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The Valley guide to an eco-friendly lifestyle

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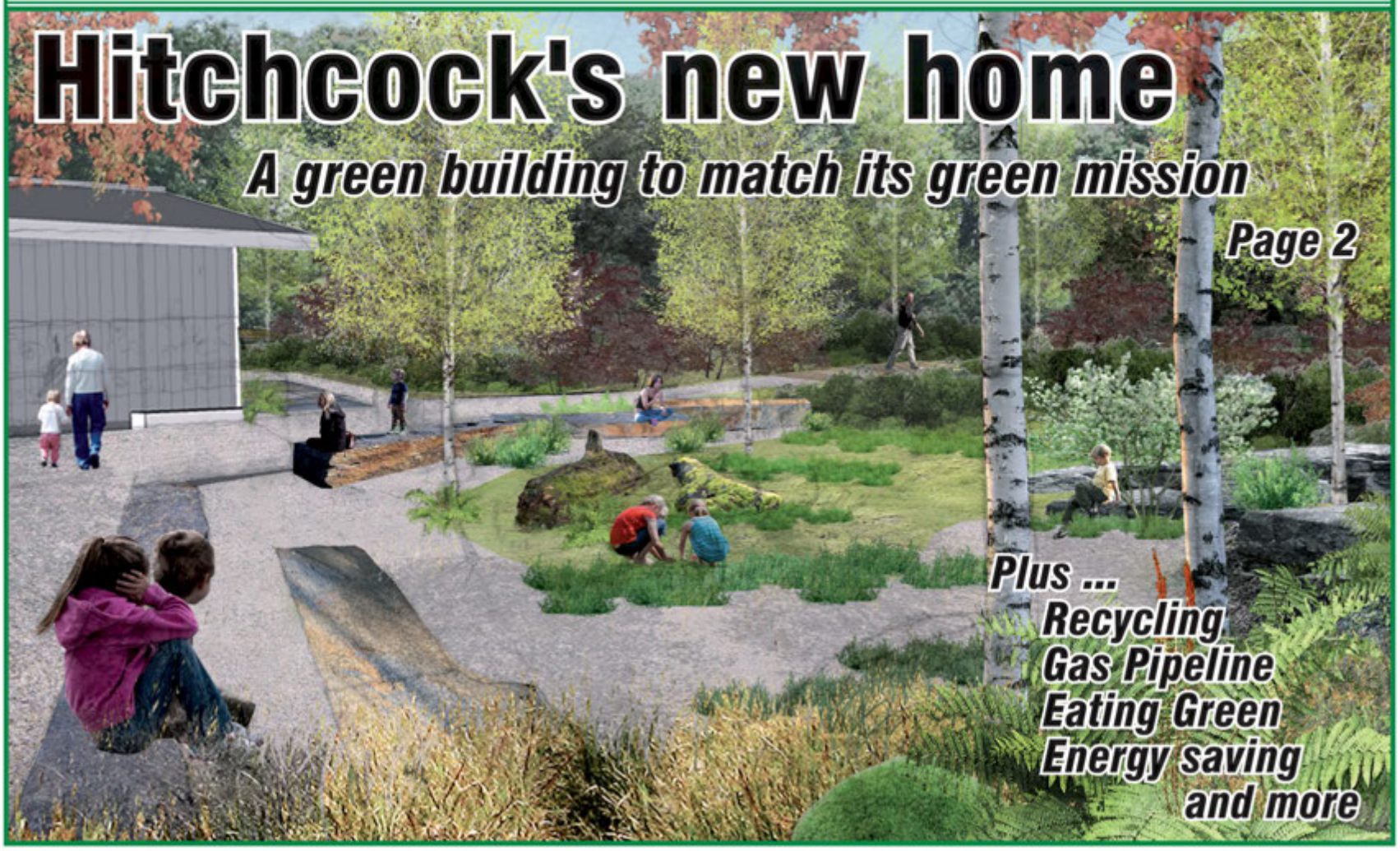

Hitchcock's new home

A green building to match its green mission

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Going Green **is published quarterly by The Recorder, of Greenfield, Mass., to help readers in the Pioneer Valley of Western Massachusetts and southern Vermont sustain and protect our natural resources for future generations.**

Going Green **offers readers a forum for their opinions and concerns; expert advice they can use at home and at work; locally written stories that objectively examine regional issues, and a community of readers to share and inspire progress toward the goal of sustainable living.**

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On the cover: **Courtyard of the planned Hitchcock Environmental Center in Amherst. See story this page.**

COVER STORY

Rendering by designLAB Architects.

Artist's rendering of approach to the new home for the Hitchcock Center for the Environment on Route 116 in Amherst. Hitchcock hopes to break ground on the project late this spring and anticipates a grand opening in the fall of 2016.

Hitchcock Center takes 'Living Building' challenge

Environmental center's new home will be state of the art in green construction

By MAUREEN TURNER
Special to Going Green

AMHERST — When Amherst's Hitchcock Center for the Environment marked its 50th anniversary in 2012, it was an occasion both to celebrate its history and to consider its future — including where it would spend that future.

Since 1976, Hitchcock has made its home in a converted carriage house on 13 acres of town-owned conservation land just south of downtown Amherst. And while the building has its charms, says Julie Johnson, Hitchcock's executive director, the organization — with its popular camps, field trip program, classes for kids and adults, and other public programs — has simply outgrown the space.

