

Amend 7/8/13

ARTICLE 7 – RESOURCE REGULATIONS

SECTION 70 – FLOODPLAIN MANAGEMENT

70. FLOODPLAIN MANAGEMENT

70.1 PURPOSE

The Floodplain Management Districts exist to minimize the public and private losses due to flood conditions by controlling the **uses**, methods of construction, alteration of natural waterways and barriers, topographical features of land and erection of flood barriers.

70.2 STATUTORY AUTHORITY

Section 7-148 of the Connecticut General Statutes, as amended.

70.3 FLOODPLAIN MANAGEMENT DISTRICT MAPS

The Floodplain Management District is an area of special flood hazard identified by the Federal Emergency Management Agency (FEMA), as shown in its Flood Insurance Study (FIS) for New Haven County, Connecticut dated July 8, 2013, accompanying Flood Insurance Rate Maps (FIRM), dated July 8, 2013 (Panels 09009C0437J, 09009C0439J, 09009C0443J, 0900C0551J, 09009C0552J) and December 17, 2010 (Panels 09009C0428H, 09009C0436H, 09009C0438H, 09009C0441H, 09009C0556H,) and other supporting data applicable to the City of West Haven and any subsequent revisions thereto, are adopted by reference and declared to be a part of this regulation. Since mapping is legally adopted by reference into this regulation it must take precedence when more restrictive until such time as a map amendment or map revision is obtained from FEMA. The area of special flood hazard includes any area shown on the FIRM as Zones A, AE and VE, including areas designated as a floodway on a FIRM, Zone VE are also identified as a coastal high hazard area. Areas of special flood hazard are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for a community. BFEs provided on Flood Insurance Rate Map (FIRM) are approximate (rounded up or down) and should be verified with BFEs published in the FIS for a specific location.

70.4 SUBJECT ACTIVITIES

No zoning, building or other permit shall be issued for a **building, use or structure** unless a Floodplain Development Permit has been issued in accordance with the provisions of the Floodplain Management Ordinance of the City of West Haven, Connecticut.

70.5 USES PERMITTED

Such **uses** as are allowed and in the same manner as the underlying zone shall be permitted in the Floodplain Management District, within the restrictions of the Floodplain Management Ordinance of the City of West Haven.

70.6 PERMIT PROCEDURES

Application for a Floodplain Development Permit shall be made to the Building Official, in accordance with the provisions of the West Haven Floodplain Management Ordinance.

70.7 WAIVERS

The West Haven Flood and Erosion Control Board (hereafter FECB) shall hear and decide appeals and requests for waivers from the requirements, in accordance with the standards of the West Haven Floodplain Management Ordinance.

70.8 ENFORCEMENT

The FECB or a designated agent thereof shall have the power to enforce this provision.

70.9 FEES

Each application submitted to the Board for a waiver shall be accompanied by a fee payable to the City of West Haven in accordance with Chapter 101, Section 101-1 Fees, of the Code of the City of West Haven Code of Ordinances.

70.10 DEFINITIONS

Unless specifically defined below, words or phrases used in this regulation shall be interpreted so as to give them the meaning they in common usage and to give this regulation its most reasonable application. As used in this Section, the following definitions shall control:

APPEAL: A request for a review of the interpretation of any provision of this regulation by the **Zoning Enforcement Officer** or a request for a **variance** of such interpretation.

AREAS OF SPECIAL FLOOD HAZARD: Those areas in the flood plain within the city subject to a one per cent or greater chance of flooding in any given year. Areas of Special Flood Hazard are determined utilizing the **base flood elevations (BFE)** provided on the flood profiles in the **Flood Insurance Study (FIS)** for the city.

BASE FLOOD: The flood having a one per cent chance of being equaled or exceeded in any given year. (100 year flood)

BASE FLOOD ELEVATION (BFE): The elevation of the crest of the **base flood** (100 year flood). The height in relation to **mean sea level** (NAVD 1988) expected to be reached by the waters of the **base flood** at pertinent points in the floodplains of coastal and riverine areas.

