

Energy Savings that Improve Indoor Air Quality

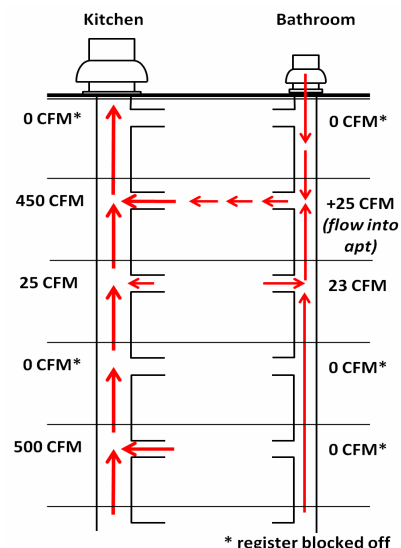
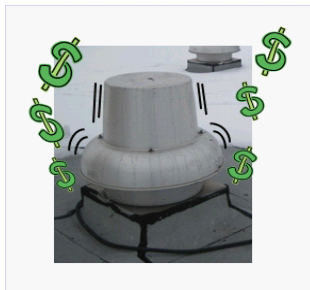
Improved Indoor Air Quality is one of the benefits of the RSI Exhaust Shaft Retrofit Program that separates us from other energy efficiency programs. Over ventilated areas cause specific problems in that depending on the season excessive hot or cold air from the outside environment is forced inside to replace heated or cooled air exhausted from the living space. Under ventilated spaces have IAQ problems that include odor & cigarette smoke transmission from one apartment to another. The accumulation of indoor pollutants and moisture can lead to mold issues, etc which in turn cause additional IAQ problems.

3rd Party Energy Audits have shown that in most buildings 15 stories or more approximately 70% of the air exhausted from building comes from the upper 5 floors while only about 7% comes from the lower 5 floors. The top five floors can be drafty causing them to be too hot in the summer and too cold in the winter. The bottom five floors experience odor & moisture problems which often lead to mold issues. The Lenox a 17 story Multi-family Building in Union City NJ is our most recent success story. After the system was cleaned & sealed and the installation of CAR (Constant Air Regulators) into the kitchen and bathroom exhaust vents were complete the system was balanced. (The CAR is a uniquely designed airflow regulator that is factory set to a building Auditor's specified CFM rate. It controls the flow of air through a combination of CFM and Static Pressure that engages an air damper when the factory setting is reached, thereby regulating the flow of air.) The residents in the upper & lower floors of the "Lenox" experienced an immediate improvement in their indoor air quality. This building is estimated to realize a savings of more than 23,000 CFM which translates into energy cost savings to the building's Owners of over \$27,000 / year in heating costs alone, not to mention the uncalculated air conditioning and electric savings. These additional savings will be significant in light of the fact it costs more to cool air than it does to heat it. This data was compiled by Steven Winters Associates (SWA) a third party energy consultant who monitored our progress throughout the project. SWA provided all parties with a detailed report and the project was concluded to be "Very Successful" by SWA thus proving the value of our technology not just for energy savings but also for Indoor Air Quality.

RSI's Exhaust Shaft Weatherization Retro-Fit Program is a uniquely positioned energy savings program that is able to successfully improve a building's Indoor Air Quality which is a win-win for the building Owners as well as the Tenants.

Why Retrofit?

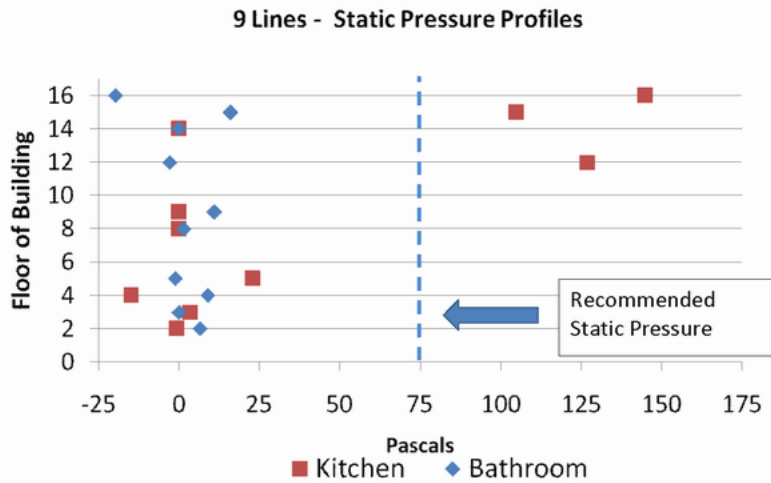
- Very unbalanced flow
- Tenant Complaints of smells, noise, smoke
- High energy waste



Tennant blocked exhaust vents indicated by the asterisk are the result of a poorly balanced system. Note the bathroom exhaust that is actually forcing 25 CFM's of air into the living space.

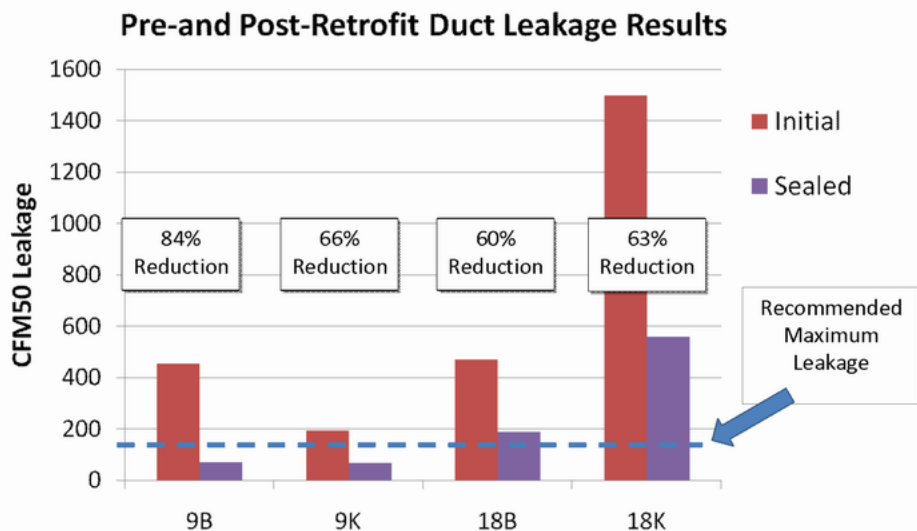
Existing Conditions

Balancing and Performance



Note the total lack of ventilation to both kitchen & bathroom exhaust vents. A poorly balanced or non functional system results on poor Indoor Air Quality.

Retrofit Results



Note the positive improvements (the Purple) after RSI completed our Exhaust Shaft Retro-Fit in these shafts. The Indoor Air Quality improvements are substantial.