

ARTICLE 5

RESOURCE PROTECTION

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ARTICLE 5

RESOURCE PROTECTION

SECTION 5.01. PURPOSE

The purpose of this Article is to establish those resources or areas of a development site that must be protected from harmful effects of development. A developer should apply the provisions of this Article to divide a proposed development site into areas that may be developed and areas that must generally be left free of development activity. The proposed development should then be designed to fit within the areas that may be developed.

SECTION 5.02. TREE PROTECTION

5.02.01 Findings

- A. Trees benefit the community in the following ways:
1. Absorbing carbon dioxide and returning oxygen to the atmosphere.
 2. Precipitating dust and other particulates from the air.
 3. Providing wildlife habitat, particularly for birds, which in turn help control insects.
 4. Providing soil stabilization which reduces erosion and mitigates the effect of flooding.
 5. Providing shade which reduces energy consumption and glare, and making outdoor areas more comfortable during the warm months.
 6. Making the built environment more attractive by adding a variety of color, shape, and pattern, and thus increasing community pride and the value of property.
 7. Providing attractive buffering between incompatible land uses.
 8. Abating noise.
- B. Because some trees are more beneficial than others, the public benefits of tree protection may be obtained without preserving each and every tree.

5.02.02. Definitions

Diameter at Breast Height (DBH) means the diameter of the plant or tree at 54 inches above the surface of the ground at the base of the plant or tree. In the case of a tree with multiple main stems, the diameter shall be the sum of the diameters of the stems.

Historic Tree means a tree designated by the City Council as one of notable historical interest, as further described in Section 5.01.03 C.

Protected Tree means any tree that has a DBH of more than 8 inches, and which is not otherwise exempted from this Code.

Remove means to relocate, cut down, damage, poison, or in any other manner destroy or cause to be destroyed, a tree.

Specimen Tree means a tree designated by the City Council to be of high value, as further described in Section 5.01.030 C.

5.02.03. Exemptions

A. *Single-Family Homes.* Lots or parcels of land on which a single-family home is used as a residence shall be exempt from all provisions of these tree protection regulations, except that historic or specimen trees on such parcels shall be protected according to these regulations. This shall not be construed to exempt any residential developments that require the approval of a development plan by the Plan Board or City.

B. *Nuisance Trees.* The following types of trees shall be exempt from the tree protection requirements of this Code:

Brazilian Pepper
Malaleuca
Australian Pine
Wild Cherry

C. *Utility Operations.* Tree removals by duly constituted communication, water, sewer, electrical, or other utility companies or federal, state, or county agencies, or engineers or surveyors working under a contract with such utility companies or agencies, shall be exempt, provided the removal is limited to those areas necessary for maintenance of existing lines or facilities or for construction of new lines or facilities in furtherance of providing utility service to its customers, and provided further that the activity is conducted so as to avoid any unnecessary removal and, in the case of aerial electrical utility lines, is not greater than that specified by the National Electrical Codes as necessary to achieve safe electrical clearances. Written notice of the removal shall be provided to the Waldo Development Review Coordinator 5 days prior to the removal,

except that when the removal is needed to restore interrupted service under emergency conditions, no prior notice is required.

- D. *Surveyors.* A Florida licensed land surveyor in the performance of his duties provided such alteration is limited to a swath three feet or less in width.
- E. *Commercial Growers.* All commercial nurseries, botanical gardens, tree farms, and grove operations shall be exempt from the provisions of this part, but only as to those trees which were planted for silvicultural or agricultural purposes or for sale or intended sale in the ordinary course of business.
- F. *Emergencies.* During emergencies caused by a hurricane or other disaster, the City Manager may suspend tree protection regulations.

5.02.04. Removal of Trees

- A. *Conditions for Authorization to Remove Protected Trees.*
 - 1. It is the intent of this section to minimize the removal of protected trees and that no authorization shall be granted to remove a tree if the developer has failed to take reasonable measures to design and locate the proposed improvements so that the number of protected trees to be removed is minimized. In particular, the design must attempt to preserve specimen and historic trees.
 - 2. No authorization for the removal of a protected tree shall be granted unless the developer demonstrates one or more of the following conditions:
 - a. A permissible use of the site cannot reasonably be undertaken unless specific trees are removed or relocated.
 - b. The tree is located in such proximity to an existing structure that the safety, utility, or structural integrity of the structure is materially impaired.
 - c. The tree materially interferes with the location, servicing or functioning of existing utility lines or services.
 - d. The tree creates a substantial hazard to motor, bicycle, or pedestrian traffic by virtue of physical proximity to traffic or impairment of vision.
 - e. The tree is diseased or weakened by age, abuse, storm, or fire, and is likely to cause injury or damage to people, buildings, or other improvements.
 - f. Any law or regulation requires the removal.

B. *Replacement of Removed Trees.*

1. Trees removed pursuant to paragraph A above shall be replaced at the expense of the developer.
2. For each inch of Diameter at Breast Height (DBH) removed, an inch of DBH shall be replaced.
3. In addition to substitution for a removed tree, a replacement tree may be a removed tree moved from one location to another on the site, or moved off the site pursuant to paragraph 4 below.
4. Replacement trees shall, if practicable, be planted on the development site. If not practicable, a fee in lieu may be paid to the City or, at the City's option, replacement trees may be donated, for purposes of planting trees on public property. The fee in lieu shall be based on the cost of purchasing the requisite size and number of replacement trees.

C. *Historic and Specimen Trees.*

1. A historic tree is one that has been designated by the City Council as one of notable historical interest and value to the city because of its location or historical association with the community. A public hearing shall be held by the City Council on the designation with due notice to the owner of the tree.
2. A specimen tree is one that has been officially designated by the City Council, upon the advice of the City Manager, to be of high value because of its type, size, age, or other relevant criteria. A public hearing on the designation shall be held by the City Council with due notice to the owner of the tree.
3. No historic or specimen tree shall be removed without a finding by the City Council that the tree is a hazard or that it is not economically or practically feasible to develop the parcel without removing the tree. The developer shall explain in detail why the tree is a hazard or why it is not economically or practically feasible to develop the parcel without removing the historic or specimen tree. The City Manager shall make a presentation to the City Council on the application and make a recommendation as to whether it should be approved or denied. The decision by the City Council on the application shall be made within thirty (30) days of the date the application was filed.

