



# City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811  
 Tel 407-581-8161 \* Fax 407-581-0313 \* [www.universalengineering.com](http://www.universalengineering.com)

## PERMIT CARD – PLEASE POST AT JOB SITE

THIS DOCUMENT BECOMES YOUR PERMIT WHEN PROPERLY VALIDATED

Per FBC 105.3.3: An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies." The issuance of this permit does not grant permission to violate any applicable City, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, Roofing, Electrical, Gas, Plumbing and Mechanical services. This permit becomes VOID if the work authorized is not commenced within 6 months, or is suspended or abandoned for a period of 6 months after commencement. **WORK SHALL BE CONSIDERED SUSPENDED IF AN APPROVED INSPECTION HAS NOT BEEN MADE WITHIN A 6 MONTH PERIOD.** PERMISSION IS GRANTED TO DO THE FOLLOWING WORK ACCORDING TO THE CONDITIONS HEREON AND THE APPROVED PLANS AND SPECIFICATIONS, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF BELLE ISLE, FLORIDA.

<b>Scope of Work:</b> MECHANICAL: one 3.5-ton change out  <b>Comments:</b> None  <b>Project Information</b> Address: 7235 Lake Drive, Belle Isle, FL 32809 Parcel ID: 25-23-29-5884-16-140 Property Owner: Kellair Properties Phone Number: None ***** Company Name: Ambrose Air Inc Contractor Name: Ambrose, Pat License Number: CAC042735 Address: 448 W Landstreet Rd, Orlando, FL 32824 Phone Number: 407 857 0889	<b>Permit Number: 2015-03-035</b> <b>Date of Application: 03/18/2015</b> <b>Date Permit Issued: 03/20/2015</b>  <b>WARNING TO OWNER:</b> "YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT." ON THE JOB INSPECTION(S) MUST BE MADE BEFORE PROCEEDING WITH SUBSEQUENT WORK. THIS CARD MUST BE DISPLAYED OUTSIDE AND BE PROTECTED FROM THE WEATHER WHILE BEING VISIBLE FROM THE STREET UNTIL THE FINAL INSPECTIONS HAVE BEEN APPROVED.
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### BUILDING FEATURES

<b>IMPACT FEES</b> School \$ Traffic \$  <b>ZONING FEES</b> Zoning Fee \$  <b>UNIVERSAL ENG - BUILDING FEES</b> Cert of Occ \$ Demo \$\$ Building \$\$\$ Fence \$\$\$ Driveway \$\$ Shed \$\$ Window(s) \$ Door(s) \$ PrePower \$ Electrical \$ Temp Pole \$ Plumbing \$ Mechanical \$127.50 Gas \$ Roofing \$ Boat Dock \$ Screen Encl \$ Swimming Pool \$ Sign \$  <b>SURCHARGE FEES</b> Surcharge Fee \$2.00 Surcharge Fee \$2.00  <b>TOTAL FEES \$131.50</b>  Date Paid <u>4-2-15</u> CC or Check # <u>VISA 6997</u> Amount Paid <u>131.50</u>  The person accepting this permit shall conform to the terms of the application on file and construction shall conform to the requirements of the Florida Building Code (FS 553).	<b>BUILDING INSPECTOR USE ONLY</b>  IF APPLICABLE: Have Zoning Approval Conditions Been Met? YES NO    Have Stormwater Approval Conditions Been Met? YES NO    Silt fencing in place? YES NO    Turbidity Barrier in place? YES NO  <input type="checkbox"/> <b>BUILDING</b> 1 <sup>st</sup> _____ (Footing/Foundation) Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____ 2 <sup>nd</sup> _____ (Slab) 3 <sup>rd</sup> _____ (Lintel)(Wall Reinforcing on Masonry Building) 4 <sup>th</sup> _____ (Exterior Framing)(Roof/Wall Sheathing) 5 <sup>th</sup> _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed) 6 <sup>th</sup> _____ (Insulation to be Made After Roof Installed) 7 <sup>th</sup> _____ (Drywall) 8 <sup>th</sup> _____ (Sidewalk/Driveway) 9 <sup>th</sup> _____ (Other) 10 <sup>th</sup> _____ (Final – After MEP and Other Applicable Finals)  <input type="checkbox"/> <b>ROOFING</b> 1 <sup>ST</sup> ROOFING Deck Nailing/Dry-in/Flashing _____ 2 <sup>nd</sup> ROOFING Covering In-Progress _____ 3 <sup>rd</sup> ROOFING Covering Final _____  <input type="checkbox"/> <b>PLUMBING</b> (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...) <input type="checkbox"/> 1 <sup>ST</sup> _____ (Underground)    2 <sup>nd</sup> _____ (Sewer) 3 <sup>rd</sup> _____ (Rough-In/Tub Set)    4 <sup>th</sup> _____ (Final)  <b>CHECK APPROPRIATE BOX</b> <input type="checkbox"/> GAS ___ Natural ___ LP <input type="checkbox"/> MECHANICAL <input type="checkbox"/> ELECTRICAL <input type="checkbox"/> LOW VOLTAGE 1 <sup>st</sup> _____ (Rough-In)    2 <sup>nd</sup> _____ (Final)
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Inspection requests are to be emailed to [BI DScheduling@UniversalEngineering.com](mailto:BI DScheduling@UniversalEngineering.com); a confirmation email will be sent back to you upon scheduling. **Next-Day Inspection requests must be made by 1pm.** Please include the following in your request: Permit #, project address, type of inspection, date of the requested inspection, a contact name & a contact phone number. AM or PM may be requested but cannot be guaranteed.

