

**LUCAS COUNTY BUILDING REGULATIONS
PART IX
FLOOD DAMAGE PREVENTION REGULATIONS
LUCAS COUNTY, OHIO**

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Adopted – December 12, 2023

**PART IX
FLOOD DAMAGE PREVENTION REGULATIONS
LUCAS COUNTY, OHIO**

SECTION 1.0: GENERAL PROVISIONS

1.1 Statutory Authorization

This resolution is adopted pursuant to authorization contained in Sections 307.37 and 307.85 of the Ohio Revised Code. This resolution adopts regulations for areas of special flood hazard that are necessary for participation in the National Flood Insurance Program. Therefore, the Board of County Commissioners of Lucas County, State of Ohio does resolve as follows:

1.2 Findings of Fact

Lucas County has special flood hazard areas that 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. Additionally, structures that are inadequately elevated, floodproofed, or otherwise protected from flood damage also contribute to the flood loss. In order to minimize the threat of such damages and to achieve the purposes hereinafter set forth, these regulations are adopted.

1.3 Statement of Purpose

It is the purpose of these regulations to promote the public health, safety and general welfare, and to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the proper use and development of areas of special flood hazard so as to protect property and minimize future flood blight areas;
- G. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions;
- H. Minimize the impact of development on adjacent properties within and near flood prone areas;
- I. Ensure that the flood storage and conveyance functions of the floodplain are maintained;
- J. Minimize the impact of development on the natural, beneficial values of the floodplain;
- K. Prevent floodplain uses that are either hazardous or environmentally incompatible; and
- L. Meet community participation requirements of the National Flood Insurance Program.

1.4 Methods of Reducing Flood Loss

In order to accomplish its purposes, these regulations include methods and provisions for:

- A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water hazards, or which result in damaging increases in flood heights or velocities;
- B. Requiring that uses vulnerable to floods, including facilities, which serve such uses, be protected against flood damage at the time of initial construction;
- C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- D. Controlling filling, grading, dredging, excavating, and other development which may increase flood damage; and,
- E. Preventing or regulating the construction of flood barriers, which will unnaturally divert flood, waters or which may increase flood hazards in other areas.

1.5 Lands to Which These Regulations Apply

These regulations shall apply to all areas of special flood hazard within the jurisdiction of unincorporated Lucas County, Ohio as identified in Section 1.6, including any additional areas of special flood hazard annexed by Lucas County, Ohio.

1.6 Basis for Establishing the Areas of Special Flood Hazard

For the purposes of these regulations, the following studies and / or maps are adopted:

- A. “Flood Insurance Rate Map for Lucas County, Ohio and Incorporated Areas” effective **February 22, 2024**, and “Flood Insurance Study for Lucas County, Ohio and Incorporated Areas,” effective **February 22, 2024**.
- B. Other studies and / or maps, which may be relied upon for establishment of the flood protection elevation, delineation of the 100-year floodplain, floodways or delineation of other areas of special flood hazard. The Lucas County Engineer retains studies that may have been performed on streams that are not included on the Flood Insurance Rate Maps.
- C. Any hydrologic and hydraulic engineering analysis authored by a registered Professional Engineer in the State of Ohio which has been approved by Lucas County as required by Section 4.3 Subdivisions and Large Scale Developments.
- D. Any revisions to the aforementioned maps and / or studies are hereby adopted by reference and declared to be a part of these regulations. Such maps and/or studies are on file at the office of the Lucas County Engineer’s Office 1049 S. McCord Rd. Holland, Ohio 43528.

1.7 Abrogation and Greater Restrictions

These regulations are not intended to repeal any existing resolutions including subdivision regulations, zoning or building codes. In the event of a conflict between these regulations and any other resolution, the more restrictive shall be followed. These regulations are not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this ordinance and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

1.8 Interpretation

In the interpretation and application of these regulations, 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.
- Where a provision of these regulations may be in conflict with a state or Federal law, such state or Federal law shall take precedence over these regulations.

1.9 Warning and Disclaimer of Liability

The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. These regulations do not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damage. These regulations shall not create liability on the part of Lucas County, any officer or employee thereof, or the Federal Emergency Management Agency, for any flood damage that results from reliance on these regulations or any administrative decision lawfully made thereunder.

1.10 Severability

Should any section or provision of these regulations 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.

SECTION 2.0: DEFINITIONS

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

Accessory Structure

A structure on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. For floodplain management purposes, the term includes only accessory structures used for parking and storage.

Agricultural Structural

For floodplain management purposes, a walled and roofed structure used *exclusively* for agricultural purposes or uses in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock, including aquatic organisms. Structures that house tools or equipment used in connection with these purposes or uses are also considered to have agricultural purposes or uses.

Appeal

A request for review of the Floodplain Administrator's interpretation of any provision of these regulations or a request for a variance.

Base Flood

The flood having a one percent chance of being equaled or exceeded in any given year. The base flood may also be referred to as the 1% chance annual flood or one-hundred (100) year flood.

Base (100-Year) Flood Elevation (BFE)

The water surface elevation of the base flood in relation to a specified datum, usually the National Geodetic Datum of 1929 or the North American Vertical Datum of 1988 (NAVD 88), and usually expressed in Feet Mean Sea Level (MSL). In Zone AO areas, the base flood elevation is the lowest adjacent natural grade elevation plus the depth number (from 1 to 3 feet).

Basement

Any area of the building having its floor sub grade (below ground level) on all sides.

Breakaway wall

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

Coastal high hazard area

An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast, and any other area subject to high velocity wave action from storms or seismic sources. A coastal high hazard area is identified on a community's FIRM by the designation of zone VE.

Critical Development

Critical development is that which is critical to the community's public health and safety, is essential to the orderly functioning of a community, store or produce highly volatile, toxic or water-reactive materials, or house occupants that may be insufficiently mobile to avoid loss of life or injury. Examples of critical development include jails, hospitals, schools, police stations, fire stations, nursing homes, assisted living facilities, wastewater treatment facilities, water plants, and gas/oil/propane storage facilities, and similar facilities as determined by the Floodplain Administrator.

Development

Any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Enclosure Below the Lowest Floor

See "Lowest Floor."

Executive Order 11988 (Floodplain Management)

Issued by President Carter in 1977, this order requires that no federally assisted activities be conducted in or have the potential to affect identified special flood hazard areas, unless there is no practicable alternative.

Federal Emergency Management Agency (FEMA)

The agency with the overall responsibility for administering the National Flood Insurance Program.

Fill

A deposit of earth material placed by artificial means.

Flood or Flooding

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

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

Flood Hazard Boundary Map (FHBM)

Usually the initial map, produced by the Federal Emergency Management Agency, or U.S. Department of Housing and Urban Development, for a community depicting approximate special flood hazard areas.

Flood Insurance Rate Map (FIRM)

An official map on which the Federal Emergency Management Agency or the U.S. Department of Housing and Urban Development has delineated the areas of special flood hazard.

Flood Insurance Risk Zones

Zone designations on FHBMs and FIRMs that indicate the magnitude of the flood hazard in specific areas of a community. Following are the zone definitions

Zone A:

Special flood hazard areas inundated by the 100-year flood in any given year; base flood elevations are not determined.

