MIAMI-DADE COUNTY
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

Metallum Enterprises, Inc.
7500 NW 68 Street
Miami, Florida 33176

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER- Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Aluminum Roof Stand Frame Support for A/C Condensing Units.

APPROVAL DOCUMENT: Drawing No. 26-090, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 22 of 22, prepared by Tilteco, Inc., dated 09/01/2023, revision #1 on 06/29/2026, signed and sealed by Walter A. Tillit Jr., P.E., on 09/01/2026, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section

MISSILE IMPACT RATING: None

LABELING: Each stand frame shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA #23-0913.14** and consists of this page 1, evidence submitted pages E-1, E-2, E-3, E-4, E-5, E-6 & E-7 as well as approval document mentioned above.
The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**

MIAMI-DADE COUNTY APPROVED

Helmy A. Makar
10/29/26

NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

Metallum Enterprises, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 07-0322.13

A. DRAWINGS:

1. Drawing No 06-MEE-0002, titled "Aluminum A/C Stand", sheets 1 through 3 of 3, prepared by Engineering Express, dated 03/09/07, signed and sealed by Frank L. Bennardo, P.E.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Aluminum A/C Stands Calculations", dated 03/14/2007, sheets 1 through 11 of 11, signed and sealed by Frank L. Bennardo, P.E.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Building Code Compliance Office.

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Review Request Letter issued by Metallum Enterprises, Inc., dated June 09, 2007, signed by Victor Toyos.

2. Code Compliance Letter issued by Engineering Express, dated March 16, 2007, signed and sealed by Frank L. Bennardo, P.E.

3. No financial Interest Letter issued by Engineering Express, dated March 16, 2007, signed and sealed by Frank L. Bennardo, P.E.

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 09-0720.01

A. DRAWINGS:

1. Drawing No. 06-MEE-0002, titled "Aluminum A/C Stand", sheets 1 through 4 of 4, prepared by Engineering Express, dated March 09, 2007, last revision dated February 03, 2009, signed and sealed by Frank L. Bennardo, P.E., on May 13, 2010.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Aluminum A/C Stands Calculations", dated 03/29/2010, sheets 1 through 122 of 122, signed and sealed by Frank L. Bennardo, P.E.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Building Code Compliance Office.

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Code Compliance Letter with the FBC 2007 issued by Engineering Express, dated March 29, 2010, signed and sealed by Frank L. Bennardo, P.E.

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 12-0327.02

A. DRAWINGS:

1. Drawing No. 12-MEE-01, titled "Aluminum Stand for Mechanical Units", sheets 1 through 7 of 7, prepared by Engineering Express, dated March 09, 2007, revision dated May 21, 2012, signed & sealed by Frank L. Bennardo, P.E., on June 14, 2012.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Aluminum Telescopic Roof Top Stands", dated 06/12/2012, sheets 1 through 104 of 104, signed and sealed by Frank L. Bennardo, P.E.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Code Compliance Letter with the FBC, 2010 Edition, issued by Engineering Express, dated June 14, 2012, signed and sealed by Frank L. Bennardo, P.E.

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 14-0123.13

A. DRAWINGS:

1. Drawing No. 12-MEE-01, titled "Aluminum Stand for Mechanical Units", sheets 1 through 7 of 7, prepared by Engineering Express, dated March 09, 2007, last revision dated January 10, 2014, signed and sealed by Frank L. Bennardo, P.E.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Aluminum Telescopic Roof Top Stands", dated 04/10/2014, sheets 1 through 104 of 104, signed and sealed by Frank L. Bennardo, P.E.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

E. MATERIAL CERTIFICATIONS:

1. None.

5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 14-1224.10

A. DRAWINGS:

1. Drawing No. 14-074, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 20 of 20, prepared by Tilteco, Inc., dated September 25, 2014, last revision dated May 12, 2015, signed and sealed by Walter A. Tillit Jr., P.E.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Structural Design of A/C equipment Stands", dated 9/17/2014, 239 sheets, signed and sealed by Walter A. Tillit Jr., P.E., on 12/21/2014.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

6. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 17-0320.02

A. DRAWINGS:

1. None.

B. TESTS:

1. None.

C. CALCULATIONS:

1. None.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

7. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 17-1023.17

A. DRAWINGS:

1. Drawing No. 17-087, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 20 of 20, prepared by Tilteco, Inc., dated July 21, 2017, last revision dated July 21, 2017, signed and sealed by Walter A. Tillit Jr., P.E.

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Structural Design of A/C equipment Stands", dated 9/21/2017, 21 sheets, signed and sealed by Walter A. Tillit Jr., P.E., on 9/21/2017.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Code Compliance Letter with the FBC, 2017 Edition, prepared by Tilteco, Inc., dated July 21, 2017, signed and sealed by Walter A. Tillit Jr., P.E.

8. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 20-0302.05

A. DRAWINGS:

1. Drawing No. 17-087, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 29 of 29, prepared by Tilteco, Inc., dated December 20, 2019, signed and sealed by Walter A. Tillit Jr., P.E., on February 18, 2020.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Structural Design of A/C equipment Stands", dated 02/18/20, 230 sheets, signed and sealed by Walter A. Tillit Jr., P.E., on 02/18/2020.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Code Compliance Letter with the FBC, 2017 Edition, prepared by Tilteco, Inc., dated February 17, 2020, signed and sealed by Walter A. Tillit Jr., P.E.

9. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 20-0922.03

A. DRAWINGS:

1. Drawing No. 20-248, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 29 of 29, prepared by Tilteco, Inc., dated August 12, 2020, signed and sealed by Walter A. Tillit Jr., P.E., on August 17, 2020.

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS:

1. None.

C. CALCULATIONS:

1. None.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Code Compliance Letter with the FBC, 2020 Edition, prepared by Tilteco, Inc., dated August 12, 2020, signed and sealed by Walter A. Tillit Jr., P.E.

10. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 21-0504.03

A. DRAWINGS:

1. Drawing No. 20-248, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 22 of 22, prepared by Tilteco, Inc., dated August 12, 2020, revision #1 on April 01, 2021, signed & sealed by Walter A. Tillit Jr., P.E., on April 07, 2021.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Revision to Structural Design of A/C equipment Stands", dated 04/07/21, 31 sheets, signed and sealed by Walter A. Tillit Jr., P.E., on 04/07/2021.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Code Compliance Letter with the FBC, 2020 Edition, prepared by Tilteco, Inc., dated April 05, 2021, signed and sealed by Walter A. Tillit Jr., P.E.

11. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 22-0721.02

A. DRAWINGS:

1. None.

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS:
1. None.

C. CALCULATIONS:
1. None.

D. QUALITY ASSURANCE:
1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:
1. None.

F. STATEMENTS:
1. Code Compliance Letter with the FBC, 2020 Edition, prepared by Tilteco, Inc., dated April 05, 2021, signed and sealed by Walter A. Tillit Jr., P.E.

12. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 23-0913.14

A. DRAWINGS:
1. Drawing No. 23-196, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 22 of 22, prepared by Tilteco, Inc., dated 09/01/2023, revision #1 on 09/01/2023, signed and sealed by Walter A. Tillit Jr., P.E., on 09/01/2023.

B. TESTS:
1. None.

C. CALCULATIONS:
1. None.

D. QUALITY ASSURANCE:
1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:
1. None.

F. STATEMENTS:
1. Code Compliance Letter with the FBC, 2020 Edition, prepared by Tilteco, Inc., dated April 05, 2021, signed and sealed by Walter A. Tillit Jr., P.E.
2. Code Compliance Letter with the FBC, 2023 Edition, prepared by Tilteco, Inc., dated September 01, 2023, signed and sealed by Walter A. Tillit Jr., P.E.

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

13. NEW EVIDENCE SUBMITTED

A. DRAWINGS:

1. Drawing No. 26-090, titled "Aluminum Stands for Roof Top Equipment", sheets 1 through 22 of 22, prepared by Tilteco, Inc., dated 09/01/2023, revision #1 on 06/29/2026, signed and sealed by Walter A. Tillit Jr., P.E., on 09/01/2026.

B. TESTS:

1. None.

C. CALCULATIONS:

1. Calculation titled "Revision to Structural Design of A/C equipment Stands", dated 06/29/26, 9 sheets, signed and sealed by Walter A. Tillit Jr., P.E., on 06/29/2026.

D. QUALITY ASSURANCE:

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS:

1. None.

F. STATEMENTS:

1. Code Compliance Letter with the FBC, 2023 & 2026 Editions, prepared by Tilteco, Inc., dated 06/29/26, signed and sealed by Walter A. Tillit Jr., P.E.

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 26-0904.07
Expiration Date: 06/28/2027
Approval Date: 10/29/2026

PRODUCT APPROVAL FOR ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

1- THIS EQUIPMENT UNIT STAND SYSTEM HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2023 (8th EDITION) AND 2026 (9th EDITION)OF THE FLORIDA BUILDING CODE, FOR USE WITHIN THE HIGH VELOCITY HURRICANE ZONE (HVHZ) AND OUT OF IT. 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, IN ACCORDANCE WITH ASCE 7-22 AND SECTIONS 1616.1, 1620.1 & 1620.6 OF THE FLORIDA BUILDING CODE, AND SHALL BE LESS THAN OR EQUAL TO THE LATERAL AND UPLIFT DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

2- THE ARCHITECT/ENGINEER OF RECORD FOR THE EXISTING STRUCTURE THAT WILL SUPPORT THESE ALUMINUM STANDS SHALL BE RESPONSIBLE FOR ITS INTEGRITY AND SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND THE SUPERIMPOSED LOADS (ASD) - REF "REACTION SCHEDULE" INDICATED ON SHEET 6, WHERE REACTION FORCES ARE LISTED FOR USE WITH EXISTING STRUCTURE. DESIGN PROFESSIONAL OF RECORD SHALL VERIFY APPLICABILITY AND/OR ADDITIONAL FACTORS FOR USE WITH EXISTING STRUCTURE VERIFICATION.

3- STAND SHALL BE INSTALLED WITH MINIMUM CLEAR HEIGHT AS SPECIFIED IN THE ABOVE-NOTED BUILDING CODE. "STAND HEIGHT" AS USED HEREIN IS NOT NECESSARILY EQUIVALENT TO "STAND CLEAR HEIGHT" AS SPECIFIED IN THE BLDG CODE. STANDS SHALL BE INSTALLED WITH A MINIMUM CLEAR HEIGHT IN ACCORDANCE WITH SECTION 1522 TABLE 1522.3 OF THE FLORIDA BUILDING CODE.

4- VIBRATION ISOLATOR PADS SHALL BE PROVIDED BY OTHERS BETWEEN UNITS & STAND.

5- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT FASTENING AS SHOWN HEREIN WILL NOT VOID THE EQUIPMENT MANUFACTURER'S WARRANTY, ESPECIALLY WHERE UNITS ARE INSTALLED WITH OVERHANG PAST RAIL (SEE TIE-DOWN DETAILS).

6- ELECTRICAL GROUND , WHEN REQUIRED , TO BE DESIGNED & INSTALLED BY OTHERS. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AMD ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.

7- MAXIMUM DIMENSIONS AND WEIGHT OF MECHANICAL UNITS SHALL CONFORM TO SPECIFICATIONS STATED HEREIN, SEE SHEETS 6 & 17 FOR LIMITATIONS.

8- ALL SCREWS & BOLTS SHALL BE AS SPECIFIED ON THIS DRAWING, AND SHALL COMPLY WITH SECTIONS 2411.3.3.4 & 1711 OF THE FLORIDA BUILDING CODE.

9- ALL ALUMINUM EXTRUSIONS SHALL BE 6061-T6 ALLOY & TEMPER, UNLESS NOTED OTHERWISE.WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D 1.2 REQUIREMENTS, USING 5356 FILLER ALLOYS.

10- ALL EXISTING CONCRETE SUBSTRATE SHALL HAVE MINIMUM fc COMPRESSIVE STRENGTH OF 3000 PSI AS VERIFIED BY OTHERS.

11- ALL ALUMINUM EXTRUSIONS IN CONTACT WITH DISSIMILAR MATERIALS SHALL COMPLY WITH SECTION III-6 OF THE 2020 ALUMINUM DESIGN MANUAL.

12- ENGINEER SEAL AFFIXED HERETO VALIDATE 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. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED ON THIS DOCUMENT.

13- WATER-TIGHTNESS OF EXISTING HOST SUBSTRATE 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 WAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA

14- (a) THIS P.A.D. (PRODUCT APPROVAL DOCUMENT) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.A.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(c) THIS P.A.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D.

(e) ORIGINAL P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

15- PRODUCT MANUFACTURER'S LABEL SHALL BE PLACED ON AN EXPOSED SURFACE OF STAND IN ACCORDANCE W/ SECTION 1703.5 OF THE FLORIDA BUILDING CODE.

INDEX

SHEET #	DESCRIPTION
1	GENERAL NOTES AND INDEX
2	BILL OF MATERIALS AND COMPONENTS: STANDS W/O DIAGONAL BRACE
3	ASSEMBLY DETAILS FOR STANDS W/O DIAGONAL BRACE
4	STAND ASSEMBLY DETAILS VALID FOR STANDS W/O DIAGONAL BRACE
5	EQUIPMENT UNIT ANCHORAGE TO RAILS STANDS WITH OR W/O DIAGONAL BRACE
6	SCHEDULE NOTES/ANCHOR SCHEDULE/REACTION SCHEDULE/STANDS W/O DIAGONAL BRACE
7	SCHEDULE FOR MAX. PRESSURE DS=20"; HU=24",28",32" STANDS W/O DIAGONAL BRACE
8	SCHEDULE FOR MAX. PRESSURE RATING W/ DS>20" UP TO 60"; HU=24",28",32" STANDS W/O DIAGONAL BRACE
9	SCHEDULE FOR MAX. PRESSURE DS=20"; HU=36" STANDS W/O DIAGONAL BRACE
10	SCHEDULE FOR MAX. PRESSURE DS>20" UP TO 60"; HU=36" STANDS W/O DIAGONAL BRACE
11	SCHEDULE FOR MAX. PRESSURE DS≥20" UP TO 60"; HU=42" STANDS W/O DIAGONAL BRACE
12	SCHEDULE FOR MAX. PRESSURE DS≥20" UP TO 60"; HU=48" STANDS W/O DIAGONAL BRACE
13	SCHEDULE FOR MAX. PRESSURE DS≥20" UP TO 60"; HU=56" STANDS W/O DIAGONAL BRACE
14	BILL OF MATERIALS AND COMPONENTS: STANDS WITH DIAGONAL BRACE
15	ASSEMBLY DETAILS FOR STANDS WITH DIAGONAL BRACE
16	STAND ASSEMBLY DETAILS: VALID FOR STANDS WITH DIAGONAL BRACE
17	SCHEDULE NOTES/ANCHOR SCHEDULE/REACTION SCHEDULE/STANDS W/ DIAGONAL BRACE
18	SCHEDULE FOR MAX. PRESSURE, DS≥24" UP TO 60"; HU≤57". STANDS WITH DIAGONAL BRACE
19	SCHEDULE FOR MAX. PRESSURE, DS≥24" UP TO 60"; HU≤70". STANDS WITH DIAGONAL BRACE
20	BILL OF MATERIALS AND COMPONENTS: STANDS W/ OR W/O DIAGONAL BRACE
21	ASSEMBLY DETAILS FOR STANDS WITH CROSS BARS
22	EQUIPMENT UNIT ANCHORAGE FOR STANDS WITH CROSS BARS

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 1 OF 22

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/26/26
-	-	-

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

© 2026 TILTECO INC.

TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

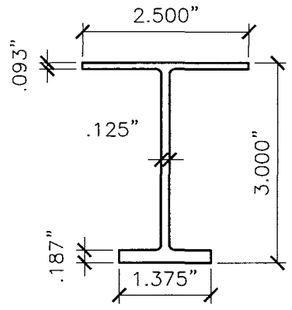
P.E. SEAL/SIGNATURE/DATE

26-090A.07
06/28/2027

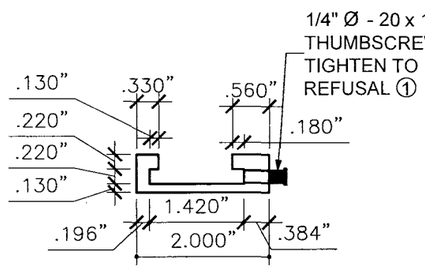
BILL OF MATERIALS: VALID ONLY FOR STANDS WITHOUT DIAGONAL BRACE REINFORCEMENT

COMPONENT No.	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
①	RAIL (I-BEAM)	2.50" X 1.375" X 3"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	SUPPORT FOR ROOF TOP EQUIPMENT FIT AND ADJUSTED INTO ③
2A	LARGE STRUT TUBING	1.75" X 1.75" X 0.094"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WIND BRACING COMPONENT WELDED TO ④
2B	SMALL STRUT TUBING	1.50" X 1.50" X 0.125"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WIND BRACING COMPONENT WELDED TO ④
③	TOP CHANNEL	2.00" X 0.570" X 0'-3"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WELDED TO TOP OF ④ TO RECEIVE ①
④	POST	1.90" X 0.145" THK.	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WELDED TO ⑤, 2A, 2B & ③
⑤	BASE PLATE	5" X 5" X 1/4"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WELDED TO ④ & ANCHORED TO EXISTING STRUCTURE

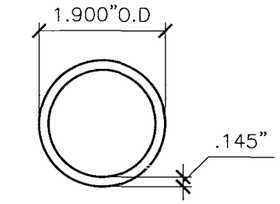
COMPONENTS



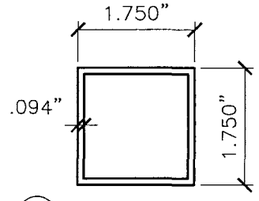
① **RAIL (I-BEAM)**
1/2"= 0'- 1"



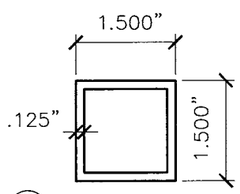
③ **TOP CHANNEL (3" LONG)**
1/2"= 0'- 1"



④ **POST**
1/2"= 0'- 1"

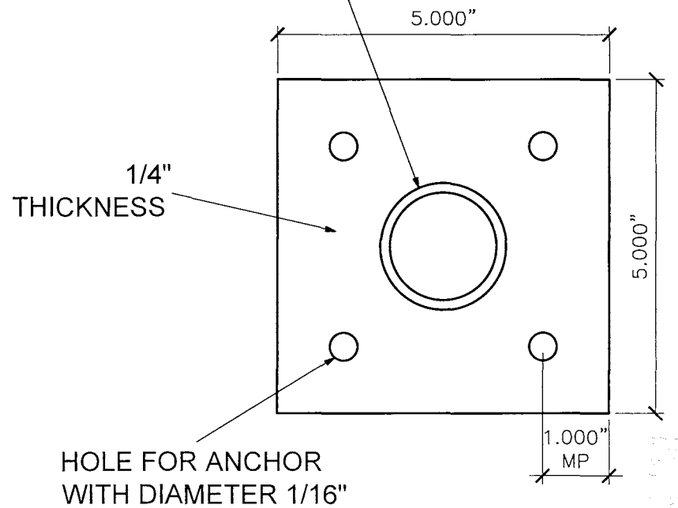


2A **LARGE STRUT TUBING**
1/2"= 0'- 1"



2B **SMALL STRUT TUBING**
1/2"= 0'- 1"

POST④LOCATION
(CENTERED) W/ OPTIONAL 1.9"
DIAM HOLE AT CENTER TO FIT④



⑤ **BASE PLATE**
3/8"= 0'- 1"

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.
7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	8/28/26
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-

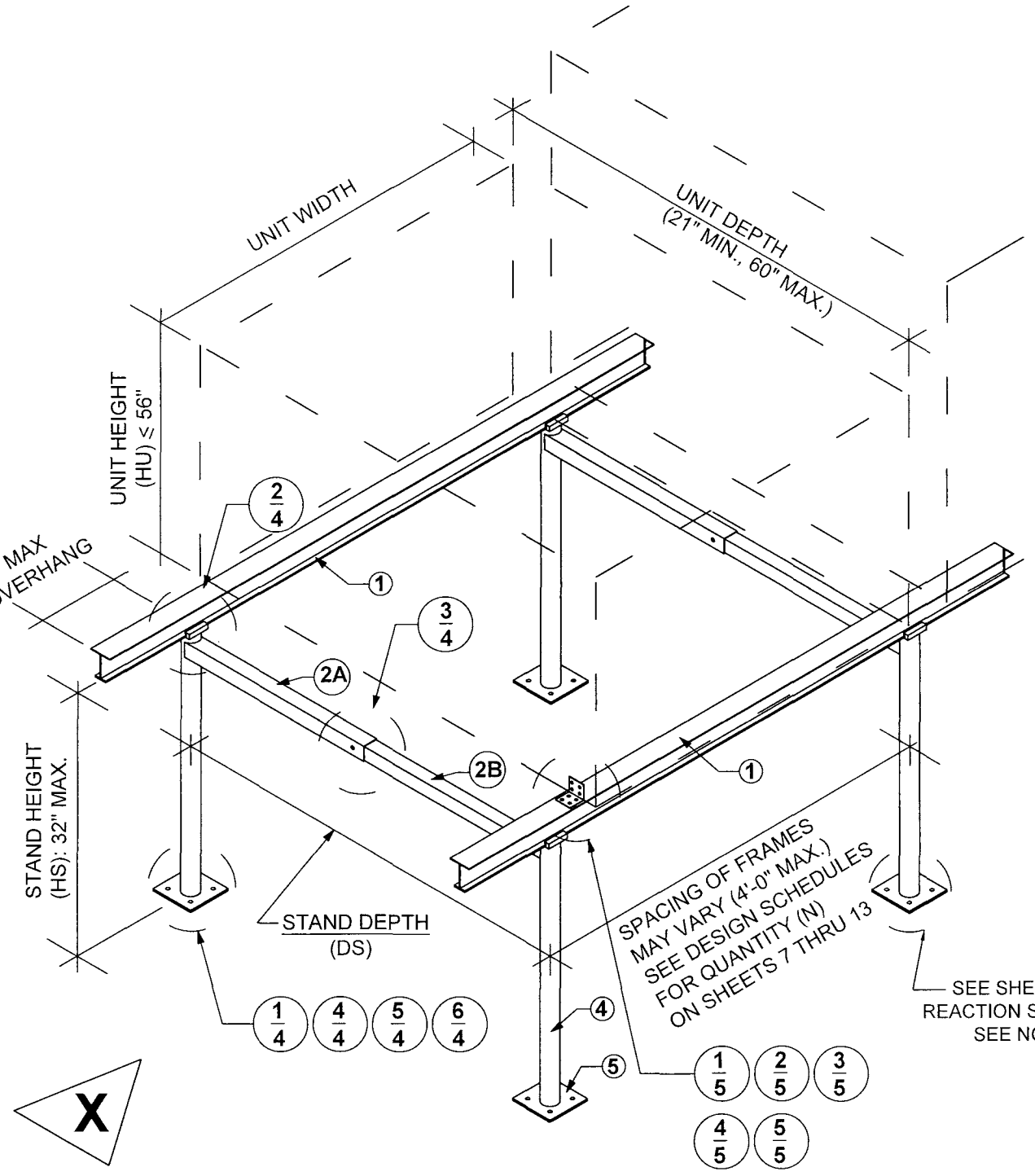
DRAWN BY: W.H.
6/29/2026 DATE
26-090 DRAWING No
SHEET 2 OF 22

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 205, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-00006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

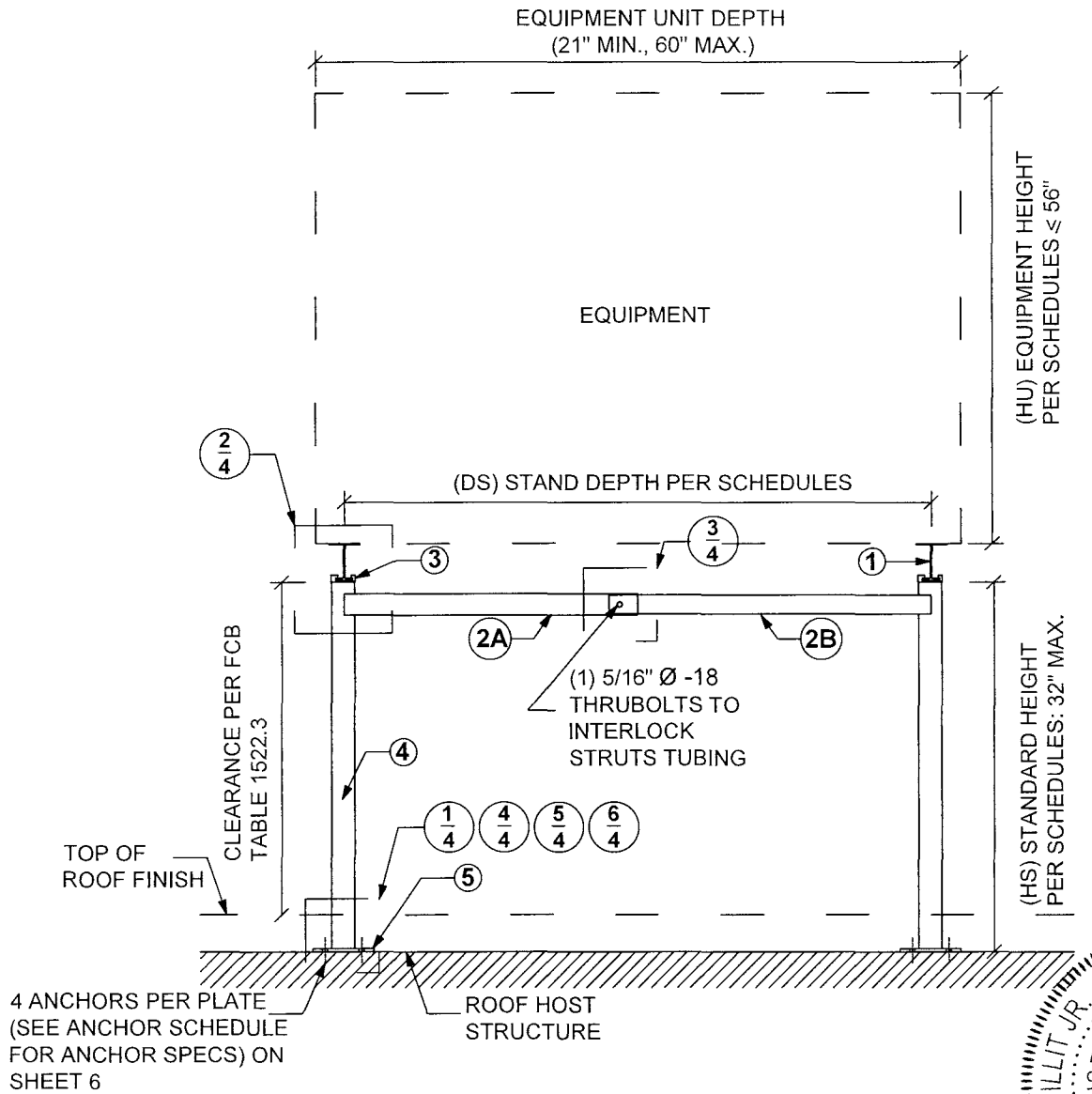
WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

26-0904.07
28 JUN 2027



ASSEMBLY FOR STANDS W/O DIAGONAL BRACE REINFORCEMENT

SCALE: 1/16"= 0'-1"



ELEVATION X

SCALE: 1/16"= 0'-1"

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 3 OF 22

REV. No	DESCRIPTION	DATE
-	OLD 24-012	8/25/25
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

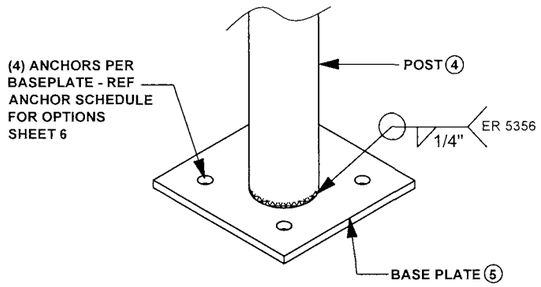
© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St. Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

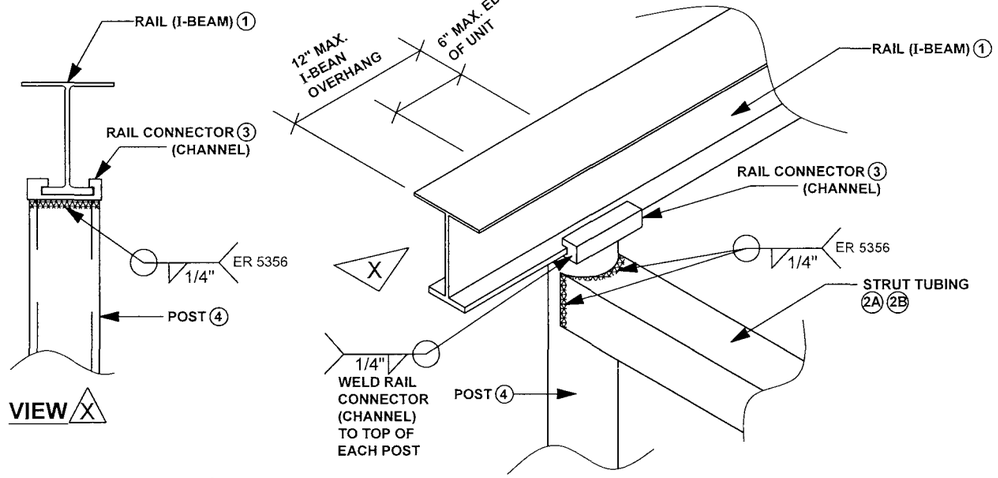
WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

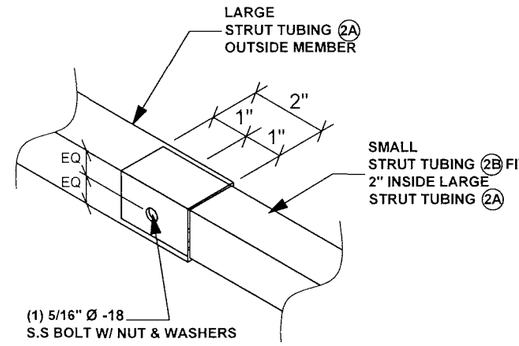
26-0904_07
28 JUN 2027



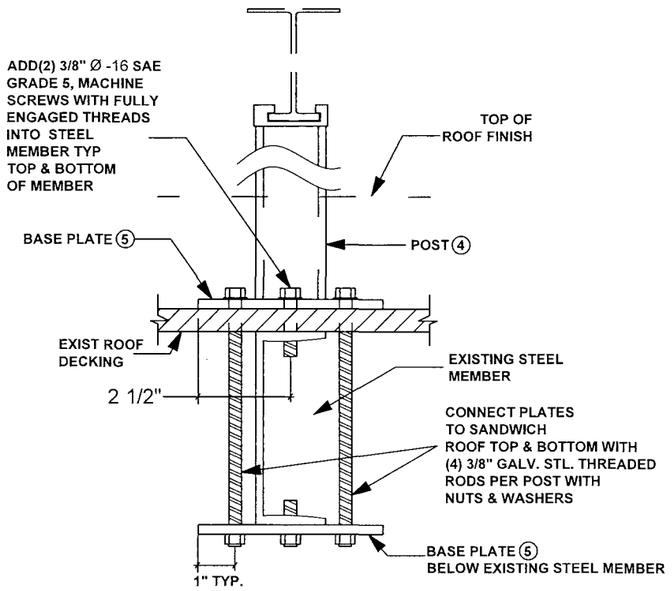
1 POST & BASEPLATE
SCALE: 1/4"= 0'- 1"



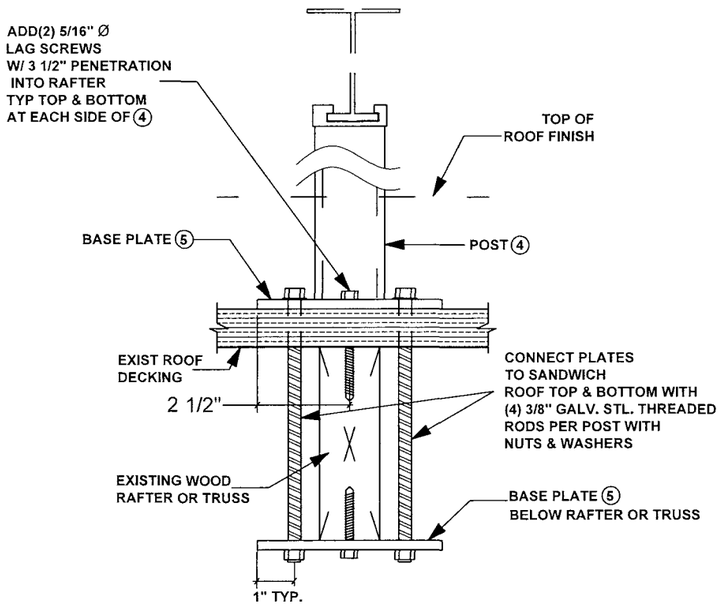
2 POST, STRUT TUBING & TOP CHANNEL CONNECTION
SCALE: 1/4"= 0'- 1"



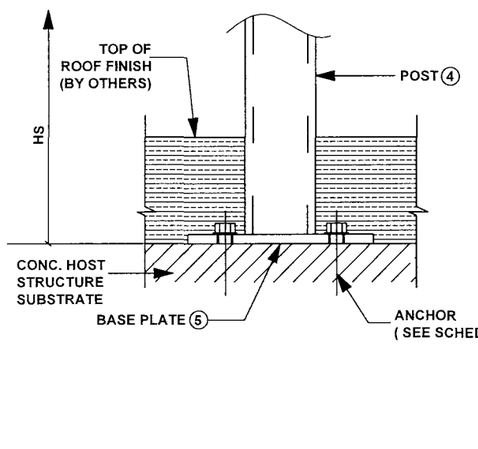
3 STRUT SPLICE
SCALE: 1/4"= 0'- 1"



4 BASE PLATE ATTACHMENT TO EXISTING STEEL TRUSS OR STEEL BEAM ROOF *
SCALE: 1/4"= 0'- 1" ELEVATION



5 BASE PLATE ATTACHMEN TO EXISTING WOOD TRUSS OR WOOD RAFTER ROOF *
SCALE: 1/4"= 0'- 1" ELEVATION



6 BASE PLATE ATTACHMENT TO EXIST CONCRETE STRUCTURAL SLAB
SCALE: 1/4"= 0'- 1" ELEVATION

TYPICAL ASSEMBLY DETAILS VALID ONLY FOR STANDS W/O DIAGONAL BRACE REINFORCEMENT

*** DETAILS ARE JUST SCHEMATIC. ACTUAL JOB CONDITIONS SHALL BE ADDRESSED AND CERTIFIED THRU A SITE SPECIFIC ENGINEERING.**

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.
7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

DRAWN BY: W.H.
6/29/2026 DATE
26-090 DRAWING No
SHEET 4 OF 22

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/29/26
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

© 2026 TILLECO INC.

