

CHAD OPPENHEIM

A chat (and a swim) with Miami's coolest starchitect **p14**

PARADIGM SHFT

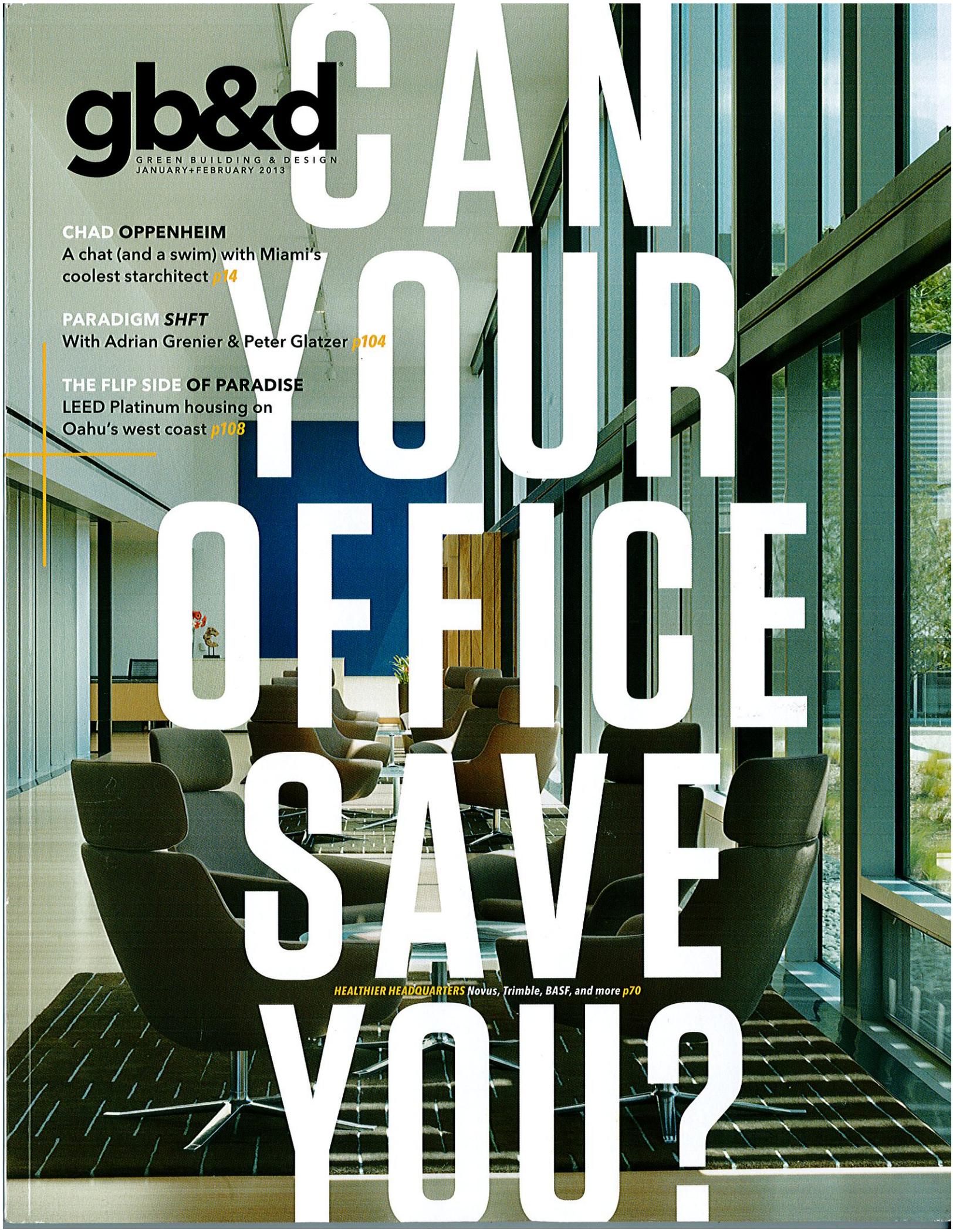
With Adrian Grenier & Peter Glatzer **p104**

THE FLIP SIDE OF PARADISE

LEED Platinum housing on Oahu's west coast **p108**

HEALTHIER HEADQUARTERS Novus, Trimble, BASF, and more **p70**

CAN YOUR OFFICE SAVE YOU?



