

# ***Flood Damage Prevention Ordinance for the City of Henderson and Henderson County***



Prepared by Flood Ordinance Technical Working Group:

Kathy Ferrell, Executive Director, Henderson City-County Planning Commission

Bill Hubiak, P.E., Henderson County Engineer

Randy Tasa, Henderson County Code Enforcement

Buzzy Newman, Asst. City Manager

Doug Boom, P.E., Henderson City Engineer

Don Summers, City of Henderson Code Enforcement

John Stroud, City of Henderson Code Enforcement

Brian Bishop, Henderson City-County Planning Commission

Ken Ferry, P.E., HWU Chief Engineer

Tom Williams, P.E., HWU Director of Engineering

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**CITY OF HENDERSON – HENDERSON COUNTY**  
***Flood Damage Prevention Ordinance***

**BACKGROUND AND PURPOSE**

The Legislature of the Commonwealth of Kentucky has delegated responsibility to local government units to adopt regulations designed to promote the public health, safety, and general welfare. Flood damage prevention is among those responsibilities, and each community in Kentucky must adopt an ordinance that meets or exceeds the minimum requirements of Federal Regulations in order to maintain good standing in the National Flood Insurance Program (NFIP). The NFIP is a program enabling property owners in participating communities to purchase insurance as a protection against flood losses, in exchange for state and community floodplain management regulations that reduce future flood damages.

If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in flood prone areas, the federal government will make flood insurance available within the community as financial protection against flood losses. The insurance is designed to provide an alternative to disaster assistance and to reduce the rising costs of repairing damage to buildings and their contents caused by floods.

If a community backs out of the NFIP, Federally backed flood insurance will no longer be available. No property owner or renter within the community will be able to purchase a new policy and existing flood insurance policies will not be renewed, and lenders may call in mortgages. No Federal disaster assistance may be provided to repair insurable buildings located in a flood area. Federally insured or regulated lending institutions, such as banks and credit unions, must notify applicants seeking loans for insurable buildings that no loan that requires Federally backed insurance is available, and that the property would not be eligible for Federal disaster relief.

Kentucky has 106 participating counties, and 212 participating communities.

**PROCESS FOR ADOPTION OF NEW MAPS**

- The preliminary Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) data is delivered to the community by certified mail. A 30-45 day review period follows.
- After the initial review period, KDOW will schedule a Preliminary D-FIRM Community Coordination (PDCC) meeting. At the PDCC meeting, local officials will provide comments to KDOW on the D-FIRMs.
- After all comments are addressed the Kentucky Division of Water (KDOW) publishes a notice of the proposed new/revised Base Flood Elevations (BFEs) in a local paper, twice, one week apart. On the date of the second publication, a 90-day appeal period begins.
- The community reviews the preliminary FIS/FIRM information and submits its comments within the 90-day period; comments are processed and incorporated into the study and map as appropriate.
- The community determines what, if any, changes to its current ordinance are required.

- Once all appeals and/or protests are resolved, a Letter of Final Determination (LFD) is sent to the community stating that the study and map will become effective in six months.
- Henderson adopts the new ordinance (publishing the public notice, holding public hearings, etc.), with the new FIRM effective date within 90 days (prior to the end of the six month compliance period), then forwards a copy of the ordinance to the State NFIP Coordinator. The Coordinator forwards the ordinance to FEMA.

#### PROPOSED CHANGES AND CORRECTIONS IN HENDERSON ORDINANCES

In these items, the Base Flood Elevation (BFE) is defined as the water surface elevation that results from a flood that has a 1-percent chance of being exceeded in any given year. Sometimes this is referred to as the 100-year flood.

Added Critical Facility Standards: Critical facilities include, but are not limited to: schools, nursing homes, hospitals, police, fire and emergency response installations; vehicle and equipment storage facilities; emergency operations centers likely to be called upon before, during and after a flood; public and private utility facilities important to maintaining or restoring normal services before, during and after a flood; and those facilities or installations which produce, use or store volatile, flammable, explosive, toxic and/or water-reactive materials, hazardous materials or hazardous waste. Critical facilities are required to be one foot above the 500-year flood elevation, and have at least one access road that is at or above the 500-year flood.

Added standards for Accessory Structures: Examples of accessory structures are detached garages, carports, storage sheds, pole barns, and hay sheds, use of which is incidental to the use of the principle structure. Accessory structures must be anchored, non-habitable, be constructed of flood-resistant materials below the BFE, allow free-flow of water through the structure, have utilities above the BFE, can only be used for storage or parking, and can't be modified for a different use after permitting.

Construction Standards: General Construction Standards (Sec. 13-17) have not changed substantially, but Specific Standards (Sec 13-18) are more complete. One change is the requirement that mechanical equipment now be elevated two feet above the BFE, in addition to lowest floor, including basement. Mechanical equipment is defined as any HVAC, mechanical or electrical equipment not designed for immersion in water.

Subdivision Plans: All subdivision plans must now include the elevation of proposed structure(s) and lowest adjacent grade. If the site is filled above the base flood elevation, the lowest floor and lowest adjacent grade elevations shall be certified by a registered professional engineer or surveyor. We removed the requirement for dedication of flood hazard areas as easements, since this previous requirement may have constituted a taking under recent court decisions.

Vegetative Buffer Strips: Vegetative Buffer Strips will be required for construction along and either side of blue-line streams, creeks, rivers, lakes and impoundments, and all streams labeled with names or numbers on the maps. Vegetative buffer strips, made up of native, riparian vegetation, will be preserved within 25 feet of the top of bank. This measure is related to new water quality regulations from USEPA. It applies to new development, and is not intended to impact existing agricultural uses, in this ordinance.

Appeals and Variances: The ordinance as now written has enforcement handled through the Planning Commission. The hope is that the City and County will adopt identical ordinances, which will make enforcement easier and more uniform. Since the HCCPC has access to all the technical resources from the City, County, and HWU, this seems to be the logical place to hear variances requests, and appeals from decisions of the Flood Plain Administrator. The Planning Commission staff, and City and County Code Enforcement have agreed that the Flood Plain Administrator will be a member of the Planning Commission staff.

***CITY OF HENDERSON***

**CHAPTER 13 – FLOOD DAMAGE PREVENTION****ARTICLE I. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES****Sec. 13-1. Statutory authorization.**

The Legislature of the Commonwealth of Kentucky has in Kentucky Revised Statutes delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the board of commissioners of the City of Henderson, Kentucky, hereby adopts the following floodplain management ordinance, as follows.

(Ord. No. 7-87, 3-10-87)

**Sec. 13-2. Findings of fact.**

(a) The flood hazard areas of Henderson, Kentucky, are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the location in flood hazard areas of uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

(Ord. No. 7-87, 3-10-87)

**Sec. 13-3. Statement of purpose.**

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

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

(Ord. No. 7-87, 3-10-87)

**Sec. 13-4. Objectives.**

The objectives of this chapter are:

- (a) To protect human life and health;
- (b) To minimize expenditure of public money for costly flood control projects;

- (c) To minimize the need for rescue and relief efforts associated with flooding which are generally undertaken at the expense of the general public;
- (d) To minimize prolonged business interruptions;
- (e) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in Special Flood Hazard Areas;
- (f) To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas;
- (g) To insure that potential home buyers are notified that property is in a flood area; and
- (h) To ensure that those who occupy a Special Flood Hazard Area assume responsibility for their actions.

(Ord. No. 7-87, 3-10-87)

## ARTICLE II. DEFINITIONS

### [Sec. 13-4.1. Words and terms defined.]

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

*A Zone* - Portions of the special flood hazard area (SFHA) in which the principal source of flooding is runoff from rainfall, snowmelt, or a combination of both. In A zones, floodwaters may move slowly or rapidly, but waves are usually not a significant threat to structures. Areas of 100-year flood, base flood elevations and flood hazard factors are not determined.

*Accessory structure* - A structure located on the same parcel of property as the principal structure, the use of which is incidental to the use of the principal structure. Accessory structures should constitute a minimal initial investment, may not be used for human habitation, and should be designed to have minimal flood damage potential. Examples of accessory structures are detached garages, carports, storage sheds, pole barns, and hay sheds.

*Accessory use* - A use which is incidental and subordinate to the principal use of the parcel of land on which it is located.

*Addition (to an existing structure)* means any walled and roofed expansion to the perimeter of a structure in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

*AE zones* - Special Flood Hazard Areas inundated by the 1% annual flood (100-year flood). Base flood elevations (BFEs) are determined.

*Appeal* means a request for a review of the Floodplain Administrator's interpretation of any provision of this chapter or from the Floodplain Administrator's ruling on a request for a variance.

*Area of shallow flooding* means a designated AO or AH Zone on the City of Henderson's flood insurance rate map (FIRM) with base flood depths from one (1) to three (3) feet where a clearly defined

channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

*Base flood* means the flood having a one-percent (1%) chance of being equaled or exceeded in any given year (also called the “100-year flood”).

*Base Flood Elevation (BFE)* - The elevation shown on the Flood Insurance Rate Map (FIRM) that indicates the water surface elevation resulting from a flood that has a one-percent (1%) or greater chance of being equaled or exceeded in any given year.

*Basement* means that portion of a structure having its floor subgrade (below ground level) on all sides.

*Breakaway wall* means a wall that is not part of the structural support of the structure and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the structure or the supporting foundation system.

*Community Rating System (CRS)* - A program developed by the Federal Insurance Administration to provide incentives to those communities in the Regular Program to go beyond the minimum floodplain management requirements to develop extra measures for protection from flooding.

*Community Flood Hazard Area (CFHA)* - An area that has been determined by the Floodplain Administrator (or other delegated, designated, or qualified community official) from available technical studies, historical 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. Included are areas downstream from dams.

*Critical facility* - Any property that, if flooded, would result in severe consequences to public health and safety or a facility which, if unusable or unreachable because of flooding, would seriously and adversely affect the health and safety of the public. Critical facilities include, but are not limited to: housing likely to contain occupants not sufficiently mobile to avoid injury or death unaided during a flood; schools, nursing homes, hospitals, police, fire and emergency response installations, vehicle and equipment storage facilities, emergency operations centers likely to be called upon before, during and after a flood, public and private utility facilities important to maintaining or restoring normal services before, during and after a flood, and those facilities or installations which produce, use or store volatile, flammable, explosive, toxic and/or water-reactive materials, hazardous materials or hazardous waste.

*D zone* - An area in which the flood hazard is undetermined.

*Development* means any manmade change to improved or unimproved real estate, including, but not limited to, structures, mining, dredging, filling, grading, paving, excavating, drilling operation, or permanent storage of equipment or materials.

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

*Elevation Certificate* - A statement certified by a registered professional engineer or surveyor on the FEMA-approved form in effect at the time of certification that verifies a structure's elevation and other related information to verify compliance with this ordinance.

*Enclosure* - That portion of a structure below the Base Flood Elevation (BFE) used solely for parking of vehicles, limited storage, or access to the structure.

*Encroachment* - The physical advance or infringement of uses, plant growth, fill, excavation, structures, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

*Existing construction* means any structure for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMS effective before that date. "Existing construction" may also be referred to as "existing structures".

*Existing manufactured home park / subdivision* means a manufactured home park/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 first flood plain management ordinance adopted by the City of Henderson based on specific technical base flood elevation data which established the area of special flood hazards.

*Expansion to an existing manufactured home park/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).

*Five-Hundred Year Flood* - The flood that has a 0.2 percent chance of being equaled or exceeded in any year. Areas subject to the 500-year flood have a moderate to low risk of flooding.

*Flood, Flooding, or Flood Waters* – are sometimes used interchangeably, and mean:

- 1) A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters;
- 2) The unusual and rapid accumulation or runoff of surface waters from any source;
- 3) The condition resulting from flood-related erosion.

*Flood hazard boundary map (FHBM)* means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as Zone A or as amended by FEMA by letter or otherwise.

*Flood insurance rate map (FIRM)* means a map on which the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA) has delineated special flood hazard areas and risk premium zones. These maps are now made available in digital format (DFIRM), but the paper copies of the maps on file are the maps of record.

*Flood Insurance Study (FIS)* - The official report provided by the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA) containing flood profiles, the Flood Insurance

Rate Map (FIRM), and/or the Flood Boundary Floodway Map (FBFM), and the water surface elevation of the base flood.

*Floodplain or flood-prone area* - Any land area susceptible to being inundated by flood waters from any source.

*Floodplain Administrator* - The individual appointed by a NFIP participating community to administer and enforce the floodplain management ordinances.

*Floodplain Management* - The operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management ordinances, and open space plans.

*Floodplain Management Regulations* - This chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control), and other applications of police power, which control development in flood-prone areas. This term describes federal, state and/or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

*Floodproofing* - Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

*Floodproofing Certificate* - A certification by a registered professional engineer or architect, on a FEMA-approved form in effect at the time of certification stating that a non-residential structure, together with attendant utilities and sanitary facilities, is watertight to a specified design elevation with walls that are substantially impermeable to the passage of water, and all structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy and anticipated debris impact forces.

*Floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as the "regulatory floodway".

*Floodway fringe* - That area of the floodplain on either side of the regulatory floodway where encroachment may be permitted without additional hydraulic and/or hydrologic analysis.

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

*Fraud and victimization* - As related in Article 6, Appeals and Variance Procedures of this ordinance, means that the variance granted must not cause fraud on or victimization of the public. In examining this requirement, the governing body will consider the fact that every newly constructed structure adds to government responsibilities and remains a part of the community for fifty to one hundred years. Structures that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the

property and the community as a whole are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages may incur. In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.

*Governing body* - The local governing unit, i.e. county or municipality that is empowered to adopt and implement ordinances to provide for the public health, safety and general welfare of its citizenry. The governing body may delegate administration and enforcement of this ordinance to a department of local government, or to a joint City-County Board.

*Hazard potential* - The possible adverse incremental consequences that result from the release of water or stored contents due to failure of a dam or mis-operation of a dam or appurtenances. The hazard potential classification of a dam does not reflect in any way the current condition of a dam and its appurtenant structures (e.g., safety, structural integrity, flood routing capacity).

*Highest adjacent grade* means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

*Historic structure* means any structure that is:

- (1) Listed individually in the National Register of Historic Places (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.
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or district preliminarily determined by the Secretary to qualify as a registered historic district;
- (3) 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
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified by an approved state program as determined by the Secretary of the Interior.

*Kentucky Revised Statute 151.250* – Plans for dams, levees, etc to be approved and permit issued by cabinet – (Environmental and Public Protection Cabinet).

- (1) Notwithstanding any other provision of law, no person and no city, county or other political subdivision of the state, including levee districts, drainage districts, flood control districts or systems, or similar bodies, shall commence the construction, reconstruction, relocation or improvement of any dam, embankment, levee, dike, bridge, fill or other obstruction (except those constructed by the Department of Highways) across or along any stream, or in the floodway of any stream, unless the plans and specifications for such work have been submitted by the person or political subdivision responsible for the construction, reconstruction or improvement and such plans and specifications have been approved in writing by the cabinet and a permit issued. However, the cabinet by regulation may exempt those dams, embankments or other obstructions which are not of such size or type as to require approval by the cabinet in the interest of safety or retention of water supply.
- (2) No person, city, county, or other political subdivision of the state shall commence the filing of any area with earth, debris, or any other material, or raise the level of any area in any manner, or place a structure, barrier or obstruction of any sort on any area located adjacent to a river or

stream or in the floodway of the stream so that such filling, raising, or obstruction will in any way affect the flow of water in the channel or in the floodway of the stream unless plans and specifications for such work have been submitted to and approved by the cabinet and a permit issued as required in subsection (1) above.

- (3) Nothing in this section is intended to give the cabinet any jurisdiction or control over the construction, reconstruction, improvement, enlargement, maintenance or operation of any drainage district, ditch or system established for agricultural purposes, or to require approval of the same except where such obstruction of the stream or floodway is determined by the cabinet to be a detriment or hindrance to the beneficial use of water resources in the area, and the person or political subdivision in control thereof so notified. The Department for Natural Resources through KRS Chapter 350 shall have exclusive jurisdiction over KRS Chapter 151 concerning the regulation of dams, levees, embankments, dikes, bridges, fills, or other obstructions across or along any stream or in the floodway of any stream which structures are permitted under KRS Chapter 350 for surface coal mining operations.

*Letter of Map Change (LOMC)* – Is an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, and Flood Insurance Studies. LOMC's include the following categories:

- 1) Letter of Map Amendment (LOMA) – A revision based on technical data showing that a property was incorrectly included in a designated SFHA. A LOMA amends the current effective FIRM and establishes that a specific property is not located in a SFHA.
- 2) Letter of Map Revision (LOMR) - A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features.
- 3) Letter of Map Revision – Fill (LOMR\_F) – A determination that a structure or parcel has been elevated by properly placed engineered fill above the BFE and is, therefore, excluded from the SFHA.

*Levee* - A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

*Levee System* - A flood protection system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

For a levee system to be recognized, the following criteria must be met:

- 1) All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual (a copy of which must be provided to FEMA by the operator when levee or drainage system recognition is being sought or revised).
- 2) All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.

*Limited storage* - An area used for storage and intended to be limited to incidental items which can withstand exposure to the elements and have low flood damage potential. Such an area must be of flood resistant material, void of utilities except for essential lighting, and cannot be temperature controlled.

*Lowest adjacent grade* - The elevation of the sidewalk, patio, deck support, or basement entryway immediately next to the structure and after the completion of construction. It does not include earth that is emplaced for aesthetic or landscape reasons around a foundation wall. It does include natural ground or properly compacted fill that comprises a component of a structure's foundation system.

*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, structure access or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

*Manufactured home* means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for one hundred eighty (180) consecutive days or longer and intended to be improved property. The term "manufactured home" does not include a "recreational vehicle" (see Recreational Vehicle).

*Manufactured home park/subdivision* - A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

*Map* - The Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by the Federal Emergency Management Agency (FEMA).

*Map Panel Number* - The four-digit number on a flood map, followed by a letter suffix, assigned by FEMA. The first four digits represent the map panel. The letter suffix represents the number of times the map panel has been revised. (The letter "A" is not used by FEMA, the letter "B" is the first revision.)

*Market value* - The structure value, excluding the land (as agreed between a willing buyer and seller), as established by what the local real estate market will bear. Market value can be established by independent certified appraisal; replacement cost depreciated by age of structure (Actual Cash Value) or adjusted assessed values.

*Mean sea level* means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For the purposes of the National Flood Insurance Program, the MSL is used as a reference for establishing various elevations within the floodplain as shown on a community's FIRM. For purposes of this ordinance, the term is synonymous with the North American Vertical Datum (NAVD) 1988.

*Mechanical equipment* – For the purpose of this ordinance, defined as electrical, heating, air condition equipment, and other machinery or equipment servicing the structure which is not designed for immersion in water.

*Mitigation* - Sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. The purpose of mitigation is twofold: to protect people and structures, and to minimize the costs of disaster response and recovery.

*National Flood Insurance Program (NFIP)* - The federal program that makes flood insurance available to owners of property in participating communities nationwide through the cooperative efforts of the federal government and the private insurance industry.

*New construction* means structures for which the "start of construction" commenced on or after the effective date of this chapter [Ordinance Number 7-87] 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 the City of Henderson's floodplain management ordinance.

*Non-Residential* – Structures that are not designed for human habitation, including but is not limited to: small business concerns, churches, schools, farm structures (including grain bins and silos), pool houses, clubhouses, recreational structures, mercantile structures, agricultural and industrial structures, warehouses, and hotels or motels with normal room rentals for less than 6 months duration.

*North American Vertical Datum (NAVD)* – As corrected in 1988, a vertical control used as a reference for establishing varying elevations within the floodplain. Refer to FIRM or DFIRM legend panel for correct datum. Whenever elevations are referred to, they shall be stated in reference to the datum of the FIRMs or DFIRMs.

*Obstruction* - Includes but is not limited to any dam, wall, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, structure, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

*One-Hundred Year Flood (100-Year Flood) (see Base Flood)* - The flood that has a 1-percent or greater chance of being equaled or exceeded in any given year. Any flood zone that begins with the letter A is subject to the 100-year flood.

*Participating Community* - A community that voluntarily elects to participate in the NFIP by adopting and enforcing floodplain management regulations that are consistent with the standards of the NFIP.

*Pre-FIRM Construction* - Construction or substantial improvement, which started on or before December 31, 1974, or before the effective date of the initial FIRM of the community, whichever is later.

*Post-FIRM Construction* - Construction or substantial improvement that started on or after the effective date of the initial FIRM of the community or after December 31, 1974, whichever is later.

*Probation* - A means of formally notifying participating NFIP communities of violations and deficiencies in the administration and enforcement of the local floodplain management regulations. During periods of probation, each insurance policy is subject to a \$50 surcharge.

*Program Deficiency* - A defect in a community's floodplain management regulations or administrative procedures that impairs effective implementation of those floodplain management standards or of the standards of 44 CFR 60.3, 60.4, 60.5, and/or 60.6.

*Public Safety and Nuisance* - Anything which is injurious to 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* means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred (400) square feet or less when measured at the largest horizontal projection;
- (3) Designed to be self-propelled or permanently towable by a light duty truck; and
- (4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

*Regular Program* - The phase of a community's participation in the NFIP where more comprehensive floodplain management requirements are imposed and higher amounts of insurance are available based upon risk zones and elevations determined in a FIS.

*Regulatory floodway* - The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. See Base Flood.

*Remedy a violation* - The process by which a community brings a structure or other development into compliance with State or local floodplain management regulations, or, if this is not possible, to reduce the impact of non-compliance. Reduced impact may 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 state or federal financing exposure with regard to the structure or other development.

*Repair* - The reconstruction or renewal of any part of an existing structure.

*Repetitive Loss* - Flood-related damages sustained by a structure on two or more separate occasions during a 10-year period where the value of damages equals or exceeds an average of 50% of the current value of the structure, beginning on the date when the damage first occurred, or, four or more flood losses of \$1000.00 or more over the life of the structure, or, three or more flood losses over the life of the structure that are equal to or greater than the current value of the structure.

*Riverine* - Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

*Sand dunes* mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.

*Section 1316* - That section of the National Flood Insurance Act of 1968, as amended, which states that no new or renewal flood insurance coverage shall be provided for any property that the Administrator 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.

*Special flood hazard area (SFHA)* - That portion of the floodplain subject to inundation by the base flood and/or flood-related erosion hazards as shown on a FHBM or FIRM as Zone A or AE.

*Start of construction* (includes substantial improvement and other proposed new development), and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, addition placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory structures, 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 structure, whether or not that alteration affects the external dimensions of the structure.

*Structure* means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other manmade facilities or infrastructures.

*Subdivision* - Any division, for the purposes of sale, lease, or development, either on the installment plan or upon any and all other plans, terms and conditions, of any tract or parcel of land into two (2) or more lots or parcels.

*Subrogation* - An action brought by FEMA to recover insurance money paid out where all or part of the damage can be attributed to acts or omissions by a community or other third party.

*Substantial damage* means any damage of any origin to a structure for which the cost of repairs equals or exceeds fifty (50) percent of the market value of the structure before the damage occurred. This term includes structures that are categorized as repetitive loss. For the purposes of this definition, "repair" is considered to occur when the first repair or reconstruction of any wall, ceiling, floor, or other structural part of the structure commences.

The term does not apply to:

- a.) Any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which have been identified by a Code Enforcement Official and which are solely 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".

*Substantial improvement* means any combination of repairs, reconstruction, alteration, or improvements to a structure, taking place during a one-year period, in which the cumulative cost equals or exceeds fifty (50) percent of the current market value of the structure. For the purposes of this definition, an improvement occurs when the first alteration of any wall, ceiling, floor, or other structural part of the structure commences, whether or not that alteration affects the external dimensions of the structure. The term does not apply to:

- a.) Any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which have been identified by the Codes Administrator and which are solely 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"; or
- c.) Any structure that has been damaged from any source or is categorized as repetitive loss.

*Substantially improved existing manufactured home parks or subdivisions* is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities, and pads equals or exceeds fifty (50) percent of the value of the streets, utilities and pads before repair, reconstruction or improvement commenced.

*Suspension* - Removal of a participating community from the NFIP for failure to enact and/or enforce floodplain management regulations required for participation in the NFIP. New or renewal flood insurance policies are no longer available in suspended communities.

*Utilities* - Includes electrical, heating, ventilation, plumbing, and air conditioning equipment.

*Variance* is a grant of relief from the requirements of this chapter which permits construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary hardship.

*Vegetative Buffer Strip (Riparian Zone)* is an undeveloped area directly adjacent to a body of water, stream or channel. Buffer Strips can be comprised of existing plants on the site and/or new plantings, and include aquatic plants in shallow water, water-tolerant plants along the bank or shore, and upland plants in dry soils. The primary purposes of Vegetative Buffer Strips are to:

- a) Reduce runoff by increasing stormwater infiltration into soil, decreasing nutrients and other pollutants entering the water.
- b) Stabilize soils with plant root systems.
- c) Reduce bank and shoreline erosion due to stream velocity and wave action.
- d) Filter water with aquatic vegetation.
- e) Improve wildlife and fish habitat by providing food, shelter, and shade.

*Violation* - Failure of a structure or other development to fully comply with this ordinance. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

*Watercourse* - A lake, river, creek, stream, wash, channel or other topographic feature on or over which water flows at least periodically.

*Water surface elevation* - The height, in relation to the North American Vertical Datum (NAVD) 1988, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

*Watershed* - All the area within a geographic boundary from which water, sediments, dissolved materials, and other transportable materials drain or are carried by water to a common outlet, such as a point on a larger stream, lake, or underlying aquifer.

