VERRILL FARM

GOING GREEN AT OUR NEW FARMSTAND

Our beautiful new farmstand only looks brown. It is really green. We have worked hard to use green and recycled materials and to manage, conserve, and recycle energy.

The building itself is supported almost entirely of components produced from recycled wood. The exterior walls are natural red cedar and Hardie Board, which is a durable composite of concrete and cellulose fiber and should be low-maintenance. Low VOC sealants were used throughout the building. The use of natural light is one of the most striking features (especially on a sunny day). The combination of a recessed white roof in the center of the building and the windows near the ceiling maximize the use of both direct and indirect light in the building. The final phase is a computer system that controls the lights with the input of photo cells, time of day, and approximation to sunset. Motion detectors control the lights in offices, bathrooms, and storage areas. Ceiling fans are in place to circulate solar heat in the cooler months.

The finished floor of the retail area is concrete with an acid etched finish. This process results in a durable pigmented surface without the use of paints or VOC's. The floors in the kitchen, coolers, and produce work area are a vinyl safety flooring by Altro which contains aluminum carbide to minimize injuries. The Altro company has developed a process to recycle their manufacturing waste and is working to reuse post consumer floor coverings. The porch area inside the overhead doors is insulated, but not heated to provide a buffer to the main building in the winter and allow for an expanded sales area during the growing season. The outdoor display area is simply a broom-finished concrete with a powdered dye added to the concrete and to the concrete sealer.

Refrigeration is one of the major energy demands in our type of business. Our four walk-ins are arranged in a block so that they all have common walls to reduce heat loss. The walk-ins are all double insulated in the ceiling (as well as being under a reflective roof) and the freezer is triple insulated in the floor and double insulated in a non-common wall.

The main door to the freezer opens into a cooler so energy is recycled and loss is minimized when the freezer door is opened. The 24 fan motors are all the newer energy-efficient models that use less energy and produce less heat in the coolers. The door heaters around all of the reach-in doors can be shut off when they are not required. The four major compressors are piped through heat exchanger units where the heat removed from the refrigeration system is used to preheat the water going into the water heater. The water goes into the furnace at over 100 degrees instead of +/- 55. This means more efficient cooling and heating. The computerized monitoring system has the capability of monitoring temperatures and allowing reduction of fan running time and heated defrost cycles to save substantial electricity.

Computers in our offices go into 'SLEEP' mode when not in use. The computerized electrical controls also make it possible to reduce *peak loads* when advantageous to the municipal rates for all Concord consumers.

Piped natural gas is the primary sources of energy for cooking and heating. It is clean burning and does not need to be delivered by truck. The wood stove in the stand will allow for the use of some "home grown" energy. Water for watering plants comes from our own well. The major portion of runoff from impervious surfaces as well as all of the processed waste water recharges into ground water.

Our new greenhouse is constructed of tempered, laminated glass and metal. The floor is concrete with radiant heat and insulation under the floor. The radiant heat will be the primary and most efficient source for starting seedlings. There is also hot air heat for the times more is needed. The ventilation is passive with the opening of the roof and natural convection. There is an insulating cover that automatically closes in anticipation of sunset or lack of solar contribution.

As we did in the past, we continue to recycle compostable waste, paper, cardboard, glass, plastic, tin cans, and electronic components. We still sell fresh local milk in reusable glass bottles.

We are pleased and proud that we were able to reopen an energy-efficient building while maintaining our staff and increasing employment in a down economy in less than one year from our fire of September 20, 2008 with no grants or subsidies. We owe many thanks to our friends, neighbors, customers, and associates who donated funds, services, and much personal and emotional support to help us make it through. Thank you to The Office of Michael Rosenfeld Inc., Architects and the general contractor, Bluefin Construction and Design for making it happen.