

# 2026 NC Flood Damage Prevention Ordinance, Non-Coastal

## Instructions:

1. Where you see sections of text highlighted in grey (i.e., Governing Body), select the entire highlighted text and enter in the information as requested (i.e., City Council, Board of Aldermen, etc.). This should delete the grey highlighted text and replace with your information.
2. Sections, definitions, or text **highlighted in BLUE** is optional language to include in your jurisdictions flood ordinance.
  - a. If you elect to maintain the optional language in your flood ordinance, remove the italics, return the text color to black, and delete “**(OPTIONAL Language...)**” and any other instructions in the parenthesis.
  - b. If you elect to delete the optional language, delete in its entirety including the bullet and instructions (i.e., **OPTIONAL Language**). If the section must be reserved to maintain references throughout the document, these instructions will be included in the parenthesis.
3. Sections, definitions, or text **highlighted in GREEN** are new or revised language to include in your jurisdictions flood ordinance.
  - a. If you elect to maintain the new language or revise your existing language to reflect the updated or revised language, return the text color to black.
  - b. If the new or revised language provides instructions such as, *(this amount should be consistent with Article 3, Section H)*, delete the instructions and parenthesis.
4. Contact your North Carolina NFIP Branch Planner with any questions and to allow for a review of the revisions prior to adoption to ensure accuracy and compliance.

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# FLOOD DAMAGE PREVENTION ORDINANCE

## Non-Coastal Regular Phase

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

#### **SECTION A. STATUTORY AUTHORIZATION.**

The Legislature of the State of North Carolina has in Part 6 of Article 21 of Chapter 143; Article 6 of Chapter 153A; Article 8 of Chapter 160A; and Articles 1, 7, 9, and 11 of Chapter 160D of the North Carolina General Statutes, delegated to local governmental units the authority to adopt regulations designed to promote the public health, safety, and general welfare.

Therefore, the Governing Body of Community Name, North Carolina, does ordain as follows:

#### **SECTION B. FINDINGS OF FACT.**

- (1) The flood prone areas within the jurisdiction of Community Name 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, both inside and outside the identified Special Flood Hazard Areas, causing increases in flood heights and velocities and by the occupancy in flood prone areas by uses vulnerable to floods or other hazards. These obstructions and occupancy by uses vulnerable to floods may be hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

#### **SECTION C. STATEMENT OF PURPOSE.**

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

- (1) Restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion hazards or that result in damaging increases in erosion, flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities that 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 all other development that may increase erosion or flood damage; and
- (5) Prevent or regulate the construction of flood barriers that will unnaturally divert flood waters or which may increase flood hazards to other lands.

#### **SECTION D. OBJECTIVES.**

The objectives of this ordinance are to:

- (1) Protect human life, safety, 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 losses and interruptions;
- (5) Minimize damage to public facilities and utilities (i.e. water and gas mains, electric, telephone, cable and sewer lines, streets, and bridges) that are located in flood prone areas;
- (6) Minimize damage to private and public property due to flooding;
- (7) Make flood insurance available to the community through the National Flood Insurance Program;
- (8) Maintain the natural and beneficial functions of floodplains;
- (9) Help maintain a stable tax base by providing for the sound use and development of flood prone areas; and
- (10) Ensure that potential buyers are aware that property is in a Special Flood Hazard 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.

“A Zone” is the Special Flood Hazard Area subject to inundation by the 1% annual chance flood where base flood elevations have NOT been determined.

“AE Zone” is the Special Flood Hazard Area subject to inundation by the 1% annual chance flood where base flood elevations have been determined by detailed or limited detailed methods.

“Accessory Structure (Appurtenant Structure)” means a structure located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Garages, carports, and storage sheds are common urban accessory structures. Pole barns, hay sheds, and the like qualify as accessory structures on farms and may or may not be located on the same parcel as the farm dwelling or shop building.

“Addition (to an existing building)” means an extension or increase in the floor area or height of a building or structure.

“AH Zone” is the Special Flood Hazard Area with a 1% annual chance of shallow flooding (usually areas of ponding), where average depths are between one (1) and three (3) feet. Base flood elevations derived from detailed hydraulic analyses are shown in this zone.

“Alteration of a watercourse” means a dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

“AO Zone” is the Special Flood Hazard Area with a 1% annual chance of shallow flooding (usually sheet flow on sloping terrain) where average depths are between one (1) and three (3) feet. Average flood depths derived from detailed hydraulic analyses are shown in this zone.

“Appeal” means a request for a review of the Floodplain Administrator's interpretation of any provision of this ordinance.

“Area of Shallow Flooding” means a designated Zone AO or AH on a community's Flood Insurance Rate Map (FIRM) with base flood depths determined to be from one (1) to three (3) feet. These areas are located where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

“Area of Special Flood Hazard” see “Special Flood Hazard Area (SFHA)”.

“Area of Future-Conditions Flood Hazard” means the land area that would be inundated by the 1-percent-annual-chance

*(100- year) flood based on future-conditions hydrology. (Italicized Text OPTIONAL)*

“Base Flood” means the flood having a one (1) percent chance of being equaled or exceeded in any given year.

“Base Flood Elevation (BFE)” means a determination of the water surface elevations of the base flood as published in the Flood Insurance Study. When the BFE has not been provided in a “Special Flood Hazard Area”, it may be obtained from engineering studies available from a Federal, State, or other source using FEMA approved engineering methodologies. This elevation, when combined with the “Freeboard,” establishes the “Regulatory Flood Protection Elevation”.

“Basement” means any area of the building having its floor subgrade (below ground level) on all sides.

“Building” see “Structure”.

“Chemical Storage Facility” means a building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

“Community” means any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, which has authority to adopt and enforce flood plain management regulations for the areas within its jurisdiction.

“Community Flood Hazard Area (CFHA)” is an area that has been determined by the Floodplain Administrator (or other delegated, designated, or qualified community official) from available technical studies, historical flood information, and other available and reliable sources, which may be subject to periodic inundation by floodwaters that can adversely affect the public health, safety and general welfare. This includes areas downstream from dams. (Italicized Text OPTIONAL)

“Community Floodplain Management Map” means any map produced by the community utilizing best available base flood elevation and floodway data that is from a federal, state, or other accepted technical source. (Italicized Text OPTIONAL)

“Community Rating System (CRS)” means a program developed by the Federal Insurance Administration to provide incentives for those communities in the Regular Program that have gone beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.

“Critical facility (also called critical action)” means facilities for which the effects of even a slight chance of flooding would be too great. The minimum floodplain of concern for critical facilities is the 0.2 percent chance flood level. Critical facilities include, but are not limited to facilities critical to the health and safety of the public such as: emergency operations centers, designated public shelters, schools, nursing homes, hospitals, police, fire, and emergency response installations, vital data storage centers, power generation and water and other utilities (including related infrastructure such as principal points of utility systems) and installations which produce, use, or store hazardous materials or hazardous waste.

“Design Flood” See “Regulatory Flood Protection Elevation.”

“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 operations, or storage of equipment or materials.

“Development Activity” means any activity defined as Development which will necessitate a Floodplain Development Permit. This includes buildings, structures, and non-structural items, including (but not limited to) fill, bulkheads, piers, pools, docks, landings, ramps, and erosion control/stabilization measures.

“Digital Flood Insurance Rate Map (DFIRM)” means the digital official map of a community, issued by the Federal Emergency Management Agency (FEMA), on which both the Special Flood Hazard Areas and the risk premium zones applicable to the community are delineated.

“Disposal” means, as defined in NCGS 130A-290(a)(6), the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

“Dry Floodproofing” means a combination of measures that make a building and attendant utilities and equipment watertight and substantially impermeable to floodwater, with structural components having the capacity to resist flood loads. Please refer to Technical Bulletin 3, *Requirements for the Design and Certification of Dry Floodproofed Non-Residential and Mixed-Use*

*Buildings, and available from the FEMA.*

“Elevated Building” means a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

“Encroachment” means the advance or infringement of uses, fill, excavation, buildings, structures or development into a special flood hazard area, which may impede or alter the flow capacity of a floodplain.