Zones A1-30 and Zone AE:

Special flood hazard areas inundated by the 100-year flood in any given year; base flood elevations are determined.

Zone AO:

Special flood hazard areas inundated by the 100-year flood in any given year; with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths are determined.

Zone AH:

Special flood hazard areas inundated by the 100-year flood in any given year; flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations are determined.

Zone A99:

Special flood hazard areas inundated by the 100-year flood to be protected from the 100-year flood by a Federal flood protection system under construction; no base flood elevations are determined.

Zone V:

Coastal special flood hazard area subject to a 100-year flood from velocity hazard (wave action); base flood elevations are not determined.

Zone VE and V1-30

Coastal special flood hazard area subject to a 100-year from velocity hazard (wave action); base flood elevations are determined.

Zone B and Zone X (shaded):

Areas of 500-year flood; areas subject to the 100-year flood with average depths of less than 1 foot or with contributing drainage area less than 1 square mile; and areas protected by levees from the base flood.

Zone C and Zone X (unshaded):

Areas determined to be outside the 500-year floodplain.

Flood Insurance Study (FIS)

The official report in which the Federal Emergency Management Agency or the U.S. Department of Housing and Urban Development has provided flood profiles, floodway boundaries (sometimes shown on Flood Boundary and Floodway Maps), and the water surface elevations of the base flood.

Floodproofing

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

Flood Protection Elevation

The Flood Protection Elevation, or FPE, is the base flood elevation plus one (1) foot of freeboard. In areas where no base flood elevations exist from any authoritative source, the flood protection elevation can be historical flood elevations, or base flood elevations determined and/or approved by the floodplain administrator.

Floodway

A floodway is the channel of a river or other watercourse and the adjacent land areas that have been reserved in order to pass the base flood discharge. A floodway is typically determined through a hydraulic and hydrologic engineering analysis such that the cumulative increase in the water surface elevation of the base flood discharge is no more than a designated height. In no case shall the designated height be more than one foot at any point within the community.

The floodway is an extremely hazardous area, and is usually characterized by any of the following: Moderate to high velocity flood waters, high potential for debris and projectile impacts, and moderate to high erosion forces.

Freeboard

A factor of safety usually expressed in feet above a flood level for the purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, obstructed bridge openings, debris and ice jams, and the hydrologic effect of urbanization in a watershed.

Historic structure

Any structure that is:

1. Listed individually 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; or
3. Individually listed on the State of Ohio's inventory of historic places maintained by the Ohio Historic Preservation Office.
4. Individually listed on the inventory of historic places maintained by Lucas County's historic preservation program, which program is certified by the Ohio Historic Preservation Office.

Hydrologic and hydraulic engineering analysis

An analysis performed by a professional engineer, registered in the State of Ohio, in accordance with standard engineering practices as accepted by FEMA, used to determine flood elevations and/or floodway boundaries.

Letter of Map Change (LOMC)

A Letter of Map Change is an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, and Flood Insurance Studies. LOMCs are broken down into the following categories:

Letter of Map Amendment (LOMA)

A revision 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 is not located in a special flood hazard area.

Letter of Map Revision (LOMR)

A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a LOMR-F, is a determination concerning whether a structure or parcel has been elevated by fill above the base flood elevation and is, therefore, excluded from the special flood hazard area.

Conditional Letter of Map Revision (CLOMR)

A comment made by FEMA regarding a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations, or the special flood hazard area. A CLOMR does not amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies.

Limit of Moderate Wave Action (LiMWA) A line shown on a Flood Insurance Rate Map to indicate the inland limit of the 1.5-ft breaking wave height during the base flood.

Lowest floor

The lowest floor of the lowest enclosed area (including basement) of a structure. This definition excludes an "enclosure below the lowest floor" which is an unfinished or flood resistant enclosure 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 these regulations for enclosures below the lowest floor.

Manufactured home

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 home" does not include a "recreational vehicle". For the purposes of these regulations, a manufactured home includes manufactured homes and mobile homes as defined in Section 4781 of the Ohio Revised Code.

Manufactured home park

As specified in the Ohio Administrative Code 4781-12-01(K), a manufactured home park means any tract of land upon which three or more manufactured homes, used for habitation are parked, either free of charge or for revenue purposes, and includes any roadway, building, structure, vehicle, or enclosure used or intended for use as part of the facilities of the park. A tract of land

that is subdivided and the individual lots are not for rent or rented, but are for sale or sold for the purpose of installation of manufactured homes on the lots, is not a manufactured home park, even though three or more manufactured homes are parked thereon, if the roadways are dedicated to the local government authority. Manufactured home park does not include any tract of land used solely for the storage or display for sale of manufactured homes.

Mean sea level

For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

Moderate Wave Action Area (MoWA)

A special flood hazard area subject to the potential for breaking wave heights of greater than or equal to 1.5 feet, but less than 3 feet, where the primary source of flooding is storm surges, seiches. A MoWA is an area within zone AE on a FIRM that is between the inland limit of zone VE and a Limit of Moderate Wave Action, where identified. (Also known as "Coastal A Zone").

National Flood Insurance Program (NFIP)

The NFIP is a Federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal government that states if a community will adopt and enforce floodplain management regulations to reduce future flood risks to all development in special flood hazard areas, the Federal government will make flood insurance available within the community as a financial protection against flood loss.

New construction

Structures for which the "start of construction" commenced on or after the effective date of a floodplain regulation adopted by Lucas County and includes any subsequent improvements to such structures.

For the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM for Lucas County (March 16, 1983), and includes any subsequent improvements to such structures.

Person

Includes any individual or group of individuals, corporation, partnership, association, or any other entity, including state and local governments and agencies. An agency is further defined in the Ohio Revised Code Section 111.15(A)(2) as any governmental entity of the state and includes, but is not limited to, any board, department, division, commission, bureau, society, council, institution, state college or university, community college district, technical college district, or state community college. "Agency" does not include the general assembly, the controlling board, the adjutant general's department, or any court.

Recreational vehicle

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

Registered Professional Architect

A person registered to engage in the practice of architecture pursuant to Section 4703.01 to 4703.19 of the Ohio Revised Code.

Registered Professional Engineer

A person registered as a professional engineer pursuant to Chapter 4733 of the Ohio Revised Code.

Registered Professional Surveyor

A person registered as a professional surveyor pursuant to Chapter 4733 of the Ohio Revised Code.

Riparian Setback

The area setback from each bank of a stream to protect the stream from impacts of development and streamside residents from impacts of flooding and land loss through erosion.

Special Flood Hazard Area

Also known as “Areas of Special Flood Hazard”, it is 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 on Flood Insurance Rate Maps, Flood Insurance Studies, Flood Boundary and Floodway Maps and Flood Hazard Boundary Maps as Zones A, AE, AH, AO, A1-30, and A99 or V and VE. Special flood hazard areas may also refer to areas that are flood prone and designated from other federal state or local sources of data including but not limited to historical flood information reflecting high water marks, previous flood inundation areas, and flood prone soils associated with a watercourse.

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 home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of a building.

Structure

A walled and roofed building, manufactured home, or gas or liquid storage tank that is principally above ground.