BASEMENT: That portion of a building having its floor subgrade (below ground level) on all sides.

BREAKAWAY WALL: Any type of wall, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic, or any other suitable building material which are not part of the structural support of the building and which are so designed as to breakaway, under abnormally high tides or wave action, without damage to the structural integrity of the building on which they are used or any buildings to which they might be carried by **flood** waters.

BUILDING: See "Structure".

COASTAL HIGH HAZARD AREA: An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. Coastal High Hazard Areas are designated as Zone VE and Zone AE bounded by a line labeled "Limit of Moderate Wave Action (LiMWA)" on a Flood Insurance Rate Map (FIRM).

COST: As related to substantial improvements, the cost of any reconstruction, rehabilitation, addition, alteration, repair or other improvement of a structure as established by a detailed written contractor's estimate. The

estimate shall include, but not be limited to: the cost of materials (interior finishing elements, structural elements, utility and service equipment); sales tax on materials, building equipment and fixtures, including heating and air conditioning and utility meters, labor, built-in appliances, demolition and site preparation; repairs made to damaged parts of the building worked on at the same time; contractor's overhead; contractor's profit and grand total. Items to be excluded include: cost of plans and specifications, survey costs, permit fees, outside improvements such as septic systems, water supply wells, landscaping, sidewalks, fences, yard lights, irrigation systems and detached structures such as garages, sheds and gazebos.

DEVELOPMENT: Any man-made change to improved or unimproved real estate, including but not limited to the construction of buildings or structures; the construction of additions, alterations or substantial improvement to buildings or structures; the placement of buildings or structures; mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment; the storage, deposition, or extraction of materials; and the installation, repair or removal of public or private swage disposal system or waster supply facilities.

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 the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before January 17, 1979, the effective date of the floodplain management regulations adopted by the city.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to affixed (including the installation utilities, the construction of streets, and either final grading or the pouring of concrete pads.)

FEDERAL EMERGEMY MANAGEMENT AGENCY (FEMA): The federal agency that administers the National Flood Insurance Program (NFIP).

FLOOD OR FLOODING: a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters and/or unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD INSURANCE RATE MAP (FIRM): The official map of the city, on which FEMA has delineated both the areas of special flood hazards and the risk premium zones applicable to the city.

FLOOD INSURANCE STUDY (FIS): The official report provided by **FEMA**. The report contains flood profiles, wave height analysis, water surface elevations, as well as the Flood Insurance Rate Map (FIRM),

FLOODPROOFING: Reference to any combination of structural and non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to them or improve property, structures and their contents.

FLOODWAY: 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 one foot.

FLOOR: The top surface of an enclosed area in a building (including basement) i.e. top of slab in concrete slab construction or top of wood flooring on wood frame construction. The term does not include the floor of a garage used solely for parking of vehicles.

FUNCTIONALLY DEPENDENT FACILITY: A facility that cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers and shipbuilding and repair facilities. The term does not include seafood processing facilities, long term storage, manufacture, sales or service facilities.

HISTORIC STRUCTURE: Any structure that is (a) listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirement for individual listing on the National Register; (b) certified or preliminarily determined by the Secretary of the Interior as contributing to the historic significance of a registered historic district preliminarily determined by the Secretary to qualify as a registered historic district; (c) 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 (d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either (1) by an approved state program as determined by the Secretary of the Interior or (2) directly by the Secretary of the Interior in states with approved programs.

LOWEST FLOOR: The lowest floor of the lowest enclosed area (including basement).

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 also includes **camp trailers**, park trailers, travel trailers, **recreational vehicles** and similar transportable structures placed on a site 180 consecutive days or longer and intended to be improved property.

