



City of Belle Isle
 Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
 Tel 407-581-8161 * Fax 407-581-0313 * 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: one 3-ton change out

Comments: None

Project Information
 Address: 5833 Windmill Ct, Belle Isle, FL 32809
 Parcel ID: 24-23-29-9361-00-100
 Property Owner: Girard, William
 Phone Number: 407 869 9929

 Company Name: American Air & Heat Inc
 Contractor Name: Bent, Jerry Lee
 License Number: CMC049238
 Address: 502 S. Econ Circle, Oviedo, FL 32765
 Phone Number: 407 359 9501

Permit Number: 2017-04-004
Date of Application: 03/30/2017
Date Permit Issued: 03/30/2017

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	
Traffic	\$
School	\$
ZONING FEES	
Zoning Fee	\$
UNIVERSAL ENG - BUILDING FEES	
Boat Dock	\$
Boat House	\$
Building	\$
Demo	\$
Door(s)	\$
Driveway	\$
Electrical	\$
Fence	\$
Gas	\$
Irrigation	\$
Low Voltage	\$
Mechanical	\$82.50
Plumbing	\$
Pool	\$
Roofing	\$
Screen Encl	\$
Shed	\$
Temp Pole	\$
Window(s)	\$
SURCHARGE FEES	
Surcharge Fee	\$2.00
Surcharge Fee	\$2.00
TOTAL FEES \$86.50	
Date Paid 4-4-17	
CC or Check # AMEX 92003	
Amount Paid 86.50	

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

1st _____ (Footing/Foundation)
 Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? _____

2nd _____ (Slab)

3rd _____ (Lintel)(Wal Reinforcing on Masonry Building)

4th _____ (Exterior Framing)(Roof/Wall Sheathing)

5th _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed)

6th _____ (Insulation to be Made After Roof Installed)

7th _____ (Drywall)

8th _____ (Sidewalk/Driveway)

9th _____ (Other)

10th _____ (Final – After MEP and Other Applicable Finals)

ROOFING **OSHA APPROVED ACCESS MUST BE MADE AVAILABLE TO INSPECTOR**

1ST ROOFING Deck Nailing/Dry-in/Flashing _____

2nd ROOFING Covering In-Progress _____

3rd ROOFING Covering Final _____

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

1ST _____ (Underground) 2nd _____ (Sewer)

3rd _____ (Rough-In/Tub Set) 4th _____ (Final)

CHECK APPROPRIATE BOX

GAS __ Natural __ LP **MECHANICAL** **ELECTRICAL** **LOW VOLTAGE**

1st _____ (Rough-In) 2nd _____ (Final)

Inspection requests are to be emailed to IDScheduling@UniversalEngineering.com; a confirmation email will be sent back to you upon scheduling. **Next-Day Inspection requests must be made by 4pm.** 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>
 login ID = cobi@universalengineering.com password = universal13



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: 3/29/17

PERMIT NUMBER 2017-04-004

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

Project Address 5833 Windmill Court 5833 Windmill Ct Belle Isle FL 32809 32812
Property Owner William R. Girard Girard, William Phone 407 869 9929 407 869 9929
Property Owner's Mailing Address 5833 Windmill Court City Orlando
State FL Zip Code 32809 Parcel Id Number: 24-23-29-9361-00-100 24-23-29-9361-00-100

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

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

- REQUIRED: Tie Down Engineering
- 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 Total Tons 3
Type of System: Water to Air Chiller Split System Package Heat Pump Estimated Cost \$ _____
Heating: # of Units KWS Per Unit 6 Total KWS _____ BTU's _____ Estimated Cost \$ 7300.00 7300
Oil Electric Boiler Gas

(A) Estimated Cost Fee \$ _____

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 [Signature] LICENSE # CMC049238 CMC049238
LICENSE HOLDER NAME Jerry Bent COMPANY NAME American Air and Heat American Air & Heat
Street Address 502 S. Egan Circle 502 S. Egan Circle
City Orlando State FL Zip Code 32765 Phone Number 407 359 9501
Email Address Suzice@AMERICANAIRANDHEAT.NET 32765 407-359-9501

Building Official: [Signature] Date 3-30-17
Verified Contractor's Licenses & Insurance are on file [Signature] Date 3-30-17

Permit Fee	\$	<u>55.-</u>
Review Fee	\$	<u>27.50</u>
3% Florida Surcharge	\$	<u>4.4</u>
Total Permit Fee	\$	<u>86.50</u>

