



# Building Construction Services

18400 Murdock Circle, Port Charlotte, FL 33948  
Phone: (941) 743-1201 FAX: (941)743-1213  
Zoning (941) 743-1964  
Toll Free from Englewood (941)697-4000  
www.charlottecountyfl.com

*"To exceed expectations in the delivery of public services"*

For Office Use Only

Permit Number

2 0 \_\_\_\_\_

Application Date

CSR \_\_\_\_\_

## Application for Construction Permit

### Job Site Details

Description of work to be done \_\_\_\_\_

Address: \_\_\_\_\_ Unit # \_\_\_\_\_  
Number Name Type:(St., Dr., Pkwy., Blvd., etc.)

Tax Folio # \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Section Township Range Wind Zone Exposure Flood Zone

This building will be used as \_\_\_\_\_ Map Page \_\_\_\_\_

Zoning Class \_\_\_\_\_ Construction Cost (excluding lot but including labor) \_\_\_\_\_

Model Home  Corner Lot  Inside Lot  Waterfront

### Owner Information

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Phone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Email \_\_\_\_\_

### Contractor Information

Name \_\_\_\_\_

Address \_\_\_\_\_  
Number Name Type:(St., Dr., Pkwy., Blvd., etc.)

City \_\_\_\_\_ State \_\_\_\_\_

Phone \_\_\_\_\_ Fax No \_\_\_\_\_

Email \_\_\_\_\_

Contractors State Certification or Registration No. \_\_\_\_\_ Contractors Certificate of Competency Number \_\_\_\_\_



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Permit Number	_____
2 0	_____
Application Date	_____
CSR	_____

## Application for Construction Permit (cont.)

Name of Fee Simple Titleholder (if not owner) _____				
Street _____	City _____	State _____	Zip _____	Phone No _____
Bonding Company Name _____	Street _____	State _____	Zip _____	
Architect/Engineer Name _____	Street _____	State _____	Zip _____	
Mortgage Lender _____	Street _____	State _____	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 issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction.

The undersigned applicant for this permit does hereby certify that he/she has or will prior to the performance of any work in connection with the authorization granted under this permit comply with the provisions of the Florida Worker's Compensation Act of Employers Liability Insurance, the Social Security Act, the Florida Child Labor Laws and all other applicable safety and labor laws of the state. Violation will invoke severe penalties.

**Owners Affidavit:** I hereby 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.**

**IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOU LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.**

**NOTICE:** In addition to the requirement of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this County, and there may be additional permits required from other governmental entities such as water management districts, state, or federal agencies.

OWNERS/AGENT SIGNATURE	CONTRACTORS SIGNATURE
State of Florida, County of _____	State of Florida, County of _____
The foregoing instrument was acknowledged before me this _____ day of _____ 20____ by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.	The foregoing instrument was acknowledged before me this _____ day of _____ 20____ by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.
Signature of Notary _____	Signature of Notary _____
Notary's Printed Name _____	Notary's Printed Name _____
Commission Number _____	Commission Number _____



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## Uniform Roofing Permit Application

Section 1525, Florida Building Code Edition 2007

For Office Use Only

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2 0 \_\_\_\_\_

Application Date

CSR \_\_\_\_\_

### INSTRUCTION PAGE

**Complete the Necessary Sections of the Uniform Roofing Permit Application form and attach the required documents as noted below:**

Roof System	Required Section of the Permit Application Form	Attachments Required See list below
Low Slope Application	A, B, C	1, 2, 3, 4, 5
Prescriptive BUR-RAS 150	A, B, C	1, 2, 4
Asphaltic Shingles	A, B, D	1, 2, 4
Concrete or Clay Tile	A, B, D, E	1, 2, 3, 4, 5
Metal Roofs	A, B, D	1, 2, 3, 4, 5
Wood Shingles and Shakes	A, B, D	1, 2, 4, 5
Other	As Applicable	1, 2, 3, 4, 5

### Attachments Required:

1.	Building Construction Services Permit Application
2.	From Product Approval: Front Page Specific System Description Specific System Limitations General Limitations Applicable Detail Drawings Accepted Dade NOA, FBC approvals <u>OR</u> Product Testing Documentation
3.	Design Calculations per Chapter 16 or Chapter 3 Residential or, if applicable, RAS 127 or RAS 128
4.	Other Component of Product Approval
5.	Any required Roof Testing/Calculation Documentation



#### Green Thinking, Green Building

Do you know what the Solar Reflectance Index (SRI) of your roof covering is?

