

TITLE 15A
LUMMI NATION CODE OF LAWS
FLOOD DAMAGE PREVENTION CODE

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**TITLE 15A
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Chapter 15A.01 Authorization, Finding of Fact, and Purpose

15A.01.001 Jurisdiction

The provisions of this Title and all rules and regulations under it shall apply within the exterior boundaries of the Lummi Reservation and within the exterior boundaries all lands held in trust for the Lummi Nation by the United States regardless of location.

15A.01.010 Statutory Authorization

The Lummi Indian Business Council (LIBC) is delegated the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of the citizens of the Lummi Reservation and trust lands. Therefore, the LIBC does ordain as follows:

15A.01.020 Finding of Fact

(a) The flood hazard areas of the Lummi Reservation and trust lands are subject to periodic inundation that may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, damages to treaty protected resources, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(b) These flood losses are caused by the cumulative effect of winter storms and upstream land uses in the Nooksack River basin which increase flood heights and velocities, and when inadequately managed, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

15A.01.030 Statement of Purpose

It is the purpose of this Ordinance 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

(a) to protect human life and health;

(b) to minimize expenditure of public money and costly flood control projects;

(c) to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(d) to minimize prolonged business interruptions;

(e) to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in the special flood hazard areas;

(f) to minimize damage to treaty protected resources;

(g) to help maintain a stable tax base by providing for the sound use and development of the special flood hazard areas so as to minimize future flood areas;

(h) to ensure that potential buyers are notified that property is in a special flood hazard area; and,

(i) to ensure that those who occupy the special flood hazard areas assume legal and financial responsibility for their actions.

15A.01.040 Methods of Reducing Flood Losses

In order to accomplish its purposes, this Ordinance includes methods and provisions for

(a) restricting or prohibiting 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;

(b) requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(c) controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

(d) controlling filling, grading, dredging, and other development which may increase flood damage; and

(e) preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

Chapter 15A.02 Definitions

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

15A.02.010 Appeal

Means a request for a review of the interpretation of any provision of this Ordinance or a request for a variance.

15A.02.020 Area of Shallow Flooding

Means a designated AO, AH, AR/AO, or AR/AH Zone on the Flood Insurance Rate Map (FIRM)- with a one percent or greater annual chance of flooding. The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

15A.02.030 Base Flood

Means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood.” Designation on maps always includes the letters A or V.

15A.02.035 Base Flood Elevation (BFE)

Means the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. The BFE is shown on the Flood Insurance Rate Map (FIRM) for zones AE, AH, A1-30, AR, AR/A, AR/AE, AR/A1-30, AR/AH, AR/AO, V1-30 and VE. Also referred to as the base flood level.

15A.02.040 Basement

Means any area of the building having its floor subgrade (below ground level) on all sides.

15A.02.050 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 supporting foundation system.

15A.02.060 Coastal High Hazard Area

Means a special flood hazard area 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. The area is designated on the FIRM as Zone V1-V30, VE or V.

15A.02.070 Critical Facility

Means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals police, fire and emergency response installations, and installations which produce, use, or store hazardous materials or hazardous waste.

15A.02.080 Development

Means 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 or storage of equipment or materials located within the special flood hazard areas.

15A.02.090 Elevated Building

Means for insurance purposes, a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

15A.02.100 Existing Manufactured Home Park or Subdivision

Means a manufactured home park 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 the adopted floodplain management regulations.

15A.02.110 Expansion to an Existing Manufactured Home Park or Subdivision

Means the preparation of 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 pads).

15A.02.120 Flood or Flooding

Means

(a) a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) the overflow of inland or tidal waters and/or
- (2) the unusual and rapid accumulation of runoff of surface waters from any source.
- (3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or under-mining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

15A.02.125 Floodplain Administrator

Means the Director of the Planning Department as described in LCL §15A.04.03.

15A.02.130 Flood Insurance Rate Map (FIRM)

Means the official map on which the Federal Insurance Administration has delineated both the special flood hazard areas and the risk

premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

15A.02.140 Flood Insurance Study

Means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood, or an examination and determination of mudslide (ie., mudflow) and/or flood-related erosion hazards.

