# FLORIDA BUILDING & FIRE CODE 6<sup>th</sup> Edition (2017)

# FORMAL INTERPRETATIONS

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# I. Building Code Formal Interpretations



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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (# 1)

DATE:	October 12, 2017	
TO:	All Building Officials	100
FROM:	James DiPietro, Administrative Director	Vann -
SUBJECT:	Mechanical Code 602.2.1 Materials Exposed w	нин т клинь,

This portion of the Interpretation concerns the residential portion of R-2 occupancies.

At its meeting of October 12, 2017, the Broward County Board of Rules and Appeals approved the following Formal Interpretation.

Section 602.2.1 of the 6th Edition (2017) Florida Mechanical Code requires materials exposed within plenums to be noncombustible or 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 E 84-2013A.

CPVC Flowguard Gold Pipe, SDR11 was tested by Southwest Research Institute using a modified ASTM E-84 test methodology in the following sizes.

0.5 inch (nominal) water filled CPVC pipe: SwRI Project No. 01.04017.01.301b [1] 2.0 inch (nominal) water filled CPVC Pipe: SwRI Project No. 01.04017.01.301c [1] 0.5 inch (nominal) empty CPVC Pipe: SwRI Project No. 01.10083.01.158e 0.75 inch (nominal) empty CPVC Pipe: SwRI Project No. 01.10083.01.158f [1]

All four Modified ASTM E-84 Tests showed flame spread indices of not more than 25 and smoke-developed indices of not more than 50.

By accepting these four Modified ASTM-E 84 Tests, the Broward County Board of Rules and Appeals approved the use of CPVC Flowguard Gold Pipe, SDR11 installed in Mechanical Closets and Mechanical Equipment/Appliance Rooms used as plenums in the residential portion of R-2 Occupancies. Approval is limited to 0.5 inch (nominal) thru 2 inch (nominal) water filled CPVC and 0.5 inch (nominal) and 0.75 inch (nominal) empty CPVC pipe.

At its meeting of September 11, 2008 the above Interpretation was expanded to include the following language which applies to both commercial and residential occupancies:

CPVC piping may be accepted for use in plenums in instances where the manufacturers have tested their product with an approved testing agency to an acceptable alternate method to ASTM E-84 – "Standard Test Method for Surface Burning Characteristics of Building Materials". Evidence must be submitted to the Authority Having Jurisdiction (AHJ) that the piping has a flame spread index of not more than 25 and a smoke developed index of not more than 50 when tested in general accordance with ASTM E-84, 2009 Edition, Pipe can be tested empty or water filled and in various pipe diameters. EFFECTIVE DATE: OCTOBER 20, 2005

EFFECTIVE DATE: January 1, 2018

RE-ISSUED: October 12, 2017

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#2)

DATE:	October 12, 2017	
TO:	All Building Officials	
FROM:	James DiPietro, Administrative Director	James .
SUBJECT:	Identification of Mechanical Equipment.	

At the meeting of October 12, 2017 the Board approved an interpretation of Section 304.12, 6<sup>th</sup> Edition (2017) Florida Building Code, Mechanical (FMC). This section of the code requires marking of appliances (air conditioning equipment) serving different areas of a building other than where they are installed to uniquely identify the appliance and the area it serves.

The purpose of these sections is to easily identify equipment for servicing and in case of an emergency. An example would be multiple installations of appliances on a roof top of an office building, condominium, apartment building, etc. There is no requirement for identification of appliances contained in the Florida Residential Code.

### Formal Interpretation:

Section 304.12, 6<sup>th</sup> Edition (2017) Florida Building Code, Mechanical does not apply to buildings governed under the Florida Residential Code. These buildings include detached one-two family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress.

EFFECTIVE DATE: October 20, 2005 RE-ISSUED: October 12, 2017 EFFECTIVE DATE: January 1, 2018

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#3)

DATE:	October 12, 2015	
TO:	All Building Officials	$\sim 0^{2}$
FROM:	James DiPietro, Administrative Director	Jam - the
SUBJECT:	Attachments of Ductwork to Air Handling	Equipment.

At the meeting of October 12, 2017, BORA approved an interpretation of Section 603.9, Florida Mechanical Code, 6 edition (2017) and section 1601.4.1, FBC, Residential, 6 edition (2017).

These sections state attachment of rigid fibrous glass duct work to air-handling equipment shall be by mechanical attachment and attachment shall be by mechanical fasteners. These sections further define mechanical attachments for air distribution systems as screws, rivets, welds, interlocking joints crimped and rolled, staples, twist in (screw attachment, and compression systems created by bend tabs or screw tabs and flanges or by clinching straps.

Broward County has a long successful history of using UL181 A/P listed pressure-sensitive aluminum foil tape and UL 181 A/M glass fabric and mastic for attaching rigid fibrous glass duct board to cleaned sheet metal equipment flanges in residential applications. North American Insulation Manufacturers Association (NAIMA) is listed in the Reference Standards and Organizations sections of the FMC and FRC. NAIMA's Fibrous Glass Residential Duct Construction Standard states" Connections of fibrous glass duct board to carefully cleaned sheet metal equipment flanges may be made with UL A/P listed pressure-sensitive aluminum foil tape."

### **Formal Interpretation:**

The use of UL 181 A/P listed pressure sensitive aluminum tape or UL 181 A/M glass fabric and mastic are acceptable methods of attaching rigid fibrous glass duct work to cleaned sheet metal equipment flanges in residential applications.

EFFECTIVE DATE: October 20, 2005 RE-ISSUED: October 12, 2017 EFFECTIVE DATE: January 1, 2018

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#4)

DATE:	October 12, 2015	
TO:	All Building Officials	$\cdot$
FROM:	James DiPietro, Administrative Director	James - the
SUBJECT:	Insulation Requirements for Condensate D	Prains.

At its meeting of October 12, 2015, BORA approved an interpretation of the following Sections of the 6 Edition (2017), Florida Building Code, Mechanical 307.2.1; Residential M1411.3, and 1206.11; Energy Conservation C403.2.10, and R403.4. See attached code sections.

Questions have been raised about the code requirement to insulate condensate drains that were installed vertically or at an angle (pitched).

All condensate drain lines are required to have a slope to insure proper drainage and therefore are not perfectly horizontal. The code does not address the insulation of condensate drains lines that are installed vertical or at an angle (pitched). It appears the intent of the code was to apply to condensate piping which is installed in a relatively horizontal manner.

**Formal Interpretation:** 

All primarily horizontal condensate drains pipes within unconditioned areas shall be insulated to prevent condensation from forming on the exterior of the drain pipe. Only primary condensate drain lines within unconditioned areas installed in a relatively horizontal manner are required to be insulated.

EFFECTIVE DATE:October 20, 2005RE-ISSUED:October 12, 2017EFFECTIVE DATE:January 1, 2018

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# **BROWARD COUNTY** BOARD OF RULES AND APPEALS

# FBC 6<sup>th</sup> Edition (2017) **FORMAL INTERPRETATION (#5)**

**DATE: October 12, 2017** 

All Building Officials TO:

FROM:

James DiPietro, Administrative Director

**SUBJECT:** Retrofit of Windows, Doors, Garage Doors, Shutters and Skylights FBC Existing Building, Alteration Level I

At its meeting of October 12th, 2017 the Board approved an interpretation of Retrofit of Windows, Doors, Garage Doors, Shutters and Skylights, for detached one and two family dwellings, and multiple single family dwellings, (townhouses) with common roof height < 30feet.

1. A Florida Professional Engineer or Architect may modify the buck or fasteners as specified in a Notice of Acceptance. Such modification must be documented with a signed and sealed letter or drawing.

2. To obtain the required design pressure for a specific opening at a specific site, an individual must utilize one of the following and submit documentation as indicated.

a) A site-specific plan (signed and sealed) by a Florida Professional Engineer or Architect, indicating the location of all retro openings and the required design pressures.

b) A site-specific plan (not sealed) indicating the location of all retro openings accompanied by a worst case design pressure chart (signed and sealed) prepared by a Florida P.E. or Architect.

c) A site-specific plan (not sealed) indicating the location of all openings and indicating the required design pressures based on the Broward County Fenestration Voluntary Wind Load Chart. (see attached chart).

3. Buildings with a (height) > 30 feet or more shall have a site-specific design (signed and sealed) by a Florida Professional Engineer or Architect, indicating the location of all retro openings and the required design pressures for each opening.

NOTE: Generic charts, graphs alone, etc. are not acceptable for buildings above 30 feet.

ORIGINAL DATE:	September 12, 2012
<b>RE-ISSUED</b> :	October 12, 2017
EFFECTIVE DATE:	January 1, 2018

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# **Broward County Fenestration Voluntary Wind Load Chart\***

## Per ASCE 7-10 Method 1, Part 1 and FBC (2017) for Retrofiting in Accordance with Formal Interpretation #5

## For Detached One-and Two family dwellings and Multiple Single-Family Dwellings (Townhouses) with Mean Roof Height ≤ 30 feet

Wind 170 mph (3-second gust) / Exposure C\*\* / Kd = 0.85 / Kzt = 1.0 / Pressures are in PSF / Not for use in Coastal (Exposure 'D' areas)

\* Using Allowable Stress Design methodology (P = 0.6w) / \*\* Exposure shall be determined according to ASCE 7-10 Section 26.7.3 (Exposure Categories)

Effective	Location:	Mean Roof Height of 1				15 feet Mean Roof Height of 20 feet							Mean Roof Height of 25 feet				et	Mean Roof Height of 30 feet							
Wind				Zo	ne			Zone					Zone					Zone							
Area	Gable or Hip Roof		1	2	2		3		1		2		3		1		2		3		1		2		3
(ft <sup>2</sup> )	ROOI	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
10	Gable/Hip	16.0	-37.8	16.0	-63.4	16.0	-95.4	16.3	-40.2	16.3	-67.4	16.3	-101.4	17.1	-42.1	17.1	-70.6	17.1	-106.3	17.8	-43.7	17.8	-73.4		-110.4
20	Roof	16.0	-36.8	16.0	-56.7	16.0	-79.1	16.0	-39.1	16.0	-60.2	16.0	-84.0	16.0	-41.0	16.0	-63.1	16.0	-88.0	16.7	-42.6	16.7	-65.6	16.7	-91.5
50	θ ≤ 7°	16.0	-35.6	16.0	-47.7	16.0	-57.4	16.0	-37.8	16.0	-50.7	16.0	-61.0	16.0	-39.6	16.0	-53.2	16.0	-63.9	16.0	-41.1	16.0	-55.2	16.0	-66.4
100	(0 to 1.5:12)	16.0	-34.6	16.0	-41.0	16.0	-41.0	16.0	-36.8	16.0	-43.6	16.0	-43.6	16.0	-38.5	16.0	-45.7	16.0	-45.7	16.0	-40.0	16.0	-47.4	16.0	-47.4
10	Gable/Hip	21.8	-34.6	21.8	-60.2	21.8	-89.0	23.1	-36.8	23.1	-64.0	23.1	-94.6	24.3	-38.5	24.3	-67.1	24.3	-99.2	25.2	-40.0	25.2	-69.7		·103.0
20	Roof***	19.9	-33.6	19.9	-55.4	19.9	-83.3	21.1	-35.7	21.1	-58.9	21.1	-88.5	22.1	-37.4	22.1	-61.7	22.1	-92.7	23.0	-38.9	23.0	-64.1	23.0	-96.3
50	7° < θ ≤ 27°	17.3	-32.4	17.3	-49.0	17.3	-75.6	18.4	-34.4	18.4	-52.1	18.4	-80.3	19.3	-36.0	19.3	-54.6	19.3	-84.2	20.0	-37.4	20.0	-56.7	20.0	-87.5
100	(1.5 to6:12)	16.0	-31.4	16.0	-44.2	16.0	-69.8	16.3	-33.3	16.3	-47.0	16.3	-74.2	17.1	-35.0	17.1	-49.2	17.1	-77.8	17.8	-36.3	17.8	-51.1	17.8	-80.8
10	Gable Roof	34.6	-37.8	34.6	-44.2	34.6	-44.2	36.8	-40.2	36.8	-47.0	36.8	-47.0	38.5	-42.1	38.5	-49.2	38.5	-49.2	40.0	-43.7	40.0	-51.1	40.0	-51.1
20	27° < θ≤ 45°	33.6	-35.9	33.6	-42.3	33.6	-42.3	35.7	-38.1	35.7	-44.9	35.7	-44.9	37.4	-39.9	37.4	-47.1	37.4	-47.1	38.9	-41.5	38.9	-48.9	38.9	-48.9
50	(6 to12:12)	32.4	-33.3	32.4	-39.7	32.4	-39.7	34.4	-35.4	34.4	-42.2	34.4	-42.2	36.0	-37.1	36.0	-44.2	36.0	-44.2	37.4	-38.6	37.4	-46.0	37.4	-46.0
100	(0 1012.12)	31.4	-31.4	31.4	-37.8	31.4	-37.8	33.3	-33.3	33.3	-40.2	33.3	-40.2	35.0	-35.0	35.0	-42.1	35.0	-42.1	36.3	-36.3	36.3	-43.7	36.3	-43.7
			-		-		$>$ 7 degrees (1.5:12) and $\leq$ 25 degrees (5.5:12), Zone 3																		
Effective			Mean F	loof He	eight of	15 feet	t	Mean Roof Height of 20 feet				Mean Roof Height of 25 feet				Mean Roof Height of 30 feet				t					
Wind	Location				ne			Zone					Zone				Zone								
Area	Location		4	!	5				4		5				4		5				4		5		
(ft <sup>2</sup> )		+	-	+	-			+	-	+	-			+	-	+	-			+	-	+	-		
10		37.8	-41.0	37.8	-50.6			40.2	-43.6	40.2	-53.8			42.1	-45.7	42.1	-56.4			43.7	-47.4	43.7	-58.6		
20			-39.3	36.1	-47.2			38.3	-41.7	38.3	-50.1			40.2	-43.8	40.2	-52.6			41.8	-45.5	41.8	-54.6		
50	Wall	33.8	-37.0	33.8	-42.7			36.0	-39.4	36.0	-45.4			37.7	-41.3	37.7	-47.5			39.2	-42.9	39.2	-49.4		
100		32.1	-35.3	32.1	-39.3			34.1	-37.5	34.1	-41.7			35.8	-39.4	35.8	-43.8			37.2	-40.9	37.2	-45.5		
500		28.2	-31.4	28.2	-31.4			29.9	-33.3	29.9	-33.3			31.4	-35.0	31.4	-35.0			32.6	-36.3	32.6	-36.3		
	Garage Doo	or Wir	nd Loa	ds		*	a≁	→ a¦a	*							. >	a+			1/2					
for a Bu	uilding with 30	)-foot N	vlean Ro	of Heig	ght	a F	31.2	1_3	_2	3						a	3		1/	3 /	K				
	Ехр	osure C	2			T	1									*	1	2.1.		-					
Tables	s 1609.7(1) & (	2), and	d Sectio	n 1609.	.3.1												1								
Effective	Wind Area	Roof	Angle	Wind	Load	2	2 1	2	1	2	5	4		5	h			2	1	-	5		4	10	>   h
Width	Height	noon	Angre	+	-						Li				1			$\wedge$	1				+	:5	_
8	8	0 -	10	35.2	-39.8		1			)	∙a≁	and the second	*	a *			/		1.		* a +			* a	- 2 1
10	10		rees	34.1	-38.2	E	-+	1-1		-	(	Gable	Roof				/		)			Hip	Roof		1022
14	14	acg		32.3	-36.1	or Effe	ective W	/ind Are	eas betw	een th	ose give	n, valu	es may	be inte	rpolated	l. Othe	rwise us	e the v	alue ass	ociated	d with th	ne lowe	er Effect	ive Win	d Area.
9	7	>	10	38.4	-43.4	End Zo	ne (a) s	hall be	the sm	aller of	f 10% of	Least	Hor. Dis	st. or 4	0% of N	lean R	oof Heig	ght ('h')	), but no	ot less	than 4%	6 of Lea	ast Hor	Dist. o	r 3 ft.
16	7	deg	rees	36.8	-41.0		Ident	tify the	zone p	er the f	figure o	r infor	mation	by oth	ers. Any	quest	ionable	zone is	s to be c	onside	ered the	e more	critical	zone.	
Design is ba	ased on the 3-se	cond gu	st (wind	velocity	) for Risk	Catego	ry II (ger	neral res	idential	& comm	nercial co	nstruct	ion) per	FBC 162	20.2 Brow	vard. Th	ese table	es not fo	or use wit	h essen	itial facil	ities or a	assembly	, occupa	ncies.
Design is based on the 3-second gust (wind velocity) for Risk Category II (general residential & commercial construction) per FBC 1620.2 Broward. These tables not for use with essential facilities or assembly occupancies.																									