Roof coverings with high SRI reflect/reflect the solar heat and stay cooler, reducing cooling loads and the energy required to cool the building through the air conditioning system.

For more information on roof products, visit the United States Energy Star Program at: [www.energystar.gov](http://www.energystar.gov), select the link to find energy star products, select roof products from the Building Products list.

**MATERIALS WITH THE HIGHEST SRI VALUES ARE THE COOLEST CHOICES FOR ROOFING.**





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## Uniform Roofing Permit Application

Florida Building Code Edition 2007

### SECTION C (Low Slope Application)

**Fill in specific roof assembly components and identify manufacturer.  
(If a component is not used, identify as "NA")**

System Manufacturer: \_\_\_\_\_

Surfacing: \_\_\_\_\_

Product Approval Number: \_\_\_\_\_

Fastener Spacing for Anchor/Base Sheet Attachment:

Design Wind Pressures, From Chapter 16 or Chapter 3 Residential

Field: \_\_\_\_\_ " oc @ Lap, # Rows \_\_\_\_\_ @ \_\_\_\_\_ " oc

Pmax1: \_\_\_\_\_ Pmax2: \_\_\_\_\_ Pmax3: \_\_\_\_\_

Perimeter: \_\_\_\_\_ " oc @ Lap, # Rows \_\_\_\_\_ @ \_\_\_\_\_ " oc

Max. Design Pressure, from the Specific Product Approval System: \_\_\_\_\_

Corner: \_\_\_\_\_ " oc @ Lap, # Rows \_\_\_\_\_ @ \_\_\_\_\_ " oc

Deck: \_\_\_\_\_

Number of Fasteners Per Insulation Board:

Type: \_\_\_\_\_

Field: \_\_\_\_\_ Perimeter: \_\_\_\_\_ Corner: \_\_\_\_\_

Gauge/Thickness: \_\_\_\_\_

Illustrate Components Noted and Details as Applicable:  
Woodblocking, Gutter, Edge Termination, Stripping, Flashing,  
Continuous Cleat, Cant Strip, Base Flashing, Counter Flashing,  
Coping, etc.

Slope: \_\_\_\_\_

Indicate: Mean Roof Height, Parapet Height, Height of Base  
Flashing, Component Material, Material Thickness, Fastener  
Type, Fastener Spacing or Submit

Anchor/Base Sheet & No. of Ply(s): \_\_\_\_\_

Anchor/Base Sheet Fastener/Bonding Material: \_\_\_\_\_

Insulation Base Layer: \_\_\_\_\_

Base Insulation Size & Thickness: \_\_\_\_\_

Base Insulation Fastener/Bonding Material: \_\_\_\_\_

Top Insulation Layer: \_\_\_\_\_

Top Insulation Size and Thickness: \_\_\_\_\_

Top Insulation Fastener/Bonding Material: \_\_\_\_\_

Base Sheet(s) & No. of Ply(s): \_\_\_\_\_

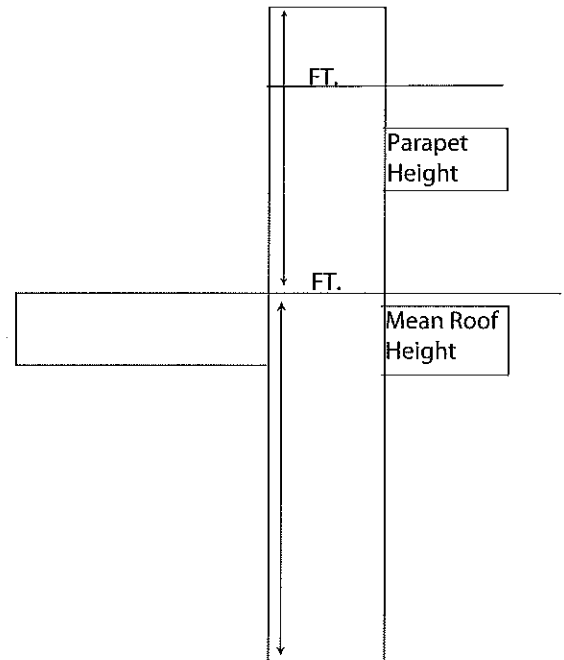
Base Sheet Fastener/Bonding Material: \_\_\_\_\_

