

ALUMINUM MECHANICAL UNIT STANDS HVHZ & NON-HVHZ

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

RICHARD NEET, P.E.
PE# 86488 CA# 9885



Digitally signed by
Richard Neel
Date: 2024.07.03
15:08:13-04'00'

FL 46880.1

MAXIMUM ALLOWABLE DESIGN PRESSURES:

AS NOTED IN DESIGN SCHEDULES

DESIGN NOTES:

DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED SEPARATELY ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE USING ASD METHODOLOGY. SITE-SPECIFIC PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7-22 AND THE STRUCTURAL PROVISIONS OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) SHALL BE LESS THAN OR EQUAL TO THE LATERAL AND UPLIFT DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

GENERAL NOTES

1. THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE STRUCTURAL PROVISIONS OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) AND THE 2020 ALUMINUM DESIGN MANUAL.
2. MAXIMUM DIMENSIONS AND WEIGHT OF A/C UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN, MINIMUM 75LB OR MAXIMUM AS LISTED HEREIN.
3. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
4. REACTION FORCES LISTED FOR USE WITH HOST STRUCTURE VERIFICATION ARE CALCULATED USING ASD METHODOLOGY. DESIGN PROFESSIONAL OF RECORD TO VERIFY APPLICABILITY AND/OR ADDITIONAL FACTORS FOR USE WITH HOST STRUCTURE VERIFICATION.
5. ALL FASTENERS TO BE #10 OR GREATER SAE GRADE 5, UNLESS NOTED OTHERWISE, CADMIUM PLATED OR OTHERWISE CORROSION RESISTANT MATERIAL AND SHALL COMPLY WITH CHAPTER J, SPECIFICATIONS FOR ALUM. STRUCTURES -SECTION 1, THE ALUMINUM ASSOCIATION, INC., & APPLICABLE FEDERAL, STATE, AND LOCAL CODES. PROVIDE (3) PITCHES MIN STAINLESS STEEL THREAD PLANE.
6. ALL EXTRUDED MEMBERS SHALL BE ALUMINUM ALLOY TYPE 6061-T6 OR 6005-T5, U.N.O.
7. ALL 22GA DEFORMED STEEL STRAPS USED FOR UNIT TIE-DOWNS SHALL BE $F_y = 36\text{KSI}$ MIN. STEEL. FABRICATION OF STEEL STRAPS SHALL BE BY STRAP MANUFACTURER ONLY.
8. ALL EXISTING CONCRETE SUBSTRATE SHALL HAVE MINIMUM f'_c COMPRESSIVE STRENGTH OF 3000 PSI AS VERIFIED BY OTHERS, U.N.O.
9. ALUMINUM WELDING SHALL BE PERFORMED IN ACCORDANCE WITH FBC SECTION 2003.8.1 WITH WELD FILLER ALLOYS MEETING ANSI/AWS A5.10 STANDARDS TO ACHIEVE ULTIMATE DESIGN STRENGTH IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL, TABLE J.2.1. SUGGESTED WELD FILLER: 5356 ELECTRODES. ALL ALUMINUM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOLERANCES, QUALITY AND METHODS OF CONSTRUCTION AS SET FORTH IN FBC SECTION 2003.2 AND THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE-ALUMINUM (D1.2). MINIMUM WELD IS $\frac{1}{8}$ " THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR IS RESPONSIBLE TO INSULATE MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
11. 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.
12. 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 & APPELLATE 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.
13. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
14. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
15. AC STANDS SHALL BE LABELED PER MIAMI-DADE REQUIREMENTS FOR NON-MANDATORY PRODUCT APPROVALS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.

**NOTE REGARDING USE OF THIS DOCUMENT &
USE OUTSIDE FLORIDA:**

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. THIS PRODUCT EVALUATION IS VALID FOR USE IN **FLORIDA ONLY**. USE OF THIS EVALUATION REQUIRES A REVIEW & CERTIFICATION BY A LOCAL DESIGN PROFESSIONAL WHO SHALL BE RESPONSIBLE FOR THE PROPER ADAPTATION OF THIS GENERAL PERFORMANCE EVALUATION TO ANY SITE-SPECIFIC PROJECT. CONTACT THIS OFFICE AT **ENGINEERINGEXPRESS.COM/QUOTE** FOR ASSISTANCE WITH YOUR PROJECT-SPECIFIC NEEDS & FOR ADAPTATION & CERTIFICATION OF THIS DOCUMENT OUTSIDE OF FLORIDA.

