

# Broward County Board of Rules & Appeals Meeting Agenda

October 8, 2020  
Time: 7:00 P.M.

Due to COVID-19, this meeting will be held virtually via ZOOM.

Join Zoom Meeting

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Meeting ID: 920 8434 1221

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One tap mobile

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+1 253 215 8782 US (Tacoma)

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+1 669 900 6833 US (San Jose)

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Call Meeting to Order

Roll Call

Approval of Minutes – July 9, 2020

## CONSENT AGENDA

### 1. Certifications - Staff Recommended.

#### BROWARD COUNTY

FERNANDEZ, JOSE, CHIEF MECHANICAL INSPECTOR

#### TOWN OF DAVIE

BARRETO-FRIE, KELLY, FIRE INSPECTOR

LECOUNT, WILLIAM, FIRE INSPECTOR

#### CITY OF HOLLYWOOD

BATTAGLIA, ALEXANDER, FIRE INSPECTOR

MONTELLANICO, HOLLY, FIRE PLANS EXAMINER

#### CITY OF POMPANO BEACH

CONGER, JASON R. , FIRE INSPECTOR

JEBOAM, CARPELO, ASSISTANT BUILDING OFFICIAL

MASSIE, JEFFREY L., CHIEF STRUCTURAL INSPECTOR

#### CITY OF WEST PARK

DILLON, BRIAN, BUILDING OFFICIAL

## COUNTYWIDE

DE LA FE, GUSTAVO, MECHANICAL PLANS EXAMINER  
DIAAZ-DELUCCA, EDUARDO R., STRUCTURAL INSPECTOR  
DIAAZ-DELUCCA, EDUARDO R., STRUCTURAL PLANS EXAMINER  
DEMARS, JAMES R., STRUCTURAL INSPECTOR  
DEMARS, JAMES R., STRUCTURAL PLANS EXAMINER

## REGULAR AGENDA

**1.a Request of Mr. Manuel Barrera for a 2nd extension of time with respect to the Board of Rules and Appeals Policy 18-02 relating to closing out of open and ongoing projects.**

- a. Staff Report
- b. Request of Manuel Barrera
- c. Board Action

**2. FBC 7th EDITION (2020) Formal Interpretation (#25) PVC pipes and fittings within plenums in the residential portion of R-2 and R-3 occupancies.**

- a. Recommendation of the Mechanical Smoke Control Committee
- b. Board Questions
- c. If desired, motion adopting interpretation

**3. FBC 7th EDITION (2020) Formal Interpretation (#26) Location of permanently installed residential standby generator's exhaust.**

- a. Recommendation of the Mechanical Smoke Control Committee
- b. Board Questions
- c. If desired, motion adopting interpretation

***Code amendments for 2<sup>nd</sup> reading, Public hearing (applies to items # 4,5,6,7,8, 9,10, 11 and 12)***

**4. Amendment to the 7<sup>th</sup> Edition Florida Building Code (2020) effective December 31st, 2020, Chapter One Administrative provisions.**

- a. Staff Report
- b. Board Questions
- c. Public Hearing
- d. If desired, motion amending Chapter One

**5. Amendments to 7th Edition Florida Building Code (2020) – Plumbing, Section 604.4, effective December 31st, 2020.**

- a. Staff Report
- b. Board Questions
- c. Public Hearing
- d. If desired, motion adopting responses to State required questions for adopting technical amendments.
- e. If desired, motion amending the Building Code

6. **Amendments to the 7<sup>th</sup> Edition Florida Building Code (2020), Residential Table P2903.2 Design of Building Water Distribution System, effective December 31st, 2020.**
  - a. Staff Report
  - b. Board Questions
  - c. Public Hearing
  - d. If desired, motion adopting responses to State required questions for adopting technical amendments.
  - e. If desired, motion amending the Building Code
  
7. **Amendments to 7th Edition Florida Building Code (2020) Plumbing Appendix F, Proposed Construction Building Codes for Turf and Landscape Irrigation Systems, effective December 31st, 2020.**
  - a. Staff Report
  - b. Board Questions
  - c. Public Hearing
  - d. If desired, motion amending the Building Code
  
8. **Amendments to the upcoming Florida Mechanical Code (FMC) 7th Edition (2020), Section 307.2.1 and Florida Plumbing Code (FPC), Section [M] 314.2.1 “Condensate disposal”, effective December 31st, 2020.**
  - a. Staff Report
  - b. Board Questions
  - c. Public Hearing
  - d. If desired, motion adopting responses to State required questions for adopting technical amendments.
  - e. If desired, motion amending the Building Code
  
9. **Amendments to the upcoming Florida Mechanical Code (FMC) 7th Edition (2020), Section 908 “Cooling Towers, Evaporative Condensers and Fluid Coolers”, subsection 908.3 “Location” effective December 31st, 2020.**
  - a. Staff Report
  - b. Board Questions
  - c. Public Hearing
  - d. If desired, motion adopting responses to State required questions for adopting technical amendments.
  - e. If desired, motion amending the Building Code
  
10. **Amendments to the upcoming Florida Mechanical Code (FMC) 7th Edition (2020), Section 908.8 “Cooling Towers, Evaporative Condensers and Fluid Coolers”, effective December 31st, 2020.**
  - a. Staff Report
  - b. Board Questions
  - c. Public Hearing
  - d. If desired, motion adopting responses to State required questions for adopting technical amendments.
  - e. If desired, motion amending the Building Code

**11. Amendments to 7th Edition Florida Building Code (2020) Building Section 454.1.4.1 and 454.2.16 Electrical, effective December 31st, 2020,**

- a. Staff Report
- b. Board Questions
- c. Public Hearing
- d. If desired, motion adopting responses to State required questions for adopting technical amendments.
- e. If desired, motion amending the Building Code

**12. Amendments to 7th Edition Florida Building Code (2020) Building Section Residential, Section R4501.16 Underwater Luminaries, effective December 31st, 2020.**

- a. Staff Report
- b. Board Questions
- c. Public Hearing
- d. If desired, motion adopting responses to State required questions for adopting technical amendments.
- e. If desired, motion amending the Building Code

**13. Amendment to Policy 16-01 “Reduction of paperwork for Building Officials and Chief Inspectors seeking to serve in multiple jurisdictions, or moving from one jurisdiction to another, within a biennial certification period.”**

- a. Staff Report
- b. Board Questions
- c. If desired, motion amending the Board Policy

**14. Invitation to participate in the Clean Energy Technical Group for the Broward County 2020 Climate Change Action Plan (CCAP) update.**

- a. Request of the Administrative Director
- b. Board questions
- c. If desired, motion to approve request to authorize staff participation in the Clean Energy Technical Group

**15. Director’s Report**

**16. Attorney’s Report**

**17. Committee Report**

**18. General Board Members Discussion**

**19. Public Comment (3-minute limit per person) and written communications**

**20. Adjournment**

*If a person desires to appeal any decision with respect to any matter considered at this meeting, such person will need record of the proceedings and, for this reason, such person may need to ensure that a verbatim record of the proceeding is made, which includes the testimony and evidence upon which the appeal is to be based (Sec. 286. 0105.FS). (Members: If you cannot attend the meeting, please contact Mr. DiPietro @ (954) 931-2393, between 6:00 p.m. & 7:00 p.m.)*



September 10, 2020  
Board Minutes



# DRAFT

## BROWARD COUNTY BOARD OF RULES & APPEALS SEPTEMBER 10, 2020 MEETING MINUTES

### Call to Order

Chairman Daniel Lavrich called a published virtual meeting of the Broward County Board of Rules and Appeals to order at 7:00 p.m.

### Present:

Daniel Lavrich, Chair  
Stephen E. Bailey, Vice Chair  
Ron Burr  
Gregg D'Attile  
John Famularo  
Shalanda Giles-Nelson  
Robert A. Kamm  
Sergio Pellecer  
David Rice  
Daniel Rourke  
James Terry  
Dennis Ulmer

Mr. Bailey made a motion and Mr. D'Attile seconded the motion to approve the agenda with a modification to Item 4 relating to Section 118 and ORCAT. The motion carried by unanimous vote of 12-0.

### Approval of Minutes – July 9, 2020

Mr. Bailey made a motion and Mr. D'Attile seconded the motion to approve the minutes as submitted. The motion carried by unanimous vote of 12-0.

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### CONSENT AGENDA

1. Certifications - Staff Recommended.

#### **BROWARD COUNTY SHERIFF'S OFFICE**

O'CONNOR, TRICIA, FIRE INSPECTOR  
CITY OF CORAL SPRINGS

EGEZEINO, MICHAEL, CHIEF ELECTRICAL INSPECTOR  
**TOWN OF DAVIE**  
 ALBRECHT, RANDY, FIRE INSPECTOR  
**CITY OF DEERFIELD BEACH**  
 MITCHELL, STEVEN, CHIEF ELECTRICAL INSPECTOR  
**CITY OF HOLLYWOOD**  
 BATTAGLIA, ALEXANDER, FIRE INSPECTOR  
**TOWN OF LAUDERDALE-BY-THE-SEA**  
 ALVAREZ, REINER "REY", CHIEF MECHANICAL INSPECTOR  
**CITY OF LAUDERHILL**  
 GAUNCHE, STEVE, CHIEF ELECTRICAL INSPECTOR  
**CITY OF PEMBROKE PINES**  
 BENNETT, KYLE, FIRE PLANS EXAMINER  
 GLATZ, MICHAEL C., FIRE PLANS EXAMINER  
**TOWN OF SOUTHWEST RANCHES**  
 BENDAVID, ANDRE, ASSISTANT BUILDING OFFICIAL  
**CITY OF SUNRISE**  
 MENDOZA, ALEXANDER, FIRE PLANS EXAMINER  
**CITY OF TAMARAC**  
 AZEEZ TAIWO, FATAI O., STRUCTURAL INSPECTOR (PROVISIONAL)  
 FOLLES, GEORGE, BUILDING OFFICIAL  
**CITY OF WEST PARK**  
 BENDAVID, ANDRE, ASSISTANT BUILDING OFFICIAL  
**CITY OF WILTON MANORS**  
 ALVAREZ, REINER "REY", CHIEF MECHANICAL INSPECTOR  
**COUNTYWIDE**  
 FURONES, CARLOS M., PLUMBING INSPECTOR  
 FURONES, CARLOS M., PLUMBING PLANS EXAMINER  
 GUERRERO, OSCAR R., STRUCTURAL INSPECTOR  
 GUERRERO, OSCAR R., STRUCTURAL PLANS EXAMINER  
 JAMES, ROBERT, ELECTRICAL PLANS EXAMINER  
 MENARD, REESE, PLUMBING INSPECTOR  
 RODRIGUEZ, ROLANDO, STRUCTURAL INSPECTOR - LIMITED  
 STARKEY, EDWARD A., STRUCTURAL PLANS EXAMINER – LIMITED

Mr. Rice made a motion and Mr. Pellecer seconded the motion to approve the certifications as recommended. The motion carried by unanimous vote of 12-0.

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**REGULAR AGENDA**

- 2. **Formal Interpretation related to the Florida Building Code 6th Edition (2017) Chapter I Section 109.3, and 109.3.1 Building Permit Valuation, and Florida Building Code 7th Edition (2020) Chapter I Section 109.3 and 109.3.1.**

Chairman Lavrich advised that the Committee Chair, Shalanda Giles-Nelson, improved the interpretation text to make it more concise.

- 1. Request of the Ad Hoc Committee
- 2. Board Questions - none
- 3. Public Comment - none
- 4. Board Action

Mr. D’Attile made a motion and Mr. Pellecer seconded the motion to accept the Ad Hoc Committee Chair’s Alternate Version of the subject Formal Interpretation. The motion carried by unanimous vote of 12-0.

3. **Formal Interpretation related to the Florida Building Code 7th Edition (2020) Retrofit of Windows, Doors, Garage Doors, Shutters and Skylights FBC Existing Building, Alteration Level I, effective December 31st, 2020.**

Chairman Lavrich explained this is essentially a readoption with the new wind requirements prepared by the staff engineer, Mark Johnson.

1. Staff Report
2. Board Questions - none
3. Public Comment - none
4. Board Action

Mr. Rice made a motion and Ms. Giles-Nelson seconded the motion to approve the Formal Interpretation as submitted. The motion carried by unanimous vote of 12-0.

**Code amendments for 1<sup>st</sup> reading (applies to items Nos. 4,5,6,7,8, 9,10 and 11)**

4. **Amendment to the 7<sup>th</sup> Edition Florida Building Code (2020) effective December 31<sup>st</sup>, 2020, Chapter One Administrative Provisions.**

Chairman Lavrich noted this is a readoption for the new Florida Building Code. He noted the additional language in Section 118 relating to ORCAT that was a change provided to the Board today. (Agenda was amended to reflect this addition.)

1. Staff Report

Mr. Rolando Soto, Chief Mechanical Code Compliance Officer, noted that most of the changes are merely readoptions with minor grammar corrections as well as those cases where the State adopted and incorporated a local administrative provision into the Florida Building Code. Significant changes have to do with codifying Board of Rules and Appeals adopted policies. With respect to Section 110.14 Period of declared disaster, he noted that all sections related to emergencies and/or disasters have been moved to this part of Chapter One.

Mr. James DiPietro, Administrative Director, noted that this is the first of two readings.

2. Board Questions

Mr. Soto responded to Mr. D'Attile indicating that Section 109 was not changed. In the alternative a Formal Interpretation was put into place.

3. Public Comment - none
4. If desired, motion adopting response to State required questions for adopting technical amendments
5. If desired, motion amending Chapter One

Mr. D'Attile made a motion and Mr. Rice seconded the motion to adopt amendments to Chapter One as recommended and amended to include Section 118 add-to-the-agenda. The motion carried by unanimous vote of 12-0.

5. **Amendments to 7<sup>th</sup> Edition Florida Building Code (2020) – Plumbing, Section 604.4, effective December 31<sup>st</sup>, 2020**

1. Staff Report

Mr. Otto Vinas, Chief Plumbing Code Compliance Officer, advised that the code section has not changed.

2. Board Questions - none

3. Public Comment - none

4. If desired, motion adopting response to State required questions for adopting technical amendments.

Mr. D’Attile made a motion and Mr. Terry seconded the motion 1) acknowledging the Board’s review of answers to the State of Florida’s questions and adopting those answers. The motion carried by unanimous vote of 12-0.

5. If desired, motion amending the Building Code

Ms. Giles-Nelson made a motion and Mr. Burr seconded the motion to adopt the amendments to Section 604.4. The motion carried by unanimous vote of 12-0.

6. **Amendments to the 7<sup>th</sup> Edition Florida Building Code (2020), Residential Table P2903.2 Design of Building Water Distribution System, effective December 31<sup>st</sup>, 2020.**

1. Staff Report

Mr. Otto Vinas, Chief Plumbing Code Compliance Officer, indicated this is the same as the previous item, but the Residential area.

2. Board Questions - none

3. Public Comment - none

4. If desired, motion adopting response to State required questions for adopting technical amendments.

Mr. D’Attile made a motion and Mr. Ulmer seconded the motion 1) acknowledging the Board’s review of answers to the State of Florida’s questions and adopting those answers. The motion carried by unanimous vote of 12-0.

5. If desired, motion amending the Building Code

Mr. D’Attile made a motion and Mr. Rourke seconded the motion to adopt the amendments to the Residential Table P2903.2. The motion carried by unanimous vote of 12-0.

7. **Amendments to the 7<sup>th</sup> Edition Florida Building Code (2020) Plumbing Appendix F, Proposed Construction Building Codes for Turf and Landscape Irrigation Systems, effective December 31<sup>st</sup>, 2020.**

Mr. James DiPietro, Administrative Director, confirmed that page 16 (Section 314.2.1) should be removed and page 17 intended to be a summary of the changes is incomplete. The Board should consider the text only presented in the agenda backup information.

1. Staff Report

Mr. Otto Vinas, Chief Plumbing Code Compliance Officer, advised that this appendix has not changed from the 6<sup>th</sup> Edition. Also, because it is an appendix, there are no State required questions.

2. Board Questions - none
3. Public Comment - none
4. If desired, motion adopting response to State required questions for adopting technical amendments. – not applicable
5. If desired, motion amending the Building Code

Mr. D’Attile made a motion and Mr. Rice seconded the motion to adopt the Plumbing Appendix. The motion carried by unanimous vote of 12-0.

8. **Amendments to the upcoming Florida Mechanical Code (FMC) 7<sup>th</sup> Edition (2020), Section 307.2.1 and Florida Plumbing Code (FPC), Section [M] 314.2.1 “Condensate disposal”, effective December 31st, 2020.**

1. Staff Report – none
2. Board Questions – none
3. Public Comment – none
4. If desired, motion adopting response to State required questions for adopting technical amendments.

Mr. D’Attile made a motion and Mr. Pellecer seconded the motion 1) acknowledging the Board’s review of answers to the State of Florida’s questions and adopting those answers. The motion carried by unanimous vote of 12-0.

5. If desired, motion amending the Building Code

Mr. Terry made a motion and Mr. Pellecer seconded the motion to adopt the amendments to Florida Mechanical Code Section 307.2.1 and Florida Plumbing Code Section [M] 314.2.1. The motion carried by unanimous vote of 12-0.

9. **Amendments to the upcoming Florida Mechanical Code (FMC) 7<sup>th</sup> Edition (2020), Section 908 “Cooling Towers, Evaporative Condensers and Fluid Coolers”, subsection 908.3 “Location” effective December 31<sup>st</sup>, 2020.**

1. Staff Report – none
2. Board Questions – none
3. Public Comment – none
4. If desired, motion adopting response to State required questions for adopting technical amendments.

Ms. Giles-Nelson made a motion and Mr. Rice seconded the motion 1) acknowledging the Board’s review of answers to the State of Florida’s questions and adopting those answers. The motion carried by unanimous vote of 12-0.

5. If desired, motion amending the Building Code

Ms. Giles-Nelson made a motion and Mr. Ulmer seconded the motion to adopt the amendments to Florida Mechanical Code Section 908. The motion carried by unanimous vote of 12-0.

10. **Amendments to the upcoming Florida Mechanical Code (FMC) 7<sup>th</sup> Edition (2020), Section 908.8 “Cooling Towers, Evaporative Condensers and Fluid Coolers”, effective December 31<sup>st</sup>, 2020.**

1. Staff Report

Mr. Rolando Soto, Chief Mechanical Code Compliance Officer, indicated that the staff report shows that Chapter One language in this area was adopted by the State and therefore will no longer appear in Chapter One.

2. Board Questions – none
3. Public Comment – none
4. If desired, motion adopting response to State required questions for adopting technical amendments.

Mr. D’Attile made a motion and Mr. Rourke seconded the motion 1) acknowledging the Board’s review of answers to the State of Florida’s questions and adopting those answers. The motion carried by unanimous vote of 12-0.

5. If desired, motion amending the Building Code

Mr. Pellecer made a motion and Mr. D'Attile seconded the motion to adopt the amendments to Florida Mechanical Code Section 908.8. The motion carried by unanimous vote of 12-0.

11. **Amendments to 7<sup>th</sup> Edition Florida Building Code (2020), Section 454.1.4.1 and 454.2.16 Electrical, and Residential, Section R4501.16 Underwater Luminaries, effective December 31<sup>st</sup>, 2020.**

1. Staff Report

Mr. James DiPietro, Administrative Director, explained that if passed this evening, the public hearing on second reading will be divided appropriately into two items for consideration.

Mr. Ken Castronovo, Chief Electrical Code Compliance Officer, indicated that this is simply a readoption of these amendments found in three areas for Public and Private Swimming Pools and the Residential Code for Swimming Pools

2. Board Questions – none
3. Public Comment – none
4. If desired, motion adopting response to State required questions for adopting technical amendments.

Mr. Rice made a motion and Mr. Ulmer seconded the motion 1) acknowledging the Board's review of answers to the State of Florida's questions and adopting those answers. The motion carried by unanimous vote of 12-0.

5. If desired, motion amending the Building Code

Mr. D'Attile made a motion and Mr. Pellecer seconded the motion to adopt the amendments to Florida Mechanical Code Section 908.8. The motion carried by unanimous vote of 12-0.

12. **Director's Report** - none
13. **Attorney's Report**

Mr. Charles Kramer, Board Attorney, noted the first legal opinion has to do with building permit applicants using runners to file their documentation. There is no liability on the part of the municipality. Municipalities cannot be forced to accept a power of attorney; it is a matter of their discretion.

Mr. Kramer noted the second legal opinion has to do with an inquiry from the City of Margate whether a zoning law could be enacted to require elevators in all new buildings over one story. A zoning code that would change the Florida Building Code cannot be done.

14. **Committee Report** - none
15. **General Board Members Discussion**



Chairman Lavrich acknowledged the new Chief Energy Code Compliance Officer, Mr. Timothy DeCarion and indicated he has decided to create an ad hoc energy committee with Mr. Rice serving as the chair. Once this ad hoc committee is formed and organized, he will bring to the Board a request to establish it as a standing committee.

16. **Public Comment (3-minute limit per person) and written communications**

40/50 Year Building Safety Inspection Program

Mr. Carmelo Giglio advised that he is a structural professional engineer involved in a lot of restoration work as well as structural design including work relating to the 40-Year Building Safety Inspection Program. He believed there is a dilemma with some engineers not including full building surveys in their assessments and consequently not covering the requirements necessary to protect the public. His firm inspects every balcony whereas a competitor may not walk onto any balcony. There could be life-safety elements not being inspected. From an ethical and professional standpoint without checking every unit, how can the individual say it is safe. He asked the Board to consider this issue.

Chairman Lavrich indicated if he so desires Mr. Giglio could contact the Structural Committee Chair. A Board member may ask that this point be scheduled before a committee however it is not an agenda item this evening and as such the Board is not prepared to discuss the topic at this time.

17. **Adjournment**

There being no further business, the meeting adjourned at 7:46 p.m.

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Daniel Lavrich, P.E. - Chair

# Section 1

OCTOBER 8, 2020 BOARD MEETING  
CERTIFICATIONS

**BROWARD COUNTY**

FERNANDEZ, JOSE, CHIEF MECHANICAL INSPECTOR

**TOWN OF DAVIE**

BARRETO-FRIE, KELLY, FIRE INSPECTOR

LECOUNT, WILLIAM, FIRE INSPECTOR

**CITY OF HOLLYWOOD**

BATTAGLIA, ALEXANDER, FIRE INSPECTOR

MONTELLANICO, HOLLY, FIRE PLANS EXAMINER

**CITY OF POMPANO BEACH**

CONGER, JASON R. , FIRE INSPECTOR

JEBOAM, CARPELO, ASSISTANT BUILDING OFFICIAL

MASSIE, JEFFREY L., CHIEF STRUCTURAL INSPECTOR

**CITY OF WEST PARK**

DILLON, BRIAN, BUILDING OFFICIAL

**COUNTYWIDE**

DE LA FE, GUSTAVO, MECHANICAL PLANS EXAMINER

DIAAZ-DELUCCA, EDUARDO R., STRUCTURAL INSPECTOR

DIAAZ-DELUCCA, EDUARDO R., STRUCTURAL PLANS EXAMINER

DEMARS, JAMES R., STRUCTURAL INSPECTOR

DEMARS, JAMES R., STRUCTURAL PLANS EXAMINER

# Section 1a



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

<http://www.broward.org/codeappeals>

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**To:** Members of the Broward County Board of Rules and Appeals  
**From:** Chief Mechanical Code Compliance Officer, Rolando Soto.  
**Date:** October 8, 2020  
**Subject:** Request of Mr. Manuel Barrera for a 2nd extension of time with respect to the Board of Rules and Appeals Policy 18-02 relating to closing out of open and ongoing projects.

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### Recommendation

That BORA approve by vote, Mr. Manuel Barrera's request for a 2<sup>nd</sup> time extension to close remaining open permits.

### Reasons

Mr. Manuel Barrera was given staff approval on 12/2/2019 and BORA approval on 2/26/2020.

After the expiration of the 180 days granted by BORA Policy 18-02, Mr. Manuel Barrera requested an extension. BORA granted an extension of 83 days until September 30, 2020 at its meeting of July 9, 2020. The total time granted under the original and the extended period is 263 days.

Mr. Manuel Barrera has worked diligently to close his initial list of open permits. Of the original 54 open permits, he has closed 49, or 91%. He has 5 permits pending to close.

He is facing challenges with the COVID-19 health emergency, in most cases the owners are not responding to his communications, the permits have expired, and are now code enforcement cases. His contractor license is inactive, there is no chance of Mr. Barrera applying for new permits.

### Additional information

Attached you will find the following documents.

1. Emails requesting extension.
2. Open permits list of 6/19/2020.
3. DBPR inactive license receipt.
4. BORA Policy 18-02.

Respectfully submitted,

Rolando Soto 

**From:** Manuel Barrera  
**To:** Dipietro, James  
**Cc:** Joseph, Jonda; Boselli, Ruth; John Travers; Andres Vera; Soto, Rolando  
**Subject:** RE: Manuel Barrera - open permits  
**Date:** Monday, September 28, 2020 12:24:37 PM  
**Attachments:** image001.png  
image002.png

**External Email Warning:** This email originated from outside the Broward County email system. Do not reply, click links, or open attachments unless you recognize the sender's **email address** (not just the name) as legitimate and know the content is safe. Report any suspicious emails to [ETSSecurity@broward.org](mailto:ETSSecurity@broward.org).

Good morning Mr. Dipietro,  
I am requesting to the board for additional extension of time to resolve the pending open permits. As you will see, there has been progress made from 15 open permits to 5 since the July 9<sup>th</sup> Board meeting. Please keep in mind the open permits are limited to residential exact A/C equipment replacements. Although I have made progress, I continue to struggle with difficulties in the processing times for resolving this matter due to the limitations of Covid-19, property ownership cooperation and internal department processing. I fully understand that time is of the essence in closing out this matter and will continue to do whatever is in my power and control to close out these permits.  
I'm hopeful I can have these closed out by the date of the next board meeting. However not being able to reassure this uncertainty, how much additional time can the board grant me?

Respectfully,  
Manuel Barrera

**From:** Soto, Rolando <ROSOTO@broward.org>  
**Sent:** Monday, September 28, 2020 10:34 AM  
**To:** Andres Vera <AVera@fortlauderdale.gov>; Manuel Barrera <MBarrera@fortlauderdale.gov>; John Travers <JTravers@fortlauderdale.gov>  
**Cc:** Dipietro, James <JDIPIETRO@broward.org>; Joseph, Jonda <JONDAJOSEPH@broward.org>; Boselli, Ruth <RBOSELLI@broward.org>  
**Subject:** [-EXTERNAL-] RE: Manuel Barrera - open permits

We understand the difficulties. Please have Mr. Barrera write an email to BORA's Director Jim DiPietro requesting more time, explaining the circumstances. He needs to do that today, so we can place his request on the agenda for next week 10/8/20 BORA meeting. His previous extension expires 9/30/20.

Rolando Soto  
Mechanical Chief Code Compliance Officer  
Broward Co. Board of Rules and Appeals  
1 N University Dr. Suite 3500B  
Plantation FL 33324  
954-765-4500  
<http://www.broward.org/CodeAppeals/Pages/Default.aspx>



STRONGER CODES MEAN SAFER BUILDINGS  
~ESTABLISHED 1971~

**From:** Andres Vera <AVera@fortlauderdale.gov>  
**Sent:** Monday, September 28, 2020 10:26 AM  
**To:** Soto, Rolando <ROSOTO@broward.org>  
**Subject:** FW: Manuel Barrera - open permits

**External Email Warning:** This email originated from outside the Broward County email system. Do not reply, click links, or open attachments unless you recognize the sender's **email address** (not just the name) as legitimate and know the content is safe. Report any suspicious emails to [ETSSecurity@broward.org](mailto:ETSSecurity@broward.org).

Good morning Rolando, Manuel Barrera has been doing everything possible to close his open permits. Unfortunately with this pandemic he still has 5 permits remaining due to uncooperating owners and tenants who do not want anyone in their homes. I am asking you to please give him more time.

Thanks,

Andres Vera  
Chief Mechanical Inspector  
[AVera@fortlauderdale.gov](mailto:AVera@fortlauderdale.gov)  
954-828-5218



**From:** Manuel Barrera <[MBarrera@fortlauderdale.gov](mailto:MBarrera@fortlauderdale.gov)>  
**Sent:** Friday, September 18, 2020 7:13 AM  
**To:** Soto, Rolando <[ROSOTO@broward.org](mailto:ROSOTO@broward.org)>  
**Cc:** Joseph, Jonda <[JONDAJOSEPH@broward.org](mailto:JONDAJOSEPH@broward.org)>; Dipietro, James <[JDIPIETRO@broward.org](mailto:JDIPIETRO@broward.org)>; John Travers <[JTravers@fortlauderdale.gov](mailto:JTravers@fortlauderdale.gov)>; Andres Vera <[AVera@fortlauderdale.gov](mailto:AVera@fortlauderdale.gov)>  
**Subject:** RE: Manuel Barrera - open permits

GM Mr. Soto,  
 As of the July 9<sup>th</sup> Board meeting there were 15 pending permits under my A/C license. I have been able to close out 10 with 5 remaining. As originally planned, I will continue to make all necessary efforts to complete by end of this month. I can check back with you at the end of the month with another update.

Best regards,

**From:** Soto, Rolando <[ROSOTO@broward.org](mailto:ROSOTO@broward.org)>  
**Sent:** Thursday, September 17, 2020 2:04 PM  
**To:** Andres Vera <[AVera@fortlauderdale.gov](mailto:AVera@fortlauderdale.gov)>  
**Cc:** Joseph, Jonda <[JONDAJOSEPH@broward.org](mailto:JONDAJOSEPH@broward.org)>; Dipietro, James <[JDIPIETRO@broward.org](mailto:JDIPIETRO@broward.org)>; John Travers <[JTravers@fortlauderdale.gov](mailto:JTravers@fortlauderdale.gov)>; Manuel Barrera <[MBarrera@fortlauderdale.gov](mailto:MBarrera@fortlauderdale.gov)>  
**Subject:** [-EXTERNAL-] FW: Manuel Barrera - open permits

Good afternoon Andres,  
 Please give us an update of Mr. Barrera's open permits situation. See below. Thank you.  
 Respectfully,

Rolando Soto  
 Mechanical Chief Code Compliance Officer  
 Broward Co. Board of Rules and Appeals  
 1 N University Dr. Suite 3500B  
 Plantation FL 33324  
 954-765-4500  
<http://www.broward.org/CodeAppeals/Pages/Default.aspx>



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**From:** Joseph, Jonda <[JONDAJOSEPH@broward.org](mailto:JONDAJOSEPH@broward.org)>  
**Sent:** Thursday, September 17, 2020 1:40 PM  
**To:** Soto, Rolando <[ROSOTO@broward.org](mailto:ROSOTO@broward.org)>  
**Cc:** Boselli, Ruth <[RBOSELLI@broward.org](mailto:RBOSELLI@broward.org)>  
**Subject:** Manuel Barrera - open permits

This individual was approved for a period of time thru Sep 30 2020 at the March Board meeting

Fort Lauderdale	Manuel	Barrera	Mechanical	5/18/2020 original	9/30/2020
-----------------	--------	---------	------------	--------------------	-----------

**Jonda K. Joseph**  
**Administrative Specialist**  
 Board of Rules and Appeals  
 1 N University Dr., Suite 3500B  
 Plantation, Florida 33324  
 954-765-4500 X 9891  
[broward.org/codeappeals](http://broward.org/codeappeals)



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**OUTSTANDING PERMITS FOR PROSERV AMERICA, LLC AS OF 06/19/2020**

1. JANNETH A. CONDOR CABANILLAS- CITY OF PLANTATION – M19-977  
Inspection was scheduled by the Customer for Wednesday, June 17, however, when I called the City to schedule it, they said that they are not holding interior residential inspection. The permit will not expire, so it is a matter of time to get the inspection done.
2. CRESPO, RODOLFO AND ILEANA- PEMBROKE PINES – 1969529  
Inspection is scheduled for June 23<sup>rd</sup>.
3. KARRYANN FRASER – CITY OF COCONUT CREEK – 20-000028  
The City needs to send me the permit via email, then I will call customer to see where to mail it out to. She said that she will get someone to be at the house, so that we could do the inspection. Customer has not called me; I will call her on Monday.
4. GAUDIN, VANESSA – CITY OF MARGATE – 19-3426  
Prepared Change of Contractor Form to be signed by Vanessa. Mailed it out to her via US mail. When I receive it from her, I will send to the City for processing. I have yet to receive it.
5. KIM, FRANK – CITY OF AVENTURA - #18-401  
Mailed out a new Change of Contractor, renewal request, and Hold Harmless letter for him to sign and mail back to me. I am still waiting.
6. KOSS, ELENA – CITY OF AVENTURA – MECHSA1906-0002  
I have written two Certified letters on different dates. Letter #1 was never received by the customer; thus, it came back to us. Letter #2 was just sent out on June 1, 2020. Will prepare forms and send Jesus to get signatures. I received the delivery proof of the second certified letter; still have not heard from customer.
7. LEVITZ, TAMMY- CITY OF PEMBROKE PINES -19-70351—0  
This customer has two properties in Pembroke Pines. Inadvertently, we requested a mechanical permit for the wrong address. Thus, I sent a letter to the inspector to null and void said mechanical permit. I received the proof of delivery for the certified letter addressed to the Chief inspector at City of Pembroke Pines. I still have not heard from the inspector.
8. ORLANDO, PATRICK-CITY OF MIAMI – BD19-006820-001-MA001  
Calling City of Miami to get information on how to change the contractor. I have called on 06/01; 06/03; 06/05; 06/08; and 06/09. After waiting for 2-hours, a recording comes out saying that my call could not get through. The saga continues. I cannot do anything, until the city clerk answers the phone.



9. LAURA ORTIZ-CITY OF MIAMI UNINCORPORATED -2019-057889  
Customer passed the mechanical part of the inspection, but not the electrical because she did not get an electrical permit. We have written her and requested her to hire an electrician to do this, but she has not. **No updates.**
10. PATRICK, JUDITH – CITY OF TAMARAC – 19-00004951  
Need to call the City to make sure they are doing residential inspections. Called six times today and no one picks up. **This appointment was scheduled for inspection this upcoming Tuesday, June 23<sup>rd</sup>. Again, when I called to schedule the inspection, the clerk said they were not conducting interior residential inspections.**
11. JUAN PENAGOS-CITY OF SUNRISE-2019-00002550  
Inspection scheduled for June 16, 2020. **The City is not conducting interior residential inspections.**
12. JESSICA V. PRADO- CITY OF WESTON – M19-101217  
I have written two Certified letters on different dates. Letter #1 was never received by the customer; thus, it came back to us. Letter #2 was just sent out on June 3, 2020. If she does not reply to my letter, she will never sign the Change of Contractor form. **Forms are prepared, will send Jesus to get signature.**
13. GILBERTO RODRIGUEZ- CITY OF DAVIE – 2019-00008317  
I have also written two letters on two different dates. Letter one was signed, but he never called our office inquiring. Letter #2 was just sent on June 3, 2020. I received the green card signed by the customer acknowledging receipt, but he has not call. I have called him, but there is no answer. Will prepare forms and send Jesus to get signatures. **Called Chief Mechanical Inspector today, waiting on his call. Will call again on Monday.**
14. CHRISTIAN ROMAN – MIAMI-DADE UNINCORPORATED – 2019070074  
Again, I have written this customer twice, and he has never cared to sign for the letters. I called the mother several times and left messages, but until this date, I have not heard from him. Will prepare forms and send Jesus to get signatures. **Spoke to the mother, she said her son does not want to have the unit inspected, because the closet where the a/c is located has a hole in the wall. Prepared Change of Contractor, will be mailing it out next week.**
15. SILVA, JAIRO – CITY OF PEMBROKE PINES – 1972159-0  
Permit was mailed to customer on 06/10/20. As soon as it is received, they will call me to scheduled final inspection. **Scheduled for inspection on 06/24/2020.**

---

**Data Contained In Search Results Is Current As Of 09/28/2020 11:57 AM.**

## Search Results

Please see our [glossary of terms](#) for an explanation of the license status shown in these search results.

For additional information, including any complaints or discipline, click on the name.

License Type	Name	Name Type	License Number/ Rank	Status/Expires
Certified Air Conditioning Contractor	<a href="#">BARRERA, MANUEL RAMON</a>	Primary	CAC026413 Cert Air	Current, Inactive 08/31/2022
<b>Main Address*:</b> Private				
Standard Inspector	<a href="#">BARRERA, MANUEL RAMON</a>	Primary	BN8014 Inspector	Current, Active 11/30/2021
<b>Main Address*:</b> Private				
Provisional Mechanical Inspector	<a href="#">BARRERA, MANUEL RAMON</a>	Primary	PMI734 Prov. Mech. Ins	Null and Void, 02/24/2021
<b>Main Address*:</b> Private				
Certified General Contractor	<a href="#">BARRERA, MANUEL RAMON</a>	Primary	CGC035945 Cert General	Delinquent, Active 08/31/2020
<b>Main Address*:</b> Private				

[Back](#)

[New Search](#)

**\* denotes**

Main Address - This address is the Primary Address on file.

Mailing Address - This is the address where the mail associated with a particular license will be sent (if different from the Main or License Location addresses).

License Location Address - This is the address where the place of business is physically located.

---

**[2601 Blair Stone Road, Tallahassee FL 32399](#) :: Email: [Customer Contact Center](#) :: Customer Contact Center: 850.487.1395**

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Under Florida law, email addresses are public records. If you do not want your email address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee.

However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public.

**SUBJECT:** Board Policy #18-02 - Design Professional and Contractor requirements to become a certified inspector, as it relates to the closing out of open and ongoing projects.

---

**POLICY:**

This policy applies to all individuals that seek certification through Broward County Board of Rules and Appeals (“BORA”) to be certified as a building code professional. Any code professional (such as but not limited to engineers, architects or structural, plumbing, mechanical, or electrical contractors) who are required to hold or who otherwise holds a Certificate of Competency (“Certificate”) or Professional License (“License”) in any area of construction shall not use that Certificate or License to engage in free enterprise thereby competing against persons or firms whose work he may also inspect, nor may this individual allow their Certificate or License to be used by another person or firm.

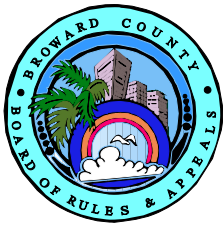
Per Florida Statute 71-575 (4)b, commencing with the time of application submission, an applicant is prohibited from engaging in free enterprise including but not limited to bids, proposals, contracts, permits, etc. The applicant shall be required to provide a detailed list of all open and ongoing projects currently under construction which will include information such as the municipality they are located within, the existing permit number and the time frame in which the project will be completed. This time frame shall not exceed a 180 days period from the time the application for certification was submitted to BORA.

If this 180 days’ time frame is required to be extended, a written request shall be submitted to the Director of the BORA no later than 30 days prior to the expiration of the 180 days period. This request for extension will be reviewed by the Board of Rules and Appeals (“Board”) for approval at the next, upcoming meeting. An extension, if granted will be set by the Board depending on circumstances, unless the Board does not meet that month in which case the Administrative Director may extend the time frame until the next scheduled meeting. All extensions beyond this point shall follow the same notification rule as mentioned previously and shall be reviewed and voted on by the Board on a case by case basis.

**Florida Statute 71-575 (4)b**

*Any Inspector (such as and including but not limited to structural, engineering, plumbing, mechanical, or electrical) or other building official charged with enforcing or otherwise supervising or inspecting any work covered under any section of the South Florida Building Code as applicable to Broward County pursuant to Chapter 71-575, Laws of Florida, and who is required to hold or who otherwise holds a Certificate of Competency in any area of construction shall not use that Certificate of Competency to engage in free enterprise thereby competing against persons or firms whose work he may also inspect, nor may he allow his Certificate of Competency to be used by another person or firm.*

# Section 2



BROWARD COUNTY  
**Board of Rules & Appeals**

1 North University Drive, Suite 3500B, Plantation, Florida 33324

**To:** Members of the Board of Rules and Appeals  
**From:** Rolando Soto, Mechanical Chief Code Compliance Officer  
**Date:** October 8, 2020  
**Re:** Proposed Formal Interpretation #25 related to "PVC pipes and fittings used for the removal of condensate within plenums in the residential portion of R-2 and R-3 occupancies" for the 7<sup>th</sup> Edition (2020) of the FBC.

---

**Recommendation**

That BORA adopts by vote the Formal Interpretation #25 of the 7th Edition (2020) Florida Building Code – Mechanical ("FMC"), 602.2.1, Materials within plenums, Exception 5.3, FMC 602.2.1.5 Discrete plumbing and mechanical products in plenums, and FMC 602.2.1.7 Plastic plumbing pipe and tube; related to "PVC pipes and fittings used for the removal of condensate within plenums in the residential portion of R-2 and R-3 occupancies"

**Reasons**

Currently the codes do not address residential stand-by generators. Attached F.I. #25 will provide clarity in consistency in the code enforcement, permitting process, and installation of some materials within plenums in the residential portion of R-2 and R-3 occupancies, specifically air conditioning units drain lines.

**Additional Information**

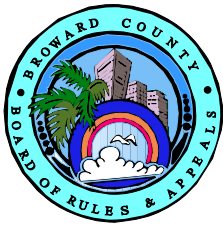
This proposed Formal Interpretation has been reviewed, revised, and supported by the Mechanical and Smoke Control Committee. The Committee voted unanimously for the interpretation.

Attached are the related code sections.


Respectfully,

A handwritten signature in blue ink, appearing to read "R. Soto".

Rolando Soto



BROWARD COUNTY  
**Board of Rules & Appeals**  
1 North University Drive, Suite 3500B, Plantation, Florida 33324

 2020 Florida Building Code, Mechanical, 7th Edition   
CHAPTER 6 DUCT SYSTEMS  
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served directly to the air-handling equipment. Fuel-fired appliances shall not be installed within a plenum.

**602.2 Construction.**



*Plenum* enclosure construction materials that are exposed to the airflow shall comply with the requirements of Section 703.5 of the *Florida Building Code, Building* or such materials shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E84 or UL 723.

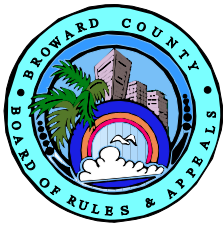
The use of gypsum boards to form plenums shall be limited to systems where the air temperatures do not exceed 125°F (52°C) and the building and mechanical system design conditions are such that the gypsum board surface temperature will be maintained above the airstream dew-point temperature. Air plenums formed by gypsum boards shall not be incorporated in air-handling systems utilizing evaporative coolers.

**602.2.1 Materials within plenums.**

Except as required by Sections 602.2.1.1 through 602.2.1.7, materials within plenums shall be noncombustible or shall be listed and labeled as having a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E84 or UL 723.

**Exceptions:**


1. Rigid and flexible ducts and connectors shall conform to Section 603.
2. Duct coverings, linings, tape and connectors shall conform to Sections 603 and 604.
3. This section shall not apply to materials exposed within plenums in one- and two-family dwellings.
4. This section shall not apply to smoke detectors.
-  5. Combustible materials fully enclosed within one of the following:
  - 5.1. Continuous noncombustible raceways or enclosures.
  - 5.2. Approved gypsum board assemblies.
  -  5.3. Materials listed and labeled for installation within a plenum.
6. Materials in Group H, Division 5 fabrication areas and the areas above and below the fabrication area that share a common air recirculation path with the fabrication area.



BROWARD COUNTY  
**Board of Rules & Appeals**

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use, where it is separated from the airflow in the plenum by not less than a 1-inch (25 mm) thickness of masonry or concrete.

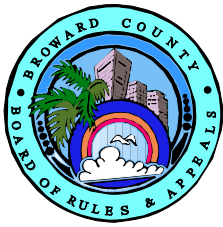
**602.2.1.7 Plastic plumbing piping and tubing.**

Plastic piping and tubing used in plumbing systems shall be *listed and labeled* as having a flame spread index of not greater than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E84 or UL 723.

**Exception:** Plastic water distribution piping and tubing listed and labeled in accordance with UL 2846 as having a peak optical density not greater than 0.50, an average optical density not greater than 0.15 and a flame spread distance not greater than 5 feet (1524 mm), and installed in accordance with its listing.

**602.2.1.8 Pipe and duct insulation within plenums.**


Pipe and duct insulation contained within *plenums*, including insulation adhesives, shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E84 or UL 723 using the specimen preparation and mounting procedures of ASTM E2231. Pipe and duct insulation shall not flame, glow, smolder or smoke when tested in accordance with ASTM C411 at the temperature to which they are exposed in service. The test temperature shall not fall below 250°F (121°C). Pipe and duct insulation shall be listed and labeled.



BROWARD COUNTY  
**Board of Rules & Appeals**

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**310.4 Residential Group R-2.**

Residential Group R-2 occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

- Apartment houses
- Boarding houses (nontransient)
- Congregate living facilities (nontransient) with more than 16 occupants
- Convents
- Dormitories
- Fraternities and sororities
- Hotels (nontransient)
- Live/work units
- Monasteries
- Motels (nontransient)
- Vacation timeshare properties

**310.5 Residential Group R-3.**

Residential Group R-3 occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

- Buildings that do not contain more than two *dwelling units*
- Boarding houses (nontransient) with 16 or fewer occupants
- Boarding houses (transient) with 10 or fewer occupants
- Care facilities that provide accommodations for five or fewer persons receiving care
- Congregate living facilities (nontransient) with 16 or fewer occupants
- Congregate living facilities (transient) with 10 or fewer occupants
- Owner-occupied lodging houses with five or fewer guest rooms and 10 or fewer occupants





# BROWARD COUNTY BOARD OF RULES AND APPEALS

1 N. University Drive, Suite 3500B  
Plantation, FL 33324

Phone: 954-765-4500  
Fax: 954-765-4504

[broward.org/CodeAppeals](http://broward.org/CodeAppeals)

## FBC 7<sup>th</sup> EDITION (2020) FORMAL INTERPRETATION (#25)

**DATE:** October 8, 2020  
**TO:** All Building Officials  
**FROM:** James DiPietro, Administrative Director  
**SUBJECT:** PVC pipes and fittings within plenums in the residential portion of R-2 and R-3 occupancies.

### 2020 Voting Members

#### **Chair**

Mr. Daniel Lavrich,  
P.E., S.I., SECB, F.ASCE, F.SEI  
Structural Engineer

#### **Vice-Chair**

Mr. Stephen E. Bailey, P.E.  
Electrical Engineer

Mr. John Famularo,  
Roofing Contractor  
Mrs. Shalanda Giles Nelson,  
General Contractor  
Mr. Daniel Rourke  
Master Plumber

Mr. Gregg D'Attile,  
Mechanical Contractor

Mr. Ron Burr  
Swimming Pool Contractor  
Mr. John Sims,  
Master Electrician

Mr. Dennis A. Ulmer  
Consumer Advocate  
Mr. Abbas H. Zackria, CSI  
Architect

Mr. Robert A. Kamm, P.E.  
Mechanical Engineer

#### **Vacant**

Representative Disabled Community  
Mr. Sergio Pellecer  
Fire Service Professional

### 2020 Alternate Board Members

Mr. Jeff Falkanger  
Architect

Mr. Steven Feller, P.E.  
Mechanical Engineer

Mr. Alberto Fernandez,  
General Contractor

Mr. Robert Taylor  
Fire Service

Mr. Gary Elzweig, P.E., F.ASCE  
Structural Engineer

Mr. David Rice, P.E.  
Electrical Engineer

Mr. James Terry,  
Master Plumber

Mr. David Tringo,  
Master Electrician

Mr. William Flett,  
Roofing Contractor

#### **Board Attorney**

Charles M. Kramer, Esq.

#### **Board Administrative Director**

James DiPietro

—ESTABLISHED 1971—

At its meeting of October 8, 2020, the Broward County Board of Rules and Appeals approved an interpretation of the following sections of the 7<sup>th</sup> Edition (2020) Florida Building Code-Mechanical ("FMC"):

- FMC 602.2.1, Materials within plenums, Exception 5.3
- FMC 602.2.1.5 Discrete plumbing and mechanical products in plenums.
- FMC 602.2.1.7 Plastic plumbing pipe and tube.

#### ***Formal Interpretation:***

The use of PVC pipes and fittings for the removal of condensate, in air handler closets used as plenums in the residential portion of R-2 and R-3 occupancies, is acceptable when complying with all the following conditions:

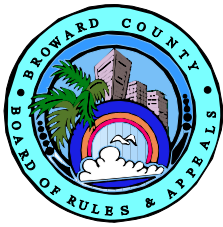
1. Acceptance is limited to schedule 40 PVC pipe and fittings of 3/4" or 1" nominal diameter.
2. Acceptance is limited to a total pipe length of 48" or less.
3. PVC pipes and fittings shall comply with ASTM standards referred in FMC 1202.4 and 1202.5.

EFFECTIVE DATE: December 31, 2020

**\*\*\* PLEASE POST AT YOUR PERMIT COUNTER \*\*\***

**Page 1 of 1 F.I. #25**

# Section 3



BROWARD COUNTY  
**Board of Rules & Appeals**

1 North University Drive, Suite 3500B, Plantation, Florida 33324

**To:** Members of the Board of Rules and Appeals  
**From:** Rolando Soto, Mechanical Chief Code Compliance Officer  
**Date:** October 8, 2020  
**Re:** Proposed Formal Interpretation #26 related to "Location of permanently installed residential standby generator's exhaust" for the 7<sup>th</sup> Edition (2020) of the FBC.

---

**Recommendation**

That BORA adopts by vote the Formal Interpretation #26 of the 7th Edition (2020) Florida Building Code – Residential M1301.1, M1804.2.6, R315.1.1, R315.1.2, and 7th Edition (2020) Florida Building Code – Mechanical, 501.3, 915.1, related to "Location of permanently installed residential standby generator's exhaust".

**Reasons**

Currently the codes do not address residential stand-by generators. Attached F.I. #26 will provide clarity and consistency in the code enforcement, permitting process, and installation of residential stand-by generators by describing what are the requirements for the location of the generator exhaust in relation to the surrounding buildings openings.

**Additional information**

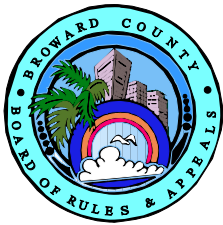
This proposed Formal Interpretation is based in BORA Policy 06-03, and has been reviewed, revised, and supported by the Mechanical and Smoke Control Committee. The Committee voted unanimously for the interpretation.

Please see the attached Policy 06-03 and related code sections.

Respectfully,

A handwritten signature in blue ink, appearing to read "RSoto", is written over a light blue circular stamp.

Rolando Soto



BROWARD COUNTY  
**Board of Rules & Appeals**  
1 North University Drive, Suite 3500B, Plantation, Florida 33324

BROWARD COUNTY BOARD OF RULES & APPEALS Policy # 06-03

Effective 9/15/06

Amended: January 9, 2014

Amended: February 8, 2018

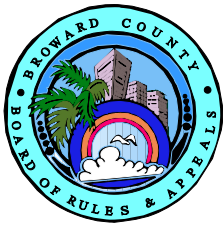
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**MINIMUM CODE REQUIREMENTS FOR PERMANENT RESIDENTIAL TYPE STAND-BY GENERATORS**

1. Generators (Engines) shall be installed at least 5 feet from structures having combustible walls unless there is an adjacent wall that has a fire resistance rating of at least 1 hour between the structure and generator.
2. The generator shall be installed in compliance with floodplain management construction standards (same elevation above grade as the interior 1st floor of the building).
3. Generators that are exposed to wind shall be installed to resist the wind pressures according to ASCE (American Society of Civil Engineers) 7 –2007.
4. Generators installed at grade level shall be supported on a level minimum 4 inch nominal (3.5 inch actual) concrete slab or other approved material extending a minimum of 2 inches above adjoining finished grade. Such slabs shall be placed on clean, thoroughly compacted sand or crushed rock free from organics, debris or other deleterious materials.
5. Generator exhaust shall be located so as not to create a nuisance. Exhaust termination shall be a minimum of 10 feet from any openable openings (doors, windows, vents, etc.) or air intakes.


Exception: Where a Carbon monoxide (CO) alarm(s) is installed in the residency in accordance with Section R315.1.1 CARBON MONOXIDE ALARMS of the 2017 Florida Building Code - Residential, Sixth Edition, or the alarm's manufacturer installation requirements and listing, whichever is more restrictive; the generator exhaust can be located in compliance with Section M1804.2.6 Mechanical draft systems of the 2017 Florida Building Code - Residential, Sixth Edition or with generator manufacturer installation requirements and listing, whichever is more restrictive.

6. Generators shall be listed and labeled. Generators shall be installed according to the manufacturer's recommendations and by the terms of their approval, in accordance with the conditions of the listing. Where conflicts between 1) the code, 2) the conditions of listing or, 3) the manufacturer's installation recommendations occur, the most restrictive of the three alternatives shall apply.
7. When applicable, the following Codes and Standards shall apply: 2017 Florida Building Code - Residential, Sixth Edition, NFPA 58-14 - Liquefied Petroleum Gas Code, NFPA 37-15 – Stationary Combustion Engines and Gas Turbines, NFPA 30-15 – Flammable and Combustible Liquids Code, ANSI/ASME B31.3-2012 Process Piping, and the 2017 Florida Fuel Gas Code 6<sup>th</sup> Edition.
8. Installations shall comply with the Florida Fire Prevention Code
9. Maximum allowable sound levels and property setbacks shall comply with local jurisdiction's zoning requirements.
10. Electrical installation shall comply with NFPA 70-2014 National Electrical Code.



BROWARD COUNTY  
**Board of Rules & Appeals**  
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CHAPTER 13  
 GENERAL MECHANICAL SYSTEM REQUIREMENTS

SECTION M1301  
 GENERAL

**M1301.1 Scope.**

The provisions of this chapter shall govern the installation of mechanical systems not specifically covered in other chapters applicable to mechanical systems. Installations of **mechanical appliances, equipment and systems not addressed by this code shall comply with the applicable provisions of the Florida Building Code, Mechanical** and the Florida Building Code, **Fuel Gas Code**.



2020 Florida Building Code, Mechanical, 7th Edition   
 CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-  
 BURNING EQUIPMENT  
 First Printing: Jul 2020

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 START YOUR 14-DAY TR

SECTION 915  
 ENGINE AND GAS TURBINE-POWERED  
 EQUIPMENT AND APPLIANCES

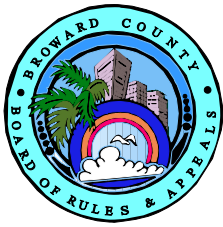
**915.1 General.**

The installation of liquid-fueled stationary internal *combustion* engines and gas turbines, including exhaust, fuel storage and piping, shall meet the requirements of NFPA 37. Stationary engine generator assemblies shall meet the requirements of UL 2200.

**915.2 Powered equipment and appliances.**

Permanently installed *equipment* and appliances powered by internal *combustion* engines and turbines shall be installed in accordance with the manufacturer's instructions and NFPA 37.





BROWARD COUNTY  
**Board of Rules & Appeals**  
1 North University Drive, Suite 3500B, Plantation, Florida 33324

IT SYSTEMS

37-15

**8.2.3 Exhaust System Termination.**

**8.2.3.1\*** Exhaust systems shall terminate outside the structure at a point where hot gases, sparks, or products of combustion will discharge to a safe location.

**8.2.3.2** Exhaust system terminations shall not be directed toward combustible material or structures or into atmospheres containing flammable gases, flammable vapors, or combustible dusts.

**8.2.3.3** Exhaust systems equipped with spark-arresting mufflers shall be permitted to terminate in Division 2 locations or Zone 2 locations, as defined in Article 500 and Article 505 of *NFPA 70*.

**8.2.4** Where necessary to prevent personnel burns, exhaust systems shall be guarded.

**8.2.5** Exhaust systems shall consist of metal, masonry, or factory-built chimneys where they pass through a floor, ceiling, attic, or concealed space.

**8.2.5.1\*** If an engine exhaust system connects to the same flue as other fuel-burning appliances, the engine exhaust shall enter the flue a distance of at least 1½ times the equivalent diameter of the exhaust pipe or duct above or below the level of the other appliance vent(s).

**8.2.5.1.1** Common venting shall be permitted where appropriate calculations demonstrate that the exhaust from the engine does not reduce the performance of the other appliance(s).

**8.2.5.2\*** An engine exhaust system that will discharge at positive pressure (greater than atmospheric pressure) shall not enter the same flue as an appliance that relies on natural draft to vent.

**8.2.5.2.1** Common venting shall be permitted where appropriate calculations demonstrate that the exhaust from the engine does not reduce the performance of the other appliance(s).



# BROWARD COUNTY BOARD OF RULES AND APPEALS

1 N. University Drive, Suite 3500B  
Plantation, FL 33324

Phone: 954-765-4500  
Fax: 954-765-4504

[broward.org/CodeAppeals](http://broward.org/CodeAppeals)

## FBC 7<sup>th</sup> EDITION (2020) FORMAL INTERPRETATION (#26)

**DATE:** October 8, 2020  
**TO:** All Building Officials  
**FROM:** James DiPietro, Administrative Director  
**SUBJECT:** Location of permanently installed residential standby generator's exhaust.

### 2020 Voting Members

#### **Chair**

Mr. Daniel Lavrich,  
P.E., S.I., SECB, F.ASCE, F.SEI  
Structural Engineer

#### **Vice-Chair**

Mr. Stephen E. Bailey, P.E.  
Electrical Engineer

Mr. John Famularo,  
Roofing Contractor  
Mrs. Shalanda Giles Nelson,  
General Contractor  
Mr. Daniel Rourke  
Master Plumber

Mr. Gregg D'Atile,  
Mechanical Contractor  
Mr. Ron Burr  
Swimming Pool Contractor

Mr. John Sims,  
Master Electrician  
Mr. Dennis A. Ulmer  
Consumer Advocate  
Mr. Abbas H. Zackria, CSI  
Architect  
Mr. Robert A. Kamm, P.E.  
Mechanical Engineer

#### **Vacant**

Representative Disabled Community  
Mr. Sergio Pellecer  
Fire Service Professional

### 2020 Alternate Board Members

Mr. Jeff Falkanger  
Architect  
Mr. Steven Feller, P.E.  
Mechanical Engineer  
Mr. Alberto Fernandez,  
General Contractor  
Mr. Robert Taylor  
Fire Service  
Mr. Gary Elzweig, P.E., F.ASCE  
Structural Engineer  
Mr. David Rice, P.E.  
Electrical Engineer  
Mr. James Terry,  
Master Plumber  
Mr. David Tringo,  
Master Electrician  
Mr. William Flett,  
Roofing Contractor

#### **Board Attorney**

Charles M. Kramer, Esq.

#### **Board Administrative Director**

James DiPietro

—ESTABLISHED 1971—

At its meeting of October 8, 2020, the Broward County Board of Rules and Appeals approved an interpretation of 2020 Florida Building Code – Residential M1301.1, M1804.2.6, R315.1.1, R315.1.2. 2020 Florida Building Code – Mechanical, 501.3, 915.1.

#### ***Formal Interpretation:***

Permanently installed residential standby generator's exhaust shall be located to not create a nuisance. Exhaust termination shall be a minimum of 10 feet from any openings that could allow fumes into the building (doors, windows, eave vents, etc.) or air intakes.

Exception: The generator exhaust can be located a minimum of 5 feet from any such openings (doors, windows, eave vents, etc.) or in compliance with generator manufacturer installation requirements and listing, whichever is more restrictive, if all of the following is complied with:

1. A carbon monoxide (CO) alarm(s) is installed in the residency within 10 feet of each room used for sleeping purposes, or per the alarm's manufacturer installation requirements and listing, whichever is more restrictive.
2. An additional carbon monoxide (CO) alarm is installed in the residency as close as possible to the building's exterior opening nearest to the generator exhaust.
3. The carbon monoxide (CO) alarm(s) mentioned above shall be one of the following types, as required by FBC Residential R315.1.1, R315.1.2:
  - a) A hard-wired carbon monoxide alarm.
  - b) A battery-powered carbon monoxide alarm.
  - c) A hard-wired combination carbon monoxide and smoke alarm.
  - d) A battery-powered combination carbon monoxide and smoke alarm.
4. Combination smoke/carbon monoxide alarms shall be listed and labeled by a nationally recognized testing laboratory.

EFFECTIVE DATE: December 31, 2020

\*\*\* PLEASE POST AT YOUR PERMIT COUNTER \*\*\*

Page 1 of 1 F.I. #26

# Section 4



## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7th Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7th Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

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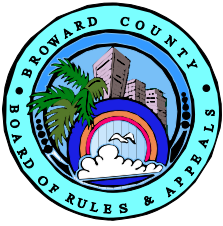
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Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

<http://www.broward.org/codeappeals>

---

**To:** Members of the Broward County Board of Rules and Appeals.  
**From:** Administrative Director, James DiPietro.  
**Date:** October 8, 2020  
**Subject:** Broward County Amendments (Chapter 1) to the upcoming Florida Building Code (FBC) 7th Edition (2020),

---

## Recommendation

That BORA adopt by vote, Broward County Amendments (Chapter 1) to the upcoming Florida Building Code (FBC) 7th Edition (2020), that will be effective December 31, 2020.

## Reasons

All our existing amendments, including Chapter 1, expire when a new building code becomes effective, and therefore they need to be re adopted, updated, or discarded. The staff has discussed at length and incorporated into the text improvements and addressed issues as deemed appropriate. This final draft has been reviewed by our Legal Counselor Mr. Charles Kramer and his recommended corrections were also included.

Most of the changes are an effort to streamline Chapter 1, remove redundancies, consolidate two or more sections into one, and stay close to the Florida statewide Chapter 1. Significant changes are related an effort to codify BORA adopted policies, or changes to the county's charter. We would like to call your attention to section 110.14 Period of declared disaster, to which we have moved all sections related to emergencies and/or disasters, and we added language codifying a staff interpretation that allows the use of electronic media for inspections and records during emergencies. Please see the attached sample of changes by type and draft of Chapter 1, with comments provided for most of the changes.

## Additional information

List of attached documents:

1. Sample of changes.
2. Revised 7<sup>th</sup> Edition Chapter 1 with stricken and underlined text to show changes from the 6<sup>th</sup> Edition of Chapter 1.
3. Clean 7<sup>th</sup> Edition Chapter 1.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "James DiPietro".

James DiPietro.

STRONGER CODES MEAN SAFER BUILDINGS  
~ESTABLISHED 1971~

## **CHAPTER 1 ADMINISTRATION—BROWARD COUNTY**

[Section 101 General](#)

[Section 102 Applicability](#)

[Section 103 Department of building safety](#)

[Section 104 Powers and Duties of the Building Official, Assistant Building Official, Fire Code Official, Chief Inspector, Plan Examiner, and Inspector](#)

[Section 105 Permits](#)

[Section 106 Floor and Roof Design Loads](#)

[Section 107 Submittal Documents](#)

[Section 108 Temporary Structures and Uses](#)

[Section 109 Fees](#)

[Section 110 Inspections](#)

[Section 111 Certificates of Occupancy and Completion](#)

[Section 112 Service Utilities](#)

[Section 113 Board of Rules and Appeals](#)

[Section 114 Violations](#)

[Section 115 Stop Work Order](#)

[Section 116 Unsafe Structures and Equipment](#)

[Section 117 Powers and Duties of the Floodplain Administrator; Delegation, Administration, Enforcement, and Variances.](#)

[Section 118 Two-Way Radio Communication Enhanced Public Safety Signal Booster Systems](#)

Underscored text is the language proposed to be added. See also comment box next to it.

~~Stricken thru text is the language proposed to be deleted. See also comment box next to it.~~

### **Section 101 General**

**101.1 Title.** These regulations shall be known as the "Florida Building Code" hereinafter referred to as FBC or "this Code."

**101.2 Scope.** The provisions of this Chapter shall govern the administration and enforcement of the FBC, Fire Protection Provisions of this Code and FFPC and shall apply countywide in both incorporated and unincorporated areas of Broward County, Florida. The provisions of this Code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

#### **Exceptions:**

G:\SHARED\2020 BR&A\BOARD AGENDA\10. Oct 8\Chapter 1\Complete Ch.1 for agenda 9.23.2020.docx

1. Detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the FBC, Residential, & Broward County Amendments Chapter 1.
2. Code Requirements that address snow loads and earthquake protection are pervasive; they are left in place but shall not be utilized or enforced because Florida has no snow load or earthquake threat.

Commented [SR1]: Added language recommended by Ted.

**101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically adopted by BORA.

**101.2.2 Definitions.**

- A. **AHJ** (means Authority Having Jurisdiction) shall be a federal, state, local (Building or Fire Service Provider), or individual such as a Building Official, Assistant Building Official; Chief Electrical/Mechanical/Plumbing/Structural Inspector; Fire Chief; Fire Marshal/Fire Code Official; or Broward County Board of Rules and Appeals.
- B. **BORA** means the Broward County Board of Rules and Appeals.
- C. **Architect** means Registered Architect, registered in the State of Florida.
- D. **Engineer** means licensed Professional Engineer, licensed in the State of Florida.
- E. **BCAIB** means the Building Code Administrators and Inspectors Board.
- F. **FFPC** means the adopted Florida Fire Prevention Code including the Broward County Local Fire Amendments to the Florida Fire Prevention Code.
- G. **HVHZ** means the High Velocity Hurricane Zone.
- H. **State** means the State of Florida.
- I. **FAC** means Florida Administrative Code.
- J. **Fire Service Provider** means Fire Department.
- K. **Fire Code Manager/Administrator** means Fire Code Official or Fire Marshal.
- L. **SFBC** means South Florida Building Code, Broward Edition.
- M. **G.C.** means an unlimited General Contractor licensed by either the CILB, the Broward County Central Examining Board or the Miami-Dade Construction Trades Qualifying Board.
- N. **CILB** means the Florida Construction Industry Licensing Board.
- O. **ECLB** means the Florida Electrical Contractors Licensing Board.

**101.3 Intent.** The purpose of this Code is to establish the minimum requirements to safeguard, the public health, safety and general welfare through structural strength, means of egress, facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.

**101.4 Referenced Codes.** The other codes listed in Sections 101.4.1 through 101.4.11 101.4.10 and referenced elsewhere in this Code shall be considered part of the requirements of this Code to the prescribed extent of each such reference.

Commented [SR2]: Correct number.

**101.4.1 Electrical.** The provisions of Chapter 27 of the FBC, Building, NFPA 70, Fire Protection Provisions of this Code and FFPC shall apply to electrical components, equipment, and systems.

**101.4.2 Gas.** The provisions of the FBC, Fuel Gas, shall apply to the installation of gas piping, gas appliances and related accessories as covered in this Code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances, and the installation and operation of residential and commercial gas appliances and related accessories.

**101.4.3 Mechanical.** The provisions of the FBC, Mechanical, shall apply to the installation of mechanical systems, including, but not limited to, alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances, including ventilating, heating, cooling, air conditioning and refrigeration systems, vacuum, compressed air and pneumatic systems, incinerators and other energy-related devices.

**101.4.4 Plumbing.** The provisions of the FBC, Plumbing, Fire Protection Provisions of this Code and FFPC shall apply to every plumbing installation, including, but not limited to, alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances when connected to a water or sewage systems, compressed air systems, lawn sprinkler systems and all aspects of a medical gas system.

~~101.4.4.1 The Chief Plumbing Inspector or Building Official shall have the power to abate any nuisance by the issuance of a notice in writing, to correct and/or eliminate the nuisance within a reasonable amount of time.~~

Commented [SR3]: Moved to 104.1.2.1

**101.4.5 Property maintenance.** Reserved.

**101.4.6 Fire prevention.** For provisions related to fire prevention, refer to FFPC as referenced in Florida Statute 633, Broward County Local FFPCs as adopted and the Fire Protection Provisions of this Code as referenced above. FFPC shall apply to matters affecting or relating to structures, new or existing; processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

**101.4.7 Energy.** The provisions of the FBC, Energy Conservation, shall apply to all matters governing the design and construction of buildings for energy efficiency.

**101.4.8 Existing buildings.** The provisions of the FBC Existing Building shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

**101.4.9 Accessibility.** For provisions related to accessibility, refer to the FBC, Accessibility.

**101.4.10 Manufactured buildings.** For additional administrative and special code requirements, see section 458, FBC, Building, Rule 61-41 FAC, and Florida Statute 553.

## Section 102 Applicability

**102.1 General.** Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this Code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

**102.1.1** The FBC, Fire Protection Provisions of this Code and FFPC does not apply to, and no code enforcement action shall be brought with respect to, zoning requirements, land use requirements and owner specifications or programmatic requirements which do not pertain to and govern the design, construction, erection, alteration, modification, repair or demolition of public or private buildings, structures or facilities or to programmatic requirements that do not pertain to enforcement of the FBC, and FFPC. Additionally, a local code enforcement agency may not administer or enforce the FBC, Building to prevent the siting of any publicly owned facility, including, but not limited to, correctional facilities, juvenile justice facilities, or state universities, community colleges, or public education facilities, as provided by law.

**102.2 Building.** The provisions of the FBC and FFPC shall apply to the placement, construction, erection, alteration, modification, repair, equipment, use and occupancy, location, maintenance,

relocation, removal and demolition of every public and private building, structure or facility or floating residential structure, or any appurtenances connected or attached to such buildings, structures or facilities. Additions, alterations, repairs and changes of use or occupancy group in all buildings and structures shall comply with the provisions provided in FBC Existing Building and FFPC and in Chapter 34 of the FBC. The following buildings, structures and facilities are exempt from the FBC as provided by law, and any further exemptions shall be as determined by the legislature and provided by law:

**Commented [SR4]:** Matches state's Ch.1

**Commented [SR5]:** FBC Ch. 34 is reserved.

- A. Building and structures specifically regulated and preempted by the federal government.
- B. Railroads and ancillary facilities associated with the railroad.
- C. Nonresidential farm buildings on farms.
- D. Temporary buildings or sheds used exclusively for construction purposes.
- E. Mobile or modular structures used as temporary offices, except that the provisions of Part II (Sections 553.501—553.513, Florida Statutes) relating to accessibility by persons with disabilities shall apply to such mobile or modular structures.
- F. Those structures or facilities of electric utilities, as defined in Section 366.02, Florida Statutes, which are directly involved in the generation, transmission, or distribution of electricity.
- G. Temporary sets, assemblies, or structures used in commercial motion picture or television production, or any sound-recording equipment used in such production, on or off the premises; except as required in 102.2.6 of this Code.
- H. Chickees constructed by the Miccosukee Tribe of Indians of Florida or the Seminole Tribe of Florida. As used in this paragraph, the term "chickee" means an open-sided wooden hut that has a thatched roof of palm or palmetto or other traditional materials, and that does not incorporate any electrical, plumbing, or other nonwood features.
- I. Family mausoleums not exceeding two hundred fifty (250) square feet (23 m<sup>2</sup>) in area which are prefabricated and assembled on site or preassembled and delivered on site and have walls, roofs, and a floor constructed of granite, marble, or reinforced concrete.
- J. Temporary housing provided by the Department of Corrections to any prisoner in the state correctional system.
- K. A building or structure having less than one thousand (1,000) square feet (93 m<sup>2</sup>) which is constructed and owned by a natural person for hunting and which is repaired or reconstructed to the same dimension and condition as existed on January 1, 2011, if the building or structure:
  - 1. Is not rented or leased or used as a principal residency residence;
  - 2. Is not located within the 100-year floodplain according to The Federal Emergency Management Agency's current Flood Insurance Rate Map; and
  - 3. Is not connected to any offsite electric power or water supply.
- L. Swings and other playground equipment accessory to a one- or two-family dwelling.

**Commented [SR6]:** Typo

**Exception:** Electrical service to such playground equipment shall be in accordance with Chapter 27 of this Code.

**102.2.1** In addition to the requirements of Sections 553.79 and 553.80 Florida Statutes, facilities subject to the provisions of Chapter 395 Florida Statutes and Part II of Chapter 400 Florida Statutes shall have facility plans and/or specifications reviewed and construction surveyed by the state agency authorized to do so under the requirements of Chapter 395 Florida Statutes and Part II of Chapter 400 Florida Statutes and the certification requirements of the Federal Government.

**102.2.2** Residential buildings or structures moved into or within a county or municipality shall not be required to be brought into compliance with the state minimum building code in force at the time the building or structure is moved, provided:

- A- 1. The building or structure is structurally sound and in occupiable condition for its intended use;
- B- 2. The occupancy use classification for the building or structure is not changed as a result of the move;
- C- 3. The building is not substantially remodeled;
- D- 4. Current FFPC requirements for ingress and egress are met;
- E- 5. Electrical, gas, mechanical and plumbing systems meet the codes in force at the time of construction and are operational and safe for reconnection; and
- F- 6. Foundation plans are sealed by an Engineer or Architect, if required by the FBC, Building or Residential for all residential buildings or structures of the same occupancy class.

**Commented [SR7]:** To be consistent w. state's. ch. 1

**102.2.3** The Building Official shall apply the same standard to a moved residential building or structure as that applied to the remodeling of any comparable residential building or structure to determine whether the moved structure is substantially remodeled. The cost of the foundation on which the moved building or structure is placed shall not be included in the cost of remodeling for purposes of determining whether a moved building or structure has been substantially remodeled.

**102.2.4** This section does not apply to the jurisdiction and authority of the Department of Agriculture and Consumer Services to inspect amusement rides or the Department of Financial Services to inspect state-owned buildings and boilers.

**102.2.5** The Broward County Building and Fire Code enforcement district shall be governed by BORA.

**102.2.6** Temporary motion picture and television Sets. All temporary plumbing installations shall be installed so as not to create a sanitary nuisance as defined by Section 386.01, Florida Statutes. A permit shall be required and issued to the producer, upon the filing of an application by the producer, for one (1) electrical permit to cover each complete motion picture production or television series.

**102.3 Application of references.** References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this Code.

**102.4 Referenced codes and standards.** The Codes and standards referenced in this Code shall be considered part of the requirements of this Code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2. Where conflicts occur between provisions of this Code and referenced Codes and standards, the provisions of this Code shall apply.

**102.4.1 Conflicts.** Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

**102.4.2 Provisions in referenced codes and standards.** Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code or the Florida Codes listed in Section 101.4, the provisions of this code or the Florida Codes listed in Section 101.4, as applicable, shall take precedence over the provisions in the referenced code or standard.

**Commented [SR8]:** Consistency w/ FL. state ch. 1

**102.5 Partial invalidity.** Reserved.

**102.6 Existing structures.** The legal occupancy of any structure existing on the date of adoption of this Code shall be permitted to continue without change, except as is specifically covered in this Code, the FBC

Exiting Building, and/or the Fire Protection Provisions of this Code and FFPC, or as is deemed necessary by the Building Official for the general safety and welfare of the occupants and the public.

Commented [SR9]: Consistency w/ FL. state ch. 1

**102.6.1** Existing Building Code violations that are discovered by the AHJ, owner and/or an owner's representative(s) and/or any interested party shall be cited by the Building Official and/or Fire Marshal/Fire Code Official for such violations. All such violations shall be repaired and corrected in accordance with the SFBC and/or FBC in effect on the date of the structure received a building permit. Existing buildings shall comply with FFPC and this Code.

#### **102.7 Relocation of manufactured buildings.**

1. Relocation of an existing manufactured building does not constitute an alteration.
2. A relocated building shall comply with wind speed requirements of the new location, using the appropriate wind speed map. If the existing building was manufactured in compliance with the Standard Building Code (prior to March 1, 2002), the wind speed map of the Standard Building Code shall be applicable. If the existing building was manufactured in compliance with the FBC (after March 1, 2002), the wind speed map of the FBC shall be applicable.
3. A relocated building shall comply with the flood hazard area requirements of the new location, if applicable.

**102.8 Existing mechanical equipment.** An agency or local government may not require that existing mechanical equipment located on or above the surface of a roof be installed in compliance with the requirements of the FBC except during reroofing when the equipment is being replaced or moved during reroofing and is not in compliance with the provisions of the FBC relating to roof mounted mechanical units.

#### **Section 103 Department of building safety**

Reserved.

#### **Section 104 Powers and Duties of the Building Official, Assistant Building Official, Fire Code Official, Chief Inspector, Plan Examiner, and Inspector**

##### **104.1 Building Official.** As set forth herein:

**104.1.1 Appointment of a Building Official.** The appointing authority shall appoint a Building Official, and such person shall meet the following minimum qualifications and be certified by BORA, as specified in Section 104.1.3. The Building Official does not have to be personally present at the governmental department as long as he or she is available and can perform his or her duties.

##### **104.1.1.1 Appointment of an Interim Building Official.**

- a) In the event that the Building Official is not available to perform his or her duties, each appointing authority shall appoint an Interim Building Official provided such person is qualified as set forth in Section 104.1.3 of this Code, BORA shall be timely notified in writing by the Building Official or appointing authority of the starting date and period of time that the Interim Building Official or Assistant Building Official will assume the Building Official's duties. The name of the Interim Building Official will be recorded by BORA, but he or she will not be issued a certification card as a Building Official. If there is one Inspector hired by an appointing authority in Broward County, that Inspector shall be a Building Official. The Building Official shall have the authority to delegate powers, duties and assignments to subordinate regular employees working under his or her authority, but only to those employees certified by BORA as qualified to perform such powers, duties and assignments. It shall be his or her duty and responsibility to



supervise and coordinate the work of all subordinate Assistant Building Officials, Chief Inspectors, Plans Examiners and Inspectors.

- b) In the event that the Building Official's employment with the jurisdiction is terminated, an Interim Building Official may be appointed while the Building Official is being replaced with a permanent appointee. The Interim Building Official shall be qualified as a Building Official as specified in 104.1.3. An Interim Building Official's appointment will be limited to ninety (90) calendar days. At the written request of the chief executive officer (City Manager, Acting City Manager, or Mayor) for demonstrated cause, a one-time ninety (90) calendar days extension may be granted by BORA's Administrative Director. Any additional extensions beyond this point must be requested in writing to BORA's Administrative Director a minimum of forty-five (45) calendar days prior to the second period expiration date. This request must be reviewed and approved by the Board of Rules and Appeals at its next regularly scheduled meeting. The name of the Interim Building Official will be recorded by BORA, but he/she will not be issued a certification card as a Building Official.

**104.1.2 Powers and Duties of the Building Official.** The Building Official shall be vested with the powers and subject to regulations, as provided by Chapter 468 Florida Statutes and BORA, as set forth in Section 113 of this Code. The Building Official is hereby authorized and directed to enforce the provisions of this Code. The Building Official shall delegate powers, duties and assignments to BORA certified Chief Inspectors to render interpretations of this Code and to adopt policies and procedures in order to clarify the application of the technical provisions of this Code in categories in which the Building Official is not certified. Such interpretations, policies, and procedures shall be in compliance with the intent and purpose of this Code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this Code.

**104.1.2.1** The Building Official or Chief Plumbing Inspector shall have the power to abate any nuisance by the issuance of a notice in writing, to correct and/or eliminate the nuisance within a reasonable amount of time.

Commented [SR10]: Moved from 101.4.4.1.

**104.1.3 Certification of the Building Official and the Assistant Building Official.** To be eligible for appointment as a Building Official or Assistant Building Official, such person shall be certified as required by BCAIB as a Building Code Administrator.

**104.1.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.1.3.1.1** A Florida Registered Architect or Florida licensed Professional Engineer having practiced for at least seven (7) years, a minimum of five (5) years shall have been within the jurisdiction of the HVHZ.

**104.1.3.1.2** Ten (10) years combined experience as a Master Electrician, Electrical Contractor, General Contractor, Master Mechanical, Mechanical Contractor, Class A Air Conditioning Contractor, Master Plumber, Plumbing Contractor, Chief Inspector, Standard Plans Examiner or Standard Inspector appointed by an AHJ or school board within the State of Florida. A minimum of five (5) years shall have been within the jurisdiction of the HVHZ.

**104.1.3.2** As part of the experience requirements above, the applicant shall have been appointed as Chief Inspector, Standard Plans Examiner or Standard Inspector by an AHJ or school board within the State of Florida for a minimum of two (2) years.

**104.1.3.3** Each of the applicants shall possess a current Certificate of Competency or a Professional Engineer license or Architect registration issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board as a General Contractor, Mechanical Contractor or Plumbing Contractor.

- B. Florida Electrical Contractors Licensing Board as an Electrical Contractor.
- C. Broward County Central Examining Board of Building Construction Trades. (As Class "A" Unlimited General Contractor.)
- D. Broward County Central Examining Board of Electricians as a Master Electrician and/or Electrical Contractor.
- E. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors as a Mechanical Contractor or Class A Air Conditioning Contractor.
- F. Broward County Central Examining Board of Plumbers as a Master Plumber.
- G. Miami-Dade County Construction Trades Qualifying Board, for any of the above-referenced disciplines.
- H. Florida Board of Architecture and Interior Design.
- I. Florida Board of Professional Engineers.

**104.1.3.4** An applicant for Certification as Building Official or Assistant Building Official under the provisions of this section may only substitute two (2) years HVHZ experience with two (2) years of statewide experience by passing the BORA HVHZ exam.

**104.1.3.5** An applicant for Certification as a Building Official or Assistant Building Official under the provisions of this section who is a graduate from an accredited school holding a Bachelor or Associate of Science Degree in Engineering, Architecture or Building Construction from an accredited school may be credited for a maximum of two (2) years for Bachelor's Degree or a maximum of one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under section 104.1.3.1.1.

**104.2 Assistant Building Official.** As set forth herein:

**104.2.1 Appointment of an Assistant Building Official.** Each appointing authority may appoint a person qualified as set forth in Section 104.1.3 to serve as an Assistant Building Official. To be eligible for appointment as an Assistant Building Official, such person shall be certified by BORA and shall meet the qualifications equal to the requirements for Building Official. No other title is recognized for certification by BORA.

**104.2.2 Powers and Duties of the Assistant Building Official.** The Assistant Building Official shall be vested with the powers and subject to regulations, as provided by Chapter 468 Florida Statutes and BORA, as set forth in Section 113 of this Code. The Assistant Building Official shall be responsible for duties as assigned by the Building Official. The Assistant Building Official shall fulfill the duties of the Building Official during the absence of the Building Official with full responsibilities of the position.

**104.3 Appointment of the Chief Electrical, Mechanical, Plumbing and Structural Inspector.** As set forth herein.

Each appointing authority shall appoint a person qualified as set forth in the below Sections to serve as Chief Inspector in each discipline stated above. If there is one (1) Inspector (each discipline stated above) hired by an appointing authority in Broward County, that Inspector shall be a Chief Inspector (Chief or Head of the Division). The Chief Inspector (Chief or Head of the Division) does not have to be personally present at the governmental department as long as he or she is available and can perform their duties. To be eligible for appointment as a Chief Inspector (each discipline stated above), such person shall be certified by BORA.

**104.3.1 Interim Chief Inspector.** In the event that a Chief Inspector's employment is terminated with a jurisdiction, or is otherwise unavailable, an Interim Chief Inspector may be appointed for up to ninety (90) days while the Chief Inspector is being replaced with a permanent appointee. An approved application for a Chief Inspector must be submitted to BORA prior to the expiration of the ninety (90) days. The Interim Chief Inspector shall be qualified as a Chief Inspector as specified in Section 104.5,

104.6, 104.7 or 104.8 of this Code. BORA shall be notified in writing by the Building Official of the name and starting date of the Interim Chief Inspector. The name of the Interim Chief Inspector will be recorded by BORA but he or she will not be issued a certification card as the Chief Inspector.

**104.4 Powers and Duties of the Chief Electrical, Mechanical, Plumbing and Structural Inspector.** The Chief Inspector (each discipline stated above) shall be vested with the powers and subject to regulations by BORA as set forth in Section 113 of this Code. The Chief Inspector shall have the power to delegate powers, duties and assignments to subordinate regular employees working under his or her authority, but only to those employees certified by BORA as qualified to perform such powers, duties and assignments within his or her particular discipline. It shall be his or her duty and responsibility to supervise and coordinate the work of all subordinate Plans Examiners and Inspectors within his or her particular discipline. The Chief Inspector shall have the sole authority to render interpretations of this Code and to adopt policies and procedures in order to clarify the application of its provisions within his or her particular discipline. Such interpretations, policies, and procedures shall be in compliance with the intent and purpose of this Code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this Code.

**104.5 Certification of the Chief Electrical Inspector.** To be eligible for appointment as a Chief Electrical Inspector, such person shall be certified as required by BCAIB as an Electrical Plans Examiner and as an Electrical Inspector. Engineers are exempt from BCAIB certification.

**104.5.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.5.1.1** An Electrical Plans Examiner serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.2.1.

**104.5.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Electrician or Electrical Contractor or Engineer issued by at least one of the following entities:

- A. Florida Electrical Contractors Licensing Board.
- B. Broward County Central Examining Board of Electricians.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.6 Certification of the Chief Mechanical.** To be eligible for appointment as a Chief Mechanical Inspector, such person shall be certified as required by BCAIB as a Mechanical Plans Examiner and as a Mechanical Inspector. Engineers are exempt from BCAIB certification.

**104.6.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.6.1.1** A Mechanical Plans Examiner serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.3.1.

**104.6.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.7 Certification of the Chief Plumbing Inspector.** To be eligible for appointment as a Chief Plumbing Inspector, such person shall be certified as required by BCAIB as a Plumbing Plans Examiner and as a Plumbing Inspector. Engineers are exempt from BCAIB certification.

**104.7.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.7.1.1** A Plumbing Plans Examiner serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.4.1.

**104.7.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Plumber or Plumbing Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Plumbers.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.8 Certification of the Chief Structural Inspector.** To be eligible for appointment as a Chief Structural Inspector, such person shall be certified as required by BCAIB as a Standard Plans Examiner and Standard Inspector or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.8.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.8.1.1** Be a Standard Plans Examiner appointed as such, for a minimum of one (1) year by an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.1.1.

**104.8.2** Each of the applicants shall possess a current Certificate of Competency as a G.C. or a Professional Engineer license or Architect registration issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Building Construction Trades.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.
- E. Department of Business and Professional Regulation as an Architect.

**104.9 Appointment of the Electrical, Mechanical, Plumbing and Structural Plans Examiner.** As set forth herein: Each appointing authority shall appoint a person qualified as set forth in the above and below Sections to serve as Plans Examiner in each discipline as stated above. To be eligible for appointment as a Plans Examiner, such person shall be certified by BORA.

**104.10 Powers and Duties of the Electrical, Mechanical, Plumbing and Structural Plans Examiner.** The Plans Examiner shall be responsible for duties as assigned by the Chief Inspector within his or her particular discipline. The Plans Examiner shall fulfill the duties of the Chief Inspector during the absence of the Chief Inspector with full responsibilities of the position within his or her particular discipline. The Plans Examiner shall examine all plans and/or specifications and applications for permits within his or her particular discipline. When approvals by other agencies having authority may logically be required to be affixed to the plans and/or specifications before approval by the Plans Examiner, such approval shall be affixed to the plans and/or specifications before examination by the Plans Examiner. If the application or plans and/or specifications do not conform to the requirements of all pertinent laws or regulations, the Plans

Examiner shall reject such application in writing, stating the reasons therefore and citing the relevant code section(s). Plans and/or specifications which are rejected, as stated herein above, shall be returned for correction. Pen notations on mechanically reproduced plans and/or specifications may be accepted for only minor corrections. If the applications, plans and/or specifications, upon examination, are found to comply with the requirements of this Code, the plans and/or specifications shall be signed and marked approved.

**104.10.1 Certification of the Structural Plans Examiner.** To be eligible for appointment as a Structural Plans Examiner, such person shall be certified by BCAIB as a Standard Plans Examiner or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.10.1.1** Such person shall also be certified by BORA by meeting at least one (1) of the following:

**104.10.1.1.1** Be a Florida Registered Architect or a Florida Licensed Professional Engineer, in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida, two (2) years of which shall have been within the HVHZ or by passing BORA's HVHZ exam.

**104.10.1.1.2** Be a Standard Inspector appointed as such, for a minimum of one (1) year by an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.16.3.1.

**104.10.1.2** Limited Plans Examiner certifications may be issued to individuals holding current Building Contractor or Residential Contractor licenses and who otherwise meet the requirements of the appropriate section under which they are qualifying, with duties limited to the scope of work authorized by their license.

**104.10.1.3** Each of the applicants shall possess a current Certificate of Competency or a Professional Engineer license or Architect registration issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Building Construction Trades.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers Department of Business and Professional Regulation as an Architect.

**104.10.2 Certification of the Electrical Plans Examiner.** To be eligible for appointment as an Electrical Plans Examiner, such person shall be certified as required by BCAIB as an Electrical Plans Examiner and as an Electrical Inspector. Engineers are exempt from BCAIB certification.

**104.10.2.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.10.2.1.1** An Engineer in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida.

**104.10.2.1.2** An Electrical Inspector serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.12.3.1.

**104.10.2.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Electrician or Electrical Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Electrical Contractors Licensing Board.

- B. Broward County Central Examining Board of Electricians.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.10.3 Certification of the Mechanical Plans Examiner.** To be eligible for appointment as a Mechanical Plans Examiner, such person shall be certified as required by the BCAIB as a Mechanical Plans Examiner and as a Mechanical Inspector. Engineers are exempt from BCAIB certification.

**104.10.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.10.3.1.1** An Engineer in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida.

**104.10.3.1.2** A Mechanical Inspector serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.13.3.1.

**104.10.3.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.10.3.2.1** Individuals holding licenses as a Class "B" Air Conditioning Contractor, with a current Certificate of Competency issued by the above-mentioned Boards, shall have duties limited to the examination of air conditioning and mechanical plans within the scope of his or her Certificate of Competency.

**104.10.4 Certification of the Plumbing Plans Examiner.** To be eligible for appointment as a Plumbing Plans Examiner, such person shall be certified as required by BCAIB as a Plumbing Plans Examiner and as a Plumbing Inspector. Engineers are exempt from BCAIB certification.

**104.10.4.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.10.4.1.1** An Engineer in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida.

**104.10.4.1.2** A Plumbing Inspector serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.14.3.1.

**104.10.4.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Plumber or Plumbing Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Plumbers.
- C. Miami-Dade County Construction Trades Qualifying Board.

