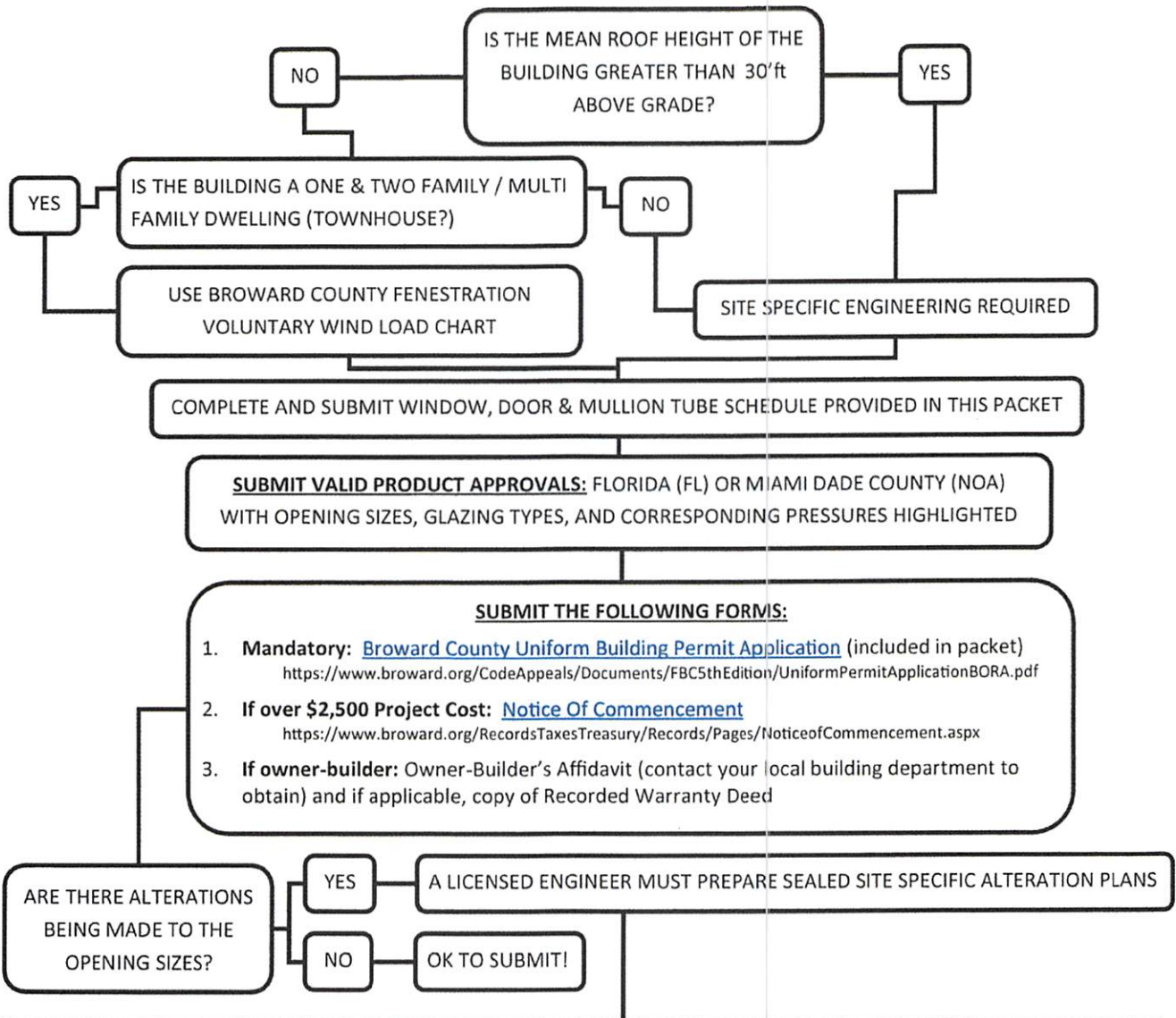


BROWARD COUNTY UNIFORM APPLICATION INSTRUCTIONS FOR RETROFIT WINDOWS - DOORS - GARAGE DOORS

- PAGE 1 of 3

INSTRUCTION FLOWCHART



DESIGN CRITERIA REQUIREMENTS FOR PLANS

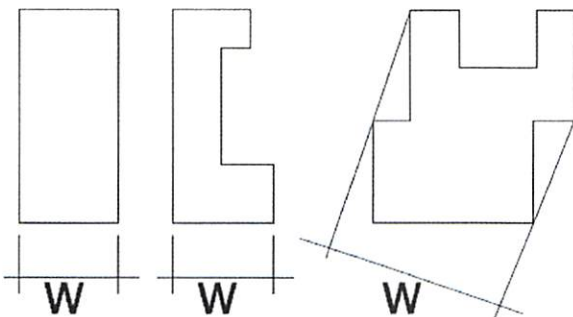
1. Unit sketch, generally to scale illustrating the unit and overall building (if multi-family).
2. Broward requires ASCE 7 calculations using Peak wind velocity $V_{ult(min)} = 170\text{mph}$
3. Either Exposure C (inland) or D (coastal - see description next page)
4. Mean (average) Roof height (see 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):

