

Remodeling Before+After

Wooded Bliss

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After 20 months and seven designs, a passive solar failure gets its rightful place in the sun.



Before



Views, views, and more views topped the clients' wish list. And views — of towering oak and cherry trees; of wildlife including deer and the occasional great horned owl; and, in winter, of the twinkling lights of town, six miles away — were what Rochman Design-Build, Ann Arbor, Mich., delivered. That is, after working through some kinks.

There was the ineffectual solar heating system that blocked out natural light and caused wild temperature swings. There was the family-unfriendly floor plan and the child-unfriendly lot. There was the year-long design process, suspended briefly while the clients considered buying another house. And there was the budget, which sent the remodeler back to the drawing board again and again.

GREEN GONE BAD

Nestled into a steeply sloping lot in the wooded hills outside Chelsea, Mich., a suburb of Ann Arbor, the 1,800-square-foot home appealed to its outdoorsy-minded owners for its dramatic setting and cottage-like interior featuring raw pine floors, exposed brick walls, and beam-and-plank construction. Guerin Wilkinson, who became the home's third owner in 1991, says he "liked the way the house looked from the street" — that is, quirky and unpretentious, especially its unassuming entrance, which belied the relatively open space behind it. "I liked the unusual nature of the house," he says. "It fit my personality."

The home didn't just look quirky; it was quirky. Built on speculation at the height of the energy crisis in 1980, it aspired to energy efficiency by way of passive solar heating — a method that uses glass to capture, and mass to store and slowly release, the heat of the sun. In the case of this house, the glass took the form of a two-story greenhouse, and the mass was a block and brick two-story loadbearing wall 12 inches thick.

But, as with so many other good intentions, this passive solar system went bad — a failure both of execution and location.

In terms of execution, the system didn't evenly distribute heat throughout the house, in part because of faulty construction of the plenums and convective loops. To compensate, the home's previous owners had installed fans and added wood-burning stoves. Wilkinson himself installed a gas-fired furnace in the attic, but the collective result was both visual clutter — with ugly ductwork snaking throughout — and hard work. "You had to be there all day to flip switches," he recalls. "It was just funky, and it made a lot of noise."

In addition, the glazing failed on the greenhouse, making it plant-roastingly hot in summer and freezing in winter. The greenhouse was "a good habitat for spiders, but pretty much unusable in winter," Wilkinson says.



Behind the home's hobbit-like front entrance is a surprising expanse of space and long sightlines that reach through three levels and into the wood outside. "I like the fact that going into the house is a surprise," owner Guerin Wilkinson says.

In terms of location, the sun-challenged Michigan woods delivered too many cloudy days — sometimes for weeks on end — for the system to work. And the home's beautiful setting was squandered by the massive greenhouse and the masonry that blocked light as well as any views to the backyard or woods.

Despite the home's drawbacks, Wilkinson didn't initially plan to remodel. A bachelor when he bought it, as well as a weekend botanist, he spent more time tending to his gardens than to the interior. Plus, he owned a tree service, so "the idea of wood stoves was fine," he says. "I figured I would never run out of wood."

After a few years, however, Wilkinson was joined by Mary Waldron and her young daughter, followed by a son for the couple. As a family home, it didn't work. Waldron, an artist drawn to light and color, remembers walking around the house with Rochman, whom the couple had heard about from friends. "He asked me what I liked about the house, and then he said, 'You don't like much about it, do you?'" Other than the site, she didn't.

PEELING BACK THE PRIORITIES

In architecture school, Rochman learned to engage clients with a simple question: "Do you want us to design for your budget or for your wish list?" Wilkinson and Waldron, he says, "wanted us to design for their budget," which was \$200,000. Yet they also had many wishes, which Rochman unearthed by way of a series of questions that he weaves into every design/build process. (See "Questionnaire Extraordinaire," page 88.)

From these conversations, Rochman created a "program" that distilled the couple's wishes into two key concepts: interaction with

"Before [the remodel], the roof was the only place to see the view."

—Mary Waldron, homeowner

nature and interaction between spaces. As is often the case, "their program was much bigger than their budget," he says. The couple agreed to design for their budget, with some flexibility, and to adjust their wish list accordingly. Together, remodeler and clients settled on six priorities:

- Views, views, views
- New "away room"
- Mudroom/second entry
- Improved front entry
- New screened porch
- Improved kitchen

The away room, a concept borrowed from *The Not So Big House* author Sarah Susanka, refers to a set-off part of the house that creates a quiet retreat for reading, working, or music.

