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MODEL "D" ORDINANCE
FLOODPLAIN MANAGEMENT

SECTION 1.0
STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE, AND OBJECTIVES

1.1 STATUTORY AUTHORIZATION

The Legislature of the State of North Dakota has in North Dakota Century Code, Chapters 40-05, 11-11 and 58-06, delegated responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry.

Therefore, the _____ of _____,
(governing body) (local unit)
North Dakota does ordain as follows:

1.2 FINDINGS OF FACT

- (1) The flood hazard areas of _____ are subject to periodic
(local unit)
inundation which can endanger life, result in loss of property, create health and safety hazards, disrupt commerce and governmental services, cause extraordinary public expenditures for flood protection and relief, and impair the tax base, all of which adversely affect the public health, safety, and general welfare.
- (2) Flood losses caused by the cumulative effect of obstructions in the special flood hazard areas cause increases in flood heights and velocities. Inadequately floodproofed, elevated or otherwise unprotected structures also contribute to the flood loss.

1.3 STATEMENT OF PURPOSE

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

- (1) To protect human life and health;
- (2) To minimize expenditure of public money for costly flood control projects;
- (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

- (4) To minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in special flood hazard areas;
- (6) To help maintain a stable tax base by providing for the second use and development of special flood hazard areas so as to minimize future flood blight areas;
- (7) To ensure that potential buyers are notified that property is in a special flood hazard area;
- (8) To ensure that those who occupy the special flood hazard areas assume responsibility for their actions.

1.4 METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this ordinance includes methods and provisions for:

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

SECTION 2.0 DEFINITIONS

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

"Appeal" means a request for a review of the _____'s

(local administrator's)
interpretation of any provision of this ordinance or a request for a variance.

"Base flood or 100-year flood" means the flood having a one percent chance of being equaled or exceeded in any given year.

"Base Flood Elevation" (BFE) means the height of the base flood or 100-year flood usually in feet, measured in the same datum (either NAVD88 or NGVD29) as the FIRM.

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

"Best Available Information" (BAI) means water elevation information from any source used to estimate or determine a base flood elevation (i.e. high water mark).

"Community" means any political subdivision that has the authority to zone, or any Indian tribe or authorized tribal organization, which has authority to adopt and enforce flood plain management regulations for the areas within its jurisdiction.

"Conveyance or hydraulic conveyance" means a geometric characteristic of a river or watercourse at a given point that determines the flow-carrying capacity at that point.

"Development" means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the special flood hazard area.

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

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

"Flood Insurance Rate Map" (FIRM) means the official map issued by the Federal Emergency Management Agency where special flood hazard areas are designated as Zone A, AE, AO, AH, A1-A30 or A-99.

"Flood Insurance Study" (FIS) means the official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Insurance Rate Map, and the water surface elevation of the base flood.

"Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters and/or; from the unusual and rapid accumulation or runoff of surface waters from any source.

"Floodproofing" (Dry) means protection provided a structure, together with attendant utilities and sanitary facilities, which is watertight two feet above the base flood elevation with walls that are substantially impermeable to the passage of water.

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

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

"Lowest floor" means the lowest floor of a structure including the basement.

"Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle" but does include "mobile home".

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

"New construction" means structures for which the "start of construction" commenced on or after the effective date of this ordinance.

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

"Person" means any person, firm, partnership, association, corporation, limited liability company, agency, or any other private or governmental organization, which includes any agency of the United States, a state agency, or any political subdivision of the state.

"Reasonably safe from flooding" means base flood waters will not inundate the land or damage structures to be removed from the special flood hazard area, and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

"Recreational vehicle" means a vehicle which is:

- (a) built on a single chassis;
- (b) 400 square feet or less when measured at the largest horizontal projection;
- (c) designed to be self-propelled or permanently towable by a light duty truck;
- (d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use; including, but not limited to;
- (e) travel trailers, trailers on wheels, park-model trailers, and other similar vehicles.