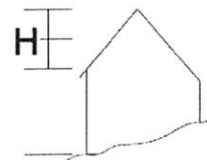


Mean Roof Height

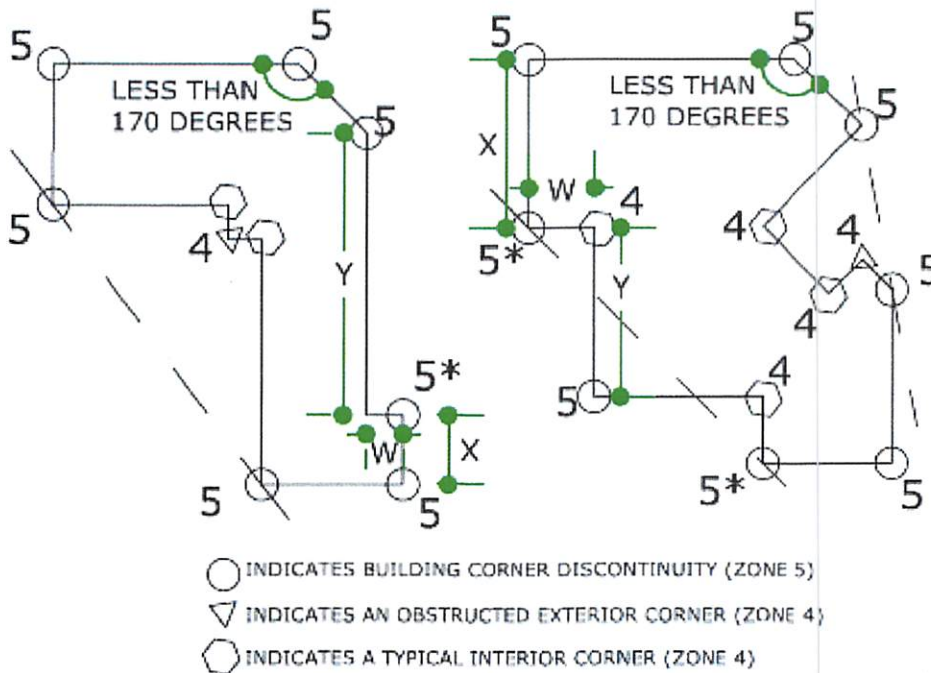
2: FLAT ROOF



2: SLOPED ROOF



ZONE EXAMPLES (PLAN VIEW)



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:

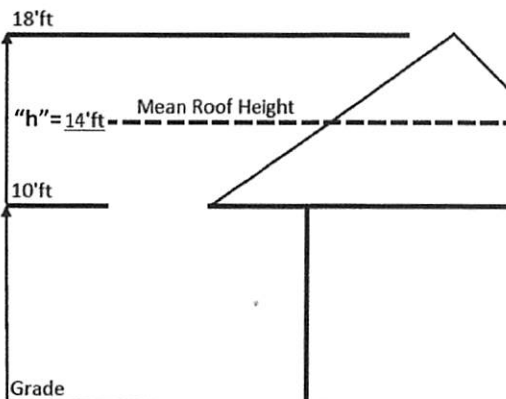
An unobstructed exterior corner with an interior angle of less than 170 degree would be considered a corner zone

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

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. In this example, openings 1, 2, 3 & 10 are located in a zone 5 (corner zone). All other opening would be considered zone 4 (interior zone).

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

All others would be zone 4.



The diagram shows a rectangular building layout with the following dimensions and features:

- Overall Dimensions:** 70' wide by 50' deep.
- Internal Dimensions:**
 - Top horizontal segment: 10' from the right edge.
 - Left vertical segment: 2' from the top edge.
 - Bottom vertical segment: 2' from the bottom edge.
 - Right vertical segment: 5' from the top edge.
 - Bottom horizontal segment: 5' from the left edge, 4' from the right edge.
- Numbered Zones:**
 - ZONE 5:** Located in the top-left, bottom-left, and bottom-right areas.
 - ZONE 4:** Located in the top-right area.
- Numbered Points:**
 - 10, 12, 9, 8 (top edge)
 - 13 (top-right corner)
 - 7, 6, 5, 4 (right edge)
 - 11 (bottom-left corner)
 - 1 (bottom-left corner)
 - 2 (bottom edge)
 - 3 (bottom-right corner)