SECTION 5.03. ENVIRONMENTALLY SENSITIVE LANDS

5.03.01. Wetlands

All development is prohibited within wetlands as designated by the Suwannee River Water Management District. All residential, commercial, and industrial land uses are prohibited within a natural buffer area around all wetlands, as required by the Waldo Comprehensive Plan, or other state or regional regulations; but resource-based recreational uses are allowed within the buffer area.

SECTION 5.04. GROUNDWATER AND WELLHEAD PROTECTION

5.04.01. Purpose and Intent

The purpose of groundwater protection standards is to safeguard the health, safety, and welfare of Waldo's citizens. This is accomplished specifically by ensuring the protection of the principle sources of water for domestic, agricultural, and industrial use. The availability of an adequate and dependable supply of good quality water is of primary importance to the city's future. Therefore, standards are established in this section with the intent of protecting both the quantity and quality of the groundwater supply. It is further the intent of this section to control development in and adjacent to designated wellheads to protect water supplies from potential contamination.

5.04.02. Definitions

Protected Wellheads means those wellheads with a permitted capacity of 100,000 Gallons per day or more.

Wellhead Protection Area means all land within a 500 foot radius of an existing or designated protected wellhead.

Zone of Exclusion means all land within a 100 foot radius of an existing or designated protected wellhead.

5.04.03. Restrictions on Development

- A. *Within the Zone of Exclusion.* No development activities shall take place within the Zone of Exclusion.
- B. *Within the Wellhead Protection Zone.* The following land uses are prohibited within the Wellhead Protection Zone:
 - 1. Land use which require or involve storage, use or manufacture of regulated materials.

2. Landfills.
 3. Facilities for the bulk storage, handling, or processing of materials on the Florida Hazardous Substance List.
 4. Activities that require the storage, use, handling, or production of restricted substances, including, but not limited to, agricultural chemicals, petroleum products, hazardous/toxic wastes, industrial chemicals, and medical wastes. Transportation of such substances shall also be prohibited, except for local traffic serving facilities within the wellfield protection area shall be allowed.
 5. Feedlots or concentrated animal facilities.
 6. Wastewater treatment plants, percolation ponds, and similar facilities.
 7. Excavation of waterways or drainage facilities which intersect the water table.
- C. *Groundwater Restrictions on General Development.*
1. Stormwater management practices shall not include drainage wells and sinkholes for stormwater disposal where recharge is into potable water aquifers.
 2. Where development is approved in areas with existing wells, these wells shall be abandoned, including adequate sealing and plugging according to Rule 40D - 3.531, Florida Administrative Code.
 3. The discharge of hazardous materials to all soils, groundwaters, and surface waters of the City is prohibited.

SECTION 5.05. FLOOD MANAGEMENT

Division 1. Administration

5.05.01. General Provisions

- A. *Title.* The regulations in this Section shall be known as the *Floodplain Management Regulations* of the City of Waldo, hereinafter referred to as "this Section."
- B. *Scope.* The provisions of this Section shall apply to all development that is wholly within or partially within any flood hazard area, including but not limited to the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, improvement, replacement, repair, relocation or demolition of buildings, structures, and facilities that are exempt from the

Florida Building Code; placement, installation, or replacement of manufactured homes and manufactured buildings; installation or replacement of tanks; placement of recreational vehicles; installation of swimming pools; and any other development.

- C. *Intent.* The purposes of this Section and the flood load and flood resistant construction requirements of the *Florida Building Code* are to establish minimum requirements to safeguard the public health, safety, and general welfare and to minimize public and private losses due to flooding through regulation of development in flood hazard areas to:
1. Minimize unnecessary disruption of commerce, access and public service during times of flooding;
 2. Require the use of appropriate construction practices in order to prevent or minimize future flood damage;
 3. Manage filling, grading, dredging, mining, paving, excavation, drilling operations, storage of equipment or materials, and other development which may increase flood damage or erosion potential;
 4. Manage the alteration of flood hazard areas, watercourses, and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain;
 5. Minimize damage to public and private facilities and utilities;
 6. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas;
 7. Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events; and
 8. Meet the requirements of the National Flood Insurance Program for community participation as set forth in the Title 44 Code of Federal Regulations, Section 59.22.
- D. *Coordination with the Florida Building Code.* This Section is intended to be administered and enforced in conjunction with the *Florida Building Code*. Where cited, ASCE 24 refers to the edition of the standard that is referenced by the *Florida Building Code*.
- E. *Warning.* The degree of flood protection required by this Section and the *Florida Building Code*, is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. This Section does not imply

that land outside of mapped special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage. The flood hazard areas and base flood elevations contained in the Flood Insurance Study and shown on Flood Insurance Rate Maps and the requirements of Title 44 Code of Federal Regulations, Sections 59 and 60 may be revised by the Federal Emergency Management Agency, requiring this community to revise these regulations to remain eligible for participation in the National Flood Insurance Program. No guaranty of vested use, existing use, or future use is implied or expressed by compliance with this Section.

- F. *Disclaimer of Liability.* This Section shall not create liability on the part of City Council of the City of Waldo by any officer or employee thereof for any flood damage that results from reliance on this Section or any administrative decision lawfully made thereunder.
- G. *Conflicting Provisions.* Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.
- H. *Areas to which this Section applies.* This Section shall apply to all flood hazard areas within the incorporated area of the City of Waldo as established in 5.05.01 I of this Section.
- I. *Basis for establishing flood hazard areas.* The Flood Insurance Study for Alachua County, Florida and Incorporated Areas, dated June 16, 2006, and all subsequent amendments and revisions, and the accompanying Flood Insurance Rate Maps (FIRM), and all subsequent amendments and revisions to such maps, are adopted by reference as a part of this Section and shall serve as the minimum basis for establishing flood hazard areas. Studies and maps that establish flood hazard areas are on file at the City of Waldo City Hall, 14655 Kennard Street, Waldo, Florida.
- J. Submission of additional data to establish flood hazard areas. To establish flood hazard areas and base flood elevations, pursuant to the provisions of 5.05.04 of this Section, the Floodplain Administrator may require submission of additional data. Where field surveyed topography prepared by a Florida licensed professional surveyor or digital topography accepted by the community indicates that ground elevations:
 - (1) Are below the closest applicable base flood elevation, even in areas not delineated as a special flood hazard area on a FIRM, the area shall be considered as flood hazard area and subject to the requirements of this Section and, as applicable, the requirements of the *Florida Building Code*.
 - (2) Are above the closest applicable base flood elevation, the area shall be regulated as special flood hazard area unless the applicant obtains a Letter of Map Change that removes the area from the special flood hazard area.