*X zones* - Areas of the 0.2% annual chance (500-year) flood, areas subject to the 100-year flood with average depths of less than one foot or with contributing drainage area less than 1 square mile, and areas protected by levees from the base flood. Unshaded X zones are areas determined to be outside the 500-year floodplain, where the annual exceedance probability of flooding is less than 0.2 percent.

*Zone* - A geographical area shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map that reflects the severity or type of flooding in the area.  
(Ord. No. 7-87, 3-10-87; Ord. No. 44-94, 8-23-94)

### ARTICLE III. GENERAL PROVISIONS

#### **Sec. 13-5. Lands to which this ordinance applies.**

This chapter shall apply to all Special Flood Hazard Areas (SFHA), areas applicable to KRS 151.250 and, as determined by the Floodplain Administrator or other delegated, designated, or qualified community official as determined by the Board of Commissioners of the City of Henderson, Kentucky from available technical studies, historical information, and other available and reliable sources, areas within the jurisdiction of the City of Henderson, Kentucky, which may be subject to periodic inundation by floodwaters that can adversely affect the public health, safety, and general welfare of the citizens of the City of Henderson, Kentucky.  
(Ord. No. 7-87, 3-10-87)

#### **Sec. 13-6. Basis for establishing the areas of special flood hazard.**

The areas of special flood hazard identified by the Federal Emergency Management Agency, the Flood Insurance Study (FIS) for Henderson County, effective February 20, 2013, with accompanying Flood Insurance Rate Maps (FIRMS), other supporting data and any subsequent amendments thereto, are hereby adopted by reference and declared to be a part of these regulations by the City of Henderson, Kentucky, and for those land areas acquired by the City of Henderson, Kentucky through annexation. This FIS and attendant mapping is the minimum area of applicability of this ordinance and may be supplemented by studies for other areas which allow implementation of this ordinance and which are recommended to the Board of Commissioners by the Floodplain Administrator and are enacted by the Board of Commissioners pursuant to statutes governing land use management regulations. The FIS and/or FIRM are permanent records of the City of Henderson, Kentucky and are on file and available for review by the public during regular business hours.  
(Ord. No. 7-87, 3-10-87)

#### **Sec. 13-7. Establishment of development permit.**

The development permit shall be required in conformance with the provisions of this chapter prior to the commencement of any development activities in the special flood hazard areas (SFHA). Application for a development permit shall be made on forms furnished by the Floodplain Administrator.  
(Ord. No. 7-87, 3-10-87)

**Sec. 13-8. Compliance.**

No structure or land shall hereafter be constructed, located, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the Board of Commissioners from taking such lawful action as is necessary to prevent or remedy any violation. (Ord. No. 7-87, 3-10-87)

**Sec. 13-9. Abrogation and greater restrictions.**

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another chapter, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. No. 7-87, 3-10-87)

**Sec. 13-10. Interpretation.**

In the interpretation and application of this chapter all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and (3) deemed neither to limit nor repeal any other powers granted under Kentucky Revised Statutes.. (Ord. No. 7-87, 3-10-87)

**Sec. 13-11. Warning and disclaimer of liability.**

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of The City of Henderson or by any officer or employee thereof, the Commonwealth of Kentucky, the Federal Insurance Administration, or the Federal Emergency Management Agency, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder. (Ord. No. 7-87, 3-10-87)

**Sec. 13-12. Enforcement, Violation Notice and Penalties.**

- a) Violation of the provisions of this chapter 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, including development which is not in accordance with the provisions of this chapter, and further including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications, such development shall constitute a misdemeanor. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City of Henderson from taking such other lawful action as is necessary to prevent or remedy any violation.
- b) Notice of Violation: If, at any time, a duly authorized employee or agent of the Floodplain Administrator has reasonable cause to believe that a person has caused development to occur which is not in accordance with the provisions of this chapter including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications thereof, a duly authorized employee of the Floodplain Administrator shall issue a notice to the person responsible for the violation and/or the property owner, stating the facts of the offense or violation, the section of this chapter and/or of the permit violated, when it

occurred, how the violation is to be remedied to bring the development into conformity with this chapter or with the approved permit, and within what period of time the remedy is to occur, which period of time shall be reasonable and shall be determined by the nature of the violation and whether or not it creates a nuisance or hazard. The remedy may include an order to stop work on the development. The notice shall also state that a citation may be forthcoming in the event that the requested remedies and corrective actions are not taken within the required amount of time, which citation will request a civil monetary fine and shall state the maximum fine which could be imposed.

c) Notice of Citation: If, at any time, a duly authorized employee or agent of the Floodplain Administrator has reasonable cause to believe that a person has caused development to occur which is not in accordance with the provisions of this ordinance including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications thereof, a duly authorized employee of the Floodplain Administrator may issue a citation to both the owner of record and the offender stating the violation, prior notices of violation issued, how the violation is to be remedied to bring the development into conformity with this ordinance or with the approved permit, and within what period of time the remedy is to occur, and what penalty or penalties are recommended. When a citation is issued, the person to whom the citation is issued shall respond to the citation within seven (7) days of the date the citation is issued by either carrying out the remedies and corrections set forth in the citation, paying the civil fine set forth in the citation or requesting a hearing before the appropriate body. If the person to whom the citation is issued does not respond to the citation within seven (7) days, that person shall be deemed to have waived the right to a hearing and the determination that a violation occurred shall be considered final.

d) 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 granting of a variance or special exceptions, shall constitute a Class B Misdemeanor offense. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction be fined no less than one hundred dollars \$ 100.00 or imprisoned for not more than thirty (30) days, or both.

(Ord. No. 7-87, 3-10-87)

#### **ARTICLE IV. ADMINISTRATION**

##### **Sec. 13-13. Designation of Floodplain Administrator.**

The Henderson City-County Planning Commission is hereby appointed to administer and implement the provisions of this chapter by granting or denying development permits in accordance with its provisions and by designating an administrative and enforcement officer, herein referred to as the Floodplain Administrator.

(Ord. No. 7-87, 3-10-87)

##### **Sec. 13-14. Permit procedures.**

A development permit shall be obtained before any construction or other development begins within any special flood hazard area established in Section 13-6. Endorsement of the Floodplain Administrator is required before a state floodplain construction permit can be processed. Application for a development permit shall be made to the Floodplain Administrator on forms furnished by him or her prior to any development activities, and may include, but not be limited to, the following: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in

question; existing or proposed structure, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

(a) *Application stage.*

- (1) Proposed elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures in Zone A and elevation of highest adjacent grade; or
- (2) Proposed elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;
- (3) All appropriate certifications from a Kentucky registered professional engineer or architect that the nonresidential floodproofed structure will meet the floodproofing criteria in Article V, section 13-18 (b) and 13-21 (b).
- (4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development; and

(b) *Construction stage.* Provide a floor elevation or floodproofing certification after the lowest floor is completed. Upon placement of the lowest floor and before construction continues, or floodproofing by whatever construction means, it shall be the duty of the permit holder to submit to the Floodplain Administrator and to the State a certification of the elevation of the lowest floor or the floodproofed elevation, whichever is applicable as built, in relation to mean sea level. In AE and A zones where the City has adopted a regulatory Base Flood Elevation, said certification shall be prepared by or under the direct supervision of a Kentucky registered land surveyor or professional engineer and certified by same. When floodproofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a Kentucky registered professional engineer or architect and certified by same. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the lowest floor and flood proofing elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said correction required hereby shall be cause to issue a stop-work order for the project.

(Ord. No. 7-87, 3-10-87)

**Sec. 13-15. Duties and responsibilities of the Floodplain Administrator.**

The Floodplain Administrator and/or staff is hereby appointed, authorized and directed to administer, implement and enforce the provisions of this chapter. The Floodplain Administrator is further authorized to render interpretations of this chapter, which are consistent with its spirit and purpose by granting or denying development permits in accordance with its provisions.

The duties and responsibilities of the Floodplain Administrator shall include, but not be limited to the following:

(a) Permit Review: Review all development permits to ensure that:

- 1) Permit requirements of this chapter have been satisfied;
- 2) All other required state and federal permits have been obtained. Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C 1334;
- 3) Flood damages will be reduced in the best possible manner; and
- 4) The proposed development does not adversely affect the carrying capacity of

affected watercourses. For purposes of this ordinance, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation of the base flood more than one foot at any point.

(b) Review and Use of Any Other Base Flood Data. When base flood elevation data has not been provided in accordance with Article III, Section 13-6, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or state agency, or other source, in order to administer Article V. Any such information shall be submitted to the appropriate governing body for adoption.

(c) Notification of Other Agencies:

- (1) Notify adjacent communities, the Kentucky Division of Water, and any other federal and/or state agencies with statutory or regulatory authority prior to any alteration or relocation of the watercourse, and
- (2) Submit evidence of such notification to the Federal Insurance Administration, Federal Emergency Management Agency (FEMA); and
- (3) Assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained and not diminished.

(d) Documentation of Floodplain Development. Obtain and maintain for public inspection and make available as needed the following:

- (1) Certification required by Article V, Section 13-18 (a) (5) (lowest floor elevations) as shown on a completed and certified Elevation Certificate. Verify and record the actual elevation (in relation to Mean Sea Level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with Article IV, Section 13-14 (b);
- (2) Certification required by Article V, Section 13-18 (b) (4) (elevation or floodproofing of nonresidential structures) as shown on a completed and certified floodproofing certificate. Verify and record the actual elevation (in relation to Mean Sea Level) to which the new or substantially improved structures have been flood-proofed, in accordance with Article IV, Section 13-14 (b);
- (3) Certification required by Article V, Section 13-18 (c) (1) (elevated structures),
- (4) Certification of elevation required by Article V, Section 13-20 (h) (subdivision standards),
- (5) Certification required by Article V, Section 13-18 (d) (floodway encroachments),
- (6) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished;
- (7) Review certified plans and specifications for compliance;
- (8) Remedial Action. Take action to remedy violations of this ordinance as specified in Article III, Section 13-12.

(e) Map Determinations. Make interpretations where needed, as to the exact location of the boundaries of the special flood hazard areas, for example, where there appears to be a conflict between a mapped boundary and actual field conditions.

- (1) Where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Article VI, Section 13-16(b);
- (2) When base flood elevation data or floodway data have not been provided in accordance with Article III, Section 13-6, then the Floodplain Administrator shall obtain, review, and

- reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of Article V;
- (3) When flood-proofing is utilized for a particular structure, the Floodplain Administrator shall obtain certification from a Kentucky registered professional engineer or architect, in accordance with Article V, Section 13-18 (b) (4) a floodproofing certificate;
  - (4) All records pertaining to the provisions of this ordinance shall be maintained in the office of the Floodplain Administrator and shall be open for public inspection.
- (f) Right of Entry.
- (1) Whenever necessary to make an inspection to enforce any of the provisions of this ordinance, or whenever the floodplain administrator has reasonable cause to believe that there exists in any structure or upon any premises any condition or ordinance violation which makes such structure or premises unsafe, dangerous or hazardous, the Floodplain Administrator may enter such structure or premises at all reasonable times to inspect the same or perform any duty imposed upon the administrator by this ordinance.
  - (2) If such structure or premises are occupied, he/she shall first present proper credentials and request entry. If such structure or premises are unoccupied, he shall first make a reasonable effort to locate the owner or other persons having charge or control of such request entry.
  - (3) If entry is refused, the Floodplain Administrator shall have recourse to every remedy provided by law to secure entry.
  - (4) When the Floodplain Administrator shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other persons having charge, care or control of any structure, or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the administrator for the purpose of inspection and examination pursuant to this ordinance.
- (g) Stop Work Orders
- (1) Upon notice from the Floodplain Administrator, work on any structure or premises that is being done contrary to the provisions of this ordinance shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to his agent, or to the person doing the work, and shall state the conditions under which work may be resumed.
- (h) Revocation of Permits
- (1) The Floodplain Administrator may revoke a permit or approval, issued under the provisions of this ordinance, in case there has been any false statement or misrepresentation as to the material fact in the application or plans on which the permit or approval was based.
  - (2) The floodplain administrator may revoke a permit upon determination by the administrator that the construction, erection, alteration, repair, moving, demolition, installation, or replacement of the structure for which the permit was issued is in violation of, or not in conformity with, the provisions of this ordinance.
- (i) Liability
- (1) Any officer, employee, or member of the Floodplain Administrator's staff, charged with the enforcement of this ordinance, acting for the applicable governing authority in the discharge of his duties, shall not thereby render himself personally liable, and is hereby relieved from all personal liability, for any damage that may accrue to persons or

property as a result of any act required or permitted in the discharge of his duties. Any suit brought against any officer, employee, or member because of such act performed by him or her in the enforcement of any provision of this ordinance shall be defended by the department of law until the final termination of the proceedings.

(j) Expiration of Floodplain Construction Permit

- (1) A floodplain construction permit, and all provisions contained therein, shall expire if the holder of a floodplain construction permit has not commenced construction within one hundred and eighty (180) calendar days from the date of its issuance by the Floodplain Administrator.