D. Florida Board of Professional Engineers.

**104.11 Powers and Duties of the Electrical, Mechanical, Plumbing, Roofing and Structural Inspector.**

The Electrical, Mechanical, Plumbing, Roofing, and Structural Inspectors shall comply with rules and regulations of this Code, enforcing all the laws, rules and regulations relating thereto in the area of jurisdiction and enforcing all the provisions of this Code. If defects, omissions or violations exist on any other part relating to work for which approval is requested, the issuance of the Approval shall be withheld until corrections have been made to the defective portion and the same are made to comply with this Code. The Inspector shall serve notice to the contractor/representative or owner/representative in writing, stating the reasons therefore and citing the relevant code section(s) of this Code.

**104.12 Electrical Inspector.** As set forth herein:

**104.12.1 Appointment of an Electrical Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.12.3 to serve as an Electrical Inspector. To be eligible for appointment as an Electrical Inspector, such person shall be certified by BORA.

**104.12.2 Powers and Duties of the Electrical Inspector.**

**104.12.2.1** Such employee shall have the duties and powers as delegated by the Chief Electrical Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Electrical Code.

**104.12.2.2** It shall be the duty of the Electrical Inspector to inspect any work on electrical installations shall be held to include and govern all work and materials used in installing, maintaining and/or extending a system of electrical wiring for the use of light, heat, power or low voltage systems, and all appurtenances, apparatus, or equipment used in connection therewith, inside of or attached to any building or structure, lot or premises) and every electrical system or device, (all wiring, apparatus and equipment, and all installations for light, heat, power and low voltage systems), installed in new construction, additions, alterations or repairs to existing electrical systems, apparatus or equipment in existing construction.

**104.12.2.3** The Electrical Inspector shall issue an Approval for all installations of light, heat, power and low voltage systems (burglar alarms, central vacuums, communications, computer systems, fiber optics, fire alarms, telephone, television and all other systems ninety-eight (98) volts and less) that comply with the rules and regulations of this Electrical Code.

**104.12.2.4** A 30-day temporary electrical service connection shall be approved by the Electrical Inspector, where the need for electrical power exists, if the wiring installation, apparatus or equipment is found to be in a safe operating condition. Under these circumstances, an application for temporary service shall be made in writing by the electrical contractor, firm, corporation, or owner requesting a temporary service connection to the public utility system or isolated generating plant.

**104.12.2.5** The Electrical Inspector is hereby empowered to inspect or re-inspect any wiring, equipment or apparatus used in the installation of light, heat, power or low voltage systems and if this wiring, equipment, apparatus or low voltage system is found to be unsafe to life or property, the Electrical Inspector shall serve notice to the owner and/or operator, in writing, stating the reasons therefore and citing the relevant code section(s) of this Electrical Code, that the hazardous wiring, or equipment exists and shall be corrected within a reasonable period of time.

**104.12.2.6** The Electrical Inspector is hereby given the power to disconnect extension cords, temporary wiring, branch circuits, feeder conductors or the main service supplying electrical energy to any portion of an electrical wiring system in buildings, or on premises, if this wiring is in the opinion of the Electrical Inspector, considered to be hazardous to life or property. Any person, firm or corporation supplying current, shall disconnect service from the source of supply upon instructions from the Chief Electrical Inspector where hazards are deemed to exist, after receiving

written notice citing the appropriate Code Section(s) of this Electrical Code from the Electrical Inspector.

**104.12.3 Certification of the Electrical Inspector.** To be eligible for appointment as an Electrical Inspector, such person shall be certified as required by BCAIB as an Electrical Inspector. Engineers are exempt from BCAIB certification.

**104.12.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.12.3.1.1** An Engineer in the discipline requested.

**104.12.3.1.2** Five (5) years construction experience in the electrical discipline in a supervisory capacity and possess a Certificate of Competency as a Master Electrician or Electrical Contractor.

**104.12.3.1.3** Five (5) years construction experience in the electrical discipline and five (5) years' experience as an Electrical Inspector certified by BCAIB and possess a Certificate of Competency as a Master Electrician or Electrical Contractor.

**104.12.3.1.4** Seven (7) years construction experience in the electrical discipline and possess a Certificate of Competency as a Journeyman Electrician.

**104.12.3.1.5** Ten (10) years' experience as an Electrical Inspector certified by BCAIB. A person with multi-discipline certifications can only be certified in one (1) discipline. A person certified under this section is exempt from Section 104.12.3.2.

**104.12.3.2** Each of the applicants shall possess a current Certification of Competency or a Professional License in the discipline requested as a Master Electrician or Electrical Contractor or Journeyman Electrician or Engineer issued by at least one (1) of the following entities:

- A. Florida Electrical Contractors Licensing Board.
- B. Broward County Central Examining Board of Electricians.
- C. Miami-Dade County Construction Trades Qualifying Board, Block proctored.
- D. Florida Board of Professional Engineers.

**104.12.3.3** An applicant for Certification as an Electrical Inspector under the provisions of this Section who is a graduate from an accredited school holding a Bachelor or an Associate of Science Degree in Electrical Engineering may be credited for two (2) years for a Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.12.3.1.1.

**104.13 Mechanical Inspector.** As set forth herein:

**104.13.1 Appointment of a Mechanical Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.13.3 to serve as Mechanical Inspector. To be eligible for appointment as a Mechanical Inspector, such person shall be certified by BORA.

**104.13.2 Powers and Duties of the Mechanical Inspector.**

**104.13.2.1** Such employee shall have the duties and powers as delegated by the Chief Mechanical Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Mechanical Code.

**104.13.2.2** The Mechanical Inspector shall issue an Approval for all installations of mechanical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and/or appurtenances thereto, including ventilating, heating, cooling, air conditioning and



refrigeration systems and other energy-related systems that comply with the rules and regulations of this Mechanical Code.

**104.13.2.3** It shall be the duty of the Mechanical Inspector to inspect all installations of ventilation, air conditioning and refrigeration systems and equipment. Existing installations not conforming to the requirements of this Mechanical Code shall be made to comply, when relocated, or when altered or repaired, in compliance with the FBC, Existing Building. The Mechanical Inspector shall enforce all the laws, rules and regulations relating thereto in the area of jurisdiction and to enforce all the provisions of this Mechanical Code.

**104.13.3 Certification of the Mechanical Inspector.** To be eligible for appointment as a Mechanical Inspector, such person shall be certified as required by the BCAIB as a Mechanical Inspector. Engineers are exempt from BCAIB certification.

**104.13.3.1** Such person shall be certified by BORA and shall meet at least one (1) of the following qualifications:

**104.13.3.1.1** An Engineer in the discipline requested.

**104.13.3.1.2** Five (5) years construction experience in the mechanical discipline in a supervisory capacity and possess a Certificate of Competency as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor.

**104.13.3.1.3** Five (5) years construction experience in the mechanical discipline and five (5) years' experience as a Mechanical Inspector certified by BCAIB and possess a Certificate of Competency as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor.

**104.13.3.1.4** Seven (7) years construction experience in the mechanical discipline and possess a Certificate of Competency as a Journeyman Mechanical.

**104.13.3.1.5** Ten (10) years' experience as a Mechanical Inspector certified by BCAIB. A person with multi-discipline certifications can only be certified in one (1) discipline. A person certified under this section is exempt from Section 104.13.3.2.

**104.13.3.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor or Journeyman Mechanical or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.13.3.2.1** Individuals holding licenses as a Class "B" Air Conditioning Contractor, with a current Certificate of Competency issued by the above-mentioned Boards, shall have duties limited to the inspection of air conditioning and mechanical work within the scope of his or her Certificate of Competency.

**104.13.3.3** An applicant for Certification as a Mechanical Inspector under the provisions of this Section who is a graduate from an accredited school holding a Bachelor or an Associate of Science Degree in Mechanical Engineering may be credited for two (2) years for a Bachelor

Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.13.3.1.1.

**104.14 Plumbing Inspector.** As set forth herein:

**104.14.1 Appointment of a Plumbing Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.14.3 to serve as Plumbing Inspector. To be eligible for appointment as a Plumbing Inspector, such person shall be certified by BORA.

**104.14.2 Powers and Duties of the Plumbing Inspector.**

**104.14.2.1** Such employee shall have the duties and powers as delegated by the Chief Plumbing Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Plumbing Code.

**104.14.2.2** The Plumbing Inspector shall issue an Approval for all installations of plumbing and sanitary systems, appliances, plumbing fixtures, fittings and/or appurtenances thereto, including heating and storing water, backflow and backsiphonage, public and private sewer disposal and drainage systems that comply with the rules and regulations of this Plumbing Code.

**104.14.2.3** It shall be the duty of the Plumbing Inspector to inspect all new plumbing or drainage systems or parts thereof or additions, alterations, repairs or changes to the existing plumbing or drainage installations or fixtures or appliances shall conform to the requirements of this Plumbing Code. The Plumbing Inspector shall enforce all the laws, rules and regulations relating thereto in the area of jurisdiction and to enforce all the provisions of the Plumbing Code.

**104.14.2.4** It shall be the duty of the Plumbing Inspector to inspect any Plumbing system, he or she has reason to believe has become unsanitary or defective. Nothing contained in this Plumbing Code shall be deemed to require any plumbing or drainage system or part thereof, or any other work regulated by this Plumbing Code and existing prior to the effective date of this Plumbing Code, to be altered, changed, reconstructed, removed or demolished if such work was installed in accordance with all applicable laws in effect prior to the date this Plumbing Code became effective, except when any such plumbing or drainage system or other work regulated by this Plumbing Code is dangerous, unsafe, unsanitary or a menace to life, health or property, in the opinion of the Plumbing Inspector.

**104.14.2.5** All installations regulated by this Plumbing Code or related drainage work shall be maintained and executed in such a manner as to not constitute a nuisance or to threaten or impair the health of any individual or the public in general. The contents of such installations shall not be permitted to overflow in a building, on a premise or upon the surface of the ground, street, or sidewalk. It shall be unlawful for any person, firm, or corporation whether owner or agent, to create, keep, cause, maintain, propagate, or permit the existence of a nuisance as defined in this Plumbing Code. Any building or premises found to be unsanitary or inadequate, or which constitute a health or safety hazard, or which by reason of illegal use or improper use, occupancy or maintenance constitute a violation of the provisions of this Plumbing Code, shall be deemed to be unsafe. The Plumbing Inspector shall have the power to abate any nuisance by the issuance of a notice to correct and/or eliminate the nuisance within a reasonable length of time.

**104.14.3 Certification of the Plumbing Inspector.** To be eligible for appointment as a Plumbing Inspector, such person shall be certified as required by BCAIB as a Plumbing Inspector. Engineers are exempt from BCAIB certification.

**104.14.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.14.3.1.1** An Engineer in the discipline requested.

**104.14.3.1.2** Five (5) years construction experience in the plumbing discipline in a supervisory capacity and possess a Certificate of Competency as a Master Plumber or Plumbing Contractor.

**104.14.3.1.3** Five (5) years construction experience in the plumbing discipline and five (5) years' experience as a Plumbing Inspector certified by BCAIB and possess a Certificate of Competency as a Master Plumber or Plumbing Contractor.

**104.14.3.1.4** Seven (7) years construction experience in the plumbing discipline and possess a Certificate of Competency as a Journeyman Plumber.

**104.14.3.1.5** Ten (10) years' experience as a Plumbing Inspector certified by BCAIB. A person with multi-discipline certifications can only be certified in one (1) discipline. A person certified under this section is exempt from Section 104.14.3.2.

**104.14.3.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Plumber or Plumbing Contractor or Journeyman Plumber issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Plumbers.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.14.3.3** An applicant for Certification as a Plumbing Inspector under the provisions of this Section who is a graduate from an accredited school holding a Bachelor or an Associate of Science Degree in Mechanical Engineering may be credited for two (2) years for a Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.14.3.1.1.

**104.15 Roofing Inspector.** As set forth herein:

**104.15.1 Appointment of a Roofing Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.15.3 to serve as a Roofing Inspector. To be eligible for appointment as a Roofing Inspector, such person shall be certified by BORA.

**104.15.2 Powers and Duties of the Roofing Inspector.**

**104.15.2.1** Such employee shall have the duties and powers as delegated by the Chief Structural Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Code. A Roofing Inspector, if properly certified, may be assigned to perform Roofing Inspections as delegated by the Chief Structural Inspector. Certified Standard Inspectors may be assigned duties as a Roofing Inspector.

**104.15.2.2** The Roofing Inspector shall serve notice to the Roofing Contractor/representative or owner/representative in writing, stating the reasons therefore and citing the relevant code section(s).

**104.15.3 Certification of the Roofing Inspector.** To be eligible for appointment as a Roofing Inspector, such person shall be certified by BCAIB as a Standard Inspector or Standard Roofing Inspector or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.15.3.1** Such person shall also be certified by BORA by meeting at least one of the following:

**104.15.3.1.1** Be a Florida Registered Architect or a Florida Licensed Professional Engineer in the discipline requested with two (2) years of HVHZ experience or passing BORA's HVHZ exam.

**104.15.3.1.2** Be a BCAIB certified Standard Inspector or Standard Roofing Inspector with five (5) years of experience within the State of Florida, two (2) years of which shall have been within the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a Roofing Contractor license, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification.

**104.15.3.1.3** Be a licensed Roofing Contractor, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board with at least five (5) years of experience within the State of Florida in the roofing discipline with that License of which two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam.

**104.15.3.1.4** Five (5) years construction experience within the State of Florida in the roofing discipline in a supervisory capacity of which at least two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a Roofing Contractors License, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.15.3.1.5** Ten (10) years construction experience within the State of Florida in the roofing discipline of which at least two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a Roofing Contractors License, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.15.3.2** An applicant for Certification as a Roofing Inspector under the provisions of this section who is a graduate from an accredited school holding a Bachelor or Associate of Science Degree in Engineering, Architecture or Building Construction may be credited for two (2) years for Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.15.3.1.1.

**104.15.3.3** An applicant for certification as Roofing Inspector under the provisions of this section may only substitute the required two (2) years HVHZ experience with two (2) years of statewide experience by passing the BORA HVHZ exam.

**104.16 Structural Inspector.** As set forth herein:

**104.16.1 Appointment of a Structural Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.16.3 to serve as a Structural Inspector. To be eligible for appointment as a Structural Inspector, such person shall be certified by BORA.

**104.16.2 Powers and Duties of the Structural Inspector.** Such employee shall have the duties and powers as delegated by the Chief Structural Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Code.

**104.16.2.1** The Structural Inspector shall serve notice to the Structural Contractor/representative or owner/representative in writing, stating the reasons therefore and citing the relevant code section(s).

**104.16.2.2** The Structural Inspector shall issue an Approval for installations of all building components, as listed in Section 110.3 of this Code.

**104.16.3 Certification of the Structural Inspector.** To be eligible for appointment as a Structural Inspector, such person shall be certified by BCAIB as a Standard Inspector or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.16.3.1** Such person shall also be certified by BORA by meeting the requirements of at least one (1) of the following:

**104.16.3.1.1** Be a Florida Registered Architect or a Florida Licensed Professional Engineer in the discipline requested with two (2) years of HVHZ experience or by passing BORA's HVHZ exam.

**104.16.3.1.2** Be a BCAIB certified Standard Inspector in the Structural discipline with five (5) years of experience within the State of Florida, of which, two (2) years shall have been within HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a G.C. license, by exam, within one (1) year of initial certification as an inspector.

**104.16.3.1.3** Be a licensed G.C. with at least five (5) years of experience within the State of Florida in the Structural discipline with that license of which, two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam.

**104.16.3.1.4** Five (5) years construction experience in the Structural discipline in a supervisory capacity of which at least two (2) years shall have been within the jurisdiction of HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire an Unlimited G.C. license, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.16.3.1.5** Ten (10) years construction experience in the Structural discipline of which at least two (2) years shall have been within the jurisdiction of the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire an Unlimited G.C. license, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.16.3.2** An applicant for Certification as a Structural Inspector under the provisions of this section who is a graduate from an accredited school holding a Bachelor or Associate of Science Degree in Engineering, Architecture or Building Construction may be credited for two (2) years for Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.16.3.1.1.

**104.16.3.3** Limited Building or Residential Inspector certifications may be issued to individuals holding current Building Contractor or Residential Contractor licenses and who otherwise meet the requirements of the appropriate section under which they are qualifying, with duties limited to the scope of work authorized by their license.

**104.16.3.4** An applicant for certification as Structural Inspector under the provisions of this section may only substitute the required two (2) year HVHZ experience with two (2) years of statewide experience by passing the BORA HVHZ exam.

**104.15.3.5** Building Inspectors (structural) certified by BORA on or after July 1<sup>st</sup>, 2020 shall be required to obtain a Reinforced Unit Masonry certification within two years from their initial BORA certification date.

**104.17 Certification of Building Departments and Building Code Inspection Enforcement Personnel.**

BORA shall certify each and every Building Department after it has determined to its satisfaction that the Building Code Inspection Enforcement Personnel are qualified by the provisions of this Code. These positions shall include at a minimum the Building Official, Chief Electrical Inspector, Chief Mechanical Inspector, Chief Plumbing Inspector, and Chief Structural Inspector.

**104.17.1** Only such persons that have been examined and certified by BORA may be appointed or have the powers and duties of a Building Official, Assistant Building Official, or Chief Inspector. Each Building Official, Assistant Building Official, and Chief Inspector shall obtain a separate card for each governmental AHJ by which he or she is employed. Plans Examiners and Inspectors shall be issued a single certification card that is valid Countywide upon approval.

**104.17.2** The certification of Building Department Inspection Personnel may be revoked, for cause, by BORA. BORA may deny, refuse to renew, suspend, or revoke BORA certificate of a Building Official, Assistant Building Official, Chief Inspector, Plans Examiner, or Inspector if it finds that any of the following grounds exist:

- A. Any cause for which issuance of a certificate could have been refused had it then existed and been known to BORA.
- B. Violation of FBC.
- C. Falsification of records relating to the certificate.
- D. Having been found guilty of or having pleaded guilty or nolo contendere to a felony, whether or not a judgment of conviction has been entered.
- E. Failure to meet any of the renewal requirements.
- F. Having been convicted of a crime in any jurisdiction which directly relates to the practice of the building code inspection, plan review, or administration.
- G. Making or filing a report or record that the certificate holder knows to be false, or knowingly inducing another to file a false report or record, or knowingly failing to file a report or record required by the state or local law, or knowingly impeding or obstructing such filings, or knowingly inducing another person to impede or obstruct such filing.
- H. Failure to properly enforce applicable building codes or permit requirements within this state which the certificate holder knows are applicable by committing willful misconduct, gross negligence, gross misconduct, repeated negligence, or negligence resulting in a significant danger to life or property.
- I. Accepting labor, service, or materials at no charge or at a noncompetitive rate from any person who performs work that is under the enforcement authority of the certificate holder and who is not an immediate family member of the certificate holder. For the purpose of this paragraph, the term "immediate family member" means a spouse, child, parent, sibling, grandparent, aunt, uncle, or first cousin of the person or the person's spouse or any person who resides in the primary residence of the certificate holder. BORA upon verification of the above grounds, shall immediately notify the Building Official, Assistant Building Official, Chief Inspector, Plans Examiner and/or the Inspector involved, who, upon notification from BORA, shall appear before the Board to explain why his or her certification should not be revoked.

**104.17.3** When Building Departments fail to meet certification criteria, they will immediately be notified to cease activities until such time as requirements of this Code are met.

**104.17.4** Application for certification shall contain such pertinent information as is considered relevant by BORA.

**104.17.5** Certification shall be for the remainder of the current biennial certification period for initial employment and shall be renewed biennially on January 1 of each even-numbered year thereafter. When a Building Official, Assistant Building Official or Chief Inspector, resigns from his or her position,

his or her card becomes inactive until he or she again returns to work for a Building Department, at which time, upon proper application, he or she will be issued a new certification card, at a renewal fee in the amount appropriate for each discipline according to BORA Fee Schedule for Certification.

**104.17.6** Applications for certification will not be considered unless the application is made on a form prescribed by BORA.

**104.17.7 Certification Fee.** Reserved.

**104.17.8** Within ten (10) days of receipt of a properly completed application, the Secretary to BORA (Administrative Director) shall, after performing a review of the application: grant temporary certification, limit certification to a particular discipline or deny it, stating the reasons for denial. Any such determination is subject to final review and approval or revision by BORA. The temporary certification shall only be effective through the date of final action by BORA with respect to the application. The Secretary of BORA may delegate this duty to the Chief Code Compliance Officers.

**104.17.9** Certification may be withdrawn, rescinded or suspended if, upon investigation, it is found that the certified person has failed to enforce the Code, abused the powers of office, or withheld or concealed information on the application which, if known to BORA, may have been cause for denying certification.

**104.17.10** Any person, whose certification has been denied, withdrawn or rescinded, may appeal to BORA in open meeting and may produce witnesses and be represented by counsel in support of his or her claim.

**104.17.11 Suspension of Certification Requirements.** ~~See section 113.11.7. Upon Broward County being declared a Disaster Area, the Chairperson of BORA or designee may temporarily suspend the Broward County certification requirements for all Certified by the State of Florida, Department of Business and Professional Regulation, BCAIB as Building Code Administrators, Plans Examiners and Inspectors. The length of time that this suspension will be in effect will be for thirty (30) calendar days. The Chairperson or designee may extend this period if conditions warrant. This temporary suspension of the certification requirement shall not apply to an individual being hired on a permanent basis.~~

Commented [SR11]: Repeated in 113.

**104.18 Recertification of Building Departments and Building Code Inspection Enforcement Personnel.**

**104.18.1** All Building Departments shall be recertified biennially by BORA. To be recertified, all Building Officials, Assistant Building Officials, Chief Inspectors, Plans Examiners, and Inspectors who are presently certified by BORA, shall meet the following criteria and comply with the current requirements for initial certification.

**104.18.1.1** Be currently certified by BORA.

**104.18.1.2** Be presently employed by a governmental AHJ (Building Department) within Broward County. See Section 104.17.

**104.18.1.3** All Building Officials, Assistant Building Officials, Chief Inspectors, Plans Examiners, and Inspectors, to be recertified shall obtain twenty-eight (28) contact hours within a two (2) consecutive calendar year biennial renewal period (starting January 1, on an even year, through December 31, of the next odd year) by attending formal education courses, workshops, and seminars, any of which shall be approved by BORA, the Miami-Dade County Code Compliance Office, the BCAIB, the Construction Industry Licensing Board, or the Electrical Contractors Licensing Board, and be related to the individual's discipline. Continuing education contact hours shall include courses approved as discipline specific category (courses which are specific to the code chapters enforced by the specific discipline) and non-discipline specific category. Specific courses mandated for license holders by the State of Florida Boards shall be classified as non-discipline specific, unless clearly indicated as discipline specific by a State agency. A minimum

of one-half (½) of the twenty-eight (28) contact hours within a two (2) consecutive calendar year biennial renewal period shall be discipline specific category. Meetings of BORA Committees shall be counted as one (1) hour in the non-discipline specific category and professional association meetings shall be counted as not to exceed one (1) hour in the discipline specific category for a maximum of fourteen (14) contact hours within a two (2) consecutive calendar year biennial renewal period. Unless authorized by BORA Staff online education courses, workshops and seminars do not meet this requirement and shall not be accepted.

**104.18.1.4 Prorating of continuing education contact hours.** For any person newly certified, the required continuing education is prorated according to the number of months remaining in the renewal period. To determine the continuing education required, divide the number of months remaining in the renewal period from the time of certification by twenty-four (24) and multiply the result by twenty-eight (28). The result, rounded up to the next round number, is the number of continuing educational hours required. Half of these hours shall be discipline specific. Any person newly certified within less than six (6) months remaining in the renewal period shall not be required to have any continuing educational credits.

**104.18.2** A previously employed Building Official, Assistant Building Official, Chief Inspector, Plans Examiner or Inspector may be recertified biennially upon the presentation of twenty-eight (28) contact hours of education accumulated during the previous two (2) consecutive calendar years.

**104.18.3** If certification is not renewed and allowed to lapse, the application for recertification shall be accompanied with proof acceptable to BORA that the twenty-eight (28) contact hour requirement of continued education has been met.

**104.18.4** By December 5 of the second year (the odd-numbered year) of a biennially renewal period, on a form as approved by BORA, each Building Official shall submit to BORA a list of currently employed personnel who are to be recertified for the ensuing new biennial renewal period, on a form as approved by BORA, ~~accompanied by a check in the amount appropriate for each discipline according to BORA Fee Schedule for Certification for each certification, payable to the "Broward County Board of County Commissioners."~~ Recertification is to be effective on January 1 of each biennial renewal period (the even-numbered year).

**104.18.5 Recertification Fee.** ~~If applicable, each application shall be accompanied by a check in the amount appropriate for each discipline according to BORA Fee Schedule for Recertification, payable to "Broward County Board of County Commissioners."~~

**Commented [SR12]:** BORA repealed the fee. Proposed for deletion by Ted.

**Commented [SR13]:** BORA repealed the fee. Proposed for deletion by Ted.

**104.19 Fire Prevention Bureau.** A Fire Prevention Bureau shall be established within the fire department, under the direction of the Fire Chief, which shall consist of such fire department personnel as may be assigned thereto, by the Fire Chief, in accordance with the requirements prescribed herein. The function of this bureau shall be to assist the Fire Chief in the administration and enforcement of the Fire Protection Provision of this Code, and FFPC. Personnel assigned to the bureau as the Fire Marshal, Fire Code Official, Fire Plans Examiner, and/or Fire Inspector shall be certified by BORA. As set forth herein: (see also Broward Local Fire Amendments to FFPC)

**104.19.1 Appointment, Powers and Duties and Certification of the Fire Marshal/Fire Code Official, Fire Plans Examiner, and/or Fire Inspector.** There shall be appointed by the Fire Chief, certain fire prevention personnel to be assigned to the Fire Prevention Bureau to serve as Fire Marshal/Fire Code Official, Fire Plans Examiner, and/or Fire Inspector.

**104.19.1.1** Certification of Fire Marshal/Fire Code Official, Fire Plans Examiner, and/or Fire Inspector shall comply with the requirements set forth in the Broward County Amendments to the FFPC, ~~6<sup>th</sup> Edition.~~

**104.19.1.2 Powers and Duties.** The Fire Marshal or Fire Code Official, Fire Plans Examiner, and/or Fire Inspector shall be vested with the powers and perform the duties as set forth in the Broward County Amendments to the FFPC, ~~6<sup>th</sup> Edition.~~



**104.19.2.1** No enforcing agency may issue any permit for construction, erection, alteration, repair, or demolition until the Building Official, in conjunction with the appropriate fire plans examiner, has reviewed the plans and/or specifications for such proposal and both officials have found the plans and/or specifications to be in compliance with FFPC and the applicable fire safety standards as determined by the local authority in accordance with FFPC and Chapter 633, Florida Statutes. In the event that agreement cannot be reached between the Building and Fire Officials, the dispute shall be referred to the Fire Code Committee for review and recommendation to BORA.

**104.19.2.2** Industrial construction on sites where design, construction, and fire safety are supervised by appropriate design and inspection professionals and which contain adequate in-house fire departments, is exempt; subject to local government option, from review of plans and/or specifications and inspections, providing owners certify that applicable codes and standards have been met and supply appropriate approved drawings to the building department. The enforcing agency shall issue a permit to construct, erect, alter, repair, or demolish any building when the plans and/or specifications for such proposal comply with the Fire Protection Provisions of this Code, FFPC, and Chapter 633, Florida Statutes.

**104.19.2.3** Approval of Fire Department accessibility and all tests of fire alarm detection and suppression systems, smoke evacuation systems and life safety systems shall be conducted prior to final structural inspection and issuance of Certificate of Occupancy. (See Section 111)

**104.20 Stop-Work Orders.** See Section 115, Stop Work Order.

**104.21 Orders to Eliminate Dangerous or Hazardous Conditions.** Whenever the Fire Chief or his or her duly authorized representative shall find in any building or upon any premises, dangerous or hazardous conditions or materials, including, but not limited to violations of the requirements encompassed in Chapter 633, Florida Statutes, or the following paragraphs, he or she shall order such violations and dangerous conditions or materials removed or remedied.

**104.21.1** Dangerous or unlawful amounts of combustible or explosive or otherwise hazardous materials.

**104.21.2** Hazardous conditions arising from defective or improperly installed equipment for handling or using combustible or explosive or otherwise hazardous materials.

**104.21.3** Dangerous accumulation of rubbish, wastepaper, boxes, shavings, or other flammable materials.

**104.21.4** Accumulations of dust or waste material in air conditioning or ventilation systems or of grease in kitchen or other exhaust ducts.

**104.21.5** Obstructions to, on, or under fire escapes, stairs, passageways, or doors, liable to interfere with the operations of the fire department or egress of occupants; locked exits shall constitute an unsafe condition.

**Exception:** Unless permitted by the Fire Protection Provisions of this Code and FFPC.

**104.21.6** Obstruction to windows. Where windows are required to provide the second means of escape from a room or area, the following are prohibited:

- A. Bars that cannot be opened from the inside.
- B. Other obstructions such as security grills.

**Exception:** Only one (1) window is required to meet the above where two (2) windows are in the same room or area.

**104.21.7** Any building or other structure which, for want of repairs, lack of adequate exit facilities, automatic or other fire alarm apparatus or fire extinguishing equipment, or by reason of age or dilapidated condition, or from any other cause, create a hazardous condition.

**104.21.8** Any building or structure vacated or unoccupied shall be properly secured to prevent entry by unauthorized persons.

**104.21.9** The improper storage, transporting or handling of all classes of flammable or combustible liquids or otherwise hazardous substances any place within the enforcing jurisdiction.

**104.22 Certification.** All Fire Department Inspection Personnel shall be certified by BORA as set forth in the current Broward County Amendments to the FFPC, ~~6<sup>th</sup> Edition.~~

**Commented [R14]:** Eliminate the possibility of typos on the edition.

**104.23 Recertification.** All Fire Department/Fire Prevention Bureau Inspection Personnel shall be recertified by BORA as set forth in the current Broward County Amendments to the FFPC, ~~6<sup>th</sup> Edition.~~

**104.24 Applications and permits.** Reserved. See Section 105.

**104.25 Notices and Orders.** The Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative shall issue all necessary notices or orders to ensure compliance with this Code, the Fire Protection Provisions of this Code, FFPC, and all Fire Codes.

**104.25.1 Concealed Work.** The Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative may order portions of the structural frame of a building and/or structure to be exposed for inspection when, in his or her opinion, there is a good reason to believe that a building or portion thereof is in an unsafe or dangerous condition or that there is willful or negligent concealment of a violation of this Code, the Fire Protection Provisions of this Code, FFPC, and all Fire Codes.

**104.26 Inspections.** Reserved. See Section 110.

**104.27 Identification.** Reserved.

**104.28 Right of Entry.** Upon presentation of proper credentials, the Building Official or his or her duly authorized representative or the Fire Chief/Fire Marshal/Fire Code Official or his or her duly authorized representative may enter, at any reasonable time, any building, structure or premises for the purpose of making any inspection or investigation, which falls under the provisions of this Code, and FFPC.

**104.29 Department records.** Reserved.

**104.30 Liability.** Reserved.

**104.31 Modifications.** Reserved.

**104.32 Alternative materials, design and methods of construction and equipment.** The provisions of the technical codes are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this Code, provided any such alternative has been reviewed and approved by the Building Official and/or Fire Marshal/Fire Code Official (according to the Fire Protection Provisions of this Code and FFPC). An alternative material, design or method of construction shall be approved where the Building Official and/or Fire Marshal/Fire Code Official (according to the Fire Protection Provisions of this Code and FFPC) finds that the proposed design is satisfactory and complies with the intent of the provisions of this Code, and that the material, method of construction offered for the purpose intended; is at least the equivalent of that prescribed in the technical codes in quality, strength, effectiveness, fire resistance, durability and safety. Where alternate life safety systems are designed, the "SFPE Engineering Guide to Performance-Based Fire Protection Analysis and Design of Buildings," or other methods approved by the Building Official and/or Fire Marshal/Fire Code Official (according to the Fire Protection Provisions of this Code and FFPC) may be used. The Building Official and/or Fire

Marshal/Fire Code official (according to the Fire Protection Provisions of this Code and FFPC) shall require that sufficient evidence or proof be submitted to substantiate any claim made regarding the alternative. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved.

**104.32.1 Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this Code, shall consist of valid research reports from approved sources.

**104.32.2 Tests.** Whenever there is insufficient evidence of compliance with the provisions of this Code, or evidence that a material or method does not conform to the requirements of this Code, or in order to substantiate claims for alternative materials or methods, the Building Official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this Code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the Building Official for the period required for retention of public records.

**104.32.3 Accessibility.** Alternate designs and technologies for providing access to and usability of a facility for persons with disabilities shall be in accordance with provisions of the FBC, Accessibility.

**104.33 Standards.** The types of construction or materials or methods of design referred to in this Code shall be considered as standards of quality and strength. New types of construction or materials or methods of design shall be at least equal to these standards for the corresponding use intended.

**104.34 Approved materials and equipment.** Materials, equipment, and devices approved by the Building Official shall be constructed and installed in accordance with such approval.

**104.34.1** Used materials and equipment. The installation of used materials which meet the requirements of this Code for new materials is permitted. Used equipment and devices shall not be installed unless approved by the Building Official.

**104.35 Application for the use of alternative methods and materials.**

**104.35.1** Any person desiring to use types of construction or materials or methods of design not specifically mentioned in this Code shall file with the Building Official and/or Fire Marshal/Fire Code Official, in writing, authentic proof in support of claims that may be made regarding the sufficiency of such types of construction or materials or methods of design and request approval and permission for their use. Such documentation shall be attached to and be made a part of the permit documents.

**104.35.2** The Building Official and/or Fire Marshal/Fire Code Official shall approve such alternate types of construction or materials or methods of design if it is clear that the standards of this Code are at least equaled. If, in the opinion of the Building Official and/or Fire Marshal/Fire Code Official, the standards of this Code will not be satisfied by the requested alternate, he or she shall refuse approval.

**104.36 Appeal.** Any person, whose request for alternate types of construction and materials or methods of design has been denied by the Building Official and/or Fire Marshal/Fire Code Official, may appeal to BORA or Fire Code Committee by written request to the Secretary of the Board, and such written request shall be transmitted to BORA or Fire Code Committee if fire related. For fire related appeals see FFPC.

**104.37 Appeal by Others.** Any person, in whose considered opinion an action by the Building Official or Fire Marshal/Fire Code Official approving or disapproving construction under this Code does not satisfy the standards of the Code for reasons of safety, quality or strength, may appeal to BORA by written request to the Secretary of the Board, and such written request shall be transmitted to BORA or BORA Fire Code Committee. For fire related appeals see FFPC.

## Section 105 Permits

**105.1 Required.** Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, remove, demolish or to change the occupancy any building, structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any impact-resistant coverings, electrical, gas, mechanical or plumbing system, the installation of which is regulated by this Code, or to cause any such work to be done; shall first make application to the Building Official and/or Fire Code Official as indicated in FFPC or a duly authorized representative and obtain the required permits.

**105.1.1 Annual Facility Permit.** The Building Official is authorized to issue an annual facility permit for any occupancy to facilitate routine maintenance or emergency service, repair, refurbishing, minor renovations of service systems or manufacturing equipment installations/relocations. The Building Official shall be notified of major changes and shall retain the right to make inspections at the site as deemed necessary. An annual facility permit shall be assessed with an annual fee and shall be valid for one (1) year from date of issuance. A separate permit shall be obtained for each facility and for each construction trade, as applicable. The permit application shall contain a general description of the parameters of work intended to be performed during the year.

**105.1.2 Annual Facility Permit Records.** The holders of an annual premises permit shall maintain a detailed record listing all work performed under such annual facility permit on forms provided by the Building Official and shall make that record available to the Building Official or his or her authorized employees upon demand, in order that the work may be inspected as deemed necessary. The holder of the annual facility permit shall be responsible for insuring that all work performed under such permit conforms to this Code and if inspection reveals that such work does not so conform, the work will be corrected or removed. The annual premises permit shall be subject to cancellation for violation of the provisions of applicable regulations.

**105.1.3 Food Permit.** In accordance with Section 500.12, Florida Statutes, a food permit from the Department of Agriculture and Consumer Services is required of any person who operates a food establishment or retail store.

**105.1.4 Public swimming pool.** The local enforcing agency may not issue a building permit to construct, develop, or modify a public swimming pool without proof of application, whether complete or incomplete, for an operating permit pursuant to Section 514.031, Florida Statutes. A certificate of completion or occupancy may not be issued until such operating permit is issued. The local enforcing agency shall conduct its review of the building permit application upon filing and in accordance with Chapter 553, Florida Statutes. The local enforcing agency may confer with the Department of Health, if necessary, but may not delay the building permit application review while awaiting comment from the Department of Health.

**105.2 Work exempt from permit.** Exemptions from permit requirements of this Code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this Code. Permits shall not be required for the following:

- A. No permit shall be required in this or any of the following Sections for general maintenance or repairs which do not change the occupancy and the value of which does not exceed fifteen hundred dollars (\$1,500.00) in labor and material as determined by the Building Official.
- B. No permit is required for the installation of a concrete slab on grade in the right-of-way that is less than two hundred fifty (250) square feet in total, installed entirely within a public right-of-way and solely for the purpose of accessibility to public transportation shall not be considered a structure as described in Section 105.1.
- C. No permit shall be required for storm water gutter systems installed on buildings regulated by the FBC Residential, that have an eave height of thirty (30) feet or less unless such gutters are installed behind any part of the eave drip metal.
- D. **Electrical.**

Commented [SR15]: IV. Better match to 101.2 language.

1. No permit shall be required for installations performed by companies whose work is regulated by Chapter 364, Florida Statutes, for unregulated inside telephone wiring on new construction for commercial occupancies.
2. No permit shall be required for installations performed by companies whose work is regulated by Chapter 364, Florida Statutes, in single family occupancies, whether detached or townhouse.
3. Permits shall not be required for the installation, replacement, removal or metering of any load management control device.

**E. Gas.**

1. Portable heating appliance not connected to a building air distribution system.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

**F. Mechanical.**

1. Portable heating appliance not connected to a building air distribution system.
2. Portable ventilation equipment not connected to a building air distribution system.
3. Portable cooling unit not connected to a building air distribution system.
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this Code.
5. Replacement of any part which does not alter its approval or make it unsafe, including replacement of thermostats.
6. Portable evaporative cooler.
7. Self-contained refrigeration system containing ten (10) pounds (4.54 kg) or less of refrigerant and actuated by motors of one (1) horsepower (746 W) or less.
8. The installation, replacement, removal, or metering of any load management control device.
9. Portable air compressors, dust collectors and their correspondent distributions systems.
10. Pool heating equipment. Plumbing and electrical permits are required.

**G. Plumbing.**

1. The stopping of leaks in drains, water, soil, waste or vent pipe provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this Code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves, faucets or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.
3. The cleaning of septic tanks, or temporary placement of chemical toilets on construction sites where such work is located within the property lines.

**H. Roofing.**

1. No permit will be required for maintenance or repair of any roof covering, as provided in Chapter 15, for work not exceeding fifteen hundred dollars (\$1,500.00) as determined by the Building Official.

**105.2.1 Emergency repairs.** Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the Building Official.

**105.2.2 Minor repairs.** Ordinary minor repairs may be made with the approval of the Building Official without a permit, provided the repairs do not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; additionally, ordinary minor repairs shall not include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring systems or mechanical equipment or other work affecting public health or general safety, and such repairs shall not violate any of the provisions of the technical codes.

**105.2.3 Public Service Agencies/Other Approvals.** An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this County, and there may be additional permits required from other governmental entities such as water management districts, state agencies or federal agencies."

In addition, the Building Official shall require that the laws, rules and regulations of any other regulatory AHJ, and where such laws, rules and regulations are applicable and are known to the Building Official, shall be satisfied before a permit shall be issued. The Building Official shall require such evidence, as in his or her opinion is reasonable, to show such other approvals. The Building Official shall not thereby be held responsible for enforcement of such other regulations as he or she is not specifically authorized to enforce. Following are some, but not necessarily all, other agencies having jurisdiction:

**105.2.3.1** The Engineering Department, Fire Department and/or Police Department for the moving of buildings, structures and heavy equipment over or the temporary blocking of streets or other public spaces, or the temporary construction, or storage of material, or construction operations on streets or other public spaces; and for land clearing adjacent to existing sidewalks; as well as for the discharge of rainwater or other water runoff on streets or other public spaces into the public sewers.

**105.2.3.2** The Fire Department for the burning of construction or demolition waste or the use or storage of explosives.

**105.2.3.3** The City and/or County Tax assessor and Collector for the moving or demolition of any building or structure.

**105.2.3.4** Broward County Environmental Protection and Growth Management Department and/or Florida Department of Environmental Regulation for (but not limited to):

- A. The adequacy of waste treatment plants receiving waste from industrial, commercial, public or dwelling units.
- B. Waste treatment and disposal systems.
- C. Waste disposal wells.
- D. Waste water collection systems.
- E. Air pollution.
- F. Underground and above ground liquid fuel storage.

**105.2.3.5** Broward County Health Department, Florida Department of Health for (but not limited to):

- A. Onsite sewage treatment and disposal systems.

- B. Places where food or drink is prepared or served to the public, but not regulated by the Department of Business and Professional Regulation or by the Department of Agriculture and Consumer Services.
- C. Public water supply and supply wells.
- D. Public swimming pools.
- E. Chemical toilets as set forth in Section 311.1 of the Florida Plumbing Code.
- F. Mobile home parks as set forth in Sections 513 and 723, Florida Statutes.

**105.2.3.6** The State Hotel Commission for the construction, alteration or addition to multiple-residential rental units or places where food and/or drink is prepared or served to the public.

**105.2.3.7** The U.S. Army Corps of Engineers, for construction of bulkheads or docks adjacent to or extending into navigable waters.

**105.2.3.8** Federal regulations limiting construction during periods of national emergency.

**105.2.3.9** The Public Works Department for bulkheads, docks, similar construction or fill along water front property.

**105.2.3.10** The Rules and Regulations of the State Fire Marshal.

**105.2.3.11** The State of Florida Bureau of Elevator Inspection and/or the Broward County Permitting, Licensing and Consumer Protection Division, Elevator Section.

**105.2.3.12** The Department of Agriculture and Consumer Services (Grocery stores and convenience stores) or Department of Business and Professional Regulation (public restaurants).

**105.2.3.13** In addition to the plumbing permit, permits shall be required by other regulating authorities having jurisdiction. Following are some, but not necessarily all, other required permits:

- A. Fire Department and Police Department before obstructing or excavating in any public thoroughfare;
- B. Engineering Department before cutting any street paving, sidewalk curb or sewage system or part thereof or appurtenance thereof, or otherwise cutting, tapping or piercing any public sewer or appurtenance thereof;
- C. Building Official before the addition of any fixtures or the removal or alteration of any structural or load bearing members.

**105.3 Application for Permit Required.** Any applicant desiring a permit to be issued by the Building Official or Fire Code Official as required, shall first file an application therefore in writing or electronically on a form furnished by the Building Department or Fire Department for that purpose.

**105.3.0.1 Qualification of Applicant.** Application for permit will be accepted from owner, qualified persons or firms, or authorized agents.

**105.3.0.1.1 Qualification of persons or firms.** Persons or firms shall be qualified in accordance with the rules of the Broward County Central Examining Board, Ordinance No. 78-9 and Chapter 9 of the Broward County Codes; the State of Florida, Department of Professional Regulation by authority of Chapter 489, Parts One and Two of the Florida Statutes; or other Examining Boards as specifically approved by BORA.

**105.3.0.2 Application Form.** Each application for a permit, shall be submitted with the required fee, and filed with the Building Department on the Broward County Uniform Building Permit Application (effective April 1, 2016) furnished for that purpose (see Appendix A of the Broward County Administrative Provisions). The application shall describe the property on which the

proposed work is to be done and shall include both the legal description and more commonly known address. The application shall also show the use or occupancy of the building or structure; shall be accompanied by plans and/or specifications as required hereafter; shall state the value of the proposed work; as specified in Section 109, shall give such other information as reasonably may be required by the Building Official to describe the proposed work; and shall be attested by the owner, qualified person or firm or authorized agents. The Permit Application shall be inscribed with the application date and the Edition of the Code in effect and comply with the requirements of Section 713.135(5) and (6), Florida Statutes. The code in effect on the date of application shall govern the project. For a building permit for which an application is submitted prior to the effective date of the FBC, the state minimum building code in effect in the permitting jurisdiction on the date of the application shall govern the permitted work for the life of the permit and any extension granted to the permit.

*Effective October 1, 2017, a local enforcement agency shall post each type of building permit application on its website. Completed applications must be able to be submitted electronically to the appropriate building department. Accepted methods of electronic submission include, but are not limited to, e-mail submission of applications in portable document format or submission of applications through an electronic fill-in form available on the building department's website or through a third-party submission management software. Payments, attachments, or drawings required as part of the permit application may be submitted in person in a nonelectronic format, at the discretion of the building official. \**

**105.3.0.3 Attesting of Application.** The permit application shall be signed in a space provided, before an officer duly qualified to administer oaths, by the owner, qualified person or firm, or authorized agents. The contractor may sign solely and independently from either an Owner or Owner's Agent for the purpose of applying for a building permit.

Commented [R16]: I. Added to follow F.I # 25.

**105.3.0.4 Changes to Application.** In the event of a change in any material fact given in the attested application which served as a basis for issuing the permit, the permit holder shall immediately file an amended attested application detailing such changed conditions. In the event the change in the attested application is a change in the person responsible for the work, the owner shall immediately stop the work and notify the Building Official in writing detailing such changed conditions and any other information required by the Building Official or in lieu thereof a new attested permit application shall be filed immediately by a new qualified applicant. If such changed conditions are determined to be in compliance with this Code and other applicable regulations, an amended building permit will be issued, without additional fee if the changed condition shall not be greater than those permitted in the original permit.

**105.3.1 Action on application.** The Building Official and Fire Code Official or his or her duly authorized representative shall examine or cause to be examined applications for permits and amendments thereto within thirty (30) working days after plans and/or specifications are submitted and accepted for a building permit. The Building Official or his or her duly authorized representative shall notify the applicant in writing or electronically, that a permit is ready for issuance or that additional information is required. If the application or the construction documents do not conform to the requirements of pertinent laws, the Building Official and/or Fire Code Official shall reject such application in writing or electronically, stating the reasons therefore citing relevant code sections. If the Building Official and after consulting with the Fire Code Official is satisfied that the proposed work conforms to the requirements of this Code, laws and ordinances applicable thereto, the Building Official shall issue a permit therefore as soon as practicable, to persons or firms qualified in accordance with 105.3.0.1.1 and/or FFPC.1.12. When authorized through contractual agreement with a school board, in acting on applications for permits, the building official shall give first priority to any applications for the construction of, or addition or renovation to, any school or educational facility.

**105.3.1.1** Not more than sixty (60) calendar days after the date of such notification, where such additional information has not been submitted or the permit has not been purchased, the application and/or the permit shall become null and void. If the 60<sup>th</sup> day falls on a Saturday, Sunday or a National Holiday the next business day shall be used for the 60<sup>th</sup> day. The Building



Official may extend such permit application to be corrected or purchased for a single period of sixty (60) days after the initial expiration date if the request is in writing, for a good reason and is submitted prior to the initial expiration date.

**105.3.1.2** Where an application and/or a permit has become null and void, an applicant may again apply, as set forth in Section 105.3 of this Code, and such applications shall be processed as though there had been no previous application.

**105.3.1.3** If a state university, Florida college or public school district elects to use a local government's code enforcement offices, fees charged by counties and municipalities for enforcement of the FBC on buildings, structures, and facilities of state universities state colleges and public school districts shall not be more than the actual labor and administrative costs incurred for plans review and inspections to ensure compliance with the Code.

**105.3.1.4** Permits shall be required for the following operations:

**105.3.1.4.1** The erection or construction of any building or structure, the adding to, enlarging, repairing, improving, altering, covering, or extending of any building or structure.

**105.3.1.4.2** The moving of any building or structure within, into, through or out of the area of jurisdiction, or the moving of a building or structure on the same lot.

**105.3.1.4.3** The demolition of any building or structure. (Refer to 116.1.4, 105.18.)

**105.3.1.4.4** The installation, alteration or repair of any sanitary plumbing, water supply, lawn sprinkler or gas supply system, as provided in the FBC, Plumbing, and/or FBC Fuel Gas.

**105.3.1.4.5** The installation, alteration or repair of any electrical wiring or equipment, as provided in Chapter 27, Electrical Systems; except as allowed in Section 105.17 of this Code. Any alteration or extension of an existing wiring system is not considered to be maintenance or repair.

**105.3.1.4.6** The installation, alteration or major repair of any boiler, pressure vessel, furnace, steam-actuated machinery, or heat producing apparatus, including the piping and appurtenances thereto as provided in this Code.

**105.3.1.4.7** The erection, remodeling, relocating, repair, altering, or removal of any sign, as provided in Section 3107 of this Code.

**105.3.1.4.8** The erection, alteration or repair of any awning or similar appurtenance, as defined in Section 202 of this Code.

**105.3.1.4.9** The storage and use of all volatile, flammable, or combustible liquids, gases, and materials, but such permits shall not be issued without the endorsement of the Fire Chief, or his/her designee, as provided in FFPC.

**Commented [R17]:** IV. Consistency w/ FFPC

**Commented [SR18]:** By B. Parks. Flexibility and consistency w/ FFPC

**105.3.1.4.10** The application, construction, or repair of any roof covering, as provided in Chapter 15, for work exceeding fifteen hundred dollars (\$1,500.00).

**105.3.1.4.10.1** Not more than twenty-five (25) percent of the total roof area or roof section of any existing building or structure shall be repaired, replaced or recovered in any 12-month period unless the entire roofing system or roof section conforms to requirements of this Code.

**105.3.1.4.11** The installation, alteration or major repair of any air conditioning, refrigeration, vacuum, pneumatic or other mechanical system, as provided in the FBC, Mechanical. A permit shall not be required for repairs that do not change the location, size or capacity of a compressor, coil, or duct.

**105.3.1.4.12** The installation, alteration, or repair of any apparatus producing air contaminants.

**105.3.1.4.13** The installation, alteration, or repair of a swimming pool, as provided in Section 424 454 of this Code and Chapter 41 42 of the Florida Residential Code.

Commented [SR19]: IV. Correcting section # by Ted

**105.3.1.4.14** The installation, alteration, or repair of any structure or facility on private property defined by this or any other regulation as being within the scope of work of an engineering contractor.

**105.3.1.4.15** The installation of exterior windows and exterior glass doors in new buildings or additions and the installation, alteration or repair of such windows and doors in existing buildings.

**105.3.1.4.16** The installation, alteration, or repair of any curtain wall.

**105.3.1.4.17** The installation, alteration, or repair of any garage door in any existing building.

**105.3.1.4.18** The installation, alteration, or repair of any fence.

**105.3.1.4.19** The installation, alteration, or repair of any screen enclosure.

**105.3.1.5** No permit may be issued for any building construction, erection, alteration, modification, repair, or addition unless the applicant for such permit provides to the enforcing agency which issues the permit any of the following documents which apply to the construction for which the permit is to be issued and which shall be prepared by or under the direction of an engineer registered under Chapter 471, Florida Statutes:

1. Plumbing documents for any new building or addition which requires a plumbing system with more than two hundred fifty (250) fixture units or which costs more than one hundred twenty-five thousand dollars (\$125,000.00).
2. Fire sprinkler documents for any new building or addition which includes a fire sprinkler system which contains fifty (50) or more sprinkler heads. Personnel as authorized by Chapter 633, Florida Statutes, may design a fire sprinkler system of forty-nine (49) or fewer heads and may design the alteration of an existing fire sprinkler system if the alteration consists of the relocation, addition or deletion of not more than forty-nine (49) heads, notwithstanding the size of the existing fire sprinkler system.
3. Heating, ventilation and air-conditioning documents for any new building or addition which requires more than a 15-ton-per-system capacity or which is designed to accommodate more than one hundred (100) persons or for which the system costs more than one hundred twenty-five thousand dollars (\$125,000.00). This paragraph does not include any document for the replacement or repair of an existing system in which the work does not require altering a structural part of the building or for work on a residential one-family, two-family, three-family or four-family structure.

An air-conditioning system may be designed by an installing air-conditioning contractor certified under Chapter 489, Florida Statutes to serve any building or addition which is designed to accommodate one hundred (100) persons or fewer and requires an air-conditioning system with value of one hundred twenty-five thousand dollars (\$125,000.00) or less; and when a 15-ton-per-system or less is designed for a singular space of a building and each 15-ton system or less has an independent duct system. Systems not complying with the above require design documents that are to be sealed by an Engineer.

**Example 1:** When a space has two (2) 10-ton systems with each having an independent duct system, the contractor may design these two (2) systems since each system is less than fifteen (15) tons.

**Example 2:** Consider a small single-story office building, which consists of six (6) individual offices where each office has a single three-ton package air conditioning heat pump. The six (6) heat pumps are connected to a single water-cooling tower. The cost of the entire heating, ventilation and air conditioning work is forty-seven thousand dollars (\$47,000.00) and the office building accommodates fewer than one hundred (100) persons. Because the six (6) mechanical units are connected to a common water tower this is considered to be an 18-ton system. It therefore could not be designed by a mechanical or air conditioning contractor.

**Note:** It was further clarified by the Commission that the limiting criteria of one hundred (100) persons and one hundred twenty-five thousand dollars (\$125,000.00) apply to the building occupancy load and the cost of the total air-conditioning system of the building.

4. Any specialized mechanical, electrical, or plumbing document for any new building or addition which includes a medical gas, oxygen, steam, vacuum, toxic air filtration, clean agent fire extinguishing or fire detection and alarm system which costs more than five thousand dollars (\$5,000.00).
5. Electrical documents. See Section 471.003(2)(h), Florida Statutes.

**Note:** Documents requiring an engineer seal by this part shall not be valid unless an Engineer who possesses a valid certificate of registration has signed, dated, and stamped such document as provided in Section 471.025, Florida Statutes.

6. All public swimming pools and public bathing places as defined by and regulated under Chapter 514, Florida Statutes.

#### 105.3.2 Time Limitation.

**105.3.2.1** Every permit issued shall become null and void if work, as defined in Section 105.3.2.6 authorized by such permit is not commenced within one hundred eighty (180) days from the date the permit is issued or if the work authorized by such permit is suspended or abandoned for a period of ninety (90) days after the time the work is commenced.

**105.3.2.2** If the work covered by the permit has not commenced, or has been commenced and has been suspended or abandoned, the Building Official may for good cause, extend such permit for no more than two (2) periods of ninety (90) days, not to exceed one (1) year, from the date of expiration of the initial permit, if an extension is requested.

Commented [SR20]: IV. grammar

**105.3.2.3** If the work covered by the permit has commenced, is in progress, has not been completed and is being carried on progressively in a substantial manner in accordance with Section 105.3.2.6, the permit shall be in effect until completion of the job.

**105.3.2.4** If work has commenced and the permit is revoked, becomes null and void or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

**105.3.2.5** If a new building permit is not obtained within one hundred eighty (180) days from the date the initial permit became null and void, the Building Official is authorized to require that any work which has been commenced or completed be removed from the building site; or alternately, he or she may issue a new permit, on application, providing the work in place and the required work to complete the structure meets all applicable regulations in effect at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date of issuance of a new permit.

**Exception:** On written request from owner or the contractor, the Building Official may reinstate the permit one (1) time. The job shall be completed under the jurisdiction of the code that the

original permit was approved under. The reinstated permit shall be subject to the life safety requirements as determined by the Fire Code Official.

**105.3.2.5.1** A local government that issues building permits shall send a written notice of expiration, by e-mail or United States Postal Service, to the owner of the property and the contractor listed on the permit, no less than thirty (30) days before a building permit is set to expire. The written notice must identify the permit that is set to expire and the date the permit will expire.

~~(a) A property owner, regardless of whether the property owner is the one listed on the application for the building permit, may close a building permit by complying with the following requirements:~~

- ~~1. The property owner may retain the original contractor listed on the permit or hire a different contractor appropriately licensed in this state to perform the work necessary to satisfy the conditions of the permit and to obtain any necessary inspections in order to close the permit. If a contractor other than the original contractor listed on the permit is hired by the property owner to close the permit, such contractor is not liable for any defects in the work performed by the original contractor and is only liable for the work that he or she performs.~~
- ~~2. The property owner may assume the role of an owner-builder, in accordance with Sections 489.103(7) and 489.503(6).~~
- ~~3. For purposes of this section, the term "close" means that the requirements of the permit have been satisfied.~~

~~(b) If a building permit is expired and its requirements have been substantially completed, as determined by the local enforcement agency, the permit may be closed without having to obtain a new building permit, and the work required to close the permit may be done pursuant to the building code in effect at the time the local enforcement agency received the application for the permit, unless the contractor has sought and received approval from the local enforcement agency for an alternative material, design, or method of construction.~~

~~(c) A local enforcement agency may close a building permit six (6) years after the issuance of the permit, even in the absence of a final inspection, if the local enforcement agency determines that no apparent safety hazards exist.~~

~~(d) A local enforcement agency may not deny issuance of a building permit to; issue a notice of violation to; or fine, penalize, sanction, or assess fees against an arms-length purchaser of a property for value solely because a building permit applied for by a previous owner of the property was not closed. The local enforcement agency shall maintain all rights and remedies against the property owner and contractor listed on the permit.~~

~~(e) The local enforcement agency may not deny issuance of a building permit to a contractor solely because the contractor is listed on other building permits that were not closed.~~

**105.3.2.6** Work shall be considered to have commenced and be in active progress when the permit has received an approved inspection within ninety (90) days of being issued, or if in the opinion of the Building Official, the permit has a full complement of workers and equipment is present at the site to diligently incorporate materials and equipment into the structure, weather permitting. This provision shall not be applicable in case of civil commotion or strike or when the building work is halted due directly to judicial injunction, order or similar process. The fact that the property or parties may be involved in litigation shall not be sufficient to constitute an exception to the time period set forth herein.

**Commented [SR21]:** III. Move to 105.5 and 105.6 to match state Ch.1

**Exception:** ~~To the time period.~~ A primary permit shall not be deemed expired while the secondary permit is considered active.

**105.3.2.7** The fee for renewal, re-issuance and extension of a permit shall be set forth by the AHJ.

**105.3.2.8** If the work covered by the permit is subordinate to the permit issued to the general (or prime) contractor, i.e. plumbing, electrical, pool, etc., the subordinate permit will be in effect for the full time of the contract permit.

**105.3.3** An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this County, and there may be additional permits required from other governmental entities such as water management districts, state agencies or federal agencies."

**105.3.4** A building permit for a single-family residential dwelling must be issued within thirty (30) working days of application; unless unusual circumstances require a longer time for processing the application or unless the permit application fails to satisfy the FBC or the enforcing agency's laws or ordinances.

**105.3.5 Identification of minimum premium policy.** Except as otherwise provided in Chapter 440, Florida Statutes, Workers' Compensation, every employer shall, as a condition to receiving a building permit, show proof that it has secured compensation for its employees as provided in Sections 440.10 and 440.38, Florida Statutes.

**105.3.6 Asbestos.** The enforcing agency shall require each building permit for the demolition or renovation of an existing structure to contain an asbestos notification statement which indicates the owner's or operator's responsibility to comply with the provisions of Section 469 Florida Statutes and to notify the Department of Environmental Protection of his or her intentions to remove asbestos, when applicable, in accordance with state and federal law.

**105.3.6.1 Asbestos removal.** Moving, removal or disposal of asbestos-containing materials on a residential building where the owner occupies the building, the building is not for sale or lease, and the work is performed according to the owner-builder limitations provided in this paragraph. To qualify for exemption under this paragraph, an owner must personally appear and sign the building permit application. The permitting agency shall provide the person with a disclosure statement in substantially the following form:

**Disclosure**

**Statement**

State law requires asbestos abatement to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own asbestos abatement contractor even though you do not have a license. You must supervise the construction yourself. You may move, remove or dispose of asbestos-containing materials on a residential building where you occupy the building and the building is not for sale or lease, or the building is a farm outbuilding on your property. If you sell or lease such building within one (1) year after the asbestos abatement is complete, the law will presume that you intended to sell or lease the property at the time the work was done, which is a violation of this exemption. You may not hire an unlicensed person as your contractor. Your work must be done according to all local, state and federal laws and regulations which apply to asbestos abatement projects. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances.

**105.3.7 Applicable Code for Manufactured Buildings.** Manufacturers should be permitted to complete all buildings designed and approved prior to the effective date of a new code edition, provided a clear signed contract is in place. The contract shall provide specific data mirroring that required by

an application for permit, specifically, without limitation, date of execution, building owner or dealer, and anticipated date of completion. However, the construction activity must commence within six (6) months of the contract's execution. The contract is subject to verification by the Department of Business and Professional Regulation.

**105.4 Conditions of Permit.** A permit issued shall be construed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the Building Official, and/or Fire Marshal/Fire Code Official, or their duly authorized representative from thereafter requiring a correction of errors in plans, construction or violations of this Code.

**105.4.1 Compliance.**

**105.4.1.1** At any time when approved plans and/or specifications are found to be in violation of this Code, the Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official, or his or her duly authorized representative shall notify the designer and the designer shall correct the drawings or otherwise satisfy the Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative that the design and/or working drawings are in compliance with this Code and FFPC.

**105.4.1.2** Compliance with the Code is the responsibility of the property owner and the permit holder. The safety to persons and materials during actual construction operations, as set forth in FBC Building, Chapter 33, is the responsibility of the permit holder.

**105.4.1.3** The Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative (according to this Code and FFPC) shall issue a notice of violation(s) of this Code and/or corrections ordered. Such notice shall be served on the permit holder or his or her job representative by mail, hand delivery, electronically or may be posted at the site of the work. Refusal, failure or neglect to comply with such notice or order within ten (10) days, except where an appeal has been filed with BORA, shall be considered a violation of this Code, and shall be subject to the penalties as set in Section 114 of this Code. In event of failure to comply with this section, no further permits shall be issued to such person, firm or corporation.

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**105.5 Additional options for closing a permit.** Pursuant to section 553.79(15), Florida Statute, a property owner, regardless of whether the property owner is the one listed on the application for the building permit, may close a building permit by complying with the following requirements:

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1. The property owner may retain the original contractor listed on the permit or hire a different contractor appropriately licensed in this state to perform the work necessary to satisfy the conditions of the permit and to obtain any necessary inspections in order to close the permit. If a contractor other than the original contractor listed on the permit is hired by the property owner to close the permit, such contractor is not liable for any defects in the work performed by the original contractor and is only liable for the work that he or she performs.
  2. The property owner may assume the role of an owner-builder, in accordance with Sections 489.103(7) and 489.503(6).
  3. For purposes of this section, the term "close" means that the requirements of the permit have been satisfied.
- (b) If a building permit is expired and its requirements have been substantially completed, as determined by the local enforcement agency, the permit may be closed without having to obtain a new building permit, and the work required to close the permit may be done pursuant to the building code in effect at the time the local enforcement agency received the application for the permit, unless the contractor has sought and received

approval from the local enforcement agency for an alternative material, design, or method of construction.

(c) A local enforcement agency may close a building permit six (6) years after the issuance of the permit, even in the absence of a final inspection, if the local enforcement agency determines that no apparent safety hazards exist.

Commented [SR24]: Moved from 105.3.2

#### 105.6 Suspension or Revocation of Permit.

**105.6.1** The Building Official may revoke a permit or approval issued under the provisions of this Code in case of any false statement or misrepresentation of fact in the application or on the plans and/or specifications on which the permit or approval was based.

**105.6.2** Whenever the work for which a permit has been issued is not being performed in conformity with plans, specifications or descriptions, or approved plans and/or specifications are not being kept at the site, it shall be the duty of the Building Official to notify the contractor or owner or his or her agent, in writing, that the permit is suspended. Written notice shall be mailed or given to the permit holder or his or her agent, and it shall be unlawful for any person or persons to perform any work in or about the building or structure except such work as may be required for the correction of the expressed violations. And if, in the judgment of the Building Official, there is imminent danger that requires immediate action, the permit may be revoked or suspended verbally, and written notice served later.

**105.6.3** When a permit has been suspended, it shall not be reinstated until all existing violations have been corrected. Written notice of reinstatement shall be given the permit holder if requested.

**105.6.4** Upon request by the owner and/or permit holder and upon investigation by the Building Official to determine that the work has been abandoned or that the permit holder is unable or unwilling to complete the contract, a change of contractor may be issued without the initial permit being revoked or suspended.

**105.6.4.1** The foregoing will be permitted only when the following stated persons have filed with the Building Official a letter stating the reason for a change of contractor being required and holding the Building Official harmless from legal involvement. All interested parties shall be notified before action is taken.

1. Where the contractor being changed is the prime contractor, the owner shall file such hold-harmless letter.
2. Where a sub-contractor or specialty contractor is the permit holder, the owner and prime contractor shall both file such hold-harmless letters.

**105.6.5.1** Pursuant to section 553.79(15), Florida Statute, a local enforcement agency may not deny issuance of a building permit to; issue a notice of violation to; or fine, penalize, sanction, or assess fees against an arms-length purchaser of a property for value solely because a building permit applied for by a previous owner of the property was not closed. The local enforcement agency shall maintain all rights and remedies against the property owner and contractor listed on the permit.

Commented [SR25]: new section #, but same language that was moved.

**105.6.5.2** Pursuant to section 553.79(15), Florida Statute, the local enforcement agency may not deny issuance of a building permit to a contractor solely because the contractor is listed on other building permits that were not closed

Commented [SR26]: new section #, but same language that was moved.

Commented [SR27]: Moved from 105.5 To match state Ch. 1

**105.7 Placement of Permit Card.** The building permit card shall be maintained in a conspicuous place on the front of the premises affected thereby during the hours of work in progress and available on demand for examination by the Building Official. The permit card which shall bear the description of the property, the nature of the work being done, the name of the owner and contractor and other pertinent information.

**105.8 Notice of Commencement.** In accordance with Section 713.135, Florida Statutes, when any person applies for a building permit, the authority issuing such permit shall print on the face of each permit card in no less than 14-point, capitalized, boldfaced type: **"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR**

**IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."**

**105.9 Reserved. See 105.3.6 Asbestos.**

**105.10 Certificate of Protective Treatment for prevention of termites.** A weather resistant jobsite posting board shall be provided to receive duplicate Treatment Certificates as each required protective treatment is completed, providing a copy for the person the permit is issued to and another copy for the building permit files. The Treatment Certificate shall provide the product used identity of the applicator, time and date of the treatment, site location, area treated, chemical used, percent concentration and number of gallons used, to establish a verifiable record of protective treatment. If the soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.

**105.11 Notice of termite protection.** A permanent sign, which identifies the termite treatment provider and need for re-inspection and treatment contract renewal, shall be provided. The sign shall be posted near the water heater or electric panel.

**105.12 Work starting before permit issuance.** Upon prior written approval of the Building Official, the scope of work delineated in the building permit application and plans may be started prior to the final approval and issuance of the permit, provided that any work completed (including exploratory uncovering of concealed structural elements of existing buildings for design information) is entirely at risk of the permit applicant and the work does not proceed past the first required inspection.

Commented [SR28]: moving commas. By Ted

**105.13 Phased permit approval.** After submittal of the appropriate construction documents, the Building Official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted and upon payment of the required fee. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted. Corrections may be required to meet the requirements of the technical codes.

**105.14 Permit issued on basis of affidavit.** Reserved.

**105.15 Opening protection.** When any activity requiring a building permit, not including roof covering replacement or repair work associated with the prevention of degradation of the residence, that is applied for on or after July 1, 2008, and for which the estimated cost is fifty thousand dollars (\$50,000.00) or more for a building that is located in the wind borne debris region as defined in the FBC and that has an insured value of seven hundred fifty thousand dollars (\$750,000.00) or more, or, if the building is uninsured or for which documentation of insured value is not present, has a just valuation for the structure for purposes of ad valorem taxation of seven hundred fifty thousand dollars (\$750,000.00) or more, Opening protection as required within the FBC Building or FBC Residential for new construction must be provided.

Commented [SR29]: Typos.

**Exception:** Single family residential structures permitted subject to the FBC are not required to comply with this section.

**105.16 Inspection of existing residential building not impacted by construction.**

- (a) A local enforcing agency, and any local building code administrator, inspector, or other official or entity, may not require as a condition of issuance of a one- or two-family residential building permit the inspection of any portion of a building, structure, or real property that is not directly impacted by the construction, erection, alteration, modification, repair, or demolition of the building, structure, or real property for which the permit is sought.
- (b) This subsection does not apply to a building permit sought for:



1. A substantial improvement as defined in Section 161.54, Florida Statutes or as defined in FBC.
  2. A change of occupancy as defined in FBC.
  3. A conversion from residential to nonresidential or mixed use pursuant to Section 553.507(2)(a) ~~79(20)(a)~~, Florida Statutes or as defined in FBC.
  4. An historic building as defined in FBC.
- (c) This subsection does not prohibit a local enforcing agency, or any local building code administrator, inspector, or other official or entity, from:
1. Citing any violation inadvertently observed in plain view during the ordinary course of an inspection conducted in accordance with the prohibition in paragraph (a).
  2. Inspecting a physically nonadjacent portion of a building, structure, or real property that is directly impacted by the construction, erection, alteration, modification, repair, or demolition of the building, structure, or real property for which the permit is sought in accordance with the prohibition in paragraph (a).
  3. Inspecting any portion of a building, structure, or real property for which the owner or other person having control of the building, structure, or real property has voluntarily consented to the inspection of that portion of the building, structure, or real property in accordance with the prohibition in paragraph (a).
  4. Inspecting any portion of a building, structure, or real property pursuant to an inspection warrant issued in accordance with Sections 933.20—933.30, Florida Statutes.

**Commented [R30]:** This is the correct FL. state statute. By Mike.

**105.17 Streamlined low-voltage alarm system installation permitting.**

- (1) As used in this section, the term:
  - (a) "Contractor" means a person who is qualified to engage in the business of electrical or alarm system contracting pursuant to a certificate or registration issued by the department under Part II of Chapter 489.
  - (b) "Low-voltage alarm system project" means a project related to the installation, maintenance, inspection, replacement, or service of a new or existing alarm system, as defined in Section 489.505, that is hardwired operating at low voltage, as defined in the National Electrical Code Standard 70, Current Edition, or a new or existing low-voltage electric fence, and ancillary components or equipment attached to such a system, including, but not limited to, home-automation equipment, thermostats, closed-circuit television systems, access controls, battery recharging devices, and video cameras.
  - (c) "Low-voltage electric fence" means an alarm system, as defined in Section 489.505, that consists of a fence structure and an energizer powered by a commercial storage battery not exceeding twelve (12) volts which produces an electric charge upon contact with the fence structure.
  - (d) "Wireless alarm system" means a burglar alarm system or smoke detector that is not hardwired.
- (2) Notwithstanding any provision of law, this section applies to low-voltage alarm system projects for which a permit is required by a local enforcement agency. However, a permit is not required to install, maintain, inspect, replace, or service a wireless alarm system, including any ancillary components or equipment attached to the system.
- (3) A low-voltage electric fence must meet all of the following requirements to be permitted as a low-voltage alarm system project and no further permit shall be required for the low-voltage alarm system project other than as provided in this section:

- (a) The electric charge produced by the fence upon contact must not exceed energizer characteristics set forth in paragraph 22.108 and depicted in Figure 102 of International Electrotechnical Commission Standard No. 60335-2-76, Current Edition.
  - (b) A nonelectric fence or wall must completely enclose the low-voltage electric fence. The low-voltage electric fence may be up to two (2) feet higher than the perimeter nonelectric fence or wall.
  - (c) The low-voltage electric fence must be identified using warning signs attached to the fence at intervals of not more than sixty (60) feet.
  - (d) The low-voltage electric fence shall not be installed in an area zoned exclusively for single family or multi-family residential use.
  - (e) The low-voltage electric fence shall not enclose the portions of a property which are used for residential purposes.
- (4) This section does not apply to the installation or replacement of a fire alarm if a plan review is required.
- (5) A local enforcement agency shall make uniform basic permit labels available for purchase by a contractor to be used for the installation or replacement of a new or existing alarm system at a cost as indicated in Section 553.793, Florida Statutes. The local enforcement agency may not require the payment of any additional fees, charges, or expenses associated with the installation or replacement of a new or existing alarm.
- (a) A local enforcement agency may not require a contractor, as a condition of purchasing a label, to submit information other than identification information of the licensee and proof of registration or certification as a contractor.
  - (b) A label is valid for one (1) year after the date of purchase and may only be used within the jurisdiction of the local enforcement agency that issued the label. A contractor may purchase labels in bulk for one (1) or more unspecified current or future projects.
- (6) A contractor shall post an unused uniform basic permit label in a conspicuous place on the premises of the low-voltage alarm system project site before commencing work on the project.
- (7) A contractor is not required to notify the local enforcement agency before commencing work on a low-voltage alarm system project. However, a contractor must submit a Uniform Notice of a Low-Voltage Alarm System Project as provided under subsection (7) to the local enforcement agency within fourteen (14) days after completing the project. A local enforcement agency may take disciplinary action against a contractor who fails to timely submit a Uniform Notice of a Low-Voltage Alarm System Project.
- (8) The Uniform Notice of a Low-Voltage Alarm System Project may be submitted electronically or by facsimile if all submissions are signed by the owner, tenant, contractor, or authorized representative of such persons. The Uniform Notice of a Low-Voltage Alarm System Project shall be in the format prescribed by the local enforcement agency and must comply with the requirements of Section 553.793(7), Florida statutes
- (9) A low-voltage alarm system project may be inspected by the local enforcement agency to ensure compliance with applicable codes and standards. If a low-voltage alarm system project fails an inspection, the contractor must take corrective action as necessary to pass inspection.
- (10) A municipality, County, district, or other entity of local government may not adopt or maintain in effect an ordinance or rule regarding a low-voltage alarm system project that is inconsistent with this section.
- (11) A uniform basic permit label shall not be required for the subsequent maintenance, inspection, or service of an alarm system that was permitted in accordance with this section.

The provisions of this act are not intended to impose new or additional licensure requirements on persons licensed in accordance with the applicable provisions of Chapter 489, Florida Statutes.

**105.18 Demolition.** Application for building permits for the work of demolition of buildings or structures, if such building or structure is over twelve (12) feet in extreme height above grade or any wall of which is over forty (40) feet in horizontal length, shall be accepted from only qualified persons or firms. Qualifications of persons or firms shall be in accordance with separate ordinance providing for qualification and certification of construction tradesmen.

**105.18.1** A permit for the demolition of a building or structure for which an application is made voluntarily by the owner shall expire sixty (60) days from the date of issuance, and shall specifically require the completion of the work for which the permit is issued on or before the expiration date.

## Section 106 Floor and Roof Design Loads

**106.1 Live loads posted.** In commercial or industrial buildings, for each floor or portion thereof designed for live loads exceeding fifty (50) psf (2.40 kN/m<sup>2</sup>), such design live loads shall be conspicuously posted by the owner in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

**106.2 Issuance of certificates of occupancy.** A certificate of occupancy required by Section 111 shall not be issued until the floor load signs, required by Section 106.1, have been installed.

**106.3 Restrictions on loading.** It shall be unlawful to place, or cause or permit to be placed, on any floor or roof of a building, structure or portion thereof, a load greater than is permitted by this Code.

**106.3.1 Storage and Factory-Industrial Occupancies.** It shall be the responsibility of the owner, agent, proprietor or occupant of Group S and Group F occupancies, or any occupancy where excessive floor loading is likely to occur, to employ a competent Architect or Engineer in computing the safe load capacity. All such computations shall be accompanied by an affidavit from the Architect or Engineer stating the safe allowable floor load on each floor in pounds per square foot uniformly distributed. The computations and affidavit shall be filed as a permanent record of the building department.

**Commented [SR31]:** There are no changes proposed for this section.

## Section 107 Submittal Documents

### 107.1 General.

**107.1.1 Submittal documents.** Submittal documents consisting of construction documents, statement of special inspections, geotechnical reports, structural observation programs, and other data shall be submitted in two (2) or more sets of plans and/or specifications as described in Section 107.3 with each application for a permit. The construction documents shall be prepared by a registered design professional where required by Chapter 471, Florida Statutes or Chapter 481, Florida Statutes. ~~The application for permit shall be inscribed with the application date and the date of the Code in effect as set forth herein.~~ Where special conditions exist, the Building Official is authorized to require additional construction documents to be prepared by a registered design professional.

**Commented [SR32]:** This is in the state's section.

**Commented [SR33]:** Repetitive. We already say it in 105.3.0.2 Application Form.

**Exception:** The Building Official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this Code.

**107.1.2** Where required by the Building Official and/or Fire Marshal/Fire Code Official, a third copy of the plan showing parking, landscaping and drainage shall be provided.

**107.2 Construction documents.** Construction documents shall be in accordance with Sections 107.2.1 through 107.2.5.

**107.2.1 Information on construction documents.** Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the Building Official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this Code and FFPC, relevant laws, ordinances, rules and regulations, as determined by the Building Official and/or Fire Marshal/Fire Code Official. (See also Section 107.3.5.1.)

**107.2.1.1** At any time during the course of construction, the Building Official and/or Fire Marshal/Fire Code Official may require the submittal of a first-floor elevation survey, as built.

**107.2.2 Fire protection system shop drawings.** Shop drawings for the fire protection system(s) shall be submitted to indicate conformance with this Code, FFPC and the construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9 of this Code and FFPC.

**107.2.3 Means of egress.** The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress including the path of the exits discharge to the public way in compliance with the provisions of this Code. In other than occupancies in Groups R-2, R-3, and I-1, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

107.2.4 Exterior wall envelope. Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system that was tested, where applicable, as well as the test procedure used.

Commented [SR34]: Added by state

107.2.4.1 Exterior balcony and elevated walking surfaces. Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, or irrigation, and the structural framing is protected by an impervious moisture barrier the construction documents shall include details for all elements of the impervious moisture barrier system. the construction documents shall include manufacturer's installation instructions. (CAC7834)

Commented [SR35]: Added by state.

**107.2.5 Site plan.** The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

**107.2.5.1 Design flood elevations.** Where design flood elevations are not specified, they shall be established in accordance with FBC Ch. 16. The elevation above Mean Sea Level (MSL) of the top of all first floors shall appear on all construction plans and the Building Official shall require that such elevations be transferred to the accompanying application for permit.

**107.3 Examination of documents.** The Building Official and/or Fire Marshal/Fire Code Official shall examine or cause to be examined each application for a permit and the accompanying documents, consisting of drawings, specifications, calculations (when required), and additional data, and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of the technical codes and all other pertinent laws or ordinances. All plan review shall be performed by Plans Examiners certified per Section 104 of this Code.

**Exceptions 1:** Building plans and/or specifications approved pursuant to Section 553 Part I, Florida Statutes and state-approved manufactured buildings are exempt from local codes enforcing agency plan reviews except for provisions of the code relating to erection, assembly or construction at the site. Erection, assembly, and construction at the site are subject to local permitting and inspections. Photocopies of plans approved according to FAC 61-41.009, shall be sufficient for local permit application documents of record for the modular building portion of the permitted project.

**Exception 2.** Reserved

**107.3.0.1** Plans and/or specifications for which only minor correction is necessary may be corrected by notation on the prints with the approval of the designer.

**107.3.0.2** Plans and/or specifications for which major correction is necessary shall be revised by the designer and new corrected plans submitted.

**107.3.1 Approval of construction documents.** When the Building Official issues a permit, the construction documents shall be approved, in writing or by stamp or electronically, as "Reviewed for Code Compliance. The Building Official shall retain one (1) set of the approved (construction documents) plans and/or specifications, and the other set shall be returned to the (applicant) permit holder, who shall maintain and keep this set at the site of work and available for inspections by the Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official, or his or her duly authorized representative.

**107.3.2 Previous approval.** Reserved.

**107.3.3 Phased approval.** Reserved. See 105.13.

**107.3.4 Design professional in responsible charge.**

**107.3.4.0.1 General Requirements for Professional Design.** For buildings and/or structures (except single-family residences), alterations, repairs, improvements, replacements or additions, costing fifteen thousand dollars (\$15,000.00) or more, as specified herein, the plans/or specifications shall be prepared and approved by, and each sheet shall bear the impress seal of an Architect or Engineer. For any work involving structural design, the Building Official may require that plans and/or specifications be prepared by and bear the impress seal of an Engineer, regardless of the cost of such work.

**Exception:** Roofing as set forth in FBC Chapter 15.

**107.3.4.0.2** Plans and/or specifications for proposed construction, where such plans and/or specifications are required by this Code to be prepared by and bear the impress seal of an Architect or Engineer, shall be submitted by the Architect or Engineer or authorized representative

**107.3.4.0.3** For alterations, repairs, improvements, replacements or additions to a single-family residence, costing thirty thousand dollars (\$30,000.00) or more, as specified herein, the plans and/or specifications shall be prepared and approved by, and each sheet shall bear the impress seal of an Architect or Engineer. For any work involving structural design, the Building Official may require that plans and/or specifications be prepared by and bear the impress seal of an Engineer, regardless of the cost of such work.

**107.3.4.0.4** Plans and/or specifications for work that is preponderantly of architectural nature shall be prepared by and bear the impress seal of an Architect, and such work that involves extensive computation based on structural stresses shall, in addition, bear the impress of seal of an Engineer.

**107.3.4.0.5** Plans and/or specifications for work that is preponderantly of mechanical or electrical nature; at the discretion of the Building Official, shall be prepared by, and bear the impressed seal of an Engineer.

**107.3.4.0.6** Compliance with the specific minimum requirements of this Code shall not be in itself deemed sufficient to assure that a building or structure complies with all of the requirements of this Code. It is the responsibility of the Architect and/or Engineer of Record for the building or structure to determine through rational analysis what design requirements are necessary to comply with this Code.

**107.3.4.0.7** Plans and/or specifications for work that is preponderantly of a structural nature shall be prepared by and bear the impress seal of an Engineer.

**107.3.4.0.8** Plans and/or specifications for new construction requiring an aggregate electrical service capacity of more than six hundred (600) amperes or more than two hundred forty (240) volts on residential or more than eight hundred (800) amperes or more than two hundred forty (240) volts on commercial or industrial or an electrical system having a value greater than one hundred twenty-five thousand dollars (\$125,000.00) or any electrical system(s) for an assembly area having an area greater than five thousand (5,000) square feet or a fire alarm and/or security alarm system(s) which cost more than five thousand dollars (\$5,000.00) shall be prepared by and signed, dated and bear the impress seal of an Engineer who is competent in this field of expertise. All plans and/or specifications prepared by an Architect or an Engineer pursuant to the requirements of this Code shall be hand signed, dated, and sealed by the respective Architect or Engineer who prepared such plans and/or specifications.

**107.3.4.1 Deferred submittals.** Reserved.

**107.3.4.2 Certification by contractors.** Reserved.

**107.3.4.3 Application for Examination of Plans.**

**107.3.4.3.1** Complete plans and/or specifications shall be submitted in duplicate and with a third copy of the plot plan showing parking, landscaping and drainage; or such plans may be submitted in single copy where it is evident that code interpretation is needed before final working drawings can be prepared.

**107.3.4.3.2** Plans and/or specifications for proposed construction, where such plans and/or specifications are not required to be prepared by and bear the impress seal of an Architect or Engineer shall be submitted by the designer with the application as set forth in Section 105.3.

**107.3.4.3.3 Construction Inspection.** The Professional Engineer of Record or the Architect of Record in responsible charge of the structural design shall include in the construction documents the following:

1. Special inspections required by Section 110.10.2.
2. Other structural inspections required by the Professional Engineer of Record or the Architect of Record in responsible charge of the structural design.

**107.3.4.3.4** Application for permit for new construction and additions shall be accompanied by a registered land surveyor's certificate and plan in duplicate on which shall be clearly

indicated the property-corner stakes, property-line dimensions, existing structures and their location, existing right-of-way, sidewalks, easements, street zoning and property zoning of record, critical elevations and building setbacks required by law, general block plan and other plan and other pertinent survey data which may be required. The Building Official may waive the requirements for such survey when property-line stakes are existing and known to be in place, and the work involved is minor and/or is clearly within building lines.

**Exceptions:**

1. The Building Official may authorize the issuance of a permit without plans and/or specifications for small or unimportant work, but in no instance where the work is of a structural nature except as set forth below.
2. The Building Official will authorize the issuance of a permit for a single-family fall-out shelter without a professional seal on the plans where the cost of such work does not exceed five thousand dollars (\$5,000.00).

**107.3.5 Minimum plan review criteria for buildings.** The examination of the documents by the Building Official, or his or her duly authorized representative and/or Fire Marshal/Fire Code Official, or his or her duly authorized representative for that discipline qualified under Section 104 of this Code shall include the following minimum criteria and documents: energy conservation code compliance documents, a floor plan; site plan; foundation plan; floor/roof framing plan or truss layout; all fenestration penetrations; flashing; and rough opening dimensions; and all exterior elevations:

**Commented [R36]:** Change proposed by T. DeCarion.

**A. Building.**

1. Site Requirements:
  - a. Parking.
  - b. Fire access.
  - c. Vehicle loading.
  - d. Driving/turning radius.
  - e. Fire hydrant/water supply/Post Indicator Valve (PIV).
  - f. Setback/separation (assumed property lines).
  - g. Location of specific tanks, water lines and sewer lines.
  - h. Flood hazard areas, flood zones, design flood elevations, lowest floor elevations, enclosures, equipment, and flood damage-resistant materials.
2. Occupancy group and special occupancy requirements shall be determined.
3. Minimum type of construction shall be determined (see Table 503-FBC Ch. 5)
4. Fire resistant construction requirements shall include the following components:
  - a. Fire resistant separations.
  - b. Fire resistant protection for type of construction.
  - c. Protection of openings and penetrations of all rated components.
  - d. Fire blocking and draftstopping.
  - e. Calculated fire resistance.
5. Fire suppression systems shall include:
  - a. Early warning.
  - b. Smoke evacuation systems schematic.

**Commented [SR37]:** Table 503 was split into several tables.

- c. Fire sprinklers.
  - d. Standpipes.
  - e. Pre-engineered systems.
  - f. Riser diagram.
6. Life Safety systems shall be determined and shall include the following requirements:
- a. Occupant load and egress capacities.
  - b. Early warning.
  - c. Smoke control.
  - d. Stair pressurization.
  - e. Systems schematic.
  - f. BDA submittal, if applicable.
7. Occupancy Load/Egress Requirements shall include:
- a. Occupancy load.
  - b. Gross occupancy.
  - c. Net occupancy.
  - d. Means of egress.
  - e. Exit access.
  - f. Exit.
  - g. Exit discharge.
  - h. Stairs construction/geometry and protection.
  - i. Doors.
  - j. Emergency lighting and exit signs.
  - k. Specific occupancy requirements.
  - l. Construction requirements.
  - m. Horizontal exits/exit passageways.
8. Structural requirements shall include:
- a. Soil conditions/analysis.
  - b. Termite protection.
  - c. Design loads.
  - d. Wind requirements.
  - e. Building envelope.
  - f. Structural calculations (if required).
  - g. Foundation.
  - h. Impact resistant coverings or systems.
  - i. Wall systems.
  - j. Floor systems.
  - k. Roof systems.



- l. Threshold inspection plan.
  - m. Stair systems.
  - n. Flood requirements in accordance with Section 1612, including lowest floor elevations, enclosures, flood damage-resistant materials.
  - o. For windows and doors replacement include "Broward County Uniform Retrofit Window & Door Schedule". See addendum #2.
9. Materials shall be reviewed and shall at a minimum include the following:
- a. Wood.
  - b. Steel.
  - c. Aluminum.
  - d. Concrete.
  - e. Plastic.
  - f. Glass.
  - g. Masonry.
  - h. Gypsum board and plaster.
  - i. Insulating (mechanical).
  - j. Roofing.
  - k. Insulation.
10. Accessibility requirements shall include the following:
- a. Site requirements.
  - b. Accessible route.
  - c. Vertical accessibility.
  - d. Toilet and bathing facilities.
  - e. Drinking fountains.
  - f. Equipment.
  - g. Special occupancy requirements.
  - h. Fair housing requirements.
11. Interior requirements shall include the following:
- a. Interior finishes (flame spread/smoke develop).
  - b. Light and ventilation.
  - c. Sanitation.
12. Special systems:
- a. Elevators.
  - b. Escalators.
  - c. Lifts.
13. Swimming Pools:
- a. Barrier requirements.
  - b. Spas.

**Commented [SR38]:** Codifies Board policy and form.

- c. Wading pools.
- 14. Photovoltaic:
  - a. Site Plan.
  - b. Roof Penetration approval.
  - c. Roof sealing detail.
  - d. Wind resistance ratings of modules.
  - e. Roof live load approval.
  - f. Fire classification of building and modules.
  - g. Roof top shingle module ratings if installed.
  - h. Design Load path.

**B. Electrical.**

- 1. Wiring Methods and materials.
- 2. Services, including riser diagram electrical and/or fire.
- 3. Feeders and Branch Circuits, include circuit and location, AFCI's and GFCI's.
- 4. Overcurrent Protection.
- 5. Grounding and Bonding.
- 6. Equipment Location, sizes all equipment.
- 7. Special Occupancies.
- 8. Emergency Systems.
- 9. Communication Systems.
- 10. Low Voltage.
- 11. Load calculations and panel schedules.
- 12. Design flood elevations.
- 13. Short circuit analysis.
- 14. Electrical legend.
- 15. Lighting specifications.
- 16. Accessibility requirements.
- 17. Selective coordination study if required by NFPA 70-2011.
- 18. Emergency generator, if applicable.
- 19. Photovoltaic:
  - a. Lay out plan including combiner box and accessible junction boxes.
  - b. Size of system number of modules.
  - c. Wire size at coldest temperature.
  - d. Listing and model numbers of all equipment and racking.
  - e. Inverter rating and location.
  - f. Three-line diagram.
  - g. Connection to utility. Line side or load side. Buss bar ratings.

- h. Grounding.
  - i. Labeling.
- C. **Gas.**
1. Gas piping.
  2. Venting.
  3. Combustion air.
  4. Chimneys and vents.
  5. Appliances.
  6. Type of gas.
  7. Fireplaces.
  8. LP tank location.
  9. Riser diagram/shutoffs.
  10. Design flood elevation.

