

SPECIAL DISTRICTS

ARTICLE

VIII

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, protect new buildings and major improvements to buildings from flood damage, and to reduce economic losses to individuals and the community at large. The District and its regulations are established in compliance with the rules and regulations of the National Flood Insurance Program of the Federal Emergency Management Agency, codified as 44 C.F.R. Parts 59 through 79, and as may be amended and supplemented from time to time, in order to make federally subsidized flood insurance available within the Village; and in compliance with Section 18g of the Rivers, Lakes and Streams Act, 615 ILCS 5/18g, and 17 Ill. Admin. Code Part 3708 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. In addition to the powers listed in Section 1-102 and other provisions of this Code, this Part II of Article VIII of this Code is also adopted pursuant to Sections 1-2-1, 11-12-12, 11-30-2, 11-30-8, and 11-31-1 et seq. of the Illinois Municipal Code, 65 ILCS 5/1-2-1, 11-12-12, 11-30-2, 11-30-8, and 11-31-1 et seq.

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

8-203 A. Generally. The provisions of this Part shall apply to all land within the Village of Northbrook located within the flood plain.

8-203 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 appropriate Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS).

8-204 A. Incorporated Areas; Depiction on Zoning Map. The floodway and the base flood elevation for the special flood hazard areas mapped by FEMA and IDNR/OWR for the West and Middle Forks of the North Branch of the Chicago River and for their tributaries (Underwriters' Laboratories, Techny Drain, and the South Fork Techny Drain) shall be as delineated on the one hundred (100) year flood profiles in the Cook County Flood Insurance Rate Maps (FIRMs), Map Number 17031C; panels 0088F, 0089F, 0093F, 0226F, 0227F, 0231F and 0232F, 0088J, 0089J, 0093J, 0226J, 0227J, 0231J and 0232J, effective date November 6, 2000; August 19, 2008; panels 0069G and 0207G, 0069J and 0207J, effective date April 16, 2007, August 19, 2008, and the Cook County Flood Insurance Study (FIS), effective date April 16, 2007; August 19, 2008. The Village Manager shall order the depiction of the approximate location of the flood plain limits on the Village zoning map and the Cook County Flood Insurance Rate Maps (FIRMs), Map Number 17031C; the panels referenced in Subsection 8-204 A panels 0068F and 0094F, 0068J and 0094J, effective date November 6, 2000; August 19, 2008, panels 0069G and 0207G, 0069J and 0207J, effective date April 16, 2007; August 19, 2008, and the Cook County Flood Insurance Study (FIS), effective date April 16, 2007; August 19, 2008.

8-204 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 then current version of the Flood Insurance Rate Maps (FIRM) and the Flood Insurance Studies for those parts of unincorporated Lake, as the case may be, prepared by FEMA and the Cook County Flood Insurance Rate Maps (FIRMs), Map Number 17031C; the panels referenced in Subsection 8-204 A. and panels 0068F and 0094F, 0068J and 0094J, effective date November 6, 2000; August 19, 2008, panels 0069G and 0207G, 0069J and 0207J, effective date April 16, 2007; August 19, 2008, and the Cook County Flood Insurance Study (FIS), effective date April 16, 2007; August 19, 2008.

8-204 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 Cook County Flood Insurance Rate Maps (FIRMs), Map Number 17031C; panels 0088F, 0089F, 0093F, 0226F, 0227F, 0231F and 0232F, 0088J, 0089J, 0093J, 0226J, 0227J, 0231J and 0232J, effective date November 6, 2000; August 19, 2008; panels

0069G and 0207G, 0069J and 0207J, effective date April 16, 2007; August 19, 2008, as may be amended from time to time.

8-204 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 IDNR/OWR, as specified in the Village Standards and Specifications for Public and Private Improvements and any other applicable authority

8-205 ADMINISTRATION OF FLOOD HAZARD REGULATIONS

8-205 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.

8-205 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. The Village Manager shall ensure that any and all required federal, state and local permits are received prior to the issuance of a flood plain development permit.

8-205 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.

8-206 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.

8-206 B. Elevation Standards.

1. Existing Structures, Improved to Less Than Fifty Percent (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 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 Fifty Percent (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 fifty percent (50%) or more of the market value of the structure before the start of construction of the improvement; however, in such cases the structure must be elevated in such a manner that the lowest floor of the structure, including any basement area, is at or above the base flood elevation, unless:
 - a) FEMA grants the Village an exception to permit the construction of floodproofed residential basements, in accordance with 44 CFR Section 60.6(c); or
 - b) 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 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:
 - a) 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
 - b) 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.

8-206 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:

- i. The same zoning lot as the proposed development, or
 - ii. An off-site location, approved by the Village Manager, where hydraulically equivalent storage can be achieved. When such compensatory storage is provided, the continued protection and maintenance thereof shall be provided for by a recorded easement, recorded covenant, or other recorded legal document may be approved by the Village and IDNR/OWR.
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 one hundred (100)

year frequency flood elevation equal to one hundred twenty percent (120%) 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 one hundred (100) year frequency flood elevation equal to one hundred fifty percent (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 ten (10) year elevation shall be replaced below the proposed ten (10) year flood elevation. All flood plain storage lost above the existing ten (10) year flood elevation shall be replaced above the proposed ten (10) year flood elevation.