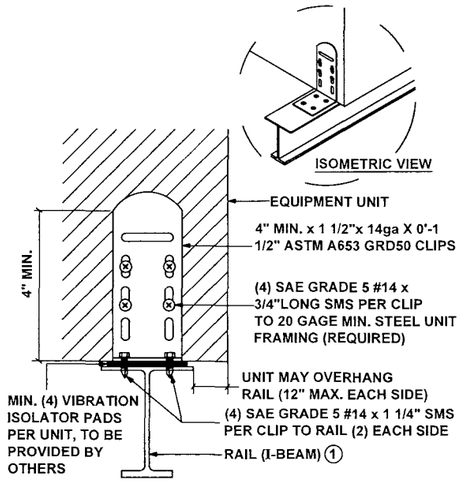
TILLECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St. Miami, FLORIDA 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-00006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

26-0904.07
28 JUN 2027

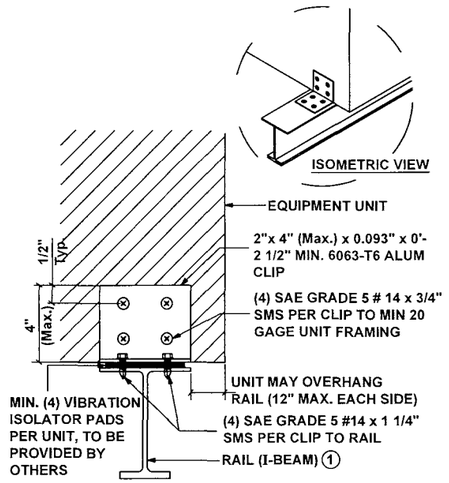
WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
INITIAL SEAL/SIGNATURE/DATE

EQUIPMENT UNIT ANCHORAGE TO RAIL ①: VALID FOR STANDS WITH OR WITHOUT DIAGONAL BRACE REINFORCEMENT

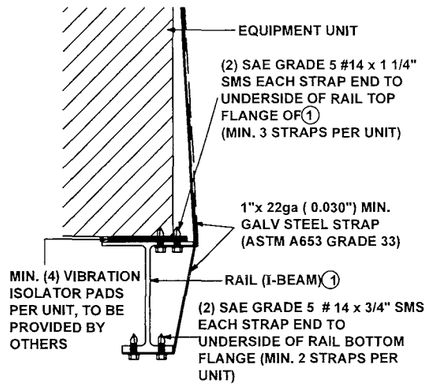
SEE SHEET 22 FOR CONNECTIONS TO CROSS BARS (WHEN USED)



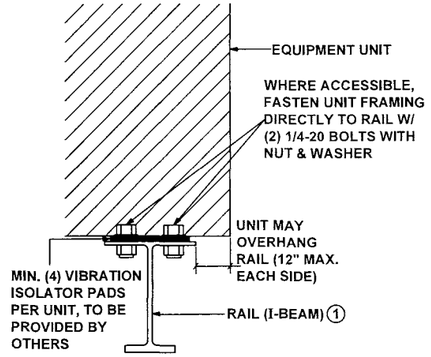
TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-



TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-



TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-



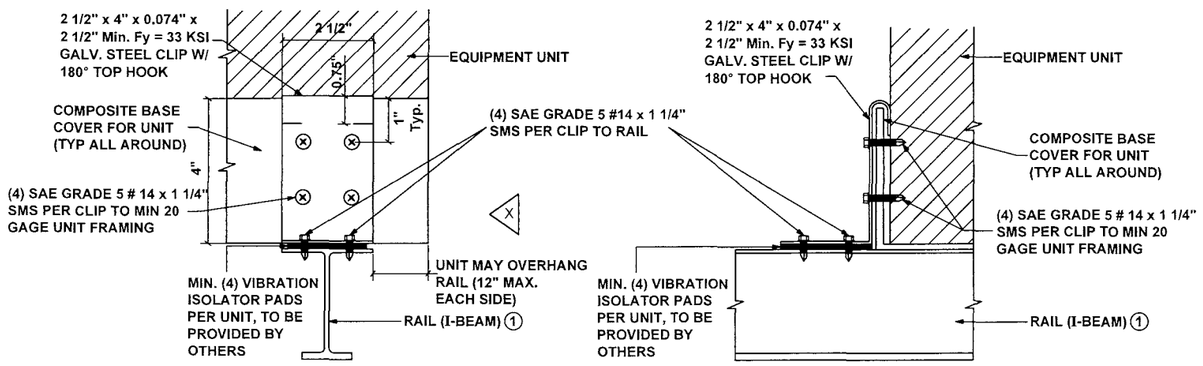
TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-

① CLIPPED UNIT CONNECTION
SCALE: 1/4"= 0'- 1" ELEVATION

② CLIPPED UNIT CONNECTION
SCALE: 1/4"= 0'- 1" ELEVATION

③ STRAPPED UNIT CONNECTION
SCALE: 1/4"= 0'- 1" ELEVATION

④ DIRECT UNIT CONNECTION
SCALE: 1/4"= 0'- 1" ELEVATION



VIEW X

TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-

⑤ ALTERNATE CLIPPED UNIT WITH COMPOSITE BASE
SCALE: 1/4"= 0'- 1" ELEVATION

* ADDITIONAL NOTES WITH GUIDELINES AND REFERENCES FOR PERFORMING UNIT'S TIE DOWN TO STANDS:

(1) IF EQUIPMENT TO BE INSTALLED IS MANUFACTURED BY CARRIER, USE THEIR TECHNICAL EVALUATION REPORT, AS ENGINEERED FOR TIE DOWN PROCEDURES.
(2) IF EQUIPMENT TO BE INSTALLED IS MANUFACTURED BY RHEEM, USE THEIR NOA FOR TIE DOWN PROCEDURES.
(3) FOR UNITS REQUIRED TIE DOWN BOLTS LARGER THAN 1/4 Ø. RAIL ① SHALL NOT BE USED. SPECIAL ENGINEERING WILL BE APPLICABLE IN THAT CASE.
(4) ANY OTHER CASE OF TIE DOWN NOT ADDRESSED HERE SHALL BE MADE THRU SPECIAL ENGINEERING.

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.
7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/25/26
-	-	-
-	-	-

DRAWN BY: W.H.
6/29/2026 DATE
26-090 DRAWING No
SHEET 5 OF 22

© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St. Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
SEAL/SIGNATURE/DATE

26-0904.07
28 JUN 2027

SCHEDULE NOTES: VALID ONLY FOR STANDS W/O DIAGONAL BRACE REINFORCEMENT

1. SCHEDULES ON SHEETS 7 THRU 20 PROVIDE MAXIMUM A.S.D LATERAL & UPLIFT WIND LOADS FOR EACH COMBINATION OF TOTAL UNIT FRONTAL AREA (AF), STAND DEPTH (DS), EQUIPMENT HEIGHT(HU), STAND HEIGHT (HS) AND NUMBER OF POST FRAMES (N) PER STAND.

2. TOTAL FRONT AREA IS TOTAL FRONTAL AREA OF EQUIPMENT UNIT FACE PARALLEL TO RAIL① (EQUAL TO TOTAL SUM OF UNIT HEIGHT (IN) x UNIT WIDTH (IN) FOR ALL UNITS ON STAND), AS DEPICTED HEREIN.

3. UNIT HEIGHT (HU) INCHES INCLUDED IN SCHEDULE SHALL BE DEFINED AS FOLLOWS: AVERAGE HEIGHT IF ALL UNITS IF THE DIFFERENCE IN HEIGHT BETWEEN TWO ADJACENT UNITS DOES NOT EXCEED 8", OR MAX UNIT HEIGHT OF INSTALLATION IF THE ABOVE CONDITION IS NOT COMPLIED WITH. MAX. UNIT HEIGHT IS 56"

4. STAND HEIGHT (HS), INCHES, IS AS DEPICTED HEREIN.

5. "FRAMES" HERE DENOTES ASSEMBLAGE OF 2 POSTS ④WITH STRUTS (2A), (2B).

6. EACH EQUIPMENT UNIT SHALL HAVE A MAXIMUM WEIGHT OF 500 lbs & A MIN.WEIGHT OF 75 LBS.

7. SPACING BETWEEN UNITS MAY VARY.

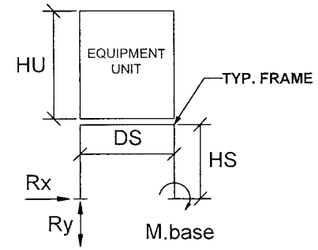
8. REFERENCE ANCHOR SCHEDULE BELOW FOR ALLOWABLE ANCHORS AND INSTALLATION CRITERIA. MINIMUM CONCRETE SLAB THICKNESS SHALL BE TWICE THE ANCHOR EMBEDMENT.

9. EQUIPMENT UNITS SHALL BE ATTACHED TO RAILS ① PER UNIT CONNECTION DETAILS ON SHEET 5.

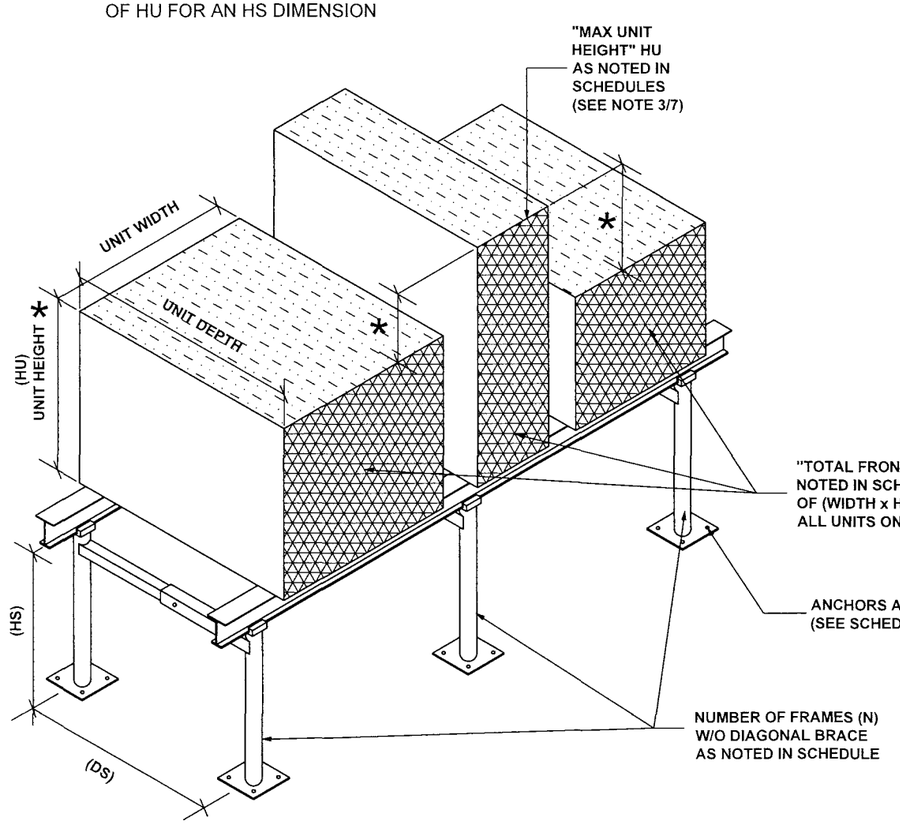
**REACTION SCHEDULE: SEE NOTE 2/1

STAND HEIGHT (HS)	REACTION AT BASE Rx	REACTION AT BASE Ry	REACTION AT BASE M.base
18"	358 LB	600 LB	3.5 K-IN
24"	268 LB	600 LB	3.5 K-IN
32"	202 LB	600 LB	3.5 K-IN

** REACTIONS CORRESPOND TO THE WORST CASE FORCE APPLIED AT BASE PLATE FOR ANY COMBINATION OF DS OF HU FOR AN HS DIMENSION



SIDE VIEW



UNIT SIZES & CONFIGURATION (FOR USE WITH DESIGN SCHEDULES)

SCALE: 1/4" = 1'-0" ISOMETRIC

* SEE NOTE 3

ANCHORS SCHEDULE

SUBSTRATE											
CONCRETE △				STEEL △				WOOD △			
MANUFACTURER & ANCHOR NAME	DIAMETER	MIN. E.D	MIN. EMBD'T	MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T	MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T
DEWALT WEDGE BOLT	3/8"	4 1/2"	3 1/2"	ELCO CONSTRUCTION PRODUCTS	5/16"-24 S.S	5/8"	FULL THREAD ENGAGEMENT	N/A	3/8" S.S	1 1/2"	3 1/2"
DEWALT SCREW BOLT	3/8"	4 1/2"	2"								
ELCO CONSTRUCTION CONFLEX	3/8"	4 1/2"	2 1/2"								
DEWALT POWER BOLT	3/8"	4 1/2"	2"								
HILTI INC.	3/8"	5"	2 1/2"								

△ NOTES:
1 - CONCRETE TO BE MIN f'c = 3 KSI
2 - STEEL TO BE MIN ASTM A-36, 1/4" MIN THICK.
3 - WOOD TO BE G=0.55 SOUTHERN YELLOW PINE # 2.
4 -ONLY STAINLESS STEEL ANCHORS ARE ALLOWED AT INSTALLATION WITHIN 300ft OF THE COASTAL SHORELINE.

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 6 OF 22

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 24-012	4/25/25
-	-	-
-	-	-
-	-	-

© 2026 TILTECO INC.

TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th, St. Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904-07
28 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND W/O DIAGONAL BRACE, WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)

DS = 20"

AF (IN^2)	HU (IN)	HS (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
576	24	18	268.2	211.7																				
		24	268.2	211.7																				
		32	201.1	158.8	301.7	238.2																		
864	28	18	174.1	137.5	225.2	177.8																		
		24	174.1	137.5	225.2	177.8																		
		32	134.1	105.9	201.1	158.8																		
1152	32	18	125.3	99.0	167.2	132.0	230.7	182.2																
		24	125.3	99.0	167.2	132.0	201.1	158.8	293.6	231.8														
		32	100.6	79.4	150.9	119.1	230.7	182.2	251.4	198.5														
1440	32	18	100.3	79.2	135.0	106.6	185.7	146.6	236.0	186.3														
		24	100.3	79.2	135.0	106.6	185.7	146.6	236.0	186.3	286.1	225.8												
		32	80.5	63.5	120.7	95.3	160.9	127.0	201.1	158.8	241.4	190.6												
1728	32	18	83.6	66.0	113.6	89.7	155.8	123.0	197.6	156.0	239.3	188.9												
		24	83.6	66.0	113.6	89.7	156.2	123.3	197.6	156.0	239.3	188.9												
		32	67.0	52.9	100.6	79.4	134.1	105.9	167.6	132.3	201.1	158.8	234.7	185.3										
2304	32	18	62.6	49.5	88.5	70.0	118.3	93.4	149.6	118.1	180.8	142.8	212.0	167.4										
		24	62.6	49.5	88.5	70.0	118.8	93.8	149.6	118.1	180.8	142.8	212.0	167.4										
		32	-	-	75.8	57.8	100.6	79.4	125.7	99.3	150.9	119.1	176.0	138.9										
2880	32	18					80.0	63.2	120.8	95.4	145.7	115.1	170.7	134.7	195.6	154.4								
		24					80.0	63.2	120.8	95.4	145.7	115.1	170.7	134.7	195.6	154.4								
		32					80.0	63.2	100.6	79.4	120.7	95.28	140.8	111.2	160.9	127.0								
3600	32	18					31.3	24.7	82.0	64.7	117.7	92.9	137.6	108.6	157.5	124.4	177.4	140.1	197.3	155.8				
		24					-	-	82.0	64.7	117.7	92.9	137.6	108.6	157.5	124.4	177.4	140.1	197.3	155.8				
		32					-	-	80.5	63.5	96.5	76.2	112.6	88.9	128.7	101.6	144.8	114.3	160.9	127.0				
4320	32	18							45.1	35.6	83.0	65.5	115.6	91.2	132.1	104.3	148.7	117.4	165.3	130.5				
		24							-	-	83.0	65.5	115.6	91.2	132.1	104.3	148.7	117.4	165.3	130.5				
		32							-	-	80.5	63.5	93.9	74.1	107.3	84.7	120.7	95.3	134.1	105.9				
5184	32	18									48.0	37.9	78.0	61.6	106.0	83.7	124.8	98.5	138.6	109.4				
		24									-	-	78.0	61.6	106.0	83.7	124.8	98.5	138.6	109.4	152.4	120.3		
		32									-	-	78.0	61.6	89.4	70.6	100.6	79.4	111.7	88.2	122.9	97.0	134.1	105.9
5760	32	18											58.3	46.0	84.0	66.3	108.6	85.8	125.3	98.9	137.7	108.7	150.1	118.5
		24											-	-	84.0	66.3	108.6	85.8	125.3	98.9	137.7	108.7	150.1	118.5
		32											-	-	80.5	63.5	90.5	71.5	100.6	79.4	110.6	87.3	120.7	95.3
6480	32	18													62.0	49.0	84.3	66.6	105.9	83.6	123.0	97.1	134.0	105.8
		24													62.0	49.0	84.3	66.6	105.9	83.6	123.0	97.1	134.0	105.8
		32													62.0	49.0	80.5	63.5	89.4	70.6	98.3	77.6	107.3	84.7
7700	32	18															53.5	42.2	72.1	56.9	90.2	71.2	107.9	85.2
		24															-	-	72.1	56.9	90.2	71.2	107.9	85.2
		32															-	-	72.1	56.9	82.8	65.3	90.3	71.3

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 7 OF 22

METALLUM ENTERPRISES Inc.

7500 NW 66 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-013	6/29/26
-	-	-
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St. Ste. 305 VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904-07

8 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND W/O DIAGONAL BRACE, WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)

DS > 20" UP TO 60"

AF (IN^2)	HU (IN)	HS (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
576	24	18	217.0	171.3	232.2	183.3																		
		24	217.0	171.3	232.2	183.3																		
		32	201.1	158.8	232.2	183.3																		
864	28	18	160.2	126.5	175.3	138.4																		
		24	160.2	126.5	175.3	138.4																		
		32	134.1	105.9	175.3	138.4																		
1152	32	18	129.7	102.4	145.1	114.5	210.4	166.1																
		24	129.7	102.4	145.1	114.5	210.4	166.1	275.3	217.4														
		32	100.6	79.4	145.1	114.5	201.1	158.8	251.4	198.5														
1440	32	18	103.8	81.9	117.1	92.5	169.4	133.7	221.3	174.7														
		24	86.8	65.5	117.1	92.5	169.4	133.7	221.3	174.7	273.1	215.6												
		32	80.5	63.5	117.1	92.5	160.9	127.0	201.1	158.8	241.4	190.6												
1728	32	18	86.5	68.3	98.5	77.8	142.0	112.1	185.3	146.3	228.4	180.3												
		24	86.5	68.3	98.5	77.8	142.0	112.1	185.3	146.3	228.4	180.3												
		32	67.0	52.9	98.5	77.8	134.1	105.9	167.6	132.3	201.1	158.8												
2304	32	18			75.2	59.4	107.8	85.1	140.3	110.7	172.6	136.3	204.9	161.8										
		24			75.2	59.4	107.8	85.1	140.3	110.7	172.6	136.3	204.9	161.8										
		32			75.2	59.4	100.6	79.4	125.7	99.3	150.9	119.1	176.0	138.9										
2880	32	18					87.3	69.0	113.3	89.4	139.1	109.8	165.0	130.2	190.8	150.6								
		24					87.3	69.0	113.3	89.4	139.1	109.8	165.0	130.2	190.8	150.6								
		32					80.5	63.5	100.6	79.4	120.7	95.3	140.8	111.2	160.9	127.0								
3600	32	18					70.9	56.0	91.7	72.4	112.3	88.7	133.0	105.0	153.6	121.3	174.3	137.6	194.9	153.9				
		24					70.9	56.0	91.7	72.4	112.3	88.7	133.0	105.0	153.6	121.3	174.3	137.6	194.9	153.9				
		32					64.4	50.8	80.5	63.5	96.5	76.2	112.6	88.9	128.7	101.6	144.8	114.3	160.9	127.0				
4320	32	18							77.3	61.0	94.5	74.6	111.7	88.2	128.9	101.8	146.1	115.3	163.2	128.9				
		24							77.3	61.0	94.5	74.6	111.7	88.2	128.9	101.8	146.1	115.3	163.2	128.9				
		32							67.0	52.9	80.5	63.5	93.9	74.1	107.3	84.7	120.7	95.3	134.1	105.9				
5184	32	18							65.2	51.5	79.6	62.8	93.9	74.2	108.3	85.5	122.6	96.8	136.9	108.1				
		24							-	-	79.6	62.8	93.9	74.2	108.3	85.5	122.6	96.8	136.9	108.1	151.2	119.4		
		32							-	-	67.0	52.9	78.2	61.8	89.4	70.6	100.6	79.4	111.7	88.2	122.9	97.0	134.1	105.9
5760	32	18									72.2	57.0	85.1	67.1	97.9	77.3	110.8	87.5	123.7	97.7	136.6	107.8	149.5	118.0
		24									72.2	57.0	85.1	67.1	97.9	77.3	110.8	87.5	123.7	97.7	136.6	107.8	149.5	118.0
		32									60.3	47.6	70.4	55.6	80.5	63.5	90.5	71.5	100.6	79.4	110.6	87.3	120.7	95.3
6480	32	18									64.7	51.1	76.2	60.1	87.6	69.2	99.1	78.2	110.5	87.3	122.0	96.3	133.4	105.3
		24									64.7	51.1	76.2	60.1	87.6	69.2	99.1	78.2	110.5	87.3	122.0	96.3	133.4	105.3
		32									53.6	42.3	62.6	49.4	71.5	56.5	80.5	63.5	89.4	70.6	98.3	77.6	107.3	84.7
7700	32	18											64.9	51.3	74.6	58.9	84.2	66.5	93.8	74.1	103.5	81.7	113.1	89.3
		24											64.9	51.3	74.6	58.9	84.2	66.5	93.8	74.1	103.5	81.7	113.1	89.3
		32											52.7	41.6	60.2	47.5	67.7	53.5	75.2	59.4	82.8	65.3	90.3	71.3

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 8 OF 22

REV. No	DESCRIPTION	DATE
-	O.D. 26-013	6/29/26

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

METALLUM ENTERPRISES Inc.

7500 NW 88 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St. Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1330 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-00006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904_07

28 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND W/O DIAGONAL BRACE, WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)

DS = 20"

AF (IN^2)	HU (IN)	HS (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
1440	36	18	95.5	75.4	130.7	103.2	178.9	141.2																
		24	95.5	75.4	130.7	103.2	178.9	141.2																
		32	80.5	63.5	120.7	95.3	160.9	127.0																
1728	36	18	79.6	62.8	106.2	83.9	149.9	118.3	189.7	149.8														
		24	79.6	62.8	106.2	83.9	149.9	118.3	189.7	149.8														
		32	67.0	52.9	100.6	79.4	134.1	105.9	167.6	132.3														
2304	36	18			79.5	62.8	105.7	83.4	143.5	113.3	173.2	136.7												
		24			79.5	62.8	105.7	83.4	143.5	113.3	173.2	136.7												
		32			75.8	59.8	100.6	79.4	125.7	99.3	150.9	119.1												
2880	36	18					65.2	51.5	105.4	83.2	139.5	110.1	163.2	128.8										
		24					65.2	51.5	105.4	83.2	139.5	110.1	163.2	128.8										
		32					65.2	51.5	100.6	79.4	120.7	95.3	140.8	111.2										
3600	36	18							67.2	53.1	97.9	77.3	126.9	100.2	150.4	118.8	169.4	133.7						
		24							67.2	53.1	97.9	77.3	126.9	100.2	150.4	118.8	169.4	133.7						
		32							67.2	53.1	96.5	76.2	112.6	88.9	128.7	101.6	144.8	114.3						
4320	36	18									68.4	54.0	93.2	73.6	117.0	92.4	140.3	110.8	157.7	124.5	173.4	136.9		
		24									68.4	54.0	93.2	73.6	117.0	92.4	140.3	110.8	157.7	124.5	173.4	136.9		
		32									68.4	54.0	93.2	73.6	107.3	84.7	120.7	95.3	134.1	105.9	147.5	116.5		
5184	36	18											65.0	51.4	85.4	67.4	105.1	83.0	124.5	98.3	143.6	113.4	158.4	125.1
		24											65.0	51.4	85.4	67.4	105.1	83.0	124.5	98.3	143.6	113.4	158.4	125.1
		32											65.0	51.4	85.4	67.4	100.6	79.4	111.7	88.2	122.9	97.0	134.1	105.9
5760	36	18													69.6	54.9	87.5	69.1	105.1	83.0	122.4	96.6	139.5	110.2
		24													69.6	54.9	87.5	69.1	105.1	83.0	122.4	96.6	139.5	110.2
		32													69.6	54.9	87.5	69.1	100.6	79.4	110.6	87.3	120.7	95.3
6480	36	18															69.9	55.2	85.7	67.7	101.2	79.9	116.5	92.0
		24															69.9	55.2	85.7	67.7	101.2	79.9	116.5	92.0
		32															69.9	55.2	85.7	67.7	98.3	77.6	107.3	84.7
7700	36	18																	61.1	48.2	74.4	58.7	87.4	69.0
		24																	61.1	48.2	74.4	58.7	87.4	69.0
		32																	61.1	48.2	74.4	58.7	87.4	69.0
7920	36	18																			70.4	55.6	83.1	65.6
		24																			70.4	55.6	83.1	65.6
		32																			70.4	55.6	83.1	65.6

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/25/26
-	-	-
-	-	-

DRAWN BY: W.H.
6/29/2026 DATE
26-090 DRAWING No
SHEET 9 OF 22

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305 VIRGINIA GARDENS, FL. 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR LICENSE No 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904-07
28 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND W/O DIAGONAL BRACE, WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)

DS > 20" UP TO 60"

AF (IN^2)	HU (IN)	HS (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
1440	36	18	109.9	86.7	125.4	99.0	180.9	142.8																
		24	107.3	84.7	125.4	99.0	180.9	142.8																
		32	80.5	63.7	120.7	95.3	160.9	127.0																
1728	36	18	91.6	72.3	105.4	83.2	151.6	119.7	197.4	155.9														
		24	89.4	70.6	105.4	83.2	151.6	119.7	197.4	155.9														
		32	67.0	52.9	100.6	79.4	134.1	105.9	167.6	132.3														
2304	36	18			80.3	63.4	114.9	90.7	149.3	117.9	183.6	144.9												
		24			80.3	63.4	114.9	90.7	149.3	117.9	183.6	144.9												
		32			75.4	59.5	100.6	79.4	125.7	99.3	150.9	119.1												
2880	36	18			65.3	51.6	93.0	73.4	120.4	95.7	147.8	118.7	175.2	138.3										
		24			65.3	51.6	93.0	73.4	120.4	95.1	147.8	118.7	175.2	138.3										
		32			60.3	47.6	80.5	63.5	100.6	79.4	120.7	95.3	140.8	111.2										
3600	36	18					75.4	59.5	97.3	76.9	119.3	94.2	141.1	111.4	162.9	128.7	184.8	148.9						
		24					75.4	99.5	97.3	76.9	119.3	94.2	141.1	111.4	162.9	128.7	184.8	148.9						
		32					64.4	50.6	80.5	63.5	96.5	76.2	112.6	88.9	128.7	101.6	144.8	114.3						
4320	36	18					63.6	50.2	81.9	64.7	100.2	79.1	118.4	93.5	136.6	107.9	154.8	122.2	173.0	136.6				
		24					63.6	50.2	81.9	64.7	100.2	79.1	118.4	93.5	136.6	107.9	154.8	122.2	173.0	136.6				
		32					-	-	67.0	52.9	80.5	63.5	93.9	74.1	107.3	84.7	120.7	95.3	134.1	105.9				
5184	36	18							69.1	54.6	84.3	66.6	99.5	78.6	114.7	90.5	129.8	100.5	145.0	114.5	160.1	126.4	175.3	138.4
		24							69.1	54.6	84.3	66.6	99.5	78.6	114.7	90.5	129.8	102.5	145.0	114.5	160.1	126.4	175.3	138.4
		32							-	-	67.0	52.9	78.2	61.8	89.4	70.6	100.6	79.4	111.7	88.2	122.9	97.0	134.1	105.9
5760	36	18									76.4	60.3	90.0	71.1	103.7	81.9	117.3	92.6	131.0	103.4	144.6	114.2	158.2	124.9
		24									76.4	60.3	90.0	71.1	103.7	81.9	117.3	92.6	131.0	103.4	144.6	114.2	158.2	124.9
		32									60.3	47.6	70.4	55.6	80.5	63.5	90.5	71.5	100.6	79.4	110.6	87.3	120.7	95.3
6480	36	18									68.4	54.0	80.6	63.5	92.7	73.2	104.8	82.8	117.0	92.3	129.1	101.9	141.2	111.5
		24									68.4	54.0	80.6	63.5	92.7	73.2	104.8	82.8	117.0	92.3	129.1	101.9	141.2	111.5
		32									-	-	62.6	49.4	71.5	56.5	80.5	63.5	89.4	70.6	98.3	77.8	107.3	84.7
7700	36	18											68.6	54.1	78.8	62.2	89.0	70.3	99.2	78.3	109.4	86.4	119.6	94.4
		24											68.6	54.1	78.8	62.2	89.0	70.3	99.2	78.3	109.4	86.4	119.6	94.4
		32											-	-	60.2	47.5	67.7	53.5	75.2	59.4	82.8	65.3	90.3	71.3
7920	36	18													76.7	60.6	86.7	68.4	96.6	76.2	106.5	84.1	116.4	91.9
		24													76.7	60.6	86.7	68.4	96.6	76.2	106.5	84.1	116.4	91.9
		32													-	-	65.8	52.0	73.1	57.7	80.5	63.5	87.8	69.3
8640	36	18													70.7	55.9	79.8	63.0	88.9	70.2	98.0	77.4	107.1	84.6
		24													70.7	55.9	79.8	63.0	88.9	70.2	98.0	77.4	107.1	84.6
		32													-	-	63.1	49.9	67.0	52.9	73.8	58.2	80.5	63.5

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H. | 6/29/2026 DATE | 26-090 DRAWING No | SHEET 10 OF 22

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/26/26
-	-	-
-	-	-
-	-	-

METALLUM ENTERPRISES Inc.
7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6335 N.W. 36th St., Ste. 305 VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr, P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE NO 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

6/29/2026

P.E. SEAL/SIGNATURE/DATE

26-0904-07
28 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND W/O DIAGONAL BRACE, WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)

DS ≥ 20" UP TO 60"

