

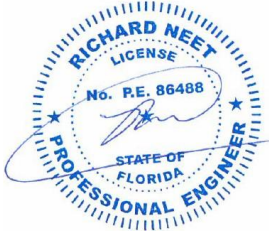
RT MOORE CO., INC.

ALUMINUM MECHANICAL EQUIPMENT STAND
VALID FOR USE WITHIN AND OUTSIDE THE HVHZ

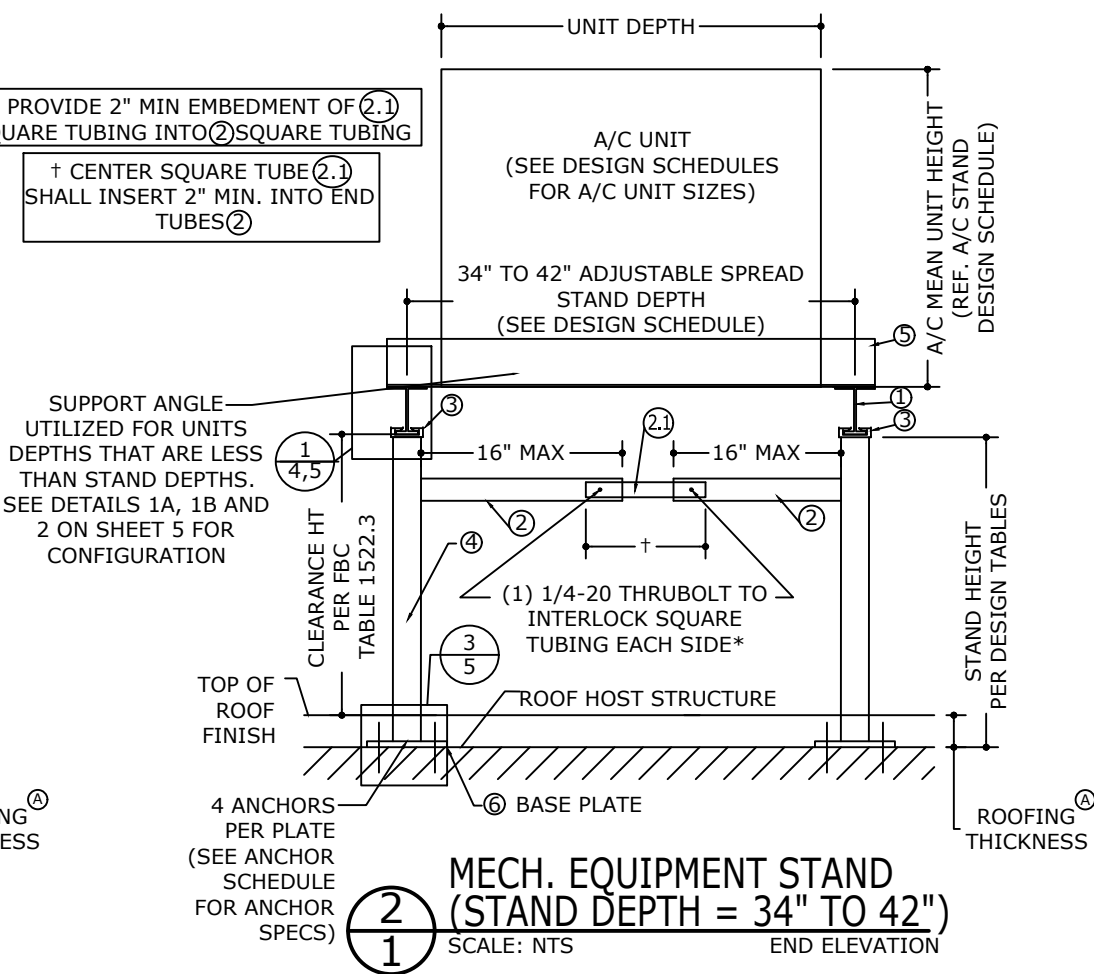
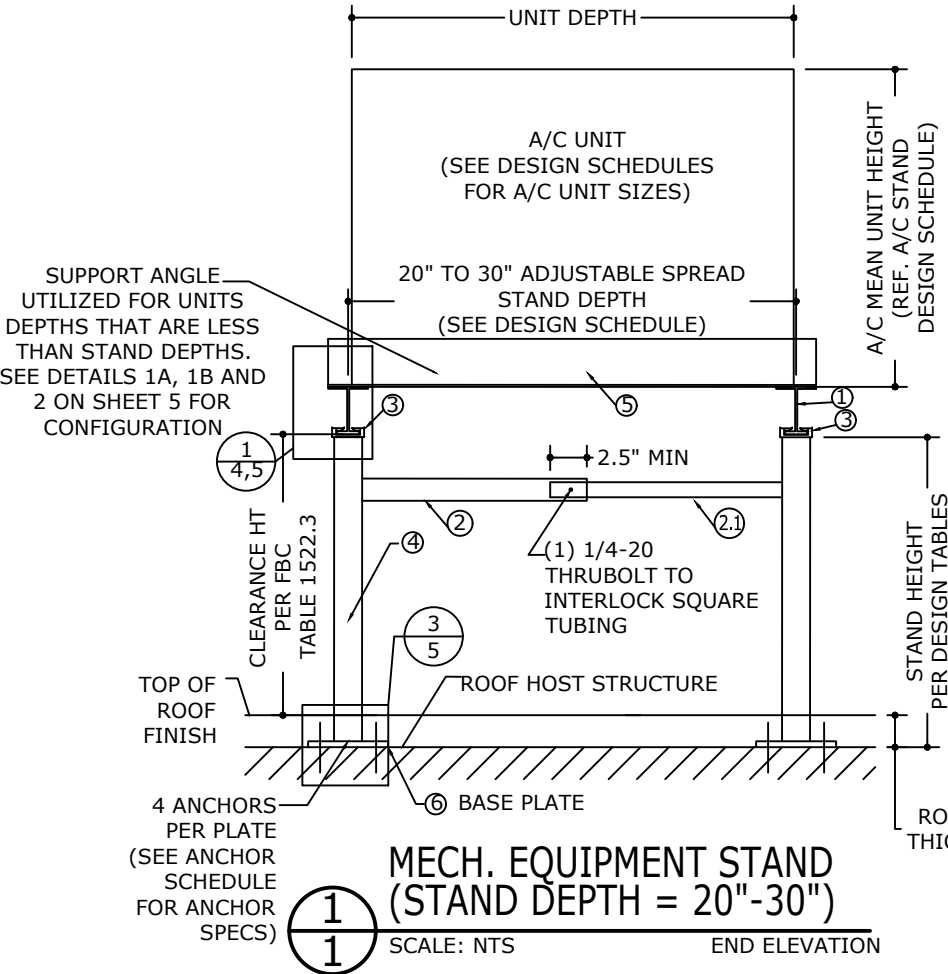
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RICHARD NEET, P.E.
PE# 86488 CA# 9885

