



Green & Gracious

Energy efficient systems are designed to save money,
but they don't compromise comfort

BY Connie Adair PHOTOS BY Daniel Dutka



It's bright, airy, comfortable and beautiful, but it's not just another pretty face – this stylish 5,500-square-foot custom home has substance.

With GreenHouse Certified Construction, the Energy Star Qualified New Home has all the energy-efficient bells and whistles, from fibreglass-framed windows labelled to withstand Arctic conditions to a system that collects rain water and melted snow and stores it in a 12,000-litre underground cistern for use in the home's seven toilets

and for irrigation. "Every drop of rain water is used," says Amedeo Barbini of Barbini Developments Inc.

Two solar panels on the southeast roof help heat water for household use and 60 to 80 per cent of heat from used hot water is captured by a passive heat recovery system.

There are a lot of green features hidden within the walls and floors, not apparent to visitors or its occupants and not top of mind. All people think about is how comfortable they feel, and that's exactly what Barbini intended.

LEFT

The front door opens to heated marble floors.

ABOVE

The staircase is an attractive architectural element enhanced by the circular floor pattern.





Hybrid Heating System

The 2,500-square-foot lower level is not cold and damp – the humidity and temperature are the same as they are throughout the rest of the house.

“The heating system is somewhat of a hybrid. The main appliance is a modulating gas boiler, modulating meaning that it does not turn on and off,” Barbini says. Instead, it ramps up as required. “The boiler heats water for domestic use, the heated floors throughout the house and the air. The air in the house is heated by water, not a gas appliance like a furnace.” The system is low maintenance, requiring only a filter change once a year.

If it’s dry and cold outside, a steam humidifier with a reverse osmosis system adds moisture to the air as it enters the house. The system adds about 12 gallons of water every 24 hours in the winter and the humidity level never goes under 35 per cent.

The two HRV systems run continuously, exchanging air every 12 to 16 hours. “As the air goes through the air handlers, it is filtered and on the second floor it also goes through a separate HEPA filtering system,” he says.





The front door opens into a gracious foyer, which has heated marble floors. Moving from marble to hardwood to carpet and back again isn't an issue for slipperless feet – the temperature remains consistently warm throughout the home's three levels.

The rotunda features Barbini's signature oval open staircase, a gentler option to a circular design. The staircase is topped by a skylight, which floods the centre of the home with light.

Strategically placed windows and skylights ensure there's ample natural light throughout so there's no need to turn on a light during the day, he says. Energy-efficient windows and skylights have fibreglass frames, which expand and contract at the same rate as the glass so there's no cracking.

To the left of the front door is the library,

which has large windows overlooking the front yard. In the formal living room across the hall, a fireplace flanked by windows is a dramatic focal point. The closed combustion electronic ignition fireplace, one of four in the home, doesn't have a pilot light. Instead, the system turns on with the flick of a switch. It's an energy saver because it can cost between \$250 and \$400 a year to keep one pilot light running, Barbini says.

The fireplaces, which help heat the home, are hooked up to a back-up battery system in case of a power outage.

The dining room easily seats 12 at an Art Deco table. Mouldings add a touch of easy formality. The rest of the neutral home is purposely clean and simple to act as a backdrop to the family's art collection.

LEFT

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ABOVE

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“I future-proof houses by including components that will help save money in the future”

A door beside the library leads to a mudroom, complete with a dog and boot wash. The ‘family entrance’ offers access from the driveway to the mudroom. Another door leads to a heated two-car garage.

The kitchen and two-storey family room extend across the back of the house. Barbini, who owned a kitchen cabinet company but sold the manufacturing side, continues to design cabinetry but uses select companies to build them. Cabinetry throughout his home was built on site and was hand-painted for an extra custom touch.

The family room has a two-storey wall occupied by a fireplace, and another by windows, set two over two. Electronic

LEFT

The lower level includes an exercise room, spa, music room, hobby room and games room.

RIGHT

Strategically placed windows and skylights ensure there’s ample natural light throughout.

BELOW

Cabinetry throughout his home was built on site and was hand-painted for an extra custom touch.





blinds can be opened or closed together or separately. A spiral staircase beside the piano leads to an open loft office that overlooks the family room.

A door from the office leads to the master suite, which has a sitting room outfitted with a fireplace and a Juliette balcony. Pocket doors separate it from the master bedroom. The sitting room is connected to a skylight-topped walk-in closet, which leads directly to the en suite bathroom. The bathroom is also accessible directly from the master bedroom. The design means a sleeping spouse won't be disturbed if their better half is getting ready for work or relaxing in the sitting room, Barbini says, adding that when designing a home it's important to consider how a family would use it.

The en suite bathroom has a separate shower room and a room that houses a Toto Washlet, a space-saving combination toilet/bidet. Each of the other four bedrooms has a unique layout and its own en suite bathroom. All the bathroom fans run on a closed system integrated with the heat recovery ventilation systems.

A laundry room, a mechanical room that includes an air handler, and an elevator are other second-floor features. The elevator is equipped with a battery back-up and phone. It also has a hydraulic system that will gently lower the elevator to the lower level if there is a power outage.

Cocooning is still a popular trend among owners of high-end properties, and this home will not disappoint. The lower level includes an exercise room, a spa, a music room, a hobby room and a games room equipped with a pool table, a fireplace and a big screen TV wired for sound. A wine room and a cold cellar are other features.

Barbini says he is constantly checking out new products and incorporating those that are valuable into the homes he builds. "I future-proof houses by including components that will help save money in the future." One example is a place to plug in electric cars. But instead of concentrating on green features, concentrate on comfort and the rest will come, he says. **HC**