BROWARD COUNTY
Board of Rules & Appeals
1 North University Drive, Suite 3500B, Plantation, Florida 33324
Phone (954) 765-4500 Fax: (954) 765-4504
http://www.broward.org/codeappeals.htm

To: Members of the Broward County Board of Rules and Appeals

From: Administrator Director

Date: May 14, 2009

Re: Florida Building Commission Declaratory Statement, #DCA 08-DEC205

RECOMMENDATION

It is recommended that the Florida Building Commission (FBC) be contacted by the Broward County Board of Rules and Appeals staff concerning code enforcement issues related to DCA08-DEC205.

BACKGROUND

The Broward County Board of Rules and Appeals staff has contacted 59 air-conditioning manufacturers by U.S. Mail and electronic mail with respect to wind load requirements exposed to wind and the FBC ruling dated January 6, 2009. A report prepared by staff engineer Mark Scala summarizes that only three companies have responded to date, none of which have demonstrated to our satisfaction compliance with the FBC ruling.

I am advised by our lobbyist, Larry Smith, that state legislature efforts to grant a time extension to the manufacturers to come into compliance were not successful. We believe at the present time there is almost no statewide enforcement of DCA -08-DEC205.

Respectfully submitted,

James DiPietro

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MECHANICAL EQUIPMENT WIND LOADS

4-24-2009

1. Lennox

Lennox submitted a detail for mounting the base of its units to a ground mounted concrete pad. No calculations accompanied the detail.
The rest of the submittal was unrelated to wind loads.

2. American Standard – Trane 4-24-2009
A letter submitted by John Buerosse, PE, on behalf of American Standard states that ground mounted "anchoring requirement" and "The unit housings also comply with these requirements." meet V_{3s} = 150mph. No calculations were included with the letter. When asked to supply additional backup information he requested Trane send their information to me.

But reviewing the Trane engineering data from the manufacturer for V_{3s}=150mph, the calculations and testing prepared by Trane's engineer, John J. Bailey, PE are all focused on the base mounting and housing attachments to the base. The actual unit housing integrity is not addressed.

3. Goodman Manufacturing 4-24-2009
We received a letter and calculations from Paul Welch, PE on behalf of Goodman Manufacturing which states "building code anchoring and unit integrity requirements for a 3 second wind gust and a maximum wind speed of 150mph at a height of 33 feet above the ground." Included are some calculations for anchoring a ground mounted unit to a concrete pad on grade. Nothing in the submittal was directed to the unit integrity so because of the statement about integrity we requested (by fax) backup information to support the statement. No reply has yet been received.
A second submittal was received 4-28-2009 from Mr. Welsh but was rejected due to calculation deficiencies on 5-5-2009.

Staff,
A. Mark Scala, PE

STATE OF FLORIDA
BUILDING COMMISSION

In the Matter of

CITY OF WEST PALM BEACH, FLORIDA, BUILDING SERVICES DEPARTMENT,

Case #: DCA08-DEC-205

Petitioner.

_____/

DECLARATORY STATEMENT

The foregoing proceeding came before the Florida Building Commission (the Commission) by a Petition from Neil Melick of the City of West Palm Beach, Florida, Building Services Department, which was received on July 17, 2008, and subsequently amended on August 1, 2008. Based on the statements in the petition and the material subsequently submitted, it is hereby ORDERED:

Findings of Fact

1. The petition is filed pursuant to, and must conform to the requirements of Rule 28-105.002, Florida Administrative Code.

2. At the time of the Petition, the Petitioner directed the Building Services Department for the City of West Palm Beach, Florida, and enforced the requirements of the Florida Building Code on construction within the City of West Palm Beach.

3. The Petitioner has received a permit application for a proposed, new, five-story, 165 room hotel with an integral parking garage in which application, no supporting information for the wind resistance of mechanical equipment has been supplied. The applicant asserts that it has been unable to find any manufacturer of mechanical equipment with wind design information available.