JUNE 20, 2025



Digitally signed
by Richard Neet
Date: 2025.06.21
12:32:05 -04'00'



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UNIT CLEARANCE REQUIREMENTS PER FBC 1522.3

WIDTH OF EQUIPMENT (in)	HEIGHT OF LEGS (in)
UP TO 24	14
25 TO 36	18
37 TO 48	24
49 TO 60	30
61 AND WIDER	48

NOTE: EXCEPTIONS TO THESE CLEARANCE HEIGHTS SHALL BE APPROVED SEPARATELY BY THE AUTHORITY HAVING JURISDICTION

^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.

VISIT **ECALC.IO/85590**

FOR SITE-SPECIFIC DEVIATIONS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THIS QR CODE

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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

- 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.
- MAXIMUM DIMENSIONS AND WEIGHT OF A/C UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN, MINIMUM 75LB OR MAXIMUM AS LISTED HEREIN.
- 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.
- REACTION FORCES LISTED FOR USE WITH HOST STRUCTURE VERIFICATION ARE CALCULATED USING ASD METHODOLOGY. STRUCTURAL ENGINEER OF RECORD TO VERIFY APPLICABILITY AND/OR ADDITIONAL FACTORS FOR USE WITH HOST STRUCTURE VERIFICATION.
- 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 PAST THREAD PLANE.
- ALL EXTRUDED MEMBERS SHALL BE ALUMINUM ALLOY TYPE 6061-T6 OR 6005-T5.
- ALL 22GA DEFORMED STEEL STRAPS USED FOR UNIT TIE-DOWNS SHALL BE $F_y = 36$ KSI MIN. STEEL. FABRICATION OF STEEL STRAPS SHALL BE BY STRAP MANUFACTURER ONLY.
- ALL EXISTING CONCRETE SUBSTRATE SHALL HAVE MINIMUM f'_c COMPRESSIVE STRENGTH OF 3000 PSI AS VERIFIED BY OTHERS, U.N.O.
- 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.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- 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.
- 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.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- AC STANDS SHALL LABELED PER REQUIREMENTS FOR NON-MANDATORY PRODUCT APPROVALS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE. LABEL TO INCLUDE MANUFACTURER NAME, MANUFACTURER CITY/STATE AND FBC APPROVAL NUMBER.

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317-989-9476

Aluminum Mechanical Equipment Stand
Florida Statewide Approval
Florida Building Code

DATE	DRWN	CHKD	INIT	ISSUE
5/29/2025	RN	RN		

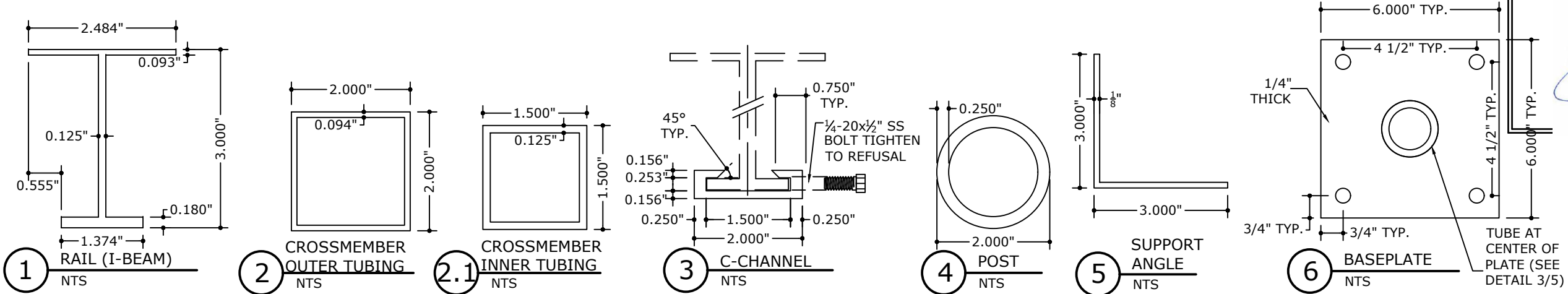
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STAND COMPONENTS



