly County from taking such other lawful action as is necessary to prevent or remedy any violation.

ARTICLE 4. ADMINISTRATION.

SECTION A. DESIGNATION OF LOCAL ADMINISTRATOR.

The Stanly County Planning Director is hereby appointed to administer and implement the provisions of this ordinance.

SECTION B. PERMIT PROCEDURES.

Application for a Development Permit shall be made to the local administrator on forms furnished by him or her prior to any development activities, and may include, but not be limited to, the following plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- (1) Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures;

- (2) Elevation in relation to mean sea level to which any nonresidential structure will be flood-proofed;
- (3) Provide a certificate from a registered professional engineer or architect that the non-residential flood-proofed structure meets flood-proofing criteria in Article 5, Section B (2);
- (4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development; and
- (5) Provide a floor elevation or flood-proofing certification after the lowest floor is completed, or in instances where the structure is subject to the regulations applicable to Coastal High Hazard Areas, after placement of the horizontal structural members of the lowest floor. Within twenty-one (21) calendar days of establishment of the lowest floor elevation, or flood-proofing by whatever construction means, or upon placement of the horizontal structural members of the lowest floor, whichever is applicable, it shall be the duty of the permit holder to submit to the local administrator a certification of the elevation of the lowest floor, flood-proofed elevation, or the elevation of the bottom of the horizontal structural members of the lowest floor, whichever is applicable, as built, in relation to mean sea level. Said certification 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 a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work done within the twenty-one (21) calendar period and prior to submission of the certification shall be at the permit holder's risk. The local administrator shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby, shall be caused to issue a stop-work order for the project.

SECTION C. DUTIES AND RESPONSIBILITIES OF THE LOCAL ADMINISTRATOR.

Duties of the local administrator shall include, but not be limited to:

- (1) Review all development permits to assure that the permit requirements of this ordinance have been satisfied;
- (2) Advise permittee that additional federal or state permits may be required, and if specific federal or state permits are known, require that copies of such permits be provided and maintained on file with the development permit;
- (3) Notify adjacent communities and the N.C. Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency;
- (4) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
- (5) Prevent encroachments within floodways unless the certification and flood hazard reduction provisions of Article 5 are met;

- (6) Verify and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with Article 4, section B (5).
- (7) Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood-proofed, in accordance with Article 4, Section B (5).
- (8) When flood-proofing is utilized for a particular structure, the local administrator shall obtain certifications from a registered professional engineer or architect in accordance with Article 5, Section B (2).
- (9) 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 local administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
- (10) When base flood elevation data has not been provided in accordance with Article 3, Section B, then the local administrator shall obtain, review and reasonably utilize any base flood elevation data, floodway data, and preliminary maps available from a federal, state or other source, including data developed pursuant to Article 5, Section D (4), in order to administer the provisions of this ordinance.
- (11) All records pertaining to the provisions of this ordinance shall be maintained in the office of the local administrator and shall be open for public inspection.

SECTION D. VARIANCRE PROCEDURES.

- (1) The Stanly County Planning Board as established by the Stanly County Board of Commissioners shall hear and decide appeals and requests for variances from the requirements of this ordinance.
- (2) The Planning Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the local administrator in the enforcement or administration of this ordinance.
- (3) Any person aggrieved by the decision of the Planning Board or any taxpayer may appeal such decision to Superior Court, as provided in Chapter 7A of the N.C. General Statutes.
- (4) 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 section.
- (5) In passing upon such applications, the Planning Board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:
 - (a) the danger that materials may be swept onto other lands to the injury of others;
 - (b) the danger to life and property due to flooding or erosion damage;

- (c) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (d) the importance of the services provided by the proposed facility to the community;
 - (e) the necessity to the facility of a waterfront location, where applicable;
 - (f) the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (g) the compatibility of the proposed use with existing and anticipated development;
 - (h) the relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 - (i) the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (j) the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
 - (k) the costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- (6) Upon consideration of the factors listed above and the purpose of this ordinance, the Planning Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- (7) Variances shall not be issued within any designated floodway if any increase in flood levels during the base discharge would result.
- (8) Conditions for Variances:
- (a) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (b) Variances shall only be issued upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship, 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 nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (c) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. Such notification shall be maintained with a record of all variance actions.
 - (d) The local administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

ARTICLE 5. PROVISIONS FOR FLOOD HAZARD REDUCTION.

SECTION A. GENERAL STANDARDS.

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

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

SECTION B. SPECIFIC STANDARDS.