For a copy of your permit, or to check inspection results, please visit <https://universalengineering.sharefile.com/f/fo94edc4-832d-44bd-9809-ecf32f9e2e63>


login ID = [cobi@universalengineering.com](mailto:cobi@universalengineering.com)

password = universal13

PROJECT NUMBER 0115.1500520.0000

TASK NUMBER 01

CITY OF BELLE ISLE  
Permit Application Review Sheet

Permit Number	2015-03-035
Property Owner	Kellair Properties
Address	7235 Lake Dr.
Nature of Improvement	Mechanical: one 3.5 ton changeout
Received Application	3-18-15
Sent for Stormwater Review	
Stormwater Approved	/
Sent for Zoning Review	
Zoning Approved	/
Applied for Variance	
Variance Approved	
Sent to BO for Review	3-18-15
Building Official Approved	3-19-15 
Comments	
1. Susan 3-18-15	review wo # 48533
2.	all check on files ✓
3.	
4.	73
5.	12
6.	<u>85 ÷ 2 =</u>
7.	42.50
8.	<u>127.50</u>
9.	+ 4
10.	
11.	131.50
12.	

RECEIVED  
3-18-15



### City of Belle Isle

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## APPLICATION FOR MECHANICAL PERMIT

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

DATE OF APPLICATION: 3-18-15

PERMIT NUMBER 2015-03-035

PLEASE PRINT. The undersigned hereby applies for a permit to make installations as indicated below:

Project Address 7235 LAKE DRIVE, Belle Isle FL  32809  32812  
Property Owner KELLAIR PROPERTIES Phone \_\_\_\_\_  
Property Owner's Mailing Address 1641 OVERLOOK ROAD City BELLE ISLE  
State FL Zip Code 32809 Parcel Id Number: 25-23-29-5884-16-140

To obtain this information, please visit <http://www.ocpafl.org/Searches/ParcelSearch.aspx>

Class of Building: Old  New  Type of Building: Residential  Commercial  Other   
Type of Work: New  Alteration  Addition  Repair

- REQUIRED certified Tie Down Engineering documentation (can be found at [www.floridabuilding.org](http://www.floridabuilding.org))
- REQUIRED: if adding A/C to new space, provide Energy Calculations & Equipment Sizing Calculations
- REQUIRED: if replacing unit with no duct work, Duct Certification as per FB 101.4.7.1, must be posted on unit

Please indicate the nature of work by completing the information below:

Air Conditioning: # of Units 1 Tons Per Unit 3.5 Total Tons 3.5  
Type of System: Water to Air  Chiller  Split System  Package  Heat Pump  Estimated Cost \$ \_\_\_\_\_

Heating: # of Units KWS Per Unit 10 Total KWS \_\_\_\_\_ BTU's \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_  
Oil  Electric  Boiler  Gas

(A) Estimated Cost Fee \$ 5000

Fees for items below are based on valuation of all units, equipment, materials and labor supplied by owner or contractor.