AF (IN^2)	HU (IN)	HS (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
1440	42	18	116.4	91.7	135.4	106.9	194.3	153.4																
		24	107.3	84.7	135.4	106.9	194.3	153.4																
		32	80.5	63.5	120.7	95.3	160.4	127.0																
1728	42	18	97.0	76.6	113.6	89.7	162.7	128.4																
		24	89.4	70.6	113.6	89.7	162.7	128.4																
		32	67.0	52.9	100.6	79.4	134.1	105.9																
2304	42	18			86.4	68.2	123.2	97.2	159.6	126.0														
		24			86.4	68.2	123.2	97.2	151.6	126.0														
		32			75.4	59.5	100.6	79.4	125.7	99.3														
2880	42	18			70.1	55.3	99.5	78.5	128.6	101.5	157.7	124.5												
		24			70.1	55.3	99.5	78.5	128.6	101.5	157.7	124.5												
		32			60.3	47.6	80.5	63.5	100.6	79.4	120.7	95.3												
3600	42	18			57.0	45.0	80.5	63.6	103.8	82.0	127.0	100.3	150.2	118.6	173.4	136.9								
		24			57.0	45.0	80.5	63.6	103.8	82.0	127.0	100.3	150.2	118.6	171.6	135.5								
		32			48.3	38.1	64.4	50.8	80.5	63.5	96.5	76.2	112.6	88.9	128.7	101.6								
4320	42	18					67.9	53.6	87.3	68.9	106.6	84.2	125.9	99.4	145.2	114.7	164.5	129.9						
		24					67.9	53.6	87.3	68.9	106.6	84.2	125.2	98.8	143.0	112.9	160.9	127.0						
		32					53.6	42.4	67.0	52.9	80.5	63.5	93.8	74.1	107.3	84.7	120.7	95.3						
5184	42	18									89.6	70.7	105.7	83.4	121.8	96.1	137.8	108.8	153.9	121.5				
		24									89.4	70.6	104.3	82.3	119.2	94.1	134.1	105.9	149.0	117.6				
		32									67.0	52.9	78.2	61.8	89.4	70.6	100.6	79.4	111.7	88.2				
5760	42	18									81.1	64.0	95.6	75.5	110.0	86.9	124.5	99.3	138.9	109.7	159.4	125.8	167.8	132.0
		24									80.5	63.5	93.9	74.1	107.3	84.7	120.7	95.3	134.1	105.9	147.5	116.5	160.9	127.0
		32									60.3	47.6	70.4	55.6	80.5	63.5	90.5	71.5	100.6	79.4	110.6	87.3	120.0	95.3
6480	42	18											85.5	67.5	98.3	77.6	111.2	87.8	124.0	97.9	136.8	108.0	190.7	150.6
		24											83.4	65.9	95.4	75.3	107.3	84.6	119.2	94.1	131.1	103.5	143.0	112.9
		32											62.6	49.4	71.5	56.5	80.5	63.5	89.4	70.6	98.8	78.0	107.3	84.7
7700	42	18											72.6	57.3	83.4	65.9	94.4	74.4	105.4	83.2	119.9	91.5	160.5	126.7
		24											70.2	55.4	80.2	63.4	90.3	71.3	100.3	79.2	110.3	87.1	120.4	95.0
		32											52.7	41.6	60.2	47.5	67.7	53.5	75.2	59.4	82.8	65.3	90.3	71.3
7920	42	18													84.0	66.4	91.7	72.4	102.3	80.7	112.8	89.0	155.9	123.0
		24													78.0	61.6	87.8	69.3	97.5	77.0	107.3	84.7	116.7	92.5
		32													-	-	65.8	52.0	73.1	57.7	80.5	63.5	87.7	69.2
8640	42	18															87.3	69.0	94.1	74.3	103.7	81.9	143.0	112.9
		24															80.5	63.5	89.4	70.6	98.3	77.6	107.3	84.7
		32															60.3	47.6	67.0	52.9	73.8	58.2	80.5	63.5
9360	42	18															80.9	63.8	90.1	71.1	96.1	75.9	132.0	104.2
		24															74.3	58.6	82.5	65.2	90.8	71.7	99.0	78.2
		32															-	-	61.9	48.9	68.1	53.8	74.3	58.6

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 11 OF 22

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/29/26
-	-	-

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 : Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904-07
28 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND W/O DIAGONAL BRACE, WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)

DS ≥ 20" UP TO 60"

AF (IN^2)	HU (IN)	HS (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
1728	48	18	100.2	79.1	119.6	94.4	170.4	134.5																
		24	89.4	70.6	119.6	94.4	170.4	134.5																
		32	67.0	52.9	100.6	79.4	134.1	105.9																
2304	48	18	75.1	59.3	90.8	71.7	128.9	101.7	166.6	131.5														
		24	67.0	52.9	90.8	71.7	128.9	101.7	166.6	131.5														
		32	50.3	39.7	75.4	59.5	100.6	79.4	125.7	99.2														
2880	48	18			73.5	58.0	103.9	82.1	134.1	105.9	164.1	129.6												
		24			73.5	58.0	103.9	82.1	134.1	105.9	164.9	127.0												
		32			60.3	47.6	80.5	63.5	100.6	79.4	120.7	95.3												
3600	48	18			59.7	47.1	84.0	60.3	108.1	85.4	132.1	104.3												
		24			59.7	47.1	84.0	60.3	107.3	84.7	128.7	101.6												
		32			-	-	64.4	50.8	80.5	63.5	96.5	76.2												
4320	48	18					70.7	55.8	90.8	71.7	110.8	87.5	130.8	103.2	150.7	119.0								
		24					70.7	55.8	89.4	70.6	107.3	84.7	125.2	98.8	143.0	112.9								
		32					-	-	67.0	52.9	80.5	63.5	93.9	74.1	107.3	84.7								
5184	48	18									93.0	73.4	109.6	86.6	128.3	101.3	142.9	112.8	159.6	125.9				
		24									89.4	70.6	104.3	82.3	119.2	96.1	134.1	105.9	149.0	117.6				
		32									67.0	52.9	78.2	61.8	89.4	70.6	100.6	79.4	111.7	88.2				
5760	48	18									84.1	66.4	99.1	78.2	114.0	90.0	129.0	101.8	143.9	113.6	158.8	125.4		
		24									80.5	63.5	93.9	74.1	107.3	84.7	120.7	95.3	134.1	105.9	147.5	116.5		
		32									60.3	47.6	70.4	55.6	80.5	63.5	90.5	71.5	100.6	79.4	110.6	87.3		
6480	48	18									75.3	59.4	88.5	69.9	101.8	80.4	115.1	90.9	128.4	101.4	141.6	111.8	154.9	122.3
		24									71.5	56.5	83.4	65.9	95.4	75.3	107.3	84.7	119.2	94.1	131.1	103.5	143.0	112.9
		32									-	-	62.6	49.4	71.5	56.5	80.5	63.5	89.4	70.6	98.3	77.6	107.3	84.7
7700	48	18									64.0	50.5	75.2	59.3	86.3	68.2	97.5	77.0	108.7	85.8	119.8	94.6	131.0	103.4
		24									60.2	47.5	70.2	55.4	80.2	63.4	90.3	71.3	100.3	79.2	110.3	87.1	120.4	95.0
		32									-	-	-	-	60.2	47.5	67.7	53.5	75.2	59.4	82.8	65.3	90.3	71.3
7920	48	18											73.2	57.8	84.0	66.4	94.9	74.9	105.6	83.5	116.6	92.1	127.5	109.6
		24											68.3	53.9	78.0	61.6	87.8	69.3	97.5	77.0	107.3	84.7	117.0	92.4
		32											-	-	-	-	65.8	52.0	73.1	57.7	80.5	63.5	87.8	69.3
8640	48	18											67.4	53.2	77.4	61.1	87.3	69.0	97.3	76.8	107.2	84.7	117.2	92.5
		24											62.6	49.4	71.5	56.5	80.5	63.5	89.4	70.6	98.3	77.6	107.3	84.7
		32											-	-	-	-	60.3	47.6	67.0	52.9	73.7	58.2	80.5	63.5
9360	48	18											62.6	49.4	71.7	56.6	80.9	63.8	90.1	71.1	99.3	78.4	108.5	85.6
		24											-	-	66.0	52.1	74.3	58.6	82.5	65.2	90.8	71.7	99.0	78.2
		32											-	-	-	-	-	-	61.9	48.9	68.1	53.8	74.3	58.6

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	-	-
-	OLD 26-013	6/25/26
-	-	-

DRAWN BY: W.H.
6/29/2026 DATE
26-090 DRAWING No
SHEET 12 OF 22

© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr, P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

26-0904.07
28 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND W/O DIAGONAL BRACE, WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)

DS ≥ 20" UP TO 60"

AF (IN^2)	HU (IN)	HS (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
2880	56	18			76.3	60.2	107.3	84.7	138.0	108.9														
		24			76.3	60.2	107.3	84.7	134.1	105.9														
		32			60.3	47.6	80.5	63.5	100.6	79.4														
3600	56	18			61.8	48.8	86.6	68.4	111.1	87.1	135.5	107.0												
		24			61.8	48.8	85.8	67.8	107.3	84.7	128.7	101.6												
		32			-	-	64.4	50.8	88.5	63.5	96.5	76.2												
4320	56	18					72.8	57.5	93.2	73.6	113.5	89.6	133.5	105.7										
		24					71.5	56.5	89.4	70.6	107.3	84.7	125.2	98.1										
		32					-	-	67.0	52.9	80.5	63.5	93.9	74.1										
5184	56	18					61.3	48.4	78.3	61.8	95.2	75.2	112.1	88.5	129.0	101.9								
		24					59.6	47.1	74.5	58.8	89.9	74.6	104.3	82.3	119.2	74.1								
		32					-	-	-	-	67.0	52.9	78.2	61.8	89.4	70.6								
5760	56	18							70.8	55.9	86.1	68.0	101.3	80.0	116.5	92.0	131.7	103.9						
		24							67.0	52.9	80.5	63.5	93.9	74.1	107.3	84.7	120.7	95.3						
		32							-	-	60.3	47.6	70.4	55.6	80.5	63.5	90.5	71.5						
6480	56	18							63.4	50.0	78.9	62.3	90.4	71.4	103.9	82.0	117.4	92.7	130.5	103.4				
		24							59.6	47.1	71.5	56.5	83.4	65.9	95.4	75.3	107.3	84.6	119.2	94.1				
		32							-	-	-	-	62.6	49.4	71.5	56.5	80.5	63.6	89.4	70.6				
7700	56	18									65.3	51.6	78.7	62.1	88.0	69.5	99.4	78.5	110.7	87.4	122.1	96.4	133.4	105.3
		24									60.2	47.5	70.2	55.3	80.2	63.4	90.3	71.3	100.3	79.2	110.3	87.1	120.4	95.0
		32									-	-	-	-	60.2	47.5	67.1	53.5	75.2	59.4	82.8	65.3	90.3	71.3
7920	56	18									63.6	50.2	74.6	58.9	85.6	67.6	96.6	76.3	107.7	85.1	118.8	93.8	129.8	102.5
		24									-	-	68.3	53.9	78.0	61.6	87.7	69.2	97.5	77.0	107.3	84.7	117.0	92.4
		32									-	-	-	-	-	-	65.8	51.9	73.1	57.7	80.5	63.5	87.8	69.3
8640	56	18											68.7	54.3	78.8	62.2	89.0	70.2	99.1	78.2	108.2	85.4	119.3	94.2
		24											62.6	49.4	71.5	56.5	80.5	63.5	89.4	70.6	98.3	77.6	107.3	84.7
		32											-	-	-	-	60.3	47.6	67.0	52.9	73.8	58.2	80.5	63.5
9360	56	18													73.0	57.7	82.4	65.0	91.7	72.4	101.0	79.8	110.9	87.1
		24													66.0	52.1	74.3	58.6	82.5	65.2	90.8	71.9	99.0	78.2
		32													-	-	-	-	61.9	48.9	68.1	53.8	74.3	58.6

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 13 OF 22

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/29/26
-	-	-
-	-	-

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th, St. Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

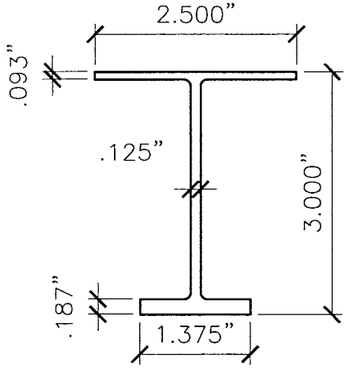
P.E. SEAL/SIGNATURE/DATE

26-0904.07
28 JUN 2027

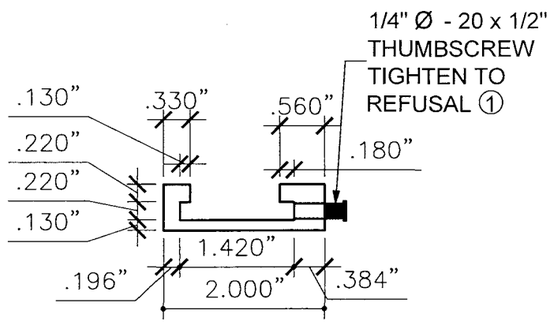
BILL OF MATERIALS: VALID ONLY FOR STANDS WITH DIAGONAL BRACE REINFORCEMENT

COMPONENT No.	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
(1.)	RAIL (I-BEAM)	2.50" X 1.375" X 3"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	SUPPORT FOR ROOF TOP EQUIPMENT FIT AND ADJUSTED INTO (3)
(2A)	LARGE STRUT TUBING	1.75" X 1.75" X 0.094"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WIND BRACING COMPONENT WELDED TO (4)
(2B)	SMALL STRUT TUBING	1.50" X 1.50" X 0.125"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WIND BRACING COMPONENT WELDED TO (4)
(3.)	TOP CHANNEL	2.00" X 0.570" X 0'-3"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WELDED TO TOP OF (4) TO RECEIVE (1)
(4.)	POST	1.90" X 0.145" THK.	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WELDED TO (5), (2A), (2B) & (3)
(5.)	BASE PLATE	5" X 5" X 1/4" THK.	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	WELDED TO (4) & ANCHORED TO EXISTING STRUCTURE
(6.)	DIAGONAL BRACE	2.00" X 2.00" X 0.125"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	BOLTED TO (4) W/ (7)
(7.)	THRU BOLT	3/8"ø-16	ASTM A-307 GALV. STL.	-	USE (2) EACH PAIR OF (6), SEE DETAILS SHEET 16

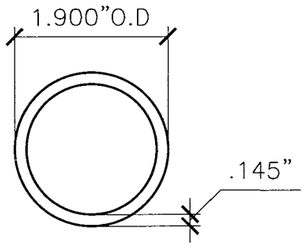
COMPONENTS



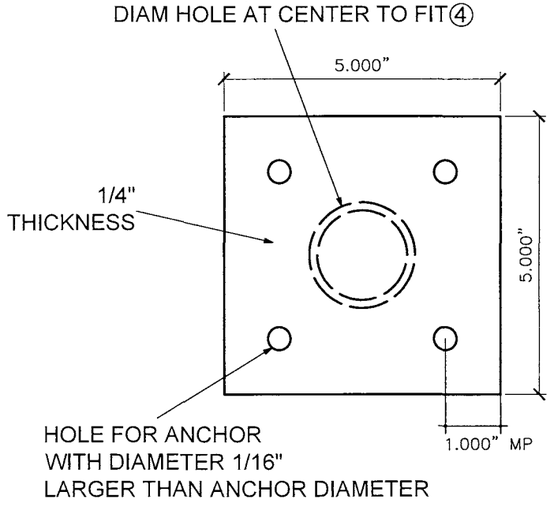
(1) **RAIL (I-BEAM)**
1/2"= 0'- 1"



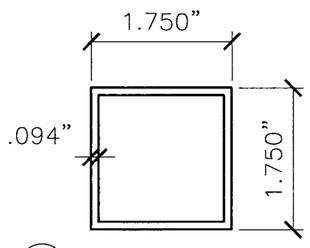
(3) **TOP CHANNEL (3" LONG)**
1/2"= 0'- 1"



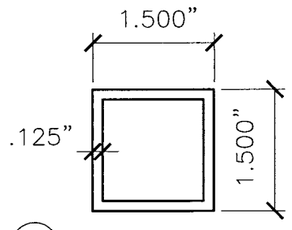
(4) **POST**
1/2"= 0'- 1"



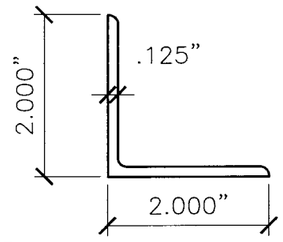
(5) **BASE PLATE**
3/8"= 0'- 1"



(2A) **LARGE STRUT TUBING**
1/2"= 0'- 1"



(2B) **SMALL STRUT TUBING**
1/2"= 0'- 1"



(6) **DIAGONAL BRACE**
1/2"= 0'- 1"

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.
7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

DRAWN BY: W.H. | 6/29/2026 DATE | 26-090 DRAWING No | SHEET 14 OF 22

REV. No	DESCRIPTION	DATE
-	QLD 26-013	6/29/26
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-

© 2026 TILTECO INC.