4. The Petitioner asks that the Commission interpret Section 301.13, Florida Building Code, Mechanical Volume (2004 as amended 5/21/07), and specifically:

(a). Whether the Florida Building Code, Mechanical Volume, requires that appliances be designed to resist wind pressures even if the permit applicant is unable to find an appliance manufacturer who will provide supporting wind resistance documentation;

(b). Whether it is the responsibility of the appliance manufacturer to design their outdoor appliances to resist wind pressures since the manufacturer is the designer of the appliance;

(c). Whether all mechanical appliances and equipment, including package units, condensing units and fans that are exposed to wind be designed and installed to resist wind pressures in accordance with section 1609 of the Florida Building Code, Building Volume;

(d). Whether a standard other than that required by Section 1609 applies to mechanical appliances, equipment and their supports due to the use of the word "resist" in Section 301.13 of the Florida Building Code, Mechanical Volume, rather than the use of the word "withstand" as stated in Section 1609.1 of the Florida Building Code, Building Volume; and

(e). Whether the Code authorizes a building official to withhold a certificate of occupancy if a permit holder fails to demonstrate that mechanical equipment is not designed to withstand the appropriate wind forces?

Conclusions of Law

1. The Florida Building Commission has the specific statutory authority to interpret the provisions of the Florida Building Code by entering a declaratory statement.

2. Section 301.13, Florida Building Code, Mechanical Volume (2004 as amended 5/21/07), states:

> 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. This may be accomplished by design or by application of Section 301.13.1. Roof-mounted mechanical units and supports shall be secured to the structure. The use of wood "sleepers" shall not be permitted.

3. The Commission has addressed similar circumstances in case numbers DCA07-DEC-182 and DCA07-DEC-183, both of which applied explicitly to cooling towers.

4. The answer to the Petitioner's first question is yes, mechanical equipment exposed to wind is required to be designed for wind resistance regardless of whether manufacturers of that equipment are willing to provide design information and documentation.

5. The Commission is without authority to answer the Petitioner's second question pertaining to design responsibility. Although the Code would clearly envision that the mechanical equipment be designed for wind resistance by its manufacturer, its design for wind resistance be confirmed by an appropriate design professional, or that the equipment be housed within a structure that is designed for wind resistance.

6. The answer to the Petitioner's third question is yes, despite the fact that the two previous declaratory statements were limited to cooling towers, the Code contains no

language that limits the application of the explicit requirement of design for wind resistance to any particular piece of mechanical equipment. All the mechanical equipment exposed to the wind in the proposed project is subject to this requirement.

7. The answer to the Petitioner's fourth question is no, there is no difference between the use of the word "resist" in Section 301.13 of the Mechanical Volume and "withstand" in Section 1609 of the Building Volume.

8. Section 110.2, Florida Building Code, Building Volume (2004 as amended 5/21/07) provides that. [a[fter the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department of building safety, the building official shall issue a certificate of occupancy . . .."

9. Section 110.4, Florida Building Code, Building Volume (2004 as amended 5/21/07), states:

> The building official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

10. On the basis of the foregoing, the Code explicitly authorizes the building official to withhold or revoke the Certificate of Occupancy for violation of the provisions of the code.

Petitioner and all other interested parties are hereby advised of their right to seek judicial review of this Order in accordance with Section 120.68(2)(a), Florida Statutes, and with Fla. R. App. 9.030(b)(1)(C) and 9.110(a). To initiate an appeal, a Notice of

Appeal must be filed with Paula P. Ford, Clerk of the Commission, Sadowski Building, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2100, and with the appropriate District Court of Appeal no later than thirty days after this Order is filed with the Clerk of the Commission. A Notice of Appeal filed with the District Court of Appeal shall be accompanied by the filing fee specified by section 35.22(3), Florida Statutes.

DONE AND ORDERED this 6 of January, 2009, in Coral Gables, Miami-Dade County, State of Florida.

Raul L. Rodriguez, AIA, Chair
Florida Building Commission
Department of Community Affairs
Sadowski Building
2555 Shumard Oak Blvd.
Tallahassee, FL 32399-2100

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was sent to the following by the method indicated on this 9th day of Jan, 2009.