"Special Flood Hazard Area" (SFHA) means an area of land that would be inundated by a flood having a one percent chance of being equaled or exceeded in any given year.

"Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. The actual start means 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.

"Structure" means a walled and roofed building, including manufactured homes and gas or liquid above-ground storage tanks.

"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the building to its pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

"Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- 1) Before the improvement or repair is started; or
- 2) If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

- 1) Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or
- 2) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

“Watercourse” means only the channel and banks of an identifiable watercourse, and not the adjoining floodplain areas. The flood carrying capacity of a watercourse refers to the flood carrying capacity of the channel, except in the case of alluvial fans, where a channel is not typically defined. The definition of watercourse in N.D.C.C. § 61-01-06 is not applicable in this ordinance.

“Variance” means a grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

“Violation” means the failure of a structure or other development to be fully compliant with the community’s flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required by the community’s floodplain management ordinance is presumed to be in violation until such time as that documentation is provided.

SECTION 3.0 GENERAL PROVISIONS

3.1 LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all special flood hazard areas within the jurisdiction of _____.
(local unit)

3.2 BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS

The special flood hazard areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled “The Flood Insurance Study for the _____, dated _____,” with an accompanying
(local unit) (date)

Flood Insurance Rate Map is hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file at _____.
(address)

3.3 COMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations.

3.4 GREATER RESTRICTIONS

This ordinance is not intended to repeal, remedy, 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.

3.5 INTERPRETATION

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

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the governing body; and,
- (3) Deemed neither to limit nor repeal any other powers granted under state statutes.

3.6 WARNING AND DISCLAIMER OR LIABILITY

The degree of flood protection required by this ordinance 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 manmade or natural causes. This ordinance does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of _____, any officer or employee thereof, or the Federal _____ (local unit)

Emergency Management Agency, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

3.7 SEVERABILITY

If any section, clause, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court of law, the remainder of this ordinance shall not be affected and shall remain in full force.

SECTION 4.0 ADMINISTRATION

4.1 ESTABLISHMENT OF DEVELOPMENT PERMIT

A development permit shall be obtained before construction or development begins within any special flood hazard area established in Section 3.2. Application for a development permit shall be made on forms furnished by the _____
(local administrator)

and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill storage materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

- (1) Elevation in the same datum (either NAVD88 or NGVD29) as the FIRM, of the lowest floor of all structures;
- (2) Elevation in the same datum (either NAVD88 or NGVD29) as the FIRM to which any structure has been floodproofed;
- (3) Certification by a registered professional engineer or architect that the floodproofing methods for any non-residential structure meet the floodproofing criteria in Section 5.2-2; and,
- (4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

4.2 DESIGNATION OF THE _____ (local administrator)

The _____ is hereby appointed to administer and
(local administrator)
implement this ordinance by granting or denying development permit applications in accordance with its provisions.

4.3 DUTIES AND RESPONSIBILITIES OF THE _____ (local administrator)

Duties of the _____ shall include, but not be limited to:
(local administrator)

4.3-1 Permit Review

- (1) Review all development permits to determine that the permit requirements of this ordinance have been satisfied.

- (2) Approve or deny all applications for development permits required by adoption of this ordinance.
- (3) Review all development permits to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required.
- (4) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 5.4 are met.

4.3-2 Use of Other Base Flood Data

When base flood elevation data has not been provided in accordance with Section 3.2, BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS, the _____ shall obtain, review, and reasonably utilize

(local administrator)

any base flood elevation data and floodway data available (known as best available information) from any other federal, state, or other source, as criteria for requiring that new construction, substantial improvements, or other development in the floodplain are administered in accordance with Section 5.2, SPECIFIC STANDARDS.

