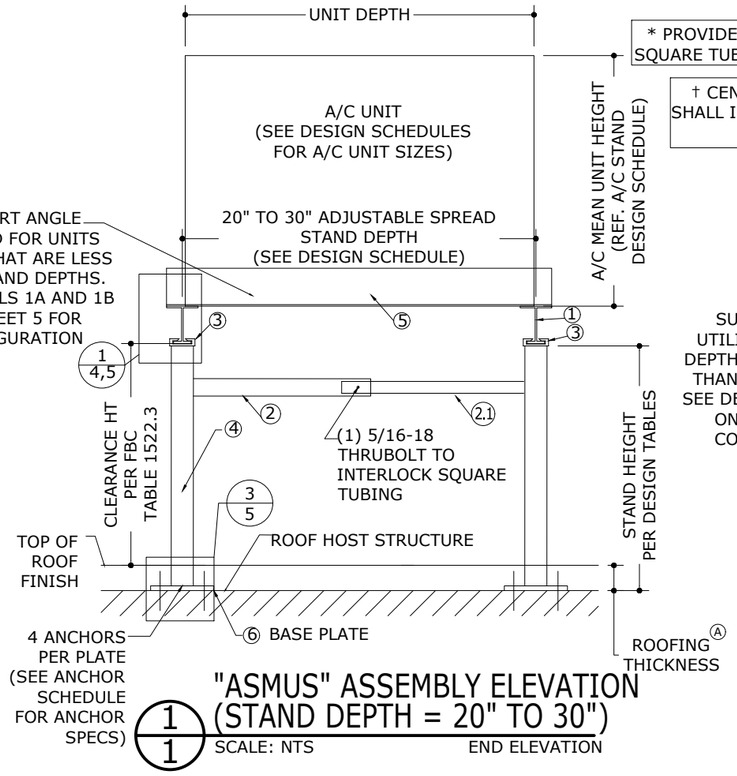
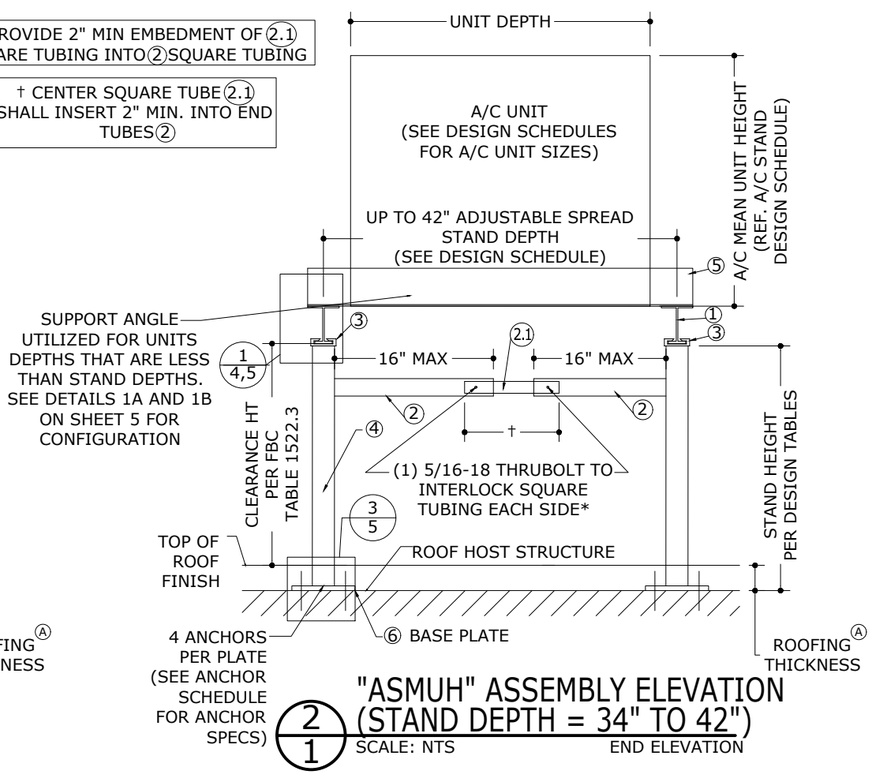
ALUMINUM STANDS FOR MECHANICAL UNITS