PAULA P. FORD
Commission Clerk

Via U.S. Mail

Neil K. Melick, CBO
200 2nd Street, 3rd Floor
West Palm Beach, Florida 33401

Via Hand Delivery

Mo Madani, C.B.O. Manager
Codes and Standards Section
Department of Community Affairs
2555 Shumard Oak Blvd.
Tallahassee, FL 32399-2100

BROWARD COUNTY
BOARD OF RULES AND APPEALS

One North University Drive
Suite 3500-B
Plantation, Florida 33324

Phone: 954-765-4500
Fax: 954-765-4504
www.broward.org/codeappeals

January 30, 2009

Sent to 59 Manufacturers – Pages 1 - 12
See last 2 pages for listing of addressees

Dear

Please find enclosed a clearly worded ruling by the Florida Building Commission (Declaratory Statement DCA 08-DEC 205) concerning wind load requirements for mechanical equipment exposed to wind. I have also attached for your convenience Florida Building Code sections 1620.1, 1620.2 and 1620.3 (2004 and 2007 Florida Building Code) and 301.13 (2004 Florida Mechanical Code) and 301.12 (2007 Florida Mechanical Code) which specifically relates to Broward County Florida in its entirety.

As a professional courtesy and at no cost to you, we will pass along information to Broward County building officials on any air-conditioning equipment that you have meeting the Florida Building Code – Windload Requirements. This is an on-going offer for compliant equipment that you now have to offer or that you will be providing in the weeks, months and years to follow.

This mechanical equipment information can be emailed to akline@broward.org or jdipietro@broward.org. and/or faxed to my attention at (954) 765-4504.

We are happy to offer this assistance in an effort to ensure County-wide Building Code Compliance.

Sincerely,

James DiPietro
Administrative Director
Board of Rules and Appeals

Broward County Florida 2004 Code, Mechanical

3. Fuel-burning units: Hourly rating in Btu/h (W); type of fuel approved for use with the appliance; and required clearances.
4. Electric comfort heating appliances: Name and trade-mark of the manufacturer; the model number or equivalent; the electric rating in volts, ampacity and phase; Btu/h (W) output rating; individual marking for each electrical component in amperes or watts, volts and phase; required clearances from combustibles; and a seal indicating approval of the appliance by an approved agency.

301.7 Electrical. Electrical wiring, controls and connections to equipment and appliances regulated by this code shall be in accordance with the Chapter 27 of the *Florida Building Code, Building*.

301.8 Plumbing connections. Potable water supply and building drainage system connections to equipment and appliances regulated by this code shall be in accordance with the *Florida Building Code, Plumbing*.

301.9 Fuel types. Fuel-fired appliances shall be designed for use with the type of fuel to which they will be connected and the altitude at which they are installed. Appliances that comprise parts of the building mechanical system shall not be converted for the usage of a different fuel, except where approved and converted in accordance with the manufacturer's instructions. The fuel input rate shall not be increased or decreased beyond the limit rating for the altitude at which the appliance is installed.

301.10 Vibration isolation. Where vibration isolation of equipment and appliances is employed, an approved means of supplemental restraint shall be used to accomplish the support and restraint.

301.11 Repair. Defective material or parts shall be replaced or repaired in such a manner so as to preserve the original approval or listing.

301.12 Reserved.

301.13 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*. This may be accomplished by design or by application of Section 301.13.1.

301.13.1 Ground-mounted units. Ground-mounted units for R3 residential applications may be anchored with #14 screws with gasketed washers according to the following.

1. For units with sides less than 12 inches (305 mm), one screw shall be used at each side of the unit
2. For units between 12 and 24 inches (305 and 610 mm), two screws shall be used per side.
3. For units between 24 and 36 inches (305 and 914 mm), three screws shall be used per side.
4. For units greater than 36 inches (914 mm) or 5 tons, anchorage shall be designed in accordance with Section 301.13.

Notes:

1. **Corrosion protection.** Buildings located within 3,000 feet (914 400 mm) of the ocean should utilize nonferrous metal, stainless steel or steel with minimum G-90 hot-dip galvanized coating for equipment stands and anchors and stainless steel screws.
2. **Strapping.** Job-site strengthening of fan cowlings and vent hoods is recommended. Two or four stainless steel cables are recommended, depending on design wind conditions. Alternatively, additional, heavy straps can be screwed to the cowling and curb.

