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(Subject to Renew January 1, 2026 or next code cycle)

EVALUATION SUBJECT: **SKYLIFT MODULAR DESIGN**

**TER-24-76743**

## REPORT HOLDER:

SKYLIFT HARDWARE  
1160 VISTA AVENUE SE  
SALEM, OR 97302, USA  
(503) 361-2274 | SKYLIFTHARDWARE.COM

## SCOPE OF EVALUATION (compliance with the following codes):

**THIS IS A STRUCTURAL PERFORMANCE EVALUATION OF THE COMPONENTS LISTED HEREIN ONLY. NO OTHER PERFORMANCE RATINGS OR CERTIFICATIONS ARE OFFERED OR IMPLIED HEREIN.**

This Product Evaluation Report is being issued in accordance with the requirements of the **Florida Building Code Seventh Edition (2020) & Eighth Edition (2023)** per ASCE 7, FBC Building Ch. 16, FBC Building Sections 104.11 & 1522.2, FBC Existing Building Sections 707.1 & 707.2 and Broward County Administrative Provisions 107.3.4. This report is also in accordance with the **International Building & Residential Codes (2012, 2015, 2018, & 2021)**. The product noted in this report has been tested and/or evaluated as summarized herein.

**IN ACCORDANCE WITH THESE CODES EACH OF THESE REPORTS MUST BEAR THE ORIGINAL SIGNATURE & RAISED SEAL OR DIGITAL SEAL OF THE EVALUATING ENGINEER.**

## SUBSTANTIATING DATA:

### • Product Evaluation Documents

Substantiating documentation has been submitted to provide this TER and is summarized in the sections below.

### • Test Reports

No testing data has been provided and this analysis is based on the current edition of 360 Specifications for Structural Steel Buildings - AISC and National Design Specifications – NDS Standards.

## OPTIONS:

This evaluation is valid for the models described herein. Any structural changes outside of the design as described herein would void this certification.

## INSTALLATION:

Installation shall be made in accordance with the manufacturers published installation instructions and this report.

-Remove roofing materials carefully as required and save for reinstall whenever is possible. Cut an access hole through the roof directly over the exterior bearing wall. Do not cut any roof trusses or rafters.

- Verify existing surface and structure for deficiencies, cracks or other imperfections that will create rotation on the system. Design is based on full contact of base plate to host surface.

- Determine approximate positioning or layout of all SkyLift roof riser brackets prior cutting any access holes. SkyLift positioning shall be directly over exterior load bearing walls.

- Center base plate on top of existing host structure with minimum anchoring edge and end distances required.

- Integrity of existing host structure shall be verified by others for new vertical and horizontal imposed loads including re-installation of removed material from access hole.

- If the SkyLift column does not extend above the roofline, you may need to purchase a different SkyLift product. Raising SkyLift with additional blocking will create rotation on the system and it is not covered under this report.

- Install anchoring (by others) as required according to designer and manufacturer's specifications.

- Additional bracing and/or shoring (by others) may required during erection and installation process.

- Connect steel bucket to wood beam as shown and as per manufacturer's specifications. Use of wood post for upright support shall be designed by others. Dry wood may split more easily. If wood tends to split, pre-boring holes shall be used with diameters not exceeding 3/4 of the anchor diameter or use a 5/32" bit for SDS screws. A fastener that splits the wood shall be reevaluated prior loading the connection.



NOTE: RISER MAY BE CUT SHORTER THAN THE MAXIMUM DIMENSIONS SHOWN AS FIELD CONDITIONS DICTATE.

**NOTE: THE GRAPHICAL DEPICTIONS IN THIS REPORT ARE FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER IN APPEARANCE.**

## STRUCTURAL PERFORMANCE:

This report is based on individual force direction capacity referred by the standard above. The user/designer shall combine forces in more than one direction to find the allowable capacity of the riser. No allowable stress increase has been used in the preparation of this document.

## UNIT CASING MATERIALS:

Steel pipes schedule 40 conform to ASTM A53 grade B,  $F_y = 35$  ksi and  $F_u = 60$  ksi. Steel plates conform to ASTM A36,  $F_y = 36$  ksi and  $F_u = 58$  ksi. Carbon Steel. SDS screws conform to ICC-ES ESR-2236. Thru bolts to conform to ASTM A307 and SAE J429. Concrete anchors conform to NOA 20-0427.13.

## FINISH:

All SkyLift riser components are black powder coated.