- K. *Other laws.* The provisions of this Section shall not be deemed to nullify any provisions of local, state or federal law.
- L. *Abrogation and greater restrictions.* This Section supersedes any ordinance in effect for management of development in flood hazard areas. However, it is not intended to repeal or abrogate any existing ordinances including but not limited to land development regulations, zoning ordinances, stormwater management regulations, or the *Florida Building Code*. In the event of a conflict between this Section and any other ordinance, the more restrictive shall govern. This Section shall not impair any deed restriction, covenant or easement, but any land that is subject to such interests shall also be governed by this Section.
- M. *Interpretation.* In the interpretation and application of this Section, all provisions shall be:
- (1) Considered as minimum requirements;
 - (2) Liberally construed in favor of the governing body; and
 - (3) Deemed neither to limit nor repeal any other powers granted under state statutes.

5.05.02. Duties and Powers of the Floodplain Administrator

- A. *Designation.* The City Manager is designated as the Floodplain Administrator. The Floodplain Administrator may delegate performance of certain duties to other employees.
- B. *General.* The Floodplain Administrator is authorized and directed to administer and enforce the provisions of this Section. The Floodplain Administrator shall have the authority to render interpretations of this Section consistent with the intent and purpose of this Section and may establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies, and procedures shall not have the effect of waiving requirements specifically provided in this Section without the granting of a variance pursuant to this Section.
- C. *Applications and permits.* The Floodplain Administrator, in coordination with other pertinent offices of the community, shall:
1. Review applications and plans to determine whether proposed new development will be located in flood hazard areas;
 2. Review applications for modification of any existing development in flood hazard areas for compliance with the requirements of this Section;

3. Interpret flood hazard area boundaries where such interpretation is necessary to determine the exact location of boundaries; a person contesting the determination shall have the opportunity to appeal the interpretation;
4. Provide available flood elevation and flood hazard information;
5. Determine whether additional flood hazard data shall be obtained from other sources or shall be developed by an applicant;
6. Review applications to determine whether proposed development will be reasonably safe from flooding;
7. Issue floodplain development permits or approvals for development other than buildings and structures that are subject to the *Florida Building Code*, including buildings, structures and facilities exempt from the *Florida Building Code*, when compliance with this Section is demonstrated, or disapprove the same in the event of noncompliance; and
8. Coordinate with and provide comments to the Building Official to assure that applications, plan reviews, and inspections for buildings and structures in flood hazard areas comply with the applicable provisions of this Section.

D. *Substantial improvement and substantial damage determinations.* For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

1. Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;
2. Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
3. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and
4. Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood

resistant construction requirements of the *Florida Building Code* and this Section is required.

- E. *Modifications of the strict application of the requirements of the Florida Building Code.* The Floodplain Administrator shall review requests submitted to the Building Official that seek approval to modify the strict application of the flood load and flood resistant construction requirements of the *Florida Building Code* to determine whether such requests require the granting of a variance pursuant to 5.05.06 of this Section.
- F. *Coordination of notices and orders.* The Floodplain Administrator and the Building Official shall coordinate the issuance of all necessary notices or orders to ensure compliance with this Section.
- G. *Inspections.* The Floodplain Administrator shall make the required inspections as specified in 5.05.05 of this Section for development that is not subject to the *Florida Building Code*, including buildings, structures and facilities exempt from the *Florida Building Code*. The Floodplain Administrator shall inspect flood hazard areas to determine if development is undertaken without issuance of a permit.
- H. *Other duties of the Floodplain Administrator.* The Floodplain Administrator shall have other duties, including but not limited to:
 - 1. Establish, in coordination with the Building Official, procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to 5.05.02 D of this Section;
 - 2. Require that applicants proposing alteration of a watercourse notify adjacent communities and the Florida Division of Emergency Management, State Floodplain Management Office, and submit copies of such notifications to the Federal Emergency Management Agency (FEMA);
 - 3. Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps if the analyses propose to change base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available;
 - 4. Review required design certifications and documentation of elevations specified by this Section and the *Florida Building Code* to determine that such certifications and documentations are complete; and
 - 5. Notify the Federal Emergency Management Agency when the corporate boundaries of City of Waldo are modified.

- I. *Floodplain management records.* Regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of this Section and the flood resistant construction requirements of the *Florida Building Code*, including Flood Insurance Rate Maps; Letters of Change; records of issuance of permits and denial of permits; determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required design certifications and documentation of elevations specified by the *Florida Building Code* and this Section; notifications to adjacent communities, FEMA, and the state related to alterations of watercourses; assurances that the flood carrying capacity of altered watercourses will be maintained; documentation related to appeals and variances, including justification for issuance or denial; and records of enforcement actions taken pursuant to this Section and the flood resistant construction requirements of the *Florida Building Code*. These records shall be available for public inspection at City Hall.