301.14 Floodplain management construction standards. This code specifically defers to the authority granted to local government by Title 44 CFR, Sections 59 and 60. This code is not intended to supplant or supercede local ordinances adopted pursuant to that authority, nor are local floodplain management ordinances to be deemed amendments to the code.

301.15 NFPA standards. Unless otherwise specified in this code, air conditioning equipment shall comply with the following standards:

1. NFPA 90A (Standard for the Installation of Air Conditioning and Ventilating Systems)
2. NFPA 90B (Standard for the Installation of Warm Air Heating and Air Conditioning Systems)

SECTION 302
PROTECTION OF STRUCTURE

302.1 Structural safety. The building or structure shall not be weakened by the installation of mechanical systems. Where floors, walls, ceilings or any other portion of the building or structure are required to be altered or replaced in the process of installing or repairing any system, the building or structure shall be left in a safe structural condition in accordance with the *Florida Building Code, Building*.

302.2 Penetrations of floor/ceiling assemblies and fire-resistance-rated assemblies. Penetrations of floor/ceiling assemblies and assemblies required to have a fire-resistance rating shall be protected in accordance with the *Florida Building Code, Building*.

302.3 Cutting, notching and boring in wood framing. The cutting, notching and boring of wood framing members shall comply with Sections 302.3.1 through 302.3.4.

302.3.1 Joist notching. Notches on the ends of joists shall not exceed one-fourth the joist depth. Holes bored in joists shall not be within 2 inches (51 mm) of the top or bottom of the joist, and the diameter of any such hole shall not exceed one-third the depth of the joist. Notches in the top or bottom of joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span.

302.3.2 Stud cutting and notching. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched not to exceed 25 percent of its depth. Cutting or

BROWARD County FLORIDA
2004 Code, BUILDING

1618.6.6 An installation plan prepared by the structural engineer of record shall be submitted to the building official for his or her approval.

1618.6.7 Installation shall be witnessed by the structural engineer of record who shall certify the following:

1. That the installation has been in accordance with the approved installation plan.
2. That the initial tension designated by the structural engineer of record has been provided in all cables.
3. That all anchors have been seated at a total load, including initial tension, equal to 85 percent of the yield strength of the cable, unless a positive locking device is provided that does not require a tension jack for the tensioning of the barrier strand.

1618.6.8 Drawings shall indicate the initial tension, the expected increase in tension under vehicular impact and the required maximum capacity of the strand barrier system.

1618.7 Ornamental projections. Ornamental cantilevered projections on the exterior of buildings shall be designed for not less than 60 psf live load (2873 Pa) or 200 pounds per lineal foot (2919 N/m) applied at the outer edge, whichever is more critical.

1618.8 Interior wall and partitions. Permanent, full-height interior walls and partitions shall be designed to resist a lateral live load not less than 5 psf (239 Pa) and if sheathed with lath and plaster, deflection at this load shall not exceed L/360.

1618.9 Load combination. The safety of structures shall be checked using the provisions of 2.3 and 2.4 of ASCE 7 with commentary.

Exception: Increases in allowable stress shall be permitted in accordance with ACI 530/ASCE 5/TMS 402 provided the load reduction factor of 0.75 of combinations 4 and 6 of ASCE 7 Section 2.4.1 shall not be applied.

SECTION 1619
HIGH VELOCITY HURRICANE ZONES — LIVE LOAD REDUCTIONS

1619.1 Application. No reduction in assumed live loads set forth in this section shall be allowed in the design of columns, walls, beams, girders and foundations, except as permitted by the provisions of Section 4.8 ASCE 7 with commentary.

Exceptions:

1. No reduction of the assumed live loads shall be allowed in the design of any slabs, joists or other secondary members, except as set forth herein.
2. No reduction in roof live loads shall be permitted except as set forth by Section 1616.1.

1619.2 Allowable live load reductions.

1619.2.1 Permissible reduction in live loads shall be as provided in Section 4.8.1 of ASCE 7 with commentary.

1619.2.2 Limitations on live load reduction shall be as noted in Section 4.8.2 of ASCE 7 with commentary.

1619.2.3 No reduction in live loads shall be permitted for

SECTION 1620
HIGH-VELOCITY HURRICANE ZONES— WIND LOADS

1620.1 Buildings and structures, and every portion thereof, shall be designed and constructed to meet the requirements of Section 6 of ASCE 7, as more specifically defined in this section, based on a 50-year mean recurrence interval.

