



71 South Wacker Drive, Chicago, IL

PHOTO: COURTESY OF THE IRVINE COMPANY

Three office towers **rising** to meet the industry's **greatest** challenge

The Building Owners and Managers Association (BOMA) International, is a global alliance of professionals working to advance the agenda of a vibrant, prosperous, and sustainable commercial real estate industry. Founded over a century ago, BOMA represents more than 10 billion square feet of office space in the U.S. The organization advocates on behalf of the industry with national, state, and local governments and publishes best practices and measurement standards, among a host of other activities. BOMA also promotes leadership in the field, with its annual **TOBY Awards** (The Outstanding Building of the Year), which for the last several years has included an “Earth” category, where applicants are judged on criteria such as energy and water conservation, green purchasing, indoor air quality, managing environmental risk, and tenant outreach.

Here, **Brian Barth** profiles three of the regional 2016 TOBY Earth Award winners, which will compete for the international TOBY Earth award to be announced at the BOMA International Conference and Expo on June 28, 2016, in Washington, D.C., after this issue goes to print. In suspense about who won this year’s international TOBY Earth Award? Visit www.boma.org to see the full list of TOBY winners and learn more about the TOBY program.

Tampa City Center

Owned by 201 North Franklin, LLC, an affiliate of Alliance HSP, LLC and Managed by Cushman and Wakefield Tampa, FL

One trait common among TOBY winners is having pushed sustainability measures forward long before it was trendy to do so. It shows that it's part of the organization's culture, not just a publicity stunt. The 39-story **Tampa City Center** was the tallest building in the state when it joined the skyline of this balmy Gulf of Mexico port in 1981. Probably less reported in the media was that it was the first multitenant office building in the city to adopt a whole building recycling program—not earth-shattering news today, but the staff was quite proud when they pulled that off in 1992.

"Other corporate offices could do that when they had only one tenant, but for a multitenant office building, it was pretty unique in the early '90s to find a program in place for tenants to do desk-side recycling," says **Sandy Ballestra**, the general manager at Tampa City Center for **Cushman and Wakefield**, who joined the staff during that period. "Long before LEED, we always had very innovative staff that wanted to do things that were good for the environment, good for the building, and reduced operating expenses."

Tampa City Center achieved **LEED Gold** for operations and maintenance in 2010, a push that Ballestra herself helped to organize after becoming a LEED Accredited Professional in 2008,

but she says the difference between "where we were and what we would need to do to achieve certification was minimal." For example, the building's engineers reconfigured the HVAC system to recycle condensate water nearly 30 years ago. During the heat of the summer, 5,000 gallons of condensate is recovered from the air handlers each day and fed back into the system, where formerly fresh potable water was used.

Then, about 12 years ago, a drought provoked the idea of capturing water from the French drain system around the building's foundation to irrigate the landscaping, which is comprised of mostly native Floridian plants. Two 500 gallon

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SANDY BALLESTRA, GENERAL MANAGER, TAMPA BAY CITY CENTER FOR CUSHMAN AND WAKEFIELD

hot water tanks were being replaced at the time, which were handily repurposed as cisterns. Today, the system collects more than 4 million gallons annually, supplying 100% of the site's irrigation water. Only a portion of the water collected is needed for irrigation, so the rest is returned to the aquifer beneath the city.

"It just shows what forward thinkers the engineers at this building are," Ballestra says. Even though massive upgrades weren't required to achieve LEED Gold, she certainly appreciates the rigorous documentation required by the LEED application. "We'd been doing some of these things for a long time but didn't have the written policy that LEED requires. So we learned a lot about the building in the process. It's easy to operate your building in a sustainable manner; it just makes sense to do it that way."

Tampa City Center was already fairly energy efficient, but each year they chip away at their usage, replacing light fixtures with LED, adding additional variable speed drives, or upgrading outdated HVAC equipment with more energy efficient options. They've set a minimum benchmark of lopping off 1% of energy use each year, which they've more than reached since they first tracked baseline data in 2008.

