April 23, 2012

Florida Department of Business and Professional Regulations/
Florida Building Codes
2555 Shumard Oak Blvd.
Tallahassee, FL 32399-0300

DS 2012-037

Petition for Declaratory Statement
Before the Florida Building Commission

The Petitioner, Raymond A. Manucy, on behalf of RM Enterprises, pursuant to Section 120.565 and 553.77.(l) (c), Florida Statutes, and the Uniform Rules of Declaratory Statements Chapter 28-105, Florida Administrative Code, hereby submits a request for a declaratory statement from the Florida Building Commission. As grounds for this request the petitioner submit's the following.

Petitioner's Name and Address

NAME: Raymond A. Manucy
President, RM Enterprises Inc.
ADDRESS: 352 A Tall Pines Road
West Palm Beach, FL 33413
TEL: 561-682-1225
FAX: 561-682-3611

Statutory Provision on which the Declaratory Statement is sought

As a manufacture (R M ENTERPRISES INC.) of hurricane roof stands, tie down clips and wall brackets for mounting air conditioning units. Currently I have a 2007 Florida Product Approval (FL 3203-R2) with the state of Florida. **I have gone to great expense and time so that I can meet the new Florida Building Code 2010, ASCE 7-10 (FL). I am in the process with a validator to have my stands, and tie down clips processed to be approved for the new Florida building Code 2010, ASCE 7-10(FL.) with the state of Florida**. According to HB 704 I don't have to comply to the Florida Building Code 2010, ASCE 7-10(FL). The petitioner is requesting clarification as to HB 704 - Relating to the Florida Building Commission and the Florida Building Code, Chapter Law Number: No. 2012-13, Approved by the Governor 3/23/2012. Section 16-4). Notwithstanding the provisions of this section, exposed mechanical equipment or appliances fastened to a roof or installed on the ground in compliance with the code using rated stands, platforms, curbs, slabs, or other means are deemed to comply with the wind resistance requirements of the 2007 Florida Building Code, as amended. Further support of enclosure of such mechanical equipment or appliances is not required by a state or local official having authority to enforce the Florida Building Code. This subsection expires on the effective date of the 2013 ~~2010~~ Florida Building Code.

Background:

Florida Building Code 2010, ASCE 7. Section 301.12 Wind Resistance of the Mechanical section of the Florida Code. 301.12 Wind Resistance. Mechanical equipment, appliances and supports that are exposed to wind shall be designed and installed to resist the wind pressures on the equipment and the supports as determined in accordance with the *Florida Building Code, Building.* Roof-mounted mechanical units and supports shall be secured to the structure. The use of wood "sleepers" shall not be permitted

Questions:

1) Do I need to update my current (2007) Florida product Approval # Fl. 3203-R2 to meet the new Florida Building Code 2010, ASCE 7-10 ? Yes or no

2) Do I need to meet the exposure ratings (B,C,D) of the Florida Building Code 2010 section 1609.4.3 Building section and ASCE 7-10 (FL.). Where Florida Building Code 2007 ASCE 7-05 only applies Exposure "C" ? Yes or no.

3) Is it correct that Florida Building Code 2010, ASCE 7- 10 (FL.) specifies higher lateral loads of 3.1 to 1 for all building heights. Where the Florida Building Code 2007, ASCE 7-05 only specified 1.9 to 1.0 for buildings 60' or less. Yes or no.

4) Is it correct that the Florida Build Code 2010, ASCE 7-10(FL.) specifies the use of uplift pressure equal to 1.5 to 1 and the Florida building code 2007, ASCE 7-05 used no additional uplift pressure ? Yes or no.

5) Do I need to meet both the higher lateral loads and uplift loads? Yes or no

6) I am correct to say the 2010 FBC - Residential Section R4403.9.1 Building and structures, and every portion thereof, shall be designed and constructed to meet the requirements of chapter 26 through 31 of ASCE 7-(10) ? Yes or no.

7) Does the Governor want the FBC 2010, ASCE 7-10 (FL) to be applied to building doors, garage doors windows and roof tiles ? Yes or no

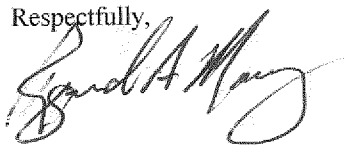
Why would you build a building to meet the new Florida Building Code 2010 ASCE 7-10(FL) and approve a weaker Florida Building Code 2007, ASCE 7-05 to roof stands and a/c tie down clips ? I believe you are making the roof the weakest part of the building by applying the old Florida Building Code 2007, ASCE 7-05 to the stands and a/c tie down clips.

