

STEP 1: DETERMINE WIND VELOCITY  
PER LOCATION, RISK, AND EXPOSURE



PRECAST PADS  
SOLID CONCRETE GENERATOR PAD  
32" X 54" ELEVATED CONCRETE PADS  
PAD HEIGHT AND WEIGHT AS LISTED BELOW  
PERFORMANCE EVALUATION  
(ON-GRADE APPLICATIONS ONLY)

SPACE RESERVED FOR DIGITAL SEAL  
INFORMATION  
WHEN DIGITALLY SEALED, THIS NOTE  
SHALL BE FULLY COVERED ON SHEET 1  
WHEN PRINTED OR PHYSICALLY SEALED,  
SEAL OF CERTIFYING ENGINEER, AND  
DATE OF CERTIFICATION SHALL BE  
SHOWN TO THE RIGHT.  
IN ALL CASES, CERTIFYING ENGINEER  
AND CERT OF AUTH AS LISTED ON STAMP

PE SEAL REQUIRED  
COPIES NOT VALID  
FOR PERMIT

ASCE 7-10 & 7-16 ULT WIND VELOCITY TO ASD DESIGN PRESSURE AT GRADE CONVERSION CHART - HVHZ OR NON HVHZ									
EXAMPLE COUNTY	RISK	EXPOSURE		RISK	EXPOSURE		RISK	EXPOSURE	
	I	C	D	II	C	D	III, IV	C	D
FORT MYERS	145 MPH	29.4 PSF	35.6 PSF	160 MPH	35.8 PSF	43.4 PSF	175 MPH	42.8 PSF	51.9 PSF
PALM BEACH	150 MPH	31.5 PSF	38.1 PSF	170 MPH	40.4 PSF	49.0 PSF	180 MPH	45.3 PSF	54.9 PSF
BROWARD	156 MPH	34.0 PSF	41.2 PSF	170 MPH	40.4 PSF	49.0 PSF	180 MPH	45.3 PSF	54.9 PSF
MIAMI-DADE	165 MPH	38.1 PSF	46.1 PSF	175 MPH	42.8 PSF	51.9 PSF	186 MPH	48.4 PSF	58.6 PSF
MONROE	175 MPH	42.8 PSF	51.9 PSF	180 MPH	45.3 PSF	54.9 PSF	200 MPH	55.9 PSF	67.8 PSF
Kz (Exp C/D) (Table 26.10-1) =		0.85	1.03	Kd (Table 26.6-1) =		0.9	G (Section 26.11) =		0.85
		Kzt (Section 26.8.2) =		1.0		Ke (Section 26.9) =		1	
						Cf (Table 29.4-1) =		1.4	

NOTE: TABLE ABOVE INCLUDES A QUICK REFERENCE OF COMMON FLORIDA CONDITIONS (AT ULTIMATE DESIGN WIND VELOCITIES) FOR SITE-SPECIFIC CONDITIONS, CONSULT LOCAL BUILDING MUNICIPALITY. MAXIMUM DESIGN WIND PRESSURES AT GRADE PER SPECIFIED EXPOSURE REMAIN CONSTANT FOR ANY MAX WIND VELOCITY. FOR SITE-SPECIFIC WIND VELOCITY AND PRESSURE CONVERSIONS, SEE QR LINK PROVIDED BELOW.

STEP 2: DETERMINE CONCRETE PAD PER ALLOWABLE WIND PRESSURE

TABLE 2.1: CONCRETE PAD INFORMATION

PRECAST PADS	MODEL	L, IN	W, IN	H, IN	WT, LB
	32 X 54 SOLID CONCRETE PADS	32	54	PER TABLE	

TABLE 2: ALLOWABLE LATERAL ASD PRESSURE FOR PAD / GENERATOR COMBINATION

CONCRETE PAD		GENERATOR UNIT				DESIGN ALLOWANCES		
PAD HEIGHT, IN	PAD WEIGHT, LB	L, IN	W, IN	H, IN	WT, LB	ALLOWABLE ASD PRESSURE	EXP C	EXP D
6 in	900 lbs	27	48	33	300	34.0 PSF	150 MPH	140 MPH
		27	48	33	400	36.8 PSF	160 MPH	145 MPH
		27	48	33	500	39.6 PSF	165 MPH	150 MPH
12 in	1800 lbs	27	48	33	300	38.4 PSF	165 MPH	150 MPH
		27	48	33	400	40.3 PSF	165 MPH	150 MPH
		27	48	33	500	42.1 PSF	170 MPH	156 MPH
18 in	2700 lbs	27	48	33	300	41.7 PSF	170 MPH	156 MPH
		27	48	33	400	43.1 PSF	175 MPH	156 MPH
		27	48	33	500	44.5 PSF	175 MPH	160 MPH
24 in	3600 lbs	27	48	33	300	42.4 PSF	170 MPH	156 MPH
		27	48	33	400	43.5 PSF	175 MPH	160 MPH
		27	48	33	500	44.5 PSF	175 MPH	160 MPH
30 in	4500 lbs	27	48	33	300	41.7 PSF	170 MPH	156 MPH
		27	48	33	400	42.6 PSF	170 MPH	156 MPH
		27	48	33	500	43.5 PSF	175 MPH	160 MPH
36 in	5400 lbs	27	48	33	300	40.5 PSF	170 MPH	150 MPH
		27	48	33	400	41.2 PSF	170 MPH	150 MPH
		27	48	33	500	41.9 PSF	170 MPH	156 MPH
42 in	6300 lbs	27	48	33	300	39.0 PSF	165 MPH	150 MPH
		27	48	33	400	39.6 PSF	165 MPH	150 MPH
		27	48	33	500	40.2 PSF	165 MPH	150 MPH
48 in	7200 lbs	27	48	33	300	37.4 PSF	160 MPH	145 MPH
		27	48	33	400	37.9 PSF	160 MPH	145 MPH
		27	48	33	500	38.4 PSF	165 MPH	150 MPH