## LIMITATIONS & CONDITIONS OF USE:

Use of the product(s) listed herein shall be in strict accordance with this TER as noted herein and manufacturer-provided model specifications. Installation shall conform to the minimum standards stated in the referenced building code(s) in addition to the specifications and limitations stated herein. See herein for complete limitations & conditions of use. Use provided fasteners for installation. DO NOT SUBSTITUTE FASTENERS.

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**FRANK BENNARDO PE0046549 CA-9885**

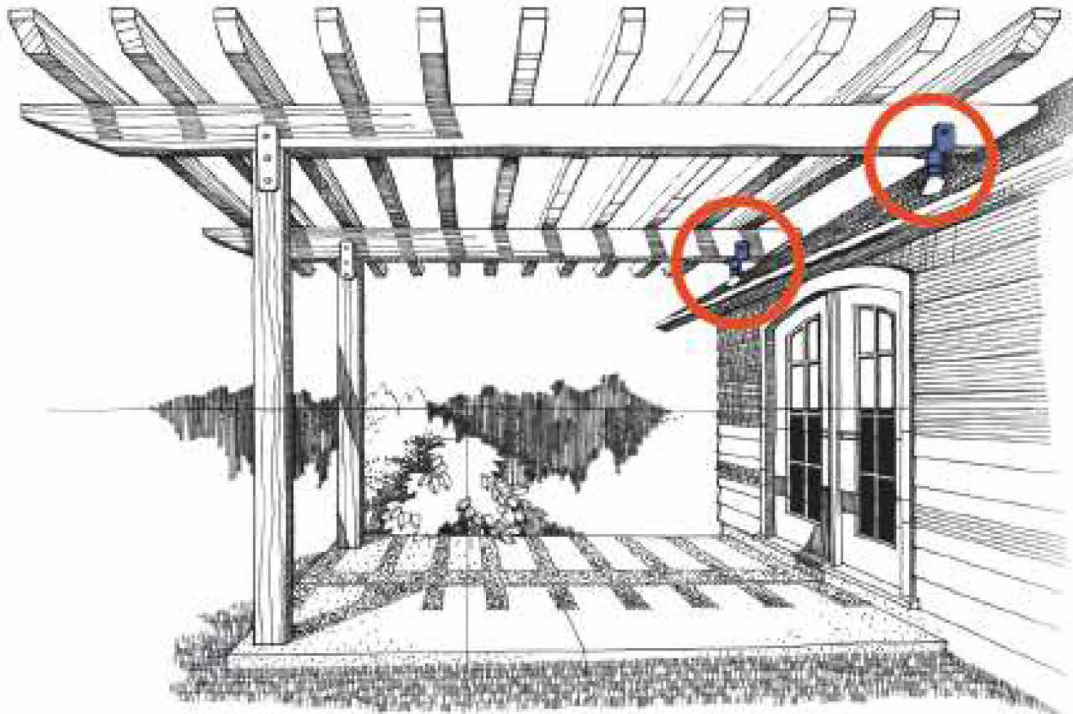
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**TYPICAL INSTALLATION DETAIL**

NOTE: RISER MAY BE CUT SHORTER THAN THE MAXIMUM DIMENSIONS SHOWN AS FIELD CONDITIONS DICTATE.



**SKYLIFT RISER ALLOWABLE CAPACITY (ASD)**

User shall verify that site-specific applied loads are lower or equal than the following allowable loads, as determined using the controlling load combination, according to ASCE 7-10, 16 or 22, based on ASD methodology:

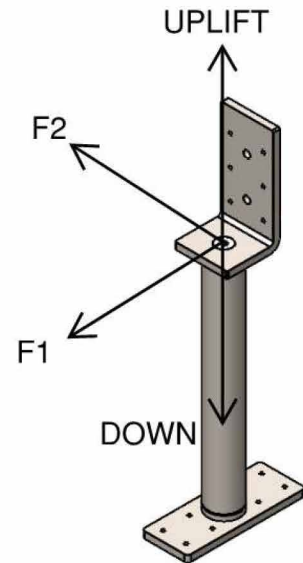
**For Wood Host (CD = 1.60):**

- F1 = +/- 50 lb
- F2 = +/- 50 lb
- UPLIFT = + 2500 (T)
- DOWN = - 2500 lb (C)

*Note: Allowable loads are shown at the wood load duration factor of CD = 1.60. Loads may vary for load duration by the building code. The user shall apply all adjustment factors required per NDS.*