D. **Mechanical.**

1. Energy-Calculations of heating and cooling loads as required by FBC Energy Conservation.
2. A complete duct layout with:
  - a. Specified materials.
  - b. Duct sizes.
  - c. Ventilation calculations, outside air intakes/make up air.
  - f. CFM air volumes at each duct inlet and outlet.
  - d. Diffuser sizes.
  - e. Routing and location of ducts, including risers.
  - f. Thermal resistance ratings for ducts and duct insulation.
3. Heating, ventilation, air conditioning and refrigeration equipment, boilers and appliances, show:
  - a. Equipment manufacturer.
  - b. Equipment model numbers.
  - c. Equipment locations.
  - d. Equipment efficiency ratings.
  - e. Equipment mounting/support details (Mechanical equipment exposed to the wind must comply with Section 301.15 of the Florida Mechanical Code).
  - f. For air conditioner replacements include "Broward County Uniform Data Form for Residential and Light Commercial Air Conditioning Replacements". See addendum #3.
4. Roof mounted equipment –
  - a. Equipment access.
  - b. Equipment capacity in tonnage and/or horsepower.
  - c. Air conditioning refrigerant type and amount of refrigerant in system (pounds).

**Commented [SR39]:** Numbering and bullets were changed to closer follow state.

**Commented [R40]:** Change proposed by T. DeCarion.

**Commented [SR41]:** Codifies Board policy and form.

- d. Detail of equipment attachment to roof stand/curb and attachment of roof stand/curb to supporting structure (Must comply with requirements of the High Velocity Hurricane Zone)
- 5. Fire protection assemblies and devices - Show make, model, type, location, and installation details for, but not limited to:
  - a. Fire dampers.
  - b. Ceiling dampers.
  - c. Smoke dampers.
  - d. Smoke detectors (duct).
  - e. Heat detectors.
  - f. Automatic fire doors.
  - d. Clean agent fire suppression systems.
- 6. Exhaust systems - Show:
  - a. Bathroom ventilation.
  - b. Kitchen equipment exhaust.
  - c. Clothes dryer exhaust.
  - d. Specialty exhaust systems.
  - e. Laboratory.
  - f. Smoke control systems.
- 7. Piping - Show:
  - a. All piping materials and sizes.
  - b. Piping locations and terminations.
  - c. Piping insulation materials and thickness.
- 8. Chimneys, fireplaces and vents - Show:
  - a. Location.
  - b. Venting requirements.
  - c. Combustion air.
- 9. Other:
  - a. Details for exterior ventilation devices,
  - b. Any available product specifications,
  - c. Product listings, and
  - d. Compressed air, vacuum, and pneumatic systems.
  - e. Liquid fuel storage and dispensing.
- 10. Mechanical equipment, devised and appurtenances compliance with the design flood elevation.
- E. **Plumbing.**
  - 1. Minimum plumbing facilities.
  - 2. Fixture requirements.

3. Water supply piping.
4. Sanitary drainage.
5. Water heaters.
6. Vents.
7. Roof drainage.
8. Backflow prevention.
9. Irrigation.
10. Location of water supply line.
11. Grease traps.
12. Environmental requirements.
13. Plumbing risers/Isometric.
14. Design flood elevation.

**F. Demolition.**

1. Asbestos removal.

**107.3.5.1** Plans and/or specifications completely defining the work for each discipline (Electrical, Mechanical, Plumbing, Roofing, and Structural) shall be submitted. Plans shall be electronically or mechanically reproduced prints on substantial paper showing completely all foundation, wall sections, floor plans, roof plans and elevations at a scale no less than 3/16 -inch equals one (1) foot, and the main details at a scale not less than 3/4-inch equals one (1) foot or equivalent metric scale. Electrical plans shall be drawn at a minimum scale of 1/4-inch equals one (1) foot for all buildings of less than five thousand (5,000) square feet or equivalent metric scale, except that an isometric or riser diagram need not be to scale. Designated Electrical Equipment Rooms and Meter Rooms shall be drawn at a minimum scale of 1/2-inch equals one (1) foot or equivalent metric scale.

**107.3.5.2** Computations, stress diagrams, shop drawings, results of site tests, floor plans of existing buildings to which additions are proposed and other data necessary to show compliance with this Code, the correctness of the plans and the sufficiency of structural and mechanical design shall be included when required by the Building Official.

**107.3.5.2.1** When applying for a permit, calculations prepared by the designer of record for Group R3 or R2 (Townhouse only) shall be submitted for the complete building for the structural requirements of this Code.

**Exception:** Component systems covered by product approval or designed by a delegated professional.

**107.3.5.3** Any specifications in which general expressions are used to the effect that "work shall be done in accordance with the Building Code" or "to the satisfaction of the Building Official" shall be deemed imperfect and incomplete, and every reference to this Code shall be by section or subsection number applicable to the materials to be used, or to the methods of construction proposed.

**107.3.5.4** Product Approvals shall be reviewed and approved by the Building Designer prior to submittal to verify that such products comply with the design specifications. Reviewed and approved Product Approvals shall then become part of the plans and/or specifications. Product Approval shall be filed with the Building Official for review and approval prior to installation.

**107.3.5.5** When applying for a permit, the Architect or Engineer of Record shall provide a framing plan. The truss system designer (delegated Engineer) shall submit to the Architect or Engineer of record a truss system shop drawing which conforms to this framing plan, plus a collation of the applicable truss designs and truss connections which denote their location on the placement plan. The truss system shop drawing does require the seal of an Engineer and shall be reviewed and accepted by the Architect or Engineer of record for conformance to design concepts and load interaction with the building. After the Architect and/or Engineer of record have indicated their review and acceptance, the truss system shop drawings, design drawings for individual trusses, and truss to truss connection details shall be submitted to the building department. This submittal shall take place prior to the inspection of the foundation. The designs for individual trusses shall be prepared by an Engineer.

**107.3.5.6 Structural and fire resistance integrity.** Plans for all buildings shall indicate how required structural and fire resistance integrity will be maintained where a penetration of a required fire-resistant wall, floor or partition will be made for electrical, gas, mechanical, plumbing and communication conduits, pipes and systems. Such plans shall also indicate in sufficient detail how the fire integrity will be maintained where required fire-resistant floors intersect the exterior walls and where joints occur in required fire resistant construction assemblies.

**107.4 Amended construction documents.** Work shall be installed in accordance with the approved construction documents and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted to the Building Official for approval as an amended set of construction documents.

**107.5 Retention of construction documents.** One (1) set of approved construction documents shall be retained by the Building Official for a period of not less than what is required by Section 107.5.1, 107.5.2 or 107.5.3; or as required by Florida Statutes and Administrative Rules (General Records Schedule GS1-SL for State and Local Government Agencies).

**107.5.1 Architectural/Building Plans: Commercial.** For life of structure or ten (10) anniversary years after issuance of certificate of occupancy, completion, or final inspection of the permitted work, whichever is later.

**107.5.2 Architectural/Building Plans: Residential.** For ten (10) anniversary years after issuance of certificate of occupancy or final inspection.

**107.5.3 Architectural/Building Plans and Permits, Abandoned/With-Drawn.** For six (6) months after last action.

**107.6 Affidavits.** Reserved.

## Section 108 Temporary Structures and Uses

**108.1 General.** The Building Official is authorized to issue a special building permit for the erection of temporary structures and temporary uses such as seats, canopies, tents, and fences used in construction work or for temporary purposes such as viewing stands. Such permits shall be limited as to time of service but shall not be permitted for more than one hundred eighty (180) days. The Building Official is authorized to grant extensions for demonstrated cause.

Commented [SR42]: Follows the state.

**108.2 Conformance.** Temporary structures and uses shall conform to the fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements of this Code and FBC Building Section 3103, as necessary to ensure public health, safety and general welfare.

**108.3 Temporary power.** The Building Official/Chief Electrical Inspector is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary

certificate shall comply with the requirements specified for temporary lighting, heat, or power in Chapter 27 of FBC, Building.

**108.4 Termination of approval.** The Building Official is authorized, for good cause, to terminate such permit for a temporary structure or use and to order the temporary structure or use to be discontinued.

## Section 109 Fees

Commented [SR43]: No changes.

**109.1 Payment of fees.** A permit shall not be valid until the fees prescribed by law have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

**109.2 Schedule of Permit Fees.** On all buildings, structures, electrical, plumbing, mechanical, and gas systems or alterations requiring a permit, a fee for each permit shall be paid as required in accordance with the schedule as established by the applicable governing authority.

**109.3 Building permit valuations.** The applicant for a permit shall provide an estimated permit value at a time of application. Permit valuations, shall include total value of work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the Building Official. Final building permit valuation shall be set by the Building Official.

**109.3.1** The Building Official may require an estimate of the cost utilizing RSMeans, copies of signed contract and/or other descriptive data as a basis for determining the permit fee.

**109.4 Work commencing before permit issuance.** Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits or the Building Official's written approval, shall be subject to a penalty not to exceed one hundred (100) percent of the usual permit fee that shall be in addition to the required permit fees.

**109.5 Related fees.** Reserved.

**109.6 Refunds.** Reserved.

## Section 110 Inspections

**110.1 General.** Construction or work for which a permit is required shall be subject to inspection by the Building Official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this Code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this Code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the Building Official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

Commented [SR44]: redundant

**110.1.1** The Building Official shall make inspections required by this code or may accept reports in writing and certified by inspectors with recognized qualifications for special inspections.

**110.1.2** No inspection shall be made until sanitary facilities have been provided, as required in Section 311.1 of the FBC Plumbing.

**110.1.3** When the services, reports of inspections, and testing laboratories are required by this Code, only such services and reports shall be accepted as are submitted from impartial inspecting and testing laboratories having an Engineer in active responsible charge of the work of sampling and testing.

Commented [SR45]: redundant

**110.1.4** Testing laboratories engaged in the sampling and testing of concrete and steel products shall have complied with the Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection ASTM E329-14a.

**110.1.5** Testing laboratories located out of this State outside of the State of Florida and under the supervision of an Engineer legally qualified in the State in which the laboratory is located, and where such testing laboratory has complied with the above Standard, may submit test reports as required by this Code.

Commented [SR46]: better, more specific language.

**110.1.6** All equipment, material, power, coordination for access and labor, necessary for inspection and/or test shall be supplied by the permit holder.

**110.2 Preliminary inspection.** Before issuing a permit, the Building Official is authorized to examine or cause to be examined buildings, structures, and sites for which an application has been filed.

**110.3 Required Inspections.** The Building Official, upon notification from the permit holder or his or her agent, shall make the following inspections performed by Inspectors BORA certified by BORA in the categories involved who shall either release that portion of the work completed or shall notify the permit holder or his or her agent of any violations which shall be corrected in order to comply with the technical codes. The Building Official shall determine the timing and sequencing of when inspections occur and what elements are inspected at each inspection.

Commented [SR47]: By Mike.

**A. Building.**

1. **Piling:** To be made during the installation of piles by Special Inspector.
2. **Foundation Inspection:** Include piling/pile caps, footer/grade beams, stem-wall, and monolithic slab-on-grade to be made after necessary excavation, form erection, and reinforcing steel placement, prior to pouring of concrete.
  - a. In flood hazard areas, upon placement of the lowest floor, including basement, and prior to further vertical construction, the elevation certification shall be submitted to the AHJ.
3. **Floor Slab on Grade and/or Elevated:** To be made after necessary excavations, form erection as may be required, placement of reinforcing steel, mesh, and vapor barrier when specified, and prior to pouring concrete.
4. **Concrete Columns:** To be made after the placement of reinforcing steel and prior to complete erection of forms and pouring of concrete.
5. **Concrete Unit Masonry:** To be made at each successive pour after placement of the reinforcement and prior to the pouring of grout. See Sections 110.10.2.2 and 110.10.5.
6. **Concrete Beams:** To be made after the erection of forms, placement of reinforcing steel, hangers, bracing and shoring and prior to pouring of concrete.
7. **Framing Inspection:** To be made after the installation of all structural elements, including: the roof, furring, fire stops, fireblocking, nailers, anchors, and bracing is in place, chimneys, and prior to the installation of interior cladding, but after inspection of rough in electrical, mechanical and plumbing, which shall be completed prior to request for framing inspection. See mandatory inspections for electrical, mechanical and plumbing. Framing inspection shall at a minimum include the following building components:
  - a. Window/door framing.
  - b. Vertical cells/columns.
  - c. Lintel/tie beams.
  - d. Framing/trusses/bracing/connectors.
  - e. Draft stopping/fire blocking/fire stopping.
  - f. Curtain wall framing.
  - g. Accessibility.
  - h. Verify rough opening dimensions are within tolerances.



8. **Roof/Floor Trusses:** To be made after the erection of truss members, permanent and temporary bracing, roof sheathing and bottom chord furring members and anchors.
9. **Roof Sheathing:** To be made after placement of panels or planking and sheathing fasteners; prior to application of base or anchor coat of roofing.
10. **Wall/Floor Sheathing:** To be made after placement of panels or planking and sheathing fasteners.
11. **Roofing Inspection:** To be made in accordance with Chapter 15 of the FBC and Chapter 44 of the Florida Residential Code and Section 614706 of the FBC Existing Building.
12. **Window and Door Inspection:** Two (2) inspections to be made, one (1) after door and window bucks have been installed, and the second, after window and door assemblies have been installed and before attachments and connections to the building frame are concealed.
13. **Wire Lath:** To be made after installation of all metal lath and accessories prior to application of any coatings.
14. Exterior wall covering. Shall at a minimum include the following building components in-progress inspections:
  - a. Exterior wall covering and veneers
  - b. Soffit coverings.
15. **Energy insulation:** After installation in compliance with type and "R" values stipulated in energy calculations and prior to installation of rock lath and drywall.
16. **Rock Lath:** To be made after installation of all rock lath, corner beads, strip reinforcement and nailers for molding and trim and prior to application of plaster basecoat.
17. **Drywall:** To be made after installation of drywall panels and prior to taping and spackling.
18. **Curtain Wall Inspection:** To be made at each floor level after curtain walls are installed and before curtain wall attachments are concealed.
19. **Storefront Inspection:** To be made after storefronts are installed and before store front attachments are concealed.
20. **Concealed Work:** The Building Official or his or her duly authorized representative may order portions of the structural frame of a building and/or structure to be exposed for inspection when, in his or her opinion, there is a good reason to believe that a building or portion thereof is in an unsafe or dangerous condition or that there is willful or negligent concealment of a violation of this Code.
21. **Hurricane Shutters:** To be made before the attachments and connections to the building are concealed and when job is completed. All shutters shall be installed for final inspection. On occupied buildings, all required means of egress and emergency exits shall be left uncovered.
22. **Photovoltaic:**
  - a. Rough.
    1. Check specifications, model numbers and lay out.
    2. Check attachments, penetrations on roof, torque requirements.
  - b. Final.
23. **Final Inspection:** To be made after installation and completion of all elements of construction, safeguards, and protective devices, and after final electrical, mechanical and plumbing. Approval of Fire Department accessibility and all tests of fire alarm detection and suppression systems, smoke evacuation systems and life safety systems shall be approved prior to final inspection and issuance of Certificate of Occupancy.

Commented [SR48]: Updated code section.

Commented [SR49]: Language added by the state.

- a. In flood hazard areas, as part of the final inspection, a final certification of the lowest floor elevation shall be submitted to the authority having jurisdiction.
- 24. **Certificate of Occupancy:** This final inspection shall signify the completion of all work and that the structure is safe for Occupancy. Final adjustments to mechanical devices may be made after this inspection and during Occupancy.
- 25. **Fence:** Final-only.
- 26. **Swimming Pools/Spas Inspection:** First inspections to be made after excavation and installation of reinforcing steel, bonding, and main drain and prior to placing of concrete, gunite or shotcrete. Second inspection(s) of perimeter plumbing, pressure test, deck electrical perimeter bonding and deck structural (includes soil reports as applicable, paver type decks, special perimeter footings or deck features) is (are) to follow after the completion of each phase. Child barrier (exit) alarms (if applicable), and yard barriers that are part of the fourth wall protection as described in FBC Building Section 454.2.17, shall be completed and approved inspection prior to the swimming pool/spa being filled with water. Final zoning (if applicable) is to be completed prior to the swimming pool/spa being completed. Electrical final is to be completed prior to the swimming pool/spa being filled with water. Final structural and plumbing are to be completed after the swimming pool/spa is filled with water and the filtration system is in operation.
  - a. **Structural inspections:**
    - (1) Steel.
    - (2) Deck (includes soil reports as applicable, paver type decks, special perimeter footings or deck features).
    - (3) Child barrier fences (if applicable) and yard barriers that are part of the fourth wall protection prior to the swimming pool/spa being filled with water.
    - (4) Final structural (after filling of the swimming pool/spa with water and the filtration system is in operation).

**B. Electrical.**

- 1. **General:** All Underground, Slab, low voltage and Rough Electrical Installations shall be left uncovered and convenient for examination until Inspected and approved by the Electrical Inspector.
- 2. **Temporary Electrical Service Installations:**
  - a. Rough.
  - b. Final.
- 3. **Underground Electrical Inspection:** To be made after trenches or ditches are excavated, underground conduits or cables installed, and before any backfill is put in place.
- 4. **Slab Electrical Inspection:** To be made and after conduits and boxes are installed, and prior to pouring concrete.
  - a. Grounding Electrode Conductor to Foundation Steel.
- 5. **Rough Electrical Inspection:** To be made after the roof, framing, fire blocking bracing are in place, and the building is deemed dry, and conduits, cables, panels, receptacles, etc. are installed, and prior to the installation of wall or ceiling membranes.
- 6. **Electrical Service Inspection:**
  - a. Electrical rough.
  - b. Electrical Final Inspection.
- 7. **Miscellaneous Electrical Inspection.**

8. **Swimming Pool/Spa Electrical Inspection:**

- a. Steel Bonding.
- b. Underground.
- c. Deck perimeter bonding.
- d. Electrical rough
- e. Final electrical prior to the swimming pool/spa being filled with water.
- f. Existing Swimming Pools. To be made after all repairs or alterations are complete, all required electrical equipment, GFCI protection, and equipotential bonding are in place on said alterations or repairs.

Commented [SR50]: Added by the state.

9. **Temporary Electrical 30-Day Power for Testing.**

10. **Photovoltaic:**

- a. Rough. Before modules are installed.
  - 1. Check specifications, model numbers and lay out.
  - 2. All wiring for junction boxes, combiner, and inverter completed.
  - 3. Grounding system completed, torque requirements.
- b. Final. Module must be available for inspection.
  - 1. Verify proper labeling.
  - 2. Test system.
- c. Service change if required by design.

11. **Final Inspection:** To be made after the building is complete, all electrical fixtures are in place and properly connected, or protected, and the structure is ready for occupancy and deemed safe for power by the Building Official.

Final Electrical Inspection shall be made prior to Final Structural Inspection.

C. **Gas.**

- 1. **General:** To be made for all underground work, and at each floor and roof level where gas work is installed. All gas work shall be left uncovered and convenient for examination until inspected and approved by the Plumbing Inspector.
- 2. **Underground inspection:** To be made after trenches or ditches are excavated, piping installed, and before any backfill is put in place.
- 3. **Rough piping inspection:** To be made after all new piping authorized by the permit has been installed, and before any such piping has been covered or concealed or any fixtures or gas appliances have been connected. This inspection shall include a pressure test.
- 4. **Final Gas inspection:** To be made on all new gas work authorized by the permit and such portions of existing systems as may be affected by new work or any changes, to ensure compliance with all the requirements of this Code and to assure that the installation and construction of the gas system is in accordance with reviewed plans.

Final Gas Inspection shall be made prior to Final Structural Inspection.

D. **Mechanical.**

- 1. **General:** To be made for all underground work, and at each floor and roof level where mechanical work is installed. All mechanical work shall be left uncovered and convenient for examination until inspected and approved by the Mechanical Inspector.

2. **Underground inspection:** To be made after trenches or ditches are excavated, underground duct and all piping installed, and before any backfill is put in place.
3. **Rough-in inspection:** To be made after the roof, framing, fire blocking and bracing are in place and all ducting, and other concealed components are complete, and prior to the installation of wall or ceiling membranes.
4. **Final Mechanical inspection:** To be made after the building is complete, the mechanical system is in place and properly connected, and the structure is ready for occupancy.  
Final Mechanical Inspection shall be made prior to Final Structural Inspection.

**E. Plumbing.**

1. **General:** To be made for all underground work, and at each floor and roof level where plumbing work is installed. All plumbing work shall be left uncovered and convenient for examination until inspected and approved by the Plumbing Inspector.
2. **Underground inspection:** To be made after trenches or ditches are excavated, piping installed, and before any backfill is put in place.
3. **Rough-in inspection:** To be made after the roof, framing, fire-blocking and bracing is in place and all soil, waste and vent piping is complete, and prior to this installation of wall or ceiling membranes. Floors shall be left open in all bathrooms and elsewhere above all sanitary plumbing, and water-supply piping and other plumbing work until it shall have been examined, tested and approved.
4. **Swimming Pool/Spa Plumbing Installations:**
  - a. Main drain(s).
  - b. Perimeter plumbing, pressure test and water features.
  - c. Final plumbing (after filling of swimming pool/spa with water and the filtration system is in operation).
5. **Final Plumbing inspection:** To be made after the building is complete, all plumbing fixtures are in place and properly connected, and the structure is ready for occupancy. Water shock or hammer in the water supply system will be cause ~~for condemnation or to fail the final inspection.~~

Commented [R51]: Better, simpler language.

**Note:** See Section 312 of the FBC, Plumbing for required tests.

Final Plumbing Inspection shall be made prior to Final Structural Inspection.

- F. Demolition Inspections.** First inspection to be made after all utility connections have been disconnected and secured in such manner that no unsafe or unsanitary conditions shall exist during or after demolition operations.

Final inspection to be made after all demolition work is completed.

- G. Manufactured building inspections.** The Building Department shall inspect construction of foundations; connecting buildings to foundations; installation of parts identified on plans as site installed items, joining the modules, including utility crossovers; utility connections from the building to utility lines on site; and any other work done on site which requires compliance with the FBC. Additional inspections may be required for public educational facilities (see Section 423453.27.20 of FBC Building).

Commented [SR52]: Updated section.

**110.3.1 Footing and foundation inspection.** See 110.3.A, Building, of this Code.

**110.3.2 Concrete slab and under floor inspection.** See 110.3.A, Building, of this Code.

**110.3.3 Lowest floor elevation.** Reserved

**110.3.4 Reinforcing steel and structural frames.** No reinforcing steel or structural framework of any part of any building or structure shall be covered or concealed in any manner whatsoever without the approval of the Building Official. It shall be unlawful for any person, firm or corporation, or their agents or employees, to cover or conceal any wiring for light, heat, power or low voltage systems until the appropriate Sections of the building permit card and/or inspection record are signed, signifying that the wiring has been inspected and approved.

**110.3.5 Lath and gypsum board inspection.** Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum boards joints and fasteners are taped and finished.

**Exception.** Reserved.

**110.3.5.1 Weather exposed balcony and walking surfaces waterproofing.** Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, or irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious moisture barrier system shall not be concealed until inspected and approved.

Commented [SR53]: Added by FL. state

**110.3.6 Fire- and smoke-resistant penetrations.** Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

**110.3.7 Energy efficiency inspections.** Inspections shall be made to determine compliance with FBC Energy Conservation and shall include, but not be limited to, inspections for: envelope insulation R- and U-values, fenestration U-value, duct system R-value, and HVAC and water heating equipment efficiency as described in 110.3.7.1 and 110.3.7.2.

**110.3.7.1 Rough inspections:**

1) **Footing and foundation inspection.** Inspections associated with footings and foundations shall verify compliance with the code as to R-value, location, thickness, depth of burial and protection of insulation as required by the code and approved plans and specifications.

2) **Framing and rough-in inspection.** Inspections at framing and rough-in shall be made before application of interior finish and shall verify compliance with the code as to types of insulation and corresponding R-values and their correct location and proper installation; fenestration properties (U-factor, SHGC and VT) and proper installation; and air leakage controls as required by the code and approved plans and specifications.

3) **Plumbing rough-in inspection.** Inspections at plumbing rough-in shall verify compliance as required by the code and approved plans and specifications as to types of insulation and corresponding R-values and protection; required controls; and required heat traps.

4) **Mechanical rough-in inspection.**

a) **Commercial.** Inspections at mechanical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed HVAC equipment type and size; required controls, system insulation and corresponding R-value; system and damper air leakage; and required energy recovery and economizers.

b) **Residential.** Inspections at mechanical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed HVAC equipment type and size, required controls, system insulation and corresponding R-value, system air leakage control, programmable thermostats, dampers, whole-house ventilation, and minimum fan efficiency.

**Exception:** Systems serving multiple dwelling units shall be inspected in accordance with Florida Energy Conservation Code for commercial buildings.

5) Electrical rough-in inspection. Inspections at electrical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed lighting systems, components and controls, and installation of an electric meter for each dwelling unit.

**110.3.7.2 Final inspection.**

1. Commercial. The building shall have a final inspection and shall not be occupied until approved. The final inspection shall include verification of the installation and proper operation of all required building controls, and documentation verifying activities associated with required building commissioning have been conducted and findings of noncompliance corrected. Buildings, or portions thereof, shall not be considered for a final inspection until the code official has received a letter of transmittal from the building owner acknowledging that the building owner has received the Preliminary Commissioning Report as required in The Florida Energy Conservation Code.
2. Residential. The building shall have a final inspection and shall not be occupied until approved. The final inspection shall include verification of the installation of all required building systems, equipment and controls and their proper operation and the required number of high-efficacy lamps and fixtures.

**Commented [SR54]:** New language proposed by T. de Carion.

**110.3.8 Other Inspections.** In addition to the inspections previously specified, the Building Official is authorized to make or require other inspections of any construction work to ascertain compliance with the provision of this Code and other applicable laws.

**110.3.9 Special inspections.** See Section 110.10 of this Code.

**110.3.10 Final Inspection.** See Section 110.3 of this Code.

**110.3.10.1 Flood hazard documentation.** Reserved

**110.3.11 Termites.** Building components and building surroundings required to be protected from termite damage in accordance with Section 1503.7, Section 2304.12 or Section 2304.12.4, specifically required to be inspected for termites in accordance with Section 2114, or required to have chemical soil treatment in accordance with Section 1816 shall not be covered or concealed until the release from the Building Official has been received. (Refer to Section 105.10, Certificate of Protective Treatment for prevention of termites and Section 105.11, Notice of termite protection.)

**110.3.12 Impact-resistant coverings inspections.** Where impact-resistant coverings or impact resistant systems are installed the Building Official shall schedule adequate inspections of impact-resistant coverings or impact resistant systems to determine the following:

1. The system indicated on the plans was installed.
2. The system is installed in accordance with the manufacturer's installation instructions and the product approval.

**110.4 Inspection agencies.** Reserved

**110.5 Inspection requests.** It shall be the duty of the ~~permit holder of the building permit~~ or their duly authorized agent ~~(person, firm or corporation performing the work)~~ to notify the Building Official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code. Failure to request such inspections constitutes a violation of this Code. The inspection request shall be made to the Building Department office at least one (1) day prior to the required inspection and shall provide reasonable time for such inspections to be made. Inspections shall be made not later than the following workday after the day of the request for inspection

**Commented [R55]:** Redundant

when a request is made prior to 12:00 noon. Requests for inspections received after 12:00 noon, shall be made not later than the day after the following workday.

**110.6 Approval required.** No work shall be done on any part of a building or structure or any electrical, mechanical or plumbing installation beyond the point indicated herein above for each successive inspection until such inspection has been made and the work approved and the Inspector has so indicated on the permit card or an inspection record pad at the job site, or other electronic means which has been approved by the Building Official.

**Commented [SR56]:** New language to allow electronic records. Added by C. Kramer.

**110.7 Shoring.** For threshold buildings, shoring and associated formwork or false work shall be designed and inspected by an Engineer, employed by the permit holder or subcontractor, prior to any required mandatory inspections by the threshold building inspector.

**110.8 Threshold Buildings.** For structures defined in Section 553.71, Florida Statutes, as "Threshold Buildings," permitting and inspection shall be as required by Section 553.79, Florida Statutes.

**110.8.1** During new construction or during repair or restoration projects in which the structural system or structural loading of a building is being modified, the enforcing agency shall require a special inspector to perform structural inspections on a threshold building pursuant to a structural inspection plan prepared by the Engineer or Architect of record. The structural inspection plan must be submitted to the enforcing agency prior to the issuance of a building permit for the construction of a threshold building. The purpose of the structural inspection plans is to provide specific inspection procedures and schedules so that the building can be adequately inspected for compliance with the permitted documents. The special inspector may not serve as a surrogate in carrying out the responsibilities of the Building Official, the Architect or the Engineer of record. The contractor's contractual or statutory obligations are not relieved by any action of the special inspector.

**Commented [SR57]:** Added by FL. state

**110.8.2** The special inspector shall determine that an Engineer who specializes in shoring design has inspected the shoring and reshoring for conformance with the shoring and reshoring plans submitted to the enforcing agency.

**110.8.3** A fee simple title owner of a building, which does not meet the minimum size, height, occupancy, occupancy classification or number-of-stories criteria which would result in classification as a threshold building under Section 553.71(~~712~~), may designate such building as a threshold building, subject to more than the minimum number of inspections required by the FBC.

**Commented [SR58]:** Updated statute #.

**110.8.4** The fee owner of a threshold building shall select and pay all costs of employing a special inspector, but the special inspector shall be responsible to the enforcement agency. The inspector shall be a person certified, licensed or registered under Chapter 471, Florida Statutes, as an Engineer or under Chapter 481, Florida Statutes, as an Architect.

**110.8.5** Each enforcement agency shall require that, on every threshold building:

**110.8.5.1** The special inspector, upon completion of the building and prior to the issuance of a certificate of occupancy, file a signed and sealed statement with the enforcement agency in substantially the following form: "To the best of my knowledge and belief, the above described construction of all structural load-bearing components complies with the permitted documents, and the shoring and reshoring conforms to the shoring and reshoring plans submitted to the enforcement agency."

**110.8.5.2** Any proposal to install an alternate structural product or system to which building codes apply be submitted to the enforcement agency for review for compliance with the codes and made part of the enforcement agency's recorded set of permit documents.

**110.8.5.3** All shoring and reshoring procedures, plans and details be submitted to the enforcement agency for recordkeeping. Each shoring and reshoring installation shall be

supervised, inspected and certified to be in compliance with the shoring documents by the contractor.

**110.8.5.4** All plans for the building which are required to be signed and sealed by the Architect or Engineer of record contain a statement that, to the best of the Architect's or Engineer's knowledge, the plans and specifications comply with the applicable minimum building codes and the applicable fire-safety standards as determined by the local authority in accordance with this section and Chapter 633, Florida Statutes.

**110.8.5.5** No enforcing agency may issue a building permit for construction of any threshold building except to a licensed general contractor, as defined in Section 489.105(3)(a), Florida Statutes, or to a licensed building contractor, as defined in Section 489.105(3)(b), Florida Statutes, within the scope of her or his license. The named contractor to whom the building permit is issued shall have the responsibility for supervision, direction, management, and control of the construction activities on the project for which the building permit was issued.

**110.8.5.6** The building department may allow a special inspector to conduct the minimum structural inspection of threshold buildings required by this Code, Section 553.73, Florida Statutes, without duplicative inspection by the building department. The Building Official is responsible for ensuring that any person conducting inspections is qualified as a building inspector under Part XII of Chapter 468, Florida Statutes, or certified as a special inspector under Chapter 471 or 481, Florida Statutes. Inspections of threshold buildings required by Section 553.79(5), Florida Statutes, are in addition to the minimum inspections required by this Code.

**110.8.5.7** Construction inspected by the Building Department may be rejected or approval refused for reasons of incompleteness or code violation. The work shall be made to comply and the request for inspection repeated as outlined herein. It shall be assumed that the responsible individual or individuals in charge of the work shall have themselves inspected the work and found it to be in compliance with this Code and plans requirements before the request for inspection is made. It is the responsibility of the permit holder to ensure that the job is accessible and means for inspections of such work that are required by this Code for all requested inspections. Failure to provide for this access shall constitute a violation of this Code.

**110.9** The Inspector shall inspect all work for which a request for inspection is made and shall, after inspection, either approve by signing the appropriate sections of the building permit card or inspection record, or other electronic means which has been approved by the Building Official, or disapprove the work and notify the permit holder of the discrepancies found and order corrections within a reasonable period of time. Violations and/or correction notices shall be written and posted at the job site stating the specific reference to the Code Section(s) that have been violated. Any person, firm or corporation who fails to correct defective work within ten (10) days after having been duly notified of such defects shall not be issued any further permits by the Building Department. Permits will resume after the defects have been corrected, inspected, and approved or upon the filing of an appeal with BORA.

**Commented [SR59]:** New language to allow electronic records. Added by C. Kramer.

**110.10 Special Building Inspector.**

**110.10.1** The Building Official upon the recommendation of the Chief Structural Inspector or upon the Building Official's initiative may require the owner to employ a special inspector for the inspection of the structural framework, or any part thereof, as herein required:

**110.10.1.1** Buildings or structures or part thereof of unusual size, height, design or method of construction and critical structural connections.

1. Placement of Piling.
2. Windows, glass doors, external protection devices and curtain walls on buildings over two (2) stories.
3. The method or pace of construction requires continuous inspection.



4. In the opinion of the Building Official, any other additional inspections that are required.

**110.10.2** The Building Official shall require the owner to employ a special building inspector for the inspections herein required:

**110.10.2.1** Precast Concrete Units.

**110.10.2.2** Reinforced unit masonry.

**110.10.2.3** Connections.

**110.10.2.4** Metal Building Systems.

**110.10.2.5** Smoke Control Systems.

**110.10.3** The person employed by the owner as a Special Building Inspector shall be subject to verification of qualifications by the Chief Structural Inspector or Chief Mechanical Inspector, as applicable.

**110.10.4** The Chief Structural Inspector or Chief Mechanical Inspector, as applicable shall require that the Architect or Engineer of record submit an inspection plan which shall specify the scope and nature of inspections to be performed. The special building inspector or their authorized representative shall make all inspections in accordance with the approved inspection plan.

**110.10.5** Special building inspector shall be an Architect or Engineer or their duly authorized representative.

**Exception 1:** Building Inspectors (structural) certified by BORA who have satisfactorily completed an approved masonry course may perform inspections of Reinforced Unit Masonry and any precast lintels incorporated into such masonry for Group R-3 Occupancy.

**Exception 2:** Special building inspector for Smoke control systems shall meet the qualifications required in FBC 909.18.8.2.

**110.10.6** The special building inspector shall be responsible for compliance with the applicable portions of the permitted construction documents as delineated in the special building inspection plan and shall submit progress reports and inspection reports to the Chief Structural Inspector or Chief Mechanical Inspector, as applicable, for submittal to the Building Official. Structural inspections performed by the special building inspector shall satisfy the requirements for mandatory inspections by the FBC.

**110.10.6.1** A log of all progress reports and inspection reports shall be maintained at the job site.

**110.10.6.2** Signed and Sealed progress reports and inspection reports shall be submitted to the Chief Structural Inspector, or Chief Mechanical Inspector, as applicable, for submittal to the Building Official on a weekly basis.

**Exception:** The Chief Mechanical Inspector, and or Building Official shall determine the frequency for the submitting of progress reports for Smoke Control Systems.

**110.10.6.3** The municipality shall monitor the progress of the special building inspector on a regular basis.

**110.10.7** At the completion of the work, the special building inspector shall submit a signed and sealed Certificate of Compliance to the Chief Structural Inspector or Chief Mechanical Inspector, as applicable for submittal to the Building Official, stating that the work was done, substantially in accordance with the applicable portions of the permitted construction documents as delineated in the special building inspection plan.

**Exception:** Reports for Smoke Control Systems shall comply with FBC 909.18.8.3 Reports, and FBC 909.18.8.3.1 Report filing.

**110.11 Official Reports.** The Building Official shall keep records of inspections, Certificates of Compliance, results of tests, plans, specifications, surveys and Certificates of Occupancy for a period of not less than what is required in Section 107.5. Such records shall become a part of the public records and open to public inspection, except as may be elsewhere specifically stipulated.

**110.12 Clean-up of Construction Site.** Upon completion of the proposed work, the permit holder shall leave the construction site cleared of rubbish, debris, construction sheds or materials of construction. In the event there has been damage to public property or that rubbish, debris, construction sheds or materials of construction have been left at the construction site, then the Building Official shall refuse to make final inspection and shall notify the permit holder to correct the condition of violation with five (5) days. For failure to comply with such notice after such period of five (5) days, the permit holder is subject to the penalties specified herein, and the Building Official shall have the clean-up work done and public property restored and shall notify the legal authority, who shall institute the necessary action to have the costs placed as a lien against the property in relation to which the permit was issued.

**110.13 Special Hurricane Provisions.** During such periods of time as are designated by the National Weather Service as being a hurricane watch, all furniture, display racks, material and similar loose objects in exposed outdoor locations, shall be lashed to rigid construction or stored in buildings. The Building Official shall issue orders to secure all construction sites. Orders shall be oral or written and shall be given to any person on the premises most logically responsible for maintenance or by facsimile to the responsible entity if such entity is known.

**110.13.1** Any person, firm or corporation receiving an order from the Building Official to comply with this section shall comply with said order within the time specified on the order.

**110.13.2 Construction Waste and Construction Materials.**

**110.13.2.1** It shall be the joint responsibility of any owner of real property upon which construction is occurring, and any contractor responsible for said construction, to ensure that all road rights-of-way remain free at all times of all construction waste and trash resulting from such construction, and that all waste and trash resulting from the construction are contained on the real property upon which the construction occurs. After a hurricane watch or warning has been suspended, the City's Building Official shall give said owner or contractor reasonable time to clear the road rights-of-way of construction waste and trash.

**110.13.2.2** Notices issued by the National Weather Service of a hurricane watch are deemed sufficient notice to the owner of real property upon which construction is occurring, or any contractor responsible for said construction, to secure loose construction debris and loose construction materials against the effects of hurricane force winds.

**110.13.2.3** Pursuant to this section, it shall be a violation of this Code for an owner of the real property upon which construction is occurring, or any contractor responsible for said construction, to have on that property loose construction materials that are not fastened or secured to the ground or any permanent structure. Materials stockpiled on top of any structure under construction shall be permanently installed by the property owner or contractor upon a hurricane watch; provided, however, in the event such installation cannot be timely completed, then the property owner or contractor shall:

1. Band together the construction materials and fasten them to the top of the structure in such a manner so as not to present a threat of their becoming airborne during severe weather; or
2. Remove the construction materials from the top of the structure and fasten down to the ground; or

3. Remove the construction materials from the job site; or
4. Store the construction materials inside an enclosed structure.

**110.13.3** From June 1 to November 30 of each calendar year (the National Weather Service designated hurricane season), building materials shall be loaded on a roof no earlier than twenty (20) working days prior to the permanent installation of those materials.

**110.13.4** After winds of hurricane velocity are experienced and have subsided, the Building Official shall investigate to determine if damage has occurred to buildings or other structures.

**110.13.5** No building or other structure or assembly or part thereof, which was damaged or collapsed; out of plumb or line shall be repaired or altered, or otherwise returned to its original position, without inspection and approval by the Building Official.

~~**110.13.6** When conducting emergency damage assessments, the Building Official shall complete the Broward County Emergency Management Division Unsafe Structures Reporting Form. The reports can be faxed, emailed, or if necessary, telephoned in to the numbers prescribed on the form within forty-eight (48) hours of a building being posted as unsafe and a secondary report shall be submitted when the building is deemed safe, also within forty-eight (48) hours. The reporting form will be approved by both the Emergency Management Division and BORA.~~

Commented [SR60]: Moved to 110.14

**110.13.76** Physical damage occurring to meter troughs, risers and masts, weather-heads and associated electrical equipment on the exterior portion of residential structures shall be repaired by a qualified electrical contractor. Upon completion of said repairs:

**110.13.76.1** Contractor shall tag the completed work with appropriate identification including Customer Name, Customer Address, brief description of repair, Contractor Name, Contractor License Number and Contractor phone number for Florida Power & Light Company (FPL) and inspecting authorities. Tag and text shall be durable and weather resistant.

**110.13.76.2** FPL may, upon acknowledging the tag, reconnect the electrical service without inspection by the inspecting authorities. FPL shall take due care to ensure safety before energizing the service.

**110.13.76.3** Contractor shall obtain permits after the fact within thirty days of the occurrence.

**110.13.76.4** Florida Power & Light Co. shall record and submit to individual inspecting authorities a list of electrical service reconnections and locations within thirty (30) days after the emergency or crisis conditions have subsided.

~~**110.13.8** During the emergency period, as pro-claimed by the Governor, the Building Official may accept inspection reports as outlined in Section 110.11, Special Inspector, for structural portions, including qualified Engineers or Architects for electrical, mechanical and plumbing inspections.~~

~~**110.13.9** During the emergency period, as pro-claimed by the Governor, the Building Official may at his or her option allow an Architect or an Engineer, or their duly authorized representative to perform required re-roofing inspections. The Architect or Engineer shall submit sealed inspection reports to the Building Official.~~

Commented [SR61]: Moved to 110.14

**110.13.407 Storm Shutter Placement during Hurricane Season.** After the termination of such periods of time that had been designated by the National Weather Service as being a hurricane watch or warning, hurricane protective devices installed on occupied buildings which impede required egress or required light and ventilation shall be removed within fifteen (15) days.

**110.14 Period of declared disaster.** During such periods of time that an area or areas of Broward County is deemed a Federal or State declared Disaster Area, During periods of a state of emergency or disaster as declared by the Governor, building owners and/or their designated representatives may institute

temporary repairs to their property, in order to restore the impermeability to the building envelope and/or perform any service required to make the structure safe, secure and minimize further damage. Such repairs shall be temporary in nature and may be undertaken without repair permits and inspections by the local building department, as long as the damaged building components and their respective attachments are not permanently concealed. Prior to the permanent repair/reconstruction being commenced, a permit shall be obtained per Section 105, or a demolition permit shall be obtained by a licensed Demolition Contractor pursuant to Section 105.18 of this Code. All work performed prior to obtaining a permit shall comply with the FBC or shall be replaced by permitted work. In order to comply with the FBC, and with the approval of the Building Official, the property owner may retain the services of a Special Building Inspector as described in, complying with all the requirements of Section 110.10.

**110.14.1 Inspection requests.** During periods of emergency or disaster as declared by the Governor, the time frame for performing requested inspections can be extended by the Building Official as personnel availability allows.

**110.14.2 Approval required.** During periods of emergency or disaster as declared by the Governor, inspections performed via electronic or photographic media can be acceptable, on a case by case basis as determined by the Building Official.

**110.14.3 Inspection records.** During periods of emergency or disaster as declared by the Governor, electronic records of inspection results can be acceptable, on a case by case basis as determined by the Building Official.

**110.14.4 Special inspections.** During the emergency or disaster period, as declared by the Governor, the Building Official may accept special inspection reports as outlined in Section 110.11. Special Inspector, for structural, electrical, mechanical, and plumbing inspections portions, including performed by qualified Engineers or Architects for electrical, mechanical and plumbing inspections. During periods of emergency or disaster as declared by the Governor, inspections performed via electronic or photographic media can be acceptable, on a case by case basis as determined by the Building Official.

**110.14.5 Reroofing Inspections.** During the emergency or disaster period, as declared by the Governor, the Building Official may at his or her option allow an Architect or an Engineer, or their duly authorized representative to perform required re-roofing inspections. The Architect or Engineer shall submit sealed inspection reports to the Building Official. During periods of emergency or disaster as declared by the Governor, inspections performed via electronic or photographic media can be acceptable, on a case by case base as determined by the Building Official.

**110.14.6 Damage assessments.** When conducting emergency damage assessments, the Building Official shall complete the Broward County Emergency Management Division Unsafe Structures Reporting Form. The reports can be faxed, emailed, or if necessary, telephoned in to the numbers prescribed on the form within forty-eight (48) hours of a building being posted as unsafe and a secondary report shall be submitted when the building is deemed safe, also within forty-eight (48) hours. The reporting form will be approved by both the Emergency Management Division and BORA.

**110.14.7** The protocol for Sections 110.14.1 through 110.14.6 applies during a state of emergency or disaster as declared by the Governor of the state of Florida.

**110.14.8** Inspections and records of inspections required by Section 110.3 and as set forth in Sections 110.6, 110.9, and 110.14.2 through 110.14.4 can be acceptable, on a case by case base as determined by the Building Official.

**110.14.9 Suspension of Certification Requirements.** See section 113.11.7.

**110.15 Building Safety Inspection Program.** BORA has established a building safety inspection program for buildings and structures that have been in existence for a period of 40 years or longer. BORA by written

**Commented [SR62]:** Section revised to have all emergency powers in one place. Section revised per C.Kramer proposal.

policy shall establish the guidelines and criteria which will be the minimum requirements for the Building Safety Inspection Program. The Building Official shall enforce the building safety inspection Program. U. S. Government buildings, State of Florida buildings, buildings built on Indian Reservations, Schools buildings under the jurisdiction of the Broward County School Board, One- and Two-Family Dwellings, and minor structures defined as buildings or structures in any occupancy group having a gross floor area less than three thousand five hundred (3,500) square feet; are exempt from this program.

In order to implement the new Building Safety Inspection Program in an orderly manner to clear a backlog of buildings needing inspection, implementation shall proceed as follows:

1. 40 year or older buildings of eleven thousand (11,000) square feet or more - compliance in calendar year 2006.
2. 40 year or older buildings seven thousand (7,000) square feet or more - compliance no later than calendar year 2007.
3. 40 year or older building five thousand five hundred (5,500) square feet or more - compliance no later than calendar year 2008.
4. 40 year or older buildings four thousand six hundred fifty (4,650) square feet or more - compliance no later than calendar year 2009.
5. 40 year or older buildings three thousand eight hundred (3,800) square feet or more - compliance no later than calendar year 2010.
6. 40 year or older buildings three thousand five hundred (3,500) square feet or more - compliance no later than calendar year 2011.

Subsequent building inspections shall be required at ten (10) year intervals, Section 110.15 Effective January 1, 2006, regardless of when the inspection report for same is finalized or filed. Any buildings or structures not otherwise excluded as set forth herein shall be inspected at the same time as the initial 40-year inspection of the building and shall be re-inspected in accordance with the schedule for the building.

## Section 111 Certificates of Occupancy and Completion

### 111.1 Certificate of Occupancy.

**111.1.1 Use and Occupancy.** No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or nature or use or portion thereof shall be made until the Building Official has issued a Certificate of Occupancy therefor as provided herein. Said certificate shall not be issued until all ~~required electrical, gas, mechanical, plumbing and fire protection systems, requirements of the FBC, and provisions of FFPC~~ have been inspected for compliance with the technical codes and other applicable laws and ordinances and released by the Building Official. Issuance of a Certificate of Occupancy shall not be construed as an approval of a violation of the provisions of this Code or of other ordinances of the jurisdiction.

Commented [SR63]: More inclusive language.

**Exception:** Certificates of occupancy are not required for work exempt from permits under Section 105.2.

**111.2 Certificate Issued.** After the Building Official or duly authorized representative, inspects the building or structure and does not find violations of the provisions of this Code or other laws that are enforced by the AHJ, the Building Official shall issue a Certificate of Occupancy that contains the following:

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner.
4. A description of that portion of the structure for which the certificate is issued.

5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this Code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. For buildings and structures in flood hazard areas, a statement that documentation of the as-built lowest floor elevation has been provided and is retained in the records of the authority having jurisdiction.
7. The name of the Building Official.
8. The edition of the code under which the permit was issued.
9. The use and occupancy, in accordance with the provisions of FBC Building Chapter 3.
10. The type of construction as defined in FBC Building Chapter 6.
11. The design occupant load and the number of persons for each floor, and the allowable load live or dead per square foot for each floor in accordance with the provisions of this Code.
12. If an automatic sprinkler system is provided, whether the sprinkler system is required.
13. Any special stipulations and conditions of the building permit.

#### **111.3 Temporary/Partial Certificate of Occupancy.**

**111.3.1** The Building Official is authorized to issue a Temporary Certificate of Occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely providing the building to be occupied has, to the satisfaction of the Building Official, met all the code provisions related to sanitary facilities, electric service, means of egress, fire resistive separation, structural adequacy, and life safety requirements as found in the FBC, Fire Protection Provisions of this Code and FFPC for the use of a building. The Building Official shall set a time period during which the temporary certificate of occupancy is valid.

**111.3.3.2 Partial Certificate of Occupancy.** A Partial Certificate of Occupancy may be issued by the Building Official for portions of a building providing such portions comply with the requirements for a Certificate of Occupancy, and the portions of the building are isolated from the portions in which construction activities are continuous. Areas not included in the Partial Certificate of Occupancy shall not be occupied until such areas are completed satisfactorily for an issuance of a Certificate of Occupancy. Each area shall not be occupied until inspected and approved and additional Partial Certificates of Occupancy are issued. The final Certificate of Occupancy shall not be issued for the entire building until the requirements of Section 111.1 are complied with.

Commented [SR64]: Proper number sequence.

**111.4 Revocation.** The Building Official is authorized to serve a notice of the suspension or revocation of the certificate of occupancy or completion, issued under the provisions of this Code, in writing, on the person or persons using or causing the use of a building or structure, wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance, regulation, any of the provisions of this Code or Fire Protection Provisions of this Code and FFPC. After the receipt of such notice or order, the building or portion thereof shall be brought into compliance with this Code within a reasonable time, as determined by the Building Official.

**111.5 Certificate of Completion.** A certificate of completion is proof that a structure or system is complete and for certain types of permits is released for use and may be connected to a utility system. This certificate does not grant authority to occupy or connect a building, such as a shell building, prior to the issuance of a Certificate of Occupancy.

## Section 112 Service Utilities

**112.1 Connection of service utilities.** A person shall not make connections from a utility source of energy, fuel or power to any building or system that is regulated by this Code and for which a permit is required, until a Certificate of Occupancy, or Completion is issued, or released by the Building Official or his/her duly authorized discipline Chief.

**Exception:** Temporary connections per Section 112.2.

**112.2 Temporary connection.** The Building Official or his/her duly authorized discipline Chief may authorize the temporary connection of the building or system to the utility source of energy, fuel or power for the purpose of testing building service systems or for use under a Temporary Certificate of Occupancy.

**112.2.1 Energizing Systems.** It shall be unlawful for any person, firm or corporation to energize any wiring system or portion thereof until the electrical work has been inspected and approved and the responsible person, firm or corporation is authorized by the appropriate governmental jurisdiction to energize the system.

**112.3 Authority to disconnect service utilities.** The Building Official or his/her duly authorized discipline Chief or Fire Chief, shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by the reference codes and standards set forth in Section 101.4 in case of emergency where necessary to eliminate an immediate hazard to life or property or where such utility connections have been made without the approval required by Section 112.1 or 112.2. The Building Official or Chief Electrical Inspector shall notify the serving utility, and whenever possible the owner and occupant of the building, structure, or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

**112.4 Sewer connections.** No person shall make any connection to a public or private sewer, or appurtenance thereof, without the authorization of the Building Official or Chief Plumbing Inspector.

## Section 113 Board of Rules and Appeals.

**113.1 General.** In order to determine the suitability of alternate materials and types of construction to provide for reasonable interpretation of the provisions of this Code and to assist in the control of the construction of buildings and structures, there is hereby created BORA, appointed by the appointing authority, consisting of thirteen (13) members and nine (9) alternates who are qualified by training and experience to pass on matters pertaining to building construction.

**113.1.1 Secretary to the Board (Administrative Director) and employees.** BORA is authorized to hire a full-time secretary. Office space, office equipment and such other material, equipment and services required to operate such office shall be furnished by the Broward County Commissioners. The Board may hire other personnel as they are deemed necessary by said Board with permission from the Broward County Commissioners. All moneys collected by the Board as fees shall be retained by the Broward County Commission to offset operating costs of such office.

**113.2 Staff.** BORA shall maintain a staff to coordinate the enforcement of this Code and FFPC and shall be called the Code Compliance Department. The Department shall consist of the Administrative Director, and Chief Code Compliance Officers (Electrical, Fire Prevention, Mechanical, Plumbing, Energy Conservation, and Structural). Chief Code Compliance Officers shall be certifiable as Chiefs, in their respective disciplines, and the Chief Fire Prevention Code Compliance Officer shall be certifiable as Fire Marshal/Fire Code Official. The Chief Code Compliance Officers shall have the authority to make inspections in their disciplines and shall be responsible to see that this Code is being uniformly enforced by all Building and Fire Departments in all cities and the unincorporated areas in Broward County. The Code Compliance staff shall work directly under the Administrative Director, who will be directed by the full BORA.

Commented [SR65]: New position approved by BORA

### 113.3 Membership.

#### 113.3.1 The Membership of BORA is as stated in the current County Charter.

~~113.3.1.1 Eleven (11) members and/or seated alternates shall constitute a quorum and decisions shall be reached by a majority of those present. A quorum of the Board of Rules and Appeals shall consist of a majority of the total membership of the Board of Rules and Appeals, and a majority vote of those members voting on a measure shall be necessary for the Board of Rules and Appeals affirmative action. With a total membership of 13 members, quorum is 7.~~

**Commented [R66]:** Changed to match language in county charter 9.02, B (9)

113.3.1.2 All appointments shall be for a term of three (3) years. All members and alternates shall continue in office until their successors are duly appointed.

113.3.1.3 The Board shall adopt rules of procedure to seat alternates in the event all board members are not present for a scheduled meeting of the Board.

113.4 The Broward County Commission or Broward County League of Cities, whichever is the appointing authority, may remove, either by its own action or upon recommendation of the majority of BORA, any members or alternate for misconduct, incompetence, or neglect of duty. However, any member or alternate so removed may, within ten (10) days, request a public hearing before the public body who attempts to remove the member or alternate, and the member or alternate shall receive such hearing before such removal shall be final.

113.5 Any vacancies occurring on BORA shall be filled for the remainder of the former member's or alternate's term of office by appointment of the Broward County Commission when the former member or alternate was an appointee of the Commission, or by the Broward League of Cities when the former member or alternate was an appointee of the League.

113.6 It shall be the function of BORA, created by this Charter, to exercise the powers, duties, responsibilities, and obligations as set forth and established in Chapter 71-575, Laws of Florida, Special Acts of 1971, as amended by Chapters 72-482 and 72-485, Laws of Florida, Special Acts of 1972; Chapters 73-437, and 74-448, Laws of Florida, Special Acts of 1974; the Florida Building Code and the SFBC as enacted and amended by Chapter 71-575, as amended.

113.7 **Compensation.** Members shall serve without compensation but shall be entitled to reimbursement for necessary expenses in performance of their Official duties upon approval of the appointing authority.

#### 113.8 Meetings.

113.8.1 Meetings of BORA shall be held at the call of the Chairperson and at such other times as the Board may determine.

113.8.2 The Board shall select one (1) of its members to serve as Chairman and one (1) to serve as Vice-Chairman, to act in the absence of the Chairman. A detailed record of all proceedings shall be kept on file in the office of the Secretary. The Board shall establish rules and regulations for its own procedure.

#### 113.8.3 Hearings.

113.8.3.1 All hearings shall be open to the public, and any person whose interest may be affected by the matter on appeal shall be given an opportunity to be heard.

113.8.3.2 The hearing shall be informal and need not be conducted according to technical rules relating to evidence and witnesses.

113.8.3.3 Any relevant evidence shall be admitted if it is the sort of evidence on which responsible persons are accustomed to rely in the conduct of serious affairs, regardless of the existence of



any common law or statutory rules which might make improper the admission of such evidence over objection in civil actions.

**113.8.3.4** Hearsay evidence may be used for the purpose of supplementing or explaining any direct evidence but shall not be sufficient in itself to support a finding unless it would be admissible over objection in civil actions.

**113.8.3.5** The rules of privilege shall be effective to the same extent that they are now, or hereafter may be, recognized in civil actions, and irrelevant and unduly repetitious evidence shall be excluded.

**113.8.4 Conflict of Interest.** No member of the Board shall sit as a voting member in any hearing involving any question in which he or she has personal or financial interest and shall be sequestered during the deliberation and vote of the Board.

**Commented [SR67]:** New language proposed by C. Kramer. Esq.

**113.8.5 Quorum.** ~~Eleven (11) members of the Board shall constitute a quorum. Decisions shall be reached by the majority of those present. A quorum of the Board of Rules and Appeals shall consist of a majority of the total membership of the Board of Rules and Appeals, and a majority vote of those members voting on a measure shall be necessary for the Board of Rules and Appeals affirmative action. With a total membership of 13 members, quorum is 7.~~

**Commented [R68]:** Changed to match language in county charter 9.02, B (9)

**113.8.6** Written notice of Board decision shall be furnished to the appellant when requested.

**113.8.7** When an appeal of a decision of a Building Official/Fire Code Official or his or her subordinate has been filed with BORA that Building Official/Fire Code Official or his or her designated representative shall be responsible to (1, 2, 3, or all):

**113.8.7.1** Respond to BORA in writing defending his or her decision and/or interpretation, within five (5) (working) days.

**113.8.7.2** Attend the Board meeting when the appeal is on the agenda.

**113.8.7.3** Take immediate action in accordance with decision of BORA. Immediate action shall be that a Certificate of Completion, Temporary Occupancy, or a Certificate of Occupancy shall not be issued until compliance with the decision of the Board has been completed.

**Exception:** For fire related appeals only, see FFPC.

#### **113.9 Duties.**

**113.9.1 Appeal from decision of Building Official, Assistant Building Official or Chief Inspector.** The Board shall hear all appeals from the decisions of the Building Official, Assistant Building Official or Chief Inspector wherein such decision is on matters regulated by this Code from any person, aggrieved thereby, and specifically as set forth in Section 104.32, "Alternate Materials, designs and methods of Construction and equipment." Application for Appeal shall be in writing and addressed to the Secretary of the Board.

**113.9.2 Interpret code at request of Building Official, Assistant Building Official, Chief Inspector, Fire Code Official or the staff of BORA.** The Board shall pass on all matters pertaining to this Code and referred to the Board by the Building Official, Assistant Building Official, Chief Inspector or staff of BORA for interpretation or clarification.

**113.9.3 Investigate Enforcement.** BORA, upon the request of any person charged with the responsibility of enforcing the Code, or upon its own initiative, shall conduct investigation into enforcement of this Code, and shall have the power to suspend or revoke any permits issued thereunder, after a hearing at which interested persons may appear and be heard and evidence indicates that the best interests of the public are served by such action except in regard to the qualifications of the applicant for permit.

#### 113.9.4 Report and Recommendations.

**113.9.4.1** BORA may recommend to the elected Officials of the jurisdictions adopting this Code, ordinances prescribing the fee for examinations, permits, inspections of boilers and elevators, the testing of materials, and all other such work required by this Code.

**113.9.4.2** BORA shall make any desired amendments or revisions to the Code.

**113.10 Cost of appealing to Board.** ~~Reserved. Any person who appeals to BORA for a decision on any matter within its jurisdiction is required to pay a fee of fifty dollars (\$50.00) to the Secretary of BORA, and said person shall further guarantee payment of all expenses for necessary tests made or ordered by said Board to ascertain whether the request of the applicant has any merit.~~

Commented [SR69]: Appeal fee was repealed by BORA.

**113.11 Procedure for Appeals.** Any person aggrieved by anyone enforcing this Code who desires to appeal to this Board shall first contact the Secretary of the Board for a date for his Appeal to be heard. A notice of Appeal shall be sent to the governing body of the jurisdiction wherein the dispute arose and said notice shall contain the following:

**113.11.1** The time and date of the hearing.

**113.11.2** A clear and concise statement of the subject to be decided on appeal sufficient to put the said governing body on notice so that they may defend their interpretation of this Code.

**113.11.3** The notice shall be sent by certified mail with return receipt and by facsimile or electronic media, with a receipt showing delivery by noon, or by personal delivery by noon at least nine (9) days prior to the hearing. The Board in its discretion may require a specific form for this notice. For an appeal to be valid, a written rejection from the denial AHJ shall be included with the appeal. The denial authority shall respond in writing to the appellant.

**113.11.4** The appellant shall also file a copy of his or her notice of Appeal with the Secretary of the Board at the same time that he or she notifies the governing body and said Secretary shall deliver to each member of the Board, a copy of the notice, with sufficient time before the hearing for the Board members to study the dispute. Procedure for Appeals may be changed from time to time by the Board if they deem it necessary for the benefit of the public. Whenever feasibly possible, the Chief Inspector involved in the appeal shall present the jurisdiction's position and justifications for the appeal at the Board meeting.

**113.11.5** Notwithstanding, and in addition to, the jurisdiction of BORA created by Chapter 71-575, Laws of Florida, Building Code as applicable to Broward County may be enforced by injunctive proceedings, or other appropriate legal proceedings, in the appropriate court having jurisdiction thereof, upon petition or complaint filed by BORA, which is hereby granted the power to sue and be sued, or by any aggrieved person, any interested citizen, citizen's association, corporation or other business entity if any elected or appointed Officials named in Section 3 of Chapter 71-575 or any Building Official fails or refuses to comply with said Code.

**113.11.6 Certification of Building Official, Assistant Building Official/Code Administrator, Chief Electrical Inspector, Electrical Plans Examiner, Electrical Inspector, Chief Mechanical Inspector, Mechanical Plans Examiner, Mechanical Inspector, Chief Plumbing Inspector, Plumbing Plans Examiner, Plumbing Inspector, Roofing Inspector, Chief Structural Inspector, Structural Plans Examiner, Structural Inspector, Fire Marshal/Fire Code Official, Fire Plans Examiner, and Fire Inspector.** BORA shall have the duty, as set forth in Section 104 of this Code, to accept and review certification applications and to certify or refuse to certify applicants for Building Official, Assistant Building Official, Chief Electrical Inspector, Electrical Plans Examiner, Electrical Inspector, Chief Mechanical Inspector, Mechanical Plans Examiner, Mechanical Inspector, Chief Plumbing Inspector, Plumbing Plans Examiner, Plumbing Inspector, Roofing Inspector, Chief Structural Inspector, Structural Plans Examiner, Structural Inspector, Fire Marshal/Fire Code Official,

Fire Plans Examiner, and Fire Inspector to be employed by any inspection authority regulated by this Code.

**113.11.7 Suspension of Certification Requirements.** During an emergency period proclaimed by the Governor, the Chairperson of BORA or designee may temporarily suspend the Broward County certification requirements for all individuals Certified by the State of Florida, Department of Business and Professional Regulation, BCAIB as Building Code Administrators, Plans Examiners and Inspectors. The length of time that this suspension will be in effect will be for an initial period not to exceed ninety (90) calendar days. BORA may extend this period if conditions warrant. This temporary suspension of the certification requirement shall not apply to an individual being hired on a permanent basis.

#### **113.12 Powers.**

**113.12.1** BORA may interpret the provisions of this Code to cover a special case if it appears that the provisions of this Code do not definitely cover the point raised or that the intent of this Code is not clear or that ambiguity exists in the wording; but it shall have no authority to grant variances where the Code is clear and specific.

**113.12.2** The use of alternate materials or types of construction not clearly comparable with the materials and types of construction specified in this Code may not be granted by BORA; but the Board, if favorable to such use, may amend this Code to make such use lawful.

**113.12.3** The Board shall have the power to affirm, modify or reverse the decision of the Building Official wherein such decision is on matters regulated by this Code.

**113.12.4** BORA shall have the powers as specified in Section 116, "Unsafe Structures and Equipment."

**113.12.5** BORA shall have the power to suspend or revoke permits, as specified in Section 105.6 of this Code.

**113.12.6** When it is deemed necessary by the Board, it may request experienced and technical advice on any specific subject or subjects from any qualified person or persons, and such request may be for attendance at Board Meetings or for written analysis of the specific problem. BORA may establish Panels of Industry, either standing or temporary, for technical analysis of specific subjects.

#### **113.13 Reciprocity.**

**113.13.1** BORA shall have the authority to meet with similarly constituted and authorized boards for the purposes of discussion, decision, and similar matters of area-wide industry concern.

**113.13.2** Decisions of the majority of all members at joint meetings as referred to herein, shall not be binding on BORA. The decisions of joint meetings with other boards may be accepted or rejected or accepted with modifications.

#### **113.14 Review of Board Decisions.**

**113.14.1** Any person aggrieved by a decision of BORA, whether or not a previous party to the decision, may file an appeal pursuant to Section 553.775(3)(c), Florida Statutes. Appeals of decisions within the review jurisdiction of the Florida Building Commission shall be to the Florida Building Code in the manner prescribed in the referenced statute. Review of other decisions of BORA shall be as provided in the Florida Rules of Appellate Procedure for judicial review of administrative action.

#### **113.15 Amendments to Code.**

**113.15.1** The provisions of the SFBC, Broward Local Amendments to FFPC, and the FBC as applicable to Broward County, shall be amended only by BORA and only to the extent and in the

manner specified in this Code, and in Section 553.73(4), Florida Statutes. For fire code related amendments see FFPC and Section ~~633.0245202~~, Florida Statutes.

Commented [SR70]: State statute number has changed.

**113.15.2** Neither the Broward County Board of County Commissioners nor any municipality within Broward County may enact any ordinance in conflict with Chapter 71-575, as amended, the Florida Building Code, or the SFBC.

## Section 114 Violations.

**114.1 Violations and Penalties.** Any person, firm, or corporation, who violates a provision of this Code, or FFPC or fails to comply therewith, or with any of the requirements thereof, shall be guilty of a misdemeanor. Each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Code or FFPC is committed or continued, and upon conviction of any such violation, such person shall be punishable by a fine of not less than fifty dollars (\$50.00) nor more than five hundred dollars (\$500.00), or by imprisonment not exceeding sixty (60) days, or by both such fine and imprisonment.

## Section 115 Stop Work Order

**115.1 Authority.** Whenever the Building Official or Fire Chief finds any work regulated by this Code being performed in a manner either contrary to the provisions of this Code or dangerous or unsafe, the Building Official or Fire Chief is authorized to issue a stop work order. See also Sections 105.4, 105.6, 111.4, and 112.3.

**115.2 Issuance.** The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work, or posted on the job site in a conspicuous location. Upon issuance of a stop work order, the cited work shall immediately cease by such persons. The stop work order shall state the reason for the order, and ~~the conditions under which the cited work will be permitted to resume work that is required to correct a violation or unsafe condition.~~

Commented [SR71]: Trying to simplify and clarify language.

**115.3 Unlawful continuance.** Any person who ~~shall continue~~ continues any work after having been served with a stop work order, ~~except such work as that person is directed to perform to remove a violation or unsafe condition,~~ shall be subject to penalties as prescribed by law.

Commented [SR72]: Better language.

Exception: Work required to correct a violation or unsafe condition.

Commented [SR73]: Trying to simplify and clarify language.

## Section 116 Unsafe Structures and Equipment.

Commented [SR74]: No changes to this section.

### 116.1 General.

**116.1.1** Buildings or structures that in the opinion of the Building Official are, or hereafter shall become unsafe, unsanitary or deficient in adequate facilities for means of egress, or which constitute a fire or windstorm hazard, or illegal or improper use, occupancy or maintenance, or which do not comply with the provisions of the applicable Minimum Housing Code, or which have been substantially damaged by the elements, acts of God, fire, explosion or otherwise shall be deemed unsafe buildings and a permit shall be obtained to demolish the structure or bring the building to comply with the applicable Codes.

**116.1.2** Incomplete buildings or structures commenced without a permit or the permit for which has expired, or completed buildings or structures commenced without a permit or the permit for which

expired prior to completion and no Certificate of Occupancy has been issued, shall be presumed and deemed unsafe.

**116.1.3** Unsafe buildings or structures shall be demolished and removed from the premises concerned, or made safe, sanitary and secure in a manner required by the Building Official and as provided in this Code, provided that where replacement, repair, alteration or demolition is required on Buildings or structures within the purview of the applicable Minimum Housing Code, the provisions of such Code shall be complied with and shall control.

**116.1.4** A permit shall be issued for the demolition of any unsafe building or structure in accordance with Section 105.18 of this Code.

**116.2 Criteria.** When any one (1) of the following conditions exist, a building may be deemed unsafe or a fire hazard:

**116.2.1 Physical Criteria.**

**116.2.1.1** A Building shall be deemed a fire hazard and/or unsafe when:

**116.2.1.1.1** It is vacant, unguarded and open at doors or windows.

**116.2.1.1.2** There is an unwarranted accumulation of dust, debris or other combustible material therein.

**116.2.1.1.3** The building condition creates hazards with respect to means of egress and fire protection as provided herein for the particular occupancy.

**116.2.1.2** A building shall be deemed unsafe when:

**116.2.1.2.1** There is a failure, hanging loose or loosening of any siding, block, brick, or other building material.

**116.2.1.2.2** There is a deterioration of the structure or structural parts.

**116.2.1.2.3** The building is partially destroyed.

**116.2.1.2.4** There is an unusual sagging or leaning out of plumb of the Building or any parts of the building and such effect is caused by deterioration or over-stressing.

**116.2.1.2.5** The electrical or mechanical installations or systems create a hazardous condition in violation of this Code.

**116.2.1.2.6** An unsanitary condition exists by reason of inadequate or malfunctioning sanitary facilities or waste disposal systems.

**116.2.1.2.7** Swimming pools that contain stagnant water are deemed unsanitary and dangerous to human life and public welfare and shall be presumed and deemed unsafe.

**116.2.1.2.8** By reason of use or Occupancy the area, height, type of construction, fire-resistivity, means of egress, electrical equipment, plumbing, air conditioning or other features regulated by this Code do not comply with this Code for the use and Group of Occupancy.

**116.2.1.2.9** Any mobile home that is being modified in violation of Department of Highway safety and motor vehicles Florida Administrative Code section 15C-2.0081 may be deemed unsafe or a fire hazard.

**116.2.1.3** A Building, or part thereof, shall be presumed to be unsafe if:

**116.2.1.3.1** The construction, installation of electrical, plumbing or other equipment therein or thereon, or the partial construction or installation of equipment has been commenced or completed without a permit therefore having been obtained or the permit therefore expired prior to completion and a Certificate of Occupancy issued.

**116.2.1.3.2** By reason of illegal or improper use, occupancy, or maintenance does not comply with this Code or the Code in effect at the time of construction or the applicable Minimum Housing Code.

#### **116.2.2 Valuation Criteria.**

**116.2.2.1** If the cost of completion, alteration, repair and/or replacement of an unsafe building or structure or part thereof exceeds fifty (50) percent of its value, such building shall be demolished and removed from the premises. If the cost of completion, alteration, repair and/or replacement of an unsafe building or structure or part thereof does not exceed fifty (50) percent of such replacement cost, such building or structure may be repaired and made safe, as provided in the FBC Existing Building.

**116.2.2.2** If the cost of structural repair or structural replacement of an unsafe building or structure or part thereof exceeds thirty-three (33) percent of the structural value such building or structure or part thereof shall be demolished and removed from the premises; and if the cost of such structural repairs does not exceed thirty-three (33) percent of such replacement cost, such building or structure or part thereof may be structurally repaired and made safe, as provided in FBC Existing Building.

**116.2.2.3** In order to determine the value of a building or structure and the cost of alterations, repairs and replacement, the guides and standards provided in the FBC Existing Buildings shall apply.

**116.2.2.4** An Exception to the above percentages may be recognized provided:

**116.2.2.4.1** The owner of property has the ways and means to complete the work.

**116.2.2.4.2** All imminent danger has been removed from the site.

**116.2.2.4.3** All applicable Zoning regulations are met.

**116.2.2.4.4** All applicable requirements of other departments and agencies are met.

**116.2.2.4.5** Criteria noted in FBC Existing Building are followed.

**116.2.2.4.6** Any remaining portion of the structure to be used in rebuilding is certified as safe by an Engineer or Architect.

**116.3 Inspection of Unsafe Buildings and Structures.** The Building Official, on his or her own initiative or as a result of reports by others, shall examine or cause to be examined every building or structure appearing or reported to be unsafe, and if such is found to be an unsafe Building or structure as defined in this Section, the Building Official shall post the property concerned and shall furnish the owner of such Building or structure with written notice, the manner of posting and furnishing of written notice is provided hereinafter.

**116.4 Posting.** The Building Official shall post a signed notice in a conspicuous location on the building or structure which has been determined to be unsafe. The posted notice shall read substantially as follows:

"UNSAFE BUILDING." This building or structure is, in the opinion of the Building Official, unsafe, as defined in Section 116 of this Code.

This Building Shall Be Vacated — Shall Not Be Occupied. Action shall be taken by the owner as further prescribed by written notice previously served. This Notice Shall Not Be Removed Except By The Building Official. Date \_\_\_\_\_

#### **116.5 Emergency Action.**

**116.5.1** When in the opinion of the Building Official, there is actual or immediate danger of the failure or the collapse of a building or structure, or there is a health, windstorm or fire hazard, he or she may order the occupants to vacate, temporarily close for use or occupancy the rights-of-way thereto, sidewalks, streets or adjacent buildings or nearby area and institute such other temporary safeguards, including securing posting and demolition of the building or structure, as he or she may deem necessary under the circumstances, and may employ the necessary labor and materials to perform the required work as expeditiously as possible.

**116.5.2** Costs incurred in the performance of such emergency work shall be paid by the appropriate governmental authority and upon the recording in the public records of this County a certificate executed by the Building Official, certifying the amount so expended and why expended, the same shall become a lien against the property involved.

**116.6 Notice of Violation.** The Building Official shall give the owner of record of the premises concerned written notice by certified or registered mail, addressed to such person's last known address. If proof of service by registered or certified mail is not completed by signed return receipt, then a copy of the written notice shall be affixed to the structure concerned and such procedure shall be deemed proper service, and the time for compliance, stipulated in the notice, shall be deemed to commence with the date such notice is so affixed. This written notice shall state the defects which constitute a violation of this Section and shall prescribe the action to be taken to comply and the time within which compliance must be accomplished, such time to be ten (10) business days, subject to reasonable extension when requested in writing, for reasons which the Building Official considers justifying an extension of time. All such extensions of time shall be by written approval of the Building Official. In addition, this written notice will explain the right of appeal of the decision of the Building Official to the Unsafe Structures and Housing Appeals Board, and also advise that unless there is compliance with the instructions in the Notice of Violation or an appeal is filed that a public hearing before the Unsafe Structures and Housing Appeals Board will be initiated by the Building Official after time for compliance has expired.

#### **116.7 Recording of Notice of Violation.**

**116.7.1** If the owner of the property concerned has not complied with the requirements as stated in the Notice of Violation within the time stipulated or has not appealed the action of the Building Official as stated in the Notice of Violation within the time specified, the Building Official may file an appropriate instrument in the office of the Clerk of the Circuit Court, to be recorded in the public records of this County, indicating that violations of this Code, and of Section 116 thereof, exist upon the property involved.

**116.7.2** The recording of such notice shall constitute constructive notice to all concerned, as well as to any subsequent purchasers, transferees, grantees, mortgages, lessees and all persons claiming or acquiring interest in said property.

**116.7.3** When the violation specified in the Notice of Violation has been corrected, the Building Official shall file for record a certificate certifying that the violation has been corrected, upon being paid for the filing fees incurred.

**116.8 Appeal and Review.** The owner or anyone having an interest in a building or structure which has been determined to be unsafe, and concerning which a Notice of Violation has been served by the Building Official, may appeal the decision of the Building Official as stated in the Notice of Violation, to the Unsafe Structures and Housing Appeals Board, if such appeal is filed prior to the expiration of the time allowed for compliance specified in such notice; provided, in no event shall appeal period be less than ten (10) business days. Such appeal shall be in writing, addressed to the Secretary of the Unsafe Structures and Housing

Appeals Board, and shall be in the form of a certified statement, stating the reasons for such an appeal and stating wherein they consider the Building Official to be in error. Upon receipt of the appeal, the Secretary of the Board will proceed to notify all parties in interest as to the time and place the Unsafe Structures and Housing Appeals Board shall conduct a public hearing on the matter. The procedure for the serving of and the form of notice is provided hereinafter.

**116.9 Notice of Public Hearing.** If the owner, or other parties having an interest do not comply with the terms of the Notice of Violation and do not file an appeal within the time stipulated, the Building Official shall then apply for a public hearing to be conducted by the Unsafe Structures and Housing Appeals Board, and the Secretary of the Unsafe Structures and Housing Appeals Board shall notify all parties in interest of the time and place of such public hearing on the matter. The procedure for the serving and the form of notice shall be the same as in the case where an appeal has been filed by the owner or other parties in interest and such procedure and form of notice shall be as set forth hereinafter.

**116.9.1** When an appeal has been properly filed, or when the public hearing is initiated by the Building Official, as provided herein, the Secretary of the Unsafe Structures and Housing Appeals Board shall issue a notice in the Board's name, requiring the owner of record and all parties having an interest to appear before the Board in person or by an attorney at the time set forth in such notice, but not earlier than ten (10) days after service thereof, and show cause why the decision of the Building Official should not be carried out.

**116.9.2** As many alias and pluries notices may be issued as may be necessary.

**116.9.3** Service of such notices shall be certified or registered mail to the last known address of the party being served, if known; however, failure to receive such notice shall not invalidate the same as such notice shall also be perfected by posting such notice on the property and by publishing a copy thereof in a newspaper published in this County, such publication to be for two (2) times one (1) week apart.

**116.9.4** The time for appearing and showing cause as aforesaid, and a description of the property shall be as set forth in such published notice; provided, such time shall not be less than ten (10) days after the last publication thereof.

**116.9.5** Any person or party who shall not appear and show cause as aforesaid shall be as fully bound by proceedings taken as if he or she had appeared and shown cause.

**116.10 Public Hearing.**

**116.10.1** On the day established in the notice of public hearing the Board shall review all pertinent evidence and hear all testimony from the Building Official, the owner and other parties in interest and their respective witnesses.

**116.10.2** The Board may modify, rescind, or uphold the decision of the Building Official as recited in the Notice of Violation and may order the owner or persons responsible for the building or structure to vacate, or cause to be vacated forthwith, to make repairs and to take necessary action to secure the building, or to demolish the building or structure and remove the salvage, contents debris and abandoned property from the premises, all within the time stipulated in the order by the Board.

**116.10.3** Such order shall be entered in the minute book of the Board within three (3) days after such public hearing and a copy of such order shall be forwarded to the owner and all parties in interest by registered or certified mail and a copy thereof posted on the premises.

**116.10.4** If the owner or those responsible shall fail to comply with the order of the Board within the time stipulated therein, and such order is to repair, or secure the building to make safe, then the Building Official shall cause such building to be vacated, if occupied, and shall through his or her employees or through a contractor making the lowest responsible bid, secure the building or structure.



**116.10.5** If the order is to demolish the building or structure and to remove the salvage, contents, debris and abandoned property from the premises, and the owner or those responsible shall have failed to comply with such order, then the Building Official may do so thereafter through his or her employees or through a contractor making the lowest responsible bid.

**116.10.6** The Building Official may sell to the highest bidder or bidders for cash the salvage and the contents of such building or other structure so demolished which have not been removed by the owner of the land.

**116.10.7** If no bids are received for such salvage or contents the Building Official may destroy that for which no bids are received.

**116.10.8** Advertisement calling for bids shall be published by the Building Official one (1) time in a newspaper published in the County.

#### **116.11 Recovery of Cost.**

**116.11.1** The entire costs incurred pursuant to Section 116.5 to Section 116.10 of this Code shall be paid by the owner or occupant of the premises or by the person who caused or maintained the violation.

**116.11.2** The Building Official shall file among his or her records an affidavit stating with fairness and accuracy the items of expense and the date of execution of actions authorized by Section 116.5 or Section 116.10 of this Code.

**116.11.3** The enforcing agency may institute a suit to recover such expenses against any liable person or may cause such expenses to be charged against the property as a lien or as a special assessment collectable according to established procedures.

**116.11.4** Except with respect to a lien imposed for expenses incurred in demolition, nothing herein shall be construed as placing a lien upon property which supersedes the lien of any mortgage on such property executed and recorded prior to the existence of a lien authorized herein.

**116.11.5** Any costs incurred pursuant to Section 116.5 or Section 116.10 of this Code which result in demolition of unsafe buildings, structures or equipment shall be a lien prior in dignity to all liens, excepting county tax liens and liens of equal dignity with county tax liens.

**116.12 Review.** Any person aggrieved by a decision of the Unsafe Structure Board may seek judicial review of that decision in accordance with the Florida Appellate Rules.

**116.13 Unsafe Structures Board.** The Unsafe Structures Board is hereby created, consisting of nine (9) members who shall be appointed by the Appointing Authority. All professional members of the Unsafe Structures Board should be registered and licensed in the State of Florida. In the event the Appointing Authority cannot find a properly qualified resident of the area under its jurisdiction, it may by majority vote of its membership, appoint a qualified non-resident of the specific categories or professions required.

**116.13.1 Qualification of Members.** Members of the Board shall be permanent residents of the area under the jurisdiction of the Appointing Authority, who possess outstanding reputations for civic activity, interest, integrity, responsibility, and business or professional ability. The composition and representative membership of the Board shall be as follows: an Engineer, an Architect, a General Contractor, an Electrical Contractor, an Attorney at Law, a Plumbing Contractor, a Real Estate Appraiser, a Real Estate Property Manager and a Citizen with experience and background in social problems.

**116.13.2 Terms of Office.** In order that the terms of office of all members of the Board shall not expire at the same time, the initial appointments to the Board shall be as follows: Three (3) members for the term of two (2) years, three (3) members for the term of three (3) years, and three (3) members for the term of four (4) years. Thereafter, all appointments shall be for the term of three (3) years, provided that the term in all instances shall continue until a successor is appointed and qualified. Appointments

to fill any vacancy on the Board shall be for the remainder of the unexpired term, but failure to fill a vacancy shall not invalidate any action or decision of the Board.

**116.13.3 Organization of the Board.**

**116.13.3.1** The members of the board shall elect a Chairman and a Vice Chairman and such other officers as may be deemed necessary or desirable, who shall serve at the will of the Board. Election of officers shall be held at the first meeting after February First, and such officers shall hold office for one (1) year.

**116.13.3.2** Five (5) members of the Board shall constitute a quorum necessary to hold a meeting or take any action.

**116.13.3.3** A majority vote of the Board membership present and voting at a duly constituted meeting shall be sufficient to overrule, modify or affirm any action or decision of the Building Official or to take any other action within the scope of the power and duties of the Board.

**116.13.3.4** Members shall serve without compensation but shall be entitled to reimbursement for necessary expenses incurred in the performance of their Official duties, upon approval by the legislative body adopting this Code.

**116.13.3.5** No member of the Board shall sit as a voting member in any hearing on a matter in which he or she has a personal or financial interest.

**116.13.3.6** The Building Official, or his or her designee, shall be the Secretary of the Board but shall have no vote.

**116.13.3.7** The Chairman or the Secretary may call meetings of the Board, and meetings may be called by written notice signed by three (3) members of the Board.

**116.13.3.8** Minutes and records shall be kept of all meetings of the Board and all meetings shall be public.

**116.13.3.9** All hearings shall be open to the public, and any person whose interest may be affected by the matter on appeal shall be given an opportunity to be heard in person, or through his or her attorney.

**116.13.3.10** Witnesses may be sworn and subpoenaed by the Board in a like manner as they are subpoenaed by the court or courts in the County in which this Code is adopted.

**116.13.3.11** The hearings shall be informal and need not be conducted according to technical rules relating to evidence and witnesses. Any relevant evidence shall be admitted if it is the type of evidence on which responsible persons are accustomed to rely in the conduct of serious affairs regardless of the existence of any common law or statutory rules which might make improper the admission of such evidence over objection in civil actions.

**116.13.3.12** Hearsay evidence may be used for the purpose of supplementing or explaining any direct evidence but shall not be sufficient itself to support a finding unless it would be admissible over objection in civil actions.

**116.13.3.13** The rules of privilege shall be effective to the same extent that they are now, or hereafter may be, recognized in civil actions; and irrelevant and unduly repetitious evidence shall be excluded.

**116.13.3.14** The Board may establish rules and regulations for its own procedure.

**116.13.3.15** The Building Official shall provide adequate and competent clerical and administrative personnel and such technical or scientific personnel as may be reasonably

required by the Board for the proper performance of its duties, and shall maintain a record of all proceedings in the office of the Building Official, and shall make available for copying any and all portions of the record of the proceeding and may certify the same as a true copy and make a reasonable charge therefore.

**116.13.3.16** The Building Official shall provide a regular meeting place for the Board.

**116.13.4** Duties and Powers of the Board. The board shall have the following duties, functions, powers, and responsibilities:

**116.13.4.1** Hear and determine appeals from actions and decisions of the Building Official pursuant to the provisions thereof.

**116.13.4.2** Hear and review the application of the Building Official for review of his action where his decision as indicated in a Notice of Violations has not been complied with.

**116.13.4.3** Affirm, modify, or reverse the decision of the Building Official upon appeal or on application for review.

**116.13.4.4** The Board, through its Secretary, shall transmit the record with all exhibits, instruments, papers, and transcripts of its proceedings to the appointing authority in the event that authority shall consider the matter pursuant to applicable law in that regard made and provided.

**116.13.4.5** Hear and determine appeals from actions and decisions of the enforcing agency pursuant to the provisions of the applicable Minimum Housing Code.

**116.14 Duties of Legal Counsel.** It shall be the duty of the attorney for the appointing authority, when so requested, to appear at all hearings before the Unsafe Structures Board and to represent and advise the Board.

**116.15 Conflict of Interest.** No Building Official, Board Member or employee charged with the enforcement of this law shall have any financial interest, directly or indirectly, in any repairs, corrections, construction or demolition which may be required, nor shall any Building Official, board member or employee give to anyone the location of any property or the names of owners thereof on which repairs, corrections or demolition have been ordered, except as otherwise directed hereinafter, until after the owners have been formally advised at which time such shall become a matter of public record.

**116.16 Alternative Board.** As an alternative to use of its own Unsafe Structures Board, any municipality in Broward County may utilize by means of an applicable inter-local agreement, the Unsafe Structures Board of Broward County or that of another municipality located within Broward County.

**Section 117 Powers and Duties of the Floodplain Administrator; Delegation, Administration, Enforcement, and Variances.**

Commented [SR75]: No changes to this section.

**117.1 Scope.** In accordance with Section 553.73, Florida Statutes, the appointing Authority of Broward County or the Municipalities may delegate the authority to enforce the floodplain provisions of the Florida Building Code to a Floodplain Administrator, the Building Official, or any other appropriate agency or combination thereof.

**117.2 Intent.** A Floodplain Administrator, the Building Official, or any other appropriate agency or combination thereof, as designated, is authorized and directed to administer and enforce the flood provisions of the FBC and any adopted flood hazard ordinances. The designated authority shall delegate such duties and assignments as may be deemed necessary to carry out provisions of the FBC and any adopted flood hazard ordinances, to render interpretations consistent with the intent and purpose of these

codes and may establish policies and procedures in order to clarify the application of their provisions including the application of the variance procedures of any adopted flood hazard ordinances to the flood provisions of the FBC. The variance procedures herein shall not apply to section 3109 of the FBC, Building.

**117.3 General.** Where, in any specific case, different sections of the FBC or adopted flood hazard ordinances specify different materials, methods of construction or other requirements, the most restrictive shall govern.

## **Section 118 Two-Way Radio Communication Enhanced Public Safety Signal Booster Systems**

### **118.1 General.**

**118.1.1** The Two-Way Radio Communication Enhancement Public Safety Signal Booster System shall be installed as per NFPA 1-11.10, NFPA 70, NFPA 1221, and NFPA 72. ~~Any such system installed on or after April 1st, 2016 shall be adaptable for both 700/800 MHz p25 (association of public safety communication officials, project 25).~~

**118.1.2** The Authority Having Jurisdiction (AHJ), in Broward County, for the Two-Way Radio Communication Enhancement Public Safety Signal Systems has two (2) permitting entities and multiple frequency licenses as follows:

1. The Installation and Wiring shall comply with the local municipality Building and Fire Departments permitting process and shall be approved by the local and county FCC Licensee prior to installation.
2. The FCC Licensees are:

Broward County ORCAT Regional Emergency Services and Communication Division

City of Coral Springs

City of Fort Lauderdale

City of Hollywood

City of Plantation

**118.1.3** The AHJ shall determine if a new building or existing building shall require that a two-way radio communication enhanced public safety signal booster system be installed to comply with NFPA 1-11.10.1. The Building owner shall install a public safety signal booster to meet this requirement if so directed.

**118.1.4 Design.** For new buildings, a temporary, partial or certificate of occupancy shall not be issued until the AHJ determines that the building is in compliance with NFPA 1-11.10.1. It is recommended that the local Development Review Committee (DRC) notify the new building owner, architect, and engineers of this requirement in writing before the building is designed. At the time of BDA permitting, a design package, comprising of block level diagrams, materials submittals, coverage measurements and predictions are required. Sufficient and substantial engineering design and support information and data shall be submitted with the application. A sealed submittal from an Engineer, with training and experience in electrical engineering, shall also be required.

**118.1.5** To the extent authorized by law, Distributed Antenna Systems Integrators with Public Safety and/or Communication installation and repair experience, as a sub-contractor in association with qualified electrical contractors, and Fire Alarm contractors, may install or repair Two-Way Radio Communication Enhancement Systems. Should the contractor of record fail to have radio communications installation and repair experience with Distributed Antenna Systems, the contractor of

record shall sub-contract the installation or repair of non-fire alarm function to a qualified company, having knowledge of Radio communications installation and repair

#### **118.2 Permit Documentation.**

**118.2.1** The following documentation shall be required for permitting a "Two-Way Radio Communication Enhancement System":

1. Signed and Sealed drawings shall be submitted to the City and County FCC Licensee(s) shall approve for approval of the proposed installation of Two-Way Radio Communicating Enhanced Systems prior to installation in writing or by sealing documents submitted for review.
2. City and County FCC Licensee(s) shall provide written approval or of the sealed documents which shall be provided to the local Fire Prevention Bureau office at the time of plan submittal and prior to plan review.
3. Plans shall comply with FBC 107, NFPA 1, 1.7, NFPA 70, NFPA 1221, and NFPA 72. All plans shall be signed and sealed by an engineer.
4. Sealed floor plans showing radio coverage for critical and general areas using industry standard radio frequency computer generated propagation modeling.
5. Schedule of signal strength as per NFPA 72 or as agreed to by the Fire Code Official in consultation with the FCC licensee in writing.
6. Schedule of the system radio frequencies or band of frequencies.
7. Notation that the system is upgradable for frequency band coverage changes including at a minimum both 700/800 MHz compatible with the Broward County Regional Emergency Services and Communication Division.
8. Plans shall show that the BDA enclosure shall be painted red. A sign affixed next to or stenciling on the enclosure shall be provided in high contrasting letters over a red background, weatherproof plaque and shall include the following information:
  - a) Fire Department Signal Booster.
  - b) Permit Number: \_\_\_\_\_.
  - c) Serviced by: Vendor name and telephone.

