

ROOFING

MAXIMUM PLAN SIZE 24" X 36"
NO HIGHLIGHTING

**Applicant must provide a completed application and the following items:
(one copy if items are 11" x 17" or smaller and two copies if larger)**

Please indicate items submitted with a checkmark (√)

1. Permit application (check appropriate trade) completed and signed _____
2. Roofing contractor's license required or Owner/Builder affidavit; as applicable _____
3. Roofing material:
 - a. Miami-Dade or State of Florida product approval _____
For products other than asphalt fiberglass shingles, identify project specific details on the product approval (system type, deck type, attachment method, etc.).
For roofs with a slope of 2" in 12" or less, it is only necessary to submit the product approval pages for the system being used. _____
 - b. Town of Jupiter Concrete and Clay Tile Installation Application for tile roofs _____
 - c. Manufacturer's specifications for built up roofs _____
 - d. For roofs with a slope of less than 2" in 12", provide perimeter fastening densities to comply with enhanced uplift requirements pursuant to the product approval (fill out attached low slope form) _____
4. When re-roofing a Detached Single Family residence only, provide:
 - a. Proof of building's insured value or taxable value _____
 - b. Copy of Town of Jupiter's Roof Replacement form for Detached Single Family Dwellings _____
5. Mean roof height _____ ft Roof slope _____ Sq ft _____
6. Attach sketch of roof or roof section _____

NOTE:

- Minimum slope for flat roof is ¼" in 12". For a re-roof application, it is 1/8" in 12"
- Plastic roof cement between eave shingles and metal drip edge for fiberglass/asphalt shingles
- Old shingles shall be removed
- Solid sheathing is required
- Roof inspections required: Sheathing, Tin Tag, In Progress and Final

***When tiles are foam or mortar adhered, FBC requires the underlayment to meet the wind uplifts for the tile. If a base sheet is mechanically fastened the anchors must be designed pursuant to Table IA of the FRSA 5th Edition Florida High Wind Concrete and Clay Tile installation Manual (2 Rows at 12 inches will not comply)**

**RESIDENT LIVES IN A DEED RESTRICTED COMMUNITY,
OBTAIN HOMEOWNERS ASSOCIATION APPROVAL PRIOR TO COMMENCING WORK**

For further information, refer to chapter 15, Florida Building Code, 2014 or chapter 9, Florida Building Code – Residential, 2014



Town of Jupiter Building Department Concrete & Clay Tile Installation Application

Address _____ Permit # _____

1. Scope of Work: New Roof Re-Roof Roof Slope _____ Mean Roof Height _____

2. Underlayment System: 30/90 Self Adhered Direct to Deck

Self Adhered over 30 Other _____

Fastener Spacing at base sheet: _____ Rows at _____ inches O/C

THE ROOF TILE UNDERLAYMENT PRODUCT APPROVAL SHALL BE SUBMITTED

3. Roof Tile Manufacturer _____ Product Approval Number: _____

THE ROOF TILE PRODUCT APPROVAL SHALL BE SUBMITTED

4. Manufacture's Style _____ Roof Tile Profile _____

5. Proposed Field Tile Attachment Method:

Mechanical Attachment Identify Type _____, Size _____ and # of Fasteners _____

Adhesive Attachment Identify Product _____, Patty Size _____

PRODUCT APPROVAL SHALL BE SUBMITTED

FBC Approved Pre-Bagged Mortar

5. Proposed Ridge Detail

Manufacturer _____ Product Approval* _____

*Product Approval shall be submitted

RAS Manual –Attach detail from manual

FRSA/TR1 07 320/08-05-Identify ridge beam straps and fasteners below.

Roof Sheathing (inches)	Exposure	Number of Fasteners on each side of Ridge Boards	Strap Width	Basic Wind Speed, V (mph)	
				140	
				Center to Center Spacing (inches)	
15/32"	B	1 - #8	3/4"	18	
		2 - #8	1-1/2"	31	
	C	1 - #8	3/4"	13	
		2 - #8	1-1/2"	23	
19/32"	B	1 - #8	3/4"	19	
		2 - #8	1-1/2"	31	
	C	1 - #8	3/4"	14	
		2 - #8	1-1/2"	23	

FBC Approved Pre-bagged Mortar: Requires calculation of hip & ridge tile design pressure
(This calculation is based upon **AVERAGE** width and **EXPOSED** length of hip and ridge tile to be installed)