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FOR SITE-SPECIFIC DEVIATIONS
& MORE INFORMATION ABOUT THIS DOCUMENT
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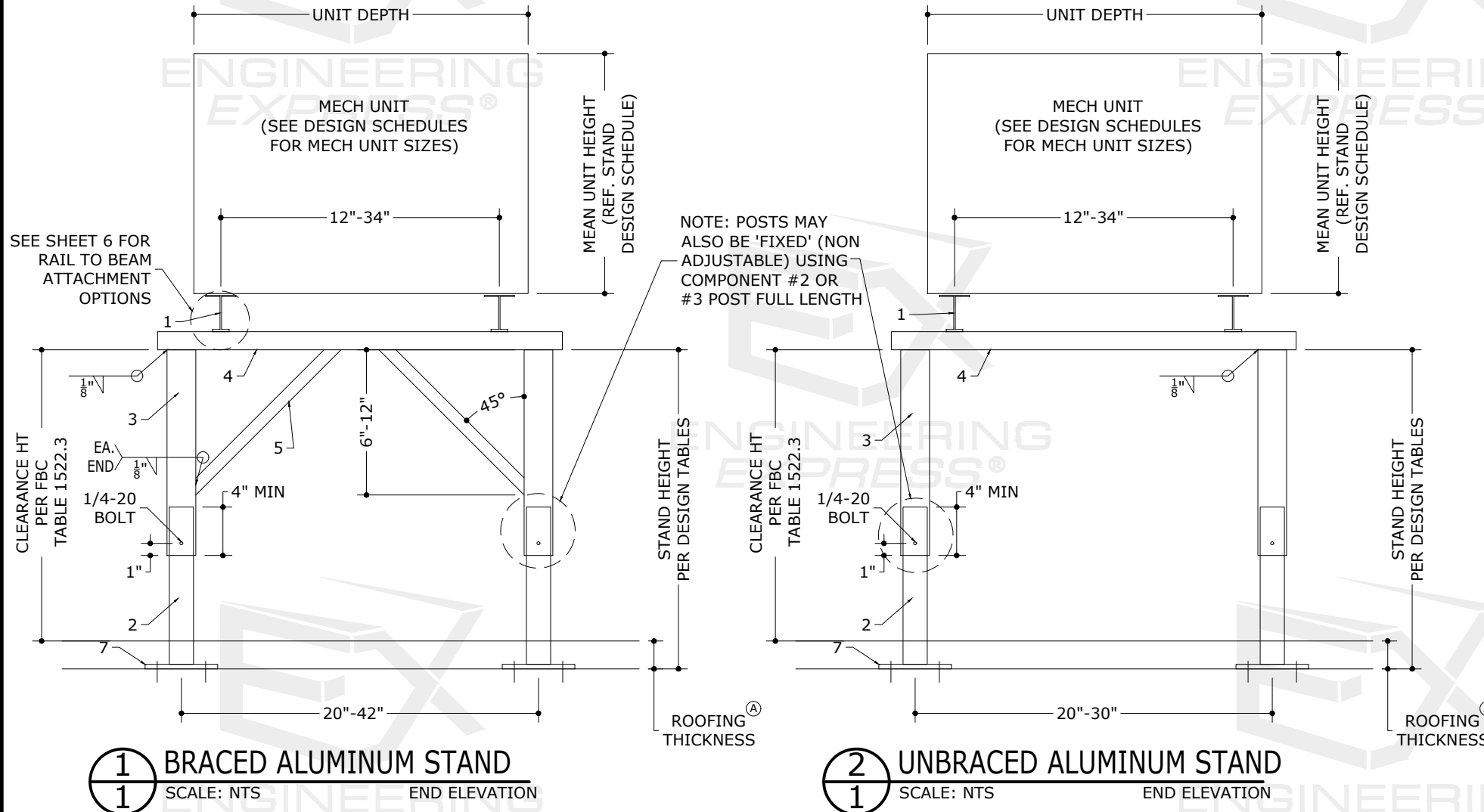
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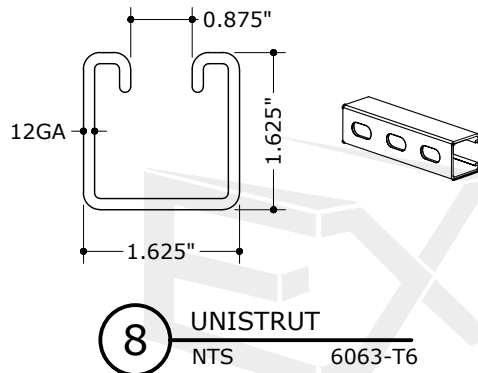