“Existing building and existing structure” means any building and/or structure for which the “start of construction” commenced before the effective date of the floodplain management regulations adopted by a community, dated \_\_\_\_\_.

“Existing Manufactured Home Park or Manufactured Home 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, dated \_\_\_\_\_.

“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 manufacturing 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) 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 or runoff of surface waters from any source.
  - (3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
- (b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

“Flood Boundary and Floodway Map (FBFM)” means an official map of a community, issued by the FEMA, on which the Special Flood Hazard Areas and the floodways are delineated. This official map is a supplement to and shall be used in conjunction with the Flood Insurance Rate Map (FIRM).

“Flood Hazard Boundary Map (FHBM)” means an official map of a community, issued by the FEMA, where the boundaries of the Special Flood Hazard Areas have been defined as Zone A.

“Flood Insurance” means the insurance coverage provided under the National Flood Insurance Program.

“Flood Insurance Rate Map (FIRM)” means an official map of a community, issued by the FEMA, on which both the Special Flood Hazard Areas applicable to the community are delineated. (see also DFIRM)

“Flood Insurance Study (FIS)” means an examination, evaluation, and determination of flood hazards, corresponding water surface elevations (if appropriate), flood hazard risk zones, and other flood data in a community issued by the FEMA. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRMs).

“Flood Prone Area” see “Floodplain”

“Flood Zone” means a geographical area shown on a Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

“Floodplain” means any land area susceptible to being inundated by water from any source.

“Floodplain Administrator” is the individual appointed by the community to administer and enforce the floodplain management

regulations.

“Floodplain Development Permit” means any type of permit that is required in conformance with the provisions of this ordinance, prior to the commencement of any development activity.

“Floodplain Management” means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

“Floodplain Management Regulations” means this ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances, and other applications of police power. This term describes federal, state or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

“Floodproofing” means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

“Flood-resistant material” means any building product [material, component or system] capable of withstanding direct and prolonged contact (minimum 72 hours) with floodwaters without sustaining damage that requires more than low-cost cosmetic repair. Any material that is water-soluble or is not resistant to alkali or acid in water, including normal adhesives for above-grade use, is not flood-resistant. Pressure-treated lumber or naturally decay-resistant lumbars are acceptable flooring materials. Sheet-type flooring coverings that restrict evaporation from below and materials that are impervious, but dimensionally unstable are not acceptable. Materials that absorb or retain water excessively after submergence are not flood-resistant. Please refer to Technical Bulletin 2, *Flood Damage-Resistant Materials Requirements*, and available from the FEMA. Class 4 and 5 materials, referenced therein, are acceptable flood-resistant materials.

“Floodway” means the channel of a river or other watercourse, including the area above a bridge or culvert when applicable, 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 (1) foot.

“Floodway encroachment analysis” means an engineering analysis of the impact that a proposed encroachment into a floodway or non-encroachment area is expected to have on the floodway boundaries and flood levels during the occurrence of the base flood discharge. The evaluation shall be prepared by a qualified North Carolina licensed engineer using standard engineering methods and hydraulic models meeting the minimum requirements of the National Flood Insurance Program.

“Freeboard” means the height added to the BFE to account 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, blockage of bridge or culvert openings, precipitation exceeding the base flood, and the hydrological effect of urbanization of the watershed. The BFE plus the freeboard establishes the “Regulatory Flood Protection Elevation”.

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

“Hazardous Waste Management Facility” means, as defined in NCGS 130A, Article 9, a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste.

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

“Historic Structure” means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of 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 local inventory of historic landmarks in communities with a “Certified Local Government

(CLG) Program”; or

- (d) Certified as contributing to the historical significance of a historic district designated by a community with a “Certified Local Government (CLG) Program.”

Certified Local Government (CLG) Programs are approved by the US Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the State Historic Preservation Officer as having met the requirements of the National Historic Preservation Act of 1966 as amended in 1980.

“Letter of Map Change (LOMC)” means an official determination issued by FEMA that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of Map Change include:

- (a) Letter of Map Amendment (LOMA): An official amendment, by letter, to an effective National Flood Insurance Program map. A LOMA is based on technical data showing that a property had been inadvertently mapped as being in the floodplain, but is actually on natural high ground above the base flood elevation. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property, portion of a property, or structure is not located in a special flood hazard area.
- (b) Letter of Map Revision (LOMR): A revision based on technical data that may show changes to flood zones, flood elevations, special flood hazard area boundaries and floodway delineations, and other planimetric features.
- (c) Letter of Map Revision Based on Fill (LOMR-F): A determination that a structure or parcel of land has been elevated by fill above the BFE and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community’s floodplain management regulations.
- (d) Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA to revise the effective FIRM.

“Light Duty Truck” means any motor vehicle rated at 8,500 pounds Gross Vehicular Weight Rating or less which has a vehicular curb weight of 6,000 pounds or less and which has a basic vehicle frontal area of 45 square feet or less as defined in 40 CFR 86.082-2 and is:

- (a) Designed primarily for purposes of transportation of property or is a derivation of such a vehicle, or
- (b) Designed primarily for transportation of persons and has a capacity of more than 12 persons; or
- (c) Available with special features enabling off-street or off-highway operation and use.

“Lowest Adjacent Grade (LAG)” means the lowest elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building.

“Lowest Floor” means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or limited storage in an area other than a basement area is not considered a building's lowest floor, provided that such an 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 “manufactured home” does not include a “recreational vehicle”.

“Manufactured Home Park or Subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

“Map Repository” means the location of the official flood hazard data to be applied for floodplain management. It is a central location in which flood data is stored and managed; in North Carolina, FEMA has recognized that the application of digital flood hazard data products has the same authority as hard copy products. Therefore, the NCEM’s Floodplain Mapping Program websites house current and historical flood hazard data. For effective flood hazard data, the NC FRIS website (<https://fris.nc.gov/>) is the map repository. Repositories of historical flood hazard data are available on the Flood.NC website (<https://flood.nc.gov/ncflood/>) and the FEMA Flood Map Service Center website (<https://msc.fema.gov/portal/home>).

“Market Value” means the building value, not including the land value and that of any accessory structures or other

improvements on the lot. Market value may be established by independent certified appraisal; replacement cost depreciated for age of building and quality of construction (Actual Cash Value); or adjusted tax assessed values.

“New Construction” means structures for which the “start of construction” commenced on or after the effective date of the initial floodplain management regulations and includes any subsequent improvements to such structures.

“New Manufactured Home Park or Subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

“Non-Conversion Agreement” means a document stating that the owner will not convert or alter what has been constructed and approved. Violation of the agreement is considered a violation of the ordinance and, therefore, subject to the same enforcement procedures and penalties. The agreement must be filed with the recorded deed for the property. The agreement must show the clerk’s or recorder’s stamps and/or notations that the filing has been completed. **(Italicized Text OPTIONAL)**

“Non-Encroachment Area (NEA)” means the channel of a river or other watercourse, including the area above a bridge or culvert when applicable, 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 (1) foot as designated in the Flood Insurance Study report.

“Post-FIRM” means construction or other development for which the “start of construction” occurred on or after insert date of community’s first FIRM, the effective date of the initial Flood Insurance Rate Map. (The initial FIRM date can be found in the FEMA Community Status Book.)

“Pre-FIRM” means construction or other development for which the “start of construction” occurred before insert date of community’s first FIRM, the effective date of the initial Flood Insurance Rate Map. (The initial FIRM date can be found in the FEMA Community Status Book.)

“Principally Above Ground” means that at least 51 percent of the actual cash value of the structure, less land value, is above ground.

“Public Safety” and/or “Nuisance” means anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

“Recreational Vehicle (RV)” means a vehicle, which is:

- (a) Built on a single chassis;
- (b) 400 square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towable by a light duty truck;
- (d) Designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use, and
- (e) Is fully licensed and ready for highway use.
- (f) Has no attached deck, porch, or shed, and
- (g) Has quick-disconnect sewage, water, and electrical connectors.

