

ARTICLE VII. COASTAL CONSTRUCTION CODE¹

Sec. 103-263. Title.

The provisions contained herein shall constitute the coastal construction code for construction within the coastal building zone and coastal barrier islands in the city and shall be referred to as the coastal code.

(Code 1983, § 5-305; Ord. No. I-200, § 2, 12-15-1986)

Sec. 103-264. Purpose.

The purpose of the coastal code is to provide minimum standards for the design and construction of buildings and structures to reduce the harmful effects of hurricanes and other severe storms occurring along the coastal area of the city which fronts on the Atlantic Ocean. These standards are intended to specifically address design features which affect the structural stability of the beach, dunes, and topography of adjacent properties. The coastal code is site specific to the coastal building zone, as defined herein, and is not applicable to other locations. In the event of a conflict between this article and the other chapters of this Code, the requirements resulting in the more restrictive design shall apply. No provisions in this article shall be construed to permit any construction in any area prohibited by city, county, state or federal regulation.

(Code 1983, § 5-306; Ord. No. I-200, § 2, 12-15-1986)

Sec. 103-265. Scope.

- (a) *Applicability.* The requirements of this coastal code shall apply to the following types of construction in the coastal building zone and on coastal barrier islands in the city:
- (1) The new construction of, or substantial improvements to major structures, nonhabitable major structures, and minor structures as defined herein;
 - (2) Construction which would change or otherwise have the potential for substantial impact on coastal zones (i.e. excavation, grading, paving);
 - (3) Construction located partially within the coastal building zone;
 - (4) Reconstruction, redevelopment or repair of a damaged structure from any cause which meets the definition of substantial improvement as defined herein.
- (b) *Exceptions.* The requirements of the coastal code shall not apply to the following:
- (1) Minor work in the nature of normal beach cleaning and debris removal;
 - (2) Structures in existence prior to the effective date of the code, except for substantial improvements as defined herein;

¹State law reference(s)—Coastal Zone Protection Act of 1985, F.S. § 161.52 et seq.

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- (3) Construction for which a valid and unexpired building permit was issued prior to the effective date of this code;
 - (4) Construction extending seaward of the seasonal high water line which is regulated by the provisions of F.S. § 161.041 (i.e. groins, jetties, moles, breakwaters, seawalls, piers, revetments, beach nourishment, inlet dredging, etc.);
 - (5) Construction of nonhabitable major structures as defined herein, except for the requirements of section 103-267(d);
 - (6) Construction of minor structures as defined herein, except for the requirements of section 103-267(e);
 - (7) Structures listed in the National Register of Historic Places or the state inventory of historic places;
 - (8) Construction for improvement of a major structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions.
- (c) *Application for permits.* Applications for building permits for construction in the coastal building zone and on coastal barrier islands, if not of normal or usual design, may be required by the building official to be certified by an architect or professional engineer registered in the state. Such certifications shall state that the design plans and specifications for the construction are in compliance with the criteria established by this coastal code.

(Code 1983, § 5-307; Ord. No. I-200, § 2, 12-15-1986)

Sec. 103-266. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Coastal construction control line means the landward extent of that portion of the beach-dune system which is subject to severe fluctuations based upon a 100-year storm surge, storm waves or other predictable weather conditions as established by the department of environmental protection in accordance with F.S. § 161.053.

Mean high water line means the intersection of the tidal plane of mean high water with the shore. Mean high water is the average height of high waves over a 19-year period.

Mobile home means manufactured housing which conforms to the Federal Manufactured Housing Construction and Safety Standards or the Uniform Standards Code ANSI A-119.1 pursuant to F.S. § 320.823.

NGVD means National Geodetic Vertical Datum, a geodetic datum established by the National Ocean Service and frequently referred to as the 1929 Mean Sea Level Datum.

One-hundred-year storm or 100-year storm means a shore incident hurricane or any other storm with accompanying wind, wave and storm surge intensity having a one-percent chance of being equaled or exceeded in any given year, during any 100-year interval.

Seasonal high water line means the line formed by the intersection of the rising shore and the elevation of 150 percent of the local mean tidal range above mean high water.

(Code 1983, § 5-308; Ord. No. I-200, § 2, 12-15-1986; Ord. No. K-418, § 1, 4-3-2006; Ord. No. L-245, § 1, 2-6-2012)

Sec. 103-267. Coastal construction requirements.

- (a) *General.* Construction within the coastal building zone and on coastal barrier islands shall meet the requirements of this article. All structures shall be designed so as to minimize damage to life, property and

the natural environment. Assistance in determining the design parameters to minimize such damage may be found in the reference documents listed in section 103-268.

(b) *Structural requirements for major structures.*

- (1) *Design and construction.* Major structures, except for mobile homes, shall be designed and constructed in accordance with the state building code (FBC). Major structures, except mobile homes, shall also comply with the applicable standards for construction found elsewhere in the state building code.
- (2) *Mobile homes.* Mobile homes shall conform to the Federal Mobile Home Construction and Safety Standards or the Uniform Standards Code ANSI A-119.1, pursuant to F.S. § 320.823, as well as the requirements of chapter 125 and article I of chapter 109 of this Code.
- (3) *Elevation, floodproofing and siting.* All major structures shall be designed, constructed and located in compliance with the National Flood Insurance Regulations as found in 44 CFR parts 59 and 60 or article I of chapter 109 of this Code, whichever is more restrictive.