MANUFACTURED HOME PARK OR SUBDIVISION: A parcel or parcels of land divided into two or more **manufactured home** lots for rent or sale.

MARKET VALUE: The market value of the structure shall be determined by the cost approach to value, the quantity survey method, the segregated cost method, or the square foot method prior to the start of the initial repair or improvement, or in the case of damage, the value of the structure prior to the **damage** occurring.

MEAN SEA LEVEL: For purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988 or other datum to which base flood elevations shown on the city's Flood Insurance Rate Map are referenced.

NEW CONSTRUCTION: Reference to structures for which the start of construction commenced on or after January 17, 1979, the effective date of the floodplain management regulations, and includes any subsequent improvement to such structures.

NEW 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 on or after January 17, 1979, the effective date of the floodplain management regulation adopted by the city.

RECREATIONAL VEHICLE: A vehicle which is; (a) built on a single chassis; (b) four hundred (400) square feet or less when measured to the largest horizontal projection; (c) designed to be self-propelled or permanently towable by a light duty truck; and (d) designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel or seasonal use.

SAND DUNES: Naturally occurring accumulations of sand in ridges or mounds landward of the beach.

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, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of structure (included a manufactured home) on a site, such as the pouring of slabs of footing, installation of piles, construction of columns, or any work beyond the stage of excavation or 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, piers, or foundations or the erect 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 any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

SUBSTANTIAL DAMAGE: Damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 per cent of the market value of the structure before the damage occurred. "Substantial Damage" also means 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 average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT: Any repair, reconstruction, or improvement of a structure, taking place over a one year period, the cost of which equals or exceeds fifty per cent (50%) of the market value of the structure (as determined by the cost approach to value, the quantity survey method, the segregated cost method or the square foot method) as determined at the beginning of such one year period before the "start of construction" of the improvement or repair, or if the structure has been damaged and is

being restored, before the damage occurred. This term includes structures that have incurred "substantial damage", regardless of the actual repair work performed. (For the purposes of this definition "substantial improvement" is considered to occur when the first alteration any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimension of the structure.) 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 official 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".

VARIANCE: A grant of relief to a person from the requirements of this regulation which permits construction in a manner otherwise prohibited by this regulation where specific enforcement would result in unnecessary hardship.

VIOLATION: Failure of a structure or other development to be fully compliant with the city's flood plain management regulations. A structure or other development without required permits, lowest floor elevation documentation, flood-proofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION: The height, in relation to the North American Vertical Datum (NAVD) of 1988, (or other datum, where specified) of floods or various magnitudes and frequencies in the flood plains of coastal or riverine areas.

70.11 FLOOD HAZARD AREAS

Flood Hazard Areas include all areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study (FIS) for New Haven County, Connecticut dated July 8, 2013, accompanying Flood Insurance Rate Maps (FIRM), dated July 8, 2013, and other supporting data applicable to the City of West Haven, and any subsequent revisions thereto, are adopted by reference and declared to be a part of this regulation. Since mapping is legally adopted by reference into this regulation, it must take precedence when more restrictive until such time as a map amendment or map revision is obtained from FEMA. The area of special flood hazard includes any area shown on the FIRM as Zones, A, AE, and VE, including areas designated as a floodway on a FIRM. Zone VE are also identified as Coastal High Hazard Areas. Areas of special flood hazard are determined by utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for a community. BFEs provided on Flood Insurance Rate Maps (FIRM) are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location.

70.12 PERMIT REQUIRED

In any Flood Hazard Area, no land shall be filled or excavated and building or other structure shall be constructed, reconstructed, enlarged, moved or structurally

altered until a site plan has been approved by the Commissioner of Planning and Development and a building permit issued by the Building Official in accordance with these regulations, the State Building Code and any other applicable city ordinances or state statutes and all applicable state and federal permits have been obtained. This requirement may also be placed on any property which is subject to periodic flooding and inundation but which is not listed on the official Flood Insurance Rate Map at the discretion of the Commissioner of Planning and Development after consultation with the City Engineer, the Inland Wetland Agency and any other appropriate city officials.