15A.02.145 Flood Proofing

Means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

15A.02.150 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 a designated height.

15A.02.155 Highest Adjacent Grade

Means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

15A.02.160 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 enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Ordinance found at LCL §15A.05.050(a)(2) and LCL §15A.05.080(a)(1) .

15A.02.170 Manufactured Home

Means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a

permanent foundation when attached to the required utilities. The term “manufactured home” does not include a “recreational vehicle.”

15A.02.180 Manufactured Home Park or Subdivision

Means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

15A.02.190 New Construction

Means, for the purposes of determining insurance rates, structures for which the “start of construction” commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, *new construction* means structures for which the *start of construction* commenced on or after the effective date of a flood- plain management regulation adopted by a community and includes any subsequent improvements to such structures.

15A.02.200 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 pads) is completed on or after the effective date of adopted floodplain management regulations.

15A.02.210 Recreational Vehicle

Means a vehicle which is

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

15A.02.215 Regulatory Flood Elevation

Means the total elevation requirements, including base flood elevation plus freeboard, flood depth plus freeboard, and all the applicable elevation requirements specified in Chapter LCL §15A.05 – Provisions For Flood Hazard Reduction.

15A.02.220 Special Flood Hazard Area (SFHA)

Means the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. Designation on Flood Insurance Rate Maps always includes the letters A or V and can include the following zones, A, AO, AH, A1-30, AE, A99, AR, AR/A, AR/AO, AR/AH, AR/A1-30, AR/AE, V, V1-30, and VE.

15A.02.230 Start of Construction

Includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, ~~and~~ addition, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of 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 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 of the property or 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 a building, whether or not that alteration affects the external dimensions of the building.

15A.02.240 Structure

Means a walled and roofed building including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

15A.02.250 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 50 percent of the market value of the structure before the damage occurred. "Substantial damage" also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

15A.02.260 Substantial Improvement

Means any repair, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 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. 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 can exclude:

- (a) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or
- (b) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places, provided that the alteration will not preclude the structure's continued designation as a "historic structure."

15A.02.265 Trust Land

Means all lands held in trust for the Lummi Nation by the United States regardless of location.

15A.02.270 Variance

Means a grant of relief from the requirements of this Ordinance which permits construction in

a manner that would otherwise be prohibited by this Ordinance.

15A.02.280 Water Dependent

Means a structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

Chapter 15A.03 General Provisions

15A.03.010 Land to Which this Ordinance Applies

This Ordinance shall apply to all special flood hazard areas within the exterior boundaries of the Lummi Reservation, including fee and trust land parcels and all trust lands regardless of location.

15A.03.020 Basis for Establishing the Special Flood Hazard Area

The special flood hazard areas identified by the Federal Insurance Administrator in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for Whatcom County, Washington, and Incorporated Areas" dated January 18, 2019 with accompanying Flood Insurance Rate Maps (FIRMs) dated January 18, 2019, are hereby adopted by reference and declared to be a part of this ordinance. The FIS and FIRM panels are on file with the Planning Department at the Lummi Nation Administration Building located at 2665 Kwina Road, Bellingham, Washington, 98226). Future studies and flood insurance maps, as amended, shall become a part of this Ordinance.

15A.03.030 Penalties for Non Compliance

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this Ordinance and other applicable regulations. Violations of the provisions of this Ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions), shall constitute a misdemeanor. Any person who violates this Ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$1000.00, for each violation, and in addition shall pay all costs and

expenses involved in the case. Nothing herein contained shall prevent the LIBC from taking such other lawful action as is necessary to prevent or remedy any violation.

15A.03.040 Abrogation and Greater Restrictions

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

15A.03.050 Interpretation

In the interpretation and application of this Ordinance, all provisions and various parts thereof shall be

- (a) considered as minimum requirements;
- (b) liberally construed in favor of the governing body;
- (c) deemed neither to limit or repeal any other powers granted under Lummi Nations laws and federal statutes; and
- (d) are hereby declared to be severable. Should any Section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the Section so declared to be unconstitutional or invalid.