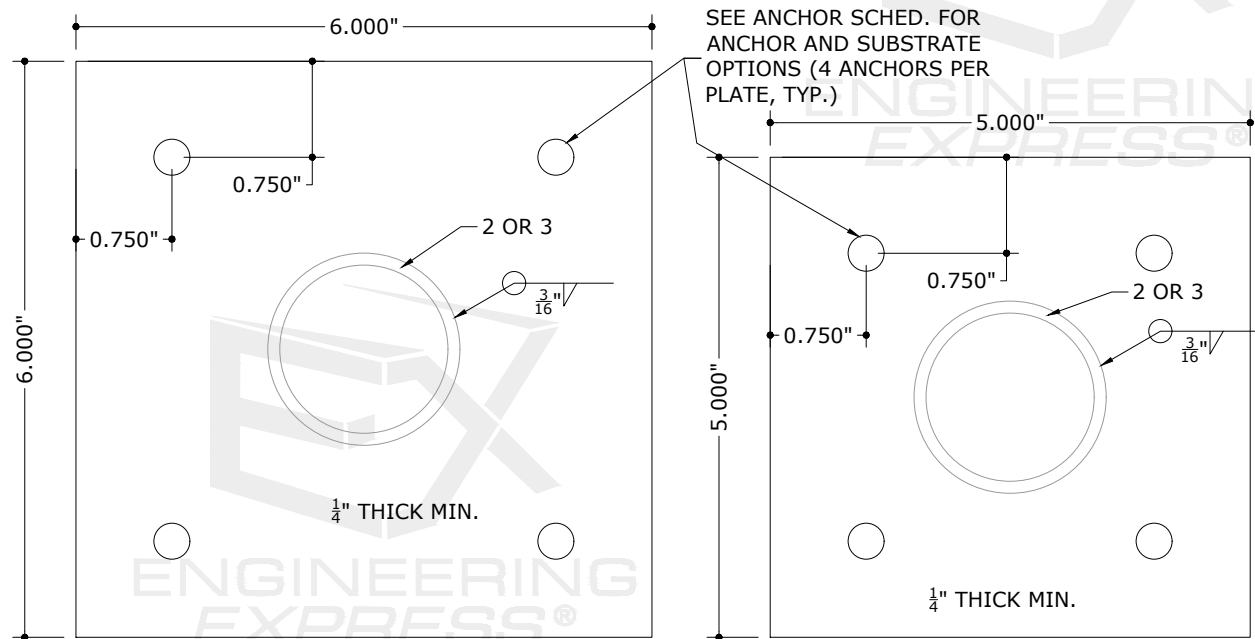
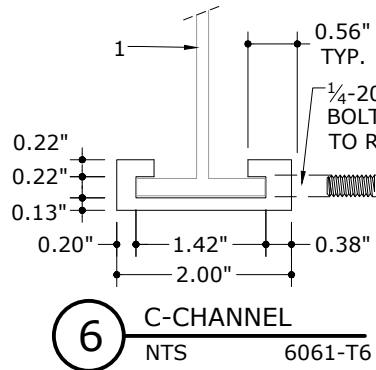
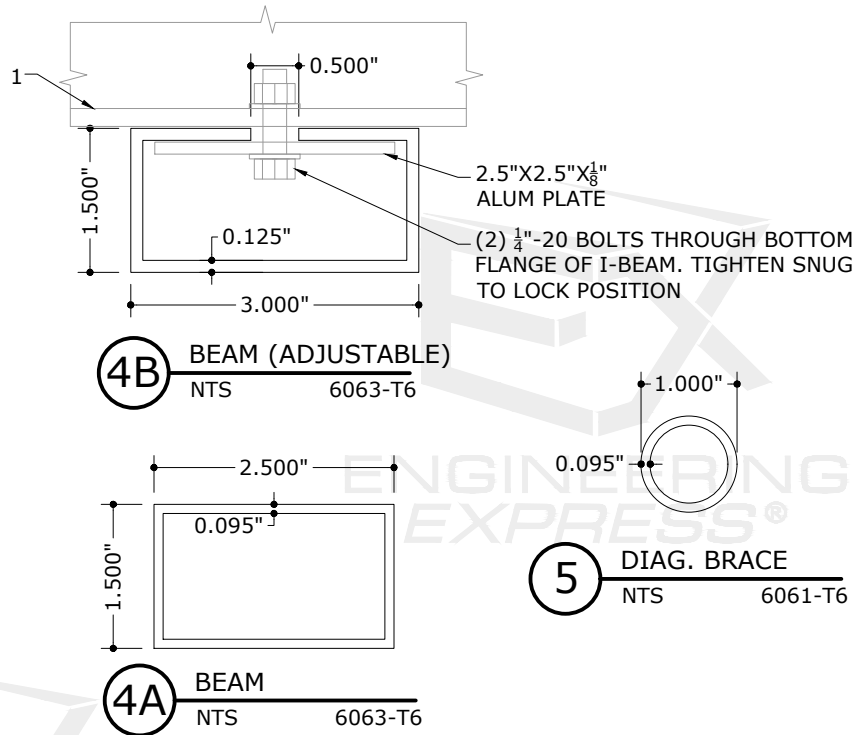
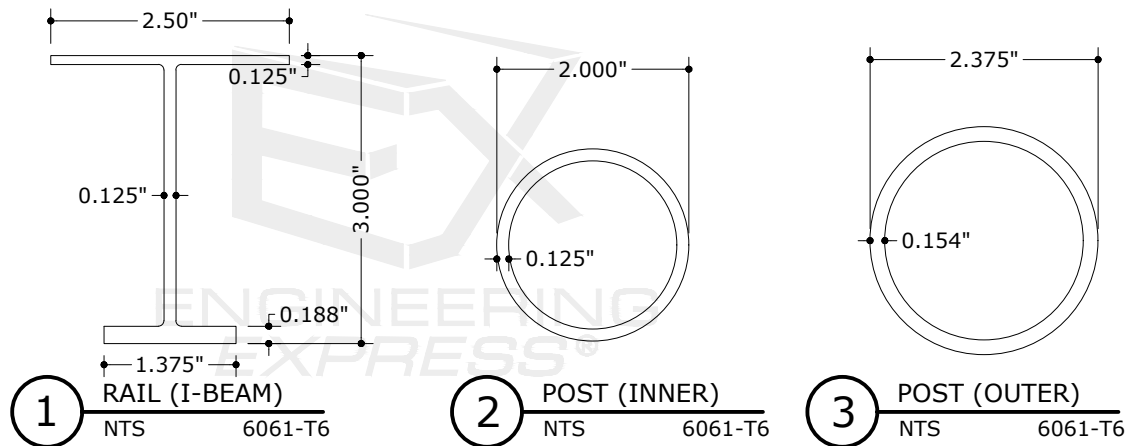
^A ROOFING FINISH THICKNESS SHALL BE ACCOUNTED FOR BY CONTRACTOR WHEN DETERMINING REQUIRED STAND HEIGHT IN ACCORDANCE WITH THE FBC OR THE LOCAL JURISDICTION.

