
ORDINANCE NO. 92-6

AN ORDINANCE AMENDING THE NORTHBROOK ZONING
CODE (1988), AS AMENDED, TO MODIFY THE FLOOD
HAZARD OVERLAY DISTRICT AND CERTAIN
OTHER RELATED PROVISIONS

Passed by the Board of Trustees, February 11, 1992

Printed and Published, February 12, 1992

Printed and Published in Pamphlet Form
By Authority of the
President and Board of Trustees

VILLAGE OF NORTHBROOK
COUNTY OF COOK, ILLINOIS

I certify that this document
was duly adopted and published
on the dates stated above.

/s/ Lona N. Louis

Village Clerk

ORDINANCE NO. 92-6

BE IT ORDAINED by the President and Board of Trustees of the Village of Northbrook, County of Cook, State of Illinois, that:

AN ORDINANCE AMENDING THE NORTHBROOK ZONING CODE (1988), AS AMENDED, TO MODIFY THE FLOOD HAZARD OVERLAY DISTRICT AND CERTAIN OTHER RELATED PROVISIONS

be and is hereby adopted as follows:

Section 1. Background.

The Northbrook Zoning Code (1988), as amended, contains regulations governing the Flood Hazard Overlay District in Section 8-201 et seq. In order to modify these regulations to conform to the standards of federal and state laws and regulations governing the National Flood Insurance Program and the method, manner and extent of construction and other work undertaken in the flood plain, the Village of Northbrook requested certain amendments to the Flood Hazard Overlay District regulations and related provisions of the Zoning Code (Docket No. 91-3).

Pursuant to notice published in the Northbrook Star on January 10, 1991, as provided by law, a public hearing was held by the Plan Commission of the Village of Northbrook on January 29, 1991, and continued to February 19, March 19, May 7, June 18, August 6, September 24, October 15, November 5, November 19 and December 3, 1991. The Plan Commission made its recommendations on the requests made in Docket No. 91-3 on January 7, 1992, in Plan Commission Resolution No. 92-PC-1.

Section 2. Repeal of Existing Regulations.

Part II of Article VIII of the Northbrook Zoning Code (1988), as amended, is hereby repealed in its entirety.

Section 3. Adoption of New Flood Hazard Overlay District Regulations.

A new Part II of Article VIII of the Northbrook Zoning Code (1988), as amended, is hereby adopted, as follows:

PART II -- FLOOD HAZARD OVERLAY DISTRICT

8-201 PURPOSE

The Flood Hazard Overlay District is intended to promote the orderly development of land and water resources, diminish threats to public health and safety caused by floodwaters, and to reduce economic losses to individuals and the community at large. The District and its regulations are established in compliance with the National Flood Insurance Program of the Federal Emergency Management Agency in order to make federally subsidized flood insurance available within the Village; and in compliance with Ill. Rev. Stat. Ch. 19, Paragraph 65g, and 92 Ill. Admin. Code Part 708 to allow the Village to issue certain permits regulating construction and the method, manner and extent of construction and other work undertaken in the flood way.

8-202 OVERLAY DISTRICT ESTABLISHED

The Flood Hazard Overlay District is established, and appears on the Zoning Map as an "overlay district." The restrictions of the Flood Hazard Overlay District are in addition to the limitations established in this Code for the "Base Districts." Development of properties in the Flood Hazard Overlay District must comply both with the regulations of the Flood Hazard Overlay District and the regulations of the base district in which they are located. Where there is any conflict between the Flood Hazard Overlay District and the base district, the provisions of the more restrictive district shall apply.

8-203 APPLICABILITY

- A. Generally. The provisions of this Part shall apply to all land within the Village of Northbrook located within the flood plain.
- B. Interpretation of Maps. The limits of the Flood Hazard Overlay District shown on the Zoning Map shall be used as a guide; provided, however, that only those land areas that are located in a special flood hazard area, as established in this Code, shall be subject to the provisions of this Part.

8-204 INCORPORATION OF STUDIES, MAPS AND DATA; ESTABLISHMENT OF BASE FLOOD ELEVATION

The base flood elevations, and the limits of the special flood hazard areas, such as the flood plain, flood fringe and regulatory floodway, are based on the Northbrook flood insurance study and the Regulatory Flood Plain Maps and Profiles prepared by IDOT/DWR.

- A. Incorporated Areas: Depiction on Zoning Map. The base flood elevation for the special flood hazard areas mapped by FEMA and IDOT/DWR shall be as delineated for the West and Middle Forks of the North Branch of the Chicago River on the Regulatory Flood Plain Maps prepared by IDOT/DWR (dated January 1, 1975) and for their tributaries (Underwriters' Laboratories, Techny Drain, and the South Fork Techny Drain) on the one hundred (100) year flood profiles in the Northbrook flood insurance study. The Village Manager shall order the depiction of the approximate location of the flood plain limits on the Village zoning map.
- B. Areas Annexed into the Village. In the event properties may be annexed into the Village that include areas defined as being within the flood plain, the base flood elevation and flood fringe and regulatory floodway limits shall be as delineated on the flood profiles in the flood insurance studies for those parts of unincorporated Lake County (dated December 4, 1984) and Cook County (dated May 3, 1982), as the case may be, prepared by FEMA and such amendments or revisions to such studies and maps as may be prepared from time to time.

- C. FIRM Maps. The base flood elevation for each portion of a SFHA delineated as an "AH Zone" or "AO Zone" shall reflect the elevation delineated on the Flood Insurance Rate Map of the Village of Northbrook, as may be amended from time to time.
- D. Areas Without Established Base Flood Elevations. When no base flood elevation has been established by FEMA for a property, such elevation shall be determined by utilizing computation methods established by the Village and IDOT/DWR.

8-205 ADMINISTRATION OF FLOOD HAZARD REGULATIONS

- A. Determination of Flood Status. The Village Manager shall take all such actions as are necessary to ensure that all proposed development sites within the Village are reviewed to determine whether they are within the Flood Hazard Overlay District.
- B. Flood Plain Development Permit Required. In the event that a development site is determined to be within the Flood Hazard Overlay District, a flood plain development permit must be issued by the Village Manager in accordance with Section 11-403 of this Code prior to commencing any development activity. No flood plain development permit shall be issued for any activity which does not comply with the standards of this Part.
- C. Variations. Applications for variations of the provisions of these Flood Hazard Overlay District regulations shall be limited to, and reviewed in accordance with, the provisions of Section 11-504 of this Code.

8-206 DEVELOPMENT RESTRICTIONS IN FLOOD FRINGE AREAS

The requirements of this section shall apply to all proposed development activities and other activities, defined in this Part within a flood fringe area of a SFHA.