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Board Attorney Charles M. Kramer, Esq.

**Board Administrative Director** James DiPietro

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#6)

DATE:	October 12, 2017	
TO:	All Building Officials	$\sim \circ$
FROM:	James DiPietro, Administrative Director	former all
SUBJECT:	Solar Assisted Air Conditioning Systems.	

At its regular meeting of October 12, 2017, the Board of Rules and Appeals approved an interpretation of the following  $6^{th}$  Edition (2017) Florida Building Codes:

- 1. FBC, Mechanical Section 301.7 Listed and Labeled,
- 2. FBC, Residential Section M1302.1 Listed and Labeled,
- 3. FBC, Energy Conservation, Sections C403.2.3 and table R405.5.2.(1) HVAC equipment performance requirements.
- 4. FBC, 6th Edition (2017) FBC Broward County Administrative Provisions, Section 104.32.

Alternative materials, design and methods of construction and equipment. The Board concurred with the Building Code Advisory Board of Palm Beach County Tec

The Board concurred with the Building Code Advisory Board of Palm Beach County Technical Advisory (attached) issued on 12/13/11.

## **Formal Interpretation:**

The above sections are applicable to "solar assisted air conditioning systems" (a conventional air conditioning system with a solar heat collector placed between the compressor and the condensing coils) and such systems must obtain certification or successfully pass testing by State of Florida or a nationally recognized testing or certification agency prior to permitting.

EFFECTIVE DATE: RE-ISSUED: EFFECTIVE DATE: September 14, 2012 October 12, 2017 January 1, 2018

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

Page 1 of 8 F.I #6

# **TECHNICAL ADVISORY**

Building Code Advisory Board of Palm Beach County

# Issued on 12-13-11 by Building Code Advisory Board

Subject: Solar-Assisted Air Conditioning System

This technical advisory is established as a "Public Awareness Notice" concerning a "Solar-Assisted A/C System" that modifies a factory matched air conditioning equipment system and that has been advertised recently in Palm Beach County. The creator of this hybrid system is promoting it, using several unsubstantiated claims regarding AHRI Certification, UL Listing, and dramatically improved SEER efficiency ratings.

This system <u>should not be confused</u> with other tested and certified air conditioning systems that incorporate solar photovoltaic panels into the electrical portion of their system. Unlike those designs, the "Solar-Assisted" portion of this system involves re-routing the <u>refrigerant line</u> up to the roof, and through a solar collector which is intended to "super heat" the gas prior to routing the line back to the condenser coil. There are many technical concerns with this design theory that prompted months of research by BCAB staff, the details of which are beyond the scope of this advisory.

However, there is specific information pertinent to the claims involving AHRI Certification, UL Listing, limitations on the pressures and approvals of solar panels, and dramatic increases in SEER efficiency that are worth noting:

- 1) Air Conditioning, Heating, and Refrigeration Institute communications (attached BCAB letter available on request)
- 2) Florida Solar Energy Center communications (attached)
- 3) Manufacturers the original equipment manufacturers of the Air Condensing Units that were contacted by BCAB staff, stated that their warranties and the UL Listing of their equipment would be voided by this type of field alteration.

It is the duty and the responsibility of the building official to ensure that products are properly installed in accordance with the manufacturer's instructions, certifications, and their listings. Installation of a system, that is not in compliance with listing and installation standards can lead to problems and invalidation of the warranty for the customer. When alternate materials, technologies, or designs are being proposed, it is incumbent on the applicant to provide enough information to substantiate the proposed alternative will comply with the code. The building official can request testing or other type of documentation when insufficient evidence is submitted at time of permitting. This firm has not demonstrated their claims with thorough and reliable science, engineering, testing, or demonstrated field applications. Due to the several above cited issues, and the extraordinary time spent by BCAB staff in the analysis of submitted materials that failed to substantiate the code-compliance of the hybrid system; the recommendation of the Board is that this system must obtain certification or successfully pass testing by a State of Florida or nationally recognized testing or certification agency, prior to permitting.

For Building Code Advisory Board

omasik Jacok

The Building Code Advisory Board of Palm Beach County was created by a Special Act of the Florida Legislature, at the request of the building code enforcement and construction industries. The purpose of the Board is to advise the Board of County Commissioners and local governments concerning the adoption of building codes and their enforcement throughout the County. The Act also granted Palm Beach County special powers concerning building codes, in the interest of the public's health, safety and general welfare.

comfortable at a higher temperature... in addition your air conditioning unit doesn't run as long and cycles less.

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A S.E.E.R. (Sensonal Energy Efficiency Rating) is the rating and performance standards that have been developed by the U.S. government and equipment manufacturor's to produce an energy consumption rating that is easy to understand by consumers. It has a universal formula and conditioning that can be applied to all units and compensates for varying weather conditions.

ENERGY STAR is a government-backed program helping businesses and individuals protect the environment through *superior* energy efficiency.

AHRI administers the heating, ventilation, air conditioning and commercial refrigeration (HVACR) industry's performance certification programs for heating and cooling equipment and components. Manufacturers who have had their product performance claims tested and certified by AHRI can apply one of the association's families of certification marks.

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# 2

From: Ann.Stanton@dca.state.fl.us [mailto:Ann.Stanton@dca.state.fl.us] Sent: Friday, September 16, 2011 11:34 AM To: Bob Boyer Subject: Fw: Solar Cool Permit Issues

----- Forwarded by Ann Stanton/DCA/FLEOC on 09/16/2011 11:33 AM -----

Philip Fairey <pfairey@fsec.ucf.edu>

To Ann.Stanton@dca.state.fl.us co Robin Vietra <robin@fsec.ucf.edu> Subject Re: Fw: Solar Cool Permit Issues

Ann,

09/16/2011 10:49 AM

We have seen this proposed system before; it is described here:

http://www.sednaaireusa.com/How%20it%20works.htm. It does not work. In fact, it will decrease the efficiency of the air conditioner on which it is installed. In fact, one could make a cogent argument that if this concept were incorporated into a minimum efficiency air conditioner it would no longer meet the minimum federal standard for the manufacture and sale of air conditioner systems. The issue is that we want to extract heat from the loop between the compressor and condenser, not add heat to it- they have it exactly backwardl

## Philip

# On 9/16/2011 10:29 AM, Ann.Stanton@dca.state.fl.uswrote:

Philip: Does one of your people want to respond on this issue? I'd appreciate it. Ann

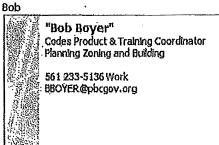
----- Forwarded by Ann Slanton/DCA/FLEOC on 09/16/2011 10:28 AM -----

Bob Boyer <bboyer@pbcgov.org></bboyer@pbcgov.org>	
	To <u>"Ann.Stanton@dca.state.fl.us"<ann.stanton@dca.state.fl.us></ann.stanton@dca.state.fl.us></u>
09/16/2011 10:16 AM	co Rebecca Caldwell <u><rcaldwel@pbcgov.org></rcaldwel@pbcgov.org></u> , Richard Gathright < <u><rgathrig@pbcgov.org></rgathrig@pbcgov.org></u> , Michael Fox <u><mfox@pbcgov.org></mfox@pbcgov.org></u>
	Subject FW: Solar Cool Permit issues

Good Morning Ann,

I am forwarding ongoing correspondence that we are having with a solar contractor on the proposed field modification of a AC system. The contractor is proposing to install a thermal solar collector in the hot gas loop between the compressor and the condenser. We would be very interested in hearing your opinion and thoughts on this proposed installation. We have sent a letter to AHRI which I have attached also requesting input on the proposed installation. Thank you for your time in considering and responding to our questions.

Regards,





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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# FBC 6<sup>th</sup> Edition (2017) FORMAL INTERPRETATION (#7)

DATE: October 3, 2017

TO: All Building Officials

FROM: James DiPietro

De.

Administrative Director

SUBJECT: Installation of 100% Wireless Network Low Voltage

Alarm Systems.

At its regular meeting of May 14, 2015, the Board of Rules and Appeals approved an interpretation regarding 100% Wireless Network Low Voltage Alarm Systems, as follows.

INSTALLATION OF 100% WIRELESS NETWORK LOW VOLTAGE ALARM SYSTEMS, AND ANCILLARY COMPONENTS OR EQUIPMENT ATTACHED TO SUCH A SYSTEM, INCLUDING, BUT NOT LIMITED TO HOME–AUTOMATION EQUIPMENT, THERMOSTATS, AND VIDEO CAMERAS DOES NOT REQUIRE A PERMIT. THIS INTERPRETATION DOES NOT APPLY TO THE INSTALLATION OR REPLACEMENT OF A FIRE ALARM IF A PLAN REVIEW IS REQUIRED.

EFFECTIVE DATE: RE-ISSUED: RE-ISSUED DATE: EFFECTIVE DATE: January 10, 2014 May 14, 2015 October 12, 2017 January 1, 2018

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

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# **BROWARD COUNTY** BOARD OF RULES AND APPEALS

# FBC 6<sup>th</sup> Edition (2017) FORMAL INTERPRETATION (#8)

October 12th, 2017 DATE:

**All Building Officials** TO:

**James DiPietro** 

FROM:

DP. **Administrative Director** 

**Retrofits required pursuant to Florida Building Code SUBJECT: Existing Building Section 706.8** 

Anchors not less than 1/8" by 1" steel strap nailed with 3- 16D nails installed in accordance with previous additions of the South Florida Building Code shall be deemed to comply with the minimum uplift capacity of 500 pounds as specified in the Florida Building Code Existing Building Manual Section 706.8 for roof to wall connections for site-built single-family residential structures.

ORIGINAL DATE: **RE-ISSUED**: EFFECTIVE DATE: May 9, 2014 October 12, 2017 January 1, 2018

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# BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#9)

**DATE:** October 12, 2017

TO: All Building Officials

FROM: James DiPietro

De.

Administrative Director

SUBJECT: Residential Clothes Washing Machines Drains.

At its regular meeting of October 12, 2017, the Board of Rules and Appeals approved an interpretation of the Florida Building Code 6th Edition (2017), Residential Section P2718.1

The interpretation is to clarify the use of a minimum 2-inch sanitary piping to drain clothes washing machines. The FBC, Residential Section P2718.1 is silent on the issue. The Board\_ with Building Officials Association of Florida Informal Interpretations 4939 and 6501.

# **Formal Interpretation:**

FBC Residential Section P2718.1: The automatic clothes washing machine fixture drain shall connect to a branch drain or drainage stack a minimum of 2 inches in diameter.

ORIGINAL DATE: RE-ISSUED: EFFECTIVE DATE: January 10, 2014 October 12, 2017 January 1, 2018

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#10)

DATE:	September 9, 2017
TO:	All Building Officials
FROM:	James DiPietro, Administrative Director
SUBJECT:	<b>Recessed Ceiling Air Handlers</b>



At its regular meeting of October 12, 2017, the Board of Rules and Appeals approved an interpretation of the following 6<sup>th</sup> Edition (2017) Florida Building Codes:

1. FBC, Energy Conservation, Sections C501.7 and R501.7.

**Building systems and components.** Thermal efficiency standards are set for the following building systems and components where new products are installed or replaced in existing buildings, and for which a permit must be obtained. New products shall meet the minimum efficiencies allowed by this code for the following systems and components:

Heating, ventilating or air-conditioning systems; Service water or pool heating systems; Lighting systems; and Replacement fenestration.

## **Exceptions:**

4.

Replacement equipment that would require extensive Revisions to other systems, equipment or elements of a building where such replacement is a like-for-like replacement, such as through-the-wall condensing units and PTACs, chillers and cooling towers in confined spaced.

## **Formal Interpretation:**

The replacement of existing Recessed Ceiling Air Handlers that will require the alteration of building walls; as determined by the Building Official or his or her representative, qualifies under the exception 4 to the FBC Energy Conservation 6th Edition section C501.7 and R501.7. As consequence this application needs not meet the minimum SEER required in Section C303.2.3 and Table R405.5.2(1) of said Code as long as the replacement is a "like for like" as stated in the above Exception.

EFFECTIVE DATE: RE-ISSUED: EFFECTIVE DATE: June 30, 2015 October 12, 2017 January 1, 2018

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# Page | of | F.I #10

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# **BROWARD COUNTY** BOARD OF RULES AND APPEALS

# FBC 6<sup>th</sup> Edition (2017) Energy **Conservation Code FORMAL INTERPRETATION (#11)**

DATE:

TO:

October 12, 2017 **All Building Officials** 

S

FROM:

James DiPiet Administrative Director

Windows Replacement

SUBJECT:

At its meeting of October 12, 2017, the Broward County Board of Rules and Appeals approved the following interpretation.

When windows are replaced they may be exempt from the Florida Building Code-Energy Conservation,  $6^{th}$  Edition (2017).

