

## 16.40.050 – Floodplain Management

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**16.40.050.1 Generally**

**16.40.050.1.1 Definitions.** For the purposes of this Section, the following words shall have the following meanings.

Accessory structure means a structure which is located on the same parcel or lot, or on a contiguous parcel or lot with the same ownership, the use of which is customarily subordinate or incidental to the use of the principal structure and which is not designed to be used for human habitation (eg., garage, storage shed, carport).

Area of special flood hazard means the land in the floodplain within the City subject to a one (1) percent or greater chance of flooding in any given year.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year, also known as the 100-year flood.

Base flood elevation means the highest elevation of the water surface associated with a base flood.

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

Breakaway wall means any type of 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 portions of the building or the supporting foundation system.

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

*Coastal high hazard area* means an area of special flood hazard designated on the FIRM as Zone VI - 30, VE or V.

*Development* means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or the storage of materials or equipment.

*Elevated building* means a nonbasement building built to have the lowest floor elevated above the ground level by means of solid foundation perimeter walls, pilings, columns (posts and piers), or shear walls.

*Existing manufactured home park or subdivision* means a manufactured home park or subdivision for which 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) was completed before December 31, 1974.

*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).

*FEMA* means the Federal Emergency Management Agency.

*Fill* means any material (usually soil, dirt, sand or similar nonbiodegradable material) used to elevate the grade of property to a level higher than the grade of the property as it existed prior to the start of construction.

*Flood or flooding* means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waves;
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

*Flood Insurance Rate Map (FIRM)* means an official map of the City, on which FEMA has delineated the areas of special flood hazard and the risk premium zones applicable to the City.

*Flood Insurance Study* means the official report provided by FEMA which contains flood profiles, the flood boundary floodway map and the water surface elevation of the base flood.

*Flood opening* means a permanent opening in a wall or door that would allow the free passage of water automatically in both directions without human intervention. This term is synonymous with flood vent and hydrostatic vent.

*Floodproofing* 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.

*Floodway or regulatory 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 the designated height.

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

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

Historic structure means any structure that is:

- (1) Listed individually on the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (3) Individually listed on the state inventory of historic places as long as the State's historic preservation program is approved by the Secretary of the Interior; or
- (4) Individually listed as a local landmark pursuant to the City's Historic Preservation Program as long as the City's historic preservation programs is certified by the State as a certified Local Government Program, and the State historic preservation program is approved by the Secretary of the Interior.

Lowest floor means the lowest floor of the lowest enclosed area (including the basement) of a structure. An unfinished or flood resistant enclosure which is used solely for parking of vehicles, building access, or storage in an area other than a basement, 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 non-elevation design requirements of this section.

Lowest horizontal structural member means the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings or columns and grade beams used for lateral support of the piles).

Mangrove stand means an assemblage of trees which contain one or more of the following species: black mangrove (*Avicennia germinans*); red mangrove (*Rhizophora mangle*); white mangrove (*Languncularia racemosa*); and, buttonwood (*Conocarpus erecta*).

Manufactured home means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. This term does not include a recreational vehicle.

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.

Market value means, for the purpose of this section, the current replacement cost of an existing structure, less the depreciated value, not including the value of the land, accessory structures, and appurtenant structures (e.g. pool, pool cage, any structure not structurally attached to the principal structure). For the purpose of determining market value, either (1) the Pinellas County Property Appraiser's Office assessed value of improvement prior to the start of the initial repair or improvement or, (2) an independent, certified, professional appraisal report of the depreciated value of the structure shall be used. 'Appraisal report' means an independent, certified, professional appraisal report which consists of only the current depreciated value for the existing condition of the structure(s) prior to damage or the start of construction on the property. The appraisal report shall not include, as part of

the depreciated value, the projected value of the proposed new construction, substantial improvements or replacement costs or include any work done, either without the required permit(s) or without closure of an existing permit. All appraisals must clearly identify the estimated value of the structure (using the replacement cost approach) separate from the value any other item appraised. Replacement cost means the cost to construct, at current prices, a structure with the same utility as the structure being appraised using modern materials and the existing design and layout. For purposes of this definition, 'current' shall mean at the time of the appraisal.

Mean sea level means the mean sea level set forth in the National Geodetic Vertical Datum (NGVD) of 1929 or the North American Vertical Datum of 1988.