- A. Base Zoning District Regulations. Nothing in these Flood Hazard Overlay District regulations shall be interpreted to allow any use of the flood fringe area which would not otherwise be allowed within the base zoning district in which a property is located.
- B. Elevation Standards.
 - 1. Existing Structures Improved to Less Than 50% in Value of Structure. A habitable structure within the flood fringe area, for which the start of construction commenced prior to February 12, 1992, may be improved in accordance with the standards and procedures established in the Building Code and the other limitations of the base zoning zoning district, but need not meet any special flood elevation requirements; provided the cost of such reconstruction, rehabilitation, addition, or other improvement of a structure is less than fifty percent (50%) of the market value of the structure before the start of construction of the improvement.
 - 2. Existing Structures Improved by 50% or More in Value. A habitable structure within the flood fringe area, for which the start of construction commenced prior to February 12, 1992, may be improved by 50% or more of the market value of the structure before the start of construction of the improvement; however, in such cases the structures must be elevated in such a manner that the lowest floor of the structure, including any basement area, is at or or above the base flood elevation, unless: (1) FEMA grants the Village an exception to permit the construction of floodproofed residential basements, in accordance with 44 CFR Section 60.6(c); or (2) a variation is granted in accordance with Section 11-504 of this Code.

3. New Construction and Subsequent Improvements. In the flood fringe area, new construction (including alterations to structures having a start of construction on or after February 12, 1992), as defined in this Part, may occur; however, in such cases the structures must be elevated in such a manner that the lowest floor of the structure, including any basement area, is at or or above the flood protection elevation.
 4. Substantially Damaged Structures. The elevation requirements of Paragraphs 2 and 3 of this Subsection, as appropriate to the structure, shall also apply to structures which have incurred substantial damage, as defined in this Part, regardless of the actual repair work performed. These limitations do not, however, apply to: (1) any project for improvement of a structure to correct existing violations of state and local health, sanitary, or safety code specifications which have been identified by the Village Manager and which are the minimum necessary to assure safe living conditions; or (2) any alteration of a historic structure or site, documented as deserving preservation by the Illinois Historic Preservation Agency or listed on the National Register of Historic Places, provided that such alteration will not preclude the structure's or site's continued designation as a historic structure or site.
- C. Compensatory Storage in Flood Fringe Areas. Compensatory storage shall be required for all development proposed in the flood fringe area. Compensatory storage may be provided on: (1) the same zoning lot as the proposed development, or (2) an off-site location, approved by the Village Manager, where hydraulically equivalent storage can be achieved.
1. Existing Lots of Record. Whenever any development is proposed within the flood fringe area, as authorized in this Section, for a lot of record existing prior to February 12, 1992 within the flood fringe, 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 a hydraulic volume of excavation taken from below the base flood or 100-year frequency flood elevation equal to 100% of the volume of storage lost due to the proposed fill or structure's displacement. Compensatory storage shall not be required for authorized floodproofing activities.
 2. New Lots of Record. Whenever any development is proposed within the flood fringe area, as authorized in this Section, for a lot of record or planned development created on or after February 12, 1992, 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 a hydraulic volume of excavation taken from below the base flood or 100-year frequency flood elevation equal to 150% of the volume of storage lost due to the proposed fill or structure's displacement. Compensatory storage shall not be required for authorized floodproofing activities.
 3. Manner of Construction. All such excavations shall be constructed to drain freely and openly to the watercourse by gravity, fine graded and landscaped to prevent soil erosion and sedimentation in accordance with Northbrook Standards and Specifications. In the case of streams or watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All flood plain storage lost below the existing 10-year elevation shall be replaced below the proposed 10-year flood elevation. All flood plain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation.

- D. Additional Limitations on Development in Flood Fringe. Uses which are permitted or allowed by special permit may be located within the flood fringe upon issuance of a flood plain development permit and compliance with the general flood plain development requirements established in Section 8-209 of this Code.
- E. Fill Activities; LOMR Required. If fill or other improvements are proposed to elevate a flood fringe site above the base flood elevation, the applicant shall, in addition to obtaining a flood plain development permit, submit sufficient data and obtain a Letter of Map Revision (LOMR) from FEMA for the purpose of removing the site from the flood plain. The Village shall have no obligation to issue (1) a flood plain development permit until a CLOMR is issued by FEMA and delivered to the Village Manager, or (2) a building permit until a FLOMR is issued by FEMA and delivered to the Village Manager.

8-207

DEVELOPMENT RESTRICTIONS IN REGULATORY FLOODWAY AREAS

The requirements of this section shall apply to all proposed development activities, as defined in this Part, within the regulatory floodway. For the West and Middle Forks of the North Branch of the Chicago River and for their tributaries, the regulatory floodway shall be as delineated on the maps and studies referenced in Section 8-204 of this Code.

- A. Base Zoning District Regulations. Nothing in these Flood Hazard Overlay District regulations shall be interpreted to allow any use of the regulatory floodway which would not otherwise be allowed within the base zoning district in which a property is located.
- B. Appropriate Uses Within the Floodway. Only "appropriate uses", as established herein and as listed in 92 Illinois Administrative Code Part 708 shall be permitted within the regulatory floodway. All appropriate uses within the regulatory floodway must comply with the requirements of this Section and with the general flood plain development requirements in Section 8-209. Appropriate uses in the regulatory floodway are limited to the following:
1. The replacement, reconstruction or repair of a damaged building, provided that the outside dimensions of the building are not increased and, provided that, if the building is damaged to 50 percent or more of building's market value before it was damaged, the building must be protected from flooding to or above the base flood elevation.
 2. Modifications to an existing building that would not increase the enclosed area of the building below the 100-year frequency flood elevation, and which will not block flood flows, including, but not limited to fireplaces, bay windows, decks, patios, and second story additions. In the event such modifications result in a 50% or more increase in the market value of the structure before the start of construction, the structure must comply with the elevation standards in Paragraph 8-206 B2 of this Code.
 3. Construction, modification, repair or replacement of detached garages, storage sheds, or other non-habitable structures without toilet facilities that are accessory to an existing building or use, as authorized in Subsection 8-209 D of this Code, and that will not block flood flows, nor reduce floodway water storage.
 4. Parking lots, driveways, and any modifications thereto, where the flooding at the 100-year frequency flood event will not exceed one foot in depth.

