

# CASE STUDY

## Cambridge Housing Authority

### Cambridge Housing Authority Meets LEED Certification Using AeroSeal

#### Duct sealing reduced exhaust fan while increasing air exchange rate

Excessive duct leakage was preventing LEED certification for the Cambridge Housing Authority (CHA). 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 the first test results from hand sealing the air ducts with mastic showing 900+ CFM, CHA was not even close to LEED status. The CHA had a big problem. There were thousands of dollars in federal rebate dollars that the CHA could not receive until it achieved LEED certification.

The mechanical contractor sent in a team of hand-sealers to find and fix the leaks using traditional hand sealing methods (mastic, tape). After several costly attempts at manually sealing the ductwork, leakage rates remained too high to meet LEED requirements. That's when the CHA decided to try AeroSeal, a computer-controlled approach to sealing air ducts. AeroSeal emits a precise amount

of aerosolized sealant into pressurized ductwork. As a result, the ductwork is sealed from the inside to simultaneously find and seal the leaks more consistently than manual sealing.

The entire AeroSeal duct sealing process took only two workdays to complete (much faster than hand sealing) and was conducted while other construction work continued throughout the building. In only a weekend, Aspen Air Duct Cleaning set up its AeroSeal equipment, prepared the ductwork for sealing, and finished the entire building.

The mechanical contractors confirmed what the computer-controlled AeroSeal duct sealing technology reported upon completion of the process – sealing the ductwork with AeroSeal brought leakage down to 47 CFM – well below the LEED certification requirements. The CHA was so pleased with the results that it continued discussions with Aspen Air Duct Cleaning regarding the possibility of future AeroSeal duct sealing projects.

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### PROJECT OVERVIEW

#### BUILDING

Cambridge Housing Authority  
LEED Construction

#### LOCATION

Cambridge, Massachusetts

#### SERVICE TECHNICIAN

P.J. Dionne

#### AEROSEAL CONTRACTORS

Aspen Air Duct Cleaning

#### GOAL

Meet required duct leakage rate of 250 CFM or less in order to achieve LEED certification

#### BEFORE AEROSEAL

Average 900+ CFM of leakage

#### AFTER AEROSEAL

Average 40 CFM of leakage

#### RESULTS

Met LEED certification requirements; Reduced leakage by approximately 95%

Initially, there was a lot of skepticism among the building engineers that aerosol 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.

#### David Smith

Account Executive  
Siemens Industry Inc.

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

#### Don Stock

Project Manager  
P.J. Dionne