The mudroom/second entry would create a child-friendly transition between the house and what was, at the time, the only level play yard, and between the house and the detached garage. "We wanted a place to drop the backpacks, where the shoes wouldn't jumble up," Waldron says.

A new front entry would replace what the couple called "the mouse hole": a small, dark, unwelcoming space that took visitors down several steep and narrow stairs before entering the main house.

The screened porch would create a connection to the outdoors and remind Waldron of her childhood in a house without air conditioning, where the family spent much time on the porch. "I wanted the porch to be integrated into the house. We're outdoors people," she says. "We don't care about pollen and stuff."

BACK TO THE DRAWING BOARD

Over a period of about a year, Rochman presented Wilkinson and Waldron with at least seven conceptual designs, some accompanied by a 3-D computer model to show the massing of the back of the house after the greenhouse had been removed. Rochman was project architect and handled the final detailing, specifications, and execution, but he credits another local designer named Jef Forward as a key player in working through the schematics.

Questionnaire Extraordinaire

Gary Rochman's design/build process begins with a detailed "programming questionnaire" that he customizes for each client based on their home and needs. The main programming boilerplate is 17 pages long. Clients complete it on their own, then Rochman meets with them, using their answers as an "agenda to go through and hear the stories behind some of their ideas," he explains.

"The questionnaire is a great organizational tool to help people calm down from the countless ideas swirling in their heads, and it helps us focus," Rochman says.

Questions cover basics such as the ages of the inhabitants and the age and style of the home, and explore the client's flexibility regarding timing, budget, and design. "Gary's questions were so wonderful and detailed," remembers client Mary Waldron, noting in particular his "list of 30 adjectives to describe how you want your house to be." She and Guerin Wilkinson passed on words such as "impressive" and "spacious" (their completed project added just 280 square feet of new space), and checked off words such as "whimsical," "unpredictable," and "comfortable."

The questionnaire also asks questions meant to reveal how the clients actually live, e.g., "What activities take place in the kitchen? Studying, planning, baking, bill paying, homework, gourmet cooking for large parties?" —L.T.



Fairly early on it became apparent that the cost would exceed \$200,000 by a considerable margin to achieve the couple's goals. Frustrated, Waldron and Wilkinson enlisted a real estate agent to show them homes that didn't require so much work.

"But they were all so hideous, and we thought of all we would have to do to them to make them reflect our taste and be interesting," Waldron says.