Ventilation: (Number of) Grease \_\_\_\_\_ Heat \_\_\_\_\_ Hoods \_\_\_\_\_ Air Intakes \_\_\_\_\_ Exhaust Fans \_\_\_\_\_ Dryer Vents \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Refrigeration: Number of units \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Piping: Air \_\_\_\_\_ Vacuum \_\_\_\_\_ Steam \_\_\_\_\_ Chill Water \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Others: (Specify) \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Was the space previously Air Conditioned? Yes  No  (B) Estimated Cost Fee \$ \_\_\_\_\_

I hereby certify that the above is true and correct to the best of my knowledge and make Application for Permit as outlined above, and if same is granted I agree to conform to all Florida Building Code Regulations and City Ordinances regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable Town and/or State of Florida codes and/or ordinances.


LICENSE HOLDER SIGNATURE Patrick Ambrose LICENSE # CACD 42735

LICENSE HOLDER NAME Patrick Ambrose COMPANY NAME AMBROSE AIR

Street Address 448 W. Landstreet Road

City Orlando State FL Zip Code 32824 Phone Number 407-857-0889

Email Address leisa@ambroseair.com

Building Official: \_\_\_\_\_ Date \_\_\_\_\_  
Verified Contractor's Licenses & Insurance are on file  Date 3/15

Permit Fee	\$ <u>85.00</u>
Review Fee	\$ <u>42.50</u>
3% Florida Surcharge	\$ <u>4.00</u>
<b>Total Permit Fee</b>	<b>\$ <u>131.50</u></b>

NOTE: The Building Permit Number is required if the Mechanical Installation is associated with any construction or alteration where a Building Permit has been issued. Building Permit Number \_\_\_\_\_



# The Metal Shop AC Condenser Clip

**THE METAL SHOP**  
 2541W. Dannelon Road  
 Dannelon, FL 34433

www.metalsshop.org  
 Phone: 888-441-2492 Fax: 352-522-0007

## Notes

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2010 FLORIDA BUILDING CODE, INCLUDING VOLUME AND ASCE 7 - 1010 TYPICAL DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES.
2. IF THE CONTRACTORS OBTAIN ANY WORK THAT IS IDENTIFIED IN THIS SPECIFICATION AS BEING A FIRST CLASS PIECE OF WORK, OR SHOULD PROCEEDURES APPROVE BY THE ARCHITECT OR DETAILS THEY SHALL BE SUBMITTED TO OWNER BEFORE PROCEEDING WITH WORK.
3. ANY CHANGE FROM THE DRAWINGS AND / OR FIELD CHANGE ORDERS MUST BE IMMEDIATELY COMMUNICATED TO THE ATTENTION OF THE STRUCTURAL ENGINEER BY E-MAIL OR BY TELEPHONE. ANY CHANGES MUST BE APPROVED BY THE STRUCTURAL ENGINEER AND CARRIED OUT TO HIS FULLEST EXTENT.
4. ALL ANCHORS/CONNECTOR BARS SHALL BE IN ACCORDANCE WITH AISC 308 OR A-308.
5. TYPICAL DESIGN LOADS - DEAD LOADS AND LIVE LOADS IN ACCORDANCE WITH THE 2010 FLORIDA BUILDING CODE CHAPTER 6.
6. SEE MANUFACTURE INSTALLATION FOR AC CONDENSER UNIT.
7. DESIGN AND ENGINEERING IS FOR THE METAL SHOP ANCHOR CLIP ONLY. SEE MANUFACTURE INSTALLATION AND CERTIFICATIONS FOR REFRIG.