REQUIRED STAND DEPTH
SHALL BE DETERMINED BY
CONTRACTOR

75# MIN./450 # MAX UNIT
WEIGHT AS VERIFIED BY
OTHERS, TYP.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER/ELEVATIONS
2	COMPONENTS/ANCHOR SCHEDULE
3	UNIT FACE AREA DIRECTIVE
4	BRACED STAND DESIGN SCHEDULE
5	UNBRACED STAND DESIGN SCHEDULE
6	ASSEMBLY & TIEDOWN DETAILS

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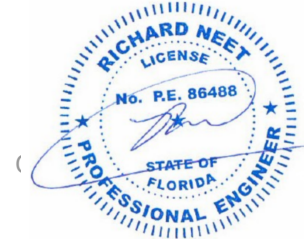
ANCHOR SCHEDULE

ANCHOR TYPE	HOST STRUCTURE	ANCHOR DESCRIPTION
1	STEEL	3/8"Ø SAE GRADE 5 SHEET METAL SCREWS WITH 1"Ø MIN. WASHER, TO STRUCTURAL A36 STEEL MEMBERS (3/16" MIN HOST THICKNESS)
2A	CONCRETE (3.0 KSI MIN)	3/8"Ø DEWALT CARBON STEEL SCREW-BOLT CONCRETE ANCHOR WITH 1"Ø MIN. WASHER, 2-1/2" EMBEDMENT & 6" MIN EDGE DISTANCE, SEE BASE PLATE COMPONENT #6 (ON SHEET 2) FOR TYPICAL ANCHOR SPACING.
2B	CONCRETE (5.0 KSI MIN)	1/2"Ø DEWALT MINI-DROPIN ANCHOR WITH 1.0" EMBEDMENT & 6" MIN EDGE DISTANCE, SEE BASE PLATE COMPONENT #6 (ON SHEET 2) FOR TYPICAL ANCHOR SPACING. NOTE: MAX ALLOWABLE PRESSURES LISTED IN THE STAND DESIGN SCHEDULE SHALL BE MULTIPLIED BY 0.8 WHEN USING THIS ANCHOR OPTION
3	WOOD*	*SEE DETAIL 4/4 OR SITE SPECIFIC ENGINEERING IS REQUIRED
4	STEEL	3/8"Ø SAE GRADE 5 THRUBOLT WITH 1"Ø MIN. WASHER & NUT, TO STRUCTURAL A36 STEEL MEMBERS (3/16" MIN HOST THICKNESS)

ANCHOR NOTES:

- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE FOR EACH ANCHOR.
- WOOD HOST STRUCTURE SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY. ALL CONCRETE SUBSTRATE SHALL BE UN-CRACKED CONCRETE AND SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, U.N.O. CONCRETE SUBSTRATE THICKNESS SHALL BE GREATER THAN OR EQUAL TO 1.5xANCHOR EMBEDMENT. INSTALL CONCRETE ANCHORS TO UN-CRACKED CONCRETE ONLY.
- MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES ROOFING FINISHES.
- WHERE EXISTING STRUCTURE IS WOOD TRUSSES, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD TRUSS MEMBERS, NOT INTO PLYWOOD.

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JULY 3, 2024

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REMARKS	DATE	DRWN	CHKD
INIT ISSUE	6/6/2024	RN	RN

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REMARKS	DRWN		CHKO	DATE
	RN	RN		
INIT ISSUE				6/6/2024
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EXAMPLE CONFIGURATIONS:

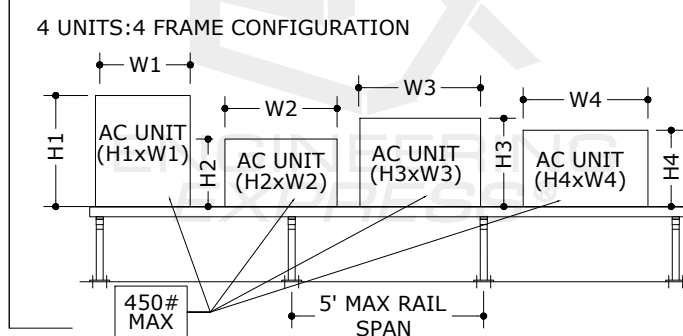
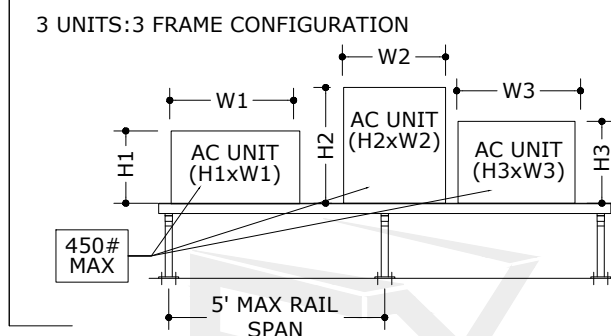
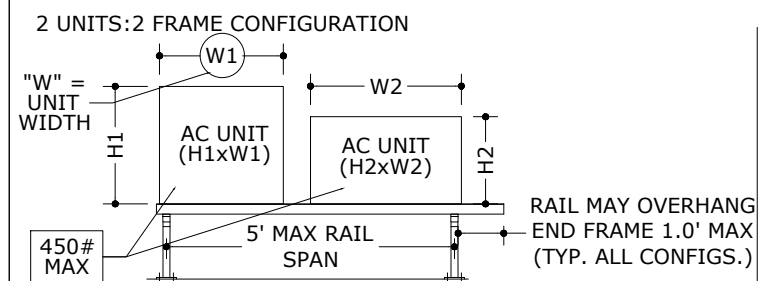
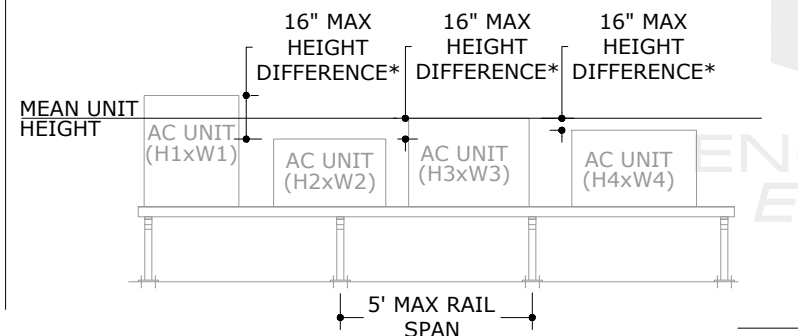
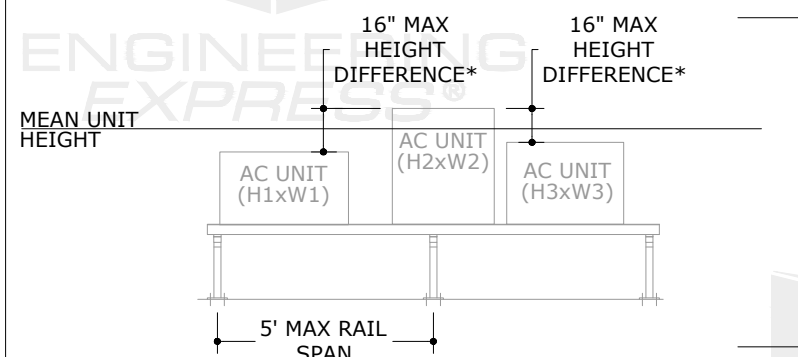


