O-15-37

ORDINANCE NO. _____

AN ORDINANCE ADOPTING CHAPTER 6 ON FLOODS, A FLOOD DAMAGE PREVENTION PROGRAM, AS PART OF THE NORTH LITTLE ROCK MUNICIPAL CODE; REPEALING CERTAIN ORDINANCES AND CODE SECTIONS; DECLARING AN EMERGENCY; AND FOR OTHER PURPOSES.

WHEREAS, pursuant to Arkansas law, the City of North Little Rock ("the City") is authorized to adopt regulations by reference (Ark. Code Ann. §47-55-207) and to codify all or part of its ordinances (Ark. Code. Ann § 14-55-701); and

WHEREAS, Ark. Code Ann. §§ 14-268-101 et seq. designates that local governmental units have the responsibility to adopt regulations to minimize flood losses; and

WHEREAS, the Federal Emergency Management Agency ("FEMA") has identified Special Flood Hazard Areas of the City of North Little Rock ("the City") in the current scientific and engineering report entitled "The Flood Insurance Study ("FIS") for Pulaski County and Incorporated Areas," dated July 6, 2015, with an effective Flood Insurance Rate Map ("FIRM") dated July 6, 2015; and

WHEREAS, these Special Flood Hazard Areas are subject to periodic flooding events that result in loss of life and property, pose health and safety hazards, disrupt commerce and governmental services, and cause extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare; and

WHEREAS, these periodic flooding events are exacerbated by the cumulative effects of floodplain developments which cause an increase in flood heights and velocities, and by the placement of inadequately elevated and/or flood proofed or otherwise unprotected structures or uses vulnerable to floods into Special Flood Hazard Areas, with such structures or uses being inherently hazardous to other lands because of their adverse impact on flooding events.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NORTH LITTLE ROCK, ARKANSAS:

SECTION 1: That the City of North Little Rock hereby declares its intention to promote the public health, safety and general welfare, to minimize public and private losses due to flood events, to prevent adverse impacts from any floodplain development activities, and does hereby adopt in its entirety, **North Little Rock Municipal Code Chapter 6** on **Floods – A Flood Damage Prevention Program**, attached hereto as Exhibit "A" and incorporated herein by reference.

SECTION 2: That three (3) copies of this ordinance shall be filed with the Office of the City Clerk and on the City web site for inspection and view by the public prior to adoption.

SECTION 3: That all ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of the conflict. Specifically, Ordinance Numbers 4841, 6149, 7272 and all of Chapter 50 (Floods) of the old North Little Rock Municipal Code are hereby repealed in their entirety.

SECTION 4: That the provisions of this Ordinance are hereby declared to be severable, and if any section, phrase or provision shall be declared or held invalid, such invalidity shall not affect the remainder of the sections, phrases or provisions.

SECTION 5: It is hereby found and determined that severe flooding has previously occurred in the City of North Little Rock and is likely to happen in the future resulting in substantial personal injury and/or destruction of property; that there is a need to adopt minimum standards for coverage under the National Flood Insurance Program to prevent or reduce damage and injury caused by floods; that the adoption of a new code chapter on floods and establishment of a Flood Damage Prevention Program is immediately necessary to minimize public and private losses, thereby insuring the proper and orderly growth of the City of North Little Rock, Arkansas, and being necessary for the immediate preservation of the public health, safety and welfare; THEREFORE, an emergency is hereby declared to exist, and this Ordinance shall be in full force and effect from and after its passage and approval.

PASSED:

APPROVED:

_____

_____
Mayor Joe A. Smith

SPONSOR:

Joe A. Smith

Mayor Joe A. Smith

ATTEST:

_____
Diane Whitbey, City Clerk

APPROVED AS TO FORM:

C. Jason Carter, City Attorney

PREPARED BY THE OFFICE OF THE CITY ATTORNEY/b

FILED 11:32 A.M. _____ P.M.
By City Atty Carter
DATE 5-5-15
Diane Whitbey, City Clerk and Collector
North Little Rock, Arkansas
RECEIVED BY J. Mauldin

NORTH LITTLE ROCK, ARKANSAS
MUNICIPAL CODE

Chapter 6

FLOODS
A Flood Damage Prevention Program

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ARTICLE ONE
SEAWALL

Section 1
IN GENERAL

1.1.1 Passage of wide objects through seawall.

(A) Vehicles, equipment or other objects of which the overall width exceeds eight feet shall not pass through openings in the seawall without a permit issued by the Chief of Police.

(B) The Chief of Police, along with the City Engineer, is hereby authorized to promulgate rules and regulations relative to ingress and egress through the seawall.

1.1.2 Cuts in seawall.

(A) The seawall located on the north bank of the Arkansas River shall be cut only where there is a dedicated street on each side of the seawall.