70.13 GENERAL STANDARDS FOR ALL FLOOD HAZARD AREAS

1. All new construction and substantial improvement shall be anchored to prevent floatation, collapse or lateral movement of the structure resulting in hydrodynamic and hydrostatic loads, including the effects of buoyancy.
2. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damage, and be constructed with materials resistant to flood damage.
3. Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities shall be designed and/or located safely to prevent water from entering or accumulating within the components during conditions of flooding.
4. Adequate drainage shall be provided to reduce exposure to flood hazards.
5. All public utilities and facilities such as gas, storm and sanitary sewers, electrical and water systems both new and replacement are located and constructed to minimize or eliminate flood damage and infiltration.
6. On site waste disposal systems shall be located to avoid impairment of them or contamination from them during flooding.
7. The flood carrying capacity within altered or relocated water courses is to be maintained.
8. All manufactured homes shall be installed using methods and practices which minimize flood damage. Elevation construction standards include piling foundations placed no more than ten (10) feet apart, and the provision of reinforcement for piers more than six (6) feet above ground.
9. Equal Conveyance. Within the floodplain, except those areas which are tidally influenced, as designated on the Flood Insurance Rate Map (FIRM) for the city, encroachments resulting from filling, new construction or substantial improvements involving an increase in the footprint of the structure, are prohibited unless the applicant provides certification by a registered professional engineer demonstrating, with supporting hydrologic and hydraulic analyses performed in accordance with standard engineering practices that such encroachments shall not result in an (0.00 feet) increase in flood levels (base flood elevation). Work within the floodplain and the land adjacent to the floodplain, including work to provide compensatory storage shall not be constructed in such a way so as to cause an increase in flood stage or flood velocity.

10. **Compensatory Storage.** The water holding capacity of the floodplain, except those areas which are tidally influenced, shall not be reduced. Any reduction caused by filling, new construction or substantial improvements involving an increase in footprint to the structure, shall be compensated for by deepening or widening of the floodplain. Storage shall be provided on-site, unless easements have been gained from adjacent property owners; be hydraulically comparable and incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100 year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Compensatory storage can be provided off-site if approved by the city.
11. **Aboveground Storage Tanks.** Above-ground storage tanks (oil, propane, etc.) which are located outside or inside of a structure must either be elevated above the base flood elevation (BFE) on a concrete pad, or be securely anchored with tie-down straps to prevent flotation or lateral movement, have the top of the fill pipe extended above the BFE, and a screw fill cap that does not allow for the infiltration of flood water.
12. **Portion of Structure in Flood Zone** If any portion of a structure lies within the Special Flood Hazard Area (SFHA), the entire structure is considered to be in the SFHA. The entire structure must meet the construction requirement of the flood zone. The structure includes any attached additions, garages, decks, sunrooms, any other structure attached to the main structure. Decks or porches that extend into a more restrictive flood zone will require the entire structure to meet the standards of the more restrictive zone.
13. **Structures in Two Flood Zones.** If a structure lies within two or more flood zones, the construction standards of the most restrictive zone apply to the entire structure (i.e., V zone is more restrictive than A zone; structure must be built to the highest BFE). The structure includes any attached additions, garages, decks, sunrooms or any other structure attached to the main structure. (Decks or porches that extend into a more restrictive zone will require the entire structure to meet the requirements of the more restrictive zone.)

70.14 FLOODWAY REQUIREMENTS

1. In "A" zones where base flood elevations have been determined, but before a floodway is designated, no new construction, substantial improvement, or other development (including fill) shall be permitted which will increase base flood elevations more than one (1) foot at any point along the watercourse when all anticipated development is considered cumulatively with the proposed development.
2. Should data be requested and/or provided, the city shall adopt a regulatory floodway based on the principle that the floodway must be able to convey the waters of the base flood without increasing the water surface elevation more than one (1) foot at any point along the watercourse.

