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Client: Crown Building Products of Florida, LLC
 6018 S.W. Highway 72
 Arcadia, Florida 34266
 Att. Mr. Juan Prestamo

Report Date: 12/6/13
 ATLSF Report #: RT1206.01-13

Re: Calculations for Aerodynamic Multiplier per FBC, Section 1518.8.4.5
 Calculations for Weight and Restoring Moment Due to Gravity per TAS 101-95
 Sections 10.2 & 10.2, TAS 102-95 & 102A-95 Sections 9.1 & 9.2.

Service Authorized by:	Juan Prestamo
Manufacturer:	Crown Building Products of Florida, LLC
Model:	Sanibel, Concrete Roof Tile
Imprint:	ACT
Nominal Dimensions (in.), (l x w x h), provided by supplier:	17.0 x 13.25 x N/P
Nominal Thickness (in.), provided by Supplier:	0.56
Nominal Weight (lbf) as provided by supplier:	11.33
Classification:	Type 1a- High Profile, Interlocking, Class III
Purpose:	New Product Approval
Comments:	Attachment Resistance Expressed as a Moment Data to be obtained from Tile Roof Institute data on file.

ATLSF Accreditations & Certifications:	Miami-Dade: 13-0228.09 A2LA: 2650.01 testing FBC Organization #: TST3782
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Calculations:

1. Weight (W):

$$W = m \times 1 \text{ lbf s}^2/\text{ft} \times 32.2 \text{ ft/s}^2$$

$$32.174 \text{ lbf}$$

$$W = 11.33 \times 1.0008$$

$$W = 11.339 \text{ lbf}$$

2. Restoring Moment Due to Gravity (M_g):

$$M_g = W \times \cos(\theta - \alpha) \times L_g$$

$$M_g = 11.339 \cos[(9.462^\circ - 4.016)] \times 0.802$$

$$M_g = 9.05 \text{ ft-lbf}$$

Pitch	Equation	Restoring Moment Due to Gravity (M_g)
2:12	$M_g = 11.339 \times \cos[(9.462 - 4.016)] \times 0.802$	$M_g = 9.05$
3:12	$M_g = 11.339 \times \cos[(14.036 - 4.016)] \times 0.802$	$M_g = 8.96$
4:12	$M_g = 11.339 \times \cos[(18.435 - 4.016)] \times 0.802$	$M_g = 8.81$
5:12	$M_g = 11.339 \times \cos[(22.620 - 4.016)] \times 0.802$	$M_g = 8.62$
6:12	$M_g = 11.339 \times \cos[(26.565 - 4.016)] \times 0.802$	$M_g = 8.40$
7:12	$M_g = 11.339 \times \cos[(30.256 - 4.016)] \times 0.802$	$M_g = 8.16$

3. Aerodynamic Multiplier (λ): Direct Deck Application

$$\lambda = 0.156 \times b \times l^2$$

$$\lambda = 0.156 \times 1.000 \times 1.417^2$$

$$\lambda = .313$$

4. Aerodynamic Multiplier (λ): Batten Application

$$\lambda = 0.144 \times b \times l^2$$

$$\lambda = 0.144 \times 1.000 \times 1.417^2$$

$$\lambda = .289$$

The calculations provided in report ATLSF #: RT1206.01-13 has been performed in full accordance with the requirements of Miami-Dade County, with no deviations.

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End of report.

Prepared by:

Tony Porcello, RRO
 Chief Executive Officer

American Test Lab of South Florida



Reviewed by:

12/10/13

Stephen W. Warter, P.E.
 Reg. State of Florida # 54395
 American Test Lab of South Florida