Substantial Damage

Damage of any origin sustained by a structure whereby the cost of restoring the structure to the ‘before damaged’ condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Substantial damage also means flood related damage sustained by a structure on two (2) separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred

Substantial Improvement

Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures, which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include:

1. Any project for improvement of a 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 and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a "historic structure," provided that the alteration would not preclude the structure's continued designation as a "historic structure".

Variance

A grant of relief from the standards of these regulations.

Violation

The failure of a structure or other development to be fully compliant with these regulations.

SECTION 3.0: ADMINISTRATION

3.1 Designation of the Floodplain Administrator

The Lucas County Engineer is hereby appointed to administer and implement these regulations and is referred to herein as the Floodplain Administrator.

3.2 Duties and Responsibilities of the Floodplain Administrator

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

- A. Evaluate applications for permits to develop in special flood hazard areas.
- B. Interpret floodplain boundaries and provide flood hazard and flood protection elevation information.
- C. Issue permits to develop in special flood hazard areas when the provisions of these regulations have been met, or refuse to issue the same in the event of noncompliance.
- D. Inspect buildings and lands to determine whether any violations of these regulations have been committed.
- E. Make and permanently keep all records for public inspection necessary for the administration of these regulations including Flood Insurance Rate Maps, Letters of Map Amendment and Revision, records of issuance and denial of permits to develop in special flood hazard areas, determinations of whether development is in or out of special flood hazard areas for the purpose of issuing floodplain development permits, elevation certificates, floodproofing certificates, VE-zone construction certificates, variances, and records of enforcement actions taken for violations of these regulations.
- F. Enforce the provisions of these regulations.
- G. Provide information, testimony, or other evidence as needed during variance hearings.
- H. Coordinate map maintenance activities and FEMA follow-up.

- I. Conduct substantial damage determinations to determine whether existing structures, damaged from any source and in special flood hazard areas identified by FEMA, must meet the development standards of these regulations.

3.3 Floodplain Development Permits

It shall be unlawful for any person to begin construction or other development activity including but not limited to filling; grading; construction; alteration, remodeling, or expanding any structure; or alteration of any watercourse wholly within, partially within or in contact with any identified special flood hazard area, as established in Section 1.6, until a floodplain development permit is obtained from the Floodplain Administrator. Such floodplain development permit shall show that the proposed development activity is in conformity with the provisions of these regulations. No such permit shall be issued by the Floodplain Administrator until the requirements of these regulations have been met.

3.4 Application Required

An application for a floodplain development permit shall be required for all development activities located wholly within, partially within, or in contact with an identified special flood hazard area. Such application shall be made by the owner of the property or his/her authorized agent, herein referred to as the applicant, prior to the actual commencement of such construction on a form furnished for that purpose. Where it is unclear whether a development site is in a special flood hazard area, the Floodplain Administrator may require an application for a floodplain development permit to determine the development's location. Such applications shall include, but not be limited to:

- A. Site plans drawn to scale showing the nature, location, dimensions, and topography of the area in question; the location of existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing.
- B. Elevation of the existing, natural ground where structures are proposed.
- C. Elevation of the lowest floor, including basement, of all proposed structures.
- D. Such other material and information as may be requested by the Floodplain Administrator to determine conformance with, and provide enforcement of these regulations.
- E. Technical analyses conducted by the appropriate design professional registered in the State of Ohio and submitted with an application for a floodplain development permit when applicable:
 1. Floodproofing certification for non-residential floodproofed structure as required in Section 4.5.
 2. Certification that fully enclosed areas below the lowest floor of a structure not meeting the design requirements of Section 4.4(E) are designed to automatically equalize hydrostatic flood forces.
 3. Description of any watercourse alteration or relocation that the flood carrying capacity of the watercourse will not be diminished, and maintenance assurances as required in Section 4.9(C).
 4. A hydrologic and hydraulic analysis demonstrating 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 in special flood hazard areas where the Federal Emergency Management Agency has provided base flood elevations but no floodway as required by Section 4.9(B).

5. A hydrologic and hydraulic engineering analysis showing impact of any development on flood heights in an identified floodway as required by Section 4.9(A).
 6. Generation of base flood elevation(s) for subdivision and other new developments as required by Section 4.3.
 7. Generation of the 500-year flood elevation for critical development as required by Section 4.10.
 8. Certification of structural design and methods of construction for VE zone construction as required by Section 4.10(A).
 9. Certification of breakaway wall design, when applicable, as provided in Section 4.10(B).
- F. The Floodplain Development Permit Application Fee as adopted by the Board of Lucas County Commissioners as shown on the Lucas County Engineer's Fee Schedule.

3.5 Review and Approval of a Floodplain Development Permit Application

A. Review

1. After receipt of a complete application, the Floodplain Administrator shall review the application to ensure that the standards of these regulations have been met. No floodplain development permit application shall be reviewed until all information required in Section 3.4 has been received by the Floodplain Administrator.
2. The Floodplain Administrator shall review all floodplain development permit applications to assure that all necessary permits have been received from those federal, state, or local government agencies from which prior approval is required. The applicant shall be responsible for obtaining such permits as required including permits issued by the U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, and the Ohio Environmental Protection Agency under Section 401 of the Clean Water Act.

B. Approval

Within thirty (30) days after the receipt of a complete application, the Floodplain Administrator shall either approve or disapprove the application. If an application is approved, a floodplain development permit shall be issued. If the Floodplain Administrator is satisfied that the development proposed in the floodplain development application conforms to the requirements of this ordinance, the Floodplain Administrator shall issue the permit. All floodplain development permits shall be conditional upon the commencement of work within 180 days. A floodplain development permit shall expire 180 days after issuance unless the permitted activity has been substantially begun and is thereafter pursued to completion.

3.6 Inspections

The Floodplain Administrator shall make periodic inspections at appropriate times throughout the period of construction in order to monitor compliance with permit conditions.

3.7 Post-Construction Certifications Required

The following as-built certifications are required after a floodplain development permit has been issued:

- A. For new or substantially improved residential structures, or nonresidential structures that have been elevated, the applicant shall have a *Federal Emergency Management Agency Elevation Certificate* completed by a registered professional surveyor to record as-built elevation data.
- B. For all development activities subject to the standards of Section 3.11(A), a Letter of Map Revision.
- C. For new or substantially improved nonresidential structures that have been floodproofed in lieu of elevation, where allowed, the applicant shall supply a completed Floodproofing Certificate for Non-Residential Structures completed by a registered professional engineer or architect together with associated documentation

3.8 Revoking a Floodplain Development Permit

A floodplain development permit shall be revocable, if among other things, the actual development activity does not conform to the terms of the application and permit granted thereon. In the event of the revocation of a permit, an appeal may be taken to the Variance and Appeals Board in accordance with Section 5 of these regulations.

3.9 Exemption from Filing a Development Permit

An application for a floodplain development permit shall not be required for maintenance work such as roofing, painting, and basement sealing, or for small nonstructural development activities (except for filling and grading) valued at less than \$2,500.