1620.2 Wind velocity (3-second gust) used in structural calculations shall be 140 miles per hour (63 m/s) in Broward County and 146 miles per hour (65 m/s) in Miami-Dade County.

1620.3 All buildings and structures shall be considered to be in Exposure Category C as defined in Section 6.5.6.3 of ASCE 7.

1620.4 For wind force calculations, roof live loads shall not be considered to act simultaneously with the wind load.

1620.5 Utility sheds shall be designed for a wind load of not less than 15 psf (718 Pa).

SECTION 1621
HIGH-VELOCITY HURRICANE ZONES— OVERTURNING MOMENT AND UPLIFT

1621.1 Computations for overturning moment and uplift shall be based on ASCE 7.

1621.2 Overturning and uplift stability of any building, structure or part thereof taken as a whole shall be provided, and shall be satisfied by conforming to the load combination requirements of ASCE 7.

SECTION 1622
HIGH-VELOCITY HURRICANE ZONES— SCREEN ENCLOSURES

1622.1 Screen enclosures.

1622.1.1 The wind loads on screen surfaces shall be per ASCE 7 Table 6-12 based on the ratio of solid to gross area.

1622.1.2 Design shall be based on such loads applied horizontally inward and outward to the walls with a shape factor of 1.3 and applied vertically upward and downward on the roof with a shape factor of 0.7.

SECTION 1623
HIGH-VELOCITY HURRICANE ZONES— LIVE LOADS POSTED AND OCCUPANCY PERMITS

1623.1 Live loads posted. The live loads in every building, structure or part thereof of Group F, M or S Storage occupancy approved by the building official shall be shown on plates supplied by the owner or his authorized agent, in that part of each space to which such loads apply.

1623.1.1 Such plates shall be of approved durable materials displaying letters and figures not less than $^3/_8$ inch (9.5 mm) in height, and shall be securely affixed to the structure in conspicuous places.

1623.1.2 Such notices shall not be removed or defaced and where defaced, removed or lost, it shall be the responsibility

BROWARD County FLORIDA
2007 Code, MECHANICAL

3. Fuel-burning units: Hourly rating in Btu/h (W); type of fuel approved for use with the appliance; and required clearances.
4. Electric comfort heating appliances: Name and trade-mark of the manufacturer; the model number or equivalent; the electric rating in volts, ampacity and phase; Btu/h (W) output rating; individual marking for each electrical component in amperes or watts, volts and phase; required clearances from combustibles; and a seal indicating approval of the appliance by an approved agency.

301.7 Electrical. Electrical wiring, controls and connections to equipment and appliances regulated by this code shall be in accordance with Chapter 27 of the *Florida Building Code, Building*.

301.8 Plumbing connections. Potable water supply and building drainage system connections to equipment and appliances regulated by this code shall be in accordance with the *Florida Building Code, Plumbing*.

301.9 Fuel types. Fuel-fired appliances shall be designed for use with the type of fuel to which they will be connected and the altitude at which they are installed. Appliances that comprise parts of the building mechanical system shall not be converted for the usage of a different fuel, except where approved and converted in accordance with the manufacturer's instructions. The fuel input rate shall not be increased or decreased beyond the limit rating for the altitude at which the appliance is installed.

301.10 Vibration isolation. Where vibration isolation of equipment and appliances is employed, an approved means of supplemental restraint shall be used to accomplish the support and restraint.

301.11 Repair. Defective material or parts shall be replaced or repaired in such a manner so as to preserve the original approval or listing.

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.

301.13 Floodplain management construction standards. This code specifically defers to the authority granted to local government by Title 44 CFR, Sections 59 and 60. This code is not intended to supplant or supercede local ordinances adopted pursuant to that authority, nor are local floodplain management ordinances to be deemed amendments to the code.

[B] 301.13.1 High-velocity wave action. Reserved.

