

≡ **CASE STUDY** ≡

**HISTORIC CHURCH SOLVES VENTILATION AND HEATING
PROBLEMS WITH DUCT SEALING FROM THE INSIDE**

**Engineering And Mechanical Teams Skeptical – Then Surprised At The
Effectiveness Of AeroSeal At Sealing All The Leaks / Improving Performance**

St. Alban's Church, A 150 year-old stone building in Ottawa, Canada is the oldest church in the city. Recent renovations to the interior included a energy efficient ERV system and new ductwork to increase the indoor comfort and improve the ventilation in this historic landmark. Once installed, the system was tested with disappointing results. The ERV wasn't drawing in or blowing out a sufficient amount of air to do its job...no matter how high they cranked it.

In Brief

Building: St. Alban's Anglican Church
Location: Ottawa, Canada
Heritage Consultants: Barry Padolsky Architects
Project Managers: Dolyn Developments Inc.
AeroSeal Specialists: AWS Remediation
Goal: Fix heating system / improve ventilation
Before AeroSeal: Losing 665 CFM of treated air
After AeroSeal: Losing 49 CFM, a 93% reduction
Results: ERV system had enough air from ductwork to work properly; ventilation fixed



With insufficient air, the ERV was working overtime with little results. Ventilation in the church's new kitchen and bathrooms was insufficient. The basement facilities and upstairs daycare unit remained cold during the winter and would certainly be hot without enough air-conditioned air in the summer.

For more than a year, the engineers and mechanical contractors on the project investigated possible solutions. The ERV unit was tested, adjusted and retested. The system was balanced and rebalanced. The registers were tuned and retuned. The ductwork was manually sealed – where possible, but the results were the same. The frustrated teams of contractors were contemplating the proposition of tearing down all the new drywall and reinstalling the ductwork. Then someone suggested trying AeroSeal.

In a few short hours, the AeroSeal team sealed the entire duct system from the inside. Prior to sealing, tests revealed that about 33% of the treated air was being lost through duct leaks. AeroSeal quickly sealed 92% of the leaks. The same ERV system that wouldn't work properly at maximum power was now generating 20% more than was needed at half its available speed. Problem solved with AeroSeal.

Quotes

“We were all highly skeptical that duct leaks could be responsible for the issues we were having with the ERV system and that this new duct sealing technology could solve the problem. We were wrong on both accounts. AeroSeal was not only the fastest, easiest and least expensive option we could find, it was also the answer to our problem. AeroSeal worked an absolute miracle on this system. Hard to believe.”

Daniel Carley
Project Manager
Dolyn Developments Inc.

“We see this all the time. Even highly trained engineers are surprised at the role duct sealing plays in the proper overall performance of an HVAC system. Many commercial projects do not even spec in the cost of duct sealing so we find that virtually all buildings we test are losing 20% of treated air – not to mention thousands of dollars in utility costs - through leaks in the ductwork. AeroSeal can quickly fix those leaks, reduce energy use, solve ventilation issues, and increase heating and air conditioning efficiency, all without having to rip into existing structures or otherwise disrupt the regular office operations.”

Bert Lelievre
NADCA-certified duct specialist
AWS Remediation Technologies Inc.
Solutions Engineer
Bruner Corporation

AeroSeal – The Technology

- Developed at Lawrence Berkeley National Laboratory in 1994.
- Research for AeroSeal 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 the St. Alban's Church sealing project or about AeroSeal in general, contact AeroSeal at (937) 428-9300. You can also visit the AeroSeal website at www.aeroseal.com.

###