



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.

**Scope of Work:** MECHANICAL – New HVAC 1.5 ton 5 KWS and 1 exhaust fan

**Comments:** None

**Project Information**  
 Address: 2117 Hoffner Avenue, Belle Isle, FL 32809  
 Parcel ID: 18-23-30-5120-00-330  
 Property Owner: Tumarkin, Daniel and Patricia  
 Phone Number: None  
 \*\*\*\*\*  
 Company Name: Allied Mechanical Services, LLC  
 Contractor Name: Conner, William R  
 License Number: CAC058731  
 Address: 2137 West Pine Street Orlando, FL 32805  
 Phone Number: 407-841-1630

**Permit Number: 2014-01-034**

**Date of Application: 01/22/2014**

**Date Permit Issued: 01/27/2014**

**WARNING TO OWNER:** "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.

### BUILDING FEATURES

#### IMPACT FEES

School \$  
 Traffic \$

#### ZONING FEES

Zoning Fee \$

#### UNIVERSAL ENG - BUILDING FEES

Cert of Occ \$  
 Demo \$  
 Building \$  
 Fence \$  
 Driveway \$  
 Shed \$  
 Window(s) \$  
 Door(s) \$  
 PrePower \$  
 Electrical \$  
 Temp Pole \$  
 Plumbing \$  
 Mechanical \$196.50  
 Gas \$  
 Roofing \$  
 Boat Dock \$  
 Screen Encl \$  
 Swimming Pool \$  
 Sign \$

#### SURCHARGE FEES

Surcharge Fee \$2.95  
 Surcharge Fee \$2.95

**TOTAL FEES \$202.40**

**Date Paid** 1-27-14  
**CC or Check #** Visa  
**Amount Paid** 202.40

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).

#### BUILDING INSPECTOR USE ONLY

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

€ BUILDING

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)

€ ROOFING

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 \_\_\_\_\_

€ PLUMBING (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...)

€ 1<sup>st</sup> \_\_\_\_\_ (Underground) 2<sup>nd</sup> \_\_\_\_\_ (Sewer)

3<sup>rd</sup> \_\_\_\_\_ (Rough-In/Tub Set) 4<sup>th</sup> \_\_\_\_\_ (Final)

CHECK APPROPRIATE BOX

€ GAS \_\_\_ Natural \_\_\_ LP € MECHANICAL € ELECTRICAL € LOW VOLTAGE

1<sup>st</sup> \_\_\_\_\_ (Rough-In) 2<sup>nd</sup> \_\_\_\_\_ (Final)

Inspection requests are to be emailed to [BiDscheduling@UniversalEngineering.com](mailto:BiDscheduling@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/ff094edc4-932d-44bd-9809-ect32f9e2e63>  
 login ID = [cobi@universalengineering.com](mailto:cobi@universalengineering.com) password = universal113



mechanical services, llc

"working in alliance with our customers"

October 16, 2013

Ray Kennedy  
K2a Partners, LLC

Re: 2117 Hoffner – Garage Apartment

Dear Mr. Kennedy:

After reviewing the existing HVAC ductwork, exhaust and piping systems at the above referenced project we submit that the existing work was completed with-in Code and with-in common Industry Standards for residential HVAC.

- The existing ductwork includes 1.5" Fiberglass duct board, R-6 Flex Ductwork, Refrigerant Piping is copper with Armoflex pipe insulation.
- The ductwork is hung correctly to prevent excessive sagging.
- The main is via a filtered return in the open living area and transfer ducts from the two bedrooms back into the open living area. There is a dedicated path of return as required.
- There is a supply grille in each room.
- The rest room has a 50CFM exhaust fan ducted to the exterior of the building.
- The air conditioning unit is to be a PhilCo 1.5-ton 13-SEER heat pump with a 5kw emergency heat installed in the air handling unit.
  - AHU Model #: B6BMM024K-A
  - Matching Condensing Unit Model #: JT4BD-018K

Thank you and please feel free to contact me if you have any questions concerning this information.

