

## CHAPTER 7

### FLOOD DAMAGE PREVENTION

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**5-7-1: PURPOSE:** The purpose of this Chapter is to diminish threats to public health and safety caused by floodwaters; reduce economic losses to individuals and the community at large; protect, conserve, and promote the orderly development of land and water resources; and to comply with the guidelines for the National Flood Insurance Program as published by the U.S. Department of Housing and Urban Development. The provisions of this Chapter further regulate, guide, and control:

- A. The use, subdivision, layout, and improvement of lands located in floodplains.
- B. The excavating, filling, and grading of lots and other land parcels or areas located in floodplains and the storing of certain materials thereon.
- C. The location, construction, and elevation of buildings and other structures or parts and appurtenances thereof, and of sanitary and storm sewers and appurtenances, located in floodplains. (Ord-80-623-30)
- D. Golf courses located within the Village. (Ord. 80-637-44)

**5-7-2: INTERPRETATION, CONFLICTS:** All ordinances and parts of ordinances in conflict herewith are repealed to the extent of such conflict herewith. The regulations contained in this Chapter 7 are hereby incorporated by reference into the Zoning, Building and Subdivision Codes<sup>1</sup> of the Village as fully as if set forth at length therein.

**5-7-3: COMPLIANCE REQUIRED:** Before starting any of the work regulated by this

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<sup>1</sup> See Titles 5, 6 and 7 of this Village Code

Chapter, an applicant shall comply with the requirements set forth in other applicable ordinances with respect to the submission and approval of preliminary and final subdivision plats, improvement plans, building and zoning permits, inspections, appeals and similar matters, along with those set forth in this Chapter and as may be required by Federal or State laws and the regulations of any department of the State of Illinois. Where provisions of this Chapter are more restrictive than other requirements, this Chapter shall apply.

**5-7-4: DEFINITIONS:** For the purposes of this Chapter, the following definitions are adopted:

AREA OF SPECIAL FLOOD HAZARD	The land which is subject to a one percent (1%) chance of flooding annually. This area may also be identified as that which is subject to the 100-year flood. The area is designated as Zone A, A1-99, AH, or AO on the maps provided by the Federal Insurance Administration.
BASE FLOOD	The flood having a one percent (1%) chance of being equaled or exceeded in any given year. The base flood is also known as the 100-year flood. If the 100-year flood information is not available, the base flood shall be the flood of record.
BASE FLOOD AREA	The land area subject to inundation by waters of the base flood.
BASE FLOOD ELEVATION	The highest water surface elevation of the base flood.
COMPENSATORY STORAGE	An artificially excavated volume of storage within the base flood area used to balance the loss of natural flood storage capacity when artificial fill or structures are placed within the floodplain. The uncompensated loss of natural floodplain storage can increase off-site floodwater elevations and flows.
DEVELOPMENT	Any manmade change to improved or unimproved real estate, including but not limited to construction of or substantial improvements to buildings or other structures, the placement of mobile homes, mining, dredging, filling, grading, paving, excavation or drilling operations.
FLOOD	The condition existing when the waters of any

watercourse, pond, or depression temporarily rise to a height above their normal levels and overflow the boundaries within which they are ordinarily contained. It also includes the unusual rapid accumulation or runoff of surface waters.

**FLOOD FREQUENCY**

A period of years, based on a statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded.

**FLOOD FRINGE**

The higher portion of the floodplain, immediately adjacent to and on either side of the floodway, occupied by quiescent or slow-moving waters during floods.

**FLOOD HAZARD BOUNDARY**

An official map of the Village, issued or approved by the MAP (FHBM) Administrator of the Federal Insurance Administration, on which the areas having special flood hazards have been drawn and designated as Zone A.

**FLOOD INSURANCE STUDY**

An examination and evaluation of hydro- (FIS) logic and hydraulic data sponsored by the Federal Insurance Administration to determine base flood flows, elevations, areas and floodways. The FIS also determines flows, elevations and areas of floods having lesser and greater frequencies of occurrence.

**FLOOD OF RECORD**

An actual historical flood event for which sufficient records are available to establish its extent. No uniform probability of occurrence is associated with floods of record. However, the probability of occurrence may be determined for the event at specific locations.

**FLOOD PROFILE**

Graphical representations of the elevations of the water surface of the 100-year flood along the watercourses of the Village.