3. A regulatory floodway has been established on the Floor Insurance Rate Map by reference. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectile and erosion potential, the following provisions shall apply:
 - a. No encroachments including fill, new construction, substantial improvements and other developments shall be permitted unless certification, with supporting technical data, by a registered professional engineer is provided demonstrating, through hydrologic and hydraulic analysis performed in accordance with standard engineering practice, that encroachments shall not result in any (0.00 increase in flood levels during the occurrence of the base flood discharge. Fences in the floodway must be aligned with the flow and be of open design.
 - b. if provision (a) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions general and specific standards.

70.15 SPECIFIC STANDARDS FOR "A" ZONES

The following provisions shall apply in all areas of special flood hazard AE or A zones where base flood elevation data has been provided in accordance with Sections 70.18 and 70.20 of these regulations

1. Residential – all new construction and substantial improvements of residential structures shall be the lowest floor (including basement) elevated to or above the base flood elevation.
2. Non-residential – all new construction and substantial improvements to non-residential structures are required to:
 - a. have the lowest floor (including basement) elevated above the base flood level or;
 - b. together with attendant utility facilities, be designed so that below the base flood level, the structure is water tight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
3. Manufactured Homes –all manufactured homes (including "mobile" homes or recreational vehicles placed on a site for 180 consecutive days or longer) to be placed or substantially improved (including manufactured homes located outside of a manufactured home park or subdivision in a new manufactured home park or subdivision, in an existing manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or in an existing manufacture home park or subdivision on which a manufactured home has incurred substantial damage as a result of a flood) shall be;
 - a. elevated so that the lowest floor is above the base flood elevation; and
 - b. placed on a permanent foundation which is itself securely anchored and to which the structure is securely anchored so that it will resist flotation, lateral movement, and hydrostatic and hydrodynamic pressures. Anchoring may include, but not be limited to, the use of over-the-top or frame ties to ground anchors.

- c. recreational vehicles shall either be on the site for fewer than 180 consecutive days, and be fully licensed and ready for highway use, or meet all the general standards of Section 70.13 and the elevation and anchoring standards of Section 70.15.3 a and b. 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 utilities and security devices, and has no permanently attached additions.
4. Fully enclosed areas below the base flood elevation of elevated buildings. All new construction, substantial improvement, or repair to structures that have sustained substantial damage, whether residential or non-residential, that include fully enclosed areas formed by a foundation and other exterior walls below the base flood elevation (BFE) of an elevated building shall be designed to preclude finished living space and be designed to allow for the entry and exit of flood waters to automatically equalize hydrostatic flood forces on exterior walls (wet flood-proofing). Designs for complying with this requirement must either be certified by a registered professional engineer or architect, or meet the following minimum criteria listed in sections a-g) below:
 - a. Provide a minimum of two (2) openings (hydraulic flood vents) having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding. These hydraulic openings must be located on at least two different walls. Only the area (square footage) that lies below the BFE can be used in the calculation of net area of vents required. If the structure has more than one enclosed area, opening must be installed in the exterior walls of each enclosed area so that flood water can enter directly from the outside;
 - b. The bottom of all openings shall be no higher than one (1) foot above the finished grade adjacent to the outside of the foundation wall. At least one entire side of the structure's fully enclosed area must be at or above grade. Fill placed around the foundation walls must be graded so that the elevation inside the enclosed area is equal or higher than the adjacent outside elevation on at least one side of the building. The finished floor of the enclosed area shall be no lower than the bottom of the foundation openings. The foundation slab of a residential structure, including the slab of a crawlspace, must be set equal to the outside finished grade on at least one side of the building;
 - c. The openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic entry and exit of flood waters in both directions without any external influence or control such as human intervention, including the use of electrical and other non-automatic mechanical means. These coverings must not block or impede the automatic flow of flood waters into and out of the enclosed area. Other coverings may be designed and certified by a registered professional engineer or approved the City Engineer;

