

FILED

Department of Business and Professional Regulation
Deputy Agency Clerk

CLERK Brandon Nichols

Date 3/20/2019

File #

Petition for Declaratory Statement Before the Florida Building Commission

Excel Electrical Group, LLC
3956 Coral Ridge Drive
Coral Springs, Fl. 33065
954-344-6763

DS 2019-022

Robert Messing,
President
954-818-3933

2017 Florida Building Code 6th Edition Existing Buildings, Chapter 2 Definitions, Chapter 6 Repairs, Section 602.2 New and Replacement Materials. 2014 National Electric Code, 210.12A, 210.12B and 210.12B, exception. 2017 FBC Residential, E3902.16 and .17

Excel Electric of Coral Springs, Florida, a Florida Registered Corporation and ECLB License EC2640, completed a routine electrical panel change out at 474 NE 3rd Street, Boca Raton, Florida on February 14th, 2019. The permit was issued, and the job was completed. Upon rough inspection, Excel Electric failed per NEC 210.12 (exhibit #1). The City of Boca Raton is requiring Arc Fault Breakers to be installed per the NEC 210.12 A and B, (exhibit #2). The violation wording includes the statement "provide AFCI breakers when replacing panels", this statement does not appear anywhere in the wording of NEC 210.12 and in FBC E3902.16 (exhibit #3). NEC 210.12 B requires an AFCI when extending branch circuits, the exception to this section states that an AFCI is not required where the extension is not more than 6ft. No wiring has been added for the panel changeout that would require an AFCI per NEC 210.12 B. A written letter from the Building Official (exhibit #4) states that the Boca Raton Ordinance #5455 (exhibits #5,6, 7 and 8) allows the Building Official to supersede the Florida Building Code when deemed necessary for safety. In this case I believe that the Building Official is using an administrative amendment to enforce the Florida Building Code instead of using a technical amendment which is necessary to properly enforce and approve a local technical code. There is no requirement for installing the latest code type breakers per the NEC when replacing a panel box in an existing building. The NEC and the FBC Existing Buildings do require to update code materials when changing a receptacle or adding wire to a circuit over 6 feet in length (exhibit # 2, NEC 210.12 B, and exception and exhibit #9). There would be a significant financial cost to add Arc Fault Breakers to this type of job which the financial impact of this work would be one of several requirements needed to approve a local technical amendment by the State of Florida. I believe that this work is considered a "Repair" per the definition in Chapter 2 and Section 602.2 of the FBC Existing Buildings Code (see code sections below). A repair is performed with like material unless an unsafe condition would occur. Therefore, in my opinion, this panel replacement shall not be required to include Arc Fault breakers.

Definition Repair, Chapter 2, 2017 FBC Existing. The reconstruction or renewal of any part of an *existing building* for the purpose of its maintenance or to correct damage.

2017 FBC Existing Buildings, 602.2 New and Replacement Materials.

Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no *dangerous* or *unsafe* condition, as defined in Chapter 2, is created. Hazardous materials, such as asbestos and lead-based paint, shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

In reviewing Level 1 and Level 2 alterations there are no specific electrical code references when replacing a panel box in an existing residence.

Question.

1. Would a panel change out require Arc Fault breakers to be installed?

Robert Messing

March 7,2019



CORRECTION NOTICE



Permit Number 18-9502



Date Inspected: 8-14-19



Site Address 474 NE 3rd St

- STRUCTURAL ELECTRICAL PLUMBING MECHANICAL
- ENVIRONMENTAL ZONING ENGINEERING UTILITIES

CODE SECTION REFERENCED AND THE CITY OF BOCA RATON CHAPTER 19

<input type="checkbox"/> PARTIAL APPROVED	<input type="checkbox"/> NOT READY FOR COMPLETION 19-153	<input type="checkbox"/> WORK NOT TO PLAN 19-114
<input checked="" type="checkbox"/> UNSAPPROVED	<input type="checkbox"/> PERMIT CARD ONLY 19-154	<input type="checkbox"/> NO ACCESS 19-152
<input type="checkbox"/> RE-INSPECTION FEE	<input type="checkbox"/> APPROVED PLAN ONLY 19-110	<input type="checkbox"/> PORTABLE DEBRIS 19-169
	<input type="checkbox"/> STOP WORK UNDER 19-155	<input type="checkbox"/> OTHER



Provide AFCI protection for all exposed circuits per NEC 210.12 when replacing panels. NEC 210.12

NOT TO PLAN - Plans show 1" Bore w/ 4 wires - BRMC 19-107

END NEXT CLASS WORK UNTIL CORRECTIONS ARE COMPLETED AND RE-INSPECTED. REMOVAL OF THE LABEL IS ILLEGAL AND SUBJECT TO FINE. THIS NOTICE IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.