3.10 State and Federal Development

- A. Development that is funded, financed, undertaken, or preempted by state agencies shall comply with minimum NFIP criteria.
- B. Before awarding funding or financing or granting a license, permit, or other authorization for a development that is or is to be located within a 100-year floodplain, a state agency shall require the applicant to demonstrate to the satisfaction of the agency that the development will comply with minimum NFIP criteria and any applicable local floodplain management resolution or ordinance as required by Ohio Revised Code Section 1521.13. This includes, but is not limited to:
 - 1. Development activities in an existing or proposed manufactured home park that are under the authority of the Ohio Department of Commerce and subject to the flood damage reduction provisions of the Ohio Administrative Code Section 4781-12.
 - 2. Major utility facilities permitted by the Ohio Power Siting Board under Section 4906 of the Ohio Revised Code.
 - 3. Hazardous waste disposal facilities permitted by the Hazardous Waste Siting Board under Section 3734 of the Ohio Revised Code.
- C. Development activities undertaken by a federal agency and which are subject to Federal Executive Order 11988 – Floodplain Management.
 - 1. Each federal agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget request reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of EO 11988.

3.11 Map Maintenance Activities

To meet National Flood Insurance Program minimum requirements to have flood data reviewed and approved by FEMA, and to ensure that Lucas County's flood maps, studies and other data identified in Section 1.6 accurately represent flooding conditions so

appropriate floodplain management criteria are based on current data, the following map maintenance activities are identified:

A. Requirement to Submit New Technical Data

1. For all development proposals that impact floodway delineations or base flood elevations, the community shall ensure that technical data reflecting such changes be submitted to FEMA within six months of the date such information becomes available. These development proposals include:
 - a. Floodway encroachments that increase or decrease base flood elevations or alter floodway boundaries;
 - b. Fill sites to be used for the placement of proposed structures where the applicant desires to remove the site from the special flood hazard area;
 - c. Alteration of watercourses that result in a relocation or elimination of the special flood hazard area, including the placement of culverts; and
 - d. Subdivision or other new development proposals requiring the establishment of base flood elevations in accordance with Section 4.3.
2. It is the responsibility of the applicant to have technical data, required in accordance with Section 3.11(A), prepared in a format required for a Conditional Letter of Map Revision or Letter of Map Revision, and submitted to FEMA. Submittal and processing fees for these map revisions shall be the responsibility of the applicant.
3. The Floodplain Administrator shall require a Conditional Letter of Map Revision prior to the issuance of a floodplain development permit for:
 - a. Proposed floodway encroachments that increase the base flood elevation; and
 - b. Proposed development which increases the base flood elevation by more than one foot in riverine areas where FEMA has provided base flood elevations but no floodway.
4. Floodplain development permits issued by the Floodplain Administrator shall be conditioned upon the applicant obtaining a Letter of Map Revision from FEMA for any development proposal subject to Section 3.11(A)(1).

B. Right to Submit New Technical Data

The Floodplain Administrator may request changes to any of the information shown on an effective map that does not impact floodplain or floodway delineations or base flood elevations, such as labeling or planimetric details. Such a submission shall include appropriate supporting documentation made in writing by the President of the Board of County Commissioners of Lucas County, and may be submitted at any time.

C. Annexation / Detachment

Upon occurrence, the Floodplain Administrator shall notify FEMA in writing whenever the boundaries of Lucas County have been modified by annexation or the community has assumed authority over an area, or no longer has authority to adopt and enforce floodplain management regulations for a particular area. In order that the Lucas County Flood Insurance Rate Map accurately represents the boundaries of the County, include within such notification a copy of a revised map of Lucas County suitable for reproduction, clearly showing the new corporate limits or the new area for which Lucas County has assumed or relinquished floodplain management regulatory authority.

3.12 Data Use and Flood Map Interpretation

The following guidelines shall apply to the use and interpretation of maps and other data showing areas of special flood hazard:

- A. In areas where FEMA has not identified special flood hazard areas, or in FEMA identified special flood hazard areas where base flood elevation and floodway data have not been identified, the Floodplain Administrator shall review and reasonably utilize any other flood hazard data available from a federal, state, or other source.
- B. Base flood elevations and floodway boundaries produced on FEMA flood maps and studies shall take precedence over base flood elevations and floodway boundaries by any other source that reflect a reduced floodway width and/or lower base flood elevations. Other sources of data, showing increased base flood elevations and/or larger floodway areas than are shown on FEMA flood maps and studies, shall be reasonably used by the Floodplain Administrator.
- C. The Floodplain Administrator shall make interpretations, where needed, as to the exact location of the flood boundaries and areas of special flood hazard. A person contesting the determination of the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 5.0, Appeals and Variances.
- D. Where an existing or proposed structure or other development is affected by multiple flood zones, by multiple base flood elevations, or both, the development activity must comply with the provisions of this ordinance applicable to the most restrictive flood zone and the highest base flood elevation affecting any part of the existing or proposed structure; or for other developments, affecting any part of the area of the development.

3.13 Use of Preliminary Flood Insurance Rate Map and/or Flood Insurance Study Data

- A. Zone A:
 - 1. Within Zone A areas designated on an effective FIRM, data from the preliminary FIRM and/or FIS shall reasonably utilized as best available data.
 - 2. When all appeals have been resolved and a notice of final flood elevation determination has been provided in a Letter of Final Determination (LFD), BFE and floodway data from the preliminary FIRM and/or FIS shall be used for regulating development.
- B. Zones AE, A1-30, AH, AO, VE, and V1-30:
 - 1. BFE and floodway data from a preliminary FIS or FIRM restudy are not required to be used in lieu of BFE and floodway data contained in an existing effective FIS and FIRM. However,
 - a. Where BFEs increase in a restudied area, communities have the responsibility to ensure that new or substantially improved structures are protected. Communities are encouraged to reasonably utilize preliminary FIS or FIRM data in instances where BFEs increase and floodways are revised to ensure that the health, safety, and property of their citizens are protected.
 - b. Where BFEs decrease, preliminary FIS or FIRM data should not be used to regulate floodplain development until the LFD has been issued or until all appeals have been resolved.
 - 2. If a preliminary FIRM or FIS has designated floodways where none had previously existed, communities should reasonably utilize this data in lieu of applying the encroachment performance standard of Section 4.9(B) since the data in the draft or preliminary FIS represents the best data available.

C. Zones B, C, and X:

1. Use of BFE and floodway data from a preliminary FIRM or FIS are not required for areas designated as Zone B, C, or X on the effective FIRM which are being revised to Zone AE, A1-30, AH, AO, VE, or V1-30. Communities are encouraged to reasonably utilize preliminary FIS or FIRM data to ensure that the health, safety, and property of their citizens are protected.

3.14 Substantial Damage Determinations

Damages to structures may result from a variety of causes including flood, tornado, wind, heavy snow, fire, *etc.* After such a damage event, the Floodplain Administrator shall:

- A. Determine whether damaged structures are located in special flood hazard areas;
- B. Conduct substantial damage determinations for damaged structures located in special flood hazard areas; and
- C. Require owners of substantially damaged structures to obtain a floodplain development permit prior to repair, rehabilitation, or reconstruction.

Additionally, the Floodplain Administrator may implement other measures to assist with the substantial damage determination and subsequent repair process. These measures include issuing press releases, public service announcements, and other public information materials related to the floodplain development permits and repair of damaged structures; coordinating with other federal, state, and local agencies to assist with substantial damage determinations; providing owners of damaged structures materials and other information related to the proper repair of damaged structures in special flood hazard areas; and assist owners of substantially damaged structures with Increased Cost of Compliance insurance claims.