#### **118.3 System Notifications.**

**118.3.1** The AHJ's for the FCC licensee ~~and along with Broward County Office of Regional Communications and Technology (ORCAT)~~ Broward County Regional Emergency Services and Communication Division shall be notified in writing of the following events by the permit holder, the system vendor, and/or the building owner. The AHJ for the FCC Licensee shall approve the date and time and may request that the AHJ shall be present during the following events:

1. Initial system testing, with date and time start and finish.
2. Periodic system testing, with date and time start and finish.
3. System placed in operation with date and time.

#### **118.4 Prior to the Initial Testing.**

1. The vendor shall provide the system's settings prior to the initial system testing as accepted by the AHJ, FCC Licensee and ~~ORCAT~~ Broward County Regional Emergency Services and Communication Division. The AHJ may ask for additional information prior to testing.
2. The system shall remain "off the air" until the initial testing with AHJ, FCC Licensee, ~~ORCAT~~ Broward County Regional Emergency Systems and Communication Division, and the Fire Code Official are ready to begin and provide their approval.

**118.5 Annual Test.**

**118.5.1** In addition to the annual fire alarm test, an annual test and report, in compliance with NFPA 72 Chapter 14, shall be completed by a qualified company having the knowledge of RF installation with training and experience of two-way radio communication enhanced radio systems to ensure that the original installed system is still in compliance.

**118.5.2 Annual Test Report.** The annual test report shall be maintained with the fire alarm log book and copies shall be submitted to the local AHJ and to City and ORCAT Broward County Regional Emergency Services and Communication Division for review. All problems found, with any corrective action(s), shall be noted in the test report, along with the name and license number of the Fire Alarm Contractor and sub-contractor Inspection Company.

**118.6. System Monitoring and Maintenance.**

1. Any Public Safety Signal Booster system installed in a premises shall be tied into a fire alarm system for monitoring.
2. In case of failure, the building owner shall be notified within two (2) hours and he/she shall cause to occur an inspection of the system. If a trouble condition is found the system shall be repaired within forty-eight (48) hours of notification. If such repair proves to be longer in time or impossible to perform, a notification to the Fire Marshal shall be made indicating the failure of the system, so that in case of emergency the system shall not be relied upon by the First Responders.

Any system installed shall have a service level agreement with a responsible company. Once the system is repaired the service company shall notify both the building owner and the fire marshal.

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## **CHAPTER 1 ADMINISTRATION—BROWARD COUNTY**

Section 101 General

Section 102 Applicability

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Section 104 Powers and Duties of the Building Official, Assistant Building Official, Fire Code Official, Chief Inspector, Plan Examiner, and Inspector

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Section 116 Unsafe Structures and Equipment

Section 117 Powers and Duties of the Floodplain Administrator; Delegation, Administration, Enforcement, and Variances.

Section 118 Two-Way Radio Communication Enhanced Public Safety Signal Booster Systems

### **Section 101 General**

**101.1 Title.** These regulations shall be known as the "Florida Building Code" hereinafter referred to as FBC or "this Code."

**101.2 Scope.** The provisions of this Chapter shall govern the administration and enforcement of the FBC, Fire Protection Provisions of this Code and FFPC and shall apply countywide in both incorporated and unincorporated areas of Broward County, Florida. The provisions of this Code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

#### **Exceptions:**

1. Detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the FBC, Residential, & Broward County Amendments, Chapter 1.
2. Code Requirements that address snow loads and earthquake protection are pervasive; they are left in place but shall not be utilized or enforced because Florida has no snow load or earthquake threat.

**101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically adopted by BORA.

### 101.2.2 Definitions.

- A. **AHJ** (means Authority Having Jurisdiction) shall be a federal, state, local (Building or Fire Service Provider), or individual such as a Building Official, Assistant Building Official; Chief Electrical/Mechanical/Plumbing/Structural Inspector; Fire Chief; Fire Marshal/Fire Code Official; or Broward County Board of Rules and Appeals.
- B. **BORA** means the Broward County Board of Rules and Appeals.
- C. **Architect** means Registered Architect, registered in the State of Florida.
- D. **Engineer** means licensed Professional Engineer, licensed in the State of Florida.
- E. **BCAIB** means the Building Code Administrators and Inspectors Board.
- F. **FFPC** means the adopted Florida Fire Prevention Code including the Broward County Local Fire Amendments to the Florida Fire Prevention Code.
- G. **HVHZ** means the High Velocity Hurricane Zone.
- H. **State** means the State of Florida.
- I. **FAC** means Florida Administrative Code.
- J. **Fire Service Provider** means Fire Department.
- K. **Fire Code Manager/Administrator** means Fire Code Official or Fire Marshal.
- L. **SFBC** means South Florida Building Code, Broward Edition.
- M. **G.C.** means an unlimited General Contractor licensed by either the CILB, the Broward County Central Examining Board or the Miami-Dade Construction Trades Qualifying Board.
- N. **CILB** means the Florida Construction Industry Licensing Board.
- O. **ECLB** means the Florida Electrical Contractors Licensing Board.

**101.3 Intent.** The purpose of this Code is to establish the minimum requirements to safeguard, the public health, safety and general welfare through structural strength, means of egress, facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.

**101.4 Referenced Codes.** The other codes listed in Sections 101.4.1 through 101.4.10 and referenced elsewhere in this Code shall be considered part of the requirements of this Code to the prescribed extent of each such reference.

**101.4.1 Electrical.** The provisions of Chapter 27 of the FBC, Building, NFPA 70, Fire Protection Provisions of this Code and FFPC shall apply to electrical components, equipment, and systems.

**101.4.2 Gas.** The provisions of the FBC, Fuel Gas, shall apply to the installation of gas piping, gas appliances and related accessories as covered in this Code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances, and the installation and operation of residential and commercial gas appliances and related accessories.

**101.4.3 Mechanical.** The provisions of the FBC, Mechanical, shall apply to the installation of mechanical systems, including, but not limited to, alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances, including ventilating, heating, cooling, air conditioning and refrigeration systems, vacuum, compressed air and pneumatic systems, incinerators and other energy-related devices.

**101.4.4 Plumbing.** The provisions of the FBC, Plumbing, Fire Protection Provisions of this Code and FFPC shall apply to every plumbing installation, including, but not limited to, alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances when connected to a water



or sewage systems, compressed air systems, lawn sprinkler systems and all aspects of a medical gas system.

**101.4.5 Property maintenance.** Reserved.

**101.4.6 Fire prevention.** For provisions related to fire prevention, refer to FFPC as referenced in Florida Statute 633, Broward County Local FFPCs as adopted and the Fire Protection Provisions of this Code as referenced above. FFPC shall apply to matters affecting or relating to structures, new or existing; processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

**101.4.7 Energy.** The provisions of the FBC, Energy Conservation, shall apply to all matters governing the design and construction of buildings for energy efficiency.

**101.4.8 Existing buildings.** The provisions of the FBC Existing Building shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

**101.4.9 Accessibility.** For provisions related to accessibility, refer to the FBC, Accessibility.

**101.4.10 Manufactured buildings.** For additional administrative and special code requirements, see section 458, FBC, Building, Rule 61-41 FAC, and Florida Statute 553.

## **Section 102 Applicability**

**102.1 General.** Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this Code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

**102.1.1** The FBC, Fire Protection Provisions of this Code and FFPC does not apply to, and no code enforcement action shall be brought with respect to, zoning requirements, land use requirements and owner specifications or programmatic requirements which do not pertain to and govern the design, construction, erection, alteration, modification, repair or demolition of public or private buildings, structures or facilities or to programmatic requirements that do not pertain to enforcement of the FBC, and FFPC. Additionally, a local code enforcement agency may not administer or enforce the FBC, Building to prevent the siting of any publicly owned facility, including, but not limited to, correctional facilities, juvenile justice facilities, or state universities, community colleges, or public education facilities, as provided by law.

**102.2 Building.** The provisions of the FBC and FFPC shall apply to the placement, construction, erection, alteration, modification, repair, equipment, use and occupancy, location, maintenance, relocation, removal and demolition of every public and private building, structure or facility or floating residential structure, or any appurtenances connected or attached to such buildings, structures or facilities. Additions, alterations, repairs and changes of use or occupancy group in all buildings and structures shall comply with the provisions provided in the FBC Existing Building and the FFPC. The following buildings, structures and facilities are exempt from the FBC as provided by law, and any further exemptions shall be as determined by the legislature and provided by law:

- A. Building and structures specifically regulated and preempted by the federal government.
- B. Railroads and ancillary facilities associated with the railroad.
- C. Nonresidential farm buildings on farms.
- D. Temporary buildings or sheds used exclusively for construction purposes.

- E. Mobile or modular structures used as temporary offices, except that the provisions of Part II (Sections 553.501—553.513, Florida Statutes) relating to accessibility by persons with disabilities shall apply to such mobile or modular structures.
- F. Those structures or facilities of electric utilities, as defined in Section 366.02, Florida Statutes, which are directly involved in the generation, transmission, or distribution of electricity.
- G. Temporary sets, assemblies, or structures used in commercial motion picture or television production, or any sound-recording equipment used in such production, on or off the premises; except as required in 102.2.6 of this Code.
- H. Chickees constructed by the Miccosukee Tribe of Indians of Florida or the Seminole Tribe of Florida. As used in this paragraph, the term "chickee" means an open-sided wooden hut that has a thatched roof of palm or palmetto or other traditional materials, and that does not incorporate any electrical, plumbing, or other nonwood features.
- I. Family mausoleums not exceeding two hundred fifty (250) square feet (23 m<sup>2</sup>) in area which are prefabricated and assembled on site or preassembled and delivered on site and have walls, roofs, and a floor constructed of granite, marble, or reinforced concrete.
- J. Temporary housing provided by the Department of Corrections to any prisoner in the state correctional system.
- K. A building or structure having less than one thousand (1,000) square feet (93 m<sup>2</sup>) which is constructed and owned by a natural person for hunting and which is repaired or reconstructed to the same dimension and condition as existed on January 1, 2011, if the building or structure:
  - 1. Is not rented or leased or used as a principal residence;
  - 2. Is not located within the 100-year floodplain according to The Federal Emergency Management Agency's current Flood Insurance Rate Map; and
  - 3. Is not connected to any offsite electric power or water supply.
- L. Swings and other playground equipment accessory to a one- or two-family dwelling.  
**Exception:** Electrical service to such playground equipment shall be in accordance with Chapter 27 of this Code.

**102.2.1** In addition to the requirements of Sections 553.79 and 553.80 Florida Statutes, facilities subject to the provisions of Chapter 395 Florida Statutes and Part II of Chapter 400 Florida Statutes shall have facility plans and/or specifications reviewed and construction surveyed by the state agency authorized to do so under the requirements of Chapter 395 Florida Statutes and Part II of Chapter 400 Florida Statutes and the certification requirements of the Federal Government.

**102.2.2** Residential buildings or structures moved into or within a county or municipality shall not be required to be brought into compliance with the state minimum building code in force at the time the building or structure is moved, provided:

- 1. The building or structure is structurally sound and in occupiable condition for its intended use;
- 2. The occupancy use classification for the building or structure is not changed as a result of the move;
- 3. The building is not substantially remodeled;
- 4. Current FFPC requirements for ingress and egress are met;
- 5. Electrical, gas, mechanical and plumbing systems meet the codes in force at the time of construction and are operational and safe for reconnection; and

6. Foundation plans are sealed by an Engineer or Architect, if required by the FBC, Building or Residential for all residential buildings or structures of the same occupancy class.

**102.2.3** The Building Official shall apply the same standard to a moved residential building or structure as that applied to the remodeling of any comparable residential building or structure to determine whether the moved structure is substantially remodeled. The cost of the foundation on which the moved building or structure is placed shall not be included in the cost of remodeling for purposes of determining whether a moved building or structure has been substantially remodeled.

**102.2.4** This section does not apply to the jurisdiction and authority of the Department of Agriculture and Consumer Services to inspect amusement rides or the Department of Financial Services to inspect state-owned buildings and boilers.

**102.2.5** The Broward County Building and Fire Code enforcement district shall be governed by BORA.

**102.2.6** Temporary motion picture and television Sets. All temporary plumbing installations shall be installed so as not to create a sanitary nuisance as defined by Section 386.01, Florida Statutes. A permit shall be required and issued to the producer, upon the filing of an application by the producer, for one (1) electrical permit to cover each complete motion picture production or television series.

**102.3 Application of references.** References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section, or provision of this Code.

**102.4 Referenced codes and standards.** The Codes and standards referenced in this Code shall be considered part of the requirements of this Code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2.

**102.4.1 Conflicts.** Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

**102.4.2 Provisions in referenced codes and standards.** Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code or the Florida Codes listed in Section 101.4, the provisions of this code or the Florida Codes listed in Section 101.4, as applicable, shall take precedence over the provisions in the referenced code or standard.

**102.5 Partial invalidity.** Reserved.

**102.6 Existing structures.** The legal occupancy of any structure existing on the date of adoption of this Code shall be permitted to continue without change, except as is specifically covered in this Code, the FBC Existing Building, and/or the Fire Protection Provisions of this Code and FFPC, or as is deemed necessary by the Building Official for the general safety and welfare of the occupants and the public.

**102.6.1** Existing Building Code violations that are discovered by the AHJ, owner and/or an owner's representative(s) and/or any interested party shall be cited by the Building Official and/or Fire Marshal/Fire Code Official for such violations. All such violations shall be repaired and corrected in accordance with the SFBC and/or FBC in effect on the date of the structure received a building permit. Existing buildings shall comply with FFPC and this Code.

**102.7 Relocation of manufactured buildings.**

1. Relocation of an existing manufactured building does not constitute an alteration.
2. A relocated building shall comply with wind speed requirements of the new location, using the appropriate wind speed map. If the existing building was manufactured in compliance with the Standard Building Code (prior to March 1, 2002), the wind speed map of the Standard Building

Code shall be applicable. If the existing building was manufactured in compliance with the FBC (after March 1, 2002), the wind speed map of the FBC shall be applicable.

3. A relocated building shall comply with the flood hazard area requirements of the new location, if applicable.

**102.8 Existing mechanical equipment.** An agency or local government may not require that existing mechanical equipment located on or above the surface of a roof be installed in compliance with the requirements of the FBC except during reroofing when the equipment is being replaced or moved during reroofing and is not in compliance with the provisions of the FBC relating to roof mounted mechanical units.

## **Section 103 Department of building safety**

Reserved.

## **Section 104 Powers and Duties of the Building Official, Assistant Building Official, Fire Code Official, Chief Inspector, Plan Examiner, and Inspector**

### **104.1 Building Official.** As set forth herein:

**104.1.1 Appointment of a Building Official.** The appointing authority shall appoint a Building Official, and such person shall meet the following minimum qualifications and be certified by BORA, as specified in Section 104.1.3. The Building Official does not have to be personally present at the governmental department as long as he or she is available and can perform his or her duties.

#### **104.1.1.1 Appointment of an Interim Building Official.**

- a) In the event that the Building Official is not available to perform his or her duties, each appointing authority shall appoint an Interim Building Official provided such person is qualified as set forth in Section 104.1.3 of this Code, BORA shall be timely notified in writing by the Building Official or appointing authority of the starting date and period of time that the Interim Building Official or Assistant Building Official will assume the Building Official's duties. The name of the Interim Building Official will be recorded by BORA, but he or she will not be issued a certification card as a Building Official. If there is one Inspector hired by an appointing authority in Broward County, that Inspector shall be a Building Official. The Building Official shall have the authority to delegate powers, duties and assignments to subordinate regular employees working under his or her authority, but only to those employees certified by BORA as qualified to perform such powers, duties and assignments. It shall be his or her duty and responsibility to supervise and coordinate the work of all subordinate Assistant Building Officials, Chief Inspectors, Plans Examiners and Inspectors.
- b) In the event that the Building Official's employment with the jurisdiction is terminated, an Interim Building Official may be appointed while the Building Official is being replaced with a permanent appointee. The Interim Building Official shall be qualified as a Building Official as specified in 104.1.3. An Interim Building Official's appointment will be limited to ninety (90) calendar days. At the written request of the chief executive officer (City Manager, Acting City Manager, or Mayor) for demonstrated cause, a one-time ninety (90) calendar days extension may be granted by BORA's Administrative Director. Any additional extensions beyond this point must be requested in writing to BORA's Administrative Director a minimum of forty-five (45) calendar days prior to the second period expiration date. This request must be reviewed and approved by the Board of Rules and Appeals at its next regularly scheduled meeting. The name of the Interim Building Official will be recorded by BORA, but he/she will not be issued a certification card as a Building Official.

**104.1.2 Powers and Duties of the Building Official.** The Building Official shall be vested with the powers and subject to regulations, as provided by Chapter 468 Florida Statutes and BORA, as set forth in Section 113 of this Code. The Building Official is hereby authorized and directed to enforce the provisions of this Code. The Building Official shall delegate powers, duties and assignments to BORA certified Chief Inspectors to render interpretations of this Code and to adopt policies and procedures in order to clarify the application of the technical provisions of this Code in categories in which the Building Official is not certified. Such interpretations, policies, and procedures shall be in compliance with the intent and purpose of this Code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this Code.

**104.1.3 Certification of the Building Official and the Assistant Building Official.** To be eligible for appointment as a Building Official or Assistant Building Official, such person shall be certified as required by BCAIB as a Building Code Administrator.

**104.1.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.1.3.1.1** A Florida Registered Architect or Florida licensed Professional Engineer having practiced for at least seven (7) years, a minimum of five (5) years shall have been within the jurisdiction of the HVHZ.

**104.1.3.1.2** Ten (10) years combined experience as a Master Electrician, Electrical Contractor, General Contractor, Master Mechanical, Mechanical Contractor, Class A Air Conditioning Contractor, Master Plumber, Plumbing Contractor, Chief Inspector, Standard Plans Examiner or Standard Inspector appointed by an AHJ or school board within the State of Florida. A minimum of five (5) years shall have been within the jurisdiction of the HVHZ.

**104.1.3.2** As part of the experience requirements above, the applicant shall have been appointed as Chief Inspector, Standard Plans Examiner or Standard Inspector by an AHJ or school board within the State of Florida for a minimum of two (2) years.

**104.1.3.3** Each of the applicants shall possess a current Certificate of Competency or a Professional Engineer license or Architect registration issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board as a General Contractor, Mechanical Contractor or Plumbing Contractor.
- B. Florida Electrical Contractors Licensing Board as an Electrical Contractor.
- C. Broward County Central Examining Board of Building Construction Trades. (As Class "A" Unlimited General Contractor.)
- D. Broward County Central Examining Board of Electricians as a Master Electrician and/or Electrical Contractor.
- E. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors as a Mechanical Contractor or Class A Air Conditioning Contractor.
- F. Broward County Central Examining Board of Plumbers as a Master Plumber.
- G. Miami-Dade County Construction Trades Qualifying Board, for any of the above-referenced disciplines.
- H. Florida Board of Architecture and Interior Design.
- I. Florida Board of Professional Engineers.

**104.1.3.4** An applicant for Certification as Building Official or Assistant Building Official under the provisions of this section may only substitute two (2) years HVHZ experience with two (2) years of statewide experience by passing the BORA HVHZ exam.

**104.1.3.5** An applicant for Certification as a Building Official or Assistant Building Official under the provisions of this section who is a graduate from an accredited school holding a Bachelor or Associate of Science Degree in Engineering, Architecture or Building Construction from an accredited school may be credited for a maximum of two (2) years for Bachelor's Degree or a maximum of one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under section 104.1.3.1.1.

**104.2 Assistant Building Official.** As set forth herein:

**104.2.1 Appointment of an Assistant Building Official.** Each appointing authority may appoint a person qualified as set forth in Section 104.1.3 to serve as an Assistant Building Official. To be eligible for appointment as an Assistant Building Official, such person shall be certified by BORA and shall meet the qualifications equal to the requirements for Building Official. No other title is recognized for certification by BORA.

**104.2.2 Powers and Duties of the Assistant Building Official.** The Assistant Building Official shall be vested with the powers and subject to regulations, as provided by Chapter 468 Florida Statutes and BORA, as set forth in Section 113 of this Code. The Assistant Building Official shall be responsible for duties as assigned by the Building Official. The Assistant Building Official shall fulfill the duties of the Building Official during the absence of the Building Official with full responsibilities of the position.

**104.3 Appointment of the Chief Electrical, Mechanical, Plumbing and Structural Inspector.** As set forth herein.

Each appointing authority shall appoint a person qualified as set forth in the below Sections to serve as Chief Inspector in each discipline stated above. If there is one (1) Inspector (each discipline stated above) hired by an appointing authority in Broward County, that Inspector shall be a Chief Inspector (Chief or Head of the Division). The Chief Inspector (Chief or Head of the Division) does not have to be personally present at the governmental department as long as he or she is available and can perform their duties. To be eligible for appointment as a Chief Inspector (each discipline stated above), such person shall be certified by BORA.

**104.3.1 Interim Chief Inspector.** In the event that a Chief Inspector's employment is terminated with a jurisdiction, or is otherwise unavailable, an Interim Chief Inspector may be appointed for up to ninety (90) days while the Chief Inspector is being replaced with a permanent appointee. An approved application for a Chief Inspector must be submitted to BORA prior to the expiration of the ninety (90) days. The Interim Chief Inspector shall be qualified as a Chief Inspector as specified in Section 104.5, 104.6, 104.7 or 104.8 of this Code. BORA shall be notified in writing by the Building Official of the name and starting date of the Interim Chief Inspector. The name of the Interim Chief Inspector will be recorded by BORA but he or she will not be issued a certification card as the Chief Inspector.

**104.4 Powers and Duties of the Chief Electrical, Mechanical, Plumbing and Structural Inspector.** The Chief Inspector (each discipline stated above) shall be vested with the powers and subject to regulations by BORA as set forth in Section 113 of this Code. The Chief Inspector shall have the power to delegate powers, duties and assignments to subordinate regular employees working under his or her authority, but only to those employees certified by BORA as qualified to perform such powers, duties and assignments within his or her particular discipline. It shall be his or her duty and responsibility to supervise and coordinate the work of all subordinate Plans Examiners and Inspectors within his or her particular discipline. The Chief Inspector shall have the sole authority to render interpretations of this Code and to adopt policies and procedures in order to clarify the application of its provisions within his or her particular discipline. Such interpretations, policies, and procedures shall be in compliance with the intent and purpose of this Code. Such policies and procedures shall not have the effect of waving requirements specifically provided for in this Code.

**104.5 Certification of the Chief Electrical Inspector.** To be eligible for appointment as a Chief Electrical Inspector, such person shall be certified as required by BCAIB as an Electrical Plans Examiner and as an Electrical Inspector. Engineers are exempt from BCAIB certification.

**104.5.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.5.1.1** An Electrical Plans Examiner serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.2.1.

**104.5.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Electrician or Electrical Contractor or Engineer issued by at least one of the following entities:

- A. Florida Electrical Contractors Licensing Board.
- B. Broward County Central Examining Board of Electricians.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.6 Certification of the Chief Mechanical.** To be eligible for appointment as a Chief Mechanical Inspector, such person shall be certified as required by BCAIB as a Mechanical Plans Examiner and as a Mechanical Inspector. Engineers are exempt from BCAIB certification.

**104.6.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.6.1.1** A Mechanical Plans Examiner serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.3.1.

**104.6.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.7 Certification of the Chief Plumbing Inspector.** To be eligible for appointment as a Chief Plumbing Inspector, such person shall be certified as required by BCAIB as a Plumbing Plans Examiner and as a Plumbing Inspector. Engineers are exempt from BCAIB certification.

**104.7.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.7.1.1** A Plumbing Plans Examiner serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.4.1.

**104.7.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Plumber or Plumbing Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Plumbers.

- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.8 Certification of the Chief Structural Inspector.** To be eligible for appointment as a Chief Structural Inspector, such person shall be certified as required by BCAIB as a Standard Plans Examiner and Standard Inspector or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.8.1** Such person shall be certified by BORA and shall meet the following qualification:

**104.8.1.1** Be a Standard Plans Examiner appointed as such, for a minimum of one (1) year by an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.10.1.1.

**104.8.2** Each of the applicants shall possess a current Certificate of Competency as a G.C. or a Professional Engineer license or Architect registration issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Building Construction Trades.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.
- E. Department of Business and Professional Regulation as an Architect.

**104.9 Appointment of the Electrical, Mechanical, Plumbing and Structural Plans Examiner.** As set forth herein: Each appointing authority shall appoint a person qualified as set forth in the above and below Sections to serve as Plans Examiner in each discipline as stated above. To be eligible for appointment as a Plans Examiner, such person shall be certified by BORA.

**104.10 Powers and Duties of the Electrical, Mechanical, Plumbing and Structural Plans Examiner.** The Plans Examiner shall be responsible for duties as assigned by the Chief Inspector within his or her particular discipline. The Plans Examiner shall fulfill the duties of the Chief Inspector during the absence of the Chief Inspector with full responsibilities of the position within his or her particular discipline. The Plans Examiner shall examine all plans and/or specifications and applications for permits within his or her particular discipline. When approvals by other agencies having authority may logically be required to be affixed to the plans and/or specifications before approval by the Plans Examiner, such approval shall be affixed to the plans and/or specifications before examination by the Plans Examiner. If the application or plans and/or specifications do not conform to the requirements of all pertinent laws or regulations, the Plans Examiner shall reject such application in writing, stating the reasons therefore and citing the relevant code section(s). Plans and/or specifications which are rejected, as stated herein above, shall be returned for correction. Pen notations on mechanically reproduced plans and/or specifications may be accepted for only minor corrections. If the applications, plans and/or specifications, upon examination, are found to comply with the requirements of this Code, the plans and/or specifications shall be signed and marked approved.

**104.10.1 Certification of the Structural Plans Examiner.** To be eligible for appointment as a Structural Plans Examiner, such person shall be certified by BCAIB as a Standard Plans Examiner or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.10.1.1** Such person shall also be certified by BORA by meeting at least one (1) of the following:

**104.10.1.1.1** Be a Florida Registered Architect or a Florida Licensed Professional Engineer, in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida, two (2) years of which shall have been within the HVHZ or by passing BORA's HVHZ exam.



**104.10.1.1.2** Be a Standard Inspector appointed as such, for a minimum of one (1) year by an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.16.3.1.

**104.10.1.2** Limited Plans Examiner certifications may be issued to individuals holding current Building Contractor or Residential Contractor licenses and who otherwise meet the requirements of the appropriate section under which they are qualifying, with duties limited to the scope of work authorized by their license.

**104.10.1.3** Each of the applicants shall possess a current Certificate of Competency or a Professional Engineer license or Architect registration issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Building Construction Trades.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers Department of Business and Professional Regulation as an Architect.

**104.10.2 Certification of the Electrical Plans Examiner.** To be eligible for appointment as an Electrical Plans Examiner, such person shall be certified as required by BCAIB as an Electrical Plans Examiner and as an Electrical Inspector. Engineers are exempt from BCAIB certification.

**104.10.2.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.10.2.1.1** An Engineer in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida.

**104.10.2.1.2** An Electrical Inspector serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.12.3.1.

**104.10.2.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Electrician or Electrical Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Electrical Contractors Licensing Board.
- B. Broward County Central Examining Board of Electricians.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.10.3 Certification of the Mechanical Plans Examiner.** To be eligible for appointment as a Mechanical Plans Examiner, such person shall be certified as required by the BCAIB as a Mechanical Plans Examiner and as a Mechanical Inspector. Engineers are exempt from BCAIB certification.

**104.10.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.10.3.1.1** An Engineer in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida.

**104.10.3.1.2** A Mechanical Inspector serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.13.3.1.

**104.10.3.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.10.3.2.1** Individuals holding licenses as a Class "B" Air Conditioning Contractor, with a current Certificate of Competency issued by the above-mentioned Boards, shall have duties limited to the examination of air conditioning and mechanical plans within the scope of his or her Certificate of Competency.

**104.10.4 Certification of the Plumbing Plans Examiner.** To be eligible for appointment as a Plumbing Plans Examiner, such person shall be certified as required by BCAIB as a Plumbing Plans Examiner and as a Plumbing Inspector. Engineers are exempt from BCAIB certification.

**104.10.4.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.10.4.1.1** An Engineer in the discipline requested and having practiced for a minimum of five (5) years within the State of Florida.

**104.10.4.1.2** A Plumbing Inspector serving for a minimum of one (1) year for an AHJ or school board within the State of Florida and who complies with at least one (1) of the qualifications of Section 104.14.3.1.

**104.10.4.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Plumber or Plumbing Contractor or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Plumbers.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.11 Powers and Duties of the Electrical, Mechanical, Plumbing, Roofing and Structural Inspector.** The Electrical, Mechanical, Plumbing, Roofing, and Structural Inspectors shall comply with rules and regulations of this Code, enforcing all the laws, rules and regulations relating thereto in the area of jurisdiction and enforcing all the provisions of this Code. If defects, omissions or violations exist on any other part relating to work for which approval is requested, the issuance of the Approval shall be withheld until corrections have been made to the defective portion and the same are made to comply with this Code. The Inspector shall serve notice to the contractor/representative or owner/representative in writing, stating the reasons therefore and citing the relevant code section(s) of this Code.

**104.12 Electrical Inspector.** As set forth herein:

**104.12.1 Appointment of an Electrical Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.12.3 to serve as an Electrical Inspector. To be eligible for appointment as an Electrical Inspector, such person shall be certified by BORA.

**104.12.2 Powers and Duties of the Electrical Inspector.**

**104.12.2.1** Such employee shall have the duties and powers as delegated by the Chief Electrical Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Electrical Code.

**104.12.2.2** It shall be the duty of the Electrical Inspector to inspect any work on electrical installations shall be held to include and govern all work and materials used in installing, maintaining and/or extending a system of electrical wiring for the use of light, heat, power or low voltage systems, and all appurtenances, apparatus, or equipment used in connection therewith, inside of or attached to any building or structure, lot or premises) and every electrical system or device, (all wiring, apparatus and equipment, and all installations for light, heat, power and low voltage systems), installed in new construction, additions, alterations or repairs to existing electrical systems, apparatus or equipment in existing construction.

**104.12.2.3** The Electrical Inspector shall issue an Approval for all installations of light, heat, power and low voltage systems (burglar alarms, central vacuums, communications, computer systems, fiber optics, fire alarms, telephone, television and all other systems ninety-eight (98) volts and less) that comply with the rules and regulations of this Electrical Code.

**104.12.2.4** A 30-day temporary electrical service connection shall be approved by the Electrical Inspector, where the need for electrical power exists, if the wiring installation, apparatus or equipment is found to be in a safe operating condition. Under these circumstances, an application for temporary service shall be made in writing by the electrical contractor, firm, corporation, or owner requesting a temporary service connection to the public utility system or isolated generating plant.

**104.12.2.5** The Electrical Inspector is hereby empowered to inspect or re-inspect any wiring, equipment or apparatus used in the installation of light, heat, power or low voltage systems and if this wiring, equipment, apparatus or low voltage system is found to be unsafe to life or property, the Electrical Inspector shall serve notice to the owner and/or operator, in writing, stating the reasons therefore and citing the relevant code section(s) of this Electrical Code, that the hazardous wiring, or equipment exists and shall be corrected within a reasonable period of time.

**104.12.2.6** The Electrical Inspector is hereby given the power to disconnect extension cords, temporary wiring, branch circuits, feeder conductors or the main service supplying electrical energy to any portion of an electrical wiring system in buildings, or on premises, if this wiring is in the opinion of the Electrical Inspector, considered to be hazardous to life or property. Any person, firm or corporation supplying current, shall disconnect service from the source of supply upon instructions from the Chief Electrical Inspector where hazards are deemed to exist, after receiving written notice citing the appropriate Code Section(s) of this Electrical Code from the Electrical Inspector.

**104.12.3 Certification of the Electrical Inspector.** To be eligible for appointment as an Electrical Inspector, such person shall be certified as required by BCAIB as an Electrical Inspector. Engineers are exempt from BCAIB certification.

**104.12.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.12.3.1.1** An Engineer in the discipline requested.

**104.12.3.1.2** Five (5) years construction experience in the electrical discipline in a supervisory capacity and possess a Certificate of Competency as a Master Electrician or Electrical Contractor.

**104.12.3.1.3** Five (5) years construction experience in the electrical discipline and five (5) years' experience as an Electrical Inspector certified by BCAIB and possess a Certificate of Competency as a Master Electrician or Electrical Contractor.

**104.12.3.1.4** Seven (7) years construction experience in the electrical discipline and possess a Certificate of Competency as a Journeyman Electrician.

**104.12.3.1.5** Ten (10) years' experience as an Electrical Inspector certified by BCAIB. A person with multi-discipline certifications can only be certified in one (1) discipline. A person certified under this section is exempt from Section 104.12.3.2.

**104.12.3.2** Each of the applicants shall possess a current Certification of Competency or a Professional License in the discipline requested as a Master Electrician or Electrical Contractor or Journeyman Electrician or Engineer issued by at least one (1) of the following entities:

- A. Florida Electrical Contractors Licensing Board.
- B. Broward County Central Examining Board of Electricians.
- C. Miami-Dade County Construction Trades Qualifying Board, Block proctored.
- D. Florida Board of Professional Engineers.

**104.12.3.3** An applicant for Certification as an Electrical Inspector under the provisions of this Section who is a graduate from an accredited school holding a Bachelor or an Associate of Science Degree in Electrical Engineering may be credited for two (2) years for a Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.12.3.1.1.

**104.13 Mechanical Inspector.** As set forth herein:

**104.13.1 Appointment of a Mechanical Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.13.3 to serve as Mechanical Inspector. To be eligible for appointment as a Mechanical Inspector, such person shall be certified by BORA.

**104.13.2 Powers and Duties of the Mechanical Inspector.**

**104.13.2.1** Such employee shall have the duties and powers as delegated by the Chief Mechanical Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Mechanical Code.

**104.13.2.2** The Mechanical Inspector shall issue an Approval for all installations of mechanical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and/or appurtenances thereto, including ventilating, heating, cooling, air conditioning and refrigeration systems and other energy-related systems that comply with the rules and regulations of this Mechanical Code.

**104.13.2.3** It shall be the duty of the Mechanical Inspector to inspect all installations of ventilation, air conditioning and refrigeration systems and equipment. Existing installations not conforming to the requirements of this Mechanical Code shall be made to comply, when relocated, or when altered or repaired, in compliance with the FBC, Existing Building. The Mechanical Inspector shall enforce all the laws, rules and regulations relating thereto in the area of jurisdiction and to enforce all the provisions of this Mechanical Code.

**104.13.3 Certification of the Mechanical Inspector.** To be eligible for appointment as a Mechanical Inspector, such person shall be certified as required by the BCAIB as a Mechanical Inspector. Engineers are exempt from BCAIB certification.

**104.13.3.1** Such person shall be certified by BORA and shall meet at least one (1) of the following qualifications:

**104.13.3.1.1** An Engineer in the discipline requested.

**104.13.3.1.2** Five (5) years construction experience in the mechanical discipline in a supervisory capacity and possess a Certificate of Competency as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor.

**104.13.3.1.3** Five (5) years construction experience in the mechanical discipline and five (5) years' experience as a Mechanical Inspector certified by BCAIB and possess a Certificate of Competency as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor.

**104.13.3.1.4** Seven (7) years construction experience in the mechanical discipline and possess a Certificate of Competency as a Journeyman Mechanical.

**104.13.3.1.5** Ten (10) years' experience as a Mechanical Inspector certified by BCAIB. A person with multi-discipline certifications can only be certified in one (1) discipline. A person certified under this section is exempt from Section 104.13.3.2.

**104.13.3.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Mechanical or Mechanical Contractor or Class "A" Air Conditioning Contractor or Class "B" Air Conditioning Contractor or Journeyman Mechanical or Engineer issued by at least one (1) of the following entities:

- A. Florida Construction Industry Licensing Board.
- B. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.13.3.2.1** Individuals holding licenses as a Class "B" Air Conditioning Contractor, with a current Certificate of Competency issued by the above-mentioned Boards, shall have duties limited to the inspection of air conditioning and mechanical work within the scope of his or her Certificate of Competency.

**104.13.3.3** An applicant for Certification as a Mechanical Inspector under the provisions of this Section who is a graduate from an accredited school holding a Bachelor or an Associate of Science Degree in Mechanical Engineering may be credited for two (2) years for a Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.13.3.1.1.

**104.14 Plumbing Inspector.** As set forth herein:

**104.14.1 Appointment of a Plumbing Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.14.3 to serve as Plumbing Inspector. To be eligible for appointment as a Plumbing Inspector, such person shall be certified by BORA.

**104.14.2 Powers and Duties of the Plumbing Inspector.**

**104.14.2.1** Such employee shall have the duties and powers as delegated by the Chief Plumbing Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Plumbing Code.

**104.14.2.2** The Plumbing Inspector shall issue an Approval for all installations of plumbing and sanitary systems, appliances, plumbing fixtures, fittings and/or appurtenances thereto, including heating and storing water, backflow and backsiphonage, public and private sewer disposal and drainage systems that comply with the rules and regulations of this Plumbing Code.

**104.14.2.3** It shall be the duty of the Plumbing Inspector to inspect all new plumbing or drainage systems or parts thereof or additions, alterations, repairs or changes to the existing plumbing or drainage installations or fixtures or appliances shall conform to the requirements of this Plumbing Code. The Plumbing Inspector shall enforce all the laws, rules and regulations relating thereto in the area of jurisdiction and to enforce all the provisions of the Plumbing Code.

**104.14.2.4** It shall be the duty of the Plumbing Inspector to inspect any Plumbing system, he or she has reason to believe has become unsanitary or defunctive. Nothing contained in this Plumbing Code shall be deemed to require any plumbing or drainage system or part thereof, or any other work regulated by this Plumbing Code and existing prior to the effective date of this Plumbing Code, to be altered, changed, reconstructed, removed or demolished if such work was installed in accordance with all applicable laws in effect prior to the date this Plumbing Code became effective, except when any such plumbing or drainage system or other work regulated by this Plumbing Code is dangerous, unsafe, unsanitary or a menace to life, health or property, in the opinion of the Plumbing Inspector.

**104.14.2.5** All installations regulated by this Plumbing Code or related drainage work shall be maintained and executed in such a manner as to not constitute a nuisance or to threaten or impair the health of any individual or the public in general. The contents of such installations shall not be permitted to overflow in a building, on a premise or upon the surface of the ground, street, or sidewalk. It shall be unlawful for any person, firm, or corporation whether owner or agent, to create, keep, cause, maintain, propagate, or permit the existence of a nuisance as defined in this Plumbing Code. Any building or premises found to be unsanitary or inadequate, or which constitute a health or safety hazard, or which by reason of illegal use or improper use, occupancy or maintenance constitute a violation of the provisions of this Plumbing Code, shall be deemed to be unsafe. The Plumbing Inspector shall have the power to abate any nuisance by the issuance of a notice to correct and/or eliminate the nuisance within a reasonable length of time.

**104.14.3** Certification of the Plumbing Inspector. To be eligible for appointment as a Plumbing Inspector, such person shall be certified as required by BCAIB as a Plumbing Inspector. Engineers are exempt from BCAIB certification.

**104.14.3.1** Such person shall be certified by BORA and shall meet at least one of the following qualifications:

**104.14.3.1.1** An Engineer in the discipline requested.

**104.14.3.1.2** Five (5) years construction experience in the plumbing discipline in a supervisory capacity and possess a Certificate of Competency as a Master Plumber or Plumbing Contractor.

**104.14.3.1.3** Five (5) years construction experience in the plumbing discipline and five (5) years' experience as a Plumbing Inspector certified by BCAIB and possess a Certificate of Competency as a Master Plumber or Plumbing Contractor.

**104.14.3.1.4** Seven (7) years construction experience in the plumbing discipline and possess a Certificate of Competency as a Journeyman Plumber.

**104.14.3.1.5** Ten (10) years' experience as a Plumbing Inspector certified by BCAIB. A person with multi-discipline certifications can only be certified in one (1) discipline. A person certified under this section is exempt from Section 104.14.3.2.

**104.14.3.2** Each of the applicants shall possess a current Certificate of Competency or a Professional License in the discipline requested as a Master Plumber or Plumbing Contractor or Journeyman Plumber issued by at least one (1) of the following entities:

A. Florida Construction Industry Licensing Board.

- B. Broward County Central Examining Board of Plumbers.
- C. Miami-Dade County Construction Trades Qualifying Board.
- D. Florida Board of Professional Engineers.

**104.14.3.3** An applicant for Certification as a Plumbing Inspector under the provisions of this Section who is a graduate from an accredited school holding a Bachelor or an Associate of Science Degree in Mechanical Engineering may be credited for two (2) years for a Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.14.3.1.1.

**104.15 Roofing Inspector.** As set forth herein:

**104.15.1 Appointment of a Roofing Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.15.3 to serve as a Roofing Inspector. To be eligible for appointment as a Roofing Inspector, such person shall be certified by BORA.

**104.15.2 Powers and Duties of the Roofing Inspector.**

**104.15.2.1** Such employee shall have the duties and powers as delegated by the Chief Structural Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Code. A Roofing Inspector, if properly certified, may be assigned to perform Roofing Inspections as delegated by the Chief Structural Inspector. Certified Standard Inspectors may be assigned duties as a Roofing Inspector.

**104.15.2.2** The Roofing Inspector shall serve notice to the Roofing Contractor/representative or owner/representative in writing, stating the reasons therefore and citing the relevant code section(s).

**104.15.3 Certification of the Roofing Inspector.** To be eligible for appointment as a Roofing Inspector, such person shall be certified by BCAIB as a Standard Inspector or Standard Roofing Inspector or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.15.3.1** Such person shall also be certified by BORA by meeting at least one of the following:

**104.15.3.1.1** Be a Florida Registered Architect or a Florida Licensed Professional Engineer in the discipline requested with two (2) years of HVHZ experience or passing BORA's HVHZ exam.

**104.15.3.1.2** Be a BCAIB certified Standard Inspector or Standard Roofing Inspector with five (5) years of experience within the State of Florida, two (2) years of which shall have been within the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a Roofing Contractor license, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification.

**104.15.3.1.3** Be a licensed Roofing Contractor, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board with at least five (5) years of experience within the State of Florida in the roofing discipline with that License of which two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam.

**104.15.3.1.4** Five (5) years construction experience within the State of Florida in the roofing discipline in a supervisory capacity of which at least two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a Roofing Contractors License, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade

Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.15.3.1.5** Ten (10) years construction experience within the State of Florida in the roofing discipline of which at least two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a Roofing Contractors License, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.15.3.2** An applicant for Certification as a Roofing Inspector under the provisions of this section who is a graduate from an accredited school holding a Bachelor or Associate of Science Degree in Engineering, Architecture or Building Construction may be credited for two (2) years for Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.15.3.1.1.

**104.15.3.3** An applicant for certification as Roofing Inspector under the provisions of this section may only substitute the required two (2) years HVHZ experience with two (2) years of statewide experience by passing the BORA HVHZ exam.

**104.16 Structural Inspector.** As set forth herein:

**104.16.1 Appointment of a Structural Inspector.** Each appointing authority shall appoint a person qualified as set forth in Section 104.16.3 to serve as a Structural Inspector. To be eligible for appointment as a Structural Inspector, such person shall be certified by BORA.

**104.16.2 Powers and Duties of the Structural Inspector.** Such employee shall have the duties and powers as delegated by the Chief Structural Inspector except that the Chief may not delegate authority to subordinates to interpret provisions of this Code.

**104.16.2.1** The Structural Inspector shall serve notice to the Structural Contractor/representative or owner/representative in writing, stating the reasons therefore and citing the relevant code section(s).

**104.16.2.2** The Structural Inspector shall issue an Approval for installations of all building components, as listed in Section 110.3 of this Code.

**104.16.3 Certification of the Structural Inspector.** To be eligible for appointment as a Structural Inspector, such person shall be certified by BCAIB as a Standard Inspector or be a Florida Registered Architect or Florida Licensed Professional Engineer in the discipline requested.

**104.16.3.1** Such person shall also be certified by BORA by meeting the requirements of at least one (1) of the following:

**104.16.3.1.1** Be a Florida Registered Architect or a Florida Licensed Professional Engineer in the discipline requested with two (2) years of HVHZ experience or by passing BORA's HVHZ exam.

**104.16.3.1.2** Be a BCAIB certified Standard Inspector in the Structural discipline with five (5) years of experience within the State of Florida, of which, two (2) years shall have been within HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire a G.C. license, by exam, within one (1) year of initial certification as an inspector.

**104.16.3.1.3** Be a licensed G.C. with at least five (5) years of experience within the State of Florida in the Structural discipline with that license of which, two (2) years shall have been within the HVHZ or by passing BORA's HVHZ exam.



**104.16.3.1.4** Five (5) years construction experience in the Structural discipline in a supervisory capacity of which at least two (2) years shall have been within the jurisdiction of HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire an Unlimited G.C. license, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.16.3.1.5** Ten (10) years construction experience in the Structural discipline of which at least two (2) years shall have been within the jurisdiction of the HVHZ or by passing BORA's HVHZ exam. An individual qualifying through this path shall be required to acquire an Unlimited G.C. license, by exam, from either the Construction Industry Licensing Board (CILB), Broward County Examining Board or the Miami-Dade Construction Trades Qualifying Board, within one (1) year of initial certification as an inspector.

**104.16.3.2** An applicant for Certification as a Structural Inspector under the provisions of this section who is a graduate from an accredited school holding a Bachelor or Associate of Science Degree in Engineering, Architecture or Building Construction may be credited for two (2) years for Bachelor Degree or one (1) year for an Associate Degree towards the combined experience requirements. This credit is not applicable towards the requirements under Section 104.16.3.1.1.

**104.16.3.3** Limited Building or Residential Inspector certifications may be issued to individuals holding current Building Contractor or Residential Contractor licenses and who otherwise meet the requirements of the appropriate section under which they are qualifying, with duties limited to the scope of work authorized by their license.

**104.16.3.4** An applicant for certification as Structural Inspector under the provisions of this section may only substitute the required two (2) year HVHZ experience with two (2) years of statewide experience by passing the BORA HVHZ exam.

**104.15.3.5** Building Inspectors (structural) certified by BORA on or after July 1<sup>st</sup>, 2020 shall be required to obtain a Reinforced Unit Masonry certification within two years from their initial BORA certification date.

**104.17 Certification of Building Departments and Building Code Inspection Enforcement Personnel.** BORA shall certify each and every Building Department after it has determined to its satisfaction that the Building Code Inspection Enforcement Personnel are qualified by the provisions of this Code. These positions shall include at a minimum the Building Official, Chief Electrical Inspector, Chief Mechanical Inspector, Chief Plumbing Inspector, and Chief Structural Inspector.

**104.17.1** Only such persons that have been examined and certified by BORA may be appointed or have the powers and duties of a Building Official, Assistant Building Official, or Chief Inspector. Each Building Official, Assistant Building Official, and Chief Inspector shall obtain a separate card for each governmental AHJ by which he or she is employed. Plans Examiners and Inspectors shall be issued a single certification card that is valid Countywide upon approval.

**104.17.2** The certification of Building Department Inspection Personnel may be revoked, for cause, by BORA. BORA may deny, refuse to renew, suspend, or revoke BORA certificate of a Building Official, Assistant Building Official, Chief Inspector, Plans Examiner, or Inspector if it finds that any of the following grounds exist:

- A. Any cause for which issuance of a certificate could have been refused had it then existed and been known to BORA.
- B. Violation of FBC.
- C. Falsification of records relating to the certificate.

- D. Having been found guilty of or having pleaded guilty or nolo contendere to a felony, whether or not a judgment of conviction has been entered.
- E. Failure to meet any of the renewal requirements.
- F. Having been convicted of a crime in any jurisdiction which directly relates to the practice of the building code inspection, plan review, or administration.
- G. Making or filing a report or record that the certificate holder knows to be false, or knowingly inducing another to file a false report or record, or knowingly failing to file a report or record required by the state or local law, or knowingly impeding or obstructing such filings, or knowingly inducing another person to impede or obstruct such filing.
- H. Failure to properly enforce applicable building codes or permit requirements within this state which the certificate holder knows are applicable by committing willful misconduct, gross negligence, gross misconduct, repeated negligence, or negligence resulting in a significant danger to life or property.
- I. Accepting labor, service, or materials at no charge or at a noncompetitive rate from any person who performs work that is under the enforcement authority of the certificate holder and who is not an immediate family member of the certificate holder. For the purpose of this paragraph, the term "immediate family member" means a spouse, child, parent, sibling, grandparent, aunt, uncle, or first cousin of the person or the person's spouse or any person who resides in the primary residence of the certificate holder. BORA upon verification of the above grounds, shall immediately notify the Building Official, Assistant Building Official, Chief Inspector, Plans Examiner and/or the Inspector involved, who, upon notification from BORA, shall appear before the Board to explain why his or her certification should not be revoked.

**104.17.3** When Building Departments fail to meet certification criteria, they will immediately be notified to cease activities until such time as requirements of this Code are met.

**104.17.4** Application for certification shall contain such pertinent information as is considered relevant by BORA.

**104.17.5** Certification shall be for the remainder of the current biennial certification period for initial employment and shall be renewed biennially on January 1 of each even-numbered year thereafter. When a Building Official, Assistant Building Official or Chief Inspector, resigns from his or her position, his or her card becomes inactive until he or she again returns to work for a Building Department, at which time, upon proper application, he or she will be issued a new certification card, at a renewal fee in the amount appropriate for each discipline according to BORA Fee Schedule for Certification.

**104.17.6** Applications for certification will not be considered unless the application is made on a form prescribed by BORA.

**104.17.7 Certification Fee.** Reserved.

**104.17.8** Within ten (10) days of receipt of a properly completed application, the Secretary to BORA (Administrative Director) shall, after performing a review of the application: grant temporary certification, limit certification to a particular discipline or deny it, stating the reasons for denial. Any such determination is subject to final review and approval or revision by BORA. The temporary certification shall only be effective through the date of final action by BORA with respect to the application. The Secretary of BORA may delegate this duty to the Chief Code Compliance Officers.

**104.17.9** Certification may be withdrawn, rescinded or suspended if, upon investigation, it is found that the certified person has failed to enforce the Code, abused the powers of office, or withheld or concealed information on the application which, if known to BORA, may have been cause for denying certification.

**104.17.10** Any person, whose certification has been denied, withdrawn or rescinded, may appeal to BORA in open meeting and may produce witnesses and be represented by counsel in support of his or her claim.

**104.17.11 Suspension of Certification Requirements.** See section 113.11.7.

#### **104.18 Recertification of Building Departments and Building Code Inspection Enforcement Personnel.**

**104.18.1** All Building Departments shall be recertified biennially by BORA. To be recertified, all Building Officials, Assistant Building Officials, Chief Inspectors, Plans Examiners, and Inspectors who are presently certified by BORA, shall meet the following criteria and comply with the current requirements for initial certification.

**104.18.1.1** Be currently certified by BORA.

**104.18.1.2** Be presently employed by a governmental AHJ (Building Department) within Broward County. See Section 104.17.

**104.18.1.3** All Building Officials, Assistant Building Officials, Chief Inspectors, Plans Examiners, and Inspectors, to be recertified shall obtain twenty-eight (28) contact hours within a two (2) consecutive calendar year biennial renewal period (starting January 1, on an even year, through December 31, of the next odd year) by attending formal education courses, workshops, and seminars, any of which shall be approved by BORA, the Miami-Dade County Code Compliance Office, the BCAIB, the Construction Industry Licensing Board, or the Electrical Contractors Licensing Board, and be related to the individual's discipline. Continuing education contact hours shall include courses approved as discipline specific category (courses which are specific to the code chapters enforced by the specific discipline) and non-discipline specific category. Specific courses mandated for license holders by the State of Florida Boards shall be classified as non-discipline specific, unless clearly indicated as discipline specific by a State agency. A minimum of one-half ( $\frac{1}{2}$ ) of the twenty-eight (28) contact hours within a two (2) consecutive calendar year biennial renewal period shall be discipline specific category. Meetings of BORA Committees shall be counted as one (1) hour in the non-discipline specific category and professional association meetings shall be counted as not to exceed one (1) hour in the discipline specific category for a maximum of fourteen (14) contact hours within a two (2) consecutive calendar year biennial renewal period. Unless authorized by BORA Staff online education courses, workshops and seminars do not meet this requirement and shall not be accepted.

**104.18.1.4 Prorating of continuing education contact hours.** For any person newly certified, the required continuing education is prorated according to the number of months remaining in the renewal period. To determine the continuing education required, divide the number of months remaining in the renewal period from the time of certification by twenty-four (24) and multiply the result by twenty-eight (28). The result, rounded up to the next round number, is the number of continuing educational hours required. Half of these hours shall be discipline specific. Any person newly certified within less than six (6) months remaining in the renewal period shall not be required to have any continuing educational credits.

**104.18.2** A previously employed Building Official, Assistant Building Official, Chief Inspector, Plans Examiner or Inspector may be recertified biennially upon the presentation of twenty-eight (28) contact hours of education accumulated during the previous two (2) consecutive calendar years.

**104.18.3** If certification is not renewed and allowed to lapse, the application for recertification shall be accompanied with proof acceptable to BORA that the twenty-eight (28) contact hour requirement of continued education has been met.

**104.18.4** By December 5 of the second year (the odd-numbered year) of a biennially renewal period, on a form as approved by BORA, each Building Official shall submit to BORA a list of currently

employed personnel who are to be recertified for the ensuing new biennial renewal period, on a form as approved by BORA. Recertification is to be effective on January 1 of each biennial renewal period (the even-numbered year).

**104.19 Fire Prevention Bureau.** A Fire Prevention Bureau shall be established within the fire department, under the direction of the Fire Chief, which shall consist of such fire department personnel as may be assigned thereto, by the Fire Chief, in accordance with the requirements prescribed herein. The function of this bureau shall be to assist the Fire Chief in the administration and enforcement of the Fire Protection Provision of this Code, and FFPC. Personnel assigned to the bureau as the Fire Marshal, Fire Code Official, Fire Plans Examiner, and/or Fire Inspector shall be certified by BORA. As set forth herein: (see also Broward Local Fire Amendments to FFPC)

**104.19.1 Appointment, Powers and Duties and Certification of the Fire Marshal/Fire Code Official, Fire Plans Examiner, and/or Fire Inspector.** There shall be appointed by the Fire Chief, certain fire prevention personnel to be assigned to the Fire Prevention Bureau to serve as Fire Marshal/Fire Code Official, Fire Plans Examiner, and/or Fire Inspector.

**104.19.1.1** Certification of Fire Marshal/Fire Code Official, Fire Plans Examiner, and/or Fire Inspector shall comply with the requirements set forth in the Broward County Amendments to the FFPC.

**104.19.1.2** Powers and Duties. The Fire Marshal or Fire Code Official, Fire Plans Examiner, and/or Fire Inspector shall be vested with the powers and perform the duties as set forth in the Broward County Amendments to the FFPC.

**104.19.2.1** No enforcing agency may issue any permit for construction, erection, alteration, repair, or demolition until the Building Official, in conjunction with the appropriate fire plans examiner, has reviewed the plans and/or specifications for such proposal and both officials have found the plans and/or specifications to be in compliance with FFPC and the applicable fire safety standards as determined by the local authority in accordance with FFPC and Chapter 633, Florida Statutes. In the event that agreement cannot be reached between the Building and Fire Officials, the dispute shall be referred to the Fire Code Committee for review and recommendation to BORA.

**104.19.2.2** Industrial construction on sites where design, construction, and fire safety are supervised by appropriate design and inspection professionals and which contain adequate in-house fire departments, is exempt; subject to local government option, from review of plans and/or specifications and inspections, providing owners certify that applicable codes and standards have been met and supply appropriate approved drawings to the building department. The enforcing agency shall issue a permit to construct, erect, alter, repair, or demolish any building when the plans and/or specifications for such proposal comply with the Fire Protection Provisions of this Code, FFPC, and Chapter 633, Florida Statutes.

**104.19.2.3** Approval of Fire Department accessibility and all tests of fire alarm detection and suppression systems, smoke evacuation systems and life safety systems shall be conducted prior to final structural inspection and issuance of Certificate of Occupancy. (See Section 111)

**104.20 Stop-Work Orders.** See Section 115, Stop Work Order.

**104.21 Orders to Eliminate Dangerous or Hazardous Conditions.** Whenever the Fire Chief or his or her duly authorized representative shall find in any building or upon any premises, dangerous or hazardous conditions or materials, including, but not limited to violations of the requirements encompassed in Chapter 633, Florida Statutes, or the following paragraphs, he or she shall order such violations and dangerous conditions or materials removed or remedied.

**104.21.1** Dangerous or unlawful amounts of combustible or explosive or otherwise hazardous materials.

**104.21.2** Hazardous conditions arising from defective or improperly installed equipment for handling or using combustible or explosive or otherwise hazardous materials.

**104.21.3** Dangerous accumulation of rubbish, wastepaper, boxes, shavings, or other flammable materials.

**104.21.4** Accumulations of dust or waste material in air conditioning or ventilation systems or of grease in kitchen or other exhaust ducts.

**104.21.5** Obstructions to, on, or under fire escapes, stairs, passageways, or doors, liable to interfere with the operations of the fire department or egress of occupants; locked exits shall constitute an unsafe condition.

**Exception:** Unless permitted by the Fire Protection Provisions of this Code and FFPC.

**104.21.6** Obstruction to windows. Where windows are required to provide the second means of escape from a room or area, the following are prohibited:

- A. Bars that cannot be opened from the inside.
- B. Other obstructions such as security grills.

**Exception:** Only one (1) window is required to meet the above where two (2) windows are in the same room or area.

**104.21.7** Any building or other structure which, for want of repairs, lack of adequate exit facilities, automatic or other fire alarm apparatus or fire extinguishing equipment, or by reason of age or dilapidated condition, or from any other cause, create a hazardous condition.

**104.21.8** Any building or structure vacated or unoccupied shall be properly secured to prevent entry by unauthorized persons.

**104.21.9** The improper storage, transporting or handling of all classes of flammable or combustible liquids or otherwise hazardous substances any place within the enforcing jurisdiction.

**104.22 Certification.** All Fire Department Inspection Personnel shall be certified by BORA as set forth in the current Broward County Amendments to the FFPC.

**104.23 Recertification.** All Fire Department/Fire Prevention Bureau Inspection Personnel shall be recertified by BORA as set forth in the current Broward County Amendments to the FFPC.

**104.24 Applications and permits.** Reserved. See Section 105.

**104.25 Notices and Orders.** The Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative shall issue all necessary notices or orders to ensure compliance with this Code, the Fire Protection Provisions of this Code, FFPC, and all Fire Codes.

**104.25.1 Concealed Work.** The Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative may order portions of the structural frame of a building and/or structure to be exposed for inspection when, in his or her opinion, there is a good reason to believe that a building or portion thereof is in an unsafe or dangerous condition or that there is willful or negligent concealment of a violation of this Code, the Fire Protection Provisions of this Code, FFPC, and all Fire Codes.

**104.26 Inspections.** Reserved. See Section 110.

**104.27 Identification.** Reserved.

**104.28 Right of Entry.** Upon presentation of proper credentials, the Building Official or his or her duly authorized representative or the Fire Chief/Fire Marshal/Fire Code Official or his or her duly authorized representative may enter, at any reasonable time, any building, structure or premises for the purpose of making any inspection or investigation, which falls under the provisions of this Code, and FFPC.

**104.29 Department records.** Reserved.

**104.30 Liability.** Reserved.

**104.31 Modifications.** Reserved.

**104.32 Alternative materials, design and methods of construction and equipment.** The provisions of the technical codes are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this Code, provided any such alternative has been reviewed and approved by the Building Official and/or Fire Marshal/Fire Code Official (according to the Fire Protection Provisions of this Code and FFPC). An alternative material, design or method of construction shall be approved where the Building Official and/or Fire Marshal/Fire Code Official (according to the Fire Protection Provisions of this Code and FFPC) finds that the proposed design is satisfactory and complies with the intent of the provisions of this Code, and that the material, method of construction offered for the purpose intended; is at least the equivalent of that prescribed in the technical codes in quality, strength, effectiveness, fire resistance, durability and safety. Where alternate life safety systems are designed, the "SFPE Engineering Guide to Performance-Based Fire Protection Analysis and Design of Buildings", or other methods approved by the Building Official and/or Fire Marshal/Fire Code Official (according to the Fire Protection Provisions of this Code and FFPC) may be used. The Building Official and/or Fire Marshal/Fire Code official (according to the Fire Protection Provisions of this Code and FFPC) shall require that sufficient evidence or proof be submitted to substantiate any claim made regarding the alternative. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved.

**104.32.1 Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this Code, shall consist of valid research reports from approved sources.

**104.32.2 Tests.** Whenever there is insufficient evidence of compliance with the provisions of this Code, or evidence that a material or method does not conform to the requirements of this Code, or in order to substantiate claims for alternative materials or methods, the Building Official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this Code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the Building Official for the period required for retention of public records.

**104.32.3 Accessibility.** Alternate designs and technologies for providing access to and usability of a facility for persons with disabilities shall be in accordance with provisions of the FBC, Accessibility.

**104.33 Standards.** The types of construction or materials or methods of design referred to in this Code shall be considered as standards of quality and strength. New types of construction or materials or methods of design shall be at least equal to these standards for the corresponding use intended.

**104.34 Approved materials and equipment.** Materials, equipment, and devices approved by the Building Official shall be constructed and installed in accordance with such approval.

**104.34.1 Used materials and equipment.** The installation of used materials which meet the requirements of this Code for new materials is permitted. Used equipment and devices shall not be installed unless approved by the Building Official.

**104.35 Application for the use of alternative methods and materials.**

**104.35.1** Any person desiring to use types of construction or materials or methods of design not specifically mentioned in this Code shall file with the Building Official and/or Fire Marshal/Fire Code Official, in writing, authentic proof in support of claims that may be made regarding the sufficiency of such types of construction or materials or methods of design and request approval and permission for their use. Such documentation shall be attached to and be made a part of the permit documents.

**104.35.2** The Building Official and/or Fire Marshal/Fire Code Official shall approve such alternate types of construction or materials or methods of design if it is clear that the standards of this Code are at least equaled. If, in the opinion of the Building Official and/or Fire Marshal/Fire Code Official, the standards of this Code will not be satisfied by the requested alternate, he or she shall refuse approval.

**104.36 Appeal.** Any person, whose request for alternate types of construction and materials or methods of design has been denied by the Building Official and/or Fire Marshal/Fire Code Official, may appeal to BORA or Fire Code Committee by written request to the Secretary of the Board, and such written request shall be transmitted to BORA or Fire Code Committee if fire related. For fire related appeals see FFPC.

**104.37 Appeal by Others.** Any person, in whose considered opinion an action by the Building Official or Fire Marshal/Fire Code Official approving or disapproving construction under this Code does not satisfy the standards of the Code for reasons of safety, quality or strength, may appeal to BORA by written request to the Secretary of the Board, and such written request shall be transmitted to BORA or BORA Fire Code Committee. For fire related appeals see FFPC.

## **Section 105 Permits**

**105.1 Required.** Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, remove, demolish or to change the occupancy any building, structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any impact-resistant coverings, electrical, gas, mechanical or plumbing system, the installation of which is regulated by this Code, or to cause any such work to be done; shall first make application to the Building Official and/or Fire Code Official as indicated in FFPC or a duly authorized representative and obtain the required permits.

**105.1.1 Annual Facility Permit.** The Building Official is authorized to issue an annual facility permit for any occupancy to facilitate routine maintenance or emergency service, repair, refurbishing, minor renovations of service systems or manufacturing equipment installations/relocations. The Building Official shall be notified of major changes and shall retain the right to make inspections at the site as deemed necessary. An annual facility permit shall be assessed with an annual fee and shall be valid for one (1) year from date of issuance. A separate permit shall be obtained for each facility and for each construction trade, as applicable. The permit application shall contain a general description of the parameters of work intended to be performed during the year.

**105.1.2 Annual Facility Permit Records.** The holders of an annual premises permit shall maintain a detailed record listing all work performed under such annual facility permit on forms provided by the Building Official and shall make that record available to the Building Official or his or her authorized employees upon demand, in order that the work may be inspected as deemed necessary. The holder of the annual facility permit shall be responsible for insuring that all work performed under such permit conforms to this Code and if inspection reveals that such work does not so conform, the work will be corrected or removed. The annual premises permit shall be subject to cancellation for violation of the provisions of applicable regulations.

**105.1.3 Food Permit.** In accordance with Section 500.12, Florida Statutes, a food permit from the Department of Agriculture and Consumer Services is required of any person who operates a food establishment or retail store.

**105.1.4 Public swimming pool.** The local enforcing agency may not issue a building permit to construct, develop, or modify a public swimming pool without proof of application, whether complete or incomplete, for an operating permit pursuant to Section 514.031, Florida Statutes. A certificate of

completion or occupancy may not be issued until such operating permit is issued. The local enforcing agency shall conduct its review of the building permit application upon filing and in accordance with Chapter 553, Florida Statutes. The local enforcing agency may confer with the Department of Health, if necessary, but may not delay the building permit application review while awaiting comment from the Department of Health.

**105.2 Work exempt from permit.** Exemptions from permit requirements of this Code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this Code. Permits shall not be required for the following:

- A. No permit shall be required in this or any of the following Sections for general maintenance or repairs which do not change the occupancy and the value of which does not exceed fifteen hundred dollars (\$1,500.00) in labor and material as determined by the Building Official.
- B. No permit is required for the installation of a concrete slab on grade in the right-of-way that is less than two hundred fifty (250) square feet in total, installed entirely within a public right-of-way and solely for the purpose of accessibility to public transportation shall not be considered a structure as described in Section 105.1.
- C. No permit shall be required for storm water gutter systems installed on buildings regulated by the FBC Residential, that have an eave height of thirty (30) feet or less unless such gutters are installed behind any part of the eave drip metal.
- D. **Electrical.**
  - 1. No permit shall be required for installations performed by companies whose work is regulated by Chapter 364, Florida Statutes, for unregulated inside telephone wiring on new construction for commercial occupancies.
  - 2. No permit shall be required for installations performed by companies whose work is regulated by Chapter 364, Florida Statutes, in single family occupancies, whether detached or townhouse.
  - 3. Permits shall not be required for the installation, replacement, removal or metering of any load management control device.
- E. **Gas.**
  - 1. Portable heating appliance not connected to a building air distribution system.
  - 2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
- F. **Mechanical.**
  - 1. Portable heating appliance not connected to a building air distribution system.
  - 2. Portable ventilation equipment not connected to a building air distribution system.
  - 3. Portable cooling unit not connected to a building air distribution system.
  - 4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this Code.
  - 5. Replacement of any part which does not alter its approval or make it unsafe, including replacement of thermostats.
  - 6. Portable evaporative cooler.
  - 7. Self-contained refrigeration system containing ten (10) pounds (4.54 kg) or less of refrigerant and actuated by motors of one (1) horsepower (746 W) or less.
  - 8. The installation, replacement, removal, or metering of any load management control device.
  - 9. Portable air compressors, dust collectors and their correspondent distributions systems.



10. Pool heating equipment. Plumbing and electrical permits are required.

**G. Plumbing.**

1. The stopping of leaks in drains, water, soil, waste or vent pipe provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this Code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves, faucets or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.
3. The cleaning of septic tanks, or temporary placement of chemical toilets on construction sites where such work is located within the property lines.

**H. Roofing.**

1. No permit will be required for maintenance or repair of any roof covering, as provided in Chapter 15, for work not exceeding fifteen hundred dollars (\$1,500.00) as determined by the Building Official.

**105.2.1 Emergency repairs.** Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the Building Official.

**105.2.2 Minor repairs.** Ordinary minor repairs may be made with the approval of the Building Official without a permit, provided the repairs do not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; additionally, ordinary minor repairs shall not include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring systems or mechanical equipment or other work affecting public health or general safety, and such repairs shall not violate any of the provisions of the technical codes.

**105.2.3 Public Service Agencies/Other Approvals.** An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this County, and there may be additional permits required from other governmental entities such as water management districts, state agencies or federal agencies."

In addition, the Building Official shall require that the laws, rules and regulations of any other regulatory AHJ, and where such laws, rules and regulations are applicable and are known to the Building Official, shall be satisfied before a permit shall be issued. The Building Official shall require such evidence, as in his or her opinion is reasonable, to show such other approvals. The Building Official shall not thereby be held responsible for enforcement of such other regulations as he or she is not specifically authorized to enforce. Following are some, but not necessarily all, other agencies having jurisdiction:

**105.2.3.1** The Engineering Department, Fire Department and/or Police Department for the moving of buildings, structures and heavy equipment over or the temporary blocking of streets or other public spaces, or the temporary construction, or storage of material, or construction operations on streets or other public spaces; and for land clearing adjacent to existing sidewalks; as well as for the discharge of rainwater or other water runoff on streets or other public spaces into the public sewers.

**105.2.3.2** The Fire Department for the burning of construction or demolition waste or the use or storage of explosives.

**105.2.3.3** The City and/or County Tax assessor and Collector for the moving or demolition of any building or structure.

**105.2.3.4** Broward County Environmental Protection and Growth Management Department and/or Florida Department of Environmental Regulation for (but not limited to):

- A. The adequacy of waste treatment plants receiving waste from industrial, commercial, public, or dwelling units.
- B. Waste treatment and disposal systems.
- C. Waste disposal wells.
- D. Waste water collection systems.
- E. Air pollution.
- F. Underground and above ground liquid fuel storage.

**105.2.3.5** Broward County Health Department, Florida Department of Health for (but not limited to):

- A. Onsite sewage treatment and disposal systems.
- B. Places where food or drink is prepared or served to the public, but not regulated by the Department of Business and Professional Regulation or by the Department of Agriculture and Consumer Services.
- C. Public water supply and supply wells.
- D. Public swimming pools.
- E. Chemical toilets as set forth in Section 311.1 of the Florida Plumbing Code.
- F. Mobile home parks as set forth in Sections 513 and 723, Florida Statutes.

**105.2.3.6** The State Hotel Commission for the construction, alteration or addition to multiple-residential rental units or places where food and/or drink is prepared or served to the public.

**105.2.3.7** The U.S. Army Corps of Engineers, for construction of bulkheads or docks adjacent to or extending into navigable waters.

**105.2.3.8** Federal regulations limiting construction during periods of national emergency.

**105.2.3.9** The Public Works Department for bulkheads, docks, similar construction or fill along water front property.

**105.2.3.10** The Rules and Regulations of the State Fire Marshal.

**105.2.3.11** The State of Florida Bureau of Elevator Inspection and/or the Broward County Permitting, Licensing and Consumer Protection Division, Elevator Section.

**105.2.3.12** The Department of Agriculture and Consumer Services (Grocery stores and convenience stores) or Department of Business and Professional Regulation (public restaurants).

**105.2.3.13** In addition to the plumbing permit, permits shall be required by other regulating authorities having jurisdiction. Following are some, but not necessarily all, other required permits:

- A. Fire Department and Police Department before obstructing or excavating in any public thoroughfare;
- B. Engineering Department before cutting any street paving, sidewalk curb or sewage system or part thereof or appurtenance thereof; or otherwise cutting, tapping or piercing any public sewer or appurtenance thereof;

- C. Building Official before the addition of any fixtures or the removal or alteration of any structural or load bearing members.

**105.3 Application for Permit Required.** Any applicant desiring a permit to be issued by the Building Official or Fire Code Official as required, shall first file an application therefore in writing or electronically on a form furnished by the Building Department or Fire Department for that purpose.

**105.3.0.1 Qualification of Applicant.** Application for permit will be accepted from owner, qualified persons or firms, or authorized agents.

**105.3.0.1.1 Qualification of persons or firms.** Persons or firms shall be qualified in accordance with the rules of the Broward County Central Examining Board, Ordinance No. 78-9 and Chapter 9 of the Broward County Codes; the State of Florida, Department of Professional Regulation by authority of Chapter 489, Parts One and Two of the Florida Statutes; or other Examining Boards as specifically approved by BORA.

**105.3.0.2 Application Form.** Each application for a permit, shall be submitted with the required fee, and filed with the Building Department on the Broward County Uniform Building Permit Application (effective April 1, 2016) furnished for that purpose (see Appendix A of the Broward County Administrative Provisions). The application shall describe the property on which the proposed work is to be done and shall include both the legal description and more commonly known address. The application shall also show the use or occupancy of the building or structure; shall be accompanied by plans and/or specifications as required hereafter; shall state the value of the proposed work; as specified in Section 109, shall give such other information as reasonably may be required by the Building Official to describe the proposed work; and shall be attested by the owner, qualified person or firm or authorized agents. The Permit Application shall be inscribed with the application date and the Edition of the Code in effect and comply with the requirements of Section 713.135(5) and (6), Florida Statutes. The code in effect on the date of application shall govern the project. For a building permit for which an application is submitted prior to the effective date of the FBC, the state minimum building code in effect in the permitting jurisdiction on the date of the application shall govern the permitted work for the life of the permit and any extension granted to the permit.

*Effective October 1, 2017, a local enforcement agency shall post each type of building permit application on its website. Completed applications must be able to be submitted electronically to the appropriate building department. Accepted methods of electronic submission include, but are not limited to, e-mail submission of applications in portable document format or submission of applications through an electronic fill-in form available on the building department's website or through a third-party submission management software. Payments, attachments, or drawings required as part of the permit application may be submitted in person in a nonelectronic format, at the discretion of the building official. \**

**105.3.0.3 Attesting of Application.** The permit application shall be signed in a space provided, before an officer duly qualified to administer oaths, by the owner, qualified person or firm, or authorized agents. The contractor may sign solely and independently from either an Owner or Owner's Agent for the purpose of applying for a building permit.

**105.3.0.4 Changes to Application.** In the event of a change in any material fact given in the attested application which served as a basis for issuing the permit, the permit holder shall immediately file an amended attested application detailing such changed conditions. In the event the change in the attested application is a change in the person responsible for the work, the owner shall immediately stop the work and notify the Building Official in writing detailing such changed conditions and any other information required by the Building Official or in lieu thereof a new attested permit application shall be filed immediately by a new qualified applicant. If such changed conditions are determined to be in compliance with this Code and other applicable regulations, an amended building permit will be issued, without additional fee if the changed condition shall not be greater than those permitted in the original permit.

**105.3.1 Action on application.** The Building Official and Fire Code Official or his or her duly authorized representative shall examine or cause to be examined applications for permits and amendments thereto within thirty (30) working days after plans and/or specifications are submitted and accepted for a building permit. The Building Official or his or her duly authorized representative shall notify the applicant in writing or electronically, that a permit is ready for issuance or that additional information is required. If the application or the construction documents do not conform to the requirements of pertinent laws, the Building Official and/or Fire Code Official shall reject such application in writing or electronically, stating the reasons therefore citing relevant code sections. If the Building Official and after consulting with the Fire Code Official is satisfied that the proposed work conforms to the requirements of this Code, laws and ordinances applicable thereto, the Building Official shall issue a permit therefore as soon as practicable, to persons or firms qualified in accordance with 105.3.0.1.1 and/or FFPC.1.12. When authorized through contractual agreement with a school board, in acting on applications for permits, the building official shall give first priority to any applications for the construction of, or addition or renovation to, any school or educational facility.

**105.3.1.1** Not more than sixty (60) calendar days after the date of such notification, where such additional information has not been submitted or the permit has not been purchased, the application and/or the permit shall become null and void. If the 60<sup>th</sup> day falls on a Saturday, Sunday or a National Holiday the next business day shall be used for the 60<sup>th</sup> day. The Building Official may extend such permit application to be corrected or purchased for a single period of sixty (60) days after the initial expiration date if the request is in writing, for a good reason and is submitted prior to the initial expiration date.

**105.3.1.2** Where an application and/or a permit has become null and void, an applicant may again apply, as set forth in Section 105.3 of this Code, and such applications shall be processed as though there had been no previous application.

**105.3.1.3** If a state university, Florida college or public school district elects to use a local government's code enforcement offices, fees charged by counties and municipalities for enforcement of the FBC on buildings, structures, and facilities of state universities state colleges and public school districts shall not be more than the actual labor and administrative costs incurred for plans review and inspections to ensure compliance with the Code.

**105.3.1.4** Permits shall be required for the following operations:

**105.3.1.4.1** The erection or construction of any building or structure, the adding to, enlarging, repairing, improving, altering, covering, or extending of any building or structure.

**105.3.1.4.2** The moving of any building or structure within, into, through or out of the area of jurisdiction, or the moving of a building or structure on the same lot.

**105.3.1.4.3** The demolition of any building or structure. (Refer to 116.1.4, 105.18.)

**105.3.1.4.4** The installation, alteration or repair of any sanitary plumbing, water supply, lawn sprinkler or gas supply system, as provided in the FBC, Plumbing, and/or FBC Fuel Gas.

**105.3.1.4.5** The installation, alteration or repair of any electrical wiring or equipment, as provided in Chapter 27, Electrical Systems; except as allowed in Section 105.17 of this Code. Any alteration or extension of an existing wiring system is not considered to be maintenance or repair.

**105.3.1.4.6** The installation, alteration or major repair of any boiler, pressure vessel, furnace, steam-actuated machinery, or heat producing apparatus, including the piping and appurtenances thereto as provided in this Code.

**105.3.1.4.7** The erection, remodeling, relocating, repair, altering, or removal of any sign, as provided in Section 3107 of this Code.

**105.3.1.4.8** The erection, alteration or repair of any awning or similar appurtenance, as defined in Section 202 of this Code.

**105.3.1.4.9** The storage and use of all volatile, flammable, or combustible liquids, gases, and materials, but such permits shall not be issued without the endorsement of the Fire Chief, or his/her designee, as provided in the FFPC.

**105.3.1.4.10** The application, construction, or repair of any roof covering, as provided in Chapter 15, for work exceeding fifteen hundred dollars (\$1,500.00).

**105.3.1.4.10.1** Not more than twenty-five (25) percent of the total roof area or roof section of any existing building or structure shall be repaired, replaced or recovered in any 12-month period unless the entire roofing system or roof section conforms to requirements of this Code.

**105.3.1.4.11** The installation, alteration or major repair of any air conditioning, refrigeration, vacuum, pneumatic or other mechanical system, as provided in the FBC, Mechanical. A permit shall not be required for repairs that do not change the location, size or capacity of a compressor, coil, or duct.

**105.3.1.4.12** The installation, alteration, or repair of any apparatus producing air contaminants.

**105.3.1.4.13** The installation, alteration, or repair of a swimming pool, as provided in Section 454 of this Code and Chapter 42 of the Florida Residential Code.

**105.3.1.4.14** The installation, alteration, or repair of any structure or facility on private property defined by this or any other regulation as being within the scope of work of an engineering contractor.

**105.3.1.4.15** The installation of exterior windows and exterior glass doors in new buildings or additions and the installation, alteration or repair of such windows and doors in existing buildings.

**105.3.1.4.16** The installation, alteration, or repair of any curtain wall.

**105.3.1.4.17** The installation, alteration, or repair of any garage door in any existing building.

**105.3.1.4.18** The installation, alteration, or repair of any fence.

**105.3.1.4.19** The installation, alteration, or repair of any screen enclosure.

**105.3.1.5** No permit may be issued for any building construction, erection, alteration, modification, repair, or addition unless the applicant for such permit provides to the enforcing agency which issues the permit any of the following documents which apply to the construction for which the permit is to be issued and which shall be prepared by or under the direction of an engineer registered under Chapter 471, Florida Statutes:

1. Plumbing documents for any new building or addition which requires a plumbing system with more than two hundred fifty (250) fixture units or which costs more than one hundred twenty-five thousand dollars (\$125,000.00).
2. Fire sprinkler documents for any new building or addition which includes a fire sprinkler system which contains fifty (50) or more sprinkler heads. Personnel as authorized by Chapter 633, Florida Statutes, may design a fire sprinkler system of forty-nine (49) or fewer heads and may design the alteration of an existing fire sprinkler system if the alteration consists of the relocation, addition or deletion of not more than forty-nine (49) heads, notwithstanding the size of the existing fire sprinkler system.

3. Heating, ventilation and air-conditioning documents for any new building or addition which requires more than a 15-ton-per-system capacity or which is designed to accommodate more than one hundred (100) persons or for which the system costs more than one hundred twenty-five thousand dollars (\$125,000.00). This paragraph does not include any document for the replacement or repair of an existing system in which the work does not require altering a structural part of the building or for work on a residential one-family, two-family, three-family or four-family structure.

An air-conditioning system may be designed by an installing air-conditioning contractor certified under Chapter 489, Florida Statutes to serve any building or addition which is designed to accommodate one hundred (100) persons or fewer and requires an air-conditioning system with value of one hundred twenty-five thousand dollars (\$125,000.00) or less; and when a 15-ton-per-system or less is designed for a singular space of a building and each 15-ton system or less has an independent duct system. Systems not complying with the above require design documents that are to be sealed by an Engineer.

**Example 1:** When a space has two (2) 10-ton systems with each having an independent duct system, the contractor may design these two (2) systems since each system is less than fifteen (15) tons.

**Example 2:** Consider a small single-story office building, which consists of six (6) individual offices where each office has a single three-ton package air conditioning heat pump. The six (6) heat pumps are connected to a single water-cooling tower. The cost of the entire heating, ventilation and air conditioning work is forty-seven thousand dollars (\$47,000.00) and the office building accommodates fewer than one hundred (100) persons. Because the six (6) mechanical units are connected to a common water tower this is considered to be an 18-ton system. It therefore could not be designed by a mechanical or air conditioning contractor.

**Note:** It was further clarified by the Commission that the limiting criteria of one hundred (100) persons and one hundred twenty-five thousand dollars (\$125,000.00) apply to the building occupancy load and the cost of the total air-conditioning system of the building.

4. Any specialized mechanical, electrical, or plumbing document for any new building or addition which includes a medical gas, oxygen, steam, vacuum, toxic air filtration, clean agent fire extinguishing or fire detection and alarm system which costs more than five thousand dollars (\$5,000.00).
5. Electrical documents. See Section 471.003(2)(h), Florida Statutes.

**Note:** Documents requiring an engineer seal by this part shall not be valid unless an Engineer who possesses a valid certificate of registration has signed, dated, and stamped such document as provided in Section 471.025, Florida Statutes.

6. All public swimming pools and public bathing places as defined by and regulated under Chapter 514, Florida Statutes.

### **105.3.2 Time Limitation.**

**105.3.2.1** Every permit issued shall become null and void if work, as defined in Section 105.3.2.6 authorized by such permit is not commenced within one hundred eighty (180) days from the date the permit is issued or if the work authorized by such permit is suspended or abandoned for a period of ninety (90) days after the time the work is commenced.

**105.3.2.2** If the work covered by the permit has not commenced, or has commenced and has been suspended or abandoned, the Building Official may for good cause, extend such permit for no more than two (2) periods of ninety (90) days, not to exceed one (1) year, from the date of expiration of the initial permit, if an extension is requested.

**105.3.2.3** If the work covered by the permit has commenced, is in progress, has not been completed and is being carried on progressively in a substantial manner in accordance with Section 105.3.2.6, the permit shall be in effect until completion of the job.

**105.3.2.4** If work has commenced and the permit is revoked, becomes null and void or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

**105.3.2.5** If a new building permit is not obtained within one hundred eighty (180) days from the date the initial permit became null and void, the Building Official is authorized to require that any work which has been commenced or completed be removed from the building site; or alternately, he or she may issue a new permit, on application, providing the work in place and the required work to complete the structure meets all applicable regulations in effect at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date of issuance of a new permit.

**Exception:** On written request from owner or the contractor, the Building Official may reinstate the permit one (1) time. The job shall be completed under the jurisdiction of the code that the original permit was approved under. The reinstated permit shall be subject to the life safety requirements as determined by the Fire Code Official.

**105.3.2.5.1** A local government that issues building permits shall send a written notice of expiration, by e-mail or United States Postal Service, to the owner of the property and the contractor listed on the permit, no less than thirty (30) days before a building permit is set to expire. The written notice must identify the permit that is set to expire and the date the permit will expire.

**105.3.2.6** Work shall be considered to have commenced and be in active progress when the permit has received an approved inspection within ninety (90) days of being issued, or if in the opinion of the Building Official, the permit has a full complement of workers and equipment is present at the site to diligently incorporate materials and equipment into the structure, weather permitting. This provision shall not be applicable in case of civil commotion or strike or when the building work is halted due directly to judicial injunction, order, or similar process. The fact that the property or parties may be involved in litigation shall not be sufficient to constitute an exception to the time period set forth herein.

**Exception:** A primary permit shall not be deemed expired while the secondary permit is considered active.

**105.3.2.7** The fee for renewal, re-issuance and extension of a permit shall be set forth by the AHJ.

**105.3.2.8** If the work covered by the permit is subordinate to the permit issued to the general (or prime) contractor, i.e. plumbing, electrical, pool, etc., the subordinate permit will be in effect for the full time of the contract permit.

**105.3.3** An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this County, and there may be additional permits required from other governmental entities such as water management districts, state agencies or federal agencies."

**105.3.4** A building permit for a single-family residential dwelling must be issued within thirty (30) working days of application; unless unusual circumstances require a longer time for processing the application or unless the permit application fails to satisfy the FBC or the enforcing agency's laws or ordinances.

**105.3.5 Identification of minimum premium policy.** Except as otherwise provided in Chapter 440, Florida Statutes, Workers' Compensation, every employer shall, as a condition to receiving a building permit, show proof that it has secured compensation for its employees as provided in Sections 440.10 and 440.38, Florida Statutes.

**105.3.6 Asbestos.** The enforcing agency shall require each building permit for the demolition or renovation of an existing structure to contain an asbestos notification statement which indicates the owner's or operator's responsibility to comply with the provisions of Section 469 Florida Statutes and to notify the Department of Environmental Protection of his or her intentions to remove asbestos, when applicable, in accordance with state and federal law.

**105.3.6.1 Asbestos removal.** Moving, removal or disposal of asbestos-containing materials on a residential building where the owner occupies the building, the building is not for sale or lease, and the work is performed according to the owner-builder limitations provided in this paragraph. To qualify for exemption under this paragraph, an owner must personally appear and sign the building permit application. The permitting agency shall provide the person with a disclosure statement in substantially the following form:

**Disclosure Statement**

State law requires asbestos abatement to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own asbestos abatement contractor even though you do not have a license. You must supervise the construction yourself. You may move, remove or dispose of asbestos-containing materials on a residential building where you occupy the building and the building is not for sale or lease, or the building is a farm outbuilding on your property. If you sell or lease such building within one (1) year after the asbestos abatement is complete, the law will presume that you intended to sell or lease the property at the time the work was done, which is a violation of this exemption. You may not hire an unlicensed person as your contractor. Your work must be done according to all local, state, and federal laws and regulations which apply to asbestos abatement projects. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances.

**105.3.7 Applicable Code for Manufactured Buildings.** Manufacturers should be permitted to complete all buildings designed and approved prior to the effective date of a new code edition, provided a clear signed contract is in place. The contract shall provide specific data mirroring that required by an application for permit, specifically, without limitation, date of execution, building owner or dealer, and anticipated date of completion. However, the construction activity must commence within six (6) months of the contract's execution. The contract is subject to verification by the Department of Business and Professional Regulation.

**105.4 Conditions of Permit.** A permit issued shall be construed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the Building Official, and/or Fire Marshal/Fire Code Official, or their duly authorized representative from thereafter requiring a correction of errors in plans, construction or violations of this Code.

**105.4.1 Compliance.**

**105.4.1.1** At any time when approved plans and/or specifications are found to be in violation of this Code, the Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official, or his or her duly authorized representative shall notify the designer and the designer shall correct the drawings or otherwise satisfy the Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative that the design and/or working drawings are in compliance with this Code and FFPC.



**105.4.1.2** Compliance with the Code is the responsibility of the property owner and the permit holder. The safety to persons and materials during actual construction operations, as set forth in FBC Building, Chapter 33, is the responsibility of the permit holder.

**105.4.1.3** The Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official or his or her duly authorized representative (according to this Code and FFPC) shall issue a notice of violation(s) of this Code and/or corrections ordered. Such notice shall be served on the permit holder or his or her job representative by mail, hand delivery, electronically or may be posted at the site of the work. Refusal, failure or neglect to comply with such notice or order within ten (10) days, except where an appeal has been filed with BORA, shall be considered a violation of this Code, and shall be subject to the penalties as set in Section 114 of this Code. In event of failure to comply with this section, no further permits shall be issued to such person, firm, or corporation.

**105.5 Additional options for closing a permit.** Pursuant to section 553.79(15), Florida Statute, a property owner, regardless of whether the property owner is the one listed on the application for the building permit, may close a building permit by complying with the following requirements:

1. The property owner may retain the original contractor listed on the permit or hire a different contractor appropriately licensed in this state to perform the work necessary to satisfy the conditions of the permit and to obtain any necessary inspections in order to close the permit. If a contractor other than the original contractor listed on the permit is hired by the property owner to close the permit, such contractor is not liable for any defects in the work performed by the original contractor and is only liable for the work that he or she performs.
  2. The property owner may assume the role of an owner-builder, in accordance with Sections 489.103(7) and 489.503(6).
  3. For purposes of this section, the term "close" means that the requirements of the permit have been satisfied.
- (b) If a building permit is expired and its requirements have been substantially completed, as determined by the local enforcement agency, the permit may be closed without having to obtain a new building permit, and the work required to close the permit may be done pursuant to the building code in effect at the time the local enforcement agency received the application for the permit, unless the contractor has sought and received approval from the local enforcement agency for an alternative material, design, or method of construction.
- (c) A local enforcement agency may close a building permit six (6) years after the issuance of the permit, even in the absence of a final inspection, if the local enforcement agency determines that no apparent safety hazards exist.

#### **105.6 Suspension or Revocation of Permit.**

**105.6.1** The Building Official may revoke a permit or approval issued under the provisions of this Code in case of any false statement or misrepresentation of fact in the application or on the plans and/or specifications on which the permit or approval was based.

**105.6.2** Whenever the work for which a permit has been issued is not being performed in conformity with plans, specifications or descriptions, or approved plans and/or specifications are not being kept at the site, it shall be the duty of the Building Official to notify the contractor or owner or his or her agent, in writing, that the permit is suspended. Written notice shall be mailed or given to the permit holder or his or her agent, and it shall be unlawful for any person or persons to perform any work in or about the building or structure except such work as may be required for the correction of the expressed violations. And if, in the judgment of the Building Official, there is imminent danger that requires immediate action, the permit may be revoked or suspended verbally, and written notice served later.

