

HACKENSACK MEADOWLANDS DISTRICT ZONING REGULATIONS (N.J.A.C. 19:4)
SUBCHAPTER 9. FLOODPLAIN MANAGEMENT
as of August 19, 2019

§ 19:4-9.1 Title

(a) This subchapter shall be known, and may be referred to as, the Floodplain Management Regulations of the Hackensack Meadowlands District.

(b) The flood hazard areas of the New Jersey Sports and Exposition Authority are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazard, which increase flood heights and velocities, and when inadequately anchored, causes damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

§ 19:4-9.2 Purposes

This subchapter sets forth procedures and engineering and planning standards in accordance with which the NJSEA shall review and approve or disapprove applications for the development or use of land within the District. This subchapter is designed to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed: to protect human life and health; to minimize expenditure of public money for costly flood control projects; to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; to minimize prolonged business interruptions; to minimize damage to new and existing construction; to minimize damage to public and private facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard; to help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas; to ensure that potential buyers are notified that property is in an area of special flood hazard; to ensure that those who own or occupy the areas of special flood hazard assume responsibility for their actions; and generally to provide for the exercise of the powers regarding the review and regulation of land use and development conferred upon the NJSEA by P.L. 2015, c. 19. In order to accomplish its purpose, this subchapter includes methods and provisions for: restricting or prohibiting uses that are dangerous to health, safety, and property due to water or erosion hazards, or that result in damaging increases in erosion, flood heights, or velocities; requiring that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction; controlling the alteration of natural floodplains, stream channels, and natural protective barriers that help accommodate or channel flood waters; controlling filling, grading, dredging and other development that may increase flood damage; and preventing or regulating the construction of flood barriers that will unnaturally divert flood waters or that may increase flood hazards in other areas.

§ 19:4-9.3 Words and phrases defined

Unless specifically defined in N.J.A.C. 19:4-2 or below, words or phrases used in this subchapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

“AH Zone” means an area subject to inundation by one percent annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base flood elevations (BFEs) derived from detailed hydraulic analyses are shown in this zone.

“AO Zone” means an area subject to inundation by one percent annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet.

"Area of shallow flooding" means a designated AO or AH zone on the Digital Flood Insurance Rate Map (DFIRM) with a one percent annual or greater chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist; where the path of flooding is unpredictable; and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

"Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year, which is shown on the FIRM as zone V, VE, V1-30, A, AO, A1-A30, AE, A99, or AH.

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

"Base flood elevation (BFE)" means the flood elevation shown on a published Flood Insurance Study (FIS), including the Flood Insurance Rate Map (FIRM). For zones AE, AH, AO, and A1-A30, the elevation represents the water surface elevation resulting from a flood that has a one percent or greater chance of being equaled or exceeded in any given year. "Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"Best available flood hazard data" means the most recent available flood risk guidance FEMA has provided. The best available flood hazard data may be depicted on, but is not limited to, Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM.

"Best available flood hazard data elevation" means the most recent available flood elevation FEMA has provided. The best available flood hazard data elevation may be depicted on an Advisory Flood Hazard Area Map, Work Maps, or Preliminary FIS and FIRM.

"Breakaway wall" means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or supporting foundation system.

"Community" means any state or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce flood plain management regulations for the areas within its jurisdiction.

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

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

"Elevated building" means a non-basement building that is:

1. In the case of a building in an area of special flood hazard, built to have the top of the lowest floor, or in the case of a building in a coastal high hazard area, built to have the bottom of the lowest horizontal structural member of the elevated floor, elevated at or above the base flood elevation plus freeboard by means of piling, columns (posts and piers), or shear walls parallel to the flow of the water; and
2. Adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood.
3. In an area of special flood hazard, elevated building also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

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

"FIA" means the Federal Insurance Administration.

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

1. The overflow of inland or tidal water; and/or
2. The unusual and rapid accumulation or runoff of surface waters from any source.

