



FLORIDA DIVISION OF EMERGENCY MANAGEMENT

Office of Floodplain Management

GUIDANCE FOR COMPARISON of the Coastal Construction Control Line Requirements of Sec. 3109 and Flood Hazard Area Requirements of 8th Edition FBCB 1612 and FBCR R322, and ASCE 24-14

Office of Floodplain Management

Florida Division of Emergency Management

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OBJECTIVE: Provide a comparison of the requirement for construction seaward of the Coastal Construction Control Line (CCCL) and the flood hazard area requirements of the 8th Edition Florida Building Code.¹

***** This Comparison is provided for guidance ONLY. The provisions of the FBC prevail. *****

8th Edition FBC, Building:

- Section 1612 applies to buildings and structures in flood hazard areas
- Section 3109 applies to *habitable structures* seaward of the CCCL
- Sec. 202 defines Coastal A Zone; coastal high hazard area; dry floodproofing; flood hazard area; special flood hazard area; substantial damage; substantial improvement
- Sec. 3109.2 defines allowed use; Coastal Construction Control Line; combined total storm tide elevation (value); design grade; 50-foot setback line; habitable structure; low-rise building; lowest floor; lowest horizontal structural member; 100-year storm elevation

8th Edition FBC, Residential:

- Sec. R301.2.5: structures seaward of the CCCL shall be designed in accordance with Sec 3109 of FBCB.
- Sec. R322.1.11: structures seaward of the CCCL shall be designed in accordance with Sec 3109 of FBCB, and “the more restrictive provisions shall govern.”

Also see the BASF Fact Sheet on CCCL.

www.floridadisaster.org/dem/mitigation/floodplain/community-resources/ (Guidance, Ordinance Amendments, FBC Amendments, and Sample Forms).

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	CCCL	CCCL and Zone V or Coastal A Zone	CCCL and Zone A/AE	CCCL and Zone X
Section 3109 Scope (applicable to)	Section 3109 applies to the construction, substantial improvement, and repair of substantial damage of <i>habitable structures</i> (Note 1) entirely or partly seaward of the CCCL (or seaward of the <i>50-foot setback line</i> , if applicable).	Section 3109 applies to <i>habitable structures</i> and Sec. 1612 applies to structures in flood hazard areas that are not <i>habitable structures</i> . (Note 1)	Section 3109 applies to <i>habitable structures</i> and Sec. 1612 applies to structures in flood hazard areas that are not <i>habitable structures</i> . (Note 1)	Section 3109 applies to <i>habitable structures</i> . (Note 1)
Approval prior to construction	Sec. 3109.1.2 requires an environmental permit from the Florida DEP prior to the start of construction.	Sec. 3109.1.2 requires an environmental permit from the Florida DEP prior to the start of construction.	Sec. 3109.1.2 requires an environmental permit from the Florida DEP prior to the start of construction.	Sec. 3109.1.2 requires an environmental permit from the Florida DEP prior to the start of construction.
Design and Construction	Sec. 3109 and Sec. 1612, as applicable.	Sec. 3109 and Sec. 1612 (Note 2).	Sec. 3109 and Sec. 1612 (Note 2).	Sec. 3109 only.
Flood loads	Sec. 3109.3.1 Flood loads per ASCE 7, Chapter 5	Sec. 3109.3.1 for load calculation, the stillwater depth is the difference between <i>design grade and the higher</i> of stillwater per FIS or DEP <i>combined total storm tide elevation</i> for a 100-year return period.	Sec. 3109.3.1 for load calculation, the stillwater depth is the difference between <i>design grade</i> and the DEP <i>combined total storm tide elevation</i> for a 100-year return period.	Sec. 3109.3.1 for load calculation, the stillwater depth is the difference between <i>design grade</i> and the DEP <i>combined total storm tide elevation</i> for a 100-year return period.
<p>Note 1: HABITABLE STRUCTURE. Structures designed primarily for human occupancy. Typically included within this category are residences, hotels and restaurants.</p> <p>Note 2: 1612.4 Design and construction. The design and construction of buildings and structures located in flood hazard areas, including coastal high hazard areas and Coastal A Zones, shall be in accordance with Chapter 5 of ASCE 7 and with ASCE 24.</p>				

