

CODE OF ORDINANCES, CITY OF BRISTOL, CONNECTICUT
APPENDIX D, FLOOD DAMAGE PREVENTION (adopted on August 12, 2008)

SECTION 1 - STATUTORY AUTHORIZATION, FINDING OF FACT, PURPOSE AND OBJECTIVES

1.1. Statutory Authorization.

The Legislature of the State of Connecticut has in Section 7-148(c)(7)(A) and in Title 8, Chapter 124, Section 8-2 of the General Statutes delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City Council of City of Bristol, Connecticut, does ordain as follows:

1.2. Findings of fact.

- 1.2.1. The flood hazard areas of the City of Bristol are subject to periodic inundation which may result 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.
- 1.2.2. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages. Uncontrolled development and use of the floodplains can adversely affect the community.
- 1.2.3. The City of Bristol has voluntarily participated in the National Flood Insurance Program (NFIP) since 1988. The NFIP is founded on a mutual agreement between the federal government and each participating community. Local, state and federal governments must share roles and responsibilities to meet the goals and objectives of the NFIP. The community's role is of paramount importance. Property owners are able to receive federally-subsidized flood insurance only if the community enacts and enforces the minimum floodplain regulations required for participation in the NFIP.

1.3. Statement of purpose.

It is the purpose of this ordinance to regulate floodplain development, 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:

- 1.3.1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion or in flood heights or velocities;
- 1.3.2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- 1.3.3. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;
- 1.3.4. Control filling, grading, dredging and other development which may increase erosion or flood damage, and;
- 1.3.5. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

1.4. Objectives.

The objectives of this ordinance are:

- 1.4.1. To protect human life and health;
- 1.4.2. To minimize expenditure of public money for costly flood control projects;
- 1.4.3. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- 1.4.4. To minimize prolonged business interruptions;
- 1.4.5. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
- 1.4.6. To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas;
- 1.4.7. To insure that potential home buyers are notified that property is in a flood area; and
- 1.4.8. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions;

- 1.4.9. To prevent increase in flood heights that could increase flood damage and result in conflicts between property owners;
- 1.4.10. To discourage development in a floodplain if there is any practicable alternative to locate the activity, use or structure outside of the floodplain.

SECTION 2. DEFINITIONS

- 2.1 Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.
- 2.1.1. *Addition (to an existing building)* means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a firewall. Any walled and roofed addition which is connected by a firewall or is separated by independent perimeter load-bearing walls is new construction.
 - 2.1.2. *Administrator* means the city engineer of the City of Bristol or his designated representative.
 - 2.1.3. *Appeal* means a request for a review of the administrator's interpretation of any provision of this ordinance or a request for a variance.
 - 2.1.4. *Applicant* means that the owner or authorized agent of the owner of land partially or wholly located in an area of special flood hazard and on which land development is proposed. His/her name shall appear on the floodplain development permit application and will be responsible for assuring that the provisions of this ordinance are met and any stipulations or conditions placed at the time of approval are adhered to.
 - 2.1.5. *Area of Shallow Flooding (for a community with AO or AH Zones only)* – A designated AO, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual 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.
 - 2.1.6. *Area of special flood hazard* is the land in the floodplain within a community subject to one percent or greater chance of flooding in any given year.
 - 2.1.7. *Base flood* means the flood having a one (1%) percent chance of being equaled or exceeded in any given year also referred to as the one hundred (100) year flood, as published by the Federal Emergency Management Agency (FEMA) as part of a Flood Insurance Study (FIS) and depicted on a Flood Insurance Rate Map (FIRM).
 - 2.1.8. *Base flood elevation (BFE)* – The elevation of the crest of the base flood or 100-year flood. The height in relation to mean sea level expected to be reached by the waters of the base flood at pertinent points in the floodplains of coastal and riverine areas.
 - 2.1.9. *Basement* means that portion of a building having its floor subgrade (below ground level) on all sides.
 - 2.1.10. *Building* means any structure built for support, shelter, or enclosure for any occupancy or storage.
 - 2.1.11. *Cost* – As related to substantial improvements, the cost of any reconstruction, rehabilitation, addition, alteration, repair or other improvement of a structure shall be 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.
 - 2.1.12. *Designated representative* means the inland/wetlands enforcement officer of the City of Bristol or other person designated, in writing, by the flood and erosion commission to enforce the terms and provisions of this ordinance.
 - 2.1.13. *Development* means any manmade 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 improvements 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 sewage disposal systems or water supply facilities.
 - 2.1.14. *Elevated building* means a non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shear walls, or breakaway walls.