301.14 Rodentproofing. Buildings or structures and the walls enclosing habitable or occupiable rooms and spaces in which persons live, sleep or work, or in which feed, food or foodstuffs are stored, prepared, processed, served or sold, shall be constructed to protect against the entrance of rodents in accordance

301.15 NFPA standards. Unless otherwise specified in this code, air conditioning equipment shall comply with the following standards:

1. NFPA 90A (Standard for the Installation of Air Conditioning and Ventilating Systems)
2. NFPA 90B (Standard for the Installation of Warm Air Heating and Air Conditioning Systems)

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302.2 Penetrations of floor/ceiling assemblies and fire-resistance-rated assemblies. Penetrations of floor/ceiling assemblies and assemblies required to have a fire-resistance rating shall be protected in accordance with the *Florida Building Code, Building*.

[B] 302.3 Cutting, notching and boring in wood framing. The cutting, notching and boring of wood framing members shall comply with Sections 302.3.1 through 302.3.4.

[B] 302.3.1 Joist notching. Notches on the ends of joists shall not exceed one-fourth the joist depth. Holes bored in joists shall not be within 2 inches (51 mm) of the top or bottom of the joist, and the diameter of any such hole shall not exceed one-third the depth of the joist. Notches in the top or bottom of joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span.

[B] 302.3.2 Stud cutting and notching. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched not to exceed 25 percent of its depth. Cutting or notching of studs not greater than 40 percent of their depth is permitted in nonbearing partitions supporting no loads other than the weight of the partition.

[B] 302.3.3 Bored holes. A hole not greater in diameter than 40 percent of the stud depth is permitted to be bored in any wood stud. Bored holes not greater than 60 percent of the depth of the stud are permitted in nonbearing partitions or in any wall where each bored stud is doubled, provided not more than two such successive doubled studs are so bored. In no case shall the edge of the bored hole be nearer than 0.625 inch (15.9 mm) to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.

[B] 302.3.4 Engineered wood products. Cuts, notches and holes bored in trusses, structural composite veneer lumber, structural glue-laminated members and I-joists are prohibited except where permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered in the design of the member.

[B] 302.4 Alterations to trusses. Truss members and compc

BROWARD COUNTY FLORIDA
2007 Code, BUILDING

1618.6.3 The cable system including anchors shall be protected against corrosion.

1618.6.4 Cable tension under design load shall not exceed 90 percent of the yield strength of the cable.

1618.6.5 The uppermost cable shall be at least 42 inches (1067 mm) above the adjacent surface. Cables shall not be spaced more than 6 inches (152 mm) apart.

1618.6.6 An installation plan prepared by the structural engineer of record shall be submitted to the building official for his or her approval.

1618.6.7 Installation shall be witnessed by the structural engineer of record who shall certify the following:

1. That the installation has been in accordance with the approved installation plan.
2. That the initial tension designated by the structural engineer of record has been provided in all cables.
3. That all anchors have been seated at a total load, including initial tension, equal to 85 percent of the yield strength of the cable, unless a positive locking device is provided that does not require a tension jack for the tensioning of the barrier strand.

1618.6.8 Drawings shall indicate the initial tension, the expected increase in tension under vehicular impact and the required maximum capacity of the strand barrier system.

1618.7 Ornamental projections. Ornamental cantilevered projections on the exterior of buildings shall be designed for not less than 60 psf live load (2873 Pa) or 200 pounds per lineal foot (2919 N/m) applied at the outer edge, whichever is more critical.

1618.8 Interior wall and partitions. Permanent, full-height interior walls and partitions shall be designed to resist a lateral live load not less than 5 psf (239 Pa) and if sheathed with lath and plaster, deflection at this load shall not exceed L/360.

1618.9 Load combination. The safety of structures shall be checked using the provisions of 2.3 and 2.4 of ASCE 7 with commentary.

Exception: Increases in allowable stress shall be permitted in accordance with ACI 530/ASCE 5/TMS 402 provided the load reduction factor of 0.75 of combinations 4 and 6 of ASCE 7 Section 2.4.1 shall not be applied.

SECTION 1619
HIGH VELOCITY HURRICANE ZONES — LIVE LOAD REDUCTIONS

1619.1 Application. No reduction in assumed live loads set forth in this section shall be allowed in the design of columns, walls, beams, girders and foundations, except as permitted by the provisions of Section 4.8 ASCE 7 with commentary.