- d. The area cannot be used as finished living space. Use of the enclosed area shall be the minimum necessary and shall only be used for the parking of vehicles, building access or limited storage. Access to the enclosed area shall be the minimum necessary to allow for the parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator). The enclosed area shall not be used for human habitation or partitioned into separate rooms;
- e. All interior walls, floor and ceiling materials located below the BFE shall be unfinished and resistant to flood damage;

A registered professional engineer or architect shall review and/or develop structural design specifications and plans for construction and shall certify that the design and methods of construction are in accordance with acceptable standards of practice for meeting the provision of this section. Such certification shall be provided to the Commissioner of Planning and Development.

70.16 SPECIFIC STANDARDS FOR "V" ZONES

Located within the areas of special hazard established in Section 70.11 are areas designated as coastal High Hazard areas (Zones VE). Since these areas have special flood hazards associated with high velocity waters, including hurricane wave wash, the following provisions apply:

1. The use of fill for structural support is prohibited
2. All new construction or substantial improvement shall be located landward of the reach of the Connecticut Coastal Jurisdiction Line as defined in CGS 22a-359 as amended by Public Act 12-101.
3. Man made alteration of sand dunes which would increase potential flood damage is prohibited.
4. All new construction and substantial improvements shall be securely anchored on pilings or columns which are themselves anchored to resist flotation, collapse, and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. The anchoring and support system shall be designed with wind and water loading values which equal or exceed 100 year mean recurrence interval (one percent annual chance of floods and winds).
5. All new construction and substantial improvements shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) is located no lower than the base flood elevation level, with all space below the lowest supporting member open so as not to impede the flow of water.
6. A registered professional engineer or architect shall review and/or develop structural design specifications and plans for construction and shall certify that the design specifications and methods of construction are in accordance with acceptable standards of practice for meeting any provisions contained in subsections (4) and (5) above.
7. Non-supporting breakaway wall, lattice work or mesh screening may be allowed below the base flood elevation provided it is not part of the structural support of the building and is designed so as to break away ,

under abnormally high tides or wave action, without damage to the structural integrity of the building on which it is to be used and provided the following design specifications are met;

- a. Design safe loading resistance of each wall shall not be less than 10 nor more than 20 pounds per square foot; or
 - b. If more than 20 pounds per square foot, a registered professional engineer or architect shall certify that the design wall collapse would result from a water load event, and the elevated portion of the building and supporting foundation system shall not be subject to the effects of wind and water loads acting simultaneously on all building components during the base flood event. Maximum wind and water loading values to be used in this determination shall each have one percent (1%) chance of being equaled or exceeded in any given year (100 year mean recurrence interval).
 - c. If breakaway wall, lattice work or screening are utilized the resulting enclosed space shall not be designed to be used for human habitation, but shall be designed to be used only for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises.
 - d. Prior to construction, plans for any structures that will have breakaway wall, lattice work, or screening must be submitted to the Commissioner of Planning and Development for approval.
8. Any alteration, repair, reconstruction, or improvement to a structure shall not enclose the space below the lowest first floor except with breakaway wall, lattice work, or screening as provided for in subsection (7) above.
9. Manufactured Homes – all manufactured homes (including “mobile” homes and recreational vehicles) to be newly placed, undergoing a substantial improvement or repaired as a result of sustained substantial damage, shall be elevated so that the bottom of the lowest horizontal structural member is at or above the base flood elevation. The manufactured home must also meet all the construction standards for V Zones as per subsections (1) through (8) above. This includes manufactured homes located outside a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an existing manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or on a site in an existing manufactured home park in which a manufactured home has incurred substantial damage as a result of a flood. All manufactured homes shall be placed on a permanent foundation which itself is securely anchored and to which the structure is securely anchored so that it will resist flotation, lateral movement and hydrostatic pressures. Anchoring may include, but not be limited to, the use of over-the-top or frame ties to ground anchors. All manufactured homes shall be installed using

methods and practices that minimize flood damage. Adequate access and drainage shall be provided.

