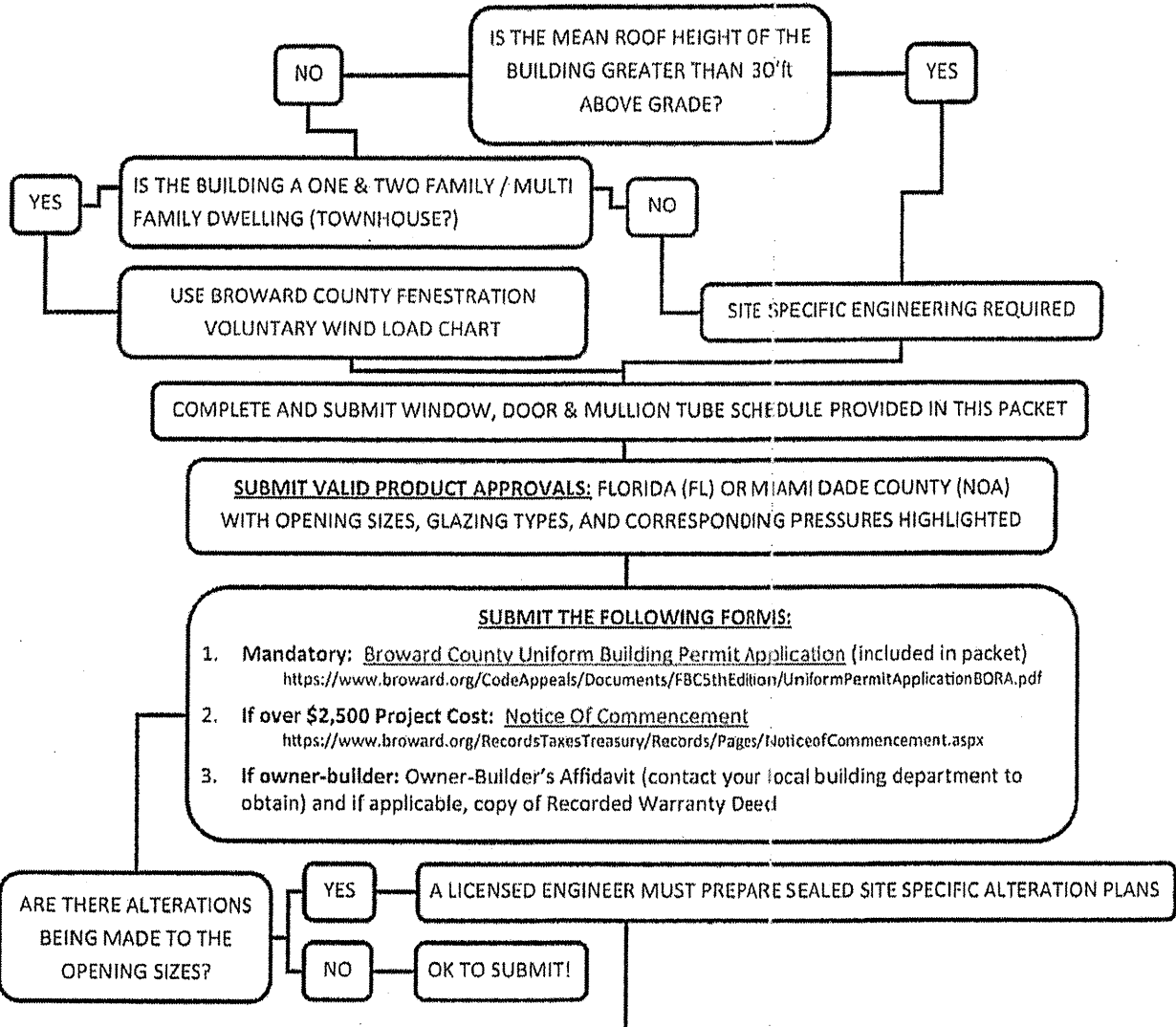


INSTRUCTION FLOWCHART



DESIGN CRITERIA REQUIREMENTS FOR PLANS

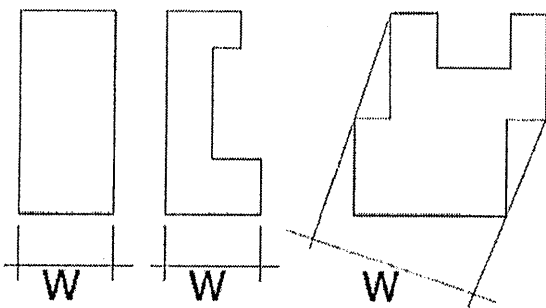
1. Unit sketch, generally to scale illustrating the unit and overall building, (if multi-family).
2. Broward requires ASCE 7 calculations using Peak wind velocity $V_{ult}(min) = 170\text{mph}$
3. Either Exposure C (inland) or D (coastal - see description next page)
4. Mean (average) Roof height. (see page 3)
5. Overall Building Width & Length (lessor dimension is used to determine width of zone 5)
6. Label each opening dimensions, wind zone (4 or 5) on the layout as shown in example on page 3
7. Each opening shall have a corresponding "mark" which ties into the window, door & mullion schedule provided within this packet

OK TO SUBMIT!

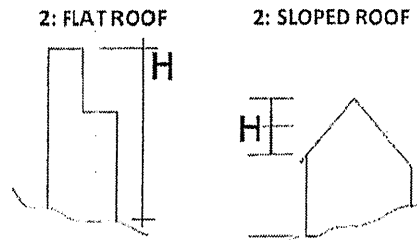
Explanation of Terms

- 1: **Exposure C:** All of Broward County. The "Broward County Fenestration Voluntary Wind Load Chart" included within this packet can be used for all detached one & two story dwellings and multiple single-family dwellings (townhomes).