5. Structures or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities, and facilities and improvements related to recreational boating, commercial shipping and other functionally water dependent uses.
 6. Flood proofing activities to protect previously existing lawful structures including, but not limited to, the construction of water tight window wells, elevating structures, or construction of floodwalls.
 7. Public recreational facilities such as playing fields, trail systems and open air pavilions, including any related fencing built parallel to the direction of flood water flows.
 8. Flood control structures, dikes, dams and other public works or private improvements relating to the control of drainage, flooding, erosion, or water quality or habitat for fish and wildlife.
 9. Storm and sanitary sewer outfalls.
 10. Underground and overhead utilities.
 11. Roads, bridges, culverts, sidewalks, bikeways, railways, runways and taxiways, and any necessary modifications thereto.
 12. Regrading within the regulatory floodway, without fill, to create a positive non-erosive slope toward a watercourse.
- C. Interpretation of Appropriate Uses. The Village Manager shall enforce the floodway development restrictions of this Part in compliance with 92 Ill. Admin. Code Part 708.
- D. Additional Criteria for Reviewing Appropriate Uses. All appropriate uses within the regulatory floodway shall require the issuance of a flood plain development permit and, further, shall demonstrate compliance with the general flood plain development requirements established in Section 8-209 of this Code. The applicant's engineer shall: (1) submit to the Village Manager certified documents, plans and calculations demonstrating that the proposed use or improvement meets or exceeds the minimum federal, state, and local requirements; and (2) submit evidence of approval of the use by any other entity with jurisdiction.
- No development shall be permitted within the regulatory floodway: (1) that will reduce the regulatory floodway storage or conveyance; (2) that will increase the regulatory floodway velocities; (3) that will increase flood heights during the base flood by more than 0.1 (1/10) of a foot; (4) that will be a threat to public health, safety and welfare; (5) that will impair the natural hydrologic and hydraulic functions of the floodway or channel; (6) where periodic inundation will pose a danger to the general health and welfare of the user; or (7) where periodic inundation will require the expenditure of public funds or the provision of public resources or disaster relief services.
- E. Compensatory Storage Requirements for Floodway Development. Compensatory storage shall be required for all development proposed in the floodway. Compensatory storage may be provided on: (1) the same zoning lot as the proposed development, or (2) an off-site location, approved by the Village Manager, where hydraulically equivalent storage can be achieved.
1. Existing Lots of Record. Whenever any development is proposed within the regulatory floodway, as authorized in this Section, for a lot of record existing prior to February 12, 1992, 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 a hydraulic volume of excavation taken from below the base flood or 100-year frequency flood elevation equal to 100% of the volume of storage lost due to the proposed fill or structure's displacement. Compensatory storage shall not be required for authorized floodproofing activities.

2. New Lots of Record. Whenever any development is proposed within the regulatory floodway, as authorized in this Section, for a lot of record or planned development created after February 12, 1992, 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 a hydraulic volume of excavation taken from below the base flood or 100-year frequency flood elevation equal to 150% of the volume of storage lost due to the proposed fill or structure's displacement. Compensatory storage shall not be required for authorized floodproofing activities.
3. Manner of Construction. All such excavations shall be constructed to drain freely and openly to the watercourse by gravity, and fine graded and landscaped to prevent soil erosion and sedimentation in accordance with Northbrook Standards and Specifications. In the case of streams or watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All flood plain storage lost below the existing 10-year elevation shall be replaced below the proposed 10-year flood elevation. All flood plain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation.

8-208 DEVELOPMENT IN FLOOD PLAINS WITHOUT IDENTIFIED FLOODWAYS

In the event a development activity or other activity as defined in this Part is proposed within a flood plain draining more than one square mile, where no floodways have been identified and no base flood elevations have been established by FEMA, the Village Manager shall consider all such areas as being within the regulatory floodway, and subject to the development restrictions of Section 8-207 of this Code. Upon approval of the hydraulic calculations by FEMA or IDOT/DWR, as appropriate, properties in flood plain areas without identified floodways shall be delineated as being within the flood fringe or floodway, and development shall be allowed in accordance with Section 8-206 or 8-207, as appropriate.

8-209 GENERAL FLOOD PLAIN DEVELOPMENT REQUIREMENTS

In addition to any restrictions elsewhere in this Code, all proposed development and other activities defined in this Part within the flood plain shall demonstrate compliance with the general requirements of this section prior to issuance of a flood plain development permit.

- A. Prevention of Increased Damages. No development in the Flood Hazard Overlay District shall be permitted which would: (1) impair the natural hydrologic and hydraulic functions of the floodway or channel; or (2) threaten the public health, safety and welfare.
- B. Public Health Standards.
 1. Storage of Materials. No developments in the flood plain shall include locating or storing chemicals, explosives, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other hazardous or toxic materials below the flood protection elevation.
 2. Utilities. New and replacement water supply systems, wells, sanitary sewer lines and on-site waste collection and disposal system shall be permitted within the flood plain, provided all manholes or other above ground openings located below the FPE are clearly marked, gasketed, and sealed watertight in accordance with Northbrook Standards and Specifications.

- C. Accessory Structures. Accessory structures, including sheds and detached garages, on an existing single-family platted lot, may be constructed with the lowest floor below the flood protection elevation provided:
1. The accessory structure shall not be used for human habitation and shall be used only for the storage of vehicles and/or tools.
 2. The accessory structure shall comply with all provisions of Section 9-101 of this Code, and in no case shall such structure exceed 600 square feet in floor area.
 3. All enclosed areas of the structure below the base flood elevation shall be constructed with waterproof material.
 4. Structures located in a regulatory floodway shall be constructed and placed so as not to block the flow of flood waters and shall comply with the appropriate use criteria of Subsection 8-207 B of this Code.
 5. The structure shall be anchored to prevent flotation or buoyancy.
 6. Service facilities such as electrical and heating equipment shall be elevated or floodproofed to the base flood elevation.
- D. Temporary Uses. Construction trailers and other temporary trailers, in accordance with Subsection 9-103 D of this Code, may be located in the flood plain upon a determination by the Village Manager that no other location for such temporary use is practical and provided that such trailers are maintained so as to be fully licensed, ready for highway use and able to be moved in the event of a flood hazard.
- E. Storage of Vehicles. The off-street storage of vehicles in the flood plain shall be allowed in accordance with the limitations of Subparagraphs 9-101 D4 and D5 of this Code. Further, in accordance with 44 CFR Section 60.3, recreational vehicles stored on sites within the floodplain shall be either: (1) fully licensed and ready for highway use; or (2) stored on the site for fewer than 180 consecutive days. A recreational vehicle shall be deemed ready for highway use if it is on its own wheels or jacking system, is attached to the site only by quick disconnect type utility and security devices, and has no permanently attached additions.
- F. Manufactured Homes Prohibited. No manufactured homes, as defined in this Part, shall be permitted to be located on sites within the flood plain.
- G. Construction on Fill Material. Any authorized habitable structure, or addition or improvement thereto, may be constructed on permanent land fill in accordance with the following:
1. The earth fill shall be placed in layers no greater than one (1) foot deep before adequate compaction and shall extend at least ten (10) feet beyond the foundation of the building before sloping down to the base flood elevation. The top of the fill shall be above the base flood elevation. The Village Manager is authorized to waive the above ten-foot perimeter standard upon submission of a plan, certified by a structural engineer, that an alternative method will adequately protect the building structure from damages due to hydrostatic pressures.
 2. The fill shall be protected against erosion and scour.
 3. The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties.
 4. A Conditional Letter of Map Revision (CLOMR) must be issued by FEMA and submitted to the Village Manager prior to issuance of a flood plain development permit and commencement of land filling. Following completion of land filling, an "as-built" grading plan with soil

compaction certification shall be submitted to FEMA by the applicant for issuance of a Final Letter of Map Revision (FLOMR). The Village shall have no obligation to issue any prior to the issuance of any building permit, prior to receipt by the Village Manager of a FLOMR issued by FEMA.