(B) No person shall cut the seawall without a permit from the City Engineer and paying a permit fee of $100.00.

(C) The City Engineer may promulgate such rules and regulations as may be necessary to implement the provisions of this section and shall adopt such rules and regulations as will ensure that the cuts permitted can be closed adequately and promptly whenever the conditions of the Arkansas River indicate rising waters which may cause flood damage. The City Engineer shall cooperate the work with the Corps of Engineers.

ARTICLE TWO
FLOOD DAMAGE PREVENTION

Section 1
DEFINITIONS

2.1.1 Definitions.
Unless specifically defined below, words or phrases used in this Chapter have their common usage meaning to give the most reasonable application to this Chapter.

Additional definitions for floodplain management terms can be found at Part §59.1 of 44 CFR.

> ***44 CFR (Emergency Management and Assistance – National Flood Insurance Program Regulations)*** Parts 59-75 contain Federal regulations upon which local floodplain managements are based
>
> ***44 CFR § 65.12*** contains the section of the Federal regulations which involves revision of flood insurance rate maps to reflect base flood elevations caused by proposed encroachments.

100-year flood is any flood with a 1% chance of occurring in any given year. The term is misleading, because of its statistical derivation. A 100-year flood may occur many times in any given 100-year period, or it may not occur at all in 100 years.

500-year flood is any flood with a 0.2% chance of occurring in any given year. As with the 100-year flood, this term is also misleading, because of its statistical derivation. A 500-year flood may occur many times in any given 500-year period, or it may not occur at all in 500 years.

Accessory Structures are structures which are on the same parcel of property as the principle structure and the use of which is incidental to the use of the principle structure (such as garages and storage sheds).

Adverse impact means any negative or harmful effect.

AE or A1-30 Risk Zones are special flood hazard areas where detailed studies have determined base flood elevations. AE has replaced A1-30 in newer flood maps.

AH Risk Zones are special flood hazard areas characterized by shallow flooding with ponding effects (where floodwaters accumulate in depressions and linger until absorbed or evaporated).

A Risk Zones are special flood hazard areas without detailed studies, where base flood elevations have not been determined.

AO Risk Zones are special flood hazard areas characterized by shallow flooding with sheet flow (where floodwaters flow in a broad, shallow sheet rather than through a narrow channel).

Appeal Board means a person or persons specifically designated to render decisions on variance applications and floodplain management complaints.

Automatic entry and exit of floodwaters means that the water must be able to enter and exit with no intervening action from a person.

Base flood is the flood profile used as the basis for the NFIP regulations. The Federal government has selected the 1% chance flood as the base flood.

Basement is any enclosed area that is below grade on all sides.

BFE is the acronym for Base Flood Elevation.

Buoyancy is the upward force exerted by water. Buoyancy can cause underground tanks to float free and can lift structures off foundations.

Certificates of Compliance are formal documents issued by floodplain administrators certifying that completed projects comply with the requirements of the local Code.

CFR is the acronym for the Code of Federal Regulations. The Code of Federal Regulations is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. It is divided into 50 titles that represent broad areas subject to Federal regulation. The Federal regulations pertaining to the national Flood Insurance Program are found in title 44, Emergency Management and Assistance.

Clearing is the act of cutting timber or shrubs from an area.

Commercial business park is typically an area of offices or light industrial usage, although retail, service, or industrial usage is sometimes included in supporting roles. For example, a commercial business park of office complexes may also include restaurants which service these offices.

Concrete deadman anchors are heavy steel rods embedded in buried sections of concrete, used to secure items in place under tension.

Covenant is a clause in a contract that requires one party to do, or refrain from doing, certain things. A covenant frequently appears as a restriction that a lender imposes on a borrower.

Crawlspace is a type of structural foundation where the space beneath the lowest floor is typically not deep enough to allow a person to stand and not all four walls are below grade.

Critical Facilities include: Governmental facilities that are considered essential for the delivery of critical services and crisis management (such as data and communication centers and key governmental complexes); facilities that are essential for the health and welfare of the whole population (such as hospitals, prisons, police and fire stations, emergency operations centers, evacuation shelters and schools); mass transportation facilities (such as airports, bus terminals, train terminals); lifeline utility systems (including potable water, wastewater, oil, natural gas, electric power and communications systems); high potential loss facilities (such as nuclear power plants or military installations); hazardous material facilities (such as industrial facilities housing or manufacturing or disposing of corrosives, explosives, flammable materials, radioactive materials and toxins.

D Zones are areas in which the flood hazard has not been determined, but may be possible.