**FLOOD PROTECTION ELEVATION**

The elevation to which uses regulated by this Chapter are required to be elevated or floodproofed.

**FLOOD RETURN PERIOD**

Same as Flood Frequency.

**FLOODPLAIN**

The special flood hazard lands adjoining

a water course, whose surface elevation is lower than the base flood elevation, that are subject to periodic inundation during floods.

**FLOODPROOFING**

Modifications to structures made to reduce flood damages. These changes may be made to existing structures or incorporated in the design of new structures. In all instances, flood-proofing must be watertight and must be adequate without the need for human intervention.

**FLOODWAY**

The channel of a watercourse and those portions of the adjoining floodplains which are required to carry and discharge the 100-year flood with no significant increase in the base flood elevation.

**FLOODWAY  
ENCROACHMENT LINES**

The lateral boundaries of the floodway which separate it from the flood fringes.

**FREEBOARD**

An increment of elevation added to the base flood elevation to provide a factor of safety for uncertainties in calculations, unknown localized conditions, wave actions and unpredictable effects such as may be caused by ice or debris jams.

**HYDROSTATIC PRESSURE**

The upward pressure exerted on floodslabs or an entire structure by standing water or groundwater, which tends to float a structure or crack the floor. It is based on the difference in elevation between the surface level of the water. Hydrostatic pressure may also be horizontal, imposing forces on walls causing them to crack or fail.

**MOBILE HOME**

A structure transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers.

**MOBILE HOME PARK**

A parcel or contiguous parcels of land which has been so designated and improved that it contains two (2) or more mobile home lots available to the general public for sale or rent and the placement thereon of mobile

homes for occupancy.

**ONE HUNDRED YEAR FLOOD** A flood magnitude with a one percent (1%) statistical of being equaled or exceeded during any year. A flood this large would be reached once during a 100-year period, on the average. However, the occurrence of such an event does not diminish the chance of its recurring again at any time.

**RISK PREMIUM RATE ZONE** Flood hazard areas designated according to the degree of flooding they would experience during the base flood. The symbols used to designate these zones are as follows:

A Area of special flood hazard without water surface elevations determined.

AI-99 Area of special flood hazard with water surface elevations determined.

AH Area of special flood hazards having a level water surface (ponding) with water depths between 1 and 3 feet.

AO Area of special flood hazards having a sloping water surface (sheet runoff) with water depths between 1 and 3 feet.

VO Area of special flood hazards having shallow water depths and/or unpredictable flow paths between 1 and 3 feet and with velocity.

B Area of moderate flood hazards.

C Area of minimal hazards.

**RIVERINE** Relating to, formed by, or resembling a river (including tributaries), stream, creek or brook.

**STRUCTURE** A walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a mobile home.

**SUBSTANTIAL IMPROVEMENT**

Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either before the improvement or repair is started, or if the structure has been damaged, and is being restored, before the damage occurred. 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 or site documented as deserving preservation by the Illinois Department of Conservation or listed on the National Register of Historic Places.

**WATERCOURSE**

Any river, stream, creek, brook, branch or other drainageway in or into which stormwater runoff and floodwaters flow either regularly or intermittently.

**5-7-5: GENERAL CONDITIONS:** General conditions which shall apply in Articles A, B, and C of this Chapter include:

- A. **Floodways:** In floodways which have been identified in Section 5-7-6 of this Chapter as elements of floodplains associated with the flood having a 100-year recurrence interval, fill, encroachments, and new construction and substantial improvements of existing structures, which would result in any one-tenth foot (0.1') increase in flood heights, shall be prohibited. The location of any portion of a new mobile home park, of any expansion to an existing mobile home park, and of any mobile home not in a mobile home park shall be prohibited in the floodway (nothing herein shall be construed to permit mobile homes or mobile home parks within the Village of Lincolnshire).
- B. **Flood Fringes:** In flood fringes which have been identified in Section 5-7-6 of this Chapter as elements of the floodplains associated with floods having a 100-year recurrence interval, construction, filling or use of those low-lying lands may be permitted under the conditions specified in Articles A, B and C of this Chapter.
- C. **Compensatory Storage:** Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or

structure below the base flood elevation shall be compensated for and balanced by at least an equal volume of excavation taken from below the base flood elevation. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the 10-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation but below the base flood elevation must be replaced above the existing 10-year flood elevation and below the base flood elevation. In the case of streams or watercourses, such excavation shall be made opposite or immediately adjacent to the areas so filled or occupied. All such excavations should be constructed to drain freely and openly to the watercourse.