(c) *Design conditions.*

- (1) *Velocity pressure.* Major structures, except mobile homes, shall be designed in accordance with the requirements of the state building code.
- (2) *Foundations.* The elevation of the soil surface to be used in the design of foundations, calculation of pile reactions and bearing capacities shall not be greater than that which would result from the erosion reasonably anticipated as a result of design storm conditions. Foundation design and construction of a major structure shall consider all anticipated loads acting simultaneously with live and dead loads. Erosion computations for foundation design shall account for all vertical and lateral erosion and scour producing forces, including localized scour due to the presence of structural components. Foundation design and construction shall provide for adequate bearing capacity taking into consideration the type of soil present and the anticipated loss of soil above the design grade as a result of localized scour. Erosion computations are not required landward of coastal construction control lines established or updated since June 30, 1980. Upon request, the department of natural resources may provide information as to those areas within coastal building zones where erosion and scour of a 100-year storm event is applicable.
- (3) *Wave forces.* Calculations for wave forces resulting from design storm conditions on building foundations and superstructures may be based upon the minimum criteria and methods prescribed in the Naval Facilities Engineering Command Design Manual, NAVFAC DM-26, United States Department of Navy; Shore Protection Manual, United States Department of the Army Corps of Engineers; United States Department of the Army Coastal Engineering Research Center Technical Papers and Reports; the Technical and Design Memoranda of the Division of Beaches and Shores, Florida Department of Natural Resources; or other professionally recognized methodologies which produce equivalent design criteria.

Breaking, broken and nonbreaking waves shall be considered as applicable. Design wave loading analysis shall consider vertical uplift pressures and all lateral pressures to include impact as well as dynamic loading and the harmonic intensification resulting from repetitive waves.
- (4) *Hydrostatic loads.* Calculations for hydrostatic loads shall consider the maximum water pressure resulting from a fully peaked, breaking wave superimposed upon the design storm surge with dynamic wave setup. Both free and hydrostatic loads shall be considered. Hydrostatic loads which are confined shall be determined by using the maximum elevation to which the confined water would freely rise if unconfined. Vertical hydrostatic loads shall be considered both upward and downward on horizontal or inclined surfaces of major structures (i.e. floors, slabs, roofs, walls). Lateral hydrostatic loads shall be considered as forces acting horizontally above and below grade on vertical or inclined surfaces. Hydrostatic loads on irregular or curved geometric surfaces shall be determined by considering the

separate vertical and horizontal components acting simultaneously under the distribution of the hydrostatic pressures.

- (5) *Hydrodynamic loads.* Hydrodynamic loads shall consider the maximum water pressures resulting from the motion of the water mass associated with the design storm. Full intensity loading shall be applied on all structural surfaces above the design grade which would affect the flow velocities.
- (d) *Structural requirements for nonhabitable major structures.* Nonhabitable major structures need not meet the specific structural requirements of subsection (b) of this section, except that they shall be designed to produce the minimum adverse impact on the beach and dune system and shall comply with the applicable standards of construction found in the state building code. All sewage treatment and public water supply systems shall be floodproofed to prevent infiltration of surface water anticipated under design storm conditions. Underground utilities, excluding pad transformers and vaults, shall be floodproofed to prevent infiltration of surface water expected under design storm conditions or shall otherwise be designed to function when submerged under such storm conditions.
- (e) *Structural requirements for minor structures.* Minor structures need not meet the specific structural requirements of subsection (b) of this section except that they shall be designed to produce the minimum adverse impact on the beach and dune system and shall comply with the applicable standards of construction found in the state building code (FBC).
- (f) *Location of construction.* Construction, except for elevated walkways, lifeguard support stands, piers, beach access ramps, gazebos and coastal or shore protection structures, shall be located a sufficient distance landward of the beach to permit natural shoreline fluctuations and to preserve dune stability. Construction, including excavation, may occur to the extent that the natural storm buffering and protection capability of the dune is not diminished.
- (g) *Public access.* Where the public has established an accessway through private lands to lands seaward of mean high tide or water line by prescription, prescriptive easement or other legal means, development or construction shall not interfere with such right of access unless a comparable alternative accessway is provided. The developer shall have the right to improve, consolidate or relocate such public accessways so long as they are:
- (1) Of substantially similar quality and convenience to the public;
 - (2) Approved by the local government and approved by the department of natural resources whenever improvements are involved seaward of the coastal construction control line; and
 - (3) Consistent with the coastal management element of the local comprehensive plan adopted pursuant to F.S. § 163.3178.

(Code 1983, § 5-309; Ord. No. I-200, § 2, 12-15-1986; Ord. No. K-125, § 6, 12-17-2001; Ord. No. L-245, §§ 2, 3, 2-6-2012)

Sec. 103-268. References.

Assistance in determining the design parameters and methodologies necessary to comply with the requirements of this article may be obtained from:

- (1) Shore Protection Manual, United States Army Corps of Engineers, 4th edition, 1984.
- (2) United States Department of the Army, Coastal Engineering Research Center's Technical Papers and Reports.
- (3) Florida Department of Natural Resources, Division of Beaches and Shores Technical and Design Memoranda.

(4) Naval Facilities Engineering Command Design Manual, NAVFAC DM-26, United States Department of the Navy.

(5) Coastal Construction Manual, Federal Emergency Management Agency, August 2005.

(Code 1983, § 5-310; Ord. No. I-200, § 2, 12-15-1986; Ord. No. K-125, § 6, 12-17-2001; Ord. No. L-245, § 4, 2-6-2012)

Secs. 103-269—103-299. Reserved.