

ORDINANCE NO. 18, 2018

AN ORDINANCE AMENDING CHAPTER 155 FLOOD HAZARD AREAS OF THE CODE OF THE CITY OF LINWOOD AND REPEALING ALL ORDINANCES HERETOFORE ADOPTED, THE PROVISIONS OF WHICH ARE INCONSISTENT HEREWITH.

**BE IT ORDAINED**, by the Common Council of the City of Linwood, County of Atlantic and State of New Jersey as follows:

**SECTION 1:** Chapter 155, Flood Hazard Areas is hereby amended to be titled as follows: Flood Damage Prevention

**SECTION 2:** Chapter 155, Article II, Section 155-5 Words and terms defined, the following definitions are hereby amended to read as follows:

**ADVISORY BASE FLOOD ELEVATION (ABFE)** — The elevation shown on a community's Advisory Flood Hazard Area Map that indicates the advisory stillwater elevation plus wave effect ( $ABFE = SWEL + \text{wave effect}$ ) resulting from a flood that has a one-percent-or-greater chance of being equaled or exceeded in any given year.

**ADVISORY FLOOD HAZARD AREA (AFHA)** — The land in the floodplain within a community subject to flooding from the one-percent annual chance event depicted on the Advisory Flood Hazard Area Map.

**ADVISORY FLOOD HAZARD AREA MAP** — The official map on which the Federal Emergency Management Agency has delineated the areas of advisory flood hazards applicable to the community.

**AREA OF SPECIAL FLOOD HAZARD** — The land in the floodplain within a community subject to a one-percent-or-greater chance of flooding in any given year. It is shown on the FIRM as Zone V, VE, V1-30, A, AO, A1-A30, AE, A99, or AH.

**BASE FLOOD** — A flood having a one-percent chance of being equaled or exceeded in any given year (also known as a "one-hundred year flood").

**BREAKAWAY WALLS** — 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.

**ELEVATED BUILDING** — A non basement building built, in the case of a building in an area of special flood hazard, to have the top of the elevated floor or, in the case of a building in a coastal high-hazard area or coastal A zone, to have the bottom of the lowest horizontal structural member of the elevated floor elevated above the base flood elevation plus freeboard by means of pilings, columns (posts and piers) or shear walls parallel to the flow of the water, and adequately anchored so as to not impair the structural integrity of the building during a flood up to the magnitude of the base flood. 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 floodwaters. In areas of coastal high-hazard and coastal A

zone, "elevated buildings" also includes a building otherwise meeting the definition of "elevated building" even though the lower area is enclosed by means of breakaway walls.

**EROSION** — The process of gradual wearing away of land masses.

**FLOOD INSURANCE STUDY (FIS)** — The official report in which the Federal Insurance Administration has provided flood profiles, as well as the Flood Insurance Rate Map and the water surface elevation of the base flood.

**FLOODPLAIN MANAGEMENT REGULATIONS** — Zoning ordinances, subdivision regulations, building codes, health regulations, special purposes ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such federal, state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

**HIGHEST ADJACENT GRADE** — The highest natural elevation of the ground surface prior to construction next to the proposed or existing walls of a structure.

**LATERAL ADDITION** — Improvements that increase the square footage of a structure. Commonly, this includes the structural attachment of a bedroom, den, recreational room, enclosed porch, or other type of addition to an existing structure. If the addition is a "substantial improvement," then the existing home and addition needs to be elevated to the higher regulatory standard plus freeboard pursuant to the best available data. If the addition is being constructed in conjunction with improvements to the existing structure and the sum of the renovations are equal to a "substantial improvement," then the addition and existing home need to be elevated to the best available data plus freeboard. If the common wall is demolished as part of the project, then the entire structure must be elevated. If only a doorway is knocked through it and only minimal finishing is done, then only the addition has to be elevated.