- 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

ASCE 7-22

Roof and Wall Zone Chart Diagrams

Wall Pressure Chart	Flat Roof Uplift Chart	Gable Roof Uplift Chart	Hip Roof Uplift Chart
ELEVATION	PLAN	PLAN VIEW	PLAN VIEW

Instructions on how to use these Charts: Determine Mean Roof Height, h , which is top of roof for flat roofs or the mean roof height for pitched roofs. Find your least horizontal dimension for your building, not including a overhang if it occurs. Calculate the value of, a , = 10% of least horizontal dimension or $0.4 \cdot h$, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 feet. If your roof height is less than 30 feet, but not exactly 15, 20, or 25 feet, you will need to go to the next higher roof height. If your Mean Roof Height is higher than 30 feet, these charts do not apply. Review the diagram which illustrate the wall and roof zones and determine the wind zone in which the component is located. Determine the tributary area of the component. If the tributary area falls in between values, use the value of the smaller tributary area. Select the positive and negative wind pressures corresponding to the wall or roof zone where your component is located. Door pressures shown are for the most common door sizes and are worst case for heights ≤ 30 Feet.

Wall Pressure For All Roof Types

Mean Roof Height	15 Ft					20 Ft					<= 30 Ft				
	10	20	35	50	100	500	10	20	35	50	100	500	Effective Wind Area		
Tributary Area	38.1	36.3	35.0	34.1	32.4	28.4	40.4	38.5	37.1	36.1	34.3	30.1	Width	Height	Negative
Wall Positive Pressure	-41.4	-39.6	-38.2	-37.3	-35.6	-31.6	-43.8	-42.0	-40.5	-39.6	-37.7	-33.5	8	8	-48.2
Zone 4 Negative Pressure	-51.0	-47.5	-44.8	-43.0	-39.6	-31.6	-54.0	-50.4	-47.5	-45.6	-42.0	-33.5	10	10	-45.7
Zone 5 Negative Pressure	-51.0	-47.5	-44.8	-43.0	-39.6	-31.6	-54.0	-50.4	-47.5	-45.6	-42.0	-33.5	14	14	-41.8
Mean Roof Height	10	20	35	50	100	500	10	20	35	50	100	500	9	7	-48.3
Tributary Area	42.2	40.3	38.8	37.8	35.9	31.5	43.9	41.9	40.3	39.3	37.3	32.8	16	7	-45.0
Wall Positive Pressure	-45.8	-43.9	-42.4	-41.4	-39.5	-35.1	-47.6	-45.7	-44.1	-43.1	-41.1	-36.5	3	7	-54.6
Zone 4 Negative Pressure	-56.6	-52.8	-49.7	-47.8	-43.9	-35.1	-58.8	-54.7	-51.7	-49.6	-45.7	-36.5	6	7	-50.6
Zone 5 Negative Pressure	-56.6	-52.8	-49.7	-47.8	-43.9	-35.1	-58.8	-54.7	-51.7	-49.6	-45.7	-36.5	6	7	-50.6

Garage/Door Pressures

Mean Roof Height	15 Ft					20 Ft					<= 30 Ft				
	10	20	35	50	100	500	10	20	35	50	100	500	Effective Wind Area		
Tributary Area	38.1	36.3	35.0	34.1	32.4	28.4	40.4	38.5	37.1	36.1	34.3	30.1	Width	Height	Negative
Wall Positive Pressure	-41.4	-39.6	-38.2	-37.3	-35.6	-31.6	-43.8	-42.0	-40.5	-39.6	-37.7	-33.5	8	8	-48.2
Zone 4 Negative Pressure	-51.0	-47.5	-44.8	-43.0	-39.6	-31.6	-54.0	-50.4	-47.5	-45.6	-42.0	-33.5	10	10	-45.7
Zone 5 Negative Pressure	-51.0	-47.5	-44.8	-43.0	-39.6	-31.6	-54.0	-50.4	-47.5	-45.6	-42.0	-33.5	14	14	-41.8
Mean Roof Height	10	20	35	50	100	500	10	20	35	50	100	500	9	7	-48.3
Tributary Area	42.2	40.3	38.8	37.8	35.9	31.5	43.9	41.9	40.3	39.3	37.3	32.8	16	7	-45.0
Wall Positive Pressure	-45.8	-43.9	-42.4	-41.4	-39.5	-35.1	-47.6	-45.7	-44.1	-43.1	-41.1	-36.5	3	7	-54.6
Zone 4 Negative Pressure	-56.6	-52.8	-49.7	-47.8	-43.9	-35.1	-58.8	-54.7	-51.7	-49.6	-45.7	-36.5	6	7	-50.6
Zone 5 Negative Pressure	-56.6	-52.8	-49.7	-47.8	-43.9	-35.1	-58.8	-54.7	-51.7	-49.6	-45.7	-36.5	6	7	-50.6