- 2.1.15. 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 home are to be affixed (including, as 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.
- 2.1.16. 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 manufacturing 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).
- 2.1.17. Federal Emergency Management Agency (FEMA)—The federal agency that administers the National Flood Insurance Program (NFIP).
- 2.1.18. Finished living space – Finished living space can include, but is not limited to, a space that is heated and/or cooled, contains finished floors (tile, linoleum, hardwood, etc.), has sheetrock walls that may or may not be painted or wallpapered, and other amenities such as furniture, appliances, bathrooms, fireplaces and other items that are easily damaged by floodwaters and expensive to clean, repair or replace. A fully enclosed area below the base flood elevation (BFE) cannot have finished living space and needs to be designed for exposure to flood forces. These spaces can only be used for parking, building access or limited storage.
- 2.1.19. 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;
 - (2) The unusual and rapid accumulation or runoff of surface waters from any source.
- 2.1.20. Flood and erosion commission means the conservation commission of the City of Bristol.
- 2.1.21. Flood fringe area means that area outside of the floodway and within the limits of the base flood.
- 2.1.22. Flood boundary and floodway map (FBFM) – The official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated the limits of the regulatory floodway and 100-year floodplain.
- 2.1.23. Flood insurance rate map (FIRM) means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community. FIRM published after January 1990 may also show the limits of the regulatory floodway.
- 2.1.24. Flood insurance study (FIS) – The official study of a community in which the Federal Emergency Management Agency (FEMA) has conducted a technical engineering evaluation and determination of local flood hazards, flood profiles and water surface elevations. The Flood Insurance Rate Maps (FIRM), which accompany the FIS, provide both flood insurance rate zones and base flood elevations, and may provide the regulatory floodway limits.
- 2.1.25. Floodplain development permit means the formal granting of permission to an applicant for land development in areas of special flood hazard including permitted uses, and special exceptions as herein described and specified.
- 2.1.26. Flood proofing means any combination of structural and non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water or sanitary facilities, structures and their contents.
- 2.1.27. 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 one (1.0') foot. For the purposes of these regulations, the term "Regulatory Floodway" is synonymous in meaning with the term "Floodway".
- 2.1.28. Floor means 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 in wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.
- 2.1.29. Functionally dependent utility means a facility which cannot be used for its intended purpose unless it is located in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding and ship repair. The term does not include seafood processing facilities, long-term storage, manufacture, sales, or service facilities.
- 2.1.30. Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls or a structure.
- 2.1.31. 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 requirements 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 or a 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 without approved programs.