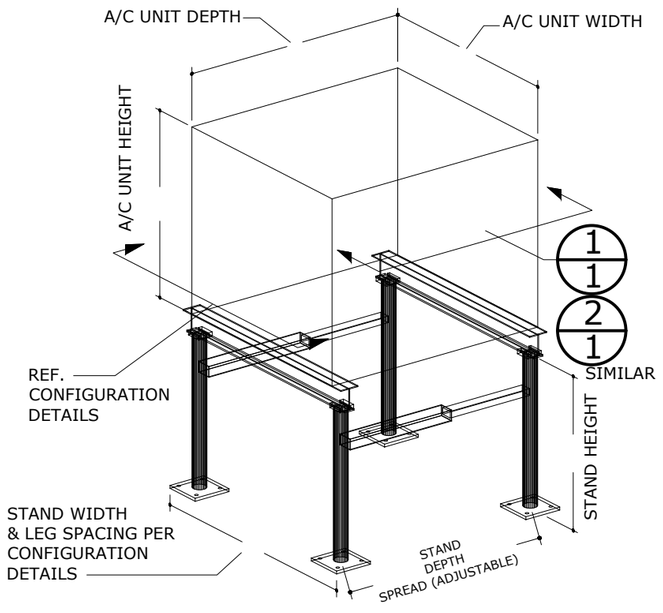
1/1 "ASMUS" ASSEMBLY ELEVATION (STAND DEPTH = 20" TO 30")
SCALE: NTS END ELEVATION

* PROVIDE 2" MIN EMBEDMENT OF 2.1 SQUARE TUBING INTO ② SQUARE TUBING

† CENTER SQUARE TUBE 2.1 SHALL INSERT 2" MIN. INTO END TUBES ②



2/1 "ASMUH" ASSEMBLY ELEVATION (STAND DEPTH = 34" TO 42")
SCALE: NTS END ELEVATION



Ⓐ 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.

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.

VISIT ECALC.IO/63451

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

VISIT ENGINEERINGEXPRESS.COM/STORE FOR ADDITIONAL PLANS, REPORTS & RESOURCES

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

RICHARD NEET LICENSE No. P.E. 86488 STATE OF FLORIDA PROFESSIONAL ENGINEER

AUGUST 25, 2023

STATE OF FLORIDA

Digitally signed by Richard Neet
Date: 2023.08.25 12:44:04-04'00'

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 EIGTH 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 PAST THREAD PLANE.
6. ALL EXTRUDED MEMBERS SHALL BE ALUMINUM ALLOY TYPE 6061-T6 OR 6005-T5.
7. ALL 22GA DEFORMED STEEL STRAPS USED FOR UNIT TIE-DOWNS SHALL BE Fy = 36KSI 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 ⅛" 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 LABELED PER MIAMI-DADE REQUIREMENTS FOR NON-MANDATORY PRODUCT APPROVALS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.

FL42314.1

ENGINEERING EXPRESS®
POSTAL ADDRESS:
401 W. ATLANTIC AVE R10 BOX 219
DELRAY BEACH, FL 33444
ENGINEERINGEXPRESS.COM

Miami Tech, Inc.
3611 NW 74th St
Miami, FL 33147
(305) 693-7054

Aluminum Stand for Mechanical Units
Florida Statewide Approval
Florida Building Code