But the pride of the building continues to be its recycling program. What started with desk-side bins to recycle office paper in 1992 has expanded to a multi-faceted program where tenants can recycle everything from bottles and cans to cell phones and computers to furniture and light bulbs. Green

By the numbers

5,000

The number of gallons of condensate that's recovered from the building's air handlers each day during the heat of the summer and fed back into the system, where formerly fresh potable water was used

4m

The number of gallons collected annually by the site's French drain system, which then supplies 100% of the site's irrigation water

1%

They've set a minimum benchmark of lopping off 1% of energy use each year, which they've more than reached since they first tracked baseline data in 2008

51%

Percentage of the waste stream at Tampa City Center that is diverted from the landfill

waste from the outdoors is composted onsite to create rich compost for the plantings. Several years ago, management made a simple, but high impact change to those desk-side recycling bins: no more plastic liners. The change resulted in more than doubling the annual recycling total from 54 tons diverted up to 136 tons each year. In total, 51% of the waste stream at Tampa City Center is diverted from the landfill.

After all those years of hard work, the staff certainly deserves some credit. They achieved the **BOMA 360** designation in 2010 and have won several TOBY awards in other categories before, but last year they won regionally in the Earth category. And now they are up for the International TOBY Earth award. "We thought it would be reasonable to pursue that," says Ballestra with characteristic humility.



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PHOTO: MARK GALL

The Millennium Building

Owned and Managed by
The Tower Companies
Washington, D.C.



At 1909 K Street in Washington, D.C.'s bustling Golden Triangle district stands a gleaming example of what dedicated and mindful long-term management can bring to the sustainability movement in corporate real estate. The 33-year old **Millennium Building**, owned and operated by D.C.-based **The Tower Companies**, is 235,000 square feet of class A commercial office space. The property first earned LEED Certification in 2009 and later re-certified to achieve **LEED Gold** under Existing Buildings: Operations and Maintenance (EBOM). In addition, the team has earned **ENERGY STAR** certification each year since 2010 and is also BOMA 360 certified.

The Tower Companies' focus on sustainability at The Millennium Building and across its portfolio goes back much further than their first green building certification. Since 2005, Tower has made a commitment to purchase renewable energy and carbon credits to offset 100% of their energy usage across the entire portfolio. In 1997, The Millennium Building completed a major renovation and added four floors without increasing its energy footprint. In 2014, the building team flipped the switch on a 30 kW roof-mounted solar array, the first PV installation on a D.C.-area building of its type. The 40,000 kWh produced annually are enough to power three elevators. "In everything we do, we ask the question, is it sustainable?" says **Debbie Webb**, vice president of property management at The Tower Companies. "How do we connect the building and the clients to the environment? How do we connect all three in a unified way?"

Webb says that she finds the answers to those questions arise through continual communication between the building's tenants, management staff, and engineers. Real-time energy monitoring has provided a basis for many small improvements that have added up to big savings. After establishing a baseline in 2010, energy use decreased 27% by 2014, well ahead of the established goal of 20% by 2020. Improvements in water use efficiency were even more dramatic, dropping by a whopping

71 South Wacker Drive

Owned by The Irvine Company
and Managed by Jones
Lang LaSalle (JLL)
Chicago, IL



PHOTO: DAVID B. SEIDE: DEFINED SPACE, CHICAGO VIA THE IRVINE COMPANY

It's fitting that in Chicago, the birthplace of the skyscraper, the next generation of skyscrapers, which are decidedly leaner and greener than those of the past, is taking shape. Located in the prestigious West Loop area of the Windy City's central business district, **The Irvine Company's 71 South Wacker** is a glass-clad futurist jewel; it also happens to be the largest multi-tenant **LEED Platinum** building in Chicago and one of the largest LEED Platinum buildings of its type anywhere in the world. Additionally, it's an **IREM Certified Sustainable Property** and has a BOMA 360 designation.

Interestingly, 71 South Wacker was not originally designed to LEED standards, says **David Hopwood**, the building's general manager with **JLL**. Originally developed by the **Pritzker Realty Group** in 2004, the building was sold to The Irvine Company in 2010, just as a major sustainability effort was completed. "In 2009, we established a sustainability steering committee with the four largest tenants and began to consider what sustainable opportunities existed," says Hopwood. "We needed their buy-in to make it happen."