Deed restriction refers to a clause in a deed that limits the future uses of the property in some respect. Deed restrictions may impose a vast variety of limitations and conditions, for example, they may limit the density of buildings, dictate the types of structures that can be erected, prevent buildings from being used for specific purposes or even from being used at all.

Development means any man-made change to improved or unimproved real estate. It includes, but not limited to, construction, reconstruction, or placement of a building, or any addition or substantial improvements to a building. ***Development*** also includes the installation of a manufactured home on a site, preparing a site for a manufactured home, or installing/parking a travel trailer. The installation of utilities, construction of roads, bridges, culverts or similar projects are also "developments." Construction or erection of levees, dams, walls, or fences; drilling, mining, filling, dredging, grading, excavating, paving, or other alterations of the ground surface are "developments." Storage of materials including the placement of gas and liquid storage tanks are "developments," as are channel modifications or any other activity that might change the direction, height, or velocity of flood or surface waters. "Development" will normally not include maintenance of existing drainage ditches, gardening, plowing, planting, harvesting of crops, or similar practices that do not involve filling, grading, or construction of levees.

Development Permit refers to the permit required for placing a "development" in the floodplain.

Easements are rights or permissions held by one person to make specific, limited use of land owned by another person.

Elevation Certificate refers to FEMA form 81-31, which for the purposes of this code chapter must be properly completed by a Professional Engineer, Surveyor or Architect licensed to practice in the State of Arkansas.

Erosion is the process of soil removal by moving water.

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

Existing Structure means, for floodplain management purposes, a structure which is in place before any reconstruction, rehabilitation, addition, or other improvement takes place.

Expansion to an Existing Manufactured Home Park or Subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Federal Emergency Management Agency (or "**FEMA**") is the Federal agency responsible for administering the National Flood Insurance Program.

FEMA is the acronym for the Federal Emergency Management Agency.

Fill refers to the placement of natural sand, dirt, soil, rock, concrete, cement, brick or similar material at a specified location to bring the ground surface up to a desired elevation.

FIRM is the acronym for Flood Insurance Rate Map.

Flood Fringe refers to the portion of the 100-year floodplain which is outside the floodway (See definition of floodway below.)

Flood Insurance Rate Map (or "**FIRM**") refers to the official flood map of a community on which FEMA has categorized Special Flood Hazard Areas into risk premium zones.

Flood Insurance Study (or "**FIS**") is the official report provided by FEMA. It contains flood profiles, floodway tables, engineering methods, and other descriptive and technical data.

Flooding events are general or temporary conditions of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters, or from the unusual and rapid accumulation or runoff of surface waters from any source.

Floodplain refers to any land area susceptible to inundation by floodwaters from any source. For the purposes of this code chapter, floodplain refers to the land area susceptible to being inundated by the base flood.

Floodplain Development Permit is a permit issued by the local Floodplain Administrator and is required before beginning any development in an area designated as a Special Flood Hazard Area on the community's FIRM.

Floodplain Management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodproofing is a combination of structural and nonstructural additions, changes, or adjustments to structures that reduce or eliminate the risk of flood damage.

Floodproofing Certificate refers to FEMA Form 81-65, which for the purposes of this Code must be properly completed by a Professional Engineer or Architect licensed to practice in the State of Arkansas.

Floodway or Regulatory Floodway refers to a stream channel and the land to either side of the stream channel that must remain undeveloped and open in order to allow floodwaters to pass without increasing the base flood elevation more than a designated height. For the purposes of this code chapter, the height is one foot (1 ft.). Severe restrictions or prohibitions are imposed on development within the floodway.

Flow-through openings are openings specifically designed to allow floodwaters to flow into and out of enclosed spaces, minimizing the danger of foundation or wall collapse from lateral hydrostatic pressure.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Grade means the surface of the ground.

Grading refers to smoothing the surface of the ground, typically with heavy construction equipment.

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

Historical Structure means any structure that is:

a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

c. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or

d. Individually listed on a local inventory or historic places in communities with historic preservation programs that have been certified by either:

    i. An approved state program as determined by the Secretary of the Interior; or
    ii. Directly by the Secretary of the Interior in states without approved programs.

Hydrodynamic forces are the forces and stresses associated with moving water, including impacts from objects carried in the water.

Hydrostatic flood forces are the forces and stresses associated with standing floodwaters.

Lacustrine Flooding is flooding associated with a lake.

Lateral forces are the horizontal hydrostatic forces associated with standing water. Water exerts an equal force in all directions, and as little as three feet of standing water can generate sufficient lateral force to collapse a foundation or wall.

