

Ordinance No. _____

ORDINANCE: To repeal in its entirety and re-enact Chapter 10 of the Rockville City Code entitled "Floodplain Management" so as to comply with the new Federal and State floodplain management provisions and to create a formal permitting process to track floodplain activities

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF ROCKVILLE,

MARYLAND, as follows:

SECTION I. That Chapter 10 of the Rockville City Code entitled "Floodplain Management" is hereby repealed in its entirety and a new Chapter 10 entitled "Floodplain Management" is enacted to read as follows:

CHAPTER 10

FLOODPLAIN MANAGEMENT

ARTICLE I. GENERAL PROVISIONS

Sec. 10-1. Findings

The Federal Emergency Management Agency has identified *special flood hazard areas* within the boundaries of the City of Rockville. *Special flood hazard areas* are subject to periodic inundation which may result 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. *Structures* that are inadequately elevated, improperly *floodproofed*, or otherwise unprotected from flood damage also contribute to flood losses.

The City of Rockville, by resolution, agreed to meet the requirements of the National Flood Insurance Program and was accepted for participation in the program on January 5, 1978, the initial effective date of the City of Rockville *Flood Insurance Rate Map*. As of that date, all *development* and *new construction* as defined herein, are to be compliant with this Chapter.

Sec. 10-2. Statutory Authorization

The Maryland General Assembly, in Md. Code Ann., Land Use Article, Title 4, has established as policy of the State that the orderly development and use of land and structures requires comprehensive regulation through the implementation of planning and zoning control, and that planning and zoning controls shall be implemented by local government in order to, among other purposes, secure the public safety, promote health and general welfare, and promote the conservation of natural resources. Therefore, the Mayor and Council of Rockville does hereby adopt the following floodplain management regulations.

Sec. 10-3. Statement of Purpose

It is the purpose of this Chapter to promote the public health, safety and general welfare, and to:

- (A) Protect human life, health and welfare;
- (B) Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future;
- (C) Minimize *flooding* of water supply and sanitary sewage disposal systems;
- (D) Maintain natural drainage;
- (E) Reduce financial burdens imposed on the *City*, its governmental units and its residents, by discouraging unwise design and construction of *development* in areas subject to *flooding*;
- (F) Minimize the need for rescue and relief efforts associated with *flooding* and generally undertaken at the expense of the general public;
- (G) Minimize prolonged business interruptions;
- (H) Minimize damage to public facilities and other utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges;
- (I) Reinforce that those who build in and occupy *special flood hazard areas* should assume responsibility for their actions;
- (J) Minimize the impact of *development* on adjacent properties within and near *flood-prone* areas;
- (K) Provide that the *flood* storage and conveyance functions of *floodplains* are maintained;
- (L) Minimize the impact of *development* on the natural and beneficial functions of *floodplains*;
- (M) Prevent *floodplain* uses that are either hazardous or environmentally incompatible; and
- (N) Meet City participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations (CFR) at 44 CFR Sec. 59.22.

Sec. 10-4. Areas to Which This Chapter Applies

This Chapter shall apply to all *special flood hazard areas* within the jurisdiction of the City of Rockville, and identified in Sec. 10-6.

A floodplain *variance* and *Floodplain Permit* from the City are required for *development* or construction within the *special flood hazard area*, including: filling; grading; construction of new *structures*; the *substantial improvement* of buildings or *structures*, including repair of *substantial damage*; placement or replacement of *manufactured structures*, including *substantial improvement* or repair of *substantial damage* of *manufactured structures*; erecting or installing a *temporary structure*, or *alteration of a watercourse*.

The following are exempted from requiring a floodplain *variance* and only require a *Floodplain Permit*:

- (A) Public utility transmission, distribution, or collection pipes, lines and facilities;
- (B) Public facilities owned or operated by the City, provided that they are located and constructed to minimize flood damage;
- (C) Minor landscaping installation and maintenance;
- (D) Split-rail fences or other fences deemed by the City to not be obstructive to the passage of floodwaters;
- (E) Play or seating equipment that is not a structure; and
- (F) Patios, decks, paths and paving less than 1,000 square feet that do not raise the surrounding grade by more than 1 foot.
- (G) Recreational vehicles that are fully licensed and ready for highway use or are on a site for less than 180 consecutive days.

Sec. 10-5. Basis for Establishing Special Flood Hazard Areas and BFEs

- (A) For the purposes of this Chapter, the minimum basis for establishing *special flood hazard areas* and *base flood elevations* is the *Flood Insurance Study* for Montgomery County, Maryland And Incorporated Areas dated September 29, 2006, or the most recent revision thereof, and the accompanying *Flood Insurance Rate Map(s)* and all subsequent amendments and revisions to the *FIRMs*. The *FIS* and *FIRMs* are retained on file and available to the public at City Hall, 111 Maryland Avenue, Rockville, Maryland.
- (B) Where field surveyed topography or digital topography indicates that ground elevations are below the closest applicable *base flood elevation*, even in areas not delineated as a *special flood hazard area* on the *FIRM*, the area shall be considered as *special flood hazard area*.
- (C) To establish *base flood elevations* in *special flood hazard areas* that do not have such elevations shown on the *FIRM*, the Floodplain Administrator may provide the best available data for *base flood elevations* to the applicant; may require the applicant to

obtain available information from Federal, State or other sources; or may require the applicant to establish *special flood hazard areas* and *base flood elevations* as set forth in Sec. 10-20, Sec. 10-36, and Sec. 10-38 of this Chapter.

- (D) To establish *special flood hazard areas* for stream reaches not included on the FIRM, but determined by the Floodplain Administrator to present a risk of flooding, the Floodplain Administrator, at his or her sole discretion, may require the applicant to establish updated *special flood hazard areas* and *base flood elevations* as set forth in Sec. 10-20, Sec. 10-36, and Sec. 10-38 of this Chapter. The update shall include new *hydrologic and hydraulic engineering analyses* based on ultimate development of the watershed, assuming current zoning at the time of the analysis. The resulting special flood hazard area delineated using these calculations may be different than the special flood hazard areas shown on the FIRM.

Sec. 10-6. Abrogation and Greater Restrictions

This Chapter is not intended to repeal or abrogate any existing regulations and ordinances, including subdivision regulations, zoning ordinances, *building codes*, or any existing easements, covenants, or deed restrictions. In the event of a conflict between this Chapter and any other ordinance, the more restrictive shall govern.

Sec. 10-7. Interpretation

In the interpretation and application of this Chapter, all provisions shall be:

- (A) Considered as minimum requirements;
- (B) Liberally construed in favor of the governing body; and,
- (C) Deemed neither to limit nor repeal any other powers granted under State statutes.

Notes referencing publications of the Federal Emergency Management Agency refer to the most recent edition of those publications, are intended only as guidance, and do not bind or alter the authority of the Floodplain Administrator to interpret and apply this Chapter.

Sec. 10-8. Warning and Disclaimer of Liability

The degree of *flood* protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur, and *flood* heights may be increased by man-made or natural causes. This Chapter does not imply that land outside of the *special flood hazard areas* or uses that are permitted within such areas will be free from *flooding* or *flood* damage.

This Chapter shall not create liability on the part of the City of Rockville, any officer or employee thereof, the Maryland Department of the Environment (MDE) or the Federal Emergency Management Agency (FEMA), for any *flood* damage that results from reliance on this Chapter or any administrative decision lawfully made hereunder.

Sec. 10-9. Severability

Should any section or provision of this Chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof other than the part so declared to be unconstitutional or invalid.

Sec. 10-10. Definitions

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

Accessory Structure: A building or *structure* on the same lot with, and of a nature customarily incidental and subordinate to, the principal *structure*. For the purposes of this Chapter, an accessory structure is limited to no more than 300 square feet in total floor area and shall be used solely for parking of vehicles and for limited storage.

Agreement to Submit an Elevation Certificate: An MDE form the applicant must submit for construction of new buildings, *structures or manufactured structures*; substantial improvement of existing structures or manufactures structures that are required to be elevated, and construction of horizontal additions that are required to be elevated The applicant agrees to have an *Elevation Certificate* prepared by a *licensed* professional engineer or *licensed* professional surveyor, as specified by the Floodplain Administrator, and to submit the certificate to the City at two stages:

- (1) Upon placement of the *lowest floor* and prior to further vertical construction; and
- (2) Prior to the final inspection and issuance of the Certificate of Occupancy.

Alteration of a Watercourse: For the purpose of this Chapter, alteration of a watercourse includes, but is not limited to widening, deepening or relocating the channel, including excavation or filling of the channel. Alteration of a watercourse does not include construction of a road, bridge, culvert, dam, or in-stream pond unless the channel is proposed to be realigned or relocated as part of such construction.

Applicant: any person, company, corporation, firm, developer, builder, governmental agency or any authorized representative or agent of same who executes the necessary forms to procure official approval of a City Floodplain Permit or floodplain variance to carry out Development.

Approved Plan: site plan, grading plan and/or building construction plan, details or design approved by the City for issuance of a Floodplain Permit.

Area of Shallow Flooding: A designated Zone AO on the *Flood Insurance Rate Map* with a 1-percent annual chance or greater of *flooding* to an average depth of one to three feet where a clearly defined channel does not exist, where the path of *flooding* is unpredictable, and where directional flow may not be evident; such *flooding* is characterized by ponding or sheet flow.

Base Building: The building to which an addition is being added. This term is used in provisions relating to additions.

Base Flood: The *flood* having a one-percent chance of being equaled or exceeded in any given year; the base flood also is referred to as the 1-percent annual chance (100-year) *flood*.

Base Flood Elevation: The water surface elevation of the *base flood* in relation to the datum specified on the *City's Flood Insurance Rate Map*. In *areas of shallow flooding*, the base flood elevation is the highest adjacent natural grade elevation plus the depth number specified in feet on the *Flood Insurance Rate Map*, or at least four (4) feet if the depth number is not specified.

Basement: Any area of the building having its floor subgrade below ground level on all sides.

Building Code(s): The effective Maryland Building Performance Standards (COMAR 05.02.07), including the building code, residential code, and existing building code.

City Waterway: Watts Branch, Rock Creek, Cabin John Creek, Muddy Branch, and any of their named and unnamed tributaries as well as other streams, brooks, creeks, ponds, lakes, impoundments, springs, seeps, marshes, swamps, bogs, wetlands, ditches, channel, canals, conduits, culverts, drains, gullies, ravines or washes, including any adjacent area that is subject to periodic inundation from overflow or flood water, whether natural or man-made, located in whole or in part within the boundaries of the City of Rockville. City waterways include perennial, intermittent and ephemeral streams.