Initial changes to the 49-story, 1.5-million-square-foot tower included strategically revising temperature settings throughout the building to reduce energy use and improve tenant comfort. Weekend HVAC use shifted to an "on request" format; lobby fans shifted to "as necessary" use, rather than run 24-7, as they had previously; and the building's static set-point was reduced from 1"

By the numbers

89%

The energy use reduction after replacing incandescent fixtures in elevators with LED strips (the investment was paid off just three years later)

1,200

The number of fixtures that were converted with more energy efficient products, resulting in an investment recoup time of only five months

3.5m kWh

The building recently realized savings of over 3.5 million kWh due to additional completed energy savings initiatives, including VFD's on the chiller and chilled/condenser water pumps, creating an all variable-speed central plant, and a system-wide HVAC optimization platform that adjusts set-points on chilled water, condenser water, static pressure, and supply air temperature based on the actual building load.

to .8", an easy fix that resulted in savings on annual energy costs. Incandescent fixtures in elevators were replaced with LED strips, cutting energy use by 89%—with the utility rebate, the investment was paid off just three years later. Another utility rebate enabled the conversion of over 1,200 fixtures with more energy efficient products; in this case, the investment was recouped in only five months.

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Though they didn't build to LEED specifications, green was definitely on the minds of **Pei Cobb Freed and Partners**, the esteemed international architecture firm who designed the building. They were just thinking of green in the more literal sense of the word: there's a green roof, an interior bamboo forest, and significantly-sized exterior landscape for an urban office tower, which was designed by the late Chicago landscape architect **Peter Lindsay Schaudt**. The eloquent words of lead designer **Henry Cobb** in his original project narrative published in 2005 give a sense of how he hoped the site would enrich Chicago's concrete jungle with a bit of soft greenness.

"The [building] manifests a

distinctive civic presence not only in the form of its tower—with curved surfaces of stainless steel and glass terminating in the dramatic verticality of bifurcated end walls—but also in the block-long garden shaped by the tower so as to offer an oasis of green to the thousands of commuters who walk by twice daily along Monroe Street on their way between the railroad station and the Loop,” Cobb wrote.

More than 10 years later as 71 South Wacker seeks the TOBY Awards' highest honor in the Earth Category, its management has already racked up a host of recognition for their ongoing work. It was picked as the **Chicago Commercial Real Estate Development** of the year when it opened in 2005; then won local and regional TOBY Awards in the over 1 Million Square Feet Category in 2007, and 2009, as well as an International TOBY Award in the same category in 2012. Following the sustainability efforts, it won the city of Chicago's **Green Office Challenge Award** and was named a **Sustainability Grand Champion** when it again won the award in 2015, in addition to local and regional TOBY Earth Awards in 2015 and 2016.