Lowest floor refers to the lowest floor of the lowest enclosed area (including Basement). For a typical slab-on-grade construction, the lowest floor is the top of the first floor of the structure. For a typical basement foundation construction, the elevation of the lowest floor is the top of the basement floor. For a typical crawlspace foundation construction, the elevation of the lowest floor is the top of the first floor of the structure. For a typical split-level construction, the elevation of the lowest floor is the top of the first living area floor. For a manufactured home installation, the elevation of the lowest

floor will be the bottom of the lowest I-Beam. The garage floor and crawlspaces are not the lowest floor as long as there are no living areas in the garage and it is used solely for storage, parking vehicle and entry to the structure, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Section 60.3 of the National Flood Insurance regulations.

Manufacture Homes or Structures means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached 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 subdivided into two or more manufactured home lots for rent or sale.

Mean Sea Level (MSL) means, for the purposes of the NFIP, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's FIRM are referenced.

Mixed Use Structures are structures with both a business and a residential component, but where the area used for business is less than 50% of the total floor area of the structure.

New Construction means, for floodplain management purposes, structures for which the "start of construction" commenced on or after the date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

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

No Adverse Impact Principle is the principle of restricting or prohibiting land development that does harm or "adversely affects" someone else's property or land.

Nonresidential Structures are structures used only for commercial or public purposes, such as businesses, schools, churches, etc.

No-Rise Certificates are formal certifications signed and stamped by a Professional Engineer licensed to practice in the State of Arkansas, demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that a proposed development will not result in any increase in flood levels within the community during the occurrence of a base flood event.

Piers are columns of masonry or other structural material (commonly cement blocks stacked up to support a manufactured home), usually rectangular, used to support other structural members. For the purpose of this code chapter, piers must be permanent in nature.

Pilings are steel tubes driven to rock or a suitable soil bearing layer and connected to the foundation of a structure.

Ponding is a flooding effect where floodwaters accumulate in shallow depressions and linger until absorbed or evaporated.

Recreational vehicle means a vehicle which is:

a. Built on a single chassis;
b. 400 square feet or less when measured at the largest horizontal projections;
c. Designed to be self-propelled or permanently towable by a light duty truck; and
d. Not primarily designed for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

Risk Zones categorize special flood hazard areas into groupings by the specific risk of flooding. Zones A, AE or A1-30, AO, and AH are Special Flood Hazard Areas. *See* "***X Risk Zones***" in this section.

Riverine flooding is flooding associated with a river or stream channel.

RV is the acronym for recreational vehicle.

Screw augers are any type of anchor that twists into the soil, typically to a depth of 4 feet or more. They are not suitable for securing manufactured homes against floodwaters because saturated grounds often soften and fail to hold the anchor in place.

Section 404 Wetlands Permit is a permit required under Section 404 of the Clean Water Act for the discharge of dredged and fill material into any surface water of the United States. The US Army Corps of Engineers issues Section 404 permits.

SFHA is the acronym for Special Flood Hazard Area.

Shallow flooding means a depth of less than 3 feet.

Slab anchors are anchors where the hook of the anchor is wrapped around a horizontal rebar in the slab before the concrete is poured.

Special flood hazard areas are geographical areas identified on FEMA flood maps as being at-risk for flooding. The maps further categorize these areas into various flood risk zones A, AE or A1-30, AH, and AO.

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 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 a building, whether or not that alteration affects the external dimensions of the building.

State Coordinating Agency is the agency that acts as a liaison between FEMA and a community for the purposes of floodplain management. The Arkansas Natural Resources Commission is the State Coordinating Agency for Arkansas.

Stream channels are depressed natural pathways through which water of any quantity routinely flows.

Structural development is a development that includes the placement or construction of a structure.

Structure means for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

Substantial damage is damage of any origin where the cost to restore a structure to its original undamaged state would equal or exceed 50% of the market value of the structure before any damage occurred. In determining whether substantial damage has occurred, estimators must use standard contractor and materials costs. There are no exceptions for homeowners who make their own repairs or for discounted or free raw materials.

Substantial improvement is any reconstruction, remodeling, addition or improvement to a structure with a cost equaling or exceeding 50% of the market value of the structure before any improvement. Improvements to correct identified violations of local health, sanitary or safety Codes are not substantial improvements, regardless of the cost, as long as they are the minimum improvement necessary to bring the structure up to Code. Alterations to historical structures are also exempted, as long as the improvement does not affect the structure's official status of "historical structure."

Uses vulnerable to floods are simply any land or structural uses that may be negatively affected by a flood.

Variance is a formal, written permission from the Appeals Board to construct or develop in a way that is inconsistent with the requirements of this Code. The variance only deals with this code chapter – the Appeals Board has no authority to waive any other governmental requirement referred to in this chapter, and has no say in the cost of flood insurance.

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 this Code is presumed to be in violation until such time as that documentation is provided.

