

FLOOD HAZARD OVERLAY DISTRICT
Article XV - The Durham Zoning Ordinance
Proposed amendments to
add freeboard, address sea level rise, and make other minor adjustments

❖ Make the following changes to the existing ordinance, below:

Text which is shown like this is added to the existing ordinance

~~*Text which is shown like this is removed from the existing ordinance*~~

175-77. Applicability.

A. Purpose

Certain areas of the Town of Durham, New Hampshire are subject to periodic flooding, causing serious damages to properties within these areas. Relief is available in the form of flood insurance as authorized by the National Flood Insurance Act of 1968. Therefore, the Town of Durham, New Hampshire has chosen to become a participating community in the National Flood Insurance Program, and agrees to comply with the requirements of the National Flood Insurance Act of 1968 (P.L. 90-488, as amended) as detailed in this Floodplain Management Ordinance.

The following regulations in this ordinance shall apply to all lands designated as special flood hazard areas by the Federal Emergency Management Agency (FEMA) in its "Flood Insurance Study for the County of Strafford, N.H." dated September 30, 2015, together with the following associated Flood Insurance Rate Map panel numbers for the Town of Durham: 33017C0314E, 33017C0315E, 33017C0318E, 33017C0320E, 33017C0340E, 33017C0376E, 33017C0377E, 33017C0378E, 33017C0379E, 33017C0381E, 33017C0383E, 33017C0385E, 33017C0405E, dated September 30, 2015, which are declared to be a part of this ordinance and are hereby incorporated by reference.

Advisory Climate Change Risk Areas. As a coastal community with significant waterfront property along Great Bay, Little Bay, and tidal portions of the Oyster River, the Town of Durham recognizes the future threats that climate change and projected sea level rise pose to the health, safety, and general welfare of its citizens. The Town of Durham, in its "Vulnerability Assessment of projected impacts from sea-level rise and coastal storm surge flooding" identified areas likely to be at risk to coastal flooding in the future under projections for rising sea-levels associated with global climate change. These areas may be subject to a higher likelihood of flood damage, and as base flood elevations change over time, may be added to FEMA special flood hazard areas in the future. The map titled "Advisory Climate Change Risk Areas" dated February 21, 2018 is declared to be an advisory and non-binding part of this ordinance and is hereby

incorporated by reference. The Town of Durham recommends (but does not require) that landowners, homeowners, developers, and any parties seeking to build in lands designated as advisory climate change risk areas elevate proposed structures to the levels, and follow best practices, as presented herein. See subsection 175-83 C. below.

B. Building Permit Required.

All proposed development in any special flood hazard area shall require a building permit.

175-78. General Design Standards.

The Code Enforcement Officer shall review all building permit applications for new construction or substantial improvements to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction or substantial improvements shall be:

- A. Designed, or modified, and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- B. *Designed and* constructed with materials resistant to flood damage.
- C. Constructed by methods and practices that minimize flood damages.
- D. Constructed with electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

175-79. Water and Sewer Systems.

Where new or replacement water and sewer systems, including on-site systems, are proposed in special flood hazard areas, the applicant shall provide the Code Enforcement Officer with assurance that these systems will be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters, and on-site waste-disposal systems will be located to avoid impairment to them or contamination from them during periods of flooding.

175-80. Certification Records.

The Code Enforcement Officer shall maintain for public inspection and furnish upon request any certifications of flood proofing and the as-built elevation, in relation to mean sea level, of the lowest floor, including basement, of all new or substantially improved structures and include whether or not such structures contain a basement. If the structure has

been flood proofed, the as-built elevation, in relation to mean sea level, to which the structure was flood proofed must be furnished by the applicant.

175-81. Review of Proposed Developments.

The Code Enforcement Officer shall review proposed developments to assure that all necessary permits have been received from those governmental agencies from which approval is required by federal or state law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C.S. 1334. It shall be the responsibility of the applicant to certify these assurances to the Code Enforcement Officer.

175-82. Watercourses.