"We've already added these solar panels to seven buildings, and we'll add them to any building on campus with a flat roof."

Patricia Swannack, Monmouth University

proximity to the Delta Waterway, the building was designed to retain 100 percent of storm water received on-site," Kang says. To accomplish this, Domus incorporated bioswales as part of the property landscape and on top of the two-story parking structure, which features a green roof that will help absorb rainfall.

"We were able to work closely with HACF to rescue this property from foreclosure, retitle it, and begin building, all within a three-month period," Kang says. "We did a lot with a little, and it's been exciting to see how Siena Court has been part of the greater transformation of downtown Pittsburg." **gb&d**
—Benjamin van Loon

A MESSAGE FROM JR PIERCE PLUMBING

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Monmouth University pushes renewable energy

- Retired Navy officer turned university president leads the institution's environmental charge
- Two new solar arrays save \$80,000 per year and reduce carbon emissions

Nine years ago, **Paul G. Gaffney II** became president of **Monmouth University** in West Long Branch, New Jersey, and sustainability became a top priority on campus. As a retired vice admiral in the United States Navy and a former ocean-

ographer, Gaffney had a strong science background and firmly believed that institutions of higher learning should not be complicit in the destruction of the environment.

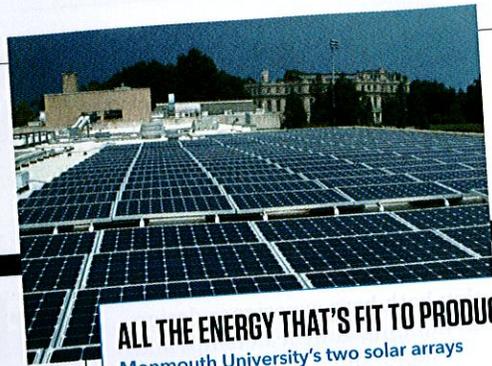
Gaffney was so serious about his dedication to sustainability that in 2009, Monmouth University became the first college in the state of New Jersey to enter into an agreement with the **EPA**. The agreement states that Monmouth will enhance its commitments to clean energy, energy efficiency, water efficiency, recycling, waste reduction, and cleaner vehicles and construction, among other commitments. Every six months, the university will voluntarily report its progress to the EPA.

In 2005, the university undertook its biggest green project to date: installing multiple arrays of solar panels across its rooftops. The university began generating electricity through solar power in August of 2006; six years later, the college entered into a power purchase agreement with **Torcon Energy Services** to build rooftop photovoltaic systems that will generate more than 695,000 kilowatt-hours annually. According to **Patricia Swannack**, Monmouth's vice president of administrative services, these systems will result in utility savings of \$80,000 each year.

"We've already added these solar panels to seven buildings, and we'll add them to any building on campus with a flat roof," Swannack says. "We've already reduced our energy usage. With our system in place, it's the equivalent of taking 321 cars off the road each year—the equivalent of not driving a million miles each year. That really adds up."

The school is also in the process of replacing an old arts building, and it's keeping sustainability in mind for the project. Monmouth hired local contractors to cut down on Rechnitz Hall's carbon footprint; the new building will exclusively feature energy-efficient fixtures and sustainable building materials.

There is a reason Monmouth University was named one of the most environmentally responsible colleges in the United States and Canada in the 2012 edition of "The Princeton Review's Guide to 322 Green Colleges." The school has covered most of its bases from water-saving fixtures and hydration stations to



ALL THE ENERGY THAT'S FIT TO PRODUCE

Monmouth University's two solar arrays together generate 1.1 million kWh

SYSTEM ONE

CAPACITY 454 kW
Composition 2,392 PowerGuard Sanyo 190-module panels
Square Footage 32,000 (across four buildings)
Annual Generation 502,000 kWh

SYSTEM TWO

CAPACITY 700 kW
Composition 2,766 Yingli-260 Ponda panels
Square Footage 50,750 (across seven buildings)
Annual Generation 695,000 kWh

on-campus **Zipcar** programs and yearly "lighting fairs" that enable students and employees to purchase energy-efficient light bulbs at reduced prices. But it has more in the works.