10. Recreational vehicles placed on sites with Zone VE shall either be on the site for fewer than 180 consecutive days, and be fully licensed and ready for highway use, or meet all the general standards of Section 70.13, the V Zone construction requirements of Section 70.16. A recreational vehicle is ready for highway use if it on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

70.17 SPECIFIC STANDARDS, UNNUMBERED "A" ZONES

The Commissioner of Planning and Development shall obtain, review and reasonably utilize any base flood elevation and floodway data available from Federal, State or other source, including data developed pursuant to Section 70.19 (4) of these regulations, as criteria for requiring that new construction, substantial improvements, or other development in Zone "A" on the city FIRM meet the standards of Section 70.14 and 70.15.

70.18 PERMIT PROCEDURES

A. ADMINISTRATIVE DUTIES OF THE COMMISSIONER OF PLANNING AND DEVELOPMENT

In the administration of these regulations, the Commissioner of Planning and Development shall perform the following duties, among others:

1. Notify adjacent communities and the Department of Environmental Protection, Inland Water Resources Division prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency.
2. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
3. Record the as-built elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with subsections 70.15 (1), 70.15 (2) and 70.16 (5).
4. Obtain and maintain all certifications required under these regulations.
5. Make the necessary interpretation, where needed, as to the exact location of boundaries of the areas of special flood hazard (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 the article.
6. Maintain all records pertaining to the provisions of these regulations.
7. Review all permit applications to determine whether the proposed development and building sites will be reasonably safe from flooding.

8. Review all permit applications to assure that the permit requirements of this regulation have been satisfied.
9. Review all permit applications to assure that all necessary Federal and State permits have been received and require that copies of such permits be provided and maintained on file with the permit application.

B. APPLICATION REQUIREMENTS

An application for a building permit or permission to fill or remove natural resources from a site in a designated flood hazard area or an area subjected to periodic flooding or inundation which is not in conjunction with a permanent construction plan, shall be made to the Commissioner of Planning and Development on forms furnished by him. A site plan drawn to a scale on not more than one(1) inch equals 100 feet signed and sealed by a registered professional engineer and/or land surveyor licensed to practice in the State of Connecticut shall be submitted in triplicate. The information to be contained on the site plan and application shall include but not be limited to:

1. Lot location, address and relationship to the flood hazard boundary
2. Lot dimensions and area
3. Existing and proposed contours at two foot intervals
4. Existing and proposed structure and yard dimensions
5. Finished floor elevation of the lowest floor (including basement of the proposed structure in relation to mean sea level)
6. Elevation in relation to mean sea level to which any non-residential structure has been flood proofed
7. Elevation of existing road(s) abutting the property in relation to mean sea level.
8. Road, walkways, and entrances(s) to the street(s) serving the property
9. Off-street parking
10. Proposed drainage
11. Location of utilities
12. Method of sewage disposal
13. Landscaping
14. Location and amount of fill to be removed or added
15. Certification from a registered professional engineer that the non-residential flood proofed structure meets the criteria set forth in these regulations
16. Description of the extent to which any watercourse will be altered or relocated as a result of the proposed development
17. Any additional documentation necessary to review the application
18. A statement as to whether or not the proposed alterations to an existing structure meets the criteria of the substantial improvement definition.
19. A statement as to whether there will be dry access to the structure during the 100-year storm event.
20. Certification as to floodway heights, as required by subsection 70.14.3
21. Certification as to breakaway walls and the design criteria stated in subsections 70.16.7 a and b

22. Certification as to the structural anchoring provision of subsections 70.14.4 and 70.14.5

Upon completion of the applicable portion of construction, the applicant shall provide the Commissioner of Planning and Development with verification of the as-built lowest floor elevation, defined as follows:

- a. In the "A" zone: the top of the lowest floor (including basement)
- b. In the "V" zone: the lowest point of the lowest supporting horizontal member (excluding pilings or columns)

Upon completion of flood proofed structures, the applicant shall provide the Commissioner of Planning and Development with the elevation to which the flood proofing is effective.