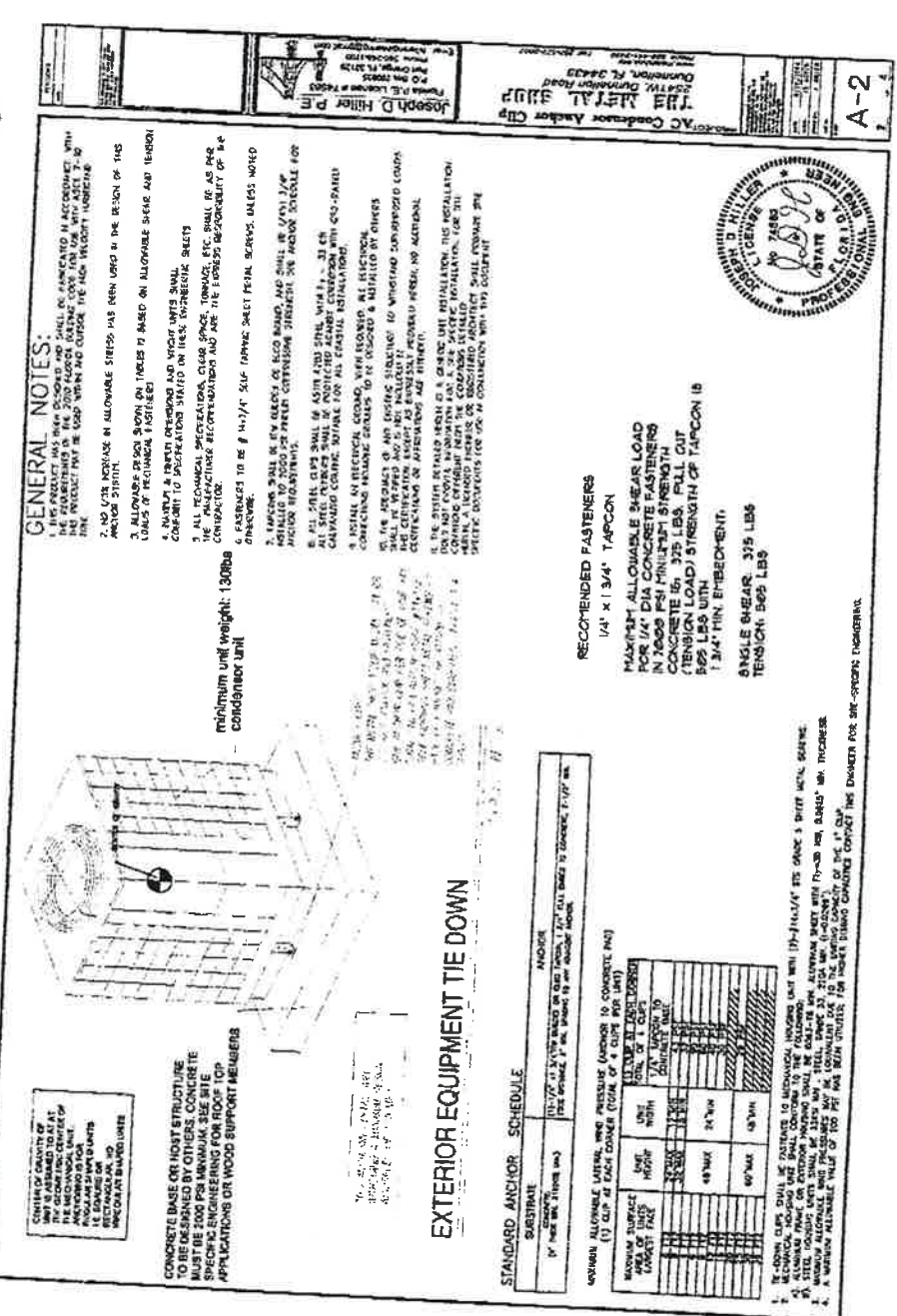
## Anchor Clip Notes:

1. The anchor clip shall be 16 gauge, G-90 Hot Dipped galvanized steel, railed for coastal applications.
2. The anchor clips shall be installed with #14 self tapping sheet metal screws.
3. Anchor clip in intended for ground mounted installations only.
4. Anchor clip to be installed on 2000 psi minimum strength concrete pad of concrete slabs ONLY. Other pads or installation configurations must be custom designed.
5. Minimum 4 clips required per ac condenser unit. Clip anchors shall be equally spaced around base of condenser unit. A minimum of 2-414x 3/4" self drilling screws per anchor clip. Self tapping screws to have neoprene washers.
6. Attach Tapcon anchor into concrete base per Tapcon installation instructions. Do not over tighten anchor.
7. All hardware must be fastened prior to connecting refrigerant lines and electrical power to the unit.