	CCCL	CCCL and Zone V or Coastal A Zone	CCCL and Zone A/AE	CCCL and Zone X
Foundation	<p>Sec. 3109.3.2 and ASCE 24, Section 4.5 (except shallow foundations and stem walls not permitted)</p> <p>Sec. 3109.3.2.1 Piles or columns (specifics for spacing to diameter, tops of grade beams and pile caps, and pile penetration)</p> <p>Sec. 3109.3.2.2 Shear walls (with specific limitations)</p>	<p>Sec. 3109.3.2 and ASCE Section 4.5 (except shallow foundations and stem walls not permitted)</p> <p>Note Commentary for ASCE 4.5 states shear walls “should be avoided” for <i>low-rise buildings</i> in Zone V</p> <p>FBC, Residential R322.3.3 allows only pilings and columns in Zone V (not shear walls) and in Coastal A Zone, piling, columns, and backfilled stem walls are permitted (not shear walls)</p>	<p>Sec. 3109.3.2 and ASCE Section 4.5 (except shallow foundations and stem walls not permitted)</p> <p>FBC, Residential R322.2 does not limit the type of foundation in Zone A/AE (other than CAZ), with the implication that shear walls are permitted (as is elevating on fill)</p>	<p>Sec. 3109.3.2 and ASCE Section 4.5 (except shallow foundations and stem walls not permitted)</p>
Elevation	<p>Sec. 3109.3.3 bottom of the <i>lowest horizontal structural member of the lowest floor</i> at or above the higher of (see bullets in columns based on flood zone):</p>	<p>Elevation per ASCE 24 (Table 4-1)</p> <p>Elevation specified by the jurisdiction</p> <p><i>100-year storm elevation</i> determined by DEP in 1999 report (may request a site-specific determination from DEP)</p>	<p>Elevation specified by the jurisdiction</p> <p><i>100-year storm elevation</i> determined by DEP in 1999 report (may request a site-specific determination from DEP)</p>	<p>Elevation specified by the jurisdiction</p> <p><i>100-year storm elevation</i> determined by DEP in 1999 report (may request a site-specific determination from DEP)</p>

	CCCL	CCCL and Zone V or Coastal A Zone	CCCL and Zone A/AE	CCCL and Zone X
Walls below the elevation required by Sec. 3109.3.3	Sec. 3109.3.4 #1 breakaway walls per ASCE 24 Sec. 4.6 using lesser of flood loads in Sec. 3109.3.1.	Sec. 3109.3.4 #1 breakaway walls per ASCE 24 Sec. 4.6 using lesser of flood loads in Sec. 3109.3.1 Sec. 3109.3.4 #4, breakaway walls shall have flood openings except for (a) shear walls per Sec. 3109.3.2.2 and (c) dry floodproofed walls (nonresidential only, permitted in CAZ by Sec. 1612.4.1)	Sec. 3109.3.4 #1 breakaway walls per ASCE 24 Sec. 4.6 using lesser of flood loads in Sec. 3109.3.1 Sec. 3109.3.4 #4, breakaway walls shall have flood openings except for (a) shear walls per Sec. 3109.3.2.2 and (c) dry floodproofed walls (nonresidential only)	Sec. 3109.3.4 #1 breakaway walls per ASCE 24 Sec. 4.6 using lesser of flood loads in Sec. 3109.3.1 Sec. 3109.3.4 #4(b), breakaway not required to have flood openings
Elevator shafts and stairways	Sec. 3109.3.4 #2 elevator shafts and stairways per ASCE 24 (ASCE 24 Sec. 7.5 for elevators and Sec. 8.1 for stairways) Sec. 3109.3.4 #3 nonresidential buildings outside of Zone V, “stairways not required to breakaway provided walls have flood openings”	Sec. 3109.3.4 #2 elevator shafts and stairways per ASCE 24 (ASCE 24 Sec. 7.5 for elevators and Sec. 8.1 for stairways).	Sec. 3109.3.4 #2 elevator shafts and stairways per ASCE 24 (ASCE 24 Sec. 7.5 for elevators and Sec. 8.1 for stairways) Sec. 3109.3.4 #3 nonresidential buildings outside of Zone V, “stairways not required to breakaway provided walls have flood openings”	Sec. 3109.3.4 #2 elevator shafts and stairways per ASCE 24 (ASCE 24 Sec. 7.5 for elevators and Sec. 8.1 for stairways) Sec. 3109.3.4 #3 nonresidential buildings outside of Zone V, “stairways not required to breakaway provided walls have flood openings”