In the Florida Building Code-Energy Conservation,  $6^{th}$  Edition (2017), C101.4.2 and R101.4.8 state: "Buildings exempt from the provisions of the *Florida Building Code*, Energy Conservation, include existing buildings except those considered renovated buildings, changes of occupancy type or previously unconditioned buildings to which comfort conditioning is added."

Renovated Buildings is defined in C202 and R202 of the Florida Building Code-*Energy Conservation*, 6<sup>th</sup> Edition (2017) as: "A residential or nonresidential building undergoing alteration that varies or changes insulation, HVAC systems, water heating systems, or exterior envelope conditions, provided the estimated cost of renovation exceeds30 percent of the assessed value of the structure."

Considering these sections, replacement of windows (including any other renovation that may be going on) in an existing building that does not exceed 30 percent of the assessed value of the structure must comply with the requirements of the Florida Building Code, Existing Building but they do not need to comply with the Florida Building Code, Energy Conservation.

**ISSUED**: **RE-ISSUED**: **EFFECTIVE DATE:**  July 9, 2015 October 12, 2017 January 1, 2018

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# BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6<sup>th</sup> Edition (2017)</u>

# FORMAL INTERPRETATION (#12)

DATE:	October 12, 2017	
TO:	All Building Officials	$1 \cap P$
FROM:	James DiPietro, Administrative Director	James Mar

SUBJECT:

**IECT:** Mechanical Equipment Wind Load Voluntary Design Pressure Chart

At its meeting of October 12, 2017, the Board approved an interpretation of the 6<sup>th</sup> Edition (2017) FBC Existing Building, 503.1 Alteration Level 1, FMC 301.15, and FBC Ch. 16. **Formal Interpretation:** 

To obtain the required design pressure for any mechanical equipment, at a specific site, an individual must use one of the following options and submit documentation as indicated.

a) A site-specific plan (signed and sealed) by a Florida Professional Engineer indicating the location of mechanical equipment and the required design pressures.

b) A site-specific plan (not sealed) or written description, indicating the location of mechanical equipment accompanied by a worst-case design pressure chart (signed and sealed) prepared by a Florida P.E.

c) A site-specific plan (not sealed) or written description, indicating the location of mechanical equipment and indicating the required design pressures based on the Broward County Mechanical Equipment Wind Load Voluntary Design Pressure Chart. (See attached chart).

All permit applications must be accompanied by evidence acceptable to the AHJ that the mechanical equipment and its installation complies with FMC 301.15 and the design pressures as determined by one of the above methods.

Mechanical equipment located at height more than 100 feet shall comply with FMC 301.15, have a site-specific design (signed and sealed) by a Florida Professional Engineer, indicating the location of mechanical equipment, the required design pressures and the installation method.

EFFECTIVE DATE: RE-ISSUED: EFFECTIVE DATE: October 9, 2015 October 12, 2017 January 1, 2018

# \*\*\*\*PLEASE POST AT YOUR PERMIT COUNTER\*\*\*\* Page | of 2 F.I #13

### Broward County - Wind Load Design Pressures For Mechanical Equipment (HVHZ only)\*

\* Using Allowable Stress Design methodology (P = 0.6w)

#### Per ASCE 7-10 Chapter 29, Design Loads for Other Structures, and Florida Building Code 6th Edition (2017)

Wind 170 mph (3-second gust) / Exposure C-D\*\* / Kzt = 1.0

 $K_d = 0.90$  for square shaped units /  $K_d = 0.95$  for round, hexagonal & octagonal shaped units

\*\* Exposure shall be determined according to ASCE 7-10 Section 26.7.3 (Exposure Categories)

#### **GROUND-MOUNTED APPLICATIONS**

		Exposure 'C	C' (Non-Coa	stal)		Exposure 'D' (Coastal)					
Mounting	Unit	Size	Wind Load Design Pressures			Mounting	Unit	Size	Wi	nd Load Design F	Pressures
Height	Width/ Diameter	Height	Square	Hexagonal, Octagonal	Round	Height	Width/ Diameter	Height	Square	Hexagonal, Octagonal	Round
GROUND	24 – 60 IN	24 – 60 IN	39 PSF	32 PSF	16 PSF	GROUND	24 – 60 IN	24 – 60 IN	47 PSF	39 PSF	20 PSF

#### **ROOFTOP-MOUNTED APPLICATIONS**

Exposure 'C' (Non-Coastal)										
Mounting	Unit	Size	Wind Load Design Pressures							
Height	Width/	Hoight		Square	Round, Hex/					
Above Grade	Diameter	Height		Square	Octagonal					
15 FT	< 60 IN	< 60 IN	LATERAL	112 PSF	118 PSF					
1311	< 00 IN	< 00 IN	UPLIFT	55 PSF	58 PSF					
20 FT	< 60 IN	< 60 IN	LATERAL	118 PSF	124 PSF					
2011	< 00 IN	< 00 IN	UPLIFT	57 PSF	60 PSF					
30 FT	< 60 IN	< 60 IN	LATERAL	126 PSF	133 PSF					
3011	< 00 IN	< 00 IN	UPLIFT	61 PSF	65 PSF					
40 FT	< 60 IN	< 60 IN	LATERAL	133 PSF	140 PSF					
4011		< 00 IN	UPLIFT	65 PSF	68 PSF					
50 FT	< 60 IN	< 60 IN	LATERAL	139 PSF	146 PSF					
5011	< 00 IN	< 00 IN	UPLIFT	67 PSF	71 PSF					
60 FT	< 60 IN	< 60 IN	LATERAL	144 PSF	152 PSF					
0011	< 00 IN	< 00 IN	UPLIFT	70 PSF	74 PSF					
70 FT	< 60 IN	< 60 IN	LATERAL	148 PSF	156 PSF					
7011	< 00 IN	< 00 IN	UPLIFT	72 PSF	76 PSF					
80 FT	< 60 IN	< 60 IN	LATERAL	152 PSF	160 PSF					
8011	< 00 IN	< 00 IN	UPLIFT	74 PSF	78 PSF					
90 FT	< 60 IN	< 60 IN	LATERAL	156 PSF	164 PSF					
5011	\$ 00 IN	\$ 00 IN	UPLIFT	76 PSF	80 PSF					
100 FT	< 60 IN	< 60 IN	LATERAL	159 PSF	168 PSF					
10011	\$ 00 IN	\$ 00 IN	UPLIFT	77 PSF	81 PSF					

Exposure 'D' (Coastal)					
Mounting	Unit Size		Wi	Wind Load Design Pressures	
Height Above Grade	Width/ Diameter	Height		Square	Round, Hex/ Octagonal
15 FT	< 60 IN	< 60 IN	LATERAL UPLIFT	135 PSF 65 PSF	142 PSF 69 PSF
20 FT	< 60 IN	< 60 IN	LATERAL	140 PSF 68 PSF	148 PSF 72 PSF
30 FT	< 60 IN	< 60 IN	LATERAL	148 PSF 72 PSF	157 PSF 76 PSF
40 FT	< 60 IN	< 60 IN	LATERAL	155 PSF 75 PSF	164 PSF 79 PSF
50 FT	< 60 IN	< 60 IN	LATERAL	160 PSF 78 PSF	169 PSF 82 PSF
60 FT	< 60 IN	< 60 IN	LATERAL UPLIFT	165 PSF 80 PSF	174 PSF 85 PSF
70 FT	< 60 IN	< 60 IN	LATERAL UPLIFT	169 PSF 82 PSF	179 PSF 87 PSF
80 FT	< 60 IN	< 60 IN	LATERAL UPLIFT	173 PSF 84 PSF	183 PSF 89 PSF
90 FT	< 60 IN	< 60 IN	LATERAL UPLIFT	176 PSF 86 PSF	186 PSF 90 PSF
100 FT	< 60 IN	< 60 IN	LATERAL UPLIFT	179 PSF 87 PSF	189 PSF 92 PSF

#### GENERAL NOTES AND INSTRUCTIONS FOR TABLE USE:

1. Design is based on the Florida Building Code (FBC) 6th Edition (2017) using ASCE 7-10 "other structures - tanks" calculation of a 3-second gust (wind velocity) per ASCE section 29.4, 29.5, or FBC section 1620.6 for a category II (general residential & commercial construction) installation. These tables not for use with essential facilities or assembly occupancies. Topographic factor kzt=1.0 for flat terrain use only. Tables use 'ASD' design method.

2. No certification is offered for the integrity of the host structure.

3. Tables are intended to depict the 'worst case' design pressure. 'Worst case' is defined as the critical condition of any unknown variable as described herein. Use of critical conditions required for use with these tables. Deviations require site specific evaluation.

4. Use of this drawing assumes the following criteria:

· Permanent attachment to the existing structure (attachment method and integrity of host structure certified by others)

 $\cdot\,$  The unit is not located in a region susceptible to channeling effects or buffeting in the wake of upwind obstructions.

5. It is the installer's responsibility to ensure that the mounting method meets or exceeds the requirements of the aforementioned building code which shall be provided per separate certification.

 Always round down unit width/depth dimensions and/or round up unit height dimension to the worst-case table value or to a conservative assumption.
 Use any combination of unit sizes, provided base attachment certification is approved for that configuration. When considering multiple sizes, utilize minimum unit depth/width along with maximum unit height to determine required design pressure from these tables.

8. Read off required pressures (for ground-mounted applications, pressures act laterally upon vertical windward faces in any direction; for rooftop applications, pressures act as specified in table).

9. For use only as required by the local municipality in accordance with code.

BORA Formal Interpretation #13 Page 2 of 2



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**Board Attorney** Charles M. Kramer, Esq.

**Board Administrative Director** James DiPietro

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# FBC 6<sup>th</sup> Edition (2017) **FORMAL INTERPRETATION (#13)**

TO:

**All Building Officials** 

FROM:

# James DiPietro, Administrative Director

100

**SUBJECT: Ceiling Grid Support for Light Fixtures** 

Per NEC 410.36, when lighting fixtures are installed in acoustical ceiling grids, they must be securely fastened to the grid. The FBC 5<sup>th</sup> Edition Section 808.1 requires ceiling grids to be installed as per ASTM C635 and ASTM C636. ASTM C635 is the standard for manufacturer's grid design. ASTM C635 Section 4 explains grid strength types such as light, medium and heavy duty and it also describes the allowable load to be applied to each grid type. ASTM C635 4.3 states the manufacturer is responsible for the design of the specified system. ASTM C636 explains the standard installation requirements. ASTM C636 Section 2.7 specifies the installation of lay in light fixtures in a grid ceiling. Depending on the load and the type of grid ceiling that is being used, there are three ways to support a lay in light fixture:

- 1) By fastening it to the grid per fixture manufacturer's instruction, NEC 410.36(B) and ASTM C636 2.7.1 where installing a light fixture does not compromise the design or strength of the ceiling.
- 2) By adding additional hanger wires on the grid at the four corners of the grid within 6" of the fixtures where it is determined that more support is needed to support additional loads per ASTM C636 2.7.2.
- 3) Per ASTM C2636 2.7.2, by independently supporting the fixtures from the grid where the weight of the fixture is determined to be too great for the selected grid to meet the deflection requirement.

## Formal Interpretation.

A support detail shall be provided on the Ceiling Grid Plan Pages indicating the method of support of lay-in light fixtures, ceiling fans, ventilator fans, and other ceiling mounted equipment or fixtures based on the lay-in ceiling system manufacturer's load capabilities for the selected grid used. The detail shall be provided by the design Professional or the manufacturer.

> **EFFECTIVE DATE: MARCH 10th, 2016 RE-ISSUED:** NOVEMBER 9th, 2017 JANUARY 1<sup>ST</sup>, 2018 **EFFECTIVE DATE:**

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FI#13 G:\SHARED\Formal Interpretations\2017 - 6th Edition\Revised 6th Edition\FI-13 Ceiling Grid Support for Light Fixtures.docx



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**Board Attorney** Charles M. Kramer, Esq.

Board Administrative Director James DiPietro —ESTABLISHED 1971BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6<sup>th</sup> Edition (2017)</u> <u>FORMAL INTERPRETATION (#14)</u>

DATE:	October 12, 2017	
TO:	All Building Officials.	$\cdot$
FROM:	James DiPietro, Administrative Director	James - Ho
	Intermediation of (th Edition (2017) Elevide	Duilding Code

SUBJECT:

Interpretation of 6<sup>th</sup> Edition (2017) Florida Building Code Mechanical: 301.15; Building: 453.25.4.3.1, 453.25.4.3.2, 1609.1.1 Ex. 8; Fuel Gas: 301.10.

At its regular meeting of October 12, 2017, the Board of Rules and Appeals approved an interpretation of the following Exception to above sections:

**Wind resistance.** Mechanical equipment, appliances and supports that are exposed to wind shall be designed and installed to resist the wind pressures determined in accordance with the *Florida Building Code, Building*.

**Exception:** Exposed mechanical equipment or appliances fastened to a roof or installed in the ground in compliance with the code using rated stands, platforms, curbs, slabs, walls, or other means are deemed to comply with the winds resistance requirements of the 2007 Florida Building Code, as amended. Further supportoe enclosure of mechanical equipment or appliances is not required by a state or local official having authority to enforce the Florida Building Code.

# **Formal interpretation**

1. Mechanical equipment or appliances themselves, are not required to demonstrate compliance with the wind load requirements of the Florida Building Code and no other shielding, sheltering, or reinforcement of the equipment of appliance is required.

2. Notwithstanding Item 1 above, the mechanical equipment or appliances shall be adequately anchored to the rated stands, platforms, curbs, slabs, walls, or other means of support to resist the wind loads of the 2007 Florida Building Code.

EFFECTIVE DATE:September 9, 2016RE-ISSUED:October 12, 2017EFFECTIVE DATE:January 1, 2018

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**Board Administrative Director** James DiPietro

# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#15)

DATE:	October 12, 2017	
то:	All Building Officials	
FROM:	James DiPietro, Administrative Director	
SUBJECT:	Permit requirements for Florida Building Code	
	Plumbing Appendix F	

At its regular meeting of October 12, 2017, the Board of Rules and Appeals approved an interpretation of the Florida Building Code 6<sup>th</sup> Edition (2017), Plumbing Appendix F Part 1 B.1 Permits required and B.2 Exceptions.

The interpretation is to clarify that a permit is not required for the installation of irrigation for golf courses.

# **Formal Interpretation:**

FBC, Plumbing Appendix F Part 1: A permit is not required for the installation of irrigation systems for golf courses Per Part 1 A.3 Scope.