So they returned to Rochman, and both scaled back and expanded their plan. For

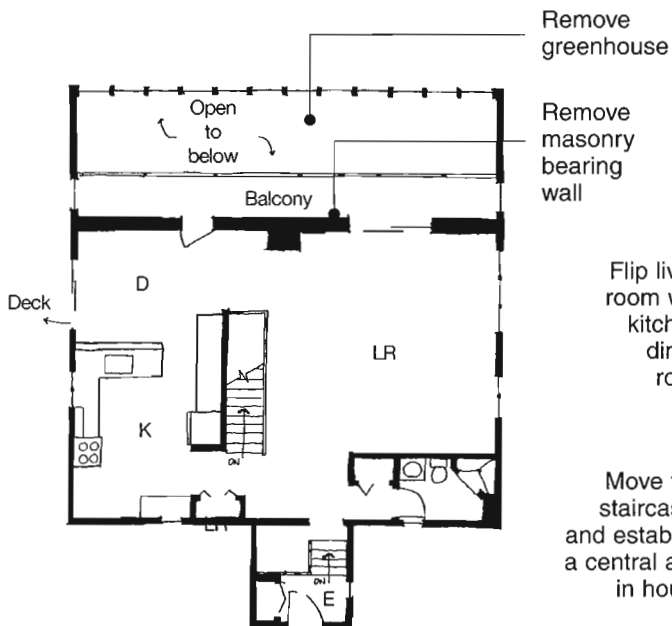


Before

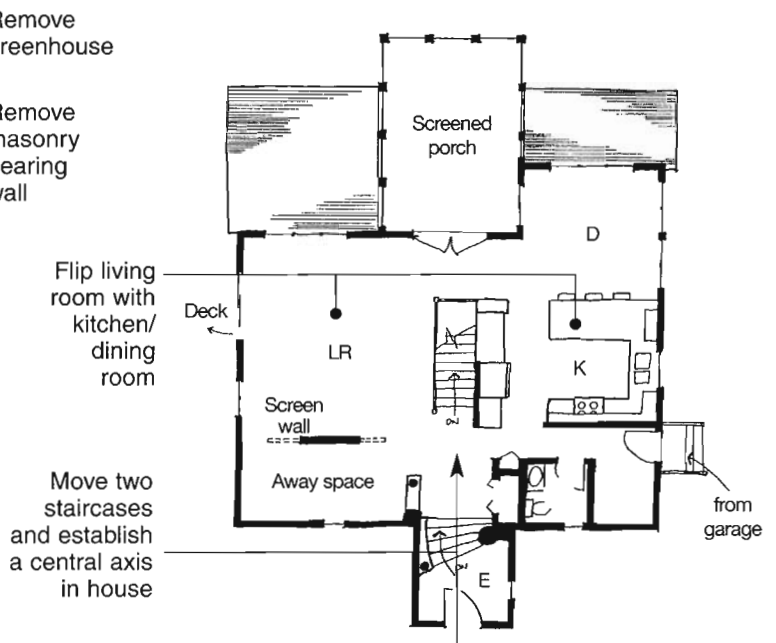
After removing the two-story greenhouse and solar panels, Rochman built a family room on the lower level, extended the new dining room, and cantilevered the new screened porch (left) 6 feet to maximize views without relying on the support of unstable soils. The home won NARI's 2006 Regional Contractor of the Year (COTY) award for the category of Entire House remodel, \$250,000-\$500,000.

UPPER LEVEL PLAN

Before



After



instance, they conceded their dream of an away room as a separate treehouse-like “pod” in favor of an “away space” in an existing room. (See page 92.)

Rochman says the “bingo” design moment was when he and Forward proposed “flipping” the floor plan, which involved moving the staircase slightly west and south. “It was a big cost issue, but we felt the kitchen was on the wrong side of the house,” he says. “The whole center of gravity” — including the yard and garage, as well as the high-priority mudroom — “was on the other side.”

Yet simply moving the kitchen to the other side of the house wouldn’t allow room for both the living room and the away space. Rochman says relocating the stairs not only improved the home’s flow, but also pointed a natural path toward the eventual screened porch. In earlier designs, “we had the porch all over,” he says.

What’s more, the relocated staircase was wide enough to create a direct visual and aural connection between the home’s two levels. “It also gave us the opportunity to add some more wow and fun to the railings, which the clients wanted,” Rochman says.

FLOWER POWER

Construction took eight months, beginning with a white-gloved approach to Wilkinson’s beloved gardens. Featuring some rare and exotic plant species, they constituted what Rochman came to consider as the “third rail” of the project. Orange hurricane fencing was placed around numerous plants, and lead carpenter Brian Mills had to be present whenever construction vehicles or Dumpsters were near. “We read the riot act to every guy who came on site,” Rochman says.

Rochman’s team removed the two-story greenhouse, then restructured the main roof and removed the solid brick upper-level bearing wall. “It was stunning when they started tearing the house apart,” remembers Waldron, who had by then decamped with her family to a rental home. “Before [the remodel], the roof was really the only place to see the view.”

The removal of the passive solar system didn’t eliminate unsightly HVAC issues. Rochman also had to relocate most of the heat and air conditioning runs that had been installed with the furnace. On the lower level, where the greenhouse had stood, he created a family room with electric in-floor heating — ideal for the children who, he knew, would play on the floor.

Initially, the cantilevered porch extending off the back of the house was going to be supported by two big posts, Rochman says. “And then we discovered that the soil under the lower deck was eroding. The whole hillside was rolling down the hill.” This led to two other major decisions: to cantilever the porch 6 feet, using 12-inch LVLs that extended another 11 feet back into the house, with a mud-set tile floor providing additional anchorage; and to build a 70-foot



The widened staircase provides sightlines (and soundlines) between the two levels. Thoughtful details, such as the hand-forged railing that resembles tree branches, “added to the quality of space the clients wanted,” Rochman says.



curved retaining wall just downhill of the deck. “The retaining wall would keep the existing soil from washing away and would also create an area for the kids to play,” Rochman says. It also added more than \$18,000 to the contract price.

ELEMENTS OF SURPRISE

Strong communication buoyed the clients’ confidence in Rochman Design-Build throughout the process, even as the final price topped \$350,000, counting design fees. At weekly meetings, Rochman’s staff took notes, which they typed up for Waldron and Wilkinson to review and sign at the following week’s meeting. “Gary really avoided misunderstandings and made sure all communications were good and clear,” Waldron says.

The family also appreciated Rochman’s attention to them on a more personal level. For instance, Waldron’s grandparents had a cottage on Drummond Island, in northern Michigan, and she liked the idea of her house somehow featuring cedar from the island. “So I called some guys up there and Gary took care of the rest,” she says,