

JOEGREEN ROADMAP TO ENERGY EFFICIENCY™



JOEGREEN Audit Team: Chris Henson

Audit Date: June 22nd, 2010

Town of Topsfield Police Department

GOODNEWS:

We were able to diagnose the problem areas in the facility during the Audit. We have listed the specific problems responsible for your energy efficiency issues. Implementing the customized solutions will save you **16- 21% per year on your HEATING bills (\$849- \$1,106/yr).**

YOURPROBLEMS:

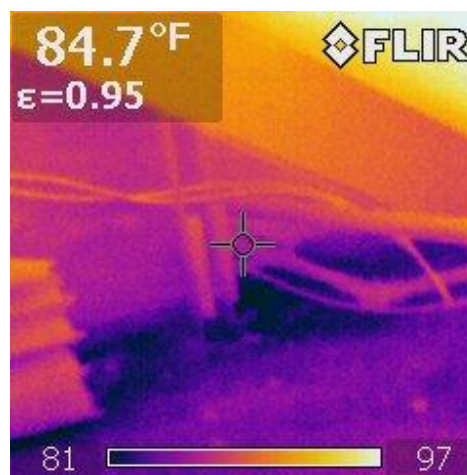
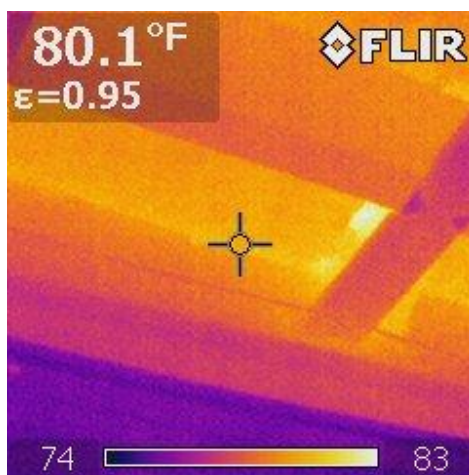
Based on the Joe Green Energy Audit conducted on June 22nd, 2010:

- **Ventilation , Heat Loss, And Infiltration**
 - Large Thermal Leakage Areas In And Around The Third Floor-Inadequate Insulation In Kneewall Areas
 - Large Thermal Leakage Areas In Garage Ventilation Duct Runs
 - Drafty Areas On Third Floor
 - Weatherstrip Downstairs Door To Outside
 - Windows Open With AC On, And Windows Not Locked In Place
 - Plant Outside On Condenser Unit Can Cause Air Flow Problems
- **Furnace and Distribution**
 - Boiler Reset Switch Has To Constantly Be Pushed

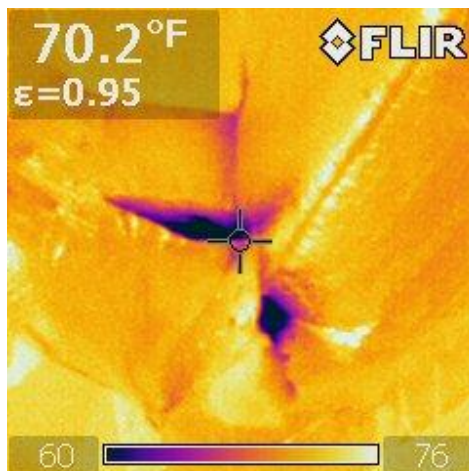
INFRARED PICTURES

*Note that darker colors = cooler areas

Third Floor- Kneewall Area

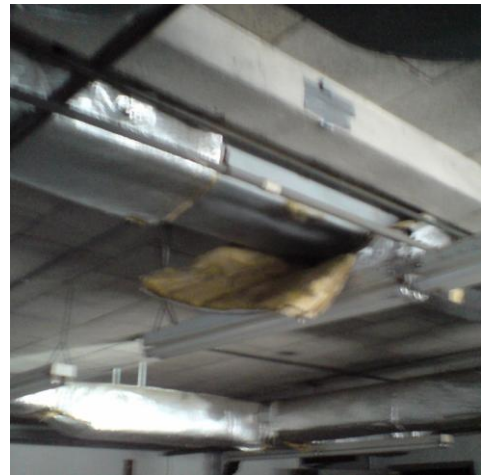
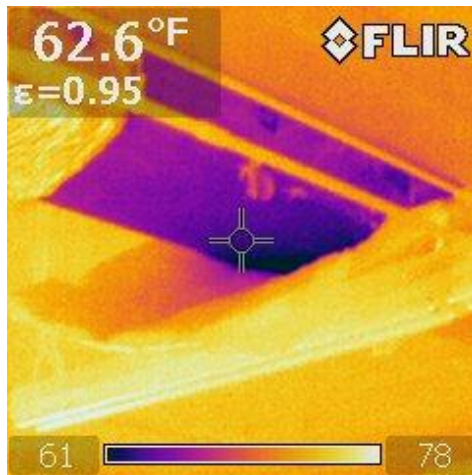