Original Date: Re-Issued Effective Date: May 12, 2017 October 12, 2017 January 1, 2018

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# BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6<sup>th</sup> Edition (2017)</u>

# FORMAL INTERPRETATION (#16)

DATE:	October 12, 2017	
TO:	All Building Officials	$1 \cap P$
FROM:	James DiPietro, Administrative Director	Jan - the
SUBJECT:	Smoke Control System testing in existing buildings undergoing Level 2 alterations.	

At its meeting of October 12, 2017, the Board approved an interpretation of the  $6^{\text{th}}$  Edition (2017) FBC.

Formal Interpretation of the following sections: FBC Existing Buildings SECTION 504 ALTERATION—LEVEL 2; FBC Existing Buildings 801.2 Alteration Level 1 compliance; FBC Existing Buildings 701.2 Conformance; FMC 513.3 Special inspection and test requirements; FMC 513.18 Acceptance testing; FMC 513.19 System acceptance; FBC 909.3 Special inspection and test requirements.

# **Formal Interpretation:**

In existing buildings undergoing Level 2 alterations, including tenant improvements, the Engineer of Record shall state if testing of the existing Smoke Control System is required and the type of test to be performed.

EFFECTIVE DATE: RE-ISSUED: EFFECTIVE DATE: May 12, 2017 October 12, 2017 January 1, 2018

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\$\2017 - 6th Edition\Revised 6th Edition\FI-16 Smoke Control System Testing in Existing Buildings

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# BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6<sup>th</sup> Edition (2017)</u>

FORMAL INTERPRETATION (#17)

DATE:	October 12, 2017	
TO:	All Building Officials	$\cdot \cap \rho$
FROM:	James DiPietro, Administrative Director	Jun Da
SUBJECT:	Acceptable testing methods for Smoke Con	trol Systems.

At its meeting of October 12, 2017, the Board approved an interpretation of the  $6^{\text{th}}$  Edition (2017) FBC.

Formal Interpretation of the following sections: FMC 513.3 Special inspection and test requirements; FMC 513.18 Acceptance testing; FMC 513.19 System acceptance; FBC 909.3 Special inspection and test requirements.

# **Formal Interpretation:**

As part of the procedures and methods to be used in testing a Smoke Control System, the Engineer of Record shall be able to use any measurable and certifiable method of generating smoke, including smoke generating machines.

EFFECTIVE DATE:MayRE-ISSUED:OctoEFFECTIVE DATE:Janua

May 12, 2017 October 12, 2017 January 1, 2018

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# BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#18)

DATE:	October 12, 2017
TO:	All Building Officials
FROM:	James DiPietro, Administrative Director

for the

SUBJECT: Duct sizing calculations.

At its meeting of October 12, 2017, the Board approved an interpretation of the  $6^{\text{th}}$  Edition (2017) FBC.

Formal Interpretation of the following sections: FMC 603.2 Duct sizing. FBC Residential M1601.1 Duct design.

# **Formal Interpretation**

Duct sizing calculations are not necessary to be submitted to the Authority Having Jurisdiction as part of the permitting process, if the design document showing duct sizes, is signed and sealed by the Engineer of Record or signed by the Mechanical or Air Condition Contractor, as allowed by Florida Statues 471 and 489.

EFFECTIVE DATE: RE-ISSUED: EFFECTIVE DATE: May 12, 2017 October 12, 2017 January 1, 2018

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# **BROWARD COUNTY BOARD OF RULES AND APPEALS**

# FBC 6<sup>th</sup> Edition (2017) FORMAL INTERPRETATION (#19)

DATE:	October 12, 2017	
TO:	All Building Officials	
FROM:	James DiPietro, Administrative Director	
SUBJECT:	Acceptable documents for the attachment of mechanical equipment during replacement.	

At its meeting of October 12, 2017, the Board approved an interpretation of the 6<sup>th</sup> Edition FBC.

# Formal Interpretation of the following sections:

FBC 6th Edition (2017), Building Section 105.3.1.5-3 of Broward County Administrative Provisions.

# **Formal Interpretation.**

For the replacement of an existing mechanical 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, the Authority Having Jurisdiction shall accept documents from the following sources:

- 1. Original signed and sealed engineered drawings.
- 2. Miami Dade Notice of Acceptance, complete sets of copies.
- 3. Florida Product Approval, complete sets of copies.
- 4. Equipment manufacturer's anchoring details, showing compliance with the wind speeds as provided by FBC 1620 for Broward County.

For commercial replacements, the Authority Having Jurisdiction shall accept documents from the following sources:

- Original signed and sealed engineered drawings. 1.
- 2. Miami Dade Notice of Acceptance, complete sets of copies.
- 3. Florida Product Approval, complete sets of copies.

**EFFECTIVE DATE: RE-ISSUED: EFFECTIVE DATE:** 

May 12, 2017 October 12, 2017 **January 1, 2018** 

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tions\2017 - 6th Edition\Revised 6th Edition\FI-19 Acceptable Documents for the Attachment of Mechanical



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# **BROWARD COUNTY BOARD OF RULES AND APPEALS** FBC 6<sup>th</sup> Edition (2017) **FORMAL INTERPRETATION (#20)**

DATE:	October 12, 2017
то:	All Building Offici
FRAM	

FROM:

cials

James DiPietro

Administrative Director

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SUBJECT:

**Two-Way Radio Communication Enhanced Public Safety** Signal Booster Systems.

At its regular meeting of October 12, 2017, the Board of Rules and Appeals approved an interpretation of Chapter 1, Section 118, titled Two-Way Radio Communication Enhanced Public Safety Signal Booster Systems, as follows:

Plans shall be signed and sealed by a licensed professional engineer. The engineer of record shall be responsible for the system. The engineer of record shall specify the brand and the model number of the bi-directional amplifier (BDA), the antenna and the component parts.

It is recognized that presently there is no listing approval for BDA systems by a nationally recognized testing laboratory.

This Formal Interpretation shall remain in effect until six (6) months after the UL sets this listing approval

Adopted Date: October 12, 2017 Effective Date: October 13, 2017 Re-Adopted : January I, 2018

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G:\SHARED\Formal Interpretations\2017 - 6th Edition\FI-22 Two-Way Radio Communication Enhanced Public Safety Signal Booster Systems.docx

# AUGUST 28, 2017 JOINT AD HOC BI-DIRECTIONAL AMPLIFIER & ELECTRICAL COMMITTEE MEETING - MINUTES EXCERPT

Rice: Broward County Board of Rules and Appeals was contacted by the County to see what we could do as far as looking at existing codes, what we would have to do to modify existing codes, what would it take so this doesn't happen again. Basically we started the BOA Committee and came up with a number of recommendations. Basically what we found was that the codes themselves were adequate. They gave us what we needed. What was not adequate was the follow-up and how to enforce it. So we made some changes to the administrative process for Broward County and we have been going forward since then. The BOA Committee was disbanded. I think we had one meeting a few months later just to discuss any other issues that came up. It has been quite a while since we've had a meeting. The reason for this meeting is basically we are going through the installation process and we have some obstacles to overcome.

Rice: You mentioned that the code, we had changed it a few months ago, as far as the requirements for the plans. My question is to solve this problem, we require the plans to be signed and sealed by an electrical engineer with experience. He is supposed to define what BOA could be used. Could we write a formal interpretation to clarify this to get it out to all the building inspectors, the chiefs, basically defining this? If the engineer of record specifies the brand and the model number for that BOA, he is liable for that, he is responsible for that. There is no UL listing for it. I'll throw this back to the inspectors. Mr. Gray (sp? 1:40:10:0) would you accept that as an alternative to going out for the third-party inspection?

Gray: Absolutely.

Rice: Sir from Miramar, would you accept it?

Inaudible

Rice: And from Fort Lauderdale, would you accept that?

Unidentified: Yes

**Rice: From Deerfield Beach?** 

Kropp: Yes I will. I can't specify pieces of equipment in these designs. For me to give somebody a list of what they can use if it is more than ...

Rice: The engineer that designed it.

Kropp: What I am seeing with a lot of these submittals for permits and I do the permit reviews on them. I see a lot of bogus emails being sent in. I know they are bogus because when I look at them, they are all on solid color. They don't show the gradation of signal strength. They don't show the blocking of the various internal components. That's an issue that needs to be addressed too.

Unidentified: Next meeting. Let's solve this one first.

Kropp: Even having engineers sign those plans with those bogus drawings in there does not provide a proper submittal. I bounce those.

Rice: I hate to rat on anybody, but I am a professional engineer and the thing that irks me more than anything else to see my competition put a piece of trash in, signed and sealed. You know

# AUGUST 28, 2017 JOINT AD HOC BI-DIRECTIONAL AMPLIFIER & ELECTRICAL COMMITTEE MEETING - MINUTES EXCERPT

what I think you should do. Send it to DPR (Department of Professional Regulation). That's the best thing you could do for the community. Mr. DiPietro, what about a formal interpretation? What is the process for doing that?

DiPietro: The first answer is the short answer, yes. Hopefully the longer answer will end up at yes. The short answer is you can interpret anything in the code. So we put it in a code section. The Committee could recommend an interpretation of that code section just as you described. Now, since we don't' have a written document ahead of us. In other words, sometimes the Committee will have a proposed interpretation and the Committee adopts that. I think obviously what we would do as we just disclosed, somebody could move what you've said that be written up as an interpretation. The staff and yourself would sign off on the draft. I'll send it to the attorney. In our report to the board, the board would vote on this in October, we'd simply disclose the truth. We had an hour and a half meeting. A lot of people spoke. At the end of it there was a general motion to put this into a formal interpretation which the Committee chair approved and we are presenting it tonight for review. Of course it is a public meeting and anybody can come and comment. That is probably the best option. There are alternatives . Another one is we do a draft and send it out to the joint Committee and go through a process of getting feedback. You have to be careful with that because under the Sunshine Law, one committee member cannot talk to another one. But, we could solicit comments and they all come into the staff, it's a little more unworkable, but you could do that. That is a second alternative. The third alternative is we can prepare what you said Mr. Chair and then put it on the agenda for another meeting a month from now and then this Committee could vote it. Any one of those would work. The Committee can delegate it to you and then we could run it by the attorney and put it on the agenda.

Rice: First of all what I'd like to do if I could get a motion.

Kropp: I make a motion that the Electrical and Ad Hoc Committee form a formal interpretation on allowing the BOA systems to be signed, sealed by a professional engineer and the engineer of record designing that system be responsible for the system as it is designed and installed.

Unidentified: Can you change that slightly?

Rice: The next question, ok, do you want to go the long process and have another meeting or authorize myself and staff, two members of staff, Mr. DiPietro, to write the report.

Kropp: That is the motion I thought I just made. Maybe I worded it wrong.

Melamed: Ok, I second that motion.

Unidentified: Before we vote on that, I'd like to hear from Mr. Castronovo because

Castronovo: No that's ok. I'm glad we are here.

Unidentified: Does that meet your essential request?

Castronovo: No listen, it is up to the individual AHJ (Authority Having Jurisdiction). I don't sign on permits. I'm getting a lot of questions from the vendors . I'm getting questions from board members and other people and I just take it all in because I am not out in the field. I am not the person who signs it. My goal is to make it not just clear but uniform. I don't want you going to Fort Lauderdale and he saying one thing and him going, that's not what I do. I have really no, I mean I can give my input. I can't vote on anything on this board. So, what's happening here is

# AUGUST 28, 2017 JOINT AD HOC BI-DIRECTIONAL AMPLIFIER & ELECTRICAL COMMITTEE MEETING - MINUTES EXCERPT

good.

Kropp: One fear as an inspector is, that we have, is we don't want to do something and then Ken come knocking on our door, saying what are you guys doing. The key point is there is a lot of inspectors here, we are all meeting.

Rice: That is the purpose of the formal interpretation.

Melamed: I just want to make sure that doesn't take away the responsibility of the electrical inspector to ensure that the unit's ? is properly connected (inaudible - multiple people speaking) it only has to do with the BDA... so that it doesn't have to be UL

Parks: Mr. Chairman, I believe the motion is already covered in code, what are you asking to interpret?

Rice: I want to have a formal interpretation sent out to all of the electrical chiefs.

Parks: That plans have to be drawn and engineer sealed?

Rice: That's already said but basically this refers specifically to BDAs. When he specifies the BOA, that's his approval on that BOA.

Unidentified: And that is part of the inspection process.

Rice: And the inspector would take that.

Unidentified: And we are really asking for it to be county-wide.

Rice: That is the purpose of the formal interpretation.

Travers: Just remind the subcommittees that are here today a year ago we had an issue with mechanical equipment and we formed two special subcommittees, one structural and one mechanical chaired by Dan Lavrich. We used the same process to come up with ? informed considering wind load calculations and fastening devices, we were able to resolve it at this level. It went through the interpretation level, distributed to all of the municipalities in Broward County and it made it clear that we could do things in a standard and uniform way throughout the county.

Parks: Ok, so we have a motion and it was seconded, Mr. Chairman.

Rice: Ok, any other discussion from board members?

Castronovo: We are just talking about BOAs. We are not talking about installation.

Rice: BOA only.

Unidentified: This eliminates the UL question.

Rice: Ok, all those in favor, raise your hand and say aye.

Rice: Ok, that is unanimous.



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**Board Attorney** Charles M. Kramer, Esq.

**Board Administrative Director** James DiPietro

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#21)

DATE: June 14, 2018.

TO: All Building Officials

Jun Q.

FROM: James DiPietro, Administrative Director

SUBJECT: Alteration of existing smoke evacuation or smoke control systems.

At its meeting of June 14, 2018, the Board approved an interpretation of the  $6^{\text{th}}$  Edition FBC.

# Formal Interpretation of the following sections:

6th Edition (2017), FBC Existing Building, Chapter 14 Performance Compliance Methods; FBC Building Chapter 4, Special detailed requirements based on use and occupancy; FBC Building, Section 909 Smoke Control Systems.

# **Formal Interpretation.**

The alteration of an existing smoke evacuation or smoke control system, including elimination; is possible, if all the following is provided and demonstrated to the Authority Having Jurisdiction for review, rejection for just cause, or acceptance:

1. A comprehensive evaluation of the building's life safety, fire safety, means of egress, general safety, etc. is performed by a registered architect and/or engineer, in accordance with Chapter 14 Performance Compliance Methods of the 2017 Florida Building Code - Existing Building, Sixth Edition.

2. The result of the alteration or elimination is to maintain or increase the degree of public safety, health and general welfare in existing buildings or structures. The alteration can include the upgrade of existing safety systems and or building safety fixtures; and or the installation of additional safety systems and or building safety fixtures in the building or structure.

3. Any proposed work is permitted and inspected, in accordance with Florida Building Code 6th Edition (2017), Chapter 1, Administration — Broward County.

4. Smoke control systems currently required by the FBC or FFPC shall not be eliminated.

EFFECTIVE DATE: June 15, 2018.

