



CITY OF COOPER CITY BUILDING DEPARTMENT

PHONE: 954-434-4300
EXT. #230, #227, #279
#262
FAX: 954-680-1439

SHUTTER DETAIL INFORMATION CHECKLIST & DIRECTIONS

WHAT TO INCLUDE WITH THE SHUTTER DETAIL INFORMATION SHEET

- COMPLETED NOTARIZED PERMIT APPLICATION
- TWO (2) COPIES OF THE HOMEOWNER ASSOCIATION AUTHORIZATION LETTER (If applicable)
- NOTICE OF COMMENCEMENT (Certified Copy or Electronic Copy (If Applicable))
- TWO (2) COPIES OF THE PRODUCT APPROVAL AND A DESIGN PRESSURES CHART.
ON THE PRODUCT APPROVAL, YOU WILL NEED TO HIGHLIGHT THE MAX. SPAN, GLASS SEPARATION, EDGE DISTANCE, FASTENER SPACING AND EACH MOUNTING OPTION TO BE USED. WRITE THE OPENING NUMBER NEXT TO EACH OPTION. WRITE THE OPENING NUMBERS THAT APPLY, NEXT TO THOSE OPTIONS.
- TWO (2) COPIES FLOOR PLAN
SHOW THE LOCATION OF EACH OPENING TO BE SHUTTERED. EACH OPENING SHOULD HAVE A NUMBER THAT CORRESPONDS TO THE SHUTTER DETAILED INFORMATION SHEET.
- TWO (2) COPIES DESIGN CRITERIA – FBC 2010 ASCE7-10 FIG 6-3 FBC170 MPH (3 SEC GUST) EXP. C
- PLEASE IDENTIFY ON LAYOUT SHEET WHICH OPENING SHALL BE DESIGNATED AS MEANS OF ESCAPE FBC R310.4

DIRECTION ON FILLING OUT THE SHUTTER DETAIL INFORMATION SHEET

COLUMN #1 (*OPENING #*) THESE NUMBERS SHOULD CORRESPOND TO A FLOOR PLAN (*You must provide*)

COLUMN #2 (*SHUTTER TYPE*) PROVIDE THE TYPE OF SHUTTER TO BE USED FOR EACH OPENING, P-PANEL, A-ACCORDION, W-WROLL-UP, O-OTHER.

COLUMN #3 (*NOA OR SHUTTER PRODUCT APPROVAL #*) PROVIDE THE PRODUCT APPROVAL NUMBER. TYPICALLY FOUND ON PAGE 1 OF THE PRODUCT APPROVAL. EXAMPLE (*01-0131.02*)

COLUMN #4 (*SHUTTER LENGTH/ SPAN*) PROVIDE THE TOTAL LENGTH / SPAN OF THE SHUTTER ACROSS THE OPENING FROM FASTENER TO FASTENER, INCLUDING THE EDGE DISTANCES.

COLUMN #5 (*TRIBUTARY AREA OF OPENING*) THIS IS DETERMINED USING THE SPAN OF EACH OPENING- *Example- If the opening measures 54" from fastener to fastener then:*

$$H (sq) / 3 = 54 (sq) / 3$$

$$2916 / 3 = 972 \text{ sq.in./144}$$



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TRIBUTARY AREA = 6.75 sq.ft. (10 S.F. MAX)

COLUMN #6 (*INTERIOR OR EXTERIOR ZONE CONDITION*) EXTERIOR OR ZONE 5 = 10% OF LEAST HORIZONTAL DIMENSION OR 0.4 TIMES EAVE HEIGHT, WHICHEVER IS SMALLER, BUT NOT LESS THAN HORIZONTAL DIMENSION OF 3ft TO THE OUTSIDE EDGE OF THE OPENING FROM ANY OUTSIDE CORNER. ALL OTHER OPENING WILL BE INTERIOR OR ZONE 4. SHOW DISTANCE TO ALL CORNER WINDOWS.

COLUMN #7 (*FASTENER EDGE, DISTANCE*) FIND THIS IN THE FASTENER SCHEDULES IN THE PRODUCT APPROVAL (NOA). IT IS THE DISTANCE FROM THE EDGE OF THE OPENING TO THE CENTER OF THE FASTENER TO BE USED TO INSTALL THE SHUTTER.