In all areas of special flood hazard where base flood elevation data has been provided, as set forth in Article 3, Section B, or Article 4, Section C (10), the following provisions are required:

- (1) Residential Construction. New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated no lower than two feet above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of flood waters shall be provided.
- (2) Non-Residential Construction. New construction or substantial improvement of any commercial, industrial, or non-residential structure shall have the lowest floor, including basement, elevated no lower than the level of the base flood elevation. Structures located in A-zones may be flood-proofed in lieu of elevation provided that all areas of the structure below the required elevation

are water tight with walls substantially impermeable to the passage of water, using 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 standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Article 4, Section B (5).

(A) MANUFACTURED HOMES

- (1) Manufactured homes that are placed or substantially improved on sites (1) outside a manufactured home park or subdivision; (2) in a new manufactured home park or subdivision; (3) in an expansion to an existing manufactured home park or subdivision or; (4) in an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as the result of a flood, must be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated on lower than two feet above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- (2) Manufactured homes that are to be placed or substantially improved on site in an existing manufactured home park or subdivision that are not subject to the provisions of Article 5, Section B (3A) of this ordinance must be elevated so that the lowest floor of the manufactured home is elevated no lower than two feet above the base flood elevation, and be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement.
- (3) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, or lateral movement in accordance with the Regulation for Mobile Homes and Modular Housing adopted by the Commissioners of Insurance pursuant to NCGS 143. 143.15. Additionally, when the elevation would be met by an elevation of the chassis at least 36 inches in height an engineering certification is required.
- (4) An evacuation plan must be developed for evacuation of all residents of all new, substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the local administrator and the local Emergency Management Coordinator.

(B) RECREATIONAL VEHICLES

A recreational vehicle is ready for highway use if it is on wheels or jacking system, is attached to site only by quick-disconnect type utilities and security devices, and has no permanently attached additions. Recreation vehicles placed on sites shall either:

- (1) Be on site for fewer than 180 consecutive days;

(2) Be fully licensed and ready for highway use; or (c) Meet the requirements of Article 4, Section B and Article 5, Section A and B(3).

- (3) Elevated Buildings. New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of flood-waters to automatically equalize hydrostatic flood forces on exterior walls.
- (a) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
- (i) 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;
 - (ii) The bottom of all openings shall be no higher than one foot above grade; and
 - (iii) Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
- (b) Electrical, plumbing, and other utility connections are prohibited below the base flood elevation;
- (c) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and
- (d) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- (4) Floodways. Located within areas of special flood hazard established in Article 3, Section B, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and has erosion potential, the following provisions shall apply:
- (a) Prohibit encroachments, including fill, new construction, substantial improvements and other developments unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.
- (b) If Article 5, Section B (4) (a) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article 5.
- (c) Prohibit the placement of manufactured homes (mobile homes), except in an existing manufactured homes (mobile homes) park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured park or subdivision provided the anchoring standards of Article 5, Section A (2), and the elevation standards of Article 5, Section B (1) are met.

SECTION C. STANDARDS FOR STREAMS WITHOUT ESTABLISHED BASE FLOOD ELEVATIONS AND/OR FLOODWAYS.

Located within the areas of special flood hazard established in Article 3, Section B, where small streams exist but where no base flood data has been provided or where no floodways have been provided, the following provisions apply:

- (1) No encroachments, including fill material or structures shall be located within a distance of the stream bank equal to five times the width of the stream at the top of bank or twenty feet each side from top of bank, whichever is greater, unless certification by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (2) New construction or substantial improvements of structures shall be elevated or flood-proofed in accordance with elevations established in accordance with Article 4, Section C (12). When base flood elevation data is not available from a federal, state or other source, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade.

SECTION D. STANDARDS FOR SUBDIVISION PROPOSALS.

- (1) All subdivision proposals shall be consistent with the need to minimize flood damage;
- (2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
- (3) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and
- (4) Base flood elevation data shall be provided for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) which is greater than the lesser of fifty lots or five acres.

SECTION E. STANDARDS FOR AREAS OF SHALLOW FLOODING (AO ZONES).

Located within the areas of special flood hazard established in Article 3, Section B, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one to three feet (1'-3') where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade.
- (2) All new construction and substantial improvements of non-residential structures shall:
 - (a) Have the lowest floor, including basement, elevated to the depth number as specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement shall be elevated at least two (2) feet above the highest adjacent grade, or;

- (b) Together with attendant utility and sanitary facilities be completely flood-proofed to or above that level and, so that, any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and efforts of buoyancy.

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