

Chapter 8 FLOOD DAMAGE PREVENTION*

***Cross references:** Environmental control, ch. 9; planning and zoning, ch. 7.

State law references: Floodplains generally, G.S. 143-215.51 et seq.

- Article I. In General
 - Division 1. Statutory Authorization, Findings of Fact, Purpose and Objectives
 - Sec. 8-1. Statutory authorization.
 - Sec. 8-2. Findings of fact.
 - Sec. 8-3. Statement of purpose.
 - Sec. 8-4. Objectives.
 - Secs. 8-5--8-10. Reserved.
 - Division 2. Definitions
 - Sec. 8-11. Specific definitions.
 - Secs. 8-12--8-15. Reserved.
 - Division 3. General Provisions
 - Sec. 8-16. Lands to which this chapter applies.
 - Sec. 8-17. Basis for establishing the areas of special flood hazard.
 - Sec. 8-18. Establishment of development permit.
 - Sec. 8-19. Compliance.
 - Sec. 8-20. Abrogation and greater restrictions.
 - Sec. 8-21. Interpretation.
 - Sec. 8-22. Warning and disclaimer of liability.
 - Sec. 8-23. Penalties for violation.
 - Secs. 8-24--8-30. Reserved.
 - Division 4. Administration
 - Sec. 8-31. Designation of local administrator.
 - Sec. 8-32. Development permit and certification requirements.
 - Sec. 8-33. Duties and responsibilities of the local administrator.
 - Sec. 8-34. Administrative procedures.
 - Sec. 8-35. Variance procedures.
 - Secs. 8-36--8-50. Reserved.
- Article II. Provisions for Flood Hazard Reduction
 - Sec. 8-51. General standards.
 - Sec. 8-52. Specific standards.
 - Sec. 8-53. Standards for streams without established base flood elevations and/or floodways.
 - Sec. 8-54. Standards for subdivision proposals.
 - Sec. 8-55. Standards for areas of shallow flooding (AO zones).

ARTICLE I. IN GENERAL

DIVISION 1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES

Sec. 8-1. Statutory authorization.

The Legislature of the State of North Carolina has in part 6, article 21 of chapter 143; parts 3, 5 and 8 of article 19 of chapter 160A; and article 8 of chapter 160A of the North Carolina 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 board of aldermen does ordain the provisions of this chapter.

(Ord. of 5-2-90, art. 1, § A)

Sec. 8-2. Findings of fact.

- (1) The flood hazard areas of the town are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- (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, floodproofed or otherwise unprotected from flood damages.

(Ord. of 5-2-90, art. 1, § B)

Sec. 8-3. Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities.
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- (3) Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.
- (4) Control filling, grading, dredging and other development which may increase erosion or flood damage.
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

(Ord. of 5-2-90, art. 1, § C)

Sec. 8-4. Objectives.

The objectives of this chapter are:

- (1) To protect human life and health.
- (2) To minimize expenditure of public money for costly flood control projects.
- (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.

- (4) To minimize prolonged business interruptions.
- (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.
- (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.
- (7) To ensure that potential home buyers are notified that property is in a flood area.

(Ord. of 5-2-90, art. 1, § D)

Secs. 8-5--8-10. Reserved.

DIVISION 2. DEFINITIONS

Sec. 8-11. Specific definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

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 fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

Appeal means a request from a review of the local administrator's interpretation of any provision of this chapter.

Area of shallow flooding means a designated AO or VO zone on a community's flood insurance rate map (FIRM) with base flood depths from one (1) to three (3) 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.

Area of special flood hazard is the land in the floodplain within a community subject to a one (1) percent or greater chance of being equaled or exceeded in any given year.

Base flood means the flood having a one (1) percent chance of being equaled or exceeded in any given year.

Basement means that lowest level or story which has its floor subgrade on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system. A breakaway wall shall have a design safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square

foot. A wall with loading resistance of more than twenty (20) pounds per square foot requires a professional engineer or architect's certificate.

Building means any structure built for support, shelter or enclosure for any occupancy or storage.

Coastal high-hazard area means 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.

Development means any manmade 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, or storage of equipment or materials.

Elevated building means a nonbasement building built, in the case of a building in zones A1--A30, AE, A, A99, AO, AH, B, C and X, to have the top of the elevated floor, or in the case of a building in zones V1--V30, VE and V, to have the bottom of the lowest horizontal structural member of the elevated floor above the ground by means of pilings, columns (posts and piers), shear walls parallel to the flow of water and adequately anchored so as not to impair the structural integrity of the building during a flood up to the magnitude of the base flood. In the case of zones A1--A30, AE, A, A99, AO, AH, B, C and X, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters. In the case of zones V1--V30, VE and V, "elevated building" also includes a building otherwise meeting the definition of "elevated building," even though the area below is enclosed by means of breakaway walls if the breakaway walls meet the standards of section 8-52(5).

