Issue: DCA10-DEC-091 by George Merlin of George Merlin Association Inc. The Petitioner is requesting clarification with regard to the provisions of the CCCL requirements of the Florida Building Code, Building. Specifically, the Petitioner provides for the following questions:

1. Is the application of the exception in FBC Ch 3109.1.1 for construction within the limits of the existing foundation to be the same as the FDEP historical application and interpretation of the exemption in FS Ch 161.053(12)(a) as noted in DEP Consultation file CNS-ST0478 - i.e. The design standards for buildings seaward of the CCCL "do not apply to any modifications, maintenance, or repair to any existing structure within the limits of the existing foundation which does not require, involve, or include any additions to, or repair or modification of, the existing foundation of that structure, regardless of building height, number of floors or costs involved".
Yes or No?

Is the exception in FBC 3109.1.1 applicable to all the items 3109.1.1.1., 3109.1.1.2 and 3109.1.1.3 that precede it; and more specifically to item 2. (see FBC 2004 edition and 2007 edition).
Yes or No?

Does this exemption in FBC3109.1.1 apply regardless if the costs constitute a substantial improvement, provided all proposed construction remains within the limits of the existing foundation, doesn't modify that foundation and meets the requirements of the Florida building code for Existing Buildings?
Yes or No?

Does this exemption apply regardless of the extent of modification above the unmodified foundation, provided all proposed construction remains within the limits of the existing foundation, doesn't modify that foundation and meets the requirements of the Florida Building Code for Existing Buildings?
Yes or No?

Background:

(1) Description of projects: The Petitioner is a Florida licensed architect and frequently design single-family homes on the golf-coast barrier islands that are in the area seaward of the FDEP-FBC Coastal Construction Control Line (CCCL). The request relates to two scenarios for two future projects in the CCCL zone:

The case in question consists of a single story single-family dwelling and proposed renovations to such, including a vertical second story addition; wherein all the existing roof and walls will be removed to the foundation level, but the foundation itself will remain unmodified. All proposed renovations including the construction of new walls and second story floor and roof, will be within the footprint/perimeter of the existing

foundation and the existing foundation has been investigated and proven by engineering calculations to be adequate to support the proposed renovations per the requirements of the FBC for Existing Buildings (i.e. gravity and wind loads) without modifying or adding to the original existing foundation in any way. The market value of the existing building is $200k and the proposed renovation will cost $500k. Therefore, the cost of the proposed renovations will exceed 50% of the market value of the existing building.

(2) 2007 Florida Building Code, Building:

SECTION 3109 STRUCTURES SEAWARD OF A COASTAL CONSTRUCTION CONTROL LINE

3109.1.1 Scope. The provisions of Section 3109 shall ensure that structures located seaward of the coastal construction control line are designed to resist the predicted forces associated with a 100-year storm event and shall apply to the following:

1. All habitable structures which extend wholly or partially seaward of a coastal construction control line (CCCL) or 50-foot (15.3 m) setback line.

2. Substantial improvement of or additions to existing habitable structures.

3. Swimming pools that are located in close proximity to a habitable structure or armoring. An environmental permit from the Florida Department of Environmental Protection, requiring special siting considerations to protect the beach-dune system or proposed or existing structures and public beach access, is required prior to the start of construction. The environmental permit may condition the nature, timing and sequence of construction of permitted activities to provide protection to nesting sea turtles and hatchlings and their habitat, including review, submittal and approval of lighting plans.

   Exception: The standards for buildings seaward of a CCCL area do not apply to any **modification**, **maintenance** or **repair** to any existing structure within the limits of the existing foundation which does not require, involve or include **any additions** to, or **repair** or **modification** of, the **existing foundation** of that structure.

3109.3 Elevation standards. All habitable structures shall be elevated at or above an elevation which places the lowest horizontal structural member above the 100-year storm elevation as determined by the Florida Department of Environmental Protection in the report titled "One-Hundred-Year Storm Elevation Requirements for Habitable Structures Located Seaward of a Coastal Construction Control Line."