INSPECTOR SIGNATURE M.H.

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condition. In addition, these devices are evaluated to determine resistance to unwanted tripping due to the presence of arcing that occurs in control and utilization equipment under normal operating conditions or to a loading condition that closely mimics an arcing fault such as a solid-state electronic ballast or a dimmed load.

AFCI devices may also be capable of performing other functions such as overcurrent protection, ground-fault circuit interruption, and surge suppression. UL 1699 currently recognizes four types of AFCIs: branch/feeder, cord, outlet circuit, and portable. (See Exhibit 210.22 for an example of the required marking indicating the type of AFCI protection.) AFCI devices have a maximum rating of 20 A and are intended for use in 120 V ac, 60-Hz circuits. Cord AFCIs may be rated up to 30 A. Placement of the device in the circuit must be considered when complying with 210.12. Six possible configurations using listed equipment are permitted by the Code. The objective of the NEC is to provide protection of the entire branch circuit. The configurations may use a single combination-type AFCI at the origin of the circuit, a combination of devices, or a combination of physical protection for part of the circuit and a device-type AFCI located downstream of the origin of the circuit. Where the AFCI is not located at the origin of the circuit, a higher level of physical protection must be provided for branch-circuit conductors from the origin of the branch circuit to the device-type AFCI. Some configurations have length restrictions to the first outlet, based on the size of the conductors (50 feet for 14 AWG and 70 feet for 12 AWG). Commentary Table 210.2 summarizes the permitted methods of providing AFCI protection.

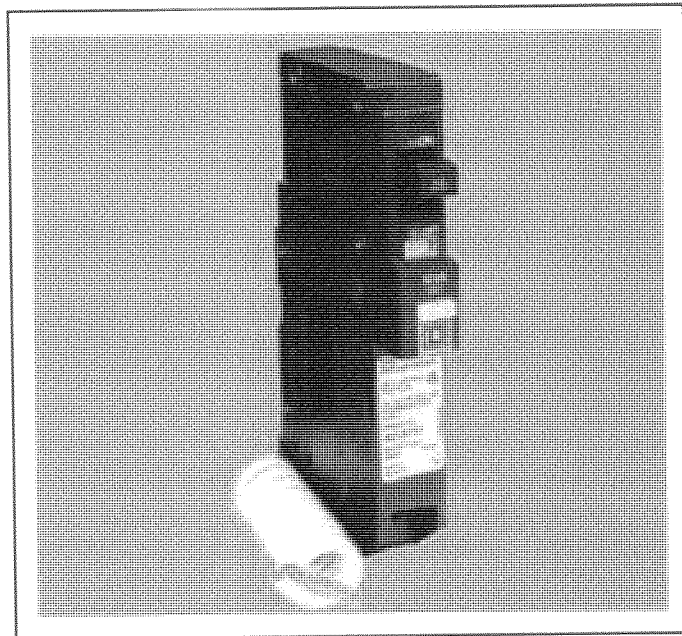


EXHIBIT 210.22 A circuit breaker with the required marking indicating the type of AFCI protection.