Critical and Essential Facilities: Buildings and other *structures* that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow or earthquakes. [Note: See Maryland Building Performance Standards, Sec. 1602 and Table 1604.5.] Critical and essential facilities typically include hospitals, fire stations, police stations, storage of critical records, facilities that handle or store hazardous materials, and similar facilities.

Declaration of Land Restriction (Nonconversion Agreement): A form signed by the owner to agree not to convert or modify in any manner that is inconsistent with the terms of the permit and this Chapter, certain *enclosures below the lowest floor* of elevated buildings and certain *accessory structures*. The form requires the owner to record it on the property deed or in the Montgomery County, Maryland, land records to inform future owners of the restrictions.

Department: The City of Rockville Department of Public Works.

Development: For purposes of this Chapter, any manmade change to improved or unimproved real estate, including but not limited to buildings or other *structures*, placement of *manufactured structures*, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials. Development includes subdivision of land and redevelopment of previously developed land.

Elevation Certificate: FEMA form on which surveyed elevations and other data pertinent to a property and a building are identified and which shall be completed by a *licensed* professional land surveyor or a *licensed* professional engineer, as specified by the Floodplain Administrator. When used to document the height above grade of buildings in *special flood hazard areas* for which *base flood elevation* data are not available, the Elevation Certificate shall be completed in accordance with the instructions issued by FEMA. [Note: FEMA Form 086-0-33 and instructions are available online at <http://www.fema.gov/library/viewRecord.do?id=1383>.]

Enclosure Below the Lowest Floor: An unfinished or *flood*-resistant enclosure that is located below an elevated building, is surrounded by walls on all sides, and is usable solely for parking of vehicles, building access or storage, in an area other than a *basement* area, provided that such enclosure is built in accordance with the applicable design requirements specified in this Chapter. Also see “Lowest Floor.”

Federal Emergency Management Agency (FEMA): The Federal agency with the overall responsibility for administering the National Flood Insurance Program.

Flood or Flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland waters, and/or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood Damage-Resistant Materials: Any construction material that is capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair. [Note: See NFIP Technical Bulletin #2, “Flood Damage-Resistant Materials Requirements.”]

Flood Insurance Rate Map (FIRM): An official map on which the Federal Emergency Management Agency has delineated *special flood hazard areas* to indicate the magnitude and nature of *flood* hazards, to designate applicable flood zones, and to delineate floodways, if applicable. FIRMs that have been prepared in digital format or converted to digital format are referred to as Digital FIRMs (DFIRM).

Flood Insurance Study (FIS): The official report in which the Federal Emergency Management Agency has provided *flood* profiles, *floodway* information, and the water surface elevations.

Flood Opening: A flood opening (non-engineered) is an opening that is used to meet the prescriptive requirement of 1 square inch of net open area for every square foot of enclosed area. An engineered flood opening is an opening that is designed and certified by a *licensed* professional engineer or *licensed* architect as meeting certain performance characteristics, including providing automatic entry and exit of floodwaters; this certification requirement may

be satisfied by an individual certification for a specific structure or issuance of an Evaluation Report by the ICC Evaluation Service, Inc. [Note: See NFIP Technical Bulletin #1, “Openings in Foundation Walls and Walls of Enclosures.”]

Flood Protection Elevation: The *base flood elevation* plus two (2) vertical feet of freeboard. Freeboard is a factor of safety that compensates for uncertainty in factors that could contribute to *flood* heights greater than the height calculated for a selected size *flood* and *floodway* conditions, such as wave action, obstructed bridge openings, debris and ice jams, climate change, and the hydrologic effect of urbanization in a watershed.

Flood Protection Setback: A distance measured perpendicular to the top of bank of a *watercourse* that delineates an area to be left undisturbed to minimize future *flood* damage and to recognize the potential for bank erosion. Along *nontidal waters of the State*, the flood protection setback is:

- (1) 100 feet, if the *watercourse* has *special flood hazard areas* shown on the *FIRM*, except where the setback extends beyond the boundary of the flood hazard area; or
- (2) 50 feet, if the *watercourse* does not have *special flood hazard areas* shown on the *FIRM*.

Flood Zone: A designation for areas that are shown on *Flood Insurance Rate Maps*:

- (1) **Zone A:** *Special flood hazard areas* subject to inundation by the 1-percent annual chance (100-year) *flood*; *base flood elevations* are not determined.
- (2) **Zone AE and Zone A1-30:** *Special flood hazard areas* subject to inundation by the 1-percent annual chance (100-year) *flood*; *base flood elevations* are determined; *floodways* may or may not be determined.
- (3) **Zone AH and Zone AO:** *Areas of shallow flooding*, with *flood* depths of 1 to 3 feet (usually areas of ponding or sheet flow on sloping terrain), with or without BFEs or designated *flood* depths.
- (4) **Zone B and Zone X (shaded):** Areas subject to inundation by the 0.2-percent annual chance (500-year) *flood*; areas subject to the 1-percent annual chance (100-year) *flood* with average depths of less than 1 foot or with contributing drainage area less than 1 square mile; and areas protected from the *base flood* by levees.
- (5) **Zone C and Zone X (unshaded):** Areas outside of Zones designated A, AE, A1-30, AO, B, and X (shaded).

Floodplain: Any land area susceptible to being inundated by water from any source (see definition of “Flood” or “Flooding”) For purposes of City ordinances and regulations, *floodplain* is the ‘100-year floodplain’, which is the same as the *special flood hazard area*.

Floodplain Administrator: The Director of Public Works.

Floodplain Permit: A permit issued by the Department of Public Works authorizing construction within the *special flood hazard area*. The floodplain permit is the second required authorization for development in the special flood hazard area.

Floodproofing or Floodproofed: Any combination of structural and nonstructural additions, changes, or adjustments to buildings or *structures* which reduce or eliminate *flood* damage to real estate or improved real property, water and sanitary facilities, *structures* and their contents, such that the buildings or *structures* are 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. [Note: State regulations at COMAR 26.17.04.11(B)(7) do not allow new nonresidential buildings in *nontidal waters of the State* to be floodproofed.]

Floodproofing Certificate: FEMA form that is to be completed, signed and sealed by a *licensed* professional engineer or *licensed* architect to certify that the design of *floodproofing* and proposed methods of construction are in accordance with the applicable requirements of Sec. 10-79(B) of this Chapter. [Note: FEMA Form 086-0-34 is available online at <http://www.fema.gov/library/viewRecord.do?id=1600>.]

Floodway: The channel of a river or other *watercourse* and the adjacent land areas that must be reserved in order to pass the *base flood* discharge such that the cumulative increase in the water surface elevation of the *base flood* discharge is no more than a designated height. When shown on a *FIRM*, the floodway is referred to as the “designated floodway.”

Highest Adjacent Grade: The highest natural elevation of the ground surface, prior to construction, next to the proposed foundation of a *structure*.

Historic Structure: Any *structure* that is:

- (1) Individually listed in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listings on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (3) Individually listed on the Maryland Register of Historic Places; or
- (4) Individually listed on the inventory of historic places maintained by the City of Rockville whose historic preservation program has been certified by the Maryland Historical Trust or the Secretary of the Interior.

Hydrologic and Hydraulic Engineering Analyses: Analyses performed by a *licensed* professional engineer, in accordance with standard engineering practices that are accepted by the Maryland Department of the Environment (Nontidal Wetlands & Waterways) and FEMA, used to determine the *base flood*, other frequency floods, *flood* elevations, *floodway* information and boundaries, *flood* profiles, and *floodplain* boundaries.

Letter of Map Change (LOMC): A Letter of Map Change is an official FEMA determination, by letter, that amends or revises an effective *Flood Insurance Rate Map* or *Flood Insurance Study*. Letters of Map Change include:

Letter of Map Amendment (LOMA): An amendment based on technical data showing that a property was incorrectly included in a designated *special flood hazard area*. A LOMA amends the current effective *Flood Insurance Rate Map* and establishes that a specific property or *structure* is not located in a *special flood hazard area*.

Letter of Map Revision (LOMR): A revision based on technical data that may show changes to *flood zones*, *flood* elevations, *floodplain* and *floodway* delineations, and planimetric features. A Letter of Map Revision Based on Fill (LOMR-F), is a determination that a *structure* or parcel of land has been elevated by fill above the *base flood elevation* and is, therefore, no longer exposed to *flooding* associated with the *base flood*. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the *City's* floodplain management regulations.

Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed *flood* protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of *special flood hazard areas*. A Conditional Letter of Map Revision Based on Fill (CLOMR-F) is a determination that a parcel of land or proposed structure that will be elevated by fill would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed. A CLOMR does not revise the effective *Flood Insurance Rate Map* or *Flood Insurance Study*; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA, to revise the effective *FIRM*.

Licensed: As used in this Chapter, licensed refers to professionals who are authorized to practice in the State of Maryland by issuance of licenses by the Maryland Board of Architects, Maryland Board of Professional Engineers, Maryland Board of Professional Land Surveyors, and the Maryland Real Estate Appraisers and Home Inspectors Commission.

Lowest Floor: The lowest floor of the lowest enclosed area (including *basement*) of a building or *structure*; the floor of an *enclosure below the lowest floor* is not the lowest floor provided the enclosure is constructed in accordance with this Chapter. The lowest floor of a *manufactured home* is the bottom of the lowest horizontal supporting member (longitudinal chassis frame beam).

Manufactured Structure: A *structure*, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term manufactured structure does not include a *recreational vehicle* or a *temporary structure*.

Market Value: The price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. For the purposes of this Chapter, the market value of a building is determined by the most recent, full phased-in assessment value of the building (improvement) determined by the Maryland Department of Assessments and Taxation.

Maryland Department of the Environment (MDE): A principal department of the State of Maryland that is charged with, among other responsibilities, the coordination of the National Flood Insurance Program in Maryland (NFIP State Coordinator) and the administration of regulatory programs for *development* and construction that occur within the *waters of the State*, including nontidal wetlands, nontidal waters and floodplains, and State and private tidal wetlands (Tidal Wetlands). Unless otherwise specified, “MDE” refers to the Department’s Wetlands and Waterways Program.