An applicant may request the Department of Environmental Protection to determine a site-specific 100-year storm elevation for the applicant's proposed habitable structure as part of the environmental permit application process. The elevation will be provided as part of the applicant's environmental permit and shall be subject to review under the provisions of Chapter 120, Florida Statutes.

Exceptions:

1. Additions, repairs or modifications to existing nonconforming habitable structures that do not advance the seaward limits of the existing habitable structure and do not constitute rebuilding of the existing structure.

2. Habitable structures located landward of existing armoring which is capable of protecting buildings from the effects of erosion from a 100-year storm surge. The applicant shall provide scientific and engineering evidence that the armoring has been designed, constructed and maintained to survive the effects of the design storm and provide protection to existing and proposed structures from the erosion associated with that event. Evidence shall include a report with data and supporting analysis, and shall be certified by a professional engineer registered in this state, that the armoring was designed and constructed and is in adequate condition to meet the following criteria:

2.1. The top must be at or above the still water level, including setup, for the design storm plus the breaking wave calculated at its highest achievable level based on the maximum eroded beach profile and highest surge level combination, and must be high enough to preclude runup overtopping.

2.2. The armoring must be stable under the design storm including maximum localized scour, with adequate penetration and toe protection to avoid settlement, toe failure, or loss of material from beneath or behind the armoring.

2.3. The armoring must have sufficient continuity or return walls to prevent flanking under the design storm from impacting the proposed construction.

2.4. The armoring must withstand the static and hydrodynamic forces of the design storm.

3. A higher elevation standard is required by either the National Flood Insurance Program (NFIP), as found on a community's Flood Insurance Rate Map (FIRM), or the local flood damage prevention ordinance. In such instances, the higher elevation standard shall apply.
3109.4 Construction standards.

3109.4.1 Pile foundations. All habitable structures shall be elevated on, and securely anchored to, an adequate pile foundation. Pile foundations for habitable structures shall be designed to withstand all reasonable anticipated erosion, scour and loads resulting from a 100-year storm including wind, wave, hydrostatic and hydrodynamic forces acting

simultaneously with typical structural (live and dead) loads. All habitable structures should be anchored to their pile foundation in such a manner as to prevent flotation, collapse or lateral displacement. The elevation of the soil surface to be used in the calculation of pile reactions and bearing capacities for habitable structures shall not be greater than that which would result from erosion caused by a 100-year storm event. Calculation of the design grade shall account for localized scour resulting from the presence of structural components. Design ratio or pile spacing to pile diameter should not be less than 8:1 for individual piles located above the design grade. Pile caps shall be set below the design grade unless designed to resist increased flood loads associated with setting the cap above the design grade, but at or below the natural grade. Pile penetration shall take into consideration the anticipated loss of soil above the design grade.

Exceptions:

1. Additions, repairs or modifications to existing nonconforming habitable structures that do not advance the seaward limits of the existing habitable structure and do not constitute rebuilding of the existing structure.

2. Habitable structures located landward of existing armoring which is capable of protecting buildings from the effects of erosion from a 100-year storm surge. The applicant shall provide scientific and engineering evidence that the armoring has been designed, constructed and maintained to survive the effects of the design storm and provide protection to existing and proposed structures from the erosion associated with that event. Evidence shall include a report with data and supporting analysis, and shall be certified by a professional engineer registered in this state, that the armoring was designed and constructed and is in adequate condition to meet the following criteria:

2.1. The top must be at or above the still water level, including setup, for the design storm plus the breaking wave calculated at its highest achievable level based on the maximum eroded beach profile and highest surge level combination, and must be high enough to preclude runup overtopping.

2.2. The armoring must be stable under the design storm including maximum localized scour, with adequate penetration and toe protection to avoid settlement, toe failure or loss of material from beneath or behind the armoring.