AVERAGE WIDTH _____ × EXPOSED LENGTH _____ ÷ 144 = _____ AREA
_____ AREA × 77.7 = _____ PSF

THE PSF OF THE FBC APPROVED PRE-BAGGED MORTAR MUST MEET OR EXCEED THE
CALCULATED DESIGN PRESSURE OF THE ROOF
CONSULT 5TH EDITION FRSA HIGH WIND MANUAL FOR TILE INSTALATION

Signature of Contractor _____ Date _____



Town of Jupiter
Building Department

Low Slope Roof Information (Built-up or Modified \leq 2:12)

Address _____ Tracking No. _____

Fill in the specific roof assembly components below as applicable. MRH _____ SLOPE _____/12

Roof System Manufacturer: _____ Deck/System Type: _____
System # (if applicable): _____ Product Approval # _____

Minimum Wind Uplift Pressures: (identify worst-case default values below for Category II buildings or specify other from FBC B1609, R301.2.1 FBC-Res, ASCE 7-10, RAS-128, or by design professional as applies)

___ Exposure **B**, 30' Ht or less:(P1) Field: **31.2psf** (P2) Perimeters: **52.32psf** (P3) Corners: **78.78psf**

___ Exposure **C**, 30' Ht or less:(P1) Field: **43.68psf** (P2)Perimeters: **73.25psf** (P3) Corners: **110.3psf**

___ Exposure **D**, 30' Ht or less:(P1) Field: **51.8psf** (P2) Perimeters: **86.85psf** (P3) Corners: **130.77psf**

___ **Other:**

Exposure: ___, Ht: _____ (P1) Field: _____ **psf**, (P2) Perimeters: _____ **psf**, (P3) Corners: _____ **psf**

Base/Anchor Sheet _____

Fastener Spacing for attachment

(1) Field: _____ in. o/c for laps & _____ rows @ _____ in. o/c

(2) Perimeter: _____ in. o/c for laps & _____ rows @ _____ in. o/c

(3) Corners : _____ in. o/c for laps & _____ rows @ _____ in. o/c

Fastener Type: _____

Insulation Base Layer (If Applicable):

Type, Size & Thickness: _____ Fastener/Bonding Material: _____

Insulation Top Layer (If Applicable):

Type, Size & Thickness: _____ Fastener/Bonding Material: _____

Number of Fasteners Per Insulation Board:

Field: _____ Perimeter: _____ Corner: _____

Contractor/Owner Builder

Signature

Date

Rev8/16/16



Town of Jupiter Building Department
Roof Replacement for Detached
Single Family Dwellings ONLY
FS 553.844

Property Address: _____ Permit No. _____

A. Secondary Water Barrier pursuant to 611.7 FBC Existing

1. Specify proposed method of secondary water barrier installation:

Roof sheathing joints covered with a minimum 4" wide self-adhering polymer modified bitumen tape applied directly to sheathing. Tape must be covered with an underlayment system as required for the roofing system.

Entire roof deck covered with a self-adhering polymer modified bitumen cap sheet. No additional underlayment is required for new installation unless required by the product approval or manufacturer.

An underlayment comprised of a layer of asphalt impregnated approved #30 felt fastened with 1" round plastic cap or metal cap nails, attached to a nailable deck in a grid pattern of 12 inches (305mm) staggered between the overlaps, with 6-inch (152mm) spacing at the overlaps. (For slopes of 2:12 to 4:12 an additional layer of felt shall be installed. An approved synthetic underlayment may be used if fastened per the manufacturer's approved specifications.)

Cement/clay tile roof is deemed to comply.

Roof < 2:12 is deemed to comply.

2. Specify secondary water barrier: _____
Manufacturer

B. Roof to Wall Connections pursuant to 611.8 FBC Existing

1. Specify proposed method of compliance:

The permit for construction of the home was applied for on or after January 1, 1988.

The taxable value or insured value is less than \$300,000, evidence is included.

Existing roof to wall connections have been certified by an engineer/architect for compliance with required uplift capacities or prescriptive guidelines. (Report must be included.)

Applicant is requesting building department personnel to research archived plans to determine if the existing structure complies with the uplift guidelines. By choosing this option the applicant agrees to research fees by staff to be billed at \$75.00 per hour. Applicant acknowledges his or her understanding staff research may not provide the required proof of compliance. Applicant will still be responsible for the charges.

Applicant is submitting a mitigation plan with the permit application pursuant to 708.8.1 FBC Existing. The plan will demonstrate improvement is valued at 15% of the roof replacement cost and will at minimum include the required connections at all gable ends or all corners.