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

New construction means any structure for which the "start of construction" commenced after December 31, 1974. The term also includes any subsequent improvements to such structure.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed on or after December 31, 1974.

POD shall have the same meaning as set forth in Section 1-2, City Code.

Project means any work done for which a permit is required during the time period from when the work begins until the permit is closed and shall include all work and permits necessary to make a structure safe to be occupied. A permit may be closed by issuance of a Certificate of Occupancy or an approved final inspection.

Recreational vehicle means a vehicle which is:

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

Standard exterior door means a movable barrier used to seal or close off entry to a building which is constructed of wood, metal or glass, not more than thirty six inches wide and that swings on hinges.

Start of construction, for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L.97-348), includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, replacement or other improvement occurred within 180 days of the date the permit was issued. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main building. 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.

Structure means a walled and roofed building, including a gas or liquid storage tank and a manufactured home, where at least 51% of the actual cash value of the building, tank or manufactured home is above ground.

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

Substantial improvement means any combination of repairs, reconstruction, rehabilitation, addition, alteration or other improvements to a structure made during a project, the cumulative value of which equals or exceeds 50 percent of the market value of the structure before the start of construction. This term includes structures which have incurred substantial damage, regardless of the actual repair work performed. Project value shall be determined using the prevailing market value (at the time of start of construction) for all materials and labor and which shall include all other expenses normally charged or incurred if the work were performed by a contractor (e.g. construction supervision and management, insurance, overhead and profit, demolition, etc.). When materials and/or labor are donated or discounted below normal market value, the project value will be adjusted to an amount equal to the value of a normal market transaction. The Building Official may use (1) the most recent (at the time of start of construction) square foot Building Valuation Data for this area published by the International Code Congress or (2) the replacement cost (at the time of start of construction) identified in a certified appraisal to determine the project value.

If insufficient supporting data is provided or the Building Official believes that an estimate of the project does not accurately reflect the actual project value, another estimate may be required or the Building Official may estimate the project value. For the purposes of this definition, the value of any combination of repairs, reconstruction, alterations or improvements to a structure shall not be cumulative from project to project.

In the case of substantial damage, the market value shall be that of the structure prior to the damage occurring. For the purposes of this definition, the start of construction is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either:

- (1) Any repairs or improvements to correct an existing violation of state or local health, sanitary, or safety codes which has been cited as a violation by the local code enforcement official, prior to receipt by the Building Official of a permit application, and which repairs or improvements are the minimum necessary to assure safe living conditions, or
- (2) Any alteration of a historic structure provided that the alteration would not result in the structure losing its historic designation.

Substantial improvement of existing manufactured home parks means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction, or improvement commenced.

Variance is a grant of relief from the requirements of this section.

**16.40.050.1.2 Findings of fact**

- A. The flood hazard areas of the City are subject to periodic inundation which results in loss of life; property, health and safety hazards; disruption of commerce and governmental services; extraordinary public expenditure for flood protection and relief; 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 obstructions in floodplains, causing increases in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods or hazardous to other lands, which are inadequately elevated, floodproofed or otherwise protected from flood damage.

### **16.40.050.1.3 Purpose**

- A. It is the purpose of this section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas, by provisions designed to:
  - 1. To protect human life and health;
  - 2. To minimize expenditure of public money for costly flood control projects;
  - 3. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
  - 4. To minimize prolonged business interruptions;
  - 5. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
  - 6. To help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize future flood blight areas; and,
  - 7. To ensure that potential home buyers are notified that property is in a flood prone area.
- B. To reduce flood losses, this section provides methods and provisions to:
  - 1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;
  - 2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
  - 3. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
  - 4. Control filling, grading, dredging and other development which may increase erosion or flood damage; and,
  - 5. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

### **16.40.050.1.4 Applicability**

This section shall apply to areas of special flood hazard as shown on the FIRM within the jurisdiction of the City.

**16.40.050.1.5 Compliance required**

It shall be unlawful to develop, locate, extend, convert or structurally alter any structure or land without fully complying with the requirements of this section and other applicable regulations. All structures or other developments shall have an elevation certificate and any other certifications or other evidence of compliance required by this section and any failure to have such certificate or required evidence of compliance shall be a violation of this section.