H. Elevated Construction. New or substantially improved buildings or structures located within the flood plain, that otherwise comply with the limitations of this Article, may be elevated above the base flood elevation rather than constructed on fill. Elevated structures in the flood plain shall comply with the requirements below.

1. The proposed building or improvements within the flood plain shall be elevated on a crawl space, stilts, piles, walls, or other foundation that is permanently open to the entry and exit of flood waters and not subject to damage by fire, debris, freezing ice or hydrostatic pressures of the 100-year frequency flood. Designs for meeting this requirement must either be certified by an Illinois registered professional engineer or architect as satisfying the requirements of 44 CFR Section 60.6(c), or otherwise meet or exceed the following minimum criteria:
 - a. A minimum of two openings having a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding below the base flood elevation shall be provided.
 - b. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of flood waters.
2. The foundation and supporting members shall be anchored and aligned parallel in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice, and floating debris.
3. All areas below the base flood elevation shall be constructed of corrosion free, non-floatable materials resistant to flood damage. The lowest floor (including basement) and all electrical, heating, communication, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the flood protection elevation. The Village Manager may permit water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities to be located below the flood protection elevation upon a finding that unusual field conditions occur.

I. Floodproofing of Proposed Non-Residential Structures. Non-residential buildings proposed to be constructed in the flood fringe area may be structurally dry floodproofed in lieu of being elevated. The Village Manager shall authorize such floodproofing activities, provided that an Illinois registered professional structural engineer or architect shall certify that the building has been adequately floodproofed below the base flood elevation and that the structure and attendant utility and sanitary facilities are watertight and capable of resisting the effects of flood hazard. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy, and impacts from debris or ice. Floodproofing measures shall be operable without human intervention and without an outside source of power/electricity. The construction of levees, berms, floodwalls and similar works are not considered floodproofing for the purpose of this subsection.

J. Other Limitations. All building and property protection requirements pertaining to structures, elevation, and anchoring established by the Federal Emergency Management Agency for participation in the National Flood Insurance Program shall be satisfied.

8-210 **DISCLAIMER OF LIABILITY**

The degree of flood protection required by this Part is considered reasonable for regulatory purposes and is based on federal and state law and regulations, historical records, and engineering and scientific methods of study. Larger floods may occur or flood heights may be increased by man-made or natural causes. The adoption and implementation of these regulations does not imply that areas outside the prescribed base flood area or land uses permitted within such area will be free from flooding or flood damage. The adoption and enforcement of these regulations shall not create liability on the part of the Village of Northbrook or any officer, employee, agent or consultant thereof for any flood damage that may result from reliance on this Code or on any administrative decision made thereunder. Nothing herein shall be construed to prevent any property owner from taking such additional, lawful measures (including non-use of flood-prone property) to protect against flood damage.

8-211 **DEFINITIONS**

For the purpose of this Part only, the following terms shall have the meanings herein ascribed to them:

- A. **Basement.** Any area of the building having its floor subgrade (below ground level) on all sides.
- B. **Development.** For the purposes of this Article only, the term "development" shall be defined as any man-made change to real estate, including:
 - 1. construction, reconstruction, repair or placement of a building or any addition to a building;
 - 2. installing a trailer of any type on a site for more than 180 days;
 - 3. drilling, mining, installing utilities, construction of roads, bridges, or similar projects;
 - 4. demolition of a structure or redevelopment of a site;
 - 5. clearing of land as an adjunct of construction; or
 - 6. construction or erection of levees, walls, fences, dams or culverts, channel modifications, filling, dredging, grading, excavating, paving or other non-agricultural alterations of the ground surface, storage of materials, or the deposit of solid or liquid waste;
 - 7. any other activity of man that might change the direction, height, or velocity of flood or surface water.

Development does not include maintenance of existing buildings and facilities such as re-roofing or re-surfacing of roads when there is no increase in elevation, or gardening, plowing, and similar agricultural practices that do not involve dredging, filling, grading, or construction of levees.

- C. **Lowest Floor.** 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 non-elevation design requirements of 44 CFR Section 60.3.
- D. **Manufactured Home.** A structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a recreational vehicle.

- E. New Construction. A new structure, for which the start of construction commenced on or after February 12, 1992, and includes any subsequent improvements to such structures.
- F. Structure. The results of a man-made change to the land constructed on or below the ground, including the construction, reconstruction or placement of a building or any addition to a building; installing a manufactured home on a site; preparing a site for a manufactured home or installing a travel trailer on a site for more than 180 days, unless they are fully licensed, ready for highway use and ready to be moved in the event of a flood hazard; installing utilities, construction of roads or similar projects; construction or erection of levees, walls, fences, bridges, or culverts; drilling, mining, filling, dredging, grading or excavating; and the storage of materials.
- G. Substantial Damage. Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.
- H. Substantial Improvement. 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 (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 purposes of this definition, "substantial improvement" is considered to occur when the 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.
- I. Substantially Improved Structure. A structure which has been repaired, reconstructed or improved in such a manner that the cost of such repair, reconstruction or improvement equals or exceeds 50 percent of the market value of the structure, in accordance with 44 C.F.R. Section 59.1, as amended from time to time.

8-212 ABROGATION AND GREATER RESTRICTIONS

These Flood Hazard Overlay District regulations are not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. Where these regulations and other ordinances, easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail. These regulations are intended to repeal the original ordinance or resolution which was adopted to meet the National Flood Insurance Program requirements, but is not intended to repeal the resolution that the Village passed in order to establish its initial eligibility for the Program.

Section 4. Pre-Code Structures

Subsection 10-104 E is hereby amended by adding the underlined text as follows:

- E. Damage or Destruction. Any pre-code structure that is damaged or destroyed, by any means not within the control of the owner thereof, to any extent, may be repaired or restored; provided, however, that no repair or restoration shall be made that would create any new nonconformity unless a Certificate of Zoning Compliance is obtained and restoration is actually begun within one year after the date of such damage or destruction and is diligently pursued to completion; and further provided, that if such pre-code structure is within the flood plain, it must comply with the requirements of Part II of Article VIII of this Code.

In no event shall any damage or destruction to such a structure by means within the control of the owner be repaired or or restored except in accordance with Subsection C of this Section.