15A.03.060 Warning and Disclaimer of Liability

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This Ordinance does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This Ordinance shall not create liability on the part of LIBC, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made hereunder.

Chapter 15A.04 Establishment of Development Permit

15A.04.010 Development Permit Required

A development permit shall be obtained before construction, or development begins within any special flood hazard area established in LCL §15A.03.020. The permit shall be for all structures including manufactured homes, as set forth in the “DEFINITIONS,” and for all development including fill and other activities, also as set forth in the “DEFINITIONS.”

15A.04.020 Application for Development Permit

Application for a development permit shall be made on forms furnished by the Planning Department and 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, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- (a) For A, AO, AH, A1-30, AE, A99, AR, AR/A, AR/AO, AR/AH, AR/A1-30, AR/AE zones, the elevation in relation to mean sea level, of the top of the lowest floor (including basement) of all structures, and also for unnumbered A zones (Zones A, AH, AO), the highest adjacent grade(s) next to all structures, or for Coastal High Hazard Areas (Zones V, V1-30, VE) the bottom of the lowest horizontal structural member of the lowest floor of all structures;
- (b) Elevation in relation to mean sea level of the top of the lowest floor and/or elevation of floodproofing to which any structure has been floodproofed;
- (c) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in LCL §15A.05.050(b) using the currently effective Federal Emergency Management Agency (FEMA) Non-Residential Floodproofing Certificate;

(d) For Coastal High Hazard Areas (Zones V, V1-30, VE), certification by a registered professional engineer or architect authorized by law to certify structural design that the design meets the requirements in LCL §15A.05.090(a)-(f) using the currently effective FEMA V Zone Design Certificate;

(e) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development;

(f) Where development is proposed in a floodway, an engineering analysis indicating no rise of the flood elevation; and

(g) Any other such information that may be determined to be needed by the Floodplain Administrator in order to review the application.

15A.04.030 Designation of the Director of Planning Department

The Director of the Planning Department (Director) is hereby designated as the Floodplain Administrator, and thereby appointed to administer and implement this Ordinance by granting or denying development permit applications in accordance with its provisions.

15A.04.031 Duties and Responsibilities of the Director

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

(a) Permit Review.

(1) Review all development permits to determine that the permit requirements of this Ordinance have been satisfied.

(2) Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required.

(3) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of LCL §15A.05.060(a) are met.

(4) Review all development permits to determine that the site is reasonably safe

from flooding.

(5) Notify FEMA when annexations occur in the Special Flood Hazard Area.

(b) Use of Other Base Flood Data

When base flood elevation data has not been provided in accordance with Chapter 15A.03.020, BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS, the Director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, in order to administer this Ordinance. Any such information shall be consistent with the requirements of the Federal Insurance Administrator.

(c) Information to be Obtained and Maintained.

(1) For all special flood hazard areas within A, AO, AH, A1-30, AE, A99, AR, AR/A, AR/AO, AR/AH, AR/A1-30, and AR/AE, zones where base flood elevation data is provided through the Flood Insurance Study or required as in LCL §15A.04.031(b), obtain and record the actual (as-built) elevation (in relation to mean sea level) of the top of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

(A) A currently effective and complete FEMA Elevation Certificate shall be submitted prior to occupancy, and if applicable, with an Engineered Flood Opening Certification.

(2) For all new or substantially improved floodproofed non-residential structures located within Zones A, AO, AH, A1-30, AE, A99, AR, AR/A, AR/AO, AR/AH, AR/A1-30, and AR/AE

(A) verify and record the actual elevation of the top of the lowest floor and/or elevation of floodproofing (in relation to mean sea level), and

(B) maintain the floodproofing certifications required in LCL §15A.04.020(c).