**16.40.050.1.6 Penalties generally**

Any person violating any of the provisions of this section shall, upon conviction thereof, be punished as described in Section 1-7 of this Code. Failure to correct a violation may also result in the issuance of a declaration of violation under federal law which may result in a denial of flood insurance coverage.

**16.40.050.1.7 Abrogation of existing private legal restrictions; conflicts with other ordinances**

This section is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. Where the requirements of this section and another law, code or regulation conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

**16.40.050.1.8 Rules for interpretation**

In the interpretation and application of this section all requirements shall be:

- (1) Considered as minimum requirements.
- (2) Liberally construed in favor of the City.

**16.40.050.1.9 Warning and disclaimer of liability**

The degree of flood protection required by this section 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 manmade or natural causes. This section does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This section shall not create liability on the part of the City, its officers, employees, agents, elected and appointed officials thereof for any flood damages that result from reliance on this section or any administrative decision made hereunder.

**16.40.050.1.10 Areas of Special Flood Hazard designated**

The Areas of Special Flood Hazard identified by FEMA in its Flood Insurance Study, with accompanying maps dated September 3, 2003, and other supporting data, and any revisions thereto, are adopted by reference and declared to be a part of this section. (The new Flood Insurance Study with accompanying maps supersedes the Flood Insurance Study, dated March 30, 1983, and accompanying maps dated September 30, 1983, however, they shall remain in effect for all permits issued or construction done prior to September 3, 2003, but only for flood insurance purposes, nonsubstantial improvements and properties not subject to substantial damage.)

**16.40.050.2 Administration and Enforcement**

**16.40.050.2.1 Administration; duties and responsibilities**

- A. The Building Official is the floodplain management administrator. The duties of the Building Official shall include, but not be limited to:
1. Review all applications for permits to assure that the permit requirements of this section have been satisfied;
  2. Advise permittee that additional federal or State permits may be required and assure that all required state and federal permits have been received. The Building Official shall require that copies of such permits be provided and maintained on file with the City permit;
  3. Notify adjacent communities and the State Department of Community Affairs, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA;
  4. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished;
  5. Verify and record the actual elevation in relation to mean sea level of the lowest floor, including basement, of all new or substantially improved structures;
  6. Verify and record the actual elevation in relation to mean sea level to which the new or substantially improved structures have been floodproofed;
  7. In coastal high hazard areas require that a registered professional engineer or architect certify that the structure is securely anchored to adequately anchored pilings or columns in order to withstand velocity waters and hurricane wave wash;
  8. Review plans for the adequacy of breakaway walls in accordance with this section;
  9. Require that a registered professional engineer or architect certify that the structure has been floodproofed to an elevation no lower than one foot above base flood elevation, when floodproofing is utilized for a structure;
  10. When interpretation is needed as to the exact location of the boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), the Building Official shall make the necessary interpretation;
  11. All records pertaining to the provisions of this section shall be maintained by the Building Official;
  12. When base flood elevation data has not been provided in accordance with this section, the Building Official shall obtain, review and reasonably utilize any data available from a federal, State or other source, in order to administer the provisions of this section.

**16.40.050.2.2 Permit required.**

A permit shall be required prior to the start of development in all areas of special flood hazard, in conformance with the provisions of this section and all other State and federal regulations and City Codes, and shall be reviewed to determine whether the proposal will be reasonably safe from flooding.

**16.40.050.2.3 Permit procedures.**

A. Application for a permit shall be made to the Building Official on the appropriate forms with any required fee prior to start of development and shall include, but shall not be limited to, the following: plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structure, fill, storage of materials; drainage facilities; and the location of the foregoing. The Building Official may require such other information necessary to adequately review an application. ¶ The following information is required:

1. Application stage.

- a. Elevation in relation to mean sea level of the lowest proposed floor, including basement, of all structures;
- b. Elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;
- c. Certificate from a registered engineer or architect, licensed to practice in the State, that the nonresidential floodproofed structure will meet the floodproofing criteria of this section;
- d. Evidence that the proposed development will fully comply with all the provisions of this section.
- e. Base flood elevation data for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) which is greater than 50 lots or five acres, whichever is less.