Section 5. Application Requirements

A new Paragraph 11-301 E13 of the Northbrook Zoning Code (1988), as amended, is hereby adopted as follows:

13. Applications for Flood Plain Development Permit Approval. Every application filed pursuant to Section 11-403 of this Code shall, in addition to the data and information required pursuant to Paragraph 1 above, provide the following information, unless waived by the Village Manager in accordance with Subsection 11-101 F:
 - (a) Name and address of contractors involved in the flood plain development activity.
 - (b) Location of the property, drawn to scale, on the regulatory floodway or FIRM map.
 - (c) Name of stream or body of water affected.
 - (d) Description of proposed flood plain development activity.
 - (e) Statement of purpose of proposed flood plain development activity.
 - (f) Anticipated dates of initiation and completion of activity.
 - (g) Estimated market value of proposed new construction or improvement to an existing structure, and the basis for such estimate if requested by the Village Manager.
 - (h) Engineering grading plans of the proposed flood plain development activity shall accompany the application. Such engineering plans shall include, at a minimum:
 - (1) A vicinity map showing the location of the proposed site's activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow;
 - (2) A site grading, utility, and soil erosion plan of the proposed project and engineering flood study reach indicating existing and proposed site conditions. These revisions include the following:
 - (i) principal dimensions of the structure or work;
 - (ii) elevations in mean sea level (1929 adjustment) datum or N.G.V.D.;
 - (iii) adjacent rights-of-way, property lines and ownership;
 - (iv) existing and proposed drainage and flood control easements;
 - (v) location of any channels and any existing or future access roads;
 - (vi) distance between proposed activity and navigation channel, when the proposed construction is within 1000 feet of a commercially navigable body of water;
 - (vii) utility locations;

- (viii) flood plain and regulatory floodway limits;
 - (ix) flood fringe limits;
 - (x) specifications and channel dimensions of any proposed channel modifications; and
 - (xi) location and orientation of engineering cross-sections.
- (3) Cross-section views of the project site and the hydraulic engineering study of the reach indicating the existing and proposed site and flooding level conditions including principal floodway dimensions and coefficients of existing and proposed site elevations, normal water elevation, ten (10) year and one hundred (100) year frequency storm flood levels, and graphic or numerical scales (horizontal and vertical).
 - (4) A soil erosion and sedimentation control plan for the disturbed areas, in accordance with the Northbrook Standards and Specifications.
 - (5) A copy of the current regulatory floodway map, marked to reflect any proposed change in the regulatory floodway location.
 - (6) Any and all other local, state and federal flood plain permits or approval letters that may be required for the type of development proposed.
 - (7) Engineering drainage, stormwater runoff, and volumetric grading calculations and supporting topographic data shall be submitted with the proposed site plans in accordance with Northbrook Standards and Specifications.
 - (8) If the flood plain development permit application is for a structure, such application shall be accompanied by:
 - (i) Accurate topographic drawings of the site indicating property line bearings and dimensions and existing ground elevations (FEMA/USGS Datum), and all proposed changes in grade resulting from any proposed excavation or filling, and flood plain, flood fringe, and proposed floodway limits, sealed by an Illinois registered professional engineer, licensed architect or registered land surveyor;
 - (ii) The location and dimensions of all structures, landscape berms, fences, buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of Flood Hazard Overlay District regulations of this Code.
 - (9) If the regulatory floodway location or base flood elevation will change due to the proposed development, the application will not be considered complete until both FEMA and IDOT/DWR have provided conditional approval of changes to the regulatory floodway map change. No structures may be built until Letters of Map Revision or a Letter of Map Amendment has been issued by FEMA.
 - (10) If the proposed development involves a channel modification, the applicant shall submit the following additional information:

- (i) A written explanation with discussion identifying the purpose of and need for the proposed work;
- (ii) A written explanation with discussion identifying the feasibility of using alternative locations or methods to accomplish the purpose of the proposed work; and
- (iii) An analysis of the extent and permanence of the significant impacts the project would have on existing natural features.

Section 6. Flood Plain Development Permit Procedures

A new Section 11-403 of the Northbrook Zoning Code (1988), as amended, is hereby adopted as follows:

11-403 FLOOD PLAIN DEVELOPMENT PERMIT

- A. **Authority.** The Village Manager is authorized to issue flood plain development permits in accordance with the National Flood Insurance Program and Ill. Rev. Stat. ch. 19, para. 65g, as amended, and 92 Ill Admin. Code Part 708, as amended, enabling the Village of Northbrook to issue certain permits regulating the construction and the method, manner and extent of construction and other work undertaken within the flood plain. The Village Manager shall have the authority to issue flood plain development permits; provided, however, that no such permit shall be issued except in accordance with the provisions of this Section, the Flood Hazard Overlay District regulations, and all other regulations of the Village governing development, building and related matters.
- B. **Purpose.** For the purpose of this Code, the flood plain development permit provides a procedure for ensuring that all development applications within the Village are reviewed to determine whether or not they are located within the flood plain; and to, further, make certain all development activities within the flood plain are approved, constructed and maintained in compliance with the National Flood Insurance Program of the Federal Emergency Management Agency, and in compliance with Chapter 19, Paragraph 52 et seq. of the Illinois Revised Statutes, as amended, and the regulations promulgated thereunder.
- C. **Flood Plain Development Permit Required.** No person, firm, corporation, or governmental body, unless specifically exempted from regulation by applicable state and federal laws and regulations, shall commence any development in the flood plain without first obtaining a flood plain development permit from the Village Manager.
- D. **Procedure.**
 - 1. **Application.** Applications for a flood plain development permit shall be filed on a form approved by the Village Manager and shall be accompanied by all necessary flood plain engineering information, as specified in the Northbrook Standards and Specifications.
 - 2. **Professional Engineer Review.** If the proposed development site is within a regulatory floodway or in a flood plain on which a detailed study has not been conducted that drains more than one (1) square mile, then the Village Manager shall refer the permit application to an Illinois registered professional engineer (P.E.) under the employ of, or under contract with the Village for hydraulic and hydrologic review to ensure that the development meets the minimum requirements of this Code.

3. Action on Application, Generally.

- (a) Determination of Flood Status. The Village Manager shall ensure that all proposed development sites within the Village are reviewed to determine whether they are within the Flood Hazard Overlay District.
- (b) Flood Plain Development Permit Required. In the event a development site is determined to be within the Flood Hazard Overlay District, a flood plain development permit must be issued by the Village Manager prior to commencing any development activity. The Village Manager, prior to issuing any such Flood plain development permit, shall determine whether the site is in:
 - (1) a flood fringe area;
 - (2) a floodway; or
 - (3) a flood plain that drains more than one square mile for which a detailed study has not yet been conducted.

If the site is within one of these areas, it shall meet all the requirements of this Code applicable to such area.