**LOWEST FLOOR** — The lowest floor of the lowest enclosed area, including the basement. An unfinished or flood-resistant enclosure, usable 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 nonelevation design requirements of 44 CFR Section 60.3.

**START OF CONSTRUCTION** — For other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348), includes substantial improvements and means the date the building permit was issued, provided that 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 clearing, grading and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings or 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** — A walled and roofed building, a manufactured home, or a gas or liquid storage tank that is principally above the ground.

**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% of the market value of the structure before the damage occurred. Substantial Damage also means flood-related damages sustained by a structure on two or more separate occasions during a 5-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 damages occurred.

**SUBSTANTIAL IMPROVEMENT** — Any reconstruction, rehabilitation, addition, or other improvement of a structure during a five-year period, the cost of which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement. Substantial improvement also means "cumulative substantial improvement." This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed or "repetitive loss". 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 which have been identified by the local code enforcement officer and which 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".

**SECTION 3:** Chapter 155, Article II, Section 155-5 Words and terms defined, is hereby amended to add the following definitions:

**AO ZONE-** Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet.

**AH ZONE -** Areas subject to inundation by 1-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.

**BASE FLOOD ELEVATION (BFE)** – The flood elevation shown on a published Flood Insurance Study (FIS) including the Flood Insurance Rate Map (FIRM). For zones AE, AH, AO, and A1-30 the elevation represents the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year. For zones VE and V1-30 the elevation represents the stillwater elevation (SWEL) plus wave effect ( $BFE = SWEL + \text{wave effect}$ ) resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.

**BEST AVAILABLE FLOOD HAZARD DATA** - The effective Flood Insurance Risk Maps or most recent Advisory Flood Hazard Area Maps FEMA has provided.

**BEST AVAILABLE FLOOD HAZARD DATA ELEVATION** - Is depicted on the effective FIRM or FIS, or an Advisory Flood Hazard Area Map or Advisory FIS.

**COASTAL A ZONE** – The portion of the Special Flood Hazard Area (SFHA) starting from a Velocity (V) Zone and extending up to the landward Limit of the Moderate Wave Action delineation. Where no V Zone is mapped the Coastal A Zone is the portion between the open coast and the landward Limit of the Moderate Wave Action

delineation. Coastal A Zones may be subject to wave effects, velocity flows, erosion, scour, or a combination of these forces. Construction and development in Coastal A Zones is to be regulated the same as V Zones/Coastal High Hazard Areas.

**CUMULATIVE SUBSTANTIAL IMPROVEMENT** - Any reconstruction, rehabilitation, addition, or other improvement of a structure that equals or exceeds 50 percent of the market value of the structure at the time of the improvement or repair when counted cumulatively for 5 years.

**EXISTING MANUFACTURED HOME PARK OR SUBDIVISION** — 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.

**FLOODPROOFING** — Any combination of structural and nonstructural 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.

**FREEBOARD** — A factor of safety usually expressed in feet above a flood level for purposes of flood plain management. “Freeboard” tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

**LIMIT OF MODERATE WAVE ACTION (LiMWA)** – Inland limit of the area affected by waves greater than 1.5 feet during the Base Flood. Base Flood conditions between the V Zone and the LiMWA will be similar to, but less severe than those in the V Zone.

**PRIMARY FRONTAL DUNE** — A continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves from coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from the relatively steep slope to a relatively mild slope.

**VIOLATION** — The failure of a structure or other development to be fully compliant with this ordinance. 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.

**SECTION 4:** Chapter 155, Article III, Section 155-7 Basis for establishing areas of special flood hazard, Sections A(1) (2) (3) and B are hereby amended to read as follows:

(1) A scientific and engineering report “Flood Insurance Study, Atlantic County, New Jersey, (All Jurisdictions) (34001CV000A) dated August 28, 2018.

(2) “Flood Insurance Rate Map for Atlantic County, New Jersey (All Jurisdictions)” as shown on Map Index and Panels 34001C0427F, 34001C0428F, 34001C0429F, 34001C0431F, 34001C0433F, and 34001CIND0A, whose effective date is August 28, 2018.