70.19 STANDARDS FOR SUBDIVISION PROPOSALS

In all flood hazard areas the following requirements shall apply:

1. All subdivision proposals shall be consistent with the need to minimize flood damage
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas electrical and water systems located and constructed to minimize flood damage.
3. All Subdivision proposals shall provide adequate drainage to reduce exposure to flood hazards; and
4. Base flood elevation data shall be provided for all subdivision proposals and other proposed developments (including manufactured home parks and subdivisions) which are five(5) acres or fifty (50) lots, whichever occurs first, and are located in an "A" zone.

70.20 VARIANCE PROCEDURES

1. The Flood Hazard Appeals Board, as established by the City of West Haven shall hear and decide appeals and requests for variances from the requirement of this regulation.
2. The Flood Hazard Appeals Board shall hear and decide appeals when it is alleged there is an error in any map requirement, decision, or determination made by the Commissioner of Planning and Development in the enforcement or administration of this regulation.
3. Any person aggrieved by the decision of the Flood Hazard Appeals Board or any taxpayer may appeal such decision to the Superior Court.
4. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this section.
5. In passing upon such application, the Flood Hazard Appeals Board shall consider all technical evaluation and all relevant factors and standards specified in other section of these regulations and:
 - a. The danger that materials may be swept onto other lands to the injury of others
 - b. The danger to life and property due to flooding or erosion damage
 - c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner

- d. The importance of the services provided by the proposed facility to the City of West Haven
 - e. The necessity to the facility of a waterfront location, where applicable
 - f. The availability of alternative locations not subject to flooding for the proposed use
 - g. The compatibility of the proposed use with existing and anticipated developments
 - h. The relationship of the proposed use to the comprehensive plan and flood management program for the area
 - i. The safety of access to the property in times of flood for ordinary and emergency vehicles
 - j. 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
 - k. The costs of providing governmental services during and after flood conditions including maintenance and repair of public facilities and facilities such as sewer, gas, electrical, water system, streets and bridges.
 - l. Generally, variances may be issued for new construction and substantial improvement to be erected on a lot of one-half (1/2) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level providing items(a) through (k) above have been fully considered. As the lot size increases beyond the one-half (1/2) acre, the technical justification required for issuing the variances increases.
6. Upon consideration of the factors listed above and purposes of this regulation, the Flood Hazard Appeals Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this regulation.
 7. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
 8. Conditions of Variances:
 - a. Variances shall only be issued upon a determination that the variance is the minimum necessary considering the flood hazard to afford relief
 - b. 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 or additional threats to public safety
 - c. Any applicant to whom a variance is granted shall be given written notice of the number of feet below the base flood elevation that the lowest floor level will be allowed to be built, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
 - d. The Commissioner of Planning and Development shall maintain the records of all appeals, action and report any variances to the Federal Emergency Management Agency upon request.

70.21 ABROGATION AND GREATER RESTRICTIONS

This regulation is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this regulation and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

70.22 INTERPRETATION

In the interpretation and application of this regulation, all provisions shall be:

1. considered as minimum requirements
2. liberally construed in favor of the governing body; and
3. deemed neither to limit nor repeal any other powers granted under state statutes.

70.23 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this regulation 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 regulation does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be freed from flooding or flood damages. This regulation shall not create any liability on the part of the City of West Haven or by any officer or employee thereof for any flood damages that result from reliance on this regulation or any administrative decision lawfully made hereunder.