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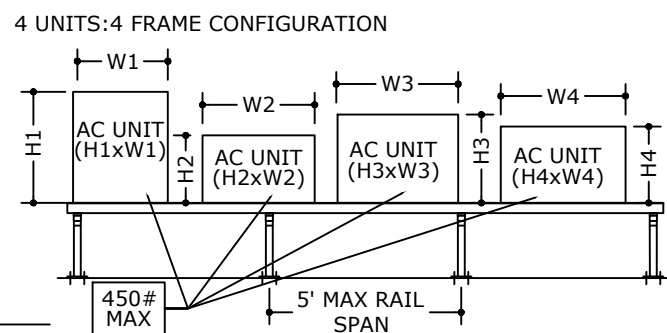
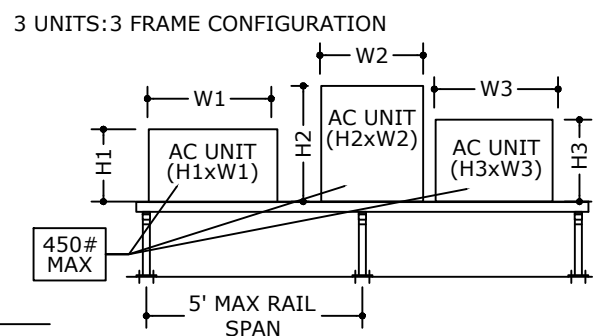
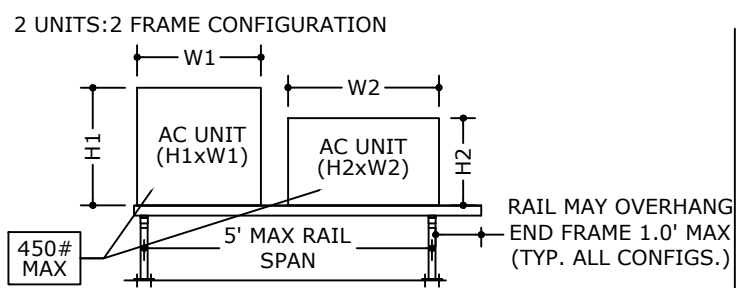
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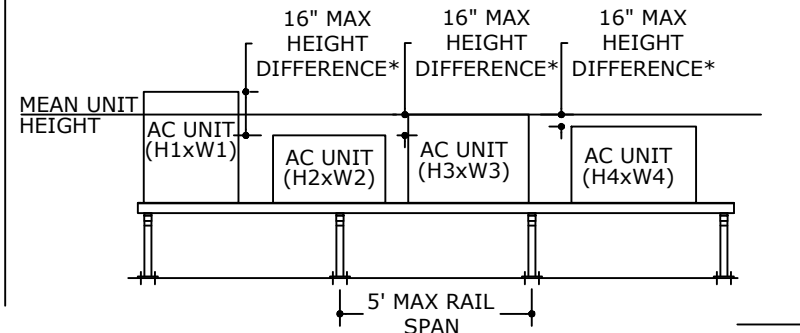
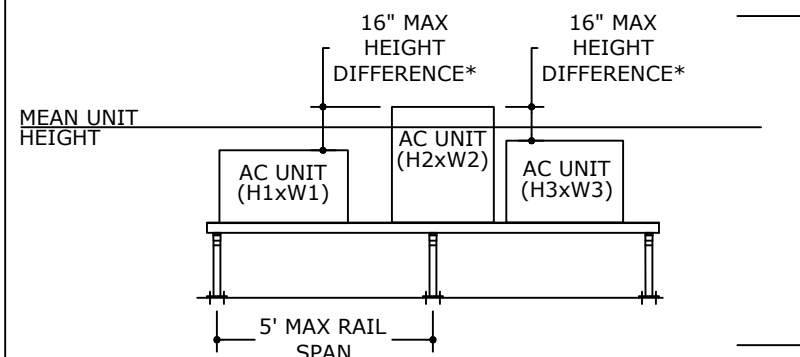
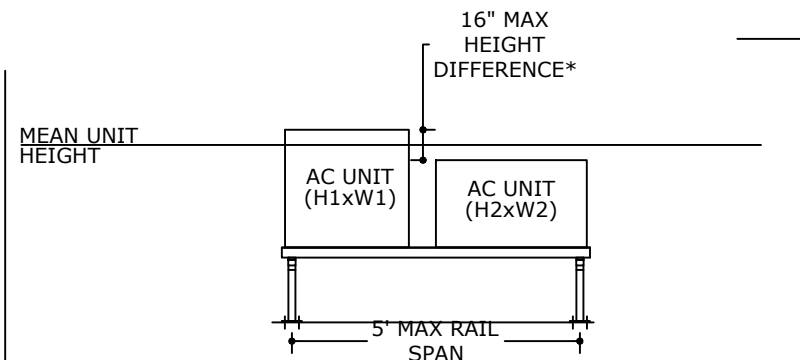
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MEAN UNIT HEIGHT & MAX FACE AREA CALCULATION DIRECTIVE: THIS DIRECTIVE SHALL BE USED TO CALCULATE THE MEAN UNIT HEIGHT & MAXIMUM FACE AREA OF ANY MULTIPLE UNIT CONFIGURATION.

EXAMPLE CONFIGURATIONS:



NOTE: THE NUMBER OF UNITS PER STAND CONFIGURATION MAY BE UNLIMITED PROVIDED THAT MULTIPLE UNITS CONFORM TO THE MEAN UNIT HEIGHT & MAXIMUM UNIT FACE AREA RESTRICTIONS UTILIZED IN THE DESIGN SCHEDULES.



*MAXIMUM ALLOWABLE HEIGHT DIFFERENCE BETWEEN ANY UNITS IN A MULTIPLE UNIT CONFIGURATION IS RESTRICTED TO 16" MAX.

