

SECTION 18 - Floodplain Management Regulations

18.1 Purpose. It is the purpose of these regulations to promote the public health, safety and general welfare and to minimize any public and private losses due to flood events and the resulting conditions in designated flood hazard areas of the Town of Bethany by the establishment and adoption of standards designed to:

- A. protect human life and public health;
- B. help minimize expenditures of money for costly flood control projects;
- C. minimize the need for rescue and relief efforts associated with flooding;
- D. minimize prolonged business and employment interruptions;
- E. minimize damage to public facilities and utilities;
- F. help maintain a stable tax base;
- G. insure that purchasers of property are notified of special flood hazards in those designated flood hazard areas so that they may assume responsibility for their actions; and
- H. insure continued eligibility of property owners in Bethany for participation in the National Flood Insurance Program pursuant to the rules and regulations published in the Federal Register.

18.2 Area of Applicability. This regulation is applicable to the “Special Flood Hazard Areas” designated as A Zones on the Town of Bethany Flood Insurance Rate Maps, (FIRM) and the Flood Boundary and Floodway Map, as published on December 2, 1980 by the Federal Emergency Management Agency, (FEMA) which are on file in the Office of the Bethany Town Clerk. These maps, the Town of Bethany Flood Insurance Study and other supporting data, and any revision thereto are adopted by reference and declared to be a part of these Regulations.

18.3 Basic Requirements. Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, located within a “Special Flood Hazard Area” may be made only in accordance with the requirements of this regulation.

- A. Other Restrictions. This regulation is not intended to repeal, abrogate or impair any easements or other laws, regulations or ordinances, and whichever imposes the more stringent restrictions shall prevail.
- B. Interpretation. In the interpretation and application of this regulation, all provisions shall be considered as minimum requirements and shall be construed so as to preserve and maintain the purposes and intent hereof.
- C. Warning and Disclaimer. The degree of flood protection established by this regulation is considered reasonable for Town-wide studies. Larger floods may occur on rare occasions, and flood heights may increase as a result of man-made or natural causes. This regulation does not imply that land outside the “Special Flood Hazard Areas” will be free from flooding or flood damages. This regulation shall not create liability on the part of the Town of Bethany, any officer or employee thereof or the Federal Emergency Management Agency for any flood damages that result on this regulation or any administrative decision lawfully made hereunder.

18.4 Definitions.

- A. General. Certain terms and phrases used in writing this regulation are hereinafter defined and explained. Otherwise, the words in this regulation shall have the meaning commonly attributed to them.
 - 1. Addition. Any walled or roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled or roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is considered new construction.
 - 2. Appeal. A request for a review of the Building Official’s interpretation of any provision of this regulation or a request for a variance from the requirements of this regulation.

3. Area of Shallow Flooding. A designated A0 or V0 Zone on the referenced FIRM with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.
4. Base Flood. The flood which has a one percent (1%) chance of being exceeded in a given year.
5. Base Flood Elevation. The particular elevation of the base flood as specified on the FIRM for A Zones.
6. Basement. That portion of a building having its floor subgrade, (below ground level), on all sides.
7. Breakaway Wall. A wall that is not part of the structural support of the building and is intended, through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.
8. Development. Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or the storage of equipment or materials.
9. Elevated Building, A and A1- A30 Zones. A non-basement building, built to have the top (finished surface) of the lowest floor elevated above the ground level by means of pilings, columns (posts and piers) or shear walls or by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.
10. Flood or Flooding. A general or temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters; and/or the unusual or rapid accumulation or runoff of surface waters from any source.

11. Flood Boundary and Floodway Map. The official map on which FEMA has delineated the boundaries of the Floodway.
12. Flood Hazard Boundary Map, (FHBM). An official map of the community issued by FEMA, where the boundaries of the areas of special flood hazard have been defined as Zone A.
13. Flood Insurance Rate Map, (FIRM). An official map on which FEMA has delineated both the areas of special flood hazard and the risk premium zones.
14. Flood Insurance Study, (FIS). The official report from FEMA which contains examination, evaluation and determination of flood hazards and if appropriate, water surface elevation of the base flood.
15. Floodproofing. Any combination of structural or non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.
16. Floodway. The channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 1.0 feet anywhere in town. The regulated floodway is delineated on the Flood Boundary and Floodway Map, which is part of this regulation.
17. Floor. The top surface of an enclosed area in a building, including basement. It is the top of slab in a 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 the parking of vehicles.