Ply sheet(s) & No. of Ply(s): \_\_\_\_\_

Ply Sheet Fastener/Bonding Material: \_\_\_\_\_

Top Ply: \_\_\_\_\_

Top Ply Fastener/Bonding Material: \_\_\_\_\_



A recorded Notice Of Commencement is required in the Permitting Office prior to issuance of the permit

Feb. 2010, mag



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## Uniform Roofing Permit Application

Florida Building Code Edition 2007

### SECTION D (STEEP SLOPED ROOF SYSTEM)

Roof System Manufacturer: \_\_\_\_\_

Notice of Acceptance Number: \_\_\_\_\_

Minimum Design Wind Pressures, If Applicable (From RAS 127 or Chapter 16 or 3 Residential or Calculations):

P1: \_\_\_\_\_ P2: \_\_\_\_\_ P3: \_\_\_\_\_

### Steep Sloped Roof System Description

Roof Slope:  
\_\_\_\_ : 12

Deck Type: \_\_\_\_\_

Type Underlayment: \_\_\_\_\_

Insulation: \_\_\_\_\_

Fire Barrier: \_\_\_\_\_

Fastener Type & Spacing: \_\_\_\_\_

Adhesive Type: \_\_\_\_\_

Type Cap Sheet: \_\_\_\_\_

Roof Covering: \_\_\_\_\_

Type & Size Drip Edge: \_\_\_\_\_

Ridge Ventilation?  
\_\_\_\_\_

Mean Roof Height: \_\_\_\_\_



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## Uniform Roofing Permit Application

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### SECTION E (TILE CALCULATIONS)

Tile Anchor Sheet Attachment:  Prescriptive per RAS 118, 119 or 120  Calculated per FRSA/TRI Manual, 4th Addition

For "Moment Based Tile Systems," choose either Method 1 or 2. Compare the values for  $M_r$  with the values from  $M_f$ , if the  $M_f$  values are greater than or equal to the  $M_r$  values for each area of the roof, then the tile attachment method is acceptable.

#### Method 1 "Moment Based Tile Calculations per RAS 127," Chapter 3 Residential or Chapter 16 Commercial.

$$(P_1 \times \lambda = ) - Mg; = M_{r1} \quad \text{Product Approval } M_f$$

$$(P_2 \times \lambda = ) - Mg; = M_{r2} \quad \text{Product Approval } M_f$$

$$(P_3 \times \lambda = ) - Mg; = M_{r3} \quad \text{Product Approval } M_f$$

Method of Attachment: \_\_\_\_\_

#### Method 2 "Simplified Tile Calculations Per Table below"

Required Moment of Resistance ( $M_r$ ) from table below \_\_\_\_\_ Product Approval  $M_f$  \_\_\_\_\_

$M_r$  Required Moment of Resistance \* Prescriptive

Mean Roof Height

Roof Slope	15'	20'	25'	30'	40'
2:12	34.4	36.5	38.2	39.7	42.2
3:12	32.2	34.4	36.0	37.4	39.8
4:12	30.4	32.2	33.8	35.1	37.3
5:12	28.4	30.1	31.6	32.8	34.9
6:12	26.4	28.0	29.4	30.5	32.4
7:12	24.4	25.9	27.1	28.2	30.0



**RAS 150/Mechanical Attachment Fastener Requirement**  
**Roof Type System: Cold Process; Hot Mop; Torch Down Roofs**

TABLE 1 <sup>(3)</sup>		
FOR MINIMUM BASE SHEET <sup>(5)</sup>		
1 LAYER, TYPE #30, ASTM D 226 - TYPE II		
Mean Roof Height (Ft.)	Fastening Pattern <sup>(1)</sup>	
	Perimeter Edge <sup>(2)</sup>	Field <sup>(4)</sup>
0-30	6 in. @ laps, 2 rows @ 6 in. midsheet	6 in. @ laps, 2 rows @ 12 in. midsheet
40	6 in. @ laps, 2 rows @ 6 in. midsheet	6 in. @ laps, 2 rows @ 9 in. midsheet
FOR MINIMUM BASE SHEET <sup>(6)</sup>		
1 LAYER, TYPE #43, ASTM D 2626 - TYPE 1		
Mean Roof Height (Ft.)	Fastening Pattern <sup>(1)</sup>	
	Perimeter Edge <sup>(2)</sup>	Field <sup>(4)</sup>
0-30	12 in. @ laps, 2 rows @ 15 in. midsheet	12 in. @ laps, 2 rows @ 18 in. midsheet
40	12 in. @ laps, 2 rows @ 12 in. midsheet	12 in. @ laps, 2 rows @ 18 in. midsheet

