



## Reduce, Reuse, Rehab

Local Architect Creates Prototype of an Environmentally Friendly Rowhouse Rehab



WHO'S THE GREENEST OF THEM ALL?: Baltimore architect Gabriel Kroiz recently unveiled his prototype design for environmentally friendly and affordable rowhouse rehabilitation.

By [David Morley](#)

Winterling Court is one of those unassuming dead-end alleys in Baltimore, the kind you find by accident, long after you thought you'd explored every street in the neighborhood. Only half a block long, the narrow alley is accessible only by another alley, South Madeira Street, just a block southwest of Patterson Park. And this unassuming little avenue is the home of a newly rehabbed rowhouse in Baltimore—or rather, a newer kind of rehabbed rowhouse.

On a sweltering Thursday in June, architect and designer Gabriel Kroiz hosted an open house to tout his new prototype rowhouse, which he hopes will catch the eye of developers as an affordable and aesthetic alternative to what Kroiz refers to as the “plain-vanilla rehab.” The interior is chic, with a simple and open design plan. Earth tones abound, and it reminds one of the “luxury town homes” that have sprouted up in the Canton neighborhood over the last decade. But when Kroiz begins to speak about the rehab, he asserts that his plan is more than a sleek design: It's also environmentally friendly, built primarily out of recyclable, sustainable, and green materials. Not only that, he says, but he used only materials one can easily obtain from a Home Depot or local wholesaler. In essence, it's an environmentally friendly home that's within the average rehabber's means.

“I didn’t bring in solar panels to this house,” he says, noting that the panels are expensive and difficult to come by. “I kept tight limitations on how far I was willing to go technologically.”

His walls, made out of wheat board—a woodlike wall product made of the fibrous parts of the wheat plant—were purchased at Chesapeake Plywood in South Baltimore. The ceiling tiles—ordinary drywall—came from the Home Depot in Southeast Baltimore.

Instead of hardwood floors, Kroiz opted for bamboo. “There’s no need to use wood that takes 80 years to grow,” he says. “If you use bamboo, it’s a renewable resource—it’s a grass, you harvest it in five years.” And, he adds, bamboo is much less expensive than it was just a decade ago.

Kroiz did use standard sheetrock for the first-floor ceiling. But rather than mounting it on studs, “mudding” it with joint compound, and applying several coats of paint, he set pieces of drywall like a drop ceiling between shiny aluminum studs, which he left exposed. He painted a clear coat over the drywall to leave it a natural eggshell color. Negating the need to paint, Kroiz says, is in itself an environmental decision.

“There is never a painting job that doesn’t leave a half-gallon of paint that doesn’t get disposed of properly,” he says.

Besides the use of recycled or renewable materials, what also stands out is the use of space in the rehab. Alley houses are typically smaller than the houses on main streets, and the houses on Winterling Court are smaller even than many alley houses. At 725 square feet and no basement, Kroiz’s building is the size of most one-bedroom apartments. Since space was so precious, Kroiz—who helped design a shopping mall in Korea and has taught design at the Maryland Institute College of Art—was thrifty in his design. For example, the bathroom features a showerhead that comes out of the ceiling and turns the entire room into a shower.

“Instead of planning for a bathtub or a shower room, I decided to make the entire bathroom the shower room,” he says. “It’s a five-foot-by-five-foot shower space.”

Kroiz, who operates his own firm called Kroiz Architecture, hopes his prototype green rowhouse catches on. He held an open house June 22 for a reception and viewing of the building, which he renovated for approximately \$100 per square foot, and he’s hoping a developer will be interested in using the concept.

So far, Kroiz hasn’t had any bites. “What’s interesting,” he says, “is that people who have looked at it are still absorbing the idea that this is the same amount of work as a traditional [rehab]. Developers seem to think of it as an expensive high-end project.”

Kroiz is not the first to attempt an environmentally friendly rehab in Baltimore. More than six years ago, TerraLogos, a Hampden architectural firm, developed a lengthy document at the behest of the Maryland Department of Natural Resources called “Green Building Template: A Guide to Sustainable Design Renovating for Baltimore Rowhouses.” The document provides data about energy use, recommendations for green building materials, and cost analyses for green rehab projects. The document was composed by firm principals Kim Schaefer and Julie

Gabrielli, and it developed a system that identifies levels of greenness in a home. Ranging from light green to dark green, the document identifies rehabs that take small steps, like installing energy-efficient appliances, to houses constructed using what architects call “off the grid” measures, such as installing solar panels and solar-voltaic systems for heat and electricity generation.

As part of its effort to promote its own green design, Terralogos also developed a prototype medium-green house: Kim Schaefer’s abode in Southeast Baltimore.

Schaefer’s house is very different from the one Kroiz designed. In fact, one would not suspect at first glance that it is a green house that saves Schaefer 25 percent on her annual energy bills. Her house is of a more traditional design, and it features carpeting, hardwood floors, and a traditional shower and bathroom. Schaefer, who says she is impressed with the quality of Kroiz’s work, says she focused more on “energy and water conservation” than on building materials in the design of her home.

Energy conservation is key to building an environmentally friendly home, Schaefer says, and she replaced skylights with clerestory windows for a passive-solar effect.

“It’s a midblock rowhouse and it’s flooded with daylight,” she says. The lighting, appliances, walls, windows, and roof are all designed for maximum energy conservation.

So far, no developer is planning on using her template for greener building, but Terralogos is still meeting with developers to convince them that green architecture is a viable rehab alternative. Schaefer says people around the city are expressing some interest in sustainable building practices, though, and she says plans are afoot to create build green residences in the city. “I think we’re on the edge of some serious greening,” she says.

Tom Liebel, co-chairman of the Baltimore American Institute of Architects’ Committee on the Environment, says that “there’s a lack of understanding about the costs” of environmentally conscious building. Developers, contractors, and consumers often believe that energy-efficient and recycled materials cost more.

“You do typically pay a premium for the costs,” he acknowledges. “But if you look at the savings, the buildings pay for themselves very quickly.”

Liebel says it will take time to get contractors and developers used to the idea that when they bid on a contract they can incorporate green materials and design as a selling point rather than an inconvenience or unnecessary expense. And that’s the idea that Kroiz hopes to get across with his prototype home on Winterling Court.

“Right now, it’s fairly tough to ask people to pay more for something,” he says. “[But] the whole game is to redefine what the value is for the consumer and the developer.”