**For Concrete Host:**

- F1 = +/- 50 lb
- F2 = +/- 50 lb
- UPLIFT = + 2500 lb (Tension)
- DOWN = - 2500 lb lb (Compression)

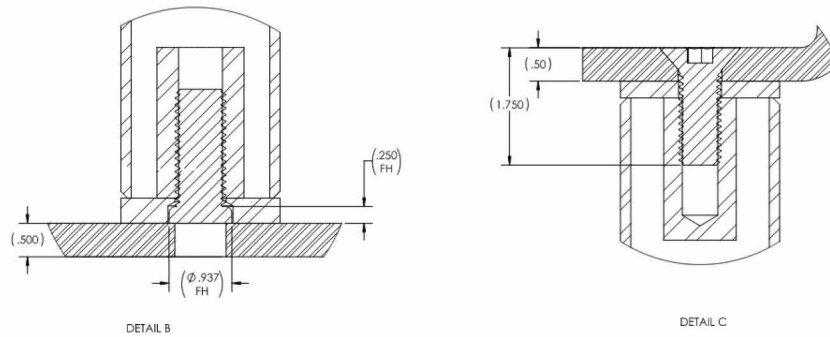
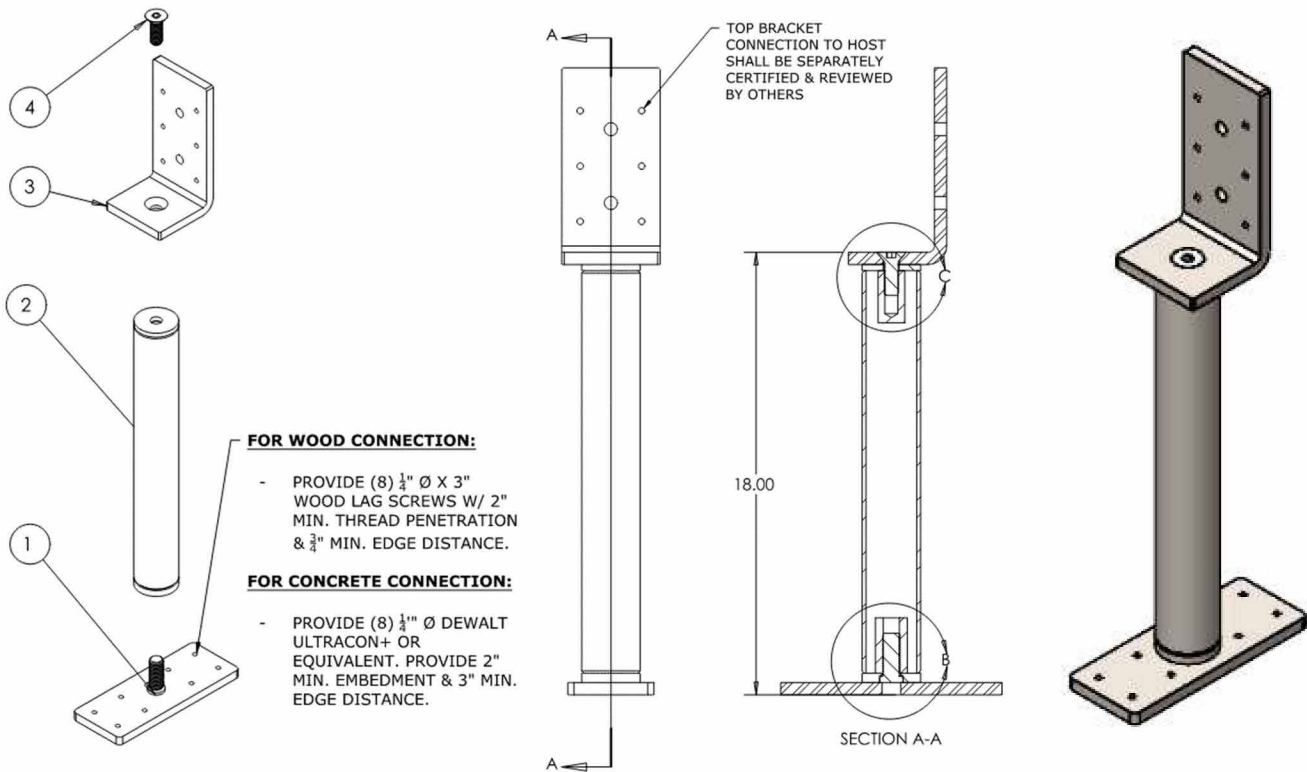


**Skylift Riser Allowable Capacity Note:**

Use shall verify the stability of the structure for which this component is intended to be used. For this purpose, the top and bottom connections of this device shall be considered as pinned connections.