	CCCL	CCCL and Zone V or Coastal A Zone	CCCL and Zone A/AE	CCCL and Zone X
Enclosures: uses permitted	Sec. 3109.3.4 #3 nonresidential buildings outside of Zone V, “small mechanical and electrical rooms with dry floodproofing...not required to be breakaway”.	Sec. 3109.3.4 #5a, “solely for parking of vehicles, building access, or storage” Sec. 3109.3.4 #5b, “Enclosures above the elevation specified in ASCE 24 or by the jurisdiction and below the <i>100-year storm elevation</i> , ... shall be limited to <i>allowed use</i> ” (Note 3)	Sec. 3109.3.4 #3 nonresidential buildings outside of Zone V, “small mechanical and electrical rooms with dry floodproofing...not required to be breakaway” Sec. 3109.3.4 #5a, “solely for parking of vehicles, building access, or storage” Sec. 3109.3.4 #5b, “Enclosures above the elevation specified in ASCE 24 or by the jurisdiction and below the <i>100-year storm elevation</i> , or enclosures with <i>dry floodproofing</i> to the elevation specified in ASCE 24 or by the jurisdiction, shall be limited to <i>allowed use</i> ” (Note 3)	Sec. 3109.3.4 #3 nonresidential buildings outside of Zone V, “small mechanical and electrical rooms with dry floodproofing...not required to be breakaway” Sec. 3109.3.4 #6 “uses of enclosures below the <i>100-year storm elevation</i> shall be limited to <i>allowed use</i> ” (Note 3†)
<p>Note 3. ALLOWED USE. For the purpose of Section 3109.3.4, use of enclosures above, or with <i>dry floodproofing</i> to, the elevation specified in ASCE 24 and below the <i>100-year storm elevation</i>, includes, but is not limited to use for parking of vehicles, storage, building access, small mechanical and electrical rooms, retail shops, commercial pool bars and other bars, snack bars, commercial grills with portable cooking equipment, commercial dining areas where the permanent kitchen is located landward of the <i>coastal construction control line</i> or above the <i>100-year storm elevation</i>, toilet rooms and bathrooms, cabanas, recreational spaces such as gyms and card rooms, commercial service/storage/back-of-house facilities; and uses of a similar nature that are not spaces for living, sleeping or cooking.</p>				

	CCCL	CCCL and Zone V or Coastal A Zone	CCCL and Zone A/AE	CCCL and Zone X
Structural slabs below the 100-year storm elevation	Sec. 3109.3.5 structural slabs not required to be breakaway if designed to withstand flood loads	Sec. 3109.3.5 and ASCE 24: 4.5.1 “Foundation systems shall be free of obstructions and attachments that will transfer flood forces to the structural system or that will restrict or eliminate free passage of ...water and waves...” 4.5.8 specifies concrete slabs only “that support columns or walls” 9.3 specifies design requirements for slabs used as parking pads, enclosure floors, landings, decks, walkways, patios, and similar uses	Sec. 3109.3.5 and ASCE 24 9.3 specify the design requirements for slabs used as parking pads, enclosure floors, landings, decks, walkways, patios, and similar uses.	Sec. 3109.3.5 structural slabs not required to be breakaway if designed to withstand flood loads
Elevation Certification	Sec. 3109.1.3 ... upon placement of the <i>lowest horizontal structural member of the lowest floor</i> and prior to further vertical construction, certification of the elevation of the bottom of the <i>lowest horizontal structural member of the lowest floor</i> .	Sec. 3109.1.3 ... upon placement of the <i>lowest horizontal structural member of the lowest floor</i> and prior to further vertical construction, certification of the elevation of the bottom of the <i>lowest horizontal structural member of the lowest floor</i> .	Sec. 3109.1.3 ... upon placement of the <i>lowest horizontal structural member of the lowest floor</i> and prior to further vertical construction, certification of the elevation of the bottom of the <i>lowest horizontal structural member of the lowest floor</i> .	Sec. 3109.1.3 ... upon placement of the <i>lowest horizontal structural member of the lowest floor</i> and prior to further vertical construction, certification of the elevation of the bottom of the <i>lowest horizontal structural member of the lowest floor</i> .
Attendant Utilities and Equipment	Not specifically addressed	ASCE 24 Chapter 7	ASCE 24 Chapter 7	Not specifically addressed