"Not only do we want to set an example for our students, but we want our students to set an example for others," Swannack says. "We're really pushing to provide our students with more opportunities to learn about sustainability. Recently, we made it possible for our students to minor in sustainability because we feel it's important to educate them on living responsibly and to create the next generation of sustainable leaders." **gb&d** —Tina Vasquez

A green advocate for Vermont seniors

- In the town of Barre, a developer saves 225,000 kWh per year by modernizing existing stock

Vermont is a picturesque state, full of lush green fields, robust forests, crisp air, and crystal blue waters. It is the place to get away from the hustle, bustle, and pollution of the big city. But Vermont does find its environmental challenges—in its man-made features that get out-of-date and need upgrades.

More than 200 historic windows were replaced at the former Hotel Barre to increase efficiency and offer residents fresh air. Today, the 100-year-old building houses the BHA's Washington Apartments.

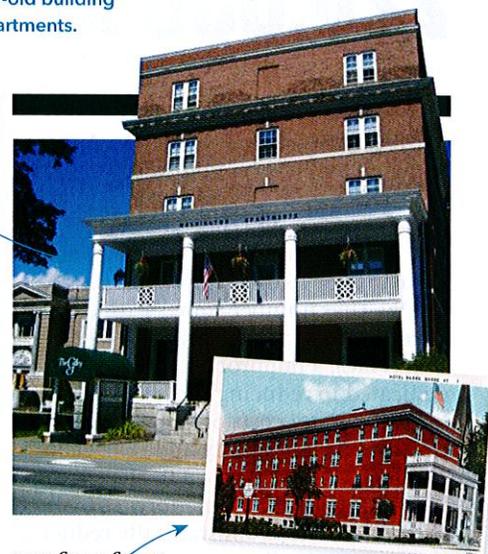
Barre, Vermont, is a unique place. It includes a city with a population of 9,000 and a town with a population of 7,000. (The town actually encircles the city.) Setup aside, Barre is leading the way in many green practices regarding building improvements. The **Barre Housing Authority (BHA)** has been working feverishly throughout the past few years to improve energy efficiency and bring its outdated senior-housing residences up to the environmental standards one would expect in such a green state.

The BHA made improvements to the 15-unit Avery Apartments by installing highly efficient insulation around the building, putting on a new roof, replacing old windows and lighting, and installing Energy Star-rated air conditioning units. The parking lot was rebuilt with new storm drains, which reduce rainwater runoff and land erosion.

Additional energy-efficiency upgrades were conducted at the Washington Apartments, a 49-unit, five-story high-rise. The BHA rebuilt both the main and annex roofs to better hold snow loads after super-insulating the building and replacing more than 200 windows. "The building is more than 100 years old, so we had to work with the state historic preservation office every step of the way," says **Chip Castle**, the executive director of the BHA.

The preservation office allowed the BHA to replace the windows with more energy-efficient, aluminum-clad windows. "Now everyone can open them where they couldn't before, and they look nice and neat," he says, "They have a historic 1900s look to them."

In exchange for the upgrade, BHA agreed to refinish and restore eight large lobby windows, remove rot and decay from the building's fascia, and install



two faux front entrances for look and appeal. Those replacements made the building reminiscent of its former self. "It looks like it did when it was the old **Barre Hotel** in the 1800s," Castle says. "This kept us in compliance with restoring a historic building and also has made

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228,000 kWh

Amount saved annually due to lighting retrofits and a new HVAC system at North Barre Manor

our residents of the Washington Apartments much more comfortable over the long Vermont winter.”

The Washington Apartments also received a lighting upgrade that resulted in savings of 15,000 kilowatt-hours annually. That number comes from the **Vermont Energy Investment Corporation (VEIC)**, a nonprofit organization dedicated to reducing the economic and environmental costs of energy consumption through efficiency and renewable technologies. In addition to electricity reductions, all of these efforts combined will contribute to substantially reducing the property's oil use.

At North Barre Manor, an 11-story, 120-unit high-rise, grant funds from the American Recovery and Reinvestment Act were used to do a similar refurbishment on the windows, change out all lighting to efficient bulbs, and put in a new HVAC system. “The

architect determined that the windows were in good shape and recommended resealing them rather than replacing them,” Castle says, noting that this approach also means less waste for the landfill. On the outside, large white panels that act as insulators below every window were replaced with new panels.”

