

## Syracuse University Meets High Energy Standards with [Aeroseal](#)



Homeowners aren't the only ones looking for ways to save energy and reduce utility costs. In fact, according to a recent McGraw-Hill Construction report, energy-saving green building is on the rise and represented about 44% of all commercial and institutional construction in 2012. By 2016, that number is expected to grow to 55%.

So it should be no surprise to learn that [Aeroseal](#) is poised to become a checklist item for new construction projects and commercial retrofits. For Syracuse University, the duct sealing technology proved key to it receiving [NYSERDA](#) certification for a new graduate student housing project completed late last year.

To qualify for a \$170,000 rebate under New York State's NYSERDA (New York State Energy Research and Development Authority) program for new construction, university administrators knew they would have to exceed SMACNA standards, surpass LEED for Homes certification criteria and meet a 10 CFM-per floor limit on duct leakage.

The new four-story building includes 200 graduate student apartments. Its massive ductwork system consists of seven individual rooftop energy recovery ventilation systems. Both the bathroom exhaust and outside air supply ductwork extend horizontally and vertically to each water-source heat pump HVAC unit and bathroom. Each ventilation shaft is completely sealed in sheetrock and protected with fire smoke dampers.

Knowing from the start they would need to meet stiff requirements for air duct leakage, the HVAC Contractor was careful when originally constructing the duct system. Meticulous attention was paid to connecting joints and sealing seams. Still, post-construction tests showed leakage rates that averaged 120 CFM per floor – way beyond the near-leak-free levels required by NYSERDA.

There seemed to be only one solution – Aeroseal.

"Aeroseal provided the lowest leakage rates we've seen for any duct system at anytime, anywhere," said the project engineer. "Energy conservation guidelines are only getting tougher, and the most stringent requirements today will soon become standards for all future buildings. We've found the aeroseal technology to be an absolute necessity to meeting today's toughest energy conservation programs, and I believe the technology will soon become a standard practice used in all new construction."

The HVAC Contractor was so impressed with the new approach to duct sealing that they decided to invest in training and learned to apply the sealant themselves. Once started, work on the entire dormitory project was completed in a few short days.

"Since Aeroseal is applied from the inside of the ductwork, there was no need to dismantle any of the newly constructed walls or ceilings to access the shafts," said Robert Seals of Aeroseal. "The non-toxic sealant travels as a fine mist throughout the inside of the ductwork and gathers around the leaks to form a seal."

End results showed the aeroseal technology reduced leakage to 10 CFM or less.

"As energy efficiency standards become increasingly stringent, we will need to turn to new technologies like Aeroseal," said Sam Doss, of general contractors Hayner Hoyt Corporation, "It was a game-changer for this project and a key to our ability to meet the NYSERDA requirements."