# \*\*\*\*PLEASE POST AT YOUR PERMIT COUNTER\*\*\*\* Page | of | F.I. #21

Superant ED/Formal Interpretations/2017 - 6th Edition/Revised 6th Edition/FI-21 Alteration of Existing Smoke Evaluation or Smoke Control Systems.doc



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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#22)

DATE: May 9, 2019

TO: All Building Officials

FROM: James DiPietro, Administrative Director

SUBJECT: Direct venting of solid fuel pizza ovens.

At its meeting of May 9, 2019, the Board approved an interpretation of the 6<sup>th</sup> Edition FBC, Mechanical and of the Broward County Administrative Provisions for the 2017 Florida Building Code (6th Edition), Chapter 1.

# Formal Interpretation of the following sections:

2017 Florida Building Code - Mechanical, Sixth Edition, SECTION 507 "COMMERCIAL KITCHEN HOODS"; and Broward County Administrative Provisions for the 2017 FBC (6th Edition) Section 104.32 "Alternative materials, design and methods of construction and equipment".

# **Formal Interpretation.**

The installation of solid fuel or combination gas and solid fuel pizza ovens without a Type 1 (grease) hood using direct venting as allowed in NFPA 96-2014 is acceptable if the oven is listed to be vented directly. The venting system shall be constructed and installed per the listing conditions of the oven and of the duct or chimney used for venting. This applies to ovens listed with natural draft or forced draft venting.

EFFECTIVE DATE: May 10, 2019.

James DiPietro, Administrative Director

# \*\*\*\*PLEASE POST AT YOUR PERMIT COUNTER\*\*\*\* Page | of | F.I. #22

# **Reference, material for FORMAL INTERPRETATION (#22) "Direct venting of solid fuel** pizza ovens".

# 2017 Florida Building Code - Mechanical, Sixth Edition SECTION507 COMMERCIAL KITCHEN HOODS

507.2 Type I hoods.

Type I hoods shall be installed where cooking appliances produce grease or smoke as a result of the cooking process. Type I hoods shall be installed over medium-duty, heavy-duty and extra-heavy-duty cooking appliances.

Exception: A Type I hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg/m3 or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 m3/s) in accordance with UL 710B.

# CHAPTER2 DEFINITIONS

EXTRA-HEAVY-DUTY COOKING APPLIANCE. Extra-heavy-duty cooking appliances are those utilizing open flame combustion of solid fuel at any time.

# Ch. 1, Broward County Administrative Provisions for the 2017 FBC (6th Edition)

# 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.

3.3.50\* Trained. A person who has become proficient in performing a skill reliably and safely through instruction and practice/field experience acceptable to the AHJ.

**3.3.51 Trap.** A cuplike or U-shaped configuration located on the inside of a duct system component where liquids can accumulate.

#### Chapter 4 General Requirements

### 4.1 General.

**4.1.1** Cooking equipment used in processes producing smoke or grease-laden vapors shall be equipped with an exhaust system that complies with all the equipment and performance requirements of this standard.

**4.1.1.1**\* Cooking equipment that has been listed in accordance with ANSI/UL 197 or an equivalent standard for reduced emissions shall not be required to be provided with an exhaust system.

**4.1.1.2** The listing evaluation of cooking equipment covered by 4.1.1.1 shall demonstrate that the grease discharge at the exhaust duct of a test hood placed over the appliance shall not exceed 5 mg/m<sup>3</sup> (0.00018 oz/ft<sup>3</sup>) when operated with a total airflow of 0.236 m<sup>3</sup>/s (500 cfm).

**4.1.2** All such equipment and its performance shall be maintained in accordance with the requirements of this standard during all periods of operation of the cooking equipment.

4.1.3 The following equipment shall be kept in working condition:

- (1) Cooking equipment
- (2) Hoods
- (3) Ducts (if applicable)
- (4) Fans
- (5) Fire-extinguishing equipment
- (6) Special effluent or energy control equipment

4.1.3.1 Maintenance and repairs shall be performed on all components at intervals necessary to maintain good working condition.

4.1.4 All airflows shall be maintained.

**4.1.5** The responsibility for inspection, testing, maintenance, and cleanliness of the ventilation control and fire protection of the commercial cooking operations shall ultimately be that of the owner of the system, provided that this responsibility has not been transferred in written form to a management company, tenant, or other party.

4.1.6\* All solid fuel cooking equipment shall comply with the requirements of Chapter 14.

**4.1.7** Multitenant applications shall require the concerted cooperation of design, installation, operation, and maintenance responsibilities by tenants and by the building owner.

4.1.8 All interior surfaces of the exhaust system shall be accessible for cleaning and inspection purposes.

### 4.2\* Clearance.

**4.2.1** Where enclosures are not required, hoods, grease removal devices, exhaust fans, and ducts shall have a clearance of at least 457 mm (18 in.) to combustible material, 76 mm (3 in.) to limited-combustible material, and 0 mm (0 in.) to noncombustible material.

**4.2.2** Where a hood, duct, or grease removal device is listed for clearances less than those required in 4.2.1, the listing requirements shall be permitted.

### 4.2.3 Clearance Reduction.

**4.2.3.1** Where a clearance reduction system consisting of 0.33 mm (0.013 in.) (28 gauge) sheet metal spaced out 25 mm (1 in.) on noncombustible spacers is provided, there shall be a minimum of 229 mm (9 in.) clearance to combustible material.

**4.2.3.2** Where a clearance reduction system consisting of 0.69 mm (0.027 in.) (22 gauge) sheet metal on 25 mm (1 in.) mineral wool batts or ceramic fiber blanket reinforced with wire mesh or equivalent spaced 25 mm (1 in.) on noncombustible spacers is provided, there shall be a minimum of 76 mm (3 in.) clearance to combustible material.

**4.2.3.3** Where a clearance reduction system consisting of a listed and labeled field-applied grease duct enclosure material, system, product, or method of construction specifically evaluated for such purpose in accordance with ASTM E 2336, the required clearance shall be in accordance with the listing.

4.2.3.4 Zero clearance to limited-combustible materials shall be permitted where protected by one of the following:

- (1) Metal lath and plaster
- (2) Ceramic tile
- (3) Quarry tile
- (4) Other noncombustible materials or assembly of noncombustible materials that are listed for the purpose of reducing clearance
- (5) Other materials and products that are listed for the purpose of reducing clearance

#### 4.2.4 Clearance Integrity.

**4.2.4.1** In the event of damage, the material or product shall be repaired and restored to meet its intended listing or clearance requirements and shall be acceptable to the AHJ.

**4.2.4.2\*** In the event of a fire within a kitchen exhaust system, the duct and its enclosure (rated shaft, factory-built grease duct enclosure, or field-applied grease duct enclosure) shall be inspected by qualified personnel to determine whether the duct and protection method are structurally sound, capable of maintaining their fire protection function, and in compliance with this standard for continued operation.

**4.2.4.3** Protection shall be provided on the wall from the bottom of the hood to the floor, or to the top of the noncombustible material extending to the floor, to the same level as required in 4.2.1.

**4.2.4.4** The protection methods for ducts to reduce clearance shall be applied to the combustible or limited-combustible

### airtiow.

11.6.12 When cleaning procedures are completed, all electrical switches and system components shall be returned to an operable state.

**11.6.13** When an exhaust cleaning service is used, a certificate showing the name of the servicing company, the name of the person performing the work, and the date of inspection or cleaning shall be maintained on the premises.

**11.6.14** After cleaning or inspection is completed, the exhaust cleaning company and the person performing the work at the location shall provide the owner of the system with a written report that also specifies areas that were inaccessible or not cleaned.

11.6.15 Where required, certificates of inspection and cleaning and reports of areas not cleaned shall be submitted to the authority having jurisdiction.

### 11.7 Cooking Equipment Maintenance.

11.7.1 Inspection and servicing of the cooking equipment shall be made at least annually by properly trained and qualified persons.

**11.7.2** Cooking equipment that collects grease below the surface, behind the equipment, or in cooking equipment flue gas exhaust, such as griddles or charbroilers, shall be inspected and, if found with grease accumulation, cleaned by a properly trained, qualified, and certified person acceptable to the authority having jurisdiction.

## Chapter 12 Minimum Safety Requirements for Cooking Equipment

## 12.1 Cooking Equipment.

12.1.1\* Cooking equipment shall be approved based on one of the following criteria:

- (1) Listings by a testing laboratory
- (2) Test data acceptable to the authority having jurisdiction

### 12.1.2 Installation.

**12.1.2.1\*** All listed appliances shall be installed in accordance with the terms of their listings and the manufacturer's instructions.

**12.1.2.1.1** Solid fuel used for flavoring within a gas-operated appliance shall be in a solid fuel holder (smoker box) that is listed with the equipment.

12.1.2.2\* Cooking appliances requiring protection shall not be moved, modified, or rearranged without prior re-evaluation of the fire-extinguishing system by the system installer or servicing agent, unless otherwise allowed by the design of the fireextinguishing system.

**12.1.2.2.1** A solid fuel holder shall not be added to an existing appliance until the fire-extinguishing system has been evaluated by the fire-extinguishing system service provider.

accordance with the manufacturer's listed design manual.

**12.1.2.3.1** An approved method shall be provided that will ensure that the appliance is returned to an approved design location.

**12.1.2.4** All deep-fat fryers shall be installed with at least a 406 mm (16 in.) space between the fryer and surface flames from adjacent cooking equipment.

**12.1.2.5** Where a steel or tempered glass baffle plate is installed at a minimum 203 mm (8 in.) in height between the fryer and surface flames of the adjacent appliance, the requirement for a 406 mm (16 in.) space shall not apply.

**12.1.2.5.1** If the fryer and the surface flames are at different horizontal planes, the minimum height of 203 mm (8 in.) shall be measured from the higher of the two.

**12.2 Operating Controls.** Deep-fat fryers shall be equipped with a separate high-limit control in addition to the adjustable operating control (thermostat) to shut off fuel or energy when the fat temperature reaches 246°C (475°F) at 25.4 mm (1 in.) below the surface.

### Chapter 13 Recirculating Systems

**13.1 General Requirements.** Recirculating systems containing or for use with appliances used in processes producing smoke or grease-laden vapors shall be equipped with components complying with the following:

- (1) The clearance requirements of Section 4.2
- (2) A hood complying with the requirements of Chapter 5
- (3) Grease removal devices complying with Chapter 6
- (4) The air movement requirements of 8.2.1.2 and 8.2.2.3
- (5) Auxiliary equipment (such as particulate and odor removal devices) complying with Chapter 9
- (6) Fire-extinguishing equipment complying with the requirements of Chapter 10 with the exception of 10.1.1 and 10.5.1, which shall not apply
- (7) The use and maintenance requirements of Chapter 11
- (8) The minimum safety requirements of Chapter 12
- (9) All the requirements of Chapter 13

13.2 Design Restrictions. All recirculating systems shall comply with the requirements of Section 13.2.

13.2.1 Only gas-fueled or electrically fueled cooking appliances shall be used.

**13.2.2** Listed gas-fueled equipment designed for use with specific recirculating systems shall have the flue outlets connected in the intended manner.

**13.2.3** Gas-fueled appliances shall have a minimum 457 mm (18 in.) clearance from the flue outlet to the filter inlet in accordance with 6.2.2 and shall meet the installation requirements of NFPA 54 or NFPA 58.

2014 Edition

#### Chapter 14 Solid Fuel Cooking Operations

14.1 Venting Application. Venting requirements of solid fael cooking operations shall be determined in accordance with 14.1.1 through 14.1.7.

14.1.1 Where solid fuel cooking equipment is required by the manufacturer to have a natural draft, the vent shall comply with Section 14.4.

14.1.2 Where the solid fuel cooking equipment has a selfcontained top, is the only appliance to be vented in an isolated space (except for a single water heater with its own separate vent), has a separate makeup air system, and is provided with supply and return air (not supplied or returned from other spaces), the system shall comply with Sections 14.4 and 14.6.

14.1.3 Where the solid fuel cooking equipment is located in a space with other vented equipment, all vented equipment shall have an exhaust system interlocked with a makeup air system for the space per Section 14.6.

14.1.4 Natural draft ventilation systems and powerexhausted ventilation systems shall comply with Sections 14.3, 14.4, and 14.6.

14.1.5 Where a solid fuel cooking appliance allows effluent to escape from the appliance opening, this opening shall be covered by a hood and an exhaust system that meets the requirements of Sections 14.3, 14.4, and 14.6.

14.1.6 Solid fuel cooking operations shall have spark arresters to minimize the passage of airborne sparks and embers into plenums and ducts.

14.1.7 Where the solid fuel cooking operation is not located under a hood, a spark arrester shall be provided to minimize the passage of sparks and embers into flues and chimneys.

#### 14.2 Location of Appliances.

14.2.1 Every appliance shall be located with respect to building construction and other equipment so as to permit access to the appliance.

14.2.2\* Solid fuel cooking appliances shall not be installed in confined spaces.

14.2.3 Solid fuel cooking appliances listed for installation in confined spaces such as alcoves shall be installed in accordance with the terms of the listing and the manufacturer's instructions.

14.2.4 Solid fuel cooking appliances shall not be installed in any location where gasoline or any other flammable vapors or gases are present.

#### 14.3 Hoods for Solid Fuel Cooking.

14.3.1 Hoods shall be sized and located in a manner capable of capturing and containing all the effluent discharging from the appliances.

14.3.2 The hood and its exhaust system shall comply with the requirements of Chapters 5 through 10.

14.3.3 Except as permitted in 14.3.4, exhaust systems serving solid fuel cooking equipment, including gas or electrically operated equipment, shall be separate from all other exhaust systems.

14.3.4\* Gas-operated equipment utilizing solid fuel for flavoring that meets all the following conditions shall not be required to have a separate exhaust system:

- <sup>(1)</sup> The solid fuel holder (smoker box) shall be listed with the gas-operated equipment.
- (2) The solid fuel holder shall be located underneath the gas burners.
- (3) Spark arresters conforming with 14.1.6 shall be provided.
- (4)<sup>6</sup>The maximum quantity of solid fuel consumed shall not exceed 2 kg (4.5 lb) per hour per 29.3 kW (100,000 Bru/hr) of gas barner capacity.
- (5) The gas-operated equipment shall be protected by a fire suppression system listed for the equipment, including the solid fuel holder.
- (6) Gas-operated equipment with integral solid fuel holder(s) intended for flavoring, such as radiant charbroiler(s), shall comply simultaneously with the requirements of ANSI/UL 300 that address that gas radiant charbroiler(s) and mesquite wood charbroiler(s).
- (7) A fire suppression system nozzle(s) shall be installed to protect the solid fuel holder.
- (8) The fire suppression system shall be designed and installed to protect the entire cooking operation.
- (9) Each solid fuel holder shall be limited to a size of 32.8 1. (2000 in.<sup>3</sup>), with no dimension to exceed 51 cm (20 in.).
- (10) A maximum of one solid fuel holder for each 29.3 kW (100,000 Btu/hr), or portion thereof, of burner capacity shall be permitted.
- (11) The inspection frequency shall be the same as for solid fuel cooking operations in Table 11.4.