5.05.03. Permits

- A. *Permits required.* Any owner or owner's authorized agent (hereinafter "applicant") who intends to undertake any development activity within the scope of this Section, including buildings, structures and facilities exempt from the *Florida Building Code*, which is wholly within or partially within any flood hazard area shall first make application to the Floodplain Administrator, and the Building Official if applicable, and shall obtain the required permit(s) and approval(s). No such permit or approval shall be issued until compliance with the requirements of this Section and all other applicable codes and regulations has been satisfied.
- B. *Floodplain development permits or approvals.* Floodplain development permits or approvals shall be issued pursuant to this Section for any development activities not subject to the requirements of the *Florida Building Code*, including buildings, structures and facilities exempt from the *Florida Building Code*. Depending on the nature and extent of proposed development that includes a building or structure, the Floodplain Administrator may determine that a floodplain development permit or approval is required in addition to a building permit.
- C. *Buildings, structures and facilities exempt from the Florida Building Code.* Pursuant to the requirements of federal regulation for participation in the National Flood Insurance Program (44 C.F.R. Sections 59 and 60), floodplain development permits or approvals shall be required for the following buildings, structures and facilities that are exempt from the *Florida Building Code* and any further exemptions provided by law, which are subject to the requirements of this Section:
1. Railroads and ancillary facilities associated with the railroad.
 2. Nonresidential farm buildings on farms, as provided in F.S. 604.50.

3. Temporary buildings or sheds used exclusively for construction purposes.
4. Mobile or modular structures used as temporary offices.
5. Those structures or facilities of electric utilities, as defined in F.S. 366.02, which are directly involved in the generation, transmission, or distribution of electricity.
6. Chickees constructed by the Miccosukee Tribe of Indians of Florida or the Seminole Tribe of Florida. As used in this paragraph, the term "chickee" means an open-sided wooden hut that has a thatched roof of palm or palmetto or other traditional materials, and that does not incorporate any electrical, plumbing, or other non-wood features.
7. Family mausoleums not exceeding 250 square feet in area which are prefabricated and assembled on site or preassembled and delivered on site and have walls, roofs, and a floor constructed of granite, marble, or reinforced concrete.
8. Temporary housing provided by the Department of Corrections to any prisoner in the state correctional system.
9. Structures identified in Section 553.73(10)(k), F.S., are not exempt from the *Florida Building Code* if such structures are located in flood hazard areas established on Flood Insurance Rate Maps

D. *Application for a permit or approval.* To obtain a floodplain development permit or approval the applicant shall first file an application in writing on a form furnished by the community. The information provided shall:

1. Identify and describe the development to be covered by the permit or approval.
2. Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitively locate the site.
3. Indicate the use and occupancy for which the proposed development is intended.
4. Be accompanied by a site plan or construction documents as specified in 5.05.04 of this Section.
5. State the valuation of the proposed work.
6. Be signed by the applicant or the applicant's authorized agent.

7. Give such other data and information as required by the Floodplain Administrator.
- E. *Validity of permit or approval.* The issuance of a floodplain development permit or approval pursuant to this Section shall not be construed to be a permit for, or approval of, any violation of this Section, the *Florida Building Codes*, or any other ordinance of this community. The issuance of permits based on submitted applications, construction documents, and information shall not prevent the Floodplain Administrator from requiring the correction of errors and omissions.
 - F. *Expiration.* A floodplain development permit or approval shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions for periods of not more than 180 days each shall be requested in writing and justifiable cause shall be demonstrated.
 - G. *Suspension or revocation.* The Floodplain Administrator is authorized to suspend or revoke a floodplain development permit or approval if the permit was issued in error, on the basis of incorrect, inaccurate or incomplete information, or in violation of this Section or any other ordinance, regulation or requirement of this community.
 - H. *Other permits required.* Floodplain development permits and building permits shall include a condition that all other applicable state or federal permits be obtained before commencement of the permitted development, including but not limited to the following:
 1. The Suwannee Water Management District; Section 373.036, F.S.
 2. Florida Department of Health for onsite sewage treatment and disposal systems; Section 381.0065, F.S. and Chapter 64E-6, F.A.C.
 3. Florida Department of Environmental Protection for activities subject to the Joint Coastal Permit; Section 161.055, F.S.
 4. Florida Department of Environmental Protection for activities that affect wetlands and alter surface water flows, in conjunction with the U.S. Army Corps of Engineers; Section 404 of the Clean Water Act.
 5. Federal permits and approvals.

5.05.04. Site Plans and Construction Documents

- A. *Information for development in flood hazard areas.* The site plan or construction documents for any development subject to the requirements of this Section shall be drawn to scale and shall include, as applicable to the proposed development:

1. Delineation of flood hazard areas, floodway boundaries and flood zone(s), base flood elevation(s) and ground elevations if necessary for review of the proposed development.
2. Where base flood elevations, or floodway data are not included on the FIRM or in the Flood Insurance Study, they shall be established in accordance with 5.05.04 B 2 or 3 of this Section.
3. Where the parcel on which the proposed development will take place will have more than 50 lots or is larger than 5 acres and the base flood elevations are not included on the FIRM or in the Flood Insurance Study, such elevations shall be established in accordance with 5.05.04 B 1 of this Section.
4. Location of the proposed activity and proposed structures, and locations of existing buildings and structures.
5. Location, extent, amount, and proposed final grades of any filling, grading, or excavation.
6. Where the placement of fill is proposed, the amount, type, and source of fill material; compaction specifications; a description of the intended purpose of the fill areas; and evidence that the proposed fill areas are the minimum necessary to achieve the intended purpose.
7. Existing and proposed alignment of any proposed alteration of a watercourse.

The Floodplain Administrator is authorized to waive the submission of site plans, construction documents, and other data that are required by this Section but that are not required to be prepared by a registered design professional if it is found that the nature of the proposed development is such that the review of such submissions is not necessary to ascertain compliance with this Section.

B. *Information in flood hazard areas without base flood elevations (approximate Zone A).* Where flood hazard areas are delineated on the FIRM and base flood elevation data have not been provided, the Floodplain Administrator shall:

1. Require the applicant to include base flood elevation data prepared in accordance with currently accepted engineering practices.
2. Obtain, review, and provide to applicants base flood elevation and floodway data available from a federal or state agency or other source or require the applicant to obtain and use base flood elevation and floodway data available from a federal or state agency or other source.