Branch-circuit/feeder-type AFCI devices provide arcing protection against parallel faults. An example of a parallel arcing fault is a cable stapled to a wooden stud where the staple has been driven deeply into the cable jacket, damaging the conductor insulation. Combination-type AFCIs provide parallel arcing

COMMENTARY TABLE 210.2 AFCI Protection Methods

210.12(A) Reference	AFCI Protection Method	Additional Installation Requirements
210.12(A)(1)	<ul style="list-style-type: none"> • Combination type AFCI circuit breaker installed at origin of branch circuit. 	<ul style="list-style-type: none"> • No additional requirements
210.12(A)(2)	<ul style="list-style-type: none"> • Branch/feeder type AFCI circuit breaker installed at origin of branch circuit, plus • Outlet branch circuit type AFCI device installed at first outlet in branch circuit. 	<ul style="list-style-type: none"> • Marking of first outlet box in branch circuit
210.12(A)(3)	<ul style="list-style-type: none"> • Supplemental arc protection type circuit breaker installed at origin of branch circuit, plus • Outlet branch circuit type AFCI device installed at first outlet in branch circuit. 	<ul style="list-style-type: none"> • Continuous branch circuit wiring; • "Home run" conductor length restricted; • Marking of first outlet box in branch circuit
210.12(A)(4)	<ul style="list-style-type: none"> • *Branch circuit overcurrent protective device, plus • *Outlet branch circuit type AFCI device installed at first outlet in branch circuit. <p>The combination of devices must be listed and identified to provide <i>system combination type</i> arc-fault protection for the "home run" conductors.</p>	<ul style="list-style-type: none"> • Continuous branch circuit wiring; • "Home run" conductor length restricted (14 AWG—50 ft., 12 AWG—70 ft.); • Marking of first outlet box in branch circuit
210.12(A)(5)	<ul style="list-style-type: none"> • Outlet branch circuit type AFCI device installed at first outlet in branch circuit. 	<ul style="list-style-type: none"> • Branch circuit conductors installed in specific types of metal raceways or metal cables and metal boxes from origin of branch circuit to the first outlet
210.12(A)(6)	<ul style="list-style-type: none"> • Outlet branch circuit type AFCI device installed at first outlet in branch circuit. 	<ul style="list-style-type: none"> • Branch circuit conduit, tubing or cable encased in 2 in. of concrete from origin of branch circuit to the first outlet

protection as well as providing protection against series arcing, such as could occur in a cord set.

AFCI protection is required for all 15- and 20-A, 120-V branch circuits that supply outlets (including receptacle, lighting, and other outlets; see definition of *outlet* in Article 100) located throughout a dwelling unit. For the 2014 *Code*, the requirement was expanded to include outlets installed in kitchens and laundry areas. The requirement does not include outlets in bathrooms, unfinished basements, garages, and outdoors. Because circuits are often shared between a bedroom and other areas such as closets and hallways, providing AFCI protection on the complete circuit would comply with 210.12. AFCI protection on other circuits or locations other than those specified in 210.12(A) is not prohibited.

- (4) A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:
- The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 - The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 15.2 m (50 ft) for a 14 AWG conductor or 21.3 m (70 ft) for a 12 AWG conductor.
 - The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.
 - The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such.
- (5) If RMC, IMC, EMT, Type MC, or steel-armored Type AC cables meeting the requirements of 250.118, metal wireways, metal auxiliary gutters, and metal outlet and junction boxes are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.
- (6) Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 50 mm (2 in.) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.

Exception: Where an individual branch circuit to a fire alarm system installed in accordance with 760.41(B) or 760.121(B) is installed in RMC, IMC, EMT, or steel-sheathed cable, Type AC

or Type MC, meeting the requirements of 250.118, with metal outlet and junction boxes, AFCI protection shall be permitted to be omitted.

Informational Note No. 1: For information on combination-type and branch/feeder-type arc-fault circuit interrupters, see UL 1699-2011, *Standard for Arc-Fault Circuit Interrupters*. For information on outlet branch-circuit type arc-fault circuit interrupters, see UL Subject 1699A, *Outline of Investigation for Outlet Branch Circuit Arc-Fault Circuit-Interrupters*. For information on system combination AFCIs, see UL Subject 1699C, *Outline of Investigation for System Combination Arc-Fault Circuit Interrupters*.

Informational Note No. 2: See 29.6.3(5) of *NFPA 72-2013, National Fire Alarm and Signaling Code*, for information related to secondary power-supply requirements for smoke alarms installed in dwelling units.

Informational Note No. 3: See 760.41(B) and 760.121(B) for power-supply requirements for fire alarm systems.