**FOOTNOTES:**

- (1) See section 4 for fasteners.
- (2) Perimeter edge is measured from all roof edges and each side of ridge as follows:  
The smaller of 0.10 x minimum building width or 0.40 x mean roof height, but not less than 0.04 x minimum building width or 3 feet.
- (3) This table applies to roof slopes up to three inches (3 in.) per twelve inches (12 in.) (Maximum)
- (4) Rows of fasteners, midsheet, shall be evenly spaced across width of sheet and staggered along length of sheet.
- (5) Patterns shown require a minimum withdrawal capacity of 34 lb per fastener (unfactored.)
- (6) Patterns shown require a minimum withdrawal capacity of 67 lb per fastener (unfactored.)

TABLE 2 MECHANICALLY FASTENED INSULATION FOR BUILDINGS 40 FEET OR LESS IN HEIGHT			
FASTENERS PER BOARD <sup>1,5,6</sup>			
BOARD SIZE	FIELD	PERIMETER <sup>2</sup>	CORNERS <sup>3</sup>
<b>WOOD FIBERBOARD</b>			
2 x 4 1 inch minimum	2	3	4 <sup>(4)</sup>
2 x 4 1 inch minimum	4	6	8 <sup>(4)</sup>
4 x 8 1 inch minimum	8	12	16 <sup>(4)</sup>
<b>FIBERGLASS</b>			
4 x 4 <sup>3</sup> / <sub>4</sub> inch minimum	5	8	11
4 x 4 1.5 inch minimum	4	6	8
<b>PERLITE</b>			
2 x 4 1 inch minimum	4	6	8 <sup>(4)</sup>
<b>ISOCYANURATE</b>			
4 x 4 1.3 inch minimum	5	8	11
4 x 4 1.5 inch minimum	4	6	8

**FOOTNOTES**

- (1) Minimum 3-inch plates must be used
- (2) Perimeter: Defined as the first board or a minimum of 4 feet from the roof edge.
- (3) Corners: Defined as 8 feet in from each side.
- (4) If the building has parapet walls 36 inches or higher around the entire roof perimeter, use the number of fasteners for the perimeter.
- (5) Wood and Steel decks use a minimum #12 screw and penetrate through the deck a minimum of 1/2 inch.
- (6) The installation of Polymer Modified Bitumen as a single-ply directly applied over mechanically fastened insulation requires DOUBLE the amount of fasteners in the field, perimeter and corners.

## Uplift Pressure Requirements

**TABLE R301.2(2)**  
**COMPONENT AND CLADDING LOADS FOR A BUILDING WITH A MEAN**  
**ROOF HEIGHT OF 30 FEET LOCATED IN EXPOSURE B (psf)**

