



by JILL WALDBIESER

The Beauty of Building Efficiently

he Baker boys—Brian, his brother Scott, and their father, Jim—founded their custom building, design, and consulting firm to bring environmentally friendly homes to the Lehigh Valley. But they couldn't tell clients that.

"Even as recently as 2005, the word 'green' wasn't something that was widely used or embraced," says Brian. "It had a bit of a negative connotation because people didn't really understand it. You'd say 'green,' and they'd think of Earthships (early solar homes, built in the 1970s) in the Southwest."

Brian, who first encountered green design in the commercial world, had correctly predicted that the trend was heading for the residential market next—right now, it's the only sector of building experiencing any growth—and saw a void in the local housing market that he knew he could fill. But he needed to show what his company, Studio 26 Homes, was capable of, to shatter the myth of green design as unattractive and uninspired. "We needed to put a home out there and show it," he says.

But what they built on a plot of land in Orefield isn't your typical model home. For one, it's a U.S. Department of Energy Building America demonstration home, used to research different energy-saving practices. It's the first house in the state to be LEED-silver certified by the U.S. Green Building Council for its energy efficiency. And it's fully furnished, because Brian and his wife live there.

A Family Affair

"Model homes tend to feel cold," says Brian. This house was a family venture (Brian's wife, Elizabeth, a LEED-certified electrical engineer who has worked on projects such as Melt restaurant in the Promenade Shops at Saucon Valley and the Eastonian condominiums, did the lighting design), so it felt

right that it become their family home. Plus, building something they'd actually live in gave them not only the chance to show people firsthand how an energy efficient house functions, but the opportunity to throw in a few design wows as well.

"We wanted to demonstrate from the design aspect that we're creative, too," Brian says. "My wife and I have little bit more of a modern taste, I call it soft modern." A prime example is the corrugated metal ceiling in the great room, warmed up with wooden beams to keep it from feeling too industrial. The metal also acts as a radiant barrier in the winter, keeping heat inside the house.

Like that ceiling, most of what makes Brian's house 55 percent more energy efficient than current codes require is, for the most part, not apparent at first glance. Indeed, buried inside or behind walls are elements such as a 100 percent recycled drywall, formaldehyde-free insula-

tion, and a tankless hot water heater. There are also solar panels that generate up to three kilowatts of power, placed out of sight on the highest roof. These aspects all speak to Brian's position that green design doesn't have to be obtrusive or ugly.

Glass is a key element of the soft modern look: rows of windows, a majority of which are tall and clerestory in nature, line the great room. All are triple-paned. "The more energy-efficient the window, the more [windows] you can have," says Brian. They're also essential for providing great views. "One of my core ideas about how a home should be designed is to look for the amenities of the site," says Brian. "We're perched up on a hill with all these amazing views. So the whole floor plan was designed around that."

The spine of the home is an 18-inch thick cement and stucco wall that conceals



Name The soft, modern look of a corrugated metal ceiling.

most of the home's systems and utilities, and anchors the floor plan. To one side of this central wall, the rooms are open, flowing public spaces; to the other, more private, compartmentalized rooms. "It's definitely organized around how my wife and I live," says Brian.