- (c) Review of Market Value of Construction. The Village Manager shall review all flood plain development permit applications prior to issuance of a permit to determine whether or not the proposed activity involves either: (1) new construction; (2) substantial improvements or (3) substantial damage, as defined in Section 8-211 of this Code.
- (d) Construction Inspection Review. The Village Manager shall ensure that inspections are performed for all flood plain development projects before, during and after construction to ensure proper completion of any site improvements and proper elevation of the structure, including the lowest floor and lowest opening, and to ensure they comply with the provisions of this Code.

4. State Review of Certain Permit Requests. Upon acceptance of the Flood Hazard Overlay District regulations and related provisions of this Code by IDOT/DWR, the review and approval of certain flood plain development activities has been delegated to the Village of Northbrook by the Illinois Department of Transportation, Division of Water Resources, pursuant to 92 Illinois Administrative Code 708; however, the following types of development approvals have not been delegated to the Village of Northbrook and shall require IDOT/DWR review or permits:

- (a) Development proposals in the flood plain by organizations that are exempt from review by local jurisdictions, in accordance with the Illinois Revised Statutes.
- (b) Department of Transportation projects, dams or impoundment structures, and all other state, federal or local unit of government projects, including projects of the Village and Cook or Lake County that are located in the flood plain that are deemed to require the review of a registered professional engineer, as specified in the Northbrook Standards and Specifications Manual.
- (c) A professional engineer's determination that an existing bridge or culvert crossing is not a source of flood damage in a regulatory floodway.
- (d) A professional engineer's analysis of the computed flood profile in a regulatory floodway.
- (e) Alternative transition sections and hydraulically equivalent compensatory storage areas in regulatory floodways.

(f) Any proposed or actual changes in the Regulatory Base Flood Elevation or Floodway locations.

(g) Base Flood Elevation determinations where none now exist.

5. Other Permits or Approvals Required. In addition to Village and IDOT/DWR permits specifically referred to in this Section, proposed developments in the flood plain may require approvals or permits from other governmental agencies. Such agencies may include, but are not limited to: the Federal Emergency Management Agency; U.S. Army Corps of Engineers; and Cook or Lake County Highway Departments.

The Village Manager shall require the applicant to submit copies of all other local, state, and federal executed permits and approvals that may be required for the proposed flood plain development activity. The Village Manager shall not issue the flood plain development permit unless copies of all required federal, state and local, conditional or final, permits and "approved" plans have been submitted to the Village.

6. Additional Procedures for Modification of Floodway or Base Flood Elevation.

- (a) Conditional Letter of Map Revision. If a proposed flood plain development activity would result in a change in the regulatory floodway location or the base flood elevation, the applicant must obtain a Conditional Letter of Map Revision (CLOMR). The applicant shall submit transitional sections to the Village Manager for review and approval prior to submittal to IDOT/DWR and FEMA. An IDOT/DWR conditional approval of the regulatory floodway change must be secured before a flood plain development permit is issued.

The final regulatory floodway map will not be changed by FEMA and IDOT/DWR until "as-built" plans or "record drawings" with fill compaction certification are submitted and approved by the Village Manager and accepted by FEMA and IDOT/DWR. No filling, grading, dredging or excavating shall take place until a conditional approval is issued. No further development activities (building permit, foundation installations, etc.) shall take place until a Final Letter of Map Revision (FLOMR) is issued by FEMA and IDOT/DWR.

- (b) Modification of Floodway. After issuance of a flood plain development permit and a Conditional Letter of Map Revision, as necessary to change the regulatory floodway designation, site development activities may proceed; however, no uses other than "Appropriate Uses" in the floodway may be located in that area until the regulatory floodway map is changed and a final Letter of Map Revision is received. The regulatory floodway map will be revised upon acceptance of and concurrence by the Village Engineer, IDOT/DWR, and FEMA with the "as built" certified plans with soil fill compaction certification.

E. General Criteria for Analysis of Flood Elevations.

1. The flood profiles, flows and floodway data in the FEMA regulatory floodway study and other maps, studies and data referenced in Section 8-204 of this Code shall be used for analysis of the base conditions.
2. If the study data appears to be in error or conditions have changed, the applicant shall contact IDOT/DWR for approval and concurrence on the appropriate minor modifications to the base conditions data used.

3. If a party disagrees with the Village flood elevation data he or she may prepare, at his own cost and expense, an engineering study prepared in accordance with the Northbrook Standards and Specifications Manual, and submit the study to the Village Manager, IDOT/DWR and FEMA for review and approval.
 4. If the regulatory floodway elevation at the site of the proposed construction is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed construction shall be shown to meet the requirements of this Code for the 100-year frequency flood elevations of the regulatory floodway conditions and conditions with the receiving stream to normal water elevations.
 5. If the applicant learns from IDOT/DWR, county or local governments, or a private owner that a downstream restrictive bridge or culvert is scheduled to be removed, reconstructed, modified, or a regional flood control project is scheduled to be built, removed, constructed or modified within the next five years, the proposed construction shall be analyzed and shown to meet the requirements of this Code for: (a) the existing conditions, and (b) the expected flood profile conditions when the bridge, culvert or flood control project is built.
 6. If a base flood elevation or one hundred (100) year frequency flood elevation is not available for a particular site, then the protection standard shall be according to the historical Storm/Flood of Record and the best existing data available from the Village and the ISWS's Flood Plain Information Repository.
- F. Elevation and Floodproofing Certificates. The Village Manager shall, for all structures in the flood plain regulated by this Code, maintain permit and property files and make available for copying and public inspection, to the extent allowed by law: (1) FEMA Elevation Certificates specifying the elevation of the lowest floor (including basement) of a residential or non-residential building; and (2) FEMA Floodproofing Certificates, specifying the elevation to which a non-residential building has been floodproofed.
- G. Records for Public Inspection. The Village Manager shall maintain for public inspection and furnish upon request, to the extent allowed by law, base flood data, SFHA and regulatory floodway maps, copies of federal or state permit documents, variation documentation, Conditional Letter of Map Revision, Letter of Map Revision, Letter of Map Amendment and "as built" elevation and floodproofing or elevation certificates for all structures in or adjacent to the flood plain.
- H. Cooperation with Other Agencies. The Village Manager shall cooperate with state and federal flood plain management agencies to periodically update and improve base flood or 100-year frequency flood event and floodway data and to improve the administration of this Article; submit data to IDOT/DWR and FEMA for proposed revisions of a regulatory flood map(s); submit reports as required for the National Flood Insurance Program; and notify the Federal Emergency Management Agency of any proposed amendments to this Code and other municipal codes and regulations regarding development in flood plain areas.
- I. Notification of Proposed Channel Modifications. For all flood plain development activities involving proposed channel modification, fill, or stream maintenance (including levees), the Village Manager shall notify the Village Clerk of the adjacent communities in writing thirty (30) days prior to the issuance of a flood plain development permit for the major alteration, realignment, or relocation of the North Branch of the Chicago River watercourse, or its tributaries.
- J. Penalties. In addition to the penalties established in Section 11-803 of this Code, the Village Manager shall inform the owner of a property in violation of the Flood Hazard Overlay District regulations that such violation is considered a willful act to increase flood damages and, therefore, may cause coverage by a Standard Flood Insurance Policy to be suspended.