Mixed-use Structure: Any *structure* that is used or intended for use for a mixture of nonresidential and residential uses in the same structure.

National Flood Insurance Program (NFIP): The program authorized by the U.S. Congress in 42 U.S.C. §§4001 - 4129. The NFIP makes flood insurance coverage available in communities that agree to adopt and enforce minimum regulatory requirements for *development* in areas prone to *flooding* (see definition of “Special Flood Hazard Area”).

New Construction: *Structures*, including additions and improvements, and the placement of *manufactured structures*, for which the *start of construction* commenced on or after January 5, 1978, the initial effective date of the City of Rockville *Flood Insurance Rate Map*, including any subsequent improvements, alterations, modifications, and additions to such *structures*.

NFIP State Coordinator: See *Maryland Department of the Environment (MDE)*.

Nontidal Waters of the State: See “Waters of the State.” As used in this Chapter, “nontidal waters of the State” refers to any stream or body of water within the State that is subject to State regulation, including the “100-year frequency *floodplain* of free-flowing waters.” COMAR 26.17.04.01 states that “the landward boundaries of any tidal waters shall be deemed coterminous with the wetlands boundary maps adopted pursuant to Environment Article, §16-301, Annotated Code of Maryland.” Therefore, the boundary between the tidal and nontidal waters of the State is the tidal wetlands boundary.

Person: An individual or group of individuals, corporation, partnership, association, or any other entity, including State and local governments and agencies.

Recreational Vehicle: A vehicle that is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light duty truck, and designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special Flood Hazard Area (SFHA): The land in the *floodplain* subject to a one-percent or greater chance of *flooding* in any given year. Special flood hazard areas are designated by the Federal Emergency Management Agency in *Flood Insurance Studies* and on *Flood Insurance Rate Maps* as Zones A, AE, AH, AO, A1-30, and A99, and Zones VE and V1-30. The term includes areas shown on other flood maps that are identified in Sec. 10-6.

Start of Construction: The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a *structure* on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a *manufactured structure* 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 *substantial improvements*, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure: A walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a *manufactured structure*.

Subdivision: The division of a lot, tract, or parcel of land into two (2) or more lots, plats, sites, or other divisions of land or assemblage of land for the purpose, whether immediate or future, of sale or of building development. "Subdivision" includes resubdivision and, when appropriate to the context, relates to the process of resubdividing. "Subdivision" may also refer to the land or territory subdivided.

Substantial Damage: Damage of any origin sustained by a building or *structure* whereby the cost of restoring the building or *structure* to its condition before damage would equal or exceed 50 percent of the *market value* of the building or *structure* before the damage occurred. Also used as "substantially damaged" structures. [Note: See "Substantial Improvement/Substantial Damage Desk Reference" (FEMA P-758).]

Substantial Improvement: Any reconstruction, rehabilitation, addition, or other improvement of a building or *structure*, the cost of which equals or exceeds 50 percent of the *market value* of the building or *structure* before the *start of construction* of the improvement. The term includes *structures* which have incurred *substantial damage*, regardless of the actual repair work

performed. The term does not, however, include any project for improvement of a building or *structure* to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official prior to the submission of an application for a permit and which are the minimum necessary to assure safe living conditions. [Note: See “Substantial Improvement/Substantial Damage Desk Reference” (FEMA P-758).]

Temporary Structure: A *structure* installed, used, or erected for a period of less than 180 days.

Variance: A grant of relief from the strict application of one or more requirements of this Chapter.

Violation: A violation is a.) any construction or *development* in a *special flood hazard area* that is being performed without an issued Floodplain Permit and, where required, an approved floodplain variance; or b.) the failure of a building, *structure*, or other *development* for which a permit is issued to be fully compliant with this Chapter and the conditions of the issued permit; or c.) a building, *structure*, or other *development* without the required design certifications, the *Elevation Certificate*, or other evidence of compliance required, until such time as the required documentation is provided.

Watercourse: The channel, including channel banks and bed, of *nontidal waters of the State*.

Waters of the State: [See Environment Article, Title 5, Subtitle 1, Annotated Code of Maryland.] Waters of the State include:

- (1) Both surface and underground waters within the boundaries of the State subject to its jurisdiction;
- (2) That portion of the Atlantic Ocean within the boundaries of the State;
- (3) The Chesapeake Bay and its tributaries;
- (4) All ponds, lakes, rivers, streams, public ditches, tax ditches, and public drainage systems within the State, other than those designed and used to collect, convey, or dispose of sanitary sewage; and
- (5) The *floodplain* of free-flowing waters determined by MDE on the basis of the 100-year *flood* frequency.

Sec. 10-11 to 10-15. Reserved.

ARTICLE II. ADMINISTRATION

Sec. 10-16. Designation of the Floodplain Administrator

The Director of Public Works is hereby appointed to administer and implement this Chapter and is referred to herein as the Floodplain Administrator. The Floodplain Administrator may:

- (A) Delegate duties and responsibilities set forth in this Chapter to qualified technical personnel, plan examiners, inspectors, and other employees.
- (B) Enter into a written agreement or written contract with another Maryland *community* or private sector entity to administer specific provisions of this Chapter. Administration of any part of this Chapter by another entity shall not relieve the *City* of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations (CFR) at 44 CFR Sec. 59.22.

Sec. 10-17. Duties and Responsibilities of the Floodplain Administrator

The duties and responsibilities of the Floodplain Administrator shall include but are not limited to:

- (A) Review applications for development approvals and permits to determine whether proposed activities will be located in *special flood hazard areas*.
- (B) Interpret *floodplain* boundaries and provide available *base flood elevation* and *flood hazard* information.
- (C) Review applications to determine whether proposed activities will be reasonably safe from *flooding*, and to require *new development* and *substantial improvements* to meet the requirements of this Chapter.
- (D) Determine whether all necessary permits have been obtained from the Federal, State or local agencies from which prior or concurrent approval is required; in particular, permits from MDE for any construction, reconstruction, repair, or alteration of a dam, reservoir, or waterway obstruction (including bridges, culverts, *structures*), any *alteration of a watercourse*, or any change of the course, current, or cross section of a stream or body of water, including any change to the 100-year frequency *floodplain* of free-flowing *nontidal waters of the State*.
- (E) Verify that applicants proposing an *alteration of a watercourse* have notified adjacent communities and MDE (NFIP State Coordinator), and have submitted copies of such notifications to FEMA.
- (F) Approve floodplain variances and issue Floodplain Permits for development in *special flood hazard areas* if the provisions of this Chapter have been met, or disapprove these if the provisions of this Chapter have not been met.
- (G) Inspect or cause to be inspected, buildings, *structures*, and other *development* in *special flood hazard areas* for which permits have been issued to determine compliance with this Chapter or to determine if non-compliance has occurred or *violations* have been committed.

- (H) Review *Elevation Certificates* and require incomplete or deficient certificates to be corrected.
- (I) Submit to FEMA, or require applicants to submit to FEMA, data and information necessary to maintain *FIRMs*, including *hydrologic and hydraulic engineering analyses* prepared by or for the City of Rockville, within six months after such data and information becomes available or has been approved by the City if the analyses indicate changes in *base flood elevations* or boundaries.
- (J) Maintain and permanently keep records that are necessary for the administration of this Chapter, including:
 - (1) *Flood Insurance Studies, Flood Insurance Rate Maps* (including historic studies and maps and current effective studies and maps) and *Letters of Map Change* that require City approval;
 - (2) Documentation supporting issuance and denial of permits, *Elevation Certificates*, documentation of the elevation (in relation to the datum on the *FIRM*) to which *structures* have been *floodproofed*, other required design certifications, *variances*, and records of enforcement actions taken to correct *violations* of this Chapter.
- (K) Enforce the provisions of this Chapter, investigate *violations*, issue notices of *violations* or stop work orders, and require permit holders to take corrective action.
- (L) Administer the requirements related to proposed work on existing buildings:
 - (1) Make determinations as to whether buildings and *structures* that are located in *special flood hazard areas* and that are damaged by any cause have been *substantially damaged*.
 - (2) Make reasonable efforts to notify owners of *substantially damaged structures* of the need to obtain a permit to repair, rehabilitate, or reconstruct, and prohibit the non-compliant repair of *substantially damaged* buildings except for temporary emergency protective measures necessary to secure a property or stabilize a building or *structure* to prevent additional damage.
- (M) Undertake, as determined appropriate by the Floodplain Administrator due to the circumstances, other actions which may include but are not limited to: issuing press releases, public service announcements, and other public information materials related to permit requests and repair of damaged *structures*; coordinating with other Federal, State, and local agencies to assist with substantial damage determinations; providing owners of damaged *structures* information related to the proper repair of damaged *structures* in *special flood hazard areas*; and assisting property owners with

documentation necessary to file claims for Increased Cost of Compliance (ICC) coverage under NFIP flood insurance policies.

(N) Notify the Federal Emergency Management Agency when the corporate boundaries of the City of Rockville have been modified and:

- (1) Provide a map that clearly delineates the new corporate boundaries or the new area for which the authority to regulate pursuant to this Chapter has either been assumed or relinquished through annexation; and
- (2) If the *FIRM* for any annexed area includes *special flood hazard areas* that have *flood zones* that have regulatory requirements that are not set forth in this Chapter, prepare amendments to this Chapter to adopt the *FIRM* and appropriate requirements, and submit the amendments to the governing body for adoption; such adoption shall take place within six months of the date of annexation and a copy of the amended regulations shall be provided to MDE (NFIP State Coordinator) and FEMA.

(O) Upon the request of FEMA, complete and submit a report concerning participation in the NFIP which may request information regarding the number of buildings in the SFHA, number of permits issued for *development* in the SFHA, and number of *variances* issued for *development* in the SFHA.

Sec. 10-18. Appeals

The City of Rockville Board of Appeals shall hear and decide all appeals from actions taken by the Floodplain Administrator on requests for Floodplain Permits or variances and on enforcement and violation actions, as provided for in this Chapter.

- (A) Any person aggrieved by any decision of the Floodplain Administrator made pursuant to the provisions of this Chapter may appeal the same to the Board of Appeals.
- (B) Once an appeal is made, the Floodplain Administrator shall advise the Board of Appeals regarding the intent of this Chapter and prepare a staff report and recommendation, including all the materials constituting the record upon which the action appealed from is taken. The Board may hear and review any additional testimony or evidence it deems necessary.
- (C) Any person aggrieved by any decision of the Board of Appeals pursuant to provisions of this Chapter may appeal the same to the Circuit Court of Montgomery County, in accordance with Chapter 200 of Title 7 of the Maryland Rules.

