

JOEGREEN ROADMAP TO ENERGY EFFICIENCY™



JOEGREEN Audit Team: Chris Henson

Audit Date: June 22nd, 2010

Town of Topsfield Library

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.

YOURPROBLEMS:

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

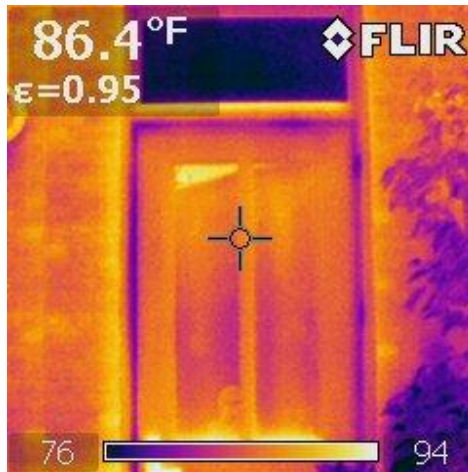
- **Ventilation , Heat Loss, And Infiltration**
 - Entrances And Book Depository Show Significant Air Leaks
 - Thermal Leakage From Hatches On 2nd Floor Into The Crawlspace
 - Some Of The Windows Are Single Paned And Leaking Energy
 - Thermal Leakage In Basement Where Drywall Has Been Removed
 - Small Leakage Found In Librarian's Office Closet
- **Furnace And Distribution**
 - Elevator Ventilation System Is Outdated
- **Moisture**
 - Small Signs Of Moisture/Mildew In Furnace Room

INFRAREDPICTURES

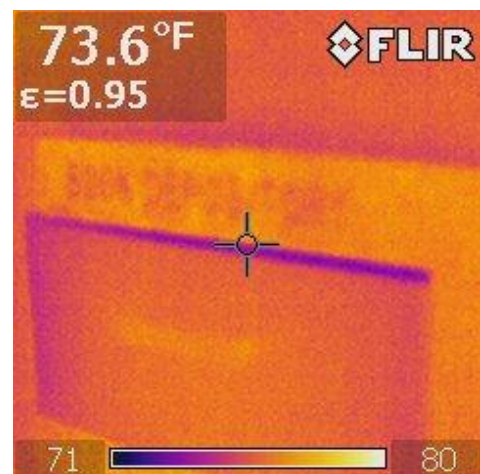
*Note that darker colors = cooler areas



Entrance Door

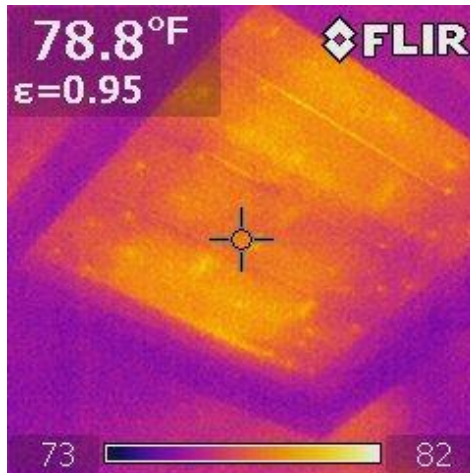


Book Depository

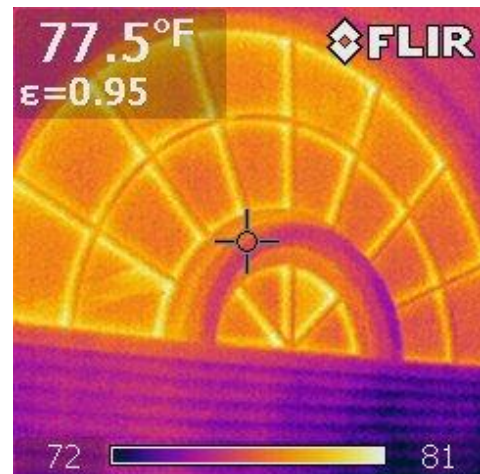


Additional Pictures can be found at <http://photobucket.com/joegreenhome-TopsfieldLibrary> Password: JOEGREEN