14.3.4.1 Gas-operated equipment utilizing solid fuel for flavoring that meets 14.3.4 shall be inspected, cleaned, and maintained in accordance with Section 14.8.

14.3.5 Cooking equipment not requiring automatic fireextinguishing equipment (per Chapter 10) shall be permitted to be installed under a common hood with solid fuel cooking equipment that is served by a duct system separate from all other exhaust systems.

14.4 Exhaust for Solid Fuel Gooking. Where a hood is not required, in buildings where the duct system is three stories or less in height, a duct complying with Chapter 7 shall be provided.

14.4.1 If a bood is used in buildings where the duct system is three stories or less in height, the duct system shall comply with Chapter 7.

14.4.2 A listed or approved grease duct system that is four stories in height or greater shall be provided for solid fuel cooking exhaust systems.

14.4.3 Where a hood is used, the duct system shall conform with the requirements of Chapter 7.

14.4.4 Wall terminations of solid fuel exhaust systems shall be prohibited.

#### 14.5 Grease Removal Devices for Solid Fuel Cooking.

14.5.1 Grease removal devices shall be constructed of steel or stainless steel or be approved for solid fuel cooking.

14.5.2 If airborne sparks and embers can be generated by the solid fuel cooking operation, spark arrester devices shall be used prior to using the grease removal device, to minimize the

entrance of these sparks and embers into the grease removal device and into the hood and the duct system.

14.5.3 Filters shall be a minimum of 1.2 m (4 ft) above the appliance cooking surface.

#### 14.6 Air Movement for Solid Fuel Cooking.

14.6.1 Exhaust system requirements shall comply with Chapter 8 for hooded operation or shall be installed in accordance with the manufacturer's recommendations for unhooded applications.

14.6.2 A replacement or makeup air system shall be provided to ensure a positive supply of replacement air at all times during cooking operations.

14.6.3 Makeup air systems serving solid fuel cooking operations shall be interlocked with the exhaust air system and powered, if necessary, to prevent the space from attaining a negative pressure while the solid fuel appliance is in operation. 14.7.9.2 The system shall have a minimum operating pressure of 275.8 kPa (40 psi) and shall provide a minimum of 19 L/min (5 gpm).

14.7.10 Fire suppression for fuel storage areas shall comply with Section 14.9 of this standard.

14.7.11 In addition to the requirements of 14.7.8 through 14.7.10, where any solid fuel cooking appliance is also provided with auxiliary electric, gas, oil, or other fuel for ignition or supplemental heat and the appliance is also served by any portion of a fire-extinguishing system complying with Chapter 10, such auxiliary fuel shall be shut off on actuation of the fire-extinguishing system.

14.8 Procedures for Inspection, Cleaning, and Maintenance for Solid Fuel Cooking. Solid fuel cooking appliances shall be inspected, cleaned, and maintained in accordance with the procedures outlined in Chapter 11 and with 14.8.1 through 14.8.5.



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**Board Attorney** Charles M. Kramer, Esq.

Board Administrative Director James DiPietro —ESTABLISHED 1971—

# BROWARD COUNTY BOARD OF RULES AND APPEALS

# <u>FBC 6<sup>th</sup> Edition (2017)</u> FORMAL INTERPRETATION (#23)

DATE:	September 12, 2019
TO:	All Building Officials
FROM:	James DiPietro, Administrative Director
SUBJECT:	Replacement of air conditioning (A/C) systems in flood hazard areas.

At its regular meeting of September 12, 2019, the Board approved an interpretation of the following codes and sections:

- Florida Building Code, 6th Edition (2017)-Existing Building 503.1, 503.2, 701.3 and Chapter 2.
- Florida Building Code, 6th Edition (2017)-Building 1612.
- Florida Building Code, 6th Edition (2017)-Residential 322.

### **Formal Interpretation:**

An air conditioning (A/C) replacement by itself, does not constitute a substantial improvement as defined by the 2017 Florida Building Code - Existing Building, Sixth Edition, Chapter 2-Definitions, unless performed in conjunction with another alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure, before the improvement or repair is started.

# **EFFECTIVE DATE: September 13, 2019**

# James DiPietro, Administrative Director

# \*\*\*\*PLEASE POST AT YOUR PERMIT COUNTER\*\*\*\* Page I of 5 F.I # 23

# Code sections relevant to Formal Interpretation #2\* 2017 Florida Building Code - Existing Building, Sixth Edition CHAPTER 5 CLASSIFICATION OF WORK

• ALTERATION—LEVEL 1

# 503.1Scope.

Level 1 alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose.

# 503.2Application.

Level 1 alterations shall comply with the provisions of Chapter 7.

CHAPTER 7 ALTERATIONS—LEVEL 1

# • [BS]701.3 Flood hazard areas.

In flood hazard areas, alterations that constitute substantial improvement shall require that the building comply with Section 1612 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable.

# **CHAPTER 2 DEFINITIONS**

• [BS]SUBSTANTIAL DAMAGE. For the purpose of determining compliance with the flood provisions of this code, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**[BS]SUBSTANTIAL IMPROVEMENT.** For the purpose of determining compliance with the flood provisions of this code, any repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure, before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. 1.Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the code official and that is the minimum necessary to ensure safe living conditions; or

2. 2.Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

# **2017 Florida Building Code - Building, Sixth Edition** SECTION 1612 FLOOD LOADS **1612.1 General.**

Within flood hazard areas as established in Section 1612.3, all new construction of buildings, structures and portions of buildings and structures, including substantial improvement and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads. For buildings that are located in more than one flood hazard area, the provisions associated with the most restrictive flood hazard area shall apply.

# 2017 Florida Building Code - Residential, Sixth Edition

# SECTION R322 FLOOD-RESISTANT CONSTRUCTION

# • R322.1General.

Buildings and structures constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2(1), and substantial improvement and restoration of substantial damage of buildings and structures in flood hazard areas, shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

R322.1.1 Alternative provisions.

As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

# **R322.1.6** Protection of mechanical, plumbing and electrical systems.

Electrical systems, equipment and components; heating, ventilating, air conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall be located at or above the elevation required in Section R322.2 or R322.3. If replaced as part of a substantial improvement, electrical systems, equipment and components; heating, ventilating, air conditioning and plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall meet the requirements of this section. Systems, fixtures, and equipment and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

Exception: Locating electrical systems, equipment and components; heating, ventilating, air conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment is permitted below the elevation required in Section R322.2 or R322.3 provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided that they conform to the provisions of the electrical part of this code for wet locations.

# Additional information.

Similar language is found in the ASCE 24-14 Flood Resistant Design and Construction, see next.

# CHAPTER 1 GENERAL

#### 1.1 SCOPE

This standard provides minimum requirements for flood resistant design and construction of structures that are subject to building code requirements and that are located, in whole or in part, in Flood Hazard Areas. This standard applies to the following: (1) new construction, including subsequent work to such structures, and (2) work classified as substantial improvement of an existing structure that is not an historic structure (see Fig. 1-1).

The general provisions of this section shall apply to all new construction and substantial improvements in flood hazard areas. In addition to the requirements of this section (see Fig. 1-2):

- Chapter 2 shall apply to all new construction and substantial improvements in Flood Hazard Areas and High Risk Flood Hazard Areas except those that are identified as Coastal High Hazard Areas and Coastal A Zones;
- Chapter 3 shall apply to all new construction and substantial improvements in High Risk Flood Hazard Areas;
- Chapter 4 shall apply to all new construction and substantial improvements in Coastal High Hazard Areas and Coastal A Zones; and
- Chapters 5, 6, 7, 8, and 9 shall apply to all new construction and substantial improvements.

#### 1.2 DEFINITIONS

The following definitions apply to the provisions of the entire standard (italicized words in a definition mean the words are defined in this section):

500-Year Flood Elevation—Elevation of flooding having a 0.2% chance of being equaled or exceeded in any given year.

Accessory Storage Structure—A structure designed and used only for storage that is customarily accessory to and incidental to that of dwellings.

Alluvial Fan—Fan-shaped deposits of sediment eroded from steep slopes and watersheds and deposited on valley floors.

Alluvial Fan Flooding—Type of flood hazard that occurs only on alluvial fans. Alluvial fan flooding is considered hazardous when designated as a flood hazard area on a community's flood hazard map or otherwise legally designated.

Apex—Highest point on an *alluvial fan* or similar landform, where the flow is last confined. The apex generally corresponds to the location where the *watershed* erosion ceases and fan sediment deposition commences.

Attendant Utilities and Equipment—Utilities, mechanical, electrical, fuel gas, plumbing, HVAC, and related equipment, as well as services associated with new construction and *substantial improvements*.

#### Flood Resistant Design and Construction

Authority Having Jurisdiction—Organization, community, political subdivision, office, or agency that has adopted this standard under due legislative authority.

Base Flood—Flood having a 1% chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE)—Elevation of flooding, including wave height, having a 1% chance of being equaled or exceeded in any given year.

Basement—That portion of a structure having its lowest floor below ground level on all sides.

Breakaway Wall—Any type of wall subject to flooding that is not required to provide structural support to a building or other *structure* and that is designed and constructed such that, under *base flood* or lesser flood conditions, it will collapse under specific lateral loads in such a way that (1) it allows the free passage of floodwaters, and (2) it does not damage the structure or supporting foundation system.

Bulkhead—Wall or structure to retain or prevent sliding or erosion of the land; sometimes used to protect against wave action.

Channel—Natural or artificial waterway that periodically or continuously contains moving water.

**Coastal A Zone (CAZ)**—Area within a special flood hazard area, landward of a V Zone or landward of an open coast without mapped V Zones. In a Coastal A Zone, the principal source of flooding must be astronomical tides, storm surges, seiches, or tsunamis, not riverine flooding. During the base flood conditions, the potential for breaking wave heights shall be greater than or equal to 1.5 ft. The inland limit of the Coastal A Zone is (1) the Limit of Moderate Wave Action if delineated on a FIRM, or (2) designated by the authority having jurisdiction.

Coastal High Hazard Area (CHHA)—Area within a special flood hazard area extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area that is subject to high velocity wave action from storms or seismic sources. This area is designated on FIRMs as velocity zones V, VO, VE, or V1-30.

**Community**—Any state or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska native village or authorized native organization, which has the authority to adopt and enforce this standard for areas within its jurisdiction.

Datum—The vertical reference on which maps are drawn, including but not limited to the North American Vertical Datum of 1988 (NAVD) and the National Geodetic Vertical Datum of 1929 (NGVD).

Debris Flow—Mass movement of sediment, including boulders, organic materials, and other debris; debris flows typically move in surges and are characterized by a steep frontal wave. on a transient or nontransient basis; (2) structures including but not limited to one- and two-family dwellings, townhouses, condominiums, multifamily dwellings, apartments, congregate residences, boarding houses, lodging houses, rooming houses, hotels, motels, apartment buildings, convents, monasteries, dormitories, fraternity houses, sorority houses, vacation time-share properties; and (3) institutional facilities where people are cared for or live on a 24-h basis in a supervised environment, including but not limited to board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers, convalescent facilities, hospitals, nursing homes, mental hospitals, detoxification facilities, prisons, jails, reformatories, detention centers, correctional centers, and prerelease centers.

Sand Dune—Natural or artificial ridges or mounds of sand landward of a beach.

Seawall—Wall separating land and water areas, primarily designed to prevent *erosion* and other damage due to *wave* action.

Shear Wall—Load bearing or nonload-bearing wall that transfers, by in-plane lateral forces, lateral loads acting on a *structure* to its foundation.

Shield—Removable or permanent substantially impermeable protective cover for an opening in a *structure* below the *DFE*, used in *dry floodproofing* the *structure*.

Special Flood Hazard Area—Land in the *floodplain* subject to a 1% or greater chance of *flooding* in any given year; area delineated on the *Flood Insurance Rate Map* as Zone A, AE, A1-30, A99, AR, AO, AH, V, VO, VE, or V1-30.

Start of Construction-Date the construction permit was issued for new construction, provided that actual start of construction commenced within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of a slab or footing, the installation of piles, the construction of columns, or any other work beyond the stage of excavation; or the placement of a manufactured home. Permanent construction does not include land preparation, such as clearing, grading, or filling; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation of accessory structures, such as garages or sheds not occupied as dwelling units or not part of the main structure. For substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a structure, whether or not that alteration affects the external dimensions of the structure.

Stem Walls—Masonry or concrete perimeter walls backfilled with compacted soil or gravel to support a floor slab or floor system.

Stillwater Depth—Vertical distance between the ground and the stillwater elevation.

Stillwater Elevation—Elevation that the surface of the water would assume in the absence of waves referenced to a *datum*.

Storage Tank-Closed vessel used to store gases or liquids.

Structural Fill—Fill placed and compacted to a specified density to provide structural support or protection to a structure.

Structure—Any building or other structure, including gas and liquid storage tanks.

Substantial Damage—Damage of any origin sustained by a structure, whereby the cost of restoration to its predamage condition equals or exceeds 50% of its predamage market value, or equals or exceeds a smaller percentage established by the *authority having jurisdiction*.

#### Flood Resistant Design and Construction

Substantial Improvement—Any reconstruction, rehabilitation, addition, or other improvement to a *structure*, the cost of which equals or exceeds 50% of its preimprovement market value, or equals or exceeds a smaller percentage established by the *authority having jurisdiction*. This term includes structures that have incurred *substantial damage*, regardless of the actual repair work performed.

Substantially Impermeable—Use of flood damage-resistant materials and techniques for dry floodproofing portions of a structure, which result in a space free of through cracks, openings, or other channels that permit unobstructed passage of water and seepage during flooding, and which result in a maximum accumulation of 4 in. of water depth in such space during a period of 24 h.

V Zone—Velocity Zones V, VO, VE, or V1-30 (See Coastal High Hazard Area).

Watershed—Topographically defined area drained by a river or stream, or by a system of connecting rivers and streams such that all outflow is discharged through a single outlet.

Wave-Ridge, deformation, or undulation of the water surface.

Wave Height—Vertical distance between the crest and the trough of a *wave*.

Wave Loads—Loads imparted on a structure caused by waves striking the structure or a portion thereof.

Wave Runup—Rush of wave water running up a slope or structure.

Wave Runup Elevation—Elevation, usually referenced to a datum, reached by wave runup.

Wet Floodproofing—Floodproofing method that relies on the use of flood damage-resistant materials and construction techniques in areas of a structure that are below the elevation required by this standard by intentionally allowing those areas to flood (see Floodproofing).