*For the purpose of this ordinance: “Tiny Homes/Houses” and Park Models that do not meet the items listed above are not considered Recreational Vehicles and should meet the standards of and be permitted as Residential Structures under this ordinance. **(Italicized Text OPTIONAL.)***

“Reference Level” is the top of the lowest floor for structures within Special Flood Hazard Areas designated as Zones A, AE, AH, AO, A99. The reference level is the bottom of the lowest horizontal structural member of the lowest floor for structures within Special Flood Hazard Areas designated as Zone VE or Coastal A Zone.

**(OPTIONAL ALTERNATIVE HIGHER STANDARD for “Reference Level” definition)** “*Reference Level*” is the bottom of the lowest horizontal structural member of the lowest floor for structures within all Special Flood Hazard Areas.

“Regulatory Flood Protection Elevation” means the “Base Flood Elevation” plus the “Freeboard”. In “Special Flood Hazard Areas” where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE *plus* Insert freeboard [four (4) feet (Four feet is the state recommended freeboard)] feet *freeboard*. In “Special Flood Hazard Areas” where no

BFE has been established, this elevation shall be at least Insert feet [Four (4) feet is a state-recommended elevation, two (2) feet is a state-recommended minimum] feet above the highest adjacent grade. *In areas where no base flood elevations exist from any authoritative source, the flood protection elevation may be historical flood elevations or base flood elevations determined and/or approved by the floodplain administrator plus the freeboard. (Italicized Text OPTIONAL.)*

“Remedy a Violation” means to bring the structure or other development into compliance with state and community floodplain management regulations, 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 development 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 development.

“Repetitive Loss” means flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

“Repetitive Loss Property” means any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling 10-year period, since 1978. At least two of the claims must be more than ten days apart but, within ten years of each other. A RL property may or may not be currently insured by the NFIP.

“Riverine” means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

“Salvage Yard” means any non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances and related machinery.

“Section 1316” means that section of the National Flood Insurance Act of 1968, as amended, which states that no new flood insurance coverage shall be provided for any property that FEMA finds has been declared by a duly constituted state or local zoning authority or other authorized public body to be in violation of state or local laws, regulations, or ordinances that are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas.

“Severe Repetitive Loss Structure” means any insured property that has met at least one of the following paid flood loss criteria since 1978, regardless of ownership. In either case, two of the claim payments must have occurred within ten years of each other. Multiple losses at the same location within ten days of each other are counted as one loss, with the payment amounts added together.

1. Four or more separate claim payments of more than \$5,000 each (including building and contents payments); or
2. Two or more separate claim payments (building payments only) where the total of the payments exceeds the current market value of the property.

“Solid Waste Disposal Facility” means any facility involved in the disposal of solid waste, as defined in NCGS 130A-290(a)(35).

“Solid Waste Disposal Site” means, as defined in NCGS 130A-290(a)(36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

“Special Flood Hazard Area (SFHA)” means the land in the floodplain subject to a one percent (1%) or greater chance of being flooded in any given year, as determined in Article 3, Section B of this ordinance.

“Start of Construction” 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, 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. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

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

**“Substantial Damage”** means damage of any origin sustained by a structure during any one-year period (**RECOMMENDED HIGHER STANDARD: choose cumulative damage sustained over a period of time exceeding one year (i.e., 5- or 10-year period)**) whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent (**RECOMMENDED HIGHER STANDARD: choose a percent damaged that is less than 50% (i.e. 30%)**) of the market value of the structure before the damage occurred. (**RECOMMENDED HIGHER STANDARD: By adding the following text for Increased Cost of Compliance (ICC) eligibility**). *Substantial damage also means flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.* **[CRS communities are eligible for up to 20 CRS points for adopting RECOMMENDED Text for Substantial Damage]**

**“Substantial Improvement”** means any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period (**RECOMMENDED HIGHER STANDARD: choose cumulative improvement sustained over a period of time exceeding one year (i.e., 5- or 10-year period)**) for which the cost equals or exceeds 50 percent (**RECOMMENDED HIGHER STANDARD: choose a percent improvement that is less than 50% (i.e. 30%)**) of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either:

- (a) Any correction of existing violations of state or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or
- (b) Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure and the alteration is approved by variance issued pursuant to Article 4, Section E of this ordinance.

**[CRS communities are eligible for up to 20 CRS points for adopting RECOMMENDED Text for Substantial Improvement]**

*“**Technical Bulletin and Technical Fact Sheet**” means a FEMA publication that provides guidance concerning the building performance standards of the NFIP, which are contained in Title 44 of the U.S. Code of Federal Regulations at Section 60.3. The bulletins and fact sheets are intended for use primarily by State and local officials responsible for interpreting and enforcing NFIP regulations and by members of the development community, such as design professionals and builders. New bulletins, as well as updates of existing bulletins, are issued periodically as needed. The bulletins do not create regulations; rather they provide specific guidance for complying with the minimum requirements of existing NFIP regulations.*

*It should be noted that Technical Bulletins and Technical Fact Sheets provide guidance on the minimum requirements of the NFIP regulations. State or community requirements that exceed those of the NFIP take precedence. Design professionals should contact the community officials to determine whether more restrictive State or local regulations apply to the building or site in question. All applicable standards of the State or local building code must also be met for any building in a flood hazard area. **(Italicized Text OPTIONAL)***

**“Temperature Controlled”** means having the temperature regulated by a heating and/or cooling system, built-in or appliance.

**“Variance”** is a grant of relief from the requirements of this ordinance.

**“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 Articles 4 and 5 is presumed to be in violation until such time as that documentation is provided.

**“Water Surface Elevation (WSE)”** means the height, in relation to NAVD 1988, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

**“Watercourse”** means a lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

**“X Zones”** means areas determined to be low to moderate risk flood zones and are located outside the community’s delineated Special Flood Hazard Area (SFHA) and include the following:

- (a) Shaded - is the area of moderate flood hazard and can represent:
  - (1) 0.2% annual chance flood hazard area (500-year flood zone),

- (2) Areas of 1% annual chance flood with average depth less than one (1) foot, or
- (3) Areas of 1% annual chance flood with drainage areas of less than one (1) square mile
- (b) Unshaded - is the area of minimal flood hazard determined to be outside of the 0.2% annual chance flood (500-year flood zone).

**ARTICLE 3.        GENERAL PROVISIONS.**

**SECTION A.       LANDS TO WHICH THIS ORDINANCE APPLIES.**

This ordinance shall apply to all Special Flood Hazard Areas and Community Flood Hazard Areas (CFHAs) as defined in Article 2. Definitions within the jurisdiction, including Extra-Territorial Jurisdictions (ETJs) and Bona Fide Farms as allowed by law, of Community Name. **[Italicized Text OPTIONAL for communities only if exercising an extra-territorial jurisdiction or CFHAs].**

**SECTION B.       BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS AND COMMUNITY FLOOD HAZARD AREAS. (Italicized Text OPTIONAL for communities only if exercising a CFHA)**

The Special Flood Hazard Areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its FIS dated Insert effective date shown on FIS for County Name County and associated DFIRM panels, including any digital data developed as part of the FIS, which are adopted by reference and declared a part of this ordinance, and all revisions thereto.