Sec. 10-19. Fees.

Fees may be collected for review and issuance of floodplain variances and Floodplain Permits, in accordance with a fee schedule approved by the Mayor and Council. Unless otherwise provided, all fees are non-refundable.

Sec. 10-20. Use and Interpretation of FIRMs and Floodplain Data

The Floodplain Administrator shall make interpretations, where needed, as to the exact location of *special flood hazard areas* and *floodplain* boundaries. The following shall apply to the use and interpretation of *FIRMs* and floodplain data for City floodplain variances and Floodplain Permits:

- (A) Where field surveyed topography indicates that ground elevations:
 - (1) Are below the *base flood elevation*, even in areas not delineated as a *special flood hazard area* on a *FIRM*, the area shall be considered as *special flood hazard area* and subject to the requirements of this Chapter;
 - (2) Are above the *base flood* elevation and are within areas delineated as a *special flood hazard area* on a *FIRM*, the area shall be regulated as *special flood hazard area* unless the applicant obtains a *Letter of Map Change* that removes the area from the *special flood hazard area*.
- (B) In FEMA-identified *special flood hazard areas* where *base flood elevations* have not been identified and in areas where FEMA has not identified *special flood hazard areas*, any other flood hazard data available from a Federal, State, or other source shall be reviewed and reasonably used, including the floodplain permit applicant's *hydrologic and hydraulic engineering analyses* which are based on ultimate development of the watershed assuming zoning current at the time of the study.
- (C) *Base flood elevations* on *FIRMs* and in *FISs* shall take precedence over *base flood elevations* by any other sources if such sources show lower *base flood elevations*.
- (D) Other sources of data shall be reasonably used if such sources show increased *base flood elevations* and/or larger *special flood hazard areas* than are shown on *FIRMs* and in *FISs*. The Floodplain Administrator, at his or her sole discretion, may require the floodplain permit applicant to submit *hydrologic and hydraulic engineering analyses* based on ultimate development of the watershed, assuming current zoning at the time of the study, to delineate updated *special flood hazard areas* in accordance with Sec. 10-36(C) of this Chapter.
- (E) If a Preliminary *Flood Insurance Rate Map* and/or a Preliminary *Flood Insurance Study* has been provided by FEMA:
 - (1) Upon the issuance of a Letter of Final Determination by FEMA, if the preliminary flood hazard data is more restrictive than the effective data, it shall be used and shall replace the flood hazard data previously provided from FEMA for the purposes of administering this Chapter.

- (2) Prior to the issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data shall be deemed the best available data pursuant to Sec. 10-6(C) and used where no *base flood elevations* are provided on the effective *FIRM*.
- (3) Prior to issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data is permitted where the preliminary *base flood elevations and floodplain* boundaries exceed the *base flood elevations* in existing flood hazard data provided by FEMA. Such preliminary data may be subject to change and/or appeal to FEMA.

Sec. 10-21 to Sec. 10-25. Reserved.

ARTICLE III. FLOODPLAIN VARIANCES

Sec. 10-26. General

- (A) As of the effective date of this ordinance, it shall be unlawful for any *person* or *applicant* to begin any *development* or construction which is wholly within, partially within, or in contact with any *special flood hazard area* established in Sec. 10-6, until a floodplain *variance* and *Floodplain Permit* are obtained from the City of Rockville, in accordance with this Chapter.
- (B) The following types of *development* are exempted from requiring a floodplain *variance* and only require a *Floodplain Permit*:
 - (1) Public utility transmission, distribution, or collection pipes, lines and facilities;
 - (2) Public facilities owned or operated by the City, provided that they are located and constructed to minimize flood damage;
 - (3) Minor landscaping installation and maintenance;
 - (4) Split-rail fences or other fences deemed by the City to not be obstructive to the passage of floodwaters;
 - (5) Play or seating equipment that is not a structure; and
 - (6) Patios, decks, paths and paving less than 1,000 square feet that do not raise the surrounding grade by more than 1 foot.
 - (7) Recreational vehicles that are fully licensed and ready for highway use or are on a site for less than 180 consecutive days.
- (C) A floodplain *variance* grants the City's permission for development to occur within the *special flood hazard area*, including repairs, improvements or additions to an

existing building, and regardless of whether the existing building pre-dates the City's entry into the *National Flood Insurance Program* or the effective date of this ordinance. A Floodplain Permit, which governs technical design and construction details, must also be obtained either concurrently or subsequent to the floodplain *variance* and prior to start of any *development* or *construction*.

- (D) A floodplain variance must be approved prior to the issuance of City construction permits, including Erosion and Sediment Control permit, Stormwater Management Permit, Building Permit, or other City permit related to the proposed development. It may be approved at any stage of the subdivision or Site Plan approval process, if such approval is required.
- (E) A *variance* shall be approved only if it is determined to not be contrary to the public interest and where, owing to special conditions of the lot or parcel, a literal enforcement of the provisions of this Chapter would result in an unnecessary hardship.
- (F) The Floodplain Administrator shall have the power to consider and authorize or deny *variances* from the strict application of the requirements of this Chapter, particularly of the prohibition in Sec. 10-55 against new structures or other development within the special flood hazard area. Upon consideration of the purposes of this Chapter, the individual circumstances, and the considerations and limitations of this section, the Floodplain Administrator may attach such conditions to *variances* as it deems necessary to further the purposes of this Chapter.
- (G) The Floodplain Administrator shall notify, in writing, that the *variance* is to the floodplain management requirements of this Chapter only, and that the cost of Federal flood insurance will be commensurate with the increased risk, with rates up to \$25 per \$100 of insurance coverage, to any applicant to whom a *variance* is granted to construct or substantially improve a building or *structure* with its *lowest floor* below the elevation required by this Chapter.
- (H) A record of all *variance* actions, including justification for issuance, shall be maintained pursuant to Sec. 10-17(J) of this Chapter.
- (I) Failure of the Department to observe or recognize hazardous conditions or failure to deny the *floodplain variance* and subsequent *Floodplain Permit* will not relieve the permittee from the responsibility for the hazardous conditions or damages resulting therefrom and will not result in the City or its officers or agents being responsible for the damages resulting therefrom.
- (J) A *floodplain variance* approval will remain valid for two years or for the term of any related City site plan approval for the same development proposal, whichever is longer. However, a *floodplain variance* may be revoked or modified by the Floodplain Administrator at any time if there has been an amendment or revision to

the basis for establishing *special flood hazard areas* and *BFEs* set forth in Sec. 10-6, or there has been a change in the development proposal.

Sec. 10-27. Application for a Variance

- (A) Application for a floodplain variance shall be made by the owner of the property or the owner's authorized agent (herein referred to as the applicant) prior to the start of any work. The application shall be on a form furnished by the City for that purpose, and shall be accompanied by any application or permit fees established by the Mayor and Council.
- (B) At a minimum, the application shall contain the following information: name, address, and telephone number of the applicant and property owner; legal description of the property; parcel map; description of the existing use; description of the proposed use; site map showing the location of special flood hazard areas, *flood zones*, and *base flood elevations*; description of the *variance* sought; and reason for the *variance* request. *Variance* applications shall specifically address each of the considerations in Sec. 10-28.
- (C) If the application is for a *variance* to allow the *lowest floor* of a building or *structure* below the applicable minimum elevation required by this Chapter, the application shall include a statement signed by the owner that, if granted, the conditions of the *variance* shall be recorded on the deed of the property.
- (D) If the application is for a *variance* for a *historic structure* pursuant to Sec. 10-62, the application shall contain documentation that the proposed work does not preclude the *structure's* continued eligibility and designation as a historic structure. The documentation shall be obtained from a source that is authorized to make such determinations (see definition of "*Historic Structure*").
- (E) Additional information listed under Sec. 10-38, Floodplain Permit Application Required, may also be required by the Floodplain Administrator for evaluation of the *variance* request.

Sec. 10-28. Considerations

In considering *variance* applications, the Floodplain Administrator shall consider all evaluations, all relevant factors, requirements specified in other sections of this Chapter, and the following factors, as determined by the Floodplain Administrator:

- (A) The danger that materials may be swept onto other lands to the injury of others.
- (B) The danger to life and property due to *flooding* or erosion damage.
- (C) The susceptibility of the proposed *development* (and its contents, if applicable) to flood damage and the effect of such damage on the individual owner.

- (D) The importance of the services provided by the proposed *development* to the *City*.
- (E) The availability of alternative locations for the proposed use which are not subject to, or are subject to less, *flooding* or erosion damage.
- (F) The compatibility of the proposed use with existing and anticipated *development*.
- (G) The relationship of the proposed use to the comprehensive plan and hazard mitigation plan for that area.
- (H) The safety of access to the property in times of flood for passenger vehicles and emergency vehicles.
- (I) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
- (J) The costs of providing government 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.

Sec. 10-29. Approval Standards

The Floodplain Administrator shall approve a *variance* request only upon making findings of fact on the following items:

- (A) A showing of good and sufficient cause. Good and sufficient cause deals solely with the physical characteristics of the property and cannot be based on the character of the improvement, the personal characteristics of the owner/inhabitants, or local provision that regulate standards other than health and public safety.
- (B) A determination that failure to grant the *variance* would result in exceptional hardship due to the physical characteristics of the property. Increased cost or inconvenience of meeting the requirements of this Chapter does not constitute an exceptional hardship to the applicant.
- (C) A determination that the granting of a *variance for development* within any flood hazard area with *base flood elevations* will not result in increased flood heights beyond that which is allowed in this Chapter.
- (D) A determination that the granting of a *variance* will not result in additional threats to public safety, the environment or stream conditions; extraordinary public expense, nuisances, fraud or victimization of the public, or conflict with existing local laws.
- (E) A determination that the building, *structure*, or other *development* is or can be protected by methods to minimize flood damages, in accordance with this Chapter.

(F) A determination that the *variance* is the minimum measure necessary to afford relief, considering the flood hazard.

(G) No reasonable alternative exists.

Sec. 10-30 to 10-35. Reserved.

ARTICLE IV. FLOODPLAIN PERMITS

Sec. 10-36 Floodplain Permits Required and Expiration

A *Floodplain Permit* from the City, in conjunction with a floodplain *variance*, is required for development or construction within the special flood hazard area.