(3) Best Available Flood Hazard Data. These documents shall take precedence over

effective panels and FIS in construction and development regulations only. Where the effective mapping or Advisory Base Flood Elevation conflict or overlap, whichever imposes the more stringent requirement shall prevail.

B. The above documents are hereby adopted and declared to be a part of this chapter. The flood insurance study, maps and advisory documents are on file at 400 Poplar Avenue, Linwood City, New Jersey.

**SECTION 5:** Chapter 155, Article III, Section 155-8 Compliance required; violation and penalties Section A is hereby amended to read as follows:

A. No structure or land shall hereafter be re-located to, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

**SECTION 6:** Chapter 155, Article IV, Section 155-12 Development permits is hereby amended to read as follows:

A development permit shall be obtained before construction or development begins, including placement of manufactured homes, within any area of special flood hazard established in § 155-7. Application for a development permit shall be made to the Construction Official on forms furnished by him and may include but not be limited to the following plans, in duplicate, drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures, fill, storage of materials; drainage facilities; and the location of the foregoing. Specifically, the following information is required:

**SECTION 7:** Chapter 155, Article IV, Section 155-14 Duties of Construction Official, Section A Permit Review (3) (4), adding (5) (6), are hereby amended to read as follows:

(3) Review all development permits in the area of special flood hazard to determine if the proposed development adversely affects the flood-carrying capacity of the area of special flood hazard. For the purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than two-tenths of a foot at any point.

(4) Review plans for walls to be used to enclose space below the base flood level in accordance with § 155-19B.

(5) 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 155-18 are met.

(6) Review all development permits in the coastal high hazard and Coastal A Zone area to determine if the proposed development alters sand dunes or other natural coastal protections so as to increase potential flood damage.

**SECTION 8:** Chapter 155, Article IV, Section 155-14 Duties of Construction Official, Section C Information to be obtained and maintained is hereby amended to add the following:

(5) In coastal high hazard and Coastal A Zone areas, certification shall be obtained

from a registered professional engineer or architect that the provisions of 155-19B(1) and 155-19B(2) are met.

**SECTION 9:** Chapter 155, Article IV, Section 155-14 Duties of Construction Official, Section D Alteration of watercourses (1) is hereby amended to read as follows:

- (1) Notify adjacent communities 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 Federal Insurance Administration

**SECTION 10:** Chapter 155, Article IV, Section 155-14 Duties of Construction Official is hereby amended to add the following:

F. Substantial Damage Review

- (1) After an event resulting in building damages, assess the damage to structures due to flood and non-flood causes.
- (2) Record and maintain the flood and non-flood damage of substantial damage structures and provide a letter of Substantial Damage Determination to the owner and the New Jersey Department of Environmental Protection, Bureau of Flood Control.
- (3) Ensure substantial improvements meet the requirements of sections 155-17A, B and C.

**SECTION 11:** Chapter 155, Article V, Section 155-16 General Standards, Section F Enclosure Openings (1) is hereby amended to read as follows:

- (1) A minimum of two openings in at least two (2) 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.

**SECTION 12:** Chapter 155, Article V, Section 155-17 Specific Standards, Sections A, B & C are hereby amended to read as follows:

A. Residential construction.

- (1) For Coastal A Zone construction see section 155-19 Coastal high-hazard areas and coastal A zone. New construction or substantial improvement of any residential structure located in an A or AE zone 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 or as required by ASCE/SEI 24-14, Table 2-1, or the best available flood hazard data elevation, whichever is more restrictive, plus one foot of freeboard.
- (2) Require within any AO or AH Zone on the municipality's FIRM that all new construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated above the highest adjacent grade one foot above the depth number specified in feet (at least three feet if no depth number is specified) or at or above the best available flood hazard data elevation plus one foot, whichever is more restrictive. And, require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