- 2: **Exposure D:** A structure that's within 600' or 20X building height of a flat area/body of water that's a mile long. Generally all areas east of the Intercoastal Waterway. Wind load pressures must be completed by a licensed design professional for all structures.
- 3: **Mean Roof Height ("h"):** Average between the lowest and the highest roof point of a sloped roof, also the highest point of a flat roof (also see page 3).
- 4: **Minimum Building Width:** 10% of least horizontal dimension (W) or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3'ft minimum.

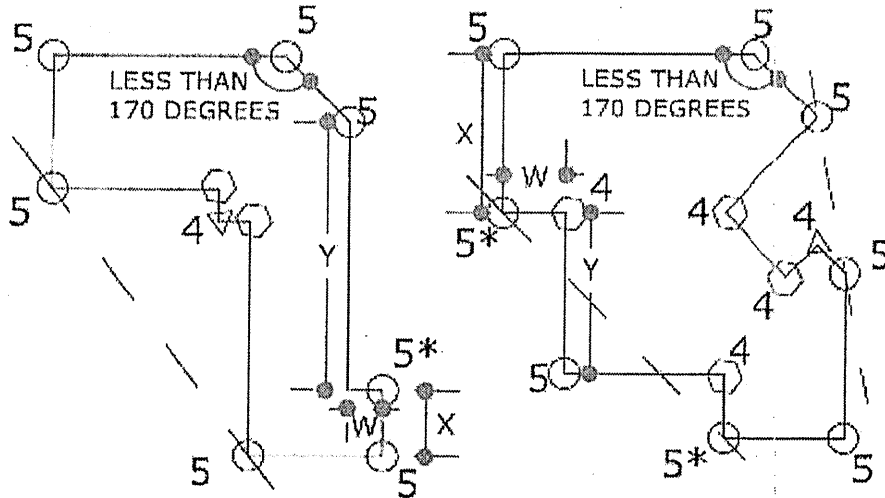
MIN. BUILDING WIDTH EXAMPLES (PLAN VIEW):



Mean Roof Height



ZONE EXAMPLES (PLAN VIEW)



- INDICATES BUILDING CORNER DISCONTINUITY (ZONE 5)
- ▽ INDICATES AN OBSTRUCTED EXTERIOR CORNER (ZONE 4)
- ⊙ INDICATES A TYPICAL INTERIOR CORNER (ZONE 4)