- D. Watercourse Alteration: The Village shall notify the Illinois Division of Water Resources and the Federal Insurance Administration prior to any alteration or relocation of a watercourse within the Municipality's jurisdiction by any person or agencies. The Village shall assure that the flood carrying capacity within the altered or relocated portion of any watercourse be maintained.
- E. Freeboard: All structures located in base flood areas shall be required to be so sited on fill or be otherwise designed and constructed so as to include a freeboard of at least two feet (2') between the lowest floor and the base flood elevation, except as provided for in Section 5-7D-3 of this Chapter. (Ord. 03-1834-11, eff. 4/14/03)
- F. Base Flood: Wherever the areas expected to be inundated by the base flood have been specifically identified, it is the intention of this Chapter to provide protection in those areas against the high waters of that flood.
- G. Historical Flood of Record: In the absence of specific information pertaining to the base flood, it is the intention of this Chapter to provide protection in the low-lying areas of this community against the high waters of the historical flood of record.
- H. Land Use Controls: This Chapter is not intended to reduce or eliminate existing flooding, nor is it intended to impose a complete prohibition of construction in base flood areas. On the contrary, these regulations are designed to guide and control development in such a manner as to lessen the damaging effects of floods on developments proposed for the low-lying areas of this community.

**5-7-6: MAPS AND PROFILES:**

- A. Base Flood Elevations:

Des Plaines River	Southern corp. limit	646*
	Northern corp. limit	648*

Indian Creek	Mouth at Des Plaines River	648*
	About 2,150 feet upstream from mouth (at corp. limits)	649*
	Upstream corp. limits at State Route 22	653*
	About 350 feet upstream of State Route 22 (upstream limit of flooding affecting community)	655*

- B. Certified HUD Flood Insurance Studies (FIS).
- C. Illinois Department of Transportation - Division of Water Resources Regulatory Floodplain Maps and Profiles.
- D. HUD Flood Hazard Boundary Maps (FHBM) and Approximate FIS Data.
- E. USGS Maps of Flood-prone Areas.
- F. USGS - NIPC Hydrologic Investigation Atlases (Floods of Record).
- G. Village of Lincolnshire, IL, Community Number 170378

Date of Current Effective Map (or Map Index)	Lake County DFIRM Panel Number	Effective FIS Study Date
September 18, 2013	17097C0254 K	September 18, 2013
September 18, 2013	17097C0257K	September 18, 2013
September 18, 2013	17097C0258 K	September 18, 2013
September 18, 2013	17097C0259 K	September 18, 2013
September 18, 2013	17097C0262 K	September 18, 2013
September 18, 2013	17097C0266 K	September 18, 2013
September 18, 2013	17097C0267K	September 18, 2013

- H. Flood Insurance Study, Village of Lincolnshire
  - a. Des Plaines River study dated September 18, 2013
  - b. North Branch Chicago River study dated September 18, 2013
- I. Conflicts Between Maps and Profiles: In the event a conflict arises between the information depicted by the official Village floodplain maps and the official



Village profiles, and in the absence of any overriding information to the contrary, the data prescribed by the profiles will govern.

- J. Source Documents: Information pertaining to the base flood incorporated in this Chapter, including maps and profiles, has been extracted from and is based on the studies and reports prepared by the Federal Emergency Management Agency.
- K. Official Elevations: The system of official bench marks and elevations already established in the area by the U.S. Coast and Geodetic Survey (first order level network) or the U.S. Geological Survey shall hereafter be taken by engineers, surveyors, architects, and contractors when making topographical surveys and maps, and when setting grades and elevations of buildings, pavements, drainage facilities, and other structures or works publicly constructed or regulated by the Village.
- L. Determination of Base Flood Area, Location and Elevations: The official maps described in this Section shall be used as an aid in determining whether a specific parcel of land lies within the base flood area. The final decision, however, shall be based on the relation of the surveyed ground elevation and the base flood elevation. For the purposes of this Chapter, the base flood elevation applicable to a specific parcel of land, if not otherwise depicted by the official maps and profiles described above, shall be that elevation established for the adjoining stream or channel measured at right angles to the general direction of flow in that stream or channel. In riverine situations where a bend in the stream exists and more than one line can be placed at right angles to the parcel of land, the highest base flood elevation determined shall prevail.