- (A) It shall be unlawful for any *person* to begin any *development* or construction which is wholly within, partially within, or in contact with any *special flood hazard area* established in Sec. 10-6, including but not limited to: filling; grading; construction of new *structures*; the *substantial improvement* of buildings or *structures*, including repair of *substantial damage*; placement or replacement of *manufactured structures*, including *substantial improvement* or repair of *substantial damage* of *manufactured structures*; erecting or installing a *temporary structure*, or *alteration of a watercourse*, until a floodplain variance and Floodplain Permit are obtained from the City of Rockville, in accordance with this Chapter. However, types of *development* listed in Sec. 10-26 (B) require only a *Floodplain Permit* and do not require a floodplain *variance*. No variance or permit shall be issued until the requirements of this Chapter have been met.
- (B) In addition to the Floodplain Permit required in Sec. 10-36(A), applicants for permits in *nontidal waters of the State* are advised to contact MDE. Unless waived by MDE, pursuant to Code of Maryland Regulations 26.17.04, Construction on Nontidal Waters and Floodplains, MDE regulates the “100-year frequency floodplain of free-flowing waters,” also referred to as *nontidal waters of the State*. To determine the 100-year frequency floodplain, hydrologic calculations are based on the ultimate *development* of the watershed, assuming current zoning at the time of the study. The resulting flood hazard areas delineated using the results of such calculations may be different than the *special flood hazard areas* established in Sec. 10-6 of this Chapter. A Floodplain Permit from the City of Rockville is still required in addition to any State requirements.
- (C) A Floodplain Permit is valid provided the actual start of work is within 180 days of permit issuance. Requests for extensions shall be submitted in writing and justifiable cause demonstrated. The Floodplain Administrator may grant, in writing, one or more extensions of time, for additional periods not exceeding 90 days each and provided

there has been no amendment or revision to the basis for establishing *special flood hazard areas* and *base flood elevations* set forth in Sec. 10-6.

- (D) The burden is on the applicant to show that the proposed development is not in the *special flood hazard area* in order to proceed without obtaining a floodplain *variance* and *Floodplain Permit*.

Sec. 10-37. Permit Conditions

(A) *Floodplain Permits* are conditioned on the following:

- (1) Compliance with plans and laws. Compliance with conditions of the *Floodplain Permit*; the *Approved Plan*; and with all relevant laws, ordinances, regulations and standards of any federal, state or local government agency, including any established by the Department and MDE relating to Floodplain Management.
- (2) Hold harmless. The agreement and obligation of the Applicant to hold the City harmless from any expense incurred through the failure of the Applicant to complete any required floodplain management or flood protection measures, or from any damages growing out of the negligence of the Applicant.
- (3) Duty to reapply. If the Applicant wishes to continue any activity regulated by a Permit after the expiration date of the Permit, the Applicant must apply for an extension or a new Permit.
- (4) Proper operation and maintenance. The Applicant must properly operate and maintain all *floodproofing* systems.
- (5) Duty to mitigate. The Applicant must take all reasonable steps to minimize or prevent any violation of this Chapter that has a reasonable likelihood of adversely affecting public health and safety, the environment, property or public Right-of-Way.
- (6) Inspection and entry. The Applicant must grant access to the Property to the Department at reasonable times for purposes of determining compliance with this Chapter including observation, inspection, to make copies of records, to take samples or to monitor any substances or parameters at any location on the Site.
- (7) Duty to provide information. Subsequent to permit issuance, the Applicant must furnish to the Department, MDE (NFIP Coordinator) and/or FEMA any required information, including recorded agreements, certificates, *LOMC* applications and supporting analyses, and as-built information to document compliance with the *Floodplain Permit* and *Approved Plans*. The Applicant must furnish to the Department any information that the Department may

request to determine whether cause exists for modifying or terminating the Floodplain Permit or to determine compliance with the Floodplain Permit.

- (8) Reporting requirements. The Applicant must immediately report the following to the Department:
- (a) Changes to the *Approved Plan* or information in the *Floodplain Permit* application.
 - (b) Changes to the permitted site conditions.
 - (c) Any violation of this Chapter.

(B) In addition, the Floodplain Administrator may impose such express conditions on the Floodplain Permit as are reasonable and appropriate to preserve public health and safety and to prevent the creation of a nuisance or dangerous condition or as are deemed necessary to accomplish the purposes of this Chapter, including but not limited to the imposition of a time sequence or time limit for performance of work.

Sec. 10-38. Floodplain Permit Application Required

Application for a Floodplain Permit shall be made by the owner of the property or the owner's authorized agent (herein referred to as the applicant) prior to the start of any work. The application shall be on a form furnished by the City for that purpose, and shall be accompanied by any application or permit fees established by the Mayor and Council.

The Floodplain Administrator may waive or modify any of the application requirements of this section if the development activity is deemed to be of minor impact on the floodplain, and is projected to have minimal impact on neighboring properties. Other material and information may be requested by the Floodplain Administrator as necessary to determine conformance with this Chapter.

(A) Application Contents

Unless already submitted for the floodplain variance application, at a minimum, Floodplain Permit applications shall include:

- (1) Site plans drawn to scale showing the nature, location, dimensions, and existing and proposed topography of the area in question, and the location of existing and proposed *structures*, excavation, filling, storage of materials, drainage facilities, and other proposed activities.
- (2) Elevation of the existing natural ground where buildings or *structures* are proposed; referenced to the datum on the *FIRM*.

- (3) Delineation of *special flood hazard areas, flood zones, base flood elevations, and flood protection setbacks, as shown on the FIRMs*. *Base flood elevations* drawn to meet the existing topography shall be used to delineate the boundary of *special flood hazard areas* and such delineations shall prevail over the boundary of SFHAs shown on *FIRMs*.
- (4) Where floodways are not delineated or *base flood elevations* are not shown on the *FIRMs*, the Floodplain Administrator has the authority to require the applicant to use information provided by the Floodplain Administrator, information that is available from Federal, State, or other sources, or to determine such information using accepted engineering practices or methods approved by the Floodplain Administrator. [Note: See “Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations” (FEMA 265).]
- (5) Determination of the *base flood elevations*, for *development* proposals and subdivision proposals, each with at least 5 lots or at least 5 acres, whichever is the lesser, in *special flood hazard areas* where *base flood elevations* are not shown on the *FIRM*; if *hydrologic and hydraulic engineering analyses* are submitted, such analyses shall be performed in accordance with the requirements and specifications of MDE and FEMA.
- (6) *Hydrologic and hydraulic engineering analyses* for proposals in *special flood hazard areas* where FEMA has provided *base flood elevations* but has not delineated a *floodway*; such analyses shall demonstrate that the cumulative effect of proposed *development*, when combined with all other existing and anticipated development will not increase the water surface elevation of the *base flood* by more than one foot, or a lower increase if required by MDE.
- (7) If fill is proposed to be placed for a purpose other than to elevate *structures*, the applicant shall indicate the intended purpose for the fill.
- (8) Certifications and/or technical analyses prepared or conducted by a *licensed* professional engineer, registered land surveyor or *licensed* architect, as appropriate. The preparer(s) must be licensed in the State of Maryland. Required information may include:
 - (a) The determination of the *base flood elevations* or *hydrologic and hydraulic engineering analyses* prepared by a *licensed* professional engineer that are required by the Floodplain Administrator or are required by this Chapter in Sec. 10-57 for certain subdivisions and *development*; Sec. 10-58(B) for *development* in *special flood hazard areas* with *base flood elevations* but no designated *floodways*; and Sec. 10-58(D) for deliberate alteration or relocation of *watercourses*.

- (b) The Floodplain Administrator, at his or her sole discretion, may require the Floodplain Permit to be supported by hydrologic and hydraulic engineering analyses based on ultimate development of the watershed, assuming current zoning at the time of the study.
- (c) Topographic survey and/or stake-out information of *special flood hazard area* boundaries and relevant elevations on or adjacent to proposed development.

(B) Additional Application Contents for Structures

- (1) For proposed buildings and *structures*, including *substantial improvement* and repair of *substantial damage*, and placement and replacement of *manufactured structures*, including *substantial improvement* and repair of *substantial damage*:
 - (a) The proposed elevation of the *lowest floor*, including *basement*, referenced to the datum on the *FIRM* and a signed *Agreement to Submit an Elevation Certificate*.
 - (b) The signed *Declaration of Land Restriction (Nonconversion Agreement)* that shall be recorded in the Montgomery County land records prior to issuance of the Certificate of Occupancy, if the application includes an *enclosure below the lowest floor* or a crawl/underfloor space that is more than four (4) feet in height.
 - (c) A written evaluation of alternative methods considered to elevate *structures* and *manufactured structures*, if the location is in *nontidal waters of the State* and fill is proposed to achieve the elevation required in Sec. 10-78(A) or Sec. 10-79(A).
- (2) For *temporary structures* and temporary storage, specification of the duration of the temporary use.
- (3) For proposed work on existing buildings, *structures*, and *manufactured structures*, including any improvement, addition, repairs, alterations, rehabilitation, or reconstruction, sufficient information to determine if the work constitutes *substantial improvement* or repair of *substantial damage*, including but not limited to:
 - (a) If the existing building or *structure* was constructed after January 5, 1978, evidence that the work will not alter any aspect of the building or *structure* that was required for compliance with the floodplain management requirements in effect at the time the building or *structure* was permitted.

- (b) If the proposed work is a horizontal addition, a description of the addition and whether it will be independently supported or structurally connected to the *base building* and the nature of all other modifications to the *base building*, if any.
 - (c) Documentation of the *market value* of the building or *structure* before the improvement or, if the work is repair of damage, before the damage occurred.
 - (d) Documentation of the actual cash value of all proposed work, including the actual cash value of all work necessary to repair and restore damage to the before-damaged condition, regardless of the amount of work that will be performed. The value of work performed by the owner or volunteers shall be valued at market labor rates; the value of donated or discounted materials shall be valued at market rates.
- (4) For nonresidential *structures* that are proposed with *floodproofing*, an operations and maintenance plan as specified in Sec. 10-79(B)(3).
- (5) Certifications and/or technical analyses prepared or conducted by a *licensed* professional engineer, registered land surveyor or *licensed* architect, as appropriate. The preparer(s) must be licensed in the State of Maryland. Required information may include:
- (a) The *Floodproofing Certificate* for nonresidential *structures* that are *floodproofed* as required in Sec. 10-79(B).
 - (b) Certification that engineered *flood openings* are designed to meet the minimum requirements of Sec. 10-78(C)(3) to automatically equalize hydrostatic flood forces.