- 2.1.32. Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area is not considered a building's lowest floor, provided that such an area meets the design requirements specified in Section 5.3.1.3 of this ordinance.
- 2.1.33. Manufactured home means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, recreational vehicles and similar transportable structures placed on a site for one hundred eighty (180) consecutive days or longer and intended to be improved property.
- 2.1.34. Manufactured home park or subdivision means a parcel, or contiguous parcels, of land divided into two (2) or more manufactured home lots for rent or sale.
- 2.1.35. Mean sea level (MSL) – The North American Vertical Datum (NAVD) of 1988 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map (FIRM) are referenced.
- 2.1.36. National Geodetic Vertical Datum (NGVD) as corrected in 1988 is a vertical control used a reference for establishing varying elevations within the floodplain.
- 2.1.37. New construction means structures for which the "start of construction" commenced on or after the effective date of this ordinance (not the revision date) and includes any subsequent improvements to such structures.
- 2.1.38. 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 the effective date, (not the revision date), of the floodplain management regulation adopted by the community.
- 2.1.39. Permitted uses means those types of development in areas of special flood hazard which do not require a floodplain development permit from the city but, do require a certificate of approval from the administrator.
- 2.1.40. Recreational vehicle means a vehicle which is (i) built on a single chassis, (ii) four hundred (400) square feet or less when measured at the largest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light-duty truck; and (iv) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
- 2.1.41. Regulated uses means those types of development which require a floodplain development permit from the administrator provided that, in the opinion of the administrator, the proposed development will not have a significant impact on the floodplain or does not alter more than forty (40) percent of the floodplain designated on the subject property in which cases the proposed development shall be classified a special exception.
- 2.1.42. Special exception means those types of development which require a floodplain development permit directly from the Bristol Flood and Erosion Commission.
- 2.1.43. Special flood hazard area (SFHA) – The land in the floodplain within a community subject to a one (1) percent or greater chance of flooding in any given year. SFHAs 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 only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. SFHAs include, but are not necessarily limited to, the land shown as Zones A, A1-30, AE, AO, AH, and the Coastal High Hazard Areas shown as Zones V, V1-30, and VE on a FIRM. The SFHA is also called the Area of Special Flood Hazard.
- 2.1.44. 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, substantial improvement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, 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 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 structures. 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.

- 2.1.45. Structure means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other man-made facilities or infrastructures.
- 2.1.46. 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 fifty (50) percent of the market value of the structure before the damage occurred.
- 2.1.47. Substantial improvement – Any combination of repairs, reconstruction, rehabilitation, alterations, additions or other improvements to a structure, taking place during a ten (10) year period, in which the cumulative cost equals or exceeds fifty (50) percent of the market value of the structure as determined at the beginning of such ten (10) year period. This term includes structures that have incurred "substantial damage", regardless of the actual repair work performed. For purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term 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."
- 2.1.48. Variance is a grant of relief from the requirements of this ordinance which permits construction in a manner otherwise prohibited by this ordinance where specific enforcement would result in unnecessary hardship.
- 2.1.49. Variance – A grant of relief by a community from the terms of the floodplain management ordinance that allows construction in a manner otherwise prohibited and where specific enforcement would result in unnecessary hardship.
- 2.1.50. Watercourse means stream, river, brook or channel which conveys surface runoff for a majority of the year. These may or may not be part of designated floodway areas.
- 2.1.51. Water surface elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

SECTION 3. GENERAL PROVISIONS

3.1. Lands to which this ordinance applies.

This ordinance shall apply to all areas of Special Flood Hazard Areas (SFHA) within the jurisdiction of the City of Bristol.

3.2. Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency in its flood insurance study (FIS), for the City of Bristol, Connecticut and the accompanying Flood Insurance Rate Maps (FIRM) and/or Flood Boundary and Floodway Maps (FBFM), dated November 18, 1981 and as later amended and effective September 26, 2008 as thereafter issued and as further amended, and other supporting data, and any subsequent revisions thereto, are hereby adopted by reference and declared to be a part of this ordinance. Such mapping hereby adopted by reference is declared to take precedence over any other provision of this ordinance when more restrictive until such time as FEMA adopts and issues a map amendment or map revision is issued modifying this requirement.

3.3. Development permit.

A floodplain development permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities.

3.4. Compliance.

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

3.5. Abrogation and greater restrictions.

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

3.6. Interpretation.

In the interpretation and application of this ordinance 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.

3.7. Warning and disclaimer of liability.

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This ordinance does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the City of Bristol or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder. The City of Bristol, its officers and employees shall assume no liability for another person's reliance on any maps, data or information provided by the City of Bristol.

SECTION 4. ADMINISTRATION

4.1. Designation of the ordinance administrator.

The city engineer is hereby appointed to administer and implement the provisions of this ordinance. The actions of the city engineer in the implementation of this ordinance are subject to review by the flood and erosion commission of the city.