SECTION 4.0: USE AND DEVELOPMENT STANDARDS FOR FLOOD HAZARD REDUCTION

The following use and development standards apply to development wholly within, partially within, or in contact with any special flood hazard area as established in Section 1.6 or 3.12(A), or 3.13:

4.1 Use Regulations

A. Permitted Uses

All uses not otherwise prohibited in this section or any other applicable land use regulation adopted by Lucas County are allowed provided they meet the provisions of these regulations.

B. Prohibited Uses

1. Infectious waste treatment facilities in all special flood hazard areas, permitted under Section 3734 of the Ohio Revised Code.
2. New construction of any residential or nonresidential structures in floodway areas.
3. Storage or processing of hazardous, flammable, or explosive materials in special flood hazard areas.
4. Storage of material or equipment that, in time of flooding, could become buoyant and pose an obstruction to flow in identified floodway areas.
5. Critical development in special flood hazard areas.

4.2 Water and Wastewater Systems

The following standards apply to all water supply, sanitary sewerage and waste disposal systems in the absence of any more restrictive standard provided under the Ohio Revised Code or applicable state rules:

- A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems.
- B. New and replacement sanitary sewerage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
- C. On-site waste disposal systems shall be located to avoid impairment to or contamination from them during flooding.

4.3 Subdivisions and Other New Developments

- A. All subdivision proposals and all other proposed new development shall be consistent with the need to minimize flood damage and are subject to all applicable standards in these regulations;
- B. All subdivision proposals and all other proposed new development shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage;
- C. All subdivision proposals and all other proposed new development shall have adequate drainage provided to reduce exposure to flood damage; and
- D. In all areas of special flood hazard where base flood elevation data are not available, the applicant shall provide a hydrologic and hydraulic engineering analysis that generates base flood elevations for all subdivision proposals and other proposed developments containing at least 50 lots or 5 acres, whichever is less.
- E. The applicant shall meet the requirement to submit technical data to FEMA in Section 3.10(A)(1)(d) when a hydrologic and hydraulic analysis is completed that generates base flood elevations as required by Section 4.3(D).
- F. All preliminary plans for platted subdivisions shall identify the flood hazard area and the elevation of the base flood.
- G. All final subdivision plats shall provide the boundary of the special flood hazard area, the floodway boundary, and the base flood elevations.
- H. In platted subdivisions, all proposed lots or parcels that will be future building sites shall have a minimum buildable area at least 12 inches above the 1% chance annual floodplain. The buildable area shall be large enough to accommodate any primary structure and associated structures such as sheds, barns, swimming pools, detached garages, on-site sewage disposal systems, and water supply wells, if applicable.
- I. Approval shall not be given for streets within a subdivision which would be subject to flooding. All street surfaces must be located at or above the base flood elevation

4.4 Residential Structures

The requirements of Section 4.4 apply to new construction of residential structures and to substantial improvements of residential structures in zones A, A1-30, AE, AO, and AH, when designated on the community's effective FIRM, and when designated on a preliminary or final FIRM issued by FEMA under the circumstances provided in Section 3.13.

- A. New construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Where a structure, including its foundation members, is elevated on fill to or above the base flood elevation, the

requirements for anchoring (4.4(A)) and construction materials resistant to flood damage (4.4(B)) are satisfied.

- B. New construction and substantial improvements shall be constructed with methods and materials resistant to flood damage.
- C. New construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.
- D. New construction and substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including crawl space or basement, elevated to or above the flood protection elevation. Support structures and other foundation members shall be certified by a registered professional engineer or architect as designed in accordance with American Society of Civil Engineers (ASCE) 24, Flood Resistant Design and Construction. In Zone AO areas with no elevations specified, the structure shall have the lowest floor, including basement, elevated at least two feet above the highest adjacent natural grade.
- E. New construction and substantial improvements, including manufactured homes, that do not have basements and that are elevated to the flood protection elevation using pilings, columns, posts, or solid foundation perimeter walls with openings to allow the automatic equalization of hydrostatic pressure may have an enclosure below the lowest floor provided the enclosure meets the following standards:
 - 1. Be used only for the parking of vehicles, building access, or storage; and
 - 2. be designed and certified by a registered professional engineer or architect to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters; or
 - 3. have a minimum of two openings on different walls having a total net area not less than one square inch for every square foot of enclosed area, and the bottom of all such openings being no higher than one foot above grade. The openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- F. Manufactured homes shall be affixed to a permanent foundation and anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.
- G. Repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure, shall be exempt from the development standards of Section 4.4.
- H. In AO and AH Zones, new construction and substantial improvement shall have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.

4.5 Nonresidential Structures

The requirements of Section 4.5 apply to new construction and to substantial improvements of nonresidential structures in zones A, A1-30, AE, AO, and AH, when designated on the

community's effective FIRM, and when designated on a preliminary or final FIRM issued by FEMA under the circumstances provided in Section 3.13.

- A. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet the requirements of Section 4.4, (A)–(C) and (E)–(G).
- B. New construction and substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated to or above the level of the flood protection elevation; or, together with attendant utility and sanitary facilities, shall meet all of the following standards:
 - 1. Be dry floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water to the level of the flood protection elevation;
 - 2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and,
 - 3. Be certified by a registered professional engineer or architect, through the use of a *Federal Emergency Management Agency Floodproofing Certificate*, that the design and methods of construction are in accordance with Section 4.5(B)(1) and (2).
- C. In Zone AO areas where flood protection elevation data are not available, the structure shall have the lowest floor, including basement, elevated or dry floodproofed at least two feet above the highest adjacent natural grade.

4.6 Accessory Structures

Structures that are 600 square feet or less which are used for parking and storage only are exempt from elevation or dry floodproofing standards within zones A, A1-30, AE, AO, and AH designated on the community's FIRM. Such structures must meet the following standards:

- A. They shall not be used for human habitation;
- B. They shall be constructed of flood resistant materials;
- C. They shall be constructed and placed on the lot to offer the minimum resistance to the flow of floodwaters;
- D. They shall be firmly anchored to prevent flotation;
- E. Service facilities such as electrical and heating equipment shall be elevated or floodproofed to or above the level of the flood protection elevation; and
- F. They shall meet the opening requirements of Section 4.4(E)(3);

4.7 Recreational Vehicles

Recreational vehicles on sites within zones A, A1-A30, AE, AO, or AH must meet at least one of the following standards:

- A. They shall not be located on sites in special flood hazard areas for more than 180 days, or
- B. They must be fully licensed and ready for highway use, or
- C. They must be placed on the site pursuant to a floodplain development permit issued under Sections 3.3 and 3.4, and meet all standards of Section 4.4.

4.8 Gas or Liquid Storage Tanks

- A. Within zone A, A1-A30, AE, AO, or AH, new or substantially improved above ground gas or liquid storage tanks shall be anchored to prevent flotation or lateral movement resulting from hydrodynamic and hydrostatic loads.