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

"Flood insurance study" or "FIS" means the official report provided in which the FIA has provided flood profiles, as well as the FIRM's and the water surface elevation of the base flood.

"Floodplain Management Regulations" means the zoning and subdivision regulations, building codes, and other applicable rules and regulations. The term describes State rules that provide standards for the purpose of flood damage prevention and reduction.

"Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water, and sanitary facilities, structures, and their contents.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 0.2 foot.

"Freeboard" means the factor of safety usually expressed in feet above a flood level for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a select size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

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

"Historic structure" means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in the states without approved programs.

"Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, useable solely for the parking of vehicles, building access, or storage in an area other than a basement is not considered a building's lowest floor provided that such enclosure is not built so to render the structure in violation of other applicable non-elevation design requirements of 44 CFR 60.3.

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

"Manufactured home park or manufactured home subdivision" means a parcel, or contiguous parcels, of land divided into two or more manufactured home lots for rent or sale.

"New construction" means structures for which the start of construction commenced on or after the effective date of a floodplain regulation adopted by a community and includes any subsequent improvements to such structures.

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

"Recreational vehicle" means a vehicle that is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the longest horizontal projections;
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

"Start of construction" (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348)) includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, 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 a slab or footings, the installation of pilings, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearings, grading, and filling, nor does it include the installation of streets and/or sidewalks; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building whether or not that alteration affects the external dimensions of the building.

"Structure" means a walled and roofed building, a manufactured home or a gas or liquid storage tank that is principally above ground.

"Substantial damage" means damage of any origin sustained by a structure, such that the cost of restoring the structure to its condition before damage would equal or exceed 50 percent of the market value of the structure before the damage occurred.

"Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement. This term includes structures that have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications that have been identified by the local code enforcement officer and that are the minimum necessary to assure safe living conditions; or
2. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

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

"Violation" means the failure of a structure or other development to be fully compliant with this subchapter. A new or substantially improved structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR 60.3(b)(5), (c)(4), (c)(10), (e)(2), (e)(4), or (e)(5) is presumed to be in violation, until such time as that documentation is provided.

§ 19:4-9.4 Lands to which this subchapter applies

This subchapter shall apply to all areas of special flood hazards within the boundaries of the District (NFIP community number 340570).

§ 19:4-9.5 Basis for establishing the areas of special flood hazard

The areas of special flood hazard identified by the FIA in a scientific and engineering report entitled, "Flood Insurance Study, Bergen County, New Jersey, All jurisdictions," dated August 28, 2019, with accompanying FIRM, Panel numbers 0245H, 0252H, 0253H, 0254H, 0256H, 0257H, 0258H, 0259H, 0261H, 0262H, 0263H, 0264H, 0266H, 0267H, 0268H, 0307H, 0331H, and 0332H, is hereby incorporated by reference, as amended and supplemented, and declared to be a part of this chapter. The effective date of the floodplain management regulations is August 28, 2019. The Flood Insurance Study and FIRM mapping are on file at the Offices of the New Jersey Sports and Exposition Authority, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

§ 19:4-9.6 Fees

(a) Any requests for flood hazard certification or variances and appeals shall be submitted to the NJSEA and accompanied by such fee as set forth in N.J.A.C. 19:4-11.2.

(b) Any requests for copies of the regulations, study, or maps submitted to the NJSEA shall be accompanied by a copying fee as specified in N.J.S.A. 46:1A-1 et seq.

§ 19:4-9.7 Penalties and enforcement

Penalties and enforcement of these regulations shall be enforced as per N.J.A.C. 19:4-4.21.

§ 19:4-9.8 Other permits

No building permit, zoning certificate, occupancy certification, subdivision plat approval, or implementation plan approval shall be issued by any official or agency of the NJSEA on any land, or portion thereof, that is within an area of special flood hazard until there has been compliance with this subchapter. Any approvals issued in conflict with this subchapter shall be null and void.