2. Construction stage. Upon placement of the lowest floor, or floodproofing by whatever construction means, or upon placement of the horizontal structural members of the lowest floor, whichever is applicable, the permit holder shall submit to the Building Official a certification of the elevation of the lowest floor, floodproofed elevation, or the elevation of the lowest portion of the bottom of the lowest horizontal structural member of the lowest floor; whichever is applicable, as built, in relation to mean sea level. Such certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer licensed to practice in the State. When floodproofing is utilized for a particular building, such certification shall be prepared by or under the direct supervision of a professional engineer or architect licensed to practice in the State indicating that such structure has been floodproofed to an elevation no lower than one foot above base flood elevation. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The Building Official shall review the certifications submitted and any violations of this section shall be corrected by the permit holder immediately and prior to further work proceeding.

B. The Building Official shall issue a permit if the application fully complies with the provisions of this section, and shall deny the application and refuse to issue a permit if the application does not fully comply with the provisions of this section.

**16.40.050.2.4 Appeals, Variances and Declarations of Violation**

A. Appeals. Appeals to the Community Preservation Commission may be made in the manner provided in Appeals Section by any person aggrieved or affected by any order, written decision, or determination made by the Building Official in the enforcement or administration

of this section. The Zoning Official shall maintain the records of all appeals, both granted and denied and report any variances to FEMA in a biennial report.

B. Variances.

1. *Procedures.* The Community Preservation Commission may authorize variances from the provisions of this subsection after receipt of an application which provides all relevant information required by the Building Official. The application shall provide notice to, and each applicant shall acknowledge that, the granting of a variance will result in increased premium rates for the flood insurance (as of the date of adoption of this Ordinance, November 4, 2004, as high as \$25 for each \$100 of insurance coverage) and construction pursuant to the variance increases risks to life and property. For variance procedures, see 16.70.040.1.12.
  - a. Variances may be granted for the reconstruction, rehabilitation or restoration of historic structures without regard to the procedures and criteria set forth in this subsection, provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historic designation. Historic properties may be required to obtain a certificate of appropriateness from the Community Preservation Commission. Any variance should be the minimum variance necessary to preserve the historic character of the structure. No fee shall be required for the variance application and, if the historic structure has a current certificate of appropriateness, no notice shall be required.
  - b. Variances may be granted for functionally dependent facilities without regard to the procedures and criteria set forth in this subsection.
  - c. Variances may be granted for hardships caused by physical characteristics of the property such as the topography, soil, geology, or configuration of the lot, providing the procedures and criteria set forth in this subsection have been complied with.
2. *Evaluation.* The CPC shall consider all technical evaluations, all relevant factors, standards specified in this section, and:
  - a. The danger that material 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 development 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 development to the community.
  - e. The necessity to the development of a waterfront location.
  - f. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use.
  - g. The compatibility of the proposed use with existing and anticipated development.
  - h. The relationship of the proposed use to the Comprehensive Plan and floodplain management program for that area.

- i. The safety of access to the property in times of flood for ordinary and emergency vehicles.
  - j. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
  - k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
  - l. Economic hardship and self-created hardship are not relevant factors and shall not be considered as reasons to grant a variance.
3. *Standards of Review.* After consideration of the factors listed above and the purposes of this section, the Commission may grant a variance if:
- a. The variance is the minimum necessary, considering the flood hazard, to afford relief.
  - b. Failure to grant the variance would result in exceptional hardship to the applicant.
  - c. The variance will not result in increased flood heights, additional threats to public safety or extraordinary public expense, create nuisances, cause fraud or victimization of the public, or conflict with existing laws or ordinances.
  - d. The variance receives the affirmative vote of at least five members of the CPC (as long as the CPC consists of seven members).
  - e. No variance shall be granted for development which was constructed without a permit, or beyond the scope of a permit, unless it receives the affirmative vote of all seven members of the CPC.
  - f. No variance shall be effective until a copy of the variance with the name of the owner and the legal description of the property is recorded in the public records of Pinellas County at the expense of the applicant.
- C. Declaration of Violation.
1. Where a violation of this section has been found to exist by (i) a court of competent jurisdiction, (ii) the Code Enforcement Board, (iii) the written admission of a property owner, or (iv) the City Council, and the violation has not been corrected, the City Council may declare the property to be in violation of this section and forward the declaration to FEMA. The issuance of the declaration may cause the property to be denied flood insurance and no permits will be issued for any improvements to the property except permits for the maintenance of structures existing at the time the declaration is made and permits for the removal of violations of this section.
  2. The declaration shall be approved by resolution of the City Council and should meet the requirements of Section 1316 of the National Flood Insurance Act of 1968 as implemented by Part 73 of 44 CFR, both as amended, and any other applicable law. The declaration shall be recorded in the public records.
  3. Structures existing on the property at the time a declaration is issued shall not be cited for violating the requirements of this section unless and until the declaration is rescinded by resolution of the City Council which shall not be effective until approved in writing by FEMA. Violations of the City Code, not including violations of this section, which exist on