METAL SHOP \* 711 - 4' ANCHOR CLIP  
 METAL SHOP \* 712 - 6' ANCHOR CLIP



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 Dannelon, FL 34433  
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 www.metalsshop.org



**GENERAL NOTES:**  
 1. THIS PRODUCT HAS BEEN ENGINEERED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2002 FLORIDA BUILDING CODE FOR AN ANCHOR WITH THIS PROFILE TO BE USED WITH AND OUTSIDE THE HIGH WINDS/TORNADO ZONE.  
 2. NO ONE SHOULD BE ALLOWED TO STRESS THIS PRODUCT IN THE DESIGN OF THIS ANCHOR SYSTEM.  
 3. ALLOWANCE SHOULD BE GIVEN IN THE DESIGN OF THE ANCHOR TO THE LOADS OF TECHNICAL REQUIREMENTS.  
 4. ALL MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE MANUFACTURING OF THIS ANCHOR SYSTEM.  
 5. ALL MECHANICAL SPECIFICATIONS, CLEARANCES, TOLERANCES, ETC. SHALL BE AS PER THE MANUFACTURING RECOMMENDATIONS AND NOT THE USUAL REQUIREMENT OF THE CONTRACTOR.  
 6. FASTENERS TO BE # 4 x 1/4" SELF DRILLING SHEET PILE SCREWS UNLESS NOTED OTHERWISE.  
 7. ANCHORS SHALL BE SET IN THE BOTTOM OF EACH HOLE AND SHALL BE 1/4" MIN. FROM THE BOTTOM OF THE HOLE.  
 8. ALL STEEL PARTS SHALL BE GALVANIZED WITH A MINIMUM OF 1.40 OZ/SQ. FT. OF ZINC COATING.  
 9. THE WEIGHT AND DIMENSIONS SHALL BE AS NOTED.  
 10. THE WEIGHT AND DIMENSIONS SHALL BE AS NOTED.  
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**RECOMMENDED FASTENERS**  
 1/4" x 1 3/4" TAPCON  
 MAXIMUM ALLOWABLE SHEAR LOAD FOR 1/4" DIA CONCRETE FASTENERS IN 7000 PSI MINIMUM STRENGTH CONCRETE IS 375 LBS. FULL CUT 505 LBS WITH  
 1 3/4" MIN EMBEDMENT.  
**ANGLE SHEARS: 375 LBS TENSION: 505 LBS.**

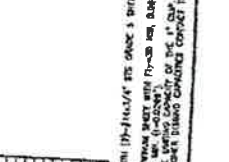
**CONCRETE UNIT WEIGHT: 130lbs/condor unit**

SUBSTRATE	ANCHOR	HEIGHT	MAXIMUM ALLOWABLE LATERAL WIND PRESSURE (ANCHOR IS CONCRETE FIN)
WOOD	1/2" x 1 3/4" TAPCON	48" MAX	17.4 PSF
		60" MAX	15.4 PSF
MASONRY	1/2" x 1 3/4" TAPCON	48" MAX	23.3 PSF
		60" MAX	19.7 PSF
CONCRETE	1/2" x 1 3/4" TAPCON	48" MAX	37.5 PSF
		60" MAX	31.2 PSF

- 1. TO DOWN CLIP, DO NOT DISTURB TO MINIMUM HEIGHTS SHOWN WITH 1/2" x 1 3/4" TAPCON SET INTO 3" THICK CONCRETE.
- 2. TECHNICAL DRAWING NOT TO SCALE.
- 3. ALL DIMENSIONS SHALL BE AS NOTED.
- 4. ALL STEEL SHALL BE GALVANIZED WITH A MINIMUM OF 1.40 OZ/SQ. FT. OF ZINC COATING.
- 5. ANCHOR SHALL BE SET IN THE BOTTOM OF EACH HOLE AND SHALL BE 1/4" MIN. FROM THE BOTTOM OF THE HOLE.
- 6. A WARNING ALLOWABLE VALUE OF 200 PSI WAS USED FOR THE DESIGN OF THE 1" CLIP.