**105.6.3** When a permit has been suspended, it shall not be reinstated until all existing violations have been corrected. Written notice of reinstatement shall be given the permit holder if requested.

**105.6.4** Upon request by the owner and/or permit holder and upon investigation by the Building Official to determine that the work has been abandoned or that the permit holder is unable or unwilling to complete the contract, a change of contractor may be issued without the initial permit being revoked or suspended.

**105.6.4.1** The foregoing will be permitted only when the following stated persons have filed with the Building Official a letter stating the reason for a change of contractor being required and holding the Building Official harmless from legal involvement. All interested parties shall be notified before action is taken.

1. Where the contractor being changed is the prime contractor, the owner shall file such hold-harmless letter.
2. Where a sub-contractor or specialty contractor is the permit holder, the owner and prime contractor shall both file such hold-harmless letters.

**105.6.5.1** Pursuant to section 553.79(15), Florida Statute, a local enforcement agency may not deny issuance of a building permit to; issue a notice of violation to; or fine, penalize, sanction, or assess fees against an arms-length purchaser of a property for value solely because a building permit applied for by a previous owner of the property was not closed. The local enforcement agency shall maintain all rights and remedies against the property owner and contractor listed on the permit.

**105.6.5.2** Pursuant to section 553.79(15), Florida Statute, the local enforcement agency may not deny issuance of a building permit to a contractor solely because the contractor is listed on other building permits that were not closed

**105.7 Placement of Permit Card.** The building permit card shall be maintained in a conspicuous place on the front of the premises affected thereby during the hours of work in progress and available on demand for examination by the Building Official. The permit card which shall bear the description of the property, the nature of the work being done, the name of the owner and contractor and other pertinent information.

**105.8 Notice of Commencement.** In accordance with Section 713.135, Florida Statutes, when any person applies for a building permit, the authority issuing such permit shall print on the face of each permit card in no less than 14-point, capitalized, boldfaced type: **"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."**

**105.9 Reserved. See 105.3.6 Asbestos.**

**105.10 Certificate of Protective Treatment for prevention of termites.** A weather resistant jobsite posting board shall be provided to receive duplicate Treatment Certificates as each required protective treatment is completed, providing a copy for the person the permit is issued to and another copy for the building permit files. The Treatment Certificate shall provide the product used identity of the applicator, time and date of the treatment, site location, area treated, chemical used, percent concentration and number of gallons used, to establish a verifiable record of protective treatment. If the soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.

**105.11 Notice of termite protection.** A permanent sign, which identifies the termite treatment provider and need for re-inspection and treatment contract renewal, shall be provided. The sign shall be posted near the water heater or electric panel.

**105.12 Work starting before permit issuance.** Upon prior written approval of the Building Official, the scope of work delineated in the building permit application and plans may be started prior to the final

approval and issuance of the permit, provided that any work completed (including exploratory uncovering of concealed structural elements of existing buildings for design information) is entirely at risk of the permit applicant and the work does not proceed past the first required inspection.

**105.13 Phased permit approval.** After submittal of the appropriate construction documents, the Building Official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted and upon payment of the required fee. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted. Corrections may be required to meet the requirements of the technical codes.

**105.14 Permit issued on basis of affidavit.** Reserved.

**105.15 Opening protection.** When any activity requiring a building permit, not including roof covering replacement or repair work associated with the prevention of degradation of the residence, that is applied for on or after July 1, 2008, and for which the estimated cost is fifty thousand dollars (\$50,000.00) or more for a building that is located in the wind borne debris region as defined in the FBC and that has an insured value of seven hundred fifty thousand dollars (\$750,000.00) or more, or, if the building is uninsured or for which documentation of insured value is not present, has a just valuation for the structure for purposes of ad valorem taxation of seven hundred fifty thousand dollars (\$750,000.00) or more; opening protection as required within the FBC Building or FBC Residential for new construction must be provided.

**Exception:** Single family residential structures permitted subject to the FBC are not required to comply with this section.

**105.16 Inspection of existing residential building not impacted by construction.**

- (a) A local enforcing agency, and any local building code administrator, inspector, or other official or entity, may not require as a condition of issuance of a one- or two-family residential building permit the inspection of any portion of a building, structure, or real property that is not directly impacted by the construction, erection, alteration, modification, repair, or demolition of the building, structure, or real property for which the permit is sought.
- (b) This subsection does not apply to a building permit sought for:
  - 1. A substantial improvement as defined in Section 161.54, Florida Statutes or as defined in FBC.
  - 2. A change of occupancy as defined in FBC.
  - 3. A conversion from residential to nonresidential or mixed use pursuant to Section 553.79(20)(a), Florida Statutes or as defined in FBC.
  - 4. An historic building as defined in FBC.
- (c) This subsection does not prohibit a local enforcing agency, or any local building code administrator, inspector, or other official or entity, from:
  - 1. Citing any violation inadvertently observed in plain view during the ordinary course of an inspection conducted in accordance with the prohibition in paragraph (a).
  - 2. Inspecting a physically nonadjacent portion of a building, structure, or real property that is directly impacted by the construction, erection, alteration, modification, repair, or demolition of the building, structure, or real property for which the permit is sought in accordance with the prohibition in paragraph (a).
  - 3. Inspecting any portion of a building, structure, or real property for which the owner or other person having control of the building, structure, or real property has voluntarily consented to the inspection of that portion of the building, structure, or real property in accordance with the prohibition in paragraph (a).

4. Inspecting any portion of a building, structure, or real property pursuant to an inspection warrant issued in accordance with Sections 933.20—933.30, Florida Statutes.

**105.17 Streamlined low-voltage alarm system installation permitting.**

- (1) As used in this section, the term:
  - (a) "Contractor" means a person who is qualified to engage in the business of electrical or alarm system contracting pursuant to a certificate or registration issued by the department under Part II of Chapter 489.
  - (b) "Low-voltage alarm system project" means a project related to the installation, maintenance, inspection, replacement, or service of a new or existing alarm system, as defined in Section 489.505, that is hardwired operating at low voltage, as defined in the National Electrical Code Standard 70, Current Edition, or a new or existing low-voltage electric fence, and ancillary components or equipment attached to such a system, including, but not limited to, home-automation equipment, thermostats, closed-circuit television systems, access controls, battery recharging devices, and video cameras.
  - (c) "Low-voltage electric fence" means an alarm system, as defined in Section 489.505, that consists of a fence structure and an energizer powered by a commercial storage battery not exceeding twelve (12) volts which produces an electric charge upon contact with the fence structure.
  - (d) "Wireless alarm system" means a burglar alarm system or smoke detector that is not hardwired.
- (2) Notwithstanding any provision of law, this section applies to low-voltage alarm system projects for which a permit is required by a local enforcement agency. However, a permit is not required to install, maintain, inspect, replace, or service a wireless alarm system, including any ancillary components or equipment attached to the system.
- (3) A low-voltage electric fence must meet all of the following requirements to be permitted as a low-voltage alarm system project and no further permit shall be required for the low-voltage alarm system project other than as provided in this section:
  - (a) The electric charge produced by the fence upon contact must not exceed energizer characteristics set forth in paragraph 22.108 and depicted in Figure 102 of International Electrotechnical Commission Standard No. 60335-2-76, Current Edition.
  - (b) A nonelectric fence or wall must completely enclose the low-voltage electric fence. The low-voltage electric fence may be up to two (2) feet higher than the perimeter nonelectric fence or wall.
  - (c) The low-voltage electric fence must be identified using warning signs attached to the fence at intervals of not more than sixty (60) feet.
  - (d) The low-voltage electric fence shall not be installed in an area zoned exclusively for single family or multi-family residential use.
  - (e) The low-voltage electric fence shall not enclose the portions of a property which are used for residential purposes.
- (4) This section does not apply to the installation or replacement of a fire alarm if a plan review is required.
- (5) A local enforcement agency shall make uniform basic permit labels available for purchase by a contractor to be used for the installation or replacement of a new or existing alarm system at a cost as indicated in Section 553.793, Florida Statutes. The local enforcement agency may not require the payment of any additional fees, charges, or expenses associated with the installation or replacement of a new or existing alarm.

(a) A local enforcement agency may not require a contractor, as a condition of purchasing a label, to submit information other than identification information of the licensee and proof of registration or certification as a contractor.

(b) A label is valid for one (1) year after the date of purchase and may only be used within the jurisdiction of the local enforcement agency that issued the label. A contractor may purchase labels in bulk for one (1) or more unspecified current or future projects.

- (6) A contractor shall post an unused uniform basic permit label in a conspicuous place on the premises of the low-voltage alarm system project site before commencing work on the project.
- (7) A contractor is not required to notify the local enforcement agency before commencing work on a low-voltage alarm system project. However, a contractor must submit a Uniform Notice of a Low-Voltage Alarm System Project as provided under subsection (7) to the local enforcement agency within fourteen (14) days after completing the project. A local enforcement agency may take disciplinary action against a contractor who fails to timely submit a Uniform Notice of a Low-Voltage Alarm System Project.
- (8) The Uniform Notice of a Low-Voltage Alarm System Project may be submitted electronically or by facsimile if all submissions are signed by the owner, tenant, contractor, or authorized representative of such persons. The Uniform Notice of a Low-Voltage Alarm System Project shall be in the format prescribed by the local enforcement agency and must comply with the requirements of Section 553.793(7), Florida statutes
- (9) A low-voltage alarm system project may be inspected by the local enforcement agency to ensure compliance with applicable codes and standards. If a low-voltage alarm system project fails an inspection, the contractor must take corrective action as necessary to pass inspection.
- (10) A municipality, County, district, or other entity of local government may not adopt or maintain in effect an ordinance or rule regarding a low-voltage alarm system project that is inconsistent with this section.
- (11) A uniform basic permit label shall not be required for the subsequent maintenance, inspection, or service of an alarm system that was permitted in accordance with this section.

The provisions of this act are not intended to impose new or additional licensure requirements on persons licensed in accordance with the applicable provisions of Chapter 489, Florida Statutes.

**105.18 Demolition.** Application for building permits for the work of demolition of buildings or structures, if such building or structure is over twelve (12) feet in height above grade or any wall of which is over forty (40) feet in horizontal length, shall be accepted from only qualified persons or firms. Qualifications of persons or firms shall be in accordance with separate ordinance providing for qualification and certification of construction tradesmen.

**105.18.1** A permit for the demolition of a building or structure for which an application is made voluntarily by the owner shall expire sixty (60) days from the date of issuance, and shall specifically require the completion of the work for which the permit is issued on or before the expiration date.

## **Section 106 Floor and Roof Design Loads**

**106.1 Live loads posted.** In commercial or industrial buildings, for each floor or portion thereof designed for live loads exceeding fifty (50) psf (2.40 kN/m<sup>2</sup>), such design live loads shall be conspicuously posted by the owner in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

**106.2 Issuance of certificates of occupancy.** A certificate of occupancy required by Section 111 shall not be issued until the floor load signs, required by Section 106.1, have been installed.

**106.3 Restrictions on loading.** It shall be unlawful to place, or cause or permit to be placed, on any floor or roof of a building, structure, or portion thereof, a load greater than is permitted by this Code.

**106.3.1 Storage and Factory-Industrial Occupancies.** It shall be the responsibility of the owner, agent, proprietor or occupant of Group S and Group F occupancies, or any occupancy where excessive floor loading is likely to occur, to employ a competent Architect or Engineer in computing the safe load capacity. All such computations shall be accompanied by an affidavit from the Architect or Engineer stating the safe allowable floor load on each floor in pounds per square foot uniformly distributed. The computations and affidavit shall be filed as a permanent record of the building department.

## **Section 107 Submittal Documents**

### **107.1 General.**

**107.1.1 Submittal documents.** Submittal documents consisting of construction documents, statement of special inspections, geotechnical reports, structural observation programs, and other data shall be submitted in two (2) or more sets of plans and/or specifications as described in Section 107.3 with each application for a permit. The construction documents shall be prepared by a registered design professional where required by Chapter 471, Florida Statutes or Chapter 481, Florida Statutes. Where special conditions exist, the Building Official is authorized to require additional construction documents to be prepared by a registered design professional.

**Exception:** The Building Official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this Code.

**107.1.2** Where required by the Building Official and/or Fire Marshal/Fire Code Official, a third copy of the plan showing parking, landscaping and drainage shall be provided.

**107.2 Construction documents.** Construction documents shall be in accordance with Sections 107.2.1 through 107.2.5.

**107.2.1 Information on construction documents.** Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the Building Official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this Code and FFPC, relevant laws, ordinances, rules and regulations, as determined by the Building Official and/or Fire Marshal/Fire Code Official. (See also Section 107.3.5.1.)

**107.2.1.1** At any time during the course of construction, the Building Official and/or Fire Marshal/Fire Code Official may require the submittal of a first-floor elevation survey, as built.

**107.2.2 Fire protection system shop drawings.** Shop drawings for the fire protection system(s) shall be submitted to indicate conformance with this Code, FFPC and the construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9 of this Code and FFPC.

**107.2.3 Means of egress.** The construction documents shall show in sufficient detail the location, construction, size, and character of all portions of the means of egress including the path of the exits discharge to the public way in compliance with the provisions of this Code. In other than occupancies in Groups R-2, R-3, and I-1, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

**107.2.4 Exterior wall envelope.** Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system that was tested, where applicable, as well as the test procedure used.

**107.2.4.1 Exterior balcony and elevated walking surfaces.** Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, or irrigation, and the structural framing is protected by an impervious moisture barrier the construction documents shall include details for all elements of the impervious moisture barrier system. the construction documents shall include manufacturer's installation instructions. (CAC7834)

**107.2.5 Site plan.** The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

**107.2.5.1 Design flood elevations.** Where design flood elevations are not specified, they shall be established in accordance with FBC Ch. 16. The elevation above Mean Sea Level (MSL) of the top of all first floors shall appear on all construction plans and the Building Official shall require that such elevations be transferred to the accompanying application for permit.

**107.3 Examination of documents.** The Building Official and/or Fire Marshal/Fire Code Official shall examine or cause to be examined each application for a permit and the accompanying documents, consisting of drawings, specifications, calculations (when required), and additional data, and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of the technical codes and all other pertinent laws or ordinances. All plan review shall be performed by Plans Examiners certified per Section 104 of this Code.

**Exceptions 1:** Building plans and/or specifications approved pursuant to Section 553 Part I, Florida Statutes and state-approved manufactured buildings are exempt from local codes enforcing agency plan reviews except for provisions of the code relating to erection, assembly or construction at the site. Erection, assembly, and construction at the site are subject to local permitting and inspections. Photocopies of plans approved according to FAC 61-41.009, shall be sufficient for local permit application documents of record for the modular building portion of the permitted project.

**Exception 2.** Reserved

**107.3.0.1** Plans and/or specifications for which only minor correction is necessary may be corrected by notation on the prints with the approval of the designer.

**107.3.0.2** Plans and/or specifications for which major correction is necessary shall be revised by the designer and new corrected plans submitted.

**107.3.1 Approval of construction documents.** When the Building Official issues a permit, the construction documents shall be approved, in writing or by stamp or electronically, as "Reviewed for

Code Compliance. The Building Official shall retain one (1) set of the approved (construction documents) plans and/or specifications, and the other set shall be returned to the (applicant) permit holder, who shall maintain and keep this set at the site of work and available for inspections by the Building Official or his or her duly authorized representative and/or Fire Marshal/Fire Code Official, or his or her duly authorized representative.

**107.3.2 Previous approval.** Reserved.

**107.3.3 Phased approval.** Reserved. See 105.13.

**107.3.4 Design professional in responsible charge.**

**107.3.4.0.1 General Requirements for Professional Design.** For buildings and/or structures (except single-family residences), alterations, repairs, improvements, replacements or additions, costing fifteen thousand dollars (\$15,000.00) or more, as specified herein, the plans/or specifications shall be prepared and approved by, and each sheet shall bear the impress seal of an Architect or Engineer. For any work involving structural de-sign, the Building Official may require that plans and/or specifications be prepared by and bear the impress seal of an Engineer, regardless of the cost of such work.

**Exception:** Roofing as set forth in FBC Chapter 15.

**107.3.4.0.2** Plans and/or specifications for proposed construction, where such plans and/or specifications are required by this Code to be prepared by and bear the impress seal of an Architect or Engineer, shall be submitted by the Architect or Engineer or authorized representative

**107.3.4.0.3** For alterations, repairs, improvements, replacements or additions to a single-family residence, costing thirty thousand dollars (\$30,000.00) or more, as specified herein, the plans and/or specifications shall be prepared and approved by, and each sheet shall bear the impress seal of an Architect or Engineer. For any work involving structural design, the Building Official may require that plans and/or specifications be prepared by and bear the impress seal of an Engineer, regardless of the cost of such work.

**107.3.4.0.4** Plans and/or specifications for work that is preponderantly of architectural nature shall be prepared by and bear the impress seal of an Architect, and such work that involves extensive computation based on structural stresses shall, in addition, bear the impress of seal of an Engineer.

**107.3.4.0.5** Plans and/or specifications for work that is preponderantly of mechanical or electrical nature; at the discretion of the Building Official, shall be prepared by, and bear the impressed seal of an Engineer.

**107.3.4.0.6** Compliance with the specific minimum requirements of this Code shall not be in itself deemed sufficient to assure that a building or structure complies with all of the requirements of this Code. It is the responsibility of the Architect and/or Engineer of Record for the building or structure to determine through rational analysis what design requirements are necessary to comply with this Code.

**107.3.4.0.7** Plans and/or specifications for work that is preponderantly of a structural nature shall be prepared by and bear the impress seal of an Engineer.

**107.3.4.0.8** Plans and/or specifications for new construction requiring an aggregate electrical service capacity of more than six hundred (600) amperes or more than two hundred forty (240) volts on residential or more than eight hundred (800) amperes or more than two hundred forty (240) volts on commercial or industrial or an electrical system having a value greater than one hundred twenty-five thousand dollars (\$125,000.00) or any electrical



system(s) for an assembly area having an area greater than five thousand (5,000) square feet or a fire alarm and/or security alarm system(s) which cost more than five thousand dollars (\$5,000.00) shall be prepared by and signed, dated and bear the impress seal of an Engineer who is competent in this field of expertise. All plans and/or specifications prepared by an Architect or an Engineer pursuant to the requirements of this Code shall be hand signed, dated, and sealed by the respective Architect or Engineer who prepared such plans and/or specifications.

**107.3.4.1 Deferred submittals.** Reserved.

**107.3.4.2 Certification by contractors.** Reserved.

**107.3.4.3 Application for Examination of Plans.**

**107.3.4.3.1** Complete plans and/or specifications shall be submitted in duplicate and with a third copy of the plot plan showing parking, landscaping and drainage; or such plans may be submitted in single copy where it is evident that code interpretation is needed before final working drawings can be prepared.

**107.3.4.3.2** Plans and/or specifications for proposed construction, where such plans and/or specifications are not required to be prepared by and bear the impress seal of an Architect or Engineer shall be submitted by the designer with the application as set forth in Section 105.3.

**107.3.4.3.3 Construction Inspection.** The Professional Engineer of Record or the Architect of Record in responsible charge of the structural design shall include in the construction documents the following:

1. Special inspections required by Section 110.10.2.
2. Other structural inspections required by the Professional Engineer of Record or the Architect of Record in responsible charge of the structural design.

**107.3.4.3.4** Application for permit for new construction and additions shall be accompanied by a registered land surveyor's certificate and plan in duplicate on which shall be clearly indicated the property-corner stakes, property-line dimensions, existing structures and their location, existing right-of-way, sidewalks, easements, street zoning and property zoning of record, critical elevations and building setbacks required by law, general block plan and other plan and other pertinent survey data which may be required. The Building Official may waive the requirements for such survey when property-line stakes are existing and known to be in place, and the work involved is minor and/or is clearly within building lines.

**Exceptions:**

1. The Building Official may authorize the issuance of a permit without plans and/or specifications for small or unimportant work, but in no instance where the work is of a structural nature except as set forth below.
2. The Building Official will authorize the issuance of a permit for a single-family fall-out shelter without a professional seal on the plans where the cost of such work does not exceed five thousand dollars (\$5,000.00).

**107.3.5 Minimum plan review criteria for buildings.** The examination of the documents by the Building Official, or his or her duly authorized representative and/or Fire Marshal/Fire Code Official, or his or her duly authorized representative for that discipline qualified under Section 104 of this Code shall include the following minimum criteria and documents: energy conservation code compliance documents, a floor plan; site plan; foundation plan; floor/roof framing plan or truss layout; all fenestration penetrations; flashing; and rough opening dimensions; and all exterior elevations:

**A. Building.**

1. Site Requirements:
  - a. Parking.
  - b. Fire access.
  - c. Vehicle loading.
  - d. Driving/turning radius.
  - e. Fire hydrant/water supply/Post Indicator Valve (PIV).
  - f. Setback/separation (assumed property lines).
  - g. Location of specific tanks, water lines and sewer lines.
  - h. Flood hazard areas, flood zones, design flood elevations, lowest floor elevations, enclosures, equipment, and flood damage-resistant materials.
2. Occupancy group and special occupancy requirements shall be determined.
3. Minimum type of construction shall be determined (see FBC Ch. 5)
4. Fire resistant construction requirements shall include the following components:
  - a. Fire resistant separations.
  - b. Fire resistant protection for type of construction.
  - c. Protection of openings and penetrations of all rated components.
  - d. Fire blocking and draft stopping.
  - e. Calculated fire resistance.
5. Fire suppression systems shall include:
  - a. Early warning.
  - b. Smoke evacuation systems schematic.
  - c. Fire sprinklers.
  - d. Standpipes.
  - e. Pre-engineered systems.
  - f. Riser diagram.
6. Life Safety systems shall be determined and shall include the following requirements:
  - a. Occupant load and egress capacities.
  - b. Early warning.
  - c. Smoke control.
  - d. Stair pressurization.
  - e. Systems schematic.
  - f. BDA submittal, if applicable.
7. Occupancy Load/Egress Requirements shall include:
  - a. Occupancy load.
  - b. Gross occupancy.
  - c. Net occupancy.

- d. Means of egress.
  - e. Exit access.
  - f. Exit.
  - g. Exit discharge.
  - h. Stairs construction/geometry and protection.
  - i. Doors.
  - j. Emergency lighting and exit signs.
  - k. Specific occupancy requirements.
  - l. Construction requirements.
  - m. Horizontal exits/exit passageways.
8. Structural requirements shall include:
- a. Soil conditions/analysis.
  - b. Termite protection.
  - c. Design loads.
  - d. Wind requirements.
  - e. Building envelope.
  - f. Structural calculations (if required).
  - g. Foundation.
  - h. Impact resistant coverings or systems.
  - i. Wall systems.
  - j. Floor systems.
  - k. Roof systems.
  - l. Threshold inspection plan.
  - m. Stair systems.
  - n. Flood requirements in accordance with Section 1612, including lowest floor elevations, enclosures, flood damage-resistant materials.
  - o. For windows and doors replacement include "Broward County Uniform Retrofit Window & Door Schedule".
9. Materials shall be reviewed and shall at a minimum include the following:
- a. Wood.
  - b. Steel.
  - c. Aluminum.
  - d. Concrete.
  - e. Plastic.
  - f. Glass.
  - g. Masonry.
  - h. Gypsum board and plaster.
  - i. Insulating (mechanical).

- j. Roofing.
  - k. Insulation.
10. Accessibility requirements shall include the following:
    - a. Site requirements.
    - b. Accessible route.
    - c. Vertical accessibility.
    - d. Toilet and bathing facilities.
    - e. Drinking fountains.
    - f. Equipment.
    - g. Special occupancy requirements.
    - h. Fair housing requirements.
  11. Interior requirements shall include the following:
    - a. Interior finishes (flame spread/smoke develop).
    - b. Light and ventilation.
    - c. Sanitation.
  12. Special systems:
    - a. Elevators.
    - b. Escalators.
    - c. Lifts.
  13. Swimming Pools:
    - a. Barrier requirements.
    - b. Spas.
    - c. Wading pools.
  14. Photovoltaic:
    - a. Site Plan.
    - b. Roof Penetration approval.
    - c. Roof sealing detail.
    - d. Wind resistance ratings of modules.
    - e. Roof live load approval.
    - f. Fire classification of building and modules.
    - g. Roof top shingle module ratings if installed.
    - h. Design Load path.

**B. Electrical.**

1. Wiring Methods and materials.
2. Services, including riser diagram electrical and/or fire.
3. Feeders and Branch Circuits, include circuit and location, AFCI's and GFCI's.
4. Overcurrent Protection.

5. Grounding and Bonding.
6. Equipment Location, sizes all equipment.
7. Special Occupancies.
8. Emergency Systems.
9. Communication Systems.
10. Low Voltage.
11. Load calculations and panel schedules.
12. Design flood elevations.
13. Short circuit analysis.
14. Electrical legend.
15. Lighting specifications.
16. Accessibility requirements.
17. Selective coordination study if required by NFPA 70-2011.
18. Emergency generator, if applicable.
19. Photovoltaic:
  - a. Lay out plan including combiner box and accessible junction boxes.
  - b. Size of system number of modules.
  - c. Wire size at coldest temperature.
  - d. Listing and model numbers of all equipment and racking.
  - e. Inverter rating and location.
  - f. Three-line diagram.
  - g. Connection to utility. Line side or load side. Buss bar ratings.
  - h. Grounding.
  - i. Labeling.

**C. Gas.**

1. Gas piping.
2. Venting.
3. Combustion air.
4. Chimneys and vents.
5. Appliances.
6. Type of gas.
7. Fireplaces.
8. LP tank location.
9. Riser diagram/shutoffs.
10. Design flood elevation.

**D. Mechanical.**

1. Calculations of heating and cooling loads as required by FBC Energy Conservation.

2. A complete duct layout with:
  - a. Specified materials.
  - b. Duct sizes.
  - c. Ventilation calculations, outside air intakes/make up air.
  - f. CFM air volumes at each duct inlet and outlet.
  - d. Diffuser sizes.
  - e. Routing and location of ducts, including risers.
  - f. Thermal resistance ratings for ducts and duct insulation.
3. Heating, ventilation, air conditioning and refrigeration equipment, boilers and appliances, show:
  - a. Equipment manufacturer.
  - b. Equipment model numbers.
  - c. Equipment locations.
  - d. Equipment efficiency ratings.
  - e. Equipment mounting/support details (Mechanical equipment exposed to the wind must comply with Section 301.15 of the Florida Mechanical Code).
  - f. For air conditioner replacements include "Broward County Uniform Data Form for Residential and Light Commercial Air Conditioning Replacements".
4. Roof mounted equipment –
  - a. Equipment access.
  - b. Equipment capacity in tonnage and/or horsepower.
  - c. Air conditioning refrigerant type and amount of refrigerant in system (pounds).
  - d. Detail of equipment attachment to roof stand/curb and attachment of roof stand/curb to supporting structure (Must comply with requirements of the High Velocity Hurricane Zone)
5. Fire protection assemblies and devices - Show make, model, type, location, and installation details for, but not limited to:
  - a. Fire dampers.
  - b. Ceiling dampers.
  - c. Smoke dampers.
  - d. Smoke detectors (duct).
  - e. Heat detectors.
  - f. Automatic fire doors.
  - d. Clean agent fire suppression systems.
6. Exhaust systems - Show:
  - a. Bathroom ventilation.
  - b. Kitchen equipment exhaust.
  - c. Clothes dryer exhaust.
  - d. Specialty exhaust systems.

- e. Laboratory.
  - f. Smoke control systems.
7. Piping - Show:
    - a. All piping materials and sizes.
    - b. Piping locations and terminations.
    - c. Piping insulation materials and thickness.
  8. Chimneys, fireplaces, and vents - Show:
    - a. Location.
    - b. Venting requirements.
    - c. Combustion air.
  9. Other:
    - a. Details for exterior ventilation devices,
    - b. Any available product specifications,
    - c. Product listings, and
    - d. Compressed air, vacuum, and pneumatic systems.
    - e. Liquid fuel storage and dispensing.
  10. Mechanical equipment, devices and appurtenances compliance with the design flood elevation.

**E. Plumbing.**

1. Minimum plumbing facilities.
2. Fixture requirements.
3. Water supply piping.
4. Sanitary drainage.
5. Water heaters.
6. Vents.
7. Roof drainage.
8. Backflow prevention.
9. Irrigation.
10. Location of water supply line.
11. Grease traps.
12. Environmental requirements.
13. Plumbing risers/Isometric.
14. Design flood elevation.

**F. Demolition.**

1. Asbestos removal.

**107.3.5.1** Plans and/or specifications completely defining the work for each discipline (Electrical, Mechanical, Plumbing, Roofing, and Structural) shall be submitted. Plans shall be electronically

or mechanically reproduced prints on substantial paper showing completely all foundation, wall sections, floor plans, roof plans and elevations at a scale no less than 3/16 -inch equals one (1) foot, and the main details at a scale not less than 3/4-inch equals one (1) foot or equivalent metric scale. Electrical plans shall be drawn at a minimum scale of 1/4-inch equals one (1) foot for all buildings of less than five thousand (5,000) square feet or equivalent metric scale, except that an isometric or riser diagram need not be to scale. Designated Electrical Equipment Rooms and Meter Rooms shall be drawn at a minimum scale of 1/2-inch equals one (1) foot or equivalent metric scale.

**107.3.5.2** Computations, stress diagrams, shop drawings, results of site tests, floor plans of existing buildings to which additions are proposed and other data necessary to show compliance with this Code, the correctness of the plans and the sufficiency of structural and mechanical design shall be included when required by the Building Official.

**107.3.5.2.1** When applying for a permit, calculations prepared by the designer of record for Group R3 or R2 (Townhouse only) shall be submitted for the complete building for the structural requirements of this Code.

**Exception:** Component systems covered by product approval or designed by a delegated professional.

**107.3.5.3** Any specifications in which general expressions are used to the effect that "work shall be done in accordance with the Building Code" or "to the satisfaction of the Building Official" shall be deemed imperfect and incomplete, and every reference to this Code shall be by section or subsection number applicable to the materials to be used, or to the methods of construction proposed.

**107.3.5.4** Product Approvals shall be reviewed and approved by the Building Designer prior to submittal to verify that such products comply with the design specifications. Reviewed and approved Product Approvals shall then become part of the plans and/or specifications. Product Approval shall be filed with the Building Official for review and approval prior to installation.

**107.3.5.5** When applying for a permit, the Architect or Engineer of Record shall provide a framing plan. The truss system designer (delegated Engineer) shall submit to the Architect or Engineer of record a truss system shop drawing which conforms to this framing plan, plus a collation of the applicable truss designs and truss connections which denote their location on the placement plan. The truss system shop drawing does require the seal of an Engineer and shall be reviewed and accepted by the Architect or Engineer of record for conformance to design concepts and load interaction with the building. After the Architect and/or Engineer of record have indicated their review and acceptance, the truss system shop drawings, design drawings for individual trusses, and truss to truss connection details shall be submitted to the building department. This submittal shall take place prior to the inspection of the foundation. The designs for individual trusses shall be prepared by an Engineer.

**107.3.5.6 Structural and fire resistance integrity.** Plans for all buildings shall indicate how required structural and fire resistance integrity will be maintained where a penetration of a required fire-resistant wall, floor or partition will be made for electrical, gas, mechanical, plumbing and communication conduits, pipes and systems. Such plans shall also indicate in sufficient detail how the fire integrity will be maintained where required fire-resistant floors intersect the exterior walls and where joints occur in required fire resistant construction assemblies.

**107.4 Amended construction documents.** Work shall be installed in accordance with the approved construction documents and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted to the Building Official for approval as an amended set of construction documents.



**107.5 Retention of construction documents.** One (1) set of approved construction documents shall be retained by the Building Official for a period of not less than what is required by Section 107.5.1, 107.5.2 or 107.5.3; or as required by Florida Statutes and Administrative Rules (General Records Schedule GS1-SL for State and Local Government Agencies).

**107.5.1 Architectural/Building Plans: Commercial.** For life of structure or ten (10) anniversary years after issuance of certificate of occupancy, completion, or final inspection of the permitted work, whichever is later.

**107.5.2 Architectural/Building Plans: Residential.** For ten (10) anniversary years after issuance of certificate of occupancy or final inspection.

**107.5.3 Architectural/Building Plans and Permits, Abandoned/With-Drawn.** For six (6) months after last action.

**107.6 Affidavits.** Reserved.

## **Section 108 Temporary Structures and Uses**

**108.1 General.** The Building Official is authorized to issue a special building permit for the erection of temporary structures and temporary uses such as seats, canopies, tents, and fences used in construction work or for temporary purposes such as viewing stands. Such permits shall be limited as to time of service but shall not be permitted for more than one hundred eighty (180) days. The Building Official is authorized to grant extensions for demonstrated cause.

**108.2 Conformance.** Temporary structures and uses shall conform to the fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements of this Code and FBC Building Section 3103, as necessary to ensure public health, safety, and general welfare.

**108.3 Temporary power.** The Building Official/Chief Electrical Inspector is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat, or power in Chapter 27 of FBC, Building.

**108.4 Termination of approval.** The Building Official is authorized, for good cause, to terminate such permit for a temporary structure or use and to order the temporary structure or use to be discontinued.

## **Section 109 Fees**

**109.1 Payment of fees.** A permit shall not be valid until the fees prescribed by law have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

**109.2 Schedule of Permit Fees.** On all buildings, structures, electrical, plumbing, mechanical, and gas systems or alterations requiring a permit, a fee for each permit shall be paid as required in accordance with the schedule as established by the applicable governing authority.

**109.3 Building permit valuations.** The applicant for a permit shall provide an estimated permit value at a time of application. Permit valuations, shall include total value of work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment, and permanent systems. If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the Building Official. Final building permit valuation shall be set by the Building Official.

**109.3.1** The Building Official may require an estimate of the cost utilizing RSMMeans, copies of signed contract and/or other descriptive data as a basis for determining the permit fee.

**109.4 Work commencing before permit issuance.** Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits or the Building Official's written approval, shall be subject to a penalty not to exceed one hundred (100) percent of the usual permit fee that shall be in addition to the required permit fees.

**109.5 Related fees.** Reserved.

**109.6 Refunds.** Reserved.

## **Section 110 Inspections**

**110.1 General.** Construction or work for which a permit is required shall be subject to inspection by the Building Official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval of an inspection shall not be construed to be an approval of a violation of the provisions of this Code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this Code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the Building Official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

**110.1.1** The Building Official shall make inspections required by this code or may accept reports in writing and certified by inspectors with recognized qualifications for special inspections.

**110.1.2** No inspection shall be made until sanitary facilities have been provided, as required in Section 311.1 of the FBC Plumbing.

**110.1.3** When the services, reports of inspections, and testing laboratories are required by this Code, only such services and reports shall be accepted as are submitted from impartial inspecting and testing laboratories having an Engineer in active responsible charge.

**110.1.4** Testing laboratories engaged in the sampling and testing of concrete and steel products shall have complied with the Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection ASTM E329-14a.

**110.1.5** Testing laboratories located outside of the State of Florida and under the supervision of an Engineer legally qualified in the State in which the laboratory is located, and where such testing laboratory has complied with the above Standard, may submit test reports as required by this Code.

**110.1.6** All equipment, material, power, coordination for access and labor, necessary for inspection and/or test shall be supplied by the permit holder.

**110.2 Preliminary inspection.** Before issuing a permit, the Building Official is authorized to examine or cause to be examined buildings, structures, and sites for which an application has been filed.

**110.3 Required Inspections.** The Building Official, upon notification from the permit holder or his or her agent, shall make the following inspections performed by Inspectors certified by BORA in the categories involved who shall either release that portion of the work completed or shall notify the permit holder or his or her agent of any violations which shall be corrected in order to comply with the technical codes. The Building Official shall determine the timing and sequencing of when inspections occur and what elements are inspected at each inspection.

### **A. Building.**

1. **Piling:** To be made during the installation of piles by Special Inspector.
2. **Foundation Inspection:** Include piling/pile caps, footer/grade beams, stem-wall, and monolithic slab-on-grade to be made after necessary excavation, form erection, and reinforcing steel placement, prior to pouring of concrete.

- a. In flood hazard areas, upon placement of the lowest floor, including basement, and prior to further vertical construction, the elevation certification shall be submitted to the AHJ.
3. **Floor Slab on Grade and/or Elevated:** To be made after necessary excavations, form erection as may be required, placement of reinforcing steel, mesh, and vapor barrier when specified, and prior to pouring concrete.
4. **Concrete Columns:** To be made after the placement of reinforcing steel and prior to complete erection of forms and pouring of concrete.
5. **Concrete Unit Masonry:** To be made at each successive pour after placement of the reinforcement and prior to the pouring of grout. See Sections 110.10.2.2 and 110.10.5.
6. **Concrete Beams:** To be made after the erection of forms, placement of reinforcing steel, hangers, bracing and shoring and prior to pouring of concrete.
7. **Framing Inspection:** To be made after the installation of all structural elements, including: the roof, furring, fire stops, fireblocking, nailers, anchors, and bracing is in place, chimneys, and prior to the installation of interior cladding, but after inspection of rough in electrical, mechanical and plumbing, which shall be completed prior to request for framing inspection. See mandatory inspections for electrical, mechanical, and plumbing. Framing inspection shall at a minimum include the following building components:
  - a. Window/door framing.
  - b. Vertical cells/columns.
  - c. Lintel/tie beams.
  - d. Framing/trusses/bracing/connectors.
  - e. Draft stopping/fire blocking/fire stopping.
  - f. Curtain wall framing.
  - g. Accessibility.
  - h. Verify rough opening dimensions are within tolerances.
8. **Roof/Floor Trusses:** To be made after the erection of truss members, permanent and temporary bracing, roof sheathing and bottom chord furring members and anchors.
9. **Roof Sheathing:** To be made after placement of panels or planking and sheathing fasteners; prior to application of base or anchor coat of roofing.
10. **Wall/Floor Sheathing:** To be made after placement of panels or planking and sheathing fasteners.
11. **Roofing Inspection:** To be made in accordance with Chapter 15 of the FBC and Chapter 44 of the Florida Residential Code and Section 706 of the FBC Existing Building.
12. **Window and Door Inspection:** Two (2) inspections to be made, one (1) after door and window bucks have been installed, and the second, after window and door assemblies have been installed and before attachments and connections to the building frame are concealed.
13. **Wire Lath:** To be made after installation of all metal lath and accessories prior to application of any coatings.
14. Exterior wall covering. Shall at a minimum include the following building components in-progress inspections:
  - a. Exterior wall covering and veneers
  - b. Soffit coverings.
15. **Energy insulation:** After installation in compliance with type and "R" values stipulated in energy calculations and prior to installation of rock lath and drywall.
16. **Rock Lath:** To be made after installation of all rock lath, corner beads, strip reinforcement and nailers for molding and trim and prior to application of plaster basecoat.

17. **Drywall:** To be made after installation of drywall panels and prior to taping and spackling.
18. **Curtain Wall Inspection:** To be made at each floor level after curtain walls are installed and before curtain wall attachments are concealed.
19. **Storefront Inspection:** To be made after storefronts are installed and before store front attachments are concealed.
20. **Concealed Work:** The Building Official or his or her duly authorized representative may order portions of the structural frame of a building and/or structure to be exposed for inspection when, in his or her opinion, there is a good reason to believe that a building or portion thereof is in an unsafe or dangerous condition or that there is willful or negligent concealment of a violation of this Code.
21. **Hurricane Shutters:** To be made before the attachments and connections to the building are concealed and when job is completed. All shutters shall be installed for final inspection. On occupied buildings, all required means of egress and emergency exits shall be left uncovered.
22. **Photovoltaic:**
  - a. Rough.
    1. Check specifications, model numbers and lay out.
    2. Check attachments, penetrations on roof, torque requirements.
  - b. Final.
23. **Final Inspection:** To be made after installation and completion of all elements of construction, safeguards, and protective devices, and after final electrical, mechanical, and plumbing. Approval of Fire Department accessibility and all tests of fire alarm detection and suppression systems, smoke evacuation systems and life safety systems shall be approved prior to final inspection and issuance of Certificate of Occupancy.
  - a. In flood hazard areas, as part of the final inspection, a final certification of the lowest floor elevation shall be submitted to the authority having jurisdiction.
24. **Certificate of Occupancy:** This final inspection shall signify the completion of all work and that the structure is safe for Occupancy. Final adjustments to mechanical devices may be made after this inspection and during Occupancy.
25. **Fence:** Final.
26. **Swimming Pools/Spas Inspection:** First inspections to be made after excavation and installation of reinforcing steel, bonding, and main drain and prior to placing of concrete, gunite or shotcrete. Second inspection(s) of perimeter plumbing, pressure test, deck electrical perimeter bonding and deck structural (includes soil reports as applicable, paver type decks, special perimeter footings or deck features) is (are) to follow after the completion of each phase. Child barrier (exit) alarms (if applicable), and yard barriers that are part of the fourth wall protection as described in FBC Building Section 454.2.17, shall be completed and approved inspection prior to the swimming pool/spa being filled with water. Final zoning (if applicable) is to be completed prior to the swimming pool/spa being completed. Electrical final is to be completed prior to the swimming pool/spa being filled with water. Final structural and plumbing are to be completed after the swimming pool/spa is filled with water and the filtration system is in operation.
  - a. **Structural inspections:**
    - (1) Steel.
    - (2) Deck (includes soil reports as applicable, paver type decks, special perimeter footings or deck features).

- (3) Child barrier fences (if applicable) and yard barriers that are part of the fourth wall protection prior to the swimming pool/spa being filled with water.
- (4) Final structural (after filling of the swimming pool/spa with water and the filtration system is in operation).

**B. Electrical.**

1. **General:** All Underground, Slab, low voltage and Rough Electrical Installations shall be left uncovered and convenient for examination until Inspected and approved by the Electrical Inspector.
2. **Temporary Electrical Service Installations:**
  - a. Rough.
  - b. Final.
3. **Underground Electrical Inspection:** To be made after trenches or ditches are excavated, underground conduits or cables installed, and before any backfill is put in place.
4. **Slab Electrical Inspection:** To be made and after conduits and boxes are installed, and prior to pouring concrete.
  - a. Grounding Electrode Conductor to Foundation Steel.
5. **Rough Electrical Inspection:** To be made after the roof, framing, fire blocking bracing are in place, and the building is deemed dry, and conduits, cables, panels, receptacles, etc. are installed, and prior to the installation of wall or ceiling membranes.
6. **Electrical Service Inspection:**
  - a. Electrical rough.
  - b. Electrical Final Inspection.
7. **Miscellaneous Electrical Inspection.**
8. **Swimming Pool/Spa Electrical Inspection:**
  - a. Steel Bonding.
  - b. Underground.
  - c. Deck perimeter bonding.
  - d. Electrical rough
  - e. Final electrical prior to the swimming pool/spa being filled with water.
  - f. Existing Swimming Pools. To be made after all repairs or alterations are complete, all required electrical equipment, GFCI protection, and equipotential bonding are in place on said alterations or repairs.
9. **Temporary Electrical 30-Day Power for Testing.**
10. **Photovoltaic:**
  - a. Rough. Before modules are installed.
    1. Check specifications, model numbers and lay out.
    2. All wiring for junction boxes, combiner, and inverter completed.
    3. Grounding system completed, torque requirements.
  - b. Final. Module must be available for inspection.
    1. Verify proper labeling.

2. Test system.

c. Service change if required by design.

11. **Final Inspection:** To be made after the building is complete, all electrical fixtures are in place and properly connected, or protected, and the structure is ready for occupancy and deemed safe for power by the Building Official.

Final Electrical Inspection shall be made prior to Final Structural Inspection.

C. **Gas.**

1. **General:** To be made for all underground work, and at each floor and roof level where gas work is installed. All gas work shall be left uncovered and convenient for examination until inspected and approved by the Plumbing Inspector.
2. **Underground inspection:** To be made after trenches or ditches are excavated, piping installed, and before any backfill is put in place.
3. **Rough piping inspection:** To be made after all new piping authorized by the permit has been installed, and before any such piping has been covered or concealed or any fixtures or gas appliances have been connected. This inspection shall include a pressure test.
4. **Final Gas inspection:** To be made on all new gas work authorized by the permit and such portions of existing systems as may be affected by new work or any changes, to ensure compliance with all the requirements of this Code and to assure that the installation and construction of the gas system is in accordance with reviewed plans.

Final Gas Inspection shall be made prior to Final Structural Inspection.

D. **Mechanical.**

1. **General:** To be made for all underground work, and at each floor and roof level where mechanical work is installed. All mechanical work shall be left uncovered and convenient for examination until inspected and approved by the Mechanical Inspector.
2. **Underground inspection:** To be made after trenches or ditches are excavated, underground duct and all piping installed, and before any backfill is put in place.
3. **Rough-in inspection:** To be made after the roof, framing, fire blocking and bracing are in place and all ducting, and other concealed components are complete, and prior to the installation of wall or ceiling membranes.
4. **Final Mechanical inspection:** To be made after the building is complete, the mechanical system is in place and properly connected, and the structure is ready for occupancy.

Final Mechanical Inspection shall be made prior to Final Structural Inspection.

E. **Plumbing.**

1. **General:** To be made for all underground work, and at each floor and roof level where plumbing work is installed. All plumbing work shall be left uncovered and convenient for examination until inspected and approved by the Plumbing Inspector.
2. **Underground inspection:** To be made after trenches or ditches are excavated, piping installed, and before any backfill is put in place.
3. **Rough-in inspection:** To be made after the roof, framing, fire-blocking and bracing is in place and all soil, waste and vent piping is complete, and prior to this installation of wall or ceiling membranes. Floors shall be left open in all bathrooms and elsewhere above all sanitary plumbing, and water-supply piping and other plumbing work until it shall have been examined, tested, and approved.
4. **Swimming Pool/Spa Plumbing Installations:**

- a. Main drain(s).
  - b. Perimeter plumbing, pressure test and water features.
  - c. Final plumbing (after filling of swimming pool/spa with water and the filtration system is in operation).
5. **Final Plumbing inspection:** To be made after the building is complete, all plumbing fixtures are in place and properly connected, and the structure is ready for occupancy. Water shock or hammer in the water supply system will be cause to fail the final inspection.

**Note:** See Section 312 of the FBC, Plumbing for required tests.

Final Plumbing Inspection shall be made prior to Final Structural Inspection.

- F. **Demolition Inspections.** First inspection to be made after all utility connections have been disconnected and secured in such manner that no unsafe or unsanitary conditions shall exist during or after demolition operations.

Final inspection to be made after all demolition work is completed.

- G. **Manufactured building inspections.** The Building Department shall inspect construction of foundations; connecting buildings to foundations; installation of parts identified on plans as site installed items, joining the modules, including utility crossovers; utility connections from the building to utility lines on site; and any other work done on site which requires compliance with the FBC. Additional inspections may be required for public educational facilities (see Section 453.27.20 of FBC Building).

**110.3.1 Footing and foundation inspection.** See 110.3.A, Building, of this Code.

**110.3.2 Concrete slab and under floor inspection.** See 110.3.A, Building, of this Code.

**110.3.3 Lowest floor elevation.** Reserved

**110.3.4 Reinforcing steel and structural frames.** No reinforcing steel or structural framework of any part of any building or structure shall be covered or concealed in any manner whatsoever without the approval of the Building Official. It shall be unlawful for any person, firm or corporation, or their agents or employees, to cover or conceal any wiring for light, heat, power or low voltage systems until the appropriate Sections of the building permit card and/or inspection record are signed, signifying that the wiring has been inspected and approved.

**110.3.5 Lath and gypsum board inspection.** Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum boards joints and fasteners are taped and finished.

**Exception.** Reserved.

**110.3.5.1 Weather exposed balcony and walking surfaces waterproofing.** Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, or irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious moisture barrier system shall not be concealed until inspected and approved.

**110.3.6 Fire- and smoke-resistant penetrations.** Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

**110.3.7 Energy efficiency inspections.** Inspections shall be made to determine compliance with FBC Energy Conservation (FBC EC) and shall include, but not be limited to, inspections for: envelope insulation R- and U-values, fenestration U-value, duct system R-value, and HVAC and water heating equipment efficiency per C104.2 and R104.2 of the FBC EC as described in 110.3.7.1 and 110.3.7.2.

#### 110.3.7.1 Rough inspections:

**1) Footing and foundation inspection.** Inspections associated with footings and foundations shall verify compliance with the code as to R-value, location, thickness, depth of burial and protection of insulation as required by the code and approved plans and specifications.

**2) Framing and rough-in inspection.** Inspections at framing and rough-in shall be made before application of interior finish and shall verify compliance with the code as to types of insulation and corresponding R-values and their correct location and proper installation; fenestration properties (U-factor, SHGC and VT) and proper installation; and air leakage controls as required by the code and approved plans and specifications.

**3) Plumbing rough-in inspection.** Inspections at plumbing rough-in shall verify compliance as required by the code and approved plans and specifications as to types of insulation and corresponding R-values and protection; required controls; and required heat traps.

#### **4) Mechanical rough-in inspection.**

a) **Commercial.** Inspections at mechanical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed HVAC equipment type and size; required controls, system insulation and corresponding R-value; system and damper air leakage; and required energy recovery and economizers.

b) **Residential.** Inspections at mechanical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed HVAC equipment type and size, required controls, system insulation and corresponding R-value, system air leakage control, programmable thermostats, dampers, whole-house ventilation, and minimum fan efficiency.

Exception: Systems serving multiple dwelling units shall be inspected in accordance with Florida Energy Conservation Code for commercial buildings.

**5) Electrical rough-in inspection.** Inspections at electrical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed lighting systems, components and controls, and installation of an electric meter for each dwelling unit.

#### 110.3.7.2 Final inspection.

- 1. Commercial.** The building shall have a final inspection and shall not be occupied until approved. The final inspection shall include verification of the installation and proper operation of all required building controls, and documentation verifying activities associated with required building commissioning have been conducted and findings of noncompliance corrected. Buildings, or portions thereof, shall not be considered for a final inspection until the code official has received a letter of transmittal from the building owner acknowledging that the building owner has received the Preliminary Commissioning Report as required in The Florida Energy Conservation Code.
- 2. Residential.** The building shall have a final inspection and shall not be occupied until approved. The final inspection shall include verification of the installation of all required building systems, equipment and controls and their proper operation and the required number of high-efficacy lamps and fixtures.



**110.3.8 Other Inspections.** In addition to the inspections previously specified, the Building Official is authorized to make or require other inspections of any construction work to ascertain compliance with the provision of this Code and other applicable laws.

**110.3.9 Special inspections.** See Section 110.10 of this Code.

**110.3.10 Final Inspection.** See Section 110.3 of this Code.

**110.3.10.1 Flood hazard documentation.** Reserved

**110.3.11 Termites.** Building components and building surroundings required to be protected from termite damage in accordance with Section 1503.7, Section 2304.12 or Section 2304.12.4, specifically required to be inspected for termites in accordance with Section 2114, or required to have chemical soil treatment in accordance with Section 1816 shall not be covered or concealed until the release from the Building Official has been received. (Refer to Section 105.10, Certificate of Protective Treatment for prevention of termites and Section 105.11, Notice of termite protection.)

**110.3.12 Impact-resistant coverings inspections.** Where impact-resistant coverings or impact resistant systems are installed the Building Official shall schedule adequate inspections of impact-resistant coverings or impact resistant systems to determine the following:

1. The system indicated on the plans was installed.
2. The system is installed in accordance with the manufacturer's installation instructions and the product approval.

**110.4 Inspection agencies.** Reserved

**110.5 Inspection requests.** It shall be the duty of the permit holder ~~of the building permit~~ or their duly authorized agent to notify the Building Official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code. Failure to request such inspections constitutes a violation of this Code. The inspection request shall be made to the Building Department office at least one (1) day prior to the required inspection and shall provide reasonable time for such inspections to be made. Inspections shall be made not later than the following workday after the day of the request for inspection when a request is made prior to 12:00 noon. Requests for inspections received after 12:00 noon, shall be made not later than the day after the following workday.

**110.6 Approval required.** No work shall be done on any part of a building or structure or any electrical, mechanical or plumbing installation beyond the point indicated herein above for each successive inspection until such inspection has been made and the work approved and the Inspector has so indicated on the permit card or an inspection record pad at the job site, or other electronic means which has been approved by the Building Official.

**110.7 Shoring.** For threshold buildings, shoring and associated formwork or false work shall be designed and inspected by an Engineer, employed by the permit holder or subcontractor, prior to any required mandatory inspections by the threshold building inspector.

**110.8 Threshold Buildings.** For structures defined in Section 553.71, Florida Statutes, as "Threshold Buildings," permitting and inspection shall be as required by Section 553.79, Florida Statutes.

**110.8.1** During new construction or during repair or restoration projects in which the structural system or structural loading of a building is being modified, the enforcing agency shall require a special inspector to perform structural inspections on a threshold building pursuant to a structural inspection plan prepared by the Engineer or Architect of record. The structural inspection plan must be submitted to the enforcing agency prior to the issuance of a building permit for the construction of a threshold building. The purpose of the structural inspection plans is to provide specific inspection procedures and schedules so that the building can be adequately inspected for compliance with the permitted documents. The special inspector may not serve as a surrogate in carrying out the responsibilities of

the Building Official, the Architect, or the Engineer of record. The contractor's contractual or statutory obligations are not relieved by any action of the special inspector.

**110.8.2** The special inspector shall determine that an Engineer who specializes in shoring design has inspected the shoring and reshoring for conformance with the shoring and reshoring plans submitted to the enforcing agency.

**110.8.3** A fee simple title owner of a building, which does not meet the minimum size, height, occupancy, occupancy classification or number-of-stories criteria which would result in classification as a threshold building under Section 553.71(12), may designate such building as a threshold building, subject to more than the minimum number of inspections required by the FBC.

**110.8.4** The fee owner of a threshold building shall select and pay all costs of employing a special inspector, but the special inspector shall be responsible to the enforcement agency. The inspector shall be a person certified, licensed, or registered under Chapter 471, Florida Statutes, as an Engineer or under Chapter 481, Florida Statutes, as an Architect.

**110.8.5** Each enforcement agency shall require that, on every threshold building:

**110.8.5.1** The special inspector, upon completion of the building and prior to the issuance of a certificate of occupancy, file a signed and sealed statement with the enforcement agency in substantially the following form: "To the best of my knowledge and belief, the above described construction of all structural load-bearing components complies with the permitted documents, and the shoring and reshoring conforms to the shoring and reshoring plans submitted to the enforcement agency."

**110.8.5.2** Any proposal to install an alternate structural product or system to which building codes apply be submitted to the enforcement agency for review for compliance with the codes and made part of the enforcement agency's recorded set of permit documents.

**110.8.5.3** All shoring and reshoring procedures, plans and details be submitted to the enforcement agency for recordkeeping. Each shoring and reshoring installation shall be supervised, inspected, and certified to be in compliance with the shoring documents by the contractor.

**110.8.5.4** All plans for the building which are required to be signed and sealed by the Architect or Engineer of record contain a statement that, to the best of the Architect's or Engineer's knowledge, the plans and specifications comply with the applicable minimum building codes and the applicable fire-safety standards as determined by the local authority in accordance with this section and Chapter 633, Florida Statutes.

**110.8.5.5** No enforcing agency may issue a building permit for construction of any threshold building except to a licensed general contractor, as defined in Section 489.105(3)(a), Florida Statutes, or to a licensed building contractor, as defined in Section 489.105(3)(b), Florida Statutes, within the scope of her or his license. The named contractor to whom the building permit is issued shall have the responsibility for supervision, direction, management, and control of the construction activities on the project for which the building permit was issued.

**110.8.5.6** The building department may allow a special inspector to conduct the minimum structural inspection of threshold buildings required by this Code, Section 553.73, Florida Statutes, without duplicative inspection by the building department. The Building Official is responsible for ensuring that any person conducting inspections is qualified as a building inspector under Part XII of Chapter 468, Florida Statutes, or certified as a special inspector under Chapter 471 or 481, Florida Statutes. Inspections of threshold buildings required by Section 553.79(5), Florida Statutes, are in addition to the minimum inspections required by this Code.

**110.8.5.7** Construction inspected by the Building Department may be rejected or approval refused for reasons of incompleteness or code violation. The work shall be made to comply and the request for inspection repeated as outlined herein. It shall be assumed that the responsible individual or individuals in charge of the work shall have themselves inspected the work and found it to be in compliance with this Code and plans requirements before the request for inspection is made. It is the responsibility of the permit holder to ensure that the job is accessible and means for inspections of such work that are required by this Code for all requested inspections. Failure to provide for this access shall constitute a violation of this Code.

**110.9** The Inspector shall inspect all work for which a request for inspection is made and shall, after inspection, either approve by signing the appropriate sections of the building permit card or inspection record, or other electronic means which has been approved by the Building Official, or disapprove the work and notify the permit holder of the discrepancies found and order corrections within a reasonable period of time. Violations and/or correction notices shall be written and posted at the job site stating the specific reference to the Code Section(s) that have been violated. Any person, firm or corporation who fails to correct defective work within ten (10) days after having been duly notified of such defects shall not be issued any further permits by the Building Department. Permits will resume after the defects have been corrected, inspected, and approved or upon the filing of an appeal with BORA.

#### **110.10 Special Building Inspector.**

**110.10.1** The Building Official upon the recommendation of the Chief Structural Inspector or upon the Building Official's initiative may require the owner to employ a special inspector for the inspection of the structural framework, or any part thereof, as herein required:

**110.10.1.1** Buildings or structures or part thereof of unusual size, height, design or method of construction and critical structural connections.

1. Placement of Piling.
2. Windows, glass doors, external protection devices and curtain walls on buildings over two (2) stories.
3. The method or pace of construction requires continuous inspection.
4. In the opinion of the Building Official, any other additional inspections that are required.

**110.10.2** The Building Official shall require the owner to employ a special building inspector for the inspections herein required:

**110.10.2.1** Precast Concrete Units.

**110.10.2.2** Reinforced unit masonry.

**110.10.2.3** Connections.

**110.10.2.4** Metal Building Systems.

**110.10.2.5** Smoke Control Systems.

**110.10.3** The person employed by the owner as a Special Building Inspector shall be subject to verification of qualifications by the Chief Structural Inspector or Chief Mechanical Inspector, as applicable.

**110.10.4** The Chief Structural Inspector or Chief Mechanical Inspector, as applicable shall require that the Architect or Engineer of record submit an inspection plan which shall specify the scope and nature of inspections to be performed. The special building inspector or their authorized representative shall make all inspections in accordance with the approved inspection plan.

**110.10.5** Special building inspector shall be an Architect or Engineer or their duly authorized representative.

**Exception 1:** Building Inspectors (structural) certified by BORA who have satisfactorily completed an approved masonry course may perform inspections of Reinforced Unit Masonry and any precast lintels incorporated into such masonry for Group R-3 Occupancy.

**Exception 2:** Special building inspector for Smoke control systems shall meet the qualifications required in FBC 909.18.8.2.

**110.10.6** The special building inspector shall be responsible for compliance with the applicable portions of the permitted construction documents as delineated in the special building inspection plan and shall submit progress reports and inspection reports to the Chief Structural Inspector or Chief Mechanical Inspector, as applicable, for submittal to the Building Official. Structural inspections performed by the special building inspector shall satisfy the requirements for mandatory inspections by the FBC.

**110.10.6.1** A log of all progress reports and inspection reports shall be maintained at the job site.

**110.10.6.2** Signed and Sealed progress reports and inspection reports shall be submitted to the Chief Structural Inspector, or Chief Mechanical Inspector, as applicable, for submittal to the Building Official on a weekly basis.

**Exception:** The Chief Mechanical Inspector, and or Building Official shall determine the frequency for the submitting of progress reports for Smoke Control Systems.

**110.10.6.3** The municipality shall monitor the progress of the special building inspector on a regular basis.

**110.10.7** At the completion of the work, the special building inspector shall submit a signed and sealed Certificate of Compliance to the Chief Structural Inspector or Chief Mechanical Inspector, as applicable for submittal to the Building Official, stating that the work was done, substantially in accordance with the applicable portions of the permitted construction documents as delineated in the special building inspection plan.

**Exception:** Reports for Smoke Control Systems shall comply with FBC 909.18.8.3 Reports, and FBC 909.18.8.3.1 Report filing.

**110.11 Official Reports.** The Building Official shall keep records of inspections, Certificates of Compliance, results of tests, plans, specifications, surveys, and Certificates of Occupancy for a period of not less than what is required in Section 107.5. Such records shall become a part of the public records and open to public inspection, except as may be elsewhere specifically stipulated.

**110.12 Clean-up of Construction Site.** Upon completion of the proposed work, the permit holder shall leave the construction site cleared of rubbish, debris, construction sheds or materials of construction. In the event there has been damage to public property or that rubbish, debris, construction sheds or materials of construction have been left at the construction site, then the Building Official shall refuse to make final inspection and shall notify the permit holder to correct the condition of violation with five (5) days. For failure to comply with such notice after such period of five (5) days, the permit holder is subject to the penalties specified herein, and the Building Official shall have the clean-up work done and public property restored and shall notify the legal authority, who shall institute the necessary action to have the costs placed as a lien against the property in relation to which the permit was issued.

**110.13 Special Hurricane Provisions.** During such periods of time as are designated by the National Weather Service as being a hurricane watch, all furniture, display racks, material and similar loose objects in exposed outdoor locations, shall be lashed to rigid construction or stored in buildings. The Building Official shall issue orders to secure all construction sites. Orders shall be oral or written and shall be given to any

person on the premises most logically responsible for maintenance or by facsimile to the responsible entity if such entity is known.

**110.13.1** Any person, firm or corporation receiving an order from the Building Official to comply with this section shall comply with said order within the time specified on the order.

**110.13.2 Construction Waste and Construction Materials.**

**110.13.2.1** It shall be the joint responsibility of any owner of real property upon which construction is occurring, and any contractor responsible for said construction, to ensure that all road rights-of-way remain free at all times of all construction waste and trash resulting from such construction, and that all waste and trash resulting from the construction are contained on the real property upon which the construction occurs. After a hurricane watch or warning has been suspended, the City's Building Official shall give said owner or contractor reasonable time to clear the road rights-of-way of construction waste and trash.

**110.13.2.2** Notices issued by the National Weather Service of a hurricane watch are deemed sufficient notice to the owner of real property upon which construction is occurring, or any contractor responsible for said construction, to secure loose construction debris and loose construction materials against the effects of hurricane force winds.

**110.13.2.3** Pursuant to this section, it shall be a violation of this Code for an owner of the real property upon which construction is occurring, or any contractor responsible for said construction, to have on that property loose construction materials that are not fastened or secured to the ground or any permanent structure. Materials stockpiled on top of any structure under construction shall be permanently installed by the property owner or contractor upon a hurricane watch; provided, however, in the event such installation cannot be timely completed, then the property owner or contractor shall:

1. Band together the construction materials and fasten them to the top of the structure in such a manner so as not to present a threat of their becoming airborne during severe weather; or
2. Remove the construction materials from the top of the structure and fasten down to the ground; or
3. Remove the construction materials from the job site; or
4. Store the construction materials inside an enclosed structure.

**110.13.3** From June 1 to November 30 of each calendar year (the National Weather Service designated hurricane season), building materials shall be loaded on a roof no earlier than twenty (20) working days prior to the permanent installation of those materials.

**110.13.4** After winds of hurricane velocity are experienced and have subsided, the Building Official shall investigate to determine if damage has occurred to buildings or other structures.

**110.13.5** No building or other structure or assembly or part thereof, which was damaged or collapsed; out of plumb or line shall be repaired or altered, or otherwise returned to its original position, without inspection and approval by the Building Official.

**110.13.6** Physical damage occurring to meter troughs, risers and masts, weather-heads and associated electrical equipment on the exterior portion of residential structures shall be repaired by a qualified electrical contractor. Upon completion of said repairs:

**110.13.6.1** Contractor shall tag the completed work with appropriate identification including Customer Name, Customer Address, brief description of repair, Contractor Name, Contractor License Number and Contractor phone number for Florida Power & Light Company (FPL) and inspecting authorities. Tag and text shall be durable and weather resistant.

**110.13.6.2** FPL may, upon acknowledging the tag, reconnect the electrical service without inspection by the inspecting authorities. FPL shall take due care to ensure safety before energizing the service.

**110.13.6.3** Contractor shall obtain permits after the fact within thirty days of the occurrence.

**110.13.6.4** Florida Power & Light Co. shall record and submit to individual inspecting authorities a list of electrical service reconnections and locations within thirty (30) days after the emergency or crisis conditions have subsided.

**110.13.7 Storm Shutter Placement during Hurricane Season.** After the termination of such periods of time that had been designated by the National Weather Service as being a hurricane watch or warning, hurricane protective devices installed on occupied buildings which impede required egress or required light and ventilation shall be removed within fifteen (15) days.

**110.14 Period of declared disaster.** During periods of a state of emergency or disaster as declared by the Governor, building owners and/or their designated representatives may institute temporary repairs to their property, in order to restore the impermeability to the building envelope and/or perform any service required to make the structure safe, secure and minimize further damage. Such repairs shall be temporary in nature and may be undertaken without repair permits and inspections by the local building department, as long as the damaged building components and their respective attachments are not permanently concealed. Prior to the permanent repair/reconstruction being commenced, a permit shall be obtained per Section 105, or a demolition permit shall be obtained by a licensed Demolition Contractor pursuant to Section 105.18 of this Code. All work performed prior to obtaining a permit shall comply with the FBC or shall be replaced by permitted work. In order to comply with the FBC, and with the approval of the Building Official, the property owner may retain the services of a Special Building Inspector as described in, complying with all the requirements of Section 110.10.

**110.14.1 Inspection requests.** During periods of emergency or disaster as declared by the Governor, the time frame for performing requested inspections can be extended by the Building Official as personnel availability allows.

**110.14.2 Approval required.** During periods of emergency or disaster as declared by the Governor, inspections performed via electronic or photographic media can be acceptable, on a case by case basis as determined by the Building Official.

**110.14.3 Inspection records.** During periods of emergency or disaster as declared by the Governor, electronic records of inspection results can be acceptable, on a case by case basis as determined by the Building Official.

**110.14.4 Special inspections.** During the emergency or disaster period, as declared by the Governor, the Building Official may accept special inspection reports as outlined in Section 110.11, Special Inspector, for structural, electrical, mechanical, and plumbing inspections portions, including performed by qualified Engineers or Architects for electrical, mechanical and plumbing inspections. During periods of emergency or disaster as declared by the Governor, inspections performed via electronic or photographic media can be acceptable, on a case by case basis as determined by the Building Official.

**110.14.5 Reroofing Inspections.** During the emergency or disaster period, as declared by the Governor, the Building Official may at his or her option allow an Architect or an Engineer, or their duly authorized representative to perform required re-roofing inspections. The Architect or Engineer shall submit sealed inspection reports to the Building Official. During periods of emergency or disaster as declared by the Governor, inspections performed via electronic or photographic media can be acceptable, on a case by case base as determined by the Building Official.

**110.14.6 Damage assessments.** When conducting emergency damage assessments, the Building Official shall complete the Broward County Emergency Management Division Unsafe Structures Reporting Form. The reports can be faxed, emailed, or if necessary, telephoned in to the numbers prescribed on the form within forty-eight (48) hours of a building being posted as unsafe and a secondary report shall be submitted when the building is deemed safe, also within forty-eight (48) hours. The reporting form will be approved by both the Emergency Management Division and BORA.

**110.14.7** The protocol for Sections 110.14.1 through 110.14.6 applies during a state of emergency or disaster as declared by the Governor of the state of Florida.

**110.14.8** Inspections and records of inspections required by Section 110.3 and as set forth in Sections 110.6, 110.9, and 110.14.2 through 110.14.4 can be acceptable, on a case by case base as determined by the Building Official.

**110.14.7 Suspension of Certification Requirements.** See section 113.11.7.

**110.15 Building Safety Inspection Program.** BORA has established a building safety inspection program for buildings and structures that have been in existence for a period of 40 years or longer. BORA by written policy shall establish the guidelines and criteria which will be the minimum requirements for the Building Safety Inspection Program. The Building Official shall enforce the building safety inspection Program. U. S. Government buildings, State of Florida buildings, buildings built on Indian Reservations, Schools buildings under the jurisdiction of the Broward County School Board, One- and Two-Family Dwellings, and minor structures defined as buildings or structures in any occupancy group having a gross floor area less than three thousand five hundred (3,500) square feet; are exempt from this program.

In order to implement the new Building Safety Inspection Program in an orderly manner to clear a backlog of buildings needing inspection, implementation shall proceed as follows:

1. 40 year or older buildings of eleven thousand (11,000) square feet or more - compliance in calendar year 2006.
2. 40 year or older buildings seven thousand (7,000) square feet or more - compliance no later than calendar year 2007.
3. 40 year or older building five thousand five hundred (5,500) square feet or more - compliance no later than calendar year 2008.
4. 40 year or older buildings four thousand six hundred fifty (4,650) square feet or more - compliance no later than calendar year 2009.
5. 40 year or older buildings three thousand eight hundred (3,800) square feet or more - compliance no later than calendar year 2010.
6. 40 year or older buildings three thousand five hundred (3,500) square feet or more - compliance no later than calendar year 2011.

Subsequent building inspections shall be required at ten (10) year intervals, Section 110.15 Effective January 1, 2006, regardless of when the inspection report for same is finalized or filed. Any buildings or structures not otherwise excluded as set forth herein shall be inspected at the same time as the initial 40-year inspection of the building and shall be re-inspected in accordance with the schedule for the building.

## **Section 111 Certificates of Occupancy and Completion**

### **111.1 Certificate of Occupancy.**

**111.1.1 Use and Occupancy.** No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or nature or use or portion thereof shall be made until the Building Official has issued a Certificate of Occupancy therefor as provided herein. Said certificate shall not be issued until all requirements of the FBC, and the FFPC have been

inspected for compliance with the technical codes and other applicable laws and ordinances and released by the Building Official. Issuance of a Certificate of Occupancy shall not be construed as an approval of a violation of the provisions of this Code or of other ordinances of the jurisdiction.

**Exception:** Certificates of occupancy are not required for work exempt from permits under Section 105.2.

**111.2 Certificate Issued.** After the Building Official or duly authorized representative, inspects the building or structure and does not find violations of the provisions of this Code or other laws that are enforced by the AHJ, the Building Official shall issue a Certificate of Occupancy that contains the following:

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this Code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. For buildings and structures in flood hazard areas, a statement that documentation of the as-built lowest floor elevation has been provided and is retained in the records of the authority having jurisdiction.
7. The name of the Building Official.
8. The edition of the code under which the permit was issued.
9. The use and occupancy, in accordance with the provisions of FBC Building Chapter 3.
10. The type of construction as defined in FBC Building Chapter 6.
11. The design occupant load and the number of persons for each floor, and the allowable load live or dead per square foot for each floor in accordance with the provisions of this Code.
12. If an automatic sprinkler system is provided, whether the sprinkler system is required.
13. Any special stipulations and conditions of the building permit.

**111.3 Temporary/Partial Certificate of Occupancy.**

**111.3.1** The Building Official is authorized to issue a Temporary Certificate of Occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely providing the building to be occupied has, to the satisfaction of the Building Official, met all the code provisions related to sanitary facilities, electric service, means of egress, fire resistive separation, structural adequacy, and life safety requirements as found in the FBC, Fire Protection Provisions of this Code and FFPC for the use of a building. The Building Official shall set a time period during which the temporary certificate of occupancy is valid.

**111.3.2 Partial Certificate of Occupancy.** A Partial Certificate of Occupancy may be issued by the Building Official for portions of a building providing such portions comply with the requirements for a Certificate of Occupancy, and the portions of the building are isolated from the portions in which construction activities are continuous. Areas not included in the Partial Certificate of Occupancy shall not be occupied until such areas are completed satisfactorily for an issuance of a Certificate of Occupancy. Each area shall not be occupied until inspected and approved and additional Partial Certificates of Occupancy are issued. The final Certificate of Occupancy shall not be issued for the entire building until the requirements of Section 111.1 are complied with.

**111.4 Revocation.** The Building Official is authorized to serve a notice of the suspension or revocation of the certificate of occupancy or completion, issued under the provisions of this Code, in writing, on the person



or persons using or causing the use of a building or structure, wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance, regulation, any of the provisions of this Code or Fire Protection Provisions of this Code and FFPC. After the receipt of such notice or order, the building or portion thereof shall be brought into compliance with this Code within a reasonable time, as determined by the Building Official.

**111.5 Certificate of Completion.** A certificate of completion is proof that a structure or system is complete and for certain types of permits is released for use and may be connected to a utility system. This certificate does not grant authority to occupy or connect a building, such as a shell building, prior to the issuance of a Certificate of Occupancy.

## **Section 112 Service Utilities**

**112.1 Connection of service utilities.** A person shall not make connections from a utility source of energy, fuel or power to any building or system that is regulated by this Code and for which a permit is required, until a Certificate of Occupancy, or Completion is issued, or released by the Building Official or his/her duly authorized discipline Chief.

**Exception:** Temporary connections per Section 112.2.

**112.2 Temporary connection.** The Building Official or his/her duly authorized discipline Chief may authorize the temporary connection of the building or system to the utility source of energy, fuel or power for the purpose of testing building service systems or for use under a Temporary Certificate of Occupancy.

**112.2.1 Energizing Systems.** It shall be unlawful for any person, firm or corporation to energize any wiring system or portion thereof until the electrical work has been inspected and approved and the responsible person, firm or corporation is authorized by the appropriate governmental jurisdiction to energize the system.

**112.3 Authority to disconnect service utilities.** The Building Official or his/her duly authorized discipline Chief or Fire Chief, shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by the reference codes and standards set forth in Section 101.4 in case of emergency where necessary to eliminate an immediate hazard to life or property or where such utility connections have been made without the approval required by Section 112.1 or 112.2. The Building Official or Chief Electrical Inspector shall notify the serving utility, and whenever possible the owner and occupant of the building, structure, or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

**112.4 Sewer connections.** No person shall make any connection to a public or private sewer, or appurtenance thereof, without the authorization of the Building Official or Chief Plumbing Inspector.

## **Section 113 Board of Rules and Appeals.**

**113.1 General.** In order to determine the suitability of alternate materials and types of construction to provide for reasonable interpretation of the provisions of this Code and to assist in the control of the construction of buildings and structures, there is hereby created BORA, appointed by the appointing authority, consisting of thirteen (13) members and nine (9) alternates who are qualified by training and experience to pass on matters pertaining to building construction.

**113.1.1 Secretary to the Board (Administrative Director) and employees.** BORA is authorized to hire a full-time secretary. Office space, office equipment and such other material, equipment and

services required to operate such office shall be furnished by the Broward County Commissioners. The Board may hire other personnel as they are deemed necessary by said Board with permission from the Broward County Commissioners. All moneys collected by the Board as fees shall be retained by the Broward County Commission to offset operating costs of such office.

**113.2 Staff.** BORA shall maintain a staff to coordinate the enforcement of this Code and FFPC and shall be called the Code Compliance Department. The Department shall consist of the Administrative Director, and Chief Code Compliance Officers (Electrical, Fire Prevention, Mechanical, Plumbing, Energy Conservation, and Structural). Chief Code Compliance Officers shall be certifiable as Chiefs, in their respective disciplines, and the Chief Fire Prevention Code Compliance Officer shall be certifiable as Fire Marshal/Fire Code Official. The Chief Code Compliance Officers shall have the authority to make inspections in their disciplines and shall be responsible to see that this Code is being uniformly enforced by all Building and Fire Departments in all cities and the unincorporated areas in Broward County. The Code Compliance staff shall work directly under the Administrative Director, who will be directed by the full BORA.

### **113.3 Membership.**

#### **113.3.1 The Membership of BORA is as stated in the current County Charter.**

**113.3.1.1** A quorum of the Board of Rules and Appeals shall consist of a majority of the total membership of the Board of Rules and Appeals, and a majority vote of those members voting on a measure shall be necessary for the Board of Rules and Appeals affirmative action. With a total membership of 13 members, quorum is 7.

**113.3.1.2** All appointments shall be for a term of three (3) years. All members and alternates shall continue in office until their successors are duly appointed.

**113.3.1.3** The Board shall adopt rules of procedure to seat alternates in the event all board members are not present for a scheduled meeting of the Board.

**113.4** The Broward County Commission or Broward County League of Cities, whichever is the appointing authority, may remove, either by its own action or upon recommendation of the majority of BORA, any members or alternate for misconduct, incompetence, or neglect of duty. However, any member or alternate so removed may, within ten (10) days, request a public hearing before the public body who attempts to remove the member or alternate, and the member or alternate shall receive such hearing before such removal shall be final.

**113.5** Any vacancies occurring on BORA shall be filled for the remainder of the former member's or alternate's term of office by appointment of the Broward County Commission when the former member or alternate was an appointee of the Commission, or by the Broward League of Cities when the former member or alternate was an appointee of the League.

**113.6** It shall be the function of BORA, created by this Charter, to exercise the powers, duties, responsibilities, and obligations as set forth and established in Chapter 71-575, Laws of Florida, Special Acts of 1971, as amended by Chapters 72-482 and 72-485, Laws of Florida, Special Acts of 1972; Chapters 73-437, and 74-448, Laws of Florida, Special Acts of 1974; the Florida Building Code and the SFBC as enacted and amended by Chapter 71-575, as amended.

**113.7 Compensation.** Members shall serve without compensation but shall be entitled to reimbursement for necessary expenses in performance of their Official duties upon approval of the appointing authority.

### **113.8 Meetings.**

**113.8.1** Meetings of BORA shall be held at the call of the Chairperson and at such other times as the Board may determine.

**113.8.2** The Board shall select one (1) of its members to serve as Chairman and one (1) to serve as Vice-Chairman, to act in the absence of the Chairman. A detailed record of all proceedings shall be

kept on file in the office of the Secretary. The Board shall establish rules and regulations for its own procedure.

### **113.8.3 Hearings.**

**113.8.3.1** All hearings shall be open to the public, and any person whose interest may be affected by the matter on appeal shall be given an opportunity to be heard.

**113.8.3.2** The hearing shall be informal and need not be conducted according to technical rules relating to evidence and witnesses.

**113.8.3.3** Any relevant evidence shall be admitted if it is the sort of evidence on which responsible persons are accustomed to rely in the conduct of serious affairs, regardless of the existence of any common law or statutory rules which might make improper the admission of such evidence over objection in civil actions.

**113.8.3.4** Hearsay evidence may be used for the purpose of supplementing or explaining any direct evidence but shall not be sufficient in itself to support a finding unless it would be admissible over objection in civil actions.

**113.8.3.5** The rules of privilege shall be effective to the same extent that they are now, or hereafter may be, recognized in civil actions, and irrelevant and unduly repetitious evidence shall be excluded.

**113.8.4 Conflict of Interest.** No member of the Board shall sit as a voting member in any hearing involving any question in which he or she has personal or financial interest and shall be sequestered during the deliberation and vote of the Board.

**113.8.5 Quorum.** A quorum of the Board of Rules and Appeals shall consist of a majority of the total membership of the Board of Rules and Appeals, and a majority vote of those members voting on a measure shall be necessary for the Board of Rules and Appeals affirmative action. With a total membership of 13 members, quorum is 7.

**113.8.6** Written notice of Board decision shall be furnished to the appellant when requested.

**113.8.7** When an appeal of a decision of a Building Official/Fire Code Official or his or her subordinate has been filed with BORA that Building Official/Fire Code Official or his or her designated representative shall be responsible to (1, 2, 3, or all):

**113.8.7.1** Respond to BORA in writing defending his or her decision and/or interpretation, within five (5) (working) days.

**113.8.7.2** Attend the Board meeting when the appeal is on the agenda.

**113.8.7.3** Take immediate action in accordance with decision of BORA. Immediate action shall be that a Certificate of Completion, Temporary Occupancy, or a Certificate of Occupancy shall not be issued until compliance with the decision of the Board has been completed.

**Exception:** For fire related appeals only, see FFPC.

### **113.9 Duties.**

**113.9.1 Appeal from decision of Building Official, Assistant Building Official or Chief Inspector.** The Board shall hear all appeals from the decisions of the Building Official, Assistant Building Official or Chief Inspector wherein such decision is on matters regulated by this Code from any person, aggrieved thereby, and specifically as set forth in Section 104.32, "Alternate Materials, designs and methods of Construction and equipment." Application for Appeal shall be in writing and addressed to the Secretary of the Board.

**113.9.2 Interpret code at request of Building Official, Assistant Building Official, Chief Inspector, Fire Code Official, or the staff of BORA.** The Board shall pass on all matters pertaining to this Code and referred to the Board by the Building Official, Assistant Building Official, Chief Inspector or staff of BORA for interpretation or clarification.

**113.9.3 Investigate Enforcement.** BORA, upon the request of any person charged with the responsibility of enforcing the Code, or upon its own initiative, shall conduct investigation into enforcement of this Code, and shall have the power to suspend or revoke any permits issued thereunder, after a hearing at which interested persons may appear and be heard and evidence indicates that the best interests of the public are served by such action except in regard to the qualifications of the applicant for permit.

**113.9.4 Report and Recommendations.**

**113.9.4.1** BORA may recommend to the elected Officials of the jurisdictions adopting this Code, ordinances prescribing the fee for examinations, permits, inspections of boilers and elevators, the testing of materials, and all other such work required by this Code.

**113.9.4.2** BORA shall make any desired amendments or revisions to the Code.

**113.10 Cost of appealing to Board.** Reserved.

**113.11 Procedure for Appeals.** Any person aggrieved by anyone enforcing this Code who desires to appeal to this Board shall first contact the Secretary of the Board for a date for his Appeal to be heard. A notice of Appeal shall be sent to the governing body of the jurisdiction wherein the dispute arose and said notice shall contain the following:

**113.11.1** The time and date of the hearing.

**113.11.2** A clear and concise statement of the subject to be decided on appeal sufficient to put the said governing body on notice so that they may defend their interpretation of this Code.

**113.11.3** The notice shall be sent by certified mail with return receipt and by facsimile or electronic media, with a receipt showing delivery by noon, or by personal delivery by noon at least nine (9) days prior to the hearing. The Board in its discretion may require a specific form for this notice. For an appeal to be valid, a written rejection from the denial AHJ shall be included with the appeal. The denial authority shall respond in writing to the appellant.

**113.11.4** The appellant shall also file a copy of his or her notice of Appeal with the Secretary of the Board at the same time that he or she notifies the governing body and said Secretary shall deliver to each member of the Board, a copy of the notice, with sufficient time before the hearing for the Board members to study the dispute. Procedure for Appeals may be changed from time to time by the Board if they deem it necessary for the benefit of the public. Whenever feasibly possible, the Chief Inspector involved in the appeal shall present the jurisdiction's position and justifications for the appeal at the Board meeting.

**113.11.5** Notwithstanding, and in addition to, the jurisdiction of BORA created by Chapter 71-575, Laws of Florida, Building Code as applicable to Broward County may be enforced by injunctive proceedings, or other appropriate legal proceedings, in the appropriate court having jurisdiction thereof, upon petition or complaint filed by BORA, which is hereby granted the power to sue and be sued, or by any aggrieved person, any interested citizen, citizen's association, corporation or other business entity if any elected or appointed Officials named in Section 3 of Chapter 71-575 or any Building Official fails or refuses to comply with said Code.

**113.11.6 Certification of Building Official, Assistant Building Official/Code Administrator, Chief Electrical Inspector, Electrical Plans Examiner, Electrical Inspector, Chief Mechanical Inspector, Mechanical Plans Examiner, Mechanical Inspector, Chief Plumbing Inspector,**

**Plumbing Plans Examiner, Plumbing Inspector, Roofing Inspector, Chief Structural Inspector, Structural Plans Examiner, Structural Inspector, Fire Marshal/Fire Code Official, Fire Plans Examiner, and Fire Inspector.** BORA shall have the duty, as set forth in Section 104 of this Code, to accept and review certification applications and to certify or refuse to certify applicants for Building Official, Assistant Building Official, Chief Electrical Inspector, Electrical Plans Examiner, Electrical Inspector, Chief Mechanical Inspector, Mechanical Plans Examiner, Mechanical Inspector, Chief Plumbing Inspector, Plumbing Plans Examiner, Plumbing Inspector, Roofing Inspector, Chief Structural Inspector, Structural Plans Examiner, Structural Inspector, Fire Marshal/Fire Code Official, Fire Plans Examiner, and Fire Inspector to be employed by any inspection authority regulated by this Code.

**113.11.7 Suspension of Certification Requirements.** During an emergency period proclaimed by the Governor, the Chairperson of BORA or designee may temporarily suspend the Broward County certification requirements for all individuals Certified by the State of Florida, Department of Business and Professional Regulation, BCAIB as Building Code Administrators, Plans Examiners and Inspectors. The length of time that this suspension will be in effect will be for an initial period not to exceed ninety (90) calendar days. BORA may extend this period if conditions warrant. This temporary suspension of the certification requirement shall not apply to an individual being hired on a permanent basis.

### **113.12 Powers.**

**113.12.1** BORA may interpret the provisions of this Code to cover a special case if it appears that the provisions of this Code do not definitely cover the point raised or that the intent of this Code is not clear or that ambiguity exists in the wording: but it shall have no authority to grant variances where the Code is clear and specific.

**113.12.2** The use of alternate materials or types of construction not clearly comparable with the materials and types of construction specified in this Code may not be granted by BORA; but the Board, if favorable to such use, may amend this Code to make such use lawful.

**113.12.3** The Board shall have the power to affirm, modify or reverse the decision of the Building Official wherein such decision is on matters regulated by this Code.

**113.12.4** BORA shall have the powers as specified in Section 116, "Unsafe Structures and Equipment."

**113.12.5** BORA shall have the power to suspend or revoke permits, as specified in Section 105.6 of this Code.

**113.12.6** When it is deemed necessary by the Board, it may request experienced and technical advice on any specific subject or subjects from any qualified person or persons, and such request may be for attendance at Board Meetings or for written analysis of the specific problem. BORA may establish Panels of Industry, either standing or temporary, for technical analysis of specific subjects.

### **113.13 Reciprocity.**

**113.13.1** BORA shall have the authority to meet with similarly constituted and authorized boards for the purposes of discussion, decision, and similar matters of area-wide industry concern.

**113.13.2** Decisions of the majority of all members at joint meetings as referred to herein, shall not be binding on BORA. The decisions of joint meetings with other boards may be accepted or rejected or accepted with modifications.

### **113.14 Review of Board Decisions.**

**113.14.1** Any person aggrieved by a decision of BORA, whether or not a previous party to the decision, may file an appeal pursuant to Section 553.775(3)(c), Florida Statutes. Appeals of decisions within the

review jurisdiction of the Florida Building Commission shall be to the Florida Building Code in the manner prescribed in the referenced statute. Review of other decisions of BORA shall be as provided in the Florida Rules of Appellate Procedure for judicial review of administrative action.

### **113.15 Amendments to Code.**

**113.15.1** The provisions of the SFBC, Broward Local Amendments to FFPC, and the FBC as applicable to Broward County, shall be amended only by BORA and only to the extent and in the manner specified in this Code, and in Section 553.73(4), Florida Statutes. For fire code related amendments see FFPC and Section 633.202, Florida Statutes.

**113.15.2** Neither the Broward County Board of County Commissioners nor any municipality within Broward County may enact any ordinance in conflict with Chapter 71-575, as amended, the Florida Building Code, or the SFBC.

### **Section 114 Violations.**

**114.1 Violations and Penalties.** Any person, firm, or corporation, who violates a provision of this Code, or FFPC or fails to comply therewith, or with any of the requirements thereof, shall be guilty of a misdemeanor. Each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Code or FFPC is committed or continued, and upon conviction of any such violation, such person shall be punishable by a fine of not less than fifty dollars (\$50.00) nor more than five hundred dollars (\$500.00), or by imprisonment not exceeding sixty (60) days, or by both such fine and imprisonment.

### **Section 115 Stop Work Order**

**115.1 Authority.** Whenever the Building Official or Fire Chief finds any work regulated by this Code being performed in a manner either contrary to the provisions of this Code or dangerous or unsafe, the Building Official or Fire Chief is authorized to issue a stop work order. See also Sections 105.4, 105.6, 111.4, and 112.3.

**115.2 Issuance.** The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work, or posted on the job site in a conspicuous location. Upon issuance of a stop work order, the cited work shall immediately cease by such persons. The stop work order shall state the reason for the order, and the work that is required to correct a violation or unsafe condition.

**115.3 Unlawful continuance.** Any person who continues any work after having been served with a stop work order, shall be subject to penalties as prescribed by law.

Exception: Work required to correct a violation or unsafe condition.

### **Section 116 Unsafe Structures and Equipment.**

#### **116.1 General.**

**116.1.1** Buildings or structures that in the opinion of the Building Official are, or hereafter shall become unsafe, unsanitary or deficient in adequate facilities for means of egress, or which constitute a fire or windstorm hazard, or illegal or improper use, occupancy or maintenance, or which do not comply with

the provisions of the applicable Minimum Housing Code, or which have been substantially damaged by the elements, acts of God, fire, explosion or otherwise shall be deemed unsafe buildings and a permit shall be obtained to demolish the structure or bring the building to comply with the applicable Codes.

**116.1.2** Incomplete buildings or structures commenced without a permit or the permit for which has expired, or completed buildings or structures commenced without a permit or the permit for which expired prior to completion and no Certificate of Occupancy has been issued, shall be presumed and deemed unsafe.

**116.1.3** Unsafe buildings or structures shall be demolished and removed from the premises concerned, or made safe, sanitary and secure in a manner required by the Building Official and as provided in this Code, provided that where replacement, repair, alteration or demolition is required on Buildings or structures within the purview of the applicable Minimum Housing Code, the provisions of such Code shall be complied with and shall control.

**116.1.4** A permit shall be issued for the demolition of any unsafe building or structure in accordance with Section 105.18 of this Code.

**116.2 Criteria.** When any one (1) of the following conditions exist, a building may be deemed unsafe or a fire hazard:

**116.2.1 Physical Criteria.**

**116.2.1.1** A Building shall be deemed a fire hazard and/or unsafe when:

**116.2.1.1.1** It is vacant, unguarded and open at doors or windows.

**116.2.1.1.2** There is an unwarranted accumulation of dust, debris or other combustible material therein.

**116.2.1.1.3** The building condition creates hazards with respect to means of egress and fire protection as provided herein for the particular occupancy.

