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≡ CASE STUDY ≡

ATLANTA LUXURY HOTEL FINDS AEROSEAL KEY TO IMPROVING EXHAUST / ELIMINATING MUSTY ODORS

Innovative Approach To Duct Sealing Allowed Workers To Cost-Effectively Seal Leaks In Building's 23-Story Ventilation Shafts While Marquee Hotel Remained In Full Operation

While the JW Marriott hotel in Atlanta's affluent Buckhead district has always been a model of elegance and luxury, owners of the 28 year-old building continued to struggle with issues related to a poorly designed ventilation system. Inadequate exhaust led to musty odors that plagued the building for years. With long ventilation shafts embedded behind the building's structure, accessing and repairing the problem had proven to be logistically and economically impossible.

A consultant brought in to evaluate the situation found that exhaust levels differed substantially from floor to floor. Top floors received the full 40 CFM of exhaust they were designed to pull, while bottom floors received only 5 CFM or less. The consultant's recommended solution: start by cleaning and sealing each of the ten 23-story ventilation shafts running down the length of the building.

In Brief

Building: JW Marriott Atlanta Buckhead
Location: Atlanta, Georgia
Aeroseal Contractors: Aeroseal Southeast
Goal: Improve building exhaust. Minimize disruption
Before Aeroseal: 4,670 CFM of leakage (total)
After Aeroseal: 553 CFM of leakage
Results: Reduced leakage by approximately 88%; guests were unaware of the remediation work being conducted.



After reviewing options, the hotel engineers decided aeroseal duct sealing was the most cost-effective choice for the job, and the call went out to the experts at Aeroseal Southeast.

The aeroseal team guaranteed they could do the work with minimal disruption to the building and to normal hotel operations. All sealing was done on Mondays – the hotel's quietest day. Guests were also strategically booked into rooms away from the ventilation shafts being sealing that day.

Once prep work was completed, it took only about one hour to seal each shaft. Using his own testing equipment, the hotel's lead engineer confirmed what the computerized aeroseal system indicated: average leakage was reduced from 397 CFM down to 62 CFM...and during the entire process, few if any guests were even aware that such a significant remediation process was taking place.

"Aerosealing the ductwork proved to be a significant aide in improving the overall ventilation of the building. As far as sealing leaks in the ductwork goes, we looked at several options and the aeroseal technology stood out as being the most economical and non-intrusive process. I think it's a good technology, and it proved to be a key component of the overall strategy used to solve our ventilation issues."

Frank Atkins
Director of Engineering
JW Marriott Atlanta Buckhead



Aeroseal – The Technology

Aeroseal has proven to be a highly cost-effective means of sealing ductwork in both new and existing buildings. The technology works from the inside of the ductwork, allowing it to locate and seal leaks without disrupting surrounding structures. This innovative approach to sealing makes aeroseal the first viable solution to ventilation repair in commercial buildings.

In the aeroseal process, an aerosol-mist of sealant is blown throughout the interior of the ductwork. The microscopic particles of sealant remain suspended in air until they reach a leak. Here they cling to the edge of the hole and then to other sealant particles until the leak is completely sealed.

- Developed at Lawrence Berkeley National Laboratory in 1994.
- Research for aeroseal technology was partially funded by the U.S. Department of Energy.
- Aeroseal is delivered as a non-toxic aerosol mist that seeks out and plugs leaks.
- Aeroseal has proven to be 95% effective at sealing air duct leaks.

For more information on this sealing project or about Aeroseal in general, contact Aeroseal at (937) 428-9300. You can also visit the Aeroseal website at www.aeroseal.com.