- B. In zones V or VE, new or substantially improved above ground gas or liquid storage tanks shall be elevated with the bottom of the lowest horizontal supporting member above BFE on the landward side of buildings.
- C. In zones V or VE, new or substantially improved underground gas or liquid storage tanks must be installed below the lowest eroded ground elevation.

4.9 Assurance of Flood Carrying Capacity

Pursuant to the purpose and methods of reducing flood damage stated in these regulations, the following additional standards are adopted to assure that the reduction of the flood carrying capacity of watercourses is minimized:

A. Development in Floodways

1. In floodway areas, development shall cause no increase in flood levels during the occurrence of the base flood discharge. Prior to issuance of a floodplain development permit, the applicant must submit a hydrologic and hydraulic analysis, conducted by a registered professional engineer, demonstrating that the proposed development would not result in any increase in the base flood elevation; or
2. Development in floodway areas causing increases in the base flood elevation may be permitted provided all of the following are completed by the applicant:
 - a. Meet the requirements to submit technical data in Section 3.10(A);
 - b. An evaluation of alternatives, which would not result in increased base flood elevations and an explanation why these alternatives are not feasible;
 - c. Certification that no structures are located in areas that would be impacted by the increased base flood elevation;
 - d. Documentation of individual legal notices to all impacted property owners within and outside the community, explaining the impact of the proposed action on their property; and
 - e. Concurrence of the President of the Board of County Commissioners of Lucas County and the Chief Executive Officer of any other communities impacted by the proposed actions.

B. Development in Riverine Areas with Base Flood Elevations but No Floodways

1. In riverine special flood hazard areas identified by FEMA where base flood elevation data are provided but no floodways have been designated, the cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the base flood elevation more than one (1.0) foot at any point. Prior to the issuance of a floodplain development permit, the applicant must submit a hydrologic and hydraulic analysis, conducted by a registered professional engineer, demonstrating that this standard has been met; or,
2. Development in riverine special flood hazard areas identified by FEMA where base flood elevation data are provided but no floodways have been designated causing more than one foot increase in the base flood elevation may be permitted provided all of the following are completed by the applicant:
 - a. An evaluation of alternatives which would result in an increase of one foot or less of the base flood elevation and an explanation why these alternatives are not feasible;
 - b. Section 4.9(A)(2), items (a) and (c)-(e).

C. Alterations of a Watercourse

For the purpose of these regulations, a watercourse is altered when any change occurs within its banks. The extent of the banks shall be established by a field determination of the “bankfull stage.” The field determination of “bankfull stage” shall be based on methods presented in Chapter 7 of the *USDA Forest Service General Technical Report RM-245, Stream Channel Reference Sites: An Illustrated Guide to Field Technique* or other applicable publication available from a Federal, State, or other authoritative source. For all proposed developments that alter a watercourse, the following standards apply:

1. The bankfull flood carrying capacity of the altered or relocated portion of the watercourse shall not be diminished. Prior to the issuance of a floodplain development permit, the applicant must submit a description of the extent to which any watercourse will be altered or relocated as a result of the proposed development, and certification by a registered professional engineer that the bankfull flood carrying capacity of the watercourse will not be diminished.
2. Adjacent communities, the U.S. Army Corps of Engineers, and the Ohio Department of Natural Resources, Division of Water Resources, must be notified prior to any alteration or relocation of a watercourse. Evidence of such notification must be submitted to the Federal Emergency Management Agency.
3. The applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of said watercourse so that the flood carrying capacity will not be diminished. The Floodplain Administrator may require the permit holder to enter into an agreement with Lucas County specifying the maintenance responsibilities. If an agreement is required, it shall be made a condition of the floodplain development permit.
4. The applicant shall meet the requirements to submit technical data in Section 3.11(A)(1)(c) when an alteration of a watercourse results in the relocation or elimination of the special flood hazard area, including the placement of culverts.

4.10 Development standards for coastal high hazard areas and MoWA areas

The requirements of Section 4.10 apply to development in coastal high hazard areas designated zone V or VE on the community’s effective FIRM and when designated on a preliminary or final FIRM issued by FEMA under the circumstances provided in Section 3.13. The requirements of Section 4.10 also apply to development in Moderate Wave Action areas, within zone AE between a Limit of Moderate Wave Action and the landward limit of zone V or VE designated on the community’s effective FIRM, or between a Limit of Moderate Wave Action and the offshore limit of the community’s jurisdiction where zone V or VE is not designated on the community’s effective FIRM.

A. All new construction and substantial improvements shall be elevated on pilings or columns that may be armored as necessary to withstand Lake Erie ice forces so that:

1. The bottom of the lowest horizontal structural member supporting the lowest floor (excluding the pilings or columns) is elevated to or above the flood protection elevation, and
2. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.
 - a. Water loading values shall be those associated with the base flood.

- b. Wind loading values shall be those defined according to American Society of Civil Engineers 7-13 *Minimum design loads and associated criteria for buildings and other structures*, or current version adopted by Ohio Board of Building Standards.
 - c. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of Section 4.10(A)(1) and (2).
- B. All new construction and substantial improvements shall have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system.
 1. For the purpose of Section 4.10(B), a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot.
 2. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or where so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet all of the following conditions:
 - a. Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and
 - b. The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Water loading values shall be those associated with the base flood. Wind loading values shall be those defined according to American Society of Civil Engineers 7-16 *Minimum design loads and associated criteria for buildings and other structures*, or equivalent standard.
 3. All space enclosed by breakaway walls, open wood lattice-work, or insect screening below the lowest floor shall be used solely for parking of vehicles, building access, or storage.
- C. The use of fill or redistributed existing fill, placed after the initial identification of Zones V, VE or V1-30 on the community's FIRM, for structural support of buildings is prohibited.
- D. Alteration of sand dunes that will increase potential flood damage is prohibited.
- E. Placement or substantial improvement of manufactured homes must comply with Section 4.10(A) through (E).
- F. Recreational vehicles must either:
 1. Be on site for fewer than 180 consecutive days;
 2. Be fully licensed and ready for highway use; or
 3. Comply with Section 4.10(A) through (E).

4.11 Critical Development

Critical Developments shall be elevated to 12 inches above the 500-year flood elevation or be elevated to the highest known historical flood elevation (where records are available), whichever is greater. If no data exists, establishing the 500-year flood elevation or the highest known historical flood elevation, the applicant shall provide a hydrologic and hydraulic engineering analysis that generates 500-year flood elevation data.

4.12 Fill

The following standards shall apply to all fill activities in zones A, A1-A30, AE, AO, or AH:

- A. Fill sites, upon which structures will be constructed or placed, must be compacted to 95 percent of the maximum density obtainable with a Standard Proctor Test method or an acceptable equivalent method.
- B. Fill slopes shall not be steeper than one foot vertical to two feet horizontal.
- C. Adequate protection against erosion and scour must be provided for fill slopes. When expected velocities during the base flood are five feet per second or greater armoring with stone or rock protection shall be provided. When expected velocities during the base flood are less than five feet per second protection shall be provided to fill slopes by covering them with vegetative cover.
- D. Fill shall be composed of clean granular or earthen material.
- E. Fill shall not be placed in the designated floodway.
- F. Fill shall not be placed in wetland areas.
- G. Fill sites, upon which structures will be constructed or placed, shall have a minimum buildable area at least 12 inches above the 1% chance annual floodplain. The buildable area shall be large enough to accommodate any primary structure and associated structures such as sheds, barns, swimming pools, detached garages, on-site sewage disposal systems, and water supply wells, if applicable.
- H. The owner of a property is solely responsible for any drainage problems caused.
- I. Land that has fill placed on it shall not be issued any building permits until a copy of the approved LOMR-F is on file.