Applicant is submitting estimates and analysis demonstrating that the required connectors at all gables or all corners cannot be installed pursuant to 708.8.1 FBC Existing for 15% of the roof replacement cost.

See [technical bulletin](#)

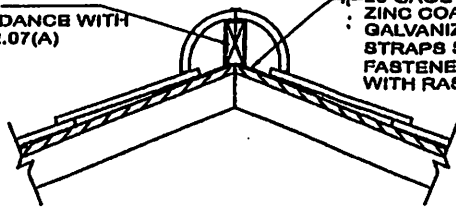
Contractor (print name)

Contractor (sign name)

Date

DETAIL 1

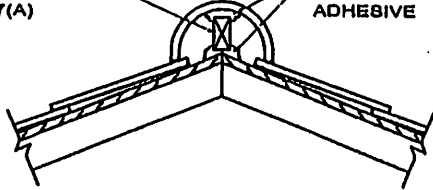
MINIMUM 2x2 INCH LUMBER IN ACCORDANCE WITH RAS 118 SECTION 2.07(A)



1/8" 20 GAGE HOT DIPPED ZINC COATED GALVANIZED x 1" STEEL STRAPS SPACED 24" o.o. FASTENED IN ACCORDANCE WITH RAS 118 SECTION 3.12(B)

DETAIL 2

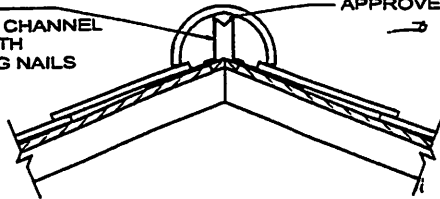
MINIMUM 2x2 INCH LUMBER IN ACCORDANCE WITH RAS 118 SECTION 2.07(A)



WOOD NAILER SET IN A CONTINUOUS BED OF APPROVED ADHESIVE

DETAIL 3

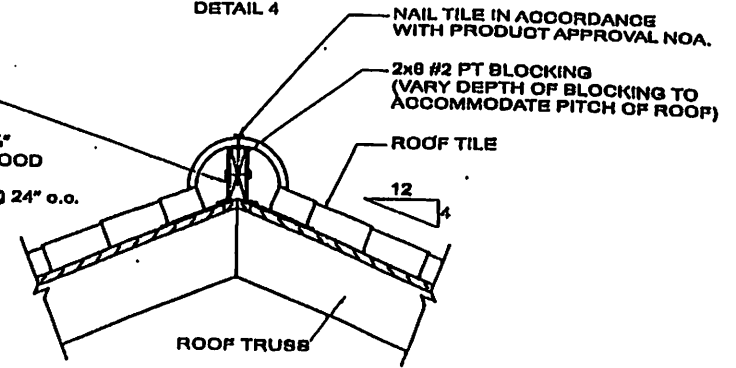
26 GAGE G-80 PREFORMED METAL CHANNEL FASTENED 6" o.c. WITH APPROVED ROOFING NAILS



SEAL ALL NAIL PENETRATIONS APPROVED ADHESIVE

DETAIL 4

4"x 1 1/4" x 0'-8" 18 GAGE HOT DIP GALV. STEEL PLATE SET IN ROOFING CEMENT. FASTEN PLATE WITH 2-#8 x 1 1/4" GALV. PH SCREWS INTO PLYWOOD DECK & 2-#8 x 1 1/4" GALV. PH SCREWS INTO 2x8, PROVIDE @ 24" o.o. (STAGGER SPACING)



NAIL TILE IN ACCORDANCE WITH PRODUCT APPROVAL NOA.

2x8 #2 FT BLOCKING (VARY DEPTH OF BLOCKING TO ACCOMMODATE PITCH OF ROOF)

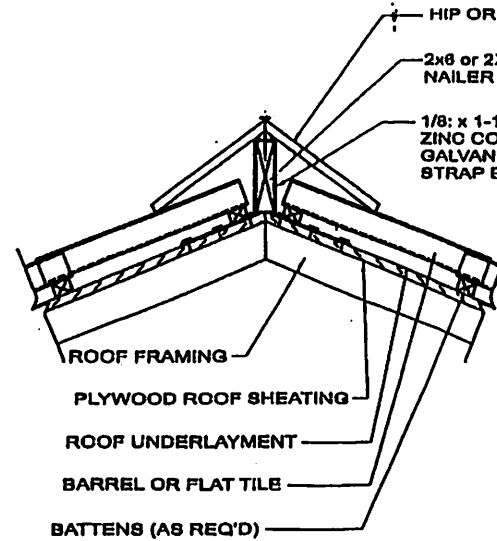
ROOF TILE

ROOF TRUSS

HIP OR RIDGE TILE

2x6 or 2x8 HIP OR RIDGE NAILER PRESSURE TREATED

1/8" x 1-1/4" HOT DIPPED ZINC COATED GALVANIZED METAL STRAP BENT



HIP OR RIDGE TILE NAILING DETAIL

TABLE I
Allowable Uplift Resistance for Anchor Sheet Attachment (psf)
Two-Ply Underlayment Fastening System