#### 1.3 IDENTIFICATION OF FLOOD HAZARD AREAS

This standard shall apply to the larger of (1) those lands within a floodplain subject to a 1% or greater chance of flooding in any year (i.e., the area subject to flooding during the base flood event); and (2) those lands designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

The flood associated with the governing definition listed here shall be termed the design flood. Design and construction requirements for new construction and substantial improvements shall be dictated by conditions during the design flood.

#### 1.4 IDENTIFICATION OF FLOOD-PRONE STRUCTURES

1.4.1 General A determination shall be made as to whether or not a structure lies, in whole or in part, within a flood hazard area following review of flood hazard maps, studies available in the public domain, and other information available from the authority having jurisdiction.

1.4.2 Consideration for Flood Protective Works Dams, levees, floodwalls, diversions, channels, flood control structures, and other flood protective works shall not be considered to provide protection for structures during the design flood, unless those works are shown on the flood hazard map as providing protection during design flood conditions.

Design of structures behind levees and floodwalls shall consider the adequacy of drainage of rainfall, runoff, and other waters behind the levees and floodwalls.



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#### 2019 Alternate Board Members

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**Board Attorney** Charles M. Kramer, Esq.

**Board Administrative Director** James DiPietro

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# BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6<sup>th</sup> Edition (2017)</u> <u>FORMAL INTERPRETATION (#24)</u>

DATE: September 12, 2019

TO: All Building Officials

FROM:

James DiPietro, Administrative Director

Jol.

SUBJECT: Storm Drainage Sizing Conversion Charts

At its regular meeting of September 12, 2019, the Board approved an advisory opinion as to approving storm drainage sizing conversion charts from gallons per minute to square footage from FBC, Plumbing Tables 1106.2,1106.3 and 1106.6.

### **Formal Interpretation:**

Storm drainage conversion charts provided by Broward County Board of Rules and Appeals, Tables 1106.2, 1106.3 and 1106.6, shall be approved as an alternate design for professional designers.

### **EFFECTIVE DATE: September 13, 2019**

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Page | of | F.I. #

# ATTACHMENTS:

- Table 1106.2
- Table 1106.3
- Table 1106.6



# 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

# TABLE 1106.2 - BROWARDSTORM DRAIN PIPE SIZING

PIPE SIZE (inches)	E CAPACITY (sq. ft. @ 5" per hour rainfall)				infall)	
	VERTICAL DRAIN	SLOPE OF HORIZONTAL DRAIN				
	1	1/16 inch per foot	1/8 inch per foot	1/4 inch per foot	1/2 inch per foot	
2	654	288	423	596	846	
3	1,673	750	1,058	1,519	2,134	
4	3,461	1,557	2,212	3,134	4,442	
5	5,980	2,250	3,173	4,500	6,365	
6	10,346	4,673	6,615	9,365	13,250	
8	21,480	9,711	13,730	19,423	27,480	
10	39,423	17,827	25,212	35,673	50,442	
12	62,923	28,461	40,250	56,923	80,519	
15	106,596	48,230	68,192	96,461	136,404	

Board Approval: 9-12-2019 Effective Date: 9-13-2019

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# **BROWARD COUNTY** Board of Rules & Appeals ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

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# TABLE 1106.3 – BROWARD **VERTICAL LEADER SIZING**

SIZE OF LEADER (inches)	CAPACITY (sq. ft. @ 5" per hour rainfall)
2	577
2 x 2	577
1 ½ x 2 ½	577
2 1/2	1,038
2 ½ x 2 ½	1,038
3	1,769
2 x 4	1,769
2 ½ x 3	1,769
4	3,692
3 x 4 ¼	3,692
3 ½ x 4	3,692
5	6,923
4 x 5	6,923
4 ½ x 4 ½	6,923
6	10,827
5 x 6	10,827
5 ½ x 5 ½	10,827
8	23,231
6 x 8	23,231

Board Approval: 9-12-2019 Effective Date: 9-13-2019

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# TABLE 1106.6 – BROWARD HORIZONTAL GUTTER SIZING

GUTTER DIMENSIONS (inches)	SLOPE (inch per foot)	CAPACITY (sq. ft. @ 5" per hour rainfall)
1 ½ x 2 ½	1/4	500
1 ½ x 2 ½	1/2	769
4	1⁄8	750
2 ¼ x 3	1/4	1,058
2 ¼ x 3	1/2	1,673
5	1⁄8	1,423
4 x 2 ½	1/4	2,038
3 x 3 ½	1/2	3,000
6	1⁄8	2,115
3 x 5	1/4	3,019
3 x 5	1/2	4,327
8	1/16	3,308
8	1⁄8	4,750
4 ½ x 6	1/4	6,692
4 ½ x 6	1/2	9,500
10	1/16	6,365
10	1⁄8	9,077
5 x 8	1/4	12,519
4 x 10	1/2	20,288

Board Approval: 9-12-2019 Effective Date: 9-13-2019

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Representative Disabled Community

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Board Attorney Charles M. Kramer, Esq.

**Board Administrative Director** James DiPietro

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# BROWARD COUNTY BOARD OF RULES AND APPEALS <u>FBC 6th Edition (2017)</u> FORMAL INTERPRETATION (#25)

DATE: November 14, 2019

TO: All Building Officials

FROM: James DiPietro, Administrative Director

SUBJECT: Required Signatures on the Broward County Uniform Building Permit Application

At its regular meeting of November 14, 2019, the Board approved an interpretation based on an advisory opinion as to the requirements for owner signature on permit application.

The opinion from Charles Kramer, General Counsel to the Board of Rules and Appeals was dated on October 31, 2019.

### **Formal Interpretation:**

An Owner's signature is not required on a Broward County Building Permit Application as further established and determined under the Florida Building Code and the Florida Statutes.

The fact that the actual permit application form provides signature space for both a Contractor and an Owner or Owner's Agent does not determine that multiple signatures are required. An Owner may sign when acting in the capacity of an Owner as Contractor, or the Owner's duly appointed Agent may sign on behalf of an Owner who has given that Agent proper authority.

Alternatively, a Contractor may sign solely and independently from either an Owner or Owner's Agent for the purpose of applying for a building permit.

#### **EFFECTIVE DATE: November 15, 2019**

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Page I of I F.I.#

#### Attachments:

I: Broward County Uniform Building Permit Application

2: Advisory opinion from Charles Kramer, Esq.

BROWARD C			ING FLIMI			
Select One Trade: 🔲 Building	Electrical	Plumbing	g 🗌 🧰 Mech	anical	Other _	
Application Number:				Applicatio	on Date:	
Job Address:			Unit:	City:		
Tax Folio No.:	Flood Zn:	BFE: F	loor Area:	Jo	b Value:	
Building Use:		Construct	ion Type:	Oc	ccupancy (	Group:
Present Use:		Proposed	Used:			
Description of Work:						
New Addition Repair		Demolition	Revision	Other:		
Legal Description:						Attachment
Property Owner:		Phone:		Email:		
Owner's Address:			City:		State:	Zip:
Contracting Co.:		Phone:		Email:		
Contracting Co.: Company Address:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Phone:	City:	Email:	State:	Zip:
······································			City: er-Builder:	Email: License N		Zip:
Company Address:						Zip:
Company Address: Qualifier's Name:		Own		License N		Zip: Zip:
Company Address: Qualifier's Name: Architect/Engineer's Name:		Own	er-Builder:	License N	lumber:	-
Company Address: Qualifier's Name: Architect/Engineer's Name: Architect/Engineer's Address:		Own	er-Builder:	License N	lumber:	-
Company Address: Qualifier's Name: Architect/Engineer's Name: Architect/Engineer's Address: Bonding Company: Bonding Company Address: Fee Simple Titleholder's name (if o		Own Phone: ):	er-Builder:  City: City:	License N	State:	Zip: Zip:
Company Address: Qualifier's Name: Architect/Engineer's Name: Architect/Engineer's Address: Bonding Company: Bonding Company Address:		Own Phone: ):	er-Builder:  City:	License N	lumber: State:	Zip:
Company Address: Qualifier's Name: Architect/Engineer's Name: Architect/Engineer's Address: Bonding Company: Bonding Company Address: Fee Simple Titleholder's name (if o		Own Phone: ):	er-Builder:  City: City:	License N	State:	Zip: Zip:

Application is hereby made to obtain a permit to do the work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction. I understand that a separate permit must be secured for ELECTRICAL WORK, PLUMBING, SIGNS, WELLS, POOLS, FURNACES, BOILERS, HEATERS, TANKS, and AIR CONDITIONERS, etc.

**OWNER'S AFFIDAVIT:** I certify that all the foregoing information is accurate and that all work will be done in compliance with all applicable laws regulating construction and zoning.

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 COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

X	Χ
Signature of Property Owner or Agent STATE OF FLORIDA COUNTY OF BROWARD	Signature of Qualifier STATE OF FLORIDA COUNTY OF BROWARD
Sworn to (or affirmed) and subscribed before me this day of, 20 by	Sworn to (or affirmed) and subscribed before me this day of, 20 by
(Type / Print Property Owner or Agent Name)	(Type / Print Qualifier's Name)
NOTARY'S SIGNATURE as to Owner or Agent's Signature	NOTARY'S SIGNATURE as to Qualifier's Signature
Notary Name	Notary Name
(Print, Type or Stamp Notary's Name) Personally Known or Produced Identification	(Print, Type or Stamp Notary's Name) Personally Known or Produced Identification
Type of Identification Produced	Type of Identification Produced
APPROVED BY: Permit Officer Issue	e Date: Code in Effect:

A jurisdiction may use a supplemental page requesting additional information and citing other conditions, please inquire. Note: If any development work as described in FS 380.04 Sec. 2 a-g is to be performed, a development permit must be obtained prior to the issuance of a building permit.



MARK S. MUCCI, P.A Certified Civil Mediator

BRAD R. WEISS, P.A. Board Certified in Construction Law Also Admitted in Michigan

BRIAN ABELOW

MATTHEW D. COHEN Senior Associate Also Admitted in New York 5561 NORTH UNIVERSITY DRIVE, SUITE 102 CORAL SPRINGS, FLORIDA 33067

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> WILLIAM H. BENSON (1929-2013)

CHARLES M. KRAMER OF COUNSEL Board Certified in Construction Law

October 31, 2019

# ADVISORY OPINION AS TO REQUIREMENT FOR OWNER SIGNATURE ON PERMIT APPLICATION

A question has arisen with respect to procedural differences in the permit application process amongst various municipalities in Broward County.

#### ISSUE

More specifically, the Board of Rules and Appeals has learned that some municipalities within Broward County are requiring the Owner's signature on the uniform permit application prior to acceptance. Other municipalities do not require an Owner's signature and will accept permit applications and documents from the Contractor.

#### RULE

# I. Florida Building Code Sec 105.3.0.1, 105.3.0.3, and 105.3.0.2.

A. We would first note that FBC Sec 105.3.0.1 states:

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

The use of the word "shall" determines mandatory compliance, the use of the word "may" determines permissive or permitted action See <u>Brooks v. Anastasia Mosquito Control Dist.</u>, 148 So.2d 64 (Fla. 1st DCA 1963). Likewise, the use of the word "or" determines the right to discretion in election of action. See <u>Celistics, LLC v. Gonzalez</u>, 922 So.3d 824 (Fla. 3d DCA 2009). Absent

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"magic words" of exclusivity such as "must" or "shall", the language is permissive thus determining the right to make an election.

Inasmuch as the word "and" is not contained between "owner" and "qualified person" the lack of the conjunctive determines that there is no mandatory requirement for dual signatures.

**B** Furthermore, the use of the word "or" following the term "qualified persons" determines that the signature is not solely confined to an owner or builder but may be an otherwise qualified person or authorized agent. This is further confirmed by 105.3.0.3 which states:

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. (Emphasis added).

Again, it is clear from the Florida Building Code (Broward County edition) that the signature on the permit application may be from any of the persons or party(ies) listed. There is also no language which determines that multiple signatures are required.

C. We have also reviewed FBC Sec 105.3.0.2 which states inter alia:

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 qualified applicant. 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 and (6) of the Florida Statutes.** 

In so saying, sec 105.3.0.2 creates causal nexus and mandatory review of Florida Building Code sections 105.3.0.2 and 3 and Florida Statutes Sec 713.135(5) and (6) a.

#### ANALYSIS

#### II. Florida Statutes Section 713.135 (5) and (6)a

Florida Building Code Sec 105.3.0.2 requires conformance of section 105 with statutes 713. The question arises as to possible conflict between FBC Sec 105.3.0.1, 105.3.0.3 and Florida Statutes sec 713.135(5) and 713.135(6) a.

A. A review of 713.135.5 determines that it is not applicable to the question as to Owners signatures for the reason that nowhere does it require an Owners signature- only Owner information. More specifically the Statute specifies:

In addition to any other information required by the authority issuing the permit, each building permit application must contain:

(a) The name and address of the owner of the real property;

(b) The name and address of the contractor;

(c) A description sufficient to identify the real property to be improved; and

(d) The number or identifying symbol assigned to the building permit by the issuing authority, which number or symbol must be affixed to the application by the issuing authority.

All of the items required under F.S. Sec 713.135.5 pertain solely to *identification* of the Owner. Nowhere is it required that an Owner signature be supplied.

**B.** With respect to 713.135.6(a), the Statute provides a form template which includes an "Owner Affidavit." The problem with this is that the statute requires an application in "*substantially* the following form" so that the title of the document is not necessarily dispositive of the contents of the document. More to the point, the form template contains a signature line for "Owner or Agent including Contractor."

If the Owner is not the applicant, and the applicant is responsible for performing the work, then it is the sworn statement of the party performing the work that it shall be performed in accordance with the code. This comports with the "substantially the same form" requirements but with the Agent or Contractor attesting to code compliance.

#### III. Form over substance arguments are rejected

Although F.S. 713.135(6)(a) provides a template of an "Owner's Affidavit", the Affidavit itself states *inter alia*:

**OWNER'S AFFIDAVIT:** 

I certify that all the foregoing information is accurate and that all work will be done in compliance with all applicable laws regulating construction and zoning.

•••

### (Signature of Owner or Agent) (including contractor)

We cannot place form over substance when examining the template of the Affidavit set forth under FS Sec 713.135. The fact that it is called an "Owners Affidavit" does not mean that it requires an Owner's signature or an Owner's attestation. The Affidavit specifically contemplates a signature by the "Owner, or Agent including Contractor."

This principle is well established un the Florida courts. More specifically:

[T]he trial court may not merely rely on the title of the document. With respect to the characterization of motions, Florida courts place substance over form. In other words,

"if the motion is mislabeled, the court will look to the substance of the motion, not the label." <u>Indus. Affiliates, Ltd. v. Testa</u>, 770 So.2d 202, 204 n. 1 (Fla. 3d DCA 2000). *See also Fire & Cas. Ins. Co. of Conn. v. Sealey*, 810 So.2d 988, 992 (Fla. 1st DCA 2002) ("We agree that the true nature of a motion must be determined by its content and not by the label the moving party has used to describe it.").