Exceptions:

1. No reduction of the assumed live loads shall be allowed in the design of any slabs, joists or other secondary members, except as set forth herein.
2. No reduction in roof live loads shall be permitted except as set forth by Section 1616.1.

1619.2 Allowable live load reductions.

1619.2.1 Permissible reduction in live loads shall be as provided in Section 4.8.1 of ASCE 7 with commentary.

1619.2.2 Limitations on live load reduction shall be as noted in Section 4.8.2 of ASCE 7 with commentary.

1619.2.3 No reduction in live loads shall be permitted for buildings or structures of Group A assembly occupancy.

SECTION 1620
HIGH-VELOCITY HURRICANE ZONES—WIND LOADS

1620.1 Buildings and structures, and every portion thereof, shall be designed and constructed to meet the requirements of Section 6 of ASCE 7, as more specifically defined in this section, based on a 50-year mean recurrence interval.

1620.2 Wind velocity (3-second gust) used in structural calculations shall be 140 miles per hour (63 m/s) in Broward County and 146 miles per hour (65 m/s) in Miami-Dade County.

1620.3 All buildings and structures shall be considered to be in Exposure Category C as defined in Section 6.5.6.3 of ASCE 7.

1620.4 For wind force calculations, roof live loads shall not be considered to act simultaneously with the wind load.

1620.5 Utility sheds shall be designed for a wind load of not less than 15 psf (718 Pa).

SECTION 1621
HIGH-VELOCITY HURRICANE ZONES—OVERTURNING MOMENT AND UPLIFT

1621.1 Computations for overturning moment and uplift shall be based on ASCE 7.

1621.2 Overturning and uplift stability of any building, structure or part thereof taken as a whole shall be provided, and shall be satisfied by conforming to the load combination requirements of ASCE 7.

SECTION 1622
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1622.1 Screen enclosures.

1622.1.1 The wind loads on screen surfaces shall be per ASCE 7 Table 6-12 based on the ratio of solid to gross area.

1622.1.2 Design shall be based on such loads applied horizontally inward and outward to the walls with a shape factor of 1.3 and applied vertically upward and downward on the roof with a shape factor of 0.7.

Aaon, Inc.
J.R.Levine
2425 S. Yukon Ave.
Tulsa OK 74107

Addison
G.Sadler
7050 Overland Road
Orlando FL 32810

Armstrong Air
President/C.E.O
215 Metropolitan Dr.
West Columbia SC 29170

Airwell-Fedders
Dave Pearson
2 Center Dr. Marine Towership
New Jersey NY 08831

American Standards Heating and AC
President/C.E.O
6200 Troup Highway
Tyler TX 75707

Americool LLC
C. Madan, Pres
7808 Sailors Ln.
Indianapolis IN 46254

Arcoaire Air Conditioning & Heating Prods.
President/C.E.O
PO Box 128
Lewisburg TN 37901

Bard Manuf. Company
President/C.E.O
1914 Randolph Drive -PO Box 607
Bryan Ohio 43506

Barr Refrigeration
President/C.E.O
1423 Planeview Drive
OshKosh WI 54904

Bohn by Heatcraft Ref. Prods.
C. Peel, V.P
2175 W. Park Pl. Blvd.
Stone Mountain GA 30087

Carrier Corp
A. Guzzi, President
One Carrier Pl.
Farmington CT 06034

Carrier Corp
President/C.E.O
6304 Carrier Pkwy
Syracuse NY 13221

Carrier Corp
President/C.E.O
7310 W Morris St
Indianapolis IN 46231

Climate Masters Inc.
B. Oliver
7300 SW 44th
Oklahoma City OK 73179

Coleman Heating & Air Conditioning
T. Huntington, V.P
5005 Interstate Dr. N
Norman OK 73069

Confort-Aire, Heat Controller Inc.
D. Peck, Pres./CEO
1900 Wellworth Ave
Jackson MI 49203