4.3-3 Information to be Obtained and Maintained

- (1) Obtain and record the actual elevation (in the same datum (either NAVD88 or NGVD29) as the FIRM), of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.
- (2) For all new or substantially improved floodproofed structures:
 - (i) obtain and record the actual elevation (in the same datum (either NAVD88 or NGVD29) as the FIRM), to which the structure has been floodproofed;
 - (ii) maintain the floodproofing certifications required in Section 4.1(3).
- (3) Maintain for public inspection all records pertaining to the provisions of this ordinance.

4.3-4 Alteration of Watercourses

The responsible person shall:

- (1) Notify nearby communities, water resource districts, and the North Dakota Department of Water Resources, as necessary, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
- (2) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished; and,
- (3) Notify the appropriate water resource district prior to removal or placement of fill within two hundred feet of the bank of a body of water during normal flow or stage.

4.3-5 Interpretation of Flood Insurance Rate Map (FIRM) Boundaries

Make interpretation where needed, as to the exact location of the boundaries of the special flood hazard areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 4.4.

4.3-6 Encroachment Analysis

When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1-30, AE, AH, on the community's FIRM which increases the water surface elevation of the base flood by more than one foot, provided that the community first applies for and receives a Conditional Letter of Map Revision (CLOMR) through FEMA.

4.4 VARIANCE PROCEDURE

4.4-1 Appeal Board

- (1) The _____ as established
(appeal board)
By _____ shall hear and decide appeals and
(local unit)
requests for variances from the requirements of this ordinance.

- (2) The _____ shall hear and decide appeals when it
(appeal board)
is alleged there is an error in any requirement, decision, or determination made by
the _____ in the enforcement or administration of
(local administrator)
this ordinance.
- (3) Those aggrieved by the decision of the _____,
(appeal board)
or any taxpayer, may appeal such decision to the _____ District Court _____,
(name of appropriate court)
as provided in N.D.C.C. §§ 40-47-11, 11-33-12, or 58-03-14.
(statute)
- (4) In passing upon such applications, the _____
(appeal board)
shall consider all technical evaluations, all relevant factors, standards specified in
other sections of this ordinance; and:
- (i) the danger that materials may be swept onto other lands to the injury of others;
 - (ii) the danger to life and property due to flooding or erosion damage;
 - (iii) the susceptibility of the proposed facility and its contents to flood damage and the
effect of such damage on the individual owner;
 - (iv) the importance of the services provided by the proposed facility to the
community;
 - (v) the necessity to the facility of a waterfront location, where applicable;
 - (vi) the availability of alternative locations, for the proposed use which are not subject
to flooding or erosion damage;
 - (vii) the compatibility of the proposed use with existing and anticipated development;
 - (viii) the relationship of the proposed use to the comprehensive plan and floodplain
management program for that area;
 - (ix) the safety of access to the property in times of flood for ordinary and emergency
vehicles;
 - (x) the expected heights, velocity, duration, rate of rise, and sediment transport of the
floodwaters and the effects of wave action, if applicable, expected at the site; and

- (xi) the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- (5) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre to less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (i-xi) in Section 4.4-1(4) have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.
- (6) Upon consideration of the factors of Section 4.4-1(4) and the purposes of this ordinance, the _____ may attach such
(appeal board)
conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- (7) The _____ shall maintain the records of all appeal actions
(local administrator)
the report any variances to the Federal Emergency Management Agency upon request.

4.4-2 Conditions for Variances

- (1) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.
- (2) Variances shall not be issued within the identified floodplain if any increase in flood levels during the base flood discharge would result.
- (3) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (4) Variances shall only be issued upon:
 - (i) a showing of good and sufficient cause;
 - (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant; and,
 - (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, cause fraud on or victimization of the public as identified in Section 4.4-1(4), or conflict with existing local laws or ordinances.

- (5) 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 that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

SECTION 5.0 PROVISIONS FOR FLOOD HAZARD REDUCTION

5.1 GENERAL STANDARDS

In all special flood hazard areas the following standards are required:

5.1-1 Anchoring

- (1) All new construction and substantial improvements, including additions, shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- (2) All manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

5.1-2 Construction Materials and Methods

- (1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (2) All new and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- (3) All 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 located so as to prevent water from entering or accumulating within the components during conditions of flooding.