Existing manufactured home park or manufactured home subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of this chapter [May 2, 1990].

Expansion to an existing manufactured home park or subdivision means the preparation of the additional sites by 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 slabs).

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters and the unusual and rapid accumulation of runoff of surface waters from any source.

Flood hazard boundary map (FHBM) means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as zone A.

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.

Flood insurance study is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the flood boundary/floodway map and the water surface elevation of the base flood.

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) foot.

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.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales or service facilities.

Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

Historic structure means any structure that is listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the secretary of interior as meeting the requirements for individual listing on the National Register; certified or preliminary determined by the secretary of interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the secretary to qualify as a registered historic district; individually listed on a state inventory of historic places; individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified by an approved state program as determined by the secretary of interior, or directly by the secretary of interior in states without approved programs.

Levee means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

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 enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter.

Manufactured home means a structure, transportable in one (1) 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 "manufactured home" does not include a "recreational vehicle."

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.

Mean sea level means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this chapter, the term is synonymous with National Geodetic Vertical Datum (NGVD).

National Geodetic Vertical Datum (NGVD) as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means structures for which the "start of construction" commenced on or after the effective date of this chapter [May 2, 1990] and includes any subsequent improvements to such structures.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs) is completed on or after the effective date of this chapter [May 2, 1990].

Nonconforming building or use means any legally existing building or use which fails to comply with the provisions of this chapter.

Primary frontal dune means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and over-topping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

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

Reference feature is the receding edge of a bluff or eroding frontal dune, or if such a feature is not present, the normal high-water line or the seaward line of permanent vegetation if the high-water line cannot be identified.

Remedy a violation means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this chapter or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

60-year setback means a distance equal to sixty (60) times the average annual long-term recession rate at a site, measured from the reference feature.

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 or 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 the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the

installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

Structure means, for floodplain management purposes, a walled and roofed building, a manufactured home, including a gas or liquid storage tank, or other manmade facilities or infrastructures that are principally above ground.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred. See definition of "substantial improvement."

Substantial improvement means any repair, reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either any project of 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 any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as an historic structure.

Substantially improved existing manufactured home park or subdivision means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds fifty (50) percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance is a grant of relief to a person from the requirements of this chapter which permits construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary hardship.

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in division 4 of this article and in article II is presumed to be in violation until such time as that documentation is provided.

Zone of imminent collapse means an area subject to erosion adjacent to the shoreline of an ocean, bay or lake and within a distance equal to ten (10) feet plus five (5) times the average annual long-term erosion rate for the site, measured from the reference feature.

(Ord. of 5-2-90, art. 2)

Secs. 8-12--8-15. Reserved.

DIVISION 3. GENERAL PROVISIONS

Sec. 8-16. Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazard within the jurisdiction of the town.

(Ord. of 5-2-90, art. 3, § A)

Sec. 8-17. Basis for establishing the areas of special flood hazard.

The areas of special flood hazard within the corporate limits of the town identified by the Federal Emergency Management Agency in its flood insurance study for Onslow County, dated July 2, 1987, with accompanying maps and other supporting data, and any revision thereto are adopted by reference and declared to be a part of this chapter.

(Ord. of 5-2-90, art. 3, § B)

Sec. 8-18. Establishment of development permit.

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

(Ord. of 5-2-90, art. 3, § C)

Sec. 8-19. Compliance.

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

(Ord. of 5-2-90, art. 3, § D)

Sec. 8-20. Abrogation and greater restrictions.

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

(Ord. of 5-2-90, art. 3, § E)

Sec. 8-21. Interpretation.

In the interpretation and application of this chapter, all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. of 5-2-90, art. 3, § F)

Sec. 8-22. Warning and disclaimer of liability.

The degree of flood protection required by this chapter 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 chapter 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 chapter shall not create liability on the part of the town or by any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

(Ord. of 5-2-90, art. 3, § G)

Sec. 8-23. Penalties for violation.

Violation of the provisions of this chapter 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 chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined no more than fifty dollars (\$50.00) or imprisoned for not more than thirty (30) days, or both. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the town from taking such other lawful action as is necessary to prevent or remedy any violation.

(Ord. of 5-2-90, art. 3, § H)

Secs. 8-24--8-30. Reserved.

DIVISION 4. ADMINISTRATION

Sec. 8-31. Designation of local administrator.

The town manager or his designee is hereby appointed to administer and implement the provisions of this chapter.