- A. In riverine situations, prior to the alteration or relocation of a watercourse, the applicant for such authorization shall notify the Wetlands Bureau of the New Hampshire Environmental Services Department and submit copies of such notification to the Code Enforcement Officer, in addition to the copies required by RSA 482-A: 3. Further, the applicant shall be required to submit copies of said notification to those adjacent communities as determined by the Code Enforcement Officer, including notice of all scheduled hearings before the Wetlands Bureau.
- B. The applicant shall submit to the Code Enforcement Officer certification provided by a registered professional engineer assuring that the flood-carrying capacity of an altered or relocated watercourse can and will be maintained.
- C. Along watercourses with a designated Regulatory Floodway no encroachments, including fill, new construction, substantial improvements, and other development are allowed within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels within the community during the base flood discharge.
- D. Along watercourses that have not had a regulatory floodway designated, no new construction, substantial improvements or other development, including fill, shall be permitted within Zones AE on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.
- E. The Code Enforcement Officer shall obtain, review, and reasonably utilize any floodway data available from Federal, State, or other sources as criteria for requiring that all development located in Zone A meet the following floodway requirement:

"No encroachments, including fill, new construction, substantial improvements, and other development are allowed within the floodway that would result in any increase in flood levels within the community during the base flood discharge."

175-83. Base Flood Elevation.

- A. In special flood hazard areas, the Code Enforcement Officer shall determine the base flood elevation in the following order of precedence according to the data available:
1. In Zone AE, the Code Enforcement Officer shall refer to the elevation data provided in the community's Flood Insurance Study and accompanying FIRM.
 2. In Zone A, the Code Enforcement Officer shall obtain, review and reasonably utilize any base flood elevation data available from federal, state, development proposals submitted to the community (i.e., subdivisions or site approvals) or other sources.
 3. In Zone A where a base flood elevation is not available, the base flood-elevation shall be at least two (2) feet above the highest adjacent grade.
- B. The Code Enforcement Officer's base flood elevation determination will be used as criteria for requiring in Zones A and AE that:
1. The lowest floor of all new construction or substantial improvements of residential structures ~~have the lowest floor, including basement,~~ be elevated to ~~or~~ at least two feet above the base flood elevation.
 2. The lowest floor of all new construction or substantial improvements of nonresidential structures ~~have the lowest floor, including basement,~~ be elevated to ~~or~~ at least two feet above the base flood elevation or, together with attendant utility and sanitary facilities, shall:
 - a. Be flood proofed at least two feet above the base flood elevation so that below ~~the base-flood~~ this elevation the structure is watertight with walls substantially impermeable to the passage of water.
 - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
 - c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section.
 3. All manufactured homes to be placed or substantially improved within special flood hazard areas shall be elevated on a permanent reinforced foundation such that the lowest floor of the manufactured home is at ~~or~~ least two feet above the base flood

elevation and ~~be~~ securely anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include but are not limited to use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces. Fully enclosed areas below elevated manufactured homes shall comply with the requirements of Section 175-83 B.4. of this ordinance.

4. For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding are permitted, provided that they meet the following requirements:
 - a. The enclosed area is unfinished or flood-resistant, usable solely for the parking of vehicles, building access or storage.
 - b. The floor of the enclosed area is not below grade on all sides of the structure. area is not a basement.
 - c. They shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - (1) 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 shall be provided.
 - (2) The bottom of all openings shall be no higher than one (1) foot above grade.
 - (3) Openings may be equipped with screens, louvers or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

Further guidance for meeting the above requirements can be found in the FEMA "Technical Bulletin 1, Openings in Foundation Walls and Walls of Enclosures".

5. Recreational vehicles placed on sites within Zones A and AE shall: (1) be on the site for fewer than 180 consecutive days, (2) be fully licensed and ready for highway use, or (3) meet all standards of section 175-77 of this ordinance and the elevation and anchoring requirements for "manufactured homes" in section 175-83(B)(3) of this ordinance. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

C. Advisory Climate Change Risk Areas.

The Town of Durham recommends (but does not require) that landowners, homeowners, developers, and other parties seeking to build on properties located in advisory climate change risk areas as designated on the Advisory Climate Change Risk Areas map, but not in a special flood hazard area, review the provisions of this chapter and apply them proactively to construction and development projects as applicable. All applicants seeking to build in these areas shall inform the Durham Building Official which standard they intend to follow. See purpose statement, above.