**RISER GENERAL ASSEMBLY**

NOTE: RISER MAY BE CUT SHORTER THAN THE MAXIMUM DIMENSIONS SHOWN AS FIELD CONDITIONS DICTATE.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1004809	BASE BRACKET ASSY, 8 BOLT, 1/2"	1
2	1004812	RISER POST ASSY	1
3	1004820	L BRACKET, 1/2"	1
4	1004821	SCREW, 5/8"-11, 1.75" LG, HEX DRIVE	1

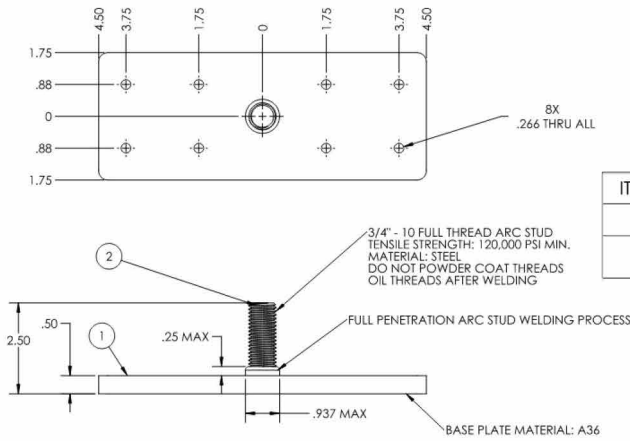
**Note(s):**

1. Units are in inches unless otherwise specified.
2. Details shown are not to scale unless noted otherwise.
3. Contact report holder for all dimensions not included.
4. Concrete host shall be non-cracked 3000 PSI minimum, 4" thick minimum, integrity by others.
5. Wood host shall be G=0.55 minimum, 3" thick minimum, integrity by others.

**COMPONENTS SPECIFICATIONS**

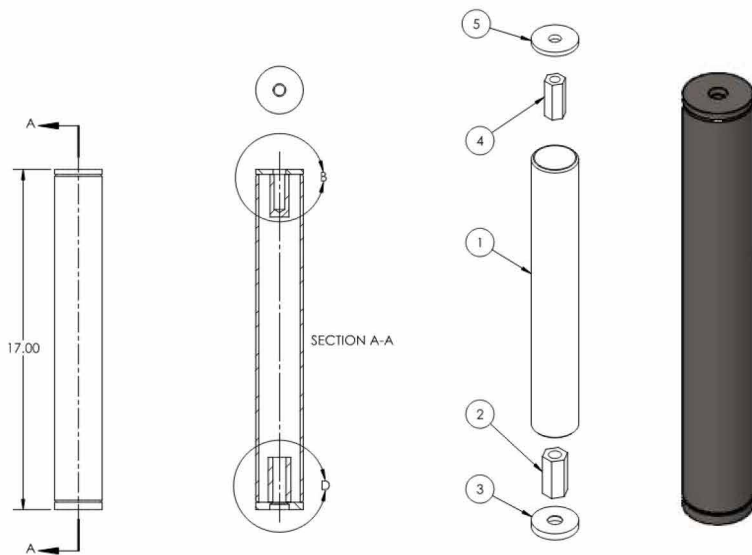
NOTE: RISER MAY BE CUT SHORTER THAN THE MAXIMUM DIMENSIONS SHOWN AS FIELD CONDITIONS DICTATE.

**BASE BRACKET**



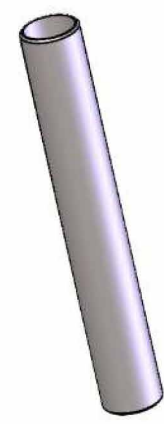
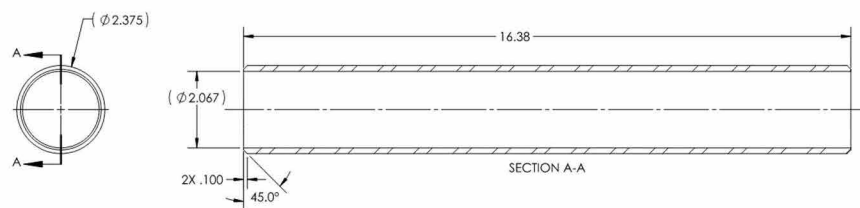
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1004810	BASE PLATE	1
2	1004811	ARC STUD, 3/4"-10 UNC2A FULL LENGTH X 2.25" LG	1