B. Nonresidential construction. In an area of special flood hazard, all new construction and substantial improvement of any commercial, industrial or other nonresidential structure located in an A or AE zone (for Coastal A Zone construction see section 155-19 Coastal high-hazard areas and coastal A zone, 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 service equipment either:

- (1) Elevated to or above the base flood elevation or as required by ASCE/SEI 24-14, Table 2-1, or the best available flood hazard data elevation, whichever is more restrictive, plus one foot; and
- (2) Require within any AO or AH Zone on the municipality's DFIRM that all new construction and substantial improvement shall have the lowest floor, including basement, elevated above the highest adjacent grade one foot above the depth number specified in feet (at least three feet if no depth number is specified) or at or above the best available flood hazard data elevation plus one foot, whichever is more restrictive. And, require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures; or
- (3) Be floodproofed so that below the base flood level plus one foot, or as required by ASCE/SEI 24-14, Table 6-1, or the best available flood hazard data elevation plus one foot (whichever is more restrictive), the structure is watertight with walls substantially impermeable to the passage of water;
- (4) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
- (5) Be certified by a registered 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 official as set forth in § 155-14C(2).

C. Manufactured homes.

- (1) Manufactured homes shall be anchored in accordance with § 155-16A.
- (2) All manufactured homes to be placed or substantially improved within an area of special flood hazard shall be consistent with the need to minimize flood damage, be constructed to minimize flood damage, have adequate drainage provided to reduce exposure to flood damage, be elevated on a permanent foundation such that the top of the lowest floor is at or above the base flood elevation or as required by ASCE/SEI 24-14, Table 2-1, or the best available flood hazard data elevation, plus one foot (whichever is more restrictive) and the manufactured home chassis is 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 be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.

**SECTION 13:** Chapter 155, Article V, Section 155-19 Coastal high-hazard areas, title, introductions and specific parts of Section B are hereby amended to read as follows:

Coastal high-hazard areas and coastal A zone

Coastal high-hazard areas (V or VE Zones) and coastal A zones are located within the areas of special flood hazard established in § 155-7. These areas have special flood hazards associated with high-velocity waters from tidal surges and hurricane wave wash; therefore, the following provisions shall apply:

B. Construction methods.

- (1) Elevation. All new construction and substantial improvements shall be elevated on piling or columns so that:
  - (a) The bottom of the lowest horizontal structural member of the lowest floor (excluding the piling or columns) is elevated to or above the base flood elevation, or as required by ASCE/SEI 24-14, Table 4-1, or the best available flood hazard data elevation, whichever is more restrictive, plus one foot and,
- (2) Structural support.
  - (c) There shall be no fill used for structural support within Zones V1-30, VE,

V, and Coastal A on the community's DFIRM.

**SECTION 14:** Chapter 155, Article V, Section 155-19 Coastal high-hazard areas and coastal A zone is hereby amended to add the following:

C. Sand dunes. Prohibit man-made alteration of sand dunes within Coastal A Zones, VE and V Zones on the community's DFIRM which would increase potential flood damage.

**SECTION 15:** Should any sentence, clause, sentence, phrase or provision of this ordinance be declared unconstitutional or invalid by a Court of competent jurisdiction, such decision shall not affect the remaining portions of this ordinance.

**SECTION 16:** This ordinance shall take effect upon its final passage, publication and adoption in the manner prescribed by law.

<i>FIRST READING:</i>	<i>August 8, 2018</i>
<i>PUBLICATION:</i>	<i>August 13, 2018</i>
<i>PASSAGE:</i>	<i>August 22, 2018</i>

The within Ordinance was introduced at a meeting of the Common Council of the City of Linwood, County of Atlantic and State of New Jersey held on, August 8, 2018 and will be further considered for final passage after a public hearing thereon at a meeting of said Common Council on August 22, 2018.

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LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

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RICHARD L. DEPAMPHILIS, III, MAYOR