

## 💻 CASE STUDY 💻

# CAMBRIDGE HOUSING AUTHORITY FINDS AEROSEAL

## THE KEY TO LEED CERTIFICATION AND HIGH INDOOR AIR QUALITY

# With Excessive Duct Leakage Standing In the Way Of LEED Certification For A New Public Housing Building, Aeroseal Succeeds Where Multiple Attempts At Mastic Failed

To be LEED certified, the ductwork used to ventilate 40 bathrooms in the newly constructed five-story building had to demonstrate a total leakage rate below 250 CFM. With first test results showing 900+ CFM, it wasn't even close. Not only was proper IAQ and bragging rights to another energy-efficient building at stake, but so were thousands of dollars in federal rebate dollars that the Cambridge Housing Authority (CHA) planned on receiving through LEED certification.

The mechanical contractor sent in a team of sealers to find and fix the leaks using traditional mastic sealing methods. After several costly attempts at manually sealing the ductwork, leakage rates remained much too high to meet building goals. That's when the CHA decided to take a chance on aeroseal, a new approach to duct sealing that works from the inside of the ductwork to find and seal the leaks.

In Brief Building: Cambridge Housing Authority construction Location: Cambridge, MA General Contractor: P.J. Dionne, Wilmington, MA Aeroseal Contractors: Aspen Air Duct Cleaning, Methuen, MA Goal: Meet LEED duct leakage rate of 250 CFM or less Before Aeroseal: Average 900+ CFM of leakage After Aeroseal: Average 40 CFM of leakage Results: Reduced leakage by approximately 95%



On a Friday, the Aeroseal team at Aspen Air Duct Cleaning set up their equipment and prepared the ductwork for aerosealing. The following Monday they began and finished the entire project. The mechanical contractors retested the ductwork and confirmed what the computerized aeroseal system reported upon completion of the process – aerosealing the ductwork brought leakage down to 47 CFM – well below the LEED certification requirements. This total included the leakage around the fire damper door access panels. When the inherent leaks around these panels were taken out of the equation, the loss was only 8 CFM for the entire system.

The entire process took two workdays to complete and was conducted while other construction work continued throughout the building. Any concerns over health risks were quickly eliminated after a review of the technology's Material Safety Data Sheets (MSDS) by the union steward. He found that the sealant was completely non-toxic and entirely safe. The CHA was so pleased with the results that it is currently in discussions with Aspen regarding the possibility of future aerosealing projects.

### Quotes

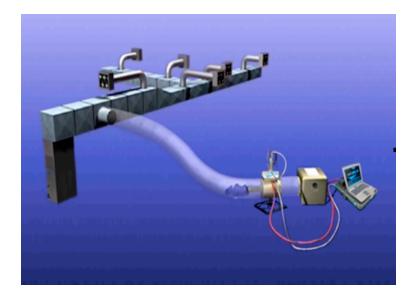
"I'm a 100% believer in the aeroseal process. I wish we had had it specified for the job in the beginning."

Don Stock, Project Manager P.J. Dionne

"Initially, there was a lot of skepticism among the building engineers that aeroseal would do the trick – especially when they learned that the sealant doesn't coat the entire inside of the ductwork but instead, accumulates around the individual leaks. After seeing the results, they are all now believers and big fans of the technology."

Bob Corsetti Aspen Duct Cleaning

### The Aeroseal Process: Duct Sealing From The Inside



<u>Aeroseal – The Technology</u>

- Developed at Lawrence Berkeley National Laboratory in 1994.
- Research for aeroseal technology was partially funded by the U.S. Department of Energy.
- Aeroseal is the only duct sealant technology that is applied from the inside of the duct system. It 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 <u>www.aeroseal.com</u>.