

### **3-Level commercial and residential space (in construction)**

5687 Charles Street

Rod Malay's email: [rodmalay@ns.sympatico.ca](mailto:rodmalay@ns.sympatico.ca)

#### **Introduction**

Rod Malay graduated from the Nova Scotia College of Art and Design. He has experience in a wide variety of fields- ranging from graphic design to building straw bale homes. Shortly after working as the construction manager for the green renovations of the Ecology Action Centre building, he was approached by the owner of a property on Charles Street in the North End. She wanted to design a building with a commercial space on the bottom and two apartments above. There was already a decrepit building on the property that would have to be torn down. Rod was thrilled to have an opportunity to design a green building, and the owner was quickly convinced by Rod's argument for a sustainable building. The building will be 30 x 40 – 1200<sub>2</sub> per floor and is scheduled to be finished by the end of October 2007, but already Rod is applying 'green principles' as he prepares the site for building.

#### **Deconstruction**

Waste from construction sites accounts for 25 % of landfill waste. Rod was determined to avoid contributing to this percentage by reusing and recycling as much as he could. He labeled this process 'deconstruction', as opposed to 'demolition'. Instead of paying for dirt to be trucked away, Rod has saved the earth removed during the drilling for geothermal. He intends to use the soil for the green roof. While deconstructing he discovered large, intact cinder blocks that he plans to use for the driveway. Ron is salvaging most of the wood from the original building to use in the new building. These are just a few of the examples of the ways Rod is diverting waste from the landfill. When it is necessary to purchase new wood, Rod buys wood that has been certified by the Forest Stewardship Council (FSC), which means that the wood is being harvested in a sustainable and environmentally responsible way.



Sneak Preview: the finished building!

## **Renewable Energy**

The house will collect heat through passive solar energy methods. The house's south facing windows, and its two skylight domes on the roof, will bring in heat from the sun that will be stored in the concrete floor. The concrete floor acts as a thermal mass and will release its heat gradually throughout the night. The concrete floors will also encase the in-floor heating pipes – a very energy efficient heating method.

The heating source for the building will be geothermal. By using the earth's energy, geothermal power can reduce home heating costs by 35 to 70 percent and does not contribute to green house gas emissions.

## **Water Conservation**

The site will feature water efficient appliances such as aerated taps and low-flush toilets. In addition, the green roof and the garden around the perimeter of the building will catch the rainwater and prevent it from running down the street into the sewage system.

## **Green Roof**

The green roof will have great insulating properties that will keep the house cool in the summer and warm in the winter.

## **Encouraging Community Involvement**

Rod's favourite feature of the building project is the way it contributes to the community. He upholds the philosophy that a building must be considered as a social factor that impacts the human community surrounding it. Already, in the deconstruction phase, he has been able to employ local unemployed people. They stop by, ask some curious questions, state their work experience, and Rod tells them that they can work if they show up the next day with boots on. There is a great relationship between Rod and the workers, and it is obvious that they hold each other in great respect. This makes for a wonderful atmosphere that has a positive impact on the surrounding neighbourhood.



Building green is still a new field and it is a learning experience for everyone, Rod included. It is encouraging to see everyone on the worksite becoming more and more aware of their environmental responsibility. Once the building is finished, the community will have a sense of ownership and pride because they participated in creating this beautiful green building in their neighbourhood. Rod is doing more than building green; he is also building community.

## **Problems Encountered**

The biggest obstacle Rod has encountered in the building project is his own lack of experience and understanding of green building techniques. It is still a very new field. He advises that building green demands a flexible and creative way of thinking. Every day there are new challenges and new questions. He is constantly checking himself to make sure he maintains his original perspective and holds to green principles. Ron has found it difficult to explain and convince the people that work for him, his suppliers, and other developers, of the reasons to build green. He is a courageous pioneer in the green building field.

In addition, building green involves expensive start up costs. For example, geothermal energy is an expensive initial investment, which is not only a renewable resource, but also quickly pays for itself by reducing heating costs by up to 70%. On the other hand, Rod has been able to save money by recycling building supplies.

## **Suppliers**

He bought local FSC wood from Wade Prest in Moose Land, near Tangier.

*Cunning electrical* installed the geothermal energy system.