NOTE: The corner designated by an * would not be considered a corner if dimension W is less than half the width of the corner zone and dimension X and Y are greater than the width of a corner zone

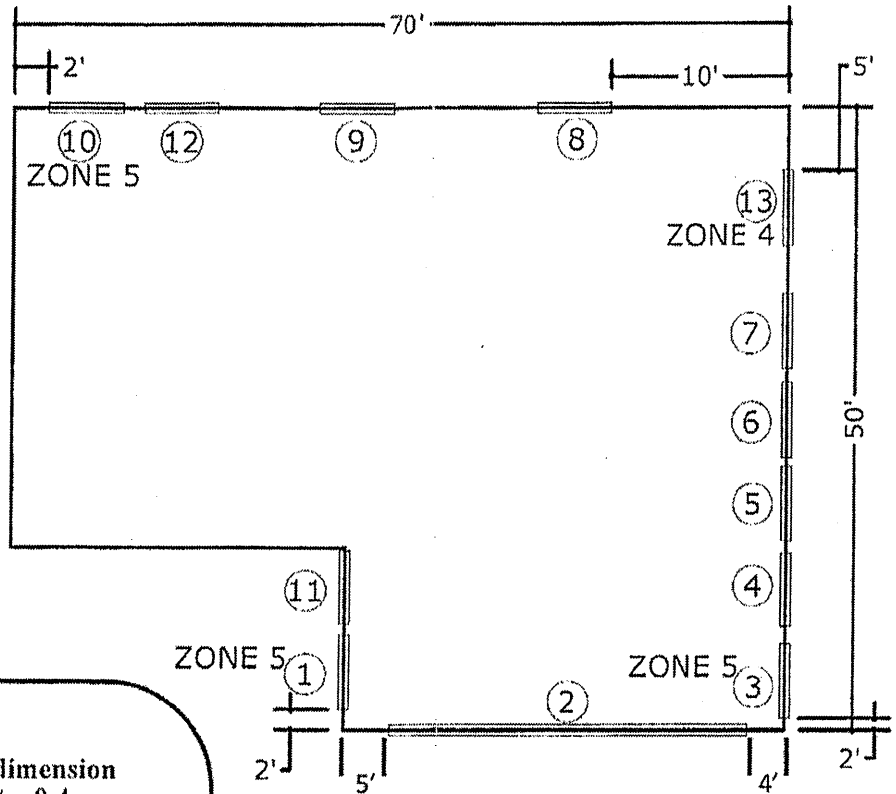
170 degree:
An unobstructed exterior corner with an interior angle of less than 170 degree would be considered a corner zone

See page 3 for example on how to calculate the zone dimensions of a building

Minimum Sketch Requirement

Zone determinations:

1. Zone 5 (corner zone) in this example is calculated as 5'ft in width, any opening within 5'ft of an outside unobstructed corner would be considered in zone 5.
2. In this example, openings 1, 2, 3 & 10 are located in a zone 5 (corner zone).
3. All other opening would be considered zone 4 (interior zone).

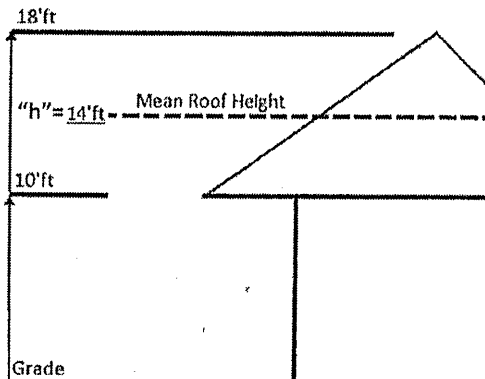


ZONE CALCULATIONS:

Zone 5 = $.10 \times$ least horizontal dimension (50ft \times .10 = 5ft) or $.4 \times$ "h" (14ft \times 0.4 = 5.6ft) whichever is smaller, but not less than either 4% of the least horizontal dimension (50ft \times 4% = 2ft), or 3ft.