**EXTERIOR EQUIPMENT TIE DOWN**

**THE METAL SHOP**  
 1200 W. UNIVERSITY BLVD  
 DUNEDIN, FL 33426  
 813-888-1111  
 www.themetalshop.com



**AC Condenser Anchor Clip**  
 Joseph D. Hiller, P.E.  
 1200 W. UNIVERSITY BLVD  
 DUNEDIN, FL 33426  
 813-888-1111  
 www.themetalshop.com

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### EXTERIOR EQUIPMENT TIE DOWN

**DOUBLE CLIP OPTION:**

**HIGH VELOCITY HURRICANE ZONE:**

**GENERAL NOTES:**

1. THIS PRODUCT HAS TEST RECORDS AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 3500 LOADS AND THE 3500 LBS. WITH A 10' DIA. 3000 LBS. WEIGHT MAY BE USED WITH AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE.
2. NO 1/2" THICKNESS IN ALLOWABLE SHEAR HAS BEEN USED IN THE DESIGN OF THIS ANCHOR SYSTEM.
3. ALLOWABLE LOADS BASED ON 4 INCHES & BASED ON ALLOWABLE SHEAR AND TENSION LOADS OF TECHNICAL DATA SHEETS. DO NOT EXCEED THESE LIMITS.
4. PRESENTS, THESE REQUIREMENTS DO NOT APPLY TO THIS SHEET.
5. ALL TECHNICAL INFORMATION, CLEARANCES, TONNAGE, ETC. SHALL BE AS PER THE MANUFACTURER'S REQUIREMENTS AND THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
6. FASTENERS TO BE 1/2" DIA. SELF TAPPING STEEL METAL SCREWS, UNLESS NOTED OTHERWISE.
7. ANCHORS SHALL BE SET IN PLACE OR LUGS GRIND, AND SHALL BE 1/4" MIN 3/4" DIA. UNIFORM DIA. SHALL BE 100 PSI TENSILE COMPRESSIVE STRENGTH. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL DATA SHEETS.
8. ALL TIE DOWN CABLES SHALL BE WITH PROTECTIVE SHEATHING. 1/2" DIA. TIE DOWN CABLES SHALL BE WITH PROTECTIVE SHEATHING WITH 600-800 PSI TENSILE STRENGTH. ALL TIE DOWN CABLES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL DATA SHEETS.
9. ALL TIE DOWN CABLES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL DATA SHEETS.
10. TO DESIGN DETAIL (CROSS) IS A CHARGE THE INSTALLATION. THE INSTALLATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION. FOR THE CONTRACTOR TO VERIFY THE PROPER INSTALLATION. SHALL VERIFY THE SPECIFIC REQUIREMENTS FOR THE PROPER INSTALLATION. SHALL VERIFY THE SPECIFIC REQUIREMENTS FOR THE PROPER INSTALLATION.

**RECOMMENDED FASTENERS**

1/4" x 1 3/4" TARCON

**MINIMUM ALLOWABLE SHEAR LOAD FOR 1/4" DIA. CONCRETE FASTENERS IN 2000 PSI STRENGTH CONCRETE IS 315 LBS. PULL OUT (TENSION LOAD) STRENGTH OF TARCON IS 505 LBS WITH 1 3/4" MIN. EMBEDMENT.**

**SINGLE SHEAR: 335 LBS**  
**TENSION: 505 LBS**

**STANDARD ANCHOR SCHEDULE**

ANCHOR	1/4" DIA. (1800 PSI)	3/8" DIA. (2700 PSI)	1/2" DIA. (3500 PSI)	5/8" DIA. (4500 PSI)	3/4" DIA. (5500 PSI)
MINIMUM ALLOWABLE LATERAL WIND PRESSURE (ANCHOR IS CONCRETE Pkg) (1) CLIP AT EACH CORNER (2) WIND AT 90 DEGREE TO CORNER (1) CLIP AT EACH CORNER (2) WIND AT 45 DEGREE TO CORNER	1100	1650	2200	2750	3300
MINIMUM ALLOWABLE TENSION (ANCHOR IS CONCRETE Pkg)	315	472	630	787	945
MINIMUM ALLOWABLE SHEAR (ANCHOR IS CONCRETE Pkg)	315	472	630	787	945

