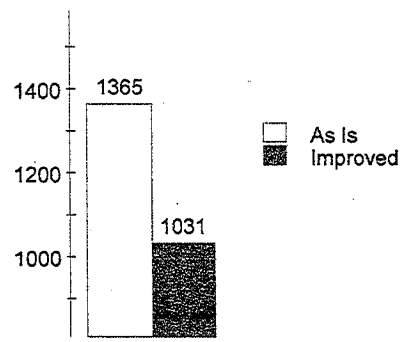
IMPROVEMENT ANALYSIS REPORT

Date:	March 22, 2010	Rating No.:	
Building Name:		Rating Org.:	The Energy Auditor
Owner's Name:	Carroll Brown	Phone No.:	208-721-2524
Property:	380 Silver Star	Rater's Name:	Brian J Bennett
Address:	Hailey, ID 83333	Rater's No.:	
Builder's Name:			
Weather Site:	Sun Valley, ID	Rating Type:	Verified Condition
File Name:	Carroll Brown Hers.big	Rating Date:	3-10-2010

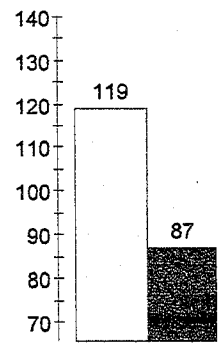
Energy Costs ($/yr)

End-Use	As Is	With All Improvements	Savings
Heating	871	538	334
Cooling	0	0	0
Hot Water	180	180	0
Lights and Appliances	316	316	-0
Photovoltaics	-0	-0	0
Service Charge	0	0	0
TOTAL	1367	1034	334

Total Costs ($/yr)



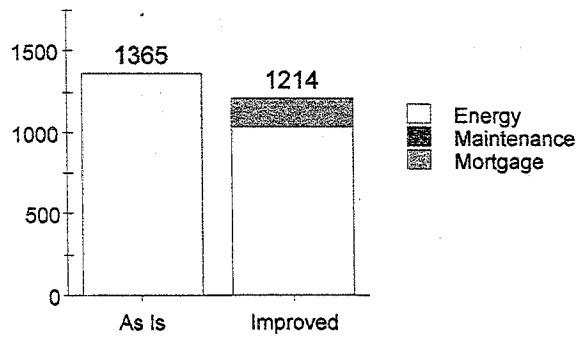
HERS Index



Information For Lenders and Appraisers

Installed Cost of Improvements ($)	4583
Cost Weighted Life of Measure (Years)	30
Mortgage Term (Years)	25
Discount/Mortgage Rate (%)	0.000
Present Value Factor	30.0
Expected Annual Energy Savings ($)	334
Expected Annual Maintenance Costs ($)	0
Expected Annual Savings ($)	334
Increased Annual Mortgage Costs ($)	183
Present Value of Savings ($)	10008
Expected Annual Cash Flow ($)	150

Cost Comparison ($/yr)



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Recommended Improvements

Component	Life	Cost	Yr Savings	PV	SIR	SP	Index
1. Infiltration:	30	320	156	4371	14.7	2.05	106
Existing: 0.6-1.0/0.3-0.5 ACHnat							
Proposed: 0.4/0.4 As Specified							
Measure: Achieve 0.4ACH							
2. Equip 1: HEAT:	30	2400	96	484	1.2	24.96	94
Existing: 80AFUE Gas Furn 80k							
Proposed: 92AFUE Gas Furn 80k							
Measure: 80->95%, 30kBtuh							
3. Window 5: 4 East	30	345	16	122	1.4	22.14	93
Existing: Single - Mtl w/Storm							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Low _e							
4. Window 2: 1 east	30	345	16	122	1.4	22.14	92
Existing: Single - Mtl w/Storm							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Low _e							
5. Window 1: 1 South	30	552	22	104	1.2	25.25	90
Existing: Single - Mtl w/Storm							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Low _e							
6. Window 3: 2 East	30	276	12	98	1.4	22.15	88
Existing: Single - Mtl w/Storm							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Low _e							
7. Window 6: 5 East	30	207	9	73	1.4	22.15	88
Existing: Single - Mtl w/Storm							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Low _e							
8. Window 4: 3 East	30	138	6	49	1.4	22.15	87
Existing: Single - Mtl w/Storm							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Low _e							

Criteria

Ranking Criteria: Present Value	Maximum $ Limit: No Limit
Cutoff: 0	Measures: Interactive

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The home's energy efficiency is rated using the HERS Index as defined in the RESNET "Mortgage Industry National Home Energy Rating Systems Accreditation Standards," 2006. An Index of 100 represents a home that meets current energy codes. A lower Index indicates the home uses less energy than a code home, a higher Index indicates the home uses more energy than a code home. The rating considers all energy use in the home. The rating should be used only for comparison, since it assumes average climate and thermostat settings, quantities of hot water, and internal loads for a typical household. Energy costs are based on local energy prices at the time of rating. If energy efficiency improvements are made to the home, or energy prices change significantly, the rating and annual energy costs may change. Although every effort has been made to provide accurate information, this rating does not constitute a warranty, expressed or implied, about the energy efficiency or operating costs of the house. Estimated savings are calculated assuming that the improvements are implemented in the order listed, and in accordance with all local codes and standards. The cost estimates for improvements are established by the local HERS provider.

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Home Energy Retro-Fit

Carroll Brown
380 Silver Star
Hailey, ID 83333

by:
Brian J Bennett
The Energy Auditor
208-721-2524
March 22, 2010

REM/Rate - Residential Energy Analysis and Rating Software v12.82
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Home Energy Retro-Fit

The Home Energy Retro-Fit report lists changes, or retrofits, that you can make to your home to save energy and money. Acting on the energy retrofit recommendations will make your home more comfortable, more valuable, and more affordable.