the date of the declaration may be cited. The owner/occupant shall be required to obtain a Certificate of Existing Noncompliant Structure from the Building Official to assure compliance with the requirements of the building code (except the provisions of this section).

4. Any violation existing on the date of the declaration for which no building permit was issued which does not meet the requirements of the building code (except the provisions of this section) shall be removed. Any violation which is required to obtain a building permit to correct shall be removed.
5. The Building Official may require such documents and certificates and perform such inspections as are reasonably necessary prior to issuing a Certificate of Existing Noncompliant Structure.
6. Any work done after the date of the declaration is a violation of this section, may be cited for violating this section, and shall be removed. No variances to this subsection shall be granted.

### **16.40.050.3 Provisions for Flood Hazard Reduction**

#### **16.40.050.3.1 General requirements for construction and improvements in all areas of special flood hazard.**

- A. Development, subdivisions, and manufactured home parks and subdivisions in all areas of special flood hazard shall comply with the following requirements:
  1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
  2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
  3. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
  4. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
  5. All new and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
  6. All on-site waste disposal systems shall be located to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
  7. All manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to a ground anchor. This standard shall be in addition to and consistent with applicable local requirements for resisting wind forces.
  8. All electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities installed during new construction or substantial improvement shall be located above base flood elevation (±) or designed to prevent water from entering or accumulating within the components during flood conditions.

9. Any alteration, repair, reconstruction or improvement to a building or structure when the building or structure is not in compliance with the provisions of this section, shall be allowed only if the non-conformity is not increased or expanded. The addition or replacement of electrical, heating, ventilation, plumbing, air conditioning and other service equipment shall not be lower than the lowest floor of the existing structure.
10. In approximate A zones, as depicted on the FIRM, where there is no base flood elevation or floodway established, the lowest floor of all new construction and substantial improvements shall have the lowest floor elevated to no lower than two feet above the highest adjacent grade.
11. The lowest floor of accessory structures shall either be elevated to or above base flood elevation, or shall meet all requirements for construction below the base flood elevation. Accessory structures shall be used for parking, storage or building access.

### **16.40.050.3.2 Specific requirements for A-Zones**

A. In A-Zones where base flood elevation data has been provided to the Building Official as provided in this section, the following additional requirements shall apply and all elevations and hydrostatic vent requirements shall be verified through submittal of a sealed elevation certificate by a licensed land surveyor or licensed engineer:

1. Residential construction. All new construction and substantial improvement of any residential structure (or manufactured home) shall have the lowest floor, including basement, elevated to or above base flood elevation. Should solid foundation perimeter walls be used to elevate a structure and the area inside the walls is not backfilled, openings sufficient to facilitate the equalization of hydrostatic forces due to floodwaters shall be provided, in accordance with standards of this Section.

Fill on the outside of the footprint of the foundation of single family through quadruplex residential structure on lots which are not part of a development with a master grading plan approved by the POD is prohibited except for fill in the front yard which is necessary in the construction of a driveway to a garage and the front entrance for access to the structure. Minor amounts of fill to (i) provide adequate lot grading for drainage or (ii) raise a side yard up to the elevation of an abutting property shall be allowed if a site plan with lot elevations and proposed fill is submitted for plan review prior to issuance of a permit and approved in advance by the Building Official. The use of fill shall not create any additional stormwater runoff onto abutting property.