**RISER POST**



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1004813	2" SCHEDULE 40 PIPE	1
2	1004816	COUPLING NUT, 3/4"-10, 2.25" LONG, GRADE 8	1
3	1004815	BOTTOM INSERT PLATE	1
4	1004819	COUPLING NUT, 5/8"-11, 2.125" LONG, GRADE 8	1
5	1004818	TOP INSERT PLATE	1

**2" SCHEDULE 40 PIPE**



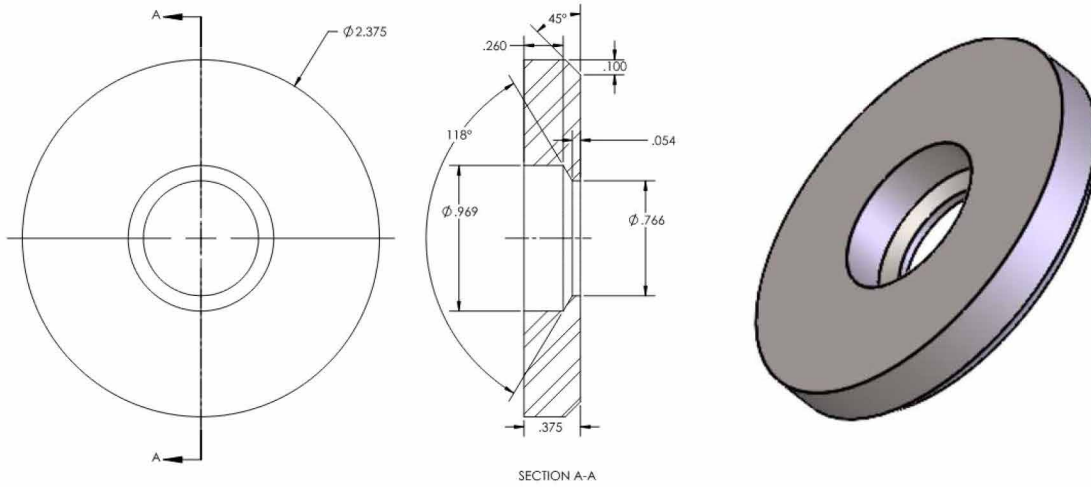
**Note(s):**

1. Units are in inches unless otherwise specified.
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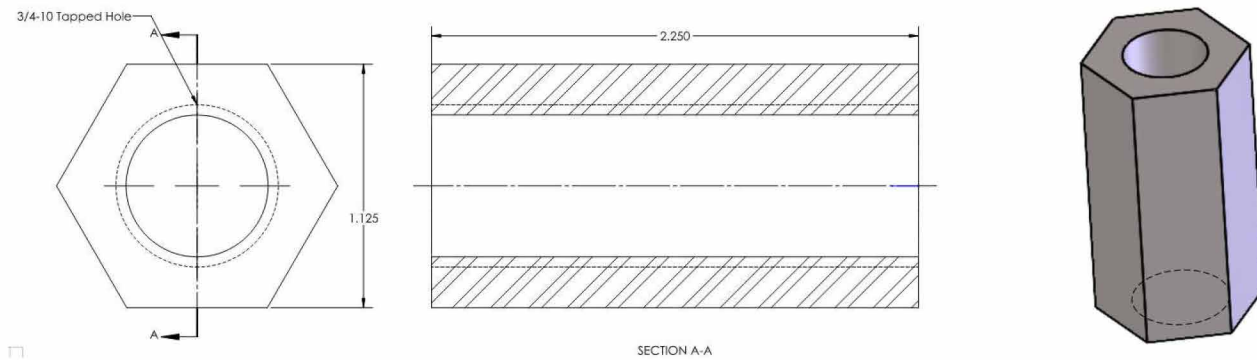
**COMPONENTS SPECIFICATIONS (CONTINUED)**

NOTE: RISER MAY BE CUT SHORTER THAN THE MAXIMUM DIMENSIONS SHOWN AS FIELD CONDITIONS DICTATE.