**5-7-7: VARIANCES:** The Village Board may grant variances from the regulatory standards of this Chapter in accordance with the following requirements:

- A. All Variance Requests: No variance shall be granted unless the applicant for the variance can demonstrate that:
  - 1. An exceptional economic hardship would result without the variance.
  - 2. The relief granted is the minimum necessary.
  - 3. There will be no additional threat to public safety or creation of nuisance.
  - 4. No additional public expense will result.

B. Variances to Lower Protection Levels: In addition to the requirements of subsection A above, a variance from the requirements of Section 5-7D -3 of this Chapter that would result in a structure not being protected to the elevation of the base flood shall also meet the following requirements:

1. The structure is to be located on a lot of one-half (1/2) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level.
2. The Village Board notifies the applicant in writing that the variance will result in increased premium rates for flood insurance up to amounts as high as twenty five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage.
3. The Village Board notifies the applicant in writing that such construction below the base flood level will increase the risks to life and property and that the applicant proceeds with knowledge of these risks.
4. The Village Board notifies the applicant that if the variance is issued, it is contingent upon the applicant obtaining approval from other agencies, having jurisdiction, when the variance violates the requirements of such agencies.

C. Variances to Increase Flood Heights: In addition to the requirements of subsection A above, a variance from the requirements of Section 5-7A-1 or 5-7A-2 of this Chapter that would significantly impede or increase the flow and passage of floodwaters shall also meet the following requirements, except that no variance will be granted that would result in an increased flood height greater than one-tenth foot (0.1') within the designated regulatory floodway:

1. The resulting increase in the base flood elevation will not affect any existing structures or utilities.
2. The owners of the properties affected by the increased base flood elevation are compensated for the resulting effect on property values and give their written agreement to granting the variance.
3. The resulting increased flood elevations will not affect any flood protection structures.

D. Variances to Compensatory Storage Requirements: In addition to the requirements of subsection A above, no variance from the compensatory

floodplain storage provisions of this Chapter shall be granted which would reduce the required volume of compensatory excavation to less than the volume of space occupied by that portion of the authorized fill or structure below the base flood elevation.

- E. Historical Structures: Variances requested in connection with the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historical Places or documented as worthy of preservation by the Illinois Department of Conservation may be granted using criteria more permissive than the requirements of subsections A or B above.

#### **5-7-8: NONCONFORMING STRUCTURES AND USES:**

- A. Nonconforming Structures: Nonconforming structures may remain in use subject to the following regulations:
  - 1. Alterations: A nonconforming structure shall not be enlarged, replaced or structurally altered. A nonconforming structure accidentally damaged may be restored unless the damage exceeds fifty percent (50%) of its replacement value in which case it must thereafter conform to this Chapter. The Building Commissioner shall determine the amount of damage.
  - 2. Building Permit Issued Prior to Adoption or Amendment of the Zoning Code: Proposed structures for which building permits have been issued prior to their designation as nonconforming by adoption or amendment of the Zoning Code<sup>1</sup> may be completed and used as originally intended subject to the nonconforming provisions of this Chapter.
- B. Nonconforming Uses: Nonconforming uses may be continued subject to the following regulations:
  - 1. Extensions: A nonconforming use shall not be expanded or moved to occupy any portion of the premises, either land or structure, which was not originally occupied by the nonconforming use.
  - 2. Discontinuance: Whenever a nonconforming use of any premises has been discontinued for a period of twelve (12) months, it may not be re-established.
  - 3. Changes: A nonconforming use shall not be changed to another or different nonconforming use.

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<sup>1</sup>See Title 6 of this Village Code.

**5-7-9: APPEALS OF ADMINISTRATIVE DECISIONS:** Appeals to the to the decisions of any administrative body of this Village in the interpretation of this Chapter may be made to the Board of Trustees for approval or rejection by any aggrieved person or governmental unit within thirty (30) days of approval or rejection.