(Ord. No. 7-87, 3-10-87)

**Sec. 13-16. Appeals and Variance procedures.**

(a) The variance criteria set forth in this section of the ordinance are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this ordinance would create an exceptional hardship to the applicant or cause damage to the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

It is the duty of the City of Henderson to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below flood level is so serious that variances from the flood elevation or from other requirements in the flood ordinance should be rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

(b) The board of zoning adjustment as established by the City of Henderson shall hear and decide requests for variance from the requirements of this chapter and appeals of decisions or determinations made by the Floodplain Administrator in the enforcement or administration of this ordinance. For purposes of this section, the board of zoning adjustment shall be referred to as the Appeals Board.

(c) The Appeals Board shall not hear any request for a variance from the requirements of this chapter unless the applicant has first made application to the Kentucky Division of Water and received written approval from same for any construction for which a variance is being requested. However, approval from the Kentucky Division of Water shall not guarantee approval of a request for variance from the Appeals Board.

(d) Any person aggrieved by the decision of the Appeals Board or any taxpayer may appeal such decision to the Henderson Circuit Court, as provided in the Kentucky Revised Statutes.

(e) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this section, except for Article IV, section 13-16 (h) (1) and (4), provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation.

(f) In passing upon such application, the Appeals Board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter, and:

- (1) The danger that materials may be swept onto other lands to the injury of others;
  - (2) The danger to life and property due to flooding or erosion damage;
  - (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
  - (4) The importance to the community of the services provided by the proposed facility;
  - (5) The necessity of the facility to a waterfront location, in the case of a functionally dependent facility;
  - (6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
  - (7) The compatibility of the proposed use with existing and anticipated development;
  - (8) The relationship of the proposed use to the comprehensive plan and the floodplain management program for that area;
  - (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
  - (10) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site, and;
  - (11) 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.
- (f) Upon consideration of the factors listed above, and the purposes of this chapter, the Appeals Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- (g) Variances shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result.
- (h) Conditions for variances:
- (1) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this ordinance. For example, in the case of variances to an elevation requirement, this means the Appeals Board need not grant permission for the applicant to build at grade, or even to whatever elevation the applicant proposes, but only to that elevation which the Appeals Board believes will both provide relief and preserve the integrity of the local ordinance.
  - (2) In the instance of a historic structure, a determination shall be made that the variance is the minimum necessary to afford relief and not destroy the historic character and design of the structure;
  - (3) Variances shall only be issued upon:
    - (a) A showing of good and sufficient cause;
    - (b) A determination that failure to grant the variance would result in exceptional hardship; and;
    - (c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud or victimization of the public (as defined above), or conflict with existing local laws or ordinances.
  - (4) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation;

- (5) The Floodplain Administrator shall maintain the records of all appeal actions and report any variance to the Federal Emergency Management Agency (FEMA) and the Federal Insurance Administration (FIA) upon request.
  - (6) Variances may be issued for new construction, substantial improvement, and other proposed new development necessary for the conduct of a functionally dependent use provided that the provisions of Article VI, Section 13-16 (a – k) are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood and does not result in additional threats to public safety and does not create a public nuisance.
  - (i) Variance Notification: Any applicant to whom a variance is granted shall be given written notice over the signature of the Floodplain Administrator that:
    - (1) The issuance of a variance to construct a structure below the base flood elevation may result in increased premium rates for flood insurance, and;
    - (2) Such construction below the base flood level increases risks to life and property. A copy of the notice shall be recorded by the Floodplain Administrator in the Office of the County Court Clerk and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land by means of a Land Use Restriction.
    - (3) The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance, and report such variances issued in the community's biennial report submission to FEMA.
  - (j) Historic Structures: Variances may be issued for the repair or rehabilitation of historic structures upon determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (Ord. No. 7-87, 3-10-87)

## ARTICLE V. PROVISIONS FOR FLOOD HAZARD REDUCTION

### Sec. 13-17. General Construction standards.

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

- (a) New construction and substantial improvements shall be adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (b) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;
- (c) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- (d) New construction or substantial improvements shall be constructed by methods and practices that eliminate flood damage from the base flood;
- (e) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (f) New and replacement water supply systems shall be designed to eliminate infiltration of flood waters into the system;
- (g) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;

- (h) On-site waste disposal systems shall be located and constructed to eliminate impairment to them or contamination from them during flooding; and
- (i) Any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this chapter, shall meet the requirements of "new construction" as contained in this chapter, and shall be undertaken only if said non-conformity is not furthered, extended, or replaced.

(Ord. No. 7-87, 3-10-87)

#### **Sec. 13-18. Specific standards.**

In all areas of special flood hazard where base flood elevation data have been provided, as set forth in Article III, section 13-6, or Article IV, section 13-15(e)(2)), the following provisions are required:

(a) *Residential construction.* New construction or substantial improvement of any residential structure (or manufactured home) shall have the lowest floor, including basement and mechanical equipment, elevated no lower than two (2) feet above the base flood elevation.

(1) Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of flood waters shall be provided in accordance with standards of Article V, section 13-18 (c).

(2) If a principal structure exists at the time of adoption of this chapter [Ordinance Number 7-87], it may be replaced, subject to the elevation of the first floor, including basement to two (2) feet above the base flood elevation.

(3) In an A zone, where no technical data has been produced by the Federal Emergency Management Agency, the lowest floor, including basement and mechanical equipment, shall be elevated two (2) feet above the base flood elevation, as determined by this community.

(4) The Floodplain Administrator will determine the method by which base flood elevations are determined. Methods include but are not limited to detailed hydrologic and hydraulic analyses, use of existing data available from other sources, use of historical data, or best supportable and reasonable judgment in the event no data can be produced. The applicant shall provide cross sections for determining floodway boundaries (and thereby Base Flood Elevations) at any proposed construction site where FEMA maps are not available. All cross sections shall be referenced to mean sea level and shall have vertical error tolerances of no more than plus or minus five-tenths (0.5) foot. Cross section elevations shall be taken at those points which represent significant breaks in slope and at points where hydraulic characteristics of the base floodplain change. Each cross section shall extend across the entire base floodplain and shall be in the number and at the locations specified by the Floodplain Administrator. If necessary to ensure that significant flood damage will not occur, the Floodplain Administrator may require additional cross sections or specific site elevations which extend beyond those needed for making routine regulatory floodway boundary calculations.

(5) Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a Kentucky registered professional engineer or surveyor, and verified by the community building inspection department to be properly elevated. Such certification and verification shall be provided to the Floodplain Administrator.

(b) *Nonresidential construction.* New construction or substantial improvement of any commercial, industrial, or nonresidential structure shall be elevated to conform with Article V, Section 13-18 (a) or together with attendant utility and sanitary facilities:

- (1) Be floodproofed below an elevation one (1) foot above the base flood elevation so that the structure is watertight with walls substantially impermeable to the passage of water;
- (2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- (3) Have the lowest floor, including basement, mechanical equipment, and ductwork, elevated no lower than an elevation one (1) foot above the base flood elevation, or;
- (4) A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Article IV, Section 13-14 (a) (3). Manufactured homes shall meet the standards in Article V, Section 13-18 (e).
- (5) All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, structure access or storage, and which are subject to flooding, shall be constructed of flood resistant materials below the base flood elevation, and, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Opening sizes (FEMA Technical Bulletin 1-93) for meeting this requirement must meet or exceed the following minimum criteria:
  - (a) Be certified by a registered professional engineer or architect; or
  - (b) Have a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater.

(c) *Elevated buildings.* New construction or substantial improvements of elevated structures on columns, posts, or pilings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

- (1) Designs for complying with this requirement must either be certified by a Kentucky registered professional engineer or architect and meet the following criteria:
  - a. Provide a minimum of two (2) openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
  - b. The bottom of all openings shall be no higher than one foot above foundation interior grade, which must be equal to in elevation or higher than the exterior foundation grade; and
  - c. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
- (2) Electrical, plumbing, and other utility connections are prohibited below the base flood elevation;
- (3) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator);
- (4) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms;

- (5) The total floor area of all such enclosed areas shall not exceed 300 square feet; and
  - (6) For enclosures greater than seven (7) feet in interior height, where elevation requirements exceed six (6) feet above the highest adjacent grade, a copy of the legally recorded land use restriction prohibiting the conversion of the area below the lowest floor to a use or dimension contrary to the structures' originally approved design, shall be presented as a condition of issue of the final Certificate of Occupancy.
- (d) *Floodways.* Located within areas of special flood hazard established in Article III, section 13-6, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:
- (1) Prohibit encroachments, including fill, new construction, substantial improvements and other developments unless certification (with supporting technical data) by a Kentucky registered professional engineer is provided demonstrating that encroachments shall not result in any increase in the base flood elevation levels during occurrence of base flood discharge.
- (e) *Standards for manufactured homes and recreational vehicles.*
- (1) All new or substantially improved manufactured homes located within Zones A and AE on the community's Flood Insurance Rate Map (FIRM), or in locations outside of a manufactured home park/subdivision, in a new manufactured home park/subdivision, in an expansion to an existing manufactured home park/subdivision, or in an existing manufactured home park/subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, must meet all the requirements for new construction, including elevation and anchoring.
  - (2) All Manufactured homes must be:
    - (a) Elevated on a permanent foundation;
    - (b) Have its lowest floor elevated no lower than two (2) feet above the level of the base flood elevation; and,
    - (c) Be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
  - (3) Except manufactured homes that have incurred substantial damage as a result of a flood, all manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that:
    - (a) The lowest floor of the manufactured home is elevated to two (2) feet above the level of the base flood elevation, or
    - (b) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength, of no less than thirty-six (36) inches in height above grade.
    - (c) The manufactured home must be securely anchored to the adequately anchored foundation system to resist flotation, collapse and lateral movement.
    - (d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, any manufactured home placed or substantially improved must meet the standards of section 13-18(e)(3) (a) and (c) above.
  - (4) All recreational vehicles placed on sites located within Zones A and AE on the community's Flood Insurance Rate Map (FIRM) must:
    - (a) Be on the site for fewer than one hundred eighty (180) consecutive days.
    - (b) Be fully licensed and ready for highway use, or

- (c) Meet the permit requirements of new construction, including anchoring and elevation requirements for "manufactured homes".
  - (5) A recreational vehicle is ready for highway use if it is licensed and insured in accordance with State of Kentucky motor vehicle regulations, on its own wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.
  - (f) Structures Elevated on Fill. A residential or non-residential structure may be constructed on permanent fill in accordance with the following:
    - (1) The lowest floor (including basement) of the structure or addition shall be no lower than two (2) feet above the base flood elevation;
    - (2) The fill shall be placed in layers no greater than six inches deep before compacting and should extend at least ten feet beyond the foundation of the structure before sloping below the base flood elevation, said slope being no greater than a 2:1 ratio unless a stability analysis is provided by a Kentucky registered professional engineer;
    - (3) The top of the fill shall be no lower than the base flood elevation. However, the ten-foot minimum may be waived if a structural engineer certifies an alternative method to protect the structure from damage due to erosion, scour, and other hydrodynamic forces;
    - (4) The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties;
    - (5) All new structures built on fill must be constructed on properly designed and compacted fill (ASTM D-698 or equivalent) that extends beyond the structure walls before dropping below the base flood elevation and has appropriate protection from erosion and scour. The design of the fill or the fill standard must be approved by a Kentucky registered professional engineer.
  - (g) Vegetative Buffer Strips shall be required for construction along and either side of blue-line streams, creeks, rivers, lakes and impoundments, and all streams labeled with names or numbers on the FIRMs. For all activities involving construction within twenty-five (25) feet of the channel, the following criteria shall be met:
    - (1) A natural vegetative buffer strip shall be preserved within twenty-five (25) feet of the top of bank.
    - (2) Where it is impossible to protect this vegetative buffer strip during the construction of an appropriate use, a vegetated buffer strip shall be established upon completion of construction.
    - (3) The use of undisturbed, native riparian vegetation is preferred in the vegetative buffer strip.
    - (4) Access through the vegetative buffer strip shall be provided as specified or required for stream maintenance purposes. Where a permanent easement for stream maintenance exists along a channel, the portion of the vegetative buffer strip immediately adjacent to the top of bank shall be constructed and maintained to allow access for maintenance equipment.
- (Ord. No. 7-87, 3-10-87; Ord. No. 44-94, 8-23-94)

**Sec. 13-19. Standards for streams without established base flood elevations and/or floodways.**

Located within the special flood hazard areas established in Article III, section 13-6, where small streams exist but where no base flood data have been provided or where base flood data has been provided without floodways, the following provisions apply:

(a) No encroachments, including fill material or structures shall be located within special flood hazard areas unless certification by a Kentucky registered professional engineer is provided demonstrating the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

(b) New construction or substantial improvements of structures shall be elevated or floodproofed to elevations established in accordance with Article IV, section 13-15 (e) (2).

(Ord. No. 7-87, 3-10-87)

**Sec. 13-20. Standards for subdivision proposals.**

(a) All subdivision proposals shall be consistent with the need to minimize flood damage.