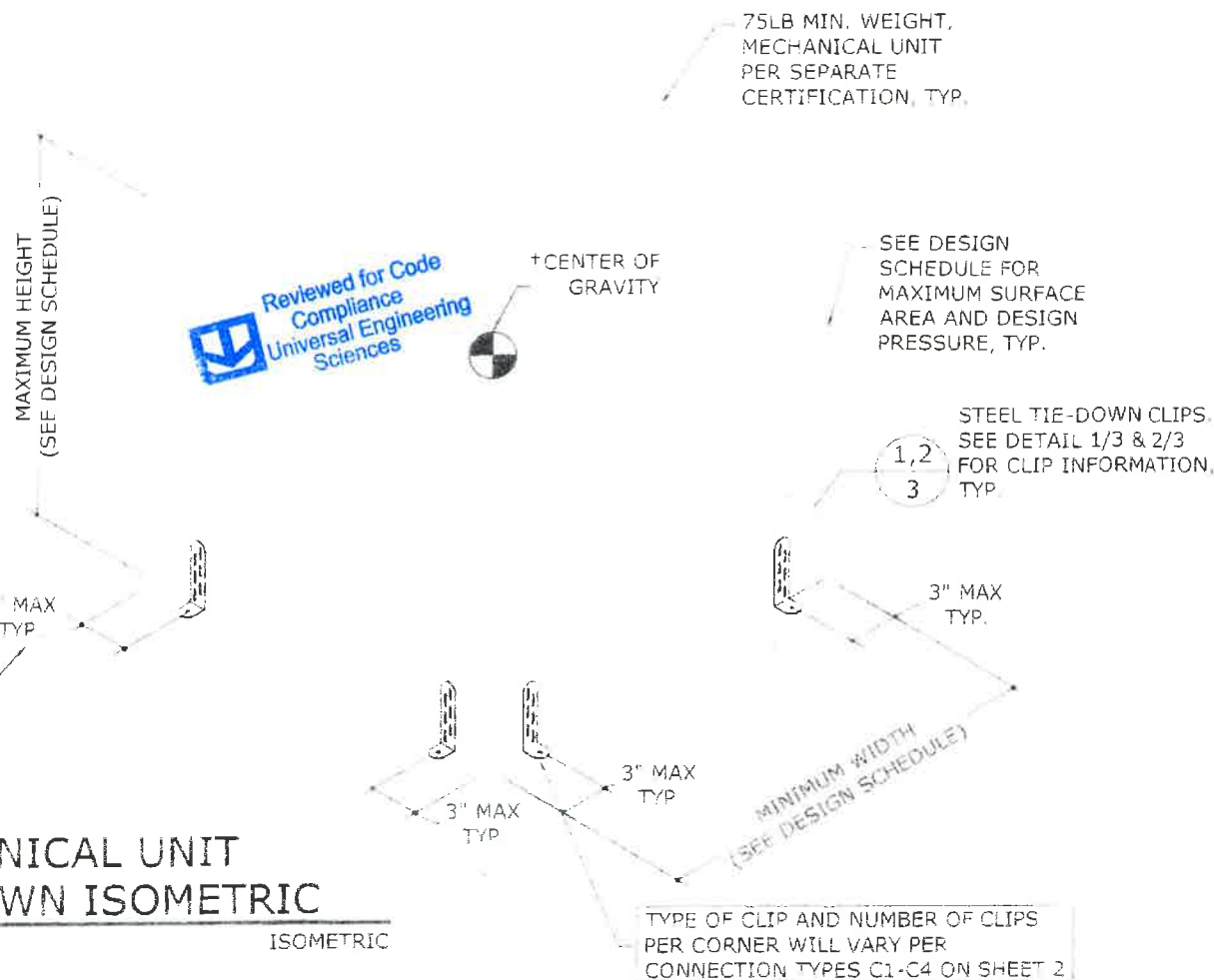
NOTE: The Building Permit Number is required if the Mechanical Installation is associated with any construction or alteration where a Building Permit has been issued.

base 37
3x6 18
55.2
27.50
82.50

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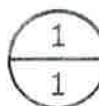
MECHANICAL UNIT STEEL TIE-DOWN CLIP: AT GRADE & ROOF-TOP MOUNTED APPLICATIONS

†CENTER OF GRAVITY ASSUMED TO ACT AT THE GEOMETRIC CENTER OF THE MECHANICAL UNIT. MECHANICAL UNIT MUST BE SQUARE OR RECTANGULAR, NO IRREGULAR SHAPES.



HOST STRUCTURE DESIGN BY OTHERS. SEE DESIGN SCHEDULES FOR ALLOWABLE SUBSTRATES

MECHANICAL UNIT TIE-DOWN ISOMETRIC



ISOMETRIC

TYPE OF CLIP AND NUMBER OF CLIPS PER CORNER WILL VARY PER CONNECTION TYPES C1-C4 ON SHEET 2

DESIGN NOTES:

THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH ASCE 7-10 AND THE FLORIDA BUILDING CODE FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE INDICATED IN THE ACCOMPANYING DESIGN SCHEDULES. THE DESIGN CRITERIA USED TO CALCULATE THE ALLOWABLE ROOF-TOP HEIGHTS CONSIDERS ASCE 7-10 SECTION 29.5.1 FOR ROOF TOP HEIGHTS (H) ≤ 60 FT AND SECTION 29.5 FOR ROOF TOP HEIGHTS (H) > 60 FT & SECTION 29.4.1 FOR INSTALLATIONS AT GRADE. $(GC_r)_{lateral} = 3.10$ WITHIN THE HVHZ, $(GC_r)_{lateral} = 1.90$ OUTSIDE THE HVHZ, $(GC_r)_{uplift} = 1.5$ FOR ALL LOCATIONS (CONCURRENT). ALL OTHER DESIGN VARIABLES ARE IN ACCORDANCE WITH ASCE 7-10 CHAPTERS 26 & 29. THE HEIGHTS LISTED IN THE DESIGN SCHEDULES REPRESENT THE ALLOWABLE HEIGHT OF THE BUILDING. THIS PRODUCT APPROVAL ALLOWS FOR EACH UNIT TO BE INSTALLED ON A MAXIMUM 30" TALL A/C STAND (CERTIFICATION BY OTHERS) ON TOP OF THE HEIGHTS LISTED IN THE DESIGN SCHEDULES.

GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE & ASCE 7-10. THIS PRODUCT MAY BE USED WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
- DESIGN IS BASED ON CLIENT PROVIDED PRODUCT AND DIE SHEETS FROM TEST REPORTS #TEL 01970387A, #TEL 01970387B BY TESTING EVALUATION LABORATORIES, INC.. NO SUBSTITUTIONS WITHOUT WRITTEN APPROVAL BY THIS ENGINEER SHALL BE PERMITTED.
- MAXIMUM & MINIMUM DIMENSIONS AND MINIMUM WEIGHT OF MECHANICAL UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
- FASTENERS TO BE #12 X 3/4" OR GREATER SAE GRADE 5 UNLESS NOTED OTHERWISE. TAPCONS REFERRED TO HEREIN SHALL BE ITW BUILDEX BRAND, CARBON STEEL ONLY, INSTALLED TO 3000 PSI MIN CONCRETE. SEE ANCHOR SCHEDULE FOR ANCHOR REQUIREMENTS. ALL FASTENERS SHALL HAVE APPROPRIATE CORROSION PROTECTION TO PREVENT ELECTROLYSIS.
- ALL STEEL CLIPS SHALL BE ASTM A283 STEEL (GRADE D) WITH $F_y = 33$ KSI OR BETTER. ALL STEEL MEMBERS SHALL BE PROTECTED AGAINST CORROSION WITH AN APPROVED COAT OF PAINT, ENAMEL OR OTHER APPROVED PROTECTION. G90-RATED COATING REQUIRED FOR ALL COASTAL INSTALLATIONS.
- ALL CONCRETE SPECIFIED HEREIN IS NOT PART OF THIS CERTIFICATION. AS A MINIMUM, ALL CONCRETE SHALL BE STRUCTURAL CONCRETE 4" MIN. THICK AND SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.
- THE ADEQUACY OF ANY EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS SHALL BE VERIFIED BY THE ONSITE DESIGN PROFESSIONAL AND IS NOT INCLUDED IN THIS CERTIFICATION. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
- 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 MAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.
- FOR AN EXPLANATION OF EXPOSURE CATEGORIES THAT ACCOMPANY THE V_{ult} WIND SPEEDS USED IN THIS APPROVAL, SEE SECTION 26.7.3 OF ASCE 7-10.