Watercourse alteration refers to any change that occurs within the banks of a watercourse.

Water Surface Elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

X Risk Zones are a special group of insurance risk zones. One type, shown as non-shaded areas on FEMA issued flood maps, indicates a zone where flooding is not expected to occur. The second type, shown as shaded areas of FEMA flood maps, indicates a flood hazard area that is expected to be affected by the 500-year flood, but not by the 100-year base flood.

ARTICLE THREE
ADMINISTRATION

Section 1
ADMINISTRATOR

3.1.1 Designation of the Floodplain Administrator.
The Mayor of North Little Rock, or his designee, shall assign a City Engineer to be the Floodplain Administrator.

3.1.2 Duties and responsibilities of the Floodplain Administrator.
It is the duty and responsibility of the Floodplain Administrator or his designee to:

A. Obtain accreditation each year as required by A.C.A. §14-268-106 through the State Coordinating Agency which is the Arkansas Natural Resources Commission.

B. Administer and implement the provisions of this Code and other appropriate sections of 44 CFR (Emergency Management and Assistance - National Flood Insurance Program Regulations) as they pertain to floodplain management.

C. Review applications for Floodplain Development Permits to:

(1) Evaluate proposed projects for reasonable safety from flooding;

(2) Evaluate proposed projects for conformance with No Adverse Impact principles;

(3) Ensure that all other permits necessary (including Section 404 Wetlands Permits as required by the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) for proposed projects are obtained from the appropriate government agency prior to issuing a Floodplain Development Permit; and

(4) Ensure that proposed projects conform to the applicable provisions of this code chapter.

D. Approve or deny applications for Floodplain Development Permits on the basis of:

(1) The proposed development's compliance or non-compliance with the provisions of this chapter;

(2) The expected flood elevation, flood water velocity, flood duration, rate of rise and sediment transport of the floodwaters expected at the proposed development site;

(3) The proposed development's potential to adversely impact life and property by changing flooding patterns, changing erosion rates, or being swept onto other lands by flood waters;

(4) The proposed development's susceptibility to flood damage;

(5) The proposed development's compatibility with existing and planned community development;

(6) The proposed development's accessibility by ordinary and emergency vehicles during flooding events;

(7) The anticipated costs of providing governmental services to the proposed development during and after flooding events, including maintenance and repair of streets, bridges, facilities and public utilities such as sewer, gas, electrical and water systems;

(8) The proposed development's functionally dependent use;

(9) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed development; and

(10) The relationship of the proposed use to the comprehensive plan for that area.

E. Interpret the exact location of the boundaries of Special Flood Hazard Areas whenever a mapped boundary appears to be different from actual field conditions. (The sole purpose of this interpretation is to determinate the applicability of the provisions of this Code to the proposed project.)

F. Notify adjacent communities and the State Coordinating Agency, which is the Arkansas Natural Resources Commission, a minimum of 60 days prior to any alteration or relocation of a watercourse, and submit evidence of all such notifications to FEMA.

G. Ensure that the flood carrying capacity within an altered or relocated portion of a watercourse is not diminished, and that the alteration or relocation does not adversely impact any other lands.

H. Obtain, review and reasonably utilize, whenever the current Flood Insurance Study or current Flood Insurance Rate Map does not provide base flood elevation data, any base flood elevation data and floodway data available from any Federal, State or other source. The Floodplain Administrator may

obtain such data by requiring the applicant to submit it in conjunction with a Floodplain Development Permit application. (The sole use of this data is the administration of the provisions of this code chapter.)

I. Inspect floodplain developments as necessary to ensure construction is in accordance with the application data that formed the basis for the decision to issue the Floodplain Development Permit.

J. Issue Certificates of Compliance.

K. Maintain all records and documents pertaining to this code chapter for public inspection.

Section 2
ESTABLISHMENT OF DEVELOPMENT PERMIT

3.2.1 Floodplain Development Permit.
A Floodplain Development Permit is required for all structural development, placement of manufactured structures, clearing, grading, mining, drilling, dredging, placement of fill, excavating, watercourse alteration, drainage improvements, roadway or bridge construction, individual water or sewer installations or any other development in a Special Flood Hazard Area to ensure conformance with the provisions of this chapter.

3.2.2 Permit Procedures.

A. Application for a Floodplain Development Permit shall be presented to the Floodplain Administrator on forms furnished by him/her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard.

B. The documentation required with each Application for a Floodplain Development Permit, and the specific provisions of this code chapter applicable to the proposed development, are dependent upon the type of development proposed and the Risk Zone of the proposed development site. Section 4.1.1 contains standards for all developments in all Risk Zones. Section 4.2.1 contains standards for specific development types in specific Risk Zones.