COLUMN #8 (*OPENING DESIGN LOAD CHART*) SEE ASCE7-05 DESIGN CHART PROVIDED, OTHERWISE A SIGNED AND SEALED CHART IS REQUIRED. BASED ON ROOF HEIGHT, OPENING LOCATION AND THE TRIBUTARY AREA OF THE OPENINGS, FIND THE PRESSURES COLUMN THAT APPLIES TO YOUR PROJECT.

COLUMN #9 (*GLASS DISTANCE SEPARATION*) FIND THIS IN THE PRODUCT APPROVAL (NOA). IT IS THE DISTANCE FROM THE BACK OF THE SHUTTER TO THE GLASS.

COLUMN #10 (*ANCHOR TYPE AND SPACING*) FIND THIS IN THE FASTENER SCHEDULES OF THE PRODUCT APPROVAL (NOA). YOU NEED TO INDICATE THE TYPE OF FASTENER TO BE USED AND THE SPACING BETWEEN THE FASTENERS.

NOTE: HIGHLIGHT ALL MOUNTING DETAILS ON THE PRODUCT APPROVAL & INDICATE THE NUMBER OF THE OPENING THAT APPLIES NEXT TO EACH DETAIL.

BROWARD COUNTY UNIFORM BUILDING PERMIT APPLICATION

Select One Trade: Building Electrical Plumbing Mechanical Other _____

Application Number: _____

Application Date: _____

1	Job Address: _____		Unit: _____		City: _____	
	Tax Folio No.: _____		Flood Zn: _____		BFE: _____	
	Floor Area: _____		Job Value: _____			
	Building Use: _____			Construction Type: _____		Occupancy Group: _____
	Present Use: _____			Proposed Used: _____		
	Description of Work:					
	<input type="checkbox"/> New <input type="checkbox"/> Addition <input type="checkbox"/> Repair <input type="checkbox"/> Alteration <input type="checkbox"/> Demolition <input type="checkbox"/> Revision <input type="checkbox"/> Other: _____					
Legal Description: _____					<input type="checkbox"/> Attachment	

2	Property Owner: _____		Phone: _____		Email: _____	
	Owner's Address: _____			City: _____		State: _____ Zip: _____

3	Contracting Co.: _____		Phone: _____		Email: _____	
	Company Address: _____			City: _____		State: _____ Zip: _____
	Qualifier's Name: _____		Owner-Builder: <input type="checkbox"/>		License Number: _____	

4	Architect/Engineer's Name: _____		Phone: _____		Email: _____	
	Architect/Engineer's Address: _____			City: _____		State: _____ Zip: _____
	Bonding Company: _____					
	Bonding Company Address: _____			City: _____		State: _____ Zip: _____
	Fee Simple Titleholder's name (if other than owner): _____					
	Fee Simple Titleholder's Address (If other than owner): _____			City: _____		State: _____ Zip: _____
	Mortgage Lender's Name: _____					
Mortgage Lender's Address: _____			City: _____		State: _____ Zip: _____	

Application is hereby made to obtain a permit to do the work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction. I understand that a separate permit must be secured for ELECTRICAL WORK, PLUMBING, SIGNS, WELLS, POOLS, FURNACES, BOILERS, HEATERS, TANKS, and AIR CONDITIONERS, etc.

OWNER'S AFFIDAVIT: I certify that all the foregoing information is accurate and that all work will be done in compliance with all applicable laws regulating construction and zoning.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

X _____
Signature of Property Owner or Agent

X _____
Signature of Qualifier

STATE OF FLORIDA
COUNTY OF BROWARD

STATE OF FLORIDA
COUNTY OF BROWARD

Sworn to (or affirmed) and subscribed before me this _____ day of _____, 20____ by _____

Sworn to (or affirmed) and subscribed before me this _____ day of _____, 20____ by _____

(Type / Print Property Owner or Agent Name)

(Type / Print Qualifier's Name)

NOTARY'S SIGNATURE as to Owner or Agent's Signature

NOTARY'S SIGNATURE as to Qualifier's Signature

Notary Name _____
(Print, Type or Stamp Notary's Name)

Notary Name _____
(Print, Type or Stamp Notary's Name)

Personally Known _____ or Produced Identification _____

Personally Known _____ or Produced Identification _____

Type of Identification Produced _____

Type of Identification Produced _____

APPROVED BY: _____ Permit Officer Issue Date: _____ Code in Effect: _____

A jurisdiction may use a supplemental page requesting additional information and citing other conditions, please inquire.
Note: If any development work as described in FS 380.04 Sec. 2 a-g is to be performed, a development permit must be obtained prior to the issuance of a building permit.