Inches on Center			Two -Rows in Field ¹				Three -Rows in Field ²				Four -Rows in Field ³			
Field	Lap	Backnail Cap Sheet	15/32 Inch		19/32 inch		15/32 Inch		19/32 inch		15/32 Inch		19/32 inch	
			Smooth	Deformed ⁴	Smooth	Deformed ⁴	Smooth	Deformed ⁴	Smooth	Deformed ⁴	Smooth	Deformed ⁴	Smooth	Deformed ⁴
12	6	12	41.6	47.4	52.7	60.0	49.6	56.5	62.9	71.5	58.6	66.6	74.2	84.3
11	6	12	43.1	49.1	54.6	62.1	51.8	58.9	65.6	74.6	61.4	69.9	77.8	88.5
10	6	12	44.9	51.0	56.8	64.6	54.4	61.9	68.9	78.3	64.9	73.9	82.2	93.5
9	6	12	47.0	53.5	59.5	67.7	57.6	65.5	72.9	82.9	69.2	78.7	87.6	99.6
8	6	12	49.6	56.5	62.9	71.5	61.5	70.0	78.0	88.6	74.4	84.7	94.3	107.2
7	6	12	53.0	60.3	67.2	76.4	66.6	75.8	84.4	96.0	81.3	92.4	102.9	117.0
6	6	12	57.6	65.5	72.9	82.9	73.5	83.6	93.0	105.8	90.3	102.8	114.4	130.1
5	6	12	63.9	72.7	81.0	92.0	83.0	94.4	105.1	119.5	103.0	117.2	130.5	148.4
4	6	12	73.5	83.6	93.0	105.8	97.3	110.7	123.2	140.1	122.1	138.9	154.6	175.8
3	6	12	89.3	101.6	113.2	128.6	121.1	137.8	153.4	174.4	153.9	175.1	194.9	221.6

- Notes;
- 1 - Two rows staggered in the field, one row at the lap, and one row at the top edge of the cap sheet
 - 2 - Three rows staggered in the field, one row at the lap, and one row at the top edge of the cap sheet
 - 3 - Three rows staggered in the field, one row at the lap, and one row at the top edge of the cap sheet
 - 4 - Deformed shank is inclusive of either ring or screw shank nail

APPENDIX A

TABLE 1A
Underlayment Table For Foam Adhesive and Mortar Set System
and Hip and Ridge Design Pressures
Required Design Pressures for Category II Buildings having a 2:12 and
Greater pitch per ASCE 7-2010 (psf)

Exposure B	Basic Wind Speed in MPH							
	MRH	120	130	140	150	160	170	180
15	36.6	42.9	49.8	57.2	65.0	73.4	82.3	91.7
20	36.6	42.9	49.8	57.2	65.0	73.4	82.3	91.7
25	36.6	42.9	49.8	57.2	65.0	73.4	82.3	91.7
30	36.6	42.9	49.8	57.2	65.0	73.4	82.3	91.7
35	38.2	44.8	51.9	59.6	67.8	76.6	85.8	95.7
40	39.7	46.6	54.1	62.1	70.6	79.7	89.4	99.6
45	40.8	47.7	55.5	63.7	72.5	81.8	91.7	102.2
50	42.3	49.7	57.6	66.1	75.3	85.0	95.3	106.1
55	43.4	50.8	59.0	67.8	77.1	87.1	97.6	108.8
60	44.4	52.1	60.5	69.4	79.0	89.2	100.0	111.4
Exposure C	Basic Wind Speed in MPH							
	MRH	120	130	140	150	160	170	180
15	44.4	52.1	60.5	69.4	79.0	89.2	100.0	111.4
20	47.0	55.2	64.0	73.5	83.6	94.4	105.8	117.9
25	49.1	57.7	66.9	76.8	87.3	98.6	110.5	123.2
30	51.2	60.1	69.7	80.0	91.1	102.8	115.2	128.4
35	52.8	62.0	71.9	82.5	93.8	105.9	118.8	132.3
40	54.4	63.8	74.0	84.9	96.6	109.1	122.3	136.3
45	55.4	65.0	75.4	86.6	98.5	111.2	124.7	138.9
50	57.0	66.9	77.5	89.0	101.3	114.3	128.2	142.8
55	58.0	68.1	79.0	90.6	103.1	116.4	130.5	145.4
60	59.1	69.3	80.4	92.3	105.0	118.5	132.9	148.1
Exposure D	Basic Wind Speed in MPH							
	MRH	120	130	140	150	160	170	180
15	53.8	63.2	73.3	84.1	95.7	108.0	123.1	135.0
20	56.4	66.2	76.8	88.2	100.4	113.3	127.0	141.5
25	58.5	68.7	79.7	91.5	104.1	117.5	131.7	146.8
30	60.6	71.2	82.5	94.7	107.8	121.7	136.4	152.0
35	62.2	73.0	84.7	97.2	110.6	124.8	139.9	155.9
40	63.8	74.8	86.8	99.6	113.4	128.0	143.5	159.9
45	65.3	76.7	88.9	102.1	116.1	131.1	147.0	163.8
50	66.4	77.9	90.3	103.7	118.0	133.2	149.3	166.4
55	67.4	79.1	91.8	105.3	119.9	135.2	151.7	169.0
60	68.5	80.4	93.2	107.0	121.7	137.4	154.1	171.6