Section 7. Flood Plain Variation Procedures.

A new Section 11-504 of the Northbrook Zoning Code (1988), as amended, is hereby adopted as follows:

11-504 VARIATIONS OF FLOOD HAZARD OVERLAY DISTRICT REGULATIONS

- A. **Authority.** The Zoning Board of Appeals, and, in the cases specified in Paragraph D4 of Section 11-503, the Board of Trustees, shall have the authority to grant variations from the provisions of the Flood Hazard Overlay District regulations, but only in compliance with the procedures set forth in Subsection D of this Section, and in those specific instances enumerated in Subsection E of this Section, and, then, only in accordance with the standards enumerated in Subsection F of this Section.
- B. **Purpose.** The variation procedure is intended to provide a narrowly circumscribed means by which relief may be granted from the requirements in this Code governing development in the flood plain, consistent with the limitations of the National Flood Insurance Program and Illinois law.
- C. **Parties Entitled to Seek Variations.** Applications for variations may be filed by the owner of, or any person having a contractual interest in, the subject property.
- D. **Procedure.** Variations authorized herein shall be reviewed in accordance with the procedures established for other variations of this Code, as established in Section 11-503 D of this Article.
- E. **Authorized Variations.**
 - 1. **Permitted Variations.** When a development proposal is located outside of a regulatory floodway, and whenever the standards of this Code place undue hardship on a specific development proposal, the applicant may apply to the Village Manager for a variation. Developments outside of the regulatory floodway may obtain variations in the following cases:
 - (a) To obtain a variation of the compensatory storage requirements of this Code, provided the property is a lot of record existing at the time that the application for variation is submitted;
 - (b) To allow other uses, developments, and methods and materials of construction within the flood fringe, in compliance with federal and Illinois law.
 - 2. **Prohibited Variations.**
 - (a) No variations of the Flood Hazard Overlay District regulations shall be granted for any proposed development activity located in a regulatory floodway.
 - (b) No variation shall be granted that would otherwise be prohibited by Paragraph 11-503 E2 of this Article.
- F. **Standards for Variations of the Flood Hazard Overlay District Regulations.**
 - 1. An Illinois Registered Professional Engineer, with an understanding of hydraulic computerized methods, under the employ of or contract with the Village shall review the applicant's request for a variation, and shall submit to the Village Manager a recommendation concerning the application.
 - 2. The "Variation and Exceptions" provisions established in 44 C.F.R. Section 60.6(a), as amended from time to time, shall be used as the general criteria by which all variation requests shall be reviewed.

3. The Village of Northbrook shall not grant any variation unless the applicant demonstrates that:
- (a) The development activity cannot be located outside the flood plain;
 - (b) An exceptional hardship would result if the variation were not granted;
 - (c) The relief requested is the minimum necessary;
 - (d) There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat, or creation of a nuisance;
 - (e) There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to stream beds and banks, roads, utilities, or other public facilities;
 - (f) The provisions of Subsection 8-209 A related to the prevention of increased damage and Subsection 8-209 B related to the protection of public health shall still be met;
 - (g) The activity is not in a regulatory floodway;
 - (h) The applicant's circumstances are unique and do not represent a general problem; and
 - (i) The granting of the variation will not alter the essential character of the area involved including existing stream uses.
- G. Variation Standards for Historic Places. Variations requested in connection with restoration of a site or building listed on the National Register of Historical Places or documented as worthy of preservation by the Illinois Historic Preservation Agency may be granted using criteria more permissive than these requirements.
- H. Variations Less Than Requested. A variation less than or different from that requested may be granted when the record supports the applicant's right to some relief, but not to the relief requested.
- I. Conditions on Variations. The Zoning Board of Appeals or Board of Trustees, as appropriate, may impose specific conditions and limitations as may be necessary or appropriate, in accordance with Subsection 11-503 H of this Article.
- J. Affidavit of Compliance; Fee. An affidavit of compliance and requisite fee, in accordance with Subsection 11-503 I of this Article, shall be required for all variations authorized pursuant to this Section.
- K. Effect of Granting Variation. The granting of a variation in accordance with this Section shall not authorize the establishment or extension of any use in the flood plain, nor the grading, development, construction, reconstruction, alteration or moving of any building or structure, but shall merely authorize the preparation of applications for any permits and approvals that may be required by the codes and ordinances of the Village, including, but not limited to, a flood plain development permit, certificate of zoning compliance, a building permit, a certificate of occupancy, subdivision approval and site plan approval.
- L. Limitations on Variations. Variations authorized in accordance with this Section shall be restricted to the period of time and other such limitations established in Subsection 11-503 K of this Article.

M. Notice: Acknowledgement by Applicant. When an application for a variation is filed in accordance with this Section, the Village Manager shall notify the applicant in writing that any variation from the requirements of this Section that would lessen the degree of protection to a building will:

1. Result in increased premium rates for flood insurance; and
2. Increase the risks to life and property.

The Village Manager shall require that the applicant proceed with knowledge of these risks and require that he will acknowledge in writing that he assumes the risk and liability.

Section 7. Granting Additional Variation Authority.

A. A new Paragraph 11-102 E3 shall be added as follows, and all remaining Paragraphs renumbered:

- "3. Subject to the provisions of Section 11-504 of this Article, to grant or deny variations from the Flood Hazard Overlay District regulations of this Code."

B. A new paragraph 11-103 D4 shall be added as follows, and all remaining Paragraphs renumbered:

- "4. Subject to the provisions of Section 11-504 of this Article, to hear, review and offer its recommendations to the Board of Trustees on applications for variations requested pursuant to Paragraph 11-504 D4 of this Article."

Section 8. Additional General Definitions.

The following terms shall be added to Section 12-206 "Definitions" of the Zoning Code, in the Subsections referenced herein:

A. Add the following definition to Subsection 12-206 A, in alphabetical order:

Appropriate Use. One of those uses specified in this Section 8-207 of this Code as being permissible within the regulatory floodway.

B. Add the following definitions to Subsection 12-206 B, in alphabetical order:

Base Flood. The flood having a one-percent probability of being equaled or exceeded in any given year. The base flood is sometimes referred to in this Code as the 100-year frequency flood event.

Base Flood Elevation. The highest water surface elevation of the base flood. The base flood elevation is also known as the 100-year frequency flood elevation.