Diagram illustrating the dimensions for a two-unit AC unit configuration:

- MEAN UNIT HEIGHT**: Indicated by a horizontal line across the units.
- 16" MAX HEIGHT DIFFERENCE***: Indicated by a vertical dimension line between the top of the two units.
- AC UNIT (H1xW1)** and **AC UNIT (H2xW2)**: Labels for the two units.
- 5' MAX RAIL SPAN**: Indicated by a horizontal dimension line at the base of the rail.

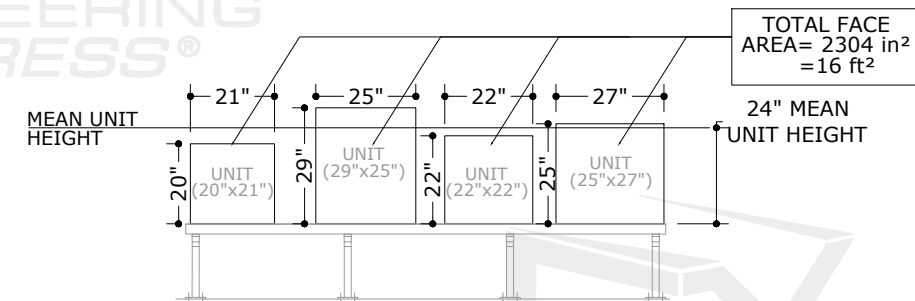


- TWO UNITS: $\frac{H_1+H_2}{2}$
- THREE UNITS: $\frac{H_1+H_2+H_3}{3}$
- FOUR UNITS: $\frac{H_1+H_2+H_3+H_4}{4}$
- "n" UNITS: $\frac{H_1+H_2+H_3+\dots+H_n}{n}$

- TWO UNITS: $(H1 \times W1) + (H2 \times W2)$
- THREE UNITS: $(H1 \times W1) + (H2 \times W2) + (H3 \times W3)$
- FOUR UNITS: $(H1 \times W1) + (H2 \times W2) + (H3 \times W3) + (H4 \times W4)$
- "n" UNITS: $(H1 \times W1) + \dots (Hn \times Wn)$

- FOUR UNITS: $\frac{H1+H2+H3+H4}{4} = \frac{20''+29''+22''+25''}{4} = 24''$ MEAN UNIT HEIGHT

- FOUR UNITS:
 $(H1 \times W1) + (H2 \times W2) + (H3 \times W3) + (H4 \times W4) = (20' \times 21') + (29' \times 25') + (22' \times 22') + (25' \times 27')$
 $= 2304 \text{ in}^2 = 16 \text{ ft}^2$



BRACED STAND DESIGN SCHEDULE

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PE# 86488 CA# 9885



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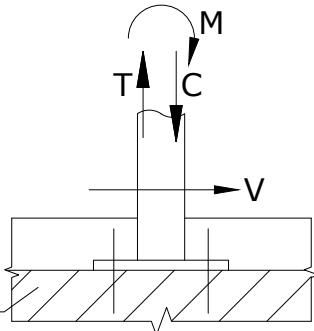
JULY 3, 2024

ROOFTOP BRACED STAND DESIGN SCHEDULE (MAXIMUM ALLOWABLE LATERAL/UPLIFT PRESSURES)

MAX UNIT HEIGHT	MAX FACE AREA	MAX POST HEIGHT	2 FRAMES		3 FRAMES		4 FRAMES		5 FRAMES		6 FRAMES		7 FRAMES		8 FRAMES		9 FRAMES		10 FRAMES	
			LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT
24.0 in	576.0 in ² (= 4.0 sqft)	18 in	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
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		30 in	170 psf	134 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
36.0 in	1008.0 in ² (= 7.0 sqft)	18 in	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
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60.0 in	8640.0 in ² (= 60.0 sqft)	18 in	27 psf	21 psf	40 psf	32 psf	54 psf	42 psf	67 psf	53 psf	80 psf	63 psf	94 psf	74 psf	107 psf	85 psf	120 psf	95 psf	134 psf	106 psf
		24 in	21 psf	17 psf	32 psf	25 psf	42 psf	33 psf	53 psf	42 psf	63 psf	50 psf	74 psf	58 psf	84 psf	67 psf	95 psf	75 psf	106 psf	83 psf
		30 in	18 psf	14 psf	27 psf	21 psf	35 psf	28 psf	44 psf	35 psf	53 psf	42 psf	62 psf	49 psf	71 psf	56 psf	80 psf	63 psf	89 psf	70 psf