§ 19:4-9.9 Abrogation and greater restrictions

This subchapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this subchapter and other regulations, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

§ 19:4-9.9A Interpretation

Interpretation of this subchapter shall be in accordance with N.J.A.C. 19:4-2.1 and 4.12A.

§ 19:4-9.10 Warning and disclaimer of liability

The degree of flood protection required by this subchapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the area of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the NJSEA, any officer or employee thereof, or the FIA for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

§ 19:4-9.11 Development permit

No structure or land shall be constructed, relocated, extended, converted or altered, including placement of manufactured homes, after February 17, 2004 within any area of a special flood hazard established at N.J.A.C. 19:4-9.5 unless a zoning certificate, construction permit, occupancy certification, subdivision approval, sanitary landfill approval or any other development permit approvals as required by P.L. 2015, c. 19 (N.J.S.A. 5:10A-1 et seq.) shall first have been obtained from the NJSEA certifying that the proposed construction, use, or development complies with this chapter, including, but not limited to, N.J.A.C. 19:4-4.4 and 9.20(b). In addition, the extent to which any watercourse is proposed to be altered or relocated as a result of proposed development shall be depicted on the site plan.

§ 19:4-9.12 Administration

The administration and implementation of this subchapter in accordance with its provisions is vested in the Chief Engineer, except for the granting of variances pursuant to N.J.A.C. 19:4-4.14(a).

§ 19:4-9.13 Duties and responsibilities of the Chief Engineer

(a) The Chief Engineer shall administer the provisions of this subchapter in the manner set forth in this section. In furtherance of such authority, the Chief Engineer shall undertake such actions as he or she deems appropriate, including, but not be limited to, the following:

1. Maintain permanent and current records with respect to this section, including amendments thereto;
2. Review and approve or disapprove all development permits after determining that the requirements of this regulation have or have not been satisfied;
3. Review all development permits to determine if the proposed development adversely affects the flood carrying capacity of the area of special flood hazard.
 - i. If it is determined that there is no adverse effect, then the permit shall be granted consistent with the provisions of this section.
 - ii. If it is determined that there is an adverse effect, then flood damage mitigation measures shall be made a condition of the permit; if such mitigation cannot be accomplished, the permit shall be denied;
4. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of N.J.A.C. 19:4-9.27(a)1 are met.
5. Maintain for public inspection all records pertaining to development permits, including: obtaining and recording the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement; verifying and recording the actual elevation (in relation to mean sea level) and maintaining flood proofing certifications for all new or substantially improved flood proofed structures;
6. Notify adjacent municipalities and the New Jersey Department of Environmental Protection, Bureau of Flood Control and the Land Use Regulation Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the FIA; require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished;
7. When base flood elevation data has not been provided in accordance with N.J.A.C. 19:4-9.5, Basis for establishing the areas of special flood hazard, the Chief Engineer shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, in order to administer N.J.A.C. 19:4-9; and
8. Make interpretations where needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in N.J.A.C. 19:4-4.19.

9. The Chief Engineer, in coordination with the municipal code enforcement official, shall perform substantial damage review as follows:

- i. After an event resulting in building damage, assess the damage to structures due to flood and non-flood causes;
- ii. Record and maintain the flood and non-flood damage of substantial damage structures and provide a letter of Substantial Damage Determination to the property owner and the New Jersey Department of Environmental Protection, Bureau of Flood Control; and
- iii. Ensure that the substantial improvements meet the requirements of N.J.A.C. 19:4-9.20.

§ 19:4-9.14 Variances from floodplain management regulations

(a) In cases in which there is exceptional hardship in carrying out the literal provision of this chapter, whether because of conflicting requirements or otherwise, the Board of Commissioners may authorize a variance from such provision. In passing upon requests for variances, the Board of Commissioners shall consider all technical evaluations; all relevant factors and standards specified in other sections of this chapter; and the following:

1. The danger that materials may be swept onto other lands, to the injury of others;
2. The danger to life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage to the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;
6. The availability of alternative locations for the proposed use that are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the comprehensive plan and floodplain management program of that area;
9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

(b) The procedure to be followed in an application for a variance from this chapter shall be the same as the procedure specified in N.J.A.C. 19:4-4.14.