Zone 5 (corner zone) would be 5'ft wide.

All others would be zone 4.



Next Steps:

- Complete Window & Door Schedule included within this packet
- Submit all forms to your local building department according to their instructions.
- The local building department may require additional documentation

NAME: _____ SITE ADDRESS: _____ CONTACT #: _____

1 OPENING LOCATION ID	2 PRODUCT ACCEPTANCE NUMBER	3 PRODUCT APPROVAL PRESSURE RATING		4 REQUIRED DESIGN PRESSURE		5 OPENING SIZES		6 ZONE LOCATION		7 Impact Glazing		8 OPENING HAS EXISTING SHUTTERS		9 NEW SHUTTERS REQUIRED		10 MULLION TUBES REQUIRED	
		(+) PSF	(-) PSF	(+) PSF	(-) PSF	WIDTH X HEIGHT IN INCHES	AREA IN SQ FEET	4 INTER	5 END	YES	NO	YES	NO	YES	NO	YES	NO
						X											
						X											
						X											
						X											
						X											
						X											
						X											
						X											
						X											
						X											
						X											
						X											
						X											

IDENTIFY OPENINGS ALPHABETICALLY OR NUMERICALLY ON ELEVATION SHEETS.
 IDENTIFY VERTICALLY STACKED GLASS IN THE SAME OPENINGS FROM BOTTOM TO TOP WITH SUB NUMBERS (Example: A, A1, A2, ETC.).

Broward County Fenestration Voluntary Wind Load Chart*

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 (φ = 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 1			Zone 2			Zone 3			Zone 1			Zone 2			Zone 3			Zone 1			Zone 2			Zone 3			Zone 1			Zone 2			Zone 3																																																																																																																																																																																																																																																																																																																																																												
		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-																																																																																																																																																																																																																																																																																																																																																												
10	Gable/Hip Roof	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	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	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	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	20	Roof	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	0 ≤ 7°	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***	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	Roof***	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	7° < θ ≤ 27°	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	-67.5	20.0	-101.5	100	(1.5 to 6:12)	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	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	27° < θ ≤ 45°	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	(6 to 12:12)	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
Effective Wind Area		Mean Roof Height of 15 feet									Mean Roof Height of 20 feet									Mean Roof Height of 25 feet									Mean Roof Height of 30 feet																																																																																																																																																																																																																																																																																																																																																																		
Wind Area (ft ²)		Zone 4			Zone 5			Zone 4			Zone 5			Zone 4			Zone 5			Zone 4			Zone 5			Zone 4			Zone 5			Zone 4			Zone 5																																																																																																																																																																																																																																																																																																																																																												
10		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	41.8	-45.5	41.8	-54.6	39.2	-42.9	39.2	-49.4	37.2	-40.9	37.2	-45.5	32.6	-36.3	32.6	-36.3																																																																																																																																																																																																																																																																																																																																																														
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	39.2	-42.9	39.2	-49.4	37.2	-40.9	37.2	-45.5	32.6	-36.3	32.6	-36.3																																																																																																																																																																																																																																																																																																																																																																		
50	Wall	33.8	-37.0	33.8	-42.7	36.0	-39.4	36.0	-45.4	37.7	-41.3	37.7	-47.5	35.8	-39.4	35.8	-43.8	32.6	-36.3	32.6	-36.3																																																																																																																																																																																																																																																																																																																																																																										
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	32.6	-36.3	32.6	-36.3																																																																																																																																																																																																																																																																																																																																																																														
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																																																																																																																																																																																																																																																																																																																																																																																		

*** 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)

Garage Door Wind Loads for a Building with 30-foot Mean Roof Height
 Tables 1609.7(1) & (2), and Section 1609.3.1
 Exposure C
 Effective Wind Area
 Width Height Roof Angle Wind Load
 8 8 0 - 10 degrees 35.2 -39.8
 10 10 0 - 10 degrees 34.1 -38.2
 14 14 0 - 10 degrees 32.3 -36.1
 9 > 10 degrees 38.4 -43.4
 16 7 degrees 36.8 -41.0