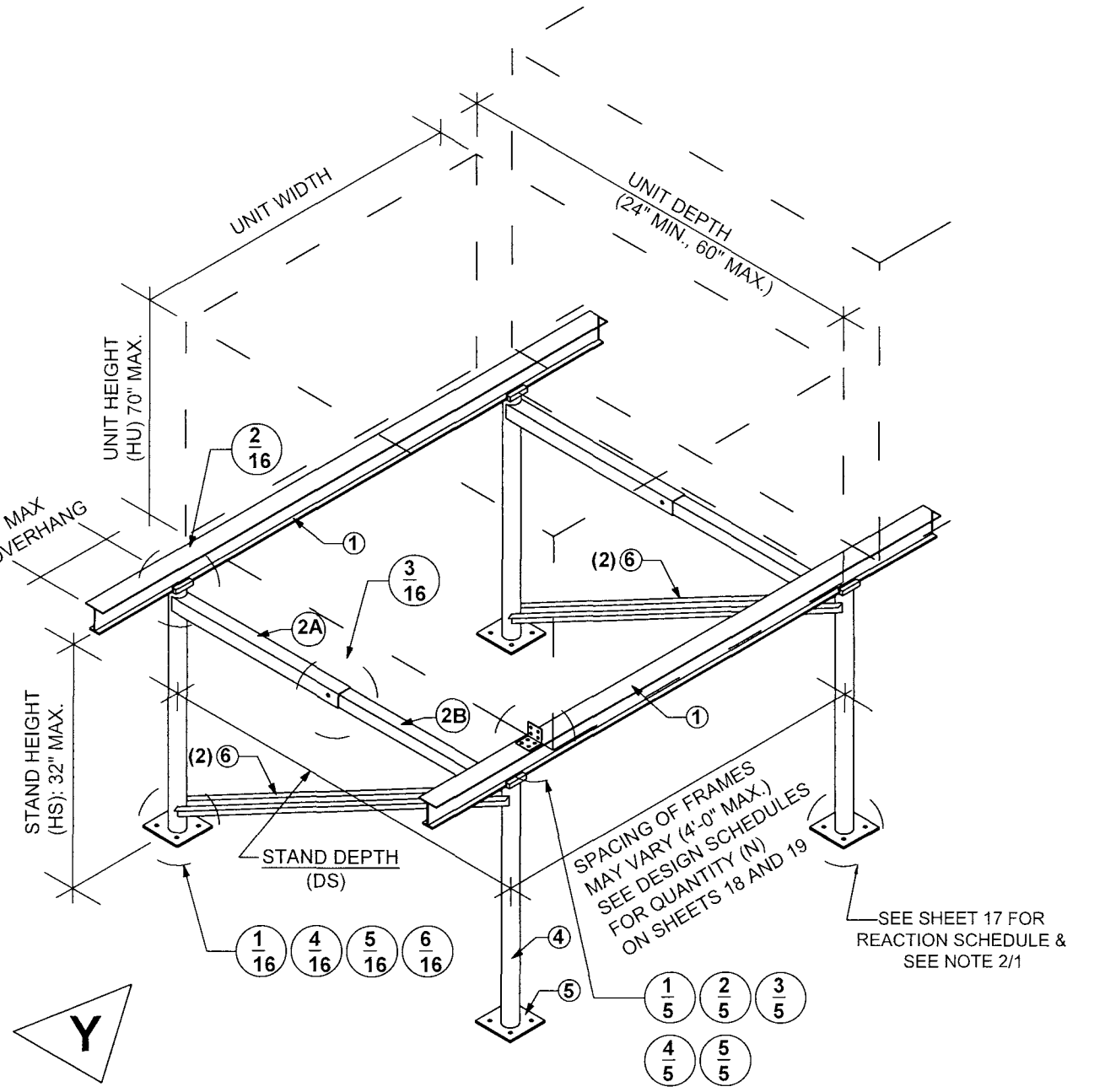
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St. Ste. 305 VIRGINIA GARDENS, FL 33166
Phone: (305)871-1530 . Fax: (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

TILTECO INC.

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

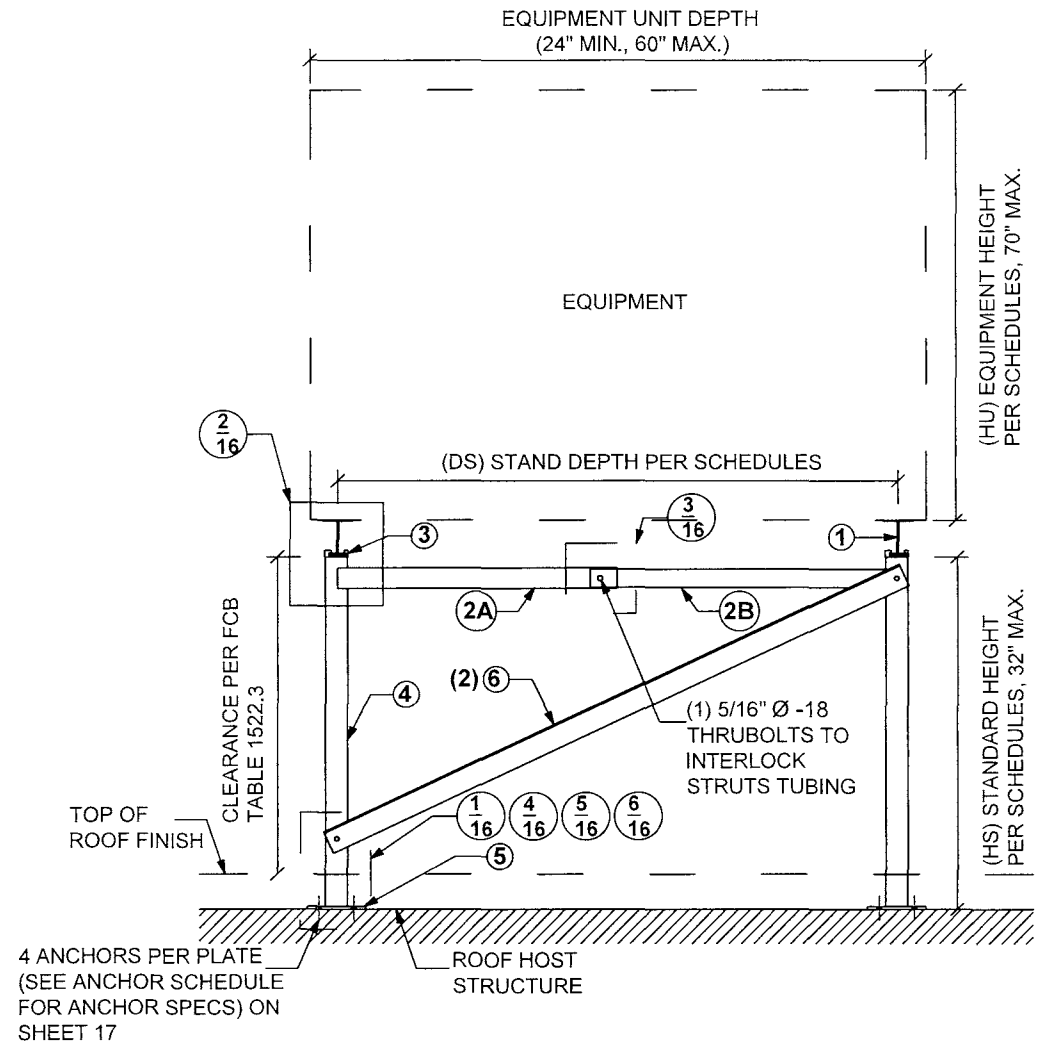
P.E. SEAL/SIGNATURE/DATE

26-0904.07
28 JUN 2027



ASSEMBLY FOR STANDS WITH DIAGONAL BRACE REINFORCEMENT

SCALE: 1/16"= 0'-1"



ELEVATION Y

SCALE: 1/16"= 0'-1"

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 15 OF 22

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/29/26
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

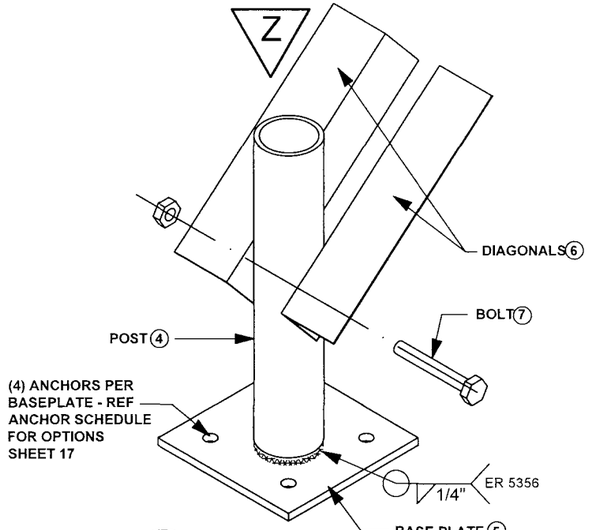
© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

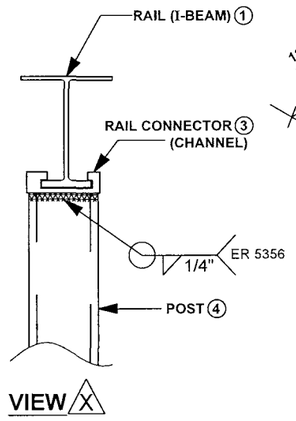
P.E. SEAL/SIGNATURE/DATE

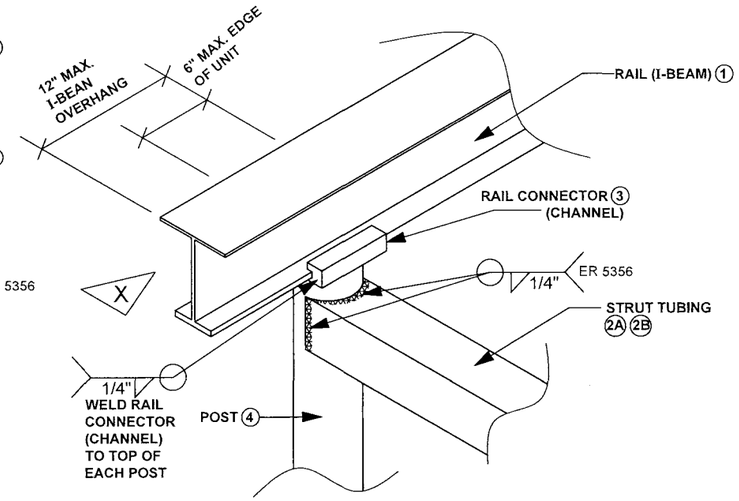
STATE OF FLORIDA
WALTER A. TILLIT JR.
LICENSE
No. 44167
PROFESSIONAL ENGINEER

26-0904-07
28 JUN 2027

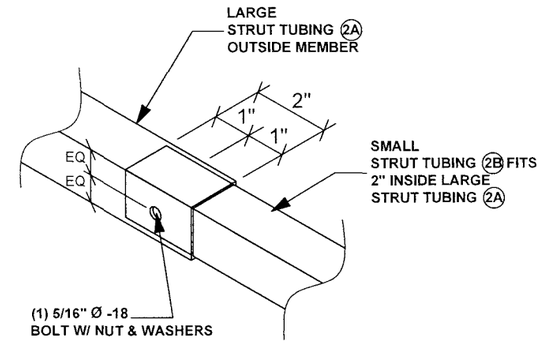


1 POST & BASE PLATE
SCALE: 1/4"= 0'- 1"

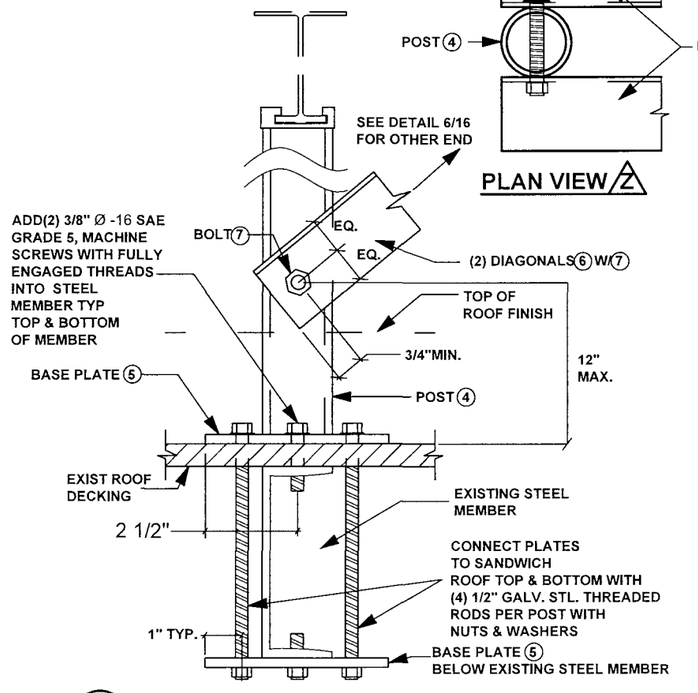




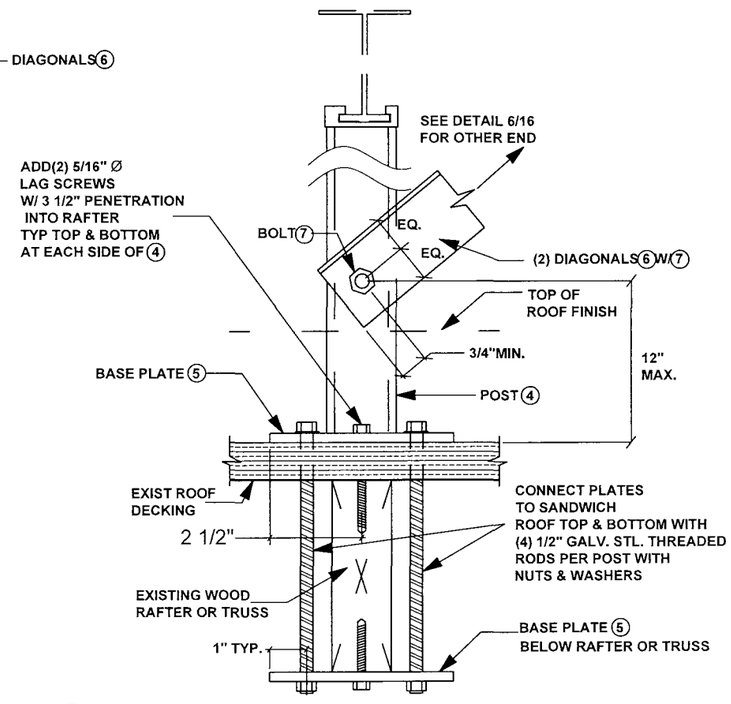
2 POST, STRUT TUBING & TOP CHANNEL CONNECTION
SCALE: 1/4"= 0'- 1"



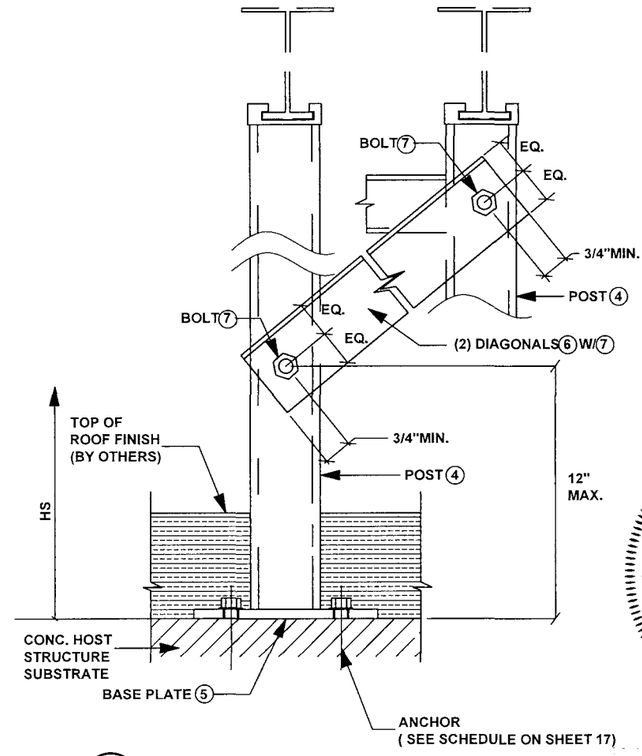
3 STRUT SPLICE
SCALE: 1/4"= 0'- 1"



4 BASE PLATE ATTACHMENT TO EXISTING STEEL TRUSS OR STEEL BEAM ROOF
SCALE: 1/4"= 0'- 1" ELEVATION



5 BASE PLATE ATTACHMENT TO EXISTING WOOD TRUSS OR WOOD RAFTER ROOF
SCALE: 1/4"= 0'- 1" ELEVATION



6 BASE PLATE ATTACHMENT TO EXIST CONCRETE STRUCTURAL SLAB
SCALE: 1/4"= 0'- 1" ELEVATION

TYPICAL ASSEMBLY DETAILS VALID ONLY FOR STANDS WITH DIAGONAL BRACE REINFORCEMENT

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.
6/29/2026 DATE
26-090 DRAWING No
SHEET 16 OF 22

METALLUM ENTERPRISES Inc.
7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/25/26
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St. Ste. 305 VIRGINIA GARDENS, FL. 33166
Phone : (305)871-1530 . Fax : (305)871-1533
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904-07
28 JUN 2027

SCHEDULE NOTES: VALID ONLY FOR STANDS WITH DIAGONAL BRACE REINFORCEMENT

1. SCHEDULES ON SHEETS 18 & 19 PROVIDE MAXIMUM A.S.D LATERAL & UPLIFT WIND LOADS FOR EACH COMBINATION OF TOTAL UNIT FRONTAL AREA (AF), DIAGONALLY REINFORCED STAND, WITH STAND DEPTH (DS), EQUIPMENT HEIGHT(HU), STAND HEIGHT (HS) AND NUMBER OF POST FRAMES (N) PER STAND.