**5-7-10: ADMINISTRATION:**

- A. Responsibility: The administration of this Chapter shall be the responsibility of the Village Manager; provided that:
  - 1. Variances: No variance shall be issued without the prior concurrence of the Village Board.
  - 2. Special Use Permit: No special use permit shall be issued without the prior concurrence of the Village Board.
  - 3. Official Maps and Profiles: Responsibility for all changes to official maps and profiles remains with the Village Board.
- B. Interpretation: In the interpretation and application of this Chapter, the provisions expressed herein shall be held to be the minimum requirements and shall be liberally construed in favor of the Village and shall not be deemed a limitation or repeal of any other powers granted by State Statutes or adopted pursuant to the home rule powers of the Village.
- C. Abrogation and Greater Restrictions: It is not intended by this Chapter to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this Chapter imposes greater restrictions, the provisions of this Chapter shall prevail.
- D. Disclaimer of Liability: The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on historical records, engineering and scientific methods of study. Larger floods may occur or flood heights may be increased by manmade or natural causes. This Chapter does not imply that areas outside the prescribed floodplain boundaries or land uses permitted within such floodplains will be free from flooding or flood damages. This Chapter shall not create liability on the part of the Village or any officer or employee thereof for any flood damages which may result from reliance on this Chapter or on any administrative decision lawfully made thereunder.
- E. Judicial Appeals: Any party shall have the right to appeal decisions of the Village of Lincolnshire before the Circuit Court of Lake County.

**5-7-11: PENALTIES FOR VIOLATION:**

- A. General: Violation of the provisions of this Chapter or failure to comply with any of its requirements, including conditions and safeguards established in connection with variances or special use permits shall be subject to penalty as herein provided. Any person who violates this Chapter or fails to comply with any of its requirements shall upon conviction, thereof, be subject to the fine set forth in the Comprehensive Fine Schedule of the Code described in 17-1, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. (Amd. Ord. 10-3131-08, eff. 3/22/10)
  
- B. Corrective Actions: Nothing herein contained shall prevent the Village from taking such other lawful action as is necessary to prevent or remedy any violation. All such costs connected therewith shall accrue to and be paid by the person or persons responsible. (Ord. 80-623-30)

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#### ARTICLE A. ZONING REGULATIONS

##### SECTION:

- 5-7A-1: Floodways Not Identified
- 5-7A-2: Floodways Identified
- 5-7A-3: Open Storage of Materials

**5-7A-1: FLOODWAYS NOT IDENTIFIED:** In base flood areas where the floodways are not identified, the following provisions shall prevail:

- A. Encroachments: In the base flood area, no development shall be permitted unless the cumulative effect of the proposals, when combined with all other existing and anticipated uses and structures, shall not significantly impede or increase the flow and passage of the floodwaters nor significantly increase the base flood elevation.
- B. Occupation and Use of Base Flood Area: Development in the use or filling of the base flood area will be permitted if protection is provided against the base flood by proper elevation, compensatory storage, and other provisions of this Chapter. No use will be permitted which will adversely affect the ability of a floodplain to convey the base flood, or the capacity of channels or drainage facilities or systems. All uses and structures shall meet applicable zoning requirements for the area.

**5-7A-2: FLOODWAYS IDENTIFIED:** In base flood areas where the floodways have been identified, the following provisions shall prevail:

- A. Occupation and Use of Floodways: In floodways which have been identified in Section 5-7-6 of this Chapter as elements of the flood-plains of the base flood, only those uses and structures will be permitted which will not impede or increase the flow and passage of floodwaters. All such uses and structures shall meet applicable zoning requirements for the area.
- B. Occupation and Use of Nonfloodway Areas: Development in the use or filling of nonfloodway areas including flood fringes will be permitted if protection is provided against the base flood by proper elevation, compensatory storage,

and other provisions of this Chapter. No use will be permitted which will adversely affect the capacity of channels, the floodway, or drainage facilities or systems. All uses and structures shall meet applicable zoning requirements for the area.

**5-7A-3: OPEN STORAGE OF MATERIALS:**

- A. Floatable Materials: Logs, wastes, lumber, lumber products, and other floatable materials or containers shall not be placed, displayed, or stored in the floodway and may be stored in flood fringes only upon the issuance of special use permits.
- B. Other Materials: The open storage or display on a flood fringe of inoperable motor vehicles and similar nonmovable machinery and other nonfloatable materials and products, where permitted by the regulations of the zoning district applicable to such land, shall be considered the same as the placement of fill on the floodplain and shall be subject to the regulations of this Chapter.
- C. Hazardous Materials: The open storage of materials anywhere in the base flood area which are flammable, explosive, toxic, or which could be otherwise injurious to human, animal, or plant life is prohibited. (Ord. 80-623-30)