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RN	RN	8/20/2023

23-63451

SCALE: NTS UNLESS NOTED

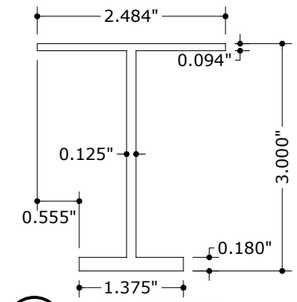
1 OF 5

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

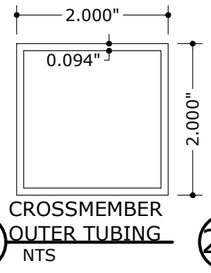
AUGUST 25, 2023

RICHARD NEET LICENSE No. P.E. 86488 STATE OF FLORIDA PROFESSIONAL ENGINEER

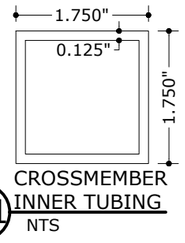
STAND COMPONENTS



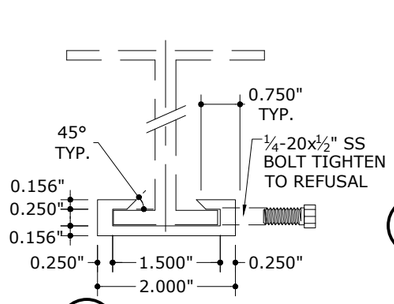
1 RAIL (I-BEAM) NTS



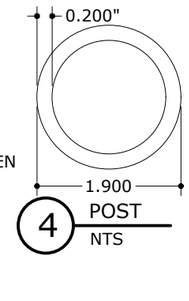
2 CROSSMEMBER OUTER TUBING NTS



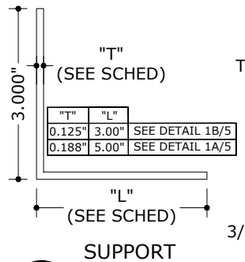
2.1 CROSSMEMBER INNER TUBING NTS



3 C-CHANNEL NTS

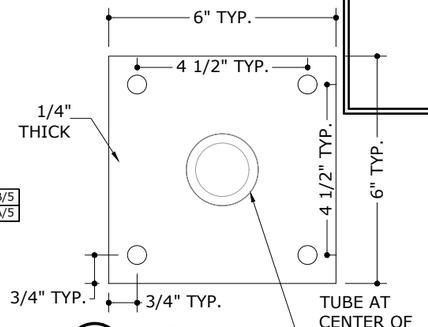


4 POST NTS



"T"	"L"	
0.125"	3.00"	SEE DETAIL 1B/5
0.188"	5.00"	SEE DETAIL 1A/5

5 SUPPORT ANGLE NTS



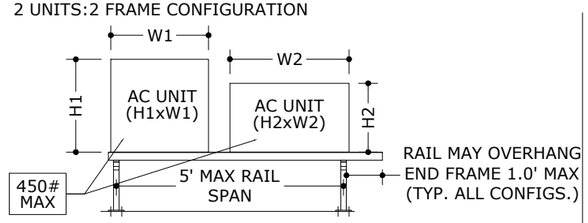
6 BASEPLATE NTS

MEAN UNIT HEIGHT & MAX FACE AREA CALCULATION DIRECTIVE:

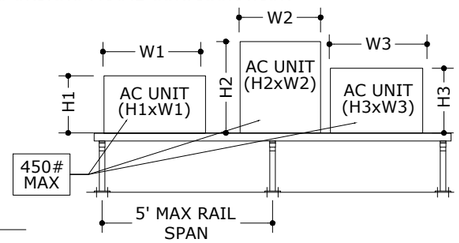
THIS DIRECTIVE SHALL BE USED TO CALCULATE THE MEAN UNIT HEIGHT & MAXIMUM FACE AREA OF ANY MULTIPLE UNIT CONFIGURATION.

EXAMPLE CONFIGURATIONS:

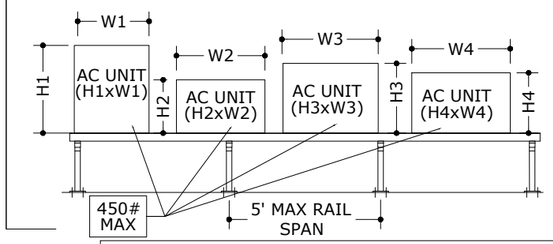
2 UNITS:2 FRAME CONFIGURATION



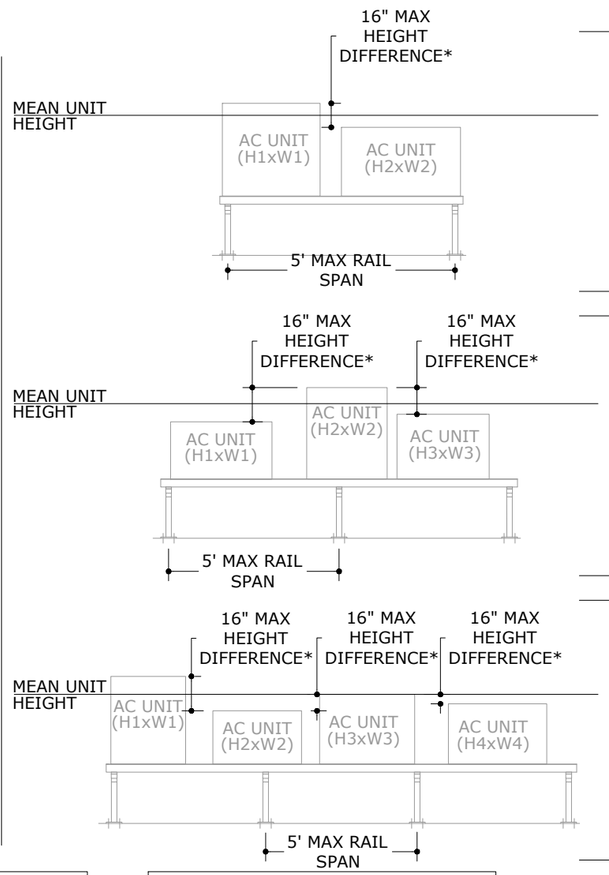
3 UNITS:3 FRAME CONFIGURATION



4 UNITS:4 FRAME CONFIGURATION



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.

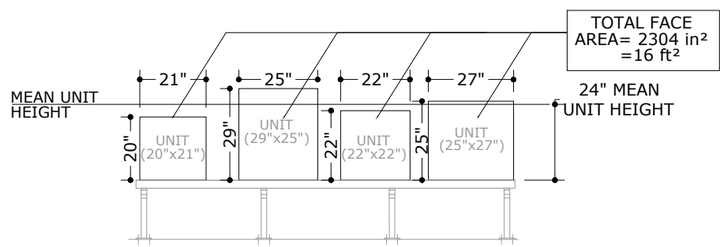
FORMULAS USED FOR DETERMINING MEAN UNIT HEIGHT & MAXIMUM UNIT FACE AREA:

1. CALCULATE THE MEAN UNIT HEIGHT BY THE FOLLOWING EQUATION:
   - TWO UNITS: $\frac{H1+H2}{2}$
   - THREE UNITS: $\frac{H1+H2+H3}{3}$
   - FOUR UNITS: $\frac{H1+H2+H3+H4}{4}$
   - "n" UNITS: $\frac{H1+H2+H3+...Hn}{n}$
2. CALCULATE THE MAXIMUM UNIT FACE AREA BY THE FOLLOWING EQUATION:
   - TWO UNITS: (H1xW1)+(H2xW2)
   - THREE UNITS: (H1xW1)+(H2xW2)+(H3xW3)
   - FOUR UNITS: (H1xW1)+(H2xW2)+(H3xW3)+(H4xW4)
   - "n" UNITS: (H1xW1)+...(HnxWn)

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: (H1xW1)+(H2xW2)+(H3xW3)+(H4xW4) = (20"x21")+(29"x25")+(22"x22")+(25"x27")

= 2304 in² = 16 ft²



FL42314.1

ENGINEERING EXPRESS®
POSTAL ADDRESS:
401 W. ATLANTIC AVE R10 BOX 219
DELRAY BEACH, FL 33444
ENGINEERINGEXPRESS.COM

Miami Tech, Inc.
3611 NW 74th St
Miami, FL 33147
(305) 693-7054

Aluminum Stand for Mechanical Units
Florida Statewide Approval
Florida Building Code

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RN	RN	6/20/2023

23-63451

SCALE: NTS UNLESS NOTED

2 OF 5

ALUMINUM STAND DESIGN SCHEDULE

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

AUGUST 25, 2023

RICHARD NEET LICENSE No. P.E. 86488 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL42314.1

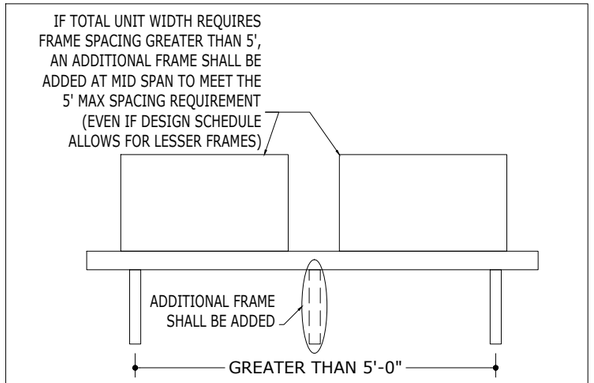
ENGINEERING EXPRESS®
POSTAL ADDRESS:
401 W. ATLANTIC AVE R10 BOX 219
DELRAY BEACH, FL 33444
ENGINEERINGEXPRESS.COM

STAND DESIGN SCHEDULE (MAXIMUM ALLOWABLE LATERAL/UPLIFT PRESSURES)