(B) Branch Circuit Extensions or Modifications — Dwelling Units. In any of the areas specified in 210.12(A), where branch-circuit wiring is modified, replaced, or extended, the branch circuit shall be protected by one of the following:

- A listed combination-type AFCI located at the origin of the branch circuit
- A listed outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit

This section details how to implement AFCI protection when performing work on existing branch-circuit wiring. To address potential existing wiring system obstacles to providing some level of AFCI protection, the *Code* provides the option of installing a combination-type device at the point where the branch circuit originates (as is required for new branch-circuit installations) or of installing an outlet branch-circuit-type AFCI at the first receptacle outlet in the branch circuit. Where the location of the first receptacle outlet in the existing branch circuit cannot be ascertained, installing a new receptacle outlet, and ensuring it is the first one in the branch circuit, is a means to implement the protection required by 210.12(B)(2).

Exception: AFCI protection shall not be required where the extension of the existing conductors is not more than 1.8 m (6 ft) and does not include any additional outlets or devices.

(C) Dormitory Units. All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets installed in dormitory unit bedrooms, living rooms, hallways, closets, and similar rooms shall be protected by a listed arc-fault circuit interrupter meeting the requirements of 210.12(A)(1) through (6) as appropriate.

210.13 Ground-Fault Protection of Equipment

Each branch-circuit disconnect rated 1000 A or more and installed on solidly grounded wye electrical systems of more than 150 volts to ground, but not exceeding 600 volts phase-to-phase, shall be provided with ground-fault protection of equipment in accordance with the provisions of 230.95.

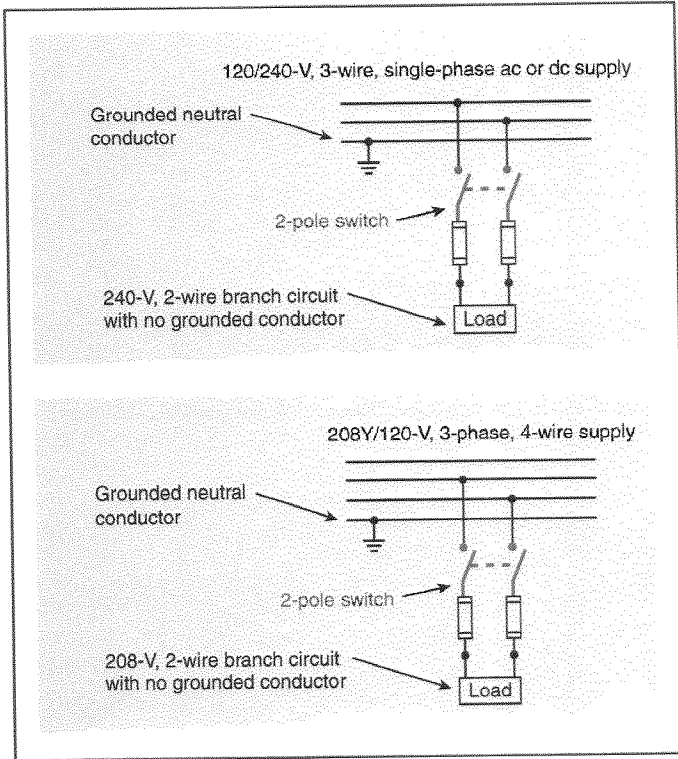


EXHIBIT 210.21 Branch circuits tapped from ungrounded conductors of multiwire systems.

(A) Number of Branch Circuits. The minimum number of branch circuits shall be determined from the total calculated load and the size or rating of the circuits used. In all installations, the number of circuits shall be sufficient to supply the load served. In no case shall the load on any circuit exceed the maximum specified by 220.18.

(B) Load Evenly Proportioned Among Branch Circuits. Where the load is calculated on the basis of volt-amperes per square meter or per square foot, the wiring system up to and including the branch-circuit panelboard(s) shall be provided to serve not less than the calculated load. This load shall be evenly proportioned among multioutlet branch circuits within the panelboard(s). Branch-circuit overcurrent devices and circuits shall be required to be installed only to serve the connected load.

(C) Dwelling Units.