18. Highest Adjacent Grade. The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

19. Lowest Floor. The top of the lowest floor of the lowest enclosed area, including basement. An unfinished or flood resistant enclosure, usable solely for the parking of vehicles, building access or storage, in an area other than a basement area is not considered a building's lowest floor.

20. Mean Sea Level. For purposes of the National Flood Insurance Program, (NFIP), the National Geodetic Vertical Datum, (NGVD) of 1929 or other subsequent datum which become the standard to which base flood elevations on a community FIRM are referenced.

21. New Construction. Structures for which the start of construction commenced on or after the effective date of the Town's entrance into the NFIP.

22. Start of Construction. 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" on a site, such as the pouring of a slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets, roads 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 structure. For 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.

23. Substantial Improvement. Any combination of repairs, reconstruction, alteration or improvements to a structure taking place during the life of a structure, in which the cumulative cost equals or exceeds fifty percent (50%) of the market value of the structure as determined by the Cost Approach to Value, the Segregated Cost Method or the Square Foot Method. Market Value shall be:
- a. the certified appraised value of the structure prior to the start of the initial repair or improvement; or
 - b. in the case of damage, the certified value of the structure, prior to the damage occurring.

For the purposes of this definition, ‘substantial improvement’ is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include any project for improvement of a structure required to comply with existing health sanitary or safety code specifications which are solely necessary to assure safe living conditions.

24. Variance. A grant of relief from the requirements of this regulation which permits construction to proceed in a manner otherwise prohibited by this regulation where specific enforcement would result in unnecessary hardship.
25. Water Surface Elevations. The height, in relation to the NGVD 29 or other datum as may be adopted by FEMA for NFIP purposes, of floods of various magnitudes and frequencies in various flood prone, flood hazard areas.

18.5 Standards.

A. General. In Special Flood Hazard Areas, all development shall conform to all applicable standards hereinafter specified.

1. Anchoring. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

2. Construction Materials and Methods. All new construction and substantial improvements shall be constructed with materials resistant to flood damage and by using methods and practices that minimize flood damage.

3. Utilities. All utility systems shall conform to the following:

a. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system; and

b. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from systems into flood waters, streams, watercourses or wetlands; and

c. On-site sewage disposal systems shall be located so as to avoid long term impairment to them or contamination from them during flooding; and

d. Electrical, heating, ventilating, plumbing, air conditioning and all 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. No underground fuel storage system shall be installed or replaced within a special flood hazard area.

4. Building and Floor Location. In all special flood hazard areas where base flood elevation data has been provided, the following provisions shall apply and a registered engineer or architect shall review and /or develop structural design specifications and plans for the construction, and shall certify that the design and methods or construction are in accordance with acceptable standards of practice for meeting the requirements of this section:
 - a. Residential Construction. New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least two (2) feet above the BFE level.
 - b. Non-Residential Construction. New construction or substantial improvement of any commercial, industrial or non-residential structure shall have the lowest floor, including basement, elevated at least two (2) feet above the BFE level.

B. Specific Standards.

1. Floodways. Located within the special flood hazard areas are areas designated as floodways on the community's Flood Boundary and Floodway Map or as may be determined by competent professional. Floodways are extremely hazardous areas due to the potential velocity of flood waters which cause erosion and may carry debris and projectiles. The following additional standards are applicable to development in relation to floodways:
 - a. There shall be no encroachments, including fill, new construction, substantial improvements or other development in any floodway unless certification by a registered professional engineer or architect is provided,

demonstrating that encroachments will not result in **any increase in flood levels** during the occurrence of the base flood discharge.

- b. If the requirement of a. (above) is satisfied, all new construction and substantial improvements shall comply with all other applicable standards and requirements of this section.
2. Manufactured Homes. Required to be properly anchored.
 3. Maintenance of Flood Carrying Capacity. The flood carrying capacity of any watercourse affected by any proposed new construction or substantial improvement, shall be maintained and not be diminished by the proposed construction or improvements.
 4. Prohibition of Making Structures Non-Compliant. A structure already in compliance with the provisions of this regulation shall not be made non-compliant by any alteration, repair, reconstruction or improvement to the structure.
 5. 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 these requirements must be certified by a professional engineer or licensed architect and meet the following minimum criteria:
 1. Provide a minimum of two (2) openings in the foundation walls, having a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area.
 2. The bottom of all openings shall be no higher than one (1) foot above finished grade.