C. The decision of the Floodplain Administrator to approve or deny issuance of a Floodplain Development Permit is subject to appeal to the designated Appeal Board. Within North Little Rock, Arkansas the designated Appeal Board is the North Little Rock Board of Adjustment & Appeals.

3.2.3 Procedures for variance from the requirements of this chapter.

A. Applicants must submit petitions for variances directly to the Appeal Board (Section E).

B. Variances may only be issued:

(1) If showing a good and sufficient cause;

(2) Granting of the variance will not result in any adverse impact upon other lands;

(3) If granting of the variance will not result in any additional threats to public safety;

(4) If granting of the variance will not result in extraordinary public expense;

(5) If granting of the variance does not create a nuisance, cause fraud on or victimization of the public, or conflict with existing laws or ordinances;

(6) If granting of the variance will not result in increased flood heights or an increase in expected flood velocities;

(7) If the requested variance is the minimum necessary, considering the flood hazards, to afford the necessary relief; and

(8) Upon determination that the requested variance is necessary to avoid an extraordinary hardship to the applicant.

C. Variances may not be issued for developments inside a regulatory floodway unless:

(1) All requirements of 44 CFR §65.12 are first met; or

(2) The following requirements are met:

a) A No-Rise Certificate signed and sealed by a Professional Engineer licensed to practice in the State of Arkansas is submitted to document that no increase in the base flood elevation would result from granting a variance for the proposed development;

b) Protective measures are employed to minimize damages during flooding events; and

c) The variance does not result in any adverse impact to other lands.

D. Examples of developments for which variance petitions may be appropriate include but are not limited to

(1) The new construction of, or substantial improvement to, a structure on a lot of 1/2 acre or less in size that is surrounded by contiguous lots with existing structures constructed below the base flood elevation;

(2) For the reconstruction, rehabilitation or restoration of an historical structure, provided that:

a) The proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure; and

b) The variance is the minimum necessary to preserve the historic character and design of the structure.

(3) The new construction of, substantial improvement to, or other development necessary to conduct a functionally dependent use, provided that:

a) The criteria outlined in Article 2, Section E, (3) and (4) and Article 2, Section F are met, and

b) The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

3.2.4 Appeal Board.
Within North Little Rock, Arkansas the **Board of Adjustment & Appeals** is the designated Appeal Board.

A. The Appeal Board will consider an appeal only with allegations of an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this code chapter.

B. Upon consideration of the factors noted in Section 3.2.3 and this Section 3.2.4, and the intent of this ordinance, the Appeal Board may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this ordinance.

C. Appeal Board decisions are binding only upon the requirements of this code chapter, and have no bearing on the decision of any lending institution to

require the purchase of flood insurance or on the rate determination of such insurance.

D. Any time the Appeal Board issues a variance, it must provide the applicant with a formal written warning of an increased risk of flood damage due to removal of restrictions designed to lessen such risks. The notice must also warn of a corresponding increase in the cost of flood insurance, since the cost of such insurance will be commensurate with the increased risk.

E. Aggrieved parties may appeal any decision of the Appeal Board to a court of competent jurisdiction.

ARTICLE FOUR
PROVISIONS FOR FLOOD HAZARD REDUCTION

Section 1
GENERAL STANDARDS

4.1.1 General Standards.
The following standards apply to ***all*** developments in Special Flood Hazard Areas, regardless of the type of proposed development or the Risk Zone of the proposed site.

A. All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

B. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

C. All new construction or substantial improvements shall be constructed with materials resistant to flood damage.

D. All critical facilities constructed or substantially improved in Special Flood Hazard Areas (SFHA) must be constructed or modified to exceed 500-year flood protection standards or located outside the SFHA.

E. The placement or construction of all new structures must be in full compliance with the provisions of this code chapter.

F. For the purposes of this code chapter, all mixed-use structures are subject to the more stringent requirements of residential structures.

G. A substantial improvement or substantial damage to an existing structure triggers a requirement to bring the entire structure into full compliance with the provisions of this code chapter. The existing structure, as well as any reconstruction, rehabilitation, addition, or other improvement, must meet the standards of new construction in this code chapter.

H. Any improvement to an existing structure that is less than a substantial improvement requires the improvement, but not the existing structure, to be in full compliance with the provisions of this code chapter.

I. All manufactured homes to be placed within a Special Flood Hazard Area on a community's FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured

homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces. Screw augers or expanding anchors will not satisfy the requirement of this provision.

J. The design or location of electrical, heating, ventilation, plumbing, and air conditioning equipment for new structures, or for any improvements to an existing structure, must prevent water from entering or accumulating within the components during base flood events.

K. The design of all new and replacement water supply systems must minimize or eliminate infiltration of floodwaters into the system during base flood events.