3. Where base flood elevation and floodway data are not available from another source, where the available data are deemed by the Floodplain Administrator to not reasonably reflect flooding conditions, or where the available data are known to be scientifically or technically incorrect or otherwise inadequate:
 - (a) Require the applicant to include base flood elevation data prepared in accordance with currently accepted engineering practices; or
 - (b) Specify that the base flood elevation is 2 feet above the highest adjacent grade at the location of the development, provided there is no evidence indicating flood depths have been or may be greater than 2 feet.
4. Where the base flood elevation data are to be used to support a Letter of Map Change from FEMA, advise the applicant that the analyses shall be prepared by a Florida licensed engineer in a format required by FEMA, and that it shall be the responsibility of the applicant to satisfy the submittal requirements and pay the processing fees.

C. *Additional analyses and certifications.* As applicable to the location and nature of the proposed development activity, and in addition to the requirements of this subsection, the applicant shall have the following analyses signed and sealed by a Florida licensed engineer for submission with the site plan and construction documents:

1. For development activities proposed to be located in a regulatory floodway, a floodway encroachment analysis that demonstrates that the encroachment of the proposed development will not cause any increase in base flood elevations; where the applicant proposes to undertake development activities that do increase base flood elevations, the applicant shall submit such analysis to FEMA as specified in 5.05.04 D of this Section and shall submit the Conditional Letter of Map Revision, if issued by FEMA, with the site plan and construction documents.
2. For development activities proposed to be located in a riverine flood hazard area for which base flood elevations are included in the Flood Insurance Study or on the FIRM and floodways have not been designated, hydrologic and hydraulic analyses that demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachments, will not increase the base flood elevation more than 1 foot at any point within the community. This requirement does not apply in isolated flood hazard areas not connected to a riverine flood hazard area or in flood hazard areas identified as Zone AO or Zone AH.
3. For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices which demonstrates that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be

decreased, and certification that the altered watercourse shall be maintained in a manner which preserves the channel's flood-carrying capacity; the applicant shall submit the analysis to FEMA as specified in 5.05.04 D of this Section.

- D. *Submission of additional data.* When additional hydrologic, hydraulic or other engineering data, studies, and additional analyses are submitted to support an application, the applicant has the right to seek a Letter of Map Change from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs, and to submit such data to FEMA for such purposes. The analyses shall be prepared by a Florida licensed engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant.

5.05.05. Inspections

- A. *General.* Development for which a floodplain development permit or approval is required shall be subject to inspection.
- B. *Development other than buildings and structures.* The Floodplain Administrator shall inspect all development to determine compliance with the requirements of this Section and the conditions of issued floodplain development permits or approvals.
- C. *Buildings, structures and facilities exempt from the Florida Building Code.* The Floodplain Administrator shall inspect buildings, structures and facilities exempt from the *Florida Building Code* to determine compliance with the requirements of this Section and the conditions of issued floodplain development permits or approvals.
- D. *Buildings, structures and facilities exempt from the Florida Building Code, lowest floor inspection.* Upon placement of the lowest floor, including basement, and prior to further vertical construction, the owner of a building, structure, or facility exempt from the *Florida Building Code*, or the owner's authorized agent, shall submit to the Floodplain Administrator:
1. If a design flood elevation was used to determine the required elevation of the lowest floor, the certification of elevation of the lowest floor prepared and sealed by a Florida licensed professional surveyor; or
 2. If the elevation used to determine the required elevation of the lowest floor was determined in accordance with 5.05.04 B 3 b of this Section, the documentation of height of the lowest floor above highest adjacent grade, prepared by the owner or the owner's authorized agent.
- E. *Buildings, structures and facilities exempt from the Florida Building Code, final inspection.* As part of the final inspection, the owner or owner's authorized agent shall submit to the Floodplain Administrator a final certification of elevation of the lowest

floor or final documentation of the height of the lowest floor above the highest adjacent grade; such certifications and documentations shall be prepared as specified in 5.05.05 D of this Section.

- F. *Manufactured homes.* The Building Official shall inspect manufactured homes that are installed or replaced in flood hazard areas to determine compliance with the requirements of this Section and the conditions of the issued permit. Upon placement of a manufactured home, certification of the elevation of the lowest floor shall be submitted to the Floodplain Administrator.

5.05.06. Variances and Appeals

- A. *General.* The Plan Board shall hear and decide on requests for appeals and requests for variances from the strict application of this Section. Pursuant to Section 553.73(5), F.S., the Plan Board shall hear and decide on requests for appeals and requests for variances from the strict application of the flood resistant construction requirements of the *Florida Building Code*.
- B. *Appeals.* The Plan Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the administration and enforcement of this Section. Any person aggrieved by the decision of Plan Board may appeal such decision to the Circuit Court, as provided by Florida Statutes.
- C. *Limitations on authority to grant variances.* The Plan Board shall base its decisions on variances on technical justifications submitted by applicants, the considerations for issuance in 5.05.06 G of this Section, the conditions of issuance set forth in 5.05.06 H of this Section, and the comments and recommendations of the Floodplain Administrator and the Building Official. The Plan Board has the right to attach such conditions as it deems necessary to further the purposes and objectives of this Section.
- D. *Restrictions in floodways.* A variance shall not be issued for any proposed development in a floodway if any increase in base flood elevations would result, as evidenced by the applicable analyses and certifications required in 5.05.04 C of this Section.
- E. *Historic buildings.* A variance is authorized to be issued for the repair, improvement, or rehabilitation of a historic building that is determined eligible for the exception to the flood resistant construction requirements of the *Florida Building Code*, Existing Building, Chapter 11 Historic Buildings, upon a determination that the proposed repair, improvement, or rehabilitation will not preclude the building's continued designation as a historic building and the variance is the minimum necessary to preserve the historic character and design of the building. If the proposed work precludes the building's continued designation as a historic building, a variance shall not be granted and the

building and any repair, improvement, and rehabilitation shall be subject to the requirements of the *Florida Building Code*.