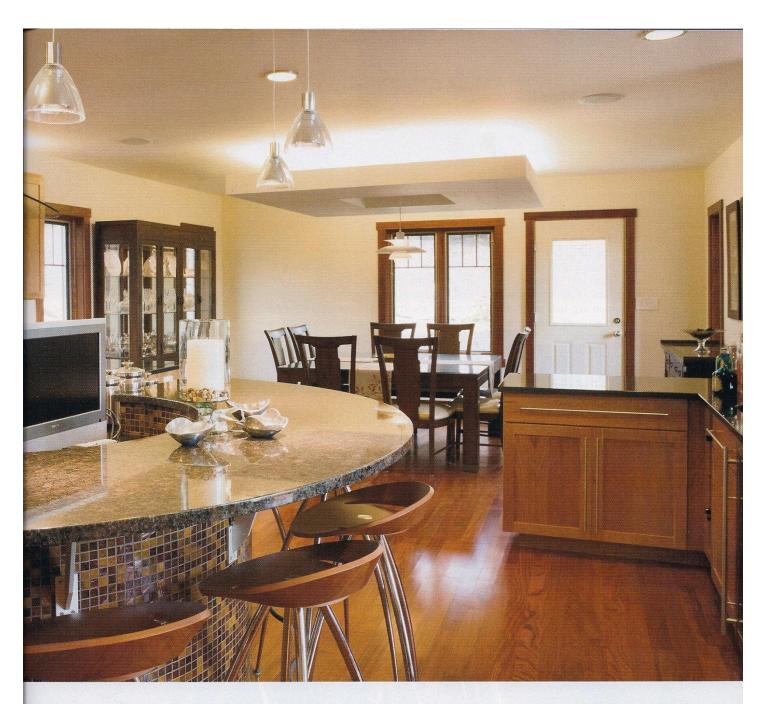






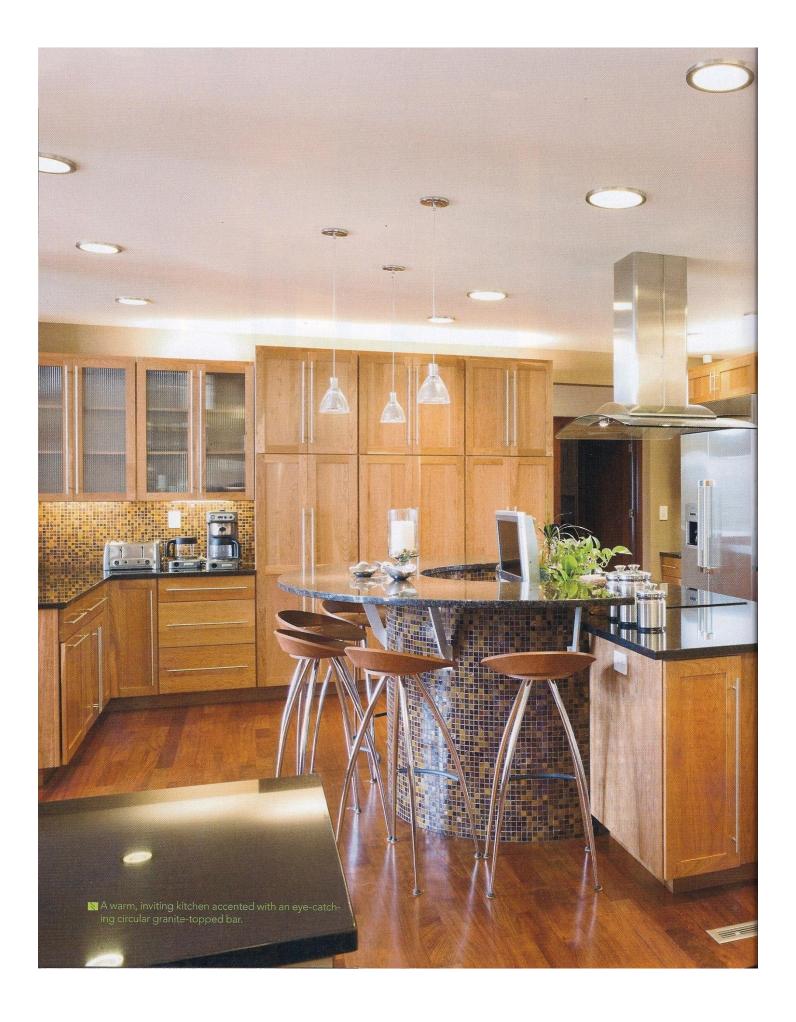
A wide hallway that doubles as an art gallery joins the two sides on the ground floor. Directly overhead on the second floor is a catwalk that's supported entirely from above to maximize the vertical openness of the plan. Open-riser scissor stairs allow light to filter from one level to the next. "I think the more open the home is, the more you tend to use it all," says Brian. "And the last thing I wanted to do was put in solid stairs that would block all that light."

He also likes the way these open elements offer snippets of other spaces, like previews of what's to come. "I'm big on pro-



viding views, even at the end of a hallway," he says. "I like to give little glimpses, so you can see into the kitchen from the foyer. I think it's always neat to have something to look forward to as you dig deeper into the home." The idea, he says, came from the way old mansions were laid out, with a succession of rooms, each a little more intimate than the previous one. How far you'd be invited in depended on how well you knew the owner; strangers might only go as far as the foyer, while guests might make it to the sitting room, and friends invited to the parlor.

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Balancing Act

The many ways the Baker house strikes a balance-between personal life and business, open spaces and private ones, energy savings and aesthetics-is efficiency of a different kind. Brian Baker simply doesn't believe in wasting anything, so even though the house is a spacious 3,900 square feet spread over two floors, if there's an opportunity for a space to multitask, he takes it. It's why he installed a keyboard attached to a granite shelf at the end of the upstairs hallway, transforming notorious dead space into a family workstation. And why the first floor has a full bath and not just a powder room, so the adjacent study can become a guest room in a pinch. Even the desk in the room is modular. "There's always a balance in design," Brian says.