L. The design of all new and replacement sanitary sewage systems must minimize or eliminate infiltration of floodwaters into the system during flooding events, and must prevent sewage discharge from the systems into floodwaters.

M. The placement of on-site waste disposal systems must avoid impairment to, or contamination from, the disposal system during base flood events.

N. Construction of basement foundations in any Special Flood Hazard Area is prohibited.

O. New construction and substantial improvements, with fully enclosed areas (such as garages and crawlspaces) below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are below the base flood elevation shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

(1) A minimum of two openings on separate walls having a total net area of not less than 1 square inch for every square foot of enclosed area subject to flooding shall be provided.

(2) The bottom of all openings shall be no higher than 1 foot above grade.

(3) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

P. The placement of recreational vehicles (RV) in Special Flood Hazard Areas must either:

(1) Be temporary, as demonstrated by the RV being fully licensed, being on wheels or a jacking system, attached to the site only by quick disconnect type utilities and security devices, having no permanently attached additions, and being immobile for no more than 180 consecutive days; or

(2) Meet all provisions of this code chapter applicable to manufactured home structures.

Q. All proposals for the development of a residential subdivision, commercial business park or manufactured home park/subdivision must have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

R. All proposals for the development of a residential subdivision, commercial business park or a manufactured home park/subdivision must include an adequate drainage plan to reduce exposure to flood hazards.

S. All proposals for the development of a commercial business park or a manufactured home park/subdivision must include an adequate evacuation plan for the escape of citizens from affected nonresidential structures during flooding events.

Section 2
RISK ZONE SPECIFIC STANDARDS

4.2.1 Risk Zone Specific Standards.
In addition to the General Standards, the following standards apply to specific development types in specific Risk Zones. Risk Zones listed in this chapter that do not appear on the current FIRM are not applicable.

I. In AE or A1-30 Risk Zones
High risk areas of stream channel and adjacent floodplain.

A. For Residential Structures in Zone AE or A1-30.

(1) For all new residential structures, the top surface of the lowest floor must have an elevation 1 foot above the published BFE. This elevation must be documented on an Elevation Certificate properly completed by a

Professional Engineer, Surveyor or Architect licensed to practice in the State of Arkansas.

(2) For all substantial improvements or substantial damage to existing residential structures, the entire structure becomes subject to the requirements of a new residential structure.

(3) For any reconstruction, rehabilitation, addition, or other improvement to an existing residential structure that is less than a substantial improvement, only the improved area, but not the entire structure, becomes subject to the requirements of a new residential structure.

B. For Nonresidential Structures in Zone AE or A1-30.

(1) All new commercial, industrial or other nonresidential structures must either:

a) Have the lowest floor (including basement) elevated 1 foot above the base flood level, or

b) Be floodproofed such that, together with attendant utility and sanitary facilities be designed so that below an elevation of 1 foot above the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

c) A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify on a Floodproofing Certificate that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator.

(2) For all substantial improvements or substantial damage to existing commercial, industrial or other nonresidential structures, the entire structure becomes subject to the requirements of a new nonresidential structure.

(3) For any reconstruction, rehabilitation, addition, or other improvement to an existing nonresidential structure that is less than a substantial improvement, only the improved area, but not the entire structure, becomes subject to the requirements of a new nonresidential structure.

C. **For Manufactured Homes in Zone AE or A1-30.**

(1) All manufactured homes that are placed or substantially improved on sites:

a) Outside of a manufactured home park or subdivision;

b) In a new manufactured home park or subdivision;

c) In an expansion to an existing manufactured home park or subdivision; or

d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated 1 foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(2) Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision on the community's FIRM that are not subject to the provisions of paragraph (1.) of this section be elevated so that either:

a) The lowest floor of the manufactured home is 1 foot above the base flood elevation, or

b) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(3) For all substantial improvements or substantial damage to existing manufactured home, the entire structure becomes subject to the requirements of a new manufactured home.

(4) For any reconstruction, rehabilitation, addition, or other improvement to an existing manufactured home that is less than a substantial improvement, only the improved area, but not the entire structure, becomes subject to the requirements of a new manufactured home.

D. **When a regulatory floodway has not been designated**, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted

within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

II. Floodways

High risk areas of stream channel and adjacent floodplain.

A. Developments in regulatory floodways are prohibited, ***unless***

(1) A No-Rise Certificate, signed and stamped by a Professional Engineer licensed to practice in the State of Arkansas, is submitted to demonstrate through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed development would not result in any increase in flood levels within the community during the occurrence of a base flood event; or

(2) All requirements of 44 CFR §65.12 are first met.