(1) Small-Appliance Branch Circuits. In addition to the number of branch circuits required by other parts of this section, two or more 20-ampere small-appliance branch circuits shall be provided for all receptacle outlets specified by 210.52(B).

(2) Laundry Branch Circuits. In addition to the number of branch circuits required by other parts of this section, at least one additional 20-ampere branch circuit shall be provided to supply the laundry receptacle outlet(s) required by 210.52(F). This circuit shall have no other outlets.

(3) Bathroom Branch Circuits. In addition to the number of branch circuits required by other parts of this section, at least one 120-volt, 20-ampere branch circuit shall be provided to supply a bathroom receptacle outlet(s). Such circuits shall have no other outlets.

Exception: Where the 20-ampere circuit supplies a single bathroom, outlets for other equipment within the same bathroom shall be permitted to be supplied in accordance with 210.23(A)(1) and (A)(2).

210.12 Arc-Fault Circuit-Interrupter Protection

Arc-fault circuit-interrupter protection shall be provided as required in 210.12(A)(B), and (C). The arc-fault circuit interrupter shall be installed in a readily accessible location.

(A) Dwelling Units. All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected by any of the means described in 210.12(A)(1) through (6):

- (1) A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit
- (2) A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.
- (3) A listed supplemental arc protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:
 - a. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 - b. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 15.2 m (50 ft) for a 14 AWG conductor or 21.3 m (70 ft) for a 12 AWG conductor.
 - c. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.

AFCI devices are evaluated in accordance with UL 1699, *Standard for Arc-Fault Circuit-Interrupters*. Testing methods create or simulate arcing conditions to determine a product's ability to detect and interrupt arcing faults. These devices are also tested to verify that arc detection is not unduly inhibited by the presence of loads and circuit characteristics that may mask the hazardous arcing

Exhibit #3
FBC 6th Edition
Residential

#3
6th Edition
Residential

E3902.16 Arc-fault circuit-interrupter protection.

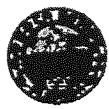
Branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sun-rooms, recreations rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by any of the following: [210.12(A)]

1. A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit. [210.12(A)(1)]
2. A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit. [210.12(A)(2)]
3. A listed supplemental arc protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:
 1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit. [210.12(A)(3)]
4. A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:
 1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.
 4. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such. [210.12(A)(4)]
5. Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8, metal wireways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(5)]
6. Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(6)]

Exception: AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC or Type MC meeting the requirements of Section E3908.8.

Exhibit # 4

bit #



CITY OF
Boca Raton

BUILDING DEPARTMENT

BUILDING DEPARTMENT
200 NW 2nd AVENUE • BOCA RATON, FL 33432
PHONE (561) 393-7930
(FOR HEARING IMPAIRED) TDD (561) 367-7043
www.myboca.us

February 20, 2019

Excel Electrical Group, Inc.
Robert G. Messing (Qualifier)
3956 Coral Ridge Drive
Coral Springs, Florida 33065
Electrical Contractor – License. # EC0002640

RE: Permit #BP2018-9502

Project Address: 474 NE 3rd Street – Boca Raton, FL 33432 – PCN:06-43-47-20-07-002-0070

Scope of Project: Panel Change/Upgrade and Misc. Electrical Work. (Single Family Dwelling)

Dear Mr. Messing,

Excel Electrical Group Inc. recently upgraded an electrical panel at the above-referenced address along with performing other miscellaneous electrical work. The City of Boca Raton adopts The Florida Building Code, Building & The Florida Building Code, Residential 6th Edition as part of our city code of ordinances under Chapter 19 – Boca Raton Building Regulations, Ordinance #5455, which is on file with the Florida Building Commission. The Florida Building Code, Residential Chapter 34-43 governs the electrical code requirements for all one- and two-family dwellings. Section E3902.16 of the Florida Building Code, Residential requires Arc-Fault Circuit Interrupter (AFCI) Protection for all branch circuits listed in this specific subsection. Section E3902.17 covers Arc-Fault Interrupter (AFCI) Protection for branch circuit extensions or modification. The definition of a branch circuit is as follows “*The circuit conductors between the final overcurrent device protecting the circuit and the outlet(s)*”. This definition does NOT include the overcurrent device itself. The City of Boca Raton has a service/sub-panel change or upgrade policy published on our website detailing all the required upgrades during a service panel or sub-panel change or upgrade to any electrical system which includes all grounding & bonding, working clearances and any GFCI or AFCI protection required to bring the system up to current code.

