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Project Living Proof providing an example of sustainable residential gardens

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Smart gardening practices take sustainability into the great outdoors.

A garden is a perfect place to put these concepts to work, and a model for sustainable landscape design is taking root around a 99-year-old house in the Rockhill neighborhood, owned by the Metropolitan Energy Center. The front, back and side yards on the 50-by-130-foot lot have been designed to demonstrate smart, ecologically sustainable landscaping practices that make sense for homeowners in the 21st century.

“Whatever stage you are in your greenness and seeking — whether you are thinking about it or are in the midst of it, you want to see what’s available to you,” says Jim van Eman, architect for the project, known as Project Living Proof. “In this project, it’s almost all there.”

Matt Schoell-Schaffer, a landscape architect at Patti Banks Associates who worked on the project, recalls, “when we were coming up with the design, we could daydream to the max.”

Rain gardens and rain barrels are integral parts, but the garden also includes native shrubs and flowers, raised beds for vegetables, a patio for backyard picnics, a low-maintenance lawn and permeable paving in the parking area. The garden uses reused and recycled materials wherever possible.

The garden is Kansas City’s pilot project in the Sustainable Sites Initiative (also known as SITES), a partnership between the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center and the United States Botanic Garden. The groups are working to develop a rating system for sustainable landscape design, comparable to LEED certification for buildings.

Of 174 pilot projects across the country, only about 22 of them are residential. The garden around Project Living Proof promises to be one of program’s little gems, with its small size, stylish design and ambitious goals.

“We wanted the landscape to express the same diversity of options for the exterior as the interior of the house does,” says Dustin Jensen, director of the energy center. Energy efficiency is the guiding principle of the project, and one goal of the landscaping is to make people aware that the supply of municipal water and the treatment of waste water are energy-intensive.

Gardeners can freely make use of the soil around their houses, of course, and sunlight and air are free, but water is an expensive ecological resource. The project’s garden, with a cistern, a rain barrel and rain gardens, is designed to catch, hold, and recycle 95 percent of the rain that falls on the property in a typical year, says Laura Adams, a water resources engineer at Black & Veatch who helped launch the project.

Beyond water conservation

The design starts out front, where rocks found on site have been reused to patch the low wall around three sides of the property. Just inside the wall are raised beds for eggplant, chard, beets, herbs and other crops. The frames of the beds are made of walnut harvested from local trees cut by one of the project’s collaborators, Joe Hendrickson of Hendrickson Tree Care.

Pea-gravel paths around the beds allow gardeners to harvest crops without getting muddy feet, but they also help filter water in downpours. The gravel helps hold the rainwater long enough for it to sink into the clay soil, Adams says, so it helps limit runoff.

A hedge of Virginia sweetspire, a small native shrub, puts a tidy frame around the front garden. It’s “visually friendly,” says Lisa Treese, a landscape designer at Patti Banks who worked on the project. “We were trying to strike a balance. It was our way of formalizing the edge, not shoving the vegetable gardens right up to the property line. We

wanted to be good neighbors, too."

Food crops were incorporated into the design because crops are edible and beautiful — plus they have social value, Schoell-Schaffer says. Harvesting parsley or parsnips from a home garden contributes to a gardener's health and well-being, and growing your own food provides opportunities for exercise and social interaction.

Natural collaboration

Sustainability isn't only a matter of conserving resources. "It covers a lot of ground — social, economical and ecological," says Steve Windhager, director of landscape restoration at the Wildflower Center, who has been working on the SITES certification system since 2005. "If you don't have all three, a project may be good, but it's not sustainable."

Students participating in Green Works, which introduces Kansas City kids to environmental and sustainable ideas and programs, helped plant the garden this spring.

"It made sense for us to reach out to Green Works," Adams says. "Project Living Proof is part of their community, and we had time to talk about it, and about what they want to do when they grow up. It's … especially important to get youth involved — kids who may not know what careers are out there."

SITES-certified landscapes (they may be campuses, parks, subdivisions, commercial or industrial areas, home landscapes or mixed-use sites) will be given up to four stars. The rating reflects how successfully they sustain "essential ecosystem services" such as soil and water, and how well they manage invasive plants, work with native plants and use and conserve resources.