For Other Category Structures Refer to ASCE 7-10.
MRH=Mean Roof Height In Feet

BCAB Fenestration Voluntary Wind Load Chart For PBC*

Per ASCE 7-10 Method 1, Part 1 and FBC (2017) for Retrofitting 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 Wind Area (ft ²)	Location: Gable or Hip Roof	Mean Roof Height of 15 feet						Mean Roof Height of 20 feet						Mean Roof Height of 25 feet						Mean Roof Height of 30 feet					
		Zone						Zone						Zone						Zone					
		1		2		3		1		2		3		1		2		3		1		2		3	
		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
10	Gable/Hip Roof θ ≤ 7°	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	17.8	-110.4
20		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		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 Roof*** 7° < θ ≤ 27° (1.5 to 6:12)	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	25.2	-103.0
20		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		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		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 27° < θ ≤ 45° (6 to 12:12)	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		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		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		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

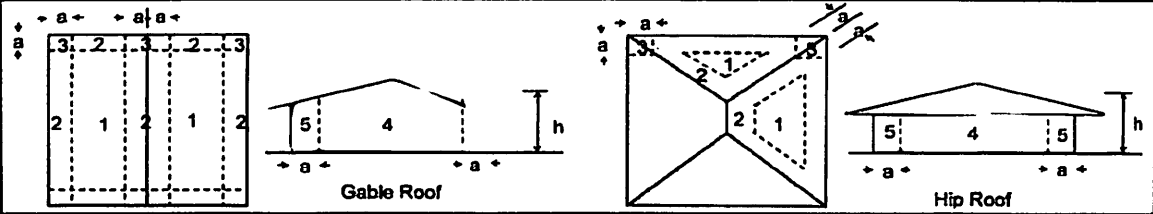
*** For Hip Roofs with angle > 7 degrees (1.5:12) and ≤ 25 degrees (5.5:12), Zone 3 shall be treated as Zone 2 (Figure 30.4-2B, Note 7, p. 337)

Effective Wind Area (ft ²)	Location	Mean Roof Height of 15 feet				Mean Roof Height of 20 feet				Mean Roof Height of 25 feet				Mean Roof Height of 30 feet			
		Zone				Zone				Zone				Zone			
		4		5		4		5		4		5		4		5	
		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
10	Wall	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		36.1	-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		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 Door Wind Loads

for a Building with 30-foot Mean Roof Height
Exposure C
Tables 1609.7(1) & (2), and Section 1609.3.1

Effective Wind Area		Roof Angle	Wind Load	
Width	Height		+	-
8	8	0 - 10 degrees	35.2	-39.8
10	10		34.1	-38.2
14	14		32.3	-36.1
9	7	> 10 degrees	38.4	-43.4
16	7		35.8	-41.0



For Effective Wind Areas between those given, values may be interpolated. Otherwise use the value associated with the lower Effective Wind Area.
End Zone (a) shall be the smaller of 10% of Least Hor. Dist. or 40% of Mean Roof Height ('h'), but not less than 4% of Least Hor. Dist. or 3 ft.
Identify the zone per the figure or information by others. Any questionable zone is to be considered the more critical zone.

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.