(Ord. of 5-2-90, art. 4, § A)

Sec. 8-32. Development permit and certification requirements.

Application for a development permit shall be made to the local administrator on forms furnished by the administrator prior to any development activities. The development permit may include but not be limited to plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures; and the location of fill materials, storage areas and drainage facilities. Specifically, the following information is required:

- (1) Where base flood elevation data is provided in accordance with section 8-33(10), the application for a development permit within the zone A on the flood insurance rate map shall show:
 - (a) The elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures; and

- (b) If the structure has been floodproofed in accordance with section 8-52(2), the elevation (in relation to mean sea level) to which the structure was floodproofed.
- (2) Where the base flood elevation data is not provided, the application for a development permit must show construction of the lowest floor at least two (2) feet above the highest adjacent grade.
- (3) Where any watercourse will be altered or relocated as a result of proposed development, the application for a development permit shall include a description of the extent of watercourse alteration or relocation, an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream, and a map showing the location of the proposed watercourse alteration or relocation.
- (4) When a structure is floodproofed, the applicant shall provide a certificate from a registered professional engineer or architect that the nonresidential floodproofed structure meets the floodproofing criteria in section 8-52(2).
- (5) A floor elevation or floodproofing certification is required after the lowest floor is completed. Within twenty-one (21) calendar days of establishment of the lowest floor elevation, or floodproofing by whatever construction means, whichever is applicable, it shall be the duty of the permit holder to submit to the local administrator a certification of the elevation of the lowest floor, or floodproofed elevation, whichever is applicable, as built, in relation to mean sea level. This certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When floodproofing is utilized for a particular building, the certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work done within the twenty-one-day period and prior to submission of the certification shall be at the permit holder's risk. The local administrator shall review the floor elevation survey data submitted. Deficiencies detected by such review 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 the required corrections shall be cause to issue a stop-work order for the project.

(Ord. of 5-2-90, art. 4, § B)

Sec. 8-33. Duties and responsibilities of the local administrator.

Duties of the local administrator shall include but not be limited to the duty to:

- (1) Review all development permits to assure that the requirements of this chapter have been satisfied.
- (2) Advise permittees that additional federal or state permits may be required, and if specific federal or state permits are known, require that copies of such permits be provided and maintained on file with the development permit.

- (3) Notify adjacent communities and the state department of crime control and public safety, division of emergency management, state coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
- (4) Assure that maintenance is provided within the altered or relocated portion of the watercourse so that the flood-carrying capacity is not diminished.
- (5) Prevent encroachments within floodways unless the certification and flood hazard reduction provisions of article II of this chapter are met.
- (6) Obtain actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with section 8-32(5).
- (7) Obtain the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been floodproofed, in accordance with section 8-32(5).
- (8) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with section 8-32(2).
- (9) 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), 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.
- (10) When base flood elevation data or floodway data has not been provided in accordance with section 8-17, obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state, or other source, including data developed pursuant to section 8-54(4), in order to administer the provisions of this chapter.
- (11) Make on-site inspections of projects in accordance with section 8-34.
- (12) Serve notices of violations, issue stop-work orders, revoke permits and take corrective actions in accordance with section 8-34.
- (13) Maintain all records pertaining to the administration of this chapter and make these records available for public inspection.
- (14) Provide the state department of crime control and public safety, division of emergency management, state coordinator for the National Flood Insurance Program with two (2) copies of the maps delineating new corporate limits within six (6) months from date of annexation or change in corporate boundaries.

(Ord. of 5-2-90, art. 4, § C)

Sec. 8-34. Administrative procedures.

- (1) *Inspections of work in progress:* As the work pursuant to a permit progresses, the local administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of this chapter and the terms of the permit. In exercising this power, the administrator has a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction at any reasonable hour for the purposes of inspection or other enforcement action.
- (2) *Stop-work orders:* Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this chapter, the administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reasons for the stoppage, and the conditions under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.
- (3) *Revocation of permits:* The local administrator may revoke and require the return of the development permit by notifying the permit holder in writing stating the reason for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans or specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable state or local law may also be revoked.
- (4) *Periodic inspections:* The local administrator and each member of his inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
- (5) *Violations to be corrected:* When the local administrator finds violations of applicable state and local laws, it shall be his duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law in the property he owns.
- (6) *Actions in event of failure to take corrective action:* If the owner of a building or property shall fail to take prompt corrective action, the administrator shall give him the following information by written notice, by certified or registered mail to his last-known address or by personal service:
 - (a) That the building or property is in violation of this chapter.
 - (b) That a hearing will be held before the local administrator at a designated place and time, not later than ten (10) days after the date of the notice, at which time the owner shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter.
 - (c) That following the hearing, the local administrator may issue such order to alter, vacate or demolish the building, or to remove fill as appears appropriate.
- (7) *Order to take corrective action:* If, upon a hearing held pursuant to the notice prescribed above, the administrator finds that the building or development is in violation of this chapter, he shall make an order in writing to the owner, requiring the owner to remedy the violation within such period, not less than sixty (60)

days, that the administrator may prescribe. Where the administrator finds that there is imminent danger to life or other property, he may order that corrective action be taken in such lesser period as may be feasible.