4.13 Materials Storage

Storage of materials or equipment not otherwise prohibited in Section 4.1(B) shall be firmly anchored to prevent flotation.

4.14 Riparian Setbacks

Floodplains perform crucial roles in preventing flooding by storing runoff water, and benefiting water quality by providing riparian habitat. It is the intent of these standards to establish riparian setbacks that will protect floodplains. Therefore, riparian setbacks shall be measured outward from the ordinary high water mark on each side of a stream, except as follows.

Exceptions

Where the 100-year floodway is wider than the riparian setback on either side or both sides of the stream, the riparian setback shall be extended to the outer edge of the 100-year floodway.

In cases where the required setback cannot be met because the depth of the parcel would render it unbuildable, then a reduction in the setback could be granted by the Floodplain Administrator.

Widths of riparian setbacks are measured as horizontal map distances on each side of a stream, and are established as follows:

A minimum of 300 feet on each side of all streams draining an area greater than 300 square miles.

A minimum of 100 feet on each side of all streams draining an area greater than 20 square miles and up to 300 square miles.

A minimum of 40 feet on each side of all streams draining an area greater than 3 square miles (>1920 acres) and up to 20 square miles.

A minimum of 30 feet on each side of all streams draining an area less than 3 square miles (<1920 acres).

A) Permitted Uses:

- ❑1) Recreational Activity. Passive recreational uses, as permitted by federal, state, and local laws, such as hiking, non-motorized bicycling, fishing, hunting, picnicking and similar uses and associated structures including boardwalks, pathways, boat docks and ramps constructed of pervious material, picnic tables, and wildlife viewing areas.
- ❑2) Removal of Damaged or Diseased Trees. Damaged or diseased trees may be removed. Because of the potential for felled logs and branches to damage downstream properties and/or block ditches or otherwise exacerbate flooding, logs and branches resulting from the removal of damaged or diseased trees that are greater than 6 inches in diameter, should be anchored to the shore or removed from the 100-year floodplain.
- ❑3) Revegetation and/or Reforestation. Species of native plants recommended for stabilizing flood prone areas along streams and ditch within the County of Lucas are listed in the Best Management Practices appendix.
- ❑4) Right of Access by Municipal/County Engineer. The Lucas County Engineer maintains the right of access to all streams and ditches within the jurisdiction for the purposes of maintenance and improvements to alleviate flooding.

The following uses are permitted within the Riparian Setbacks with prior approval of the design.

- ❑5) Stream bank Stabilization/Erosion Control Measures. Best Management Practices (BMPs) for stream bank stabilization or erosion control may be allowed if such practices are within permitted uses by the local, state, and federal government regulations and ecologically compatible and emphasize the use of natural materials and native plant species where practical and available. Such stream bank stabilization/ erosion control practices should only be undertaken upon approval of a Stormwater Pollution Prevention Plan (SWPPP or SWP3) by the Lucas County Engineer and should follow the recommendations of the most recent version of the Rainwater and Land Development Manual.
- ❑6) Stream crossings or Crossings of streams through the Riparian Setback by vehicles, storm sewers, sewer and/or water lines, and public utility lines will be per the approval of local, county, and state governing agencies and as a part of the regular subdivision process. Roadway crossings must be built in accordance with local regulations.
- ❑7) Placement of stormwater retention or detention facilities may be considered within the Riparian Setback if stormwater quality treatment is consistent with

state standards (most current version of the Ohio EPA general construction permit).

B) Uses Prohibited in the Riparian Setback

- 1) Structures. There should be no structures of any kind except as permitted under these regulations.
- 2) Dredging or Dumping. There should be no drilling for petroleum or mineral products, mining activity, filling or dredging of soil, spoils, or any material—natural or man-made—except as permitted under these regulations.
- 3) Drainage Alterations. Except as necessary to maintain the bed elevation or flow line of the channel in the event of aggradation, there should be no manipulation or alteration of wetlands, creeks, streams, surface or subsurface springs or other bodies of water, or any activities on, or uses of, the property that may be detrimental to the aquatic or terrestrial ecosystems of the property. The owner may conduct periodic inspections in collaboration with local drainage authorities to measure the bed elevation or flow line of the water course. Steps to restore original hydraulic capacity and original grade may be taken in situations where local drainage authorities have determined that lowered bed elevation or flow line and aggradation impede subsurface drainage outlets or threaten to cause flood damage to buildings or roads.
- 4) Roads or Driveways. There should be no roads or driveways, except as permitted under these regulations.
- 5) Motorized Vehicles. There should be no storage of motorized vehicles of any kind, except as permitted under these regulations.
- 6) Modification of Natural Vegetation. Modification of the natural vegetation should be limited to conservation maintenance that the landowner deems necessary to control noxious weeds; for plantings consistent with the policies of the local reviewing agency; for disturbances approved by these agencies; and for the passive enjoyment, access and maintenance of landscaping or lawns.
- 7) Impervious Surfaces. There should be no parking lots or other human-made impervious cover, except as permitted under these regulations.

C) Non-conforming Structures or Uses in the Riparian Setback

- 1) Structures and uses within the Riparian Setback, existing at the time of approval of the Riparian Setback plan, that are not permitted by the local reviewing agency may be continued but should not be expanded except as set forth in this title, or approved by the local reviewing agency.
- 2) If damaged or destroyed, these structures or uses may be repaired or restored within two years from the date of damage /destruction or the adoption of the Riparian Setback plan, whichever is later, at the property owner's own risk.
- 3) A residential structure or use within the Riparian Setback existing at the time of approval of the Riparian Setback plan may be expanded subject to the following provisions:
 - a) The expansion conforms to existing zoning regulations.
 - b) The expansion must not exceed an area of 15% of the total footprint of existing structure or use that lies within the Riparian Setback. Expansions exceeding 15% of the total footprint within the Riparian Setback must be obtained through the variance process.

- c) Non-residential structure or use expansions will be permitted only through the variance process of the local reviewing agency.

SECTION 5.0: APPEALS AND VARIANCES

5.1 Variance and Appeals Board Established

- A. The Board of Lucas County Commissioners shall appoint a Stormwater Board of Appeals (Appeals Board) consisting of three members and one alternate member in the event a regular member is unable to serve who shall be residents of Lucas County, Ohio. One member shall be a Professional Engineer with expertise in hydraulics and hydrology and/or floodplain management, one member shall be a professional with expertise in soil erosion and sedimentation control best practices, design, and operation. The alternate member shall be a professional who can serve in either of the above roles. The members shall serve three-year terms after which time they shall be reappointed or replaced by the Board of Lucas County Commissioners. Each member shall serve until his/her successor is appointed.
- B. A chairperson shall be elected by the members of the Appeals Board. Meetings of the Appeals Board shall be held as needed and shall be held at the call of the Chairperson, or in their absence, the Acting Chairperson. All meetings of the Appeals Board shall be open to the public except that the Board may deliberate in executive sessions as part of quasi-judicial hearings in accordance with law. The Appeals Board shall keep minutes of its proceedings showing the vote of each member upon each question and shall keep records of all official actions. Records of the Appeals Board shall be kept and filed with the Clerk of the Board of Lucas County Commissioners, One Government Center, Suite 800, Toledo, OH 43604.