3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of flood waters in both directions and do not require human intervention in order to work.
 - 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 the limited storage of maintenance equipment used in connection with the premises, (standard exterior door) or entry to the living area, (stairway or elevator); and
 - d. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- C. Standards for Streams without Established Base Flood Elevations and/ or Floodway.
1. Located within the areas of special flood hazard established in this section, where small streams exist but no base flood elevation data has been provided, or where no floodways have been established, the following provisions apply:
 - a. No encroachment, including fill material or structures, shall be located in a special flood hazard area unless certification by a registered professional engineer is provided demonstrating that such encroachments when considered cumulatively with all anticipated development shall not result in any increase in flood levels during the occurrence of the base flood discharge.
 - b. If the requirement of the section immediately above is satisfied, all new construction and substantial improvements shall comply with all other applicable standards of this Regulation.
 2. Should data be requested and or provided, the Town 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.

D. Standards for Subdivision Proposals.

1. In all special flood hazard areas the following requirements shall apply. All subdivision proposals shall:
 - a. be consistent with the need to minimize flood damage;
 - b. have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
 - c. provide adequate drainage to reduce exposure to flood hazards; and
 - d. provide base flood elevation data for all development, including manufactured home parks and subdivisions which are 5 acres or fifty (50) lots, whichever occurs first, and are located in Zone A.

18.6 Administration.

1. The Building Official of the Town of Bethany is hereby designated to administer the provisions of this regulation. The Building Official shall have the responsibility and authority to grant or deny flood hazard area permit applications for development in Special Flood Hazard Areas in accordance with this regulation. The Board of Selectmen may appoint deputies to assist and act for the Building Official. The Zoning Enforcement Officer shall be responsible to remedy violations of these regulations pursuant to Section 8-12 of the Connecticut General Statutes.

A. Flood Hazard Area Permit. Development, including new construction and the placement of prefabricated buildings, may be made within the Special Flood Hazard Areas only after a Flood Hazard Permit therefor has been obtained.

B. Application for such permit shall be made to the Building Official and shall include at least the following:

1. Plans in duplicate drawn to scale showing the nature, location, dimensions and flood elevations of the area in question; and also
2. Existing and proposed; contours, structures, fill, storage of materials and drainage facilities; and also
3. Elevations in NGVD 29 datum, of the lowest floor, including basement of all structures; and
4. Narrative description of the extent to which any watercourse will be altered, relocated or affected. as a result of the proposed development; and
5. Detailed plans for any walls to be used to enclose space below the base flood elevation level including foundation openings as may be required; and
6. A properly prepared statement certifying as to whether there will be dry access to the structure during the 100 year storm event; and
7. Where applicable, the following certifications by a registered engineer or architect are required, and shall be provided to the Building Official:
 - (a) Certification that the design and methods of construction are in accordance with the accepted standards of practice, and with the provisions of this regulation and applicable State and Federal regulations, requirements and policies.
 - (b) Certification as to floodway heights, as referenced herein.
 - (c) Certification as to flood levels, as referenced herein.
 - (d) Certification by the applicant that all necessary permits have been received from those Federal State or Town agencies from which prior approval is required.

- C. Construction Stage. Upon completion of the applicable portion of construction, the applicant shall provide verification of the “as-built” lowest floor elevation, or a properly prepared elevation certificate to the Building Official.
- 18.7 Duties and Responsibilities of the Building Official. Duties and responsibilities of the Building Official in the administration of the regulation shall include but not be limited to the following:
- A. Permit Application Review.
1. Review all Flood Hazard Area Permit applications to determine that the requirements of this regulation have been satisfied;
 2. Review all such applications to determine that all required certifications have been provided as required.
 3. Require that copies of such permits be provided and maintained on file with the development permit, possibly including, but not limited to, Water Diversion, Dam Safety, Corps of Engineers 404 permits.
- B. Other Base Flood and Floodway Data. When base flood elevation data or floodway data have not been provided as required herein, then the Building Official shall obtain, review and reasonably utilize any base flood elevation and/ or floodway data available from a Federal, State or other source, in order to administer the standards of this regulation.
- C. Information to be Obtained and Maintained.
1. Obtain and record the actual elevation, in NGVD 29, of the lowest floor, including basement of all new or substantially improved structures;
 2. Maintain for public inspection all records including certifications pertaining to the provisions of this regulation; and
 3. Submit an annual report to the Federal Emergency Management Agency outlining activity in the SFHA.