DESIGN SCHEDULE NOTES:

1. MAXIMUM FRAME-TO-FRAME SPACING SHALL NOT EXCEED 5'-0" O.C.
2. ALLOWABLE STAND DEPTH SHALL BE PER THE ELVATION DETAILS ON SHEET 1.
3. A "FRAME" CONSISTS OF (2) POSTS CONNECTED WITH (1) BEAM. FOR EXAMPLE, A "2 FRAME" STAND WILL HAVE 4 POSTS TOTAL.
4. REFERENCE STAND DETAILS HEREIN FOR STAND COMPONENTS AND INSTALLATION OPTIONS.
5. SEE TIEDOWN DIRECTIVE FOR UNIT TIEDOWN REQUIREMENTS AND LIMITATIONS.
6. UNIT OR STAND DIMENSIONS OUTSIDE THE PARAMETERS LISTED IN THIS SCHEDULE WILL REQUIRE SEPARATE SITE SPECIFIC ENGINEERING.
7. REQUIRED DESIGN PRESSURES FOR INSTALLATION SHALL BE CALCULATED ON A SITE SPECIFIC BASIS AND BE LESS THAN OR EQUAL TO THE MAX ALLOWABLE PRESSURES LISTED IN THIS DRAWING.
8. INTERPOLATION BETWEEN UNIT HEIGHTS, FACE AREA OR POST HEIGHT IS **NOT** PERMITTED.
9. THE UNIT DEPTH SHALL NOT EXCEED THE MAX UNIT HEIGHT LISTED. SEE THE TIEDOWN STRAP SCHEDULE FOR MINIMUM ALLOWABLE UNIT DEPTHS.
10. AT GRADE INSTALLATIONS DO NOT REQUIRE UPLIFT FORCES (UPLIFT = 0 PSF)



HOST STRUCTURE

1 BASE PLATE REACTIONS
4 NTS

ENGINEER OF RECORD TO
VERIFY THAT THE HOST
STRUCTURE CAN SUPPORT
THE SERVICE LOAD
REACTIONS LISTED BELOW:

M = 3 KIP-IN
V = 0.5 KIPS
T = C = 0.8 KIPS

AT-GRADE BRACED STAND DESIGN SCHEDULE (MAXIMUM ALLOWABLE LATERAL/UPLIFT PRESSURES)

MAX UNIT HEIGHT	MAX FACE AREA	MAX POST HEIGHT	2 FRAMES		3 FRAMES		4 FRAMES		5 FRAMES		6 FRAMES		7 FRAMES		8 FRAMES		9 FRAMES		10 FRAMES	
			LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT
24.0 in	576.0 in ² (= 4.0 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
30.0 in	900.0 in ² (= 6.3 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1008.0 in ² (= 7.0 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1152.0 in ² (= 8.0 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1440.0 in ² (= 10.0 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1728.0 in ² (= 12.0 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	2160.0 in ² (= 15.0 sqft)	48 in	50 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
40.0 in	3200.0 in ² (= 22.2 sqft)	48 in	34 psf	0 psf	51 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
48.0 in	3840.0 in ² (= 26.7 sqft)	48 in	28 psf	0 psf	43 psf	0 psf	57 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
48.0 in	4800.0 in ² (= 33.3 sqft)	48 in	23 psf	0 psf	34 psf	0 psf	45 psf	0 psf	57 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
60.0 in	7200.0 in ² (= 50.0 sqft)	48 in	15 psf	0 psf	23 psf	0 psf	30 psf	0 psf	38 psf	0 psf	45 psf	0 psf	53 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
60.0 in	8640.0 in ² (= 60.0 sqft)	48 in	13 psf	0 psf	19 psf	0 psf	25 psf	0 psf	31 psf	0 psf	38 psf	0 psf	44 psf	0 psf	50 psf	0 psf	57 psf	0 psf	60 psf	0 psf

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ENGINE

UNBRACED STAND DESIGN SCHEDULE

RICHARD NEET, P.E.
PE# 86488 CA# 9885



SPACE RESERVED FOR
CERTIFYING ENGINEER'S
DIGITAL OR PHYSICAL SEAL
& DATE OF CERTIFICATION

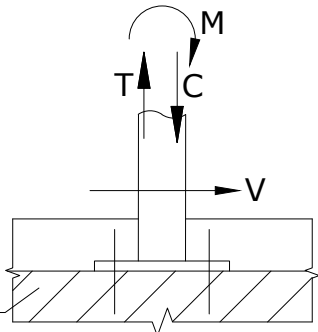
JULY 3, 2024

ROOFTOP UNBRACED STAND DESIGN SCHEDULE (MAXIMUM ALLOWABLE LATERAL/UPLIFT PRESSURES)