- TABLE 2 NOTES:
- PAD WEIGHT CALCULATED BASED ON 150 PCF MIN STANDARD WEIGHT CONCRETE
  - CONCRETE MIN COMPRESSIVE STRENGTH TO BE  $f'_{c} \geq 6,000$  PSI AT 28 DAYS.
  - CONCRETE PAD HEIGHTS ARE MAXIMUMS FOR RATINGS PROVIDED. (EX: RATINGS FOR 18 IN PAD ARE ALSO APPLICABLE FOR 13 IN TO 17 IN PADS GIVEN IDENTICAL CONSTRUCTION & MATERIALS). 6" HEIGHT LISTED IS MINIMUM ALLOWABLE
  - GENERATOR UNIT SIZE TO MATCH INFO SHOWN IN TABLE 2 (+/- 1 IN TOLERANCE).
  - GENERATOR UNIT WEIGHT TO BE EQUAL OR GREATER THAN SHOWN FOR EACH RATING. (EX: 400 LB UNIT RATING APPLICABLE FOR UNITS 400 TO 499 LBS).
  - GENERATOR'S MANUFACTURER SPECS TO BE PROVIDED WITH THIS MASTER PLAN SHEET FOR SUBMISSION & CERTIFICATION.
  - UPLIFT HAS BEEN CONSIDERED IN DESIGN CALCULATIONS. UPLIFT CALCULATED AS THE MAXIMUM OF  $1.5/1.9 \times$  LATERAL PRESSURE &  $0.6 \times q_h$
  - FOR UNITS OR CONDITIONS REQUIRING GREATER ALLOWABLE PRESSURE, ADDITIONAL ENGINEERING MAY BE REQUIRED.

ALLOWABLE DESIGN PRESSURE

REQUIRED WIND LOAD DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED UNDER SEPARATE CERTIFICATION ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC LOAD REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE "ASD" CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

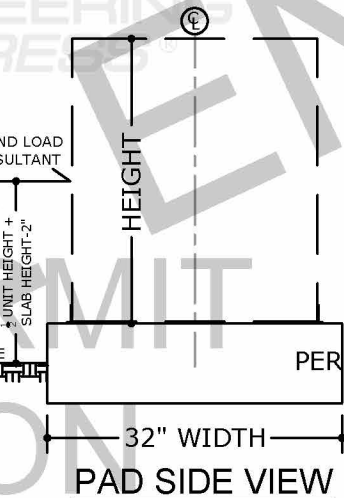
VISIT [ECALC.IO/32145](https://ecalculator.com/32145)

FOR ENGINEER CERTIFIED ORIGINALS  
& MORE INFORMATION ABOUT THIS DOCUMENT  
OR SCAN THIS QR CODE

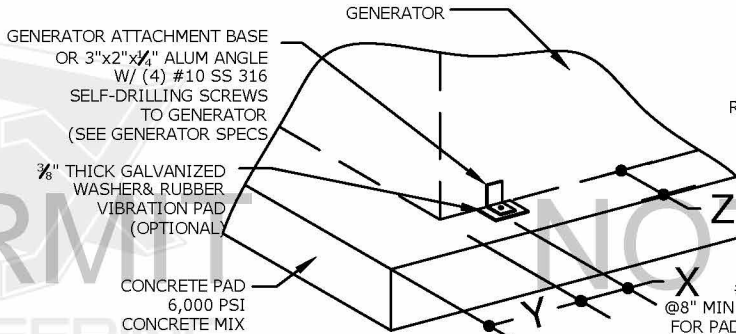
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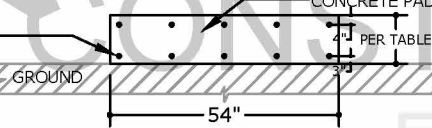
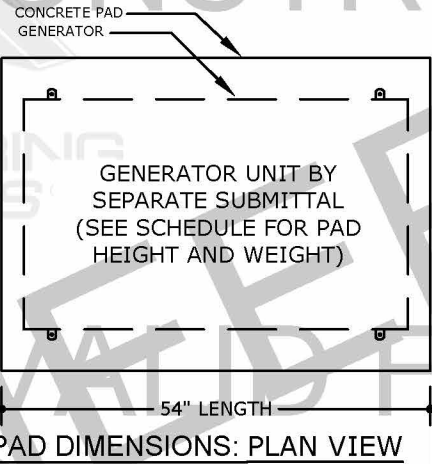
ISOMETRIC VIEW