2. TOTAL FRONT AREA IS TOTAL FRONTAL AREA OF EQUIPMENT UNIT FACE PARALLEL TO RAIL① (EQUAL TO TOTAL SUM OF UNIT HEIGHT (IN) x UNIT WIDTH (IN) FOR ALL UNITS ON STAND), AS DEPICTED HEREIN.

3. UNIT HEIGHT (HU) INCHES INCLUDED IN SCHEDULE SHALL BE DEFINED AS FOLLOWS: AVERAGE HEIGHT IF ALL UNITS IF THE DIFFERENCE IN HEIGHT BETWEEN TWO ADJACENT UNITS DOES NOT EXCEED 8", OR MAX UNIT HEIGHT OF INSTALLATION IF THE ABOVE CONDITION IS NOT COMPLIED WITH. MAX. UNIT HEIGHT IS 70".

4. STAND HEIGHT (HS), INCHES, IS AS DEPICTED HEREIN.

5. "FRAMES" HERE DENOTES ASSEMBLAGE OF 2 POSTS ④ WITH STRUTS (2A), (2B). & (2) DIAGONAL BRACE ⑥W/⑦BOLTS

6. EACH EQUIPMENT UNIT SHALL HAVE A MAXIMUM WEIGHT OF 825 lbs & A MIN. WEIGHT OF 75 LBS.

7. SPACING BETWEEN UNITS MAY VARY.

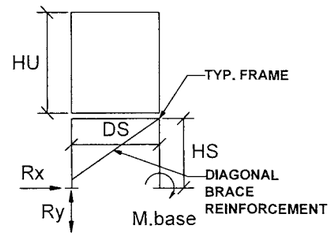
8. REFERENCE ANCHOR SCHEDULE BELOW FOR ALLOWABLE ANCHORS AND INSTALLATION CRITERIA.

9. EQUIPMENT UNITS SHALL BE ATTACHED TO RAILS ① PER UNIT CONNECTION DETAILS ON SHEET 5.

**REACTION SCHEDULE: SEE NOTE 2/1

STAND HEIGHT (HS)	REACTION AT BASE Rx	REACTION AT BASE Ry	REACTION AT BASE M.base
24"	450 LB	746 LB	3.5 K-IN
32"	399 LB	926 LB	6.6 K-IN

** REACTIONS CORRESPOND TO THE WORST CASE FORCE APPLIED AT BASE PLATE FOR ANY COMBINATION OF DS OF HU FOR AN HS DIMENSION

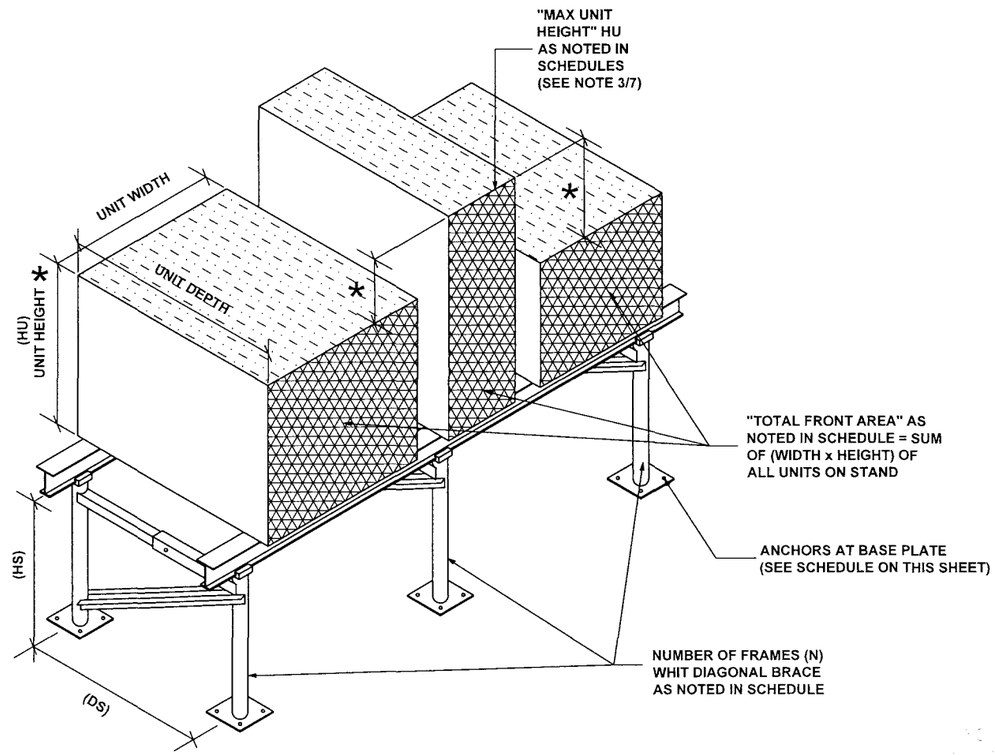


SIDE VIEW

ANCHORS SCHEDULE

SUBSTRATE											
CONCRETE △				STEEL △				WOOD △			
MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T	MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T	MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T
DEWALT	3/8"	4 1/2"	3 1/2"	ELCO CONSTRUCTION PRODUCTS	5/16"-24	5/8"	FULL THREAD ENGAGEMENT	N/A	3/8"	1 1/2"	3 1/2"
WEDGE BOLT				HEX WASHER HEAD DRILL FLEX STRUCTURAL DRILL SCREWS				NDS LAG SCREWS			

△ NOTES: 1 - CONCRETE TO BE MIN f'c = 3 KSI
2 - STEEL TO BE MIN ASTM A-36, 1/4" MIN THICK.
3 - WOOD TO BE G=0.55 SOUTHERN YELLOW PINE # 2.



UNIT SIZES & CONFIGURATION (FOR USE WITH DESIGN SCHEDULES)

SCALE: 1/4" = 1'-0" ISOMETRIC

* SEE NOTE 3

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

DRAWN BY: W.H. | 6/29/2026 DATE | 26-090 DRAWING No | SHEET 17 OF 22

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 24-012	6/25/25
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL. 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904-07
28 JUN 2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A DIAGONAL BRACE REINFORCED STAND WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), MAX. EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N) (VALID ONLY FOR INSTALLATION CONDITIONS WITH BASE PLATE ATTACHMENT TO EXISTING ROOF'S CONCRETE STRUCTURAL SLAB, PER DETAIL 6/16)

DS ≥ 24" UP TO 60"

AF (IN^2)	HU (IN)	HS (IN)	N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
2880	≤ 57	24	71.0	56.1	95.0	75.0	118.0	94.0	102.0	112.0	160.0	126.0										
		32	63.3	50.0	84.4	66.7	105.5	83.3	126.6	100.0	147.7	116.7										
3600	≤ 57	24	57.0	45.0	76.0	60.0	95.0	75.0	114.0	90.1	133.0	105.1										
		32	50.6	40.0	67.5	93.3	84.4	66.7	101.3	80.0	118.2	95.4										
4320	≤ 57	24	48.0	38.0	64.0	50.6	80.0	63.2	96.0	75.8	112.0	88.5										
		32	47.2	33.3	56.3	24.4	70.4	55.6	84.5	66.7	95.6	77.9										
5184	≤ 57	24	39.5	31.5	52.7	41.6	65.9	52.0	79.1	62.5	92.3	72.9	105.5	83.3								
		32	35.0	27.7	46.9	37.1	58.6	46.3	70.3	55.6	82.0	64.8	93.7	74.0								
5760	≤ 57	24			47.4	37.5	59.3	46.8	71.2	56.2	83.1	65.6	95.0	75.0	106.9	84.4						
		32			42.2	33.3	52.8	41.7	63.4	50.0	74.0	58.4	84.6	66.8	95.2	75.1						
6480	≤ 57	24			42.1	33.3	52.6	41.6	63.1	49.9	73.6	58.2	84.1	66.5	94.6	74.1	105.1	83.0	115.6	91.3	126.1	99.6
		32			37.5	29.6	46.9	37.0	56.3	44.5	65.6	51.9	75.2	59.4	84.6	66.8	77.0	60.8	103.4	81.6	112.8	89.1
7700	≤ 57	24			35.4	28.0	44.3	35.0	53.2	42.0	62.0	49.0	70.9	56.0	79.8	63.0	88.7	70.0	97.6	77.1	106.4	84.1
		32			27.4	21.6	34.2	27.0	41.0	32.4	47.9	37.8	54.7	43.2	61.5	48.5	68.4	68.0	75.2	58.8	88.0	69.5
7920	≤ 57	24					43.1	34.0	51.7	40.9	60.3	47.7	68.9	54.4	77.5	61.2	86.1	67.2	94.7	73.9	103.3	81.6
		32					33.3	26.3	40.0	31.6	46.7	38.9	53.4	42.2	60.1	47.5	66.8	62.4	73.5	58.7	80.2	63.3
8640	≤ 57	24					39.5	31.2	47.4	37.4	55.3	43.6	63.2	49.9	71.1	56.2	79.0	61.6	86.9	53.0	94.8	74.9
		32					30.5	24.1	36.6	28.9	42.7	33.7	48.8	38.6	54.9	43.4	61.0	48.2	67.1	52.3	73.2	57.8
9360	≤ 57	24					36.5	28.8	43.8	34.6	51.1	40.4	58.4	46.1	65.7	51.9	73.0	57.7	80.3	63.4	87.6	69.2
		32					28.2	22.2	33.8	26.7	39.4	31.1	45.0	35.6	50.6	40.0	56.2	44.4	61.8	48.8	67.4	53.3

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 18 OF 22

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/25/26
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-

© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St. Ste. 305, VIRGINIA GARDENS, Fl. 33166
Phone : (305)871-1530 Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0801.07
28 JUN-2027

MAX. ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A DIAGONAL BRACE REINFORCED STAND WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), MAX. EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N) (VALID ONLY FOR INSTALLATION CONDITIONS WITH BASE PLATE ATTACHMENT TO EXISTING ROOF'S CONCRETE STRUCTURAL SLAB, PER DETAIL 6/16)

DS ≥ 24" UP TO 60"

AF (IN^2)	HU (IN)	HS (IN)	N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10		N = 11		N = 12	
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
3600	≤ 70	24	55.0	43.5	73.3	57.9	91.6	72.4	109.9	86.8	128.2	101.3										
		32	49.6	39.2	66.1	52.2	82.6	65.5	82.6	60.3	96.4	76.1										
4320	≤ 70	24	46.5	36.7	62.0	49.0	77.5	61.2	93.0	73.5	100.5	85.7										
		32	41.3	32.6	55.1	43.5	68.9	54.4	82.7	65.3	96.5	76.2										
5184	≤ 70	24	37.5	29.6	50.7	40.0	63.3	50.1	76.0	60.0	88.7	70.0	101.4	80.1								
		32	34.4	27.2	45.9	36.2	57.4	43.3	57.4	45.3	67.0	52.9	76.6	60.5								
5760	≤ 70	24			45.6	36.0	51.0	45.0	68.4	54.0	79.8	63.0	91.2	72.0	102.6	81.1						
		32			41.3	32.6	51.6	40.8	61.9	48.9	72.2	57.1	82.5	65.2	92.8	73.3						
6480	≤ 70	24			40.5	32.0	50.6	40.0	60.7	48.0	70.8	55.9	80.9	64.0	91.0	71.9	101.1	79.9	111.2	89.9	122.4	96.7
		32			36.7	29.0	45.9	36.2	55.1	43.5	64.3	50.8	73.5	58.1	82.8	65.3	92.0	72.9	101.2	79.9	110.4	87.2
7700	≤ 70	24			34.4	27.0	42.6	33.7	51.1	40.4	59.6	47.1	68.1	53.8	76.6	60.5	85.1	67.2	93.6	74.0	102.1	80.7
		32			-	-	-	-	46.4	36.7	54.1	42.8	61.8	48.8	69.5	54.9	77.2	61.0	84.9	67.1	92.6	73.2
7920	≤ 70	24					41.4	32.7	49.7	39.2	58.0	45.8	66.3	52.4	74.6	58.9	82.9	65.5	91.2	72.0	99.5	78.6
		32					-	-	45.1	35.7	52.6	41.6	60.1	47.5	67.6	53.4	75.1	59.3	82.6	65.3	90.1	71.2
8640	≤ 70	24					38.0	30.0	45.6	36.0	53.2	42.0	60.8	48.0	68.4	54.0	76.0	60.0	83.6	66.0	91.2	72.6
		32					-	-	-	-	48.2	38.1	55.0	43.5	61.9	48.9	68.8	54.3	75.7	60.0	82.6	65.2
9360	≤ 70	24					35.0	27.7	42.0	33.2	49.0	38.7	56.0	44.2	63.0	49.8	70.0	55.3	77.0	60.8	84.0	66.4
		32					-	-	-	-	44.5	35.1	59.9	40.2	57.3	45.2	68.7	50.3	70.6	55.6	76.5	60.4
10500	≤ 70	24							37.4	29.6	43.6	34.5	49.8	39.6	56.0	44.3	62.2	49.2	68.4	54.1	74.6	58.0
		32							-	-	-	-	45.4	35.8	51.1	40.3	56.8	44.9	62.5	49.4	68.2	53.0

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 19 OF 22

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/29/26
-	-	-
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Suite 420, VIRGINIA GARDENS, FL 33166
Phone: (305)871-1530 , Fax: (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

P.E. SEAL/SIGNATURE/DATE

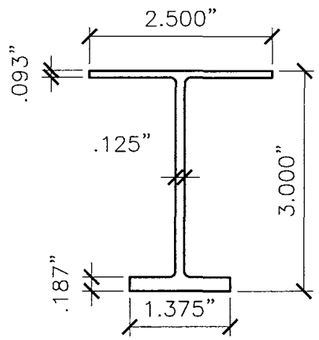
WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

26-0904-07
28 JUN 2027

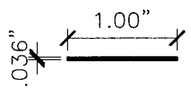
BILL OF MATERIALS: VALID FOR STANDS WITH OR W/O DIAGONAL BRACE REINFORCEMENT W/ CROSS BARS BETWEEN RAILS

COMPONENT No.	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
(1.)	RAIL (I-BEAM)	2.50" X 1.375" X 3"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	SUPPORT FOR ROOF TOP EQUIPMENT FIT AND ADJUSTED INTO (3)
(2.)	ANGLE FOR (4),(5) & (6)	1.00" X 1.00" X 1/8" THK. X 0'-2"	6063-T5 ALLOY	METALLUM ENTERPRISES INC.	USE PER DETAILS SHEET 21
(3.)	CROSS BAR	3" X 3" X 1/8"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	USE SHEET 21 FOR CONNECTION DETAILS TO RAILS
(4.)	CROSS BAR	3" X 3" X 3/16"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	USE SHEET 21 FOR CONNECTION DETAILS TO RAILS
(5.)	CROSS BAR	3" X 3" X 1/4"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	USE SHEET 21 FOR CONNECTION DETAILS TO RAILS
(6.)	CROSS BAR	4" X 4" X 1/4"	6061-T6 ALLOY	METALLUM ENTERPRISES INC.	USE SHEET 21 FOR CONNECTION DETAILS TO RAILS
(7.)	TEK-SCREW	1/4"ø X 3/4"	AISI 401 SERIES S.S	METALLUM ENTERPRISES INC.	USE SHEET 21 FOR CONNECTION DETAILS TO RAILS
(8.)	TIE DOWN STRAP	1.00" X 0.036"	ASTM A-653 GRADE 33, G-90 GALV. STEEL	METALLUM ENTERPRISES INC.	UNIT TIE DOWN TO CROSS BARS SEE DETAILS
(9.)	TIE DOWN CLIP	4" MIN. X 1" X 0'-1" X 12 GAUGE	ASTM A653 GR. 50 G-60 GALV. STL.	-	UNIT TIE DOWN TO CROSS BARS SEE DETAILS