**116.2.1.2** A building shall be deemed unsafe when:

**116.2.1.2.1** There is a failure, hanging loose or loosening of any siding, block, brick, or other building material.

**116.2.1.2.2** There is a deterioration of the structure or structural parts.

**116.2.1.2.3** The building is partially destroyed.

**116.2.1.2.4** There is an unusual sagging or leaning out of plumb of the Building or any parts of the building and such effect is caused by deterioration or over-stressing.

**116.2.1.2.5** The electrical or mechanical installations or systems create a hazardous condition in violation of this Code.

**116.2.1.2.6** An unsanitary condition exists by reason of inadequate or malfunctioning sanitary facilities or waste disposal systems.

**116.2.1.2.7** Swimming pools that contain stagnant water are deemed unsanitary and dangerous to human life and public welfare and shall be presumed and deemed unsafe.

**116.2.1.2.8** By reason of use or Occupancy the area, height, type of construction, fire-resistivity, means of egress, electrical equipment, plumbing, air conditioning or other

features regulated by this Code do not comply with this Code for the use and Group of Occupancy.

**116.2.1.2.9** Any mobile home that is being modified in violation of Department of Highway safety and motor vehicles Florida Administrative Code section 15C-2.0081 may be deemed unsafe or a fire hazard.

**116.2.1.3** A Building, or part thereof, shall be presumed to be unsafe if:

**116.2.1.3.1** The construction, installation of electrical, plumbing or other equipment therein or thereon, or the partial construction or installation of equipment has been commenced or completed without a permit therefore having been obtained or the permit therefore expired prior to completion and a Certificate of Occupancy issued.

**116.2.1.3.2** By reason of illegal or improper use, occupancy, or maintenance does not comply with this Code or the Code in effect at the time of construction or the applicable Minimum Housing Code.

### **116.2.2 Valuation Criteria.**

**116.2.2.1** If the cost of completion, alteration, repair and/or replacement of an unsafe building or structure or part thereof exceeds fifty (50) percent of its value, such building shall be demolished and removed from the premises. If the cost of completion, alteration, repair and/or replacement of an unsafe building or structure or part thereof does not exceed fifty (50) percent of such replacement cost, such building or structure may be repaired and made safe, as provided in the FBC Existing Building.

**116.2.2.2** If the cost of structural repair or structural replacement of an unsafe building or structure or part thereof exceeds thirty-three (33) percent of the structural value such building or structure or part thereof shall be demolished and removed from the premises; and if the cost of such structural repairs does not exceed thirty-three (33) percent of such replacement cost, such building or structure or part thereof may be structurally repaired and made safe, as provided in FBC Existing Building.

**116.2.2.3** In order to determine the value of a building or structure and the cost of alterations, repairs and replacement, the guides and standards provided in the FBC Existing Buildings shall apply.

**116.2.2.4** An Exception to the above percentages may be recognized provided:

**116.2.2.4.1** The owner of property has the ways and means to complete the work.

**116.2.2.4.2** All imminent danger has been removed from the site.

**116.2.2.4.3** All applicable Zoning regulations are met.

**116.2.2.4.4** All applicable requirements of other departments and agencies are met.

**116.2.2.4.5** Criteria noted in FBC Existing Building are followed.

**116.2.2.4.6** Any remaining portion of the structure to be used in rebuilding is certified as safe by an Engineer or Architect.

**116.3 Inspection of Unsafe Buildings and Structures.** The Building Official, on his or her own initiative or as a result of reports by others, shall examine or cause to be examined every building or structure appearing or reported to be unsafe, and if such is found to be an unsafe Building or structure as defined in this Section, the Building Official shall post the property concerned and shall furnish the owner of such



Building or structure with written notice, the manner of posting and furnishing of written notice is provided hereinafter.

**116.4 Posting.** The Building Official shall post a signed notice in a conspicuous location on the building or structure which has been determined to be unsafe. The posted notice shall read substantially as follows:

"UNSAFE BUILDING." This building or structure is, in the opinion of the Building Official, unsafe, as defined in Section 116 of this Code.

This Building Shall Be Vacated — Shall Not Be Occupied. Action shall be taken by the owner as further prescribed by written notice previously served. This Notice Shall Not Be Removed Except By The Building Official. Date \_\_\_\_\_

**116.5 Emergency Action.**

**116.5.1** When in the opinion of the Building Official, there is actual or immediate danger of the failure or the collapse of a building or structure, or there is a health, windstorm or fire hazard, he or she may order the occupants to vacate, temporarily close for use or occupancy the rights-of-way thereto, sidewalks, streets or adjacent buildings or nearby area and institute such other temporary safeguards, including securing posting and demolition of the building or structure, as he or she may deem necessary under the circumstances, and may employ the necessary labor and materials to perform the required work as expeditiously as possible.

**116.5.2** Costs incurred in the performance of such emergency work shall be paid by the appropriate governmental authority and upon the recording in the public records of this County a certificate executed by the Building Official, certifying the amount so expended and why expended, the same shall become a lien against the property involved.

**116.6 Notice of Violation.** The Building Official shall give the owner of record of the premises concerned written notice by certified or registered mail, addressed to such person's last known address. If proof of service by registered or certified mail is not completed by signed return receipt, then a copy of the written notice shall be affixed to the structure concerned and such procedure shall be deemed proper service, and the time for compliance, stipulated in the notice, shall be deemed to commence with the date such notice is so affixed. This written notice shall state the defects which constitute a violation of this Section and shall prescribe the action to be taken to comply and the time within which compliance must be accomplished, such time to be ten (10) business days, subject to reasonable extension when requested in writing, for reasons which the Building Official considers justifying an extension of time. All such extensions of time shall be by written approval of the Building Official. In addition, this written notice will explain the right of appeal of the decision of the Building Official to the Unsafe Structures and Housing Appeals Board, and also advise that unless there is compliance with the instructions in the Notice of Violation or an appeal is filed that a public hearing before the Unsafe Structures and Housing Appeals Board will be initiated by the Building Official after time for compliance has expired.

**116.7 Recording of Notice of Violation.**

**116.7.1** If the owner of the property concerned has not complied with the requirements as stated in the Notice of Violation within the time stipulated or has not appealed the action of the Building Official as stated in the Notice of Violation within the time specified, the Building Official may file an appropriate instrument in the office of the Clerk of the Circuit Court, to be recorded in the public records of this County, indicating that violations of this Code, and of Section 116 thereof, exist upon the property involved.

**116.7.2** The recording of such notice shall constitute constructive notice to all concerned, as well as to any subsequent purchasers, transferees, grantees, mortgages, lessees and all persons claiming or acquiring interest in said property.

**116.7.3** When the violation specified in the Notice of Violation has been corrected, the Building Official shall file for record a certificate certifying that the violation has been corrected, upon being paid for the filing fees incurred.

**116.8 Appeal and Review.** The owner or anyone having an interest in a building or structure which has been determined to be unsafe, and concerning which a Notice of Violation has been served by the Building Official, may appeal the decision of the Building Official as stated in the Notice of Violation, to the Unsafe Structures and Housing Appeals Board, if such appeal is filed prior to the expiration of the time allowed for compliance specified in such notice; provided, in no event shall appeal period be less than ten (10) business days. Such appeal shall be in writing, addressed to the Secretary of the Unsafe Structures and Housing Appeals Board, and shall be in the form of a certified statement, stating the reasons for such an appeal and stating wherein they consider the Building Official to be in error. Upon receipt of the appeal, the Secretary of the Board will proceed to notify all parties in interest as to the time and place the Unsafe Structures and Housing Appeals Board shall conduct a public hearing on the matter. The procedure for the serving of and the form of notice is provided hereinafter.

**116.9 Notice of Public Hearing.** If the owner, or other parties having an interest do not comply with the terms of the Notice of Violation and do not file an appeal within the time stipulated, the Building Official shall then apply for a public hearing to be conducted by the Unsafe Structures and Housing Appeals Board, and the Secretary of the Unsafe Structures and Housing Appeals Board shall notify all parties in interest of the time and place of such public hearing on the matter. The procedure for the serving and the form of notice shall be the same as in the case where an appeal has been filed by the owner or other parties in interest and such procedure and form of notice shall be as set forth hereinafter.

**116.9.1** When an appeal has been properly filed, or when the public hearing is initiated by the Building Official, as provided herein, the Secretary of the Unsafe Structures and Housing Appeals Board shall issue a notice in the Board's name, requiring the owner of record and all parties having an interest to appear before the Board in person or by an attorney at the time set forth in such notice, but not earlier than ten (10) days after service thereof, and show cause why the decision of the Building Official should not be carried out.

**116.9.2** As many alias and pluries notices may be issued as may be necessary.

**116.9.3** Service of such notices shall be certified or registered mail to the last known address of the party being served, if known; however, failure to receive such notice shall not invalidate the same as such notice shall also be perfected by posting such notice on the property and by publishing a copy thereof in a newspaper published in this County, such publication to be for two (2) times one (1) week apart.

**116.9.4** The time for appearing and showing cause as aforesaid, and a description of the property shall be as set forth in such published notice; provided, such time shall not be less than ten (10) days after the last publication thereof.

**116.9.5** Any person or party who shall not appear and show cause as aforesaid shall be as fully bound by proceedings taken as if he or she had appeared and shown cause.

#### **116.10 Public Hearing.**

**116.10.1** On the day established in the notice of public hearing the Board shall review all pertinent evidence and hear all testimony from the Building Official, the owner and other parties in interest and their respective witnesses.

**116.10.2** The Board may modify, rescind, or uphold the decision of the Building Official as recited in the Notice of Violation and may order the owner or persons responsible for the building or structure to vacate, or cause to be vacated forthwith, to make repairs and to take necessary action to secure the building, or to demolish the building or structure and remove the salvage, contents debris and abandoned property from the premises, all within the time stipulated in the order by the Board.

**116.10.3** Such order shall be entered in the minute book of the Board within three (3) days after such public hearing and a copy of such order shall be forwarded to the owner and all parties in interest by registered or certified mail and a copy thereof posted on the premises.

**116.10.4** If the owner or those responsible shall fail to comply with the order of the Board within the time stipulated therein, and such order is to repair, or secure the building to make safe, then the Building Official shall cause such building to be vacated, if occupied, and shall through his or her employees or through a contractor making the lowest responsible bid, secure the building or structure.

**116.10.5** If the order is to demolish the building or structure and to remove the salvage, contents, debris and abandoned property from the premises, and the owner or those responsible shall have failed to comply with such order, then the Building Official may do so thereafter through his or her employees or through a contractor making the lowest responsible bid.

**116.10.6** The Building Official may sell to the highest bidder or bidders for cash the salvage and the contents of such building or other structure so demolished which have not been removed by the owner of the land.

**116.10.7** If no bids are received for such salvage or contents the Building Official may destroy that for which no bids are received.

**116.10.8** Advertisement calling for bids shall be published by the Building Official one (1) time in a newspaper published in the County.

#### **116.11 Recovery of Cost.**

**116.11.1** The entire costs incurred pursuant to Section 116.5 to Section 116.10 of this Code shall be paid by the owner or occupant of the premises or by the person who caused or maintained the violation.

**116.11.2** The Building Official shall file among his or her records an affidavit stating with fairness and accuracy the items of expense and the date of execution of actions authorized by Section 116.5 or Section 116.10 of this Code.

**116.11.3** The enforcing agency may institute a suit to recover such expenses against any liable person or may cause such expenses to be charged against the property as a lien or as a special assessment collectable according to established procedures.

**116.11.4** Except with respect to a lien imposed for expenses incurred in demolition, nothing herein shall be construed as placing a lien upon property which supersedes the lien of any mortgage on such property executed and recorded prior to the existence of a lien authorized herein.

**116.11.5** Any costs incurred pursuant to Section 116.5 or Section 116.10 of this Code which result in demolition of unsafe buildings, structures or equipment shall be a lien prior in dignity to all liens, excepting county tax liens and liens of equal dignity with county tax liens.

**116.12 Review.** Any person aggrieved by a decision of the Unsafe Structure Board may seek judicial review of that decision in accordance with the Florida Appellate Rules.

**116.13 Unsafe Structures Board.** The Unsafe Structures Board is hereby created, consisting of nine (9) members who shall be appointed by the Appointing Authority. All professional members of the Unsafe Structures Board should be registered and licensed in the State of Florida. In the event the Appointing Authority cannot find a properly qualified resident of the area under its jurisdiction, it may by majority vote of its membership, appoint a qualified non-resident of the specific categories or professions required.

**116.13.1 Qualification of Members.** Members of the Board shall be permanent residents of the area under the jurisdiction of the Appointing Authority, who possess outstanding reputations for civic activity, interest, integrity, responsibility, and business or professional ability. The composition and representative membership of the Board shall be as follows: an Engineer, an Architect, a General

Contractor, an Electrical Contractor, an Attorney at Law, a Plumbing Contractor, a Real Estate Appraiser, a Real Estate Property Manager and a Citizen with experience and background in social problems.

**116.13.2 Terms of Office.** In order that the terms of office of all members of the Board shall not expire at the same time, the initial appointments to the Board shall be as follows: Three (3) members for the term of two (2) years, three (3) members for the term of three (3) years, and three (3) members for the term of four (4) years. Thereafter, all appointments shall be for the term of three (3) years, provided that the term in all instances shall continue until a successor is appointed and qualified. Appointments to fill any vacancy on the Board shall be for the remainder of the unexpired term, but failure to fill a vacancy shall not invalidate any action or decision of the Board.

### **116.13.3 Organization of the Board.**

**116.13.3.1** The members of the board shall elect a Chairman and a Vice Chairman and such other officers as may be deemed necessary or desirable, who shall serve at the will of the Board. Election of officers shall be held at the first meeting after February First, and such officers shall hold office for one (1) year.

**116.13.3.2** Five (5) members of the Board shall constitute a quorum necessary to hold a meeting or take any action.

**116.13.3.3** A majority vote of the Board membership present and voting at a duly constituted meeting shall be sufficient to overrule, modify or affirm any action or decision of the Building Official or to take any other action within the scope of the power and duties of the Board.

**116.13.3.4** Members shall serve without compensation but shall be entitled to reimbursement for necessary expenses incurred in the performance of their Official duties, upon approval by the legislative body adopting this Code.

**116.13.3.5** No member of the Board shall sit as a voting member in any hearing on a matter in which he or she has a personal or financial interest.

**116.13.3.6** The Building Official, or his or her designee, shall be the Secretary of the Board but shall have no vote.

**116.13.3.7** The Chairman or the Secretary may call meetings of the Board, and meetings may be called by written notice signed by three (3) members of the Board.

**116.13.3.8** Minutes and records shall be kept of all meetings of the Board and all meetings shall be public.

**116.13.3.9** All hearings shall be open to the public, and any person whose interest may be affected by the matter on appeal shall be given an opportunity to be heard in person, or through his or her attorney.

**116.13.3.10** Witnesses may be sworn and subpoenaed by the Board in a like manner as they are subpoenaed by the court or courts in the County in which this Code is adopted.

**116.13.3.11** The hearings shall be informal and need not be conducted according to technical rules relating to evidence and witnesses. Any relevant evidence shall be admitted if it is the type of evidence on which responsible persons are accustomed to rely in the conduct of serious affairs regardless of the existence of any common law or statutory rules which might make improper the admission of such evidence over objection in civil actions.

**116.13.3.12** Hearsay evidence may be used for the purpose of supplementing or explaining any direct evidence but shall not be sufficient itself to support a finding unless it would be admissible over objection in civil actions.

**116.13.3.13** The rules of privilege shall be effective to the same extent that they are now, or hereafter may be, recognized in civil actions; and irrelevant and unduly repetitious evidence shall be excluded.

**116.13.3.14** The Board may establish rules and regulations for its own procedure.

**116.13.3.15** The Building Official shall provide adequate and competent clerical and administrative personnel and such technical or scientific personnel as may be reasonably required by the Board for the proper performance of its duties, and shall maintain a record of all proceedings in the office of the Building Official, and shall make available for copying any and all portions of the record of the proceeding and may certify the same as a true copy and make a reasonable charge therefore.

**116.13.3.16** The Building Official shall provide a regular meeting place for the Board.

**116.13.4** Duties and Powers of the Board. The board shall have the following duties, functions, powers, and responsibilities:

**116.13.4.1** Hear and determine appeals from actions and decisions of the Building Official pursuant to the provisions thereof.

**116.13.4.2** Hear and review the application of the Building Official for review of his action where his decision as indicated in a Notice of Violations has not been complied with.

**116.13.4.3** Affirm, modify, or reverse the decision of the Building Official upon appeal or on application for review.

**116.13.4.4** The Board, through its Secretary, shall transmit the record with all exhibits, instruments, papers, and transcripts of its proceedings to the appointing authority in the event that authority shall consider the matter pursuant to applicable law in that regard made and provided.

**116.13.4.5** Hear and determine appeals from actions and decisions of the enforcing agency pursuant to the provisions of the applicable Minimum Housing Code.

**116.14 Duties of Legal Counsel.** It shall be the duty of the attorney for the appointing authority, when so requested, to appear at all hearings before the Unsafe Structures Board and to represent and advise the Board.

**116.15 Conflict of Interest.** No Building Official, Board Member or employee charged with the enforcement of this law shall have any financial interest, directly or indirectly, in any repairs, corrections, construction or demolition which may be required, nor shall any Building Official, board member or employee give to anyone the location of any property or the names of owners thereof on which repairs, corrections or demolition have been ordered, except as otherwise directed hereinafter, until after the owners have been formally advised at which time such shall become a matter of public record.

**116.16 Alternative Board.** As an alternative to use of its own Unsafe Structures Board, any municipality in Broward County may utilize by means of an applicable inter-local agreement, the Unsafe Structures Board of Broward County or that of another municipality located within Broward County.

## **Section 117 Powers and Duties of the Floodplain Administrator; Delegation, Administration, Enforcement, and Variances.**

**117.1 Scope.** In accordance with Section 553.73, Florida Statutes, the appointing Authority of Broward County or the Municipalities may delegate the authority to enforce the floodplain provisions of the Florida Building Code to a Floodplain Administrator, the Building Official, or any other appropriate agency or combination thereof.

**117.2 Intent.** A Floodplain Administrator, the Building Official, or any other appropriate agency or combination thereof, as designated, is authorized and directed to administer and enforce the flood provisions of the FBC and any adopted flood hazard ordinances. The designated authority shall delegate such duties and assignments as may be deemed necessary to carry out provisions of the FBC and any adopted flood hazard ordinances, to render interpretations consistent with the intent and purpose of these codes and may establish policies and procedures in order to clarify the application of their provisions including the application of the variance procedures of any adopted flood hazard ordinances to the flood provisions of the FBC. The variance procedures herein shall not apply to section 3109 of the FBC, Building.

**117.3 General.** Where, in any specific case, different sections of the FBC or adopted flood hazard ordinances specify different materials, methods of construction or other requirements, the most restrictive shall govern.

## **Section 118 Two-Way Radio Communication Enhanced Public Safety Signal Booster Systems**

### **118.1 General.**

**118.1.1** The Two-Way Radio Communication Enhancement Public Safety Signal Booster System shall be installed as per NFPA 1-11.10, NFPA 70, NFPA 1221, and NFPA 72.

**118.1.2** The Authority Having Jurisdiction (AHJ), in Broward County, for the Two-Way Radio Communication Enhancement Public Safety Signal Systems has two (2) permitting entities and multiple frequency licenses as follows:

1. The Installation and Wiring shall comply with the local municipality Building and Fire Departments permitting process and shall be approved by the local and county FCC Licensee prior to installation.
2. The FCC Licensees are:

Broward County Regional Emergency Services and Communication Division

City of Coral Springs

City of Fort Lauderdale

City of Hollywood

City of Plantation

**118.1.3** The AHJ shall determine if a new building or existing building shall require that a two-way radio communication enhanced public safety signal booster system be installed to comply with NFPA 1-11.10.1. The Building owner shall install a public safety signal booster to meet this requirement if so directed.

**118.1.4 Design.** For new buildings, a temporary, partial or certificate of occupancy shall not be issued until the AHJ determines that the building is in compliance with NFPA 1-11.10.1. It is recommended that the local Development Review Committee (DRC) notify the new building owner, architect, and engineers of this requirement in writing before the building is designed. At the time of BDA permitting, a design

package, comprising of block level diagrams, materials submittals, coverage measurements and predictions are required. Sufficient and substantial engineering design and support information and data shall be submitted with the application. A sealed submittal from an Engineer, with training and experience in electrical engineering, shall also be required.

**118.1.5** To the extent authorized by law, Distributed Antenna Systems Integrators with Public Safety and/or Communication installation and repair experience, as a sub-contractor in association with qualified electrical contractors, and Fire Alarm contractors, may install or repair Two-Way Radio Communication Enhancement Systems. Should the contractor of record fail to have radio communications installation and repair experience with Distributed Antenna Systems, the contractor of record shall sub-contract the installation or repair of non-fire alarm function to a qualified company, having knowledge of Radio communications installation and repair

## **118.2 Permit Documentation.**

**118.2.1** The following documentation shall be required for permitting a "Two-Way Radio Communication Enhancement System":

1. Signed and Sealed drawings shall be submitted to the FCC Licensee(s) for approval of the proposed installation of Two-Way Radio Communicated Enhanced Systems.
2. FCC Licensee(s) shall provide written approval of the sealed documents which shall be provided to the local Fire Prevention Bureau office at the time of plan submittal and prior to plan review.
3. Plans shall comply with FBC 107, NFPA 1, 1.7, NFPA 70, NFPA 1221, and NFPA 72. All plans shall be signed and sealed by an engineer.
4. Sealed floor plans showing radio coverage for critical and general areas using industry standard radio frequency computer generated propagation modeling.
5. Schedule of signal strength as per NFPA 72 or as agreed to by the Fire Code Official in consultation with the FCC licensee in writing.
6. Schedule of the system radio frequencies or band of frequencies.
7. Notation that the system is compatible with the Broward County Regional Emergency Services and Communication Division.
8. Plans shall show that the BDA enclosure shall be painted red. A sign affixed next to or stenciling on the enclosure shall be provided in high contrasting letters over a red background, weatherproof plaque and shall include the following information:
  - a) Fire Department Signal Booster.
  - b) Permit Number: \_\_\_\_\_.
  - c) Serviced by: Vendor name and telephone.

## **118.3 System Notifications.**

**118.3.1** The AHJ's for the FCC licensee along with Broward County Regional Emergency Services and Communication Division shall be notified in writing of the following events by the permit holder, the system vendor, and/or the building owner. The AHJ for the FCC Licensee shall approve the date and time and may request that the AHJ shall be present during the following events:

1. Initial system testing, with date and time start and finish.
2. Periodic system testing, with date and time start and finish.
3. System placed in operation with date and time.

## **118.4 Prior to the Initial Testing.**

1. The vendor shall provide the system's settings prior to the initial system testing as accepted by the AHJ, FCC Licensee and Broward County Regional Emergency Services and Communication Division. The AHJ may ask for additional information prior to testing.
2. The system shall remain "off the air" until the initial testing with AHJ, FCC Licensee, Broward County Regional Emergency Systems and Communication Division, and the Fire Code Official are ready to begin and provide their approval.

#### **118.5 Annual Test.**

**118.5.1** In addition to the annual fire alarm test, an annual test and report, in compliance with NFPA 72 Chapter 14, shall be completed by a qualified company having the knowledge of RF installation with training and experience of two-way radio communication enhanced radio systems to ensure that the original installed system is still in compliance.

**118.5.2 Annual Test Report.** The annual test report shall be maintained with the fire alarm log book and copies shall be submitted to the local AHJ and to City and Broward County Regional Emergency Services and Communication Division for review. All problems found, with any corrective action(s), shall be noted in the test report, along with the name and license number of the Fire Alarm Contractor and sub-contractor Inspection Company.

#### **118.6. System Monitoring and Maintenance.**

1. Any Public Safety Signal Booster system installed in a premise shall be tied into a fire alarm system for monitoring.
2. In case of failure, the building owner shall be notified within two (2) hours and he/she shall cause to occur an inspection of the system. If a trouble condition is found the system shall be repaired within forty-eight (48) hours of notification. If such repair proves to be longer in time or impossible to perform, a notification to the Fire Marshal shall be made indicating the failure of the system, so that in case of emergency the system shall not be relied upon by the First Responders.

Any system installed shall have a service level agreement with a responsible company. Once the system is repaired the service company shall notify both the building owner and the fire marshal.



# Section 5

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7th Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7th Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

One tap mobile

+13017158592,,92084341221#,,,,,0#,,681068# US (Germantown)

+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

[http:// www. broward.org/codeappeals](http://www.broward.org/codeappeals)

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**TO:** Members of the Broward County Board of Rules and Appeals  
**FROM:** Chief Plumbing Code Compliance Officer  
**DATE:** October 8, 2020  
**SUBJECT:** Adopt the Florida Building Code 7<sup>th</sup> Edition (2020), Plumbing, Table 604.4 Maximum Flow and Consumption for Water Fixtures, Fixture Fitting and Appliances.

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## **Recommendation**

That BORA re-adopt FBC, Plumbing Table 604.4.

## **Reasons**

Water conservation is an essential part of the Broward County water supply plan. These amendments will adopt U.S. Environmental Protection Agency (EPA) WaterSense Label for plumbing fixtures and appliances. These modifications will require less usage from the Biscayne Aquifer.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Viñas".

Otto Viñas  
Chief Plumbing Code Compliance Officer

**SECTION 603  
WATER SERVICE**

**603.1 Size of water service pipe.** The water service pipe shall be sized to supply water to the structure in the quantities and at the pressures required in this code. The water service pipe shall be not less than  $\frac{3}{4}$  inch (19.1 mm) in diameter.

**603.2 Separation of water service and building sewer.** Where water service piping is located in the same trench with the *building sewer*, such *sewer* shall be constructed of materials listed in Table 702.2. Where the *building sewer* piping is not constructed of materials listed in Table 702.2, the water service pipe and the *building sewer* shall be horizontally separated by not less than 5 feet (1524 mm) of undisturbed or compacted earth. The required separation distance shall not apply where a water service pipe crosses a *sewer* pipe, provided the water service is sleeved to a point not less than 5 feet (1524 mm) horizontally from the *sewer* pipe centerline on both sides of such crossing. The sleeve shall be of pipe materials listed in Table 605.3, 702.2 or 702.3. The required separation distance shall not apply where the bottom of the water service pipe, located within 5 feet (1524 mm) of the *sewer*, is not less than 12 inches (305 mm) above the highest point of the top of the *building sewer*.

**603.2.1 Water service near sources of pollution.** Potable water service pipes shall not be located in, under or above cesspools, septic tanks, septic tank drainage fields or seepage pits (see Section 605.1 for soil and ground water conditions).

**SECTION 604  
DESIGN OF BUILDING  
WATER DISTRIBUTION SYSTEM**

**604.1 General.** The design of the water distribution system shall conform to *accepted engineering practice*. Methods utilized to determine pipe sizes shall be *approved*.

**604.2 System interconnection.** At the points of interconnection between the hot and cold water supply piping systems and the individual fixtures, appliances or devices, provisions shall be made to prevent flow between such piping systems.

**604.3 Water distribution system design criteria.** The water distribution system shall be designed, and pipe sizes shall be selected such that under conditions of peak demand, the capacities at the fixture supply pipe outlets shall be not less than shown in Table 604.3. The minimum flow rate and flow pressure provided to fixtures and appliances not listed in Table 604.3 shall be in accordance with the manufacturer's installation instructions.

**TABLE 604.3  
WATER DISTRIBUTION SYSTEM DESIGN CRITERIA REQUIRED  
CAPACITY AT FIXTURE SUPPLY PIPE OUTLETS**

FIXTURE SUPPLY OUTLET SERVING	FLOW RATE* (gpm)	FLOW PRESSURE (psi)
Bathtub, balanced-pressure, thermostatic or combination balanced-pressure/thermostatic mixing valve	4	20
Bidet, thermostatic mixing valve	2	20
Combination fixture	4	8
Dishwasher, residential	2.75	8
Drinking fountain	0.75	8
Laundry tray	4	8
Lavatory, private	0.8	8
Lavatory, private, mixing valve	0.8	8
Lavatory, public	0.4	8
Shower	2.5	8
Shower, balanced-pressure, thermostatic or combination balanced-pressure/thermostatic mixing valve	2.5 <sup>b</sup>	20
Sillcock, hose bibb	5	8
Sink, residential	1.75	8
Sink, service	3	8
Urinal, valve	12	25
Water closet, blow out, flushometer valve	25	45
Water closet, flushometer tank	1.6	20
Water closet, siphonic, flushometer valve	25	35
Water closet, tank, close coupled	3	20
Water closet, tank, one piece	6	20

For SI: 1 pound per square inch = 6.895 kPa, 1 gallon per minute = 3.785 L/m.

- a. For additional requirements for flow rates and quantities, see Section 604.4.
- b. Where the shower mixing valve manufacturer indicates a lower flow rating for the mixing valve, the lower value shall be applied.

**604.4 Maximum flow and water consumption.** The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table 604.4.

**Exceptions:**

1. Blowout design water closets having a water consumption not greater than  $3\frac{1}{2}$  gallons (13 L) per flushing cycle.
2. Vegetable sprays.
3. Clinical sinks having a water consumption not greater than  $4\frac{1}{2}$  gallons (17 L) per flushing cycle.
4. Service sinks.
5. Emergency showers.

**TABLE 604.4  
MAXIMUM FLOW RATES AND CONSUMPTION FOR  
PLUMBING FIXTURES AND FIXTURE FITTINGS**

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY <sup>b</sup>
Lavatory, private	2.2 gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head <sup>a</sup>	2.5 gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Urinal	1.0 gallon per flushing cycle
Water closet	1.6 gallons per flushing cycle

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m,  
1 pound per square inch = 6.895 kPa.

- a. A hand-held shower spray is a shower head.
- b. Consumption tolerances shall be determined from referenced standards.

**604.5 Size of fixture supply.** The minimum size of a fixture supply pipe shall be as shown in Table 604.5. The fixture supply pipe shall terminate not more than 30 inches (762 mm) from the point of connection to the fixture. A reduced-size flexible water connector installed between the supply pipe and the fixture shall be of an *approved* type. The supply pipe shall extend to the floor or wall adjacent to the fixture. The minimum size of individual distribution lines utilized in gridded or parallel water distribution systems shall be as shown in Table 604.5.

**TABLE 604.5  
MINIMUM SIZES OF FIXTURE WATER SUPPLY PIPES**

FIXTURE	MINIMUM PIPE SIZE (inch)
Bathtubs <sup>a</sup> (60" x 32" and smaller)	1/2
Bathtubs <sup>a</sup> (larger than 60" x 32")	1/2
Bidet	3/8
Combination sink and tray	1/2
Dishwasher, domestic <sup>a</sup>	1/2
Drinking fountain	3/8
Hose bibbs	1/2
Kitchen sink <sup>a</sup>	1/2
Laundry, 1, 2 or 3 compartments <sup>a</sup>	1/2
Lavatory	3/8
Shower, single head <sup>a</sup>	1/2
Sinks, flushing rim	3/4
Sinks, service	1/2
Urinal, flush tank	1/2
Urinal, flushometer valve	3/4
Wall hydrant	1/2

(continued)

**TABLE 604.5—continued  
MINIMUM SIZES OF FIXTURE WATER SUPPLY PIPES**

FIXTURE	MINIMUM PIPE SIZE (inch)
Water closet, flush tank	3/8
Water closet, flushometer tank	3/8
Water closet, flushometer valve	1
Water closet, one piece <sup>a</sup>	1/2

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,  
1 pound per square inch = 6.895 kPa.

- a. Where the *developed length* of the distribution line is 50 feet or less, and the available pressure at the meter is 35 psi or greater, the minimum size of an individual distribution line supplied from a manifold and installed as part of a parallel water distribution system shall be one nominal tube size smaller than the sizes indicated.

**604.6 Variable street pressures.** Where street water main pressures fluctuate, the building water distribution system shall be designed for the minimum pressure available.

**604.7 Inadequate water pressure.** Wherever water pressure from the street main or other source of supply is insufficient to provide flow pressures at fixture outlets as required under Table 604.3, a water pressure booster system conforming to Section 606.5 shall be installed on the building water supply system.

**604.8 Water pressure-reducing valve or regulator.** Where water pressure within a building exceeds 80 psi (552 kPa) static, an *approved* water pressure-reducing valve conforming to ASSE 1003 or CSA B356 with strainer shall be installed to reduce the pressure in the building water distribution piping to not greater than 80 psi (552 kPa) static.

**Exception:** Service lines to sill cocks and outside hydrants, and main supply risers where pressure from the mains is reduced to 80 psi (552 kPa) or less at individual fixtures.

**604.8.1 Valve design.** The pressure-reducing valve shall be designed to remain open to permit uninterrupted water flow in case of valve failure.

**604.8.2 Repair and removal.** Water pressure-reducing valves, regulators and strainers shall be so constructed and installed as to permit repair or removal of parts without breaking a pipeline or removing the valve and strainer from the pipeline.

**604.9 Water hammer.** The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A water-hammer arrestor shall be installed where *quick-closing valves* are utilized. Water-hammer arrestors shall be installed in accordance with the manufacturer's instructions. Water-hammer arrestors shall conform to ASSE 1010.

**604.10 Gridded and parallel water distribution system manifolds.** Hot water and cold water manifolds installed with gridded or parallel connected individual distribution lines to each fixture or fixture fitting shall be designed in accordance with Sections 604.10.1 through 604.10.3.

**604.4 Maximum flow and water consumption.**

**Exceptions:**

6. All fixtures, fittings and appliances with U.S. Environmental Agency WaterSense® (EPA) label.

**TABLE 604.4  
 MAXIMUM FLOW RATES AND CONSUMPTION  
 FOR PLUMBING FIXTURES,  
 AND FIXTURE FITTINGS AND APPLIANCES**

<b>PLUMBING FIXTURE OR FIXTURE FITTING</b>	<b>MAXIMUM FLOW RATE OR QUANTITY</b>
Lavatory, private	<del>2.2</del> <u>1.5</u> gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head *	<del>2.0</del> <u>2.5</u> gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Urinal	<del>4.0</del> <u>0.5</u> gallon per flushing
Water closet	<del>4.6</del> <u>1.28</u> gallons per flushing cycle
<u>Dishwasher (Residential) *</u>	<u>6.5 gallons per cycle or less (Energy Star/WaterSense Certified)</u>
<u>Dishwasher (Commercial)</u>	<u>Less than 1.2 gallons per rack for fill and dump machines and less than 0.9 gallons per rack for low temperature machines.</u>
<u>Dishwasher (Under the counter machines commercial)</u>	<u>1.0 gallons per rack for high temperature machines and 1.7 gallons per rack for low temperature machines.</u>
<u>Washing Machine *</u>	<u>Water factor of 8 or lower (EnergyStar/WaterSense Certified) ©</u>

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m,  
 1 pound per square inch = 6.895 kPa.

- a. A hand-held shower spray is a shower head. \*If installed
- b. Consumption tolerance shall be determined from referenced standards.
- c. Water factor in gallons per cycle per cubic foot

WATER SUPPLY AND DISTRIBUTION

**SECTION 603  
WATER SERVICE**

**603.1 Size of water service pipe.** The water service pipe shall be sized to supply water to the structure in the quantities and at the pressures required in this code. The water service pipe shall be not less than  $\frac{3}{4}$  inch (19.1 mm) in diameter.

**603.2 Separation of water service and building sewer.** Where water service piping is located in the same trench with the *building sewer*, such *sewer* shall be constructed of materials listed in Table 702.2. Where the *building sewer* piping is not constructed of materials listed in Table 702.2, the water service pipe and the *building sewer* shall be horizontally separated by not less than 5 feet (1524 mm) of undisturbed or compacted earth. The required separation distance shall not apply where a water service pipe crosses a *sewer* pipe, provided the water service is sleeved to a point not less than 5 feet (1524 mm) horizontally from the *sewer* pipe centerline on both sides of such crossing. The sleeve shall be of pipe materials listed in Table 605.3, 702.2 or 702.3. The required separation distance shall not apply where the bottom of the water service pipe, located within 5 feet (1524 mm) of the *sewer*, is not less than 12 inches (305 mm) above the highest point of the top of the *building sewer*.

**603.2.1 Water service near sources of pollution.** Potable water service pipes shall not be located in, under or above cesspools, septic tanks, septic tank drainage fields or seepage pits (see Section 605.1 for soil and ground water conditions).

**SECTION 604  
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Bidet, thermostatic mixing valve	2	20
Combination fixture	4	8
Dishwasher, residential	2.75	8
Drinking fountain	0.75	8
Laundry tray	4	8
Lavatory, private	0.8	8
Lavatory, private, mixing valve	0.8	8
Lavatory, public	0.4	8
Shower	2.5	8
Shower, balanced-pressure, thermostatic or combination balanced-pressure/thermostatic mixing valve	2.5 <sup>b</sup>	20
Sillcock, hose bibb	5	8
Sink, residential	1.75	8
Sink, service	3	8
Urinal, valve	12	25
Water closet, blow out, flushometer valve	25	45
Water closet, flushometer tank	1.6	20
Water closet, siphonic, flushometer valve	25	35
Water closet, tank, close coupled	3	20
Water closet, tank, one piece	6	20

For SI: 1 pound per square inch = 6.895 kPa, 1 gallon per minute = 3.785 L/m.

- a. For additional requirements for flow rates and quantities, see Section 604.4.
- b. Where the shower mixing valve manufacturer indicates a lower flow rating for the mixing valve, the lower value shall be applied.

**604.4 Maximum flow and water consumption.** The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table 604.4.

**Exceptions:**

1. Blowout design water closets having a water consumption not greater than  $3\frac{1}{2}$  gallons (13 L) per flushing cycle.
2. Vegetable sprays.
3. Clinical sinks having a water consumption not greater than  $4\frac{1}{2}$  gallons (17 L) per flushing cycle.
4. Service sinks.
5. Emergency showers.
6. All fixtures, fittings and appliances with U.S. Environmental Agency WaterSense® (EPA) label.



TABLE 604.4  
MAXIMUM FLOW RATES AND CONSUMPTION  
FOR PLUMBING FIXTURES,  
AND FIXTURE FITTINGS AND APPLIANCES

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY <sup>a</sup>
Lavatory, private	2.2-1.5 gpm at 60 psi
Lavatory, public, (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head <sup>a</sup>	2.0-2.5 gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Urinal	4-0.5 gallon per flushing
Water closet	4-6 1.28 gallons per flushing cycle
Dishwasher (Residential)*	6.5 gallons per cycle or less (Energy Star/WaterSense Certified)
Dishwasher (Commercial)	Less than 1.2 gallons per rack for fill and dump machines and less than 0.9 gallons per rack for low temperature machines
Dishwasher(Under the counter machines commercial)	1.0 gallons per rack for high temperature machines and 1.7 gallons per rack for low temperature machines
Washing Machine *	Water factor of 8 or lower (Energy Star/WaterSense Certified)(c)

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m,  
1 pound per square inch = 6.895 kPa.

a. A hand-held shower spray is a shower head. \*If installed

b. Consumption tolerance shall be determined from referenced standards.

c. Water factor in gallons per cycle per cubic foot

**604.5 Size of fixture supply.** The minimum size of a fixture supply pipe shall be as shown in Table 604.5. The fixture supply pipe shall terminate not more than 30 inches (762 mm) from the point of connection to the fixture. A reduced-size flexible water connector installed between the supply pipe and the fixture shall be of an *approved* type. The supply pipe shall extend to the floor or wall adjacent to the fixture. The minimum size of individual distribution lines utilized in gridded or parallel water distribution systems shall be as shown in Table 604.5.

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FIXTURE	MINIMUM PIPE SIZE (inch)
Bathtubs <sup>a</sup> (60" × 32" and smaller)	1/2
Bathtubs <sup>a</sup> (larger than 60" × 32")	1/2
Bidet	3/8
Combination sink and tray	1/2
Dishwasher, domestic <sup>a</sup>	1/2
Drinking fountain	3/8
Hose bibbs	1/2
Kitchen sink <sup>a</sup>	1/2
Laundry, 1, 2 or 3 compartments <sup>a</sup>	1/2
Lavatory	3/8
Shower, single head <sup>a</sup>	1/2
Sinks, flushing rim	3/4
Sinks, service	1/2
Urinal, flush tank	1/2
Urinal, flushometer valve	3/4
Wall hydrant	1/2

(continued)

TABLE 604.5—continued  
MINIMUM SIZES OF FIXTURE WATER SUPPLY PIPES

FIXTURE	MINIMUM PIPE SIZE (inch)
Water closet, flush tank	3/8
Water closet, flushometer tank	3/8
Water closet, flushometer valve	1
Water closet, one piece <sup>a</sup>	1/2

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm,

1 pound per square inch = 6.895 kPa.

a. Where the *developed length* of the distribution line is 50 feet or less, and the available pressure at the meter is 35 psi or greater, the minimum size of an individual distribution line supplied from a manifold and installed as part of a parallel water distribution system shall be one nominal tube size smaller than the sizes indicated.

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**Exception:** Service lines to sill cocks and outside hydrants, and main supply risers where pressure from the mains is reduced to 80 psi (552 kPa) or less at individual fixtures.

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**604.8.2 Repair and removal.** Water pressure-reducing valves, regulators and strainers shall be so constructed and installed as to permit repair or removal of parts without breaking a pipeline or removing the valve and strainer from the pipeline.

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**604.10 Gridded and parallel water distribution system manifolds.** Hot water and cold water manifolds installed with gridded or parallel connected individual distribution lines to each fixture or fixture fitting shall be designed in accordance with Sections 604.10.1 through 604.10.3.



Broward County

## Board of Rules and Appeals

One N. University Drive, Suite 3500-B, Plantation, Florida 33324

TL 954.765.4500 ♦ FX 954.765.4504

<http://www.broward.org/codeappeals>

### BROWARD COUNTY LOCAL AMENDMENT Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro \_\_\_\_\_  
Address: 1 North University Dr. Suite 3500B Plantation, FL 33324 \_\_\_\_\_  
E-mail: [jdipietro@broward.org](mailto:jdipietro@broward.org) \_\_\_\_\_  
Phone: 954-765-4500 \_\_\_\_\_  
Fax: 954-765-4504 \_\_\_\_\_  
Code: 7<sup>th</sup> Edition (2020) FBC – Plumbing \_\_\_\_\_  
Section #: 604 - Design of Building Water Distribution System, Table 604.4 \_\_\_\_\_  
Text of Modification (additions underlined; deletions ~~stricken~~):

Please see attachment.

#### Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

*This Amendment exceeds minimum standards by reducing plumbing fixture water flow rates currently required by the Florida Building Code "Plumbing" thereby increasing water conservation standards. This proposed amendment will adopt U.S. Environmental Protection Agency (EPA) WaterSense Label as an Alternate for table 604.4.*

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

*Water conservation is an essential part of the Broward water supply plan and implementation of high efficiency plumbing requirements is supported by the Broward County Board of County Commissioners, the Broward League of Cities and the Broward Water Resources Task Force. The Biscayne Aquifer is the primary source of drinking water for all of Broward County and offers the lowest cost water supply for the region. However, concerns about future water availability resulted in the permanent restrictions on withdrawals from this Aquifer while saltwater intrusion limits withdrawals from two coastal well fields and threatens several others. Efforts to conserve water*

*are essential to preserving the capacity of existing water sources while reducing the need to develop alternative water supplies which will impose a substantial cost to rate payers.*

3. Explain how the local need is addressed by the proposed local amendment.

*This modification will help reduce the water demands on our Biscayne Aquifer while not creating a health or inconvenience problem for the residents of this area.*

4. Explain how the local amendment is no more stringent than necessary to address the local need.

*The local need of water conservation is very serious as mandated by the Broward Commission. The establishment of this amendment is only one of the means to help prevent a water shortage situation.*

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

*Due to the advancement in technology by all Plumbing Fixture manufacturers and the need for additional water conservation, this amendment would have little to no recognizable impact on materials, products or construction developments.*

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

*This amendment is modifying existing verbiage of the Florida Building Code "Plumbing", therefore it does not address a new subject.*

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
  - a) Impact to local government, relative to enforcement.
  - b) Impact to property and building owners relative to cost of compliance.
  - c) Impact to industry relative to the cost of compliance

- a) *No impact.*
- b) *This modification will reduce impact fees charged by Broward County.*
- c) *No impact.*

**BROWARD BORA PUBLIC HEARING AND VOTE, SEPTEMBER 10, 2020.**

**AMENDMENT EFFECTIVE DATE DECEMBER 31, 2020.**

# Section 6

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7<sup>th</sup> Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7<sup>th</sup> Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

One tap mobile

+13017158592,,92084341221#,,,,,0#,,681068# US (Germantown)

+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

[http:// www. broward.org/codeappeals](http://www.broward.org/codeappeals)

---

**TO:** Members of the Broward County Board of Rules and Appeals  
**FROM:** Chief Plumbing Code Compliance Officer  
**DATE:** October 8, 2020  
**SUBJECT:** Adopt the Florida Building Code 7<sup>th</sup> Edition (2020), Residential Table P2903.2 Maximum Flow Rate and Consumption for Plumbing Fixtures, Fixture Fittings<sup>b</sup> and Appliances

---

## **Recommendation**

That BORA re-adopt FBC, Residential Table P2903.2.

## **Reasons**

Water conservation is an essential part of the Broward County water supply plan. These amendments will adopt U.S. Environmental Protection Agency (EPA) WaterSense Label for plumbing fixtures and appliances. These modifications will require less usage from the Biscayne Aquifer.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Viñas".

Otto Viñas  
Chief Plumbing Code Compliance Officer

**TABLE P2903.1  
REQUIRED CAPACITIES AT POINT OF OUTLET DISCHARGE**

FIXTURE SUPPLY OUTLET SERVING	FLOW RATE (gpm)	FLOW PRESSURE (psi)
Bathtub, balanced-pressure, thermostatic or combination balanced-pressure/thermostatic mixing valve	4	20
Bidet, thermostatic mixing valve	2	20
Dishwasher	2.75	8
Laundry tray	4	8
Lavatory	0.8	8
Shower, balanced-pressure, thermostatic or combination balanced-pressure/thermostatic mixing valve	2.5 <sup>a</sup>	20
Sillcock, hose bibb	5	8
Sink	1.75	8
Water closet, flushometer tank	1.6	20
Water closet, tank, close coupled	3	20
Water closet, tank, one-piece	6	20

For SI: 1 pound per square inch = 6.895 kPa, 1 gallon per minute = 3.785 L/m.

a. Where the shower mixing valve manufacturer indicates a lower flow rating for the mixing valve, the lower value shall be applied.

**TABLE P2903.2  
MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND FIXTURE FITTINGS<sup>b</sup>**

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY
Lavatory faucet	2.2 gpm at 60 psi
Shower head <sup>a</sup>	2.5 gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Water closet	1.6 gallons per flushing cycle

For SI: 1 gallon per minute = 3.785 L/m,  
1 pound per square inch = 6.895 kPa.

a. A handheld shower spray shall be considered a shower head.

b. Consumption tolerances shall be determined from referenced standards.

tank, a hydropneumatic pressure booster system or a water pressure booster pump.

**P2903.3.1 Maximum pressure.** The static water pressure shall be not greater than 80 psi (551 kPa). Where the main pressure exceeds 80 psi (551 kPa), an *approved* pressure-reducing valve conforming to ASSE 1003 or CSA B356 shall be installed on the domestic water branch main or riser at the connection to the water service pipe.

**P2903.4 Thermal expansion control.** A means for controlling increased pressure caused by thermal expansion shall be installed where required in accordance with Sections P2903.4.1 and P2903.4.2.

**P2903.4.1 Pressure-reducing valve.** For water service system sizes up to and including 2 inches (51 mm), a device for controlling pressure shall be installed where, because of thermal expansion, the pressure on the downstream side of a pressure-reducing valve exceeds the pressure-reducing valve setting.

**P2903.4.2 Backflow prevention device or check valve.**

Where a backflow prevention device, check valve or other device is installed on a water supply system using storage water heating equipment such that thermal expansion causes an increase in pressure, a device for controlling pressure shall be installed.

**P2903.5 Water hammer.** The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A water-hammer arrestor shall be installed where quick-closing valves are utilized. Water-hammer arrestors shall be installed in accordance with the manufacturer's instructions. Water-hammer arrestors shall conform to ASSE 1010.

**P2903.6 Determining water supply fixture units.** Supply loads in the building water distribution system shall be determined by total load on the pipe being sized, in terms of water supply fixture units (w.s.f.u.), as shown in Table P2903.6, and gallon per minute (gpm) flow rates [see Table P2903.6(1)]. For fixtures not listed, choose a w.s.f.u. value of a fixture with similar flow characteristics.

**TABLE P2903.2**  
**MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES, AND FIXTURE**  
**FITTINGS <sup>b</sup> AND APPLIANCES**

<b>PLUMBING FIXTURE OR FITTING</b>	<b>MAXIMUM FLOW RATE OR QUANTITY</b>
Lavatory faucet	<del>2.2</del> <u>1.5</u> gpm at 60 psi
Shower head <sup>a</sup>	<u>2.0</u> <del>2.2</del> gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Water closet	<del>4.6</del> <u>1.28</u> gallons per flushing cycle
<u>Dishwasher (Residential)</u>	<u>6.5</u> gallons per cycle or less (Energy Star/Watersense Certified) (c)
<u>Washing Machine</u>	<u>Water factor</u> or 8 or lower (Energy Star/Watersense Certified) (c)

For SI: 1 gallon per minute = 3.785 L/m.

1 pound per square inch = 6.895 kPa.

- a. A handheld shower spray is also a shower head
- b. Consumption tolerances shall be determined from referenced standards.
- c. Water factor in gallons per cycle per cubic foot

Exception: All fixtures, fittings and appliances with U.S. Environmental Agency WaterSense® (EPA) Label



## WATER SUPPLY AND DISTRIBUTION

TABLE P2903.1  
REQUIRED CAPACITIES AT POINT OF OUTLET DISCHARGE

FIXTURE SUPPLY OUTLET SERVING	FLOW RATE (gpm)	FLOW PRESSURE (psi)
Bathtub, balanced-pressure, thermostatic or combination balanced-pressure/thermostatic mixing valve	4	20
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Dishwasher	2.75	8
Laundry tray	4	8
Lavatory	0.8	8
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Sillcock, hose bibb	5	8
Sink	1.75	8
Water closet, flushometer tank	1.6	20
Water closet, tank, close coupled	3	20
Water closet, tank, one-piece	6	20

For SI: 1 pound per square inch = 6.895 kPa, 1 gallon per minute = 3.785 L/m.

a. Where the shower mixing valve manufacturer indicates a lower flow rating for the mixing valve, the lower value shall be applied.

TABLE P2903.2  
MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES, AND FIXTURE FITTINGS <sup>b</sup> AND APPLIANCES

PLUMBING FIXTURE OR FITTING	MAXIMUM FLOW RATE OR QUANTITY
Lavatory faucet	<del>2.2</del> <u>1.5</u> gpm at 60 psi
Shower head <sup>a</sup>	<u>2.0</u> <del>2.2</del> gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Water closet	<del>1.6</del> <u>1.28</u> gallons per flushing cycle
<u>Dishwasher (Residential)</u>	<u>6.5 gallons per cycle or less (Energy Star/Watersense Certified) (c)</u>
<u>Washing Machine</u>	<u>Water factor or 8 or lower (Energy Star/Watersense Certified) (c)</u>

For SI: 1 gallon per minute = 3.785 L/m.

1 pound per square inch = 6.895 kPa.

- A handheld shower spray is also a shower head
- Consumption tolerances shall be determined from referenced standards
- Water factor in gallons per cycle per cubic foot

Exception: All fixtures, fittings and appliances with U.S. Environmental Agency WaterSense® (EPA) Label

**P2903.3.1 Maximum pressure.** The static water pressure shall be not greater than 80 psi (551 kPa). Where the main pressure exceeds 80 psi (551 kPa), an *approved* pressure-reducing valve conforming to ASSE 1003 or CSA B356 shall be installed on the domestic water branch main or riser at the connection to the water service pipe.

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**P2903.4.2 Backflow prevention device or check valve.**

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Broward County

## Board of Rules and Appeals

One N. University Drive, Suite 3500-B, Plantation, Florida 33324

TL 954.765.4500 ✦ FX 954.765.4504

broward.org/codeappeals

### BROWARD COUNTY LOCAL AMENDMENT Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro \_\_\_\_\_  
Address: 1 North University Dr. Suite 3500B Plantation, FL 33324 \_\_\_\_\_  
E-mail: jdipietro@broward.org \_\_\_\_\_  
Phone: 954-765-4500 \_\_\_\_\_  
Fax: 954-765-4504 \_\_\_\_\_  
Code: 7<sup>th</sup> Edition (2020) FBC – Residential \_\_\_\_\_  
Section #: P2903 Water Supply System, Table P2903.2 \_\_\_\_\_  
Text of Modification (additions underlined; deletions ~~stricken~~):

Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

*This Amendment exceeds minimum standards by reducing plumbing fixture water flow rates currently required by the Florida Building Code "Residential" thereby increasing water conservation standards. This proposed amendment will adopt U.S. Environmental Protection Agency (EPA) WaterSense Label as an Alternate for Table P2903.2.*

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

*Water conservation is an essential part of the Broward water supply plan and implementation of high efficiency plumbing requirements is supported by the Broward County Board of County Commissioners, the Broward League of Cities and the Broward Water Resources Task Force. The Biscayne Aquifer is the primary source of drinking water for all of Broward County and offers the lowest cost water supply for the region. However, concerns about future water availability resulted in the permanent restrictions on withdrawals from this Aquifer while saltwater intrusion limits withdrawals from two coastal well fields and threatens several others. Efforts to conserve water are essential to preserving the capacity of existing water sources while reducing the need to develop alternative water supplies which will impose a substantial cost to rate payers.*



Broward County

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3. Explain how the local need is addressed by the proposed local amendment.

*This modification will help reduce the water demands on our Biscayne Aquifer while not creating a health or inconvenience problem for the residents of this area.*

4. Explain how the local amendment is no more stringent than necessary to address the local need.

*The local need of water conservation is very serious as mandated by the Broward Commission. The establishment of this amendment is only one of the means to help prevent a water shortage situation.*

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

*Due to the advancement in technology by all Plumbing Fixture manufacturers and the need for additional water conservation, this amendment would have little to no recognizable impact on materials, products or construction developments.*

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

*This amendment is modifying existing verbiage of the Florida Building Code "Residential"; therefore it does not address a new subject.*

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:

- a) Impact to local government, relative to enforcement.
  - b) Impact to property and building owners relative to cost of compliance.
  - c) Impact to industry relative to the cost of compliance
- 
- a) *No impact.*
  - b) *This modification will reduce impact fees charged by Broward County.*
  - c) *No impact.*

**Broward BORA Public hearing and Vote September 10, 2020**

**Amendment Effective date: December 31, 2020**

# Section 7

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7<sup>th</sup> Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7<sup>th</sup> Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

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+13017158592,,92084341221#,,,,,0#,,681068# US (Germantown)

+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324  
PHONE (954) 765-4500 FAX: (954) 765-4504  
<http://www.broward.org/codeappeals>

---

**TO:** Members of the Broward County Board of Rules and Appeals  
**FROM:** Chief Plumbing Code Compliance Officer  
**DATE:** October 8, 2020  
**SUBJECT:** Adopt the Florida Building Code 7<sup>th</sup> Edition (2020), Plumbing, Appendix F with Amendments, entitled "Proposed Construction Building Codes For Turf and Landscape Irrigation Systems".

---

## Recommendation

That BORA re-adopt FBC, Plumbing, Appendix F with amendments.

## Reasons

The Appendix is not part of the code unless it is adopted for countywide use by BORA. BORA has adopted Appendix F since March 1, 2009. The Florida Building Commission has adopted some of Broward County local amendments in past codes. There have been no changes from the 6<sup>th</sup> Edition.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Viñas".

Otto Viñas  
Chief Plumbing Code Compliance Officer

## APPENDIX F

# PROPOSED CONSTRUCTION BUILDING CODES FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS

### PART 1: GENERAL

#### A. Description.

1. **Purpose.** To establish uniform minimum standards and requirements for the design and installation of safe, cost effective, reliable irrigation systems for turf and landscape areas which promote the efficient use and protection of water and other natural resources.
2. **Definition.** Turf and landscape irrigation systems apply water by means of permanent above-ground or subsurface sprinkler or microsprinkler equipment under pressure.
3. **Scope.** These construction codes shall apply to all irrigation systems used on residential and commercial landscape areas. They address the design requirements, water quality, materials, installation, inspection, and testing for such systems. These construction codes do not apply to irrigation systems for golf courses, nurseries, greenhouses, or agricultural production systems.
4. **Application.** All new irrigation systems and any new work to existing irrigation systems shall conform to the requirements of this code.
5. **Application to existing irrigation installations.** Nothing contained in this code shall be deemed to require any irrigation system or part thereof, which existed prior to the establishment of this code, to be changed, altered or modified to meet the standards of this code.

#### B. Permits.

1. **Permits required.** It shall be unlawful to construct, enlarge, alter, modify, repair, or move any irrigation system or part thereof, or to install or alter any equipment for which provision is made or the installation of which is regulated by this code without first having filed application and obtained a permit therefore from the building official. A permit shall be deemed issued when signed by the building official and impressed with the seal of the governmental agency issuing said permit.
2. **Exceptions.** All work where exempt from permit shall still be required to comply with the code. No permit shall be required for general maintenance or repairs which do not change the structure or alter the system and the value of which does not exceed \$600.00 in labor and material based on invoice value.

#### C. Preconstruction submittals.

1. **Plans or drawings.**

a. **Single-family residence.** Provide design drawings or shop drawings, where required, for the installation prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, and include all improvements. Drawings can be prepared by a properly licensed qualified contractor.

b. **Commercial, industrial, municipal and multiple-family.** Provide professionally designed drawings prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, including all improvements, and shall include but not be limited to: date, scale, revisions, legend, specifications which list all aspects of equipment and assembly thereof, water source, water meter and/or point of connection, backflow prevention devices, pump station size, pump station location, design operating pressure and flow rate per zone, precipitation rate per zone, locations of pipe, controllers, valves, sprinklers, sleeves, gate valves, etc. The plans and specifications shall be prepared in accordance with Section 107 of the *Florida Building Code, Building*.

#### D. Definitions.

**ABS Pipe.** Acrylonitrile-butadiene-styrene black, semi-rigid, plastic pipe extruded to IPS. ABS pipe is in limited use in present day irrigation systems. Solvent weld fittings are used with this pipe (see ASTM D1788).

**Air Release Valve.** A valve which will automatically release to the atmosphere accumulated small pockets of air from a pressurized pipeline. A small orifice is used to release air at low flow rates. Air release valves are normally required at all summits of mainline and sub-main pipelines in an irrigation system.

**Anti-Siphon Device.** A safety device used to prevent back-flow of irrigation water to the water source by back-siphonage.

**Application Rate.** The average rate at which water is applied by an irrigation system, sometimes also called precipitation rate. Units are typically inches/hr or mm/hr.

**Application Uniformity.** Irrigation application uniformity (also known as distribution uniformity) describes how evenly water is distributed within an irrigation zone.

**Arc.** The angle of coverage of a sprinkler in degrees from one side of throw to the other. A 90-degree arc would be a quarter-circle sprinkler.

**Atmospheric Vacuum Breaker.** An anti-siphon device which uses a floating seat to direct water flow. Water draining back from irrigation lines is directed to the atmosphere to protect the potable water supply.

**Automatic Control Valve.** A valve in a sprinkler system which is activated by an automatic controller by way of hydraulic or electrical control lines and controls a single device or multiple devices.

**Automatic System.** An irrigation system which operates following a preset program entered into an automatic controller.

**Backflow Prevention Device.** An approved safety device used to prevent pollution or contamination of the irrigation water supply due to backflow from the irrigation system.

**Belled (Pipe).** Pipe which is enlarged at one end so that the spigot end of another length of pipe can be inserted into it during the assembly of a pipeline.

**Block (of sprinklers).** A group of sprinklers controlled by one valve. Also called zones or subunits.

**Block System.** An irrigation system in which several groups of sprinklers are controlled by one valve for each group.

**Bubbler Irrigation.** The application of water to the soil surface or a container as a small stream or fountain. Bubbler emitter discharge rates are greater than the 0.5 to 2 gph characteristic of drip emitters, but generally less than 60 gph.

**Check Valve.** A valve which permits water to flow in one direction only.

**Chemical Water Treatment.** The addition of chemicals to water to make it acceptable for use in irrigation systems

**Chemigation.** The application of water soluble chemicals by mixing or injecting with the water applied through an irrigation system.

**Contractor.** Any person who engages in the fabrication and installation of any type of irrigation system on a contractual basis in accordance with all stipulations receiving his compensation.

**Control Lines.** Hydraulic or electrical lines which carry signals (to open and close the valves) from the controller to the automatic valves.

**Controller.** The timing mechanism and its mounting box. The controller signals the automatic valves to open and close on a pre-set program or based on sensor readings.

**Coverage.** Refers to the way water is applied to an area.

**Cycle.** Refers to one complete run of a controller through all programmed controller stations.

**Demand (or irrigation demand).** Refers to the irrigation requirements of the irrigated area. Demand primar-

ily depends on the type of crop, stage of growth, and climatic factors.

**Design Area.** The specific land area to which water is to be applied by an irrigation system.

**Design Emission Uniformity.** An estimate of the uniformity of water application with an irrigation system.

**Design Pressure.** The pressure at which the irrigation system or certain components are designed to operate. The irrigation system design pressure is that measured at the pump discharge or entrance to the system if there is no pump, and a zone design pressure is the average operating pressure of all emitters within that zone.

**Direct Burial Wire.** Plastic-coated single-strand copper wire for use as control line for electric valves.

**Discharge Rate.** The instantaneous flow rate of an individual sprinkler, emitter, or other water emitting device, or a unit length of line-source microirrigation tubing. Also, the flow rate from a pumping system.

**Double Check Valve.** An approved assembly of two single, independently-acting check valves with test ports to permit independent testing of each check valve.

**Drain Valve.** A valve used to drain water from a line. The valve may be manually or automatically operated.

**Drip Irrigation.** The precise low-rate application of water to or beneath the soil surface near or directly into the plant root zone. Applications normally occur as small streams, discrete or continuous drops, in the range of 0.5 to 2.0 gph.

**Effluent water.** Also referred to as reclaimed or gray water is wastewater which has been treated per Florida Statute, §403.086 and is suitable for use as a water supply for irrigation systems.

**Emitters.** Devices which are used to control the discharge of irrigation water from lateral pipes. This term is primarily used to refer to the low flow rate devices used in microirrigation systems.

**Fertigation.** The application of soluble fertilizers with the water applied through an irrigation system.

**Filtration System.** The assembly of physical components used to remove suspended solids from irrigation water. These include both pressure and gravity type devices, such as settling basins, screens, media filters, and centrifugal force units (vortex sand separators).

**Flexible Swing Joint.** A flexible connection between the lateral pipe and the sprinkler which allows the sprinkler to move when force is applied to it.

**Flow Meters.** Devices used to measure the volume of flow of water (typically in gallons), or flow rates (typically in gpm), and to provide data on system usage.

**Gauge (Wire).** Standard specification for wire size. The larger the gauge number, the smaller the wire diameter.

**Head.** A sprinkler head. Sometimes used interchangeably with and in conjunction with "Sprinkler."



**Infiltration Rate.** The rate of water flow across the surface of the soil and into the soil profile. Units are usually inches/hr.

**Irrigation.** Application of water by artificial means, that is, means other than natural precipitation. Irrigation is practiced to supply crop water requirements, leach salts, apply chemicals, and for environmental control including crop cooling and freeze protection.

**Irrigation Water Requirement or Irrigation Requirement.** The quantity of water that is required for crop production, exclusive of effective rainfall.

**Landscape.** Refers to any and all areas which are ornamentally planted, including but not limited to turf, ground covers, flowers, shrubs, trees, and similar plant materials as opposed to agricultural crops grown and harvested for monetary return.

**Lateral.** The water delivery pipeline that supplies water to the emitters or sprinklers from a manifold or header pipeline downstream of the control valve.

**Line-Source Emitters.** Lateral pipelines which are porous or contain closely-spaced perforations so that water is discharged as a continuous band or in overlapping patterns rather than discrete widely-spaced points along the pipeline length.

**Looped System.** A piping system which allows more than one path for water to flow from the supply to the emitters or sprinklers.

**Low Volume Sprinklers.** Sprinkler heads that emit less than 0.5 gallons per minute.

**Mainline.** A pipeline which carries water from the control station to submains or to manifolds or header pipelines of the water distribution system.

**Manifold.** The water delivery pipeline that conveys water from the main or submain pipelines to the laterals. Also sometimes called a header pipeline.

**Manual System.** A system in which control valves are manually operated rather than operated by automatic controls.

**Matched Precipitation.** An equal distribution of water over a given area or zone.

**Meter Box.** A concrete or plastic box buried flush to grade which houses flow (water) meters or other components.

**Microirrigation.** The frequent application of small quantities of water directly on or below the soil surface, usually as discrete drops, tiny streams, or miniature sprays through emitters placed along the water delivery pipes (laterals). Microirrigation encompasses a number of methods or concepts, including drip, subsurface, bubbler, and spray irrigation. Previously known as trickle irrigation.

**Overlap.** The amount one sprinkler pattern overlaps another one when installed in a pattern. Expressed as a percentage of the diameter of coverage.

**PE Pipe.** Flexible polyethylene pipe for use in irrigation systems, normally manufactured with carbon black for resistance to degradation by ultraviolet radiation.

**Potable Water.** Water which is suitable in quality for human consumption and meets the requirements of the Health Authority having jurisdiction.

**Pressure Relief Valve.** A valve which will open and discharge to atmosphere when the pressure in a pipeline or pressure vessel exceeds a pre-set point to relieve the high-pressure condition.

**Pressure Vacuum Breaker.** A backflow prevention device which includes a spring-loaded check valve and a spring-loaded vacuum breaker to prevent the backflow of irrigation system water to the water source.

**Pumping Station.** The pump or pumps that provide water to an irrigation system, together with all of the necessary accessories such as bases or foundations, sumps, screens, valves, motor controls, safety devices, shelters and fences.

**PVC Pipe.** Polyvinyl chloride plastic pipe made in standard thermoplastic pipe dimension ratios and pressure rated for water. Manufactured in accordance with AWWA C-900 or ASTM D2241.

**Rain Shut off Device.** A calibrated device that is designed to detect rainfall and override the irrigation cycle of the sprinkler system when a predetermined amount of rain fall has occurred.

**Riser.** A threaded pipe to which sprinklers or other emitters are attached for above-ground placement.

**Sleeve.** A pipe used to enclose other pipes, wire, or tubing; usually under pavement, sidewalks, or planters.

**Spacing.** The distance between sprinklers or other emitters.

**Spray Irrigation.** The microirrigation application of water to the soil or plant surface by low flow rate sprays or mists.

**Sprinkler.** The sprinkler head. Sometimes called "Head."

**Supply (Water Source).** The origin of the water used in the irrigation system.

**Swing Joint.** A ridged connection between the lateral pipe and the sprinkler, utilizing multiple ells and nipples, which allows the sprinkler to move when force is applied to it.

**Tubing.** Generally used to refer to flexible plastic hydraulic control lines which are usually constructed of PE or PVC.

## PART II: DESIGN CRITERIA

- A. Design defined.** Within the scope of this code, irrigation system design is defined as the science and art of properly selecting and applying all components within the system. The irrigation system shall be designed and installed to achieve the highest possible efficiency by providing operating pressures, sprinkler placement and

nozzle selection that are within the manufacturer’s recommendations, and maintained to keep the system at or within those ranges.

**B. Water supply.**

1. The water source shall be adequate from the standpoint of volume, flow rate, pressure, and quality to meet the irrigation requirements of the area to be irrigated, as well as other demands, if any, both at the time the system is designed and for the expected life of the system. The irrigation system shall use the lowest quality water source available on site.
2. If the water source is effluent, it shall meet the advanced waste treatment standard as set forth in *Florida Statute* §403.086(4) as well as any other standard as set forth by the controlling governmental agency.

**C. Application uniformity.**

1. Sprinkler irrigation systems should be designed with the appropriate uniformity for the type of plants being grown and the type of soil found in that area. The general watering of different types of plants as one group without regard to their individual water requirements is to be avoided.
2. Use sprinkler head spacing, type and nozzle selection to achieve the highest application uniformity.
3. Use application rates which avoid runoff and permit uniform water infiltration into the soil. Land slope, soil hydraulic properties, vegetative ground cover, and prevailing winds and sun exposure will be considered when application rates are specified. Different types of sprinklers with different application rates, i.e., spray heads vs. rotor heads, bubbler heads vs. rotor heads, shall not be combined on the same zone or circuit.

**D. System zoning.** The irrigation system should be divided into zones based on consideration of the following hydrozoning practices.

1. Available flow rate.
2. Cultural use of the area.
3. Type of vegetation irrigated, i.e., turf, shrubs, native plants, etc.
4. Type of sprinkler, i.e., sprinklers with matching precipitation rates.
5. Soil characteristics and slope.
6. Sun exposure.

**E. Sprinkler/emitter spacing and selection.**

1. Sprinkler/Emitter spacing will be determined considering the irrigation requirements, hydraulic characteristics of the soil and device, and water quality with its effect on plant growth, sidewalks, buildings, and public access areas.
2. All pop-up spray head bodies in turf areas shall be no less than 6 inches in height for St. Augustine,

Zoysia and Bahia and no less than 4 inches in height for Bermuda, Centapede and Seashore Paspalum.

3. Sprinklers should be located in all corners and on the perimeter of each irrigated zone area for a matched precipitation rate objective.
4. Single row head spacing should only occur when an additional row will cause saturated soils at the toe of a slope or other inefficiencies.
5. All heads shall not exceed 50 percent of manufacturer’s specified diameters of coverage.
6. Water conservation will be emphasized by minimizing irrigation of nonvegetated areas.
7. Microirrigation systems should be designed using the Emission Uniformity concept. Space microirrigation emitters to wet 100 percent of the root zone in turf areas and 50 percent of the root zone for shrubs and trees.
8. Microirrigation or low volume heads shall be required in all areas less than 4 feet in either direction.
9. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PD main or lateral break.
10. Each plant shall have an adequate number and size (gph) of microirrigation devices, properly placed, to meet the plant water requirements for no rainfall.

**F. Pipelines.** Pipelines will be sized to limit pressure variations so that the working pressure at all points in the irrigation system will be in the range required for uniform water application. Velocities will be kept to 5 feet (1524 mm) per second.

**G. Wells.**

1. Well diameters and depths are to be sized to correspond to the irrigation system demand. Refer to SCS Code FL-642 and local water management district regulations.
2. Well location and depth shall be in compliance with applicable state, water management district and local codes.

**H. Pumps.**

1. Pump and motor combinations shall be capable of satisfying the total system demand without invading the service factor of the motor except during start-up and between zones.
2. Pumps shall be positioned with respect to the water surface in order to ensure that the net positive suction head required (NPSHr) for proper pump operation is achieved.
3. The pumping system shall be protected against the effects of the interruption of water flow.

**I. Control valves.**

1. Control valve size shall be based on the flow rate through the valve. Friction loss through the valve, an approved air gap separation, or a reduced pressure should not exceed 10 percent of the static mainline head.
2. Control systems using hydraulic communication between controller and valve(s) shall comply with the manufacturer's recommendations for maximum distance between controller and valve, both horizontally and vertically (elevation change).
3. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications; based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except individual, single lot residential systems.
4. Locate manually operated control valves so that they can be operated without wetting the operator.
5. Locate inground valves away from large tree and palm root zones.
6. A manual shut-off valve shall be required to be installed close to the point of connection but downstream from any backflow device to minimize water loss when the system is shut off for repairs or emergencies.
7. An automatic shut-off valve (normally closed) is required on all systems with a constantly pressurized mainline to confine the water loss from minor main line leaks, weeping valves, or stuck on valves to just the time the system is operating automatically.

**J. Automatic irrigation controller.** Automatic irrigation controllers must be UL approved and have an adequate number of stations and power output per station to accommodate the irrigation system design. The controller shall be capable of incorporating a rain shut-off device or other sensors to override the irrigation cycle when adequate rainfall has occurred as required by *Florida Statutes*, Section 373.62.

**K. Chemical injection.**

1. Chemical injection systems for the injection of fertilizer, pesticides, rust inhibitors, or any other injected substance will be located and sized according to the manufacturers' recommendations.
2. Injection systems will be located downstream of the applicable backflow prevention devices as required by *Florida Statutes*, Sections 487.021 and 487.055; the Environmental Protection Agency (EPA); Pesticide Regulation Notice 87-1; or other applicable codes.

3. If an irrigation water supply is also used for human consumption, an air gap separation or an approved reduced pressure principal backflow prevention device is required.

**L. Backflow prevention methods.** Provide backflow prevention assemblies at all cross connections with all water supplies in accordance with county, municipal or other applicable codes to determine acceptable backflow prevention assembly types and installation procedures for a given application. In the event of conflicting regulation provide the assembly type which gives the highest degree of protection.

1. Irrigation systems into which chemicals are injected shall conform to Florida state law (*Florida Statutes* 487.021 and 487.055) and Environmental Protection Agency Pesticide Regulation Notice 87-1, which requires backflow prevention regulations to be printed on the chemical label.
2. For municipal water supplies, chemical injection equipment must be separated from the water supply by an approved air gap separation or a reduced pressure principle assembly that is approved by the Foundation for CCC and the Hydraulic Research Institute. The equipment must also comply with ASSE 1013 to protect the water supply from back-siphonage and back-pressure.
3. For other water supplies, Florida State law, EPA regulations, or other applicable local codes must be followed. In the absence of legal guidelines at least a PVB should be used.

**PART III: STANDARDS**

**1. American Society of Agricultural Engineers (ASAE) Standards:**

**ASAE S330.1:** Procedure for sprinkler distribution testing for research purposes.

**ASAE S376.1:** Design, installation, and performance of underground thermoplastic irrigation pipelines.

**ASAE S397.1:** Electrical service and equipment for irrigation.

**ASAE S435:** Drip/Trickle Polyethylene Pipe used for irrigation laterals.

**ASAE S398.1:** Procedure for sprinkler testing and performance reporting.

**ASAE S339:** Uniform classification for water hardness.

**ASAE S394:** Specifications for irrigation hose and couplings used with self-propelled, hose-drag agricultural irrigation system.

**ASAE EP400.1:** Designing and constructing irrigation wells.

**ASAE EP405:** Design, installation, and performance of trickle irrigation systems.

**ASAE EP409:** Safety devices for applying liquid chemicals through irrigation systems.

**2. ASTM International Standards:**

**ASTM D2241:** Poly (Vinyl Chloride) (PVC) Plastic pipe (SDR-PR).

**ASTM D2239:** Specification for polyethylene (PE) plastic pipe (SDR-PR).

**ASTM D2466:** Specification for socket-type poly (vinyl chloride) (PVC) and chlorinated poly (vinyl chloride) (CPVC) plastic pipe fittings, Schedule 40.

**ASTM D2855:** Standard recommended practice for making solvent cemented joints with polyvinyl chloride pipe and fittings.

**ASTM D3139:** Specification for joints for plastic pressure pipes using flexible elastomeric seals.

**ASTM F477:** Specification for elastomeric seals (gaskets for joining plastic pipe).

**3. American Water Works Association (AWWA) standards:**

**AWWA C-900:** PVC pipe standards and specifications.

**4. American Society of Sanitary Engineers (ASSE) Standards:**

**ASSE 1001:** Pipe applied atmospheric type vacuum breakers.

**ASSE 1013:** Reduced pressure principle backflow preventers.

**ASSE 1015:** Double check valve-type back pressure backflow preventers.

**ASSE 1020:** Vacuum breakers, anti-siphon, pressure type.

**ASSE 1024:** Dual check valve-type backflow preventers.

**5. Hydraulic Institute Standards, 14th Edition.**

**6. Standards and Specifications For Turf and Landscape Irrigation Systems Florida Irrigation Society (FIS) Standards.**

**7. Soil Conservation Service (SCS) Field Office Technical Guide, Section IV-A — Cropland Codes:**

**SCS Code 430-DD:** Irrigation water conveyance, underground, plastic pipeline.

**SCS Code 430-EE:** Irrigation water conveyance. Low pressure, underground, plastic pipeline.

**SCS Code 430-FF:** Irrigation water conveyance, steel pipeline.

**SOS Code 441-1:** Irrigation system, trickle.

**SCS Code 442:** Irrigation system sprinkler.

**SCS Code 449:** Irrigation water management.

**SCS Code 533:** Pumping plant for water control.

**SCS Code 642:** Well.

**PART IV: MATERIALS**

**A. PVC pipe and fittings.**

1. PVC pipe should comply with one of the following standards: ASTM D1785, ASTM D2241, AWWA C-900, or AWWA C-905. SDR-PR pipe shall have a minimum wall thickness as required by SDR-26. All pipe used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.
2. All solvent-weld PVC fittings shall, at a minimum, meet the requirements of Schedule 40 as set forth in ASTM D2466.
3. Threaded PVC pipe fittings shall meet the requirements of Schedule 40 as set forth in ASTM D2464.
4. PVC gasketed fittings shall conform to ASTM D3139. Gaskets shall conform to ASTM F477.
5. PVC flexible pipe should be pressure rated as described in ASTM D2740 with standard outside diameters compatible with PVC IPS solvent-weld fittings.
6. PVC cement should meet ASTM D2564. PVC cleaner-type should meet ASTM F656.

**B. Ductile iron pipe and fittings.**

1. Gasket fittings for iron pipe should be of materials and type compatible with the piping material being used.

**C. Steel pipe and fittings.**

1. All steel pipe shall be rated Schedule 40 or greater and be hot-dipped galvanized or black in accordance with ASTM A53/A53M.
2. Threaded fittings for steel pipe should be Schedule 40 Malleable Iron.

**D. Polyethylene pipe.**

1. Flexible swing joints shall be thick-walled with a minimum pressure rating of 75 psi (517 kPa) in accordance with ASTM D2239.
2. Low pressure polyethylene pipe for microirrigation systems shall conform with ASAE S-435.
3. Use fittings manufactured specifically for the type and dimensions of polyethylene pipe used.

**E. Sprinklers, spray heads, and emitters.**

1. Select units and nozzles in accordance with the size of the area and the type of plant material being irrigated. Sprinklers must fit the area they are intended to water without excessive overspray onto anything but the lot individual landscaped surface. Intentional direct spray onto walkways, buildings, roadways, and drives is prohibited. All sprinklers used with effluent water systems shall be designated for non-potable use by either label or by the industry standard color purple.
2. Use equipment that is protected from contamination and damage by use of seals, screens, and springs

where site conditions present a potential for damage.

3. Support riser-mounted sprinklers to minimize movement of the riser resulting from the action of the sprinkler.
4. Swing joints, either flexible or rigid, shall be constructed to provide a leak-free connection between the sprinkler and lateral pipeline to allow movement in any direction and to prevent equipment damage.
5. Check valves shall be installed on any sprinkler where low point drainage occurs.
6. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

**F. Valves.**

1. Valves must have a maximum working pressure rating equal to or greater than the maximum pressure of the system, but not less than 125 psi (861 kPa). This requirement may be waived for low mainline pressure systems [30 psi (207 kPa) or less]. All valves used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.
2. Only valves that are constructed of materials designed for use with the water and soil conditions of the installation shall be used. Valves that are constructed from materials that will not be deteriorated by chemicals injected into the system shall be used on all chemical injection systems.

**G. Valve boxes.**

1. Valve boxes are to be constructed to withstand traffic loads common to the area in which they are installed. They should be sized to allow manual operation of the enclosed valves without excavation.
2. Each valve box should be permanently labeled to identify its contents. All valve boxes used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.

**H. Low voltage wiring.**

1. All low voltage wire which is directly buried must be labeled for direct burial wire. Wire not labeled for direct burial must be installed in watertight conduits, and be UL listed TWN or THHN type wire as described in the NEC. All wire traveling under any hardscape or roadway must installed within a pipe and sleeve.
2. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications, based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating, on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except single lot individual residential systems.

noids operating, on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except single lot individual residential systems.

3. Connections are to be made using UL approved devices specifically designed for direct burial. All splices shall be enclosed within a valve box.

**I. Irrigation controllers.**

1. All irrigation controllers shall be UL listed, conform to the provisions of the *National Electric Code* (NEC), and be properly grounded in accordance with manufacturer's recommendations. Equip solid state controls with surge suppressors on the primary and secondary wiring, except single lot residential systems.
2. The controller housing or enclosure shall protect the controller from the hazards of the environment in which it is installed.
3. The rain switch shall be placed on a stationary structure minimum of 5-foot (1524 mm) clearance from other outdoor equipment, free and clear of any tree canopy or other overhead obstructions, and above the height of the sprinkler coverage. Soil moisture sensors and ET sensors shall be installed and monitored per manufacturer's guidelines per *Florida Statutes*, Section 373.62 requirements.

**J. Pumps and wells.**

1. Irrigation pump electrical control systems must conform to NEC and local building codes.
2. The pumping system shall be protected from the hazards of the environment in which it is installed.
3. Use electric motors with a nominal horsepower rating greater than the maximum horsepower requirement of the pump during normal operation. Motor shall have a service factor of at least 1.15.
4. Casings for drilled wells may be steel, reinforced plastic mortar, plastic, or fiberglass pipe. Only steel pipe casings shall be used in driven wells. Steel pipe must have a wall thickness equal to or greater than Schedule 40. See SCS code FL-642. Steel casings shall be equal to or exceed requirements of ASTM A589.

**K. Chemical injection equipment.**

1. Chemical injection equipment must be constructed of materials capable of withstanding the potential corrosive effects of the chemicals being used. Equipment shall be used only for those chemicals for which it was intended as stated by the injection equipment manufacturer.

**L. Filters and strainers.**

1. Filtration equipment and strainers constructed of materials resistant to the potential corrosive and

erosive effects of the water shall be used. They shall be sized to prevent the passage of foreign material that would obstruct the sprinkler/emitter outlets in accordance with the manufacturer’s recommendations.

**PART V: INSTALLATION**

**A. Pipe installation.**

1. Pipe shall be installed at sufficient depth below ground to protect it from hazards such as vehicular traffic or routine occurrences which occur in the normal use and maintenance of a property. Depths of cover shall meet or exceed SCS Code 430-DD, Water Conveyance, as follows:

a. Vehicle traffic areas.

Pipe Size (inches)	Depth of Cover (inches)
1/2 – 2 1/2	18
3 – 5	24
6 and larger	30

b. All areas except vehicle traffic:

Pipe Size (inches)	Depth of Cover (inches)
1/2 – 1 1/2	6
2 – 3	12
4 – 6	18
more than 6	24

2. Make all pipe joints and connections according to manufacturer’s recommendations. Perform all solvent-weld connections in accordance with ASTM D2855.
3. Minimum clearances shall be maintained between irrigation lines and other utilities. In no case shall one irrigation pipe rest upon another. Comingling or mixing of different types of pipe assemblies shall be prohibited.
4. Thrust blocks must be used on all gasketed PVC systems. They must be formed against a solid, hand-excavated trench wall undamaged by mechanical equipment. They shall be constructed of concrete, and the space between the pipe and trench shall be filled to the height of the outside diameter of the pipe. Size thrust blocks in accordance with ASAE S-376.1.
5. The trench bottom must be uniform, free of debris, and of sufficient width to properly place pipe and support it over its entire length. Native excavated material may be used to backfill the pipe trench. However, the initial backfill material shall be free from rocks or stones larger than 1-inch in diameter. At the time of placement, the moisture content of the material shall be such that the required degree of compaction can be obtained with the backfill method to be used. Blocking or mounding shall not be used to bring the pipe to final grade.

6. Pipe sleeves must be used to protect pipes or wires installed under pavement or roadways. Use pipe sleeves two pipe sizes larger than the carrier pipe or twice the diameter of the wire bundle to be placed under the paving or roadway and extending a minimum of 3 feet beyond the paved area or as required by the Florida Department of Transportation (FDOT). Use sleeve pipe with wall thickness at least equal to the thickness of Schedule 40 or PR 160 pipe, whichever is thicker. Proper backfill and compaction procedures should be followed.

**B. Control valve installation.**

1. Valve installation shall allow enough clearance for proper operation and maintenance. Where valves are installed underground, they shall be provided with a valve box with cover extending from grade to the body of the valve. The top of the valve body should have a minimum of 6 inches (152 mm) of cover in nontraffic and noncultivated areas and 18 inches (457 mm) of cover in traffic areas. The valve box shall be installed so as to minimize the effect of soil intrusion within the valve box with the use of filter fabric, pea gravel, or other acceptable material. If an automatic valve is installed under each sprinkler, then the valve box may be omitted.
2. Install valve boxes so that they do not rest on the pipe, the box cover does not conflict with the valve stem or interfere with valve operation, they are flush with the ground surface and do not present a tripping hazard or interfere with routine maintenance of the landscape.
3. Install quick coupling valves on swing joints or flexible pipe with the top of the valve at ground level.
4. Any above-ground manually-operated valves on nonpotable water systems will be adequately identified with distinctive purple colored paint. Do not provide hose connections on irrigation systems that utilize nonpotable water supplies.

**C. Sprinkler installation.**

1. On flat landscaped areas, install sprinklers plumb. In areas where they are installed on slopes, sprinklers may be tilted as required to prevent erosion.
2. Sprinklers should be adjusted to avoid unnecessary discharge on pavements and structures.
  - a. Adjust sprinklers so they do not water on roads.
  - b. Provide a minimum separation of 4 inches (102 mm) between sprinklers and pavement.
  - c. Provide a minimum separation of 12 inches (305 mm) between sprinklers and buildings and other vertical structures.
  - d. Polyethylene (PE) nipples shall not be used in maintenance equipment traffic areas or alongside roadways and driveways.
3. Piping must be thoroughly flushed before installation of sprinkler nozzles.



4. Surface mounted and pop-up heads shall be installed on swing joints or flexible pipe.
5. Above-ground (riser mounted) sprinklers shall be mounted on Schedule 40 PVC or steel pipe and be effectively stabilized.
6. The pop-up height for sprays and rotator nozzles shall be adequate to prevent being obstructed by the turf grass blades: 6-inch height for St. Augustine, Zoysia and Bahia, 4-inch height for Bermuda, Centapede and Seashore Paspalum.
7. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PVC main or lateral break.
8. All microirrigation zones shall have adequate pressure regulation installed at the zone valve or at the point where the drip tubing is attached to the PVC to ensure that all emission devices meet the manufacturer's performance standards.
9. Each plant shall have a adequate number and size (gph) of microirrigation devices, properly placed to meet the plant water requirements for no rainfall.
10. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

**D. Pump installation.**

1. Install pumps as per the manufacturer's recommendations. Set pumps plumb and secure to a firm concrete base. There should be no strain or distortion on the pipe and fittings. Pipe and fittings should be supported to avoid placing undue strain on the pump. Steel pipe should be used on pumps 5 horsepower (hp) or larger whenever practical.
2. Pumps must be installed in a manner to avoid loss of prime. Install suction line to prevent the accumulation of air pockets. All connections and reductions in suction pipe sizes should be designed to avoid causing air pockets and cavitation.
3. Pumps must be located to facilitate service and ease of removal. Appropriate fittings should be provided to allow the pump to readily be primed, serviced, and disconnected. Provide an enclosure of adequate size and strength, with proper ventilation, to protect the pump from the elements (except residential systems).

**E. Low voltage wire installation.**

1. Install low voltage wire (less than 98 volts) with a minimum depth of cover of 12 inches (305 mm) where not installed directly under the mainline.
2. Provide a sufficient length of wire at each connection to allow for thermal expansion/shrinkage.
3. As a minimum, provide a 12-inch (305 mm) diameter loop at all splices and connections.

4. Terminations at valves will have 24-inches (610 mm) minimum free wire.
5. Install all above-ground wire runs and wire entries into buildings in electrical conduit.

**Exception:** No conduit is required when wiring above ground manifolds from the valve to the ground immediately beneath it.

6. Provide common wires with a different color than the power wires (white shall be used for common wires).
7. Connections are to be made using UL approved devices specifically designed for direct burial.
8. All splices shall be enclosed within a valve box.

**F. Hydraulic control tubing.**

1. For hydraulic control systems, use a water supply that is filtered and free of deleterious materials, as defined by the hydraulic control system manufacturer. Install a backflow prevention device where the hydraulic control system is connected to potable water supplies.
2. Install tubing in trenches freely and spaced so that it will not rub against pipe, fittings, or other objects that could score the tubing, and with a minimum 12-inch (305 mm) diameter loop at all turns and connections. Provide a minimum depth of cover of 12 inches (305 mm).
3. Connect tubing with couplings and collars recommended by the tubing manufacturer. All splices shall be made in valve boxes. Prefill tubing with water, expelling entrapped air and testing for leaks prior to installation.

Install exposed tubing in a protective conduit manufactured from Schedule 40 UV protected PVC or electrical conduit.

**PART VI: TESTING & INSPECTIONS**

**A. Purpose.** All materials and installations covered by the Irrigation Code shall be inspected by the governing agency to verify compliance with the Irrigation Code.

**B. Rough inspections.** Rough inspections will be performed throughout the duration of the installation. These inspections will be made by the governing agency to ensure that the installation is in compliance with the design intent, specifications, and the Irrigation Codes. Inspections will be made on the following items at the discretion of the governing agency:

1. Sprinkler layout and spacing: This inspection will verify that the irrigation system design is accurately installed in the field. It will also provide for alteration or modification of the system to meet field conditions. To pass this inspection, sprinkler/emitter spacing should be within  $\pm 5$  percent of the design spacing.
2. Pipe installation depth: All pipes in the system shall be installed to depths as previously described in this code.

3. Test all mainlines upstream of the zone valves as follows:
  - a. Fill the completely installed pipeline slowly with water to expel air. Allow the pipe to sit full of water for 24 hours to dissolve remaining trapped air.
  - b. Using a metering pump, elevate the water pressure to the maximum static supply pressure expected and hold there for a period of 2 hours, solvent-weld pipe connections shall have no leakage.
  - c. For gasketed pipe main lines add water as needed to maintain the pressure. Record the amount of water added to the system over the 2-hour period.
  - d. Use the following formulas to determine the maximum allowable leakage limit of gasketed pipe.

**DUCTILE IRON:**

$$L = \frac{SDP}{133,200}$$

**PVC, GASKETED JOINT:**

$$L = \frac{NDP}{7,400}$$

Where:

- L = allowable leakage (gph),
- N = number of joints,
- D = nominal diameter of pipe (inches),
- P = average test pressure (psi), and
- S = length of pipe (fi).