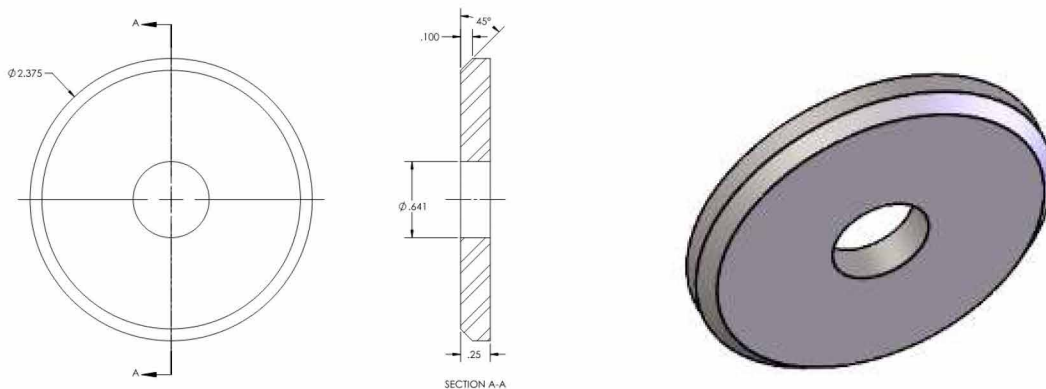
**BOTTOM INSERT PLATE**



**COUPLING NUT, 3/4"-10, 2.25" LONG**



**TOP INSERT PLATE**



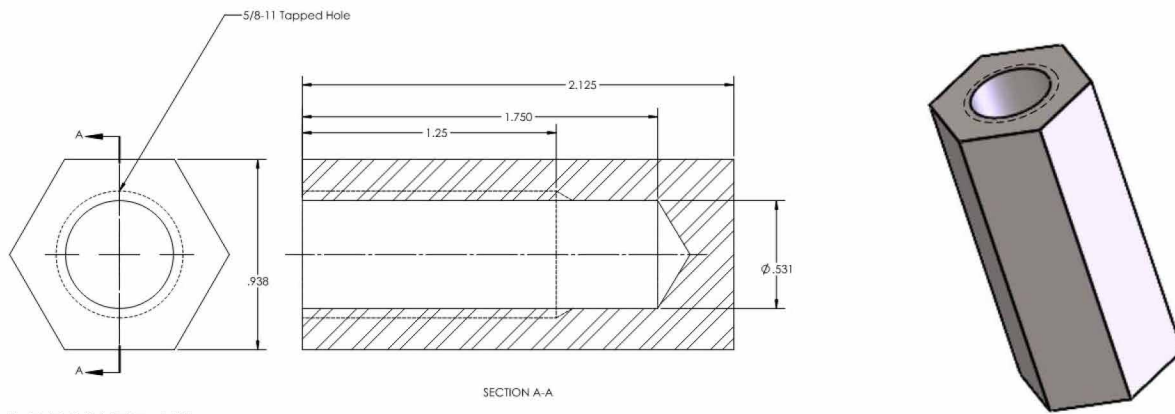
**Note(s):**

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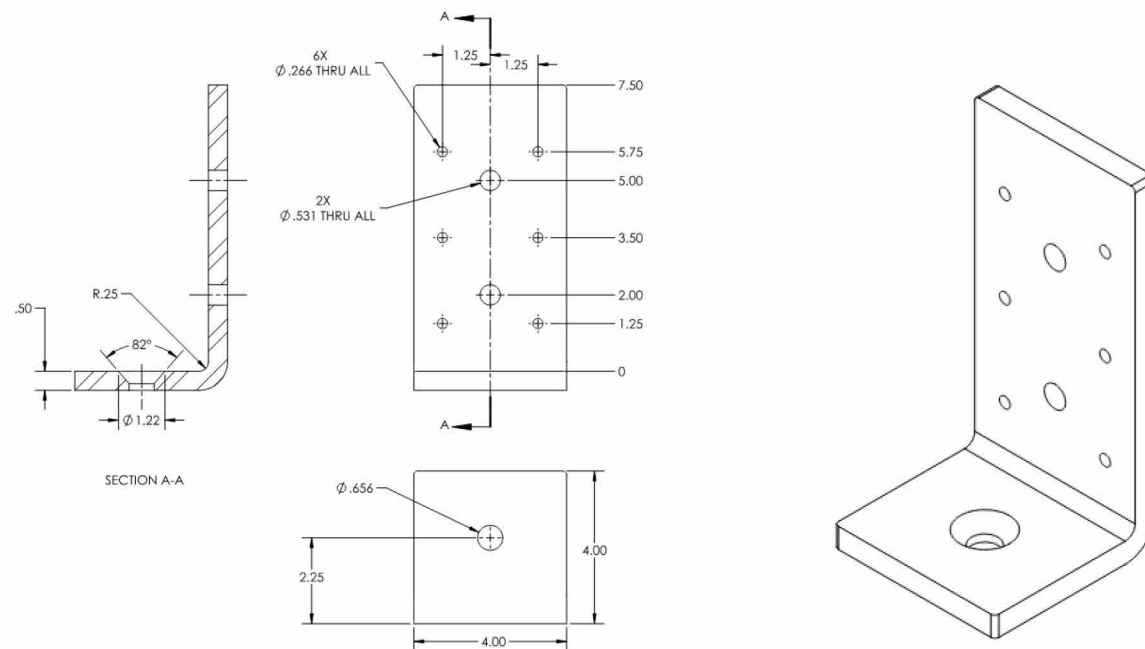
**COMPONENTS SPECIFICATIONS (CONTINUED)**