**REVISIONS:**

NO.	DATE	DESCRIPTION
1	10/15/10	ISSUED FOR BIDDING
2	10/15/10	REVISED TO SHOW 1/4" DIA. ANCHORS
3	10/15/10	REVISED TO SHOW 3/8" DIA. ANCHORS
4	10/15/10	REVISED TO SHOW 1/2" DIA. ANCHORS
5	10/15/10	REVISED TO SHOW 5/8" DIA. ANCHORS
6	10/15/10	REVISED TO SHOW 3/4" DIA. ANCHORS

**THE METAL SHOP**  
3500 W. GARDNER ROAD  
DUNEDIN, FL 33426  
Tel: (888) 350-1000  
Fax: (888) 350-1001  
www.metalshop.com

**Joseph D. Hiller P.E.**  
Professional Engineer  
No. 12487  
Florida Professional Engineer License # 12487  
Professional Seal

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**UPLIFT**

**F<sub>2</sub>: 240\***

**F<sub>1</sub>: 325\***      MODEL #T11 9-10-11

**A/C ANCHOR CLIP**

**MAX UPLIFT: 505\***

USE MIN. OF 2 - #14x3/4" SCREWS FOR 4" CLIP  
 USE MIN. OF 2 - #14x3/4" SCREWS FOR 6" CLIP  
 USE 1/4" x 1 3/4" TAPCON TO CONCRETE PAD

METAL SHOP # 771 - 4" ANCHOR CLIP  
 METAL SHOP # 772 - 6" ANCHOR CLIP

Anchor	Embedment	Concrete Strength	Capacity
1/4"	1-1/2"	3000	1000
	1-1/4"	3500	1100
	1-1/2"	4000	1200
3/8"	1-1/2"	3000	1500
	1-1/4"	3500	1650
	1-1/2"	4000	1800
1/2"	1-1/2"	3000	2200
	1-1/4"	3500	2400
	1-1/2"	4000	2600
5/8"	1-1/2"	3000	3000
	1-1/4"	3500	3300
	1-1/2"	4000	3600
3/4"	1-1/2"	3000	3600
	1-1/4"	3500	3900
	1-1/2"	4000	4200
1"	1-1/2"	3000	4200
	1-1/4"	3500	4500
	1-1/2"	4000	4800
1 1/4"	1-1/2"	3000	4800
	1-1/4"	3500	5100
	1-1/2"	4000	5400
1 1/2"	1-1/2"	3000	5400
	1-1/4"	3500	5700
	1-1/2"	4000	6000

**NOTES:**  
 1. Alternative fasteners may be used as shown in the details. All fasteners must meet or exceed the same design load values specified by the manufacturer and must be approved by the building official.

**RECOMMENDED FASTENERS**  
 1/4" x 1 3/4" TAPCON  
 MAXIMUM ALLOWABLE SHEAR LOAD FOR 1/4" DIA CONCRETE FASTENERS IN 3000 PSI MINIMUM STRENGTH CONCRETE IS 375 LBS. PULL OUT 800 LBS (LOAD) STRENGTH OF TAPCON IS 1 3/4" MIN EMBEDMENT.  
 SINGLE SHEAR: 375 LBS  
 TENSION: 800 LBS

**DIAGRAMS:**  
 - Tapcon  
 - 1/4" x 1 3/4" INTO CONCRETE PAD  
 - SHEET METAL SCREWS  
 - METAL FASTENER  
 - Neoprene washer



Reviewed for Code Compliance  
 Universal Engineering Sciences



**JDS METAL SHOP**  
 Joseph D. Hiller, P.E.  
 2527 W. Orange Road  
 Dunedin, FL 34623  
 727-261-1111

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