4.2. Permit procedures.

Application for a floodplain development permit shall be made to the administrator on forms furnished by him or her, 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 or materials, drainage facilities and the location of the foregoing. Specifically, the following information is required:

4.2.1. Application stage:

- (a) Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures section 5.3.1.(a);
- (b) Elevation in relation to mean sea level to which any non-residential structure will be flood-proofed section 5.3.1.(a);
- (c) A description, including maps, drawings and site plans, which defines the extent to which encroachment of the flood-fringe area resulting from the proposed development, new or substantial improvement. Include the Base flood elevation (BFE) for the site in question as determined in the FEMA Flood Insurance Study (FIS) or Flood Insurance Rate Map (FIRM). The FIS flood profiles provide more accurate BFE data than the FIRM. The extent of the 100-year floodplain and floodway must be depicted with a boundary line on any site plans and shown in relation to existing and proposed structures or development.
- (d) A statement as to whether or not the proposed alterations to an existing structure meets the criteria of the substantial improvement definition section 2.1.29;
- (e) A statement as to whether there will be dry access to the structure during the 100-year storm event.
- (f) Notify the regional planning agency and the affected municipality at least thirty-five (35) days prior to the public hearing if any change of regulation or use of a flood zone will affect an area within five hundred (500) feet of another municipality.
- (g) Notify adjacent communities and the department of environmental protection, water resources unit prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.

Where applicable the following certifications by a registered engineer or architect are required, and must be provided to the administrator. The design and methods of construction must be certified to be in accordance with accepted standards of practice, and with the provisions of article 5, section B [section 5.3].

- (h) Nonresidential flood-proofing must meet the provisions of section 5.3.1.(b)(c);
- (i) Enclosed areas below the base flood elevation-if the minimum design criteria in section 5.3.2.(a)—5.3.2.(c) is not used then the design and construction methods must be certified as explained in section 5.3.2.;
- (j) A description, including maps, drawings, computations and other information, of the extent to which any floodway and/or watercourse will be altered or relocated as a result of the development, new or substantial improvement. No increase in floodway heights may be allowed. Any development in a floodway must meet the provisions of section 5.3.3.;
- (k) The decision on all permits shall be published by the flood and erosion commission in a newspaper having a general circulation in the Bristol area in accordance with the statutory time limits set for the inland/wetlands commission. Publication shall be following the next regularly scheduled meeting of the commission subsequent to the date of the decision.
- (l) The effective date of a duly issued permit shall be seven (7) days after the aforementioned publication date provided no appeal of the permit decision has been taken prior to that date.

4.2.2. Construction stage. Upon completion of the applicable portion of construction the applicant shall provide verification to the administrator of the following as is applicable: Lowest floor elevation-the elevation to be verified for:

- (a) A structure in a numbered A zone is the top of the lowest floor (including basement) section 5.3.1.(a);

(b) A structure which has been floodproofed is the elevation to which the floodproofing is effective section 5.3.1.(b).

- 4.2.3. *Deficiencies.* Deficiencies detected by the review of the above listed shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.
- 4.2.4. *Completion.* Upon completion of the permitted development and prior to issuance of a Certificate of Occupancy (CO), necessary as-built surveys (prepared by a Connecticut Licensed Professional as per Connecticut State Statutes) and engineering and architectural certifications shall be provided to the administrator demonstrating compliance with the approved plans and standards set forth in Section 4.2.
- 4.2.5. *Duration.* The duration of any permit issued under this section for the development of property for which an approval is required shall be valid for five years, provided the Agency may establish a specific time period within which any regulated activity shall be conducted. Any permit issued under this section for any other activity shall be valid for not less than two years and not more than five years. Any such permit shall be renewed upon request of the permit holder unless the Agency finds that there has been a substantial change in circumstances which requires a new permit application or an enforcement action has been undertaken with regard to the regulated activity for which the permit was issued, provided no permit may be valid for more than ten years.