FORMULAS USED FOR DETERMINING MEAN UNIT HEIGHT & MAXIMUM UNIT FACE AREA:

1. CALCULATE THE MEAN UNIT HEIGHT BY THE FOLLOWING EQUATION:

- 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: $\frac{H_1+H_2+H_3+\dots H_n}{n}$

2. CALCULATE THE MAXIMUM UNIT FACE AREA BY THE FOLLOWING EQUATION:

- TWO UNITS: $(H_1 \times W_1) + (H_2 \times W_2)$
- THREE UNITS: $(H_1 \times W_1) + (H_2 \times W_2) + (H_3 \times W_3)$
- FOUR UNITS: $(H_1 \times W_1) + (H_2 \times W_2) + (H_3 \times W_3) + (H_4 \times W_4)$
- "n" UNITS: $(H_1 \times W_1) + \dots (H_n \times W_n)$

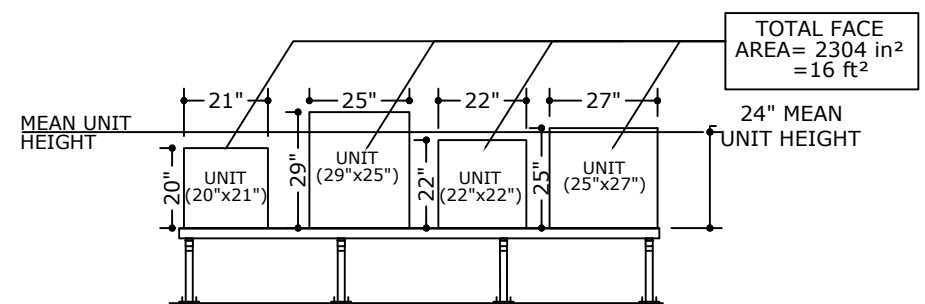
EXAMPLE SCENARIO:

1. CONSIDER A FOUR UNIT CONFIGURATION WITH THE DIMENSIONS AS SHOWN BELOW.
2. CALCULATE THE MEAN UNIT HEIGHT.

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

3. CALCULATE THE MAXIMUM FACE AREA.

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



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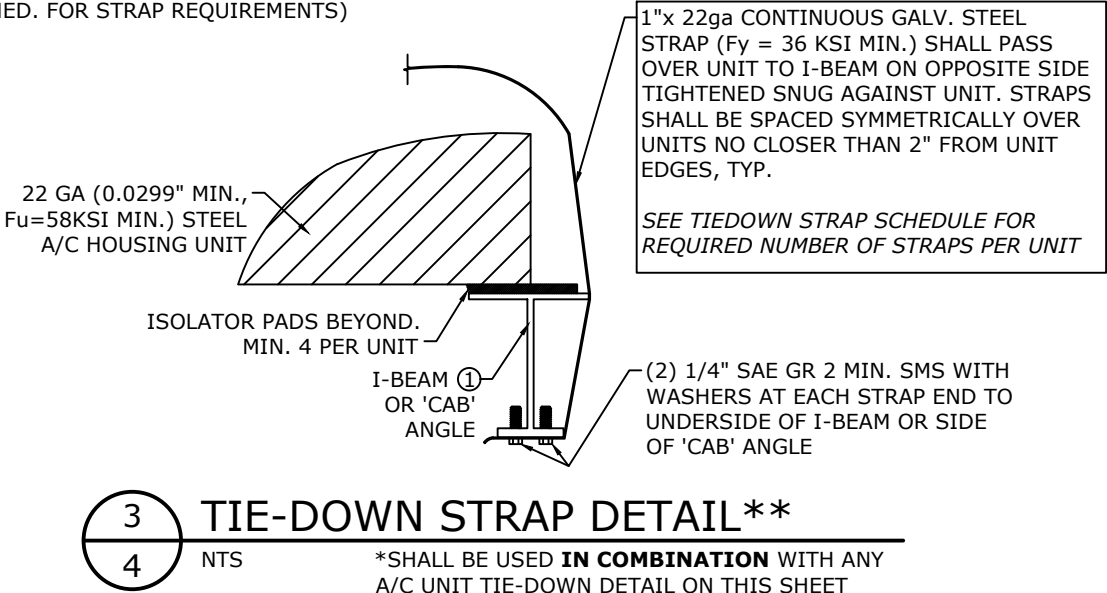
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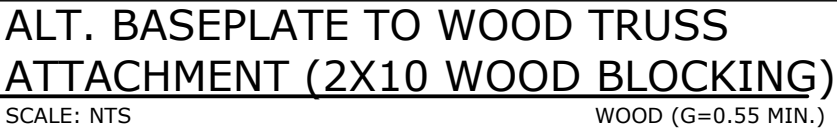