### IV. Contractor as Owner's Agent

We further note the signature line of the "Owner's Affidavit" and in particular the wording "Signature of Owner or Agent including Contractor". The straightforward interpretation and plain meaning rule under statutory interpretation is that either the Owner or the Agent may sign-"including the Contractor." Note that the Code does not state "Owner or Agent *and* Contractor" it states "Owner *or* Agent *including* Contractor."

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This does not mean that multiple signatures are required. The plain language rule determines that the Contractor may sign as the Owner's Agent in his/her capacity as Contractor. A second signature by the Contractor is not required.

The Florida courts recognize the status of a Contractor acting in the capacity of an Owner's Agent. See <u>Price vs. J.P Guerry & Sons</u>, 133, Fla. 754 (Fla. 1933) ("Where building contractor agreed to furnish materials and complete two bungalows at a stated price under contract... contractor merely acted as owner's agent in the purchase of materials, and owner, who knew of purchases made by contractor was primarily liable, for purchase price of materials for which materialmen claimed liens under statutes."). See also <u>Roberts v. Lesser</u>, 96 So. 2d 222 (Fla. 1957) (Subcontractor's suit to foreclose mechanics' lien against property improved allegedly at request of contractor acting as owner's agent.)

#### V. Failure to be included under "any other information required" under 713.135

The question has been raised as to the broad requirement provision contained in F.S. Sec. 713.135 wherein is stated:

In addition to any other information required by the authority issuing the permit, each building permit application must contain:

•••

The question posed is whether or not the words "In addition to any other information required" provides for a degree of autonomy over statutes and compliance with the codes.

We would first note that the permit application is the "Broward County Uniform Building Permit Application." The uniformity of the document is meant to determine exactly that, the application is uniform and the intention is that it be interpreted uniformly.

In this specific case, if a local municipality were to unilaterally implement changes to the Permit Application process, it will have the effect of altering an administrative portion of the Building Code thus creating a "second" set of Building Code requirements" specific to that municipality. This is not permissible under Special Act 71-575 and further constitutes the creation of a conflicting amendment to law and forbidden under common law. As noted in <u>Palm Beach</u> <u>County Canvassing Bd. v. Harris</u>, 772 So. 2d 1273 (Fla 2007):

Where two laws are in conflict, courts should adopt an interpretation that harmonizes the laws, for the legislature is presumed to have intended that both laws are to operate co-extensively and have the fullest possible effect.

Palm Beach v. Harris at 1287.

The courts have further stated:

It is presumed that laws are passed with knowledge of all prior laws already on books, and that legislature neither intended to keep contradictory enactments in force nor to repeal prior law without express intention to do so; courts have duty to adopt scheme of statutory construction which harmonizes and reconciles statutes and to find reasonable field of operation that will preserve force and effect of each.

See Floyd v. Bentley, 496 So.2d 862, 865 (Fla 2d DCA 1986). See also Woodgate Development Corp. v. Hamilton Inv. Trust, 351 So.2d 14 (Fla 1977).

# VI. Municipality amendments restricted under Florida Statutes Sec 553.73(4)a

Local municipality amendments are restricted under Florida Statutes Sec 553.73 (4)a, which states *inter alia*:

(4)(a) ...

Local governments may adopt amendments to the administrative provisions of the Florida Building Code, subject to the limitations of this paragraph. Local amendments shall be more stringent than the minimum standards described herein and shall be transmitted to the commission within 30 days after enactment. The local government shall make such amendments available to the general public in a usable format. The State Fire Marshal is responsible for establishing the standards and procedures required in this paragraph for governmental entities with respect to applying the Florida Fire Prevention Code and the Life Safety Code.

Thus, a local administrative amendment must strengthen the code in some fashion but only as established county wide through the Broward County Board of Rules and Appeals. As previously noted, uniformity in the Code requires uniformity in its administration and application.

# VII. Creation of the Florida Building Code and the Authority of the Governing Body

In 1996, the Florida Building Code Study Commission was appointed to review the system of over 400 local jurisdictions and state agencies with building code responsibilities. One of the most important issue was compliance. The Building Commission recommendations called for strengthened compliance through greater predictability and accountability in the building code system. The 1998 Legislature adopted the Study Commission's recommendations and amended Chapter 553, Florida Statutes, Building Construction Standards to create a single minimum standard building code that is enforced by local governments. In so saying, safety, uniformity and accountability are recognized as critical elements of the Florida Building Code.

### a. Florida Statutes Section 553.71

The Florida Statutes 553.71 states inter alia:

•••

(5) "Local enforcement agency" means an agency of local government, a local school board, a community college board of trustees, or a university board of trustees in the State University System with jurisdiction to make inspections of buildings and to enforce the codes which establish standards for design, construction, erection, alteration, repair, modification, or demolition of public or private buildings, structures, or facilities.

F.S. Sec 553.71(5)

# b. Florida Statutes Sec 633.208(3)(a)

The use of the word enforcement referring to building departments and municipalities is

critical where the Florida Statutes Sections 633.208(3)(a) makes the distinction between

enforcement and governing bodies. More specifically:

• • •

(3)(a) The local governing body shall determine, following a public hearing which has been advertised in a newspaper of general circulation at least 10 days before the hearing, if there is a need to strengthen the requirements of the minimum firesafety code adopted by such governing body. The determination must be based upon a review of local conditions by the local governing body, which review demonstrates that local conditions justify more stringent requirements than those specified in the minimum firesafety code for the protection of life and property or justify requirements that meet special situations arising from historic, geographic, or unusual conditions.

F.S. §633.208 (3)(a)

Local building departments are "local enforcement agency[ies]" as statutorily indicated

while the governing body, is the Broward County Board of Rules and Appeals.

# c. The authority of the Board of Rules and Appeals as governing body.

The authority of the Board of Rules and Appeals was affirmed in the express provision of an Opinion rendered by the Attorney General of the State of Florida to this Board on August 21, 2018 wherein was stated:

With regard to requirements for Certificates of Competency, which are found within the Florida Building Code, Broward County Amendments, this office is unable to comment. Section 16.01 (3), Florida Statutes (2018), authorizes the Attorney General to render an opinion "on any question of law relating to the official duties of the requesting officer." This authority, however, does not extend to the interpretation of local codes and ordinances.

In so saying, the interpretation of local codes and ordinances is the province of the Board of Rules and Appeals. See Special Act 71-575(3)(a) and 3(c); Section 9.02, Broward County Charter.

# VIII. Input from the Florida Building Commission

In response to inquiry from the Board of Rules and Appeals, the Florida Building Commission has declined comment citing the August 21, 2018 Opinion of the Florida Attorney General which it adopts with respect to the provision addressing interpretation of local administrative amendments.

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#### CONCLUSION

For the reasons set forth above, it is the determination of the General Counsel to the Broward County Board of Rules and Appeals that an Owner's signature is not required on a Broward County Building Permit Application as further established and determined under the Florida Building Code and the Florida Statutes.

The fact that the actual permit application form provides signature space for both a Contractor and an Owner or Owner's Agent does not determine that two (2) or three (3) signatures are required. An Owner may sign when acting in the capacity of an Owner as Contractor, or the Owner's duly appointed Agent may sign on behalf of an Owner who has given that Agent proper authority. Alternatively, a Contractor may sign solely and independently from either an Owner or Owner's Agent for the purpose of applying for a building permit.

Charles M. Kramer, Esq.

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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. Jeffrey Lucas, FM, CFI, CFEI Fire Service Professional 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

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**Board Attorney** Charles M. Kramer, Esq.

Board Administrative Director James DiPietro

-ESTABLISHED 1971-

# BROWARD COUNTY BOARD OF RULES AND APPEALS FBC 6<sup>th</sup> Edition (2017)

# <u>FORMAL INTERPRETATION (#26)</u>

DATE: November 14, 2019

TO:All Building OfficialsFROM:James DiPietro, Administrative Director

SUBJECT: Swimming Pool Safety Inspections

The Residential Swimming Pool Safety Act, Chapter 515 of the Florida Statutes requires minimum safety requirements for all newly constructed swimming pools. Florida Statute 515.27 for residential swimming pools has a list of required safety options of which one is to be chosen from. Section 515.29 (1)(a) through (e) requires a selection of safety options to safely protect someone from drowning when an unauthorized person enters the pool. The statute does not state who would enforce this law, only that it must be done. Chapter One of the Broward County Florida Building Code Section 110.3, A (Building) #24 states that the child barrier be inspected prior to the pool being filled with water. It is clear that section 110.3, A #24, (3) states that the child barrier inspection is to be carried out by the Structural Inspector. The section then states that the pool is to be filled with water after the Final Electrical Inspector.

A Joint Electrical/Structural Committee Meeting conducted on September 9<sup>th</sup>, 2019 to discuss the above issue. Both Electrical and Structural Committee members voted in favor of the Florida building code as it is written.

### **Formal Interpretation:**

All Swimming Pool Safety Act Inspections shall be performed by BORA Certified Structural Inspectors per section FBC Section 110.3, A, #24.

**EFFECTIVE DATE:** November 14, 2019

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

#### **ATTACHMENTS:**

Chapter One Section 10.3, A, #24, a (3). Florida Statute 515.27

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 val', fees prescribed by law have been paid, nor shall ar int to a permit be released until the additional fee, if interpretent in the permit be released until the additional fee, if interpretent is the permit be released until the additional fee, if it is the permit be released until the additional fee, if it is the permit be released until the additional fee, if it is the permit be released until the additional fee, if it is the permit be released until the additional fee, if it is the permit be released until the additional fee, if it is the permit be released until the additional fee, if it is the permit be released until th

**109.2 Schedule of Permit Fees.** On al' electrical, plumbing, mechanical, and *g* requiring a permit, a fee for each required in accordance with the sc' applicable governing authority.

109.3 Building permit valur applicant for a permit shall provide an estimated r e at a time of application. Permit valuations, shall ir .1 value of work, including materials and labor, for permit is being issued, such as electrical, gas, , plumbing equipment and permanent systems. opinion of the building official, the valuation is ur and on the application, the permit shall be denier' the applicant can show detailed estimates to m proval of the Building Official. Final building perr on shall be set by the Building Official.

> 10 Building Official may require an estimate utilizing RSMeans, copies of signed contract .her descriptive data as a basis for determining mit fee.

who commencing before permit issuance. Any who commences any work on a building, structure, cal, gas, mechanical or plumbing system before obtaining necessary permits or the Building Official's written proval, shall be subject to a penalty not to exceed 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.



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.

**110.1.2** The Building Official shall make the inspections called for by these requirements or he or she may accept reports of inspectors of recognized qualifications for special inspections, except that no certificate called for by any provisions of this Code shall be based on if such reports are in writing and certified.

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

110.1.4 When the services and reports of inspection 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.

**110.1.5** 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.

**110.1.6** Testing laboratories located out of this State 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.

**110.1.7** 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 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.

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- 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 & Chapter 44 of the Florida Residential Code and Section 611 of the FBC Existing Building.
- 12. Window and Door Inspection: Two inspections to be made, one 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. Energy insulation: After installation in compliance with type and "R" values stipulated in energy calculations and prior to installation of rock lath and drywall.
- 15. 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.
- 16. Drywall: To be made after installation of drywall panels and prior to taping and spackling.
- 17. Curtain Wall Inspection: To be made at each floor level after curtain walls are installed and before curtain wall attachments are concealed.
- 18. Storefront Inspection: To be  $\overline{mad}$  after storefronts are installed and before store front attachments are concealed.
- 19. 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.
- 20. 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.
- 21. 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.
- 22. 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.
- 23. Fence: Final only
- 24. 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. Final electrical prior to the swimming pool/spa being filled with water
  - 9. Temporary Electrical 30-Day Power for Testing
  - 10. 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.

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# Ch. 1, Broward County Administrative Provisions for the 2017 FBC (6th Edition)

- 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 on 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.

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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 423.27.20 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



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**Board Attorney** Charles M. Kramer, Esq.

**Board Administrative Director** James DiPietro

# BROWARD COUNTY BOARD OF RULES AND APPEALS

# FBC 6<sup>th</sup> EDITION Revised (2017) FORMAL INTERPRETATION (#27)

DATE: TO: FROM: SUBJECT:

September 10<sup>th</sup>, 2020 All Building Officials James DiPietro, Administrative Director Building Permit Valuations

for the

At its regularly scheduled meeting of September 10<sup>th</sup>, 2020, the Broward County Board of Rules and Appeals approved an interpretation of the following sections of Chapter 1, "Broward County Amendments" to the 6th Edition (2017) Florida Building Code.

**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 RS Means, copies of signed contract and/or other descriptive data as a basis for determining the permit fee.

### Formal Interpretation:

The Broward County Board of Rules and Appeals interprets Sections 109.3 and 109.3.1 to state the Building Official must first determine a permit application is underestimated before the applicant can be required to provide a detailed validation of the valuation of the work to meet the approval of the Building Official. Therefore, the Building Official must have a reasonable basis for his or her determination that the valuation is underestimated and may not require a detailed estimate or contract attached to the permit application at the time of submittal.

EFFECTIVE DATE: September 10th, 2020

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

# II. Fire Code Formal Interpretations



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

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**Board Attorney** Charles M. Kramer, Esq.

**Board Administrative Director** James DiPietro

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# BROWARD COUNTY BOARD OF RULES AND APPEALS

# FLORIDA FIRE PREVENTION CODE, BROWARD LOCAL FIRE CODE AMENDMENTS 6<sup>TH</sup> EDITION (2018) FORMAL INTERPRETATION (#1)

DATE:	February 14, 2019
TO:	All Fire Code Officials / Fire Marshals
FROM:	All Fire Code Officials / Fire Marshals James DiPietro, Administrative Director
SUBJECT:	<b>Residual Pressure at the Required Water Flow</b>

At its meeting of February 14, 2019, BORA approved an interpretation of the 6<sup>th</sup> edition (2018), Broward Local Fire Code Amendments to the Florida Fire Prevention Code, Section F-112 Automatic Sprinkler Required, Section F-112.1 (d).

A Formal Interpretation request was received as it relates to the intent of section F-112.1 (d) "The residual pressure at the required water flow at the connection to the water main for an AFPS and ASS shall not be less than 20 PSI".

#### **Formal Interpretation:**

The residual pressure at the required flow at the connection at the water main for the AFPS (Automatic Fire Protection System) and ASS (Automatic Standpipe System) shall not be less than 20 PSI when the system is operating at the designed flow.

EFFECTIVE DATE: February 15, 2019