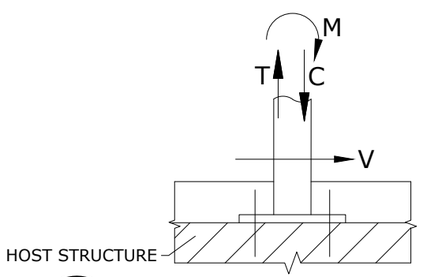
MAX UNIT HEIGHT	MAX FACE AREA	MAX POST HEIGHT	2 FRAMES		3 FRAMES		4 FRAMES		5 FRAMES		6 FRAMES		7 FRAMES		8 FRAMES		9 FRAMES		10 FRAMES	
			LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT	LATERAL	UPLIFT
24.0 in	576.0 in² (= 4.0 sqft)	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	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
		30 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
30.0 in	900.0 in² (= 6.3 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	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
		30 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
36.0 in	1008.0 in² (= 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
		24 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
		30 in	179 psf	142 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	1152.0 in² (= 8.0 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	188 psf	148 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	157 psf	124 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	1440.0 in² (= 10.0 sqft)	18 in	191 psf	151 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	150 psf	119 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	125 psf	99 psf	188 psf	149 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	1728.0 in² (= 12.0 sqft)	18 in	159 psf	126 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	125 psf	99 psf	188 psf	148 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	105 psf	83 psf	157 psf	124 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	2160.0 in² (= 15.0 sqft)	18 in	128 psf	101 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	200 psf	158 psf	200 psf	158 psf
		24 in	100 psf	79 psf	150 psf	119 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	84 psf	66 psf	125 psf	99 psf	167 psf	132 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
40.0 in	3200.0 in² (= 22.2 sqft)	18 in	86 psf	68 psf	129 psf	102 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
		24 in	68 psf	53 psf	101 psf	80 psf	135 psf	107 psf	169 psf	133 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	56 psf	45 psf	85 psf	67 psf	113 psf	89 psf	141 psf	111 psf	169 psf	134 psf	198 psf	156 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
48.0 in	3840.0 in² (= 26.7 sqft)	18 in	72 psf	57 psf	108 psf	85 psf	143 psf	113 psf	179 psf	142 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	56 psf	44 psf	84 psf	67 psf	113 psf	89 psf	141 psf	111 psf	169 psf	133 psf	197 psf	156 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		30 in	47 psf	37 psf	71 psf	56 psf	94 psf	74 psf	118 psf	93 psf	141 psf	111 psf	165 psf	130 psf	188 psf	149 psf	200 psf	158 psf	200 psf	158 psf
48.0 in	4800.0 in² (= 33.3 sqft)	18 in	57 psf	45 psf	86 psf	68 psf	115 psf	91 psf	143 psf	113 psf	172 psf	136 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf	200 psf	158 psf
		24 in	45 psf	36 psf	68 psf	53 psf	90 psf	71 psf	113 psf	89 psf	135 psf	107 psf	158 psf	124 psf	180 psf	142 psf	200 psf	158 psf	200 psf	158 psf
		30 in	38 psf	30 psf	56 psf	45 psf	75 psf	59 psf	94 psf	74 psf	113 psf	89 psf	132 psf	104 psf	151 psf	119 psf	169 psf	134 psf	188 psf	149 psf
60.0 in	7200.0 in² (= 50.0 sqft)	18 in	38 psf	30 psf	57 psf	45 psf	77 psf	60 psf	96 psf	76 psf	115 psf	91 psf	134 psf	106 psf	153 psf	121 psf	172 psf	136 psf	191 psf	151 psf
		24 in	30 psf	24 psf	45 psf	36 psf	60 psf	47 psf	75 psf	59 psf	90 psf	71 psf	105 psf	83 psf	120 psf	95 psf	135 psf	107 psf	150 psf	119 psf
		30 in	25 psf	20 psf	38 psf	30 psf	50 psf	40 psf	63 psf	50 psf	75 psf	59 psf	88 psf	69 psf	100 psf	79 psf	113 psf	89 psf	125 psf	99 psf
60.0 in	8640.0 in² (= 60.0 sqft)	18 in	32 psf	25 psf	48 psf	38 psf	64 psf	50 psf	80 psf	63 psf	96 psf	76 psf	112 psf	88 psf	128 psf	101 psf	143 psf	113 psf	159 psf	126 psf
		24 in	25 psf	20 psf	38 psf	30 psf	50 psf	40 psf	63 psf	49 psf	75 psf	59 psf	88 psf	69 psf	100 psf	79 psf	113 psf	89 psf	125 psf	99 psf
		30 in	21 psf	17 psf	31 psf	25 psf	42 psf	33 psf	52 psf	41 psf	63 psf	50 psf	73 psf	58 psf	84 psf	66 psf	94 psf	74 psf	105 psf	83 psf

DESIGN SCHEDULE NOTES:

1. MAXIMUM FRAME-TO-FRAME SPACING SHALL NOT EXCEED 5'-0" O.C. (SEE FRAME SPACING DIRECTIVE)
2. ALLOWABLE STAND DEPTH SHALL BE 20" MINIMUM UP TO 42" MAXIMUM.
3. A "FRAME" CONSISTS OF (2) POSTS CONNECTED WITH (1) CROSS MEMBER. 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.



FRAME SPACING DIRECTIVE



1/3 BASE PLATE REACTIONS
NTS

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

M = 5 KIP-IN
V = 0.5 KIPS
T = C = 0.8 KIPS

Miami Tech, Inc.
3611 NW 74th St
Miami, FL 33147
(305) 693-7054

Aluminum Stand for Mechanical Units
Florida Statewide Approval
Florida Building Code

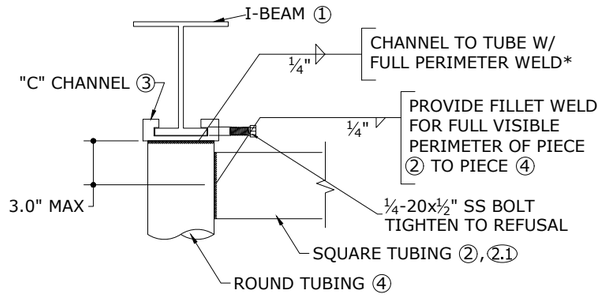
REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RN	RN	6/20/2023

23-63451

SCALE: NTS UNLESS NOTED

3 OF 5

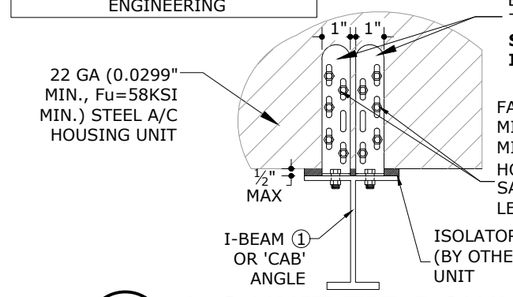
FRAME ASSEMBLY & UNIT TIE-DOWN DETAILS:



1/4 FRAME ASSEMBLY DETAIL

NTS DETAIL

THIS DETAIL IS APPLICABLE FOR UNITS UP TO 54" TALL MAX. UNITS TALLER THAN 54" REQUIRE SITE SPECIFIC OR SEPARATE TIEDOWN ENGINEERING



(2) 1" WIDE x 14GA (0.070") OR x 12GA (0.105") ASTM A-653 GRADE 33 GALV STEEL ANGLE (CUTD-1 BY MIAMI TECH). UTILIZE (2) MIN. PER CORNER (8 TOTAL). **NOTE: IF UNIT MANUFACTURER HAS SEPARATE APPROVED TIEDOWN ENGINEERING IT MAY BE USED IN LIEU OF THIS DIRECTIVE.**

FASTEN CLIP VERTICAL LEG TO 22 GA (0.0299" MIN.) STEEL HOUSING WITH (5) #10 SAE GRADE 2 MIN. SHEET METAL SCREWS PER CLIP. FASTEN CLIP HORIZONTAL LEG TO I-BEAM RAIL WITH (1) ¼"Ø SAE GRADE 2 MIN. THRU BOLT CENTERED ABOUT LEG.

2/4 A/C UNIT TIE-DOWN DETAIL

NTS (SEE TIEDOWN STRAP SCHED. FOR STRAP REQUIREMENTS)

NOTE: UNIT TIEDOWN DETAILS MAY ALSO BE USED TO ANCHOR THE UNIT TO THE SUPPORT ANGLE SHOWN ON NEXT SHEET. (I.E. I-BEAM CAN BE SUBSTITUTED WITH ANGLE SUPPORT AS BASE MATERIAL)

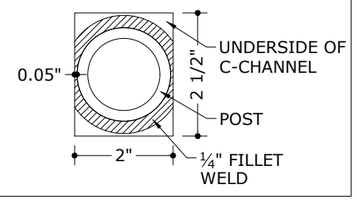
TIEDOWN STRAP SCHEDULE

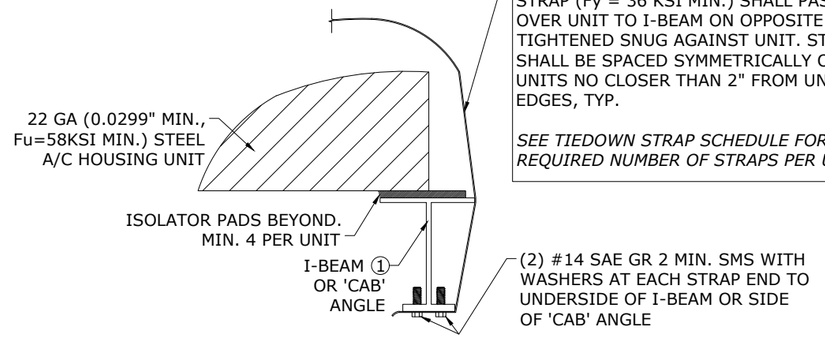
MAX UNIT HEIGHT (in)	MIN UNIT DEPTH (in)	MAX LATERAL PRESSURE (psf)	NO. OF STRAPS REQUIRED (PER UNIT)
UP TO 24	12-19	UP TO 80	0
		UP TO 120	0
		UP TO 200	2
	20	UP TO 80	0
		UP TO 120	0
		UP TO 200	0
UP TO 30	12-19	UP TO 80	0
		UP TO 120	2
		UP TO 200	2
	20	UP TO 80	0
		UP TO 120	0
		UP TO 200	0
UP TO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

TIEDOWN SCHEDULE NOTES:

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.

*C-CHANNEL TO POST WELD NOTE:
IN AREAS WHERE ¼" WELD DIAMETER CANNOT BE ACHIEVED, CONTINUE WELD AROUND FULL PERIMETER OF POST TO PREVENT WATER INFILTRATION. WELD DIAMETER WILL DECREASE TO 0.05" ALONG C-CHANNEL EDGE. SEE DETAIL BELOW.





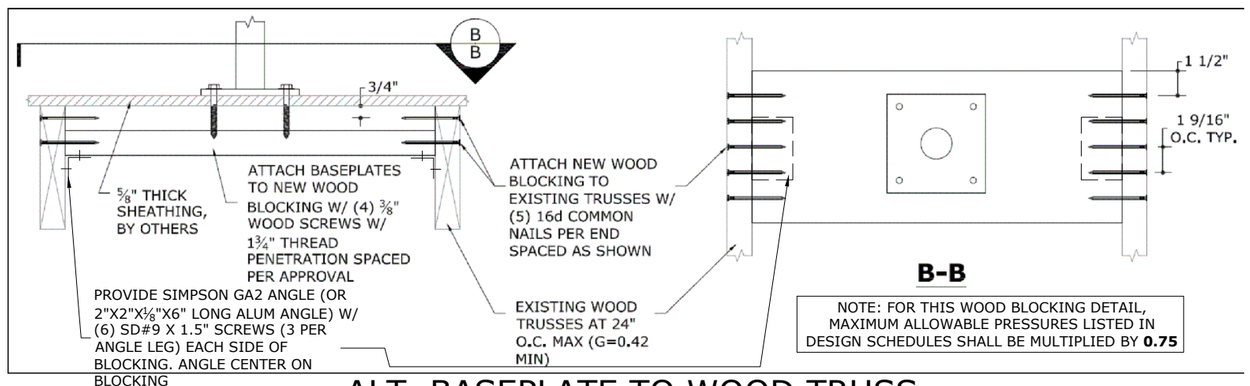
1"x 22ga CONTINUOUS GALV. STEEL STRAP (Fy = 36 KSI MIN.) SHALL PASS OVER UNIT TO I-BEAM ON OPPOSITE SIDE TIGHTENED SNUG AGAINST UNIT. STRAPS SHALL BE SPACED SYMMETRICALLY OVER UNITS NO CLOSER THAN 2" FROM UNIT EDGES, TYP.