TIE-DOWN CLIP DIRECTIVE EXAMPLE

(THE FOLLOWING EXAMPLE ILLUSTRATES THE PROCEDURE USED TO DETERMINE THE MAXIMUM ALLOWABLE ROOF-TOP INSTALLATION HEIGHT, H, FOR ANY GIVEN MECHANICAL UNIT THAT CONFORMS TO THE DIMENSION RESTRICTIONS AND DESIGN CRITERIA LISTED HEREIN. SEE SHEETS 4-5 FOR DESIGN SCHEDULES.)

MECHANICAL UNIT CRITERIA:

CONSIDER THE INSTALLATION OF (1) MECHANICAL UNIT WITH THE FOLLOWING CRITERIA=

- $V_{ult} = 170$ MPH, EXPOSURE 'B'
- 48" TALL x 48" DEEP x 48" WIDE, 100 LB (WEIGHT AS VERIFIED BY OTHERS)
- INSTALLED TO 3000 PSI MIN CONCRETE WITH (1)-2" CLIP AT EACH CORNER OF UNIT (TOTAL OF (4) CLIPS)

PROCEDURE:

PROCEDURE STEP	RESULT
1 DETERMINE THE CONNECTION TYPE BASED ON THE DIAGRAMS ON SHEET 2	CONNECTION TYPE 3
2 DETERMINE WHICH DESIGN SCHEDULE TABLE TO USE	THIS INSTALLATION IS INTENDED FOR A $V_{ult} = 170$ MPH, EXPOSURE 'B'. THIS DESIGN CRITERIA CORRESPONDS TO TABLE 5
3 DETERMINE LARGEST FACE AREA OF MECHANICAL UNIT TO BE INSTALLED	48"x48" = 16FT ²
4 CHECK MAXIMUM UNIT HEIGHT RESTRICTION	THIS UNIT HEIGHT OF 48" IS EQUAL TO THE MAXIMUM ALLOWABLE HEIGHT OF 48". NOTE: THIS PRODUCT APPROVAL ALLOWS THE UNIT TO BE INSTALLED ON TOP OF AN A/C STAND THAT IS A MAXIMUM 30" TALL. IF AN A/C STAND IS UTILIZED, CHECK TO SEE THAT THE STAND DOES NOT EXCEED 30" IN HEIGHT
5 CHECK MINIMUM UNIT WIDTH RESTRICTION	UNIT WIDTH IS 48" WHICH IS GREATER THAN THE MINIMUM ALLOWABLE WIDTH OF 24"
6 DETERMINE THE ALLOWABLE ROOF-TOP HEIGHT OF THE INSTALLATION	THIS UNIT MAY BE INSTALLED AT ROOF HEIGHTS LESS THAN OR EQUAL TO 15 FT. ADDITIONALLY, THIS UNIT MAY BE INSTALLED ON ROOF-TOP HEIGHTS GREATER THAN 60 FT AND LESS THAN 100 FT. SEE (*) ON TABLE 5 FOR THE NUMERICAL VALUES OF THIS DESIGN EXAMPLE

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04/17/2015
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A FRANK L. BENNARDO, P.E., INC. ENGINEERING

BMP INTERNATIONAL, INC.
4710 28TH STREET NORTH
ST. PETERSBURG, FL 33471
PH: (727) 577-1613
MECHANICAL UNIT STEEL TIE-DOWN CLIPS
FBC 5TH EDITION (2014) PRODUCT APPROVAL FL#14239.1

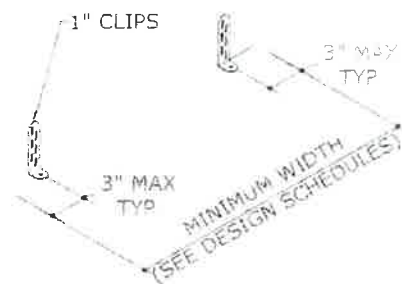
REMARKS	DRWN	CHKD	DATE
INIT ISSUE (11-BMP-0001)	FLB	FLB	12-11-11
REV FOR UNITS	CSL	TSB	02-15-13
REV FOR FBC 5TH (2014)	RWN	CSL	04-06-15

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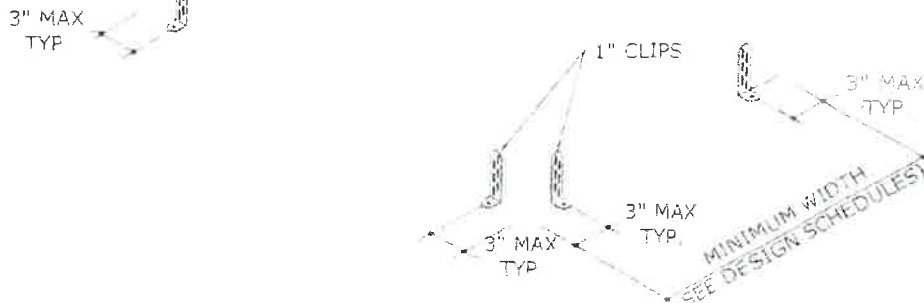


MAXIMUM UNIT HEIGHT (SEE DESIGN SCHEDULES)



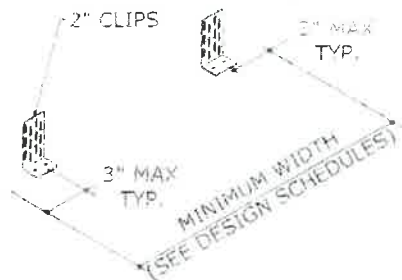
C1 CONNECTION TYPE C1
1" CLIP - UTILIZE (1) AT EACH CORNER FOR A TOTAL OF (4) PER UNIT

MAXIMUM UNIT HEIGHT (SEE DESIGN SCHEDULES)