- (8) *Appeal:* Any owner who has received an order to take corrective action may appeal from the order to the local elected governing body by giving notice of appeal in writing to the administrator and the clerk within ten (10) days following issuance of the final order. In the absence of an appeal, the order of the administrator shall be final. The local governing body shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.
- (9) *Failure to comply with order:* If the owner of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the governing body following an appeal, he shall be guilty of a misdemeanor and shall be punished in the discretion of the court.

(Ord. of 5-2-90, art. 4, § D)

Sec. 8-35. Variance procedures.

- (1) The board of aldermen shall hear and decide requests for variances from the requirements of this chapter.
- (2) Any person aggrieved by the decision of the appeal board or any taxpayer may appeal such decision to the court, as provided in General Statutes chapter 7A.
- (3) Variances may be issued for the repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (4) In passing upon such applications, the board of aldermen shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter, 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 to the facility of a waterfront location, where applicable.
 - (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 floodwaters and the effects of wave action, if applicable, expected at the site.
 - (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.
- (5) Upon consideration of the factors listed above and the purposes of this chapter, the board of aldermen may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- (6) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (7) Conditions for variances:
- (a) Variances may not be issued when the variance will make the structure in violation of other federal, state or local laws, regulations or ordinances.
 - (b) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (c) Variances shall only be issued upon a showing of good and sufficient cause; a determination that failure to grant the variance would result in exceptional hardship; and a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense; create a nuisance; cause fraud on or victimization of the public; or conflict with existing local laws or ordinances.
 - (d) 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 a written statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. Such notification shall be maintained with a record of all variance actions.
 - (e) The local administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

(Ord. of 5-2-90, art. 4, § E)

Secs. 8-36--8-50. Reserved.

ARTICLE II. PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 8-51. General standards.

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

- (1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
- (2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (3) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damages.
- (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) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (8) Any alteration, repair, reconstruction, or improvements to a structure which is in compliance with the provisions of this chapter shall meet the requirements of "new construction" as contained in this chapter.
- (9) Nonconforming buildings or uses: Nonconforming buildings or uses may not be enlarged, replaced or rebuilt unless such enlargement or reconstruction is accomplished in conformance with the provisions of this chapter. However, nothing in this chapter shall prevent the repair, reconstruction or replacement of a building or structure existing on the effective date of this chapter [May 2, 1990] and located totally or partially within the floodway zone, provided that the bulk of the building or structure below base flood elevation in the floodway zone is not increased and provided that such repair, reconstruction or replacement meets all of the other requirements of this chapter.

(Ord. of 5-2-90, art. 5, § A)

Sec. 8-52. Specific standards.

In all areas of special flood hazard where base flood elevation data has been provided, as set forth in section 8-17 or section 8-33(c), the following provisions are required:

- (1) *Residential construction:* New construction or substantial improvement of any residential structure (including manufactured homes) shall have the lowest floor, including basement, elevated no lower than zero (0) feet above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided.

- (2) *Nonresidential construction:* New construction or substantial improvement of any commercial, industrial or nonresidential structure (including manufactured homes) shall have the lowest floor, including basement, elevated no lower than zero (0) feet above the level of the base flood elevation. Structures located in A-zones may be floodproofed in lieu of elevation provided that all areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in section 8-32(5).
- (3) *Manufactured homes:* Notwithstanding any other provisions of 60.3, a community may approve certain development in Zones A1--30, AE, and AH, on the community's FIRM which increases the water surface elevation of the base flood by more than one (1) foot, provided that the community first applies for a conditional FIRM revision, fulfills the requirements for such a revision as established under the provisions of 65.12, and receives the approval of the administrator.
- (4) *Recreational vehicles:* Requires that recreational vehicles placed on sites within zones A--30, AH, and A on the community's FIRM either (i) be on the site for fewer than one hundred eighty (180) consecutive days, (ii) be licensed and ready for highway use, or (iii) meet the permit requirements of this section and the elevation and anchoring requirements for "manufactured homes" on this section. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to this site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