Sincerely,

William R. Conner  
Allied Mechanical Services, LLC  
Florida License #: CAC05873



P.O. Box - 568684 – Orlando, fl 32856  
phone: 407-841-1630 fax: 407-839-1800

# Air System Sizing Summary for AHU-001 DUCTED RA

Project Name: Detached Exist Bldg  
Prepared by: PENINSULA ENGINEERING

12/31/2013  
10:21AM

## Air System Information

Air System Name: AHU-001 DUCTED RA  
Air System Type: Single Zone CAV  
Number of zones: 1  
Floor Area: 1092.0 sqft  
Location: Orlando, Florida

## Sizing Calculation Information

Calculation Months: Jan to Dec  
Calculation method: Transfer Function Method

## Central Cooling Coil Sizing Data

Total coil load: 1.5 Tons  
Total coil load: 17.9 MBH  
Sensible coil load: 17.4 MBH  
Coil airflow: 790 CFM  
Sensible heat ratio: 0.972  
Area per unit load: 730.5 sqft/Ton  
Load per unit area: 16.4 BTU/(hr-sqft)

Load occurs at: Jun 1700  
OA DB / WB: 91.3/75.6 F  
Entering DB / WB: 75.4/61.6 F  
Leaving DB / WB: 54.9/53.6 F  
Coil ADP: 52.6 F  
Bypass Factor: 0.100  
Resulting RH: 46 %  
Design supply temp: 55.0 F

## Central Heating Coil Sizing Data

Max coil load: 13.4 MBH  
Coil airflow: 790 CFM  
Load per unit area: 12.3 BTU/(hr-sqft)

Load occurs at: Des Htg  
Ent DB / Lvg DB: 69.8/85.6 F

## Supply Fan Sizing Data

Actual max airflow: 790 CFM  
Standard airflow: 787 CFM  
Actual max airflow per unit area: 0.72 CFM/sqft

Fan motor BHP: 0.23 BHP  
Fan motor kW: 0.17 kW  
Fan static: 1.00 in wg

## Outdoor Ventilation Air Data

Design airflow: 0 CFM  
Airflow per unit floor area: 0.00 CFM/sqft

Airflow per person: 0.00 CFM/person

## Space Sizing Data

overall	17.0	790	Jun 1700	14.0	1092.0	0.72
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# System Design Load Summary for AHU-001 DUCTED RA

Project Name: Detached Exist Bldg  
Prepared by: PENINSULA ENGINEERING

12/31/2013  
10:21AM

	DESIGN LOADS		DESIGNER'S COMMENTS	
Window and Skylight Solar Loads	174 sqft	4148	-	174 sqft
Wall Transmission	899 sqft	4220	-	899 sqft
Roof Transmission	1092 sqft	1420	-	1092 sqft
Window Transmission	174 sqft	2680	-	174 sqft
Skylight Transmission	0 sqft	0	-	0 sqft
Door Loads	0 sqft	0	-	0 sqft
Floor Transmission	1092 sqft	0	-	1092 sqft
Partitions/Ceilings	0 sqft	0	-	0 sqft
Overhead Lighting	819 W	2794	-	0 W
Electric Equipment	0 W	0	-	0 W
People	4	920	480	0
Infiltration	-	0	0	0
Miscellaneous	-	0	0	0
Safety Factor	5% / 5%	809	24	5%
<b>Subtotal Solar Loads</b>				
Thermostat and Pulldown Adjustment	-	-145	0	-27
Plenum Wall Load	0%	0	-	0
Plenum Roof Load	0%	0	-	0
Plenum Lighting Load	0%	0	-	0
Ventilation Load	0 CFM	0	0	0 CFM
Supply Fan Load	790 CFM	585	-	790 CFM
<b>Subtotal System Loads</b>				
Central Cooling Coil	-	17432	507	0
Central Heating Coil	-	0	-	13427
<b>Subtotal Coil Loads</b>				