2.3. The armoring must have sufficient continuity or return walls to prevent flanking under the design storm from impacting the proposed construction.

2.4. The armoring must withstand the static and hydrodynamic forces of the design storm.

3109.2 Definitions.

SUBSTANTIAL IMPROVEMENT. See definition in Section 161.54(12), Florida Statutes.

REBUILDING. See definition of "Substantial improvement."

(3) 2007 Florida Building Code, Building

SECTION 202 GENERAL DEFINITIONS

201.3 Words not defined. Words not defined herein shall have the meanings stated in the Florida Building Code, Plumbing, Mechanical and Fuel Gas, or the Florida Fire Prevention Code. Words not defined in the Florida Building Codes shall have the meanings in Webster's Third New International Dictionary of the English Language, Unabridged.

2007 Florida Building Code, Existing Building

ADDITION. An extension or increase in floor area, number of stories, or height of a building or structure.

REPAIR. The patching, restoration and/or minor replacement of materials, elements, components, equipment and/or fixtures for the purposes of maintaining such materials, elements, components, equipment and/or fixtures in good or sound condition.

Maintenance – the labor of keeping something (as buildings or equipment) in a state of repair or efficiency: Care, upkeep…

Florida Fire Prevention Code:

Modification: The reconfiguration of any space; the addition, relocation, or elimination of any door or window; the addition or elimination of load-bearing elements; the reconfiguration or extension of any system; or the installation of any additional equipment.

501.4 Flood hazard areas. In flood hazard areas, repairs that constitute substantial improvement shall require that the building comply with Section 1612 of the Florida Building Code, Building.

501.4.1 Structure seaward of a coastal construction line. Structures located seaward of the coastal construction line shall be designed to resist the predicted forces of a 100-year storm event in accordance with Section 3109 of the Florida Building Code, Building.

601.3 Flood hazard areas. See Section 501.4.

1003.5 Flood hazard areas. See Section 501.4.

(4) Florida Statutes

Section 161.053(12), Florida Statutes - Department" means the Department of Environmental Protection.

(12)(a) The coastal construction control requirements defined in subsection (1) and the requirements of the erosion projections pursuant to subsection (6) do not apply to any modification, maintenance, or repair to any existing structure within the limits of the existing foundation which does not require, involve, or include any additions to, or repair or modification of, the existing foundation of that structure. Specifically excluded from this exemption are seawalls or other rigid coastal or shore protection structures and any additions or enclosures added, constructed, or installed below the first dwelling floor or lowest deck of the existing structure.

Section 161.54 Definitions, Florida Statutes

(12) "Substantial improvement" means any repair, reconstruction, rehabilitation, or improvement of a structure when the actual cost of the improvement or repair of the structure to its pre-damage condition equals or exceeds 50 percent of the market value of the structure either:

(a) Before the improvement or repair is started; or

(b) If the structure has been damaged and is being restored, before the damage occurred.

The total cost does not include nonstructural interior finishings, including, but not limited to, finish flooring and floor coverings, base molding, nonstructural substrates, drywall, plaster, paneling, wall covering, tapestries, window treatments, decorative masonry, paint, interior doors, tile, cabinets, moldings and millwork, decorative metal work, vanities, electrical receptacles, electrical switches, electrical fixtures, intercoms, communications and sound systems, security systems, HVAC grills and decorative trim, freestanding metal fireplaces, appliances, water closets, tubs and shower enclosures, lavatories, and water heaters, or roof coverings, except when determining whether the structure has been substantially improved as a result of a single improvement or repair.

For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or any alteration of a structure listed on the National Register of Historic Places or the State Inventory of Historic Places.

(5) BOAF – Non-binding Interpretations

Question:
Is it the intent of the exception to the CCCL standards in 3109.1.1 to apply to a substantial improvement?
Answer:
No, the term "substantial improvement" is defined as 50% of the market value.
Commentary: The exception is not based on value, it is specifically addressing "additions to, or repair or modifications of, the existing foundation" of that structure.