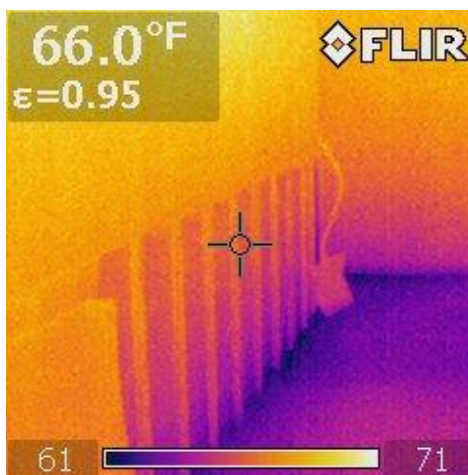
Hatches on the Second Floor



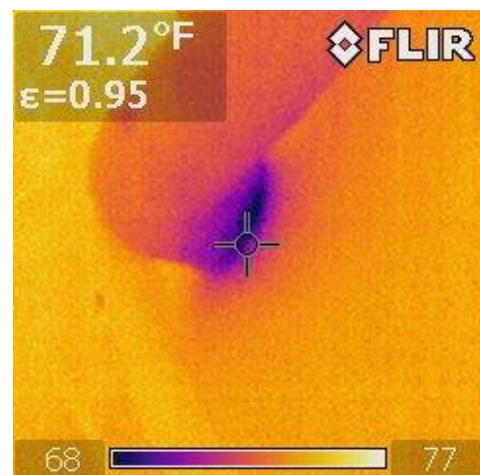
Windows



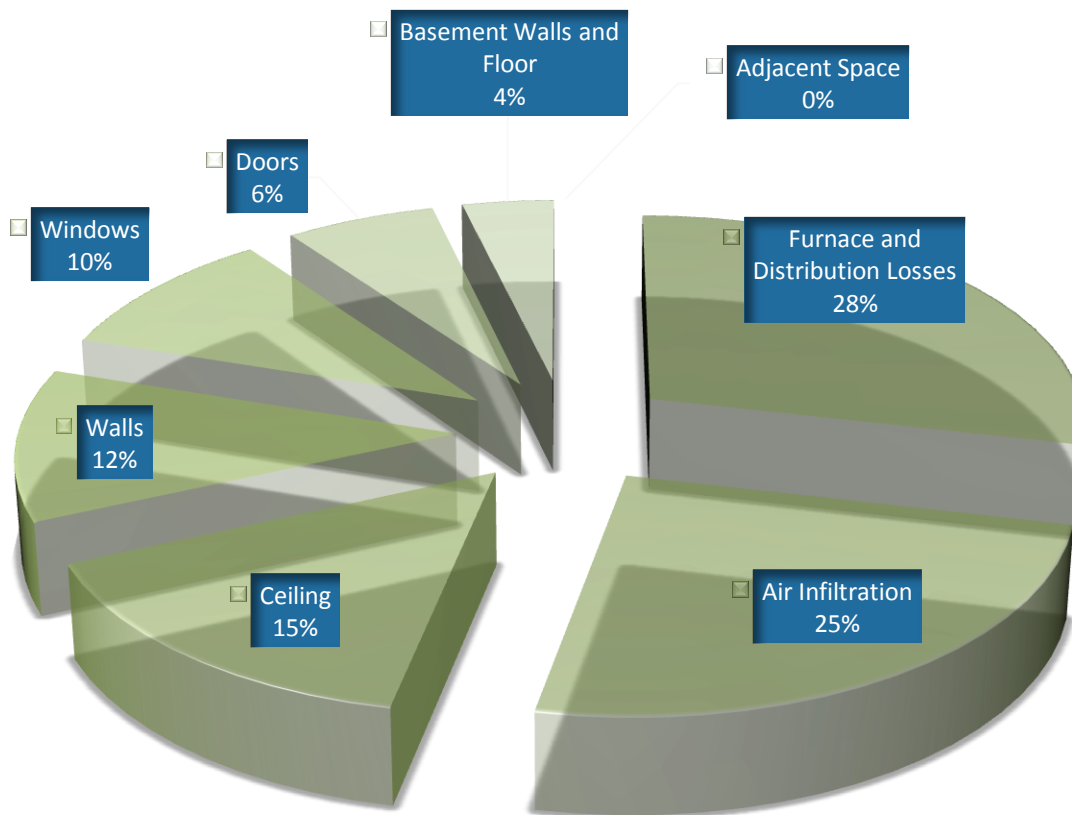
Basement



Librarian's Office



CONDITIONED AIR LOSS



SOURCE	% of USAGE
Furnace and Distribution Losses	29%
Air Infiltration	25%
Ceiling	15%
Walls	12%
Windows	10%
Doors	6%
Basement Walls and Floor	4%
Adjacent Space	0%

YOURSOLUTIONS:

	Initial Investment	Per Year Savings	% of Energy Savings
Upgrade Elevator Ventilation System--Install A Powered Louver At The Top Of The Shaft And Properly Vent The Machine Room (Remove Motored Vent System In Place)	\$6091.84	\$1399.83-\$1679.80	15%-18%
Weatherstrip Main (Unused) Door, Side Door Entrance, And The Book Deposit Flap	\$506.25	\$466.61-\$653.25	5%-7%
Hatches Going Into Crawlspace Between 2nd Floor And Roof Need To Be Sealed And Insulated	\$253.13	\$466.61-\$653.25	5%-7%
Install Interior Storms On Fixed Single Paned Windows	\$3807.40	\$279.97-\$466.61	3%-5%
Replace Missing Drywall In Basement	\$245.51	\$93.32-\$279.97	1%-3%
Patch The Small Opening In The Librarian's Office Closet	\$122.76	\$93.32-\$279.97	1%-3%
Ensure That The Ventilation System For The Mechanical Room Is Working Properly, And Is At The Proper Settings	-	-	-

*These calculations are derived using proprietary software that models the energy usage of the building based on the conditions found at the time of the audit. Although behavioral variance has been accounted for, it cannot be fully predicted and may affect the actual savings achieved. **Please be aware that the percentage reductions achieved by each action are based upon that specific action alone. When multiple actions are taken the total percentage reductions achieved will be different from an arithmetic sum of the individual actions. Please be especially sensitive when adding projected dollar savings together as they are produced by multiplying the percentage savings by the historical dollar outlay resulting in a total that is only related to that one specific action and cannot be added to other projected dollar savings in a meaningful fashion.***