D. Notifications. Notify the Bethany Wetlands Commission, adjacent towns and the Connecticut Department of Environmental Protection, Water Resources Unit, prior to any allowing any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

18.8 Appeals and Variances.

A. The Zoning Board of Appeals of the Town of Bethany shall hear and decide appeals and requests for variances from the standards of this regulation. The ZBA shall have the following duties:

1. To hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the Building Official in the enforcement and administration of this regulation.
2. To issue variances from the standards of this regulation, under the general considerations as set forth in Section 18.8 B. and the conditions for variance as specified in Section 18.8 C.; and
3. To issue variance for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places and the Connecticut State Inventory of Historic Places without regard to the considerations and conditions of Section 18.8 B.; and
4. Variances may also 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 18.8 C.

B. General Considerations for Variances. In deciding an application for variance, the Zoning Board of Appeals shall consider the following:

1. The technical evaluations and studies that are the basis for this regulation;

2. The standards of this regulation;
3. The danger that materials may be swept onto other lands to the injury of others;
4. The danger to life and property due to flooding or erosion damage;
5. The susceptibility of the proposed development and its contents to flood damage, and the effect of such damage on the individual owner;
6. The importance of the services provided to the community by the proposed development;
7. The necessity of the proposed location for the function of the development;
8. The availability of alternative locations for the proposed development which are not subject to flooding or erosion damage;
9. The compatibility of the proposed development with existing and other anticipated developments;
10. The relationship of the proposed development to the Plan of Conservation and Development for the Town and the floodplain management program for that area;
11. The safety of access to the property in times of flood for ordinary and emergency vehicles;
12. The expected heights, velocities, duration, rate of rise and sediment transport of the flood waters expected at the site; and
13. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as gas, electrical, water systems, streets and bridges.

C. Conditions for Variance. The following are applicable to the issuance of a variance by the ZBA under this section:

1. No variances shall be issued for any work within a floodway if **any** increase in flood levels during the base flood discharge will result.
2. Otherwise, variances may be issued for new construction and substantial improvements to be erected on a lot the area of which is less than the minimum required for its zone when the lot is contiguous to and generally surrounded by lots with existing structures constructed below the base flood elevation, provided the following criteria are met:
 - a. a showing of good and sufficient cause;

- b. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with other Town laws, ordinances and regulations.
3. Variances shall only be issued upon determination that the variance is the minimum necessary, considering the flood hazard, to accord relief; and in the instance of a historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
4. When issuing a variance, the ZBA may attach such conditions that it deems necessary to further the purpose and intent of this regulation.

18.9 Effective Date and Filing. A variance issued under this regulation shall be come effective at such time is fixed by the ZBA, provided a copy thereof shall be filed in the Office of the Bethany Town Clerk and in the land records of the Town of Bethany in the same manner as required for filing of variances from other Zoning Regulations.

18.10 Notice and Records.

- A. The Clerk of the ZBA shall notify the applicant for variance, in writing, of the following:
 1. That the issuance of a variance to construct a structure below the BFE will result in increased flood insurance premiums; and
 2. That such construction below the BFE increases risks to life and property; and
- B. The Clerk of the Zoning Board of Appeals shall:
 1. Maintain a record of all notices sent to applicants.
 2. Maintain a record of all variance actions, including justification cited by the ZBA in its decision for their issuance; and
 3. Report any such variances issued by the ZBA as noted in its annual report to FEMA and Connecticut DEP.

18.11 Appeal to Court. Any person or persons severally or jointly aggrieved by any decision of the Zoning Board of Appeals acting under this regulation, or any person owning land which abuts or is within a radius of 100 feet of any portion of the land involved in any decision of said Board, or any officer, board or commission of the Town of Bethany, having jurisdiction or responsibility over the flood hazards of the Town, may take an appeal to the Superior Court of the County of New Haven in the same manner as provided under the provisions of Section 8-8 of the Connecticut General Statutes.