(c) Any appeal of a variance recommendation shall be in accordance with N.J.A.C. 19:4-4.19.

§ 19:4-9.15 Standards for the granting of variances

(a) Variances may be issued for new construction and substantial improvements to be erected on a lot contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the items in N.J.A.C. 19:4-9.14(a) have been fully considered.

(b) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

(c) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(d) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(e) Variances shall only be issued upon:

1. A showing of good and sufficient cause;
2. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in N.J.A.C. 19:4-9.14(a) or conflict with existing local laws or ordinances.

(f) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

§ 19:4-9.16 Conditions

Upon consideration of the factors of N.J.A.C. 19:4-9.14(a) and the purposes of this chapter, the decision may impose such conditions to the granting of variances as deemed necessary to reduce or minimize any potentially injurious effect of such variance upon other property in the neighborhood, and to carry out the general purpose and intent of this chapter. Failure to comply with any of the conditions or restrictions placed on a variance shall constitute a violation of this chapter.

§ 19:4-9.17 Written decision and records

A written decision on an application for a variance shall be rendered in accordance with the procedure specified in N.J.A.C. 19:4-4.14. The Chief Engineer shall maintain complete records of all actions with respect to applications for variances, including technical information, and shall report any variances to the Federal Emergency Management Agency upon request.

§ 19:4-9.18 Appeals

An appeal from an adverse decision of the Board of Commissioners made pursuant to this subchapter may be made in accordance with the provisions of N.J.A.C. 19:4-4.19.

§ 19:4-9.19 Scope

In all areas of special flood hazards, the standards in this subchapter and compliance with the applicable requirements of the New Jersey Uniform Construction Code (NJ UCC), N.J.A.C. 5:23, are required.

§ 19:4-9.20 Buildings

(a) Residential construction:

1. New construction and substantial improvement of any residential structure located in an A or AE zone on the District's DFIRM shall have the lowest floor, including basement, together with the attendant utilities (including all electrical, heating, ventilating, air conditioning, and other service equipment) and sanitary facilities, elevated at or above the base flood elevation (published FIS/FIRM) plus one foot, the best available flood hazard data elevation plus one foot, or as required by the American Society of Civil Engineers (ASCE)/SEI 24-14, Flood Resistant Design

and Construction, Table 2-1, incorporated herein by reference, as amended and supplemented, whichever is more restrictive. A copy of ASCE/SEI 24-14 may be obtained from ASCE, 1801 Alexander Bell Drive, Reston, VA 20191 or online at www.asce.org.

2. New construction and substantial improvement of any residential structure located in an AO or AH zone on the District's DFIRM shall have the lowest floor, including basement, together with the attendant utilities (including all electrical, heating, ventilating, air conditioning, and other service equipment) and sanitary facilities, elevated one foot above the depth number specified in feet, above the highest adjacent grade (at least three feet if no depth number is specified).

3. Adequate drainage paths shall be provided around structures on slopes to guide floodwaters around and away from proposed structures.

(b) Non-residential construction:

1. New construction and substantial improvement of any commercial, industrial or other nonresidential structure located in an area of special flood hazard shall have the lowest floor, including basement, together with the attendant utilities and sanitary facilities, as well as all electrical, heating, ventilating, air conditioning, and other equipment, as follows:

i. When located within an A or AE zone on the District's DFIRM, elevated at or above the base flood elevation (published FIS/FIRM) plus one foot, the best available flood hazard data elevation plus one foot, or as required by ASCE/SEI 24-14, Flood Resistant Design and Construction, Table 2-1, whichever is more restrictive;

ii. When located within an AO or AH zone on the District's DFIRM, elevated above the depth number specified in feet plus one foot, above the highest adjacent grade (at least three feet if no depth number is specified); or

iii. Adequate drainage paths shall be provided around structures on slopes to guide floodwaters around and away from proposed structures;