MAX UNIT HEIGHT	MAX FACE AREA	MAX POST HEIGHT	2 FRAMES		3 FRAMES		4 FRAMES		5 FRAMES		6 FRAMES		7 FRAMES		8 FRAMES		9 FRAMES		10 FRAMES	
			LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT
24.0 in	576.0 in ² (= 4.0 sqft)	18 in	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	181 psf	143 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	152 psf	120 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
30.0 in	900.0 in ² (= 6.3 sqft)	18 in	147 psf	116 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	116 psf	91 psf	174 psf	137 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	97 psf	77 psf	146 psf	115 psf	194 psf	153 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
36.0 in	1008.0 in ² (= 7.0 sqft)	18 in	131 psf	104 psf	197 psf	155 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	103 psf	82 psf	155 psf	122 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	87 psf	68 psf	130 psf	103 psf	173 psf	137 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
36.0 in	1152.0 in ² (= 8.0 sqft)	18 in	115 psf	91 psf	172 psf	136 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	90 psf	71 psf	136 psf	107 psf	181 psf	143 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	76 psf	60 psf	114 psf	90 psf	152 psf	120 psf	190 psf	150 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
36.0 in	1440.0 in ² (= 10.0 sqft)	18 in	92 psf	72 psf	138 psf	109 psf	184 psf	145 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	72 psf	57 psf	109 psf	86 psf	145 psf	114 psf	181 psf	143 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	61 psf	48 psf	91 psf	72 psf	121 psf	96 psf	152 psf	120 psf	182 psf	144 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
36.0 in	1728.0 in ² (= 12.0 sqft)	18 in	77 psf	60 psf	115 psf	91 psf	153 psf	121 psf	191 psf	151 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	60 psf	48 psf	90 psf	71 psf	121 psf	95 psf	151 psf	119 psf	181 psf	143 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	51 psf	40 psf	76 psf	60 psf	101 psf	80 psf	126 psf	100 psf	152 psf	120 psf	177 psf	140 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
36.0 in	2160.0 in ² (= 15.0 sqft)	18 in	61 psf	48 psf	92 psf	72 psf	122 psf	97 psf	153 psf	121 psf	184 psf	145 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	48 psf	38 psf	72 psf	57 psf	96 psf	76 psf	121 psf	95 psf	145 psf	114 psf	169 psf	133 psf	193 psf	152 psf	200 psf	158 psf	200 psf	158 psf
		30 in	40 psf	32 psf	61 psf	48 psf	81 psf	64 psf	101 psf	80 psf	121 psf	96 psf	142 psf	112 psf	162 psf	128 psf	182 psf	144 psf	200 psf	158 psf
40.0 in	3200.0 in ² (= 22.2 sqft)	18 in	41 psf	33 psf	62 psf	49 psf	83 psf	65 psf	103 psf	82 psf	124 psf	98 psf	145 psf	114 psf	165 psf	130 psf	186 psf	147 psf	200 psf	158 psf
		24 in	33 psf	26 psf	49 psf	39 psf	65 psf	51 psf	81 psf	64 psf	98 psf	77 psf	114 psf	90 psf	130 psf	103 psf	147 psf	116 psf	163 psf	129 psf
		30 in	27 psf	22 psf	41 psf	32 psf	55 psf	43 psf	68 psf	54 psf	82 psf	65 psf	96 psf	75 psf	109 psf	86 psf	123 psf	97 psf	137 psf	108 psf
48.0 in	3840.0 in ² (= 26.7 sqft)	18 in	34 psf	27 psf	52 psf	41 psf	69 psf	54 psf	86 psf	68 psf	103 psf	82 psf	120 psf	95 psf	138 psf	109 psf	155 psf	122 psf	172 psf	136 psf
		24 in	27 psf	21 psf	41 psf	32 psf	54 psf	43 psf	68 psf	54 psf	81 psf	64 psf	95 psf	75 psf	109 psf	86 psf	122 psf	96 psf	136 psf	107 psf
		30 in	23 psf	18 psf	34 psf	27 psf	46 psf	36 psf	57 psf	45 psf	68 psf	54 psf	80 psf	63 psf	91 psf	72 psf	102 psf	81 psf	114 psf	90 psf
48.0 in	4800.0 in ² (= 33.3 sqft)	18 in	28 psf	22 psf	41 psf	33 psf	55 psf	43 psf	69 psf	54 psf	83 psf	65 psf	96 psf	76 psf	110 psf	87 psf	124 psf	98 psf	138 psf	109 psf
		24 in	22 psf	17 psf	33 psf	26 psf	43 psf	34 psf	63 psf	43 psf	65 psf	51 psf	76 psf	60 psf	87 psf	69 psf	98 psf	77 psf	109 psf	86 psf
		30 in	18 psf	14 psf	27 psf	22 psf	36 psf	29 psf	46 psf	36 psf	55 psf	43 psf	64 psf	50 psf	73 psf	57 psf	82 psf	65 psf	91 psf	72 psf
60.0 in	7200.0 in ² (= 50.0 sqft)	18 in	18 psf	14 psf	28 psf	22 psf	37 psf	29 psf	46 psf	36 psf	55 psf	43 psf	64 psf	51 psf	73 psf	58 psf	83 psf	65 psf	92 psf	72 psf
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60.0 in	8640.0 in ² (= 60.0 sqft)	18 in	15 psf	12 psf	23 psf	18 psf	31 psf	24 psf	38 psf	30 psf	46 psf	36 psf	54 psf	42 psf	61 psf	48 psf	69 psf	54 psf	77 psf	60 psf
		24 in	12 psf	10 psf	18 psf	14 psf	24 psf	19 psf	30 psf	24 psf	36 psf	29 psf	42 psf	33 psf	48 psf	38 psf	54 psf	43 psf	60 psf	48 psf
		30 in	10 psf	8 psf	15 psf	12 psf	20 psf	16 psf	25 psf	20 psf	30 psf	24 psf	35 psf	28 psf	40 psf	32 psf	46 psf	36 psf	51 psf	40 psf

DESIGN SCHEDULE NOTES:

1. MAXIMUM FRAME-TO-FRAME SPACING SHALL NOT EXCEED 5'-0" O.C.
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9. THE UNIT DEPTH SHALL NOT EXCEED THE MAX UNIT HEIGHT LISTED. SEE THE TIEDOWN STRAP SCHEDULE FOR MINIMUM ALLOWABLE UNIT DEPTHS.
10. AT GRADE INSTALLATIONS DO NOT REQUIRE UPLIFT FORCES (UPLIFT = 0 PSF)