# Zone Design Load Summary for AHU-001 DUCTED RA

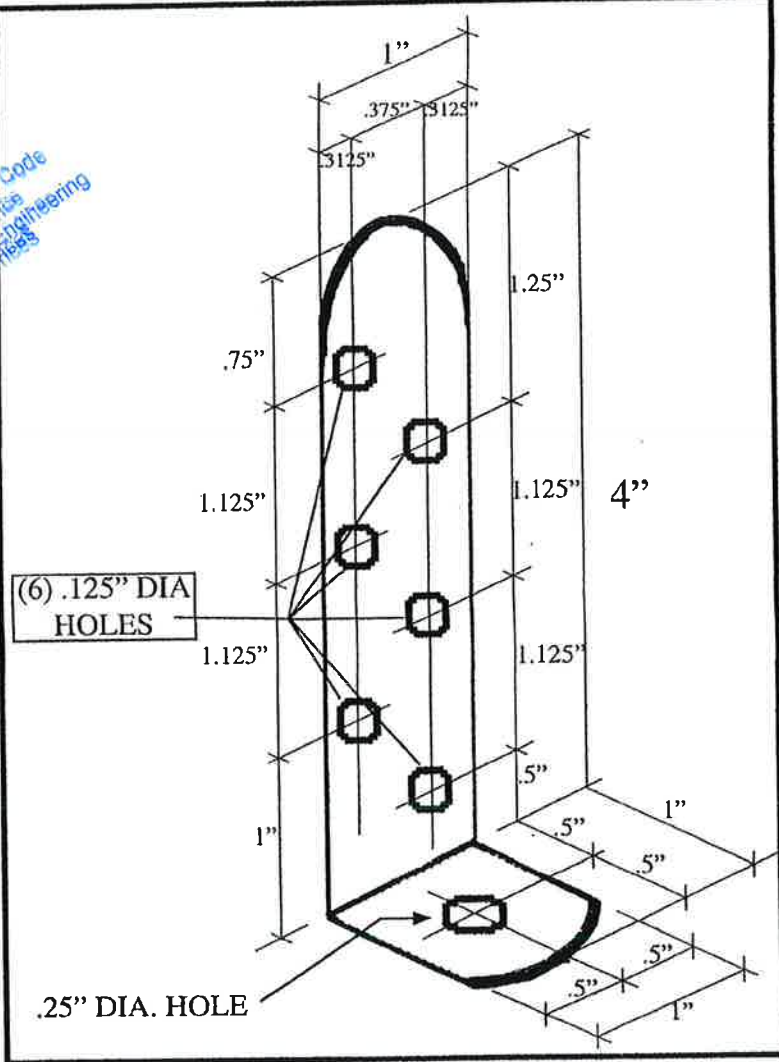
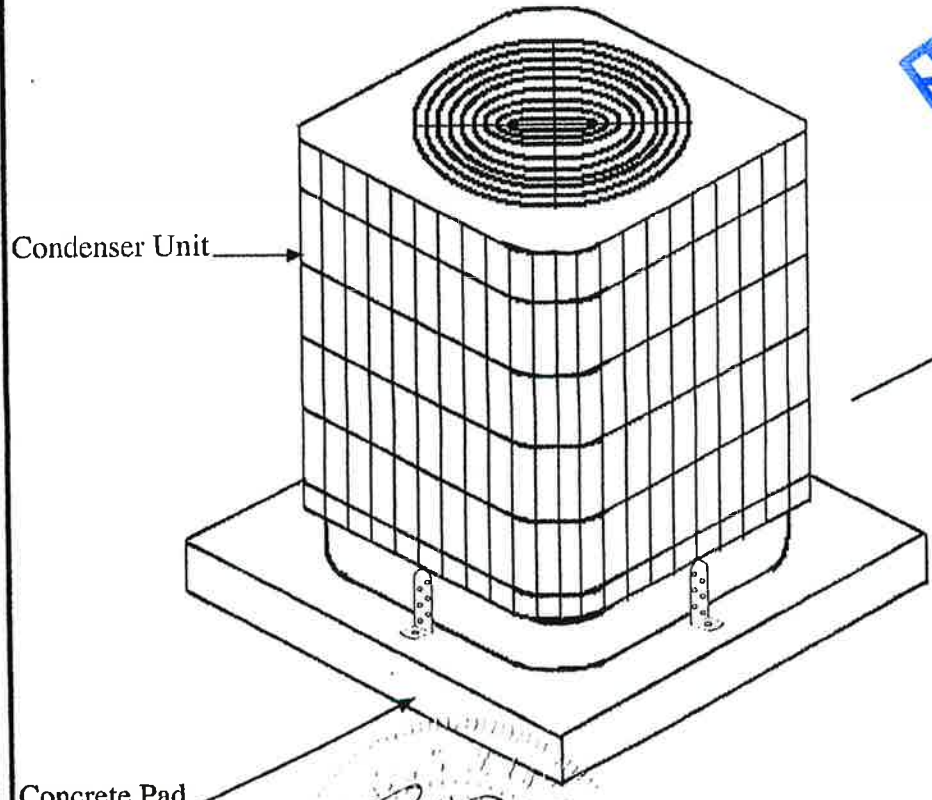
Project Name: Detached Exist Bldg  
 Prepared by: PENINSULA ENGINEERING