4.3. Duties and responsibilities of the city engineer.

Duties of the city engineer shall include, but not be limited to:

- 4.3.1. Review all floodplain development permit applications to determine whether proposed building sites will be reasonably safe from flooding.
- 4.3.2. Review all floodplain development permit applications to assure that the permit requirements of this ordinance have been satisfied.
- 4.3.3. Advise permittee that additional federal or state permits may be required, and if specific federal or state permit requirements are known, require that copies of such permits be provided and maintained on file with the development permit. Possible including but not limited to: Coastal Area Management Permit, Water Diversion, Dam Safety, Corps of Engineers 404.
- 4.3.4. Review all floodplain development permit applications to assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.
- 4.3.5. Record the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with section 5.3.1.(a).
- 4.3.6. Record the elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood-proofed, in accordance with section 5.3.1.(b).
- 4.3.7. When flood-proofing is utilized for a particular structure the administrator shall obtain certification from a registered professional engineer or architect, in accordance with section 5.3.1.(b).
- 4.3.8. Where interpretation is 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 administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
- 4.3.9. When base flood elevation data or floodway data have not been provided in accordance with article 3, section B, then the administrator 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 the provisions of section 5.
- 4.3.10. All records pertaining to the provisions of this ordinance shall be maintained in the office of the city engineer for public inspection.
- 4.3.11. Interpretation of FIRM boundaries. 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 an opportunity to appeal the interpretation as provided in section 6.2.
- 4.3.12. Require that all subdivision proposals and other proposed new developments and substantial improvements include base flood data.
- 4.3.13. Assure, through inspection of permitted activities, that compliance with the ordinance is maintained.

- 4.3.14. Grant permits for "regulated use" activities as defined in section 4.5.
- 4.3.15. Provide a monthly report to the flood and erosion commission outlining all floodplain development permit activity that took place in the preceding month and the current status of all permit applications.
- 4.3.16. To provide technical assistance to the flood and erosion commission on matters concerning special exceptions.

4.4. Permitted uses.

- 4.4.1. The following open space uses shall be permitted within the flood fringe area, excluding the regulatory floodway, to the extent that they are not prohibited by any other ordinance or regulation and provided they do not require structures, earth fill, the storage of materials or equipment, or the use of utilities such as gas, electric, water or sewer.
 - (1) Agricultural uses such as: general farming, pasture, grazing, outdoor plant nurseries, horticulture, truck farming, forestry, sod farming, and wild crop harvesting.
 - (2) Any parking areas for three (3) vehicles or less.
 - (3) Private and public recreational uses such as: golf courses, open tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails.
 - (4) Residential uses such as: lawns, gardens and play areas.
- 4.4.2. Permitted uses shall be granted by certificate by the city engineer when it has been determined that the provisions of subsection 4.4.1 have been met.

4.5. Regulated uses.

- 4.5.1. New development and substantial improvements shall be permitted within areas of special flood hazard, excluding the regulatory floodway, to the extent that they are not prohibited by any other ordinance or regulation and provided they meet the provisions of section 5, provisions for flood hazard reduction, of this ordinance.
- 4.5.2. Regulated uses shall be granted by the city engineer provided that all provisions of this ordinance have been met.

4.6. Special exceptions.

- 4.6.1. New development and substantial improvements may be permitted as a special exception in the regulated floodway and shall conform to the provisions of this ordinance, provided:
 - (1) That the area of the site covered by a proposed improvement, addition or accessory structure, be no more than twenty-five (25) percent of the area of the site covered by the existing building of principal use, as long as the pertinent requirements of this section are met. A special exception granted under these conditions shall be on a one-time-only basis.
 - (2) That the applicant provide the commission with a report prepared by a professional engineer registered in the state, that certifies that the construction, as proposed, will not adversely affect the storage capacity or flow capacity of the affected watercourse during a base flood.
 - (3) That where floodproofing is utilized for a particular non-residential structure, a professional engineer registered in the state shall certify that the floodproofing methods are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces.
 - (4) No encroachment of the regulatory floodway, including fill, substantial improvements, accessory structures or other development including public works projects of the state, federal or local government, shall be allowed except for those activities specifically granted as special exception by the Bristol Flood and Erosion Commission. In no case, however, will any such activity be allowed if an increase in flood levels within the community would result.
 - (5) In the event that elimination of a structure takes place, by reason of fire or other like catastrophe, and is subsequently replaced with a new structure of like kind and intended use, this will be allowed to the extent that the building coverage will not exceed one hundred twenty-five (125) percent of the displaced building coverage, as long as all requirements of pertinent paragraphs of this section are met.
 - (6) Commercial or industrial loading areas, parking areas for more than three (3) vehicles, or airport landing strips, are in accordance with the pertinent paragraphs or this section.