The Energy Auditor recommends these retrofits, based on data gathered in a detailed inspection of your home. If you desire more detail on the retrofits or the cost estimates, contact The Energy Auditor, which provided you this service.

Energy Retro-Fit Table

The Energy Retro-Fit table shows a package of energy retrofits for you to consider. Both the individual and total annual savings are based on the whole package. You can see how good of a financial choice these measures are by looking at the last column.

Feature to improve	Change from	Change to	Estimated cost	Annual savings	SIR*
Infiltration:	0.6-1.0/0.3-0.5 ACHnat	0.4/0.4 As Specified	$320	$156	14.7
Equipment:	80AFUE Gas Furn 80k	92AFUE Gas Furn 80k	$2400	$96	1.2
Window:	Single - Mtl w/Storm	Dbl/LoE/Arg - Vinyl	$345	$16	1.4
Window:	Single - Mtl w/Storm	Dbl/LoE/Arg - Vinyl	$345	$16	1.4
Window:	Single - Mtl w/Storm	Dbl/LoE/Arg - Vinyl	$552	$22	1.2
Window:	Single - Mtl w/Storm	Dbl/LoE/Arg - Vinyl	$276	$12	1.4
Window:	Single - Mtl w/Storm	Dbl/LoE/Arg - Vinyl	$207	$9	1.4
Window:	Single - Mtl w/Storm	Dbl/LoE/Arg - Vinyl	$138	$6	1.4

Total	$4583	$334
Monthly Finance Cost, Monthly Savings**	$15	$28

* SIR is Savings to Investment Ratio: this is an economic measure for investments. A SIR > 1 is a positive investment, while SIR < 1 loses money.

** The monthly finance cost is the monthly payment, including interest, that will pay for all the tabulated improvements when financed with a 25-year mortgage at 0.00%.

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Energy Costs by End-Use

The Energy Costs table compares the "before" and "after" annual energy costs to show energy cost savings. It groups retrofits by "end-uses," which are broad categories of how energy is used (or generated) in a home. Note that Photovoltaic panels (PV) generate energy, so as a result this "end-use" shows negative costs, if present.

The Total Costs bar chart gives a visual sense of how the annual operating costs of your house could change by incorporating all the listed energy retrofits.

The HERS Index bar chart provides a snapshot of your home's energy efficiency before and after retrofits. The HERS Index shows the energy efficiency rating of your home, similar to the way a miles per gallon rating shows the efficiency for a car.

Energy Costs ($/year)

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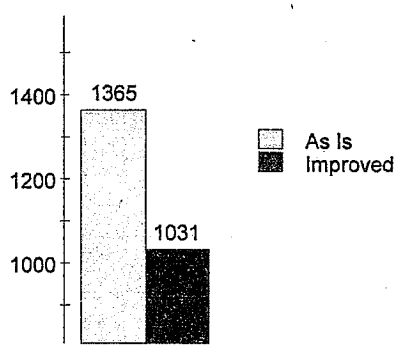
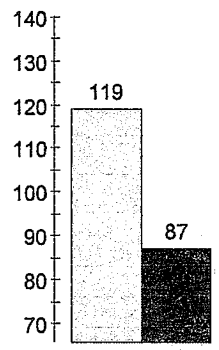
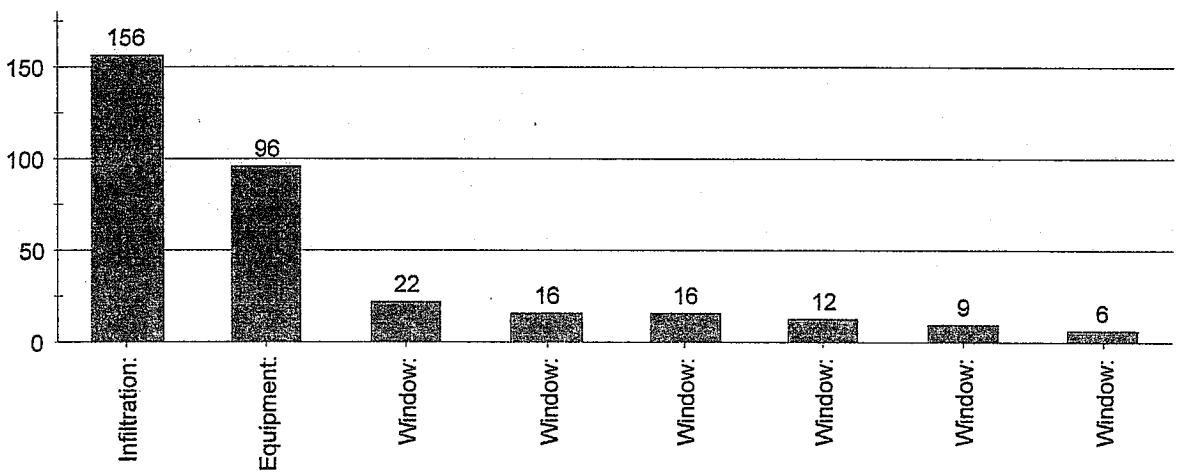


HERS Index



The bar chart below displays the annual energy cost savings ($ per year) associated with the energy retrofits you choose. Some retrofits interact with one another, and the total savings offered by each can change if the package of combined retrofits changes. For example, if you increase the insulation of your home, the energy savings you can gain from installing a more efficient furnace will be less than if you only install the furnace. However, the total savings will be greater if you choose both retrofits.

Annual Savings for Retrofits ($/year)



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