

## ARTICLE 21

### FP FLOODPLAIN DISTRICT REGULATIONS

In any FP floodplain district, the following regulations shall apply:

1. 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:
  - a. To protect human life and health;
  - b. To minimize expenditure of public money for costly flood control projects; and
  - c. To ensure that potential buyers are notified that property is in an area of special flood hazard.
2. 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 floodplain administrator's interpretation of any provision of this ordinance.

"Area of special flood hazard" means the land in the floodplain within a community subject to a one per cent or greater chance of flooding in any given year.

"Base flood" means the flood having a one per cent chance of being equaled or exceeded in any given year.

"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 area of special flood hazard.

"Flood or flooding" means a general and temporary condition or partial or complete inundation of normally dry land areas from:

- a. The overflow of inland or tidal waters and/or
- b. The unusual and rapid accumulation or runoff of surface waters from any source.

"Flood insurance rate map" (FIRM) means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

"Flood insurance study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.

"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.

"Lowest floor" means the lowest floor of the lowest enclosed area including basement. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable floodproofing design requirements of this ordinance.

"Manufactured home" means a structure that is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. It includes recreational vehicles or travel trailers placed on a site for more than 180 consecutive days.

"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.

"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 abasement, 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, manufactured home or liquid storage tank that is principally above ground.

"Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty (50) per cent of the market value of the structure either:

- a. before the improvement or repair is started, or
- b. if the structure has been damaged and is being restored, before the damage occurred. For the purpose 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:

- a. 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

- b. any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places

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

### 3. General provisions.

- a. Jurisdiction. The jurisdiction of this ordinance(section) includes all lands within the Burleigh County zoned area pursuant to Article 5 hereof that would be inundated by a 100-year flood but excluding the corporate limits of the City of Bismarck and the extra-territorial jurisdiction as provided for in 40-47-01.1 of the North Dakota Century Code.
- b. Basis for establishing the areas of special flood hazard. The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report titled "The Flood Insurance Study for Burleigh County, North Dakota and Incorporated Areas", dated July 19, 2005 with an accompanying 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 in the office of the Floodplain Administrator.
- c. 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.
- d. Warning and disclaimer of 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 man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted without such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Burleigh County, any officer or employee thereof, or the Federal Emergency Management Agency, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.
- e. District boundaries. The boundaries of the floodplain and floodway districts shall be as they appear on the zoning map which is on file in the office of the city/county planner. Compliance with provisions of this ordinance (section) shall not be grounds for the removal of lands from the floodplain district. All areas of diking shall be constructed to at least two (2) feet above the 100-year floodplain level.
- f. Establishment of building permit. A building permit shall be obtained before construction or development begins within any area of special flood hazard established herein. Application for a building permit shall be made on forms provided and shall be accompanied by any reasonable supporting material as may be requested by the office of building inspection.

- g. Use of other base flood data. When base flood elevation data has not been provided in accordance with subsection (3)(b), Basis for establishing the areas of special flood hazard, the director of inspections shall obtain, review, and reasonably utilize any base flood elevation data available from a federal, state, or other source, in order to administer this ordinance in accordance with its purpose and intent.
- h. Interpretation of FIRM boundaries. Make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazards, (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.
- i. 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. All variances shall be issued by the board of county commissioners in accordance with the specifications of Article 28 of this ordinance.
- j. Letter of Map Revision (LOMR). Development on any parcel for which a letter of Map Revision (LOMR) has been issued shall comply with all of the requirements and recommendations as continued therein.

4. Establishment of development permit.

- a. A development permit may be required before construction or development begins within any area of special flood hazard, as determined by the floodplain administrator. Application for a development permit shall be made on forms furnished by the floodplain administrator who will administer this ordinance and issue all permits hereunder. Application 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 of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:
  - 1) Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
  - 2) Elevation in relation to mean sea level 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; and
  - 4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

b. Duties of the director of inspections shall include, but not be limited to:

Permit review:

- 1) Review all development permits to determine that the permit requirements of this

ordinance have been satisfied.

- 2) 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.
  - 3) 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 this ordinance are met.
- c. Use of other base flood data. When base flood elevation data has not been provided, the director of inspections shall obtain, review and reasonably utilize any base flood elevation data available from a federal, state or other source.

Information to be obtained and maintained:

- 1) Obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures.
- 2) For all new or substantially improved floodproofed structures:
  - a) Verify and record the actual elevation (in relation to mean sea level), and
  - b) Maintain the floodproofing certifications required hereunder.

Alteration of watercourses. In case of alteration of watercourses, the director of inspections will:

- 1) Notify adjacent communities and the North Dakota state engineer 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.

## 5. Provisions for flood hazard reduction.

a. General standards. In all areas of special flood hazards the following standards are required:

- 1) Anchoring:
  - a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
  - b) 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.

2) Construction materials and methods:

- a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

3) Utilities:

- a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- b) 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
- c) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

4) Subdivision proposals:

- a) All subdivision proposals shall be consistent with the need to minimize flood damage;
- b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
- c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and
- d) Base flood elevation data shall be provided for all subdivision proposals and other proposed developments.

b. Specific standards. In all areas of special flood hazards where base flood elevation data has been provided, the following provisions are required:

- 1) Residential construction: New construction and substantial improvement of any residential structure shall have the lowest floor, including basement or crawl space, elevated to a minimum of one (1) foot above the base flood elevation, and shall:
  - a) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyance. Fully enclosed areas below the lowest floor that 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 requirement must either be certified by registered professional engineer or architect or must meet or exceed the following minimum criteria:
    - i. 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;

- ii. the bottom of all openings shall be no higher than one foot above grade;
- iii. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters;  
or

b) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the permitting official.

2) Nonresidential construction: New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement or crawl space, elevated to a minimum of one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, shall:

a) 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;

b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Fully enclosed areas below the lowest floor that 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 must meet or exceed the following minimum criteria:

i. 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;

ii. the bottom of all openings shall be no higher than one foot above grade;

iii. openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters; and

c) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the permitting official.

3) Manufactured homes:

a) Manufactured homes shall be anchored in accordance with this section.

b) All manufactured homes or those to be substantially improved shall be elevated on compacted fill such that the lowest floor of manufactured home is a minimum of one (1) foot above the base flood elevation and is securely anchored as specified elsewhere in this section.

- 4) Floodways. Located within areas of special flood hazard 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:
- a) 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.
  - b) If the preceding subsection is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this ordinance.