2. Nonresidential construction. All new construction and substantial improvement of any commercial, industrial or other non-residential structure (or nonresidential manufactured home) shall have the lowest floor, including basement, elevated to or above the base flood elevation. Instead of being elevated, structures may be floodproofed to a minimum of one foot above base flood elevation, , provided that all areas of the structure below the required elevation (i) are watertight with walls substantially impermeable to the passage of water, and (ii) use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. A Floodproofing Certificate issued by FEMA and an operation and maintenance plan prepared by a design professional shall be provided to the Building Official prior to issuance of a permit.
3. Elevated buildings. All new construction and substantial improvement that includes fully enclosed areas formed by the foundation or other exterior walls below the lowest floor shall be designed to prevent its conversion to finished living space and designed to allow

for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

- a. Designs for complying with this requirement must either be certified by a professional engineer or architect and have the certification with supporting data submitted to the Building Official prior to issuance of a permit or shall meet or exceed the following minimum criteria for interior and exterior walls:
  - (1) Provide a minimum of two flood openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.
  - (2) The bottom of all flood openings shall be no higher than one foot above the exterior grade. Where the exterior grade is lower than the interior floor grade, the bottom of all flood openings shall be no higher than one foot above the interior floor grade.
  - (3) The number of flood openings and net area they provide shall be certified by a licensed engineer.
  - (4) Flood openings may be equipped with screens, louvers, valves or other coverings or devices provided they provide the required net open area and permit the automatic entry and exit of floodwaters.
- b. The enclosed areas below the lowest floor shall solely be used for parking of vehicles, building access, and storage which shall be limited to items which otherwise would be stored outside a building or items normally used outside (e.g., grill, lawn mower, folding chairs).

Access to the enclosed area shall be the minimum necessary to allow for the parking of vehicles (garage door) or storage (standard exterior door) or entry to the living area (stairway or elevator). There shall be no more than two (2) standard exterior doors.

- c. The interior portion of such enclosed area shall not be partitioned (except for load bearing walls), temperature controlled or finished into separate rooms and interior foundation walls shall not be covered with any material subject to flood damage.
- d. When the lowest floor is required to be elevated more than six (6) feet above the highest adjacent grade, a sworn statement of the property owners and contractor acknowledging that it is illegal to convert the area below the lowest floor to a use or dimension different from the permitted use or dimensions and this section shall be submitted with the permit application. The permit application will not be processed without the sworn statement.

### **16.40.050.3.3 Specific requirements for coastal high hazard areas.**

- A. Coastal high hazard areas have special flood hazards associated with high velocity waters from tidal surge and hurricane wave wash; therefore, in addition to the General Requirements and requirements for A zones, the following additional requirements shall apply:
  1. All buildings or structures shall be located a minimum of ten feet landward of the reach of mean high tide.
  2. All new construction and substantial improvements of buildings or structures shall be elevated so that the bottom of the lowest horizontal structural member (excluding pilings

or columns) of the lowest floor, is located at or above the base flood elevation level, with all space below the lowest supporting member open so as not to impede the flow of water except for breakaway walls as provided for in this section. Open wood lattice work or insect screening is permitted for aesthetic purposes only and shall be designed to wash away in the event of abnormal wave action and shall not be part of the structural support of the building.

3. All buildings or structures shall be securely anchored on pilings or columns.
4. All pilings and columns and the attached structures shall be anchored to resist flotation, collapse, and lateral movement due to the effect of wind and water loads, acting simultaneously on all building components. Water loading values shall equal or exceed the base flood. Wind loading values shall be in accordance with the Florida Building Code, as amended.
5. Compliance with provisions contained in this subsection shall be certified by a registered professional engineer or architect and the certificate shall be provided to the Building Official prior to issuance of a permit.
6. There shall be no fill used as structural support. Limited noncompacted fill (not exceeding six inches in depth) may be used around the perimeter of a building for landscaping/aesthetic purposes provided the fill will wash out from storm surge (thereby rendering the building free of obstructions) prior to generating excessive loading forces, ramping effects or wave deflection. The Building Official shall approve design plans for landscaping/aesthetic fill only after the applicant has provided an analysis by an engineer, architect and/or soil scientist, along with the any supporting data required by the Building Official, which demonstrates that the following factors have been fully considered.
  - a. Particle composition of fill material does not have a tendency for excessive material compaction.
  - b. Volume and distribution of fill will not cause wave deflection to adjacent properties.
  - c. Slope of fill will not cause wave run up or ramping.
  - d. The use of fill shall not create any additional stormwater runoff onto abutting property.
7. There shall be no alteration of mangrove stands which would increase potential flood damage.
8. The placement of manufactured homes is prohibited. A replacement manufactured home may be placed on a lot in an existing manufactured home park, provided it meets the standards for manufactured homes set forth in this section.
9. Breakaway walls shall be allowed below the lowest floor provided that the 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 that exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by building codes) may be permitted only if a registered professional engineer or architect certifies that the design meets the following conditions:
  - a. 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 of wind and water loads acting simultaneously on all building components (structural