**(ITALICIZED TEXT IS OPTIONAL LANGUAGE which may be added in whole or by section)**

*When Preliminary Flood Insurance Studies and Flood Insurance Rate Maps have been provided by FEMA to Community Name:*

- (1) Prior to the issuance of a Letter of Final Determination (LFD) by FEMA, the use of the preliminary flood hazard data shall only be required where no base flood elevations and/or floodway areas exist or where the preliminary base flood elevations or floodway area exceed the base flood elevations and/or floodway widths in the effective flood hazard data provided by FEMA. Such preliminary data may be subject to revision through valid appeals.*
- (2) Upon the issuance of a Letter of Final Determination (LFD) by FEMA, the revised flood hazard data shall be used and replace all previously effective flood hazard data provided by FEMA for the purposes of administrating these regulations.*

*When Advisory Flood Studies have been provided by the North Carolina Floodplain Mapping Program to the Community Name:*

- (1) The data, which are adopted by reference and declared a part of this ordinance, shall be utilized where no base flood elevations or floodway areas exist, or where the Advisory Flood Studies exceed the base flood elevations and/or floodway widths in the effective flood hazard data provided by FEMA, or*
- (2) The applicant shall provide a more detailed analysis of the flood hazards for the site for floodplain management purposes.*

*The community reserves the right to require further studies for any development within its jurisdiction, if there is evidence that a potential flood hazard exists. Studies can be used to designate Community Flood Hazard Areas (CFHA). Such evidence may include but shall not be limited to:*

- (1) Eyewitness accounts of historic flooding or other reports of historic flooding deemed credible by the community;*
- (2) Surveyed high-water marks;*
- (3) Geologic features observed that resemble floodplains (such as flat areas along streams);*
- (4) Proximity to manmade or natural constrictions in or along a watercourse (such as road crossings that can cause backwater effects), and;*
- (5) Drainage basin characteristics (such as drainage area, slope, percent impervious cover, land use, etc.).*

*Where adopted regulatory standards conflict, the more stringent base flood elevation shall prevail.*

**SECTION C.       ESTABLISHMENT OF FLOODPLAIN DEVELOPMENT PERMIT.**

A Floodplain Development Permit shall be required in conformance with the provisions of this ordinance prior to the March 2026 NC Model Flood Damage Prevention Ordinance Non-Coastal

commencement of any development activities within Special Flood Hazard Areas *and Community Flood Hazard Areas* (***Italicized Text OPTIONAL for communities only if exercising a CFHA***) determined in accordance with the provisions of Article 3, Section B of this ordinance.

**SECTION D. COMPLIANCE.**

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way 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:

- (a) Considered as minimum requirements;
- (b) Liberally construed in favor of the governing body; and
- (c) 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. Actual flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Community Name or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

**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 Class 1 misdemeanor pursuant to North Carolina General Statute § 143-215.58. Any person who violates this ordinance or fails to comply with any of its requirements shall be fined not more than Insert Dollar Amount (**recommend minimum of \$100.00 or some other reasonable amount that is consistent with similar community ordinances**). Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent Community Name from taking such other lawful action as is necessary to prevent or remedy any violation.

**ARTICLE 4. ADMINISTRATION.**

**SECTION A. DESIGNATION OF FLOODPLAIN ADMINISTRATOR.**

The Staff Title, hereinafter referred to as the “Floodplain Administrator,” or their designee, is hereby appointed to administer and implement the provisions of this ordinance. In instances where the Floodplain Administrator receives assistance from others to complete tasks to administer and implement this ordinance, the Floodplain Administrator shall be responsible for the coordination and community’s overall compliance with the National Flood Insurance Program and the provisions of this ordinance.

**SECTION B. FLOODPLAIN DEVELOPMENT APPLICATION, PERMIT AND CERTIFICATION REQUIREMENTS.**

- (1) **Application Requirements.** Application for a Floodplain Development Permit shall be made to the Floodplain Administrator prior to any development activities located within Special Flood Hazard Areas *and Community Flood Hazard Areas (Italicized Text OPTIONAL, if applicable)*. The following items shall be presented to the Floodplain Administrator to apply for a floodplain development permit:
- (a) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
    - (i) The nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;
    - (ii) The boundary of the Special Flood Hazard Area as delineated on the FIRM, *Community Flood Hazard Area (Italicized Text OPTIONAL, if applicable)*, or other flood map as determined in Article 3, Section B, or a statement that the entire lot is within the Special Flood Hazard Area;
    - (iii) Flood zone(s) designation of the proposed development area as determined on the FIRM, *by the community (Italicized Text OPTIONAL, if applicable)*, or other flood map as determined in Article 3, Section B;
    - (iv) The boundary of the floodway(s) or non-encroachment area(s) as determined in Article 3, Section B;
    - (v) The Base Flood Elevation (BFE) where provided as set forth in Article 3, Section B; Article 4, Section C; or Article 5, Section D, *or by the community (Italicized Text OPTIONAL, if applicable)*;
    - (vi) The old and new location of any watercourse that will be altered or relocated as a result of proposed development; and
    - (viii) *The certification of the plot plan by a registered land surveyor or professional engineer. (Italicized Text OPTIONAL language)*
  - (b) Proposed elevation, and method thereof, of all development within a Special Flood Hazard Area *or Community Flood Hazard Area (Italicized Text OPTIONAL, if applicable)* including but not limited to:
    - (i) Elevation in relation to NAVD 1988 of the proposed reference level (including basement) of all structures;
    - (ii) Elevation in relation to NAVD 1988 to which any non-residential structure in Zones A, AE, AH, AO, A99 will be floodproofed; and
    - (iii) Elevation in relation to NAVD 1988 to which any proposed utility systems will be elevated or floodproofed.
  - (c) If floodproofing, a Floodproofing Certificate (FEMA Form [FF-206-FY-22-153](#)) with supporting data, an operational plan, and an inspection and maintenance plan that include, but are not limited to, installation, exercise, and maintenance of floodproofing measures.
  - (d) A Foundation Plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this ordinance are met. These details include but are not limited to:
    - (i) The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls); and
    - (ii) Openings to facilitate automatic equalization of hydrostatic flood forces on walls in accordance with Article 5, Section B(4)(c) when solid foundation perimeter walls are used in Zones A, AE, AH, AO, A99.

- (e) Usage details of any enclosed areas below the lowest floor.
- (f) Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage.
- (g) Certification that all other Local, State and Federal permits required prior to floodplain development permit issuance have been received.
- (h) Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure that the provisions of Article 5, Section B, subsections (6) and (7) of this ordinance are met.
- (i) A description of proposed watercourse alteration or relocation, when applicable, including an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation.

(2) **Permit Requirements.** The Floodplain Development Permit shall include, but not be limited to:

- (a) A complete description of all the development to be permitted under the floodplain development permit (e.g. house, garage, pool, septic, bulkhead, cabana, pier, bridge, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials, etc.) **including a cost estimate.**
- (b) The Special Flood Hazard Area determination for the proposed development in accordance with available data specified in Article 3, Section B.
- (c) The Regulatory Flood Protection Elevation required for the reference level and all attendant utilities.
- (d) The Regulatory Flood Protection Elevation required for the protection of all public utilities.
- (e) All certification submittal requirements with timelines.
- (f) A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse unless the requirements of Article 5, Section F have been met.
- (g) The flood openings requirements.
- (h) Limitations of below BFE enclosure uses (if applicable). (i.e., parking, building access and limited storage only).
- (i) A statement, that all materials below BFE/RFPE must be flood resistant materials.

(3) **Certification Requirements.**

(a) Elevation Certificates

- (i) *An Elevation Certificate (FEMA Form FF-206-FY-22-152) is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to NAVD 1988. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit. **(Italicized Text OPTIONAL but STATE RECOMMENDED)***
- (ii) *An Elevation Certificate (FEMA Form FF-206-FY-22-152) is required after the reference level is established. Within seven (7) calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to NAVD 1988. Any work done within the seven (7) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be*

*corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project. (Italicized Text OPTIONAL but STATE RECOMMENDED)*

- (iii) A final Finished Construction Elevation Certificate (FEMA Form **FF-206-FY-22-152**) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy. *The Finished Construction Elevation Certificate certifier shall provide at least 2 photographs showing the front and rear of the building taken within 90 days from the date of certification. The photographs must be taken with views confirming the building description and diagram number provided in Section A. To the extent possible, these photographs should show the entire building including foundation. If the building has split-level or multi-level areas, provide at least 2 additional photographs showing side views of the building. In addition, when applicable, provide a photograph of the foundation showing a representative example of the flood openings or vents. All photographs must be in color and measure at least 3" x 3". Digital photographs are acceptable. (Italicized Text OPTIONAL but this language in its entirety is required for CRS PARTICIPATION.)*
- (b) Floodproofing Certificate
  - (i) *If non-residential floodproofing is used to meet the Regulatory Flood Protection Elevation requirements, a Floodproofing Certificate (FEMA Form FF-206-FY-22-153), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy. (Italicized Text OPTIONAL. The FEMA Floodproofing Certificate Is Optional At The Time Of Initial Permitting But Recommended To Ensure Compliance With This Ordinance And Properly Permit The Structure.)*
  - (ii) A final Finished Construction Floodproofing Certificate (FEMA Form **FF-206-FY-22-153**), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the issuance of a Certificate of Compliance/Occupancy. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certificate shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to Certificate of Occupancy. Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to deny a Certificate of Compliance/Occupancy.
- (c) If a manufactured home is placed within Zones A, AE, AH, AO, A99 and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required in accordance with the provisions of Article 5, Section B(3)(b).
- (d) If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior

to issuance of a floodplain development permit.