- F. *Functionally dependent uses.* A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use, as defined in this Section, provided the variance meets the requirements of 5.05.06 D of this Section, is the minimum necessary considering the flood hazard, and all due consideration has been given to use of methods and materials that minimize flood damage during occurrence of the base flood.
- G. *Considerations for issuance of variances.* In reviewing requests for variances, the Plan Board shall consider all technical evaluations, all relevant factors, all other applicable provisions of the *Florida Building Code*, this Section, and the following:
1. The danger that materials and debris may be swept onto other lands resulting in further injury or damage;
 2. The danger to life and property due to flooding or erosion damage;
 3. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners;
 4. The importance of the services provided by the proposed development to the community;
 5. The availability of alternate locations for the proposed development that are subject to lower risk of flooding or erosion;
 6. The compatibility of the proposed development with existing and anticipated development;
 7. The relationship of the proposed development to the comprehensive plan and floodplain management program for the area;
 8. The safety of access to the property in times of flooding for ordinary and emergency vehicles;
 9. The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
 10. 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, streets and bridges.

- H. *Conditions for issuance of variances.* Variances shall be issued only upon:
1. Submission by the applicant, of a showing of good and sufficient cause that the unique characteristics of the size, configuration, or topography of the site limit compliance with any provision of this Section or the required elevation standards;
 2. Determination by the Plan Board that:
 - a. Failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable; increased costs to satisfy the requirements or inconvenience do not constitute hardship;
 - b. The granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws and ordinances; and
 - c. The variance is the minimum necessary, considering the flood hazard, to afford relief.
 3. Receipt of a signed statement by the applicant that the variance, if granted, shall be recorded in the Office of the Clerk of the Court in such a manner that it appears in the chain of title of the affected parcel of land; and
 4. If the request is for a variance to allow construction of the lowest floor of a new building, or substantial improvement of a building, below the required elevation, a copy in the record of a written notice from the Floodplain Administrator to the applicant for the variance, specifying the difference between the base flood elevation and the proposed elevation of the lowest floor, stating that the cost of federal flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation (up to amounts as high as \$25 for \$100 of insurance coverage), and stating that construction below the base flood elevation increases risks to life and property.

5.05.07. Violations

- A. *General.* Any development that is not within the scope of the *Florida Building Code* but that is regulated by this Section that is performed without an issued permit, that is in conflict with an issued permit, or that does not fully comply with this Section, shall be deemed a violation of this Section. A building or structure without the documentation of elevation of the lowest floor, other required design certifications, or other evidence of compliance required by this Section or the *Florida Building Code* is presumed to be a violation until such time as that documentation is provided.

- B. *Authority.* For development that is not within the scope of the *Florida Building Code* but that is regulated by this Section and that is determined to be a violation, the Floodplain Administrator is authorized to serve notices of violation or stop work orders to owners of the property involved, to the owner's agent, or to the person or persons performing the work.
- C. *Unlawful continuance.* Any person who shall continue any work after having been served with a notice of violation or a stop work order, except such work as that person is directed to perform to remove or remedy a violation or unsafe condition, shall be subject to penalties as prescribed by law.

5.05.08. Definitions

- A. *Terms defined in the Florida Building Code.* Where terms are not defined in this Section and are defined in the *Florida Building Code*, such terms shall have the meanings ascribed to them in that code. Many of the terms below are also defined in the *Florida Building Code*, Buildings, Section 1612.2.
- B. *Terms not defined.* Where terms are not defined in this Section or the *Florida Building Code*, such terms shall have ordinarily accepted meanings such as the context implies.
- C. *Terms Defined.* Unless otherwise expressly stated, the following words and terms shall, for the purposes of this Section, have the following meanings:

Alteration of a watercourse. A dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

Appeal. A request for a review of the Floodplain Administrator or Building Official's interpretation of any provision of this Section or a request for a variance.

ASCE 24. A standard titled Flood Resistant Design and Construction that is referenced by the *Florida Building Code*. ASCE 24 is developed and published by the American Society of Civil Engineers, Reston, VA.

Base flood. A flood having a 1-percent chance of being equaled or exceeded in any given year. The base flood is commonly referred to as the "100-year flood" or the "1-percent-annual chance flood."

Base flood elevation. The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the Flood Insurance Rate Map (FIRM).

Basement. The portion of a building having its floor subgrade (below ground level) on all sides.

Building Official. The officer or other designated authority charged with the administration and enforcement of the *Florida Building Code*, or a duly authorized representative.

Building permit. An official document or certificate issued by the community which authorizes performance of specific activities that are determined to be compliant with the *Florida Building Code*.

Design flood. The flood associated with the greater of the following two areas:

1. Area with a floodplain subject to a 1-percent or greater chance of flooding in any year; or
2. Area designated as a flood hazard area on the community's flood hazard map, or otherwise legally designated.

Design flood elevation. The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where the depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet.

Development. Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of equipment or materials, mining, dredging, filling, grading, paving, excavations, drilling operations or any other land disturbing activities.

Encroachment. The advancement or infringement of fill, excavation, buildings, permanent structures or other development into a flood hazard area which may impede or alter the flow capacity of riverine flood hazard areas.

Existing building and existing structure. Any buildings and structures for which the "start of construction" commenced before November 4, 1988.

Existing manufactured home park or subdivision. A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured 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 November 4, 1988.

Expansion to an existing manufactured home park or subdivision. The preparation of additional sites by the construction of facilities for servicing the lots on which the 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).

Federal Emergency Management Agency (FEMA). The federal agency that, in addition to carrying out other functions, administers the National Flood Insurance Program.

Flood or flooding. A general and temporary condition of partial or complete inundation of normally dry land from:

1. The overflow of inland or tidal waters.
2. The unusual and rapid accumulation or runoff of surface waters from any source.

Flood damage-resistant materials. Any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair.

Flood hazard area. The greater of the following two areas:

1. The area within a floodplain subject to a 1-percent or greater chance of flooding in any year.
2. The area designated as a flood hazard area on the community's flood hazard map, or otherwise legally designated.

Flood Insurance Rate Map (FIRM). The official map of the community on which the Federal Emergency Management Agency has delineated both special flood hazard areas and the risk premium zones applicable to the community.

Flood Insurance Study (FIS). The official report provided by the Federal Emergency Management Agency that contains the Flood Insurance Rate Map, the Flood Boundary and Floodway Map (if applicable), the water surface elevations of the base flood, and supporting technical data.

Floodplain Administrator. The office or position designated and charged with the administration and enforcement of this Section.

Floodplain development permit or approval. An official document or certificate issued by the community, or other evidence of approval or concurrence, which authorizes performance of specific development activities that are located in flood hazard areas and that are determined to be compliant with this Section.