JOHNSON

But the conversation was about more than simply finding a bigger home. Any new building, Johnson says, "needs to be an extension of our mission." Given Hitchcock's emphasis on education, the organization was determined that its expansion project not only be environmentally responsible and sustainable, but also serve as a model for a new kind of approach to building. To do that, Hitchcock's leaders decided to take the Living Building Challenge.

The Living Building Challenge is a building certification program created in 2006 by the International Living Future Institute, or ILFI, a nonprofit based in Seattle. The program is often compared to the Leadership in Energy and Environmental Design, or LEED, certification program, though it's more rigorous (some have dubbed it "LEED on steroids").

Projects are evaluated in seven performance categories, which ILFI refers to as "petals": Place, Water, Energy, Health & Happiness, Materials, Equity and Beauty. Among the requirements: buildings must be both net zero water and net zero energy, and must demonstrate that over a 12-month period after occupancy. The Living Building Challenge calls for projects to be built on previously untouched land and favors ones that remediate contaminated land. Projects must avoid

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Hitchcock Center

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using materials on a "Red List" of environmentally unsound products. They should be designed to encourage alternatives to car use. And they must take into account indoor air quality and other workplace environment issues in their plans.

The philosophy, Johnson says, "completely resonated with the conversation we were already having."

Initially, Johnson says, Hitchcock hoped to expand its current building. But because the building is on conservation land, surrounded by wetlands, it's subject to constraints that make expanding its footprint impossible. To grow, then, Hitchcock will have to move.

"It's an emotional move for us," Johnson says. "We love [our current building]. We love our land, which has been our outdoor classroom for decades. … It took an extraordinary new site to really open our minds to leaving."

That new site will be just a couple of miles down Route 116 on the Hampshire College campus, on land that the college will rent to Hitchcock for a nominal fee. The land, Johnson notes, has many of the same features as Hitchcock's current site: trails, woodlands, vernal pools, ponds. But unlike that current site, it will accommodate a much bigger building — 8,500 square feet, 5,000 more than the existing building — with more classroom and other public space. The site will also allow for more trails, teaching gardens, and other outdoor resources. With so much more space, Hitchcock predicts a 40-percent increase in the number of participants in its program and a 230-percent increase in its number of visitors. Hitchcock hopes to break ground on the project late this spring and anticipates a grand opening in the fall of 2016, according to Johnson.

Rendering by designLAB Architects.

View from Route 116 of the new Hitchcock Center for the Environment in Amherst. The new site will be just a couple of miles down the road on the Hampshire College campus in Amherst.

The building will have photovoltaic solar panels on its roof to meet the Living Building Challenge's net zero energy requirement. To satisfy the net zero water requirement, the building's roof system will act as a watershed, capturing rainwater that will be channeled into a filtration system and then stored in underground tanks, to be used as drinking water and for the building's sinks. (The building will have waterless composting toilets.) "Grey water" used in the sinks will then be filtered and channeled outside into a leach field, where it will recharge

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Rendering by designLAB Architects

Visitors Center for the new Hitchcock Center for the Environment on Route 116 in Amherst.

■ Hitchcock: $6M project will be 'built to last'

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the groundwater. "The building will model or mimic how watershed works, and it will also teach about the water cycle," Johnson explains.

As part of the building process, Hitchcock will clean up arsenic residue from an old apple orchard that had been on the land — taking a contaminated site and making it healthy, Johnson notes.

The Living Building Challenge also calls for projects to emphasize public education, a requirement that fits neatly with Hitchcock's mission. The new building design will incorporate exhibits demonstrating its sustainable features; for instance, the water filtration system will be visible in its main corridor, so visitors can see how it works, while a digital dashboard will display, in real time, the building's energy use. Other interactive exhibits will be spread throughout the building and its grounds.

> **"The building will model or mimic how the watershed works, and it will also teach about the water cycle."**
>
> **Julie Johnson**
> Hitchcock executive director

None of this will come cheaply. Johnson says the project will cost about $6 million, to come from private fundraising and public grants. That price tag, Johnson says, includes the new building as well as site improvements and remediation. While that's more than a conventional building would cost, she adds, it's a sound investment; buildings that meet the stringent Living Building Challenge standards "are highly durable buildings that are built to last," made of quality materials rather than cheaper but less sound materials. Hitchcock will also realize savings because it won't be paying for water or energy.

To pull off such a complicated project, Hitchcock has put together a team that includes designLAB architects of Boston and Northampton's Wright Builders, who will serve as the construction manager, as well as consultants in areas such as exhibit design and green material sourcing.

Designing a Living Building Challenge project presents a learning opportunity for all the players, Johnson notes, since the effort is so new. According to ILFI, so far, only five projects have achieved full certification, all of them in the U.S. (including Smith College's Bechtel Environmental Classroom, a 2,500-square-foot "field station" in Whately). Another 12 have received partial certification. There are also many buildings in the Living Building pipeline, including projects that have been completed but cannot be certified until they meet the requirement that they be fully energy and water independent for 12 months after occupancy. In 2014, ILFI reported 201 registered projects in 12 countries.

While the Living Building Challenge is, indeed, challenging, Johnson says it's been an invaluable learning opportunity, a chance for Hitchcock to think deeply about the organization's future and be mindful about the choices it makes as it moves into that future. "It isn't business as usual anymore," she says. "And I think we have to challenge ourselves at every level."

MAUREEN TURNER is a Valley-based journalist who lives with her family in Florence. She has a master's degree in journalism from UNC-Chapel Hill.