- (e) Certification Exemptions. The following structures, if located within Zones A, AE, AH, AO, A99, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) of this subsection:
  - (i) Recreational Vehicles meeting requirements of Article 5, Section B(6)(b);
  - (ii) Temporary Structures meeting requirements of Article 5, Section B(7); and
  - (iii) Accessory Structures that are 150 square feet or less and meeting requirements of Article 5, Section B(8).

(4) **Substantial Improvement/Damage determinations for existing buildings and structures.**

For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

- (a) Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;
- (b) Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
- (c) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and
- (d) Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the NC Building Code and this ordinance is required.

**SECTION C. DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR.**

The Floodplain Administrator shall perform, but not be limited to, the following duties:

- (1) Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas *or Community Flood Hazard Areas (Italicized Text OPTIONAL, if applicable)* to assure that the requirements of this ordinance have been satisfied.
- (2) Review all proposed development within Special Flood Hazard Areas *or Community Flood Hazard Areas (Italicized Text OPTIONAL, if applicable)* to assure that all necessary local, state and federal permits have been received, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- (3) Notify adjacent communities and the North Carolina Department of 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 (FEMA).
- (4) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained.
- (5) Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Article 5, Section F are met.
- (6) Obtain actual elevation (in relation to NAVD 1988) of the reference level (including basement) and all attendant utilities

of all new and substantially improved structures, in accordance with the provisions of Article 4, Section B(3).

- (7) Obtain actual elevation (in relation to NAVD 1988) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with the provisions of Article 4, Section B(3).
- (8) Obtain actual elevation (in relation to NAVD 1988) of all public utilities in accordance with the provisions of Article 4, Section B(3).
- (9) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with the provisions of Article 4, Section B(3) and Article 5, Section B(2).
- (10) Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas, floodways, or non-encroachment areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), 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.
- (11) When BFE data has not been provided in accordance with the provisions of Article 3, Section B, obtain, review, and reasonably utilize any BFE data, along with floodway data or non-encroachment area data available from a federal, state, or other source, including *Community Flood Hazard Data and (Italicized Text OPTIONAL, if applicable)* data developed pursuant to Article 5, Section D(2)(c), in order to administer the provisions of this ordinance.
- (12) When BFE data is provided but no floodway or non-encroachment area data has been provided in accordance with the provisions of Article 3, Section B, obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a federal, state, or other source in order to administer the provisions of this ordinance.
- (13) Permanently maintain all records that pertain to the administration of this ordinance and make these records available for public inspection, recognizing that such information may be subject to the Privacy Act of 1974, as amended.
- (14) Make on-site inspections of work in progress. As the work pursuant to a floodplain development permit progresses, the Floodplain Administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the Floodplain Administrator has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action.
- (15) Issue stop-work orders as required. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this ordinance, the Floodplain Administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing or in charge of the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.
- (16) Revoke floodplain development permits as required. The Floodplain Administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, and specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any floodplain development permit mistakenly issued in violation of an applicable State or local law may also be revoked.
- (17) Make periodic inspections throughout the Special Flood Hazard Areas *or Community Flood Hazard Area (Italicized Text OPTIONAL, if applicable)* within the jurisdiction of the community. The Floodplain Administrator and each member of his or her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
- (18) Follow through with corrective procedures of Article 4, Section D.
- (19) Review, provide input, and make recommendations for variance requests.
- (20) Maintain a current map repository to include, but not limited to, historical and effective FIS Report, historical and effective FIRM and other official flood maps and studies adopted in accordance with the provisions of Article 3, Section

B of this ordinance, including any revisions thereto including Letters of Map Change, issued by FEMA. Notify State and FEMA of mapping needs.

- (21) Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill (LOMR-Fs) and Letters of Map Revision (LOMRs).
- (22) Make substantial improvement and post event damage assessments and determinations:
  - (a) Conduct damage assessments for damaged structures located within the SFHA or Community Flood Hazard Area. **(Italicized Text OPTIONAL, if applicable)**
  - (b) Complete substantial improvement/damage determinations in accordance with the provisions of Article 4, Section B(4).
- (23) *When the lowest floor and the lowest adjacent grade of a structure or the lowest ground elevation of a parcel in a Special Flood Hazard Area is above the BFE, advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the LOMA issued by FEMA in the floodplain development permit file. **(Italicized Text OPTIONAL)***
- (24) *In any lot or lots/areas that will be or have been removed from the special flood hazard area utilizing a Letter of Map Revision Based on Fill (LOMR-F), the top of fill level must meet the community's freeboard elevation at that location. If the top of fill level is below the freeboard elevation, all new structures, additions to existing buildings or substantial improvement must meet the required community freeboard elevation. **(Italicized Text OPTIONAL – DELETE if the community prohibits fill in the SFHA or for structural support/elevation.)***

#### **SECTION D. CORRECTIVE PROCEDURES.**

- (1) **Stop Work Order:** The community may issue a stop work order, which shall be served on the applicant or other responsible person. The stop work order shall remain in effect until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise remedied the violation or violations described therein, provided the stop work order may be withdrawn or modified to enable the applicant or other responsible person to take the necessary remedial measures to remedy such violation or violations
- (2) **Notice of Violation.** If the community determines that an owner, occupant, applicant or other responsible person has failed to comply with the terms and conditions of a permit, or the provisions of this ordinance, it shall issue a written notice of violation, by certified return receipt mail, to such applicant or other responsible person. Where the person is engaged in activity covered by this ordinance without having first secured a permit, the notice shall be served on the owner or the responsible person in charge of the activity being conducted on the site. The notice of violation shall contain:
  - (a) The name and address of the owner or the applicant or the responsible person;
  - (b) The address or other description of the site upon which the violation is occurring;
  - (c) A statement specifying the nature of the violation;
  - (d) A description of the remedial measures necessary to bring the action or inaction into compliance with the permit or this ordinance and the date for the completion of such remedial action;
  - (e) A statement of the penalty or penalties that may be assessed against the person to whom the notice of violation is directed, and;
  - (f) A statement that the determination of violation may be appealed to the community by filing a written notice of appeal within thirty days after the notice of violation (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24-hour notice shall be sufficient).
- (3) **Additional Enforcement Actions.** If the remedial measures described in the Notice of Violation have not been completed

by the date set forth for such completion in the Notice of Violation, any one or more of the following enforcement actions may be enacted against the person to whom the Notice of Violation was directed. Before taking any of the following actions or imposing any of the following penalties, the Community Name shall first notify the owner, applicant or other responsible person in writing of its intended action. The Community Name shall provide reasonable opportunity, of not less than ten days (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24-hour notice shall be sufficient) to remedy such violation. In the event the applicant or other responsible person fails to remedy such violation after such notice and remedial period, the Community Name may take or impose any one or more of the following enforcement actions or penalties:

- (a) Termination of utility service and/or withhold or revoke Certificate of Occupancy: The community may terminate utilities and/or refuse to issue and/or revoke a certificate of occupancy for the building or other improvements and/or repairs conducted or being conducted on the site until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise remedied the violation or violations described therein.
- (b) Suspension, revocation, or modifications of permit: The community may suspend, revoke, or modify the permit authorizing the development project. A suspended, revoked, or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise remedied the violations described therein, provided such permit may be reinstated (upon such conditions as the community may deem necessary) to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
- (c) Civil penalties: 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 Class 1 misdemeanor pursuant to North Carolina General Statute § 143-215.58.
  - (i) Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than Insert Dollar Amount (*this amount should be consistent with Article 3, Section H*). Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent Community Name from taking such other lawful actions, pursuant to North Carolina General Statute § 153A, 160A, and 160D, as is necessary to prevent or remedy any violation.
  - (ii) Enforcement by an appropriate equitable remedy issuing from a court of competent jurisdiction may be pursued if the offender fails to remedy the violation, pays assessed fines, and/or fails to file an appeal within the prescribed period of time. In such case, the general court of justice shall have jurisdiction to issue such orders as may be appropriate.
- (4) Administrative appeal; judicial review. Any person receiving a Notice of Violation may appeal the determination of the community, including but not limited to the issuance of a stop work order, the assessment of an administratively-imposed monetary penalty, the suspension, revocation, modification, or grant with condition of a permit by the community upon finding that the holder is in violation of permit conditions, or that the holder is in violation of any applicable ordinance or any of the community's rules and regulations, or the issuance of a notice of bond forfeiture.
  - (a) Any person receiving a Notice of Violation may appeal the determination of the floodplain administrator to the local elected governing body. The Notice of Appeal must be in writing and be received by the floodplain administrator and the clerk within thirty (30) days of the date of the Notice of Violation. In the absence of an appeal, the determination of the floodplain administrator shall be final.
  - (b) All appeals shall be heard and decided by the community's designated Appeal Board, which shall be Insert Appeals Board, or their designees. The Appeal Board shall hear an appeal within a reasonable time and shall have the power to affirm, modify, or reject the original penalty, including the right to increase or decrease the amount of any monetary penalty and the right to add or delete remedial actions required for correction of the violation and compliance with the community's flood damage prevention ordinance, and any other applicable local, state, or federal requirements. In the absence of a petition for review of a quasi-judicial decision, the decision of the Appeal Board shall be final.
  - (c) A petition for review of a quasi-judicial decision can be requested by any person with standing aggrieved by a decision or order of the community, after exhausting his/her administrative remedies. The petition shall be

received by the clerk of superior court within 30 days of the date of the local governing body decision.

- (5) **Section 1316 Declaration:** Section 1316 of the National Flood Insurance Act authorizes FEMA to deny flood insurance to a property declared by the State, County, or Municipal government to be in violation of the local floodplain management ordinance. A Section 1316 declaration shall be used when all other legal means to remedy a violation have been exhausted and the structure remains noncompliant. The community must coordinate a request for Section 1316 declaration to the FEMA Regional Office through the State NFIP Coordinator.

Once invoked, the property's flood insurance coverage will be terminated and no new or renewal policy can be issued; no flood insurance claim can be paid on any policy on the property, and disaster assistance will be denied. If a structure that has received a Section 1316 declaration is made compliant with the community's floodplain management ordinance, then the Section 1316 declaration can be rescinded by FEMA and flood insurance eligibility restored.

**SECTION E.      VARIANCE PROCEDURES.**

- (1) The Insert appointed board name (The Board of Adjustment is the recommended appointed board) as established by Community Name, shall hear and decide requests for variances from the requirements of this ordinance.
- (2) Any person aggrieved by the decision of the Board may appeal such decision to the Court, as provided in Chapter 7A of the North Carolina General Statutes.
- (3) Variances may be issued for:
- (a) The repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and that the variance is the minimum necessary to preserve the historic character and design of the structure;
  - (b) Functionally dependent facilities if determined to meet the definition as stated in Article 2 of this ordinance, provided provisions of Article 4, Section E(9)(b), (c), and (e) have been satisfied, and such facilities are protected by methods that minimize flood damages during the base flood and create no additional threats to public safety; or
  - (c) Any other type of development provided it meets the requirements of this Section.
- (4) In passing upon variances, the 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 as defined under Article 2 of this ordinance as a functionally dependent facility, 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 floodplain 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 floodwaters and the effects of wave action, if applicable, expected at the site; and
  - (k) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
- (5) A written report addressing each of the above factors shall be submitted with the application for a variance.
- (6) Upon consideration of the factors listed above and the purposes of this ordinance, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes and objectives of this ordinance.
- (7) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the BFE and the elevation to which the structure is to be built and that such construction below the BFE increases risks to life and property, and that the issuance of a variance to construct a structure below the BFE may result in increased premium rates for flood insurance up to \$25 per \$100 of insurance coverage. Such notification shall be maintained with a record of all variance actions, including justification for their issuance.
- (8) The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to the FEMA and the State of North Carolina upon request.
- (9) Conditions for Variances:
- (a) Variances shall not be issued when the variance will make the structure in violation of other federal, state, or local laws, regulations, or ordinances.
  - (b) Variances shall not be issued within any designated floodway or non-encroachment area if the variance would result in any increase in flood levels during the base flood discharge.
  - (c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
  - (d) Variances shall only be issued prior to development permit approval.
  - (e) 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, or extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- (10) A variance may be issued for solid waste disposal facilities or sites, hazardous waste management facilities, salvage yards, and chemical storage facilities that are located in Special Flood Hazard Areas provided that all of the following conditions are met.
- (a) The use serves a critical need in the community.
  - (b) No feasible location exists for the use outside the Special Flood Hazard Area.
  - (c) The reference level of any structure is elevated or floodproofed to at least the Regulatory Flood Protection Elevation.
  - (d) The use complies with all other applicable federal, state and local laws.
  - (e) The Community Name has notified the Secretary of the North Carolina Department of Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance, **in accordance with**

**ARTICLE 5.        PROVISIONS FOR FLOOD HAZARD REDUCTION.**

**SECTION A.       GENERAL STANDARDS.**

In all Special Flood Hazard Areas, the following provisions are required:

- (1) All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.
- (2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage in accordance with the FEMA Technical Bulletin 2, *Flood Damage-Resistant Materials Requirements*.
- (3) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
- (4) All new electrical, heating, ventilation, air-conditioning, plumbing, duct systems, and other building utility systems, equipment, and service facilities must be located at or above the Regulatory Flood Protection Elevation (RFPE) and/or specially designed to prevent water from entering or accumulating within the components and installed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation. Utility systems, equipment, and service facilities include, but are not limited to, HVAC equipment, water softener units, bath/kitchen plumbing fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, water heaters, fuel tanks, and electric outlets/switches.
  - (a) Replacements part of a substantial improvement must also meet the above provisions.
  - (b) Replacements that are for maintenance and not part of a substantial improvement, may be installed at the original location provided the addition and/or improvements comply with the standards for new construction consistent with the code and requirements for the original structure.
- (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 systems and discharges from the systems into flood waters.
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (8) Nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the Regulatory Flood Protection Elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.
- (9) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, except by variance as specified in Article 4, Section E(10). A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the Regulatory Flood Protection Elevation and certified in accordance with the provisions of Article 4, Section B(3).
- (10) All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.
- (11) All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas,

electrical, and water systems located and constructed to minimize flood damage.

- (12) All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.
- (13) All subdivision proposals and other development proposals shall have received all necessary permits from those governmental agencies for which approval is required by federal or state law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- (14) When a structure is partially located in a Special Flood Hazard Area, the entire structure shall meet the requirements for new construction and substantial improvements.
- (15) When a building or structure is located in more than one flood hazard zone or in a flood hazard zone with multiple base flood elevations, the provisions for the more restrictive flood hazard zone and the highest BFE shall apply.
- (16) Structural fill shall not be used unless design and construction of the structural fill accounts for the following:
  - (a) consolidation of the underlying soil under the weight of the fill and the structure,
  - (b) differential settlement due to variations in fill composition and characteristics, and
  - (c) slope stability and erosion control during conditions of the base flood.