(3) For all special flood hazard areas within V, V1-30, VE zones, where base flood elevation is provided through the Flood Insurance Study or required as in LCL §15A.05.090(c) for residential and non-residential structures, the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of all new or substantially improved structures (floodproofing is prohibited in Zones V, V1-30, and VE).

(A) A currently effective and complete FEMA Elevation Certificate shall be submitted prior to occupancy.

(B) Maintain the V Zone design certifications required in LCL §15A.04.020(d).

(4) Certifications required in LCL §15A.05.060.

(5) Records of appeal and variance procedures, including justification for their issuance.

(6) Improvement and damage calculations.

(d) Maintain for public inspection all records pertaining to the provisions of this Ordinance.

(e) Alteration of Watercourses.

(1) Provide the Director plans and application for watercourse alteration prior to any alteration or relocation of a watercourse, and submit evidence of Tribal approval to the Federal Insurance Administration.

(2) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished and fish and wildlife habitats are protected according to designs and mitigation plans jointly approved by the Director and by the Lummi Natural Resources Department.

(3) Notify, in riverine situations, adjacent communities prior to alteration or relocations of a watercourse and submit copies of such notifications to the Federal Insurance Administrator.

(f) Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact

location of the boundaries of the special flood hazard areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in LCL §15A.04.040.

15A.04.040 Appeal and Variance Procedure

(a) Appeal Board.

(1) The Lummi Planning Commission (Commission) as established by the LIBC shall hear and decide appeals and requests for variances from the requirements of this Ordinance.

(2) The Commission shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Planning Department in the enforcement or administration of this Ordinance.

(3) Those aggrieved by the decision of the Commission, or any landowner, may appeal such decision to the LIBC, as provided in the Constitution of the Lummi Nation.

(4) In passing upon such applications, the Commission shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Ordinance, and

(A) the danger that materials may be swept onto other lands to the injury of others;

(B) the danger to life and property due to flooding or erosion damage;

(C) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(D) the importance of the services provided by the proposed facility to the community;

(E) the necessity to the facility of a waterfront location, where applicable;

(F) the availability of alternative locations for the proposed use which are

not subject to flooding or erosion damage;

(G) the compatibility of the proposed use with existing and anticipated development;

(H) the relationship of the proposed use to the comprehensive plan and flood plain management program for that area;

(I) the safety of access to the property in times of flood for ordinary and emergency vehicles;

(J) the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;

(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;

(L) the potential adverse impacts to natural resources; and

(M) the potential adverse impacts to treaty protected resources.

(5) Upon consideration of the factors of LCL §15A.04.040(a)(4) and the purposes of this Ordinance, the Commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Ordinance.

(6) The Commission shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

(b) Conditions for Variances

(1) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation or flood depth, providing items (A-M) in LCL §15A.04.040(a)(4) have been fully considered. As the lot size increases the

technical justification required for issuing the variance increases.

(2) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, or declared a historic place by the Lummi Nation, without regard to the procedures set forth in this Section, and will not preclude the structures' continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

(3) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(5) Variances shall only be issued upon

(A) a showing of good and sufficient cause;

(B) a determination that failure to grant the variance would result in exceptional hardship to the applicant; and

(C) 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 as identified in LCL §15A.04.040(a)(4), or conflict with existing local laws or ordinances.

(6) Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

(7) Variances may be issued for nonresidential buildings in very limited

circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except LCL §15A.04.040(b)(1), and otherwise complies with LCL §15A.05.010(a) and LCL §15A.05.010(b) of the GENERAL STANDARDS.

(8) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

Chapter 15A.05 Provisions For Flood Hazard Reduction

15A.05.010 General Standards for all Special Flood Hazard Areas

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

(a) Anchoring

(1) 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) All manufactured homes shall meet the requirements of LCL §15A.05.010(a)(1) above, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

(b) Construction Materials and Methods

(1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood

damage.

(3) Electrical systems, equipment and components heating, ventilating, air conditioning; plumbing appliances and plumbing fixtures; duct systems; components, fixtures and other service equipment (collectively termed machinery and equipment).

