MIAMIBEACH

City of Miami Beach (CMB)

Florida Building Code 7th Edition (2020)

High Velocity Hurricane Zone Application Form Section E (Tile Calculations)

Enter positive uplift pressures in the Zone Fields when using these methods of calculating attachment.

For Moment based tile systems, choose **Method 1**. Compare the values for Mr with the values from Mf. If the Mf values are greater than or equal to the Mr values for each area of the roof, then the tile attachment method is acceptable.

Method 1 " Moment Based Tile Calculations per RAS 127"

Zone 1:		x λ		=		- Mg:		= Mr1:		≤		NOA Mf:
Zone 2e:		x λ		=		- Mg:		= Mr2e:		≤		NOA Mf:
Zone 2n:		x λ		=		- Mg:		= Mr2n:		≤		NOA Mf:
Zone 2r:		x λ		=		- Mg:		= Mr2r:		≤		NOA Mf:
Zone 3e:		x λ		=		-Mg:		= Mr3e:		≤		NOA Mf:
Zone 3r:		x λ		=		-Mg:		= Mr3r:		≤		NOA Mf:

Tile attachment method: _____ ***Alternate attachment method***: _____

For Uplift Based tile systems use **Method 3**. Compare the values for F' with the values for Fr. If the F' values are greater than or equal to the Fr values for each area of the roof, then the tile attachment method is acceptable.

Method 3 "Uplift Based Tile Calculations per RAS 127"

Zone 1:		x L:		=		x W:		=		- w:		=		x cos θ		= Fr1		NOA F'	
Zone 2e:		x L:		=		x W:		=		- w:		=		x cos θ		= Fr2e		NOA F'	
Zone 2n:		x L:		=		x W:		=		- w:		=		x cos θ		= Fr2n		NOA F'	
Zone 2r:		x L:		=		x W:		=		- w:		=		x cos θ		= Fr2r		NOA F'	
Zone 3e:		x L:		=		x W:		=		- w:		=		x cos θ		= Fr3e		NOA F'	
Zone 3r:		x L:		=		x W:		=		- w:		=		x cos θ		= Fr3r		NOA F'	

Where to obtain information		
Description	**Symbol**	**Where to Find**
Design Pressure	Zones 1, 2e, 2n, 2r,3e, 3r	From the applicable Table in RAS- 127 or be an engineering analysis prepared by a PE based upon ASCE 7
Mean Roof Height	H	Job Site
Roof Slope	θ	Job Site
Aerodynamic Multiplier	λ	Product Approval / Notice of Acceptance
Restoring Moment due to Gravity	M_g	Product Approval / Notice of Acceptance
Attachment Resistance	M_f	Product Approval / Notice of Acceptance
Required Moment Resistance	M_r	Calculated
Minimum Attachment Resistance	F'	Product Approval / Notice of Acceptance
Required Uplift Resistance	F_r	Calculated
Average Tile Weight	w	Product Approval / Notice of Acceptance
Tile Dimensions	L=Length W= Width	Product Approval / Notice of Acceptance
All calculations must be submitted to the Building Official at the time of permit application.		

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