When the administrator has provided a notice of final base flood elevations within zones A1--30, and/or A on the community's FIRM and, if appropriate, has designated AO zones, AH zones, A99 zones, and A zones on the community's FIRM, and has provided data from which the community shall designate its regulatory floodway, the community shall:

- (a) Meet the requirements of this section;
- (b) Select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designated to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one (1) foot at any point;
- (c) Prohibit encroachments including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge;

- (5) *Elevated buildings:* New construction or substantial improvements of elevated buildings that include fully enclosed areas that are usable solely for the parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to preclude finished living space and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.
- (a) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet all the following minimum criteria:
 - (i) Provide a minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding.
 - (ii) The bottom of all openings shall be no higher than one (1) foot above grade.
 - (iii) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
 - (b) 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).
 - (c) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.
- (6) *Temporary structures:* Prior to the issuance of a development permit, for a temporary structure, the following requirements must be met:
- (a) All applicants must submit to the local administrator a plan for the removal of such structure(s) in the event of a hurricane or flash flood notification. The plan must include all the following information:
 - (i) The name, address and phone number of the individual responsible for the removal of the temporary structure.
 - (ii) The time frame prior to the event at which a structure will be removed.
 - (iii) A copy of the contract or other suitable instrument with a trucking company to ensure the availability of removal equipment when needed.
 - (iv) Designation, accompanied by documentation, of a location outside the floodplain to which the temporary structure will be moved.
 - (b) The above information shall be submitted in writing to the local administrator for review and written approval.

- (7) *Accessory structure:* When accessory structures (sheds, detached garages, etc.) with a value of three thousand dollars (\$3,000.00) or less are to be placed in the floodplain, all the following criteria shall be met:
- (a) Accessory structures shall not be used for human habitation.
 - (b) Accessory structures shall be designed to have low flood damage potential.
 - (c) Accessory structures shall be firmly anchored in accordance with section 8-51(1).
 - (d) Service facilities such as electrical and heating equipment shall be elevated in accordance with section 8-51(4).
- (8) *Floodways:* Located within areas of special flood hazard established in section 8-17 are areas designated as floodways. The floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris and potential projectiles and has erosion potential. The following provisions shall apply within such areas:
- (a) No encroachments, including fill, new construction, substantial improvements and other developments, shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be presented to the local administrator.
 - (b) If subsection (6)a of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this article.
 - (c) No manufactured homes shall be permitted except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring standards of section 8-51(2) and the elevation standards of subsection (3) of this section are met.
- (9) *Coastal high-hazard areas (V-zones).* Provide that all new construction and substantial improvements in Zones V-1--30, and also Zone V if base flood elevation data is available, on the community's FIRM, are elevated on pilings and columns so that:
- (a) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level; and
 - (b) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those required by applicable state or local building standards. A

registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of this section.

Provide that all new construction and substantial improvements within Zones V1--30, V and V on the community's FIRM have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakaway wall shall have a design loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use breakaway walls which exceed a design safe loading resistance of twenty (20) pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

- (a) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and
- (b) The elevated portion of the building supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components, (structural and non-structural). Water loading values used shall be those associated with the base flood.

(Ord. of 5-2-90, art. 5, § B; Ord. of 1-6-98, §§ 1--3)

Sec. 8-53. Standards for streams without established base flood elevations and/or floodways.

Located within the areas of special flood hazard established in section 8-17 are small streams where no base flood data has been provided or where no floodways have been identified. The following provisions apply within such areas:

- (1) No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of twenty (20) feet of the top of stream bank unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (2) If subsection (1) is satisfied and base flood elevation data is available from other sources, all new construction and substantial improvements within such areas shall comply with all applicable flood hazard ordinance provisions of this article and shall be elevated or floodproofed in accordance with elevations established in accordance with section 8-33(10). When base flood elevation data is not available from a federal,

state or other source, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade.

(Ord. of 5-2-90, art. 5, § C)

Sec. 8-54. Standards for subdivision proposals.

- (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 have adequate drainage provided to reduce exposure to flood hazards.
- (4) Base flood elevation data shall be provided for subdivision proposals and other proposed development which is greater than the lesser of fifty (50) lots or five (5) acres.

(Ord. of 5-2-90, art. 5, § D)

Sec. 8-55. Standards for areas of shallow flooding (AO zones).

Located within the areas of special flood hazard established in section 8-17 are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. The following provisions shall apply within such areas:

- (1) 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.
- (2) All new construction and substantial improvements of nonresidential structures shall:
 - (a) 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
 - (b) Be completely floodproofed together with attendant utility and sanitary facilities 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.

(Ord. of 5-2-90, art. 5, § E)