THE CITY OF



BROWARD COUNTY, FLORIDA

P.O. BOX 290910
9090 Southwest 50th Place
Cooper City, Florida 33329-0910
(954) 434-4300 Ext#230 • Fax (954) 680-1439
www.coopercityfl.org

PERMIT NUMBER:

PLAN REVIEW NUMBER:

TYPE	FEE	ADDTL FEES
PERMIT		
EDUCATION		
COUNTY		
BCPSF		
TECH FEE		
BOND		
PARKS		
PUBLIC SAFETY		
PUBLIC BLDGS		
FIRE		
ADDTL PERMIT FEES		
SUB TOTAL		
NOTARY FEE		
TOTAL		
INVOICE #		
RECEIPT #		

OFFICE USE ONLY				
DIVISION	APPROVED	DATE	REJECT	DATE
STRUCTURAL				
ELECTRICAL				
PLUMBING				
MECHANICAL				
UTILITES/ENGIN				
FIRE				
ZONING				

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENT ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES OR FEDERAL AGENCIES.

THE ISSUANCE OF A BUILDING PERMIT DOES NOT GIVE YOU PERMISSION TO VIOLATE DEED RESTRICTION AND/OR HOMEOWNER'S REGULATIONS. PLEASE CHECK DEED RESTRICTIONS BEFORE COMMENCING ANY CONSTRUCTION

OWNER'S AFFIDAVIT: I CERTIFY THAT ALL FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING. FURTHERMORE, I AUTHORIZE THE ABOVE NAMED CONTRACTOR TO DO THE WORK STATED.

**NOTICE OF COMMENCEMENT, CLERK OF COURTS, BROWARD COUNTY GOVERNMENTAL CENTER
RECORDING SECTION. ROOM 114. 115 S. ANDREWS AVENUE. FORT LAUDERDALE. FL 33302 PHONE: 954-357-7283**

URBAN PLANNING AND REDEVELOPMENT DEPARTMENT (D.P.E.P)
WWW.BROWARD.ORG/DEVELOPMENT
STATE OF FLORIDA DIVISION OF HOTELS AND RESTAURANT
PHONE: 954-956-5692

CITY OF COOPER CITY, FLORIDA • DEVELOPMENT SERVICES • BUILDING DIVISION
P.O. BOX 290910
9090 SOUTHWEST 50th PLACE
COOPER CITY, FLORIDA 33329-0910
(954) 434-4300 Ext#230 • Fax (954) 680-1439
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**CITY OF COOPER CITY
BUILDING DEPARTMENT**

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**SHUTTER DETAIL INFORMATION
BASED ON ASCE 7-10 FIG 6-3 170 MPH WIND LOAD EXPOSURE C**

OPENING NUMBER	SHUTTER TYPE P/A/W	SHUTTER PRODUCT APP. #	SHUTTER LENGTH/SPAN=(h)	TRIBUTARY AREA =10 S.F.	ZONE LOCATION *CORNER OR INTERIOR	FASTENER EDGE DISTANCE (NOA)	OPENING DESIGN WIND LOAD PER CHART	GLASS DISTANCE SEPERATION (NOA)	INFORMATION FROM PRODUCT APPROVALS				BUILD OUT TRACK
									ANCHOR TYPE AND SPACING				
									TOP	BOTTOM	SIDE	FLOOR MOUNT	
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

THE INFORMATION CONTAINED HEREIN WILL BE USED TO CONDUCT INSPECTIONS.