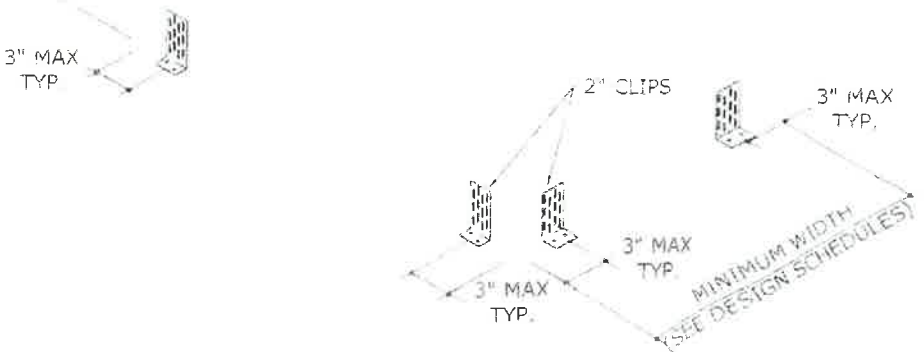
C2 CONNECTION TYPE C2
1" CLIP - UTILIZE (2) AT EACH CORNER FOR A TOTAL OF (8) PER UNIT

MAXIMUM UNIT HEIGHT (SEE DESIGN SCHEDULES)



C3 CONNECTION TYPE C3
2" CLIPS - UTILIZE (1) AT EACH CORNER FOR A TOTAL OF (4) PER UNIT

MAXIMUM UNIT HEIGHT (SEE DESIGN SCHEDULES)

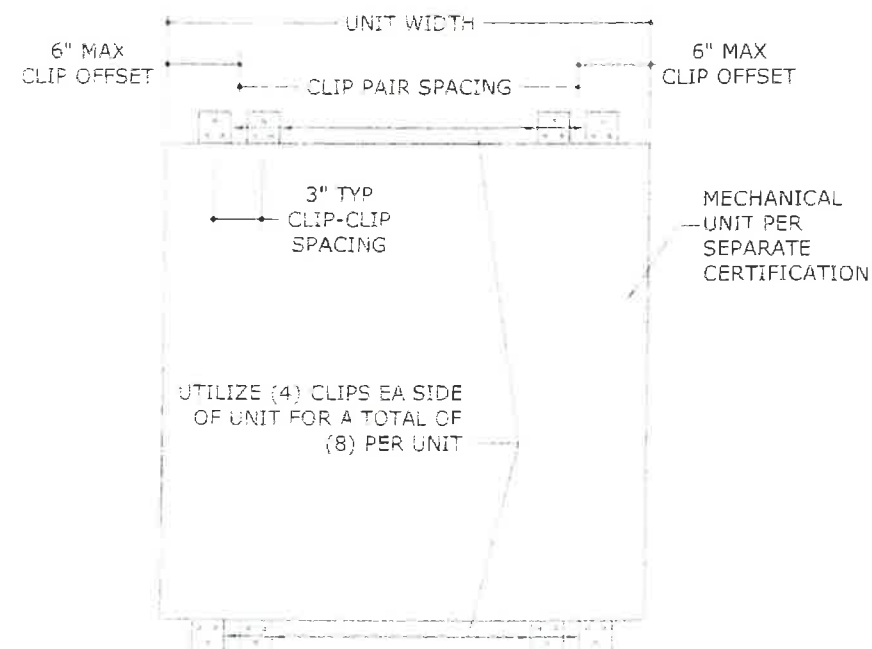


C4 CONNECTION TYPE C4
2" CLIPS - UTILIZE (2) AT EACH CORNER FOR A TOTAL OF (8) PER UNIT

ANCHOR SCHEDULE:

1" CLIPS		2" CLIPS	
SUBSTRATE	DESCRIPTION	SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-5/16"Ø CARBON STEEL ITW BUILDDEX TAPCON, 2 1/4" FULL EMBED TO CONCRETE, 3 3/8" MIN EDGE DISTANCE, 3 3/8" MIN SPACING TO ANY ADJACENT ANCHOR.	CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-5/16"Ø CARBON STEEL ITW BUILDDEX TAPCON, 2 1/4" FULL EMBED TO CONCRETE, 3 3/8" MIN EDGE DISTANCE, 3 3/8" MIN SPACING TO ANY ADJACENT ANCHOR.
ALUMINUM: (0.125" MIN THICK, 6061-T6 MIN. ALUMINUM)	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE	ALUMINUM: (0.125" MIN. THICK, 6061-T6 MIN. ALUMINUM)	(2)-#14 SAE GRADE 5 SHEET METAL SCREWS TO ALUMINUM, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE
STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE	STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(2)-#14 SAE GRADE 5 SHEET METAL SCREWS TO STEEL, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE

1. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.
2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.
3. SEE DETAILS ON SHEET 3 FOR ANCHORS ATTACHING TO MECHANICAL UNIT



5 ALTERNATE (8) CLIP DETAIL
N.T.S. PLAN VIEW

THIS DETAIL MAY BE USED AS AN ALTERNATE GEOMETRIC PATTERN FOR ALL CONNECTION TYPES THAT UTILIZE (2) CLIPS AT EACH CORNER FOR A TOTAL OF (8) CLIPS PER UNIT.