Here, too, the VEIC reports substantial annual savings, to the tune of 228,000 kilowatt-hours a year, thanks to a lighting retrofit and a new HVAC system, which includes air-conditioning, a new rooftop-ventilation system, and more energy-efficient fans in every apartment.

Efficiency Vermont, a nonprofit that helps Vermonters reduce energy costs, also has facilitated large-scale direct installation of compact fluorescent light bulbs for the tenant fixtures at several BHA buildings. “In the affordable housing community, the higher cost of

CFLs can be a real barrier to installation, so tenant lamps often have incandescent bulbs,” explains **Colleen Scarola**, an energy consultant at Efficiency Vermont.

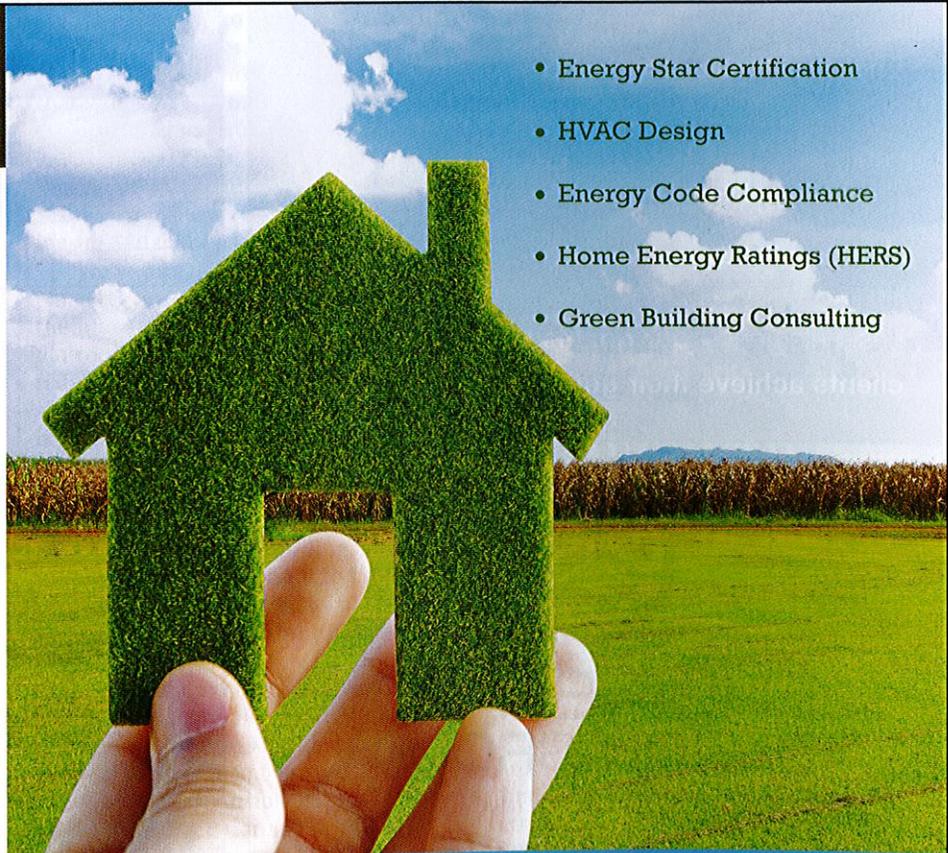
Several projects are on the horizon, such as window and roof replacements at Green Acres, a 49-unit development, and will be rolled out as budgets permit.
gb&d —Lynn Russo Whyllly

A MESSAGE FROM VERMONT CENTER FOR INDEPENDENT LIVING

Vermont's accessible housing stock is inadequate. People with disabilities are on a constant quest for affordable housing that meets their physical needs. As housing providers struggle in the face of federal budget cuts to manage aging properties and provide the necessary accessibility, they must rely on funding from new community partners. In Barre City and Town, VCIL joined forces with the Barre Housing Authority and Vermont's Community Development Program to grow the number of accessible units for elders, adults with disabilities, and low-income families. These partnerships are elemental to full inclusion of all persons in the life of our communities.



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