WALL CONSTRUCTION: 1st FLOOR MASONRY WOOD 2nd FLOOR MASONRY WOOD

*Corner Zone=40% of roof eave height- **BUT NOT LESS THAN 4%** of Least horizontal dimension (Never less than 3 ft.)
Shutter type-P=Panel A= Accordion W= Roll up Tributary Area= Sq.Ft. of opening

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 (P = 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 2		Zone 3		Zone 1		Zone 2		Zone 3		Zone 1		Zone 2		Zone 3		Zone 1		Zone 2		Zone 3			
		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
10	Gable/Hip	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
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	θ ≤ 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	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	-56.7	20.0	-87.5
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	34.6	-40.2	34.6	-47.0	34.6	-47.0	34.6	-42.1	34.6	-49.2	34.6	-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	33.6	-38.1	33.6	-44.9	33.6	-44.9	33.6	-39.9	33.6	-47.1	33.6	-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	32.4	-35.4	32.4	-42.2	32.4	-42.2	32.4	-37.1	32.4	-44.2	32.4	-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	31.4	-33.3	31.4	-40.2	31.4	-40.2	31.4	-35.0	31.4	-42.1	31.4	-42.1	36.3	-36.3	36.3	-43.7	36.3	-43.7

*** 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 30.4-2 B, Note 7, p. 337)

Effective Wind Area (ft ²)	Location	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 4		Zone 5		Zone 1		Zone 4		Zone 5		Zone 1		Zone 4		Zone 5		Zone 1		Zone 4		Zone 5			
		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
10	Wall	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	44.8	-49.4	44.8	-60.2	45.5	-51.1	45.5	-62.4
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	42.9	-47.1	42.9	-59.4	43.7	-51.1	43.7	-63.6
50		33.8	-37.0	33.8	-42.7	36.0	-39.4	36.0	-45.4	37.7	-41.3	37.7	-47.5	39.2	-42.9	39.2	-49.4	40.2	-44.2	40.2	-56.7	41.5	-48.9	41.5	-61.5
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	37.2	-40.9	37.2	-45.5	38.9	-42.2	38.9	-50.1	40.0	-46.0	40.0	-54.0
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	32.6	-36.3	32.6	-36.3	33.6	-37.4	33.6	-43.7	35.0	-42.1	35.0	-43.7

Garage Door Wind Loads

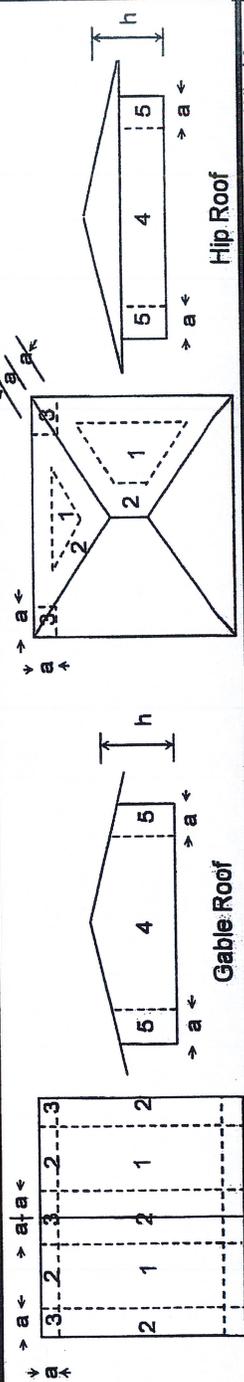
for a Building with 30-foot Mean Roof Height

Exposure C

Tables 1609.7(1) & (2), and Section 1609.3.1

Effective Wind Area	Roof Angle	Wind Load	
		Width	Height
8	0 - 10 degrees	35.2	-39.8
10	10	34.1	-38.2
14	14	32.3	-36.1
9	> 10 degrees	38.4	-43.4
16	7	36.8	-41.0

Design is based on the 3-second gust (wind velocity) for Risk Category II (general residential & commercial construction) per FBC 1620.2 Broward. These tables not for use with essential facilities or assembly occupancies.



For Effective Wind Areas between those given, values may be interpolated. Otherwise use the value associated with the lower Effective Wind Area. End Zone (a) shall be the smaller of 10% of Least Hor. Dist. or 40% of Mean Roof Height ('h'), but not less than 4% of Least Hor. Dist. or 3 ft. Identify the zone per the figure or information by others. Any questionable zone is to be considered the more critical zone.