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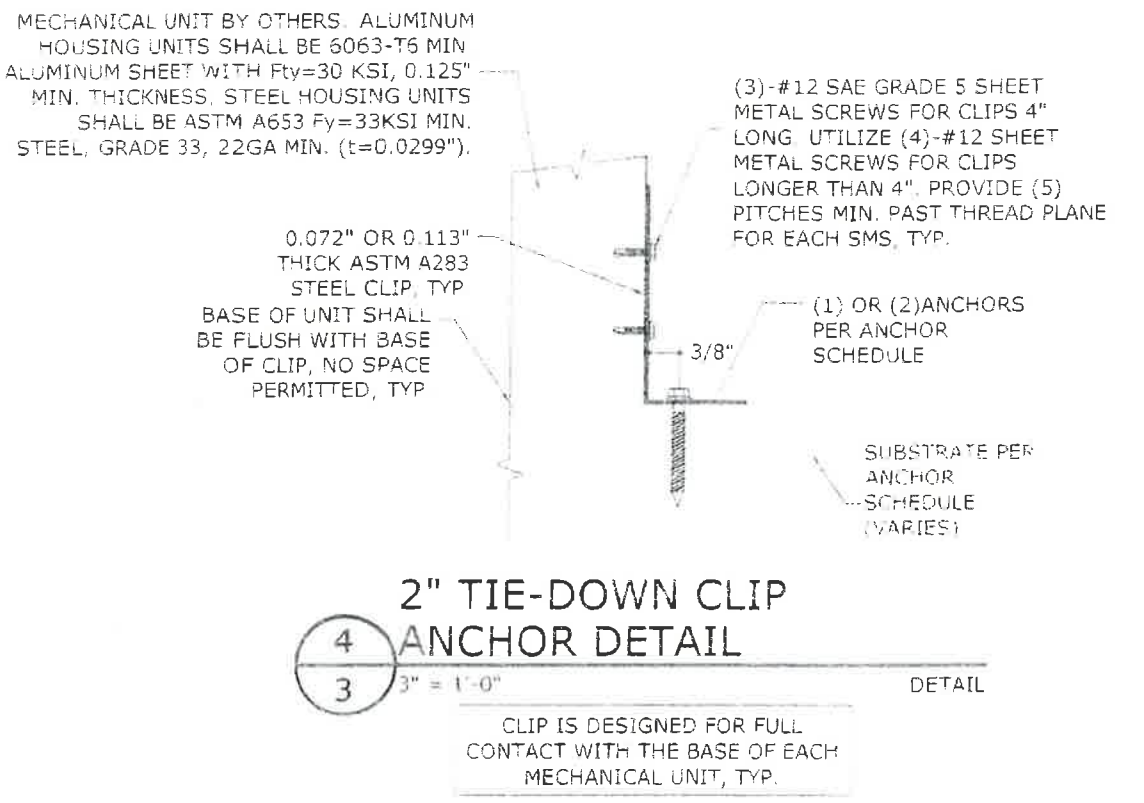
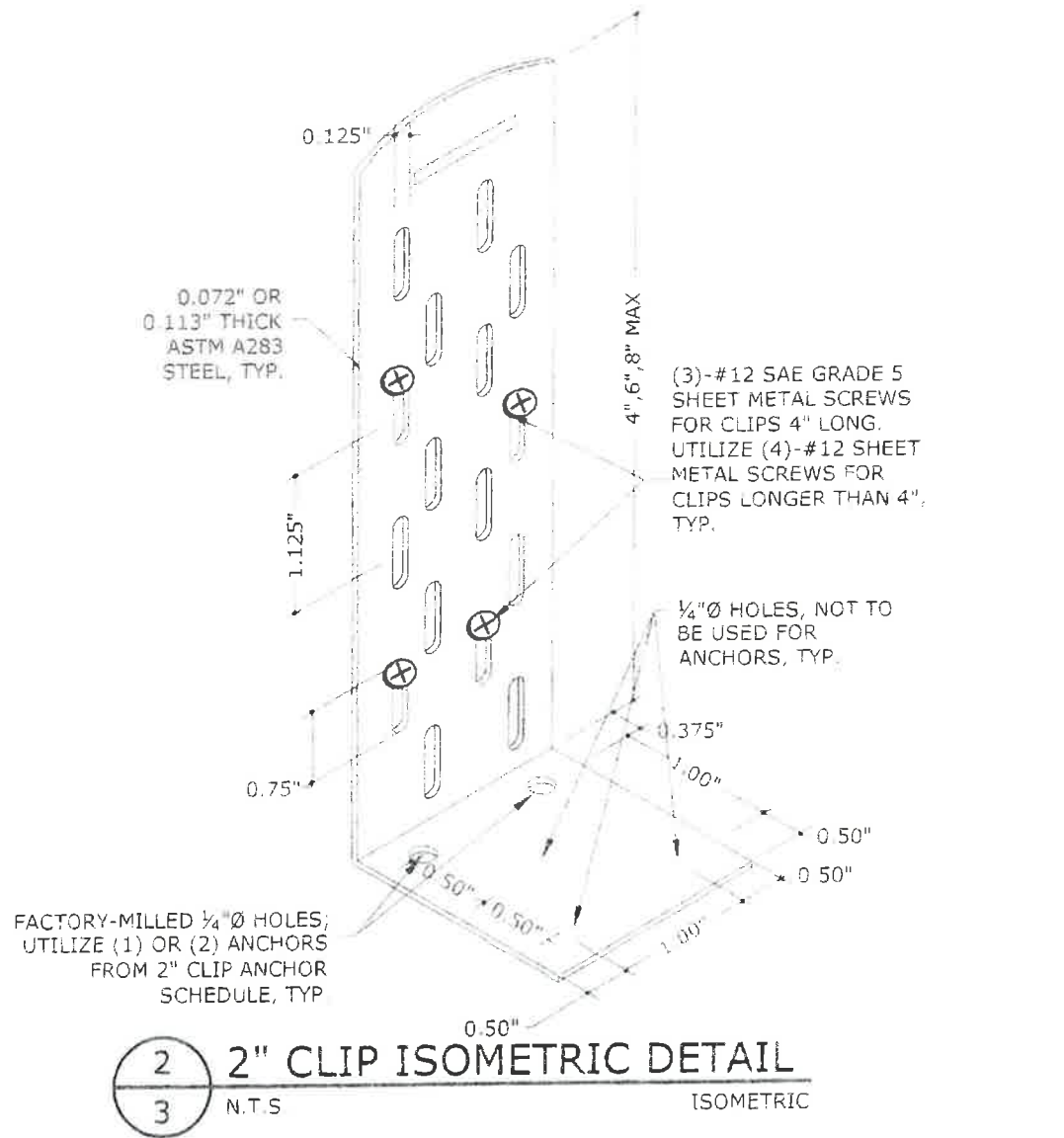
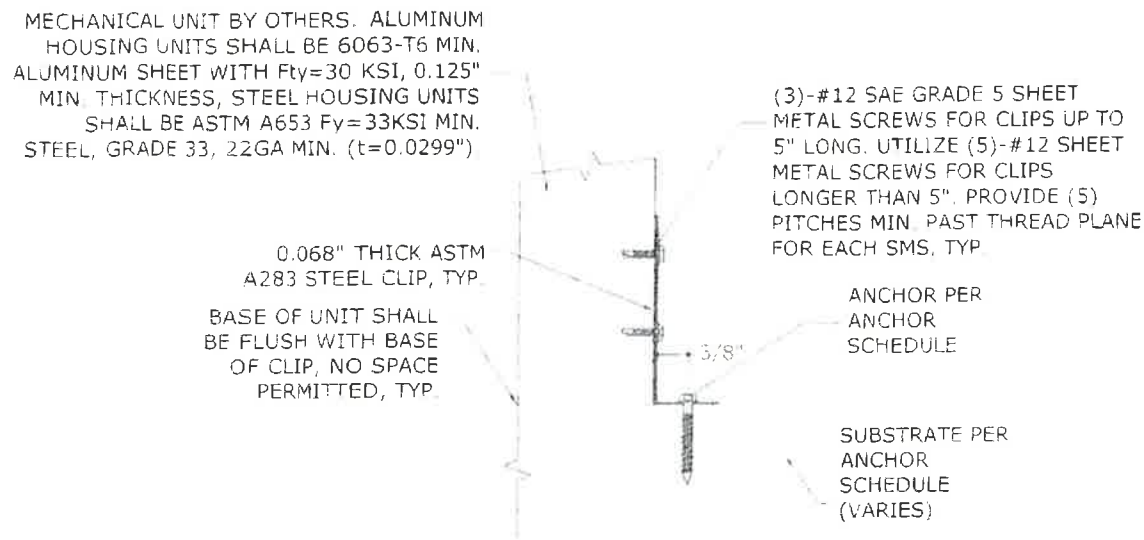
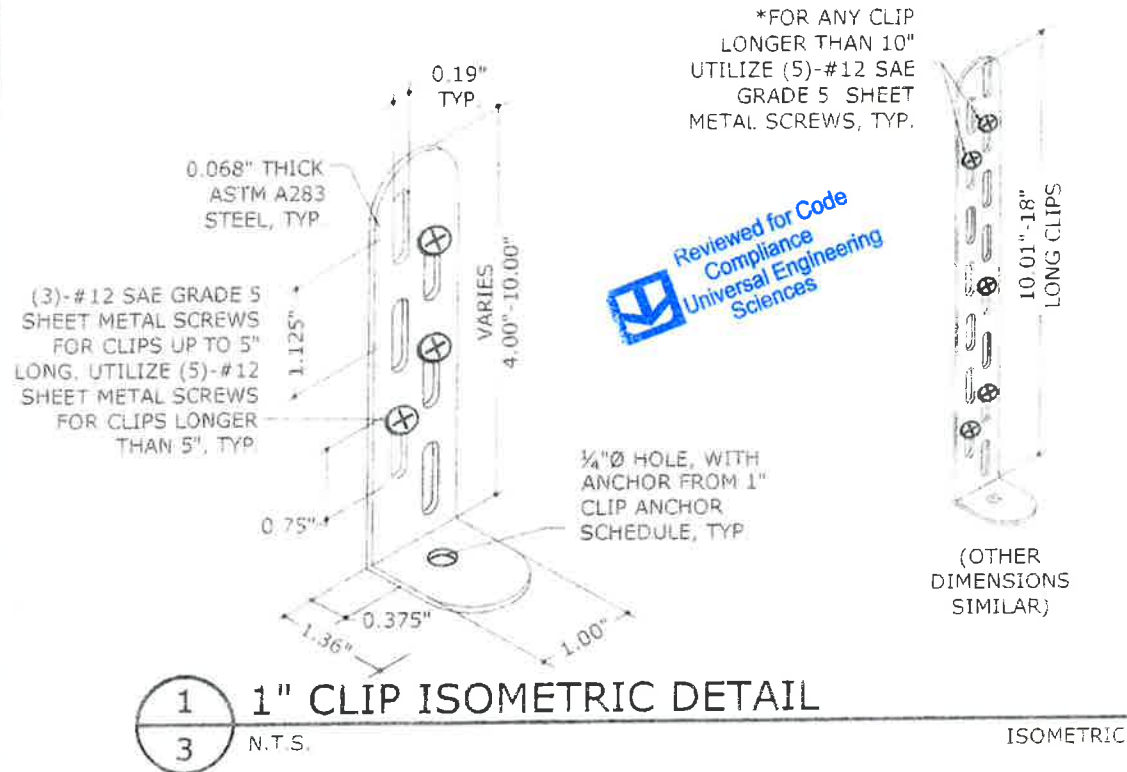
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Update FL14239 for 2014 Florida Bldg. C. Project dwg