B. A Manufactured Home may ***NOT*** be placed in a regulatory floodway, regardless of elevation height, anchoring methods, or No-Rise Certification.

III. In AH or AO Risk Zones

Special Flood Hazard Areas of shallow flooding.

A. **For Residential Structures in Zones AH or AO.**

(1) All new residential structures must be constructed with the top surface of the lowest floor elevated 1 foot above the published BFE, or 1 foot above the highest adjacent grade in addition to the depth number specified (at least 2 feet if no depth number is specified) on the community's FIRM. This elevation must be documented on an Elevation Certificate properly completed by a Professional Engineer, Surveyor or Architect licensed to practice in the State of Arkansas.

(2) For all substantial improvements or substantial damage to existing residential structures the entire structure becomes subject to the requirements of a new residential structure.

(3) For any reconstruction, rehabilitation, addition, or other improvement to an existing residential structure that is less than a substantial

d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated 1 foot above the published BFE, or 1 foot above the highest adjacent grade in addition to the depth number specified (at least 2 feet if no depth number is specified) on the community's FIRM, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(2) Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision on the community's FIRM that are not subject to the provisions of paragraph (1.) of this section be elevated so that either:

a) The lowest floor of the manufactured home meets the elevation standard of paragraph (1.), or

b) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(3) For all substantial improvements or substantial damage to existing manufactured home, the entire structure becomes subject to the requirements of a new manufactured home.

(4) For any reconstruction, rehabilitation, addition, or other improvement to an existing manufactured home that is less than a substantial improvement, only the improved area, but not the entire structure, becomes subject to the requirements of a new manufactured home.

D. **Where FEMA has not established a regulatory floodway in Zone in Zones AH or AO**, no Floodplain Development Permit may be issued unless a detailed engineering analysis is submitted along with the application that demonstrates the increase in base floodwater elevation due to the proposed development and all cumulative developments since the publication of the current FIRM will be less than 1 foot.

E. **Require adequate drainage paths** around structures on slopes, to guide flood waters around and away from proposed structures.

IV. In "A" Risk Zones

Special Flood Hazard Areas with no base flood elevations determined.

A. **In Zone A, the applicant or the applicant's agent must determine a base flood elevation prior to construction.** The BFE will be based on a source or method approved by the local Floodplain Administrator.

B. **For Residential Structures in Zone A.**

(1) For all new residential structures, the top surface of the lowest floor must have an elevation 1 foot above the BFE. This elevation must be documented on an Elevation Certificate properly completed by a Professional Engineer, Surveyor or Architect licensed to practice in the State of Arkansas.

(2) For all substantial improvements or substantial damage to existing residential structures, the entire structure becomes subject to the requirements of a new residential structure.

(3) For any reconstruction, rehabilitation, addition, or other improvement to an existing residential structure that is less than a substantial improvement, only the improved area, but not the entire structure, becomes subject to the requirements of a new residential structure.

C. **For Nonresidential Structures in Zone A.**

(1) All new commercial, industrial or other nonresidential structures must either:

a) Have the lowest floor (including basement) elevated 1 foot above the base flood level, or

b) Be floodproofed such that, together with attendant utility and sanitary facilities, be designed so that below an elevation of 1 foot above the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

c) A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify on a Floodproofing Certificate that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to

mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator.

(2) For all substantial improvements or substantial damage to existing commercial, industrial or other nonresidential structures the entire structure becomes subject to the requirements of a new nonresidential structure.

(3) For any reconstruction, rehabilitation, addition, or other improvement to an existing nonresidential structure that is less than a substantial improvement, only the improved area, but not the entire structure, becomes subject to the requirements of a new nonresidential structure.

D. **For Manufactured Homes in Zone A.**

(1) All manufactured homes that are placed or substantially improved on sites:

a) Outside of a manufactured home park or subdivision;

b) In a new manufactured home park or subdivision;

c) In an expansion to an existing manufactured home park or subdivision; or

d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated 1 foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(2) Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision on the community's FIRM that are not subject to the provisions of paragraph (1.) of this section be elevated so that either:

a) The lowest floor of the manufactured home is 1 foot above the base flood elevation; or

b) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(3) For all substantial improvements or substantial damage to existing manufactured home, the entire structure becomes subject to the requirements of a new manufactured home.

(4) For any reconstruction, rehabilitation, addition, or other improvement to an existing manufactured home that is less than a substantial improvement, only the improved area, but not the entire structure, becomes subject to the requirements of a new manufactured home.

E. **Base flood elevation data and a regulatory floodway**, utilizing accepted engineering practices, shall be generated for subdivision proposals and other proposed development including the placement of **manufactured home parks and subdivisions which is greater than 50 lots or 5 acres, whichever is lesser**, if not otherwise provided.