Daikin AC Inc.
President/C.E.O
1645 Wallace Dr. Suite 110
Carrollton TX 75006

Day & Night
President/C.E.O
PO Box 128
Lewisburg TN 37901

ECR International
President/C.E.O
5780 Success Dr.
Rome NY 13440

EDPAC - Units/Parts
President/C.E.O
864 E. 52nd St
Brooklyn NY 11203

FHP Manufacturing Company
M. Kueper, President
601 NW 65th Ct
Fort Lauderdale FL 33309

Friedrich Air Conditioning Co.
President/C.E.O
4500 Pan Am Expwy
San Antonio TX 78218

Frigidaire Heating & CoolingProds.
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63366

Gibson Heating & Cooling Prods.
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 66366

Goettl
D. Burke, Chmn.CEO
1845 W 1st Ste. 108
Tempe AZ 85281

Goodman Manufacturing Company
President/C.E.O
5151 San Felipe Ste. 500
Houston TX 77056

Hitachi America LTD
John Ferreira
50 Prospect Ave
Tarrytown NY 10591

Hussman Corp.
S. Hagler Comm. Mgr
12999 St. Charles Rock
Bridgeton MO 63044

International Confort Products, LLC
President/C.E.O
PO Box 1669
Lewisburg TN 37091

Kelvinator Heating & Cooling Prods.
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63366

Klimaire Products, Inc.
President/C.E.O
7909 NW 54 Ct.
Miami FL 33166

Kold Pack Inc.
G.E Stuart, President
5014 Page Ave.
Jackson MI 49201

Larkin Refrigeration Products
C. Peel, V.P
2175 W. Park Pl. Blvd.
Stone Mountain GA 30087

Lennox International Inc.
President/C.E.O
PO Box 799900
Dallas TX 75379-9900

Lennox Residential
President/C.E.O
2100 Lake Park Blvd
Richardson TX 75080

LG Electronics, USA Inc.
S. Schmitt, Dir. Comm.
1000 Sylvan Ave.
Englewood Cliffs NJ 7632

Luxaire Heating & AC
T. Huntington, V.P
5005 Interstate Dr. N.
Norman OK 73069

Marvair
President/C.E.O
PO Box 400
Cordele GA 31010

Maytag heating & Cooling Products
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63366

Mitsubishi Electric
B. Renaud Mktg.Cmm. Mgr
3400 Lawrence Ville Suwanee Rd
Suwanee GA 30024

Mitsubishi Heavy Industries Climate Control
President/C.E.O
19360 Van Ness Ave.
Torrance CA 90501

NcQuay International
D. Reynolds
13600 Industrial Park Blvd.
Minneapolis MN 55441

Nordic Air Incorporated
WE Calhoon V.P Sales
5455 RT 307 W
Geneva OH 44041

Nordyne
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63368

NuTone Heating & Cooling
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63368

Philco Heating & Cooling Prods.
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63368

Quiet-Aire Manufacturing Inc.
B. Kwant
14 Robb Blvd.
Orangeville ON, Canada L9W 3L2

Rheem Mfg. CO
President/C.E.O
5600 Old GreenwoodRd. PO Box 17010
Forth Smith AZ 72917-7010

Ruud AC Div.
President/C.E.O
PO Box 17010
Forth Smith AZ 72917-7010

Samsung A/C
President/C.E.O
6 Pine Hill Dr.
Carlisle PA 17013

Sanyo HVAC Solutions
D. Watkins V.P
1690 Roberts Blvd. NW Suite 110
Kennesaw GA 30144

Stulz Air Technology systems Inc.
A Shubert
1572 Tilco Dr.
Frederick MD 21704

Tappan Heating and Cooling
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63366

Temp-Air
J. Korn
3700 W. Preserve Blvd.
Burnsville MN 55337

Trane
D. Pannier
PO Box 9010
Tyler TX 75701

Unico Inc.
President/C.E.O
7401 Alabama Ave.
Saint Louis MO 63111

Westinghouse Heating & Cooling Products
President/C.E.O
8000 Phoenix Pkwy
O'Fallon MO 63366

York Heating & AC
T. Huntington, V.P
5005 York Dr.
Norman OK 73069

Zoneline Packed Terminal AC
President/C.E.O
Appliance Park AP4-109
Loiusville KY 40225