FRANK L. BENNARDO, P.E.

04/13/2014

46549

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MECHANICAL UNIT STEEL TIE-DOWN CLIPS

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TABLE 1: Vult=175 MPH, EXPOSURE C

(FOR USE WITH A RISK CATEGORY II STRUCTURE IN THE HIGH VELOCITY HURRICANE ZONE*)



MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT ²	24" MAX	12" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
9 FT ²	32" MAX	15" MIN	N/A	AT GRADE	AT GRADE	H ≤ 60 FT
4 FT ²	48" MAX	24" MIN	AT GRADE	H ≤ 200 FT	H ≤ 30 FT	H ≤ 200 FT
6 FT ²			AT GRADE	H ≤ 40 FT	AT GRADE	H ≤ 200 FT
9 FT ²	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 160 FT
12 FT ²			N/A	AT GRADE	AT GRADE	H ≤ 40 FT
16 FT ²	48" MAX	24" MIN	N/A	AT GRADE	N/A	AT GRADE
20 FT ²			N/A	AT GRADE	N/A	AT GRADE
25 FT ²	60" MAX	48" MIN	N/A	AT GRADE	N/A	AT GRADE
30 FT ²			N/A	N/A	N/A	AT GRADE
36 FT ²	N/A	N/A	N/A	N/A	N/A	AT GRADE

*THIS TABLE IS PERMISSIBLE TO BE USED WITHIN THE HVHZ WHICH CONTAINS BROWARD AND MIAMI-DADE COUNTIES. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

TABLE 2 : Vult=175 MPH, EXPOSURE D

(FOR USE WITH A RISK CATEGORY II STRUCTURE IN THE HIGH VELOCITY HURRICANE ZONE*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT ²	24" MAX	12" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
9 FT ²	32" MAX	15" MIN	N/A	AT GRADE	N/A	H ≤ 30 FT
4 FT ²	48" MAX	24" MIN	AT GRADE	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
6 FT ²			N/A	H ≤ 15 FT	AT GRADE	H ≤ 200 FT
9 FT ²	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 80 FT
12 FT ²			N/A	AT GRADE	N/A	AT GRADE
16 FT ²	48" MAX	24" MIN	N/A	AT GRADE	N/A	AT GRADE
20 FT ²			N/A	AT GRADE	N/A	AT GRADE
25 FT ²	60" MAX	48" MIN	N/A	N/A	N/A	AT GRADE
30 FT ²			N/A	N/A	N/A	AT GRADE
36 FT ²	N/A	N/A	N/A	N/A	N/A	AT GRADE