- e. When testing a system which contains metal-seated valves, an additional leakage per closed valve of 0.078 gph/inch of nominal valve size is allowed.

**C. Final inspection.** When the work is complete the contractor shall request a final inspection.

1. Cross connection control and backflow prevention.
  - a. Public or domestic water systems: Check that an approved backflow prevention assembly is properly installed and functioning correctly. Review the location of the assembly to check that it is not creating a hazard to pedestrians or vehicular traffic.
  - b. Water systems other than public or domestic water systems: Check that the proper backflow prevention assemblies are provided.
  - c. All assemblies that can be, will be tested by a technician certified for backflow testing by a State recognized certifying board prior to being placed into service.

2. Sprinkler coverage testing.
  - a. All sprinklers must be adjusted to minimize overspray onto buildings and paved areas. Minor tolerances shall be made to allow for prevailing winds.
  - b. All sprinkler controls must be adjusted to minimize runoff of irrigated water. Water application rates shall not exceed the absorption rate of the soil.
  - c. All sprinklers must operate at their design radius of throw. Nozzle sizes and types called for in the system design must have been used. All nozzles within the same zone shall have matched precipitation rates unless otherwise directed in order to increase efficiency by adjusting the nozzle selection to match site conditions.
  - d. Spray patterns must overlap as designed (a.k.a. head to head coverage) or placed to achieve the highest possible distribution uniformity using the manufacturer's specifications.
  - e. Sprinklers must be connected, as designed, to the appropriate zone.
  - f. Sprinkler heads must operate within 20 percent of the optimum operating pressure but not more than the maximum nor less than the minimum guidelines as specified by the manufacturer. If the dynamic water pressure at the site's water source(s) is too low to achieve this pressure range at the sprinklers, a booster pump or alternate source shall be required. If the dynamic water pressure at the site's water source(s) is too high to achieve this pressure range at the sprinklers, a pressure regulating device shall be required at either the source, the zone valve, or the sprinklers, or any combination thereof.

**D. Site restoration.**

1. All existing landscaping, pavement, and grade of areas affected by work must be restored to original condition or to the satisfaction of the governing authority.

Verify that the pipeline trenches have been properly compacted to the densities required by the plans and specifications.

**E. Record drawings.**

1. A record drawing shall be required of all irrigation systems installed on commercial and residential developments and shall contain the following information:
  - a. Location, type pressure and maximum flow available of all water sources.
    - Include limitations like days of week watering requirements.
  - b. Location type and size of all components including sprinklers, microirrigation, main and lateral piping, master valves, valves, moisture sensors,



rain sensors, controllers, pump start relays, back-flow devices, pumps, wells, etc.

- c. The flow rate, application rate (inches per hour), and the operating pressure for the sprinklers and microirrigation within each zone.
- d. An irrigation schedule for each zone, for each season (monthly is preferred), indicating the frequency and duration each zone should operate to meet the plant water requirements without rainfall and stay within the hydraulic capacities of the sprinkler system installed.
- e. The name, address, phone, email, professional license or certification number of the installation contractor.
- f. Date of installation.
- g. Irrigation system maintenance schedule that shall include, but is not limited to the following:
  - 1. routine visual inspections (at least 4 per year);
  - 2. adjustments to components to keep sprinklers straight, at the right height;
  - 3. aligned and unobstructed nozzles and screens cleaned;

- 4. filters cleaned and sensors monitored,; and
- 5. pressures and flows at the source and sprinklers are correct for original design.

**F. Irrigation system maintenance.**

- a. Repairs to all irrigation components shall be done with originally installed components, equivalent components or those with greater efficiency.
- b. The operation of the irrigation system outside of the normal watering window shall be allowed for evaluating, maintaining or repairing the system or its components.

**G. Irrigation system management.**

- a. The frequency (times per week/month) and duration (minutes/hours) of the operation of each zone shall be adjusted and operate in order to meet the water needs of the plants within each zone as a supplement to rainfall. Adjustments shall be made a minimum 4 times per year to match the seasonal changes of the plants and the operational restrictions.
- b. It is recommended that the schedule be adjusted monthly or controllers be properly installed and programmed to automatically adjust to maximize water savings.



## **PART 1: GENERAL**

### **C. Preconstruction submittals.**

#### **1. Plans or drawings.**

**c. Sprinkler layout.** Sprinkler layout may be modified to adjust for field conditions provided it complies with part VI, Section B, subsection 1 Sprinkler layout and spacing. Prior to final inspection, the contractor shall submit a letter or as-built drawing that reflects the modification to the authority with jurisdiction.

## **PART IV: MATERIALS**

### **A. PVC pipe and fittings.**

3. Threaded PVC pipe ~~firings~~ fittings shall meet the requirements of Schedule 40 as set forth in ASTM D2464.

## PART V: INSTALLATION

### A. Pipe installation.

4. Thrust blocks or other approved method must be used on all gasketed PVC systems.
5. The trench bottom must be uniform, free of debris, and of sufficient width to properly place pipe and support it over its entire length. Native excavated material may be used to backfill the pipe trench. However, the initial backfill the material to 6" above the top of the pipe shall be free from rocks or stones larger than 1-inch in diameter. The final backfill material shall be free of rock or debris that is greater than 3" in diameter.
6. Pipe sleeves must be used to protect pipes or wires installed under pavement or roadways-, or when position of irrigation pipes or wires conflict with pipes or appurtenances of other trades.

## **PART VI: TESTING & INSPECTIONS**

### **B. Rough inspections.**

4. Open Trench Inspection: The trench at all joints and every transition in pipes size, will be open where open trench inspection is required.

## APPENDIX F

# PROPOSED CONSTRUCTION BUILDING CODES FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS

### PART 1: GENERAL

#### A. Description.

1. **Purpose.** To establish uniform minimum standards and requirements for the design and installation of safe, cost effective, reliable irrigation systems for turf and landscape areas which promote the efficient use and protection of water and other natural resources.
2. **Definition.** Turf and landscape irrigation systems apply water by means of permanent above-ground or subsurface sprinkler or microsprinkler equipment under pressure.
3. **Scope.** These construction codes shall apply to all irrigation systems used on residential and commercial landscape areas. They address the design requirements, water quality, materials, installation, inspection, and testing for such systems. These construction codes do not apply to irrigation systems for golf courses, nurseries, greenhouses, or agricultural production systems.
4. **Application.** All new irrigation systems and any new work to existing irrigation systems shall conform to the requirements of this code.
5. **Application to existing irrigation installations.** Nothing contained in this code shall be deemed to require any irrigation system or part thereof, which existed prior to the establishment of this code, to be changed, altered or modified to meet the standards of this code.

#### B. Permits.

1. **Permits required.** It shall be unlawful to construct, enlarge, alter, modify, repair, or move any irrigation system or part thereof, or to install or alter any equipment for which provision is made or the installation of which is regulated by this code without first having filed application and obtained a permit therefore from the building official. A permit shall be deemed issued when signed by the building official and impressed with the seal of the governmental agency issuing said permit.
2. **Exceptions.** All work where exempt from permit shall still be required to comply with the code. No permit shall be required for general maintenance or repairs which do not change the structure or alter the system and the value of which does not exceed \$600.00 in labor and material based on invoice value.

#### C. Preconstruction submittals.

1. **Plans or drawings.**

- a. **Single-family residence.** Provide design drawings or shop drawings, where required, for the installation prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, and include all improvements. Drawings can be prepared by a properly licensed qualified contractor.
- b. **Commercial, industrial, municipal and multi-ple-family.** Provide professionally designed drawings prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, including all improvements, and shall include but not be limited to: date, scale, revisions, legend, specifications which list all aspects of equipment and assembly thereof, water source, water meter and/or point of connection, backflow prevention devices, pump station size, pump station location, design operating pressure and flow rate per zone, precipitation rate per zone, locations of pipe, controllers, valves, sprinklers, sleeves, gate valves, etc. The plans and specifications shall be prepared in accordance with Section 107 of the *Florida Building Code, Building*.
- c. **Sprinkler layout.** Sprinkler layout may be modified to adjust for field conditions provided it complies with part VI, Section B, subsection 1 Sprinkler layout and spacing. Prior to final inspection, the contractor shall submit a letter or as-built drawing that reflects the modification to the authority with jurisdiction.

#### D. Definitions.

**ABS Pipe.** Acrylonitrile-butadiene-styrene black, semi-rigid, plastic pipe extruded to IPS. ABS pipe is in limited use in present day irrigation systems. Solvent weld fittings are used with this pipe (see ASTM D1788).

**Air Release Valve.** A valve which will automatically release to the atmosphere accumulated small pockets of air from a pressurized pipeline. A small orifice is used to release air at low flow rates. Air release valves are normally required at all summits of mainline and sub-main pipelines in an irrigation system.

**Anti-Siphon Device.** A safety device used to prevent back-flow of irrigation water to the water source by back-siphonage.

**Application Rate.** The average rate at which water is applied by an irrigation system, sometimes also called precipitation rate. Units are typically inches/hr or mm/hr.

**Application Uniformity.** Irrigation application uniformity (also known as distribution uniformity) describes how evenly water is distributed within an irrigation zone.

**Arc.** The angle of coverage of a sprinkler in degrees from one side of throw to the other. A 90-degree arc would be a quarter-circle sprinkler.

**Atmospheric Vacuum Breaker.** An anti-siphon device which uses a floating seat to direct water flow. Water draining back from irrigation lines is directed to the atmosphere to protect the potable water supply.

**Automatic Control Valve.** A valve in a sprinkler system which is activated by an automatic controller by way of hydraulic or electrical control lines and controls a single device or multiple devices.

**Automatic System.** An irrigation system which operates following a preset program entered into an automatic controller.

**Backflow Prevention Device.** An approved safety device used to prevent pollution or contamination of the irrigation water supply due to backflow from the irrigation system.

**Belled (Pipe).** Pipe which is enlarged at one end so that the spigot end of another length of pipe can be inserted into it during the assembly of a pipeline.

**Block (of sprinklers).** A group of sprinklers controlled by one valve. Also called zones or subunits.

**Block System.** An irrigation system in which several groups of sprinklers are controlled by one valve for each group.

**Bubbler Irrigation.** The application of water to the soil surface or a container as a small stream or fountain. Bubbler emitter discharge rates are greater than the 0.5 to 2 gph characteristic of drip emitters, but generally less than 60 gph.

**Check Valve.** A valve which permits water to flow in one direction only.

**Chemical Water Treatment.** The addition of chemicals to water to make it acceptable for use in irrigation systems

**Chemigation.** The application of water soluble chemicals by mixing or injecting with the water applied through an irrigation system.

**Contractor.** Any person who engages in the fabrication and installation of any type of irrigation system on a contractual basis in accordance with all stipulations receiving his compensation.

**Control Lines.** Hydraulic or electrical lines which carry signals (to open and close the valves) from the controller to the automatic valves.

**Controller.** The timing mechanism and its mounting box. The controller signals the automatic valves to open and close on a pre-set program or based on sensor readings.

**Coverage.** Refers to the way water is applied to an area.

**Cycle.** Refers to one complete run of a controller through all programmed controller stations.

**Demand (or irrigation demand).** Refers to the irrigation requirements of the irrigated area. Demand primar-

ily depends on the type of crop, stage of growth, and climatic factors.

**Design Area.** The specific land area to which water is to be applied by an irrigation system.

**Design Emission Uniformity.** An estimate of the uniformity of water application with an irrigation system.

**Design Pressure.** The pressure at which the irrigation system or certain components are designed to operate. The irrigation system design pressure is that measured at the pump discharge or entrance to the system if there is no pump, and a zone design pressure is the average operating pressure of all emitters within that zone.

**Direct Burial Wire.** Plastic-coated single-strand copper wire for use as control line for electric valves.

**Discharge Rate.** The instantaneous flow rate of an individual sprinkler, emitter, or other water emitting device, or a unit length of line-source microirrigation tubing. Also, the flow rate from a pumping system.

**Double Check Valve.** An approved assembly of two single, independently-acting check valves with test ports to permit independent testing of each check valve.

**Drain Valve.** A valve used to drain water from a line. The valve may be manually or automatically operated.

**Drip Irrigation.** The precise low-rate application of water to or beneath the soil surface near or directly into the plant root zone. Applications normally occur as small streams, discrete or continuous drops, in the range of 0.5 to 2.0 gph.

**Effluent water.** Also referred to as reclaimed or gray water is wastewater which has been treated per Florida Statute, §403.086 and is suitable for use as a water supply for irrigation systems.

**Emitters.** Devices which are used to control the discharge of irrigation water from lateral pipes. This term is primarily used to refer to the low flow rate devices used in microirrigation systems.

**Fertigation.** The application of soluble fertilizers with the water applied through an irrigation system.

**Filtration System.** The assembly of physical components used to remove suspended solids from irrigation water. These include both pressure and gravity type devices, such as settling basins, screens, media filters, and centrifugal force units (vortex sand separators).

**Flexible Swing Joint.** A flexible connection between the lateral pipe and the sprinkler which allows the sprinkler to move when force is applied to it.

**Flow Meters.** Devices used to measure the volume of flow of water (typically in gallons), or flow rates (typically in gpm), and to provide data on system usage.

**Gauge (Wire).** Standard specification for wire size. The larger the gauge number, the smaller the wire diameter.

**Head.** A sprinkler head. Sometimes used interchangeably with and in conjunction with "Sprinkler."



**Infiltration Rate.** The rate of water flow across the surface of the soil and into the soil profile. Units are usually inches/hr.

**Irrigation.** Application of water by artificial means, that is, means other than natural precipitation. Irrigation is practiced to supply crop water requirements, leach salts, apply chemicals, and for environmental control including crop cooling and freeze protection.

**Irrigation Water Requirement or Irrigation Requirement.** The quantity of water that is required for crop production, exclusive of effective rainfall.

**Landscape.** Refers to any and all areas which are ornamentally planted, including but not limited to turf, ground covers, flowers, shrubs, trees, and similar plant materials as opposed to agricultural crops grown and harvested for monetary return.

**Lateral.** The water delivery pipeline that supplies water to the emitters or sprinklers from a manifold or header pipeline downstream of the control valve.

**Line-Source Emitters.** Lateral pipelines which are porous or contain closely-spaced perforations so that water is discharged as a continuous band or in overlapping patterns rather than discrete widely-spaced points along the pipeline length.

**Looped System.** A piping system which allows more than one path for water to flow from the supply to the emitters or sprinklers.

**Low Volume Sprinklers.** Sprinkler heads that emit less than 0.5 gallons per minute.

**Mainline.** A pipeline which carries water from the control station to submains or to manifolds or header pipelines of the water distribution system.

**Manifold.** The water delivery pipeline that conveys water from the main or submain pipelines to the laterals. Also sometimes called a header pipeline.

**Manual System.** A system in which control valves are manually operated rather than operated by automatic controls.

**Matched Precipitation.** An equal distribution of water over a given area or zone.

**Meter Box.** A concrete or plastic box buried flush to grade which houses flow (water) meters or other components.

**Microirrigation.** The frequent application of small quantities of water directly on or below the soil surface, usually as discrete drops, tiny streams, or miniature sprays through emitters placed along the water delivery pipes (laterals). Microirrigation encompasses a number of methods or concepts, including drip, subsurface, bubbler, and spray irrigation. Previously known as trickle irrigation.

**Overlap.** The amount one sprinkler pattern overlaps another one when installed in a pattern. Expressed as a percentage of the diameter of coverage.

**PE Pipe.** Flexible polyethylene pipe for use in irrigation systems, normally manufactured with carbon black for resistance to degradation by ultraviolet radiation.

**Potable Water.** Water which is suitable in quality for human consumption and meets the requirements of the Health Authority having jurisdiction.

**Pressure Relief Valve.** A valve which will open and discharge to atmosphere when the pressure in a pipeline or pressure vessel exceeds a pre-set point to relieve the high-pressure condition.

**Pressure Vacuum Breaker.** A backflow prevention device which includes a spring-loaded check valve and a spring-loaded vacuum breaker to prevent the backflow of irrigation system water to the water source.

**Pumping Station.** The pump or pumps that provide water to an irrigation system, together with all of the necessary accessories such as bases or foundations, sumps, screens, valves, motor controls, safety devices, shelters and fences.

**PVC Pipe.** Polyvinyl chloride plastic pipe made in standard thermoplastic pipe dimension ratios and pressure rated for water. Manufactured in accordance with AWWA C-900 or ASTM D2241.

**Rain Shut off Device.** A calibrated device that is designed to detect rainfall and override the irrigation cycle of the sprinkler system when a predetermined amount of rain fall has occurred.

**Riser.** A threaded pipe to which sprinklers or other emitters are attached for above-ground placement.

**Sleeve.** A pipe used to enclose other pipes, wire, or tubing; usually under pavement, sidewalks, or planters.

**Spacing.** The distance between sprinklers or other emitters.

**Spray Irrigation.** The microirrigation application of water to the soil or plant surface by low flow rate sprays or mists.

**Sprinkler.** The sprinkler head. Sometimes called "Head."

**Supply (Water Source).** The origin of the water used in the irrigation system.

**Swing Joint.** A ridged connection between the lateral pipe and the sprinkler, utilizing multiple ells and nipples, which allows the sprinkler to move when force is applied to it.

**Tubing.** Generally used to refer to flexible plastic hydraulic control lines which are usually constructed of PE or PVC.

## PART II — DESIGN CRITERIA

**A. Design defined.** Within the scope of this code, irrigation system design is defined as the science and art of properly selecting and applying all components within the system. The irrigation system shall be designed and installed to achieve the highest possible efficiency by providing operating pressures, sprinkler placement and

nozzle selection that are within the manufacturer's recommendations, and maintained to keep the system at or within those ranges.

#### B. Water supply.

1. The water source shall be adequate from the standpoint of volume, flow rate, pressure, and quality to meet the irrigation requirements of the area to be irrigated, as well as other demands, if any, both at the time the system is designed and for the expected life of the system. The irrigation system shall use the lowest quality water source available on site.
2. If the water source is effluent, it shall meet the advanced waste treatment standard as set forth in *Florida Statute* §403.086(4) as well as any other standard as set forth by the controlling governmental agency.

#### C. Application uniformity.

1. Sprinkler irrigation systems should be designed with the appropriate uniformity for the type of plants being grown and the type of soil found in that area. The general watering of different types of plants as one group without regard to their individual water requirements is to be avoided.
2. Use sprinkler head spacing, type and nozzle selection to achieve the highest application uniformity.
3. Use application rates which avoid runoff and permit uniform water infiltration into the soil. Land slope, soil hydraulic properties, vegetative ground cover, and prevailing winds and sun exposure will be considered when application rates are specified. Different types of sprinklers with different application rates, i.e., spray heads vs. rotor heads, bubbler heads vs. rotor heads, shall not be combined on the same zone or circuit.

**D. System zoning.** The irrigation system should be divided into zones based on consideration of the following hydrozoning practices.

1. Available flow rate.
2. Cultural use of the area.
3. Type of vegetation irrigated, i.e., turf, shrubs, native plants, etc.
4. Type of sprinkler, i.e., sprinklers with matching precipitation rates.
5. Soil characteristics and slope.
6. Sun exposure.

#### E. Sprinkler/emitter spacing and selection.

1. Sprinkler/Emitter spacing will be determined considering the irrigation requirements, hydraulic characteristics of the soil and device, and water quality with its effect on plant growth, sidewalks, buildings, and public access areas.
2. All pop-up spray head bodies in turf areas shall be no less than 6 inches in height for St. Augustine,

Zoysia and Bahia and no less than 4 inches in height for Bermuda, Centapede and Seashore Paspalum.

3. Sprinklers should be located in all corners and on the perimeter of each irrigated zone area for a matched precipitation rate objective.
4. Single row head spacing should only occur when an additional row will cause saturated soils at the toe of a slope or other inefficiencies.
5. All heads shall not exceed 50 percent of manufacturer's specified diameters of coverage.
6. Water conservation will be emphasized by minimizing irrigation of nonvegetated areas.
7. Microirrigation systems should be designed using the Emission Uniformity concept. Space microirrigation emitters to wet 100 percent of the root zone in turf areas and 50 percent of the root zone for shrubs and trees.
8. Microirrigation or low volume heads shall be required in all areas less than 4 feet in either direction.
9. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PD main or lateral break.
10. Each plant shall have an adequate number and size (gph) of microirrigation devices, properly placed, to meet the plant water requirements for no rainfall.

**F. Pipelines.** Pipelines will be sized to limit pressure variations so that the working pressure at all points in the irrigation system will be in the range required for uniform water application. Velocities will be kept to 5 feet (1524 mm) per second.

#### G. Wells.

1. Well diameters and depths are to be sized to correspond to the irrigation system demand. Refer to SCS Code FL-642 and local water management district regulations.
2. Well location and depth shall be in compliance with applicable state, water management district and local codes.

#### H. Pumps.

1. Pump and motor combinations shall be capable of satisfying the total system demand without invading the service factor of the motor except during start-up and between zones.
2. Pumps shall be positioned with respect to the water surface in order to ensure that the net positive suction head required (NPSHr) for proper pump operation is achieved.
3. The pumping system shall be protected against the effects of the interruption of water flow.

**I. Control valves.**

1. Control valve size shall be based on the flow rate through the valve. Friction loss through the valve, an approved air gap separation, or a reduced pressure should not exceed 10 percent of the static mainline head.
2. Control systems using hydraulic communication between controller and valve(s) shall comply with the manufacturer's recommendations for maximum distance between controller and valve, both horizontally and vertically (elevation change).
3. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications; based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except individual, single lot residential systems.
4. Locate manually operated control valves so that they can be operated without wetting the operator.
5. Locate inground valves away from large tree and palm root zones.
6. A manual shut-off valve shall be required to be installed close to the point of connection but downstream from any backflow device to minimize water loss when the system is shut off for repairs or emergencies.
7. An automatic shut-off valve (normally closed) is required on all systems with a constantly pressurized mainline to confine the water loss from minor main line leaks, weeping valves, or stuck on valves to just the time the system is operating automatically.

**J. Automatic irrigation controller.** Automatic irrigation controllers must be UL approved and have an adequate number of stations and power output per station to accommodate the irrigation system design. The controller shall be capable of incorporating a rain shut-off device or other sensors to override the irrigation cycle when adequate rainfall has occurred as required by *Florida Statutes*, Section 373.62.

**K. Chemical injection.**

1. Chemical injection systems for the injection of fertilizer, pesticides, rust inhibitors, or any other injected substance will be located and sized according to the manufacturers' recommendations.
2. Injection systems will be located downstream of the applicable backflow prevention devices as required by *Florida Statutes*, Sections 487.021 and 487.055; the Environmental Protection Agency (EPA); Pesticide Regulation Notice 87-1; or other applicable codes.

3. If an irrigation water supply is also used for human consumption, an air gap separation or an approved reduced pressure principal backflow prevention device is required.

**L. Backflow prevention methods.** Provide backflow prevention assemblies at all cross connections with all water supplies in accordance with county, municipal or other applicable codes to determine acceptable backflow prevention assembly types and installation procedures for a given application. In the event of conflicting regulation provide the assembly type which gives the highest degree of protection.

1. Irrigation systems into which chemicals are injected shall conform to Florida state law (*Florida Statutes* 487.021 and 487.055) and Environmental Protection Agency Pesticide Regulation Notice 87-1, which requires backflow prevention regulations to be printed on the chemical label.
2. For municipal water supplies, chemical injection equipment must be separated from the water supply by an approved air gap separation or a reduced pressure principle assembly that is approved by the Foundation for CCC and the Hydraulic Research Institute. The equipment must also comply with ASSE 1013 to protect the water supply from back-siphonage and back-pressure.
3. For other water supplies, Florida State law, EPA regulations, or other applicable local codes must be followed. In the absence of legal guidelines at least a PVB should be used.

**PART III — STANDARDS****1. American Society of Agricultural Engineers (ASAE) Standards:**

**ASAE S330.1:** Procedure for sprinkler distribution testing for research purposes.

**ASAE S376.1:** Design, installation, and performance of underground thermoplastic irrigation pipelines.

**ASAE S397.1:** Electrical service and equipment for irrigation.

**ASAE S435:** Drip/Trickle Polyethylene Pipe used for irrigation laterals.

**ASAE S398.1:** Procedure for sprinkler testing and performance reporting.

**ASAE S339:** Uniform classification for water hardness.

**ASAE S394:** Specifications for irrigation hose and couplings used with self-propelled, hose-drag agricultural irrigation system.

**ASAE EP400.1:** Designing and constructing irrigation wells.

**ASAE EP405:** Design, installation, and performance of trickle irrigation systems.

**ASAE EP409:** Safety devices for applying liquid chemicals through irrigation systems.

**2. ASTM International Standards:**

**ASTM D2241:** Poly (Vinyl Chloride) (PVC) Plastic pipe (SDR-PR).

**ASTM D2239:** Specification for polyethylene (PE) plastic pipe (SDR-PR).

**ASTM D2466:** Specification for socket-type poly (vinyl chloride) (PVC) and chlorinated poly (vinyl chloride) (CPVC) plastic pipe fittings, Schedule 40.

**ASTM D2855:** Standard recommended practice for making solvent cemented joints with polyvinyl chloride pipe and fittings.

**ASTM D3139:** Specification for joints for plastic pressure pipes using flexible elastomeric seals.

**ASTM F477:** Specification for elastomeric seals (gaskets for joining plastic pipe).

**3. American Water Works Association (AWWA) standards:**

**AWWA C-900:** PVC pipe standards and specifications.

**4. American Society of Sanitary Engineers (ASSE) Standards:**

**ASSE 1001:** Pipe applied atmospheric type vacuum breakers.

**ASSE 1013:** Reduced pressure principle backflow preventers.

**ASSE 1015:** Double check valve-type back pressure backflow preventers.

**ASSE 1020:** Vacuum breakers, anti-siphon, pressure type.

**ASSE 1024:** Dual check valve-type backflow preventers.

**5. Hydraulic Institute Standards, 14th Edition.****6. Standards and Specifications For Turf and Landscape Irrigation Systems Florida Irrigation Society (FIS) Standards.****7. Soil Conservation Service (SCS) Field Office Technical Guide, Section IV-A — Cropland Codes:**

**SCS Code 430-DD:** Irrigation water conveyance, underground, plastic pipeline.

**SCS Code 430-EE:** Irrigation water conveyance. Low pressure, underground, plastic pipeline.

**SCS Code 430-FF:** Irrigation water conveyance, steel pipeline.

**SOS Code 441-1:** Irrigation system, trickle.

**SCS Code 442:** Irrigation system sprinkler.

**SCS Code 449:** Irrigation water management.

**SCS Code 533:** Pumping plant for water control.

**SCS Code 642:** Well.

**PART IV: MATERIALS****A. PVC pipe and fittings.**

1. PVC pipe should comply with one of the following standards: ASTM D1785, ASTM D2241, AWWA C-900, or AWWA C-905. SDR-PR pipe shall have a minimum wall thickness as required by SDR-26. All pipe used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.
2. All solvent-weld PVC fittings shall, at a minimum, meet the requirements of Schedule 40 as set forth in ASTM D2466.
3. Threaded PVC pipe fittings shall meet the requirements of Schedule 40 as set forth in ASTM D2464.
4. PVC gasketed fittings shall conform to ASTM D3139. Gaskets shall conform to ASTM F477.
5. PVC flexible pipe should be pressure rated as described in ASTM D2740 with standard outside diameters compatible with PVC IPS solvent-weld fittings.
6. PVC cement should meet ASTM D2564. PVC cleaner-type should meet ASTM F656.

**B. Ductile iron pipe and fittings.**

1. Gasket fittings for iron pipe should be of materials and type compatible with the piping material being used.

**C. Steel pipe and fittings.**

1. All steel pipe shall be rated Schedule 40 or greater and be hot-dipped galvanized or black in accordance with ASTM A53/A53M.
2. Threaded fittings for steel pipe should be Schedule 40 Malleable Iron.

**D. Polyethylene pipe.**

1. Flexible swing joints shall be thick-walled with a minimum pressure rating of 75 psi (517 kPa) in accordance with ASTM D2239.
2. Low pressure polyethylene pipe for microirrigation systems shall conform with ASAE S-435.
3. Use fittings manufactured specifically for the type and dimensions of polyethylene pipe used.

**E. Sprinklers, spray heads, and emitters.**

1. Select units and nozzles in accordance with the size of the area and the type of plant material being irrigated. Sprinklers must fit the area they are intended to water without excessive overspray onto anything but the lot individual landscaped surface. Intentional direct spray onto walkways, buildings, roadways, and drives is prohibited. All sprinklers used with effluent water systems shall be designated for non-potable use by either label or by the industry standard color purple.
2. Use equipment that is protected from contamination and damage by use of seals, screens, and springs

where site conditions present a potential for damage.

3. Support riser-mounted sprinklers to minimize movement of the riser resulting from the action of the sprinkler.
4. Swing joints, either flexible or rigid, shall be constructed to provide a leak-free connection between the sprinkler and lateral pipeline to allow movement in any direction and to prevent equipment damage.
5. Check valves shall be installed on any sprinkler where low point drainage occurs.
6. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

#### F. Valves.

1. Valves must have a maximum working pressure rating equal to or greater than the maximum pressure of the system, but not less than 125 psi (861 kPa). This requirement may be waived for low mainline pressure systems [30 psi (207 kPa) or less]. All valves used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.
2. Only valves that are constructed of materials designed for use with the water and soil conditions of the installation shall be used. Valves that are constructed from materials that will not be deteriorated by chemicals injected into the system shall be used on all chemical injection systems.

#### G. Valve boxes.

1. Valve boxes are to be constructed to withstand traffic loads common to the area in which they are installed. They should be sized to allow manual operation of the enclosed valves without excavation.
2. Each valve box should be permanently labeled to identify its contents. All valve boxes used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.

#### H. Low voltage wiring.

1. All low voltage wire which is directly buried must be labeled for direct burial wire. Wire not labeled for direct burial must be installed in watertight conduits, and be UL listed TWN or THHN type wire as described in the NEC. All wire traveling under any hardscape or roadway must be installed within a pipe and sleeve.
2. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications, based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating, on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except single lot individual residential systems.

noids operating, on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except single lot individual residential systems.

3. Connections are to be made using UL approved devices specifically designed for direct burial. All splices shall be enclosed within a valve box.

#### I. Irrigation controllers.

1. All irrigation controllers shall be UL listed, conform to the provisions of the *National Electric Code* (NEC), and be properly grounded in accordance with manufacturer's recommendations. Equip solid state controls with surge suppressors on the primary and secondary wiring, except single lot residential systems.
2. The controller housing or enclosure shall protect the controller from the hazards of the environment in which it is installed.
3. The rain switch shall be placed on a stationary structure minimum of 5-foot (1524 mm) clearance from other outdoor equipment, free and clear of any tree canopy or other overhead obstructions, and above the height of the sprinkler coverage. Soil moisture sensors and ET sensors shall be installed and monitored per manufacturer's guidelines per *Florida Statutes*, Section 373.62 requirements.

#### J. Pumps and wells.

1. Irrigation pump electrical control systems must conform to NEC and local building codes.
2. The pumping system shall be protected from the hazards of the environment in which it is installed.
3. Use electric motors with a nominal horsepower rating greater than the maximum horsepower requirement of the pump during normal operation. Motor shall have a service factor of at least 1.15.
4. Casings for drilled wells may be steel, reinforced plastic mortar, plastic, or fiberglass pipe. Only steel pipe casings shall be used in driven wells. Steel pipe must have a wall thickness equal to or greater than Schedule 40. See SCS code FL-642. Steel casings shall be equal to or exceed requirements of ASTM A589.

#### K. Chemical injection equipment.

1. Chemical injection equipment must be constructed of materials capable of withstanding the potential corrosive effects of the chemicals being used. Equipment shall be used only for those chemicals for which it was intended as stated by the injection equipment manufacturer.

#### L. Filters and strainers.

1. Filtration equipment and strainers constructed of materials resistant to the potential corrosive and

APPENDIX F

erosive effects of the water shall be used. They shall be sized to prevent the passage of foreign material that would obstruct the sprinkler/emitter outlets in accordance with the manufacturer's recommendations.

**PART V: INSTALLATION**

**A. Pipe installation.**

1. Pipe shall be installed at sufficient depth below ground to protect it from hazards such as vehicular traffic or routine occurrences which occur in the normal use and maintenance of a property. Depths of cover shall meet or exceed SCS Code 430-DD, Water Conveyance, as follows:

a. Vehicle traffic areas.

Pipe Size (inches)	Depth of Cover (inches)
1/2 - 2 1/2	18
3 - 5	24
6 and larger	30

b. All areas except vehicle traffic:

Pipe Size (inches)	Depth of Cover (inches)
1/2 - 1 1/2	6
2 - 3	12
4 - 6	18
more than 6	24

2. Make all pipe joints and connections according to manufacturer's recommendations. Perform all solvent-weld connections in accordance with ASTM D2855.
3. Minimum clearances shall be maintained between irrigation lines and other utilities. In no case shall one irrigation pipe rest upon another. Comingling or mixing of different types of pipe assemblies shall be prohibited.
4. Thrust blocks or other approved method must be used on all gasketed PVC systems. They must be formed against a solid, hand-excavated trench wall undamaged by mechanical equipment. They shall be constructed of concrete, and the space between the pipe and trench shall be filled to the height of the outside diameter of the pipe. Size thrust blocks in accordance with ASAE S-376.1.
5. The trench bottom must be uniform, free of debris, and of sufficient width to properly place pipe and support it over its entire length. Native excavated material may be used to backfill the pipe trench. However, the initial backfill material to 6" above the top of the pipe shall be free from rocks or stones larger than 1-inch in diameter. The final backfill material shall be free of rock or debris that is greater than 3" in diameter. At the time of placement, the moisture content of the material shall be such that the required degree of compaction can be obtained with the backfill method to be used. Blocking or mounding shall not be used to bring the pipe to final grade.

6. Pipe sleeves must be used to protect pipes or wires installed under pavement or roadways, or when position of irrigation pipes or wires conflict with pipes or appurtenances of other trades. Use pipe sleeves two pipe sizes larger than the carrier pipe or twice the diameter of the wire bundle to be placed under the paving or roadway and extending a minimum of 3 feet beyond the paved area or as required by the Florida Department of Transportation (FDOT). Use sleeve pipe with wall thickness at least equal to the thickness of Schedule 40 or PR 160 pipe, whichever is thicker. Proper backfill and compaction procedures should be followed.

**B. Control valve installation.**

1. Valve installation shall allow enough clearance for proper operation and maintenance. Where valves are installed underground, they shall be provided with a valve box with cover extending from grade to the body of the valve. The top of the valve body should have a minimum of 6 inches (152 mm) of cover in nontraffic and noncultivated areas and 18 inches (457 mm) of cover in traffic areas. The valve box shall be installed so as to minimize the effect of soil intrusion within the valve box with the use of filter fabric, pea gravel, or other acceptable material. If an automatic valve is installed under each sprinkler, then the valve box may be omitted.
2. Install valve boxes so that they do not rest on the pipe, the box cover does not conflict with the valve stem or interfere with valve operation, they are flush with the ground surface and do not present a tripping hazard or interfere with routine maintenance of the landscape.
3. Install quick coupling valves on swing joints or flexible pipe with the top of the valve at ground level.
4. Any above-ground manually-operated valves on nonpotable water systems will be adequately identified with distinctive purple colored paint. Do not provide hose connections on irrigation systems that utilize nonpotable water supplies.

**C. Sprinkler installation.**

1. On flat landscaped areas, install sprinklers plumb. In areas where they are installed on slopes, sprinklers may be tilted as required to prevent erosion.
2. Sprinklers should be adjusted to avoid unnecessary discharge on pavements and structures.
  - a. Adjust sprinklers so they do not water on roads.
  - b. Provide a minimum separation of 4 inches (102 mm) between sprinklers and pavement.
  - c. Provide a minimum separation of 12 inches (305 mm) between sprinklers and buildings and other vertical structures.
  - d. Polyethylene (PE) nipples shall not be used in maintenance equipment traffic areas or alongside roadways and driveways.
3. Piping must be thoroughly flushed before installation of sprinkler nozzles.



4. Surface mounted and pop-up heads shall be installed on swing joints or flexible pipe.
5. Above-ground (riser mounted) sprinklers shall be mounted on Schedule 40 PVC or steel pipe and be effectively stabilized.
6. The pop-up height for sprays and rotator nozzles shall be adequate to prevent being obstructed by the turf grass blades: 6-inch height for St. Augustine, Zoysia and Bahia, 4-inch height for Bermuda, Centapede and Seashore Paspalum.
7. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PVC main or lateral break.
8. All microirrigation zones shall have adequate pressure regulation installed at the zone valve or at the point where the drip tubing is attached to the PVC to ensure that all emission devices meet the manufacturer's performance standards.
9. Each plant shall have a adequate number and size(gph) of microirrigation devices, properly placed to meet the plant water requirements for no rainfall.
10. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

#### D. Pump installation.

1. Install pumps as per the manufacturer's recommendations. Set pumps plumb and secure to a firm concrete base. There should be no strain or distortion on the pipe and fittings. Pipe and fittings should be supported to avoid placing undue strain on the pump. Steel pipe should be used on pumps 5 horsepower (hp) or larger whenever practical.
2. Pumps must be installed in a manner to avoid loss of prime. Install suction line to prevent the accumulation of air pockets. All connections and reductions in suction pipe sizes should be designed to avoid causing air pockets and cavitation.
3. Pumps must be located to facilitate service and ease of removal. Appropriate fittings should be provided to allow the pump to readily be primed, serviced, and disconnected. Provide an enclosure of adequate size and strength, with proper ventilation, to protect the pump from the elements (except residential systems).

#### E. Low voltage wire installation.

1. Install low voltage wire (less than 98 volts) with a minimum depth of cover of 12 inches (305 mm) where not installed directly under the mainline.
2. Provide a sufficient length of wire at each connection to allow for thermal expansion/shrinkage.

3. As a minimum, provide a 12-inch (305 mm) diameter loop at all splices and connections.
4. Terminations at valves will have 24-inches (610 mm) minimum free wire.
5. Install all above-ground wire runs and wire entries into buildings in electrical conduit.
 

**Exception:** No conduit is required when wiring above ground manifolds from the valve to the ground immediately beneath it.
6. Provide common wires with a different color than the power wires (white shall be used for common wires).
7. Connections are to be made using UL approved devices specifically designed for direct burial.
8. All splices shall be enclosed within a valve box.

#### F. Hydraulic control tubing.

1. For hydraulic control systems, use a water supply that is filtered and free of deleterious materials, as defined by the hydraulic control system manufacturer. Install a backflow prevention device where the hydraulic control system is connected to potable water supplies.
2. Install tubing in trenches freely and spaced so that it will not rub against pipe, fittings, or other objects that could score the tubing, and with a minimum 12-inch (305 mm) diameter loop at all turns and connections. Provide a minimum depth of cover of 12 inches (305 mm).
3. Connect tubing with couplings and collars recommended by the tubing manufacturer. All splices shall be made in valve boxes. Prefill tubing with water, expelling entrapped air and testing for leaks prior to installation.

Install exposed tubing in a protective conduit manufactured from Schedule 40 UV protected PVC or electrical conduit.

### PART VI: TESTING & INSPECTIONS

**A. Purpose.** All materials and installations covered by the Irrigation Code shall be inspected by the governing agency to verify compliance with the Irrigation Code.

**B. Rough inspections.** Rough inspections will be performed throughout the duration of the installation. These inspections will be made by the governing agency to ensure that the installation is in compliance with the design intent, specifications, and the Irrigation Codes. Inspections will be made on the following items at the discretion of the governing agency:

1. Sprinkler layout and spacing: This inspection will verify that the irrigation system design is accurately installed in the field. It will also provide for alteration or modification of the system to meet field conditions. To pass this inspection, sprinkler/emitter spacing should be within  $\pm 5$  percent of the design spacing.

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2. Pipe installation depth: All pipes in the system shall be installed to depths as previously described in this code.
3. Test all mainlines upstream of the zone valves as follows:
  - a. Fill the completely installed pipeline slowly with water to expel air. Allow the pipe to sit full of water for 24 hours to dissolve remaining trapped air.
  - b. Using a metering pump, elevate the water pressure to the maximum static supply pressure expected and hold there for a period of 2 hours, solvent-weld pipe connections shall have no leakage.
  - c. For gasketed pipe main lines add water as needed to maintain the pressure. Record the amount of water added to the system over the 2-hour period.
  - d. Use the following formulas to determine the maximum allowable leakage limit of gasketed pipe.

**DUCTILE IRON:**

$$L = \frac{SDP}{133,200}$$

**PVC, GASKETED JOINT:**

$$L = \frac{NDP}{7,400}$$

Where:

- L = allowable leakage (gph),
- N = number of joints,
- D = nominal diameter of pipe (inches), P = average test pressure (psi), and
- S = length of pipe (ft).

- e. When testing a system which contains metal-seated valves, an additional leakage per closed valve of 0.078 gph/inch of nominal valve size is allowed.

4. Open Trench Inspection: The trench at all joints and every transition in pipe size, will be open where open trench inspection is required.

**C. Final inspection.** When the work is complete the contractor shall request a final inspection.

1. Cross connection control and backflow prevention.
  - a. Public or domestic water systems: Check that an approved backflow prevention assembly is properly installed and functioning correctly. Review the location of the assembly to check that it is not creating a hazard to pedestrians or vehicular traffic.
  - b. Water systems other than public or domestic water systems: Check that the proper backflow prevention assemblies are provided.
  - c. All assemblies that can be, will be tested by a technician certified for backflow testing by a

State recognized certifying board prior to being placed into service.

2. Sprinkler coverage testing.

- a. All sprinklers must be adjusted to minimize overspray onto buildings and paved areas. Minor tolerances shall be made to allow for prevailing winds.
- b. All sprinkler controls must be adjusted to minimize runoff of irrigated water. Water application rates shall not exceed the absorption rate of the soil.
- c. All sprinklers must operate at their design radius of throw. Nozzle sizes and types called for in the system design must have been used. All nozzles within the same zone shall have matched precipitation rates unless otherwise directed in order to increase efficiency by adjusting the nozzle selection to match site conditions.
- d. Spray patterns must overlap as designed (a.k.a. head to head coverage) or placed to achieve the highest possible distribution uniformity using the manufacturer's specifications.
- e. Sprinklers must be connected, as designed, to the appropriate zone.
- f. Sprinkler heads must operate within 20 percent of the optimum operating pressure but not more than the maximum nor less than the minimum guidelines as specified by the manufacturer. If the dynamic water pressure at the site's water source(s) is too low to achieve this pressure range at the sprinklers, a booster pump or alternate source shall be required. If the dynamic water pressure at the site's water source(s) is too high to achieve this pressure range at the sprinklers, a pressure regulating device shall be required at either the source, the zone valve, or the sprinklers, or any combination thereof.

**D. Site restoration.**

1. All existing landscaping, pavement, and grade of areas affected by work must be restored to original condition or to the satisfaction of the governing authority.

Verify that the pipeline trenches have been properly compacted to the densities required by the plans and specifications.

**E. Record Drawings.**

1. A record drawing shall be required of all irrigation systems installed on commercial and residential developments and shall contain the following information:

- a. Location, type pressure and maximum flow available of all water sources.

Include limitations like days of week watering requirements.



- b. Location type and size of all components including sprinklers, microirrigation, main and lateral piping, master valves, valves, moisture sensors, rain sensors, controllers, pump start relays, back-flow devices, pumps, wells, etc.
  - c. The flow rate, application rate (inches per hour), and the operating pressure for the sprinklers and microirrigation within each zone.
  - d. An irrigation schedule for each zone, for each season (monthly is preferred), indicating the frequency and duration each zone should operate to meet the plant water requirements without rainfall and stay within the hydraulic capacities of the sprinkler system installed.
  - e. The name, address, phone, email, professional license or certification number of the installation contractor.
  - f. Date of installation.
  - g. Irrigation system maintenance schedule that shall include, but is not limited to the following:
    - 1. routine visual inspections (at least 4 per year);
    - 2. adjustments to components to keep sprinklers straight, at the right height;
    - 3. aligned and unobstructed nozzles and screens cleaned;
    - 4. filters cleaned and sensors monitored,; and
    - 5. pressures and flows at the source and sprinklers are correct for original design.
- F. Irrigation System Maintenance.**
- a. Repairs to all irrigation components shall be done with originally installed components, equivalent components or those with greater efficiency.
  - b. The operation of the irrigation system outside of the normal watering window shall be allowed for evaluating, maintaining or repairing the system or its components.
- G. Irrigation system management.**
- a. The frequency (times per week/month) and duration (minutes/hours) of the operation of each zone shall be adjusted and operate in order to meet the water needs of the plants within each zone as a supplement to rainfall. Adjustments shall be made a minimum 4 times per year to match the seasonal changes of the plants and the operational restrictions.
  - b. It is recommended that the schedule be adjusted monthly or controllers be properly installed and programmed to automatically adjust to maximize water savings.



# Section 8

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7th Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7th Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

One tap mobile

+13017158592,,92084341221#,,,,,0#,,681068# US (Germantown)

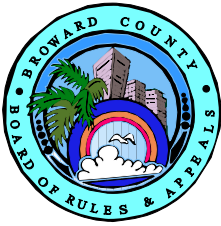
+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

<http://www.broward.org/codeappeals>

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**To:** Members of the Broward County Board of Rules and Appeals.  
**From:** Chief Mechanical Code Compliance Officer, Rolando Soto.  
Chief Plumbing Code Compliance Officer, Otto Vinas.  
**Date:** September 10, 2020  
**Subject:** Amendments to the upcoming Florida Mechanical Code (FMC) 7th Edition (2020), Section 307.2.1 and Florida Plumbing Code (FPC), Section [M] 314.2.1 "Condensate disposal", effective December 31st, 2020.

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### Recommendation

That BORA re-adopt by vote, the Broward County Amendments to the upcoming FMC, Section 307.2.1 "Condensate disposal" and FPC Section [M] 314.2.1 of the same name, for the upcoming FMC 7th Edition (2020), that will be effective January 1, 2021. These amendments were previously adopted for the 2010 FMC and FPC, and re-adopted for the FMC and FPC, 5th Edition (2014) and the current 6<sup>th</sup> Edition (2017). There is no change in the text of the original code amendments.

### Reasons

Broward County has a long history on water conservation. This modification will continue to require less water usage from the Biscayne Aquifer by requiring the collection of condensate from cooling coils and evaporators for use as cooling towers' make up water.

### Additional information

List of attached documents:

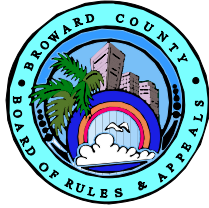
1. Original Broward Co. technical amendment to the 2010 FMC, effective 6/1/2012.
2. Draft of upcoming statewide FMC, Section 307.2.1 "Condensate disposal" and FPC Section [M] 314.2.1 of the same name without Broward Co. technical amendment.
3. Draft of Broward County Amendments to FMC, Section 307.2.1 "Condensate disposal" and FPC Section [M] 314.2.1 of the same name of the upcoming 2020 FMC and FPC, Seventh Edition. Effective January 1, 2021.
4. Justification to state for local code amendment.

Respectfully Submitted,

Rolando Soto 

Otto Vinas 

STRONGER CODES MEAN SAFER BUILDINGS  
~ESTABLISHED 1971~



# BROWARD COUNTY BOARD OF RULES AND APPEALS

March 29, 2012

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Suite 3500-B  
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Vice-Chair  
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Roofing Contractor  
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TBA  
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Architect

## **Board Attorney**

Russell White, Esq.

## **Board Administrative Director**

James DiPietro

—ESTABLISHED 1971—

## **Local Technical Amendment County of Broward**

**Code Version:** 2010 Florida Building  
**Sub Code:** Mechanical  
**Chapter & Topic:** Chapter 3 - Condensate Disposal  
**Section:** 307.2.1  
**Short Description:** Modifications to Condensate Disposal  
**Effective Date:** 6/01/2012  
**Number of paragraphs  
with changes:** 2

Reviewed and Legally Adopted: 03/15/2012

exceeds 12 inches (305 mm) below the adjoining grade, the walls of the passageway shall be lined with concrete or masonry. Such concrete or masonry shall extend a minimum of 4 inches (102 mm) above the adjoining grade and shall have sufficient lateral-bearing capacity to resist collapse. The clear access opening dimensions shall be a minimum of 22 inches by 30 inches (559 mm by 762 mm), and large enough to allow removal of the largest *appliance*.

#### Exceptions:

1. The passageway is not required where the level service space is present when the access is open and the *appliance* is capable of being serviced and removed through the required opening.
2. Where the passageway is unobstructed and not less than 6 feet high (1929 mm) and 22 inches (559 mm) wide for its entire length, the passageway shall not be limited in length.

**306.4.1 Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be provided at or near the *appliance* location in accordance with Chapter 27 of the *Florida Building Code, Building*.

**306.5 Equipment and appliances on roofs or elevated structures.** Where *equipment* requiring access and appliances are installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent *approved* means of access, the extent of which shall be from grade or floor level to the *equipment* and appliances' level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) high or walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope). Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).
2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center.
3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be a minimum of 18 inches (457 mm) between rails.
5. Rungs shall have a minimum (inter and be capable of withstanding 100 kg) load.
6. Ladders over 30 feet (9144 mm) provided with offset sections and standing 100 pounds per sq ft. Landing dimensions shall be not less than 24 inches (610 mm) and not less than the width of the guard rail shall be provided on the landing.
7. Ladders shall be protected by *approved* means.

Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall be provided with the required service platforms.

**Exception:** This section shall not apply to Group R-3 occupancies.

Minimum clearances below roof mounted mechanical units shall be in accordance with Section 1509.7, and 1522.3 of the *Florida Building Code, Building*.

**306.5.1 Sloped roofs.** Where appliances, *equipment*, fans or other components that require service are installed on a roof having a slope of three units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a level platform shall be provided on each side of the *appliance* or *equipment* to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *Florida Building Code, Building*. Access shall not require walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope). Where access involves obstructions greater than 30 inches (762 mm) in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairs installed in accordance with the requirements specified in the *Florida Building Code, Building* in the path of travel to and from appliances, fans or *equipment* requiring service.

**306.5.2 Electrical requirements.** A receptacle outlet shall be provided at or near the *equipment* location in accordance with Chapter 27 of the *Florida Building Code, Building*.

## SECTION 307 CONDENSATE DISPOSAL

**307.1 Fuel-burning appliances.** Liquid *combustion* by-products of condensing appliances shall be collected and discharged to an *approved* plumbing fixture or disposal area in accordance with the manufacturer's installation instructions. Condensate piping shall be of *approved* corrosion-resistant material and shall not be smaller than the drain connection on the appliance. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

**307.2 Evaporators and cooling coils.** Condensate drain systems shall be provided for *equipment* and appliances containing evaporators or cooling coils. Condensate drain systems shall be designed, constructed and installed in accordance with Sections 307.2.1 through 307.2.4.

**307.2.1 Condensate drainage collection, use or disposal.** Condensate from all cooling coils and evaporators of equipment served by an on-site cooling tower in a building or structure wherein the aggregate cooling capacity of the equipment exceeds 65,000 Btu/hr shall be collected and conveyed from the drain pan outlet and discharged to the cooling tower. Where an on-site cooling tower is not installed the condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

Original  
Broward Co.  
amendment to  
2010 FMC  
(underscored  
text) effective  
6/1/2012.  
Continues on  
next page.



Exceptions:

1. Condensate from cooling coils and evaporators is not required to be collected and conveyed to an on-site cooling tower, provided 1.1 through 1.3 are met:
  - 1.1 The equipment comprises 10% or less of the total capacity of the cooling tower system.
  - 1.2 The equipment is located in an isolated or remote area.
  - 1.3 The size of the equipment is 65,000 Btu/hr or less.
2. In existing buildings condensate may be collected and conveyed to a cooling tower or discharged to an approved place of disposal.

outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

**307.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the *Florida Building Code, Plumbing* relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

**Exception:** On wall mounted ductless split units less than 36,001 Btu/h where the drain line is less than 10 feet (3048 mm) in length, the factory drain outlet size shall be acceptable from the equipment to the place of disposal.

**TABLE 307.2.2  
CONDENSATE DRAIN SIZING**

EQUIPMENT CAPACITY	MINIMUM CONDENSATE PIPE DIAMETER
Up to 20 tons of refrigeration	3/4 inch
Over 20 tons to 40 tons of refrigeration	1 inch
Over 40 tons to 90 tons of refrigeration	1 1/4 inch
Over 90 tons to 125 tons of refrigeration	1 1/2 inch
Over 125 tons to 250 tons of refrigeration	2 inch

1 inch = 25.4 mm, 1 ton = 3.517 kW.

**307.2.3 Auxiliary and secondary drain systems.** In addition to the requirements of Section 307.2.1, where damage to any building components could occur as a result of overflow from the *equipment* primary condensate removal system, one of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired *appliance* that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1 1/2 inches (38 mm), shall

not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steel pans shall have a minimum thickness of not less than 0.0236 inch (0.6010 mm) (No. 24 gage). Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm).

2. A separate overflow drain line shall be connected to the drain pan provided with the *equipment*. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.

As an alternative to a separate drain line, a water-level detection device that will shut off the *equipment* served prior to overflow of the pan shall be provided. The water level detection device shall connect to the drain pan at a higher level than the primary drain connection.

3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water-level detection device conforming to UL 508 that will shut off the *equipment* served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.
4. Reserved.

**Exception:** Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

**307.2.3.1 Water-level monitoring devices.** On downflow units and all other coils that do not have a secondary drain or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the *equipment* served in the event that the primary drain becomes restricted. Devices installed in the drain line shall not be permitted.

**307.2.3.2 Appliance, equipment and insulation in pans.** Where appliances, *equipment* or insulation are subject to water damage when auxiliary drain pans fill, that portion of the *appliance, equipment* and insulation shall be installed above the rim of the pan. Supports located inside of the pan to support the *appliance* or *equipment* shall be water resistant and *approved*.

**307.2.4 Traps.** Condensate drains shall be trapped as required by the *equipment* or *appliance* manufacturer.

**307.2.5 Pipe insulation.** All horizontal primary condensate drains within unconditioned areas shall be insulated to prevent condensation from forming on the exterior of the drain pipe.

**SECTION 308  
CLEARANCE REDUCTION**

**308.1 Scope.** This section shall govern the reduction in required *clearances* to combustible materials and combustible assemblies for *chimneys*, vents, kitchen exhaust equipment, mechanical appliances, and mechanical devices and *equipment*.

**308.2 Listed appliances and equipment.** The reduction of the required *clearances* to combustibles for *listed* and *labeled*





Broward County  
**Board of Rules and Appeals**  
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<http://www.broward.org/codeappeals>

**Broward County Local Amendments**  
Proposed Modification to the Florida Building Code

Per Section 553.73, Fla Stat

Name: Broward County Board of Rules & Appeals, Attention: James DiPietro, ADMINISTRATIVE DIRECTOR  
Address: One North University Drive, Suite 3500-B, Plantation FL 33324  
E-mail: jdipietro@broward.org  
Phone: 954) 765-4500  
Fax: (954) 765-4504  
Code: 2010 Florida Building Code – Mechanical and Plumbing  
Section #: Plumbing Section [M] 314.2.1 and  
Mechanical Section 307.2.1

Text of Modification (additions underlined; deletion ~~stricken~~):  
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?  
REQUIRES THE COLLECTION OF CONDENSATE FROM ALL COOLING COILS AND EVAPORATORS OF EQUIPMENT SERVICED BY ON SITE COOLING TOWER IN A BUILDING OR STRUCTURE WHEREIN THE AGGREGATE COOLING CAPACITY OF THE EQUIPMENT EXCEEDS 65,000 BTU/HR
2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.  
BY FAR, THE MOST IMPORTANT DEMOGRAPHIC TREND AFFECTING WATER RESOURCES IS POPULATION GROWTH. SIGNIFICANT POPULATION GROWTH IS ANTICIPATED. ACCORDING TO THE MOST RECENT POPULATION PROJECTIONS, THE COUNTY IS PROJECTING A 13% INCREASE IN POPULATION TO NEARLY 2 MILLION RESIDENTS BY 2040. THIS ASSUMES POPULATION GROWTH RATES REMAIN MODERATED BY THE ECONOMIC DOWN TURN. HOWEVER, IN A COUNTY WITH THE 12<sup>TH</sup> LARGEST POPULATION IN THE UNITED STATES, EVEN A MODERATE GROWTH RATE TRANSLATES INTO A SUBSTANTIAL INCREASE IN WATER DEMAND. IN 2010, BROWARD COUNTY PUMPED APPROXIMATELY 233 MILLION GALLONS PER DAY (MGD) FROM THE BISCAYNE AQUIFER. HOWEVER, IN ACCORDANCE WITH THE REGIONAL WATER AVAILABILITY RULE, INCREASES IN WATER DEMAND MUST BE MET THROUGH ALTERNATIVE WATER SUPPLIES. BROWARD COUNTY HAS TO MAKEUP THE DIFFERENCE INCLUDING A PROJECTED INCREASE OF 22 MGD BY 2040 FROM THE FLORIDIAN AQUIFER OR OTHER WATER SUPPLIES (SUCH AS RECLAIMED WATER) WHICH REQUIRE MUCH HIGHER LEVELS OF TREATMENT BY REVERSE OSMOSIS AND/OR MEMBRANE FILTRATION, BOTH OF WHICH WILL REQUIRED NEW CAPITAL INVESTMENTS AND ENERGY INTENSIVE PROCESSES. IT HAS BEEN REPEATEDLY RECOGNIZED BY BROWARD WATER PROVIDERS AND ELECTED LEADERS THAT WATER CONSERVATION OFFER THE MOST COST EFFECTIVE AND IMMEDIATE MEANS TO MEET NEW WATER DEMANDS. WITHOUT EFFECTIVE WATER CONSERVATION BROWARD COUNTY'S CONTINUED GROWTH WILL BE DEPENDENT ON OUR ABILITY TO DEVELOP MORE COSTLY ALTERNATIVE WATER SUPPLIES.  
FLORIDA STATE STATUTES, SECTION 373.016(S), RECOGNIZES THAT THE WATER RESOURCE PROBLEMS OF THE STATE VARY FROM REGION TO REGION, BOTH IN MAGNITUDE AND COMPLEXITY. SPECIFICALLY, IN BROWARD COUNTY, THE



Broward County

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LIMITATIONS OF OUR AQUIFER, THE AMOUNT OF WATER THE STATE ALLOWS US TO WITHDRAW, THE INTRUSION OF SALT WATER INTO THE AQUIFER, AND THE INCREASED FUTURE DEMANDS THAT ARE PROJECTED ESTABLISH AND REINFORCE THE ISSUE OF REGIONAL VARIATION.

THE CONTINUED DISPOSAL OF CONDENSATE INTO THE STORM WATER DRAINAGE SYSTEMS OR PERVIOUS GRADE IS IRRECONCILABLE WITH THE VITAL ROLE CONDENSATE COLLECTION AND USE CAN PLAY IN EASING THE DEMANDS ON OUR INCREASINGLY BURDENED POTABLE WATER RESOURCES. MOREOVER, IT IS INCONSISTENT WITH FLORIDA STATUTE 373.227 WHICH CAUTIONS, "THE LEGISLATURE RECOGNIZES THAT THE PROPER CONSERVATION OF WATER IS AN IMPORTANT MEANS OF ACHIEVING THE ECONOMICAL AND EFFICIENT UTILIZATION OF WATER NECESSARY, IN PART, TO CONSTITUTE A REASONABLE—BENEFICIAL USE. THE OVERALL WATER CONSERVATION GOAL OF THE STATE IS TO PREVENT AND REDUCE WASTEFUL, UNECONOMICAL, IMPRACTICAL, OR UNREASONABLE USE OF WATER RESOURCES."

3. Explain how the local need is addressed by the proposed local amendment.

THIS MODIFICATION WILL REQUIRE LESS WATER USAGE FROM THE AQUIFERS.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

THE LOCAL NEED FOR WATER CONSERVATION IS VERY SERIOUS AND IS MANDATED BY THE BROWARD COUNTY COMMISSION AND SUPPORTED BY THE BROWARD LEAGUE OF CITIES AND THE BROWARD WATER RESOURCES TASK FORCE. THIS AMENDMENT WILL HELP ACHIEVE WATER CONSERVATION BUT CANNOT SOLVE THE PROJECTED WATER SHORTAGE PROBLEM WITHOUT OTHER LOCAL WATER CONSERVATION EFFORTS.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

PUBLIC MEETINGS AND A PUBLIC HEARING WERE HELD AND STAKEHOLDERS WERE INVITED TO ATTEND. AS PART OF THE COMMITTEE AND FINAL BOARD ADOPTION PROCESS, IT WAS DETERMINED THAT THE MODIFICATION WOULD NOT BE DISCRIMINATORY.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

THIS MODIFICATION REVISES AN EXISTING SECTION OF THE FLORIDA BUILDING CODE.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment.

Criteria for the fiscal impact statement shall include a, b, and c:

- a) Impact to local government, relative to enforcement.
  - b) Impact to property and building owners relative to cost of compliance.
  - c) Impact to industry relative to the cost of compliance
- a) THERE IS NO FISCAL IMPACT TO BROWARD COUNTY OR THE MUNICIPALITIES.
  - b) WHEN CONSIDERING LIFECYCLES, THERE IS NO COST TO BUILDING OWNERS FOR COMPLIANCE. THE FISCAL IMPACT INVOLVES HIGHER INITIAL COSTS, WHICH VARY BASED UPON THE SIZE AND COMPLEXITY OF THE COOLING SYSTEMS. HOWEVER, THE INITIAL COSTS ARE OFFSET BY A SYSTEM PAYOFF FROM 6 MONTHS TO SIX YEARS AS REASONABLY PROJECTED.
  - c) NO FISCAL IMPACT TO INDUSTRY.

BROWARD BORA PUBLIC HEARING AND VOTE MARCH 15, 2012.

AMENDMENT EFFECTIVE DATE JUNE 1, 2012.

upper edge of the roof hatch, roof or parapet, as applicable.

3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be not less than 18 inches (457 mm) between rails.
5. Rungs shall have a diameter not less than 0.75-inch (19 mm) and be capable of withstanding a 300-pound (136.1 kg) load.
6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot (488.2 kg/m<sup>2</sup>). Landing dimensions shall be not less than 18 inches (457 mm) and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.
7. Climbing clearance. The distance from the centerline of the rungs to the nearest permanent object on the climbing side of the ladder shall be not less than 30 inches (762 mm) measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15 inches (381 mm) shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs except where cages or wells are installed.
8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches (762 mm) by 30 inches (762 mm) centered in front of the ladder.
9. Ladders shall be protected against corrosion by *approved* means.
10. Access to ladders shall be provided at all times.

Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

**Exception:** This section shall not apply to Group R-3 occupancies.

**306.5.1 Sloped roofs.** Where appliances, *equipment*, fans or other components that require service are installed on a roof having a slope of three units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a level platform shall be provided on each side of the *appliance* or *equipment* to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *Florida Building Code, Building*. Access shall not require walking on roofs having a slope greater than four units vertical in 12 units

horizontal (33-percent slope). Where access involves obstructions greater than 30 inches (762 mm) in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairways installed in accordance with the requirements specified in the *Florida Building Code, Building* in the path of travel to and from appliances, fans or *equipment* requiring service.

**306.5.2 Electrical requirements.** A receptacle outlet shall be provided at or near the *equipment* location in accordance with NFPA 70.

## SECTION 307 CONDENSATE DISPOSAL

**307.1 Fuel-burning appliances.** Liquid *combustion* by-products of condensing appliances shall be collected and discharged to an *approved* plumbing fixture or disposal area in accordance with the manufacturer's installation instructions. Condensate piping shall be of *approved* corrosion-resistant material and shall not be smaller than the drain connection on the appliance. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

**307.2 Evaporators and cooling coils.** Condensate drain systems shall be provided for *equipment* and appliances containing evaporators or cooling coils. Condensate drain systems shall be designed, constructed and installed in accordance with Sections 307.2.1 through 307.2.5.

**Exception:** Evaporators and cooling coils that are designed to operate in sensible cooling only and not support condensation shall not be required to meet the requirements of this section.

**307.2.1 Condensate disposal.** Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

**307.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, brass, copper and copper alloy, cross-linked polyethylene, polyethylene, ABS, CPVC, PVC, or polypropylene pipe or tubing. Components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the *Florida Building Code, Plumbing* relative to the material type. Condensate waste and drain line size shall be not less than <sup>3</sup>/<sub>4</sub>-inch (19.1 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

GENERAL REGULATIONS

tion with the public sewer and applying a pressure of 5 psi (34.5 kPa) greater than the pump rating, and maintaining such pressure for 15 minutes.

**312.8 Storm drainage system test.** *Storm drain* systems within a building shall be tested by water or air in accordance with Section 312.2 or 312.3.

**312.9 Shower liner test.** Where shower floors and receptors are made water tight by the application of materials required by Section 421.5.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches (51 mm) measured at the threshold. Where a threshold of at least 2 inches (51 mm) high does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches (51 mm) deep measured at the threshold. The water shall be retained for a test period of not less than 15 minutes, and there shall not be evidence of leakage.

**312.10 Inspection and testing of backflow prevention assemblies.** Inspection and testing shall comply with Sections 312.10.1 and 312.10.2.

**312.10.1 Inspections.** Inspections shall be made of all backflow prevention assemblies and *air gaps* to determine whether they are operable.

**312.10.2 Testing.** Reduced pressure principle, double check, pressure vacuum breaker, reduced pressure detector fire protection, double check detector fire protection, and spill-resistant vacuum breaker backflow preventer assemblies and hose connection backflow preventers shall be tested at the time of installation and immediately after repairs or relocation. The testing procedure shall be performed in accordance with one of the following standards: ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CSA B64.10 or CSA B64.10.1.

**SECTION 313  
EQUIPMENT EFFICIENCIES**

**313.1 General.** Equipment efficiencies shall be in accordance with the *Florida Building Code, Energy Conservation*.

**SECTION 314  
CONDENSATE DISPOSAL**

**[M] 314.1 Fuel-burning appliances.** Liquid combustion by-products of condensing appliances shall be collected and discharged to an *approved* plumbing fixture or disposal area in accordance with the manufacturer’s instructions. Condensate piping shall be of *approved* corrosion-resistant material and shall not be smaller than the drain connection on the appliance. Such piping shall maintain a horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

**[M] 314.2 Evaporators and cooling coils.** Condensate drain systems shall be provided for equipment and appliances containing evaporators or cooling coils. Condensate drain sys-

tems shall be designed, constructed and installed in accordance with Sections 314.2.1 through 314.2.5.

**[M] 314.2.1 Condensate disposal.** Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

**[M] 314.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be brass, cast iron, galvanized steel, copper, copper alloy, cross-linked polyethylene, polyethylene, ABS, CPVC or PVC or polypropylene pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch (19.1 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 314.2.2.

**[M] TABLE 314.2.2  
CONDENSATE DRAIN SIZING**

EQUIPMENT CAPACITY	MINIMUM CONDENSATE PIPE DIAMETER (inch)
Up to 20 tons of refrigeration	3/4 inch
Over 20 tons to 40 tons of refrigeration	1 inch
Over 40 tons to 90 tons of refrigeration	1 1/4 inch
Over 90 tons to 125 tons of refrigeration	1 1/2 inch
Over 125 tons to 250 tons of refrigeration	2 inch

For SI: 1 inch = 25.4 mm, 1 ton of capacity = 3.517 kW.

**[M] 314.2.3 Auxiliary and secondary drain systems.** In addition to the requirements of Section 314.2.1, where damage to any building components could occur as a result of overflow from the equipment primary condensate removal system, one of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired appliance that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a depth of not less than 1 1/2 inches (38 mm), shall be not less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet metal pans shall have a thickness of not less than 0.0236-inch (0.6010 mm) (No. 24 gage) galvanized sheet metal. Nonmetallic pans shall have a thickness of not less than 0.0625 inch (1.6 mm).

**Clean text of Broward County Amendments to subsection 307.2.1 of the 2020 Florida Building Code - Mechanical, Seventh Edition. Effective January 1, 2021.**

**CHAPTER 3 GENERAL REGULATIONS**

**SECTION 307 CONDENSATE DISPOSAL**

**307.2.1 Condensate drainage collection, use or disposal.**

Condensate from all cooling coils and evaporators of equipment served by an onsite cooling tower in a building or structure wherein the aggregate cooling capacity of the equipment exceeds 65,000 Btu/hr shall be collected and conveyed from the drain pan outlet and discharged to the cooling tower. Where an on-site cooling tower is not installed the condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

Exceptions:

1. Condensate from cooling coils and evaporators is not required to be collected and conveyed to an on-site cooling tower; provided 1.1 through 1.3 are met:
  - 1.1 The equipment comprises 10% or less of the total capacity of the cooling tower system.
  - 1.2 The equipment is located in an isolated or remote area.
  - 1.3 The size of the equipment is 65,000 Btu/hr. or less.
2. In existing buildings condensate may be collected and conveyed to a cooling tower or discharged to an approved place of disposal.

**Broward County Amendments to subsection 307.2.1 of the 2020 Florida Building Code - Mechanical, Seventh Edition showing the differences with the statewide code. Effective January 1, 2021.**

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Broward County

## Board of Rules and Appeals

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### Broward County Local Amendments

#### Proposed Modification to the Florida Building Code

##### Per Section 553.73, Fla Statute

Name: Broward County Board of Rules & Appeals, Attention: James DiPietro, ADMINISTRATIVE DIRECTOR

Address: One North University Drive, Suite 3500-B, Plantation FL 33324

E-mail: jdipietro@broward.org

Phone: 954) 765-4500

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Code: 7<sup>th</sup> Edition (2020) Florida Building Code, Plumbing and Mechanical

Section #: Plumbing Section [M] 314.2.1 and  
Mechanical Section 307.2.1

Text of Modification (additions underlined; deletion ~~stricken~~):

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3. Explain how the local need is addressed by the proposed local amendment.

THIS MODIFICATION WILL REQUIRE LESS WATER USAGE FROM THE AQUIFERS.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

THE LOCAL NEED FOR WATER CONSERVATION IS VERY SERIOUS AND IS MANDATED BY THE BROWARD COUNTY COMMISSION AND SUPPORTED BY THE BROWARD LEAGUE OF CITIES AND THE BROWARD WATER RESOURCES TASK FORCE. THIS AMENDMENT WILL HELP ACHIEVE WATER CONSERVATION BUT CANNOT SOLVE THE PROJECTED WATER SHORTAGE PROBLEM WITHOUT OTHER LOCAL WATER CONSERVATION EFFORTS.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

PUBLIC MEETINGS AND A PUBLIC HEARING WERE HELD AND STAKEHOLDERS WERE INVITED TO ATTEND. AS PART OF THE COMMITTEE AND FINAL BOARD ADOPTION PROCESS, IT WAS DETERMINED THAT THE MODIFICATION WOULD NOT BE DISCRIMINATORY.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

THIS MODIFICATION REVISES AN EXISTING SECTION OF THE FLORIDA BUILDING CODE.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:

- a) Impact to local government, relative to enforcement.
  - b) Impact to property and building owners relative to cost of compliance.
  - c) Impact to industry relative to the cost of compliance
- a) THERE IS NO FISCAL IMPACT TO BROWARD COUNTY OR THE MUNICIPALITIES.
  - b) WHEN CONSIDERING LIFECYCLES, THERE IS NO COST TO BUILDING OWNERS FOR COMPLIANCE. THE FISCAL IMPACT INVOLVES HIGHER INITIAL COSTS, WHICH VARY BASED UPON THE SIZE AND COMPLEXITY OF THE COOLING SYSTEMS. HOWEVER, THE INITIAL COSTS ARE OFFSET BY A SYSTEM PAYOFF FROM 6 MONTHS TO SIX YEARS AS REASONABLY PROJECTED.
  - c) NO FISCAL IMPACT TO INDUSTRY.

BROWARD BORA PUBLIC HEARING AND VOTE SEPTEMBER 10, 2020.

AMENDMENT EFFECTIVE DATE JANUARY 1, 2021.

# Section 9

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7<sup>th</sup> Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7<sup>th</sup> Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

One tap mobile

+13017158592,,92084341221#,,,,,0#,,681068# US (Germantown)

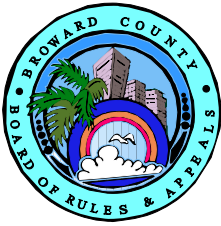
+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

<http://www.broward.org/codeappeals>

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**To:** Members of the Broward County Board of Rules and Appeals  
**From:** Chief Mechanical Code Compliance Officer, Rolando Soto.  
**Date:** September 10, 2020  
**Subject:** Amendments to the upcoming Florida Mechanical Code (FMC) 7th Edition (2020), Section 908 "Cooling Towers, Evaporative Condensers and Fluid Coolers", subsection 908.3 "Location", effective December 31st , 2020.

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### Recommendation

That BORA re-adopt by vote the Broward County Amendment to the upcoming FMC, Section 908, subsection 908.3. This amendment was originally adopted by BORA on March 10, 2016, for the FMC, 5th Edition (2014) and re-adopted for the current 6th Edition (2017) of the FMC. There is no change in the text of the original code amendments.

### Reasons

This local amendment will bring emphasis to the prevention of conditions conducive to the spread of Legionellosis, an infectious disease, during the design, siting, and installation of Cooling Towers in Broward County by adopting Section 7.2.1 of ASHRAE 188-2018. Large areas of Broward County include high density residential and large commercial buildings, hospitals, schools, etc. Many of these buildings use Cooling Towers for heat rejection. Cooling Towers create a potential breeding environment for the Legionella bacteria, the cause of a serious, and sometime fatal condition known as Legionellosis. The increasing number of Cooling Towers in Broward County places large number of county residents in potential danger of being exposed to this infectious agent. This amendment came as a recommendation by several members of the Mechanical Committee, including the Chairman, Mr. Steve Feller, P.E.

The updates keep the previous code text and do not add or remove anything from what was proposed by the mechanical committee members and latter approved by BORA, other than updating ASHRAE-188 reference to the new 2018 edition, in which the text didn't change either.

1. Original Broward Co. technical amendment to the FMC, 5th Edition (2014) effective 4/15/2016.
2. Draft of upcoming statewide FMC, Section 908 "Cooling Towers, Evaporative Condensers and Fluid Coolers", subsection 908.3 "Location", without Broward Co. technical amendment.
3. Draft of Broward County Amendments to FMC, Section 908 "Cooling Towers, Evaporative Condensers and Fluid Coolers", subsection 908.3 "Location" of the upcoming 2020 FMC, Seventh Edition. Effective January 1, 2021.
4. Copy of ASHRAE-188-2018, section 7.2.1.
5. Justification to state for local code amendment.

Respectfully submitted,

Rolando Soto

A handwritten signature in blue ink that reads "R. Soto".

STRONGER CODES MEAN SAFER BUILDINGS  
~ESTABLISHED 1971~



# BROWARD COUNTY BOARD OF RULES AND APPEALS

March 15, 2016

Marlita Peters  
Florida Building Codes and Standards  
1940 North Monroe Street  
Tallahassee, FL 32399

ONE NORTH UNIVERSITY DRIVE  
SUITE 3500-B  
PLANTATION, FLORIDA 33324

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[www.broward.org/codeappeal](http://www.broward.org/codeappeal)

### 2016 Voting Members

#### Chair

Mr. Jeffrey Lucas  
Fire Service Professional

#### Vice-Chair

Mr. Kenneth B. Wynn  
Representative Disabled Community  
Mr. John Famularo,

Roofing Contractor  
Mrs. Shalanda Giles Nelson,  
General Contractor  
Mr. Daniel Lavrich, P.E.  
Structural Engineer

VACANT

Master Plumber  
Mr. Gregg D'Attile,  
Mechanical Contractor

VACANT

Electrical Engineer  
Mr. Ron Burr  
Swimming Pool Contractor  
Mr. John Sims,  
Master Electrician

VACANT

Consumer Advocate  
Mr. Abbas H. Zackria, CSI  
Architect

Robert A. Kamm, P.E.  
Mechanical Engineer

### 2016 Alternate Board Members

Mr. Steven Feller, P.E.  
Mechanical Engineer  
Mr. Alberto Fernandez,  
General Contractor  
Assistant Chief Jeff Moral, CFO  
Fire Service

Mr. Gary Elzweig, P.E.  
Structural Engineer  
Mr. David Rice, P.E.  
Electrical Engineer

Mr. James Terry,  
Master Plumber  
Mr. David Tringo,  
Master Electrician

Mr. William Flett,  
Roofing Contractor  
VACANT

Architect

#### Board Attorney

Charles M. Kramer, Esq.

#### Board Administrative Director

James DiPietro

RE: Amendments to the FBC 5<sup>th</sup> Edition (2014)

Dear Ms. Peters:

The following listed amendments to the Florida Building Code 5<sup>th</sup> Edition (2014) were passed by the Broward County Board of Rules and Appeals on its regular session of March 10, 2016.

- FBC 5<sup>th</sup> Edition (2014) Administrative Provisions Chapter I – Section 118 (new)
- FBC 5<sup>th</sup> Edition (2014) Administrative Provisions Chapter I – Section 104.18 (modifying the training requirements from the current 32 hours in a biennial period to 28 hours).
- FBC 5<sup>th</sup> Edition (2014) Administrative Provisions Chapter I – Section 105.3 through 105.3.1
- FBC 5<sup>th</sup> edition (2014) Mechanical-(FBC-M) Chapter 9 – Section 908 Cooling Towers, Evaporate Condensers and Fluid Coolers.
- FBC-M, Chapter 15, Referenced Standards; adopting Section 7.2.1 of ASHRAE 188-2015.

Attached you will find each section with the amended text detailed and the required questions and answers form as required to proposed a local amendment to the Florida Building Code.

Please review attachments and post.

Sincerely,

James DiPietro  
Administrative Director

*Attachments*

## CHAPTER 9

# SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

### SECTION 901 GENERAL

**901.1 Scope.** This chapter shall govern the approval, design, installation, construction, maintenance, *alteration* and repair of the appliances and *equipment* specifically identified herein and factory-built fireplaces. The approval, design, installation, construction, maintenance, *alteration* and repair of gas-fired appliances shall be regulated by the *Florida Building Code, Fuel Gas*.

**901.2 General.** The requirements of this chapter shall apply to the mechanical *equipment* and appliances regulated by this chapter, in addition to the other requirements of this code.

**901.3 Hazardous locations.** Fireplaces and solid fuel-burning appliances shall not be installed in hazardous locations.

**901.4 Fireplace accessories.** Listed and labeled fireplace accessories shall be installed in accordance with the conditions of the listing and the manufacturer's instructions. Fireplace accessories shall comply with UL 907.

### SECTION 902 MASONRY FIREPLACES

**902.1 General.** Masonry fireplaces shall be constructed in accordance with the *Florida Building Code, Building*.

### SECTION 903 FACTORY-BUILT FIREPLACES

**903.1 General.** Factory-built fireplaces shall be *listed* and *labeled* and shall be installed in accordance with the conditions of the listing. Factory-built fireplaces shall be tested in accordance with UL 127.

**903.2 Hearth extensions.** Hearth extensions of approved factory-built fireplaces shall be installed in accordance with the listing of the fireplace. The hearth extension shall be readily distinguishable from the surrounding floor area. Listed and labeled hearth extensions shall comply with UL 1618.

**903.3 Unvented gas log heaters.** An unvented gas log heater shall not be installed in a factory-built fireplace unless the fireplace system has been specifically tested, *listed* and *labeled* for such use in accordance with UL 127.

### SECTION 904 PELLET FUEL-BURNING APPLIANCES

**904.1 General.** Pellet fuel-burning appliances shall be *listed* and *labeled* in accordance with ASTM E 1509 and shall be installed in accordance with the terms of the listing.

### SECTION 905 FIREPLACE STOVES AND ROOM HEATERS

**905.1 General.** Fireplace stoves and solid-fuel-type room heaters shall be *listed* and *labeled* and shall be installed in accordance with the conditions of the listing. Fireplace stoves shall be tested in accordance with UL 737. Solid-fuel-type room heaters shall be tested in accordance with UL 1482. Fireplace inserts intended for installation in fireplaces shall be *listed* and *labeled* in accordance with the requirements of UL 1482 and shall be installed in accordance with the manufacturer's installation instructions.

**905.2 Connection to fireplace.** The connection of solid fuel appliances to *chimney* flues serving fireplaces shall comply with Sections 801.7 and 801.10.

**905.3 Hearth extensions.** Hearth extensions for fireplace stoves shall be installed in accordance with the listing of the fireplace stove. The hearth extension shall be readily distinguishable from the surrounding floor area. Listed and labeled hearth extensions shall comply with UL 1618.

### SECTION 906 FACTORY-BUILT BARBECUE APPLIANCES

**906.1 General.** Factory-built barbecue appliances shall be of an *approved* type and shall be installed in accordance with the manufacturer's installation instructions, this chapter and Chapters 3, 5, 7, 8 and the *Florida Building Code, Fuel Gas*.

### SECTION 907 INCINERATORS AND CREMATORIES

**907.1 General.** Incinerators and crematories shall be *listed* and *labeled* in accordance with UL 791 and shall be installed in accordance with the manufacturer's installation instructions.

### SECTION 908 COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS

**908.1 General.** A cooling tower used in conjunction with an air-conditioning *appliance* shall be installed in accordance with the manufacturer's installation instructions. Factory-built cooling towers shall be listed in accordance with UL 1995.

**908.2 Access.** Cooling towers, evaporative condensers and fluid coolers shall be provided with ready access.

**908.3 Location.** Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location

on the property shall be as required for buildings in accordance with the Florida Building Code, Building.

908.3.1 Siting of cooling towers shall comply with Section 7.2.1 of ASHRAE 188-2015. Exception: The replacement of existing cooling towers on previously permitted and approved locations.

**908.4 Support and anchorage.** Supports for cooling towers, evaporative condensers and fluid coolers shall be designed in accordance with the *Florida Building Code, Building*. Seismic restraints shall be as required by the *Florida Building Code, Building*.

**908.5 Water supply.** Water supplies and protection shall be as required by the *Florida Building Code, Plumbing*.

**908.6 Drainage.** Drains, overflows and blowdown provisions shall be indirectly connected to an *approved* disposal location. Discharge of chemical waste shall be *approved* by the appropriate regulatory authority.

**908.7 Refrigerants and hazardous fluids.** Heat exchange equipment that contains a refrigerant and that is part of a closed refrigeration system shall comply with Chapter 11. Heat exchange equipment containing heat transfer fluids which are flammable, combustible or hazardous shall comply with the *Florida Fire Prevention Code*.

### SECTION 909 VENTED WALL FURNACES

**909.1 General.** Vented wall furnaces shall be installed in accordance with their listing and the manufacturer's installation instructions. Oil-fired furnaces shall be tested in accordance with UL 730.

**909.2 Location.** Vented wall furnaces shall be located so as not to cause a fire hazard to walls, floors, combustible furnishings or doors. Vented wall furnaces installed between bathrooms and adjoining rooms shall not circulate air from bathrooms to other parts of the building.

**909.3 Door swing.** Vented wall furnaces shall be located so that a door cannot swing within 12 inches (305 mm) of an air inlet or air outlet of such furnace measured at right angles to the opening. Doorstops or door closers shall not be installed to obtain this clearance.

**909.4 Ducts prohibited.** Ducts shall not be attached to wall furnaces. Casing extension boots shall not be installed unless listed as part of the appliance.

**909.5 Manual shutoff valve.** A manual shutoff valve shall be installed ahead of all controls.

**909.6 Access.** Vented wall furnaces shall be provided with access for cleaning of heating surfaces, removal of burners, replacement of sections, motors, controls, filters and other working parts, and for adjustments and lubrication of parts requiring such attention. Panels, grilles and access doors that must be removed for normal servicing operations shall not be attached to the building construction.

### SECTION 910 FLOOR FURNACES

**910.1 General.** Floor furnaces shall be installed in accordance with their listing and the manufacturer's installation instructions. Oil-fired furnaces shall be tested in accordance with UL 729.

Original Broward Co. amendment to 5<sup>th</sup> Edition FMC (underscored text) effective 4/15/2016. Continues next page.

furnaces shall not be installed in the sageway of any auditorium, public or in any egress element from any

wall register models, a floor furnace than 6 inches (152 mm) to the nearer models shall not be placed closer to a corner.

placed such that a drapery or similar not be nearer than 12 inches (305 mm) to the register of the furnace. Floor furnaces in concrete floor construction shall be built on grade. The controlling thermostat for a floor furnace shall be located within the same room or space as the floor furnace or shall be located in an adjacent room or space that is permanently open to the room or space containing the floor furnace.

**910.3 Bracing.** The floor around the furnace shall be braced and headed with a support framework design in accordance with the *Florida Building Code, Building*.

**910.4 Clearance.** The lowest portion of the floor furnace shall have not less than a 6-inch (152 mm) clearance from the grade level; except where the lower 6-inch (152 mm) portion of the floor furnace is sealed by the manufacturer to prevent entrance of water, the minimum clearance shall be reduced to not less than 2 inches (51 mm). Where these clearances are not present, the ground below and to the sides shall be excavated to form a pit under the furnace so that the required clearance is provided beneath the lowest portion of the furnace. A 12-inch (305 mm) minimum clearance shall be provided on all sides except the control side, which shall have an 18-inch (457 mm) minimum clearance.

### SECTION 911 DUCT FURNACES

**911.1 General.** Duct furnaces shall be installed in accordance with the manufacturer's installation instructions. Electric duct furnaces shall comply with UL 1996.

### SECTION 912 INFRARED RADIANT HEATERS

**912.1 General.** Electric infrared radiant heaters shall comply with UL 499.

**912.2 Support.** Infrared radiant heaters shall be fixed in a position independent of fuel and electric supply lines. Hangers and brackets shall be noncombustible material.

**912.3 Clearances.** Heaters shall be installed with clearances from combustible material in accordance with the manufacturer's installation instructions.

### SECTION 913 CLOTHES DRYERS

**913.1 General.** Clothes dryers shall be installed in accordance with the manufacturer's installation instructions. Elec-



## CHAPTER 15

# REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.8.

### ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.  
1791 Tullie Circle, NE  
Atlanta, GA 30329

Standard reference number	Title	Referenced in code section number
ASHRAE—2009	ASHRAE Fundamentals Handbook	603.2
15—2010	Safety Standard for Refrigeration Systems	1101.6, 1105.8, 1108.1
34—2010	Designation and Safety Classification of Refrigerants	202, 1102.2.1, 1103.1

**FLORIDA BUILDING CODE — MECHANICAL, 5th EDITION (2014)**

15.1

#### REFERENCED STANDARDS

Effective: April 15, 2016

Standard reference number	Title	Referenced in code section number
<b>ASHRAE—continued</b>		
62.1—2010	Ventilation for Acceptable Indoor Air Quality	403.3.2.3.2
180—2008	Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems	102.3
188—2015	<u>Legionellosis: Risk Management for Building Water Systems</u>	<u>908.3.1</u>



2020 Florida Building Code - Mechanical, Seventh Edition without amendments.  
CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

SECTION 908  
COOLING TOWERS, EVAPORATIVE  
CONDENSERS AND FLUID COOLERS

**908.1 General.** A cooling tower used in conjunction with an air-conditioning *appliance* shall be installed in accordance with the manufacturer's instructions. Factory-built cooling towers shall be listed in accordance with UL 1995 or UL/CSA 60335-2-40.

**908.2 Access.** Cooling towers, evaporative condensers and fluid coolers shall be provided with ready access.

**908.3 Location.** Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the *Florida Building Code, Building*.

**908.4 Support and anchorage.** Supports for cooling towers, evaporative condensers and fluid coolers shall be designed in accordance with the *Florida Building Code, Building*. Seismic restraints shall be as required by the *Florida Building Code, Building*.

**908.5 Water supply.** Cooling towers, evaporative coolers and fluid coolers shall be provided with an approved water supply, sized for peak demand. The quality of water shall be provided in accordance with the equipment manufacturer's recommendations. The piping system and protection of the potable water supply system shall be installed as required by the *Florida Building Code, Plumbing*.

**908.6 Drainage.** Drains, overflows and blowdown provisions shall be indirectly connected to an *approved* disposal location. Discharge of chemical waste shall be *approved* by the appropriate regulatory authority.

**908.7 Refrigerants and hazardous fluids.** Heat exchange *equipment* that contains a refrigerant and that is part of a closed refrigeration system shall comply with Chapter 11. Heat exchange *equipment* containing heat transfer fluids which are flammable, combustible or hazardous shall comply with the *Florida Fire Prevention Code*.

**908.8 Cooling towers.** Cooling towers, both open circuit and closed circuit type, and evaporative condensers shall comply with Sections 908.8.1 and 908.8.2.

**908.8.1 Conductivity or flow-based control of cycles of concentration.** Cooling towers and evaporative condensers shall include controls that automate system bleed based on conductivity, fraction of metered makeup volume, metered bleed volume, recirculating pump run time or bleed time.

**908.8.2 Drift eliminators.** Cooling towers and evaporative condensers shall be equipped with drift eliminators that have a maximum drift rate of 0.005 percent of the circulated water flow rate as established in the equipment's design specifications.

SECTION 909  
VENTED WALL FURNACES

**909.1 General.** Vented wall furnaces shall be installed in accordance with their listing and the manufacturer's instructions. Oil-fired furnaces shall be tested in accordance with UL 730.

**909.2 Location.** Vented wall furnaces shall be located so as not to cause a fire hazard to walls, floors, combustible furnishings or doors. Vented wall furnaces installed between bathrooms and adjoining rooms shall not circulate air from bathrooms to other parts of the building.

Vented wall furnaces shall be located so that a door cannot swing within 12 inches (305 mm) of an air inlet or air outlet of such furnace measured at right angles to the opening. Doorstops or door closers shall not be installed to obtain this *clearance*.

**909.4 Ducts prohibited.** Ducts shall not be attached to wall furnaces. Casing extension boots shall not be installed unless listed as part of the *appliance*.

**909.5 Manual shutoff valve.** A manual shutoff valve shall be installed ahead of all controls.

**909.6 Access.** Vented wall furnaces shall be provided with access for cleaning of heating surfaces, removal of burners, replacement of sections, motors, controls, filters and other working parts, and for adjustments and lubrication of parts requiring such attention. Panels, grilles and access doors that must be removed for normal servicing operations shall not be attached to the building construction.