Garage Ventilation Duct Runs

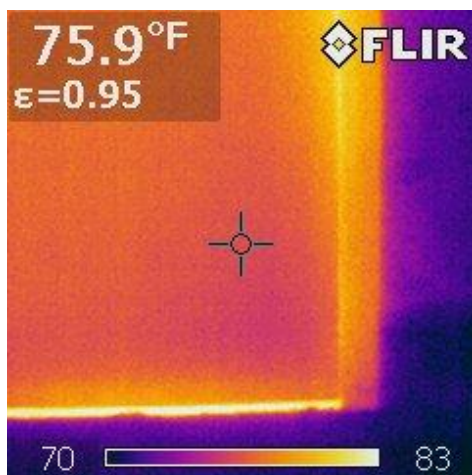


Additional Pictures can be found at
<http://photobucket.com/joegreenhome-TopsfieldPD>
Password: JOEGREEN

Garage Ventilation Duct Runs



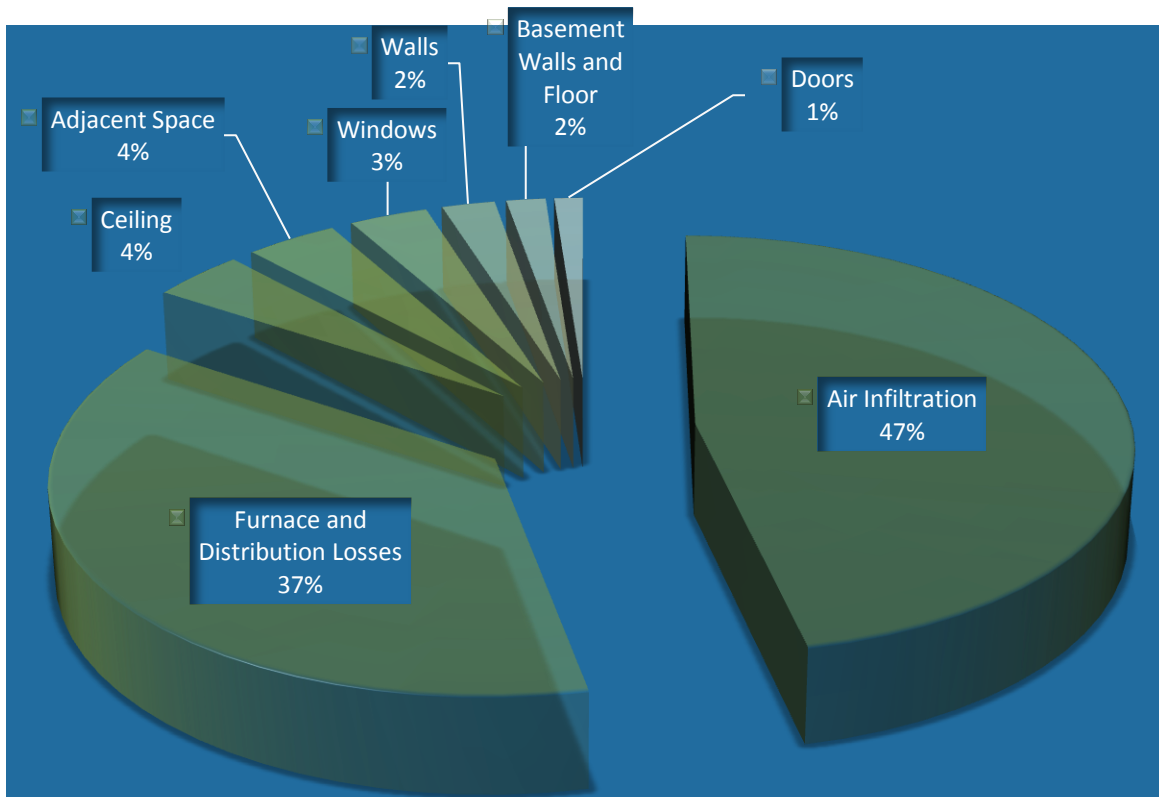
Downstairs Door to Outside



Condenser Unit



CONDITIONED AIR LOSS



SOURCE	% of USAGE
Air Infiltration	47%
Furnace and Distribution Losses	38%
Ceiling	4%
Adjacent Space	4%
Windows	3%
Walls	2%
Basement Walls and Floor	2%
Doors	1%

YOURSOLUTIONS:

	<i>Initial Investment</i>	<i>Per Year Savings</i>	<i>% of Energy Savings</i>
Add Insulation And Seal Crawlspace Areas (Wall And Floor Areas)	\$2363.64	\$624.00-\$780.00	12%-15%
Ducts Need To Be Properly Sealed And Insulated	\$1204.55	\$416.00-\$520.00	8%-10%
Insert Separate Heating Zone For Third Floor	\$3187.50	\$364.00-\$468.00	7%-9%
Troubleshoot/Replace Boiler Control Switch With An Outdoor Reset Switch	\$2656.25	\$260.00-\$364.00	5%-7%
Weatherstrip Downstairs Door To Outside	\$155.68	\$104.00-\$156.00	2%-3%
Close All Windows And Lock While AC Or Heat Is Running	-	\$104.00-\$156.00	2%-3%
Cut Plant Near AC Condenser Outside	-	-	-

Source: Based on data gathered from audit and initial estimates contingent upon site inspection by a professional plumber, HVAC, etc.