	ZONE	EFFECTIVE WIND AREA (feet <sup>2</sup> )	Basic Wind Speed (mph—3 second gust)					
			120		125		130	
Roof > 0 to 10 degrees	1	10	10.5	-25.9	11.4	-28.1	12.4	-30.4
	1	20	10.0	-25.2	10.7	-27.4	11.6	-29.6
	1	50	10.0	-24.4	10.0	-26.4	10.6	-28.6
	1	100	10.0	-23.7	10.0	-25.7	10.0	-27.8
	2	10	10.5	-43.5	11.4	-47.2	12.4	-51.0
	2	20	10.0	-38.8	10.7	-42.1	11.6	-45.6
	2	50	10.0	-32.7	10.0	-35.5	10.6	-38.4
	2	100	10.0	-28.1	10.0	-30.5	10.0	-33.0
	3	10	10.5	-65.4	11.4	-71.0	12.4	-76.8
	3	20	10.0	-54.2	10.7	-58.8	11.6	-63.6
	3	50	10.0	-39.3	10.0	-42.7	10.6	-46.2
	3	100	10.0	-28.1	10.0	-30.5	10.0	-33.0
Roof > 10 to 30 degrees	1	10	14.9	-23.7	16.2	-25.7	17.5	-27.8
	1	20	13.6	-23.0	14.8	-25.0	16.0	-27.0
	1	50	11.9	-22.2	12.9	-24.1	13.9	-26.0
	1	100	10.5	-21.5	11.4	-23.3	12.4	-25.2
	2	10	14.9	-50.1	16.2	-54.3	17.5	-58.7
	2	20	13.6	-45.4	14.8	-49.3	16.0	-53.3
	2	50	11.9	-39.3	12.9	-42.7	13.9	-46.1
	2	100	10.5	-34.7	11.4	-37.6	12.4	-40.7
	3	10	14.9	-50.1	16.2	-54.3	17.5	-58.7
	3	20	13.6	-45.4	14.8	-49.3	16.0	-53.3
	3	50	11.9	-39.3	12.9	-42.7	13.9	-46.1
	3	100	10.5	-34.7	11.4	-37.6	12.4	-40.7
Roof > 30 to 45 degrees	1	10	23.7	-25.9	25.7	-28.1	27.8	-30.4
	1	20	23.0	-24.6	25.0	-26.7	27.0	-28.9
	1	50	22.2	-22.8	24.1	-24.8	26.0	-25.8
	1	100	21.5	-21.5	23.3	-23.3	25.2	-25.2
	2	10	23.7	-30.3	25.7	-32.9	27.8	-35.6
	2	20	23.0	-29.0	25.0	-31.4	27.0	-34.0
	2	50	22.2	-27.2	24.1	-29.5	26.0	-32.0
	2	100	21.5	-25.9	23.3	-28.1	25.2	-30.4
	3	10	23.7	-30.3	25.7	-32.9	27.8	-35.6
	3	20	23.0	-29.0	25.0	-31.4	27.0	-34.0
	3	50	22.2	-27.2	24.1	-29.5	26.0	-32.0
	3	100	21.5	-25.9	23.3	-28.1	25.2	-30.4
Wall	4	10	25.9	-28.1	28.1	-30.5	30.4	-33.0
	4	20	24.7	-26.9	26.8	-29.2	29.0	-31.6
	4	50	23.2	-25.4	25.2	-27.5	27.2	-29.8
	4	100	22.0	-24.2	23.9	-26.3	25.9	-28.4
	5	10	25.9	-34.7	28.1	-37.6	30.4	-40.7
	5	20	24.7	-32.4	26.8	-35.1	29.0	-38.0
	5	50	23.2	-29.3	25.2	-31.8	27.2	-34.3
	5	100	22.0	-26.9	23.9	-29.2	25.9	-31.6

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m<sup>2</sup>, 1 mile per hour = 0.447 m/s.

**NOTES:** For effective areas between those given above the load may be interpolated, otherwise use the load associated with the lower effective area. Table values shall be adjusted for height and exposure by multiplying by the adjustment coefficient in Table R301.2(3).

See Figure R301.2(7) for location of zones.  
 Plus and minus signs signify pressures acting toward and away from the building surfaces.

**TABLE R301.2(3)**

**HEIGHT AND EXPOSURE ADJUSTMENT COEFFICIENTS FOR TABLE R301.2(2)**

MEAN ROOF HEIGHT	EXPOSURE		
	B	C	D
15	1.00	1.21	1.47
20	1.00	1.29	1.55
25	1.00	1.35	1.61
30	1.00	1.40	1.66
35	1.05	1.45	1.70
40	1.09	1.49	1.74
45	1.12	1.53	1.78
50	1.16	1.56	1.81
55	1.19	1.59	1.84
60	1.22	1.62	1.87

**ROOFING APPLICATION STANDARD (RAS) NO. 127**

**PROCEDURE FOR DETERMINING THE MOMENT OF RESISTANCE AND MINIMUM CHARACTERISTIC RESISTANCE LOAD TO INSTALL A TILE SYSTEM ON A BUILDING OF A SPECIFIED ROOF SLOPE AND HEIGHT**

**1. Scope**

This standard covers the procedure for determining the Moment of Resistance ( $M_r$ ) and Minimum Characteristic Resistance Load ( $F'$ ) to install a tile system on buildings of a specified roof slope and height. Compliance with the requirements and procedures herein specified, where the pressures ( $P$ ) have been determined based on Table 1 of this standard, do not require additional signed and sealed engineering design calculation. All other calculations must be prepared, signed and sealed by a professional engineer or registered architect.