12/31/2013  
 10:21AM

Category	Area (sqft)	Area (sqft)	Area (sqft)	Area (sqft)	Area (sqft)	Area (sqft)
Window and Skylight Solar Loads	174 sqft	4148	-	174 sqft	-	-
Wall Transmission	899 sqft	4220	-	899 sqft	6052	-
Roof Transmission	1092 sqft	1420	-	1092 sqft	1117	-
Window Transmission	174 sqft	2680	-	174 sqft	6201	-
Skylight Transmission	0 sqft	0	-	0 sqft	0	-
Door Loads	0 sqft	0	-	0 sqft	0	-
Floor Transmission	1092 sqft	0	-	1092 sqft	0	-
Partitions/Ceilings	0 sqft	0	-	0 sqft	0	-
Overhead Lighting	819 W	2794	-	0 W	0	-
Electric Equipment	0 W	0	-	0 W	0	-
People	4	920	480	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	809	24	5%	669	0
<b>TOTAL</b>		<b>6992</b>	<b>30</b>		<b>11533</b>	

**#771 (4 pl.) / #772 (100 box) Anchor Clip**

Reviewed for Code Compliance  
 Universal Engineering  
 2/14/08



Metal thickness = 16 gauge

*[Signature]*  
 2-19-08

<p>The Metal Shop          1139 Eldridge Street          Clearwater          Fl. 33755</p>	<p>Ph: (727) 441-2492          Fax: (727) 442-8493          Web: www.metalshop.org</p>	<p><b>Consulting Engineer:</b>          Douglas W. Lowe, P.E.          FLA # 13355          1206 Millentium Parkway          Brandon, Fl. 33511</p>	<p><b>Revision Date:</b>          2/14/08</p>	<p><b>Drawn by:</b>          K.P.R.          Scale - Not to scale</p>	<p><b>Page:</b>          1 of 1</p>
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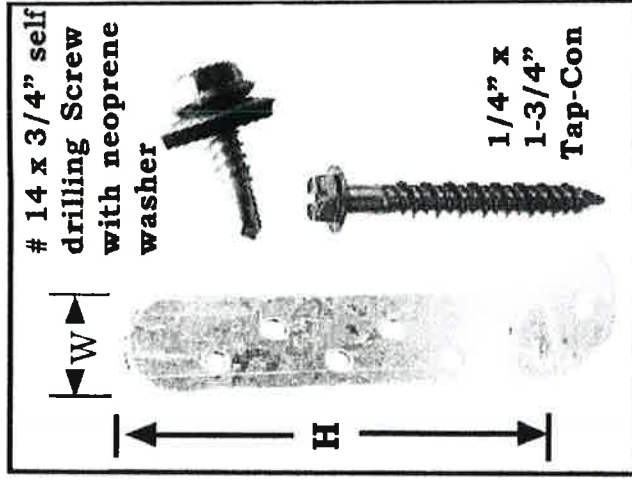
PART NO.	H DIM.	W DIM.	DESCRIPTION
# 771	4"	1"	4 PK. Clips only
# 773	6"	1"	4 PK. Clips only

**ANCHOR CLIP NOTES:**

1. The anchor clip is 16 Gauge, G-90 hot-dip galvanized steel rated for corrosion of coastal applications.
2. 196 mph ultimate wind speed (3-second gust) rating based on a condenser unit surface area of 10.2 sq. ft. facing wind: calculations based upon equations in ASCE 7-10 and chapter 16, Section 1609 2010 FBC. Exposure C or D (facing water direction) ; risk category III ; Max. 500 Lb. condenser unit that withstands 196 mph wind speed for 3 second gusts.
3. On condenser units near bodies of water AHJ may require condenser units to be raised above ground level. (Suggest The Metal Shop's equipment wall stand for these areas)
4. The anchor clips with self-drilling screws and Tap con screw are for ground mounted condensing units only on 2000 psi or higher psi concrete pads ONLY. Other pads or configurations must be custom engineered.
5. Engineer seal affixed hereto validates design as shown only. Use of this plan by Contractor, et al, indemnifies and saves harmless this engineer and The Metal Shop for all cost & damages, including legal fees & appellate fees resulting from deviations of this plan.