(A) shall be elevated to at least one foot above the base flood elevation or flood depth designated on the currently effective FIRM or FIS, except for machinery and equipment specifically designed and required by law for fire and life safety. Where such exceptions are made, machinery and equipment may be located below the regulatory flood elevation, provided that the machinery and equipment are designed and/or located, and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the regulatory flood elevation, or,

(B) if a base flood elevation or flood depth is not designated on the currently effective FIRM or FIS, shall be designed and installed so as to prevent water from entering or accumulating within the components and resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the regulatory flood elevation.

(c) Utilities

(1) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

(2) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(3) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(d) 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 damage; and
- (4) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).

(e) Review of Building Permits.

Where elevation data is not available either through the Flood Insurance Study or from another authoritative source LCL §15A.04.031(b), Applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

15A.05.050 Specific Standards for Flood Zones AH, A1-30, AE, AR, AR/AH, AR/A1-30 or AR/AE where Base Flood Elevation Provided or Available

In all special flood hazard areas designated as AH, A1-30, AE, AR, AR/AH, AR/A1-30, or AR/AE where base flood elevation data has been provided as set forth in LCL §15A.03.020, BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS or LCL §15A.04.031(b), Use of Other Base Flood Data, the following provisions are required:

(a) Residential Construction

- (1) New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot above the base flood elevation.
- (2) Fully enclosed areas below the lowest

floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters, and shall be usable solely for parking of vehicles, building access, or storage. 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:

- (A) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall provided.
- (B) The bottom of all openings shall be no higher than one foot above grade.
- (C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(b) Nonresidential Construction

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot above the base flood elevation; or, together with attendant utility and sanitary facilities, shall

- (1) be floodproofed so that below one foot above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- (2) have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- (3) 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 provisions of this Subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in LCL §15A.04.031(c)(2);
- (4) nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest

floor as described in LCL §15A.05.050(a)(2);

(5) applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be rated as one foot below).

(c) **Manufactured Homes.**

(1) All manufactured homes to be placed or substantially improved within Zones A1-A30, AH, AE, AR, AR/A1-30, AR/AH, and AR/AE on the community's FIRM on sites

(A) outside of a manufactured home park or subdivision,

(B) in a new manufactured home park or subdivision,

(C) in an expansion to an existing manufactured home park or subdivision, or

(D) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood; shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation collapse and lateral movement.

(2) Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, and AE, AR, AR/A1-30, AR/AH, and AR/AE on the community's FIRM that are not subject to the above manufactured home provisions shall conform with those same provisions.

(d) **Recreational Vehicles.**

Recreational vehicles placed on sites within Zones A1-30, AH, AE, AR, AR/A1-30, AR/AH, and AR/AE on the community's FIRM shall

(1) be on the site for fewer than 180 consecutive days and fully licensed and

ready for highway use, 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; or

(2) meet the requirements of LCL §15A.05.050(c) above and the elevation and anchoring requirements for manufactured homes.

15A.05.060 Floodways

Located within the special flood hazard areas established in LCL §15A.03.020 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

(a) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(b) Construction or reconstruction of residential structures is prohibited within designated floodways, except for

(1) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

(2) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either

(A) before the repair or reconstruction is started, or

(B) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary, or safety codes or to structures identified as historic places shall not be included in the 50 percent.

(c) If LCL §15A.05.060(a) is satisfied, all new construction and substantial improvements

shall comply with all applicable flood hazard reduction provisions of Section 15A.05, PROVISIONS FOR FLOOD HAZARD REDUCTION.

15A.05.070 Encroachments

In areas without a designated floodway, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30, AE, AH, AO, A, AR, AR/A1-30, AR/AE, AR/AH, AR/A, AR/AO, and AR/A on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, where combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

15A.05.080 Standards For Shallow Flooding Areas (AO and AR/AO Zones)

Shallow flooding areas appear on FIRMs as AO or AR/AO zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

(a) New construction and substantial improvements of residential structures and manufactured homes within AO or AR/AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building, one foot or more above the depth number specified on the FIRM (at least two feet above the highest adjacent grade if no depth number is specified).

1) Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. and shall be 0. 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:

(A) A minimum of two openings having a

total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall provided.

(B) The bottom of all openings shall be no higher than one foot above grade.

(C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(b) New construction and substantial improvements of nonresidential structures within AO or AR/AO zones shall either

(1) have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the FIRM (at least two feet above the highest adjacent grade if no depth number is specified); or

(2) together with attendant utility and sanitary facilities, be completely flood proofed to or above that level so that any space below the level specified in paragraph (b)(1) above 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. If this method is used, compliance shall be certified by a registered professional engineer or architect as in LCL §15A.05.050(b)(3).

(c) Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

(d) Recreational vehicles placed on sites within AO Zones on the community's FIRM shall

(1) be on the site for fewer than 180 consecutive days and be fully licensed and ready for highway use on its wheels or jacking system; be attached to the site only by quick disconnect type utilities and security devices; and have no permanently attached additions; or

(2) meet the requirements of LCL §15A.05.080 above and the elevation and anchoring requirements for manufactured homes.

15A.05.085 Standards For Zone A

In special flood hazard areas delineated Zone A, a base flood elevation is not designated on the community's FIRMs. If a base flood elevation cannot be determined pursuant to LCL §15A.04.031(b), Use of Other Base Flood Data, the base flood elevation shall be two feet above the highest adjacent grade and LCL §15A.05.080, STANDARDS FOR SHALLOW FLOODING AREAS (AO, AR/AO ZONES) shall apply and utilize a flood depth of at least two feet above the highest adjacent grade. If a base flood elevation is determined, LCL §15A.05.080, STANDARDS FOR SHALLOW FLOODING AREAS (AO and AR/AO ZONES) shall apply such that the base flood elevation is applied as the elevation of the flood depth.

15A.05.090 Standards for Coastal High Hazard Areas (V1-30, VE, V)

Located within the special flood hazard areas established in LCL §15A.03.020 are Coastal High Hazard Areas, designated as Zones V1-V30, VE and/or V. These areas have special flood hazards associated with high velocity waters from surges and, therefore, in addition to meeting all provisions in this Ordinance, the following provisions shall also apply:

(a) All new construction and substantial improvements in Zones V1-V30 and VE (V if base flood elevation data is available) shall be elevated on pilings and columns so that

(1) the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level; and

(2) 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. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

(b) 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 (1) and (2) of this Section.

(c) Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1-30 and VE, and whether or not such structures contain a basement. The local administrator shall maintain a record of all such information.

(d) All new construction shall be located landward of the reach of ordinary high water.

(e) Provide that all new construction and substantial improvements 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 purpose of this Section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 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:

(1) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and

(2) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

(f) If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

(g) Prohibit the use of fill for structural support of buildings.

(h) Prohibit man-made alteration of sand dunes which would increase potential flood damage.

(i) All manufactured homes to be placed or substantially improved within Zones V1-V30, V, and VE on the community's FIRM on sites

(1) outside of a manufactured home park or subdivision,

(2) in a new manufactured home park or subdivision,

(3) in an expansion to an existing manufactured home park or subdivision, or

(4) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood shall meet the standards of paragraphs LCL §15A.05.090(a) through (h) of this Section and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the FIRM meet the requirements of LCL §15A.05.050(c).

(j) Recreational vehicles placed on sites within Zones V1-30, V, and VE on the community's FIRM either

(1) be on the site for fewer than 180 consecutive days and be fully licensed and ready for highway use on its wheels or jacking system; be attached to the site only by quick disconnect type utilities and security devices; and have no permanently attached additions; or

(2) Meet the requirements of LCL §15A.04.010 (Permitting requirements) and paragraphs LCL §15A.05.090(a) through (h) of this Section.

(k) Floodproofing non-residential structures is prohibited within Zones V, V1-30, and VE on the community's FIRMs.

15A.05.100 Critical Facility

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area. Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or more above the level of the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

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