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#### ARTICLE B. SUBDIVISION, DEVELOPMENT AND IMPROVEMENT REGULATIONS

##### SECTION:

**5-7B-1: Required Information**

**5-7B-2: Subdivision Design**

**5-7B -1: REQUIRED INFORMATION:** Accompanying the preliminary plans of each proposed subdivision which involves any portion of a base flood area as described by the official maps of this Village, there shall be furnished the following information and data to the best knowledge of the applicant:

- A. Contour Map: A topographic map with one foot (1') interval contours of the land to be subdivided and such adjoining land whose topography may affect the layout or drainage of the subdivision. On such a map, there shall be shown the following:
  - 1. The location of streams and other floodwater runoff channels, their normal channels, the extent of their floodplains at the established highwater elevations, and the limits of the floodway, all properly identified.
  - 2. The normal shoreline of lakes, ponds, swamps and detention basins, their floodplains and lines of inflow and outflow, if any.
  - 3. The location of farm drains and their inlets and outlets.
  - 4. Storm, sanitary, and combined sewers and any sewer outfalls.
  - 5. Septic tank systems and outlets, if any.
  - 6. Seeps, springs, and flowing and other wells.
  - 7. Location of existing structures that will remain.
- B. 100-year flood elevation and limits, including floodway data for that portion of a subdivision or development which is in the base flood area having greater than fifty (50) lots or five (5) acres whichever is the lesser.



- C. Channel Profiles: Profile drawings of each stream, channel, pond, and basin showing elevations of the following:
1. The streambed.
  2. Channel banks, if any.
  3. Waterway openings of existing culverts and bridges within six hundred sixty feet (660') of the tract.
  4. Size and elevation of sewer and drain outlets into the stream channel or basin.
  5. The base flood elevations established by this Chapter.

**5-7B -2: SUBDIVISION DESIGN:** The following rules shall govern the design of land improvements with respect to the floodplain fringe:

- A. General: All proposed subdivision and other developments within the base flood area shall be reviewed to assure that the proposed developments are consistent with the need to minimize flood damage, that all public utilities and facilities (such as sewer, gas, electrical and water systems) are located and constructed to minimize or eliminate flood damage and that adequate drainage is provided.
- B. Design: Streets, blocks, depths of lots, parks and other public grounds shall be located and laid out in such a manner whenever possible as to preserve and utilize natural streams, channels, and detention basins. Wherever possible, the larger streams and floodplains shall be included within parks or other public grounds.
- C. Channel Straightening: Sharply meandering streams or channels may be partially straightened and minor changes made in other channels, subject to the approval of the Village Board, provided: (1) the Hydraulic capacity of the floodway is maintained, (2) provision is made to stabilize the banks of the modified channel to control erosion, and (3) any permits for this work that are required by the Illinois Department of Transportation and the Corps of Engineers are obtained.
- D. Lots in Base Flood Area: Land lying wholly or partially in the base flood area may be laid out and platted as building lots or parcels, provided that a building site not lower than the base flood elevation (see Section 5-7D-2) plus one foot (1'): (1) exists on the high part of the lot or parcel, or (2) will be built up during execution of the subdivision improvement plan through general excavation or filling, or (3) can be provided with excavation taken from within the area of the lot or parcel.
- E. Compensatory Storage: Such filling as may be required or permitted by this Chapter

for a building site, or as may otherwise be done in a floodplain shall be compensated for and balanced by at least an equal volume of excavation taken from below the highwater elevation. In the case of streams and channels, such excavation shall be made opposite or immediately adjacent to the areas so filled or occupied and shall be constructed to drain freely and openly to the watercourse.

- F. Streets and Roads: When failure or interruption of service of streets or roads would endanger public health or safety, streets and roads shall be protected to one foot (1') above the base flood elevation. In other instances, protection shall be provided to the extent practical.
- G. Drainageways: Whenever the plans call for the passage and/or storage of surface runoff or excess stormwater on lots, the grading of all such lots shall be prescribed and established as part of the subdivision plat, The areas so designated for the passage and/or storage of such waters shall not be obstructed. The horizontal limits of the high water levels resulting from the passage and/or storage of surface runoff or excess stormwater on lots shall be recorded on the plat of record and shall be covered by an easement.
- H. Manholes: All sanitary sewer manholes constructed in a floodplain must have a rim elevation of a minimum of one foot (1') above the base flood elevation or be provided with a locking, watertight manhole cover. (Ord. 80-623-30)