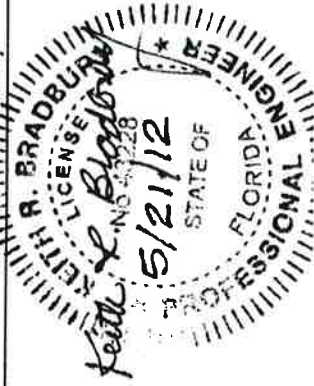
**ANCHOR CLIP INSTALLATION INSTRUCTION**

1. SUITABLE FOR GROUND MOUNTED UNITS ONLY. DISCONNECT POWER BEFORE INSTALLATION.
2. Minimum of 4 clips required equally spaced around condenser unit base. Minimum of 2- #14 x 3/4" self-drilling screws (per clip) with neoprene washer required to fasten 4 clips to condenser unit base. 1/4" x 1-3/4" Tap con concrete screw required to fasten each anchor clip into condenser pad (2000 psi or higher psi concrete)
3. Adjust anchor clip accordingly to fit on the condenser unit and attach 2 self-drilling screws through the anchor clip and into the condenser unit, at the same time ensuring that the base of the anchor clip is still in contact with the concrete pad.
4. Attach each Tap con screw to the base of the anchor clip and into the concrete pad in accordance with Tap con instructions.
5. All hardware must be fastened prior to connecting refrigerant lines and electrical power to the unit.



**ANCHOR CLIP**

ENGINEER: KEITH R. BRADBURY P.E.  
P.E. No. 43228  
8731 BAYWOOD PK. DR.  
SEMINOLE, FL. 33777  
PHONE: 727-319-3947  
KBRADBURY4@TAMPABAY.RR.COM  
COPYRIGHT 2012 Keith R. Bradbury



The Metal Shop	
2541 w. Dunnellon Rd. Dunnellon Fl. 34433	Ph: (352) 522-0006 Fx: (352) 522-0007 www.metalsshop.org
<b>ANCHOR CLIP INSTALLATION INSTRUCTIONS - 196 mph (3-second gusts)</b>	
SIZE: B	REVISED FOR 2010 FBC - REV.A
SCALE: N.T.S.	DATE: MAY 14, 2011



# THE METAL SHOP

[www.metalshop.org](http://www.metalshop.org)

2541 W. Dunnellon Road  
Office: 888-441-2492

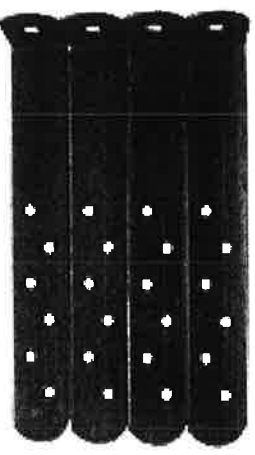
Dunnellon, FL. 34434  
Fax: 352-522-0007

E-Mail - [sales@metalshop.org](mailto:sales@metalshop.org)

**#771**  
**4" CLIPS**



**#773**  
**6" CLIPS**



**4" & 6"**  
**CONDENSER**  
**TIE-DOWN KITS**

**#771-S**

**4" CLIPS + 8 SCREWS**



**#773-S**  
**6" CLIPS + 8 SCREWS**

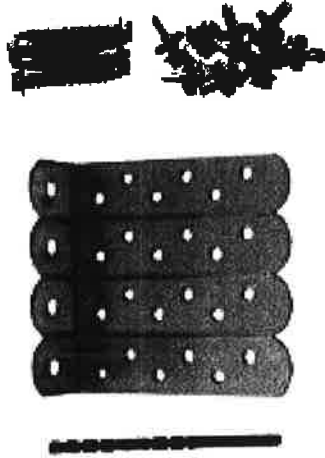


ENGINEER: KEITH R BRANNIFY P.E.  
P.E. No. 43228  
3731 BAYWOOD PK. DR.  
SEMINOLE, FL. 31777  
PHONE: 772-318-3147  
K-000137418-046-0747 T-0004  
CIVIL ENGINEER