**2. How to determine the Moment Resistance ( $M_r$ ) (Moment Based Systems)**

2.1 Determine the minimum design wind pressures for the field, perimeter and corner areas (P1, P2 and P3, respectively) using the values given in Table 1 or those obtained by engineering analysis prepared, signed and sealed by a professional engineer or registered architect based on ASCE 7.

2.2 Locate the aerodynamic multiplier ( $I$ ) in tile Product Approval.

2.3 Determine the restoring moment due to gravity ( $M_g$ ) per Product Approval.

2.4 Determine the attachment resistance ( $M_f$ ) per Product Approval.

2.5 Determine the Moment of Resistance ( $M_r$ ) per following formula:

$$M_r = (P \times l) - M_g$$

2.6 Compare the values for  $M_r$  with the values for  $M_f$  noted in the Product Approval. If the  $M_r$  values are greater than or equal to the  $M_f$  values, for each area of the roof [i.e., field

P(1), perimeter P(2) and corner P(3) areas], then the tile attachment method is acceptable.

**3. How to determine the Minimum Characteristic Resistance Load ( $F'$ ) (Uplift Based System)**

3.1 Determine the minimum design pressures for the field, perimeter and corner areas [P(1), P(2) and P(3), respectively] using the values given in Table 1 or those obtained by engineering analysis prepared, signed and sealed by a professional engineer or registered architect based on the criteria set forth in ASCE 7.

3.2 Determine the angle ( $\theta$ ) of roof slope, from Table 1.

3.3 Determine the length ( $l$ ), width ( $w$ ) and average tile weight ( $W$ ) of tile, per Product Approval.

3.4 Determine the required uplift resistance ( $F_r$ ) per following formula:

$$F_r = [(P \times l \times w) - W] \times \cos \theta$$

3.5 Compare the values for  $F_r$  with the values for  $F'$  noted in the Product Approval. If the  $F'$  values are greater than or equal to the  $F_r$  values, for each area of roof [i.e., field P(1) perimeter (P(2) and corner P(3) areas], then the tile attachment method is acceptable.

TABLE 1 MINIMUM DESIGN WIND UPLIFT PRESSURES IN PSF FOR FIELD (P(1), PERIMETER (P(2) AND CORNER (P(3) AREAS OF ROOFS FOR EXPOSURE C BUILDINGS WITH A ROOF MEAN HEIGHT AS SPECIFIED <sup>1</sup>					
ROOF SLOPE	> 2:12 to ≤ 6:12			> 6:12 to ≤ 12:12	
	P(1)	P(2)	P(3) <sup>2</sup>	P(1)	P(2) & P(3)
Roof mean height ≤ 20'	-45.1	-78.6	-116.2	-49.1	-57.5
> 20' to ≤ 25'	-47.3	-82.3	-121.8	-51.2	-60.4
> 25' to ≤ 30'	-49.2	-85.7	-126.8	-53.6	-62.9
> 30' to ≤ 35'	-50.9	-88.5	-130.9	-55.3	-65.0
> 35' to ≤ 40'	-52.3	-91.0	-134.6	-56.9	-66.8

<sup>1</sup> Calculated in accordance with ASCE 7.05 (Wind Speed: 146 mph).

<sup>2</sup> For Hip Roofs with slope ≤ 5.5: 12, P(3) shall be treated as P(2). [Mod 2014r/2104r

TABLE 2 WHERE TO OBTAIN INFORMATION		
Description	Symbol	Where to find
Design Pressure	P(1) or P(2) or P(3)	Table 1 or by an engineer analysis prepared, signed and sealed by a professional engineer based on ASCE 7
Mean Roof Height	H	Job Site
Roof Slope	q	Job Site
Aerodynamic Multiplier	l	Product Approval
Restoring Moment due to Gravity	M <sub>g</sub>	Product Approval
Attachment Resistance	M <sub>f</sub>	Product Approval
Required Moment Resistance	M <sub>r</sub>	Calculated
Minimum Characteristic Resistance Load	F'	Product Approval
Required Uplift Resistance	F <sub>r</sub>	Calculated
Average Tile Weight	W	Product Approval
Tile Dimensions	l=length w=width	Product Approval

**All calculations must be submitted to the building official at the time of permitting.**