HOST STRUCTURE

1 BASE PLATE REACTIONS
5 NTS

ENGINEER OF RECORD TO
VERIFY THAT THE HOST
STRUCTURE CAN SUPPORT
THE SERVICE LOAD
REACTIONS LISTED BELOW:

M = 3 KIP-IN
V = 0.5 KIPS
T = C = 0.8 KIPS

AT-GRADE UNBRACED STAND DESIGN SCHEDULE (MAXIMUM ALLOWABLE LATERAL/UPLIFT PRESSURES)

MAX UNIT HEIGHT	MAX FACE AREA	MAX POST HEIGHT	2 FRAMES		3 FRAMES		4 FRAMES		5 FRAMES		6 FRAMES		7 FRAMES		8 FRAMES		9 FRAMES		10 FRAMES	
			LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT
24.0 in	576.0 in ² (= 4.0 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
30.0 in	900.0 in ² (= 6.3 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1008.0 in ² (= 7.0 sqft)	48 in	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1152.0 in ² (= 8.0 sqft)	48 in	54 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1440.0 in ² (= 10.0 sqft)	48 in	43 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	1728.0 in ² (= 12.0 sqft)	48 in	36 psf	0 psf	54 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
36.0 in	2160.0 in ² (= 15.0 sqft)	48 in	29 psf	0 psf	43 psf	0 psf	58 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
40.0 in	3200.0 in ² (= 22.2 sqft)	48 in	19 psf	0 psf	29 psf	0 psf	39 psf	0 psf	49 psf	0 psf	58 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
48.0 in	3840.0 in ² (= 26.7 sqft)	48 in	16 psf	0 psf	24 psf	0 psf	32 psf	0 psf	40 psf	0 psf	49 psf	0 psf	57 psf	0 psf	60 psf	0 psf	60 psf	0 psf	60 psf	0 psf
48.0 in	4800.0 in ² (= 33.3 sqft)	48 in	13 psf	0 psf	19 psf	0 psf	26 psf	0 psf	32 psf	0 psf	39 psf	0 psf	45 psf	0 psf	52 psf	0 psf	58 psf	0 psf	60 psf	0 psf
60.0 in	7200.0 in ² (= 50.0 sqft)	48 in	9 psf	0 psf	13 psf	0 psf	17 psf	0 psf	22 psf	0 psf	26 psf	0 psf	30 psf	0 psf	35 psf	0 psf	39 psf	0 psf	43 psf	0 psf
60.0 in	8640.0 in ² (= 60.0 sqft)	48 in	7 psf	0 psf	11 psf	0 psf	14 psf	0 psf	18 psf	0 psf	22 psf	0 psf	25 psf	0 psf	29 psf	0 psf	32 psf	0 psf	36 psf	0 psf

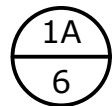
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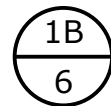
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AVCOA

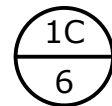
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NTS



NTS

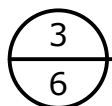


NTS

MAX UNIT HEIGHT (in)	MIN UNIT DEPTH (in)	MAX LATERAL PRESSURE (psf)	NO. OF STRAPS REQUIRED (PER UNIT)
UP TO 24	12-19	UP TO 80	0
		UP TO 120	0
		UP TO 200	2
	20	UP TO 80	0
		UP TO 120	0
		UP TO 200	0
UP TO 30	12-19	UP TO 80	0
		UP TO 120	2
		UP TO 200	2
	20	UP TO 80	0
		UP TO 120	0
		UP TO 200	0
UP TO 36	12-19	UP TO 80	0
		UP TO 120	2
		UP TO 200	3
	20	UP TO 80	0
		UP TO 120	0
		UP TO 200	2
UP TO 40	14-23	UP TO 80	0
		UP TO 120	2
		UP TO 200	3
	24	UP TO 80	0
		UP TO 120	2
		UP TO 200	3
UP TO 48	16-23	UP TO 80	3
		UP TO 120	4
		UP TO 200	5
	24	UP TO 80	0
		UP TO 120	2
		UP TO 200	4
UP TO 54	16-23	UP TO 80	4
		UP TO 120	5
		UP TO 200	6
	24	UP TO 80	2
		UP TO 120	3
		UP TO 200	5
UP TO 60	SITE SPECIFIC DESIGN REQUIRED		

$$\frac{2}{6}$$

NTS (SEE TIEDOWN STRAP SCHED. FOR STRAP REQUIREMENTS)

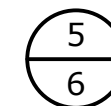


NTS

4 AT
5 SCAL

SCALE: NTS

WOOD (G=0.55 MIN.)



NTS

1. THE TIEDOWN CLIP AND STRAP REQUIREMENTS ON THIS SHEET DO NOT ACCOUNT FOR INTEGRATED FEET OR RAILS ON THE MECHANICAL UNITS. IF INTEGRATED TIEDOWN FEET OR RAILS EXIST ON THE UNIT, SEPARATE ENGINEERING IS REQUIRED.
2. THE TIEDOWN REQUIREMENTS ON THIS SHEET ACCOUNT FOR RECTANGULAR SHAPED UNITS ONLY. CIRCULAR OR OTHER SHAPED MECHANICAL EQUIPMENT (FANS, DUCTWORK, PIPES, ETC.) SHALL BE CERTIFIED SEPARATELY.

JULY 3, 2024

FL 46880.1



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FLORIDA BUILDING CODE

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RN	RN	6/6/2024

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SCALE: NTS UNLESS NOTED

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