

REPORTS ON ENVIRONMENTALLY INTEGRATED HOMES



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When Tom and I started Solares, we built a house for a couple (my parents!) who were retiring and moving to the country. They wanted a customized country home with high-performance energy-efficiency for a modest cost. Essentially, that became the description of the classic Solares country home. We've since branched out to inner-city renovations, condo upgrades, and multi-unit residential projects, but we love coming back to our roots. The house at Black Creek Ravine is one of those projects.

When Kevin and Susan decided to move out of downtown Toronto, they began their search for a rural property. They wanted to live well away from the city bustle, but also close enough that they could easily drive in if need be. At first they were looking for a piece of land where they could build new, but their search for the best location turned up a picturesque property near Georgetown, Ontario that already had a house on it. The site was nestled in a forest and backed onto the beautiful Black Creek Ravine – they were sold!



The house is essentially new construction on existing foundations. At first, the plan was to do a major renovation and addition, due to restrictions set out by the Niagara Conservation Authority. However, we eventually got permission to build a new structure as long as we used the existing footprint.

This classic Solares country house has a high-performance envelope (EnerGuide86!), triple-glazed windows, high-efficiency furnace and ERV, exceptionally well-planned interior, and beautiful finishes that are affordable with a high-end look and feel.

The design focuses on Kevin and Susan, their desire to be in the country, and their love of entertaining family and friends. In so doing, we designed a spacious and accommodating master wing, with bedroom, customized bathroom, generous walk-in closet, and a spacious laundry room with tons of storage. The guest wing is on the other side of the house with two bedrooms and a three-piece bathroom. The guest area is separate enough from the main living spaces that when no one is visiting, Kevin and Susan can lower their energy use by closing the vents and doors to those rooms.

With careers in IT and accounting, Kevin and Susan are both quite technically-minded, and wanted to know all the details about the products, systems and materials. We worked with Kevin to design a fully-networked house, with programmed light switches, sound, security and other automation components tied to a central hub that he can manage from his home office.

The house is built with 2x6 stick frame construction, with 2 inches polyisocyanurate insulation on the exterior to prevent any potential thermal bridging through the studs, and 5.5 inches of spray-in-place fiberglass between the studs. In total, the wall assembly provides a total insulation value of R34, which is 70% better than the building code minimum!

The roof comprises factory-made trusses and 18 inches of blown-in cellulose insulation on top of the ceiling. The sheet steel roofing has a galvalume finish with a high reflectance rating to help keep the house cool in summer. The home's siding is a durable, factory-painted fiber cement product by James Hardie, an extremely durable, weather-proof product that will last maintenance-free for at least twenty years.

The mechanical system is a forced-air system with super high-efficiency furnace and air conditioner, and the house is equipped with an ERV by Ultimate Air, one of the best performing ERVs on the market. A large basement workshop is heated with a wood stove, which we think is pretty cool because the scraps they generate in the shop can be used as fuel!











Throughout most of the home the cabinetry is custom-made locally. The only exceptions are in the laundry and dressing rooms, where we installed IKEA cabinetry that suited each room's needs at an affordable cost.

A special feature of the house is the large, screened-in porch on the east off of Kevin and Susan's home office. Its soaring pitched roof and immersion in the forest offers a cool respite on hot summer days.

For more information about Solares and our sustainable country (and city!) homes, visit us at www.solares.ca!

- Christine

And, as always, please visit our **blog** for updates on Solares founders Tom and Christine's own major renovation!