It's not a contest, however, but collaboration. The landscape projects in the two-year program, ending in June 2012, also receive credits for contributing to the health and well-being of people and communities and for fostering a sense of stewardship of the environment.

"We are working on having the built world and the natural world work together," says Jim Lapides, spokesman for the American Society of Landscape Architects in Washington, D.C. "The pilot projects are really putting this into action."

The big reveal

Project Living Proof — both the house and the garden — is scheduled to have its grand opening on Oct. 3. By then, the backyard also should be completed, with espaliered fruit trees or berries, a compost bin and a patio of recycled concrete.

Downspouts will be connected to rain barrels and to an above-ground cistern. Permeable pavement will be laid in a parking area. A shade garden is being planted under an oak tree, and a turf-demonstration area will show off a mixture of buffalo grass and blue grama grass. The grama grass "is bullet proof in terms of hardiness and likes very little water," Schoell-Schaffer says. "It's a wonderful little plant."

No one expects homeowners to be able to incorporate every idea in the Project Living Proof garden into their own home landscapes, but the ideas are portable and adaptable.

"The most influential element within our sphere is our home," van Eman says, "and if we can help people understand that sustainability goes out to the property line — that it's not just recycled glass countertops — that's a step in the right direction."

RESOURCES

•**The Metropolitan Energy Center's Project Living Proof,** 917 Emanuel Cleaver II Blvd., opens Oct. 3. For more information, visit www.kcenergy.org.

•**The Sustainable Sites Initiative** promotes sustainable landscape design, development and maintenance for sites with or without buildings. Find program details and the pilot projects at www.sustainablesites.org.

•**Landscape for Life** is a program developed by the Lady Bird Johnson Wildflower Center (www.wildflower.org) and the United States Botanic Garden (www.usbg.gov), designed to promote sustainability by helping homeowners wisely use resources.

@ Find a Project Living Proof photo gallery at **Kansas City.com/home**.

Getting started

You can take on sustainable landscaping one project at a time, say Matt Schoell-Schaffer and Lisa Treese, landscape designers at Patti Banks Associates (www.pbassociates.com). They were part of the design team for

the garden at Project Living Proof.

“We wanted the site to not only showcase design and technology, but to be a bridge — we wanted to make it to a point where a person could go to this and say, ‘I could do this,’ ” Schoell-Schaffer says. Here are some of the elements of the garden project.

•**Rain gardens:** They catch rainwater and allow it to infiltrate the soil instead of running off, but they also utilize native plants, which thrive in our climate and conditions. Native plants also support birds and butterflies.

•**Lawn:** The turf areas are limited, and they are planted with low-maintenance, low- or no-mow turf.

•**Flowers:** The design relies on easy-care native coneflowers, asters, yarrow, Virginia bluebells and many others, along with ornamental grasses. It includes plants that bloom from early spring through late fall.

•**Trees and shrubs:** Mature trees are one of the dominant landscape elements of the neighborhood and reflect the City Beautiful movement’s influence in Kansas City when the neighborhood was developed almost 100 years ago, says Dustin Jensen, director of the Metropolitan Energy Center. They give the neighborhood its sense of place, he says. An existing oak tree provides shade and habitat, and other trees and shrubs are planted in the understory. A shade garden under the oak is full of handsome foliage plants.

•**Recycled materials:** Concrete and rocks from the site have been repurposed to make a patio and a low wall.

•**Compost bin:** For kitchen scraps and autumn leaves; compost will be used to amend the soil and mulch the beds.

•**Permeable paving:** Rainwater rushes off a driveway, but permeable surfaces allow the water to soak in. They are installed over a layer of gravel. Snow melts more quickly on pervious pavers than it does on a traditional driveway, Schoell-Schaffer says.

•**Edible landscaping:** Raised beds give the vegetable garden a tidy look; in the backyard, espaliered fruit trees and berry plants produce crops in a small space.

•**Boardwalks:** Wooden walkways make the garden accessible to visitors in wheelchairs. “It’s not a ramp,” says Jim van Eman, the project architect, “it’s going to be a cool element for everyone.” The boardwalk is wide enough to accommodate a garden cart, and it minimizes the slope on the site.

•**Gardening together:** A garden is a place to escape from the busy world or to socialize with friends and neighbors. Children love to pick berries, play games and look for bugs in their own yards. Working in a garden is good exercise, and just being outdoors is healthy.

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