Florida Building Code, Residential - Section 3403.2 Inspections Required. “New electrical work and parts of existing systems affected by new work or alterations shall be inspected by the building official to ensure compliance with the requirements of Chapter 34-43.”

Boca Raton Building Regulations Section 19-57 states “Any requirements necessary for the strength, stability or proper operation of an existing or proposed building, structural, electrical, mechanical or plumbing system or for public safety, health or general welfare, not specifically covered by this building code or the Florida Building Code, shall be determined by the building official.”

Therefore, the new panel installed at the above-referenced address shall have (AFCI) breakers installed to provide the required protection in accordance with Florida Building Code, Residential 6th Edition Section E3902.16. If corrections are not completed within (30) days from the date of this notice, your permitting privileges may be revoked under *F.S. 489.113 (4) (b)*.

Sincerely,

John P. Cosmo

Chief Building Official

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Exhibit #5
Boca Raton Ordinance

Exhibit
Boca Raton

Sec. 19-4. - Scope.

[SHARE LINK TO SECTION](#) [PRINT SECTION](#) [DOWNLOAD \(DOCX\) OF SECTIONS](#) [EMAIL SECTION](#)
[COMPARE VERSIONS](#)

The provisions of this building code shall apply to the design, construction, alteration, modification, repair or demolition of public or private buildings or structures and facilities including manufactured buildings and code enforcement of every building or structure or any appurtenances connected or attached to such buildings or structures within the city, with exception of the following:

(1)
Detached 1- and 2-family dwellings and multiple single-family dwellings (townhouses) not more than 3 stories above grade plane in height with a separate means of egress, and accessory structures to such dwellings shall comply with the Florida Building Code, Residential; and

(2)
Existing buildings undergoing repair, alterations or additions and change of occupancy shall comply with the Florida Building Code, Existing Building.

Exhibit #6
Boca Raton Ordinance

-x- # 1
R. Code Ordinance

Sec. 19-6. - Florida Building Code, Residential.

[SHARE LINK TO SECTION PRINT SECTION DOWNLOAD \(DOCX\) OF SECTIONS EMAIL SECTION](#)
[COMPARE VERSIONS](#)

Construction standards or practices which are not covered by Florida Building Code, Residential shall be in accordance with the provisions of Florida Building Code, Building.

(Ord. No. 5455, § 2, 5-22-18)

Exhibit # 7
Bea State Ordinance

Exhibit # 7
Bea State Ordinance

Sec. 19-9. - Electrical.

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[COMPARE VERSIONS](#)

The provisions of Chapter 27 of the Florida Building Code, Building; fire protection provisions of this building code and FFPC shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto. (1)

The provisions of the National Electrical Installations Standards shall apply to all electrical installations within the city. (2)

(Ord. No. 5455, § 2, 5-22-18)

Exhibit #8
Boca Raton Ordinance

10/17/18
Boca Raton Ordinance

Sec. 19-57. - Requirements not covered by this building code.

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[COMPARE VERSIONS](#)

Any requirements necessary for the strength, stability or proper operation of an existing or proposed building, structure, electrical, gas, mechanical or plumbing system, or for the public safety, health and general welfare, not specifically covered by this building code or the Florida Building Code, shall be determined by the building official.

(Ord. No. 5455, § 2, 5-22-18)

Exhibit #9

FBC Residential

Exhibit #9

FBC Residential

2017 FBC Residential

E3902.17 Arc-fault circuit interrupter protection for branch circuit extensions or modifications.

Where branch-circuit wiring is modified, replaced, or extended in any of the areas specified in Section E3902.16, the branch circuit shall be protected by one of the following:

1. A combination-type AFCI located at the origin of the branch circuit
2. An outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit. [210.12(B)]

Exception: AFCI protection shall not be required where the extension of the existing conductors is not more than 6 feet (1.8 m) in length and does not include any additional outlets or devices. [210.12(B) Exception]