(C) New Technical Data

- (1) The applicant may seek a *Letter of Map Change* by submitting new technical data to FEMA, such as base maps, topography, and engineering analyses to support revision of *floodplain* boundaries and/or *base flood elevations*. Such submissions shall be prepared in a format acceptable to FEMA and any fees shall be the sole responsibility of the applicant. A copy of the submittal shall be attached to the application for a permit.
- (2) If the applicant submits new technical data to support any change in *floodplain* boundaries and/or *base flood elevations* but has not sought a *Letter of Map Change* from FEMA, the applicant shall submit such data to FEMA as soon as practicable, but not later than six months after the date such information

becomes available or is approved by the City. Such submissions shall be prepared in a format acceptable to FEMA and any fees shall be the sole responsibility of the applicant.

Sec. 10-39. Review and Issuance of Floodplain Permits

(A) In reviewing the Floodplain Permit application, the Floodplain Administrator shall:

- (1) Review application for *development* in *special flood hazard areas* to determine the completeness of information submitted. The applicant shall be notified of incompleteness or additional information that is required to support the application.
- (2) Notify applicant that permits from MDE and the U.S. Army Corps of Engineers, and other State and Federal authorities may be required.
- (3) Obtain documentation from applicant to assure that all necessary permits have been received from the Federal, State or local governmental agencies from which prior approval is required. The applicant shall be responsible for obtaining such permits, including permits issued by:
 - (a) The U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act;
 - (b) MDE pursuant to COMAR 26.23 (Nontidal Wetlands) and Section 401 of the Clean Water Act;
 - (c) MDE for construction on *nontidal waters of the State* pursuant to COMAR 26.17.04.
- (4) Review applications for compliance with this Chapter after all information required in Sec. 10-38, and any other information required by the Floodplain Administrator, has been received.

(B) A *Floodplain Permit* must be issued prior to issuance of any Building Permit, Single-Family Dwelling Permit, Sediment Control Permit, Stormwater Management Permit or other City permit related to the proposed work.

- (1) No *Approved Plan* for a *Floodplain Permit* is deemed approved until signed and dated by the Director.
- (2) All necessary Federal, State and/or local permits, floodplain *variance* or approvals for work within waters of the U.S., 100-year Floodplain, Wetlands or Wetlands buffer must be issued prior to issuance of a City Floodplain Permit.

- (3) No *Floodplain Permit* is deemed issued until the Applicant receives a *Floodplain Permit* signed and dated by the Director.

Sec. 10-40. Inspections

- (A) The Floodplain Administrator shall make periodic inspections of *development* permitted in *special flood hazard areas*, at appropriate times throughout the period of construction in order to monitor compliance. Such inspections may include:
 - (1) Stake-out inspection, to determine location on the site relative to the *special flood hazard area*.
 - (2) Foundation inspection, upon placement of the *lowest floor* and prior to further vertical construction, to collect information or certification of the elevation of the *lowest floor*.
 - (3) Inspection of *enclosures below the lowest floor*, including crawl/underfloor spaces, to determine compliance with applicable provisions.
 - (4) Utility inspection, upon installation of specified equipment and appliances, to determine appropriate location with respect to the *base flood elevation*.
 - (5) Final inspection prior to issuance of the Certificate of Occupancy.
- (B) The Floodplain Administrator may order at any time the performance of work deemed necessary to eliminate or prevent a flood hazard, and to ensure the work is in compliance with the Floodplain Permit.

Sec. 10-41. Submissions Required Prior to Final Inspection

- (A) Submittal of Elevation Certificate. Pursuant to the *Agreement to Submit an Elevation Certificate* submitted with the application as required in Sec. 10-38(B)(1)(a), the applicant shall have an *Elevation Certificate* prepared and submitted. In accordance with State Licensing Board standards, the *Elevation Certificate* must be signed and sealed by a Professional Land Surveyor licensed in the State of Maryland. The *Elevation Certificate* shall be submitted at two stages:
 - (1) Upon placement of the lowest floor and prior to further vertical construction (building under construction stage); and
 - (2) Prior to final inspection and issuance of a Certificate of Occupancy for elevated *structures* and *manufactured structures*, including substantially-improved *structures* and *manufactured structures*, and additions to *structures* and *manufactured structures* (finished construction stage).

- (B) Prior to issuance of the Certificate of Occupancy, the applicant shall submit an executed and recorded copy of the Declaration of Land Restriction (Nonconversion Agreement), if required by Sec. 10-38(b)(1)(b).

Sec. 10-42 to 10-45. Reserved.

ARTICLE V. ENFORCEMENT

Sec. 10-46. Compliance Required

- (A) As of the effective date of this Chapter, no building, *structure* or *development* shall hereafter be erected, constructed, reconstructed, improved, repaired, extended, converted, enlarged or altered without full compliance with this Chapter and all other applicable ordinances and regulations.
- (B) Failure to obtain a *Floodplain Permit* or, where required, a *variance* shall be a *violation* of this Chapter and shall be subject to penalties in accordance with this Article.
- (C) *Floodplain Permits* issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the specific activities set forth in such approved plans and applications or amendments thereto. Use, arrangement, or construction of such specific activities that are contrary to that authorization shall be deemed a *violation* of this Chapter.

Sec. 10-47. Enforcement Responses, Corrective Actions, and Penalties.

- (A) When a violation of this Chapter is identified, the Floodplain Administrator may, at the City's sole discretion, take any or all of the following actions against the applicant:
- (1) Administrative orders and fines
 - (a) Issue an abatement order to the applicant to abate and eliminate the violation at the responsible person's own expense. This may include removal of an unpermitted structure in the special flood hazard area.
 - (b) Issue a stop work order requiring all construction, business operation, and other activities relating to the violation to be halted until the violation is corrected to the satisfaction of the Floodplain Administrator. Work necessary to correct the violation is allowed.
 - (c) Issue a Compliance Order establishing a specific schedule for achieving compliance with reconstruction, regrading or stabilization, pollution prevention practices, the abatement of flooding, the repair of any damages

to Rockville infrastructure, and other corrective actions established in the order as the Floodplain Administrator deems necessary.

- (d) Issue a directive or order imposing an administrative fine of \$250 per violation per day until the violation is abated or compliance is achieved.
- (e) Issue a directive or order imposing an administrative fine of \$1,000 per violation per day for failure to comply with any directive or order issued under this Ordinance.
- (f) The issuance of any administrative order or fine under this section does not relieve liability for any previous or continuing violations, and issuance of the order will not bar the Floodplain Administrator from pursuing additional action against a person in violation of this Chapter.

(2) Additional administrative remedies

- (a) The City may deny, suspend, or revoke any variance or permit issued under this Chapter, Public Works Permits, Building Permits, Occupancy Permits, and any other permits related to the activity resulting in the violation or to the site on which the violation is occurring, until the violation is corrected to the satisfaction of the Floodplain Administrator.
- (b) Impose additional engineering design, permits or construction requirements to bring the site into compliance with the approved permit or relevant law or regulation, and may require a permit revision to accomplish this.

(3) Costs

- (a) Any person found to have violated this Chapter must reimburse the City for all costs associated with the inspection, surveying, analyses, abatement, and enforcement action resulting from the violation(s).
- (b) All fines, penalties, and costs owed to the City pursuant to this section may be reduced to a judgment, filed as a lien on the property of the person responsible for the violation, and added to the tax rolls for collection in the same manner as City taxes pursuant to Rockville City Code §23.5-42.
- (c) The penalties, fines, and costs recovered by the City will be deposited into the City Stormwater Management Fund.

(B) The remedies listed in this Chapter are not sequential or exclusive. The Floodplain Administrator may take any, all, or any combination of these actions. Further, the

Floodplain Administrator may pursue any other remedies available under any applicable federal, state or local law.

- (C) All decisions, findings, orders or directives issued by the Floodplain Administrator pursuant to this Section, except for a final decision of the Floodplain Administrator on an appeal, must contain a notice of the right to appeal set forth in Sec. 10-18 of this Chapter.

Sec. 10-48. Stop Work Order, Permit Suspension and Revocation.

- (A) In addition to any other remedy, sanction or penalty provided in this Chapter, the Floodplain Administrator has the authority to issue a stop work order, suspend, or revoke any *variance* or *Floodplain Permit* issued under this Chapter for any of the following reasons:
- (1) Any violation(s) of the conditions of a *variance* or *Floodplain Permit* issued under this Chapter;
 - (2) Changes in site characteristics upon which an approval or modification of requirements was granted;
 - (3) Any unsafe or unworkman-like condition;
 - (4) Noncompliance with corrective actions directed by the Floodplain Administrator; or
 - (5) The Floodplain Administrator determines an immediate danger exists in a downstream area.

Sec. 10-49. Additional Penalties and Remedies.

- (A) Institute any appropriate civil or criminal action or proceeding to prevent, restrain, correct or abate any violation of this Chapter or any administrative orders or directives issued hereunder.
- (B) Pursuant to Sec. 4-215 of the Environmental Article, Annotated Code of Maryland, as amended, any person violating the provisions of this Chapter is guilty of a misdemeanor, and upon conviction in a court of competent jurisdiction is subject to a fine of not more than Ten Thousand Dollars (\$10,000.00) or imprisonment not exceeding 1 year or both for each violation with costs. Each day that a violation continues is a separate offense. In addition, the City of Rockville may institute injunctive, or other appropriate action or proceedings of law to correct violations of this Chapter. Any court of competent jurisdiction may issue temporary or permanent restraining orders, injunctions, or other appropriate forms of relief.

- (C) In addition to any other sanction, penalty or remedy provided for by this Chapter, the City may institute any enforcement measures authorized by state or city law for violations of stormwater management requirements or sediment control or refer any suspected violations to the appropriate state or federal agencies for enforcement.

Sec. 10-50 to 10-55. Reserved.

ARTICLE VI. GENERAL DEVELOPMENT REQUIREMENTS IN SPECIAL FLOOD HAZARD AREAS

Sec. 10-56. Application of Requirements

As of the effective date of this Chapter, there shall be no new *development in special flood hazard areas* identified in Sec. 10-6 unless a floodplain variance and a Floodplain Permit are granted by the City in accordance with the provisions of this Chapter.