8-206 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.

8-206 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 LOMR-F 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 a 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.

8-207 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.

8-207 B. Appropriate Uses Within the Floodway. Only "appropriate uses", as established herein and as listed in 17 Illinois Administrative Code Part 3708 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 fifty percent (50%) 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 one hundred (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 fifty percent (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, built at or below grade, where the flooding at the one hundred (100) year frequency flood event will not exceed one (1) foot in depth or, in the case of a short-term recreational use facility parking lot, where the applicant formally agrees to restrict access during overbank flooding events and accepts liability for all damage caused by vehicular access during all overbank flooding events.
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 around residential, commercial or industrial principal structures where the outside toe of the floodwall shall be no more than ten (10) feet away from the exterior wall of the existing structure and which are not considered substantial improvements to the structure.
7. Public recreational facilities such as playing fields, trail systems, including any related fencing (at least 50 percent open when viewed from any one direction) built parallel to the direction of flood flows, and open air pavilions and toilet facilities (4 stall maximum) that will not block flood flows or reduce floodway storage.

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. Re-grading within the regulatory floodway, without fill, to create a positive non-erosive slope toward a watercourse.

Appropriate uses do not include the construction or placement of any new structures, fill, building additions, buildings on stilts, excavation or channel modifications done to accommodate otherwise non-appropriate uses in the floodway, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically listed above as an appropriate use.

8-207 C. Interpretation of Appropriate Uses. The Village Manager shall enforce the floodway development restrictions of this Part in compliance with 17 Ill. Admin. Code Part 3708.

8-207 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:

- i. 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, including, without limitation, the Village Standards and Specifications for Public and Private Improvements; and
- ii. 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 by more than 0.0 foot, provided, however, that bridges and culverts shall not increase flood heights during the base flood by more than one-tenth (0.1) 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.

8-207 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:

- i. The same zoning lot as the proposed development, or
 - ii. An off-site location, approved by the Village Manager, where hydraulically equivalent storage can be achieved. When such compensatory storage is provided, the continued protection and maintenance thereof shall be provided for by a recorded easement, recorded covenant, or other recorded legal document may be approved by the Village and IDNR/OWR.
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 one hundred (100) year frequency flood elevation equal to one hundred percent (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 one hundred (100) year frequency flood elevation equal to one hundred fifty percent (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 ten (10) year elevation shall be replaced below the proposed ten (10) year flood elevation. All flood plain storage lost above the existing ten (10) year flood elevation shall be replaced above the proposed ten (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 SFHA or floodplain (including AE, AH, AO and Unnumbered A Zones) draining more than one (1) square mile, where no floodways have been identified and no base flood elevations have been established by FEMA, all such areas shall be deemed to be within the regulatory floodway, shall be subject to all development restrictions for regulatory floodways established in this Code. In the alternative, the applicant may, at its sole cost and expense, elect to submit to the Village an engineering study by a registered professional engineer to determine a floodway. Upon approval of the engineering study by FEMA or IDNR/OWR, as appropriate,

properties in flood plain areas without identified floodways shall be delineated as being within the flood fringe or floodway, as appropriate, and development shall be allowed in accordance with Sections 8-206 or 8-207 of this Code, 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.

8-209 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.

8-209 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 (FPE).
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 so as to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters. Other public utilities and facilities such as sewer, gas and electric shall be designed, located and constructed to minimize or eliminate flood damage.

8-209 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 and shall not contain or later be modified for other uses, such as workshops, greenhouses or similar uses;
2. The accessory structure shall comply with all provisions of Section 9-101 of this Code and shall have a value of less than \$10,000 and a floor area of less than 500 square feet;
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 flood-proofed to the flood protection elevation;
7. The structure shall meet the permanent opening criteria as described in Subsection 8-209 H;
8. All flammable or toxic materials (gasoline, paint, insecticides, fertilizers, etc.) shall be stored above the flood protection elevation; and
9. The lowest floor elevation shall be identified and the Village Manager shall notify the applicant of the flood insurance implications, if any;

8-209 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.

8-209 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 flood plain shall be either:

1. Fully licensed and ready for highway use; and
2. Stored on the site for fewer than one hundred eighty (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.

8-209 F. Manufactured Homes Prohibited. No manufactured homes, as defined in this Part, shall be permitted to be located on sites within the flood plain.

8-209 G. Construction on Fill Material. Any authorized habitable structure, when allowed, may be constructed on permanent land fill. 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 Letter of Map Revision based on fill (LOMR-F). The Village shall have no obligation to issue any permit prior to receipt, by the Village Manager, of a LOMR-F issued by FEMA. A person who has obtained a LOMR-F that removes a site in the flood fringe from the flood plain due to the use of fill to elevate the site above the BFE, may construct any authorized habitable structure, or addition or improvement thereto, on

permanent land fill in accordance with the requirements of Section 8 of Northbrook Standards and Specifications.