C. Add the following definitions to Subsection 12-206 C, in alphabetical order:

Changes to the Regulatory Floodway. Changes in the original regulatory floodway due to (1) error in physical data or mathematical model; (2) changed conditions; (3) public flood control projects; or (4) relocation of floodway storage and conveyance approved by a unit of local government. Conditional approval of such a change must be obtained from IDOT/DWR and FEMA prior to construction of the floodway change. Final approval and revision of the regulatory floodway map will occur only after acceptance by IDOT/DWR and FEMA of as-built plans, and buildings and structures may thereafter be constructed.

Compensatory Storage. An artificially excavated, hydraulically equivalent volume of flood storage within the SFHA used to replace the loss of natural flood storage capacity when artificial fill or structures are placed within the flood plain.

Conditional Letter of Map Revision (CLOMR). A letter which indicates that the Federal Emergency Management Agency will revise base flood elevations, flood insurance rate zones, flood boundaries or floodway as shown on an effective Flood Hazard Boundary Map or Flood Insurance Rate Map, once the as-built plans are submitted and approved.

- D. Add the following definition to Subsection 12-206 D, in alphabetical order:

Dam. All obstructions, wall embankments or barriers, together with their abutments and appurtenant works, if any, constructed for the purpose of, or with the effect of, storing or diverting water or creating a pool.

- E. Add the following definitions to Subsection 12-206 F, in alphabetical order:

FEMA. Federal Emergency Management Agency and its regulations at 44 CFR Parts 59-79, as amended from time to time.

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

Flood Fringe. That portion of the flood plain outside of the regulatory floodway.

Flood Insurance Rate Maps (FIRM). An official map prepared by the Federal Emergency Management Agency that delineates the special flood hazard areas (SFHA's) and risk premium rate zones within the Village.

Flood Plain. That land typically adjacent to a body of water or watercourse with ground surface elevations at or below the base flood elevation. Flood plains may also include special flood hazard areas not adjacent to a body of water or watercourse. The flood plains are those lands within the Village of Northbrook that are subject to inundation by the base flood or 100-year frequency flood. The flood plains within the Village of Northbrook are generally identified on the maps, plans and studies referenced in Section 8-204 of this Code.

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

Flood Protection Elevation (FPE). The elevation of the base flood or one hundred (100) year frequency flood event plus one (1) foot of freeboard at any given location in the SFHA.

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 those caused by ice or debris jams, bridge openings and the hydrological effect of development within the watershed.

- F. Add the following definition to Subsection 12-206 I, in alphabetical order:

IDOT/DWR. The Illinois Department of Transportation, Division of Water Resources.

- G. Add the following definitions to Subsection 12-206 L, in alphabetical order:

Letter of Map Amendment (LOMA). An official determination by FEMA following a review of scientific or technical data that a specific property, or portion of a property, is not in a SFHA. The LOMA amends FIRM in effect and establishes that a property is not located in a SFHA.

Letter of Map Revision (LOMR). An official determination by FEMA that a specific property, or portion of a property, is no longer in a SFHA due to physical changes, improvements or projects that modify flood elevations. A Conditional Letter of Map Revision (CLOMR) represents FEMA's determination that the changes, improvements or projects approved may be made to the property. A Final Letter of Map Revision (FLOMR) represents FEMA's determination that the changes, improvements or projects have been properly completed and that the FIRM in effect will be amended to establish that a property is no longer in a SFHA.

H. Add the following definitions to Subsection 12-206 N, in alphabetical order:

NGVD. National Geodetic Vertical Datum of 1929. Reference surface Elevation set by the Natural Geodetic Survey deduced from a continental adjustment of all existing adjustments in 1929.

National Flood Insurance Program (NFIP). That program established by Congress at 42 U.S.C. Sec. 4001 *et seq.* to provide a means of insuring property losses caused by flood risks.

Northbrook Flood Insurance Study (FIS). The Flood Insurance Study for the Village of Northbrook, issued by FEMA and dated December 15, 1990, as it may be amended from time to time.

Northbrook Standards and Specifications. Standards and Specifications for Public and Private Improvements, approved by the Board of Trustees on October 9, 1990, as it may be amended from time to time.

I. Add the following definitions to Subsection 12-206 O, in alphabetical order:

100 Year Frequency Flood Elevation. See base flood elevation.

100 Year Frequency Flood Event. See base flood.

J. Add the following definition to Subsection 12-206 P, in alphabetical order:

Public Flood Control Project. A flood control project which will be operated and maintained by a public agency to reduce flood damages to existing buildings and structures which includes a hydrologic and hydraulic study of the existing and proposed conditions of the watershed. Nothing in this definition shall preclude the design, engineering, construction or financing, in whole or in part, of a flood control project by persons or parties who are not public agencies.

K. Add the following definitions to Subsection 12-206 A, in alphabetical order:

Registered Land Surveyor. A land surveyor registered in the State of Illinois, under The Illinois Land Surveyors Act, Ill. Rev. Stat. Ch. 111, para. 3251 *et seq.* (1989).

Registered Professional Engineer. An engineer registered in the State of Illinois, under The Illinois Professional Engineering Practice Act, Ill. Rev. Stat. ch. 111, para. 5201 *et seq.* (1989).

Regulatory Floodway. The channel, including on-stream lakes, and that portion of the flood plain adjacent to a stream or watercourse as designated by IDOT/DWR, which is needed to store or convey the existing and anticipated future 100-year frequency flood discharge with no more than a 0.1 foot increase in stage due to the loss of flood conveyance or storage, and no more than a 10% increase in velocities. The regulatory floodways are designated for the West and Middle Forks of the North Branch of the Chicago River and their tributaries, on the maps, plans and studies referenced in Section 8-204 of this Code.

Riverine SFHA. Any SFHA subject to flooding from a river, creek, intermittent stream, brook, ditch, on stream lake system or any other identified channel. Riverine SFHA does not include areas subject to flooding from lakes, ponding areas, areas of sheet flow, or other areas not subject to overbank flooding.

L. Add the following definitions to Subsection 12-206 S, in alphabetical order:

Special Flood Hazard Area (SFHA). Any base flood area subject to flooding from a river or tributary thereof, creek, intermittent stream, brook, ditch, or any other identified channel or ponding and shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map as Zone A, AO, A1-30, AE, A99, AH, VO, V1-30, VE, V, M, or E.

Standard Flood Insurance Policy. The flood insurance policy issued by the Federal Insurance Administration, or an insurer pursuant to federal statutes and regulations.

Section 9. Effective Date.

This ordinance shall become effective upon passage and publication in accordance with the laws of the State of Illinois.

PASSED: This 11th day of February, 1992 .

AYES: (6) Trustees Donahue, Jaeger, Walker, Frum, Hedien and Damisch

NAYS: (0)

/s/ Richard T. Falcone

Village President

ATTEST:

/s/ Lona N. Louis

Village Clerk