5.2 Powers and Duties

- A. The Board shall hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by the Floodplain Administrator in the administration or enforcement of these regulations.
- B. Authorize variances in accordance with Section 5.4 of these regulations.

5.3 Appeals

Any person affected by any notice and order, or other official action of the Floodplain Administrator may request and shall be granted a hearing on the matter before the Board provided that such person shall file, within 30 days of the date of such notice and order, or other official action, a brief statement of the grounds for such hearing or for the mitigation of any item appearing on any order of the Floodplain Administrator's decision. Such appeal shall be in writing, signed by the applicant, and be filed with the Floodplain Administrator. Upon receipt of the appeal, the Floodplain Administrator shall transmit said notice and all pertinent information on which the Floodplain Administrator's decision was made to the Appeals Board.

Upon filing an appeal request with the Appeals Board, the Appeals Board shall set a date for the appeal within a reasonable amount of time, give notice in writing to parties of interest, and shall arrive at a decision within a reasonable time after it is submitted.

5.4 Variances

Any person believing that the use and development standards of these regulations would result in unnecessary hardship may file an application for a variance. The Board shall have the power to authorize, in specific cases, such variances from the standards of these regulations, not inconsistent with Federal regulations, as will not be contrary to the public interest where, owing to special conditions of the lot or parcel, a literal enforcement of the provisions of these regulations would result in unnecessary hardship.

A. Application for a Variance

1. Any owner, or agent thereof, of property for which a variance is sought shall make an application for a variance by filing it with the Floodplain Administrator, who upon receipt of the variance shall transmit it to the Board.
2. Such application at a minimum shall contain the following information: Name, address, and telephone number of the applicant; legal description of the property; parcel map; description of the existing use; description of the proposed use; location of the floodplain; description of the variance sought; and reason for the variance request.
3. All applications for a variance shall be accompanied by a variance application fee as adopted by the Board of Lucas County Commissioners and listed in the Lucas County Engineer Fee Schedule.

B. Public Hearing

At such hearing the applicant shall present such statements and evidence as the Board requires. In considering such variance applications, the Board shall consider and make findings of fact on all evaluations, all relevant factors, standards specified in other sections of these regulations and the following factors:

1. The danger that materials may be swept onto other lands to the injury of others.
2. The danger to life and property due to flooding or erosion damage.
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
4. The importance of the services provided by the proposed facility to the community.
5. The availability of alternative locations for the proposed use that are not subject to flooding or erosion damage.
6. The necessity to the facility of a waterfront location, where applicable.
7. The compatibility of the proposed use with existing and anticipated development.
8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area.
9. The safety of access to the property in times of flood for ordinary and emergency vehicles.
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

Variations shall only be issued upon:

1. A showing of good and sufficient cause.
2. 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 these regulations does not constitute an exceptional hardship to the applicant.*
3. A determination that the granting of a variance will not result in increased flood heights beyond that which is allowed in these regulations; additional threats to public safety; extraordinary public expense, nuisances, fraud on or victimization of the public, or conflict with existing local laws.
4. A determination that the structure or other development is protected by methods to minimize flood damages.
5. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

Upon consideration of the above factors and the purposes of these regulations, the Appeals Board may attach such conditions to the granting of variations, as it deems necessary to further the purposes of these regulations.

C. Other Conditions for Variations

1. Variations shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
2. Generally, variations may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items in Section 5.4(B)(1) to (11) have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.
3. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

5.5 Procedure at Hearings

1. All testimony shall be given under oath.
2. A complete record of the proceedings shall be kept, except confidential deliberations of the Board, but including all documents presented and a verbatim record of the testimony of all witnesses.
3. The applicant shall proceed first to present evidence and testimony in support of the appeal or variance.
4. The administrator may present evidence or testimony in opposition to the appeal or variance.
5. All witnesses shall be subject to cross-examination by the adverse party or their counsel.
6. Evidence that is not admitted may be proffered and shall become part of the record for appeal.
7. The Board shall issue subpoenas upon written request for the attendance of witnesses. A reasonable deposit to cover the cost of issuance and service shall be collected in advance.

8. The Board shall prepare conclusions of fact supporting its decision. The decision may be announced at the conclusion of the hearing and thereafter issued in writing or the decision may be issued in writing within a reasonable time after the hearing.

5.6 Appeals to the Court

Those aggrieved by the decision of the Board may appeal such decision to the Lucas County Court of Common Pleas, pursuant to Chapter 2506 of the Ohio Revised Code.

SECTION 6.0: ENFORCEMENT

6.1 Compliance Required

- A. No structure or land shall hereafter be located, erected, constructed, reconstructed, repaired, extended, converted, enlarged or altered without full compliance with the terms of these regulations and all other applicable regulations which apply to uses within the jurisdiction of these regulations, unless specifically exempted from filing for a development permit as stated in Section 3.9.
- B. Failure to obtain a floodplain development permit shall be a violation of these regulations and shall be punishable in accordance with Section 6.3.
- C. Floodplain development permits issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the use, and arrangement, set forth in such approved plans and applications or amendments thereto. Use, arrangement, or construction contrary to that authorized shall be deemed a violation of these regulations and punishable in accordance with Section 6.3.

6.2 Notice of Violation

Whenever the Floodplain Administrator determines that there has been a violation of any provision of these regulations, he shall give notice of such violation to the person responsible therefore and order compliance with these regulations as hereinafter provided. Such notice and order shall:

- A. Be put in writing on an appropriate form;
- B. Include a list of violations, referring to the section or sections of these regulations that have been violated, and order remedial action, which, if taken, will effect compliance with the provisions of these regulations;
- C. Specify a reasonable time for performance;
- D. Advise the owner, operator, or occupant of the right to appeal;
- E. Be served on the owner, occupant, or agent in person. However, this notice and order shall be deemed to be properly served upon the owner, occupant, or agent if a copy thereof is sent by registered or certified mail to the person's last known mailing address, residence, or place of business, and/or a copy is posted in a conspicuous place in or on the dwelling affected.

6.3 Violations and Penalties

Violation of the provisions of these regulations or failure to comply with any of its requirements shall be deemed to be a strict liability offense. Any person who violates these regulations or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$300 and, in addition, shall pay all costs and expenses involved in the

case as provided, or imprisoned as provided by the laws of Lucas County. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent Lucas County from taking such other lawful action as is necessary to prevent or remedy any violation. Lucas County shall prosecute any violation of these regulations in accordance with the penalties stated herein.

SECTION 7.0: ADOPTION

In accordance with O.R.C. §307.37 (2) public hearings were held on **Tuesday December 5, 2023** and **Tuesday December 12, 2023** at regular meetings of the Board of Lucas County Commissioners.

Resolution **xx-xxx** adopted by the Board of Lucas County Commissioners on December 12, 2023, **shall take effect January 12, 2024**.