

CASE STUDY

Northgate II Apartment Complex

New Jersey Building Owners Achieve \$34,000 Annual Energy Savings Using AeroSeal

As seen in a [Forester Daily News \(FDN\) published story](#), an AeroSeal project helped New Jersey building owners achieve \$34,000 annual energy savings

Owners of Northgate II, a Section 8 community in Camden, New Jersey, were looking to reduce energy costs associated with its 308-unit apartment high-rise. To receive upgrade funding through the State's Multifamily Weatherization Assistance Program, they had to prove that upgrades would result in substantial energy savings and a payback period of ten years or less. Energy auditors were hired to evaluate and recommend an effective course of action. They specified multiple changes to be made to the building's electrical and mechanical systems. They also insisted that AeroSeal duct sealing be used to seal leaks throughout the high-rise's entire air duct system.

FDN Contributor Carol Brzozowski writes, "In an example of HVAC innovations, a 23-story high-rise apartment building in New Jersey derived \$34,000 in annual energy savings after property managers

utilized the AeroSeal duct sealing technology in exhaust shafts and replaced dampers." This project is just one example of AeroSeal's ability to save commercial facilities energy and money.

An initial audit of the 23-story high-rise apartment building's ductwork showed there was significant duct leakage throughout the facility's exhaust system. As a result, the two large fans used to remove stale air from each of the individual apartment units consumed a lot of energy. After sealing the air leaks using AeroSeal and updating the duct system's dampers, the HVAC fan energy usage was reduced by more than 217,000 kw/hours – a savings of more than \$34,000 a year in electricity. Building owners also achieved an additional \$3,000 a year in savings through more effective heating.



Our multi-family building specialists have a keen interest in ventilation systems and the wasted energy that often results from leaky ductwork. Through our ongoing experience with aeroSeal technology we've come to including the aeroSeal process as a standard recommendation when leaky duct systems are a concern.

Don Casper
Energy Auditor
Steven Winter Associates

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PROJECT OVERVIEW

BUILDING

Northgate II 23-Story High-Rise Apartment Complex (Section 8 Housing; 308 Units)

LOCATION

New Jersey

AEROSEAL CONTRACTORS

McDonald Building Co.

GOAL

Reduce energy usage by 15% or more with desired payback period

BEFORE AEROSEAL

971 CFM* average leakage

AFTER AEROSEAL

83% average reduction in CFM

RESULTS

Sealed ductwork to 83% average leakage reduction; Saved \$34,000/year from reduced exhaust fan usage plus an additional \$3,000/year from increased heating efficiency; Achieved payback period of 3-4 years



Preliminary testing revealed fairly large gaps throughout the building's vertical exhaust ducts. The AeroSeal process fixed that problem and in doing so, significantly improved the efficiency of the building's two exhaust fans. AeroSeal technology played a significant role in helping reduce energy consumption and ultimately meeting the requirements of the State's Weatherization Assistance Program.

John Ambrose
McDonald Building Company