- 4.6.2. Alterations, reconstruction or rehabilitation of watercourse and land areas within the regulated floodway may be permitted as a special exception and shall conform to the provisions of this ordinance.
- 4.6.3. Special exceptions shall be granted only by the Bristol Flood and Erosion Commission, to the extent that they are not prohibited by any other ordinance or regulation, and provided all provisions of this ordinance are met.
- 4.6.4. In order to assure the furtherance of the purposes of this ordinance, other requirements may be imposed upon the applicant as a condition to the granting of a special exception.

4.7. Application fees.

- 4.7.1. An application fee, paid in the form of a certified check, payable to the City of Bristol, shall be submitted to the Administrator at the time of application. The fee shall be at the following rates:

Permitted use	\$5.00
Regulated use	50.00
Special exception	100.00

- 4.7.2. The flood and erosion commission may review the application fee rates on an annual basis and, after conducting a public hearing, may adjust the rates to reflect administrative costs.

SECTION 5. PROVISIONS FOR FLOOD HAZARD REDUCTION

5.1. General standards.

In all areas of special flood hazard the following provisions are required:

- 5.1.1. New construction, structures that have sustained substantial damage, and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure;
- 5.1.2. New construction, structures that have sustained substantial damage, and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- 5.1.3. New construction, structures that have sustained substantial damage, or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- 5.1.4. Electrical, heating, ventilation, plumbing, 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;
- 5.1.5. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- 5.1.6. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the system into flood waters;
- 5.1.7. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
- 5.1.8. Manufactured homes:
 - (a) All manufactured homes (including "mobile" homes placed on a site for one hundred eighty (180) consecutive days or longer) to be places, or substantially improved shall be elevated so that the lowest floor is at least one (1) foot above the base flood elevation;
 - (b) It 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 and hydrodynamic pressures. Anchoring may include, but not be limited to, the use of over-the-top or frame ties to ground anchors;
 - (c) It shall be installed using methods and practices which minimize flood damage.
 - (1) Adequate access and drainage should be provided.

- (2) Elevation construction standards include, piling foundations placed no more than ten (10) feet apart, and reinforcement is provided for piers more than six (6) feet above ground level.

- 5.1.9. In any portion of a watercourse which is altered or relocated the flood carrying capacity shall be maintained and;
- 5.1.10. A structure already in compliance with the provisions of this ordinance shall not be made non-compliant by any alteration, repair, reconstruction or improvement to the structure.
- 5.1.11. New construction, substantial improvements and repair to structures that have sustained substantial damage cannot be constructed or located entirely or partially over water.
- 5.1.12. Above-ground storage tanks (oil, propane, etc.) which are located outside or inside of the 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 have a screw fill cap that does not allow for the infiltration of flood water.
- 5.1.13. In any portion of a watercourse that is altered or relocated, the flood carrying capacity must be maintained. Notify adjacent communities and the Connecticut Department of Environmental Protection (DEP), Inland Water Resources Division prior to any alteration or relocation of a watercourse.
- 5.1.14. 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 requirements of the flood zone. 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 flood zone will require the entire structure to meet the standards of the more restrictive zone.
- 5.1.15. 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.)
- 5.1.16. 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 and/or widening of the floodplain. Storage shall be provided on-site, unless easements have been gained from adjacent property owners; it shall be provided within the same hydraulic reach and a volume not previously used for flood storage; it shall 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 municipality.
- 5.1.17. Equal conveyance. Within the floodplain, except those areas which are tidally influenced, as designated on the Flood Insurance Rate Map (FIRM) for the community, encroachments resulting from filling, new construction or substantial improvements involving an increase in 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 practice, that such encroachments shall not result in any (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.