SECTION 910  
FLOOR FURNACES

**910.1 General.** Floor furnaces shall be installed in accordance with their listing and the manufacturer's instructions. Oil-fired furnaces shall be tested in accordance with UL 729.

**910.2 Placement.** Floor furnaces shall not be installed in the floor of any aisle or passageway of any auditorium, public hall, place of assembly, or in any egress element from any such room or space.

With the exception of wall register models, a floor furnace shall not be placed closer than 6 inches (152 mm) to the nearest wall, and wall register models shall not be placed closer than 6 inches (152 mm) to a corner.

The furnace shall be placed such that a drapery or similar combustible object will not be nearer than 12 inches (305 mm) to any portion of the register of the furnace. Floor furnaces shall not be installed in concrete floor construction built on grade. The controlling thermostat for a floor furnace shall be located within the same room or space as the floor furnace or shall be located in an adjacent room or space that is permanently open to the room or space containing the floor furnace.

**910.3 Bracing.** The floor around the furnace shall be braced and headed with a support framework design in accordance with the *Florida Building Code, Building*.

**Clean text of Broward County Amendments to subsection 908.3.1 of the 2020 Florida Building Code - Mechanical, Seventh Edition. Effective January 1, 2021.**

**CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT**

**SECTION 908 COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS.**

**908.3 Location.**

Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the *Florida Building Code, Building*.

908.3.1 Sitting of cooling towers shall comply with Section 7.2.1 of ASHRAE 188-2018.

Exception: The replacement of existing cooling towers on previously permitted and approved locations.

**CHAPTER 15 REFERENCED STANDARDS**

Standard Reference Number	Title	Referenced in code section number
	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329	
ASHRAE—2017	ASHRAE Fundamentals Handbook	603.2
15—2016	Safety Standard for Refrigeration Systems	1101.6, 1105.8, 1108.1
34—2016	Designation and Safety Classification of Refrigerants	202, 1102.2.1, 1103.1
62.1—2016	Ventilation for Acceptable Indoor Air Quality	403.3.1.1.2.3.2
170--2017	Ventilation of Health Care Facilities	407
188-2018	Legionellosis: Risk Management for Building Water Systems	908.3.1

**Broward County Amendments to subsection 908.3.1 of the 2020 Florida Building Code - Mechanical, Seventh Edition showing the differences with the statewide code. Effective January 1, 2021.**

**CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT**

**SECTION 908 COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS.**

~~Stricken thru text~~ are deletions from the Florida Building Code - Mechanical, Seventh Edition.

Underscored text are additions Florida Building Code - Mechanical, Seventh Edition.

**908.3 Location.**

Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the *Florida Building Code, Building*.

908.3.1 Sitting of cooling towers shall comply with Section 7.2.1 of ASHRAE 188-2018.

Exception: The replacement of existing cooling towers on previously permitted and approved locations.

**CHAPTER 15 REFERENCED STANDARDS**

Standard Reference Number	Title	Referenced in code section number
ASHRAE—2017 15—2016	ASHRAE Fundamentals Handbook	603.2
	Safety Standard for Refrigeration Systems	1101.6, 1105.8, 1108.1
34—2016	Designation and Safety Classification of Refrigerants	202, 1102.2.1, 1103.1
62.1—2016	Ventilation for Acceptable Indoor Air Quality	403.3.1.1.2.3.2
170--2017	Ventilation of Health Care Facilities	407
<u>188-2018</u>	<u>Legionellosis: Risk Management for Building Water Systems</u>	<u>908.3.1</u>

**ASHRAE** American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.  
1791 Tullie Circle, NE  
Atlanta, GA 30329

For reference only, not to be included in the code language:

ASHRAE 188-2018

**7.2.1 Equipment Siting.** Prior to the beginning of construction of new or replacement open-circuit cooling towers, closed circuit cooling towers, or evaporative condensers, drawings shall be reviewed and the following items shall be addressed:

- a. Potential contamination from building systems or facility processes to be drawn into the equipment
- b. Potential for equipment to discharge into occupied spaces, trafficable areas, pedestrian thoroughfares, outdoor air intakes, and building openings
- c. Potential for equipment siting that inhibits access to the equipment for the required maintenance and inspection consistent with the manufacturer's instructions and guidelines

DRAFT



Broward County

## Board of Rules and Appeals

One N. University Drive, Suite 3500-B, Plantation, Florida 33324

TL 954.765.4500 ✦ FX 954.765.4504

<http://www.broward.org/codeappeals>

### Proposed Modification to the Florida Building Code

Per Section 553.73, Fla Statute

Name: \_\_\_ Rolando \_Soto\_

Address: One N. University Drive, Suite 3500-B, Plantation, Florida 33324 \_\_\_\_\_

E-mail: [rosoto@broward.org](mailto:rosoto@broward.org)

Phone: \_\_\_ 9547654500

Fax: \_\_\_ 9547654504

Code: \_\_\_ 7th Edition FBC Mechanical (2020)

Section #: \_\_\_ 908.3\_ + Chapter 15\_ Referenced Standards

Text of Modification (additions underlined; deletion ~~stricken~~):  
Please see attachment.

#### Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

It requires designers and/or contractors to address the following issues not included in the FBC Mechanical 7<sup>th</sup> Edition:

- a. Potential contamination from building systems or facility processes to be drawn into the equipment
- b. Potential for equipment to discharge into occupied spaces, trafficable areas, pedestrian thoroughfares, outdoor air intakes, and building openings
- c. Potential for equipment siting that inhibits access to the equipment for the required maintenance and inspection consistent with the manufacturer's instructions and guidelines

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

Large areas of Broward County include high density residential and large commercial buildings, hospitals schools, etc. Many of these buildings use Cooling Towers for heat rejection. Cooling Towers create a potential breeding environment for the Legionella bacteria, the cause of a serious, and sometime fatal condition known as Legionellosis. The increasing number of Cooling Towers in Broward County places large number of county residents in potential danger of being exposed to this infectious agent.



Broward County

## Board of Rules and Appeals

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3. Explain how the local need is addressed by the proposed local amendment.

This local amendment will bring emphasis to the prevention of conditions, conducive to the spread of Legionellosis during the design, siting and installation of Cooling Towers in Broward County.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

No prescriptive parameters are set. Only the desired result is stated. Designers, contractors and building owners are free to find different ways to achieve the results.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

No.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

Yes, this is a new subject not addressed by the code, the siting of Cooling Towers to prevent the spread of the Legionella bacteria.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:

- a) Impact to local government, relative to enforcement.
- b) Impact to property and building owners relative to cost of compliance.
- c) Impact to industry relative to the cost of compliance

- a) No impact to local government, relative to enforcement, is expected.
- b) No impact to property and building owners, relative to cost of compliance is expected.
- c) No impact to industry, relative to the cost of compliance is expected.

BROWARD BORA PUBLIC HEARING AND VOTE SEPTEMBER 10, 2020.

AMENDMENT EFFECTIVE DATE JANUARY 1, 2021.

# Section 10

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7<sup>th</sup> Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7<sup>th</sup> Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

One tap mobile

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+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

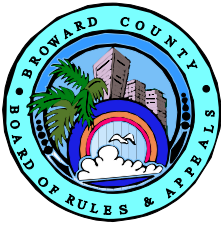
Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.





**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

<http://www.broward.org/codeappeals>

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**To:** Members of the Broward County Board of Rules and Appeals  
**From:** Chief Mechanical Code Compliance Officer, Rolando Soto.  
**Date:** September 10, 2020  
**Subject:** Amendments to the upcoming Florida Mechanical Code (FMC) 7th Edition (2020), Section 908.8 “Cooling Towers, Evaporative Condensers and Fluid Coolers”, effective December 31st, 2020.

---

## **Recommendation**

That BORA re-adopt by vote, the Broward County Amendment to FMC, Section 908.8 “Cooling Towers, Evaporative Condensers and Fluid Coolers”, for the upcoming FMC 7th Edition (2020), that will be effective January 1, 2021. These amendments were previously adopted for the 2010 FMC, and re-adopted for the FMC, 5<sup>th</sup> Edition (2014) and the current 6th Edition (2017). There is no change in the text of the original code amendment other than the one explained below in “**Additional information**”

## **Reasons**

Broward County has a long history on water conservation. This modification will continue to require less water usage from the Biscayne Aquifer by continuing the enforcement of the increase in cooling towers’ water use efficiency.

## **Additional information**

For the 6th Edition (2017) of the FMC the Florida Building Commission adopted large parts of Broward amendments to this section, with some modifications and renumbering.

Subsection **908.5.2** “The quality of cooling tower water shall comply with the equipment manufacturer’s guidelines” was adopted in its entirety by the Florida Building Commission for the FMC 2017 and 2020, with a change of the word “guidelines” with the word “recommendations” ; but the meaning is the same. Consequently, this subsection is no longer part of the Broward amendments.

List of attached documents:

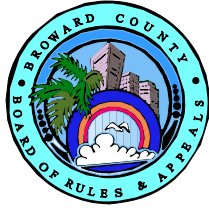
1. Original Broward Co. technical amendment to the 2010 FMC, effective 6/1/2012.
2. Draft of upcoming statewide FMC 7th Edition (2020), Section 908.8 “Cooling Towers, Evaporative Condensers and Fluid Coolers” without Broward Co. technical amendment.
3. Draft of Broward County Amendments to Section 908.8 of the upcoming 2020 Florida Building Code - Mechanical, Seventh Edition. Effective January 1, 2021.
4. Justification to state for local code amendment.

Respectfully submitted,

Rolando Soto

A handwritten signature in blue ink that reads "RSoto".

STRONGER CODES MEAN SAFER BUILDINGS  
~ESTABLISHED 1971~



# BROWARD COUNTY BOARD OF RULES AND APPEALS

March 29, 2012

One North University Drive  
Suite 3500-B  
Plantation, Florida 33324

Phone: 954-765-4500

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TBA  
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Mr. Donald Zimmer, AIA  
Architect

## **Board Attorney**

Russell White, Esq.

## **Board Administrative Director**

James DiPietro

—ESTABLISHED 1971—

## **Local Technical Amendment County of Broward**

**Code Version:** 2010 Florida Building Code  
**Sub Code:** Mechanical  
**Chapter & Topic:** Chapter 9 – Cooling Towers, Evaporative  
Condensers and Fluid Coolers  
**Section:** 908.5 Water Supply  
**Short Description:** New Sub-Sections Added  
**Effective Date:** 6/01/2012  
**Number of paragraphs  
with changes:** 5

Reviewed and Legally Adopted : 3/15/2012

# SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

## SECTION 901 GENERAL

**901.1 Scope.** This chapter shall govern the approval, design, installation, construction, maintenance, *alteration* and repair of the appliances and *equipment* specifically identified herein and factory-built fireplaces. The approval, design, installation, construction, maintenance, *alteration* and repair of gas-fired appliances shall be regulated by the *Florida Building Code, Fuel Gas*.

**901.2 General.** The requirements of this chapter shall apply to the mechanical *equipment* and appliances regulated by this chapter, in addition to the other requirements of this code.

**901.3 Hazardous locations.** Fireplaces and solid fuel-burning appliances shall not be installed in hazardous locations.

**901.4 Fireplace accessories.** *Listed* fireplace accessories shall be installed in accordance with the conditions of the listing and the manufacturer's installation instructions.

## SECTION 902 MASONRY FIREPLACES

**902.1 General.** Masonry fireplaces shall be constructed in accordance with the *Florida Building Code, Building*.

## SECTION 903 FACTORY-BUILT FIREPLACES

**903.1 General.** Factory-built fireplaces shall be *listed* and *labeled* and shall be installed in accordance with the conditions of the listing. Factory-built fireplaces shall be tested in accordance with UL 127.

**903.2 Hearth extensions.** Hearth extensions of *approved* factory-built fireplaces and fireplace stoves shall be installed in accordance with the listing of the fireplace. The hearth extension shall be readily distinguishable from the surrounding floor area.

**903.3 Unvented gas log heaters.** An unvented gas log heater shall not be installed in a factory-built fireplace unless the fireplace system has been specifically tested, *listed* and *labeled* for such use in accordance with UL 127.

## SECTION 904 PELLET FUEL-BURNING APPLIANCES

**904.1 General.** Pellet fuel-burning appliances shall be *listed* and *labeled* in accordance with ASTM E 1509 installed in accordance with the terms of the listing.

## SECTION 905 FIREPLACE STOVES AND ROOM HEATERS

**905.1 General.** Fireplace stoves and solid-fuel heaters shall be *listed* and *labeled* and shall be installed in accordance with the conditions of the listing. Fireplaces shall be tested in accordance with UL 737. Solid-fuel room heaters shall be tested in accordance with UL 1482 and shall be installed in accordance with the manufacturer's installation instructions.

Original Broward Co. amendment to 2010 FMC (underscored text) effective 6/1/2012. Continues on next page.

**905.2 Connection to fireplace.** The connection of solid fuel appliances to *chimney* flues serving fireplaces shall comply with Sections 801.7 and 801.10.

## SECTION 906 FACTORY-BUILT BARBECUE APPLIANCES

**906.1 General.** Factory-built barbecue appliances shall be of an *approved* type and shall be installed in accordance with the manufacturer's installation instructions, this chapter and Chapters 3, 5, 7, 8 and the *Florida Building Code, Fuel Gas*.

## SECTION 907 INCINERATORS AND CREMATORIES

**907.1 General.** Incinerators and crematories shall be *listed* and *labeled* in accordance with UL 791 and shall be installed in accordance with the manufacturer's installation instructions.

## SECTION 908 COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS

**908.1 General.** A cooling tower used in conjunction with an air-conditioning *appliance* shall be installed in accordance with the manufacturer's installation instructions. The design of such cooling tower shall be in accordance with the requirements of the *Florida Building Code, Building* for a structure. Unless otherwise stated in this code, water cooling towers shall comply with NFPA 214.

**908.2 Access.** Cooling towers, evaporative condensers and fluid coolers shall be provided with ready access.

**908.3 Location.** Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the *Florida Building Code, Building*.

**908.4 Support and anchorage.** Supports for cooling towers, evaporative condensers and fluid coolers shall be designed in accordance with the *Florida Building Code, Building*. Seismic restraints shall be as required by the *Florida Building Code, Building*.

**908.5 Water supply.** Water supplies and protection shall be as required by the *Florida Building Code, Plumbing*.

**908.5.1** New cooling towers, including cooling tower replacements, shall be operated with conductivity controllers, as well as make-up and blowdown (bleed off) meters and shall achieve a minimum of 8 cycles of concentration.

**908.5.2** The quality of cooling tower water shall comply with the equipment manufacturer's guidelines.

**908.5.3** Cooling towers shall be equipped with efficient drift eliminators that achieve drift reduction to a maximum of 0.002% of the recirculated water volume for counterflow towers and 0.005% of the recirculated water flow for cross-flow towers.

**908.5.4** An affidavit of compliance demonstrating compliance with section 908.5 Florida Building Code shall be submitted by the property manager/owner to the local water provider every 12 months following system installation. The affidavit shall be signed by the service provider and include all dates of service within the reporting period and verified system operation at a minimum of 8 cycles of concentration.

**Exception:** Cooling tower systems utilizing reclaimed water for makeup water are exempt from the provisions of section 908.5.1 thru 908.5.4 Florida Building Code, Mechanical.

**908.6 Drainage.** Drains, overflows and blowdown provisions shall be indirectly connected to an *approved* disposal location. Discharge of chemical waste shall be *approved* by the appropriate regulatory authority.

**908.7 Refrigerants and hazardous fluids.** Heat exchange equipment that contains a refrigerant and that is part of a closed refrigeration system shall comply with Chapter 11. Heat exchange equipment containing heat transfer fluids which are flammable, combustible or hazardous shall comply with the Florida Fire Prevention Code.

### SECTION 909 VENTED WALL FURNACES

**909.1 General.** Vented wall furnaces shall be installed in accordance with their listing and the manufacturer's installation instructions. Oil-fired furnaces shall be tested in accordance with UL 730.

**909.2 Location.** Vented wall furnaces shall be located so as not to cause a fire hazard to walls, floors, combustible furnishings or doors. Vented wall furnaces installed between bathrooms and adjoining rooms shall not circulate air from bathrooms to other parts of the building.

**909.3 Door swing.** Vented wall furnaces shall be located so that a door cannot swing within 12 inches (305 mm) of an air inlet or air outlet of such furnace measured at right angles to the opening. Doorstops or door closers shall not be installed to obtain this clearance.

**909.4 Ducts prohibited.** Ducts shall not be attached to wall furnaces. Casing extension boots shall not be installed unless listed as part of the appliance.

**909.5 Manual shutoff valve.** A manual shutoff valve shall be installed ahead of all controls.

**909.6 Access.** Vented wall furnaces shall be provided with access for cleaning of heating surfaces, removal of burners, replacement of sections, motors, controls, filters and other working parts, and for adjustments and lubrication of parts requiring such attention. Panels, grilles and access doors that must be removed for normal servicing operations shall not be attached to the building construction.

### SECTION 910 FLOOR FURNACES

**910.1 General.** Floor furnaces shall be installed in accordance with their listing and the manufacturer's installation instructions. Oil-fired furnaces shall be tested in accordance with UL 729.

**910.2 Placement.** Floor furnaces shall not be installed in the floor of any aisle or passageway of any auditorium, public hall, place of assembly, or in any egress element from any such room or space.

With the exception of wall register models, a floor furnace shall not be placed closer than 6 inches (152 mm) to the nearest wall, and wall register models shall not be placed closer than 6 inches (152 mm) to a corner.

The furnace shall be placed such that a drapery or similar combustible object will not be nearer than 12 inches (305 mm) to any portion of the register of the furnace. Floor furnaces shall not be installed in concrete floor construction built on grade. The controlling thermostat for a floor furnace shall be located within the same room or space as the floor furnace or shall be located in an adjacent room or space that is permanently open to the room or space containing the floor furnace.

**910.3 Bracing.** The floor around the furnace shall be braced and headed with a support framework design in accordance with the Florida Building Code, Building.

**910.4 Clearance.** The lowest portion of the floor furnace shall have not less than a 6-inch (152 mm) clearance from the grade level; except where the lower 6-inch (152 mm) portion of the floor furnace is sealed by the manufacturer to prevent entrance of water, the minimum clearance shall be reduced to not less than 2 inches (51 mm). Where these clearances are not present, the ground below and to the sides shall be excavated to form a pit under the furnace so that the required clearance is provided beneath the lowest portion of the furnace. A 12-inch (305 mm) minimum clearance shall be provided on all sides except the control side, which shall have an 18-inch (457 mm) minimum clearance.

### SECTION 911 DUCT FURNACES

**911.1 General.** Duct furnaces shall be installed in accordance with the manufacturer's installation instructions. Electric furnaces shall be tested in accordance with UL 1995.

### SECTION 912 INFRARED RADIANT HEATERS

**912.1 Support.** Infrared radiant heaters shall be fixed in a position independent of fuel and electric supply lines. Hangers and brackets shall be noncombustible material.

**912.2 Clearances.** Heaters shall be installed with clearances from combustible material in accordance with the manufacturer's installation instructions.

### SECTION 913 CLOTHES DRYERS

**913.1 General.** Clothes dryers shall be installed in accordance with the manufacturer's installation instructions. Electric residential clothes dryers shall be tested in accordance with UL 2158. Electric coin-operated clothes dryers shall be tested in accordance with UL 2158. Electric commercial clothes dryers shall be tested in accordance with UL 1240.





Broward County  
**Board of Rules and Appeals**  
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**Broward County Local Amendments**  
Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Stat

Name: Broward County Board of Rules & Appeals, Attention: James DiPietro, ADMINISTRATIVE DIRECTOR  
Address: One North University Drive, Suite 3500-B, Plantation FL 33324  
E-mail: jdipietro@broward.org  
Phone: (954) 765-4500  
Fax: (954) 765-4504  
Code: 2010 Florida Building Code – Mechanical  
Section #: 908

Text of Modification (additions underlined; deletion ~~stricken~~):  
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?  
THIS MODIFICATION REQUIRES USING LESS WATER IN COOLING TOWERS THAN WHAT IS PRESENTLY ALLOWED BY THE FLORIDA BUILDING CODE.
2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

BY FAR, THE MOST IMPORTANT DEMOGRAPHIC TREND AFFECTING WATER RESOURCES IS POPULATION GROWTH. SIGNIFICANT POPULATION GROWTH IS ANTICIPATED. ACCORDING TO THE MOST RECENT POPULATION PROJECTIONS, THE COUNTY IS PROJECTING A 13% INCREASE IN POPULATION TO NEARLY 2 MILLION RESIDENTS BY 2040. THIS ASSUMES POPULATION GROWTH RATES REMAIN MODERATED BY THE ECONOMIC DOWN TURN. HOWEVER, IN A COUNTY WITH THE 12<sup>TH</sup> LARGEST POPULATION IN THE UNITED STATES, EVEN A MODERATE GROWTH RATE TRANSLATES INTO A SUBSTANTIAL INCREASE IN WATER DEMAND. IN 2010, BROWARD COUNTY PUMPED APPROXIMATELY 233 MILLION GALLONS PER DAY (MGD) FROM THE BISCAYNE AQUIFER. HOWEVER, IN ACCORDANCE WITH THE REGIONAL WATER AVAILABILITY RULE, INCREASES IN WATER DEMAND MUST BE MET THROUGH ALTERNATIVE WATER SUPPLIES. BROWARD COUNTY HAS TO MAKEUP THE DIFFERENCE INCLUDING A PROJECTED INCREASE OF 22 MGD BY 2040 FROM THE FLORIDIAN AQUIFER OR OTHER WATER SUPPLIES (SUCH AS RECLAIMED WATER) WHICH REQUIRE MUCH HIGHER LEVELS OF TREATMENT BY REVERSE OSMOSIS AND/OR MEMBRANE FILTRATION, BOTH OF WHICH WILL REQUIRED NEW CAPITAL INVESTMENTS AND ENERGY INTENSIVE PROCESSES. IT HAS BEEN REPEATEDLY RECOGNIZED BY BROWARD WATER PROVIDERS AND ELECTED LEADERS THAT WATER CONSERVATION OFFER THE MOST COST EFFECTIVE AND IMMEDIATE MEANS TO MEET NEW WATER DEMANDS. WITHOUT EFFECTIVE WATER CONSERVATION BROWARD COUNTY'S CONTINUED GROWTH WILL BE DEPENDENT ON OUR ABILITY TO DEVELOP MORE COSTLY ALTERNATIVE WATER SUPPLIES.

FLORIDA STATE STATUTES, SECTION 373.016(S), RECOGNIZES THAT THE WATER RESOURCE PROBLEMS OF THE STATE VARY FROM REGION TO REGION, BOTH IN MAGNITUDE AND COMPLEXITY. SPECIFICALLY, IN BROWARD COUNTY, THE LIMITATIONS OF OUR AQUIFER, THE AMOUNT OF WATER THE STATE ALLOWS US TO WITHDRAW, THE INTRUSION OF SALT



Broward County

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WATER INTO THE AQUIFER, AND THE INCREASED FUTURE DEMANDS THAT ARE PROJECTED ESTABLISH AND REINFORCE THE ISSUE OF REGIONAL VARIATION.

THE CONTINUED DISPOSAL OF CONDENSATE INTO THE STORM WATER DRAINAGE SYSTEMS OR PERVIOUS GRADE IS IRRECONCILABLE WITH THE VITAL ROLE CONDENSATE COLLECTION AND USE CAN PLAY IN EASING THE DEMANDS ON OUR INCREASINGLY BURDENED POTABLE WATER RESOURCES. MOREOVER, IT IS INCONSISTENT WITH FLORIDA STATUTE 373.227 WHICH CAUTIONS, "THE LEGISLATURE RECOGNIZES THAT THE PROPER CONSERVATION OF WATER IS AN IMPORTANT MEANS OF ACHIEVING THE ECONOMICAL AND EFFICIENT UTILIZATION OF WATER NECESSARY, IN PART, TO CONSTITUTE A REASONABLE—BENEFICIAL USE. THE OVERALL WATER CONSERVATION GOAL OF THE STATE IS TO PREVENT AND REDUCE WASTEFUL, UNECONOMICAL, IMPRACTICAL, OR UNREASONABLE USE OF WATER RESOURCES."

3. Explain how the local need is addressed by the proposed local amendment.

THIS MODIFICATION WILL REQUIRE LESS WATER USAGE FROM THE AQUIFERS AND REDUCE THE DISCHARGE TO THE SANITARY SEWER SYSTEM.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

THE LOCAL NEED FOR WATER CONSERVATION IS VERY SERIOUS AND IS MANDATED BY THE BROWARD COUNTY COMMISSION. THIS AMENDMENT WILL HELP ACHIEVE WATER CONSERVATION BUT CANNOT SOLVE THE PROJECTED WATER SHORTAGE PROBLEM WITHOUT OTHER LOCAL WATER CONSERVATION EFFORTS.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

PUBLIC MEETINGS AND A HEARING WERE HELD WITH TESTIMONY FROM BOTH WATER TREATMENT COMPANIES AND CONDENSER WATER USING EQUIPMENT MANUFACTURERS AND IT WAS DETERMINED THAT THIS MODIFICATION WOULD NOT BE DISCRIMINATORY.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

THIS MODIFICATION REVISES AN EXISTING SECTION OF THE FLORIDA BUILDING CODE.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:

- a) Impact to local government, relative to enforcement.
- b) Impact to property and building owners relative to cost of compliance.
- c) Impact to industry relative to the cost of compliance

- a) THERE IS NO FISCAL IMPACT TO BROWARD COUNTY OR THE MUNICIPALITIES.
- b) THIS MODIFICATION WILL REDUCE THE IMPACT FEE CHARGED BY BROWARD COUNTY BY MORE THAN WHAT IT WILL COST TO COMPLY WITH THE NEW LAW.
- c) NO FISCAL IMPACT TO INDUSTRY.

BROWARD BORA PUBLIC HEARING AND VOTE MARCH 15, 2012.

AMENDMENT EFFECTIVE DATE JUNE 1, 2012.

**SECTION 908  
COOLING TOWERS, EVAPORATIVE  
CONDENSERS AND FLUID COOLERS**

**908.1 General.** A cooling tower used in conjunction with an air-conditioning *appliance* shall be installed in accordance with the manufacturer's instructions. Factory-built cooling towers shall be listed in accordance with UL 1995 or UL/CSA 60335-2-40.

**908.2 Access.** Cooling towers, evaporative condensers and fluid coolers shall be provided with ready access.

**908.3 Location.** Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the *Florida Building Code, Building*.

**908.4 Support and anchorage.** Supports for cooling towers, evaporative condensers and fluid coolers shall be designed in accordance with the *Florida Building Code, Building*. Seismic restraints shall be as required by the *Florida Building Code, Building*.

**908.5 Water supply.** Cooling towers, evaporative coolers and fluid coolers shall be provided with an approved water supply, sized for peak demand. The quality of water shall be provided in accordance with the equipment manufacturer's recommendations. The piping system and protection of the potable water supply system shall be installed as required by the *Florida Building Code, Plumbing*.

**908.6 Drainage.** Drains, overflows and blowdown provisions shall be indirectly connected to an *approved* disposal location. Discharge of chemical waste shall be *approved* by the appropriate regulatory authority.

**908.7 Refrigerants and hazardous fluids.** Heat exchange *equipment* that contains a refrigerant and that is part of a closed refrigeration system shall comply with Chapter 11. Heat exchange *equipment* containing heat transfer fluids which are flammable, combustible or hazardous shall comply with the *Florida Fire Prevention Code*.

**908.8 Cooling towers.** Cooling towers, both open circuit and closed circuit type, and evaporative condensers shall comply with Sections 908.8.1 and 908.8.2.

**908.8.1 Conductivity or flow-based control of cycles of concentration.** Cooling towers and evaporative condensers shall include controls that automate system bleed based on conductivity, fraction of metered makeup volume, metered bleed volume, recirculating pump run time or bleed time.

**908.8.2 Drift eliminators.** Cooling towers and evaporative condensers shall be equipped with drift eliminators that have a maximum drift rate of 0.005 percent of the circulated water flow rate as established in the equipment's design specifications.

**SECTION 909  
VENTED WALL FURNACES**

**909.1 General.** Vented wall furnaces shall be installed in accordance with their listing and the manufacturer's instructions. Oil-fired furnaces shall be tested in accordance with UL 730.

**909.2 Location.** Vented wall furnaces shall be located so as not to cause a fire hazard to walls, floors, combustible furnishings or doors. Vented wall furnaces installed between bathrooms and adjoining rooms shall not circulate air from bathrooms to other parts of the building.

**909.3 Door swing.** Vented wall furnaces shall be located so that a door cannot swing within 12 inches (305 mm) of an air inlet or air outlet of such furnace measured at right angles to the opening. Doorstops or door closers shall not be installed to obtain this *clearance*.

**909.4 Ducts prohibited.** Ducts shall not be attached to wall furnaces. Casing extension boots shall not be installed unless listed as part of the *appliance*.

**909.5 Manual shutoff valve.** A manual shutoff valve shall be installed ahead of all controls.

BC amendment adopted in its entirety by the Florida Building Commission for the FMC 2017 and 2020, with a change of the word "guidelines" with the word "recommendations" ; but the meaning is the same.

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**SECTION 910  
FLOOR FURNACES**

**910.1 General.** Floor furnaces shall be installed in accordance with their listing and the manufacturer's instructions. Oil-fired furnaces shall be tested in accordance with UL 729.

**910.2 Placement.** Floor furnaces shall not be installed in the floor of any aisle or passageway of any auditorium, public hall, place of assembly, or in any egress element from any such room or space.

With the exception of wall register models, a floor furnace

BC amendments adopted partially by the Florida Building Commission with some modifications and renumbering.

) to the near-  
placed closer

ry or similar  
inches (305  
mm) to any portion of the register of the furnace. Floor furnaces shall not be installed in concrete floor construction built on grade. The controlling thermostat for a floor furnace shall be located within the same room or space as the floor furnace or shall be located in an adjacent room or space that is permanently open to the room or space containing the floor furnace.

**910.3 Bracing.** The floor around the furnace shall be braced and headed with a support framework design in accordance with the *Florida Building Code, Building*.

**Clean text of Broward County Amendments to subsection 908.8 of the 2020 Florida Building Code - Mechanical, Seventh Edition. Effective January 1, 2021.**

**CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT**

**908.8 Cooling towers.** Cooling towers, both open circuit and closed circuit type, and evaporative condensers shall comply with Sections 908.8.1 thru 908.8.3.

**908.8.1 Conductivity and flow-based control of cycles of concentration.** New cooling towers, and evaporative condensers, including replacements shall be operated with conductivity controllers, as well as make-up and blowdown (bleed off) meters and shall achieve a minimum of 8 cycles of concentration.

**908.8.2 Drift eliminators.** Cooling towers and evaporative condensers shall be equipped with drift eliminators that have a maximum drift rate of 0.002% of the recirculated water volume for counterflow towers and 0.005% of the recirculated water flow for crossflow towers.

**908.8.3** An affidavit of compliance demonstrating compliance with section 908.5 Florida Building Code shall be submitted by the property manager/owner to the local water provider every 12 months following system installation. The affidavit shall be signed by the service provider and include all dates of service within the reporting period and verified system operation at a minimum of 8 cycles of concentration.

**Exception:** Cooling water tower systems utilizing reclaimed water for the total amount of makeup water are exempt from the provisions of section 908.8.1 thru 908.8.3 Florida Building Code.

**Broward County Amendments to subsection 908.8 of the 2020 Florida Building Code - Mechanical, Seventh Edition showing the differences with the statewide code. Effective January 1, 2021.**

**CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT**

~~Stricken thru text~~ are deletions from the Florida Building Code - Mechanical, Seventh Edition.

Underscored text are additions to Florida Building Code - Mechanical, Seventh Edition. There is no change in the text of the original code amendment.

**908.8 Cooling towers.** Cooling towers, both open circuit and closed circuit type, and evaporative condensers shall comply with Sections 908.8.1 ~~and 908.8.2~~ thru 908.8.3.



**908.8.1 Conductivity ~~or~~ and flow-based control of cycles of concentration.**

~~Cooling towers and evaporative condensers shall include controls that automate system bleed based on conductivity, fraction of metered makeup volume, metered bleed volume, recirculating pump run time or bleed time.~~ New cooling towers, and evaporative condensers, including replacements shall be operated with conductivity controllers, as well as make-up and blowdown (bleed off) meters and shall achieve a minimum of 8 cycles of concentration.

**908.8.2 Drift eliminators.** Cooling towers and evaporative condensers shall be equipped with drift eliminators that have a maximum drift rate of 0.002% of the recirculated water volume for counterflow towers and 0.005% of the recirculated water flow for crossflow towers ~~as established in the equipment's design specifications.~~

**908.8.3** An affidavit of compliance demonstrating compliance with section 908.5 Florida Building Code shall be submitted by the property manager/owner to the local water provider every 12 months following system installation. The affidavit shall be signed by the service provider and include all dates of service within the reporting period and verified system operation at a minimum of 8 cycles of concentration.

**Exception:** Cooling water tower systems utilizing reclaimed water for the total amount of makeup water are exempt from the provisions of section 908.8.1 thru 908.8.3 Florida Building Code.



Broward County  
**Board of Rules and Appeals**  
One N. University Drive, Suite 3500-B, Plantation, Florida 33324  
TL 954.765.4500 ✦ FX 954.765.4504  
<http://www.broward.org/codeappeals>

**Broward County Local Amendments**  
Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Statute

Name: Broward County Board of Rules & Appeals, Attention: James DiPietro, ADMINISTRATIVE DIRECTOR  
Address: One North University Drive, Suite 3500-B, Plantation FL 33324  
E-mail: jdipietro@broward.org  
Phone: (954) 765-4500  
Fax: (954) 765-4504  
Code: 7<sup>th</sup> Edition (2020) Florida Building Code – Mechanical  
Section #: 908.8

Text of Modification (additions underlined; deletion ~~stricken~~):  
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?  
THIS MODIFICATION TO THE LOCAL AMENDMENT REQUIRES COOLING TOWERS TO BE OPERATED IN A MANNER THAT ACHIEVES A MINIMUM NUMBER OF CYCLES CONCENTRATION TO SUPPORT WATER CONSERVATION NEEDS
2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

AS THE SECOND MOST POPULATED COUNTY WITHIN THE STATE OF FLORIDA, BROWARD COUNTY'S POPULATION IS PROJECTED TO INCREASE TO 2,033,471 MILLION BY 2040, A GROWTH OF ALMOST 15% FROM 2015. RECENT LOCAL PLANNING ACTIVITIES IN THE REGION DEMONSTRATE THAT THE ECONOMIC DOWNTURN HAVE ENDED IN SOUTH FLORIDA AND CONTINUED GROWTH WILL RESULT IN A CONCOMITANT INCREASE UPON OUR LIMITED WATER SUPPLIES. IN 2013, BROWARD COUNTY PUMPED APPROXIMATELY 226 MILLION GALLONS/DAY (MGD) FROM ALL WATER SOURCES. THE PROJECTED INCREASED WATER DEMAND IN 2040 WILL RANGE FROM 17 – 52 MILLION GALLONS/DAY, DEPENDING ON THE MEDIUM OR HIGH GROWTH RATES ESTIMATES PRODUCED BY [UNIVERSITY OF FLORIDA BUREAU OF ECONOMIC AND BUSINESS RESEARCH \(BEBR\)](#).

IN ACCORDANCE TO THE LOWER EAST COAST WATER AVAILABILITY RULE, NEW WATER DEMANDS WILL NEED TO BE MET THROUGH THE DEVELOPMENT OF ALTERNATIVE WATER SUPPLY OPTIONS. THIS INCLUDES THE USE OF THE BRACKISH FLORIDIAN AQUIFER AS NON-TRADITIONAL SOURCE OF WATER OR RECLAIMED WATER. HOWEVER, THESE REQUIRE SUBSTANTIAL INVESTMENTS IN NEW CAPITAL INFRASTRUCTURE, ADVANCED TREATMENT REQUIREMENTS, GREATER ENERGY DEMANDS, AND HIGHER OPERATIONAL COSTS. WATER UTILITIES WOULD HAVE A VERY DIFFICULT TIME IN TRYING TO DEVELOP THESE OPTIONS ON THEIR OWN.

BEYOND THIS WATER SOURCE ALLOCATION RESTRICTION, THERE CONTINUES TO BE PRESENT THREATS TO THE BISCAYNE AQUIFER RELATED TO CLIMATE CHANGE. SEA LEVEL RISE IS DOCUMENTED TO HAVE SUBSTANTIALLY ACCELERATED THE  
G:\SHARED\FBC Amendments\2020 - 7th Edition\FBC Mechanical\For BORA agenda\3. Cooling Towers\5. explantion to state for mech secn 908.8.docx

RATE OF SALTWATER INTRUSION OF THE COASTAL AQUIFER WITH APPROXIMATELY 40% OF THE BROWARD COUNTY'S COASTAL WELLFIELD CAPACITY DEMONSTRATED TO BE VULNERABLE TO SALTWATER CONTAMINATION DUE TO PROJECTED SEA LEVEL RISE. WE HAVE ALREADY SEEN THE LOSS OF WELLS, RELOCATION OF WELLFIELDS, AND SEVERE LIMITATIONS ON SEVERAL REMAINING COASTAL WELLFIELDS DUE TO SALTWATER CONSTRAINTS. SEA LEVEL RISE DOUBLES THE RATE AT WHICH THIS FRONT MOVES AND POSES SEVERE CHALLENGES FOR THE FUTURE. THEREFORE, IT IS IMPERATIVE THAT LOCAL GOVERNMENTS, INCLUDING BROWARD COUNTY, FORMALIZE EFFORTS TO PROVIDE LONG-TERM WATER SAVINGS AND SIZEABLE REDUCTIONS IN THE COST OF NEW AND REPLACEMENT INFRASTRUCTURE THROUGH PERMANENT CONSERVATION PRACTICES AND POLICIES.

FLORIDA STATE STATUTES, SECTION 373.016(5), RECOGNIZES THAT THE WATER RESOURCE PROBLEMS OF THE STATE VARY FROM REGION TO REGION, BOTH IN MAGNITUDE AND COMPLEXITY. IN BROWARD COUNTY, RESTRICTED WITHDRAWALS FROM OUR AQUIFER IN ACCORDANCE WITH STATE POLICY, COUPLED WITH THE LOSS OF EXISTING CAPACITY IN COASTAL WELLS AND THE CONTINUED INCREASE IN DEMAND THAT COMES WITH POPULATION GROWTH ALL COMBINE TO UNDERSCORE THE DRAMATIC REGIONAL VARIATIONS AND PRESSURES THAT MUST BE ACTIVELY ADDRESSED.

IN ADDITION, THE HISTORIC PRACTICE OF DISCHARGING MASSIVE VOLUMES OF PURE CONDENSATE WATER FROM AIR HANDLERS TO THE STORMWATER COLLECTION SYSTEMS OR GROUND SURFACE IS IRRECONCILABLE WITH THE VITAL ROLE CONDENSATE COLLECTION CAN PLAY AS A MAKEUP WATER FOR COOLING TOWERS. THE LOCAL AMENDMENT ALSO REQUIRES THAT CONDENSATE BE CAPTURED AND REUSED FOR THIS PURPOSE. MOREOVER, SUCH WASTE IS INCONSISTENT WITH FLORIDA STATUTE 373.227 WHICH CAUTIONS, "THE LEGISLATURE RECOGNIZES THAT THE PROPER CONSERVATION OF WATER IS AN IMPORTANT MEANS OF ACHIEVING THE ECONOMICAL AND EFFICIENT UTILIZATION OF WATER NECESSARY, IN PART, TO CONSTITUTE A REASONABLE –BENEFICIAL USE. THE OVERALL WATER CONSERVATION GOAL OF THE STATE IS TO PREVENT AND REDUCE WASTEFUL, UNECONOMICAL, IMPRACTICAL OR UNREASONABLE USE OF WATER RESOURCES."

3. Explain how the local need is addressed by the proposed local amendment.

COOLING TOWERS ARE ESTIMATED TO ACCOUNT FOR APPROXIMATELY 10% OF COUNTY-WIDE DEMANDS ON THE POTABLE WATER SYSTEM. CONSERVATION PRACTICES THROUGH IMPROVED COOLING TOWER OPERATIONS ARE ESTIMATED TO SAVE AS MUCH AS 20 MILLION GALLONS PER DAY OF POTABLE WATER FOR POTABLE PURPOSES.

THE MODIFICATION WILL REQUIRE LESS WATER USAGE FROM THE LIMITED BISCAYNE AQUIFER AND WILL REDUCE DISCHARGE TO THE SANITARY SYSTEM. THIS AMENDMENT WILL PROVIDE ADDITIONAL WATER CONSERVATION INITIATIVES SO NECESSARY FOR THE REGION TO MEET ITS INCREASING WATER DEMANDS.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

THE LOCAL AMENDMENT WILL HELP TO SUPPORT THE BROWARD COUNTY COMMISSIONS' LONG STANDING EFFORTS TO ACHIEVE SUSTAINED WATER CONSERVATION THROUGH A NUMBER OF INCENTIVES. THE COUNTY HAS ADOPTED A VARIETY OF WATER CONSERVATION MEASURES TO HELP IMPROVE CONSERVATION PRACTICES IN THE RESIDENTIAL AND COMMERCIAL SECTORS, AS WELL AS WITHIN GOVERNMENT OPERATIONS. THIS PARTICULAR AMENDMENT WAS WIDELY VETTED WITH INDUSTRY AND STRIKES A PRACTICAL BALANCE IN IMPLEMENTATION AS ALL CURRENT TECHNOLOGIES ARE ABLE TO ACHIEVE THE REQUIRED 8 CYCLES OF CONCENTRATION, PROVIDING NO ONE MANUFACTURER OR TECHNOLOGY WITH AN ADVANTAGE WHILE ALSO LIMITING THE REQUIRED CYCLES OF CONCENTRATION TO A FACTOR THAT OFFERS A SOLID RETURN ON INVESTMENT.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

ON SEPTEMBER 10, 2020, THE BROWARD COUNTY BOARD OF RULES AND APPEALS ADOPTED CHANGES TO CHAPTER 9, SECTION 908.8, WHICH CONTAINS THE SAME WATER EFFICIENCIES THAT ARE REQUESTED IN THIS AMENDMENT. PRIOR TO THAT EFFORT, EXTENSIVE AND WIDELY ATTENDED PUBLIC MEETINGS WERE HELD WITH TESTIMONY FROM BOTH WATER

TREATMENT COMPANIES AND EQUIPMENT MANUFACTURES AND IT WAS DETERMINED THAT THIS MODIFICATION WOULD NOT BE DISCRIMINATORY. THESE STANDARDS WERE ADVANCED WITHOUT ANY OBJECTIVE AND WITH THE COLLECTIVE CONCURRENCE OF DIVERSE SERVICE PROVIDERS AND MANUFACTURERS.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

THIS MODIFICATION REVISES AN EXISTING SECTION OF THE FLORIDA BUILDING CODE.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:

- a) Impact to local government, relative to enforcement.
- b) Impact to property and building owners relative to cost of compliance.
- c) Impact to industry relative to the cost of compliance

a) Broward County has included review for cooling tower compliance as part of the existing environmental review for project permitting.

b) There are no net cost increases to property and business owners. While there is a \$100 operational annual licensing fee to cover certification, verification, and noticing to industry to ensure they are operating the cooling towers as required (8 cycles of concentration), these costs are also offset by reduced water and wastewater disposal charges. This modification will reduce assessed impact fees charged by Broward County by more than what it would cost to comply. Water utilities have begun to meter water associated with cooling towers separate from irrigation meters. This means that not only is the user charged for the cost of the potable water, but also the cost of disposal. As disposal rates are actually higher than water rates, there is an economic advantage to reducing consumption through more efficient operations. The requirements are only implemented at the time of new construction or cooling tower replacement.

c) There is no realized cost to industry given the economics of saving waters. Industry will see a growing economic advantage as water rates continue to increase as new water sources must be developed.

BROWARD BORA PUBLIC HEARING AND VOTE, SEPTEMBER 10, 2020.

AMENDMENT EFFECTIVE DATE JANUARY 1, 2021.

# Section 11

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7th Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7th Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

One tap mobile

+13017158592,,92084341221#,,,,,0#,,681068# US (Germantown)

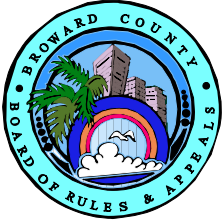
+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

<http://www.broward.org/codeappeals>

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**TO: Broward County Board of Rules and Appeals**  
**FROM: Kenneth Castronovo, Chief Electrical Code Compliance Officer**  
**DATE: September 10, 2020**  
**SUBJECT: Approval of adopting the low voltage pool requirements to the Florida Building Code 7<sup>th</sup> Edition, (2020), effective December 31st, 2020.**

---

Recommendation: Based on prior approvals of this section, it is recommended that the Board of Rules and Appeals adopt the building version of the 7<sup>th</sup> Edition of the Florida Building Code, effective 12/31/2020, pertaining to our local technical amendments using low voltage lighting on all newly constructed residential and commercial swimming pools.

Reasons: Our existing low voltage lighting amendments automatically expire on the new effective date of the 7<sup>th</sup> edition.

Additional Information: The technical amendments are to be included in the building section for the 7<sup>th</sup> edition just as they were adopted effective on December 31, 2020. The electrical wiring section of the 2020 Residential code has been placed on reserve.

Questions and Answers: When adopting technical amendments, the state requires that several questions are include in the request. The questions and answers are included in this package for you to view and approve.

Respectfully Submitted

A handwritten signature in blue ink that reads "Kenneth Castronovo".

Kenneth Castronovo

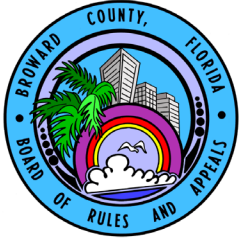
**454.1.4.1 Electrical.**

Electrical equipment wiring and installation, including the bonding and grounding of pool components, shall comply with Chapter 27 of the Florida Building Code, Building. Outlets supplying pool pump motors connected to single-phase 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, and outlets supplying other electrical equipment ~~and underwater luminaires operating at voltages greater than the low voltage contact limit~~, connected to single-phase, 120 volt through 240 volt branch circuits, rated 15 or 20 amperes, whether by receptacle or by direct connection, shall be provided with ground-fault circuit interrupter protection for personnel.

454.1.4.1.1 Maximum voltage. The maximum voltage for each luminaire in any private swimming or bathing pools shall not exceed the Low Voltage Contact Limit, which is defined as a voltage not exceeding the following values:

- (1) 15 volts (RMS) for sinusoidal alternating current
- (2) 21.2 volts peak for nonsinusoidal alternating current
- (3) 30 volts continuous direct current
- (4) 12.4 volts peak for direct current that is interrupted at a rate of 10 to 200 Hertz The maximum incandescent lamp size shall be 300 watts.





Broward County

## Board of Rules and Appeals

One N. University Drive, Suite 3500-B, Plantation, Florida 33324

TL 954.765.4500 ✦ FX 954.765.4504

<http://www.broward.org/codeappeals>

### BROWARD COUNTY LOCAL AMENDMENT Proposed Modification to the Florida Building Code

Per Section 553.73, Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro \_\_\_\_\_

Address: 1 North University Dr. Suite 3500B Plantation, FL 33324 \_\_\_\_\_

E-mail: [jdipietro@broward.org](mailto:jdipietro@broward.org) \_\_\_\_\_

Phone: 954-765-4500 \_\_\_\_\_

Fax: 954-765-4504 \_\_\_\_\_

Code: Florida Building Code, Building, 7<sup>th</sup> Edition (2020). Section 454.1.4.1

Text of Modification (additions underlined; deletion ~~stricken~~):

Please see attachment.

#### Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

*This amendment exceeds the minimum standards by requiring all swimming pool lighting fixtures to be low voltage (15 Volts or less) RMS for sinusoidal alternating current.*

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

*South Florida has more swimming pools than other jurisdictions, also South Florida salty environment may cause loose or broken connections on electrical equipment.*

3. Explain how the local need is addressed by the proposed local amendment.

*This modification will require all swimming pool lighting to be 15 volts or less RMS for sinusoidal alternating current, thereby reducing the probability of electrocution hazard of high voltage lighting in residential swimming pools.*

4. Explain how the local amendment is no more stringent than necessary to address the local need.

*This modification will require all swimming pool lighting to be 15 volts or less RMS for sinusoidal alternating current, thereby reducing the probability of electrocution hazard of high voltage lighting in residential swimming pools.*

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

*No.*

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

*The Florida Building Code currently allows the use of high voltage and low voltage types of light fixtures. Thus, by only allowing low voltage pool light fixtures to be used for pool lighting would strengthen the code.*

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
- a) Impact to local government, relative to enforcement.

*None*

- b) Impact to property and building owners relative to cost of compliance.

*Less than \$50.00 per swimming pool*

- c) Impact to industry relative to the cost of compliance

*Less than \$50.00 per swimming pool*

**Broward County Board of Rules and Appeals Public hearing and vote on September 12, and October 8<sup>th</sup>, 2020, respectively.**

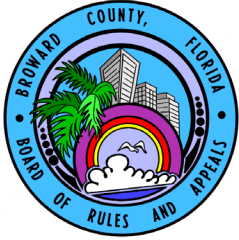
**Amendment Effective date: December 31, 2020.**

**454.2.16 Electrical.**

Electrical equipment wiring and installation, including the bonding and grounding of pool components, shall comply with Chapter 27 of the Florida Building Code, Building. Outlets supplying pool pump motors connected to single-phase 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, and outlets supplying other electrical equipment ~~and underwater luminaires operating at voltages greater than the low voltage contact limit~~, connected to single-phase, 120 volt through 240 volt branch circuits, rated 15 or 20 amperes, whether by receptacle or by direct connection, shall be provided with ground-fault circuit interrupter protection for personnel.

454.2.16.1 Maximum voltage. The maximum voltage for each luminaire in any private swimming or bathing pools shall not exceed the Low Voltage Contact Limit, which is defined as a voltage not exceeding the following values:

- (1) 15 volts (RMS) for sinusoidal alternating current
- (2) 21.2 volts peak for nonsinusoidal alternating current
- (3) 30 volts continuous direct current
- (4) 12.4 volts peak for direct current that is interrupted at a rate of 10 to 200 Hertz The maximum incandescent lamp size shall be 300 watts.



Broward County

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### BROWARD COUNTY LOCAL AMENDMENT Proposed Modification to the Florida Building Code

Per Section 553.73, Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro \_\_\_\_\_

Address: 1 North University Dr. Suite 3500B Plantation, FL 33324 \_\_\_\_\_

E-mail: [jdipietro@broward.org](mailto:jdipietro@broward.org) \_\_\_\_\_

Phone: 954-765-4500 \_\_\_\_\_

Fax: 954-765-4504 \_\_\_\_\_

Code: Florida Building Code, Building, 7<sup>th</sup> Edition (2020). Section 454.2.16

Text of Modification (additions underlined; deletion ~~stricken~~):

Please see attachment.

#### Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

*This amendment exceeds the minimum standards by requiring all swimming pool lighting fixtures to be low voltage (15 Volts or less) RMS for sinusoidal alternating current.*

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

*South Florida has more swimming pools than other jurisdictions, also South Florida salty environment may cause loose or broken connections on electrical equipment.*

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*The Florida Building Code currently allows the use of high voltage and low voltage types of light fixtures. Thus, by only allowing low voltage pool light fixtures to be used for pool lighting would strengthen the code.*

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:  
a) Impact to local government, relative to enforcement.

*None*

- b) Impact to property and building owners relative to cost of compliance.

*Less than \$50.00 per swimming pool*

- c) Impact to industry relative to the cost of compliance

*Less than \$50.00 per swimming pool*

**Broward County Board of Rules and Appeals Public hearing and vote on September 12, and October 8<sup>th</sup>, 2020, respectively.**

**Amendment Effective date: December 31, 2020.**

# Section 12

## NOTICE OF PUBLIC HEARING

Notice is hereby given by the Broward County Board of Rules and Appeals that said Board will hold a public hearing starting at 7:00 p.m. on October 8, 2020, via Zoom. The Board will consider adopting revised Broward County Administrative Provisions (Chapter One) to the 7<sup>th</sup> Edition (2020) of the Florida Building Code (“FBC”), adopting the 7<sup>th</sup> Edition (2020) FBC Plumbing Appendix F, entitled, “Proposed Construction Building Codes for Turf and Landscape Irrigation Systems”, and adopting additional technical amendments relating to the FBC 7<sup>th</sup> Edition (2020) – FBC Residential, Section P2903 Water Supply and Distribution, - FBC Plumbing, Section 604 Design of Building Water Distribution Systems, - FBC Plumbing Section [M] 314.2.1, Condensate drainage collection, use or disposal, - FBC Mechanical, Section 307.2.1 Condensate Disposal, - FBC Mechanical, Section 908.8 Cooling Towers, Evaporative Condensers And Fluid Coolers, and FBC Mechanical, 908.3 Location, - FBC Building, Section 454.2.16 Electrical, and 454.1.4.1 Electrical Equipment and wiring, - FBC Residential, Section R4501.16 Electrical. The effective date for all amendments listed is December 31<sup>st</sup>, 2020. A copy of all proposed code changes is available for review at 1 N. University Drive, Suite 3500B, Plantation, Florida 33324. Call (954) 765-4500 to obtain a copy via email. Zoom Meeting information:

<https://zoom.us/j/92084341221?pwd=Q0NoOENua2RzNktacE1HSkk3bkNpQT09>

Meeting ID: 920 8434 1221

Passcode: 681068

One tap mobile

+13017158592,,92084341221#,,,,,0#,,681068# US (Germantown)

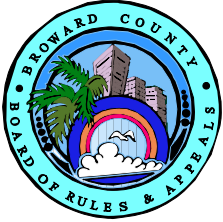
+13126266799,,92084341221#,,,,,0#,,681068# US (Chicago)

Meeting ID: 920 8434 1221

Passcode: 681068

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Dated this 27th day of September 2020.



**BROWARD COUNTY**

# Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504

<http://www.broward.org/codeappeals>

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**TO: Broward County Board of Rules and Appeals**  
**FROM: Kenneth Castronovo, Chief Electrical Code Compliance Officer**  
**DATE: September 10, 2020**  
**SUBJECT: Approval of adopting the low voltage pool requirements to the Florida Building Code 7<sup>th</sup> Edition, (2020), effective December 31st, 2020.**

---

Recommendation: Based on prior approvals of this section, it is recommended that the Board of Rules and Appeals adopt the building version of the 7<sup>th</sup> Edition of the Florida Building Code, effective 12/31/2020, pertaining to our local technical amendments using low voltage lighting on all newly constructed residential and commercial swimming pools.

Reasons: Our existing low voltage lighting amendments automatically expire on the new effective date of the 7<sup>th</sup> edition.

Additional Information: The technical amendments are to be included in the building section for the 7<sup>th</sup> edition just as they were adopted effective on December 31, 2020. The electrical wiring section of the 2020 Residential code has been placed on reserve.

Questions and Answers: When adopting technical amendments, the state requires that several questions are include in the request. The questions and answers are included in this package for you to view and approve.

Respectfully Submitted

A handwritten signature in blue ink that reads "Kenneth Castronovo".

Kenneth Castronovo



**R4501.16 Electrical.**

Electrical equipment wiring and installation, including the bonding and grounding of pool components, shall comply with Chapter 27 of the Florida Building Code, Building. Outlets supplying pool pump motors connected to single-phase 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, and outlets supplying other electrical equipment ~~and underwater luminaires operating at voltages greater than the low voltage contact limit~~, connected to single-phase, 120 volt through 240 volt branch circuits, rated 15 or 20 amperes, whether by receptacle or by direct connection, shall be provided with ground-fault circuit interrupter protection for personnel.

R4501.16.1 Maximum voltage. The maximum voltage for each luminaire in any private swimming or bathing pools shall not exceed the Low Voltage Contact Limit, which is defined as a voltage not exceeding the following values:

- (1) 15 volts (RMS) for sinusoidal alternating current
- (2) 21.2 volts peak for nonsinusoidal alternating current
- (3) 30 volts continuous direct current
- (4) 12.4 volts peak for direct current that is interrupted at a rate of 10 to 200 Hertz The maximum incandescent lamp size shall be 300 watts.

**BROWARD COUNTY LOCAL AMENDMENT**  
**Proposed Modification to the Florida Building Code**

Per Section 553.73, Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro \_\_\_\_\_  
Address: 1 North University Dr. Suite 3500B Plantation, FL 33324 \_\_\_\_\_  
E-mail: [jdipietro@broward.org](mailto:jdipietro@broward.org) \_\_\_\_\_  
Phone: 954-765-4500 \_\_\_\_\_  
Fax: 954-765-4504 \_\_\_\_\_  
Code: Florida Building Code, Building, 7<sup>th</sup> Edition (2020). Section R4501.16  
Text of Modification (additions underlined; deletion ~~stricken~~):  
Please see attachment.

**Respond to the following questions:**

1. How is the local amendment more stringent than the minimum standards described in the FBC?

*This amendment exceeds the minimum standards by requiring all swimming pool lighting fixtures to be low voltage (15 Volts or less) RMS for sinusoidal alternating current.*

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

*South Florida has more swimming pools than other jurisdictions, also South Florida salty environment may cause loose or broken connections on electrical equipment.*

3. Explain how the local need is addressed by the proposed local amendment.

*This modification will require all swimming pool lighting to be 15 volts or less RMS for sinusoidal alternating current, thereby reducing the probability of electrocution hazard of high voltage lighting in residential swimming pools.*

4. Explain how the local amendment is no more stringent than necessary to address the local need.

*This modification will require all swimming pool lighting to be 15 volts or less RMS for sinusoidal alternating current, thereby reducing the probability of electrocution hazard of high voltage lighting in residential swimming pools.*

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

*No.*

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

*The Florida Building Code currently allows the use of high voltage and low voltage types of light fixtures. Thus, by only allowing low voltage pool light fixtures to be used for pool lighting would strengthen the code.*

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
- a) Impact to local government, relative to enforcement.

*None*

- b) Impact to property and building owners relative to cost of compliance.

*Less than \$50.00 per swimming pool*

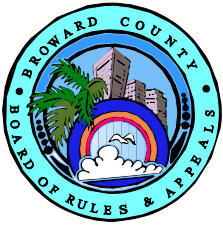
- c) Impact to industry relative to the cost of compliance

*Less than \$50.00 per swimming pool*

**Broward County Board of Rules and Appeals Public hearing and vote on September 12, and October 8<sup>th</sup>, 2020, respectively.**

**Amendment Effective date: December 31, 2020.**

# Section 13



BROWARD COUNTY

# Board of Rules & Appeals

1 North University Drive, Suite 3500B, Plantation, Florida 33324

**To:** Members of the Broward County Board of Rules and Appeals

**From:** Administrative Director

**Date:** October 8, 2020

**Re:** **Amendment to Policy 16-01 "Reduction of paperwork for Building Officials and Chief Inspectors seeking to serve in multiple jurisdictions, or moving from one jurisdiction to another, within a biennial certification period."**

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## **RECOMMENDATION**

It is recommended that the above policy be clarified to state Board of Rules and Appeals authorize by motion the Administrative Director and BORA that the individual must submit the policy affidavit to ensure compliance with Chapter 71-575 paragraph 4(b) relating to conflict of interest when moving from one jurisdiction to another .

## **REASONS**

The Board enacted the 71-575 paragraph 4(b). It is applied on all certification renewals and promotions. There should be no misunderstandings that the requirement to sign the affidavit also applies when Building officials and other Board-certified personnel move from one jurisdiction to another.

## **ADDITIONAL INFORMATION**

The updated policy has been approved as to legal form.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James DiPietro".

James DiPietro

**DRAFT**

**Board Policy #16-01**

**Effective 3/10/16  
Amended 10-8-2020**

**FROM: James DiPietro, Administrator Director**

**SUBJECT: Reduction of paperwork for Building Officials and Chief Inspectors seeking to serve in multiple jurisdictions, or moving from one jurisdiction to another, within a biennial certification period.**

**PROCEDURE:**

When a jurisdiction, wishes to hire anyone, currently certified by the Board of Rules and Appeals, in the position of Building Official, Assistant Building Official or Chief Inspector, in another jurisdiction, into that same titled position in their jurisdiction, a letter of intent signed by the Building Official, Chief Executive Officer, Human Resources Director or other duly authorized representative shall be submitted to the Board of Rules and Appeals. (For the position of Building Official, the letter must be signed by the City Manager, the Acting City Manager or the Mayor).

Said letter of intent shall identify the jurisdiction doing the hiring, the name of the appointee, the positions for which they are being hired and the effective date of the hire.

A new Policy/Affidavit to ensure compliance with Chapter 71-575, paragraph 4(b), Laws of Florida required by Florida Policy # 14-02, shall be signed and submitted.

No further paperwork shall be required, unless the existing file is found to be deficient in any way.

**104.1 Building Official.** As set forth herein:

**104.1.1 Appointment of a Building Official.** The appointing authority shall appoint a Building Official, and such person shall meet the following minimum qualifications and be certified by BORA, as specified in Section 104.1.3. The Building Official does not have to be personally present at the governmental department as long as he or she is available and can perform his or her duties.

Board Policy: 12-01

Subject: Modification of Form for Certifying the Building Official

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**To:** Members of the Broward County Board of Rules and Appeals  
**From:** Administrative Director  
**Date:** October 11, 2012  
**Re:** Modification of Form for Certifying the Building Official

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**RECOMMENDATION**

It is recommended that the BORA approve, by motion, the revisions to the form used for certifying the building official position (indicated on the attachment), which requires the chief executive officer (City Manager, Acting City Manager, or Mayor) to sign the application rather than a delegated member of the staff.

**REASONS**

For the top building code position of building official, as contrasted with other inspector vacancies, this clarification would ensure that the local jurisdiction does not sponsor an applicant where questions are pending concerning the applicant's qualifications for the position without the direct knowledge of the chief executive officer.

Respectfully submitted,



James DiPietro

This policy was approved by BORA during its regular meeting of October 12, 2012, and later incorporated to the Policies and Procedures book.





BROWARD COUNTY

# BOARD OF RULES AND APPEALS

*Certification Form for Position of*

**Building Official**

**Assistant Building Official**

*Please select one*

For Building Department of: \_\_\_\_\_

Name: \_\_\_\_\_

Home \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Driver's License #: \_\_\_\_\_

I hereby certify that I will not hold any other employment in conflict with the Florida Building Code, and the Laws of Florida Section 4(b) of Chapter 71-575, as stated below.

**Chapter 71-575 Section 4(b)** - Any Inspector (such as and including but not limited to structural, engineering, plumbing, mechanical, or electrical) or other building official charged with enforcing or otherwise supervising or inspecting any work covered under any section of the South Florida Building Code applicable to Broward County pursuant to Chapter 71-575, Laws of Florida, and who is required to hold a certificate otherwise holds a certificate of competency issued by a competing firm.

This form has been modified along the years per BORA action

The undersigned makes application for certification, and vouches for the truth and accuracy of all statements and answers herein contained

Signature of Applicant: \_\_\_\_\_ Date Signed: \_\_\_\_\_

**Please mark in each corresponding box to Indicate compliance with appropriate Code Sections:**

**104.1.3 Certification of Building Official:** To be eligible for appointment as a Building Official, such person shall be certified as required by the State of Florida, BCAIB as a Building Code Administrator. Such person shall be certified by BORA and shall meet one or more of the following qualifications.

- 104.1.3.1** An Architect or an Engineer in the discipline requested and having practiced within the HVHZ for at least three (3) years; or
- 104.1.3.2** Ten (10) years experience as a an Electrical Contractor, General Contractor, Mechanical Contractor or Plumbing Contractor, five (5) years of which shall have been construction experience within the jurisdiction of the HVHZ; or:
- 104.1.3.3** Five (5) years experience as a Chief Electrical Inspector, Chief Mechanical Inspector, Chief Plumbing Inspector or Chief Structural Inspector three (3) years of which shall have been within the HVHZ.
- 104.1.3.4** An applicant for Certification as Building Official under the provisions of this section who is a graduate from an accredited school holding a Bachelor or Associate of Science Degree in Engineering, Architecture or Building Construction may be credited for three (3) years for Bachelor Degree or one (1) year for an Associate Degree of the required ten-year experience 104.1.3.6
- 104.1.3.5** An applicant for Certification as Building Official under the provisions of this section who has passed BORA HVHZ competency exam may substitute experience within the State of Florida for the required High Velocity Hurricane Zone experience requirements as specified in section 104.1.3.1 and 104.1.3.2.
- 104.1.3.6** Each of the applicants shall possess a current Certificate of Competency issued by one of the following:
  - A. Florida Construction Industry Licensing Board as a General Contractor, Mechanical Contractor or Plumbing Contractor.
  - B. Florida Electrical Contractors Licensing Board as an Electrical Contractor.
  - C. Broward County Central Examining Board of Building Construction Trades. (As Class "A" Unlimited General Contractor).
  - D. Broward County Central Examining Board of Electricians as a Master Electrician or an Electrical Contractor.
  - E. Broward County Central Examining Board of Mechanical Contractors and Specialty Mechanical Contractors as a Mechanical Contractor or Class A Air Conditioning Contractor.
  - F. Broward County Central Examining Board of Plumbers as a Plumbing Contractor.
  - G. Dade County Construction Trades Qualifying Board, Block proctored, issued on or after January 1, 1968 for any of the above referenced disciplines.
  - H. Florida Department of Business and Professional Regulation as an Architect or an Engineer.



BROWARD COUNTY

BOARD OF RULES AND APPEALS

- Note: All applications shall include the required information in the following order. Failure to include these items shall be cause for rejection.
1. A letter of intent to hire/upgrade (State Hiring/Upgrading Position) signed by the Building Official, Chief Executive Officer, Human Resources Director, or other duly authorized representative. For Building Official, the CEO (City Manager, Acting City Manager or Mayor) shall sign.
  2. A clear copy of a current photo ID.
  3. A copy of State Certification, State Provisional License or letter from employing official verifying applicant's submittal to State for each certification.
  4. Copies of appropriate license with original date of issuance.
  5. Résumé of education and experience.
  6. Copies of W-2 Forms or tax returns to verify required experience as stated in the relevant code sections, or evidence satisfactory to the Board to verify the required experience, such as IRS Forms or other written statements attesting to your required experience from former employers, partners or co-employees who have personal knowledge of your professional or trade experience.

Note: For first time applicants only, upon staff approval, a 120 DAY TEMPORARY STAFF APPROVAL OF BORA CERTIFICATION APPLICATION FORM will be issued; upon obtaining BCAIB Provisional and BORA approval, a certification card will be issued and mailed to the Building Official.

The undersigned makes application for certification and indicates compliance with aforementioned Code Sections and vouches for the truth and accuracy of all statements and answers herein contained by affixing his/her signature below.

Printed name and Signature of Applicant.

State of Florida | SS  
 County of Broward

On the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me the above named individual who signed the foregoing instrument declaring same to be true to his/her knowledge and belief.

Notary-Public \_\_\_\_\_

My Commission Expires \_\_\_\_\_

I certify that I have verified that the above named applicant meets all the requirements for this position in accordance with the Broward County Amendments to the Florida Building Code.

Printed name and Signature of Building Official, Chief Executive Officer, Human Resources Director, or other duly authorized representative.

State of Florida | SS  
 County of Broward

On the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me the above named individual who signed the foregoing instrument declaring same to be true to his/her knowledge and belief.

Notary- Public \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

Note: The Broward County Board of Rules & Appeals has the authority to request additional information if necessary.

Approved: \_\_\_\_\_ Date: \_\_\_\_\_  
 Chief Code Compliance Officer

Disapproved: \_\_\_\_\_ Date: \_\_\_\_\_  
 Chief Code Compliance Officer

Approved by BORA on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

To: All Building and Fire Code Officials

Revised 9-22-14

From: James DiPietro 

Date: May 12, 2014

Subject: Conflict of Interest, policy and affidavit to ensure compliance with Chapter 71-575 Paragraph 4 (B), Laws of Florida.

The Board of Rules and Appeals recently acted to clarify policy concerning Conflicts of Interest. In recent years an individual certified by the Broward County Board of Rules and Appeals could work as a contractor or for a contractor outside of Broward County. The Board staff has strived to make sure any Certified Contractor had their certification located outside of Broward County when getting certified for the first time and also on renewals. During the past recertification period, one individual appealed the fact we were requiring that his certification be moved outside of Broward County. The Board ruled in his favor but decided to review Chapter 71-575 for future certifications. Attached are copies of the attorney's opinion that the Board approved on May 8, 2014 and the affidavit that must be filled out by any new hires, anyone promoted and everyone else when they are re-certified. What this decision means is that anyone certified by the Broward County Board of Rules and Appeals can hold an active Certificate of Competency in any trade and it can be located within Broward County but they cannot use that certificate anywhere. In short, it says an inspector, plans examiner, building official/fire official or anyone else certified by the Broward County Board of Rules and Appeals cannot act in the capacity of or for a contractor anywhere.

The effective date of this policy shall be immediate for new hires and everyone else when they re-new their building or fire certifications.

For any questions please contact any Code Compliance Officer or me at 954-765-4500

Please distribute this to your entire staff.

Thank you

5.159 E

## LEGAL ADVISORY OPINION RE: CHAPTER 71-575(4)(B)

**I. Statute Interpretation.**

It is well established that when interpreting a statute, the courts must examine the plain meaning of the statute to determine the legislative intent. The legislative intent must be determined from the words used without looking to rules of construction or speculating as to intent if the language of the statute is clear and unambiguous. See Palermo v. City of Tampa, 945 So. 2d 550, (Fla. 2nd DCA, 2006). This rule of construction applies to state statutes as well as local ordinances, special acts of legislature, and administrative rules. See Town of Longboat Key v. Islandside Prop. Owners Coalition, LLC, 95 So. 3d 1037 (Fla. 2nd DCA, 2012).

Neither the courts, nor any administrative bodies have the authority to attempt to modify legislative intent through the addition or omission of wording which has been clearly set forth otherwise. See Harvard v. Palm Springs, 98 So. 3d 645, 2012 Fla. App. LEXIS 15330 (Fla. 4th DCA, 2012). (“*Legislative intent is the polestar that guides a court's statutory construction analysis. In attempting to discern legislative intent, a court first looks to the actual language used in the statute. If the statute is clear and unambiguous, a court will not look behind its plain language for legislative intent or resort to rules of statutory construction to ascertain intent. In such an instance, the statute's plain and ordinary meaning must control, unless this leads to an unreasonable result or a result clearly contrary to legislative intent.*”)

At the same time, statutes must be read in their entirety so as to discern legislative intent in its entirety. See Vrchota Corp. v. Kelly, 42 So. 3d 319 (Fla. 4<sup>th</sup> DCA 2010). Select passages may not be taken out of context to contort or alter the intent of the statute in its entirety.

**II. Florida Building Code is Statutory Law.**

The Florida Building Code is incorporated into the Florida Statutes at F.S. Sec 553.73 wherein is stated: 553.73

**553.73 Florida Building Code.—**

(1)(a) The commission shall adopt, by rule pursuant to ss. 120.536(1) and 120.54, the Florida Building Code which shall contain or incorporate by reference all laws and rules which pertain to and govern the design, construction, erection, alteration, modification, repair, and demolition of public and private buildings, structures, and facilities and enforcement of such laws and rules, except as otherwise provided in this section.

With respect to 71-575 Sec. 4(b) the Code clearly states:

(b) Any Inspector (such as and including but not limited to structural , engineering, plumbing, mechanical, or electrical) or other building official charged with enforcing or otherwise supervising or inspecting any work covered under any section of the South Florida Building Code as applicable to Broward County pursuant to Chapter 71-575, Laws of Florida, and who is required to hold or who otherwise holds a Certificate of Competency in any area of construction shall not use that Certificate of Competency to engage in free enterprise thereby competing against persons or firms whose work he may also inspect, nor may he allow his Certificate of Competency to be used by another person or firm.

See F.B.C. Chapter 71-575.

A thorough review of the legislation in question necessarily requires a sentence by sentence, word by word, review of the words in their entirety.

### III. Analysis of Statute

In this case, the plain language of the Special Act at Sec 4(b) refers to:

Any Inspector (such as and including but not limited to structural, engineering, plumbing, mechanical, or electrical) or other building official charged with enforcing or otherwise supervising or inspecting any work covered under any section of the South Florida Building Code as applicable to Broward County pursuant to Chapter 71-575, Laws of Florida, and who is required to hold or who otherwise holds a Certificate of Competency in any area of construction...

In so saying, it is readily determinable as to whom the language contained in the Special Act applies.

The wording which seems to be generating the greatest discussion and uncertainty is the latter portion which states:

...shall not use that Certificate of Competency to engage in free enterprise thereby competing against persons or firms whose work he may also inspect, nor may he allow his Certificate of Competency to be used by another person or firm.

Again, where the court may be the ultimate decision maker in determining a question of statutory interpretation, the BORA must defer to the same rules used by the courts concerning statutory interpretation and which have been set forth above. (*Supra*).

The language in question does not make any determination that an inspector inactivate his license or close his place of business. The only requirements are that; 1) he/she not inspect any work which may have been performed by a competitor and; 2) not allow his/her license to be used [ i.e. to act as a qualifier] by another person or firm.

The statute does not place any geographical limitations on where an inspector may compete with another tradesman. The inspector may not compete against any party which may be a competitor, anywhere.

**(a) Inspection of Work of Possible Competitor and Definition of "Competitor."**

The plain language rule determines that an inspector could not conduct an inspection on any work which *possibly could have been performed by a competitor*. Necessarily, the inspector may not compete against another licensed contractor in another county of the state of Florida, or another state, or another country. Location is irrelevant since the statute does not provide for any such limitations. The inspector simply cannot perform work in a construction discipline against a competitor whose work he/she may inspect in the course of their duties for Broward County.

Black's Law Dictionary does not define "competition" however it does define "compete." The word "compete" is legally defined as :

To contend emulously, to strive for the position, reward, profit, goal, etc. for which another is striving.

In so saying, the legal definition of "compete" does not require remuneration or compensation however it does require that another party be striving for the same position, goal, reward, or profit. The most literal determination of this language is that simply by engaging in business an inspector may be taking away work -- even if that work was to be obtained through a "no-bid" contract- from another contractor.<sup>1</sup> The language of the statute thereby determines that an inspector may not engage in any work, in any place, where it may entail competition against a party whose work he/she may inspect and which would require the use of his/her Certificate of Competency.

**(b) Prohibition from Qualifying for Others**

The second point to note is that the statute precludes an inspector from acting as a qualifier for ANY OTHER PERSON or ANY OTHER FIRM. As far as acting as a qualifier, it makes no difference whether or not the other person or other firm being contemplated for qualification may be a competitor of the inspector. As long

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<sup>1</sup> The reason for this is evident where even in a "no-bid" situation, the inspector would still be taking work which would have otherwise been given to another contractor, "striving" or "contending" to obtain the same "goal" or "position."

as the license holder is employed as an inspector, they are not permitted to act as a qualifier for any other person or other firm, anywhere, anytime.

#### **IV. Conclusion**

The short version of this is that: 1) an inspector may not engage in any work which would require the use his/her certificate of competency anywhere it may entail competition against a party whose work he/she may inspect; 2) an inspector is not required to inactivate his/her license nor is he/she required to close their place of business while employed as an inspector; 3) an inspector may not qualify any other person or other firm anytime, anywhere, for any work requiring his/her Certificate of Competency.

**Charles M. Kramer, Esq.**  
**FBN # 133541**  
**Board Certified, Construction Law**

~~The Board of Rules and Appeals voted to accept the Board Attorney's opinion on this matter on May 8, 2014 by a vote of 10-1.~~

**Subject:** Policy/Affidavit to ensure compliance with Chapter 71-575, paragraph 4(b), Laws of Florida

**POLICY/AFFIDAVIT**

The requirements below have been adopted by vote of the Broward County Board of Rules and Appeals on April 10, 2014, to help ensure compliance with Chapter 71-575, paragraph 4(b), Laws of Florida.

**NOTICE**

All applicants for certification or re-certification are required to execute the following statement and to have same notarized by a duly authorized Notary. Failure to execute and have this statement notarized will prevent the certification / re-certification process from proceeding to completion.

**THE UNDERSIGNED HEREBY VOLUNTARILY AND KNOWINGLY STATES AS FOLLOWS:**

The undersigned has read Chapter 71-575, paragraph 4(b), Laws of Florida and has had the opportunity to have same reviewed and explained by legal counsel. Undersigned understands the terms of same and that any Inspector (such as and including but not limited to structural, engineering, plumbing, mechanical, or electrical) or other building official charged with enforcing or otherwise supervising or inspecting any work covered under any section of the Florida Building Code as applicable to Broward County pursuant to Chapter 71-575, Laws of Florida, and who is required to hold or who otherwise holds a Certificate of Competency in any area of construction shall not use his/her Certificate of Competency to engage in free enterprise thereby, competing against persons or firms that may do business within Broward County whose work he/she may also inspect, nor may he/she allow his/her Certificate of Competency to be used by another person or firm. This includes any activity, such as, but not limited to bidding, contracting, code consulting, design, employment, plan review, special building inspections, etc., regardless of compensation. The undersigned makes application for certification or re-certification, affirms compliance with aforementioned Code Section, and vouches for the truth and accuracy of all statements and answers herein contained by affixing his/her signature below. The undersigned agrees that failure to comply with the requirements of chapter 71-575 shall be considered a material breach of the terms of certification and may result in decertification/ denial of certification.

A copy of a legal opinion with respect to Chapter 71-575 is available upon request.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature of Applicant

**State of Florida**

**SS |**

**County of Broward**

On the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me the above named individual who signed the foregoing instrument declaring same to be true to his knowledge and belief.

Notary-Public: \_\_\_\_\_  
(Printed name and Signature of Notary Public, State of Florida)

(NOTARY SEAL)

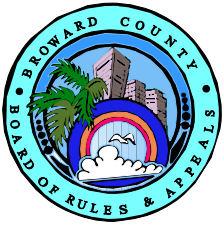
Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_

Type of Identification Produced \_\_\_\_\_

*Editor's Note: Affidavit Authorized by BORA vote on May 8, 2014, and issued by Chair on May 9, 2014.*



# Section 14



BROWARD COUNTY

# Board of Rules & Appeals

1 North University Drive, Suite 3500B, Plantation, Florida 33324

**To:** Members of the Broward County Board of Rules and Appeals

**From:** Administrative Director

**Date:** October 8, 2020

**Re:** **Invitation to participate in the Clean Energy Technical Group for the Broward County 2020 Climate Change Action Plan (CCAP).**

---

## **RECOMMENDATION**

It is recommended that the Board of Rules and Appeals authorize by motion the Administrative Director and BORA Staff members to participate in meetings of the Clean Energy Technical Group for the Broward County 2020 Climate Change Action Plan (CCAP). These meetings are organized by the Broward County Environmental Planning and Community Resilience Division and our participation has been requested.

## **REASONS**

It is a possibility that our attendance and preparation for the Clean Energy Technical Group meetings will cause our staff to devote significant time, and therefore your approval is requested.

## **ADDITIONAL INFORMATION**

The Clean Energy Technical Group for the Broward County 2020 Climate Change Action Plan (CCAP) continues to serve as the priority five-year workplan for Broward County agencies to implement necessary actions to reduce greenhouse gas emissions and increase climate resilience. As community and technical experts, our assistance requested in developing and refining actions for incorporation in the updated plan. Participation in the Clean Energy group would involve review of the 2015 Plan actions and 2020 proposals related to clean energy, submission of additional ideas, and attendance at virtual meetings (most likely two meetings, but potentially fewer or more). The first meeting is scheduled for Thursday, October 29, 2020, from 1-3 pm.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James DiPietro".

James DiPietro

---

**From:** Liechty, Jason <JLIECHTY@broward.org>  
**Sent:** Friday, September 25, 2020 3:37 PM  
**To:** Dipietro, James <JDIPIETRO@broward.org>; Boselli, Ruth <RBOSELLI@broward.org>; Curry, Brianna <BCURRY@broward.org>  
**Cc:** De Carion, Timothy <TDECARION@broward.org>  
**Subject:** RE: invitation to participate in Broward Climate Action Plan Clean Energy group

Hi Jim,

My colleague Dr. Samantha Danchuk, who is heading up the Climate Change Action Plan update, provided the following language for your use:

A technical workgroup focused on energy efficiency, renewable energy, clean fuels and electrification will convene to provide input for the Broward County Climate Action Plan 2020 Update. A county-wide strategy, the plan is intended to be implemented by local government, community partners and residents alike. Originally published in 2010, the plan is updated every five years to keep pace with accomplishments and local opportunities.

The 2015 Broward County Climate Change Action Plan (CCAP) consisted of nearly 100 strategic actions for addressing the economic, environmental, and social impacts of climate change. Two overarching goals will remain the focal points through the 2020 update: 1) Mitigate the effects of climate change by reducing greenhouse gas emissions by 2% per year, ultimately leading to a total 80% reduction by 2050, and 2) increase the resilience of our community to the effects of climate change. By 2019, all 95 actions and 23 high priority actions of the 2015 Climate Change Action Plan were completed or initiated, a 100% success rate.

The workgroup will review the 2015 actions and proposals collected to date and based on their expertise and understanding of current community needs recommend actions to be included in the update. The actions will serve as the 5-year workplan for County agencies and partners and should reflect anticipated opportunities and partner/ staff capacity.

The 2015 Climate Change Action Plan can be viewed  
<https://www.broward.org/Climate/Documents/BrowardCAPReport2015.pdf>

Please let me know if you need anything else from us!

Yours,

Jason



**JASON LIECHTY, SENIOR ENVIRONMENTAL PROJECT COORDINATOR**

Environmental Protection and Growth Management Department

**ENVIRONMENTAL PLANNING AND COMMUNITY RESILIENCE DIVISION**

115 S Andrews Ave, Room 329-H | Fort Lauderdale, Florida 33301

954-519-0310 (o) 954-257-7408 (m)

[Broward.org/NaturalResources](http://Broward.org/NaturalResources) | [Facebook](#) | [Twitter](#) | [NatureScape](#) | [4-STAR](#)



**Broward County is a certified 4-STAR Community**

*Recognized for National Excellence in Sustainability*

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**From:** Dipietro, James <[JDIPIETRO@broward.org](mailto:JDIPIETRO@broward.org)>

**Sent:** Friday, September 25, 2020 3:30 PM

**To:** Boselli, Ruth <[RBOSELLI@broward.org](mailto:RBOSELLI@broward.org)>; Curry, Brianna <[BCURRY@broward.org](mailto:BCURRY@broward.org)>

**Cc:** Liechty, Jason <[JLIECHTY@broward.org](mailto:JLIECHTY@broward.org)>; De Carion, Timothy <[TDECARION@broward.org](mailto:TDECARION@broward.org)>

**Subject:** FW: invitation to participate in Broward Climate Action Plan Clean Energy group

**Importance:** High

The attachment above needs to be added to our BORA agenda item. This documentation will be sufficient if more materials are not received. Thank you.

954-931-2393 (cell)

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**From:** Liechty, Jason <[JLIECHTY@broward.org](mailto:JLIECHTY@broward.org)>

**Sent:** Tuesday, September 22, 2020 11:52 AM

**To:** 'bfaske@bellsouth.net' <[bfaske@bellsouth.net](mailto:bfaske@bellsouth.net)>; 'brian.lomel@tlc-eng.com' <[brian.lomel@tlc-eng.com](mailto:brian.lomel@tlc-eng.com)>; 'catkinson@broward.org' <[catkinson@broward.org](mailto:catkinson@broward.org)>; 'ckettles@fsec.ucf.edu' <[ckettles@fsec.ucf.edu](mailto:ckettles@fsec.ucf.edu)>; 'cwinton@broward.edu' <[cwinton@broward.edu](mailto:cwinton@broward.edu)>;

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**Subject:** invitation to participate in Broward Climate Action Plan Clean Energy group

**Importance:** High

Hello!

**You are invited to join the Clean Energy Technical Group for the Broward County 2020 Climate Change Action Plan (CCAP) Update.**

The CCAP continues to serve as the priority five-year workplan for Broward County agencies to implement necessary actions to reduce greenhouse gas emissions and increase climate resilience. As community and technical experts, your assistance requested in developing and refining actions for incorporation in the updated plan.

Participation in the Clean Energy group would involve review of the 2015 Plan actions and 2020 proposals related to clean energy, submission of additional ideas, and attendance at virtual meetings (most likely two meetings, but potentially fewer or more). **The first meeting is scheduled for Thursday, October 29, 2020, from 1-3 pm. The meeting link is here:**

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**Meeting Information**

**CCAP Clean Energy Technical Group**

Thursday, Oct 29, 2020

1:00 PM - 3:00 PM

Join Online: <https://broward.webex.com/broward/j.php?MTID=m3ac9da83e30619ce7f4ab5897ca0197b>

Join by Phone: +1-415-655-0002

Meeting number (access code): 171 103 0590

Meeting password: CCAP (2227 from phones)

[Join meeting](#)

I will also send an Outlook calendar invitation with the same content as this email. Please accept or decline the invitation, or respond to this email, to let me know if you will be participating. We welcome suggestions of other experts to invite to participate as well.

Finally, I have attached an Excel file which lists the 2015 CCAP actions related to clean energy, a list of proposed actions for the 2020 update, and the list of people invited to join the Clean Energy group.

Thank you in advance!

Yours sincerely,  
Jason Liechty



**JASON LIECHTY, SENIOR ENVIRONMENTAL PROJECT COORDINATOR**  
Environmental Protection and Growth Management Department  
**ENVIRONMENTAL PLANNING AND COMMUNITY RESILIENCE DIVISION**  
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[Broward.org/NaturalResources](http://Broward.org/NaturalResources) | [Facebook](#) | [Twitter](#) | [NatureScape](#) | [4-STAR](#)



**Broward County is a certified 4-STAR Community**  
*Recognized for National Excellence in Sustainability*

## 2015 Actions

#	ACTION	
4	Lead advocacy for climate change policies and legislation	← JD
12	Propose Energy Code changes to the Board of Rules and Appeals (BORA)	
37	Accelerate government operations GHG reduction efforts	
38	Implement Better Buildings Challenge	
39	Install LED streetlights and garage lighting	
40	Reduce utility carbon footprint	
41	Increase share of trips made on transit	
42	Integrate bike share program with Complete Streets	
43	Build local food systems	
44	Reduce carbon footprint of local events	
45	Reduce urban heat island effect	
46	Increase county recycling rate	
47	Reduce clothing and textile waste going to landfills	

#

ACTION

- 48** Create program to encourage backyard composting
- 49** Pursue emerging technologies
- 50** Support third party retail power purchase agreements
- 51** Increase rooftop solar on county facilities
- 52** Actively pursue the installation of alternative fuel vehicle infrastructure
- 53** Reduce fuel consumption of county fleet
- 54** Fully utilize WTE capacity for county solid waste
- 55** Support local alternative energy research
- 56** Create renewable energy offset revenue
- 57** Encourage regional, private financing options
- 58** Develop permitting fee incentives
- 59** Incentivize employee carpooling and alternative fuel vehicles



## 2020 Suggested Actions

SUGGESTIONS
1. Advance infrastructure resilience and energy efficiency at Port and Airport
1. Recruit municipal and university/ institutional buildings to use ENERGY STAR Portfolio Manager to track energy use
2. List data of interest for energy to extract in poSSE/ permitting
3. Green procurement
4. Solar ready policies
7. Develop strategy for energy efficiency improvements in low to moderate income communities
8. Assess energy efficiency improvement
9. Support policy and programs to reduce residential energy efficiency cost effectively by upgrading to smart thermostats
10. Expand combined heat and power opportunities
11. ENERGY STAR for multifamily
12. Promote do-it-yourself energy evaluations and surveys offered by the utility.
13. Pursue weatherization assistance from DOE and HUD for multifamily and affordable housing.
14. Advocate for residential and commercial energy efficiency improvements in the Florida Building Code.
15. Adopt affordable housing energy efficiency standards.
16. Encourage ESCOS in all sectors
17. Provide training for property managers and maintenance personnel on energy efficiency measures.
18. Evaluate on-bill financing for affordable housing weatherization.

## SUGGESTIONS

19. Participate in the SOLAR TOGETHER program and support voluntary community solar programs.

20. Electrify buses and fleet and install EV infrastructure

21. Set efficiency standards for freight, build efficiency links across logistics networks

22. Implement strategies from Port Everglades Greenhouse Gas Inventory

23. Capture methane from landfills

Resilience hubs with solar storage

EV battery recycling strategy

Advocate for a state renewable portfolio standard

Promote renewable energy through policies and technological development in order to reduce greenhouse gas (GHG) emissions.

Enable a fuel-efficient public vehicle fleet.

Establish a fuel-efficient municipal vehicle fleet.

Promote community use of electric vehicles (EV).

Advance energy efficiency and conservation through technological solutions, behavioral strategies, and policies in order to reduce greenhouse gas (GHG) emissions.

Increase accessibility to energy efficiency solutions for limited-income families.

Increase accessibility to distributed renewable energy technology.

Utilize renewable and distributed energy technologies for emergency management and disaster recovery.

Streamline permitting and administrative processes to reduce the soft costs associated with renewable energy technologies.

Establish financing mechanisms for current homeowners to invest in renewable energy and energy efficiency.

Build the capacity for distributed renewable energy and energy storage technologies in future building stock.

Enable grid-independent energy and waste-to-energy systems.

Community Electric Vehicles Adoption - Require and encourage EV adoption through local codes, infrastructure plan

## SUGGESTIONS

Autonomous Vehicles Planning - Establish strategy and/or policy to avoid negative GHG impacts and achieve positive (

Renewable Energy Procurement for Government Operations - Power government operations from renewable energy

Utility-Scale Renewable Energy - Engage local utility or community choice program (as applicable) to increase renewable purchasing program (e.g., Solarize, community solar program) for on-site renewable energy at a scale catalyzing major new local investment.

agency) proceedings to advocate for significant renewable energy (e.g., via state RPS, net metering tariffs) and building energy efficiency standards and funding.

fossil fuel-fired space and water heating systems with high efficiency electric heat pump and similar technologies in new and existing buildings.

10. Energy Benchmarking for Large Buildings - Require large commercial and multi-family buildings to benchmark and perform energy upgrades achieving an average of ~15%+ energy savings by a certain date or at certain trigger events (e.g., time of sale, change of occupancy).

12. Zero Net Energy in Private New Buildings - Adopt policies or programs to cause new buildings in the community to

## Clean Energy

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