*THIS TABLE IS PERMISSIBLE TO BE USED WITHIN THE HVHZ WHICH CONTAINS BROWARD AND MIAMI-DADE COUNTIES. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

TABLE 3 : Vult=170 MPH, EXPOSURE C

(FOR USE WITH A RISK CATEGORY II STRUCTURE*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT ²	24" MAX	12" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 160 FT	H ≤ 200 FT
9 FT ²	32" MAX	15" MIN	N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
4 FT ²	48" MAX	24" MIN	AT GRADE 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT ²			AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT ²	48" MAX	24" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
12 FT ²			N/A	AT GRADE 60 FT < H ≤ 200 FT	N/A	H ≤ 200 FT
16 FT ²	48" MAX	24" MIN	N/A	AT GRADE	N/A	H ≤ 200 FT
20 FT ²			N/A	AT GRADE	N/A	H ≤ 200 FT
25 FT ²	60" MAX	48" MIN	N/A	N/A	N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT
30 FT ²			N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 180 FT
36 FT ²	N/A	N/A	N/A	N/A	N/A	AT GRADE

*AS AN EXAMPLE, THIS TABLE IS PERMISSIBLE TO BE USED WITHIN PALM BEACH COUNTY. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

TABLE 4 : Vult=170 MPH, EXPOSURE D

(FOR USE WITH A RISK CATEGORY II STRUCTURE*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT ²	24" MAX	12" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
9 FT ²	32" MAX	15" MIN	N/A	AT GRADE 60 FT < H ≤ 200 FT	N/A	H ≤ 200 FT
4 FT ²	48" MAX	24" MIN	AT GRADE 60 FT < H ≤ 100 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT ²			N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT ²	48" MAX	24" MIN	N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
12 FT ²			N/A	AT GRADE 60 FT < H ≤ 120 FT	N/A	H ≤ 200 FT
16 FT ²	48" MAX	24" MIN	N/A	N/A	N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT
20 FT ²			N/A	AT GRADE	N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT
25 FT ²	60" MAX	48" MIN	N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 200 FT
30 FT ²			N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 100 FT
36 FT ²	N/A	N/A	N/A	N/A	N/A	AT GRADE

*AS AN EXAMPLE, THIS TABLE IS PERMISSIBLE TO BE USED WITHIN PALM BEACH COUNTY. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

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BMP INTERNATIONAL, INC.
 4710 28TH STREET NORTH
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 PH: (727) 577-1613

DRWN	CHKD	DATE
TSB	FLB	12-11-11
CSL	TSB	02-15-13
RWN	CSL	04-06-15

REMARKS
 INIT ISSUE (11-BMP-0001)
 REV FOR UNITS
 REV FOR FBC 5TH (2014)

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15-2378

SCALE: N T S

PAGE DESCRIPTION:

TABLE 5 : Vult=140 MPH, EXPOSURE B

(FOR USE WITH A RISK CATEGORY II STRUCTURE*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C2	C3	C4	C4
6 FT ²	24" MAX	12" MIN	H ≤ 15 FT 60 FT < H ≤ 120 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT ²	32" MAX	15" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
4 FT ²	48" MAX	24" MIN	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT ²			H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT ²			AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
12 FT ²			AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
16 FT ²			N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 100 FT	H ≤ 200 FT
20 FT ²	60" MAX	48" MIN	N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 180 FT	H ≤ 200 FT
25 FT ²			N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
30 FT ²			N/A	H ≤ 15 FT 60 FT < H ≤ 160 FT	AT GRADE	H ≤ 200 FT
36 FT ²			N/A	AT GRADE 60 FT < H ≤ 80 FT	AT GRADE	H ≤ 200 FT



TABLE 6 : Vult=140 MPH, EXPOSURE C

(FOR USE WITH A RISK CATEGORY II STRUCTURE*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT ²	24" MAX	12" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT ²	32" MAX	15" MIN	N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
4 FT ²	48" MAX	24" MIN	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT ²			AT GRADE 60 FT < H ≤ 180 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT ²			AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
12 FT ²			N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 140 FT	H ≤ 200 FT
16 FT ²			N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
20 FT ²	60" MAX	48" MIN	N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
25 FT ²			N/A	AT GRADE 60 FT < H ≤ 140 FT	AT GRADE	H ≤ 200 FT
30 FT ²			N/A	AT GRADE	N/A	H ≤ 200 FT
36 FT ²			N/A	AT GRADE	N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT

TABLE 7 : Vult=140 MPH, EXPOSURE D

(FOR USE WITH A RISK CATEGORY II STRUCTURE*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT ²	24" MAX	12" MIN	N/A	H ≤ 200 FT	H ≤ 30 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT ²	32" MAX	15" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 140 FT	H ≤ 200 FT
4 FT ²	48" MAX	24" MIN	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT ²			AT GRADE 60 FT < H ≤ 100 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT ²			N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
12 FT ²			N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
16 FT ²			N/A	AT GRADE 60 FT < H ≤ 200 FT	N/A	H ≤ 200 FT
20 FT ²	60" MAX	48" MIN	N/A	AT GRADE 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
25 FT ²			N/A	AT GRADE 60 FT < H ≤ 80 FT	N/A	H ≤ 200 FT
30 FT ²			N/A	N/A	N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT
36 FT ²			N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 200 FT

*AS AN EXAMPLE, THESE TABLES ARE PERMISSIBLE TO BE USED WITHIN BREVARD COUNTY. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

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 04/11/2015
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BMP INTERNATIONAL, INC.
 4710 28TH STREET NORTH
 ST. PETERSBURG, FL 33471
 PH: (727) 577-1613

MECHANICAL UNIT STEEL TIE-DOWN CLIPS
 FBC 5TH EDITION (2014) PRODUCT APPROVAL FL#14239.1

REMARKS	DRWN	CHKD	DATE
INIT ISSUE (14-BMP-0001)	TSB	FLB	12-11-11
REV FOR UNITS	CSL	TSB	02-15-13
REV FOR FBC 5TH (2014)	RWN	CSL	04-08-15

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15-2378

SCALE: N.T.S.