8-209 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 one hundred (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 (2) 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.
4. The areas below the flood protection elevation may only be used for the parking of vehicles, building access or storage in an area other than a basement and not later modified or occupied as habitable space.
5. In lieu of the above criteria, designs that will comply with these requirements must be certified by an Illinois registered professional engineer or architect as meeting these requirements and submitted to the Village Manager for review and approval.
6. Motorized homes, travel trailers, and truck campers shall be required to meet the elevation and anchoring requirements of Paragraph 8-209 H6 above unless they are on site for less than 180 consecutive days and fully licensed, ready for highway use, and used only for recreation, camping, travel or seasonal use rather than as a permanent dwelling. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utility and service devices, and has no permanently attached additions.

8-209 I. Floodproofing of Proposed Non-Residential Structures. Only 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 the base flood or 100-year frequency flood. 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.

8-209 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.

8-209 K. Critical Facilities. New critical facilities shall be located outside the limits of the flood plain; provided, however, that siting of new critical facilities shall be permissible within the flood plain if no feasible alternative site is available. New critical facilities constructed within the flood plain shall have the lowest floor (including basement) elevated or structurally dry floodproofed to the 500-year flood frequency elevation or three feet above the level of the 100-year flood frequency elevation, whichever is greater. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters from new critical facilities. Access routes to all new critical facilities shall be elevated to or above the level of the base flood elevation.

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:

8-211 A. Basement. Any area of the building having its floor subgrade (below ground level) on all sides.

8-211 B. Control Structure. A structure designed to control the rate of flow that passes through the structure, given a specific upstream and downstream water surface elevation.

8-211 C. Critical Facility. Any facility that is critical to the health and welfare of the population and, if flooded, would create an added dimension a disaster through an impact on the delivery of vital services, causing greater damage to other sectors of the community, or putting special populations at risk, such as emergency services facilities (such as fire police stations), schools, hospitals, retirement homes and senior care facilities, major roads and bridges, critical utility sites (telephones switching stations or electrical transformers), hazardous material storage facilities (chemicals, petrochemicals, hazardous or toxic substances), sewage treatment plants, water treatment plants, and pumping stations.

8-211 D. 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 one hundred eighty (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;
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; or
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.

8-211 E. Exempt Organizations. Organizations that are exempt from the requirements of this Part as authorized by state law, including state, federal or local units of government.

8-211 F. Historic Structure. Any structure that is:

1. Listed individually in the National Register of Historic Places or preliminary determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

2. Certified or preliminary determined by the Secretary of the Interior as contributing to the historic district or a district preliminary determined by the Secretary to qualify as a registered historic district;
3. Individually listed on the State inventory of historic places by the Illinois Historic Preservation Agency; or
4. Individually listed on a local inventory of historic places that has been certified by the Illinois Historic Preservation Agency.

8-211 G. 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.

8-211 H. 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.

8-211 I. Mitigation. Those measures necessary to minimize the negative effects floodplain development activities might have on the public health, safety and welfare. Examples of mitigation include: excavation of compensatory storage, soil erosion and sedimentation control, and channel restoration. Mitigation may also include those activities taken to reduce a structure's susceptibility to flooding.

8-211 J. Natural. When used in reference to channels means those channels formed by the existing surface topography of the earth prior to changes made by man. A natural stream tends to follow a meandering path; its floodplain is not constrained by levees; the area near the bank has not been cleared, mowed or cultivated; the stream flows over soil and geologic materials typical of the area with no substantial alteration of the course or cross-section of the stream caused by filling or excavating. A modified channel may regain some natural characteristics over time as the channel meanders and vegetation is re-established. Similarly, a modified channel may be restored to more natural conditions by man through re-grading and re-vegetation.

8-211 K. 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.

8-211 L. Repetitive Loss. Flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damaged occurred.

8-211 M. Repair, Remodeling or Maintenance. Development activities which do not result in any increases in the outside dimensions of a building or any changes to the dimensions of a structure.

8-211 N. Start of Construction. The date the permit was issued, provided the actual start of construction (including substantial improvement), repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation.

8-211 O. 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 one hundred eighty (180) days, unless it is 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.

8-211 P. 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 fifty percent (50%) of the market value of the structure before the damage occurred, regardless of whether actual repair work is performed. Value shall include volunteer labor and materials, and repetitive losses.

8-211 Q. Substantial Improvement. Any repair, rehabilitation, reconstruction or improvement of, or addition to, a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

1. Before the improvement or repair is started, or
2. If the structure has been damaged, and is being restored, before the damage occurred.

For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term includes structures that have incurred repetitive loss or substantial damage, regardless of the actual work done, but does not, however, include either:

- a) Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or
- b) Any alteration of a structure listed on the National Register of Historic Places or the Illinois Inventory of Historic Places, provided that the alteration will not preclude the structure's continued designation as an historic structure.

8-211 R. 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 fifty percent (50%) of the market value of the structure, in accordance with 44 C.F.R. Section 59.1, as amended from time to time.

8-211 S. Transition Section. Reaches of the stream or floodway where water flows from a narrow cross-section to a wide cross-section or vice versa.

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.