5.1-3 Utilities

- (1) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (2) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and,

- (3) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

5.1-4 Subdivision Proposals

- (1) All subdivision proposals shall be consistent with the need to minimize flood damage;
- (2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
- (3) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and,
- (4) Base flood elevation data shall be provided for subdivision proposals and other proposed development which contain at least 50 lots or 5 acres (whichever is less).

5.2 SPECIFIC STANDARDS

In all special flood hazard areas where base flood elevation data have been provided as set forth in Section 3.2 BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS or Section 4.3-2, Use of Other Base Flood Data, the following provisions are required:

5.2-1 Residential Construction

- (1) New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to at least one foot above the base flood elevation.

5.2-2 Nonresidential Construction

Construction and substantial improvement of any nonresidential structure shall either have the lowest floor, including basement, elevated to at least one foot above the base flood elevation or, together with attendant utility and sanitary facilities shall:

- (1) Be floodproofed to at least two feet above the base flood elevation, so that below this elevation the structure is watertight with walls substantially impermeable to the passage of water.
- (2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

- (3) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Section 4.3-3(2).

5.2-3 Manufactured Homes

- (1) Require all manufactured homes placed within Zone A shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist floatation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.
- (2) Require all manufactured homes placed or substantially improved within Zones A 1-30, AH, or AE on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision which has incurred substantial damage, be elevated on a permanent foundation so the lowest floor of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.
- (3) Require that manufacture homes placed or substantially improved on sites in an existing manufacture home park or subdivision within Zones A 1-30, AH, or AE not subject to other requirements of this section be elevated so that either:
 - (i) the lowest floor of the manufacture home is one foot above the base flood elevation, or
 - (ii) the manufacture home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36" in height above grade and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.

5.2-4 Recreational Vehicles

In A1-30, AH, and AE Zones, all recreational vehicles to be placed on a site must

- (i) be elevated and anchored to meet the requirements in 5.2-3; OR
- (ii) be on the site for less than 180 consecutive days; AND
- (iii) be fully licensed and highway ready

5.3 Shallow Flooding AO and AH Zones (Section 5.3 is only required if the community has Flood Zones AO and/or AH on the effective FIRM)

Located within the areas of special flood hazard established in Section 3.2, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of 1 to 3 feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of **residential** structures have the lowest floor (including basement) elevated one foot above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified).
- (2) All new construction and substantial improvements of **non-residential** structures;
 - (i) have the lowest floor (including basement) elevated one foot above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or;
 - (ii) together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard as specified in Section 5.2-2.
- (3) Require within Zones AH or AO adequate drainage paths around structures on slopes, to guide flood waters around and away from proposed structures.

5.4 FLOODWAYS

Located within the special flood hazard areas established in Section 3.2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

- (1) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge. Any increase, as is used in this section, means any modeled impact greater than 0.00 feet.
- (2) If Section 5.4 (1) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction requirements of this ordinance.

- (3) Under the provisions of 44 CFR Section 65.12 of the NFIP Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in BFEs, provided that the community first applies for and receives a Conditional Letter of Map Revision (CLOMR) through FEMA.

5.5 ENCLOSURES

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

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

SECTION 6.0 VIOLATIONS

6.1 PENALTIES FOR VIOLATIONS

- (1) Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violations on conditions and safeguards established in connection with grants or variances or conditional uses, shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be punished by a fine not exceeding \$500 or by imprisonment not to exceed 30 days or by both such fine and imprisonment for each such offense, and in addition shall pay costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense.
- (2) Nothing herein contained shall prevent the _____
(governing body)
from taking such other lawful action as is necessary to prevent or remedy any violation.

PASSED THIS _____ of _____, _____.

APPROVED:

CHIEF EXECUTIVE OFFICER

ATTEST:
(seal)

(Auditor or Clerk)

SAMPLE