ASCE 7-22 Wind load Program (30.3 Part 1: Low-Rise Building Wall Components and Cladding)
Wall Components and Cladding *(Mean Roof Height h <= 60 ft)*

Project: 10840 SW 67 AVE
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Input:
ASCE 7-22 Strength Design Load & Allowable Stress Design
Wind Speed = 175 mph
Building Exposure = C (Open Terrain with Scattered Obstructions)
Internal Pressure Coefficient GCpi = 0.18 Enclosed Building
Roof angle is less than or equal to 10° or flat (External Pressure Coefficient is reduced 10%)
Kzt = 1.00
Kd = 0.85
Ke = 1.00
Mean Roof Height = 25 ft

Output:
Velocity Pressure Exposure Coefficient "Kz max." = 0.94
Per Table 26.10-1, page 277
LRFD uses wind speed Vult = 175 mph
Design Wind Pressure (qh LRFD) = 73.7 psf = .00256*Kz*Kzt*Ke*V^2 lb/ft^2
Per eq.30.3-1, page 316
ASD uses wind speed Vasd[1] = 136 mph
Design Wind Pressure (qh ASD) = 44.22 psf = .00256*Kz*Kzt*Ke*V^2*0.6 lb/ft^2

—	LRFD (Load Resistance Factor Design)			ASD (Allowable Stress Design)			(Per Figure 30.3-1, Page 317)		
Tributary Area Sq Feet	Positive Zone 4 & 5 psf	Negative Center Zone 4 psf	Negative Corner Zone 5 psf	Positive Zone 4 & 5 psf	Negative Center Zone 4 psf	Negative Corner Zone 5 psf	External Pressure Coefficients		
							Positive GCp	Negative Center GCp	Negative Corner GCp
10 ft²	67.7	-73.3	-90.2	40.6	-44.0	-54.1	0.90	-0.99	-1.26
20 ft²	64.7	-70.3	-84.2	38.8	-42.2	-50.5	0.85	-0.94	-1.16
50 ft²	60.7	-66.3	-76.3	36.4	-39.8	-45.8	0.79	-0.88	-1.04
100 ft²	57.7	-63.3	-70.3	34.6	-38.0	-42.2	0.74	-0.83	-0.94
200 ft²	54.7	-60.3	-64.3	32.8	-36.2	-38.6	0.69	-0.78	-0.85
500 ft²	50.7	-56.4	-56.4	30.4	-33.8	-33.8	0.63	-0.72	-0.72

Least Width = 30 ft a = 3 ft (Zone 5)

10% of least width or 0.4h, whichever is smaller but not less than 4% of least width or 3 ft.

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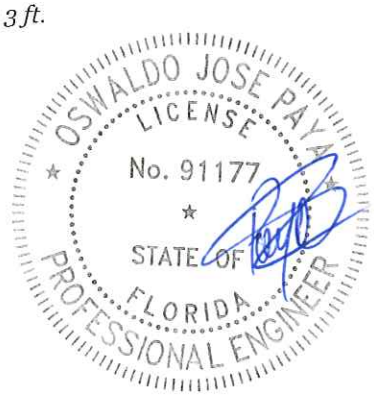

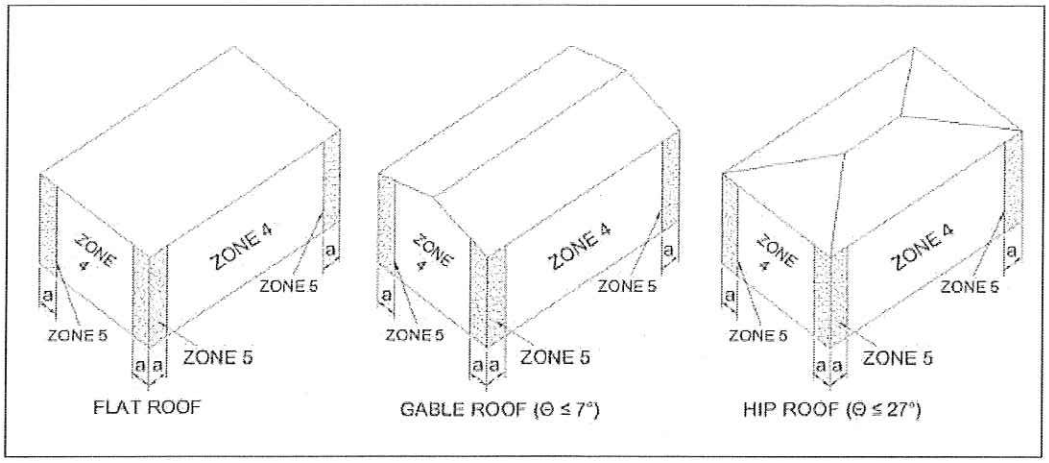

Foot notes:

[1] From Florida Building Code 8th edition 2023 in section 1609.3.1 wind speed conversion.

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