NOTE: RISER MAY BE CUT SHORTER THAN THE MAXIMUM DIMENSIONS SHOWN AS FIELD CONDITIONS DICTATE.

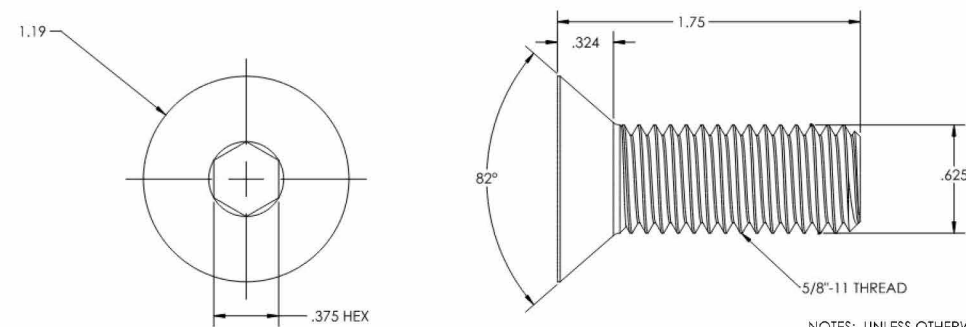
**COUPLING NUT, 5/8"-11, 2.125" LONG, GRADE 8**



**L BRACKET, 1/2"**



**SCREW, 5/8"-11 THREAD, 1-3/4" LONG, HEX DRIVE**



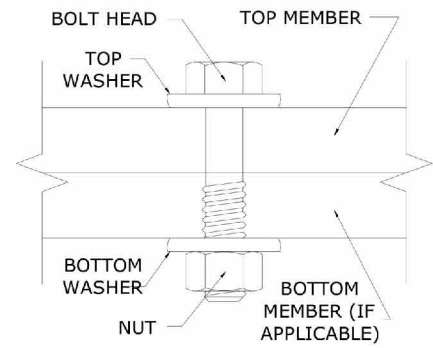
**Note(s):**

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3. Contact report holder for all dimensions not included.

NOTES: UNLESS OTHERWISE SPECIFIED  
 1) FINISH: BLACK-OXIDE  
 2) ROCKWELL C37  
 3) TENSILE STRENGTH: 130,000 PSI  
 4) SUGGESTED VENDOR: MCMACSTER-CARR, VENDOR PN 91253A800 OR EQUIV.

**TERMINOLOGY**

The following abbreviations may appear in this report: “Addtl.” for “additional”, “AHJ” for “Authority Having Jurisdiction”, “alum” for “aluminum”, “ASCE” for “American Society of Civil Engineers”, “ASD” for “Allowable Stress Design”, “ASTM” for “American Society for Testing and Materials”, “EA.” for “each”, “E.D.” for edge distance, “EDDS” for “extra deep drawing steel”, “e.g.” for “*exempli gratia*” or “for example”, “equiv.” for “equivalent”, “FBC” for “Florida Building Code”, “FEA” for “Finite Element Analysis”, “FLCA” for “Florida Certificate of Authorization”, “FS” for “Florida Statutes”, “Fu” for “ultimate tensile strength” or “ultimate tensile stress”, “Fy” for “yield strength” or “yield stress” “GA” for “gauge”, “GR.” or “Gr.” for “grade”, “HVAC” for “heating, ventilation, and air conditioning”, “HVHZ” for “High-Velocity Hurricane Zone”, “i.e.” for “*id est*” or “in other words”, “in” for “inch”, “lb” for “pound (force)”, “max.” for “maximum”, “min.” for “minimum”, “mm” for “millimeter”, “NTS” for “not to scale”, “O.C.” for “on center”, “OD” for “outer diameter”, “pcf” for “pounds (force) per cubic foot”, “PE” for “Professional Engineer”, “qty” for “quantity”, “SAE” for “Society of Automotive Engineering”, “SMS” for “sheet metal screws”, “SS” for “stainless steel”, “TER” for “Technical Evaluation Report”, “typ.” for “typical”, “ult” for “ultimate loads”, “U.N.O.” for “unless noted otherwise”, “UTS” for “ultimate tensile strength” or “ultimate tensile stress”, “WLL” for “working load limit”, “w/o” for “without”, “YS” for “yield strength” or “yield stress”, “#” for “number”, “&” for “and”, and “Ø” for “diameter”. Please visit [ecalci.io/glossary](http://ecalci.io/glossary) for additional abbreviation clarifications.