	CCCL	CCCL and Zone V or Coastal A Zone	CCCL and Zone A/AE	CCCL and Zone X
Documentation	Sec. 3109.4 in addition to documentation per Sec. 1612.4, where applicable, documentation must be prepared, signed, and sealed by registered PE for site-specific determination of <i>design grade</i> and shear wall certifications per Sec. 3109.3.2.	Sec. 3109.4 in addition to documentation per Sec. 1612.4, where applicable, documentation must be prepared, signed, and sealed by registered PE for site-specific determination of <i>design grade</i> and shear wall certifications per Sec. 3109.3.2.	Sec. 3109.4 in addition to documentation per Sec. 1612.4, where applicable, documentation must be prepared, signed, and sealed by registered PE for site-specific determination of <i>design grade</i> and shear wall certifications per Sec. 3109.3.2.	Sec. 3109.4 documentation must be prepared, signed, and sealed by registered PE for site-specific determination of <i>design grade</i> and shear wall certifications per Sec. 3109.3.2.

	CCCL	CCCL and Zone V or Coastal A Zone	CCCL and Zone A/AE	CCCL and Zone X
Existing structures	<p>FBC Existing Building Sec. 3109.1.1 Modification, maintenance or repair of existing <i>habitable structures</i>. The requirements of Section 3109 do not apply to the modification, maintenance, or repair of existing <i>habitable structures</i>, provided all of the following apply to the modification, maintenance, or repair:</p> <ol style="list-style-type: none"> 1. Is within the limits of the existing foundation. 2. Does not require, involve, or include any additions to, or repair or modification of, the existing foundation. 3. Does not include any additions or enclosures added, constructed, or installed below the <i>lowest floor</i> or deck. 	<p>FBC Existing Building Sec. 3109.1.1 Advisory Note. If the modification or repair is determined to be a <i>substantial improvement</i> or <i>substantial damage</i>, and if the building is located in a <i>special flood hazard area</i> (Zone A and Zone V) established in Section 1612.3, the requirements of <i>Florida Building Code, Existing Building</i> applicable to <i>flood hazard areas</i> shall apply.</p>	<p>FBC Existing Building Sec. 3109.1.1 Advisory Note. If the modification or repair is determined to be a <i>substantial improvement</i> or <i>substantial damage</i>, and if the building is located in a <i>special flood hazard area</i> (Zone A and Zone V) established in Section 1612.3, the requirements of <i>Florida Building Code, Existing Building</i> applicable to <i>flood hazard areas</i> shall apply</p>	<p>FBC Existing Building Sec. 3109.1.1 Modification, maintenance or repair of existing <i>habitable structures</i>. The requirements of Section 3109 do not apply to the modification, maintenance, or repair of existing <i>habitable structures</i>, provided all of the following apply to the modification, maintenance, or repair:</p> <ol style="list-style-type: none"> 1. Is within the limits of the existing foundation. 2. Does not require, involve, or include any additions to, or repair or modification of, the existing foundation. 3. Does not include any additions or enclosures added, constructed, or installed below the <i>lowest floor</i> or deck.