

Florida

SMACNA Inc.

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TECH/SPEC

NEWS

CELEBRATION C-5 OFFICE BUILDING,
CELEBRATION, FL



SHEET METAL CONTRACTOR: VICKERS METAL WORKS, INC., ORLANDO, FL

**CELEBRATION C-5 OFFICE BUILDING,
CELEBRATION, FL**



Architect: C4 Architecture, Orlando, FL

Engineer: Bowen Engineering, Orlando, FL

General Contractor: Duke Construction, Orlando, FL

Sheet Metal Contractor: Vickers Metal Works, Orlando, FL

The scope of this project called for the fabrication and installation of one Aluminum Tower/Spire feature, sixteen decorative aluminum fins located at the base of the spire, ten decorative aluminum masts (finials), ten decorative aluminum

medallions: two at the front entrance canopy, two at the rear entrance canopy and three at each side.

Aluminum Tower

The Aluminum Tower, standing atop a three story office building at 86

feet above the ground, measures approximately 30 ft tall x 7 ft diameter at the base.

The Tower base was fabricated using structural steel then welded to the steel beams of the existing building.

**CELEBRATION C-5 OFFICE BUILDING,
CELEBRATION, FL**



Next the Aluminum Tower was fabricated using 1/8" aluminum roll formed panels with a seven ft diameter cast aluminum base cap. The bottom section of the Tower was fabricated using 3/16" and 1/2" aluminum in a custom decorative pattern. All parts were welded and finished as required.

The Tower was then powder coated to the owner's specifications. A crane was used to set the tower in place and fastened to the steel frame using stainless steel fasteners as specified.

The Decorative Aluminum Fins
Four of the fins are 22 ft tall and 12

are 5" tall. Each fin is fabricated using 2" x 8" x 1/8" rectangular aluminum tube welded and finished as required. Fins were painted to the owner's specifications.

Decorative Aluminum Masts (finials) The Masts measured approximately 16 ft tall and were fabricated using five inch round schedule 40 aluminum pipe and 3 1/2" round schedule 40 aluminum pipe with 3/8" aluminum end caps and topped off with a 6" round aluminum sphere.

Each finial base included three .080 aluminum radius covers welded and finished as required. Finials were

painted to the owner's specifications prior to installation.

Decorative Aluminum Medallions
The Medallions were 24 inches in diameter with 1/8" aluminum back plate custom cast and then painted to the owner's specifications prior to installation. Each cover was then installed at every entrance rod connection. Rods were made of aluminum pipe attached to the canopy as required.

Shop fabrication for this project totaled 1,300 man hours and field installation required 450 man hours.

**TRINITY HOSPITAL,
NEW PORT RICHEY, FL**



front view of building

Architect: Earl Swensson Associates, Nashville, TN
Lead Architect: Danny Thomas

Engineering Firm: I. C. Thomasson Associates, Nashville, TN
Lead Engineer: Barry Ambuehl

General Contractor: BOVIS, New York
Superintendent: Bill Speight

Mechanical Contractor: Harper/Limbach, Tampa, FL
Mechanical Project Manager: Mark Wood

Sheet Metal Contractor: McDonald Air & Sheet Metal, Inc., Orlando, FL
Project Manager: Bob Grumblatt
Jobsite Foreman: David Laietta

The scope of the project that McDonald Air & Sheet Metal, Inc. undertook on Trinity Hospital in New Port Richey, Florida included manufacturing and installing 36,400 linear feet of rectangular duct that was tested from 2 inches to 6 inches s.p., 31,000 linear feet of round duct also tested at six inches s.p. all working in conjunction with two

TRANE 1400 ton chillers, 13 rooftop, two modular indoor and six CRAC units, and 46 exhaust fans in this five story, 340,000 square foot hospital. The building is of structural frame with metal decking.

The sheer amount of duct work alone made the job different: it required over 67,000 linear feet or

12.7 miles of metal duct.

Coordination was a challenge. Coordination with all the different trades was complicated, specifically in the priority corridors and having to work closely with the wall contractor, South Most Drywall, where first the top rails were installed, then fire proofing.

TRINITY HOSPITAL, NEW PORT RICHEY, FL



Left to right: Jim Beck, Chris Goldberg, Daniel Ramon, Chris Kunkel, Victor Castro, Robin Bruno, Russell Satterfield Sr. & Jr., Dave Farris, Cantu Forbes, Joey Rio, Kyle Herren, John Beck, Bob Grumblatt, Frank Hudak, Carey Taylor, Andy Scolaro, Dave Laietta, Greg Krueger, Brody Riles. Missing: Scott Samson, Arnest Prosser and Robbie Howlet.

After that, the remaining stud framing was done with all the holes laid out, then the top four feet was dry-walled, sealed and inspected.

Next came Harper/Limbach with mechanical piping testing and insulation, then the ductwork, pressure testing to six inch s.p. and then the insulator followed. Only after all the overhead work was completed and inspected were the remaining walls allowed to be finished.

Time constraints required extraordinary problem solving. Because the main building envelope was completed in 2008 - 2009 before the final mechanical contracts were executed, shop drawings were done in two phases.

Dan Sinclair and his team at Cadvantage Drafting Service, Inc. did the coordinated duct shop drawings in two phases.

The first phase (60%) was completed in 2008 and the remaining work in early 2010. Since the building was immediately ready for ductwork, Cadvantage was asked to finish the coordination ASAP.

McDonald's Shop Manager, Les Jones, worked closely with Project Manager, Bob Grumblatt and David Laietta, job site foreman.

McDonald's Owner and President, Ralph Carver, gave special thanks to Bovis Superintendent, Bill Speight; Harper/Limbach Project Manager,



riser duct tie-in



above ceiling rough-in complete

Mark Wood; McDonald's Project Manager, Bob Grumblatt; and General Foreman, David Laietta and all the men doing the day in and day out heavy lifting.

When asked by TECH/SPEC if there were any "budget constraints" on this project, Carver responded: "Are there any jobs out there without budget constraints? The work out there is going for the same price we received ten years ago."

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- 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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