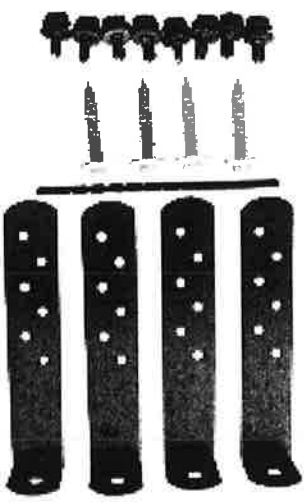
**#770**

**4" CLIPS + 8 SCREWS**  
**DRILL BIT+TAPCONS**



**#774**

**6" CLIPS + 8 SCREWS**  
**DRILL BIT+TAPCONS**





# THE METAL SHOP

[www.metalsshop.org](http://www.metalsshop.org)

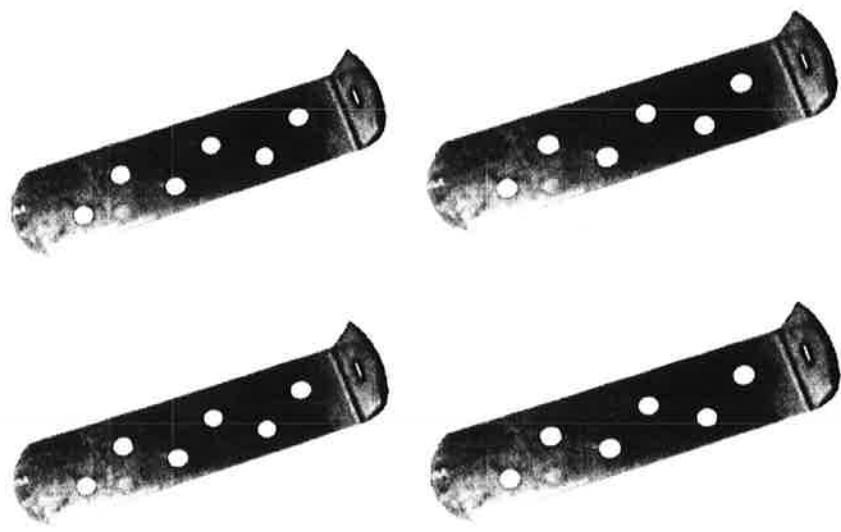
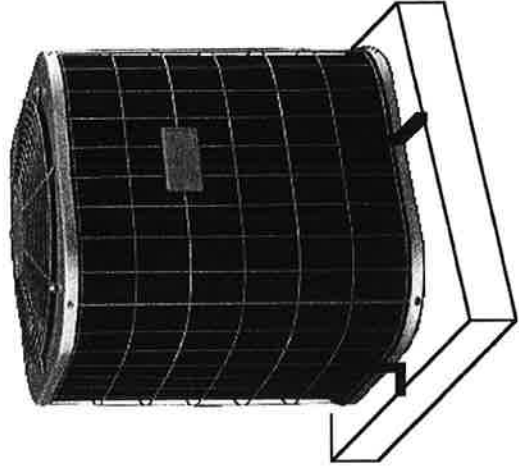
2541 W. Dunnellon Road  
Office: 888-441-2492

Dunnellon, FL. 34434  
Fax: 352-522-0007

E-Mail - [sales@metalsshop.org](mailto:sales@metalsshop.org)

April 2012

## ANCHOR CLIPS



**Meets Florida  
Hurricane Code  
196 MPH Wind  
3-second gusts**

- #770 - 4" - Complete Anchor Kit with Hardware
- #771 - 4" - 4 Clips Only per Pack
- #772 - 4" - Box of 100 Clips Only
- #773 - 6" - 4 Clips Only per Pack
- #773S 6" - 4 Clips + 8 = #14 Screws
- #774 - 6" - Complete Anchor Kit with Hardware

16ga. G-90  
Galvanized Steel

Engineering Specs. Available