5.2. Standards for stream or water body without established base flood elevations and/or flooding.

The city engineer shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, including data developed by a registered engineer pursuant to section 5.3.1.(a) of this ordinance, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the community's FIRM meet the standards in section 5.3.1.(a), 5.3.2., 5.3.3., and section 6.

The city engineer may request floodway data of an applicant for watercourses without FEMA-published floodways. When data is provided by an applicant or whenever such data is available from any other source (in response to the city/town's request or not), 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.

5.3. Specific standards.

In all areas of special flood hazard A1-30, AE, AH where base flood elevation data has been provided, as set forth in 3.2, or 4.3.10., the following provisions are required:

5.3.1. (a) *Residential construction.* New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least to one (1) foot above the base flood elevation (BFE). Electrical, plumbing, machinery or other utility equipment that service the structure must be elevated to or above the BFE.

5.3.2. (b) *Nonresidential construction.*

- (1) New construction or substantial improvement of any commercial, industrial, or nonresidential structure located in Zone A1-30, AE & AH shall have the lowest floor, including basement, elevated at least to one (1) foot above the level of the base flood elevation; or
- (2) Non-residential structures located in all A-zone may be flood-proofed in lieu of being elevated provided that together with all attendant utilities and sanitary facilities the areas of the structure below the required elevation are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall review and/or develop structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with acceptable standards of practice for meeting the provisions of this subsection. Such certification shall be provided to the official as set forth in [section] 4.2.1.(f).
- (3) Electrical, plumbing, machinery or other utility equipment that service the structure must be elevated to or above the BFE.

5.3.3. *Elevated buildings.* New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

- (a) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 - (1) Provide a minimum of two (2) openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 - (2) The bottom of all openings shall be no higher than one foot above grade; and,
 - (3) Openings may be equipped with screens, louvers, valves or other coverings of devices provided they permit the automatic flow of floodwaters in both directions.
- (b) Electrical, plumbing, and other utility connections are prohibited below the base flood elevation;
- (c) Access to the enclosed area shall be the minimum necessary to allow for 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); and

5.3.4. *Floodways.* Located within areas of special flood hazard established in section 3.2. are areas designated as floodways on the community's flood boundary and floodway map. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and has erosion potential, the following provisions shall apply:

Prohibit encroachments, including fill, new construction, substantial improvements and other developments unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any (0.00) increase in flood levels during occurrence of the flood discharge;

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.

A permit may be given which allows encroachments resulting in increases in base flood elevations provided the community first obtains a conditional floodway revision by meeting the requirements of C.F.R.44, Chapter 1, subsection 65.12.

5.4. Standards for areas of shallow flooding (AO Zones).

Located within the areas of special flood hazard established in article 3, section B, [Section 3.2] are areas designated as shallow flooding areas (Zones AO & AH). These areas have special flood hazards associated with base flood depths of one to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate.

In AO Zones the following provisions apply:

- 5.4.1. (a) All new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated, at least two (2) feet above the highest adjacent grade.
- 5.4.2. (b) All new construction and substantial improvements of nonresidential structures shall:
 - (1) Have the lowest floor, including basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor including basement, shall be elevated at least two (2) feet above the highest adjacent grade, or;
 - (2) Together with attendant utility and sanitary facilities be completely flood-proofed to or above that level so that any space below that level is watertight 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.
- 5.4.3. (c) On-site drainage for all proposed structures in Zones AO and AH located on slopes shall provide adequate drainage paths to guide floodwaters around and away from such structures.