Request;

1) To clarify the HB 704, Section 16-4) Bill passed by the Governor . As I interpret it only applies to the mechanical equipment or appliances.

2) To clarify 2010 Florida Building Code, ASCE 7, Section 301.12 Wind Resistance of the Mechanical section of the Florida Code. 301.12 Wind Resistance. Mechanical equipment, appliances and supports that are exposed to wind shall be designed and installed to resist the wind pressures on the equipment and the supports as determined in accordance with the *Florida Building Code, Building.* Roof-mounted mechanical units and supports shall be secured to the structure. The use of wood "sleepers" shall not be permitted. As I interpret it, covers mechanical equipment, appliances and supports that are exposed to the wind.
3) Myself and other Building Officials interpret the Governors Bill only applies to equipment and appliances. Not stands, platforms, curbs, slabs, etc.

Respectfully,



Raymond A. Manucy
President, RM Enterprises Inc.

Examples: 2007 FBC vs. 2010 FBC

ASCE 7-05
Wind Loads Upon Face of Square 36" x 36" Units
V = 140 mph, G = 0.85, I = 1.0, K_d = 0.90
Assuming NO Reductions
(i.e. "F" multiplier = 1.9 for z ≤ 60 ft, else = 1.0)

W = Qz*G*Cf*(F-multiplier)

Exposure C

Height from Grade to Centroid of Unit (z)	Required Design Pressures
	W
15 FT.	80.5 PSF
20 FT.	85.5 PSF
30 FT.	93.1 PSF
40 FT.	98.9 PSF
50 FT.	103.7 PSF
60 FT.	107.8 PSF
70 FT.	58.6 PSF
80 FT.	60.3 PSF
90 FT.	61.8 PSF
100 FT.	63.2 PSF

ASCE 7-10
Wind Loads Upon Face of Any Square Units
V = 170 mph, K_d = 0.90
Assuming NO Reductions
(i.e. GCf = (3.1, 1.5))

W(lateral) = Qz*GCf(lateral)
W(uplift) = Qz*Gcf(uplift)

Height from Grade to Centroid of Unit (z)	Required Design Pressures			
	Lateral (GC_f = 3.1)		Uplift (GC_f = 1.5)	
	W	0.6W	W	0.6W
15 FT.	175.2 PSF	105.1 PSF	84.8 PSF	50.9 PSF
20 FT.	186.2 PSF	111.7 PSF	90.1 PSF	54.0 PSF
30 FT.	202.8 PSF	121.7 PSF	98.1 PSF	58.9 PSF
40 FT.	215.4 PSF	129.2 PSF	104.2 PSF	62.5 PSF
50 FT.	225.8 PSF	135.5 PSF	109.2 PSF	65.5 PSF
60 FT.	234.6 PSF	140.8 PSF	113.5 PSF	68.1 PSF
70 FT.	242.3 PSF	145.4 PSF	117.3 PSF	70.4 PSF
80 FT.	249.3 PSF	149.6 PSF	120.6 PSF	72.4 PSF
90 FT.	255.5 PSF	153.3 PSF	123.6 PSF	74.2 PSF
100 FT.	261.2 PSF	156.7 PSF	126.4 PSF	75.8 PSF

1609.8 "Rooftop Structures and Equipment"

ASCE 7-10 – Section 29.5 "Design Wind Loads – Other Structures":

Basic Force Equation:

- $F = qz*GCf*Af\ (lb)$

Where:

- $qz = 0.00256\ Kz*Kzt*Kd*V^2$
- *GCf* = Varies depending on code used
  - *Per ASCE 7-10: GCf*= As per ASCE Figs 29.5-1 through 29.5-3
  - *Per FBC 2010: GCf*= As per FBC Section 1609.8, up to 3.1 maximum

2010 Florida Building Code - 1609.8 Rooftop structures and equipment:

The lateral force on rooftop structures and equipment with Af less than (0.1Bh) located on buildings of all heights shall be determined from Equation 29.5-1 of ASCE 7 in which the value of **GCf shall be taken as 3.1.** GCf shall be permitted to be reduced linearly from 3.1 to 1.1 as the value of Af is increased from (0.1Bh) to (Bh)....

Additionally, a simultaneous uplift force shall be applied, given by Equation 29.5-1 of ASCE 7 **in which GCf= 1.5** and Af is replaced by the horizontal projected area, Ar, of the rooftop structure or equipment. For the uplift forceGCf shall be permitted to be reduced linearly from 1.5 to 1.0 as the value of Ar is increased from (0.1BL) to (BL).