SEE TIEDOWN STRAP SCHEDULE FOR REQUIRED NUMBER OF STRAPS PER UNIT

(2) #14 SAE GR 2 MIN. SMS WITH WASHERS AT EACH STRAP END TO UNDERSIDE OF I-BEAM OR SIDE OF 'CAB' ANGLE

3/4 TIE-DOWN STRAP DETAIL**

NTS *SHALL BE USED **IN COMBINATION** WITH ANY A/C UNIT TIE-DOWN DETAIL ON THIS SHEET



NOTE: FOR THIS WOOD BLOCKING DETAIL, MAXIMUM ALLOWABLE PRESSURES LISTED IN DESIGN SCHEDULES SHALL BE MULTIPLIED BY **0.75**

4/4 ALT. BASEPLATE TO WOOD TRUSS ATTACHMENT (2X10 WOOD BLOCKING)

SCALE: NTS WOOD (G=0.55 MIN.)

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

AUGUST 25, 2023

RICHARD NEET LICENSE No. P.E. 86488 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL42314.1

ENGINEERING EXPRESS®
POSTAL ADDRESS:
401 W. ATLANTIC AVE R10 BOX 219
DELRAY BEACH, FL 33444
ENGINEERINGEXPRESS.COM

Miami Tech, Inc.
3611 NW 74th St
Miami, FL 33147
(305) 693-7054

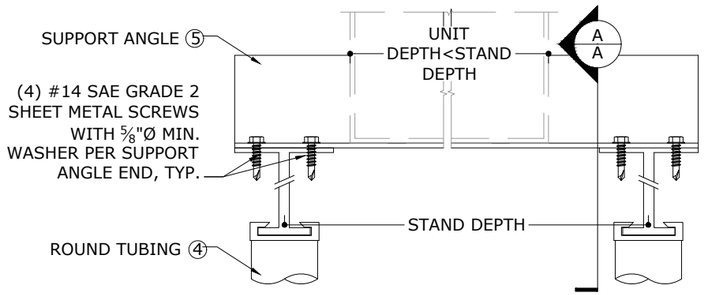
Aluminum Stand for Mechanical Units
Florida Statewide Approval
Florida Building Code

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RN	RN	6/20/2023

23-63451

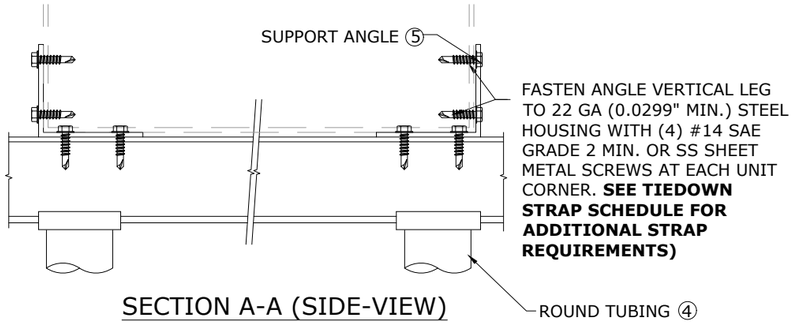
SCALE: NTS UNLESS NOTED

4 OF 5

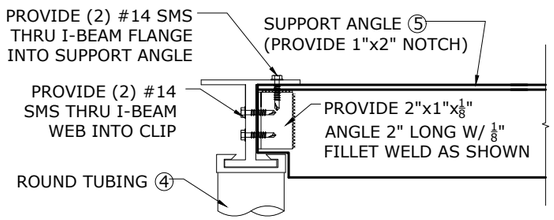


SUPPORT ANGLE ATTACHMENT DETAIL

1A / 5 NTS

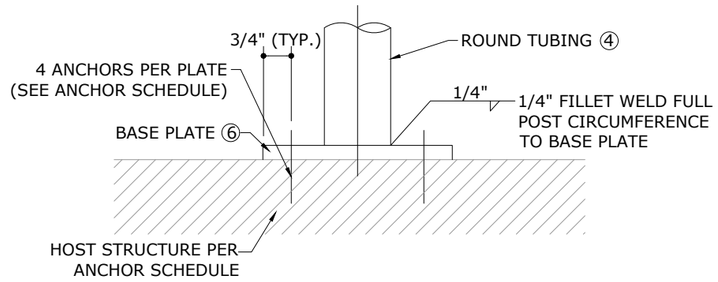


SECTION A-A (SIDE-VIEW)