GENERATOR MOUNTING CONFIGURATION:



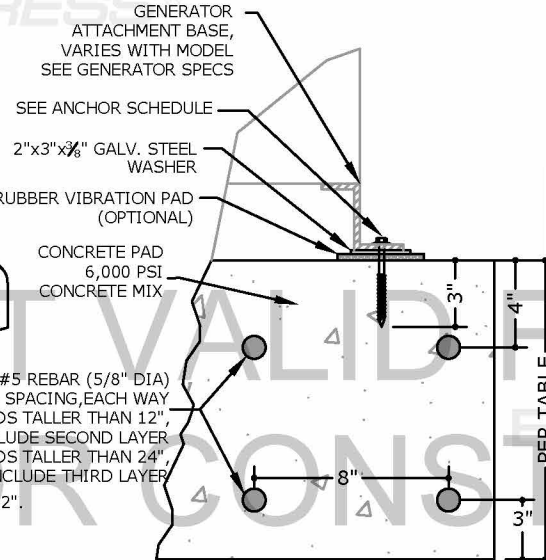
- NOTES:
- Y DISTANCE DEPEND ON GENERATOR BASE LENGTH, NO LESS THAN 2".
  - X DISTANCE 3" FROM UNIT EDGE TO CLIP.
  - Z DISTANCE DEPEND ON GENERATOR BASE WIDTH, NO LESS THAN ANCHOR REQUIREMENTS



ANCHOR TO PAD SCHEDULE:

SUBSTRATE	DESCRIPTION
CONCRETE: (6000 PSI MIN.)	(2) 3/8" DEWALT SCREW-BOLT+ OR EQUIVALENT, 2.5" FULL EMBED TO CONCRETE, 3" MIN. EDGE DISTANCE, 6" MIN. SPACING TO ANY ADJACENT ANCHOR. (4 TOTAL)

- NOTES:
- ANCHOR QUANTITY PER LONG SIDE
  - EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.
  - ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.
  - ENSURE MINIMUM SPACING TO ANY ADJACENT ANCHORS.
  - FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS TO INSTALL ANCHORS.



DESIGN NOTES

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE SEVENTH EDITION (2020).
- POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE.
- MAXIMUM DIMENSIONS AND WEIGHT OF CONCRETE PAD & GENERATOR UNIT SHALL CONFORM TO SPECIFICATIONS STATED  $\pm 1/2$ " TOLERANCE.
- THE AREA UNDER CONCRETE SLAB ON GROUND SHALL HAVE ALL VEGETATION, STUMPS, ROOTS, AND FOREIGN MATERIALS REMOVED PRIOR TO INSTALLATION ON COMPACTED SOIL AS VERIFIED BY OTHERS. THESE CONCRETE PADS HAVE BEEN DESIGNED FOR A MINIMUM BEARING CAPACITY OF 2,000 PSF AND MINIMUM SUBGRADE MODULUS = 100 PCL. SHOULD OTHER CONDITIONS OR MATERIALS BE ENCOUNTERED, THE ENGINEER OF RECORD SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE WORK.
- UPLIFT HAS BEEN CONSIDERED IN THE DESIGN CALCULATIONS. UPLIFT CALCULATED AS THE MAX OF  $1.5/1.9 \times$  LATERAL PRESSURE &  $0.6 \times q_h$
- SLIDING IS ASSUMED RESISTED BY 2" EMBEDMENT OF PAD IN GROUND ALONG WITH RESISTANCE FROM CONNECTED CABLING. NOMIAL SLIDING IS NOT ASSUMED A FAILURE CASE IN THIS DESIGN

GENERAL NOTES

- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
- ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, ET AL. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.15.
- HOLLOW PADS FOR USE WHERE APPLICABLE BY CODE. USE OF PADS MAY BE SUBJECT TO BUILDING DEPT APPROVAL
- WATER-TIGHTNESS OF EXISTING FINISHES SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR. CONTRACTOR SHALL ENSURE THAT ANY REMOVED OR ALTERED WATERPROOFING MEMBRANE IS RESTORED AFTER FABRICATION AND INSTALLATION OF STRUCTURE PROPOSED HEREIN. THIS ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY WATERPROOFING OR LEAKAGE ISSUES WHICH MAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.
- THE ROLE OF THIS ENGINEER FOR THIS PROJECT IS THAT OF SPECIALTY ENGINEER AND NOT THE ENGINEER OF RECORD. CONSEQUENTLY, THE ARCHITECT/ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
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PRECAST PADS  
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PRECAST, ELEVATED CONCRETE PADS  
FOR GENERATORS & MECHANICAL UNITS  
FBC 7TH ED (2020) & IBC (2020)

REMARKS	DATE	DRWN	CHKD
INIT ISSUE	10/07/20	CCB	FLB
ADDITIONAL HEIGHTS	6/02/21	CCB	FLB
LARGER GENERATORS	7/26/22	CCB	FLB

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