



Sharon Stangenes
The house hunter

Big ideas part of the plan for 'green' home

At the end of a winding road outside the quiet Kane County town of St. Charles, a stone mansion is taking shape on a wooded lot.

At 11,000 square feet, not including the basement, this is a house where features come in multiples. There are six bedrooms, six bathrooms, six garage bays, six fireplaces... you get the idea. This is not part of the "small is beautiful" camp.

Still, builder Robert Lord claims that when completed, this house will be one of the "greenest" homes in the Chicago area.

"Our goal was to craft an extremely spacious, intricately detailed dream home that would exceed everyone's expectations in terms of luxury and comfort as well as energy savings," says Lord, a young, hard-driving, fast-talking builder of custom homes.

"As a result, we incorporated a variety of new, innovative 'green' and renewable products and ultra-energy efficient systems—the combination of which, I believe, is uniquely resourceful and inventive."

But isn't the essence of going green making less of a footprint on the Earth?

"There are two different attitudes on that," Lord says. "There are sheds with zero operation and maintenance costs and then there is the idea that no matter what the size of the project, it should be as green as possible."

"This is the size of house that these lots and covenants were designed for. This is what was set for this home size," he said of the 1.7-acre lot on which he is building.

Lord's solution for those who want or need a big house but not the green guilt is to use a variety of energy-reducing products and systems, some new, some not.

The combination has won him the Pacesetter designation by one industry publication. Many of the home products being used are best seen during

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'Green' home forges new niche



Photo for the Tribune by Ryan Rayburn

Price: \$3.9 million

FACTS AND FIGURES

- Six bedrooms, six baths, multiple garage spaces.
- Floor area: Approximately 11,000 square feet.
- Builder: Robert Lord Builders Inc., St. Charles.
- Web site: www.robertlordbuilders.com
- Green amenities: Underground geothermal heating and cooling system, Hybrid septic system, Energy Star-certified appliances and lighting fixtures, Green flooring materials.
- Community: A custom home on a 1.7-acre wooded home site.
- Address: 6N558 Kim Lane, St. Charles
- Phone: (630) 584-9009

HUNTER: Keeping air well confined saves energy

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construction, before the dry-wall is up and final finishes such as granite countertops and marble flooring are installed.

Among the products included in this project is closed-cell foam insulation—a kind of polyurethane material which Lord says seals every crack and crevice of a home to prevent heated or cooled air from escaping.

There also is a geothermal heating and cooling system, a whole-building approach to wall sheathing, low-E highly efficient windows, and a hybrid septic system that employs an aerobic digester.

As the home is completed, Lord plans to install Energy Star-certified appliances and lighting and green flooring materials. The home will then be tested for Energy Star-certification.

The foam insulation has been used in commercial applications, says Lord, but he believes he is the first in Illinois to use it for a residence.

It is a not a new technology, he stresses, because he first saw a demonstration of it for homes almost 15 years ago.

The material, by Dow Chemical, is more expensive than some other insulation because of its thick and extensive coverage, which seals up cracks and small gaps where the heat and air conditioning could escape and dust and pollen can get in, Lord says.

But he suggests the added cost could be recouped within three to five years through greater energy savings.

The added foam layer inside the wall reduces noise and sound penetration and adds some strength to the walls, he notes.

Lord's choice of geothermal heating and cooling is an option that is popping up with some frequency in new-home projects around the Chicago area, including a Cyrus Homes development of townhouses in Evanston.

For those not familiar with geothermal, a series of geothermal heat pumps capitalizes on the ground's constant temperature, about 55 degrees Fahrenheit, by using water or an environmentally friendly antifreeze liquid that is circulated with a closed-loop pipe buried in the ground.

The conditioned air is distributed through the house by blowers and traditional ductwork.

The house is the first in Illinois to use a reflective wrap for the walls and a breathable membrane on the roof.

Behind the house, under a green hillock with two white pipes sticking out the top, is a hybrid septic system. By using an aerobic digester in conjunction with a raised sand filter, Lord says he was able to reduce the size of the septic field by half and save a number of trees on the property. The aerobic digester cuts the time for waste to decompose.

Builder Robert Lord's solution for those who want or need a big house but not the green guilt is to use a variety of energy-reducing products and systems, some new, some not.

The upfront cost of some of the energy-saving features is significant, though they are only a fraction of the home's asking price of \$3.9 million.

For example, the geothermal system in this large home is a \$50,000 item and involved drilling several wells. It is a cost which Lord insists will be recouped in less than seven years by slashing energy costs as much as \$7,000 annually. That's because geothermal heat is more than three times as efficient as a traditional fossil fuel furnace.

This house is a "more is more" home. There has been little stinting in features and ambition, but it does raise the question—which future buyers will face more often—about whether there is such a thing as too much of a good thing even in "green" construction. Do all the products and features Lord includes make the residence ever more energy-

efficient or is there a point of overlapping savings and diminishing returns? I don't have the answer, but as green building becomes more common, buyers on more limited budgets will have to decide.

Lord has certainly hedged his bets, or increased his selling chances, by including a number of luxury features that seem to have little in common with conservation.

For one thing, the U-shaped residence wraps around a courtyard with a 40-by-16-foot swimming pool and veranda.

The front of the home looks like a French chateau and the main entrance is flanked by two large turrets—one with space for the dining room and the other a home office on the first floor.

The front door opens to a foyer opposite a wall of windows overlooking the pool and a hall which leads left or right to the major rooms of the home, many looking onto and opening to the pool area.

To the left of the foyer at the end of the hall on the first floor is the master bedroom, with a huge private bath planned for a 6-foot waterfall, whirlpool and raised rain forest shower.

To the right from the foyer is the large kitchen, with the usual granite countertops, upscale appliances and, in an unusual addition, a wood-burning fireplace with a decorative pot swing.

Adjacent to the kitchen is a 300-square-foot sunroom and a two-story family room.

The second floor features three bedrooms, each with a bath and a loft space for play or storage accessible by a ship's ladder, and a gallery room, as well as two porches that overlook the pool.

A *porte-cochere* at the side of the house provides a protected side entrance for family or guests to enter or exit cars. The drive leads into a car courtyard with a four-bay garage at the back and a separate two-bay garage to the right of the home. That garage is connected to the home by a second-floor bridge over the drive-through.

Atop the four-bay garage at the back of the courtyard is a second-floor private space suitable for a sizable studio or a private apartment such as nanny suite. It overlooks trees and the back yard down to a 15-acre lake just beyond a neighbor's yard—to my mind the greenest and most refreshing view in the house.