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to eliminate damage from base flood and prevent inundation of any streets;

(c) All subdivision proposals shall have adequate drainage provided to eliminate damage from base flood.

(d) Base flood elevation data shall be provided by a Kentucky registered professional engineer who is working in conjunction with the Kentucky Division of Water for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) which is greater than the lesser of fifty (50) lots or five (5) acres.

(e) When a portion of a proposed subdivision lies within a special flood hazard area only that portion clearly outside the special flood hazard area will be considered when computing the minimum required lot size for the development. Areas of special flood hazard shall be noted on the face of the plat to be recorded.

(f) Variances and Hearings:

(1) No division of land within areas of special flood hazard shall be approved by Henderson City-County Planning Commission until the necessary variances are granted.

(2) Prior to subdivision approval, the planning commission shall hold a public hearing on all division of lands within areas of special flood hazard.

(g) All subdivision plans shall show the elevation of all proposed structure(s) and lowest adjacent grade at each structure within a special flood hazard area. If the site is filled above the base flood elevation, the lowest floor and lowest adjacent grade elevations shall be certified by a Kentucky registered professional engineer or surveyor and provided to the Floodplain Administrator.

(h) All streets included in new subdivision proposals shall be constructed above the Base Flood Elevation.

(Ord. No. 7-87, 3-10-87)

**Sec. 13-21. Standards for areas of shallow flooding.**

Located within the areas of special flood hazard established in Article III, section 13-6, 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; therefore, the following provisions apply:

(a) All new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to or above either the base flood elevation or in Zone AO the flood depth specified on the flood insurance rate map, in feet, above the highest

adjacent grade. If no depth is specified, the lowest floor, including basement, shall be elevated no less than two (2) feet above the highest adjacent grade.

- (b) All new construction and substantial improvements of non-residential structures shall:
- (1) Have the lowest floor, including basement, elevated to or above either the base flood elevation or the flood depth specified on the flood insurance rate map above the highest adjacent grade. If no flood depth is specified, the lowest floor, including basement shall be elevated no less than two (2) feet above the highest adjacent grade.
  - (2) Together with attendant utility, sanitary, and other public facilities be completely floodproofed to or above the base flood elevation so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(Ord. No. 7-87, 3-10-87)

**Sec. 13-22. Standards for accessory structures in all zones beginning with the letter "A".**

For all accessory structures in special flood hazard areas designated with the letter "A" the following provisions shall apply:

- (a) Structure must be non-habitable;
- (b) Structure must be anchored to resist floatation forces;
- (c) Structure shall require flood openings/vents no more than one foot above grade, total openings are to be one square inch per one square foot of floor area, at least two openings required on opposite walls;
- (d) Structure shall be built of flood resistant materials below the base flood elevation;
- (e) Must elevate utilities above the base flood elevation;
- (f) Structure can only be used for storage or parking;
- (g) Structure cannot be modified for a different use after permitting.

**Sec. 13-23. Standards for Critical Facilities.**

Critical Facilities shall be located outside the limits of the SFHA, unless no feasible alternative is available. Construction of new critical Facilities shall not be permissible within the floodway. Critical Facilities within the SFHA shall be constructed on properly compacted fill and shall have the lowest floor (including basement) elevated at least one foot above the elevation of the 500-year flood.

Floodproofing and sealing measures shall be taken to ensure that toxic substances will not be displaced by or released into floodwaters. A Critical Facility shall have at least one access road connected to land outside the 500-year floodplain that is capable of supporting a 12,500 pound vehicle, and the top of the access road must be no lower than the elevation of the 500-year flood.

**Sec. 13-24. Severability.**

This ordinance and the various parts thereof are hereby declared to be severable. Should 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 not affect the validity of the ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

***HENDERSON COUNTY***

## **CHAPTER 13 – FLOOD DAMAGE PREVENTION**

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

#### **Sec. 13-1. Statutory authorization.**

The Legislature of the Commonwealth of Kentucky has in Kentucky Revised Statutes delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, Henderson County Fiscal Court hereby adopts the following floodplain management ordinance, as follows.

#### **Sec. 13-2. Findings of fact.**

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

#### **Sec. 13-3. Statement of purpose.**

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

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

#### **Sec. 13-4. Objectives.**

The objectives of this chapter are:

- (a) To protect human life and health;
- (b) To minimize expenditure of public money for costly flood control projects;
- (c) To minimize the need for rescue and relief efforts associated with flooding which are generally undertaken at the expense of the general public;
- (d) To minimize prolonged business interruptions;
- (e) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in Special Flood Hazard Areas;
- (f) To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas;
- (g) To insure that potential home buyers are notified that property is in a flood area; and

- (h) To ensure that those who occupy a Special Flood Hazard Area assume responsibility for their actions.

## ARTICLE II. DEFINITIONS

### Sec. 13-4.1. Words and terms defined.

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

*A Zone* - Portions of the special flood hazard area (SFHA) in which the principle source of flooding is runoff from rainfall, snowmelt, or a combination of both. In A zones, floodwaters may move slowly or rapidly, but waves are usually not a significant threat to structures. Areas of 100-year flood, base flood elevations and flood hazard factors are not determined.

*Accessory structure* - A structure located on the same parcel of property as the principal structure, the use of which is incidental to the use of the principal structure. Accessory structures should constitute a minimal initial investment, may not be used for human habitation, and should be designed to have minimal flood damage potential. Examples of accessory structures are detached garages, carports, storage sheds, pole barns, and hay sheds.

*Accessory use* - A use which is incidental and subordinate to the principal use of the parcel of land on which it is located.

*Addition (to an existing structure)* means any walled and roofed expansion to the perimeter of a structure in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

*AE zones* - Special Flood Hazard Areas inundated by the 1% annual flood (100-year flood). Base flood elevations (BFEs) are determined.

*Appeal* means a request for a review of the Floodplain Administrator's interpretation of any provision of this chapter or from the Floodplain Administrator's ruling on a request for a variance.

*Area of shallow flooding* means a designated AO or AH Zone on the County of Henderson's flood insurance rate map (FIRM) with base flood depths from one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

*Base flood* means the flood having a one-percent (1%) chance of being equaled or exceeded in any given year (also called the "100-year flood").

*Base Flood Elevation (BFE)* - The elevation shown on the Flood Insurance Rate Map (FIRM) that indicates the water surface elevation resulting from a flood that has a one-percent (1%) or greater chance of being equaled or exceeded in any given year.

*Basement* means that portion of a structure having its floor subgrade (below ground level) on all sides.

*Breakaway wall* means a wall that is not part of the structural support of the structure and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the structure or the supporting foundation system.

*Community Rating System (CRS)* - A program developed by the Federal Insurance Administration to provide incentives to those communities in the Regular Program to go beyond the minimum floodplain management requirements to develop extra measures for protection from flooding.

*Community Flood Hazard Area (CFHA)* - An area that has been determined by the Floodplain Administrator (or other delegated, designated, or qualified community official) from available technical studies, historical 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. Included are areas downstream from dams.

*Critical facility* - Any property that, if flooded, would result in severe consequences to public health and safety or a facility which, if unusable or unreachable because of flooding, would seriously and adversely affect the health and safety of the public. Critical facilities include, but are not limited to: housing likely to contain occupants not sufficiently mobile to avoid injury or death unaided during a flood; schools, nursing homes, hospitals, police, fire and emergency response installations, vehicle and equipment storage facilities, emergency operations centers likely to be called upon before, during and after a flood, public and private utility facilities important to maintaining or restoring normal services before, during and after a flood, and those facilities or installations which produce, use or store volatile, flammable, explosive, toxic and/or water-reactive materials, hazardous materials or hazardous waste.

*D zone* - An area in which the flood hazard is undetermined.

*Development* means any manmade change to improved or unimproved real estate, including, but not limited to, structures, mining, dredging, filling, grading, paving, excavating, drilling operation, or permanent storage of equipment or materials.

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

*Elevation Certificate* - A statement certified by a registered professional engineer or surveyor on the FEMA-approved form in effect at the time of certification that verifies a structure's elevation and other related information to verify compliance with this ordinance.

*Enclosure* - That portion of a structure below the Base Flood Elevation (BFE) used solely for parking of vehicles, limited storage, or access to the structure.

*Encroachment* - The physical advance or infringement of uses, plant growth, fill, excavation, structures, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

*Existing construction* means any structure for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMS effective before that date. "Existing construction" may also be referred to as "existing structures".

*Existing manufactured home park / subdivision* means a manufactured home park/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 first flood plain management ordinance adopted by the Henderson County Fiscal Court based on specific technical base flood elevation data which established the area of special flood hazards.

*Expansion to an existing manufactured home park/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).

*Five-Hundred Year Flood* - The flood that has a 0.2 percent chance of being equaled or exceeded in any year. Areas subject to the 500-year flood have a moderate to low risk of flooding.

*Flood, Flooding, or Flood Waters* – are sometimes used interchangeably, and mean:

- 1) A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters;
- 2) The unusual and rapid accumulation or runoff of surface waters from any source;
- 3) The condition resulting from flood-related erosion.

*Flood hazard boundary map (FHBM)* means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as Zone A or as amended by FEMA by letter or otherwise.

*Flood insurance rate map (FIRM)* means a map on which the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA) has delineated special flood hazard areas and risk premium zones. These maps are now made available in digital format (DFIRM), but the paper copies of the maps on file are the maps of record.

*Flood Insurance Study (FIS)* - The official report provided by the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA) containing flood profiles, the Flood Insurance Rate Map (FIRM), and/or the Flood Boundary Floodway Map (FBFM), and the water surface elevation of the base flood.

*Floodplain or flood-prone area* - Any land area susceptible to being inundated by flood waters from any source.

*Floodplain Administrator* - The individual appointed by a NFIP participating community to administer and enforce the floodplain management ordinances.

*Floodplain Management* - The operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management ordinances, and open space plans.

*Floodplain Management Regulations* - This chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control), and other applications of police power, which control development in flood-prone areas. This

term describes federal, state and/or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

*Floodproofing* - Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

*Floodproofing Certificate* - A certification by a registered professional engineer or architect, on a FEMA-approved form in effect at the time of certification stating that a non-residential structure, together with attendant utilities and sanitary facilities, is watertight to a specified design elevation with walls that are substantially impermeable to the passage of water, and all structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy and anticipated debris impact forces.

*Floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as the “regulatory floodway”.

*Floodway fringe* - That area of the floodplain on either side of the regulatory floodway where encroachment may be permitted without additional hydraulic and/or hydrologic analysis.

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

*Fraud and victimization* - As related in Article 6, Appeals and Variance Procedures of this ordinance, means that the variance granted must not cause fraud on or victimization of the public. In examining this requirement, Henderson County Fiscal Court will consider the fact that every newly constructed structure adds to government responsibilities and remains a part of the community for fifty to one hundred years. Structures that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the property and the community as a whole are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages may incur. In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.

*Governing body* - The local governing unit, i.e. county or municipality that is empowered to adopt and implement ordinances to provide for the public health, safety and general welfare of its citizenry. The governing body may delegate administration and enforcement of this ordinance to a department of local government, or to a joint City-County Board.

*Hazard potential* - The possible adverse incremental consequences that result from the release of water or stored contents due to failure of a dam or mis-operation of a dam or appurtenances. The hazard potential classification of a dam does not reflect in any way the current condition of a dam and its appurtenant structures (e.g., safety, structural integrity, flood routing capacity).

*Highest adjacent grade* means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

*Historic structure* means any structure that is:

- (1) Listed individually in the National Register of Historic Places (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.
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or district preliminarily determined by the Secretary to qualify as a registered historic district;
- (3) 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
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified by an approved state program as determined by the Secretary of the Interior.

*Kentucky Revised Statute 151.250* – Plans for dams, levees, etc to be approved and permit issued by cabinet – (Environmental and Public Protection Cabinet).

- (1) Notwithstanding any other provision of law, no person and no city, county or other political subdivision of the state, including levee districts, drainage districts, flood control districts or systems, or similar bodies, shall commence the construction, reconstruction, relocation or improvement of any dam, embankment, levee, dike, bridge, fill or other obstruction (except those constructed by the Department of Highways) across or along any stream, or in the floodway of any stream, unless the plans and specifications for such work have been submitted by the person or political subdivision responsible for the construction, reconstruction or improvement and such plans and specifications have been approved in writing by the cabinet and a permit issued. However, the cabinet by regulation may exempt those dams, embankments or other obstructions which are not of such size or type as to require approval by the cabinet in the interest of safety or retention of water supply.
- (2) No person, city, county, or other political subdivision of the state shall commence the filing of any area with earth, debris, or any other material, or raise the level of any area in any manner, or place a structure, barrier or obstruction of any sort on any area located adjacent to a river or stream or in the floodway of the stream so that such filling, raising, or obstruction will in any way affect the flow of water in the channel or in the floodway of the stream unless plans and specifications for such work have been submitted to and approved by the cabinet and a permit issued as required in subsection (1) above.
- (3) Nothing in this section is intended to give the cabinet any jurisdiction or control over the construction, reconstruction, improvement, enlargement, maintenance or operation of any drainage district, ditch or system established for agricultural purposes, or to require approval of the same except where such obstruction of the stream or floodway is determined by the cabinet to be a detriment or hindrance to the beneficial use of water resources in the area, and the person or political subdivision in control thereof so notified. The Department for Natural Resources through KRS Chapter 350 shall have exclusive jurisdiction over KRS Chapter 151 concerning the regulation of dams, levees, embankments, dikes, bridges, fills, or other obstructions across or along any stream or in the floodway of any stream which structures are permitted under KRS Chapter 350 for surface coal mining operations.