The public spaces in the house revolve around the kitchen. "That's where entertaining starts," says Brian, who is often the cook. And the kitchen, a perfect 20-by-20 foot square, revolves around the stunning circular granite-topped bar at its center. Its base is covered in the same small, mosaic-like glass tiles that form the backsplash. "In a design, you can make one or two big

moves," says Brian. "This draws your eye to it because it's one of the only things in the house that has any curve. Everything else is on a kind of grid." The shape makes for great flow at parties, where the bar becomes a serving station for appetizers and hors d'oeuvres. The rest of the time, it's a cozy nook for grabbing a quick bite to eat. More formal meals are served in the eat-in dining room.

All the appliances in the room, acquired through Trexler Haines in Allentown, are Thermador brand and Energy Star-rated for efficiency. The cook-top is induction, which, Brian says, "has all the quickness and speed that gas does, but none of the combustibles. Plus, we can boil water in 45 seconds." The cabinets, custom-designed by Allentown's Kitchens by WIPCO, are all Pennsylvania cherry that were assembled and milled in the state. Nothing in the entire house, in fact, was shipped more than 500 miles, because using local products saves energy and reduces emissions resulting from transportation.

The kitchen opens to both the great room and gallery. Brazilian cherry floors (certified by the Forest Stewardship Council to have been harvested in an environmentally friendly manner) further tie all three rooms together. "When you get enough people, that gallery turns into a fantastic overflow space," says Brian. People can see, not just room to room, but also between floors, to the upstairs catwalk.





"When people live in a home that isn't as open as this, they tend not to have as much conversation," he says. "I did what I could to increase chance meetings or conversation throughout the house."

But the main function of the extra-wide hallway is to accommodate the art collection he and Elizabeth started when they got married. Because they are constantly buying new pieces, the gallery lighting consists of a wall-mounted rail with moveable lights that can bunch up to focus on a single large painting, or be spaced out to focus on several smaller ones. "Sometimes art is made for one place and one place only," says Brian. "But art is something that changes as people's taste evolve."

Personal Touches

Though they're removed from the sweeping public spaces of the first floor, the bedrooms mirror many of the same design elements. The ceilings are the same design as the great room, but in wood, not metal, for a warmer feel. The master suite has the same clerestory windows on the east wall to bring in the morning sun. And, like a smaller scale version of the rooms on the floor below, the master bedroom and bathroom have an open plan, separated only by a partial wall that

conceals an L-shaped walk-in closet. "There's no better sound barrier than a closet with all its sound-absorptive clothing," says Brian. "We did that throughout the house."

The entire suite, he says, was inspired by boutique hotels where they've stayed, including the white and taupe color scheme. "My wife requested neutrals," Brian says. "For her, it's a very relaxing, tranquil space." Echoing the round bar in the kitchen, a deep soaking tub is at the center of the bath. "We played off the tub's curvature and made it a sculptural element to add intrigue," says Brian. "You're always looking for something to induce a little bit of a wow." A curved wall of glass block rises behind the tub and doubles as an enclosure for a walk-in shower. Small ceramic tiles cover the tub's base and the wall behind the double vanity (again, echoing the bar).

Larger floor tiles run directly up against the Brazilian cherry hardwood in the bedroom, both unifying and defining the two spaces. "Most homes have a threshold between different flooring surfaces, but we wanted it to be transition free," says Brian. So he devised a seamless way to have the flooring surfaces meet. Similarly, he built out an L-shaped soffit above the vanity to bring a measure of intimacy to a room with high ceilings. "It brings the scale down from 13 feet to a more human scale you're comfortable brushing your teeth in front of," he says. "Not to mention, it gave us a place for lights."

The tile that extends a few feet above the soffit defines a 2-by-4 foot area where the wall was built out to accommodate twin inset medicine cabinets. Without bumping out that space, the only way to recess the medicine chests would have been at the expense of insulating the exterior wall they were hung on, leaving a weak point in the house's thermal envelope. "We took a potential problem and created a solution that actually became a fun, unique part of the house," says Brian.

If anything, that's what he and Studio 26 set out to prove was possible: that you can be energy efficient without calling undue attention to yourself, that you can conserve conservatively, that green design can be done, practically and beautifully, in the Lehigh Valley. "Not only can we be successful, but we're doing the right thing," says Brian. "One home at a time."

Nersonal spaces feature comforting warm wood tones and the clean look of glass and tile.