PAGE DESCRIPTION:



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
7/7/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Blackadar Insurance Agency, Inc. 1436 N Ronald Reagan Blvd Longwood FL 32750	CONTACT NAME: Pat DiPietro PHONE (A/C, No, Ext): 407-831-3832 E-MAIL ADDRESS: Pat@blackadar.com	FAX (A/C, No): 407-830-4681
	INSURER(S) AFFORDING COVERAGE	
INSURED American Air & Heat, Inc. 502 S. Econ Circle Oviedo FL 32765	INSURER A: Addison Insurance Company NAIC # 10324	
	INSURER B: FFVA Mutual Insurance Company NAIC # 10385	
	INSURER C: Old Republic Surety	
	INSURER D:	
	INSURER E:	

COVERAGES **CERTIFICATE NUMBER: 1069747968** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC			60362417	7/22/2016	7/22/2017	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$5,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			60362417	7/22/2016	7/22/2017	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB EXCESS LIAB DED RETENTION \$						OCCUR CLAIMS-MADE EACH OCCURRENCE \$ AGGREGATE \$ \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	WCB4000170502016A	7/22/2016	7/22/2017	<input checked="" type="checkbox"/> WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT \$100,000 E.L. DISEASE - EA EMPLOYEE \$100,000 E.L. DISEASE - POLICY LIMIT \$500,000
C	Business Services Bond			OBS0539627	2/17/2016	2/17/2017	Limit \$25,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Blanket Additional Insured with respect to the General Liability when required by construction agreement and Business Auto when required by written contract. Blanket Waiver of Subrogation applies to Workers' Compensation and Business Auto when required by written contract.

CERTIFICATE HOLDER**CANCELLATION**

City of Belle Isle Building Department
 1600 Nela Avenue
 Belle Isle FL 32809

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD
1940 NORTH MONROE STREET
TALLAHASSEE FL 32399-0783

(850) 487-1395

BENT, JERRY LEE
AMERICAN AIR & HEAT INC
502 SOUTH ECON CIRCLE
OVIDO FL 32765



SEMINOLE COUNTY BUSINESS TAX RECEIPT

RAY VALDES, SEMINOLE COUNTY TAX COLLECTOR

PO Box 630 • Sanford, FL 32772-0630 • Telephone: 407-665-1000
www.seminoletax.org

VALID THROUGH 09/30/17

AMERICAN AIR & HEAT INC
502 S ECON CIR
OVIDO, FL 32765

Account #: 067013

MATTHEW A BONI (OFFICER)

REGULATED
License # - CMCO49238
Qualifier - JERRY BENT

Receipt #: WEB#2016080913025

Amount Paid: \$ 45.00

Date Paid: 08/09/2016

DETACH HERE

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

LICENSE NUMBER

CMCO49238

The MECHANICAL CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 F.S.
Expiration date: AUG 31, 2018

BENT, JERRY LEE
AMERICAN AIR & HEATING
502 SOUTH ECON CIRCLE
OVIDO FL 32765



ISSUED: 08/20/2016

DISPLAY AS REQUIRED BY LAW

SEQ # L160620000810



This combination qualifies for a Federal Energy Efficiency Tax Credit when placed in service between Feb 17, 2009 and Dec 31, 2016.

Certificate of Product Ratings

AHRI Certified Reference Number: 9139929

Date: 3/29/2017

Product: Split System: Heat Pump with Remote Outdoor Unit-Air-Source

Outdoor Unit Model Number: 14HPX-036-230-21

Indoor Unit Model Number: CBX27UH-036-230*+TDR

Manufacturer: LENNOX INDUSTRIES, INC.

Trade/Brand name: LENNOX

Series name: MERIT 14HPX SERIES

Manufacturer responsible for the rating of this system combination is LENNOX INDUSTRIES, INC.

Rated as follows in accordance with AHRI Standard 210/240-2008 for Unitary Air-Conditioning and Air-Source Heat Pump Equipment and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (Btuh):	34800
EER Rating (Cooling):	12.50
SEER Rating (Cooling):	15.20
Heating Capacity(Btuh) @ 47 F:	32800
Region IV HSPF Rating (Heating):	8.70
Heating Capacity(Btuh) @ 17 F:	20400

* Ratings followed by an asterisk (*) indicate a voluntary rerate of previously published data, unless accompanied with a WAS, which indicates an involuntary rerate.

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CERTIFICATE VERIFICATION

The information for the model cited on this certificate can be verified at www.ahridirectory.org, click on "Verify Certificate" link and enter the AHRI Certified Reference Number and the date on which the certificate was issued, which is listed above, and the Certificate No., which is listed at bottom right.

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AIR-CONDITIONING, HEATING, & REFRIGERATION INSTITUTE

we make life better™

CERTIFICATE NO.: 131352903299647088

HEAT GAIN

Name *GIRARD*

Address

City, Zip

CALL INST :

COOLING LOAD (HEAT LOSS) 95 DEGREE DAY

MINDOWS	AREA	BTU GAIN	HEAT GAIN
NORTH (SINGLE)	10	25	250
NORTH (DOUBLE)	0	20	0
EAST/WEST (SINGLE)	80	55	4400
EAST/WEST (DOUBLE)	0	50	0
SOUTH (SINGLE)	45	30	1350
SOUTH (DOUBLE)	0	25	0

DOORS	AREA	BTU GAIN	HEAT GAIN
	36	15	540

WALLS	AREA	BTU GAIN	HEAT GAIN
NO INSULATION	1615	8	12920
R-3 1"	0	4.5	0

CEILINGS	AREA	BTU GAIN	HEAT GAIN
NO INSULATION	0	11	0
R-11 3"	0	3	0
R-19 6"	0	1.5	0
R-25 9"	1920	1.2	2304

FLOORS	AREA	BTU GAIN	HEAT GAIN
NO INSULATION	0	3	0
CARPET	0	2	0
R-11	0	1	0
SLAB ON GRADE	1920	0	0

AIR INFILTRATION	HOME SQ. FEET	BTU GAIN	HEAT GAIN
	1920	2.5	4800

INTERNAL GAINS	NUMBER OF OCCUPANTS	BTU GAIN	HEAT GAIN
	4	530	2120
	KITCHEN/BATH ALLOWANCE	1	1250

SUB TOTAL			29934
------------------	--	--	-------

DUCT MULTIPLIER			1.13
------------------------	--	--	------

TOTAL			33825.4	Tonnage
				2.8