*Letter of Map Change (LOMC)* – Is an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, and Flood Insurance Studies. LOMC's include the following categories:

- 1) Letter of Map Amendment (LOMA) – A revision based on technical data showing that a property was incorrectly included in a designated SFHA. A LOMA amends the current effective FIRM and establishes that a specific property is not located in a SFHA.

- 2) Letter of Map Revision (LOMR) - A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features.
- 3) Letter of Map Revision – Fill (LOMR\_F) – A determination that a structure or parcel has been elevated by properly placed engineered fill above the BFE and is, therefore, excluded from the SFHA.

*Levee* - A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

*Levee System* - A flood protection system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

For a levee system to be recognized, the following criteria must be met:

- 1) All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual (a copy of which must be provided to FEMA by the operator when levee or drainage system recognition is being sought or revised).
- 2) All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.

*Limited storage* - An area used for storage and intended to be limited to incidental items which can withstand exposure to the elements and have low flood damage potential. Such an area must be of flood resistant material, void of utilities except for essential lighting, and cannot be temperature controlled.

*Lowest adjacent grade* - The elevation of the sidewalk, patio, deck support, or basement entryway immediately next to the structure and after the completion of construction. It does not include earth that is emplaced for aesthetic or landscape reasons around a foundation wall. It does include natural ground or properly compacted fill that comprises a component of a structure's foundation system.

*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, structure access or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

*Manufactured home* means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for one hundred eighty (180) consecutive days or longer and intended to be improved property. The term "manufactured home" does not include a "recreational vehicle" (see Recreational Vehicle).

*Manufactured home park/subdivision* - A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

*Map* - The Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by the Federal Emergency Management Agency (FEMA).

*Map Panel Number* - The four-digit number on a flood map, followed by a letter suffix, assigned by FEMA. The first four digits represent the map panel. The letter suffix represents the number of times the map panel has been revised. (The letter "A" is not used by FEMA, the letter "B" is the first revision.)

*Market value* - The structure value, excluding the land (as agreed between a willing buyer and seller), as established by what the local real estate market will bear. Market value can be established by independent certified appraisal; replacement cost depreciated by age of structure (Actual Cash Value) or adjusted assessed values.

*Mean sea level* means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For the purposes of the National Flood Insurance Program, the MSL is used as a reference for establishing various elevations within the floodplain as shown on a community's FIRM. For purposes of this ordinance, the term is synonymous with the North American Vertical Datum (NAVD) 1988.

*Mechanical equipment* – For the purpose of this ordinance, defined as electrical, heating, air condition equipment, and other machinery or equipment servicing the structure which is not designed for immersion in water.

*Mitigation* - Sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. The purpose of mitigation is twofold: to protect people and structures, and to minimize the costs of disaster response and recovery.

*National Flood Insurance Program (NFIP)* - The federal program that makes flood insurance available to owners of property in participating communities nationwide through the cooperative efforts of the federal government and the private insurance industry.

*New construction* means structures for which the "start of construction" commenced on or after the effective date of this chapter [Ordinance Number 7-87] 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 the Henderson County Fiscal Court's floodplain management ordinance.

*Non-Residential* – Structures that are not designed for human habitation, including but is not limited to: small business concerns, churches, schools, farm structures (including grain bins and silos), pool houses, clubhouses, recreational structures, mercantile structures, agricultural and industrial structures, warehouses, and hotels or motels with normal room rentals for less than 6 months duration.

*North American Vertical Datum (NAVD)* – As corrected in 1988, a vertical control used as a reference for establishing varying elevations within the floodplain. Refer to FIRM or DFIRM legend panel for correct datum. Whenever elevations are referred to, they shall be stated in reference to the datum of the FIRMs or DFIRMs.

*Obstruction* - Includes but is not limited to any dam, wall, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, structure, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

*One-Hundred Year Flood (100-Year Flood) (see Base Flood)* - The flood that has a 1-percent or greater chance of being equaled or exceeded in any given year. Any flood zone that begins with the letter A is subject to the 100-year flood.

*Participating Community* - A community that voluntarily elects to participate in the NFIP by adopting and enforcing floodplain management regulations that are consistent with the standards of the NFIP.

*Pre-FIRM Construction* - Construction or substantial improvement, which started on or before December 31, 1974, or before the effective date of the initial FIRM of the community, whichever is later.

*Post-FIRM Construction* - Construction or substantial improvement that started on or after the effective date of the initial FIRM of the community or after December 31, 1974, whichever is later.

*Probation* - A means of formally notifying participating NFIP communities of violations and deficiencies in the administration and enforcement of the local floodplain management regulations. During periods of probation, each insurance policy is subject to a \$50 surcharge.

*Program Deficiency* - A defect in a community's floodplain management regulations or administrative procedures that impairs effective implementation of those floodplain management standards or of the standards of 44 CFR 60.3, 60.4, 60.5, and/or 60.6.

*Public Safety and Nuisance* - Anything which is injurious to 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* means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred (400) square feet or less when measured at the largest horizontal projection;
- (3) Designed to be self-propelled or permanently towable by a light duty truck; and
- (4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

*Regular Program* - The phase of a community's participation in the NFIP where more comprehensive floodplain management requirements are imposed and higher amounts of insurance are available based upon risk zones and elevations determined in a FIS.

*Regulatory floodway* - The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. See Base Flood.

*Remedy a violation* - The process by which a community brings a structure or other development into compliance with State or local floodplain management regulations, or, if this is not possible, to reduce the impact of non-compliance. Reduced impact may 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 state or federal financing exposure with regard to the structure or other development.

*Repair* - The reconstruction or renewal of any part of an existing structure.

*Repetitive Loss* - Flood-related damages sustained by a structure on two or more separate occasions during a 10-year period where the value of damages equals or exceeds an average of 50% of the current value of the structure, beginning on the date when the damage first occurred, or, four or more flood losses of \$1000.00 or more over the life of the structure, or, three or more flood losses over the life of the structure that are equal to or greater than the current value of the structure.

*Riverine* - Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

*Sand dunes* mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.

*Section 1316* - That section of the National Flood Insurance Act of 1968, as amended, which states that no new or renewal flood insurance coverage shall be provided for any property that the Administrator 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.

*Special flood hazard area (SFHA)* - That portion of the floodplain subject to inundation by the base flood and/or flood-related erosion hazards as shown on a FHBM or FIRM as Zone A or AE.

*Start of construction* (includes substantial improvement and other proposed new development), and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, addition placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory structures, 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 structure, whether or not that alteration affects the external dimensions of the structure.

*Structure* means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other manmade facilities or infrastructures.

*Subdivision* - Any division, for the purposes of sale, lease, or development, either on the installment plan or upon any and all other plans, terms and conditions, of any tract or parcel of land into two (2) or more lots or parcels.

*Subrogation* - An action brought by FEMA to recover insurance money paid out where all or part of the damage can be attributed to acts or omissions by a community or other third party.

*Substantial damage* means any damage of any origin to a structure for which the cost of repairs equals or exceeds fifty (50) percent of the market value of the structure before the damage occurred. This term includes structures that are categorized as repetitive loss. For the purposes of this definition, "repair" is considered to occur when the first repair or reconstruction of any wall, ceiling, floor, or other structural part of the structure commences.

The term does not apply to:

- a.) Any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which have been identified by a Code Enforcement Official and which are solely 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".

*Substantial improvement* means any combination of repairs, reconstruction, alteration, or improvements to a structure, taking place during a one-year period, in which the cumulative cost equals or exceeds fifty (50) percent of the current market value of the structure. For the purposes of this definition, an improvement occurs when the first alteration of any wall, ceiling, floor, or other structural part of the structure commences, whether or not that alteration affects the external dimensions of the structure. The term does not apply to:

- a.) Any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which have been identified by the Codes Administrator and which are solely 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"; or
- c.) Any structure that has been damaged from any source or is categorized as repetitive loss.

*Substantially improved existing manufactured home parks or subdivisions* is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities, and pads equals or exceeds fifty (50) percent of the value of the streets, utilities and pads before repair, reconstruction or improvement commenced.

*Suspension* - Removal of a participating community from the NFIP for failure to enact and/or enforce floodplain management regulations required for participation in the NFIP. New or renewal flood insurance policies are no longer available in suspended communities.

*Utilities* - Includes electrical, heating, ventilation, plumbing, and air conditioning equipment.

*Variance* is a grant of relief from the requirements of this chapter which permits construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary hardship.

*Vegetative Buffer Strip (Riparian Zone)* is an undeveloped area directly adjacent to a body of water, stream or channel. Buffer Strips can be comprised of existing plants on the site and/or new plantings, and include aquatic plants in shallow water, water-tolerant plants along the bank or shore, and upland plants in dry soils. The primary purposes of Vegetative Buffer Strips are to:

- a) Reduce runoff by increasing stormwater infiltration into soil, decreasing nutrients and other pollutants entering the water.
- b) Stabilize soils with plant root systems.
- c) Reduce bank and shoreline erosion due to stream velocity and wave action.
- d) Filter water with aquatic vegetation.
- e) Improve wildlife and fish habitat by providing food, shelter, and shade.

*Violation* - Failure of a structure or other development to fully comply with this ordinance. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

*Watercourse* - A lake, river, creek, stream, wash, channel or other topographic feature on or over which water flows at least periodically.

*Water surface elevation* - The height, in relation to the North American Vertical Datum (NAVD) 1988, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

*Watershed* - All the area within a geographic boundary from which water, sediments, dissolved materials, and other transportable materials drain or are carried by water to a common outlet, such as a point on a larger stream, lake, or underlying aquifer.

*X zones* - Areas of the 0.2% annual chance (500-year) flood, areas subject to the 100-year flood with average depths of less than one foot or with contributing drainage area less than 1 square mile, and areas protected by levees from the base flood. Unshaded X zones are areas determined to be outside the 500-year floodplain, where the annual exceedance probability of flooding is less than 0.2 percent.

*Zone* - A geographical area shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

### **ARTICLE III. GENERAL PROVISIONS**

#### **Sec. 13-5. Lands to which this ordinance applies.**

This chapter shall apply to all Special Flood Hazard Areas (SFHA), areas applicable to KRS 151.250 and, as determined by the Floodplain Administrator or other delegated, designated, or qualified community official as determined by the Henderson County Fiscal Court from available technical studies, historical information, and other available and reliable sources, areas within the jurisdiction of the Henderson County Fiscal Court, which may be subject to periodic inundation by floodwaters that can adversely affect the public health, safety, and general welfare of the citizens of Henderson County, Kentucky.

#### **Sec. 13-6. Basis for establishing the areas of special flood hazard.**

The areas of special flood hazard identified by the Federal Emergency Management Agency the Flood Insurance Study (FIS) for Henderson County, effective February 20, 2013, with accompanying Flood Insurance Rate Maps (FIRMS), other supporting data and any subsequent amendments thereto, are hereby adopted by reference and declared to be a part of these regulations by the Henderson County Fiscal Court. This FIS and attendant mapping is the minimum area of applicability of this ordinance and may be supplemented by studies for other areas which allow implementation of this ordinance and which are recommended to the Henderson County Fiscal Court by the Floodplain Administrator and are enacted by Henderson County Fiscal Court pursuant to statutes governing land use management regulations. The FIS and/or FIRM are permanent records of the Henderson County Fiscal Court and are on file and available for review by the public during regular business hours.

#### **Sec. 13-7. Establishment of development permit.**

The development permit shall be required in conformance with the provisions of this chapter prior to the commencement of any development activities in the special flood hazard areas (SFHA). Application for a development permit shall be made on forms furnished by the Floodplain Administrator.

#### **Sec. 13-8. Compliance.**

No structure or land shall hereafter be constructed, located, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the governing body from taking such lawful action as is necessary to prevent or remedy any violation.

#### **Sec. 13-9. Abrogation and greater restrictions.**

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

#### **Sec. 13-10. Interpretation.**

In the interpretation and application of this chapter all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and (3) deemed neither to limit nor repeal any other powers granted under Kentucky Revised Statutes.