**OR**

- (16) *Fill is prohibited in the SFHA, including construction of buildings on fill. This includes not approving Conditional Letters or Letters of Map Revision - Based on Fill (CLOMR-F or LOMR-F). (Italicized Text OPTIONAL. Maximum 280 CRS points possible.)*

**OR**

- (16) *Fill used to elevate or support a structure is prohibited in the SFHA. This includes prohibiting Conditional Letters or Letters of Map Revision - Based on Fill (CLOMR-F or LOMR-F). Fill supporting transportation (bridges, culverts, roadways, greenways, etc.), stream restoration, repair of existing levees or berms, and similar projects can be permitted within the SFHA. (Italicized Text OPTIONAL.)*

## **SECTION B. SPECIFIC STANDARDS.**

In all Special Flood Hazard Areas where BFE data has been provided, as set forth in Article 3, Section B, or Article 5, Section D, the following provisions, in addition to the provisions of Article 5, Section A, are required:

- (1) Residential Construction. New construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation (RFPE), as defined in Article 2 of this ordinance.
- (2) Non-Residential Construction. New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation, as defined in Article 2 of this ordinance. Structures located in Zones A, AE, AH, AO, A99 may be floodproofed to the Regulatory Flood Protection Elevation (RFPE) in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the Regulatory Flood Protection Elevation are watertight 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. For AO Zones, the floodproofing elevation shall be in accordance with Article 5, Section G(2). A registered professional engineer or architect shall certify that the floodproofing standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Article 4, Section B(3), along with the operational plan and the inspection and maintenance plan.

(3) Manufactured Homes.

- (a) New and replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the Regulatory Flood Protection Elevation (RFPE), as defined in Article 2 of this ordinance.
- (b) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by certified engineered foundation system, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis thirty-six (36) inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above thirty-six (36) inches in height, an engineering certification is required.
- (c) All enclosures or skirting below the lowest floor shall meet the requirements of Article 5, Section B(4).
- (d) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the Floodplain Administrator and the local Emergency Management Coordinator.

(4) Elevated Buildings. Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:

- (a) Shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;
- (b) Shall be constructed entirely of flood resistant materials at least to the Regulatory Flood Protection Elevation; and
- (c) Shall include flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum design criteria:
  - (i) A minimum of two flood openings on different sides of each enclosed area subject to flooding;
  - (ii) The total net area of all flood openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding;
  - (iii) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;
  - (iv) The bottom of all required flood openings shall be no higher than one (1) foot above the higher of the interior or exterior adjacent grade;
  - (v) Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and
  - (vi) Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.
- (d) *Shall not be temperature-controlled or conditioned (Italicized Text OPTIONAL but strongly encouraged.)*
- (e) *Property owners shall be required to execute and record a non-conversion agreement prior to issuance of a building permit declaring that the area below the lowest floor shall not be improved, finished or otherwise converted to habitable space (30 CRS points); Community Name will have the right to inspect the enclosed area*

**(30 CRS points).** *Community Name will conduct annual inspections (30 CRS points). This agreement shall be recorded with the Insert County Name County Register of Deeds and shall transfer with the property in perpetuity.* **(Italicized Text OPTIONAL. Maximum total of 90 CRS points)**

(5) Additions/Improvements.

- (a) Additions and/or improvements to pre-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
  - (i) Not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.
  - (ii) A substantial improvement, with modifications/rehabilitations/improvements to the existing structure or the common wall is structurally modified more than installing a doorway, both the existing structure and the addition must comply with the standards for new construction.
- (b) Additions to pre-FIRM or post-FIRM structures that are a substantial improvement with no modifications/rehabilitations/improvements to the existing structure other than a standard door in the common wall, shall require only the addition to comply with the standards for new construction.
- (c) Additions and/or improvements to post-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
  - (i) Not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction consistent with the code and requirements for the original structure.
  - (ii) A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
- (c) Any combination of repair, reconstruction, rehabilitation, addition or improvement of a building or structure taking place during a Insert number of years (One (1) year minimum is required) **(CRS recommends a 5- or 10-year period. Language must be consistent with the definition of “Substantial Improvement”)**, the cumulative cost of which equals or exceeds 50 percent **(Communities can also use a value less than 50%, for example, 30%. Language must be consistent with the definition of “Substantial Improvement”)** of the market value of the structure before the improvement or repair is started must comply with the standards for new construction. For each building or structure, the Insert number of years (One (1) year minimum is required) year period begins on the date of the first improvement or repair of that building or structure subsequent to the effective date of this ordinance. *Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.* **(Italicized Text OPTIONAL, but the repetitive loss portion is required for flood insurance policy holders to be eligible for Increased Cost of Compliance (ICC) benefits for repetitive losses.)** If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The requirement does not, however, include either:
  - (i) Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assume safe living conditions.
  - (ii) Any alteration of a historic structure provided that the alteration will not preclude the structure’s continued designation as a historic structure.

(6) Recreational Vehicles. Recreational vehicles shall meet the following:

- (a) **Placement of a Recreational Vehicle in the Regulatory Floodway or Non-Encroachment Area is prohibited. This includes both temporary and permanent placement. (Italicized text is OPTIONAL. Note: This should be consistent with Article 5, Section F (4).)**

- (b) Temporary Placement
  - (i) Be on site for fewer than 180 consecutive days; or
  - (ii) Be fully licensed and ready for highway use. (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 has no permanently attached additions.)
- (c) Permanent Placement. Recreational vehicles that do not meet the limitations of Temporary Placement shall meet all the requirements for new construction.

(7) Temporary Non-Residential Structures. Prior to the issuance of a floodplain development permit for a temporary structure, the applicant must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted in writing to the Floodplain Administrator for review and written approval:

- (a) A specified time period for which the temporary use will be permitted. Time specified may not exceed three (3) months, renewable up to one (1) year;
- (b) The name, address, and phone number of the individual responsible for the removal of the temporary structure;
- (c) The time frame prior to the event at which a structure will be removed (i.e., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);
- (d) A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and
- (e) Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.

(8) Accessory Structures.

- (a) **When accessory structures (sheds, detached garages, etc.) with a footprint of no more than 600 square feet are placed within A, AO, AH, AE and A99 flood zones, wet floodproofing may be permitted when the following criteria are met:**
  - i. Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);
  - ii. Accessory structures shall not be temperature-controlled;
  - iii. Accessory structures shall be designed to have low flood damage potential;
  - iv. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
  - v. Accessory structures shall be firmly anchored in accordance with the provisions of Article 5, Section A(1);
  - vi. All service facilities such as electrical shall be installed in accordance with the provisions of Article 5, Section A(4); and
  - vii. Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below Regulatory Flood Protection Elevation in conformance with the provisions of Article 5, Section B(4)(d).
- (b) **All other accessory structures exceeding the size restrictions in Article 5, Section B(8)(a) above must comply with the elevation or floodproofing standards and certification requirements in accordance with Article 4, Section B(3) and Article 5, Section B(2).**

An accessory structure with a footprint of 150 square feet or less in A, AO, AH, AE and A99 zones satisfying the criteria outlined above in Article 5, Section B(8)(a) is not required to meet the elevation or floodproofing certification requirements of Article 4, Section B(3). All other accessory structures must comply with the elevation or floodproofing certification requirements in accordance with Article 4, Section B(3).

- (9) Tanks. When gas and liquid storage tanks are to be placed within a Special Flood Hazard Area, the following criteria shall be met:
- (a) Underground tanks. Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty;
  - (b) Above-ground tanks, elevated. Above-ground tanks in flood hazard areas shall be elevated to or above the Regulatory Flood Protection Elevation on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area;
  - (c) Above-ground tanks, not elevated. Above-ground tanks that do not meet the elevation requirements of Article 5, Section B(2) of this ordinance shall be permitted in flood hazard areas provided the tanks are designed, constructed, installed, and anchored to resist all flood-related and other loads, including the effects of buoyancy, during conditions of the design flood and without release of contents in the floodwaters or infiltration by floodwaters into the tanks. Tanks shall be designed, constructed, installed, and anchored to resist the potential buoyant and other flood forces acting on an empty tank during design flood conditions.
  - (d) Tank inlets and vents. Tank inlets, fill openings, outlets and vents shall be:
    - (i) At or above the Regulatory Flood Protection Elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and
    - (ii) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.
- (10) Other Development.
- (a) Fences in regulated floodways and NEAs that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of Article 5, Section F of this ordinance.
  - (b) Retaining walls, sidewalks and driveways in regulated floodways and NEAs. Retaining walls and sidewalks and driveways that involve the placement of fill in regulated floodways shall meet the limitations of Article 5, Section F of this ordinance.
  - (c) Roads and watercourse crossings in regulated floodways and NEAs. Roads and watercourse crossings, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, that encroach into regulated floodways shall meet the limitations of Article 5, Section F of this ordinance.
  - (d) Commercial storage facilities are not considered “limited storage” as noted in this ordinance and shall be protected to the Regulatory Flood Protection Elevation as required for **non-residential** structures.