2. Non-residential construction deemed to be a non-substantial improvement of any commercial, industrial, or other non-residential structure located in an area of special flood hazard, together with the attendant utilities and sanitary facilities, as well as all electrical, heating, ventilating, air conditioning, and other equipment, may:

i. Be floodproofed, so that below the elevation equal to one foot above the base flood elevation (published FIS/FIRM) plus one foot, the best available flood hazard data elevation plus one foot, or as required by ASCE/SEI 24-14, Table 6-1, whichever is more restrictive, the structure is water tight with walls substantially impermeable to the passage of water;

ii. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy; and

iii. Be certified by a licensed professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of this subsection. Such certification shall be provided to the Chief Engineer.

(c) Manufactured homes shall be anchored in accordance with N.J.A.C. 19:4-9.23.

(d) All manufactured homes to be placed or substantially improved within an area of special flood hazard shall:

1. Be consistent with the need to minimize flood damage;

2. Be constructed to minimize flood damage;

3. Have adequate drainage provided to reduce exposure to flood damage; and

4. Be elevated on a permanent foundation such that the top of the lowest floor is elevated to a minimum of one foot above the base flood elevation (published FIS/FIRM), the best available flood hazard data elevation plus one foot, or as required by ASCE/SEI 24-14, Table 2-1, whichever is more restrictive; and

5. The manufactured home chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

§ 19:4-9.21 Building sites

(a) All building site construction, including, but not limited to, parking lots, driveways, sidewalks, truck maneuvering areas, and landscaped areas, shall be consistent with the need to minimize flood hazards and damage.

(b) All building site construction shall have public utilities and facilities such as sewer, gas, electric, and water systems located and constructed to minimize flood hazards and damage.

(c) Base flood elevation data shall be provided for building site proposals which contain at least three acres.

§ 19:4-9.22 Subdivision proposals

(a) All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.

(b) All subdivision proposals and other proposed new development shall have public utilities and facilities such as sewer, gas, electric, and water systems located and constructed to minimize flood damage.

(c) All subdivision proposals and other proposed new development shall have adequate drainage provided to reduce exposure to flood damage.

(d) Base flood elevation data shall be provided for subdivision proposals and other proposed new development that contain at least three lots or three acres (whichever is less).

§ 19:4-9.23 Anchoring

(a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

(b) All manufactured homes to be placed or substantially improved shall be anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

§ 19:4-9.24 Construction material and methods

(a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

§ 19:4-9.25 Utilities

(a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

(b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

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

(d) For all new construction and substantial improvements, the electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

§ 19:4-9.26 Enclosure openings

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

1. A minimum of two openings in at least two exterior walls of each enclosed area having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
2. The bottom of all openings shall be no higher than one foot above grade; and
3. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

§ 19:4-9.27 Floodways

(a) Areas designated as floodways are located within certain areas of special flood hazard. Since the floodway is an extremely hazardous area due to the velocity of flood waters that carry debris, potential projectiles, and erosion potential, the following provisions apply:

1. Encroachments in floodways, including new fill, new construction, substantial improvements, and other development, are prohibited, unless a technical evaluation demonstrates that encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.
2. If (a)1 above is satisfied, all new construction and substantial improvements shall comply with this subchapter.
3. In all areas of special flood hazard in which base flood elevation data has been provided and a floodway has been designated, the cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than two-tenths of a foot at any point.

§ 19:4-9.28 Severability

If any section, subsection, paragraph, sentence, clause, or phrase of this subchapter is invalidated by judicial decision, or any reason whatsoever, such decision shall not affect the remaining subchapter, section, subsection, paragraph, sentence, clause, or phrase of this subchapter, which shall remain in full force and effect, and for this purpose, the provisions of this subchapter are hereby declared to be severable.