**SAMPLE THRU-BOLT**

SCALE: NTS SECTION VIEW

Note: The term “Thru-Bolt” or through bolt, if used herein, refers to a bolt passing through the member(s) in contact and is fastened by a nut at the end opposite the screw head. Nut shall be equivalent to or exceed the strength of the bolt U.N.O. Nut shall be sized to accommodate the same nominal diameter as the bolt U.N.O. See diagram above-right for a sample thru-bolt configuration.

Note: For instances herein which list material specifications as “[material type] or stronger”. U.N.O. herein, the term “stronger” refers to a material with a UTS value equal to or greater than the UTS value of the stated material type. Consult appropriate literature for established material UTS values.

Note: Equivalent steel gauge thicknesses as used in this evaluation, U.N.O., are as follows: 22 GA (.030”), 20 GA (.036”), 18 GA (.048”), 16 GA (.060”), 14 GA (.075”), 12 GA (.098”).

**LIMITATIONS & CONDITIONS OF USE, CONTINUED**

**Use of this product shall be in strict accordance with this TER as noted herein.** The supporting host structure shall be designed to resist all superimposed loads as determined by others on a site-specific basis as may be required by the authority having jurisdiction. Host structure conditions that are not accounted for in this product’s respective anchor schedule shall be designed for on a site-specific basis by a registered Professional Engineer. No evaluation is offered for the host supporting structure by use of this document. Adjustment factors noted herein and the applicable building codes must be considered, where applicable. Product components shall be of the material(s) specified in the manufacturer-provided product specifications. All supporting components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times. All fasteners and anchors shall be installed in accordance with the applicable provisions specified herein in addition to the anchor/fastener manufacturers’ published installation instructions. Fasteners must penetrate the supporting members such that the full length of the threaded portion is embedded within the main member.

All of the wind-resisting exterior panels (with accompanying retrofits) individually meet or exceed their capacity to resist the design wind loads as stated in the calculations as required by the codes and standards stated herein. Due to the indeterminate nature of these units, distortion, deflection, and material deformation cannot be accurately evaluated, but with the diaphragm action of external components and internal stiffeners, the base unit (with accompanying retrofits stated herein as applicable) has the capacity to withstand the design wind loads without detaching from the unit and becoming flying debris.

**Survivability:** Evaluation reports are valid for a newly installed unit and do not include certification of the product beyond a design event or if impacted by any debris. Inspections shall be implemented annually by the end user and after every named storm. All fasteners and cabinet components are to be verified, and all damaged, loose, corroded and/or broken fasteners and cabinet components shall be replaced to ensure structural integrity against hurricane wind forces. Contact this office for any reevaluation needs or as designated by the Authority Having Jurisdiction.

**Durability:** Components or component assemblies shall not deteriorate, crack, fail, or lose functionality due to galvanic corrosion or weathering. All supporting components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times. Each component or component assembly shall be supported and oriented in its intended installation position. All exposed plastic components shall be certified to resist sunlight exposure as specified by ASTM B117, or ASTM G155 in Broward or Miami-Dade counties.

**Extent of Certification:** Certification pertains to the overall structural integrity of the unit components listed within the evaluation as required by code, subject to the limitations and criteria stated herein. Operability during or after a design event is not included in this certification. Water infiltration is outside the bounds of this certification. No other certifications are intended other than as described herein. This evaluation alone does not offer any evaluation for large missile impact debris or cyclic wind requirements unless specifically stated herein.

Proj. #	Remarks	By	Checked	Date	Proj. #	Remarks	By	Checked	Date
24-76743	Initial Issue	MRT	RWN	06/18/24					