SECTION 6. STANDARDS FOR SUBDIVISION PROPOSALS

In all special flood hazard areas the following requirements shall apply:

- 6.1. All subdivision proposals shall be consistent with the need to minimize flood damage;
- 6.2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
- 6.3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards, and;
- 6.4. In all special flood hazard areas where base flood elevation (BFE) data is not available, the applicant shall provide a hydrologic and hydraulic engineering analysis performed by a Connecticut licensed professional engineer that generates BFEs for all subdivision proposals and other proposed development, including manufactured home parks and subdivisions. The administrator shall require the applicant to provide BFE data for all subdivision proposals, including manufactured home parks and subdivisions

SECTION 7. VARIANCE PROCEDURES

- 7.1. The flood and erosion commission as established by Bristol City Council shall hear and decide appeals and requests for variances from the requirements of this ordinance.
- 7.2. The flood and erosion commission shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the city engineer in the enforcement or administration of this ordinance.

Any decision of the city engineer may be appealed on a form provided by the city engineer to the Bristol Flood and Erosion Commission within seven (7) calendar days of the date of publication as provided for in section 4.2.1(j), the date of said publication being excluded in the calculation of said seven (7) days. Any such appeal shall stay the decision of the city engineer. Until such time as it may be upheld, overruled, modified, or otherwise changed by said commission. All decisions on appeals shall be conveyed to the applicant in writing by certified mail.

- 7.3. Any person aggrieved by the decision of the flood and erosion commission or any person owning land which abuts or is within a radius of one hundred feet (100) of the land in question may appeal within fifteen (15) days after such decision to the State Superior Court of Hartford County, as provided in Section 8-8 of the General Statutes.
- 7.4. Specific situation variances:

- 7.4.1. *Building on an historic register.* 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, except for section 7.5.4.(a) through 7.5.4.(d), and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical character.

7.4.2. *Pre-existing, small lot location.* Variances "may" be issued by a community for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with section 7.5.4.(a) through 7.5.4.(d).

7.4.3. *Functional dependant uses.* Variances "may" be issued for new construction and substantial improvement and other development necessary for the conduct of a functionally dependent use provided the structure or other development is protected by methods that minimize flood damage, create no additional threat to public safety and meet the requirements of section 7.5.4.(a) through 7.5.4.(d).

7.4.4. *Floodway prohibition.* Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

7.5. Considerations for granting of variances:

7.5.1. In passing upon such applications, the flood and erosion commission shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, 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 community;
- (e) The necessity of the facility to waterfront location, in the case of a functionally dependent facility;
- (f) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- (g) The compatibility of the proposed use with existing and anticipated development;
- (h) The relationship of the proposed use to the comprehensive plan and floodplain management program for that 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 utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

Upon consideration of the factors listed above, and the purposes of this ordinance, the flood and erosion commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

7.5.2, 7.5.3. [Reserved.]

7.5.4. Conditions for variances:

- (a) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and in the instance of a historical building, a determination that the variance is the minimum necessary as not to destroy the historic character and design of the building;
- (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, 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 nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- (c) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage.
- (d) The city engineer shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

- (e) No variance may be issued within a regulatory floodway that will result in any increase in the 100-year flood levels. A variance may be issued for new construction, substantial improvements and other development necessary for the conduct of a "functionally dependent use" provided that there is good and sufficient cause for providing relief; and the variance does not cause a rise in the 100-year flood level within a regulatory floodway. The structure and other development must be protected by methods that minimize flood damages.

7.6. Penalties for violation. Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than two hundred fifty dollars (\$250.00) per day if proven done willfully and one hundred dollars (\$100.00) per day if not, or imprisoned for not more than ten (10) days for each day of violation, or both, and in addition, shall pay all costs and reasonable legal fees involved in the case. Nothing herein contained shall prevent the City of Bristol from making such other lawful action as is necessary to prevent or remedy any violation.

SECTION 8. CONTINUITY OF ORDINANCE PROVISIONS

8.1. If any section, subsection, paragraph, sentence, clause, or phrase of this ordinance should be declared invalid for any reason whatsoever, such decision shall not affect the remaining portions of this ordinance, which shall remain in full force and effect; and to this end the provisions of this ordinance are hereby declared to be severable.