and nonstructural). Water loading values used shall be base flood values. Wind loading values used shall be in accordance with the Florida Building Code, as amended.

- b. The enclosed areas below the lowest floor shall solely be used for parking of vehicles, building access, and storage. Storage shall be limited to items which otherwise would be stored outside a building or items normally stored in a garage or shed. Access to the enclosed area shall be the minimum necessary to allow for the parking of vehicles (garage door) or storage (standard exterior door) or entry to the living area (stairway or elevator). There shall be no more than two standard exterior doors.
- c. The interior portion of such enclosed area shall not be temperature controlled or finished into separate rooms and interior foundation walls shall not be covered with any material subject to flood damage. Access stairs and elevators attached to or beneath an elevated building are not required to meet the breakaway requirements.
- d. When the lowest floor is required to be elevated more than 6 feet above the highest adjacent grade, the sworn statement of the property owners and contractor acknowledging that it is illegal to convert the area below the lowest floor to a use or dimension different from the permitted use or dimensions and this section shall be submitted with the permit application. The permit application will not be processed without the sworn statement.

#### **16.40.050.3.4 Floodways**

- A. Located within some areas of special flood hazard are areas designated as floodways. Floodways are an extremely hazardous area due to the velocity of floodwaters which carry debris and potential projectiles and have significant erosion potential, therefore, in addition to the General Requirements and requirements for A zones, the following additional requirements shall apply:
  1. No encroachments, including fill, new construction, substantial improvements and other developments, shall be allowed unless certification (with supporting technical data) by a registered professional engineer licensed to practice in the State is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.
  2. If subsection 1, above, is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.
  3. No manufactured homes (mobile homes) shall be allowed, except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision if it complies with the anchoring and elevation standards of this section.

#### **16.40.050.3.5 Standards for streams in A-Zones without established base flood elevations and floodways.**

Where streams exist in A-Zones for which no base flood elevation data or regulatory floodway has been provided by FEMA, all new subdivisions proposals and other proposed developments (including proposals for manufactured home parks) greater than 50 lots or 5 acres, whichever is lesser, shall include within such proposals base flood elevation data.

#### **16.40.050.3.6 Standards for manufactured homes and recreational vehicles.**

- A. All manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE, on sites (1) outside of an existing manufactured home park (2) in a new manufactured home park, (3) in an expansion to an existing manufactured home park or (4) in an existing manufactured home park on which a manufactured home has incurred "substantial damage" as the result of a flood, shall be elevated to or above the base flood elevation on a permanent foundation and be securely anchored to an adequately anchored foundation system to resist flotation collapse and lateral movement. If there are enclosed areas below the lowest floor, flood openings shall be provided as required for elevated buildings in A-zones.
- B. All manufactured homes that are placed or substantially improved in an existing manufactured home park within Zones A1-30, AH, and AE, that are not subject to the provisions of paragraph (a) of this section must be elevated so that either:
  - 1. The lowest floor of the manufactured home is elevated to or above the base flood elevation, or
  - 2. The manufactured home chassis is (i) supported by reinforced piers or other foundation elements of at least an equivalent strength that are no less than 36 inches in height above the highest adjacent grade and (ii) securely anchored to an adequate foundation system to resist flotation collapse and lateral movement. If there are enclosed areas below the lowest floor, flood openings shall be provided as required for elevated buildings in A-zones.
- C. All recreational vehicles placed on sites within Zones A1-30, AH and AE must either:
  - 1. Be on the site for fewer than 180 consecutive days,
  - 2. Be fully licensed and ready for highway use, or
  - 3. Meet the requirements for new construction, including anchoring and elevation requirements.
- D. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and securing devices, and has no permanently attached additions.