ORLANDO POLICE TRAINING FACILITY, ORLANDO, FL

HOISTING DOUBLE WALL LINDAB SPIRAL PIPE

SHEET METAL CONTRACTOR: MCDONALD AIR & SHEET METAL, INC., ORLANDO, FL
The scope of this unusual project, contracted by McDonald Air & Sheet Metal, Inc. of Orlando with Carey’s Heating and Air out of Tinley Park, Illinois, involved the installation of the ventilation system in a modern police indoor firing range.

The ventilation system was the design of Carey’s who specializes in indoor arm’s range ventilation.

The systems are designed to ensure proper airflow across any firing area. It is a specialty ventilation system which delivers laminar air flow which will ensure that no contaminates enter the shooter’s respiratory zone. Without proper ventilation there are serious health concerns from the contaminants of live fire exercises (lead, sulfur dioxide, and carbon monoxide).

Utilizing radial diffusers, manufactured by Carey’s, the custom design ventilation system exceeds NIOSH, EPA and OSHA air quality standards. The system used on the Orlando Police Training Facility is also an energy recovery system. It allows the use of 100% outside air and recovers the conditioned air after being filtered. While the cost of installation is high, there is typically, a 10 year payback period with the energy savings.
This project included the installation of six 100% make-up air units and six return/exhaust units, each at 33,000 cfm. Galvanized duct, spiral pipe, and roof curbs with a hurricane-rated gripple system were used for the tie downs. The units are tied together on the roof with 90 foot runs of 62 inch Lindab 2” double wall spiral pipe.

One of the challenges of the project was the setting of the heavy equipment, curbs and ductwork. The units alone weighed 11,000 lbs each.

Because the facility is in close proximity of the Orlando Executive Airport and the height of the crane, special permitting and authorization was required by the airport authority. Hoisting of material and equipment was accomplished by Beyel Brothers Crane using a 240 ton hydraulic boom crane with a 225 foot reach.

Steve Wagner, McDonald Air’s project manager, recognized the valuable contributions of the job foreman, Mike Kacer, and the shop foreman, Les Jones, in this project which was finished in June, 2009.
Working within a tight schedule, Metalfab, Inc. of San Antonio, Florida custom fabricated and installed both interior and exterior elements for the building of the 6th Medical Replacement Clinic at McDill Air Force Base in Tampa, Florida.

Metalfab’s craftsmen fabricated and installed 14 ga. 304 stainless steel #4 counter tops and pass through counters.
6th MEDICAL REPLACEMENT CLINIC, McDILL AIR FORCE BASE, TAMPA FL

and divider/directional units composed of two-inch square aluminum tube glass frames on the interior of the building.

On the exterior of the building, Metalfab, Inc. manufactured and installed the painted column covers.

Metalfab provides design, fabrication and installation for architectural metal projects around the country.

WINNER OF THE MANUAL DRAWING FROM THE JULY NEWSLETTER!

The July SMACNA technical manual drawing winner was Gerald F. DeMarco, Architect of Miami, Florida.

He chose to receive the HVAC Duct Construction Standards-Metal and Flexible. Enter today for the next drawing.
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Rich Applegate

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  • 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.
  • Sheet Metal Welding Guide.
• SMACNA/ASHRAE Seismic Restraint Applications CD-ROM.
• Standard Practice in Sheet Metal Work.

• SMACNA’S DESIGN GUIDES
  • Duct System Calculator - Imperial.
  • Guidelines for Change Orders
  • HVAC Systems - Duct Design.

• 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.
• Thermostet FRP Duct Construction Manual.

• SMACNA’S ENVIRONMENTAL PUBLICATIONS
  • Energy Systems Analysis and Management.
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  • Indoor Air Quality - A Systems Approach.
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