MAX UNIT HEIGHT (in)	MIN UNIT DEPTH (in)	MAX LATERAL PRESSURE (psf)	NO. OF STRAPS REQUIRED (PER UNIT)
UP TO 24	12-19	UP TO 80	0
		UP TO 120	0
		UP TO 200	2
	20	UP TO 80	0
		UP TO 120	0
		UP TO 200	0
UP TO 30	12-19	UP TO 80	0
		UP TO 120	2
		UP TO 200	2
	20	UP TO 80	0
		UP TO 120	0
		UP TO 200	0
UP TO 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		

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.



3 TIE-DOWN STRAP DETAIL**
4 NTS *SHALL BE USED **IN COMBINATION** W/
A/C UNIT TIE-DOWN DETAIL ON THIS S



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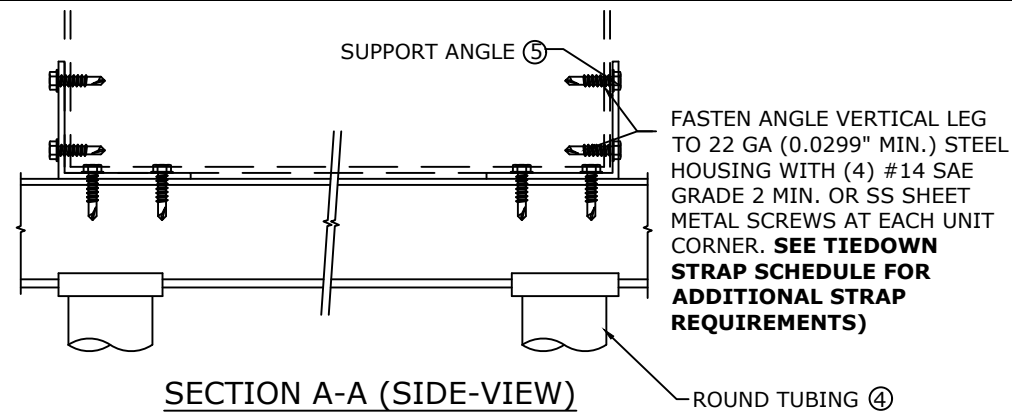
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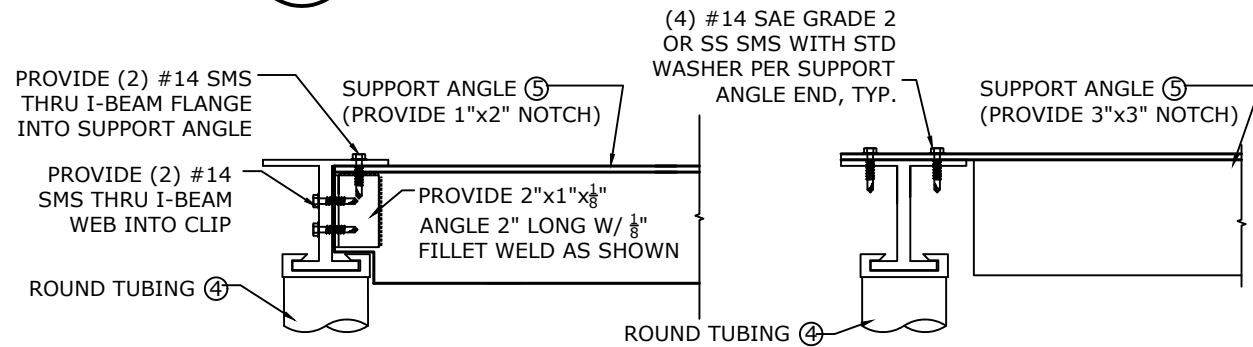
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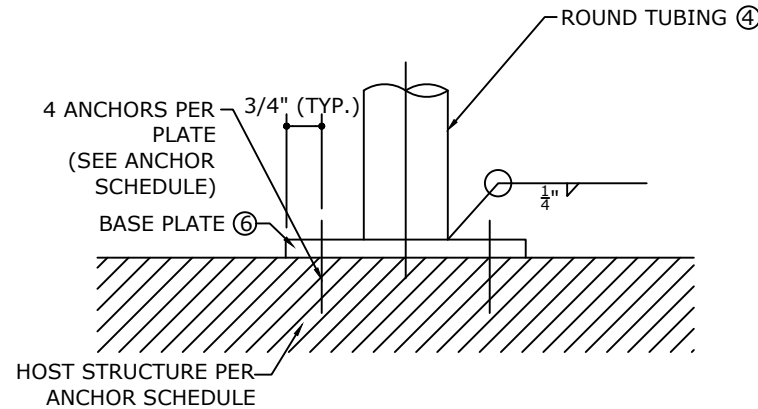
SECTION A-A (SIDE-VIEW)