Floodway. The channel of a river or other riverine 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 1 foot.

Floodway encroachment analysis. An engineering analysis of the impact that a proposed encroachment into a floodway is expected to have on the floodway boundaries and base flood elevations; the evaluation shall be prepared by a qualified Florida licensed engineer using standard engineering methods and models.

Florida Building Code. The family of codes adopted by the Florida Building Commission, including: *Florida Building Code, Building*; *Florida Building Code, Residential*; *Florida Building Code, Existing Building*; *Florida Building Code, Mechanical*; *Florida Building Code, Plumbing*; *Florida Building Code, Fuel Gas*.

Functionally dependent use. A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water, including only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities; the term does not include long-term storage or related manufacturing facilities.

Highest adjacent grade. The highest natural elevation of the ground surface prior to construction next to the proposed walls or foundation of a structure.

Historic structure. Any structure that is determined eligible for the exception to the flood hazard area requirements of the *Florida Building Code, Existing Building, Chapter 11 Historic Buildings*.

Letter of Map Change (LOMC). An official determination issued by FEMA that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of Map Change include:

Letter of Map Amendment (LOMA): An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property, portion of a property, or structure is not located in a special flood hazard area.

Letter of Map Revision (LOMR): A revision based on technical data that may show changes to flood zones, flood elevations, special flood hazard area boundaries and floodway delineations, and other planimetric features.

Letter of Map Revision Based on Fill (LOMR-F): A determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer located within the special flood hazard area. In order to

qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.

Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA to revise the effective FIRM.

Light-duty truck. As defined in 40 C.F.R. 86.082-2, any motor vehicle rated at 8,500 pounds Gross Vehicular Weight Rating or less which has a vehicular curb weight of 6,000 pounds or less and which has a basic vehicle frontal area of 45 square feet or less, which is:

1. Designed primarily for purposes of transportation of property or is a derivation of such a vehicle, or
2. Designed primarily for transportation of persons and has a capacity of more than 12 persons; or
3. Available with special features enabling off-street or off-highway operation and use.

Lowest floor. The lowest floor of the lowest enclosed area of a building or structure, including basement, but excluding any unfinished or flood-resistant enclosure, other than a basement, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of the non-elevation requirements of the *Florida Building Code* or ASCE 24.

Manufactured home. A structure, transportable in one or more sections, which is 8 feet or more in width and greater than 400 square feet, and which is built on a permanent, integral 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" or "park trailer."

Manufactured home park or subdivision. A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Market value. The price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in this Section, the term refers to the market value of buildings and structures, excluding the land and other improvements on

the parcel. Market value may be established by a qualified independent appraiser, Actual Cash Value (replacement cost depreciated for age and quality of construction), or tax assessment value adjusted to approximate market value by a factor provided by the Property Appraiser.

New construction. For the purposes of administration of this Section and the flood resistant construction requirements of the *Florida Building Code*, structures for which the "start of construction" commenced on or after November 4, 1988 and includes any subsequent improvements to such structures.

New manufactured home park or subdivision. A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after November 4, 1988.

Park trailer. A transportable unit which has a body width not exceeding 14 feet and which is built on a single chassis and is designed to provide seasonal or temporary living quarters when connected to utilities necessary for operation of installed fixtures and appliances.

Recreational vehicle. A vehicle, including a park trailer, which is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light-duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special flood hazard area. An area in the floodplain subject to a 1 percent or greater chance of flooding in any given year. Special flood hazard areas are shown on FIRMs as Zone A, AO, A1-A30, AE, A99, AH, V1-V30, VE or V.

Start of construction. The date of issuance for new construction and substantial improvements to existing structures, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement is within 180 days of the date of the issuance. The actual start of construction means either the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns.

Permanent construction does not include land preparation (such as clearing, grading, or filling), the installation of streets or walkways, excavation for a basement, footings, piers, or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main buildings. 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.

Substantial damage. Damage of any origin sustained by a building or structure whereby the cost of restoring the building or structure to its before-damaged condition would equal or exceed 50 percent of the market value of the building or structure before the damage occurred.

Substantial improvement. Any repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the structure has incurred "substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
2. Any alteration of a historic structure provided the alteration will not preclude the structure's continued designation as a historic structure and the alteration is approved by variance issued pursuant to this Section.

Variance. A grant of relief from the requirements of this Section, or the flood resistant construction requirements of the *Florida Building Code*, which permits construction in a manner that would not otherwise be permitted by this Section or the *Florida Building Code*.

Watercourse. A river, creek, stream, channel or other topographic feature in, on, through, or over which water flows at least periodically.

Division 2. Flood Resistant Development

5.05.09. Design and construction of buildings, structures and facilities exempt from the *Florida Building Code*

Pursuant to 5.05.03 C of this Section, buildings, structures, and facilities that are exempt from the *Florida Building Code*, including substantial improvement or repair of substantial damage of such buildings, structures and facilities, shall be designed and constructed in accordance with the

flood load and flood resistant construction requirements of ASCE 24. Structures exempt from the *Florida Building Code* that are not walled and roofed buildings shall comply with the requirements of 5.05.15 of this Section.

5.05.10. Subdivisions

- A. *Minimum requirements.* Subdivision proposals, including proposals for manufactured home parks and subdivisions, shall be reviewed to determine that:
1. Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding;
 2. All public utilities and facilities such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage; and
 3. Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwaters around and away from proposed structures.
- B. *Plats.* Where any portion of proposed subdivisions, including manufactured home parks and subdivisions, lies within a flood hazard area, the following shall be required:
1. Delineation of flood hazard areas, floodway boundaries and flood zones, and design flood elevations, as appropriate, shall be shown on preliminary plats and final plats;
 2. Where the subdivision has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM, the information required in 5.05.04 B 1 of this Section; and
 3. Compliance with the site improvement and utilities requirements of 5.05.11 of this Section.