**SECTION C. STANDARDS FOR AREAS OUTSIDE THE SPECIAL FLOOD HAZARD AREA [X ZONES (SHADED/UNSHADED)]. (OPTIONAL Higher Standard. Replace Title with RESERVED if not used.)**

Areas designated as X Zones (Shaded or Unshaded) on the FIRM or in the FIS report established in Article 3, Section B, are areas determined to be low to moderate risk flood zones but are not immune to inundation by flood waters. The following provisions, in addition to the provisions of Article 5, Sections A and B, shall apply to all development within such areas:

- (1) Where 0.2-percent-annual-chance water surface elevations are provided, the reference level in Zone X (Shaded) shall be elevated or floodproofed to at least the 0.2-percent-annual-chance water surface elevation or the Regulatory Flood Protection Elevation, whichever is higher.
- (2) Where no flood hazard data is available or provided per Article 3, Section B:
  - (a) the reference level shall be elevated or floodproofed, pursuant to Article 5, Section B, to at least Insert feet (two (2) feet to four (4) feet is recommended) feet above the highest adjacent grade; or
  - (b) meet the requirements of Article 5, Section C(4).
- (3) Where Advisory Flood Studies provide base flood elevations, the reference level shall be elevated or floodproofed, pursuant to Article 5, Section B, to at least the advisory BFE [**Italicized Text OPTIONAL** *communities can also choose to adopt a higher standard (i.e., 1-percent rainfall depth plus, 0.5-percent-annual-chance, 0.2-percent-annual-chance, 0.1-percent-annual-chance, etc.)*] plus a freeboard of Insert feet (two (2) feet to four (4) feet is recommended)feet.
- (4) Where a Community Flood Hazard Area (CFHA) is established per Article 3, Section B, the reference level shall be elevated or floodproofed, pursuant to Article 5, Section B, to at least the CFHA flood elevation plus a freeboard of Insert feet (two (2) feet to four (4) feet is recommended) feet.

**SECTION D. STANDARDS FOR FLOODPLAINS WITHOUT ESTABLISHED BASE FLOOD ELEVATIONS.**

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Article 3, Section B, where no BFE data has been provided by FEMA, the following provisions, in addition to the provisions of Article 5, Section A, shall apply:

- (1) No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of twenty (20) feet each side from top of bank or five times the width of the stream, whichever is greater, unless certification with supporting technical data 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) The BFE used in determining the Regulatory Flood Protection Elevation shall be determined based on the following criteria:
  - a. When BFE data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this ordinance and shall be elevated or floodproofed in accordance with standards in Article 5, Sections A and B.
  - b. When floodway or non-encroachment data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway and non-encroachment areas shall also comply with the requirements of Article 5, Sections B and F.
  - c. All subdivision, manufactured home park and other development proposals shall provide BFE data if development is greater than five (5) acres or has more than fifty (50) lots/manufactured home sites. Such BFE data shall be adopted by reference in accordance with Article 3, Section B and utilized in implementing this ordinance.
  - d. When BFE data is not available from a Federal, State, or other source as outlined above, the reference level shall be elevated or floodproofed (non-residential) to or above the Regulatory Flood Protection Elevation, as defined in Article 2. All other applicable provisions of Article 5, Section B shall also apply.

**SECTION E. STANDARDS FOR RIVERINE FLOODPLAINS WITH BASE FLOOD ELEVATIONS BUT WITHOUT ESTABLISHED FLOODWAYS OR NON-ENCROACHMENT AREAS.**

Along rivers and streams where BFE data is provided by FEMA or is available from another source but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas”

- (1) Standards of Article 5, Sections A and B; and
- (2) Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data 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 (1) foot at any point.

#### **SECTION F. STANDARDS FOR FLOODWAYS AND NON-ENCROACHMENT AREAS.**

Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in Article 3, Section B. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions, in addition to standards outlined in Article 5, Sections A and B, shall apply to all development within such areas:

- (1) No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless:
  - (a) It is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood discharge, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Floodplain Administrator prior to issuance of floodplain development permit; or
  - (b) A Conditional Letter of Map Revision (CLOMR) has been issued by FEMA for proposed encroachments resulting in increases in the flood levels during the occurrence of the base flood discharge. A Letter of Map Revision (LOMR) must be obtained within six months of completion of the proposed encroachment.
  - (c) A Letter of Map Revision (LOMR) must be obtained within six months of completion of the proposed encroachment, permitted in accordance with Article 5, Section F(1)(a), if the encroachment results in *base flood elevation decreases of more than 0.10-feet (optional)*, changes to the floodway/non-encroachment area widths, and/or changes to the stream location.
- (2) If Article 5, Section F(1) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.
- (3) Manufactured homes may be permitted provided the following provisions are met:
  - (a) The anchoring and the elevation standards of Article 5, Section B(3); and
  - (b) The encroachment standards of Article 5, Section F(1).
- (4) *Placement of recreational vehicles in the regulatory floodway or non-encroachment area (Italicized text is OPTIONAL. Note: This should be consistent with Article 5, Section B (6)(a).) is prohibited.*

#### **SECTION G. STANDARDS FOR AREAS OF SHALLOW FLOODING (ZONE AO).**

Located within the Special Flood Hazard Areas established in Article 3, Section B, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to Article 5, Sections A and B, all new construction and substantial improvements shall meet the following requirements:

- (1) The reference level shall be elevated at least as high as the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, plus a freeboard of Insert freeboard [four (4), (feet of freeboard selected for Regulatory Flood Protection Elevation definition)] feet, above the highest adjacent grade; or at least Insert feet [Four (4), (A minimum of two (2) feet is required and four (4) feet is recommended where a depth is not provided)] feet above the highest adjacent grade if no depth number is specified.
- (2) Non-residential structures may, in lieu of elevation, be floodproofed to the same level as required in Article 5, Section G(1) so that the structure, together with attendant utility and sanitary facilities, below that level shall be 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. Certification is required in accordance with Article 4, Section B(3) and Article 5, Section B(2).
- (3) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

**SECTION H. STANDARDS FOR AREAS OF SHALLOW FLOODING (ZONE AH).**

Located within the Special Flood Hazard Areas established in Article 3, Section B, are areas designated as shallow flooding areas. These areas are subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are one (1) to three (3) feet. Base Flood Elevations are derived from detailed hydraulic analyses are shown in this zone. In addition to Article 5, Sections A and B, all new construction and substantial improvements shall meet the following requirements:

- (1) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

**ARTICLE 6. LEGAL STATUS PROVISIONS.**

**SECTION A. EFFECT ON RIGHTS AND LIABILITIES UNDER THE EXISTING FLOOD DAMAGE PREVENTION ORDINANCE.**

This ordinance in part comes forward by re-enactment of some of the provisions of the Flood Damage Prevention Ordinance enacted insert adoption date of the community’s initial Flood Damage Prevention Ordinance as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the Flood Damage Prevention Ordinance of Community Name enacted on insert adoption date of the community’s initial Flood Damage Prevention Ordinance, as amended, which are not reenacted herein are repealed.

The date of the initial Flood Damage Prevention Ordinance for County Name County is insert adoption date of the community’s initial Flood Damage Prevention Ordinance.

**SECTION B. EFFECT UPON OUTSTANDING FLOODPLAIN DEVELOPMENT PERMITS.**

Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a floodplain development permit has been granted by the Floodplain Administrator or his or her authorized agents before the time of passage of this ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of six (6) months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this ordinance.

**SECTION C. SEVERABILITY.**

If any section, clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent

jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.

**SECTION D. EFFECTIVE DATE.**

This ordinance shall become effective insert upon adoption or a specific date.

**SECTION E. ADOPTION CERTIFICATION.**

I hereby certify that this is a true and correct copy of the Flood Damage Prevention Ordinance as adopted by the governing body of Community Name, North Carolina, on the Day (number or text) day of Month, Year.

WITNESS my hand and the official seal of insert Name, Title, this the Day (number or text) day of Month, Year.

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*(signature)*

*(Seal)*