DUST COLLECTION SYSTEM FOR MERRILAT CORPORATION, OCALA, FL

DUST COLLECTION SYSTEM FOR TARMAC CEMENT PLANT, MEDLEY, FL

Sheet Metal Contractor: Gordon Metal Fabrication, Inc., Tampa, FL
Gordon Metal Fabrication, Inc. of Tampa recently fabricated and installed dust collection systems for two very different industries.

Using 16, 14 and 12 gauge galvanized steel and steel angle rings Gordon fabricated and installed blower pipe exhaust ducting for a dust collection system for the Merrilat Corporation in Ocala, Florida.

This system was designed to remove wood dust from the factory of the manufacturer. One of the challenges of this job was the requirement by the customer that all work be installed at night and on weekends so as not to disrupt the flow of work in the factory. Gordon Metal Fabrication, Inc. was able to comply with this request.
The dust collection system that Gordon fabricated for the Tarmac Cement Plant in Medley, Florida removed dust of a different kind from the air, cement.

For this project, Gordon constructed exhaust pipe and fittings and fabricated chutes for conveyor systems. They also fabricated surge bins for material’s storage and miscellaneous platforms with floor grating. Using 10 gauge HRS, 3/16” HRS plate and 1/4” HRS plate, round pipe and steel floor grating Gordon Metal Fabrication sheared, formed, rolled and welded the various parts and assemblies. This project also presented some hurdles for the company to overcome. Again, scheduling between the installer and the plant was difficult because in some phases the plant needed to continue operations. Also presenting an obstacle were the blueprints, which were in metric and written in German.

Gordon Metal Fabrication, Inc., led by George and Christopher Gordon, specializes in fabrication, industrial sheet metal, custom sheet metal fabrication, architectural metal, millwright work, plant maintenance and miscellaneous fabrication.
The United States Courthouse is a recent addition to the downtown Orlando skyline. The scope of work performed by Lapin Sheet Metal Company, Inc. on this project encompassed heating, ventilating and air conditioning duct installation for the seven story complex.

The project included the procurement of 19 air-handling units and 4 outside air units, 55 fan-coil and blower coil units, and 67 air valves all of which were manufactured by York International. Loren Cook manufactured and supplied 40 system fans.

Because sound transmission was a major concern, the design incorporated the use of both internally lined duct manufactured by Lapin Sheet Metal Company, Inc. and Vibro-Acoustics sound attenuators supplied by Tom Barrow Company. The facility has roughly 283 combination fire/smoke dampers, fire dampers and multi-blade volume dampers manufactured by Ruskin; about 1,157 pieces of grilles, registers and diffusers; 146 security air devices and 4,738 lineal feet of linear slot diffusers manufactured by Titus and supplied by the Tom Barrow Company.

Lapin’s work consisted of fabrication and installation of sheet metal duct ranging from 26 to 18 gauge in accordance with SMACNA technical standards. All duct requiring privacy measures had to be identified and internally lined with either one or two inch liner as
specified. The security areas on each level required that the installation of security air devices be closely coordinated with the security ceilings specified.

The duct rough-in was done in stages. The first stage began with the basement level and worked upward through to the sixth level flowing from west to east across each level, topping out on the roof which houses the four outside air units. The next stage was the mock-up courtroom on level 4. Once completed, this mock-up will serve as the model for the remainder of the courtrooms. Following the mock-up installation, Lapin continued with the installation of the high bay atrium duct on the south face of the structure. Building construction is on schedule to supply temporary air for interior finishes which will start the beginning of December, 2005 and will progress through the end of 2006.

The major challenge for Lapin Sheet Metal Company, Inc. was the coordination of the duct systems within the confines of the ceiling space. Success would not have been possible without the cooperation of the coordination team headed by Stephen Brannock (Hensel Phelps Construction, Inc.), with assistance from Joie Kelley (Harper, Inc.), Wayne Lenigan (American Sprinkler), Fred Moore (Mader Southeast, Inc., (drywall contractor)), Nash Plumbing and Berg Electric, all working in unison with Lapin’s project coordinator, Danny Akers.

The actions of HLM’s on-site architectural coordinator, Julie Newberry in researching problems and expediting workable solutions has been paramount in the project progressing on time while maintaining excellent quality. The assistance of HLM’s mechanical engineer, Gary Starrett, in providing timely response was also of great value to the construction effort. The largest asset on this project was the project support received from Hensel Phelps Construction, Inc., the construction manager. The company has an ability to procure reputable subcontractors and pre-plan the construction activities and getting all contractors focused toward a common goal. Their managers, such as Richard Lewis, have a comprehensive grasp on construction phasing and building.

Ron Lapin, president, Lapin Sheet Metal Company, Inc., stated that he appreciates the professionalism of the other contractors on the Court House project. He also recognized project manager, Dan DeMaso; superintendent, Zimmie Chavis and coordination manager, Danny Akers for their effort and expertise.
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Air Duct, Inc.
Apollo Construction & Engineering
Draft-Tronics
EK Installations
FCR Mechanical Contractors
FG Metals

Florida Metal Art
1st Plumbing and Air Conditioning of Florida
Industrial Steel
JP Sheet Metal
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Precision Mechanical, Inc.
Quality Metal Works, Inc.SDB
SDB Engineers and Constructors, Inc.
Triple M Roofing Corp.
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SMACNA’s IAQ Guideline is the only authoritative source for providing project management in maintaining satisfactory indoor air quality (IAQ) of occupied buildings undergoing renovation or construction.

The Guideline covers how to manage the source of air pollutants, control measures, quality control and documentation and communication with occupants. It includes example projects, tables, references, resources and checklists.

The IAQ Guideline is referenced by the U.S. Green building council’s LEED Green Building Rating System for Existing Buildings and New Construction.

SMACNA recommends the guide to architects, engineers, construction managers, facility managers and building owners who will be involved in construction activities inside occupied buildings.

**SMACNA’s Construction Standards**
- Accepted Industry Standards for Sheet Metal Lagging.
- architectural Sheet Metal Manual, CADD Version 2.0
- Guide for Steel Stack Construction.
- Guidelines for Roof Mounted Outdoor Air-Conditioner Installations.
- HVAC Duct Systems Inspection Guide.
- Residential Sheet Metal Guidelines.
- SMACNA/ASHRAE Seismic Restraint Applications CD-ROM.
- Standard Practice in Sheet Metal Work.

**SMACNA’s Duct Standards**
- Duct Research Destroys Design Myths (Bubble Video).
- Duct System Calculator - Imperial.
- HVAC Duct Design Home Study
- HVAC Systems - Duct Design.

**SMACNA’s Design Guidelines**
- Accepted Industry Practice for Industrial Duct Construction.
- Fibrous Glass Duct Construction Standards.
- HVAC Duct Construction Standards - Metal and Flexible.
- Rectangular Industrial Duct Construction Standards.
- Round Industrial Duct Construction Standards.

**SMACNA’s Environmental Publications**
- Energy Systems Analysis and Management.
- HVAC Systems - Applications.
- IAQ Guidelines for Occupied Buildings Under Construction.
- Indoor Air Quality - A Systems Approach.
- TAB Procedural Guide.

**SMACNA’s Duct Standards**
- Thermoset FRP Duct Construction Manual.

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