5.05.11. Site Improvements and Utilities

- A. *Minimum requirements.* All proposed new development shall be reviewed to determine that:
1. Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding;
 2. All public utilities and facilities such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage;

and

3. Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwaters around and away from proposed structures.
- B. *Sanitary sewage facilities.* All new and replacement sanitary sewage facilities, private sewage treatment plants (including all pumping stations and collector systems), and on-site waste disposal systems shall be designed in accordance with the standards for onsite sewage treatment and disposal systems in Chapter 64E-6, F.A.C. and ASCE 24 Chapter 7 to minimize or eliminate infiltration of floodwaters into the facilities and discharge from the facilities into flood waters, and impairment of the facilities and systems.
 - C. *Water supply facilities.* All new and replacement water supply facilities shall be designed in accordance with the water well construction standards in Chapter 62-532.500, F.A.C. and ASCE 24 Chapter 7 to minimize or eliminate infiltration of floodwaters into the systems.
 - D. *Limitations on sites in regulatory floodways.* No development, including but not limited to site improvements, and land disturbing activity involving fill or regrading shall be authorized in the regulatory floodway unless the floodway encroachment analysis required in 5.05.04 C 1 of this Section demonstrates that the proposed development or land disturbing activity will not result in any increase in the base flood elevation.
 - E. *Limitations on placement of fill.* Subject to the limitations of this Section, fill shall be designed to be stable under conditions of flooding including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and protection against flood-related erosion and scour. In addition to these requirements, if intended to support buildings and structures, fill shall comply with the requirements of the *Florida Building Code*.

5.05.12. Manufactured Homes

- A. *General.* All manufactured homes installed in flood hazard areas shall be installed by an installer that is licensed pursuant to F.S. 320.8249, this Section and shall comply with the requirements of Chapter 15C-1, F.A.C. and the requirements of this Section.
- B. *Foundations.* All new manufactured homes and replacement manufactured homes installed in flood hazard areas shall be installed on permanent, reinforced foundations that are designed in accordance the foundation requirements of the *Florida Building Code*, Residential Section R322.2 and this Section.
- C. *Anchoring.* All new manufactured homes and replacement manufactured homes shall be installed using methods and practices which minimize flood damage and shall be

securely anchored to an adequately anchored foundation system to resist flotation, collapse or lateral movement. Methods of anchoring include, but are not limited to, use of over-the-top or frame ties to ground anchors. This anchoring requirement is in addition to applicable state and local anchoring requirements for wind resistance.

- D. *Elevation.* Manufactured homes that are placed, replaced, or substantially improved shall comply with 5.05.12 E or F of this Section, as applicable.
- E. *General elevation requirement.* Unless subject to the requirements of 5.05.12 F of this Section, all manufactured homes that are placed, replaced, or substantially improved on sites located: (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 upon which a manufactured home has incurred "substantial damage" as the result of a flood, shall be elevated such that the bottom of the frame is at or above the elevation required, as applicable to the flood hazard area, in the *Florida Building Code*, Residential Section R322.2 (Zone A).
- F. *Elevation requirement for certain existing manufactured home parks and subdivisions.* Manufactured homes that are not subject to 5.05.12 E of this Section, including manufactured homes that are placed, replaced, or substantially improved on sites located in an existing manufactured home park or subdivision, unless on a site where substantial damage as result of flooding has occurred, shall be elevated such that either the:
1. Bottom of the frame of the manufactured home is at or above the elevation required, as applicable to the flood hazard area, in the *Florida Building Code*, Residential Section R322.2 (Zone A); or
 2. Bottom of the frame is supported by reinforced piers or other foundation elements of at least equivalent strength that are not less than 36 inches in height above grade.
- G. *Enclosures.* Enclosed areas below elevated manufactured homes shall comply with the requirements of the *Florida Building Code*, Residential Section R322 for such enclosed areas, as applicable to the flood hazard area.
- H. *Utility equipment.* Utility equipment that serves manufactured homes, including electric, heating, ventilation, plumbing, and air conditioning equipment and other service facilities, shall comply with the requirements of the *Florida Building Code*, Residential Section R322, as applicable to the flood hazard area.

5.05.13. Recreational Vehicles and Park Trailers

- A. *Temporary placement.* Recreational vehicles and park trailers placed temporarily in flood hazard areas shall:
1. Be on the site for fewer than 180 consecutive days; or
 2. Be fully licensed and ready for highway use, which means the recreational vehicle or park model is on wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanent attachments such as additions, rooms, stairs, decks and porches.
- B. *Permanent placement.* Recreational vehicles and park trailers that do not meet the limitations in 5.05.13 A of this Section for temporary placement shall meet the requirements of 5.05.12 of this Section for manufactured homes.

5.05.14. Tanks

- A. *Underground tanks.* Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty.
- B. *Above-ground tanks, not elevated.* Above-ground tanks that do not meet the elevation requirements of 5.05.14 C of this Section shall be permitted in flood hazard areas provided the tanks are anchored or otherwise designed and constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty and the effects of flood-borne debris.
- C. *Above-ground tanks, elevated.* Above-ground tanks in flood hazard areas shall be attached to and elevated to or above the design flood elevation on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area.
- D. *Tank inlets and vents.* Tank inlets, fill openings, outlets and vents shall be:
1. At or above the design flood elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and

2. Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

5.05.15. Other Development

- A. *General requirements for other development.* All development, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in this Section or the *Florida Building Code*, shall:
 1. Be located and constructed to minimize flood damage;
 2. Meet the limitations of 5.05.11 D of this Section if located in a regulated floodway;
 3. Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
 4. Be constructed of flood damage-resistant materials; and
 5. Have mechanical, plumbing, and electrical systems above the design flood elevation, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations.
- B. *Fences in regulated floodways.* Fences in regulated floodways that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of 5.05.11 D of this Section.
- C. *Retaining walls, sidewalks and driveways in regulated floodways.* Retaining walls and sidewalks and driveways that involve the placement of fill in regulated floodways shall meet the limitations of 5.05.11 D of this Section.
- D. *Roads and watercourse crossings in regulated floodways.* Roads and watercourse crossings, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, that encroach into regulated floodways shall meet the limitations of 5.05.11 D of this Section. Alteration of a watercourse that is part of a road or watercourse crossing shall meet the requirements of 5.05.04 C 3 of this Section.