- (A) Unless exempted by Sec. 10-26 (B), all applicants must receive a floodplain variance granting permission to develop within the special flood hazard area. All applicants must also receive a Floodplain Permit that may specify technical requirements and conditions for the proposed development to occur.
- (B) The variance and Floodplain Permit may be obtained at the same time, or the variance may be obtained first.
- (C) The variance must be approved and the Floodplain permit issued prior to issuance by the City of any Building Permit, Single Family Dwelling Permit, Sediment Control Permit, Stormwater Management Permit or other City permit for work proposed within the *special flood hazard area*.

Sec. 10-57. Subdivision Proposals and Development Proposals

In *special flood hazard areas*:

- (A) Subdivision proposals and *development* proposals shall be consistent with the need to minimize flood damage and are subject to all applicable standards in this Chapter.
- (B) Subdivision proposals and *development* proposals shall have utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (C) Subdivision proposals and *development* proposals shall have adequate drainage paths provided to reduce exposure to flood hazards and to guide floodwaters around and away from existing and proposed *structures*.
- (D) Subdivision proposals and *development* proposals containing at least 5 lots or at least 5 acres, whichever is the lesser, that are wholly or partially in *special flood hazard areas*

where *base flood elevation* data are not provided by the Floodplain Administrator or available from other sources, shall be supported by determinations of *base flood elevations* as required in Sec. 10-38 of this Chapter.

- (E) Subdivision access roads shall have the driving surface at or above the *base flood elevation*.
- (F) No lot may be platted within the limits of the special flood hazard area, in accordance with the Zoning Ordinance, Sec. 25.21.20 of the City Code.
- (G) Subdivision proposals shall be laid out such that any portion of the *special flood hazard area* shall be recorded as an outlot, dedicated to the City, or otherwise protected to preserve it as open space.

Sec. 10-58. Development that Affects Flood-Carrying Capacity of Nontidal Waters of the State

- (A) For proposed *development* that includes the placement of fill in *nontidal waters of the State*, other than Construction of Roads, Bridges, Culverts, Dams and In-Stream Ponds, the volume of space occupied by the authorized fill or structure below the base flood elevation shall be compensated for and balanced by a hydraulically-equivalent volume of excavation taken from below the base flood elevation. Uncompensated loss of natural floodplain storage can increase off-site flood elevations. Such excavations shall be designed to drain freely to the watercourse or in such a manner as to not increase flooding impact to other structures.
- (B) For *development* in *special flood hazard areas* of *nontidal waters of the State* with *base flood elevations* but no designated *floodways*:
 - (1) The applicant shall develop *hydrologic and hydraulic engineering analyses* and technical data reflecting the proposed activity and shall submit such technical data to the Floodplain Administrator as required in Sec. 10-38(A)(6). The analyses shall be prepared by a *licensed* professional engineer in a format required by FEMA for a Conditional Letter of Map Revision and a Letter of Map Revision upon completion of the project. Submittal requirements and fees shall be the responsibility of the applicant.
 - (2) The proposed *development* may be permitted if the applicant has received the appropriate permits from MDE for alteration of the 100-year floodplain and if the analyses demonstrate that the cumulative effect of the proposed *development*, when combined with all other existing and potential flood hazard area encroachments will not increase the *base flood elevation* more than 1.0 foot at any point.
- (C) Construction of roads, bridges, culverts, dams, and in-stream ponds in *nontidal waters of the State* shall not be approved unless they comply with this Section and the applicant has received a permit from MDE.

- (D) Alteration of a Watercourse. For any proposed *development* that involves *alteration of a watercourse* not subject to Sec. 10-58(B), unless waived by MDE, the applicant shall develop *hydrologic and hydraulic engineering analyses* and technical data reflecting such changes, and submit such technical data to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a *licensed* professional engineer in a format required by MDE and by FEMA for a Conditional Letter of Map Revision and a Letter of Map Revision upon completion of the project. Submittal requirements and fees shall be the responsibility of the applicant.

Alteration of a watercourse may be permitted only upon submission, by the applicant, of the following:

- (1) A description of the extent to which the *watercourse* will be altered or relocated;
 - (2) A certification by a *licensed* professional engineer that the flood-carrying capacity of the *watercourse* will not be diminished; and
 - (3) Evidence that adjacent communities, the U.S. Army Corps of Engineers, and MDE have been notified of the proposal, and evidence that such notifications have been submitted to FEMA.
 - (4) Evidence that the applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the *watercourse* so that the flood carrying capacity will not be diminished. The Floodplain Administrator may require the applicant to enter into an agreement with the City specifying the maintenance responsibilities. If an agreement is required, the Floodplain Permit shall be conditioned to require that the agreement be recorded in the Montgomery County land records, and it shall be binding on future owners.
- (E) Fill proposed to be placed to elevate *structures* in *special flood hazard areas* shall comply with Sec. 10-58(A), Sec. 10-58(B), and the limitations of Sec. 10-78(B).

Sec. 10-59. Flood Protection Setbacks

Within areas defined by *flood protection setbacks* along *nontidal waters of the State*:

- (A) No new buildings, *structures*, or other *development* shall be permitted unless the applicant demonstrates that the site cannot be developed without such encroachment into the *flood protection setback* and the encroachment is the minimum necessary after consideration of varying other siting standards such as side, front, and back lot line setbacks.
- (B) Disturbance of natural vegetation shall be minimized and any disturbance allowed shall be stabilized with vegetation.

- (C) Public works and temporary construction may be permitted.
- (D) Development outside of the special flood hazard area but within the flood protection setback will be regulated through the City's site plan review or permitting process. It does not require a Floodplain Permit or variance.

Sec. 10-60. Protection of Water Supply and Sanitary Sewage Systems

- (A) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems.
- (B) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters.
- (C) On-site waste disposal systems, including ejector pumps and holding tanks, shall be located to avoid impairment to or contamination from them during conditions of *flooding*.

Sec. 10-61. Disposal of Fill Prohibited

Disposal of fill, including but not limited to earthen soils, rock, rubble, construction debris, woody debris, and trash, shall not be permitted in *special flood hazard areas*.

Sec. 10-62. Historic Structures

Repair, alteration, addition, rehabilitation, or other improvement of historic structures that does not conform with the requirements of this ordinance shall be permitted only by variance. Evidence submitted for consideration of the variance shall include a determination that the proposed work will not preclude the structure's continued eligibility or designation as a historic structure.

Sec. 10-63. Recreational Vehicles

Recreational vehicles shall:

- (A) Meet the requirements for *manufactured structures* in Sec. 10-74; or
- (B) Be fully licensed and ready for highway use; or
- (C) Be on a site for less than 180 consecutive days.

Sec. 10-64 to Sec. 10-71. Reserved.

ARTICLE VII. ADDITIONAL REQUIREMENTS IN SPECIAL FLOOD HAZARD AREAS

Sec. 10-72. General Requirements

In addition to the general development requirements of Article VI, the requirements of Article VII. address design and construction of buildings, structures, manufactured structures, and other structure categories. These requirements shall:

- (A) Apply in all *special flood hazard areas*, including *special flood hazard areas* along *nontidal waters of the State*.
- (B) Apply to all *development*, including *new construction*, *substantial improvements* (including repair of *substantial damage*), and placement, replacement, and *substantial improvement* (including repair of *substantial damage*) of *manufactured structures*.

Sec. 10-73. Buildings and Structures

New buildings and *structures* (including the placement and replacement of *manufactured structures*) and *substantial improvement* of existing *structures* (including *manufactured structures*) that are located, in whole or in part, in any *special flood hazard area* shall:

- (A) Be designed (or modified) and constructed to safely support flood loads. The construction shall provide a complete load path capable of transferring all loads from their point of origin through the load-resisting elements to the foundation. *Structures* shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses, including hydrodynamic and hydrostatic loads and the effects of buoyancy, from *flooding* equal to the *flood protection elevation* or the elevation required by this Chapter or the *building code*, whichever is higher.
- (B) Be constructed by methods and practices that minimize flood damage.
- (C) Use *flood damage-resistant materials* below the elevation specified in Sec.10-78(A) or Sec. 10-79(A) as the *lowest floor*.
- (D) Have electrical systems, equipment and components, and mechanical, heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment located at or above the elevation of the *lowest floor* required in Sec. 10-78(A) or Sec. 10-79(A). Electrical wiring systems are permitted to be located below elevation of the *lowest floor* provided they conform to the provisions of the electrical part of the *building code* for wet locations. If replaced as part of a *substantial improvement*, electrical systems, equipment and components, and heating, ventilation, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment shall meet the requirements of this section.

- (E) As an alternative to paragraph (D), electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment are permitted to be located below the elevation of the *lowest floor* provided they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to that elevation.
- (F) Have the electric panelboard elevated at least three (3) feet above the BFE.
- (G) Comply with the specific requirements of this Article.
- (H) Comply with the requirements of the most restrictive designation, if located on a site that has more than one *flood zone* designation (e.g., an A Zone and a designated *floodway*).

Sec. 10-74. Manufactured Structures

- (A) For the purpose of this Chapter, the *lowest floor* of a *manufactured structure* is the bottom of the lowest horizontal supporting member (longitudinal chassis frame beam).
- (B) New, replacement, and *substantial improvement* (including repair of *substantial damage*) of existing *manufactured structures* in all *special flood hazard areas*, shall:
 - (1) Be elevated on a permanent, reinforced foundation in accordance with this Article;
 - (2) Be installed in accordance with the anchor and tie-down requirements of the *building code* or the manufacturer's written installation instructions and specifications; and
 - (3) Have *enclosures below the lowest floor* of the elevated *manufactured structure*, if any, including enclosures that are surrounded by rigid skirting or other material that is attached to the frame or foundation, that comply with the requirements of this Article.

[Note: See "Protecting Manufactured Homes from Floods and Other Hazards: A Multi-Hazard Foundation and Installation Guide" (FEMA P-85).]

Sec. 10-75. Critical and Essential Facilities

New structures or additions to critical and essential facilities in the *special flood hazard area* shall be elevated to the highest of these elevations: the *base flood elevation* plus one (1) foot of freeboard; the elevation required by the *building code*; or the elevation of the 0.2 percent chance (500-year) flood.

