

Underground home being constructed in Drayton

by Carolyn Wilkans

DRAYTON – Driving past the four acre parcel on County Road 7 no one would suspect the unique construction project that is coming to life.

Behind the windbreak of pines passersby can see the outlines of concrete forms that provide little insight into the building that will stand, or rather be buried, there.

The construction project is a dream of Cambridge resident and contractor, Royce Hamer. For more than 30 years Hamer has fostered ideas of constructing underground homes. This home, officially named the “Dome Home Project” is the first phase in realizing his dream. It will be used as a display home for the purpose of promoting this unique type of housing.

The structure is a 3,136 square ft. residence that includes a two-vehicle garage. The building is constructed of modules that are 28 ft. square with 8 inch walls and a domed roof that adds approximately 4’ in height. Each dome has an optional 6ft. x 6ft. skylight to allow for more natural light than a conventional home.

The walls and roof are 8 inch thick and are constructed with continuous pour concrete. This provides for no cold seams. Re-bar is installed at 12 inch spacing, further re-enforcing the construction. All door and window openings and archways are blanked out during the pouring process. This unique form of design negates the need for additional supporting walls. The modules allow for large, open spaces or they may be divided into smaller units depending upon personal tastes.

Hamer stresses the benefits of properly constructed underground homes. The life expectancy of a poured concrete home is in excess of 1,000 years. He believes that as our society becomes more enlightened on issues concerning energy conservation and environmental factors, more people will see the benefit of underground dwellings.

A properly build underground home with good insulation and moisture proofing has been shown to be greater than 80% easier to heat than above-ground dwellings. The earth maintains a temperature level of approximately 14 degrees in all seasons. That means that in order to obtain indoor warmth of 20 degrees, heating requirements are greatly reduced when compared to above-ground dwellings in -30 degree weather. An underground home may be left unattended all winter and will not experience damage from pipes freezing. This factor coupled with the no-maintenance exterior makes it a perfect choice for Canadian snowbirds that head south for the winter.

Due to the fact that the design is constructed on one floor with level walkouts makes it an ideal residence for individuals who are physically challenged and the elderly. The homes are also wired with a one size larger electrical conduit than normal for extra wire to be used in home automation equipment and an extra conduit is installed for future home entertainment systems.

The home is designed to face southwest for maximum benefit of passive solar heat in the winter. Overhangs eliminate much of the sun to provide for a cool interior in the summer. Proper window glazing and insulating curtains are designed to keep the heat inside the home and reduce leaching. The use of large dark coloured interior items such as brick planters also enhance the benefits of passive solar heating. These items hold the heat and release it after sundown.

The utilization of the southwestern lighting combined with large windows and 6 ft. x 6 ft. skylights will provide this home with more natural lighting than a conventional home. Actually it is recommended that the skylights be tinted to reduce the level of brightness.

The conventional heating system will consist of in floor hot water piping using a conventional hot water system.

This system will be integrated into the home automation system for maximum efficiency. There will also be a wood-burning appliance in the house for additional heating benefits and atmospheric enhancement.

Due to lack of Canadian resources in this pioneer project, the Terra-Dome Corporation from Grain Valley, Missouri is constructing the modules for the initial project in Drayton.

Hamer has been working with engineers to create their own forming systems for doming and is confident that his company will be able to offer it locally. In a global community faced with escalating environmental concerns and skyrocketing heating prices, Hamer is offering an alternative that has caught national attention. His vision of building entire communities in this manner is one that is being embraced by visionaries who can decidedly think outside of the box.

More information about the project can be obtained by visiting www.domehome.ca or contacting Hamer at the toll-free number 1-877-899-1413. When completed the home will be open to the public for viewing. Hamer is hoping to erase the image many people have of underground structures being “damp, dark caves”.

The next time you are driving on Cty. Rd. 7, look for fire number 7400. What you see (or don’t) may surprise you.