FASTEN ANGLE VERTICAL LEG
TO 22 GA (0.0299" MIN.) STEEL
HOUSING WITH (4) #14 SAE
GRADE 2 MIN. OR SS SHEET
METAL SCREWS AT EACH UNIT
CORNER. **SEE TIEDOWN
STRAP SCHEDULE FOR
ADDITIONAL STRAP
REQUIREMENTS)**



1B AT
5 NTS

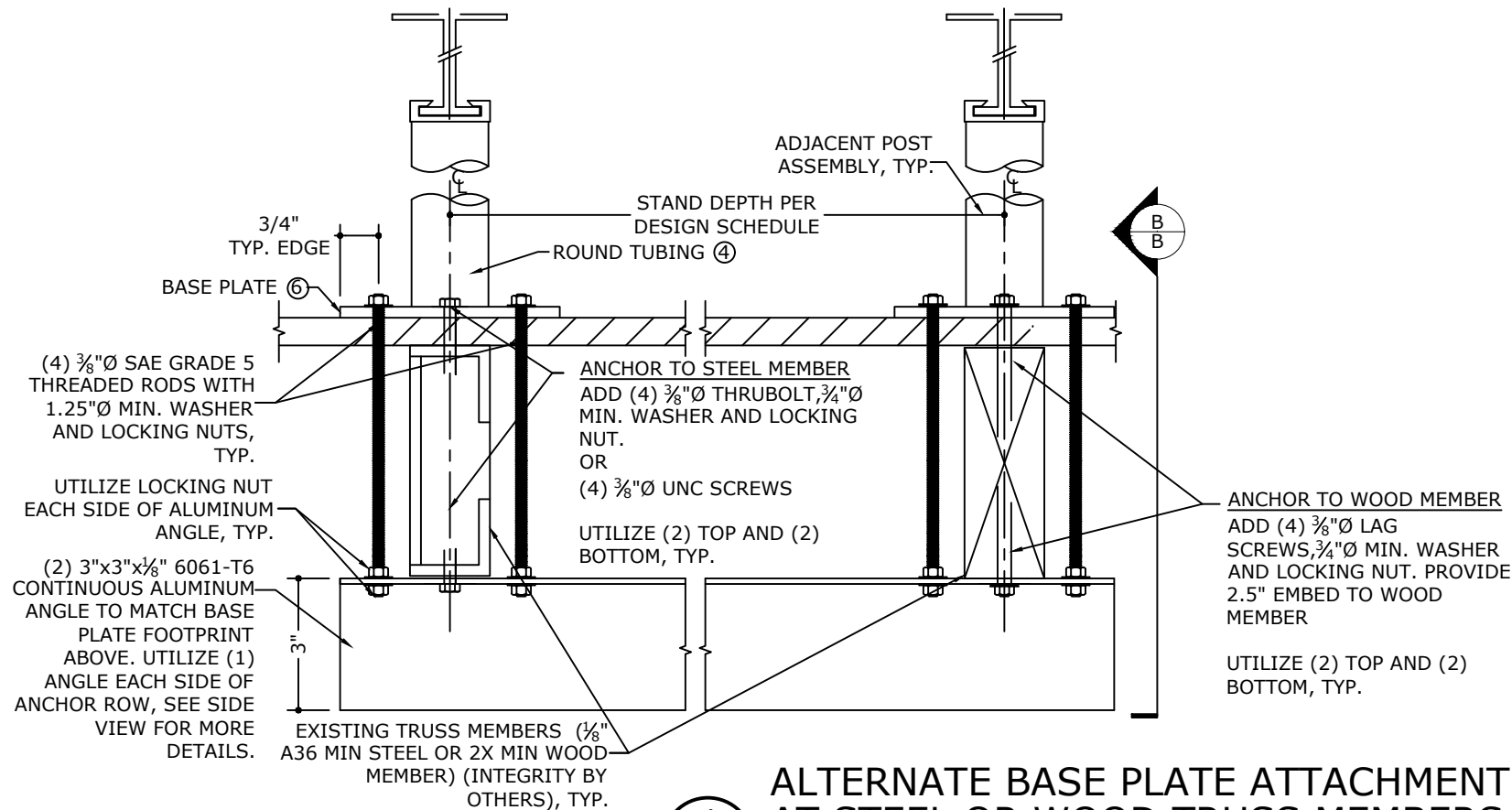
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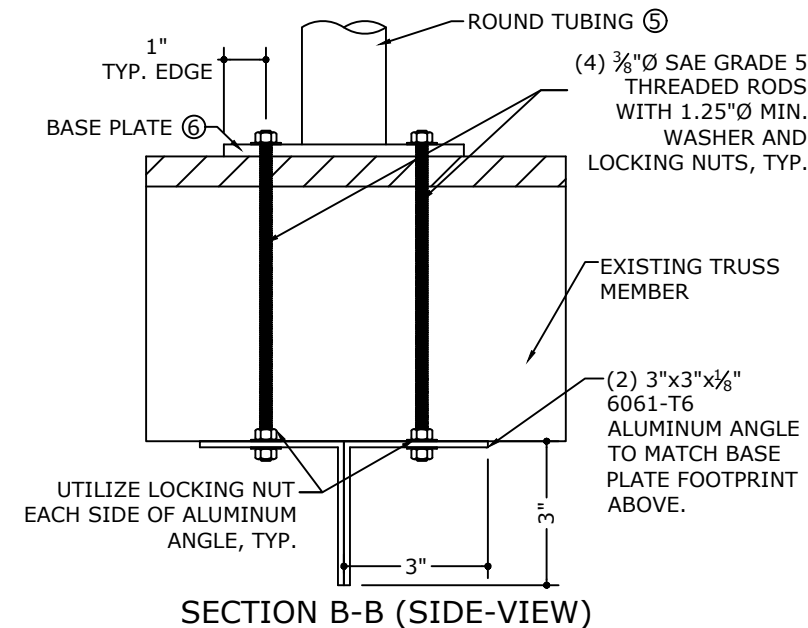
ANCHOR TYPE	HOST STRUCTURE	ANCHOR DESCRIPTION
1	STEEL	3/8"Ø SAE GRADE 5 SHEET METAL SCREWS WITH 1"Ø MIN. WASHER, TO STRUCTURAL A36 STEEL MEMBERS (3/16" MIN HOST THICKNESS)
2A	CONCRETE (3.0 KSI MIN)	3/8"Ø DEWALT CARBON STEEL SCREW-BOLT CONCRETE ANCHOR WITH 1"Ø MIN. WASHER, 2-1/2" EMBEDMENT & 6" MIN EDGE 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 4/5 OR SITE SPECIFIC ENGINEERING IS REQUIRED
4	STEEL	3/8"Ø SAE GRADE 5 THRU BOLT WITH 1"Ø MIN. WASHER & NUT, TO STRUCTURAL A36 STEEL MEMBERS (3/16" MIN HOST THICKNESS)

1. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE FOR EACH ANCHOR.
3. 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 $1.5 \times$ ANCHOR EMBEDMENT. INSTALL CONCRETE ANCHORS TO UN-CRACKED CONCRETE ONLY.
4. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES ROOFING FINISHES.
5. WHERE EXISTING STRUCTURE IS WOOD TRUSSES, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD TRUSS MEMBERS, NOT INTO PLYWOOD.



4
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DETAIL



SECTION B-B (SIDE-VIEW)