Sec. 10-76. Temporary Structures and Temporary Storage

In addition to the application requirements of Sec. 10-38, applications for the placement or erection of *temporary structures* and the temporary storage of any goods, materials, and equipment, shall specify the duration of the temporary use. In addition:

(A) *Temporary structures* shall:

- (1) Be designed and constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic loads and hydrostatic loads during conditions of the *base flood*;
- (2) Have electric service installed in compliance with the electric code; and
- (3) Comply with all other requirements of the applicable State and local permit authorities.

(B) Temporary storage shall not include hazardous materials.

Sec. 10-77. Gas or Liquid Storage Tanks

(A) Underground tanks in special flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the *base flood*.

(B) Above-ground tanks in special flood hazard areas shall be anchored to a supporting structure and elevated to or above the *base flood elevation*, or shall be anchored or otherwise designed and constructed to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the *base flood*.

(C) In special flood hazard areas, tank inlets, fill openings, outlets and vents shall be:

- (1) At or above the *base flood elevation* or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the *base flood*; and
- (2) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the *base flood*.

(D) Existing tanks within the *special flood hazard area* must be removed from the SFHA or protected in accordance with this Section for any *development* or redevelopment site requiring any City permit, regardless of whether the new *development* or redevelopment itself is proposed within the SFHA.

Sec. 10-78. Residential Structures and Residential Portions of Mixed Use Structures

New residential *structures* and residential portions of mixed use *structures*, and *substantial improvement* (including repair of *substantial damage*) of existing residential *structures* and residential portions of mixed use *structures* shall comply with the applicable requirements of Article VI and this section. See Sec. 10-80 for requirements for horizontal additions.

(A) Elevation Requirements

- (1) *Lowest floors* shall be elevated to or above the *flood protection elevation* (equal to two feet higher than the base flood elevation).
- (2) In *areas of shallow flooding* (Zone AO), the *lowest floor* (including *basement*) shall be elevated at least as high above the *highest adjacent grade* as the depth number specified in feet on the *FIRM* plus two (2) feet, or at least four (4) feet if a depth number is not specified.
- (3) *Enclosures below the lowest floor* shall meet the requirements of Sec. 10-78(C).

(B) Limitations on Use of Fill to Elevate Structures

In addition to the restrictions of Sec. 10-58, fill placed for the purpose of raising the ground level to support a building or *structure* shall:

- (1) Consist of earthen soil or rock materials only.
- (2) Extend laterally from the building footprint to provide for adequate access as a function of use; the Floodplain Administrator may seek advice from the State Fire Marshal's Office and/or the local fire services agency;
- (3) Comply with the requirements of the *building code* and be placed and compacted to provide for stability under conditions of rising and falling floodwaters and resistance to erosion, scour, and settling;
- (4) Be sloped no steeper than one (1) vertical to two (2) horizontal, unless approved by the Floodplain Administrator;
- (5) Be protected from erosion associated with expected velocities during the occurrence of the *base flood*; unless approved by the Floodplain Administrator, fill slopes shall be protected by vegetation if the expected velocity is less than five feet per second, and by other means if the expected velocity is five feet per second or more; and
- (6) Be designed with provisions for adequate drainage and no adverse effect on adjacent properties.

(C) Enclosures Below the Lowest Floor

- (1) *Enclosures below the lowest floor* shall be used solely for parking of vehicles, building access, crawl/underfloor spaces, or limited storage.
- (2) *Enclosures below the lowest floor* shall be constructed using *flood damage-resistant materials*.
- (3) *Enclosures below the lowest floor* shall be provided with *flood openings* which shall meet the following criteria: [Note: See NFIP Technical Bulletin #1, "Openings in Foundation Walls and Walls of Enclosures."]
 - (a) There shall be a minimum of two *flood openings* on different sides of each enclosed area; if a building has more than one *enclosure below the lowest floor*, each such enclosure shall have *flood openings* on exterior walls.
 - (b) The total net area of all *flood openings* shall be at least 1 square inch for each square foot of enclosed area (non-engineered *flood openings*), or the *flood openings* shall be engineered *flood openings* that are designed and certified by a *licensed* professional engineer to automatically allow entry and exit of floodwaters; the certification requirement may be satisfied by an individual certification or an Evaluation Report issued by the ICC Evaluation Service, Inc.
 - (c) The bottom of each *flood opening* shall be 1 foot or less above the higher of the interior floor or grade, or the exterior grade, immediately below the opening.
 - (d) Any louvers, screens or other covers for the *flood openings* shall allow the automatic flow of floodwaters into and out of the enclosed area.
 - (e) If installed in doors, *flood openings* that meet requirements of paragraphs (a) through (d), are acceptable; however, doors without installed *flood openings* do not meet the requirements of this section.

Sec. 10-79. Nonresidential Structures and Nonresidential Portions of Mixed Use Structures

New nonresidential *structures* and nonresidential portions of mixed use *structures*, and *substantial improvement* (including repair of *substantial damage*) of existing nonresidential *structures* and nonresidential portions of mixed use *structures* shall comply with the applicable requirements of Article VI and the requirements of this section. See Sec. 10-80 for requirements for horizontal additions.

(A) Elevation Requirements

Elevated *structures* shall:

- (1) Have the *lowest floor* (including *basement*) elevated to or above the *flood protection elevation*; or
- (2) In *areas of shallow flooding* (Zone AO), have the *lowest floor* (including *basement*) elevated at least as high above the *highest adjacent grade* as the depth number specified in feet on the *FIRM* plus two (2) feet, or at least four (4) feet if a depth number is not specified; and
- (3) Have *enclosures below the lowest floor*, if any, that comply with the requirements of Sec. 10-78(C); or
- (4) If proposed to be elevated on fill, meet the limitations on fill in Sec. 10-78(B).

(B) Floodproofing Requirements

- (1) *Floodproofing* of new nonresidential buildings is not allowed in *nontidal waters of the State* (COMAR 26.17.04.11(B)(7)).
- (2) *Floodproofing* for *substantial improvement* of nonresidential buildings is allowed in *nontidal waters of the State*.
- (3) If *floodproofing* is proposed, *structures* shall:
 - (a) Be designed to be dry *floodproofed* such that the building or *structure* is watertight with walls and floors substantially impermeable to the passage of water to the level of the *flood protection elevation* plus 1.0 foot, or
 - (b) If located in an *area of shallow flooding* (Zone AO), be dry *floodproofed* at least as high above the *highest adjacent grade* as the depth number specified on the *FIRM* plus three (3) feet, or at least five (5) feet if a depth number is not specified; and
 - (c) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
 - (d) Have *floodproofing* measures that are designed taking into consideration the nature of flood-related hazards; frequency, depth and duration of *flooding*; rate of rise and fall of floodwater; soil characteristics; flood-borne debris; at least 12 hours of flood warning time from a credible source; and time necessary to implement any measures that require human intervention;

- (e) Have at least one door above the applicable flood elevation that allows human ingress and egress during conditions of *flooding*;
- (f) Have an operations and maintenance plan that is filed with local emergency management officials and that specifies the owner/occupant's responsibilities to monitor flood potential; the location of any shields, doors, closures, tools, or other goods that are required for implementation; maintenance of such goods; methods of installation; and periodic inspection; and
- (g) Be certified by a *licensed* professional engineer or *licensed* architect, through execution of a *Floodproofing Certificate* that states that the design and methods of construction meet the requirements of this section. The *Floodproofing Certificate* shall be submitted with the construction drawings as required in Sec. 10-38(B)(5).

Sec. 10-80. Horizontal Additions

- (A) A horizontal addition proposed for a building or *structure* that was constructed after the effective date of this Ordinance shall comply with the applicable requirements of Article VI and this Article.
- (B) In *nontidal waters of the State* that are subject to the regulatory authority of MDE, all horizontal additions shall comply with the applicable requirements of Article VI and this section and:
 - (1) If the addition is structurally connected to the *base building*, the requirements of paragraph (C) apply.
 - (2) If the addition has an independent foundation and is not structurally connected to the *base building* and the common wall with the *base building* is modified by no more than a doorway, the *base building* is not required to be brought into compliance.
- (C) For horizontal additions that are structurally connected to the *base building*:
 - (1) If the addition combined with other proposed repairs, alterations, or modifications of the *base building* constitutes *substantial improvement*, the *base building* and the addition shall comply with the applicable requirements of Article VI and this Article.
 - (2) If the addition constitutes *substantial improvement*, the *base building* and the addition shall comply with all of the applicable requirements of Article VI and this Article.

- (D) For horizontal additions with independent foundations that are not structurally connected to the *base building* and the common wall with the *base building* is modified by no more than a doorway, the *base building* is not required to be brought into compliance.
- (E) A horizontal addition to a building or *structure* that is not *substantial improvement*, and is not located in *nontidal waters of the State*, is not required to comply with this Article.

[Note: See “Substantial Improvement/Substantial Damage Desk Reference” (FEMA P-758).]

Sec. 10-81. Accessory Structures

- (A) *Accessory structures* shall be limited to not more than 300 square feet in total floor area.
- (B) *Accessory structures* shall comply with the elevation requirements and other requirements of Sec. 10-78, the *floodproofing* requirements of Sec. 10-79(B), or shall:
 - (1) Be useable only for parking of vehicles or limited storage;
 - (2) Be constructed with *flood damage-resistant materials* below the *base flood elevation*;
 - (3) Be constructed and placed to offer the minimum resistance to the flow of floodwaters;
 - (4) Be anchored to prevent flotation;
 - (5) Have electrical service and mechanical equipment elevated to or above the *base flood elevation*; and
 - (6) Have *flood openings* that meet the requirements of Sec. 10-78(C).

Sec. 10-82 to 10-90. Reserved.

ARTICLE VIII. SUBSEQUENT AMENDMENTS AND EFFECTIVE DATE

Sec. 10-91. Subsequent Amendments

All ordinances or parts of ordinances that are inconsistent with the provisions of this ordinance are hereby repealed to the extent of such inconsistency. This ordinance shall be amended as required by the Federal Emergency Management Agency, Title 44, Code of Federal Regulations.

All subsequent amendments to this ordinance are subject to the approval of the Federal Emergency Management Agency and the Maryland Department of the Environment.

SECTION II. That this ordinance shall become effective on July 1, 2017.

* * * * *

I hereby certify that the foregoing is a true and correct copy of an Ordinance adopted by the Mayor and Council at its meeting of

Kathleen Conway, City Clerk/Director
Of Council Operations