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#### ARTICLE C. WATER SUPPLY AND SANITARY SEWER SYSTEMS

##### SECTION:

##### 5-7C-1: Design

**5-7C-1: DESIGN:** The design of water supply and sanitary sewer systems to be located in the floodplain shall minimize or eliminate the discharges from the system into the floodwaters and the infiltration of floodwaters into the system. On-site waste disposal systems shall be located so as to avoid impairment of them or contamination from them during or subsequent to flooding. (Ord. 80-623-30)

## CHAPTER 7

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#### ARTICLE D. BUILDING REGULATIONS

##### SECTION:

- 5-7D-1: Permits**
- 5-7D-2: Building Site**
- 5-7D-3: Design Criteria**

**5-7D-1: PERMITS:** Building permits are required for all proposed construction, substantial improvements, or other development, including the placement of mobile homes, within floodplain areas having special flood hazards. Such permits shall assure that all other necessary permits have been received from those governmental agencies from which approval is required by Federal or State law. The building permit applications will be reviewed to assure that any proposed construction is:

- A. Designed and anchored to prevent flotation, collapse or lateral movement of the structure.
- B. Constructed with materials and utility equipment resistant to flood damage.
- C. Constructed by methods and practices that minimize flood damage. At the time of issuing a building permit, the following information will be noted and recorded by the Village:
  - 1. Elevation of the lowest floor (including basement).
  - 2. Where the elevation of the lowest floor is below grade on one or more sides, the elevation of the floor immediately above.
  - 3. Where a structure has been floodproofed, the elevation to which the structure was floodproofed.

**5-7D-2: BUILDING SITE:** Each main building or structure that is built on fill shall have or shall be provided with a site, area, or yard that is not lower than the established base flood elevation plus one foot (1') and which shall extend beyond the outside walls for a distance of at least five feet (5'). The finished grade or surface of this area beyond the aforesaid five foot (5') distance shall be graded or surfaced so as to drain away from the walls over a distance of not less than five (5) additional feet.

**5-7D-3: DESIGN CRITERIA:** The following general design criteria shall apply to all new construction and substantial improvements which may be authorized in floodplains:

- A. Residential Structures: The lowest floor, including the basement, of residential structures must be at an elevation not less than that of the Flood Protection Elevation, unless they are adequately floodproofed and the Village has been granted an exception from the Federal Insurance Administration (FIA) for placing the lowest floor of the structures at a lower elevation. Within any A, AE, or AO Zone, all new construction and substantial improvements of residential structures shall have the lowest floor (including basement) elevated above the crown of the nearest street to or above the depth number specified on the Village's FIRM.
- B. Nonresidential Structures: The lowest floor, including the basement, of nonresidential structures must be elevated or floodproofed to an elevation not less than that of the Flood Protection Elevation. Within any AO Zone, all new construction and substantial improvements of nonresidential structures shall: (1) have the lowest floor (including basement) elevated above the crown of the nearest street to or above the depth number specified on the FIRM, or (2) together with attendant utility and sanitary facilities shall be completely floodproofed to or above that level to Federal Insurance Administration (FIA) standards.
- C. Walls: The walls, foundations, and other features which may be authorized for construction or installation at an elevation below that of the Flood Protection Elevation must be designed to resist appropriate hydrostatic pressures.
- D. Anchoring: All authorized structures, including underground and aboveground tanks, shall be firmly anchored to prevent flotation. Anchoring materials should be rust resistant.
- E. Service Facilities: To the maximum extent feasible, all service facilities, such as electrical, heating, ventilation, plumbing, and air conditioning equipment, shall be located at or above the Flood Protection Elevation. Water supply and wastewater collection and treatment systems shall be designed and constructed so as to prevent the entrance of floodwaters.
- F. Floodproofing: Where the lowest floor elevation (including basement) is below the Flood Protection Elevation, the structure, with the attendant utility and sanitary facilities, shall be floodproofed to the Flood Protection Elevation. Where floodproofing is required, a registered professional engineer or structural engineer shall certify that the floodproofing methods employed are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the base flood and a record of such certificates indicating the specific elevation to which such structures are floodproofed shall be maintained by the Village. (Ord. 03-1834-11, eff. 4/14/03)