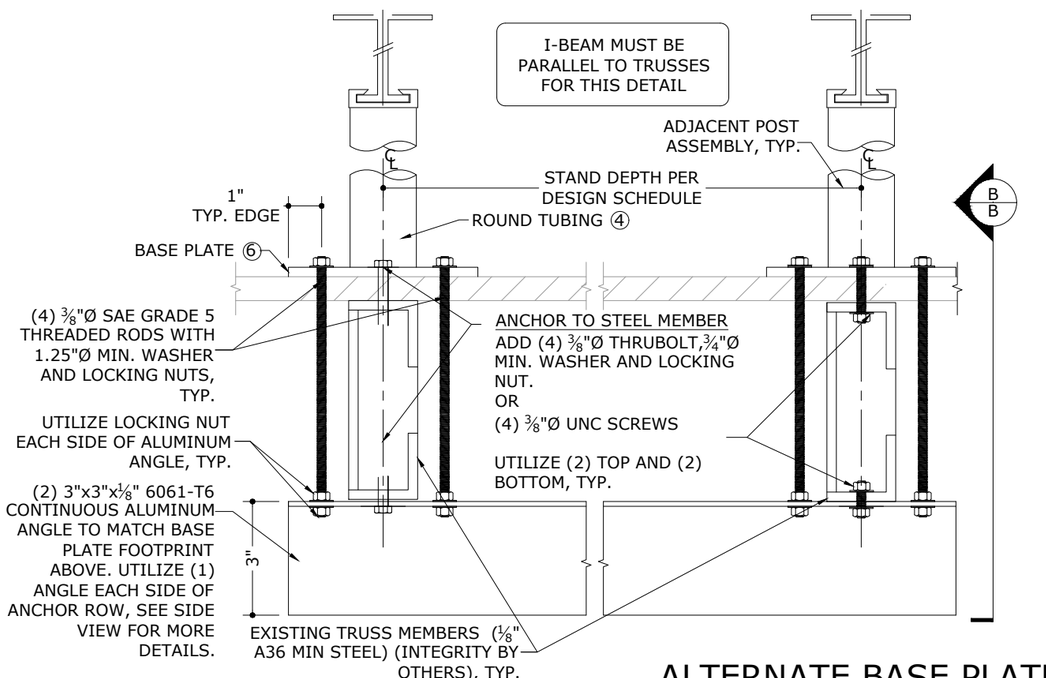
SUPPORT ANGLE ATTACHMENT DETAIL

1B / 5 NTS



STANDARD BASE PLATE ATTACHMENT DETAIL

3 / 5 NTS



ALTERNATE BASE PLATE ATTACHMENT AT STEEL TRUSS MEMBERS

4 / 5 NTS

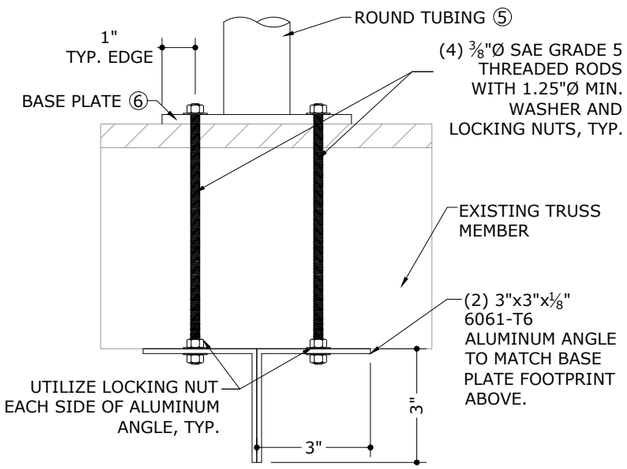
DETAIL

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:

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 1.5xANCHOR 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.



SECTION B-B (SIDE-VIEW)

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

AUGUST 25, 2023

RICHARD NEET LICENSE No. P.E. 86488 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL42314.1

ENGINEERING EXPRESS®
POSTAL ADDRESS:
401 W. ATLANTIC AVE R10 BOX 219
DELRAY BEACH, FL 33444
ENGINEERINGEXPRESS.COM

Miami Tech, Inc.
3611 NW 74th St
Miami, FL 33147
(305) 693-7054

Aluminum Stand for Mechanical Units
Florida Statewide Approval
Florida Building Code

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RN	RN	6/20/2023

23-63451

SCALE: NTS UNLESS NOTED

5 OF 5