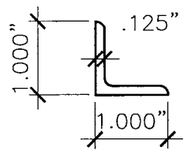
COMPONENTS



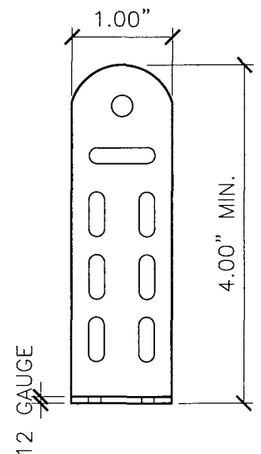
(1) **RAIL (I-BEAM)**
1/2"= 0'- 1"



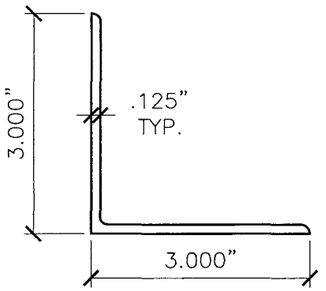
(8) **STRAP**
1/2"= 0'- 1"



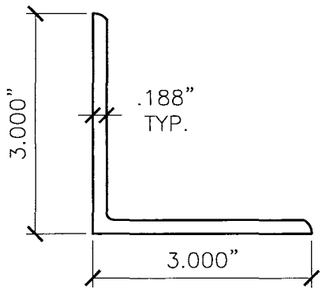
(2) **ANGLE FOR (4),(5)&(6)**
1/2"= 0'- 1"



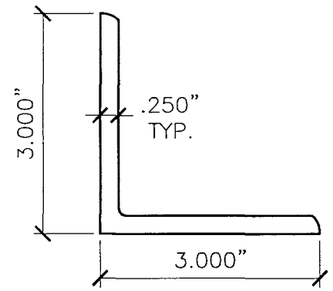
(9) **TIE DOWN CLIP**
1/2"= 0'- 1"



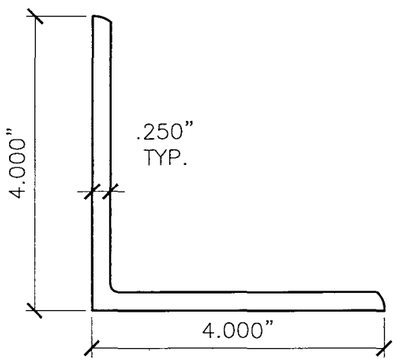
(3) **CROSS BAR**
1/2"= 0'- 1"



(4) **CROSS BAR**
1/2"= 0'- 1"



(5) **CROSS BAR**
1/2"= 0'- 1"



(6) **CROSS BAR**
1/2"= 0'- 1"

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/25/26

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

DRAWN BY: W.H.
6/29/2026 DATE
26-090 DRAWING No
SHEET 20 OF 22

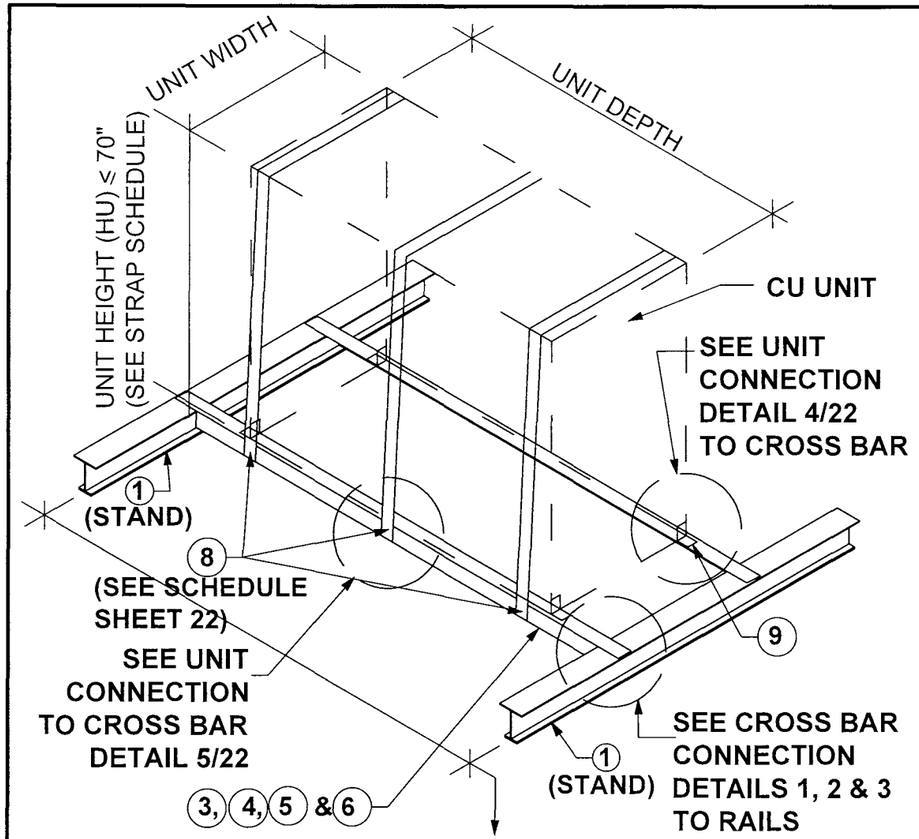
© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St. Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

26-0904_07
28 JUN 2027

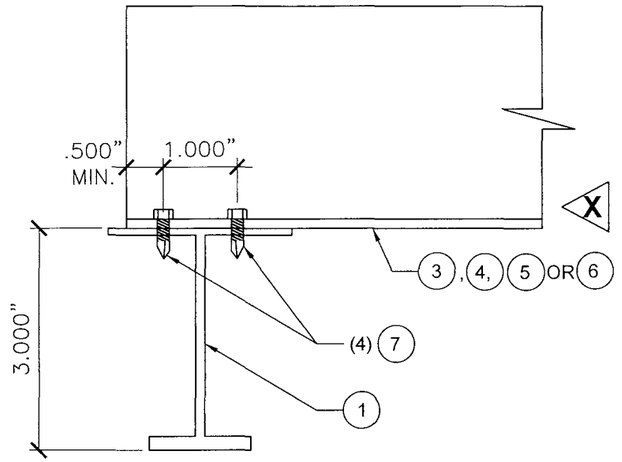


ASSEMBLY DETAIL FOR CROSS BARS AT STANDS

SCALE: N.T.S

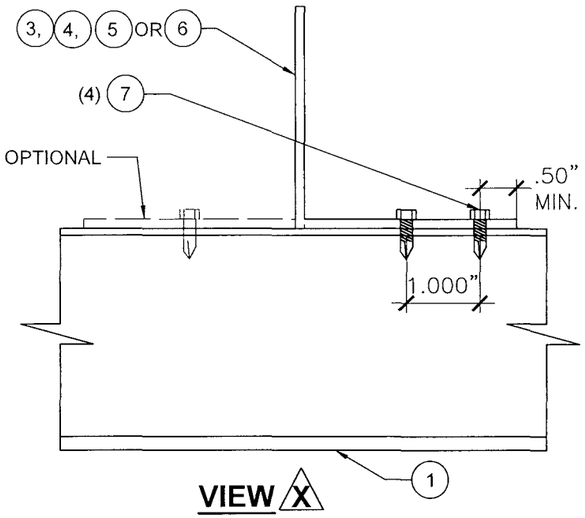
CROSS BAR	MAX. DS	MAX. PRESSURE RATING WL	WU	UNIT DIMENSION (MAX.)
3	≤ 24"	100.0	79.0	36"H (MAX.) X 36"D (MAX.) X 14" W (MIN.)
3	≤ 34"	100.0	79.0	25"H (MAX.) X 35"D (MAX.) X 13" W (MIN.)
4	≤ 42"	100.0	79.0	25"H (MAX.) X 35"D (MAX.) X 13" W (MIN.)
4	≤ 36"	100.0	79.0	36"H (MAX.) X 36"D (MAX.) X 14" W (MIN.)
5	≤ 42"	120.0	99.0	32"H (MAX.) X 35"D (MAX.) X 13" W (MIN.)
5	≤ 40"	100.0	79.0	56"H (MAX.) X 36"D (MAX.) X 24" W (MIN.)
6	≤ 42"	120.0	95.0	70"H (MAX.) X 38"D (MAX.) X 42" W (MIN.)

CROSS BAR SCHEDULE

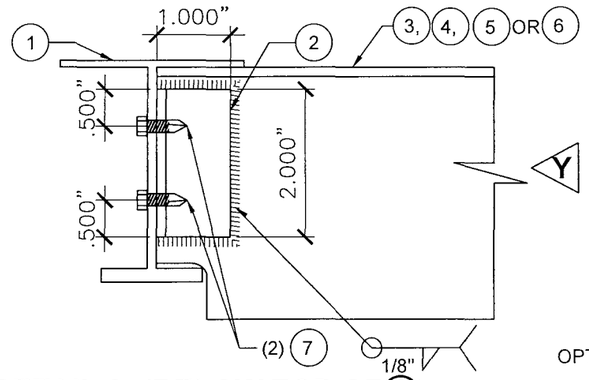


DETAIL 1: (ON TOP OF 1)

1/4"= 0'- 1" ELEVATION

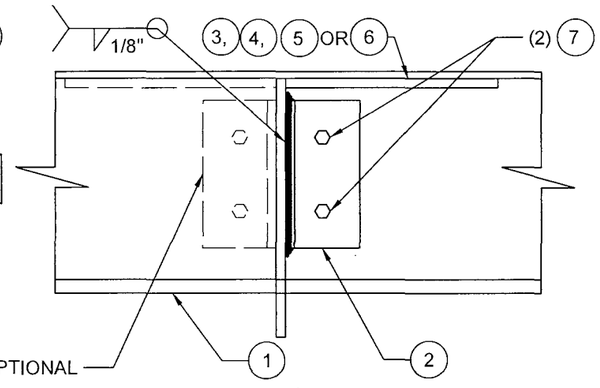


VIEW X

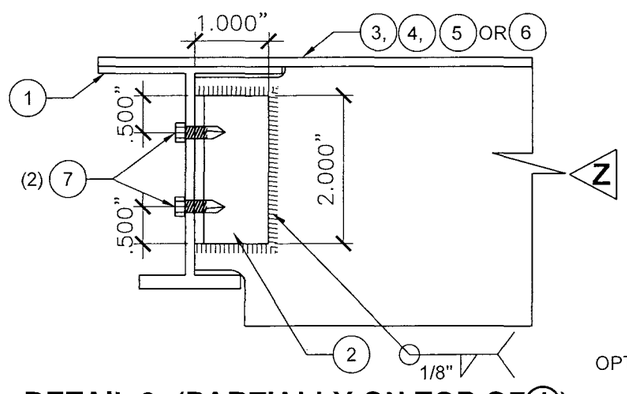


DETAIL 2: (BELOW TOP OF 1)

1/4"= 0'- 1" ELEVATION

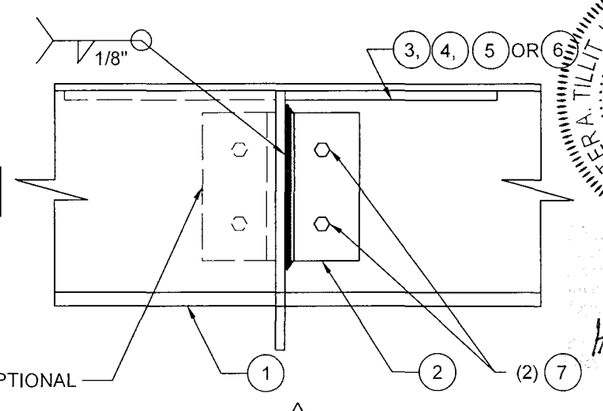


VIEW Y



DETAIL 3: (PARTIALLY ON TOP OF 1)

1/4"= 0'- 1" ELEVATION



VIEW Z

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 26-012	6/25/26
-	-	-
-	-	-

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 21 OF 22

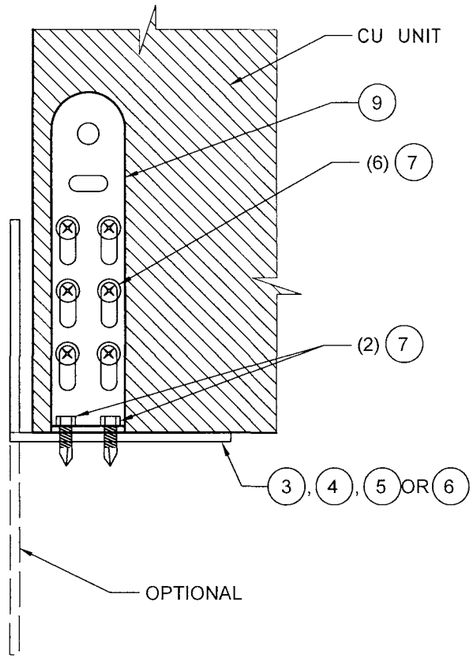
© 2026 TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 205, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr, P.E.
FLORIDA Lic. # 44167

SEAL/SIGNATURE/DATE

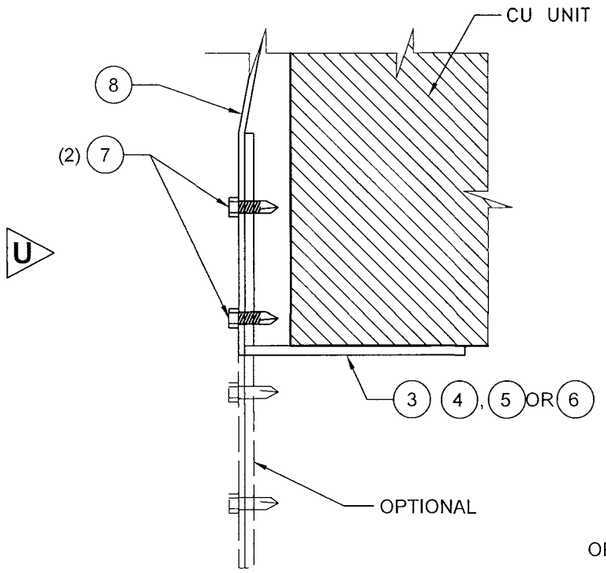
WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

26-0904_07
28 JUN 2027



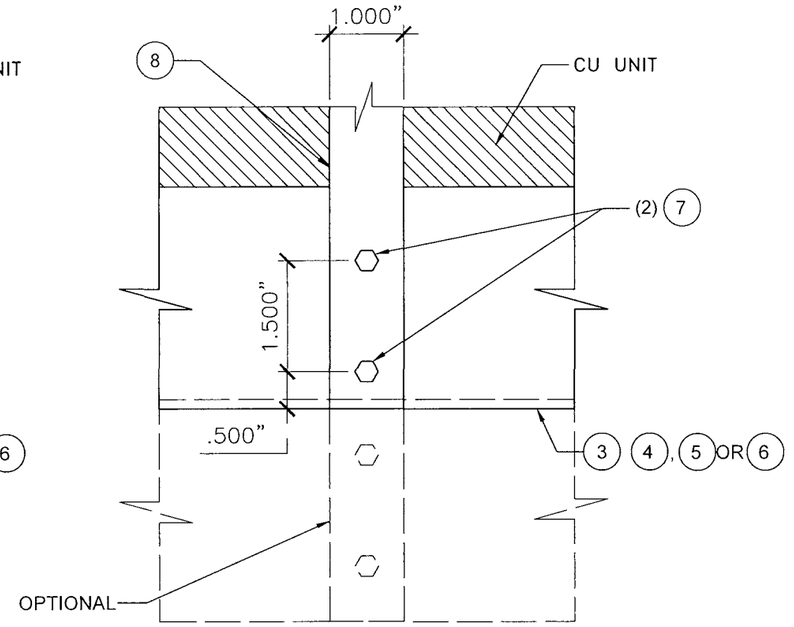
DETAIL 4

1/2"= 0'- 1" ELEVATION



DETAIL 5

1/2"= 0'- 1" ELEVATION



VIEW U

REQ'D QUANTITY OF STRAPS	MAX. PRESSURE RATING WL	MAX. PRESSURE RATING WU	UNIT DIMENSION
2	100.0	79.0	32"H (MAX.) X 35"D (MAX.) X 13" W (MIN.)
4	120.0	95.0	56"H (MAX.) X 38"D (MAX.) X 32" W (MIN.)
4	120.0	95.0	70"H (MAX.) X 38"D (MAX.) X 42" W (MIN.)

STRAP SCHEDULE FOR UNIT TIE DOWN TO CROSS BAR

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

DRAWN BY: W.H.

6/29/2026 DATE

26-090 DRAWING No

SHEET 22 OF 22

METALLUM ENTERPRISES Inc.

7500 NW 68 STREET MIAMI, FLORIDA 33166
ph: (305)884-7076; FAX:(305)884-7073

REV. No	DESCRIPTION	DATE
-	OLD 38-012	4/29/26
-	-	-

REV. No	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

© 2026 TILTECO INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: titeco@aol.com
CA-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

SEAL/SIGNATURE/DATE

26-0904_07
28 JUN 2027