#### **Sec. 13-11. Warning and disclaimer of liability.**

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free

from flooding or flood damages. This chapter shall not create liability on the part of Henderson County Fiscal Court or by any officer or employee, the Commonwealth of Kentucky, the Federal Insurance Administration, or the Federal Emergency Management Agency, thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

**Sec. 13-12. Enforcement, Violation Notice and Penalties.**

- a) Violation of the provisions of this chapter 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, including development which is not in accordance with the provisions of this chapter, and further including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications, such development shall constitute a misdemeanor. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Henderson County Fiscal Court from taking such other lawful action as is necessary to prevent or remedy any violation.
- b) Notice of Violation: If, at any time, a duly authorized employee or agent of the Floodplain Administrator has reasonable cause to believe that a person has caused development to occur which is not in accordance with the provisions of this chapter including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications thereof, a duly authorized employee of the Floodplain Administrator shall issue a notice to the person responsible for the violation and/or the property owner, stating the facts of the offense or violation, the section of this chapter and/or of the permit violated, when it occurred, how the violation is to be remedied to bring the development into conformity with this chapter or with the approved permit, and within what period of time the remedy is to occur, which period of time shall be reasonable and shall be determined by the nature of the violation and whether or not it creates a nuisance or hazard. The remedy may include an order to stop work on the development. The notice shall also state that a citation may be forthcoming in the event that the requested remedies and corrective actions are not taken within the required amount of time, which citation will request a civil monetary fine and shall state the maximum fine which could be imposed.
- c) Notice of Citation: If, at any time, a duly authorized employee or agent of the Floodplain Administrator has reasonable cause to believe that a person has caused development to occur which is not in accordance with the provisions of this ordinance including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications thereof, a duly authorized employee of the Floodplain Administrator may issue a citation to both the owner of record and the offender stating the violation, prior notices of violation issued, how the violation is to be remedied to bring the development into conformity with this ordinance or with the approved permit, and within what period of time the remedy is to occur, and what penalty or penalties are recommended. When a citation is issued, the person to whom the citation is issued shall respond to the citation within seven (7) days of the date the citation is issued by either carrying out the remedies and corrections set forth in the citation, paying the civil fine set forth in the citation or requesting a hearing before the appropriate body. If the person to whom the citation is issued does not respond to the citation within seven (7) days, that person shall be deemed to have waived the right to a hearing and the determination that a violation occurred shall be considered final.
- d) 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 granting of a variance or special exceptions, shall constitute a misdemeanor civil offense. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined no less than one hundred dollars \$ 100.00 or imprisoned for not

more than thirty (30) days, or both, and in addition, shall pay all costs and expenses involved in the case.

#### **ARTICLE IV. ADMINISTRATION**

##### **Sec. 13-13. Designation of Floodplain Administrator.**

The Henderson City-County Planning Commission is hereby appointed to administer and implement the provisions of this chapter by granting or denying development permits in accordance with its provisions and by designating an administrative and enforcement officer, herein referred to as the Floodplain Administrator.

##### **Sec. 13-14. Permit procedures.**

A development permit shall be obtained before any construction or other development begins within any special flood hazard area established in Section 13-6. Endorsement of the Floodplain Administrator is required before a state floodplain construction permit can be processed. Application for a development permit shall be made to the Floodplain Administrator on forms furnished by him or her prior to any development activities, and may include, but not be limited to, the following: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structure, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

(a) *Application stage.*

- (1) Proposed elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures in Zone A and elevation of highest adjacent grade; or
- (2) Proposed elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;
- (3) All appropriate certifications from a Kentucky registered professional engineer or architect that the nonresidential floodproofed structure will meet the floodproofing criteria in Article V, section 13-18 (b) and 13-21 (b);
- (4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development; and

(b) *Construction stage.* Provide a floor elevation or floodproofing certification after the lowest floor is completed. Upon placement of the lowest floor and before construction continues, or floodproofing by whatever construction means, it shall be the duty of the permit holder to submit to the Floodplain Administrator and to the State a certification of the elevation of the lowest floor or the floodproofed elevation, whichever is applicable as built, in relation to mean sea level. In AE and A zones where the County has adopted a regulatory Base Flood Elevation, said certification shall be prepared by or under the direct supervision of a Kentucky registered land surveyor or professional engineer and certified by same. When floodproofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a Kentucky registered professional engineer or architect and certified by same. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the lowest floor and flood proofing elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said correction required hereby shall be cause to issue a stop-work order for the project.

##### **Sec. 13-15. Duties and responsibilities of the Floodplain Administrator.**

The Floodplain Administrator and/or staff is hereby appointed, authorized and directed to administer, implement and enforce the provisions of this chapter. The Floodplain Administrator is further authorized to render interpretations of this chapter, which are consistent with its spirit and purpose by granting or denying development permits in accordance with its provisions.

The duties and responsibilities of the Floodplain Administrator shall include, but not be limited to the following:

- (a) Permit Review: Review all development permits to ensure that:
  - 1) Permit requirements of this chapter have been satisfied;
  - 2) All other required state and federal permits have been obtained. Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C 1334;
  - 3) Flood damages will be reduced in the best possible manner; and
  - 4) The proposed development does not adversely affect the carrying capacity of affected watercourses. For purposes of this ordinance, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation of the base flood more than one foot at any point.
- (b) Review and Use of Any Other Base Flood Data. When base flood elevation data has not been provided in accordance with Article III, Section 13-6, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or state agency, or other source, in order to administer Article V. Any such information shall be submitted to the appropriate governing body for adoption.
- (c) Notification of Other Agencies:
  - (1) Notify adjacent communities, the Kentucky Division of Water, and any other federal and/or state agencies with statutory or regulatory authority prior to any alteration or relocation of the watercourse, and
  - (2) Submit evidence of such notification to the Federal Insurance Administration, Federal Emergency Management Agency (FEMA); and
  - (3) Assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained and not diminished.
- (d) Documentation of Floodplain Development. Obtain and maintain for public inspection and make available as needed the following:
  - (1) Certification required by Article V, Section 13-18 (a) (5) (lowest floor elevations) as shown on a completed and certified Elevation Certificate. Verify and record the actual elevation (in relation to Mean Sea Level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with Article IV, Section 13-14 (b);
  - (2) Certification required by Article V, Section 13-18 (b) (4) (elevation or floodproofing of nonresidential structures) as shown on a completed and certified floodproofing certificate. Verify and record the actual elevation (in relation to Mean Sea Level) to which the new or substantially improved structures have been flood-proofed, in accordance with Article IV, Section 13-14 (b);
  - (3) Certification required by Article V, Section 13-18 (c) (1) (elevated structures),
  - (4) Certification of elevation required by Article V, Section 13-20 (h) (subdivision standards),
  - (5) Certification required by Article V, Section 13-18 (d) (floodway encroachments),
  - (6) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished;

- (7) Review certified plans and specifications for compliance;
- (8) Remedial Action. Take action to remedy violations of this ordinance as specified in Article III, Section 13-12.
- (e) Map Determinations. Make interpretations where needed, as to the exact location of the boundaries of the special flood hazard areas, for example, where there appears to be a conflict between a mapped boundary and actual field conditions.
  - (1) Where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Article VI, Section 13-16(3);
  - (2) When base flood elevation data or floodway data have not been provided in accordance with Article III, Section 13-6, then the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of Article V;
  - (3) When flood-proofing is utilized for a particular structure, the Floodplain Administrator shall obtain certification from a Kentucky registered professional engineer or architect, in accordance with Article V, Section 13-18 (b) (4) a floodproofing certificate;
  - (4) All records pertaining to the provisions of this ordinance shall be maintained in the office of the Floodplain Administrator and shall be open for public inspection.
- (f) Right of Entry.
  - (1) Whenever necessary to make an inspection to enforce any of the provisions of this ordinance, or whenever the floodplain administrator has reasonable cause to believe that there exists in any structure or upon any premises any condition or ordinance violation which makes such structure or premises unsafe, dangerous or hazardous, the Floodplain Administrator may enter such structure or premises at all reasonable times to inspect the same or perform any duty imposed upon the administrator by this ordinance.
  - (2) If such structure or premises are occupied, he/she shall first present proper credentials and request entry. If such structure or premises are unoccupied, he shall first make a reasonable effort to locate the owner or other persons having charge or control of such request entry.
  - (3) If entry is refused, the Floodplain Administrator shall have recourse to every remedy provided by law to secure entry.
  - (4) When the Floodplain Administrator shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other persons having charge, care or control of any structure, or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the administrator for the purpose of inspection and examination pursuant to this ordinance.
- (g) Stop Work Orders
  - (1) Upon notice from the Floodplain Administrator, work on any structure or premises that is being done contrary to the provisions of this ordinance shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to his agent, or to the person doing the work, and shall state the conditions under which work may be resumed.
- (h) Revocation of Permits

- (1) The Floodplain Administrator may revoke a permit or approval, issued under the provisions of this ordinance, in case there has been any false statement or misrepresentation as to the material fact in the application or plans on which the permit or approval was based.
  - (2) The floodplain administrator may revoke a permit upon determination by the administrator that the construction, erection, alteration, repair, moving, demolition, installation, or replacement of the structure for which the permit was issued is in violation of, or not in conformity with, the provisions of this ordinance.
- (i) Liability
- (1) Any officer, employee, or member of the Floodplain Administrator's staff, charged with the enforcement of this ordinance, acting for the applicable governing authority in the discharge of his duties, shall not thereby render himself personally liable, and is hereby relieved from all personal liability, for any damage that may accrue to persons or property as a result of any act required or permitted in the discharge of his duties. Any suit brought against any officer, employee, or member because of such act performed by him or her in the enforcement of any provision of this ordinance shall be defended by the department of law until the final termination of the proceedings.
- (j) Expiration of Floodplain Construction Permit
- (1) A floodplain construction permit, and all provisions contained therein, shall expire if the holder of a floodplain construction permit has not commenced construction within one hundred and eighty (180) calendar days from the date of its issuance by the Floodplain Administrator.

**Sec. 13-16. Appeals and Variance procedures.**

(a) The variance criteria set forth in this section of the ordinance are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this ordinance would create an exceptional hardship to the applicant or cause damage to the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

It is the duty of the Henderson County Fiscal Court to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below flood level is so serious that variances from the flood elevation or from other requirements in the flood ordinance should be rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

(b) The Henderson City-County Planning Commission (HCCPC) as established by the Henderson County Fiscal Court shall hear and decide requests for variance from the requirements of this chapter and appeals of decisions or determinations made by the Floodplain Administrator in the enforcement or administration of this ordinance. For purposes of this section, the HCCPC shall be referred to as the Appeals Board.

(c) The Appeals Board shall not hear any request for a variance from the requirements of this chapter unless the applicant has first made application to the Kentucky Division of Water and received written approval from same for any construction for which a variance is being requested. However, approval from the Kentucky Division of Water shall not guarantee approval of a request for variance from the Appeals Board.

- (d) Any person aggrieved by the decision of the Appeals Board or any taxpayer may appeal such decision to the Henderson Circuit Court, as provided in the Kentucky Revised Statutes.
- (e) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this section, except for Article IV, section 13-16 (h) (1) and (4), provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation.
- (f) In passing upon such application, the Appeals Board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter, and:
  - (1) The danger that materials may be swept onto other lands to the injury of others;
  - (2) The danger to life and property due to flooding or erosion damage;
  - (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
  - (4) The importance to the community of the services provided by the proposed facility;
  - (5) The necessity of the facility to a waterfront location, in the case of a functionally dependent facility;
  - (6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
  - (7) The compatibility of the proposed use with existing and anticipated development;
  - (8) The relationship of the proposed use to the comprehensive plan and the floodplain management program for that area;
  - (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
  - (10) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site, and;
  - (11) 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.
- (f) Upon consideration of the factors listed above, and the purposes of this chapter, the Appeals Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- (g) Variances shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result.
- (h) Conditions for variances:
  - (1) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this ordinance. For example, in the case of variances to an elevation requirement, this means the Appeals Board need not grant permission for the applicant to build at grade, or even to whatever elevation the applicant proposes, but only to that elevation which the Appeals Board believes will both provide relief and preserve the integrity of the local ordinance.
  - (2) In the instance of a historic structure, a determination shall be made that the variance is the minimum necessary to afford relief and not destroy the historic character and design of the structure;
  - (3) Variances shall only be issued upon:
    - (a) A showing of good and sufficient cause;
    - (b) A determination that failure to grant the variance would result in exceptional hardship; and;

- (c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud or victimization of the public (as defined above), or conflict with existing local laws or ordinances.
- (4) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation;
- (5) The Floodplain Administrator shall maintain the records of all appeal actions and report any variance to the Federal Emergency Management Agency (FEMA) and the Federal Insurance Administration (FIA) upon request.
- (6) Variances may be issued for new construction, substantial improvement, and other proposed new development necessary for the conduct of a functionally dependent use provided that the provisions of Article VI, Section 13-16 (a – k) are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood and does not result in additional threats to public safety and does not create a public nuisance.
- (i) Variance Notification: Any applicant to whom a variance is granted shall be given written notice over the signature of the Floodplain Administrator that:
  - (1) The issuance of a variance to construct a structure below the base flood elevation may result in increased premium rates for flood insurance, and;
  - (2) Such construction below the base flood level increases risks to life and property. A copy of the notice shall be recorded by the Floodplain Administrator in the Office of the County Court Clerk and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land by means of a Land Use Restriction.
  - (3) The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance, and report such variances issued in the community's biennial report submission to FEMA.
- (j) Historic Structures: Variances may be issued for the repair or rehabilitation of historic structures upon determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

## ARTICLE V. PROVISIONS FOR FLOOD HAZARD REDUCTION

### Sec. 13-17. General Construction standards.

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

- (a) New construction and substantial improvements shall be adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (b) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;
- (c) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- (d) New construction or substantial improvements shall be constructed by methods and practices that eliminate flood damage from the base flood;
- (e) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (f) New and replacement water supply systems shall be designed to eliminate infiltration of flood waters into the system;
- (g) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
- (h) On-site waste disposal systems shall be located and constructed to eliminate impairment to them or contamination from them during flooding; and
- (i) Any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this chapter, shall meet the requirements of "new construction" as contained in this chapter, and shall be undertaken only if said non-conformity is not furthered, extended, or replaced.