Rooftop Equip Wind Pressures

ASCE 7-05

60' MRH or Less

$Wh=Qz*G*C_f*F_{incr}(lateral)$

- Qz = base pressure
- G = Typically 0.85
- Cf = based on unit shape, lower for round units
- $F_{incr}(lateral)$ = 1.9 to 1.0 depending on ratio of unit to smallest building wall

DPh = W

- No additional uplift

61' MRH or More

Wh=Qz*G*Cf

DPh = W

ASCE 7-10 (FL)

All Building Heights

$Wh = Qz*GC_f(lateral)$

- Qz = base pressure
- GC_f(lateral) = 3.1 to 1.0 depending on ratio of unit to smallest building wall

DPh = 0.6Wh

$Wv = Qh*GC_f(uplift)$

- Qz – base pressure
- GC_f(uplift) = 1.5 to 1.0 depending on ratio of unit to smallest building wall

DPv = 0.6Wv

Comparison Chart for Use with ASCE 7-10 and 2010 Florida Building Code Section 1609.8 "Rooftop Structures and Equipment"

ASCE 7-05
Wind Loads Upon Face of Square 36" x 36" Units
V = 140 mph, G = 0.85, I = 1.0, K_d = 0.90
Assuming NO Reductions
(i.e. "F" multiplier = 1.9 for z ≤ 60 ft, else = 1.0)

ASCE 7-10
Wind Loads Upon Face of Any Square Units
V = 170 mph, K_d = 0.90
Assuming NO Reductions
(i.e. GCf = {3.1, 1.5})

Exposure C

W = Q_z*G*Cf*(F-multiplier)

Height from Grade to Centroid of Unit (z)	Required Design Pressures W
15 FT.	80.5 PSF
20 FT.	85.5 PSF
30 FT.	93.1 PSF
40 FT.	98.9 PSF
50 FT.	103.7 PSF
60 FT.	107.8 PSF
70 FT.	58.6 PSF
80 FT.	60.3 PSF
90 FT.	61.8 PSF
100 FT.	63.2 PSF

W(lateral) = Q_z*GCf(lateral)
W(uplift) = Q_z*Gcf(uplift)

Height from Grade to Centroid of Unit (z)	Required Design Pressures			
	Lateral (GC_f = 3.1)		Uplift (GC_f = 1.5)	
	W	0.6W	W	0.6W
15 FT.	175.1 PSF	105.1 PSF	84.8 PSF	50.9 PSF
20 FT.	186.2 PSF	111.7 PSF	90.1 PSF	54.0 PSF
30 FT.	202.8 PSF	121.7 PSF	98.1 PSF	58.9 PSF
40 FT.	215.4 PSF	129.2 PSF	104.2 PSF	62.5 PSF
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80 FT.	249.3 PSF	149.6 PSF	120.6 PSF	72.4 PSF
90 FT.	255.5 PSF	153.3 PSF	123.6 PSF	74.2 PSF
100 FT.	261.2 PSF	156.7 PSF	126.4 PSF	75.8 PSF

Inland (Exposure "C")

Exposure D

Exposure D not applicable in 2007 Florida Building Code

Height from Grade to Centroid of Unit (z)	Required Design Pressures			
	Lateral (GC_f = 3.1)		Uplift (GC_f = 1.5)	
	W	0.6W	W	0.6W
15 FT.	212.7 PSF	127.6 PSF	102.9 PSF	61.7 PSF
20 FT.	223.6 PSF	134.1 PSF	108.2 PSF	64.9 PSF
30 FT.	239.9 PSF	143.9 PSF	116.1 PSF	69.6 PSF
40 FT.	252.2 PSF	151.3 PSF	122.0 PSF	73.2 PSF
50 FT.	262.2 PSF	157.3 PSF	126.9 PSF	76.1 PSF
60 FT.	270.6 PSF	162.4 PSF	131.0 PSF	78.6 PSF
70 FT.	278.0 PSF	166.8 PSF	134.5 PSF	80.7 PSF
80 FT.	284.5 PSF	170.7 PSF	137.7 PSF	82.6 PSF
90 FT.	290.4 PSF	174.2 PSF	140.5 PSF	84.3 PSF
100 FT.	295.8 PSF	177.5 PSF	143.1 PSF	85.9 PSF

Coastal (Exposure "D")