Question:
Is it the intent of Florida Building Code - Building section 3109.1.1, Exception to allow substantial improvements and/or additions to an existing structure within the limits of the existing unaltered foundations that do not need any modification for support of the improvements and/or additions?

Comment: The Florida Department of Environmental Protection has had a long-standing interpretation that says "yes" to this question, that the above-described construction is exempt from DEP elevation and piling requirements. This FBC code section (3109) is essentially verbatim from Fl. Statutes 161.053 and Fl. Admin. Code 62B-33. I would like reconfirmation from BOAF, since there seems to be some disagree about this. Please note, my question is separate and independent from any FEMA regulations instituted pursuant to FBC section 3110.2

Answer:
No. The exception states "...The standards...do not apply to any modification, maintenance or repair to any existing structure within the limits of the existing foundation..." It does not exempt additions or substantial improvements.

Commentary: See Code Commentary. "Care and attention must be given to consideration of total improvement costs since they may trigger substantial improvement regulations, mandating that the entire structure be brought into compliance with current floodplain management regulations."

(6) Staff analysis:

- The subject of this request and staff recommendation relate only to the minimum - standards contained in the Florida Building Code and must not be interpreted to interfere in any manner with enforcement or application of duly adopted floodplain management ordinances as the Code explicitly authorizes and anticipates those ordinances (Section 3110.1.2, Florida Building Code, Building Volume (2007)).

- As stated by the Petitioner, the above-quoted provisions were transferred into the Code from a regulatory scheme within the jurisdiction of the Department of

Environmental Protection and its successors. The interpretation offered by the Petitioner as an appropriate interpretation of the Florida Building Code is consistent with the historical interpretation and application of those DEP regulations.

- Staff recommendation to the Petitioners inquires are consistent with the historical interpretation and application of those DEP regulations as applicable (see attached letter from DEP dated January 27, 2003).

Staff recommendation:

Question #1: Is the application of the exception in FBC Ch 3109.1.1 for construction within the limits of the existing foundation to be the same as the FDEP historical application and interpretation of the exemption in FS Ch 161.053(12)(a) as noted in DEP Consultation file CNS-ST0478 - i.e. The design standards for buildings seaward of the CCCL "do not apply to any modifications, maintenance, or repair to any existing structure within the limits of the existing foundation which does not require, involve, or include any additions to, or repair or modification of, the existing foundation of that structure, regardless of building height, number of floors or costs involved".
Yes or No?

Answer/Staff: Yes. According to Section, 3109.1.1 Exception, the project as described above is not required to be re-designed to resist the predicted forces associated with a 100-year storm event.

Answer/Structural TAC, March 2010: "No", exception does not apply to substantial improvements or additions.

Answer/Special Occupancy TAC, March 2010: **Yes**. According to Section, 3109.1.1 Exception, the project as described above is not required to be re-designed to resist the predicted forces associated with a 100-year storm event.

Question # 2: Is the exception in FBC 3109.1.1 applicable to all the items 3109.1.1.1., 3109.1.1.2 and 3109.1.1.3 that precede it; and more specifically to item 2. (see FBC 2004 edition and 2007 edition).
Yes or No?

Answer /Staff: Yes.

Question #3: **Does this exemption in FBC3109.1.1 apply regardless if the costs constitute a substantial improvement, provided all proposed construction remains**

within the limits of the existing foundation, does not modify that foundation and meets the requirements of the Florida building code for Existing Buildings? Yes or No?

Answer/Staff: See answer to Question #2.

Question #4: Does this exemption apply regardless of the extent of modification above the unmodified foundation, provided all proposed construction remains within the limits of the existing foundation, does not modify that foundation and meets the requirements of the Florida Building Code for Existing Buildings? Yes or No?

Answer/Staff: See answer to Question #1.