### Sec. 13-18. Specific standards.

In all areas of special flood hazard where base flood elevation data have been provided, as set forth in Article III, section 13-6, or Article IV, section 13-15(e)(2)), the following provisions are required:

- (a) *Residential construction.* New construction or substantial improvement of any residential structure (or manufactured home) shall have the lowest floor, including basement and mechanical equipment, elevated no lower than two (2) feet above the base flood elevation.
  - (1) Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of flood waters shall be provided in accordance with standards of Article V, section 13-18 (c).
  - (2) If a principal structure exists at the time of adoption of this chapter [Ordinance Number 7-87], it may be replaced, subject to the elevation of the first floor, including basement to two (2) feet above the base flood elevation.
  - (3) In an A zone, where no technical data has been produced by the Federal Emergency Management Agency, the lowest floor, including basement and mechanical equipment, shall be elevated two (2) feet above the base flood elevation, as determined by this community.
  - (4) The Floodplain Administrator will determine the method by which base flood elevations are determined. Methods include but are not limited to detailed hydrologic and hydraulic analyses, use of existing data available from other sources, use of historical data, or best supportable and reasonable judgment in the event no data can

be produced. The applicant shall provide cross sections for determining floodway boundaries (and thereby Base Flood Elevations) at any proposed construction site where FEMA maps are not available. All cross sections shall be referenced to mean sea level and shall have vertical error tolerances of no more than plus or minus five-tenths (0.5) foot. Cross section elevations shall be taken at those points which represent significant breaks in slope and at points where hydraulic characteristics of the base floodplain change. Each cross section shall extend across the entire base floodplain and shall be in the number and at the locations specified by the Floodplain Administrator. If necessary to ensure that significant flood damage will not occur, the Floodplain Administrator may require additional cross sections or specific site elevations which extend beyond those needed for making routine regulatory floodway boundary calculations.

(5) Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a Kentucky registered professional engineer or surveyor, and verified by the community building inspection department to be properly elevated. Such certification and verification shall be provided to the Floodplain Administrator.

(b) *Nonresidential construction.* New construction or substantial improvement of any commercial, industrial, or nonresidential structure shall be elevated to conform with Article V, Section 13-18 (a) or together with attendant utility and sanitary facilities:

(1) Be floodproofed below an elevation one (1) foot above the base flood elevation so that the structure is watertight with walls substantially impermeable to the passage of water;

(2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(3) Have the lowest floor, including basement, mechanical equipment, and ductwork, elevated no lower than an elevation one (1) foot above the base flood elevation, or;

(4) A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Article IV, Section 13-14 (a) (3). Manufactured homes shall meet the standards in Article V, Section 13-18 (e).

(5) All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, structure access or storage, and which are subject to flooding, shall be constructed of flood resistant materials below the base flood elevation, and, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Opening sizes (FEMA Technical Bulletin 1-93) for meeting this requirement must meet or exceed the following minimum criteria:

(a) Be certified by a registered professional engineer or architect; or

(b) Have a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater.

(c) *Elevated buildings.* New construction or substantial improvements of elevated structures on columns, posts, or pilings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

- (1) Designs for complying with this requirement must either be certified by a Kentucky registered professional engineer or architect and meet the following criteria:
  - a. Provide a minimum of two (2) openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
  - b. The bottom of all openings shall be no higher than one foot above foundation interior grade, which must be equal to in elevation or higher than the exterior foundation grade; and
  - c. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
- (2) Electrical, plumbing, and other utility connections are prohibited below the base flood elevation;
- (3) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and
- (4) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- (5) The total floor area of all such enclosed areas shall not exceed 300 square feet.
- (6) For enclosures greater than seven (7) feet in interior height, where elevation requirements exceed six (6) feet above the highest adjacent grade, a copy of the legally recorded land use restriction prohibiting the conversion of the area below the lowest floor to a use or dimension contrary to the structures' originally approved design, shall be presented as a condition of issue of the final Certificate of Occupancy.
- (d) *Floodways.* Located within areas of special flood hazard established in Article III, section 13-6, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:
  - (1) Prohibit encroachments, including fill, new construction, substantial improvements and other developments unless certification (with supporting technical data) by a Kentucky registered professional engineer is provided demonstrating that encroachments shall not result in any increase in the base flood elevation levels during occurrence of base flood discharge.
- (e) *Standards for manufactured homes and recreational vehicles.*
  - (1) All new or substantially improved manufactured homes located within Zones A and AE on the community's Flood Insurance Rate Map (FIRM), or in locations outside of a manufactured home park/subdivision, in a new manufactured home park/subdivision, in an expansion to an existing manufactured home park/subdivision, or in an existing manufactured home park/subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, must meet all the requirements for new construction, including elevation and anchoring.
  - (2) All Manufactured homes must be:
    - (a) Elevated on a permanent foundation;
    - (b) Have its lowest floor elevated no lower than two (2) feet above the level of the base flood elevation; and,
    - (c) Be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
  - (3) Except manufactured homes that have incurred substantial damage as a result of a flood, all manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that:

- (a) The lowest floor of the manufactured home is elevated to two (2) feet above the level of the base flood elevation, or
  - (b) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength, of no less than thirty-six (36) inches in height above grade.
  - (c) The manufactured home must be securely anchored to the adequately anchored foundation system to resist flotation, collapse and lateral movement.
  - (d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, any manufactured home placed or substantially improved must meet the standards of section 13-18(e)(3) (a) and (c) above.
- (4) All recreational vehicles placed on sites located within Zones A and AE on the community's Flood Insurance Rate Map (FIRM) must:
- (a) Be on the site for fewer than one hundred eighty (180) consecutive days.
  - (b) Be fully licensed and ready for highway use, or
  - (c) Meet the permit requirements of new construction, including anchoring and elevation requirements for "manufactured homes".
- (5) A recreational vehicle is ready for highway use if it is licensed and insured in accordance with State of Kentucky motor vehicle regulations, on its own wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.
- (f) Structures Elevated on Fill. A residential or non-residential structure may be constructed on permanent fill in accordance with the following:
- (1) The lowest floor (including basement) of the structure or addition shall be no lower than two (2) feet above the base flood elevation;
  - (2) The fill shall be placed in layers no greater than six inches deep before compacting and should extend at least ten feet beyond the foundation of the structure before sloping below the base flood elevation, said slope being no greater than a 2:1 ratio unless a stability analysis is provided by a Kentucky registered professional engineer;
  - (3) The top of the fill shall be no lower than the base flood elevation. However, the ten-foot minimum may be waived if a structural engineer certifies an alternative method to protect the structure from damage due to erosion, scour, and other hydrodynamic forces;
  - (4) The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties;
  - (5) All new structures built on fill must be constructed on properly designed and compacted fill (ASTM D-698 or equivalent) that extends beyond the structure walls before dropping below the base flood elevation and has appropriate protection from erosion and scour. The design of the fill or the fill standard must be approved by a Kentucky registered professional engineer.
- (g) Vegetative Buffer Strips shall be required for construction along and either side of blue-line streams, creeks, rivers, lakes and impoundments, and all streams labeled with names or numbers on the FIRMs. For all activities involving construction within twenty-five (25) feet of the channel, the following criteria shall be met:
- (1) A natural vegetative buffer strip shall be preserved within twenty-five (25) feet of the top of bank.
  - (2) Where it is impossible to protect this vegetative buffer strip during the construction of an appropriate use, a vegetated buffer strip shall be established upon completion of construction.

- (3) The use of undisturbed, native riparian vegetation is preferred in the vegetative buffer strip.
- (4) Access through the vegetative buffer strip shall be provided as specified or required for stream maintenance purposes. Where a permanent easement for stream maintenance exists along a channel, the portion of the vegetative buffer strip immediately adjacent to the top of bank shall be constructed and maintained to allow access for maintenance equipment.

**Sec. 13-19. Standards for streams without established base flood elevations and/or floodways.**

Located within the special flood hazard areas established in Article III, section 13-6, where small streams exist but where no base flood data have been provided or where base flood data has been provided without floodways, the following provisions apply:

- (a) No encroachments, including fill material or structures shall be located within special flood hazard areas unless certification by a Kentucky registered professional engineer is provided demonstrating the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.
- (b) New construction or substantial improvements of structures shall be elevated or floodproofed to elevations established in accordance with Article IV, section 13-15 (e) (2).

**Sec. 13-20. Standards for subdivision proposals.**

- (a) All subdivision proposals shall be consistent with the need to minimize flood damage.
- (b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to eliminate damage from base flood and prevent inundation of any streets;
- (c) All subdivision proposals shall have adequate drainage provided to eliminate damage from base flood.
- (d) Base flood elevation data shall be provided by a Kentucky registered professional engineer who is working in conjunction with the Kentucky Division of Water for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) which is greater than the lesser of fifty (50) lots or five (5) acres.
- (e) When a portion of a proposed subdivision lies within a special flood hazard area only that portion clearly outside the special flood hazard area will be considered when computing the minimum required lot size for the development. Areas of special flood hazard shall be noted on the face of the plat to be recorded.
- (f) Variances and Hearings:
  - (1) No division of land within areas of special flood hazard shall be approved by Henderson City-County Planning Commission until the necessary variances are granted.
  - (2) Prior to subdivision approval, the planning commission shall hold a public hearing on all division of lands within areas of special flood hazard.
- (g) All subdivision plans shall show the elevation of all proposed structure(s) and lowest adjacent grade at each structure. If the site is filled above the base flood elevation, the lowest floor and lowest adjacent grade elevations shall be certified by a Kentucky registered professional engineer or surveyor and provided to the Floodplain Administrator.
- (h) All streets included in new subdivision proposals shall be constructed above the Base Flood Elevation.

**Sec. 13-21. Standards for areas of shallow flooding.**

Located within the areas of special flood hazard established in Article III, section 13-6, 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; therefore, the following provisions apply:

- (a) All new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to or above either the base flood elevation or in Zone AO the flood depth specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth is specified, the lowest floor, including basement, shall be elevated no less than two (2) feet above the highest adjacent grade.
- (b) All new construction and substantial improvements of non-residential structures shall:
  - (1) Have the lowest floor, including basement, elevated to or above either the base flood elevation or the flood depth specified on the flood insurance rate map above the highest adjacent grade. If no flood depth is specified, the lowest floor, including basement shall be elevated no less than two (2) feet above the highest adjacent grade.
  - (2) Together with attendant utility, sanitary, and other public facilities be completely floodproofed to or above the base flood elevation so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

**Sec. 13-22. Standards for accessory structures in all zones beginning with the letter "A".**

For all accessory structures in special flood hazard areas designated with the letter "A" the following provisions shall apply:

- (a) Structure must be non-habitable;
- (b) Structure must be anchored to resist floatation forces;
- (c) Structure shall require flood openings/vents no more than one foot above grade, total openings are to be one square inch per one square foot of floor area, at least two openings required on opposite walls;
- (d) Structure shall be built of flood resistant materials below the base flood elevation;
- (e) Must elevate utilities above the base flood elevation;
- (f) Structure can only be used for storage or parking;
- (g) Structure cannot be modified for a different use after permitting.

**Sec. 13-23. Standards for Critical Facilities.**

Critical Facilities shall be located outside the limits of the SFHA, unless no feasible alternative is available. Construction of new critical Facilities shall not be permissible within the floodway. Critical Facilities within the SFHA shall be constructed on properly compacted fill and shall have the lowest floor (including basement) elevated at least one foot above the elevation of the 500-year flood. Flood proofing and sealing measures shall be taken to ensure that toxic substances will not be displaced by or released into floodwaters. A Critical Facility shall have at least one access road connected to land outside the 500-year floodplain that is capable of supporting a 12,500 pound vehicle, and the top of the access road must be no lower than the elevation of the 500-year flood.

**Sec. 13-24. Severability.**

This ordinance and the various parts thereof are hereby declared to be severable. Should 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 not affect the validity of the ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.