

Florida

# SMACNA Inc.

Quarterly Edition - April 2012

Volume 45

## TECH/SPEC NEWS

**JAMES HAGEDORN AVIATION COMPLEX,  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY, DAYTONA BEACH, FL**



**SHEET METAL CONTRACTOR: MCDONALD AIR & SHEET METAL, ORLANDO, FL**

**JAMES HAGEDORN AVIATION COMPLEX,  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY, DAYTONA BEACH, FL**



*exhaust drops down to lab benches (not installed) - Aviation Maintenance Science Lab Weld Shop*

**Architect:** Hawkins, Hall & Ogle, Daytona Beach, FL

**Mechanical Contractor:** W. W. Gay, Orlando, FL

**Sheet Metal Contractor:** McDonald Air & Sheet Metal, Orlando, FL

The Hagedorn Aviation Complex at Embry-Riddle Aeronautical University consists of six facilities covering 97,000 square feet. Three new buildings have recently been added.

McDonald Air and Sheet Metal, Inc. of Orlando manufactured and installed the duct work in those new buildings: the Flight Operations

Center, Emil Buhler Aviation Maintenance Science Building and the Fleet Maintenance Hangar.

Flight Operations is a two-story building containing everything needed to dispatch and retrieve student training aircraft. The three story Aviation Maintenance Science Building houses classrooms and



*coordination was critical*

laboratories to support the Aviation Maintenance Science degree programs.

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**JAMES HAGEDORN AVIATION COMPLEX,  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY, DAYTONA BEACH, FL**



*cluster of duct penetrating wall*

The Fleet Maintenance Hangar is where the university can maintain five Cessna aircraft at one time.

This \$1 million project involved manufacturing and installing the duct in the three new buildings. In the Aviation Maintenance Science Building 30,000 lbs. of galvanized duct, 60,000 lbs of aluminum duct along with stainless steel, double

wall and spiral duct were used. The laboratories required ventilation and exhaust duct.

The labs are dedicated to aircraft systems, turbine engines, metallic and composite materials, avionics and avionics electronics.

A major challenge was to make sure the Aviation Maintenance Science

building, which involved mostly exposed aluminum duct, be plumb and level. The first floor is mainly shop lab classrooms.

Embry-Riddle Aeronautical University is the world's largest, fully accredited university specializing in aviation and aerospace.

**THE WAVERLY ON LAKE EOLA,  
ORLANDO, FL**



**Sheet Metal Contractor:** Vickers Metal Works, Inc., Orlando, FL



The scope of work for the project at The Waverly on Lake Eola, a downtown Orlando high rise condominium, was to fabricate and install the custom aluminum guardrail around the water feature in the lobby.

These guardrails around the water feature were to match the existing Lobby guardrails. The guardrails were composed of one radius section approximately 19 feet long and one straight section approximately 10 feet long. The sections were mitered and welded to form one continuous rail.

**THE WAVERLY ON LAKE EOLA,  
ORLANDO, FL**

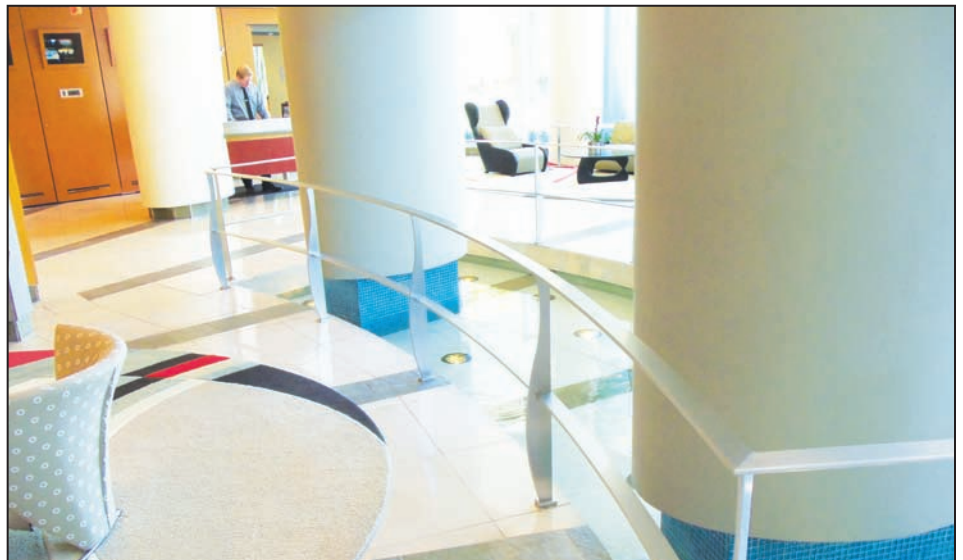


One-half inch aluminum plate was used to fabricate the guardrails.

Each part was cut to shape with all edges routed to ½ inch radius. The railing was then welded and finished in the Vickers shop and then transported to the site for installation.

Installation included drilling holes in the existing lobby floor tile and anchoring the railing with epoxy as required. The water feature railing was given a brush finish to match the existing railings. A clear coat finish was applied after installation.

Approximately 90 man hours were required for fabrication and installation.



## FLORIDA SMACNA, INC. MEMBER FIRMS

In the sheet metal and air conditioning business, nobody knows excellence quite the way SMACNA Contractors do. After all, they wrote the book on it. Why take a chance on doing business with anyone who offers less.

