

Summary

In analysis 1, the survey showed that almost half of the students want more out of their housing in every way, whether that is health, energy independency, or environmental sensitivity. Out of the other half, most want more as well but are not willing to pay as much.

The addition of this green roof can add major interest to the building. The addition of this green roof will cost about \$180,000 more than the existing, due to a small increase in structure and the cost of the green roof itself. Renting this space to a café or a restaurant would bring in \$5,000 - \$10,000 a month. This alone makes the payback period 1.5 to 3.0 years. Including the residents paying, it can cut the pay back time practically in half. Assuming residents will pay as much as they said they would the payback is in 9 months.

The first piece of the mechanical system that was implemented was an Energy Recovery Unit (ERV). Overall this system will cost \$33,000 more, but will save about \$200 a month per apartment. This will amount to a payback in 2.4 years. The second system is a water loop that will run water throughout the building to all the heat pumps supplying 60°F to 90°F water. Overall this system will cost an additional \$76,500 giving a payback between 12.3 years to 18.5 years.

Acknowledgements

| | | |
|-----------------|-------------------------|--------------------------------|
| Paul Macht | Dr. Messner | Tom Brasher |
| Linda Macht | <i>CM Advisor</i> | <i>Poole Anderson</i> |
| Alexander Macht | | |
| | Dr. Riley | Michael Norris |
| Gretchen Miller | Dr. Horman | <i>Michael L. Norris &</i> |
| | <i>CM Faculty</i> | <i>Associates, Inc.</i> |
| Dan Reynolds | | |
| Brian Ault | Mr. Parfitt | Nic Jones |
| Jim Gawthrop | Mr. Holland | <i>Sound Geothermal Inc.</i> |
| Mike Weigmann | <i>Thesis Advisors</i> | |
| Meral Kanik | | |
| Tom Yost | Dr. Schneider | |
| Dave Hull | Dr. Bahnfleth | |
| | Seth Wilberding | |
| | <i>Breadth Advisors</i> | |

The MorningStar & Natural Fusion Teams