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Orlando, FL 32839  
407-423-9897  
Ronald J. Lapin

### R. Neth & Son, Inc.

360 E. Landstreet Road  
Orlando, FL 32824  
407-855-9096  
Brad Supples

### Bohnert Sheet Metal

2225 NW 76th Street  
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William H. Marvel, Jr. (Skip)

### McDonald Air and Sheet Metal, Inc.

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Alachua, FL 32616  
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### Sheet Metal Experts, Inc.

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St. Petersburg, FL 33712  
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### MetalFab, Inc.

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352-588-9901  
Wally Ruda

### South Florida Sheet Metal

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Miami, FL 33014  
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### Dodec Inc.

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305-826-4022  
Trevor Pantry

### Moffitt Mechanical, LLC

1351 13th Avenue South, Suite 130  
Jacksonville Beach, FL 32250  
904-241-9944  
John Moffitt

### United Sheet Metal Company/ Applegate

1141 NW 31st Avenue  
Pompano Beach, FL 33069  
954-773-2910  
Rich Applegate

### Ferber Sheet Metal Works, Inc.

4121 Evergreen Avenue  
Jacksonville, FL 32206  
904-356-3042  
George Ferber

### Omega Test and Balance

126 Wisteria Avenue  
Fort Pierce, FL 34982  
772-216-7632  
Hugh Grimes

### Vickers Metal Works, Inc.

6701 Edgewater Commerce Pkwy.  
Orlando, FL 32810  
407-297-7546  
Tim Vickers

## OTHER CONTRIBUTORS TO THE FLORIDA SHEET METAL INDUSTRY

Colbert Air Conditioning  
Crown Corr Erection  
D&J Sheet Metal  
Hanan Mechanical  
FCR Mechanical Contractors

Irvine Mechanical  
MFH Sheet Metal Fabricators, Corp.  
SDB Engineers and Constructors, Inc.  
Southeast Duct Specialists  
Quality Metal Works, Inc.

System Tech Services  
Tabco, LLC  
TankServe, Inc.  
Triple M Roofing Corp.  
Veritab Environmental

## SMACNA's "HVAC AIR DUCT LEAKAGE TEST MANUAL" RECEIVES ANSI ACCREDITATION

The American National Standards Institute (ANSI) announced that SMACNA's "HVAC Air Duct Leakage Test Manual" second edition, has been approved as an American National Standard.

The soon-to-be published manual covers revised leakage criteria and builds on the proven methods for testing ductwork for air leaks used in the first edition. A new chapter written specifically for designers and specifiers was added to help reduce some of the misunderstand-

ings related to duct leakage and the methods of testing.

The new standard contains updates to the expected leakage rates for ductwork, duct leakage test procedures. Recommendations on use of leakage testing, types of test apparatus and test setup and sample leakage analysis.

SMACNA's free Duct Air Leakage Test app, available for Android, iPhone, iPod, iPad, or as a web-based version, uses the methodolo-

gy found in this new book enabling users to calculate total allowable leakage when combining multiple sections of ductwork varying by size and shape. Visit [www.smacna.org/dalt](http://www.smacna.org/dalt) to use the web version or to download the app. The app is also available from iTunes, and the droid marketplace. Search for SMACNA or DALT.

SMACNA's highly respected technical manuals are industry standards that are specified and adhered to by the design and construction community.

# Florida

# SMACNA

# Inc.

### SMACNA'S CONSTRUCTION STANDARDS

- Accepted Industry Practices for Sheet Metal Lagging.
- Architectural Sheet Metal Inspection Guide.
- Architectural Sheet Metal Manual, 6th edition 2003
- Fire Smoke and Radiation Damper Installation Guide for HVAC Systems.
- Guide for Steel Stack Construction.
- Guidelines for Roof Mounted Outdoor Air-Conditioner Installations.
- HVAC Duct Systems Inspection Guide.
- Kitchen Ventilation Systems & Food Service Equipment Fabrication & Installation Guidelines.
- Residential Sheet Metal Guidelines.
- Seismic Restraint Manual: Guidelines for Mechanical Systems.
- Sheet Metal Welding Guide.
- Standard Practice in Sheet Metal Work.

### SMACNA'S DESIGN GUIDES

- Duct System Calculator - Imperial + Metric
- Ducted Electric Heat Guide for Air Handling Systems.
- Guidelines for Change Orders
- HVAC Systems - Duct Designs.

### SMACNA'S DUCT STANDARDS

- Accepted Industry Practice for Industrial Duct Construction.
- Fibrous Glass Duct Construction Standards.
- HVAC Air Duct Leakage Test Manual.
- HVAC Duct Construction Standards - Metal and Flexible.
- Rectangular Industrial Duct Construction Standards.
- Residential Comfort System Installation Standards Manual.
- Round Industrial Duct Construction Standards.
- Round Industrial Duct Construction Standards (RIDCS) Software Version 2.0.

- Thermoplastic Duct (PVC) Construction Manual.
- Thermoset FRP Duct Construction Manual.

### SMACNA'S ENVIRONMENTAL PUBLICATIONS

- Building Systems Analysis and Retrofit Manual.
- Energy Systems Analysis and Management.
- HVAC Sound & Vibration Manual
- HVAC Systems - Applications.
- HVAC Systems - Commissioning Manual.
- HVAC Systems - Testing, Adjusting & Balancing.
- IAQ Guidelines for Occupied Buildings Under Construction.
- Indoor Air Quality - A Systems Approach.
- TAB Procedural Guide.

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RETURN SERVICE REQUESTED



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