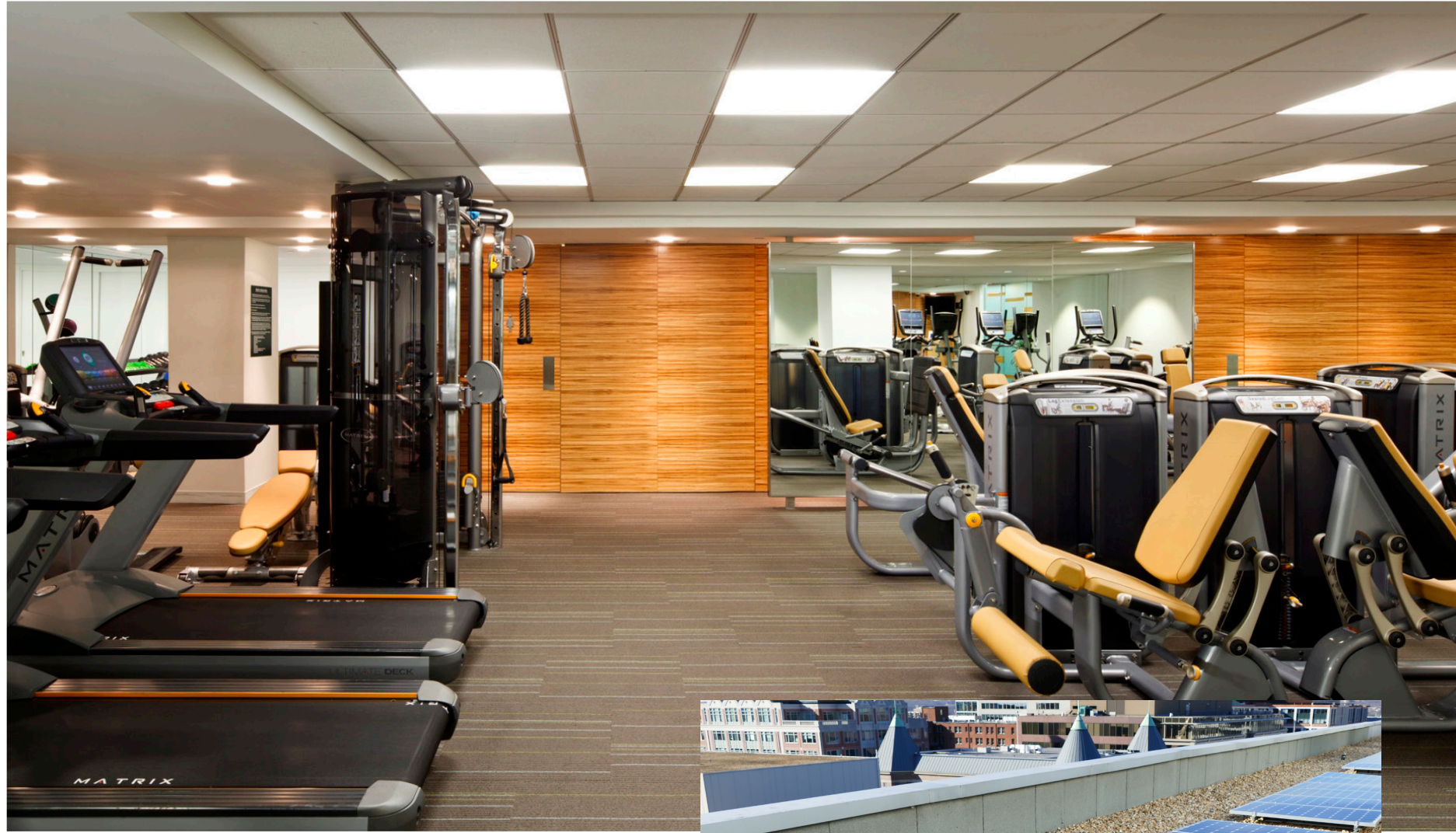
When Chicago Mayor **Rahm Emanuel** launched **Retrofit Chicago** in 2012, 71 South Wacker was honored to be a founding participant in its **Commercial Buildings Initiative**, pledging

to cut energy use by at least 20%—they were already more than a third of the way there at the end of 2015—over the next five years and volunteering to work with other commercial buildings in their district to help realize the mayor's vision for the future of the city: “In the 19th century, Chicago built the world's first modern skyscraper. In the 20th century, we created a world-renowned skyline. And today, Chicago aspires to make that skyline the most efficient on the planet.” **gb&d**

ABOVE A block-long garden shaped by the tower offers an oasis of green to the thousands of commuters who walk by twice daily along Monroe Street on their way between the railroad station and the Loop.



PHOTO: COURTESY OF THE IRVINE COMPANY



50% by 2014 over the 2010 baseline. They've also diverted waste from landfills by about 50% in recent years.

The Tower building staff has also organized a "Green Team" in the building, which consists of representatives from each tenant suite that meet for brainstorming sessions that often produce out-of-the-box ideas that lead to practical improvements and sustainability best practices. "We talk about building sustainability metrics and get feedback from tenants to understand how we can be

ABOVE The building includes a top-notch bike room with showers, lockers, tools, and maps of the city's bike routes. The room is also equipped with air conditioning, which in some cases may go unnoticed, but allows for a good start and end to a commute.

a resource to help their office with sustainability goals," Webb says.

There is also a lot of what Webb calls "extras"—little things that The Tower Companies chooses to do to encourage a healthy culture in the workplace for their "clients," the companies preferred way of referring to their tenants. Most of the "extras" don't come with a financial incentive for the company, but many of them create positive impacts on the environment, as well as the community and are considered building

amenities for their clients. For example, in addition to the Millennium Building's electric car charging stations, they've built a top-notch bike room with lockers, tools, interactive maps of the city's bike routes, and, "not of minor importance," adds Webb: air conditioning. "That way, at the start and end of your ride, you're in a good place."

On the roof, employees are welcome to harvest from the organic herb garden, should they need a bit of rosemary or oregano for their dinner plans. The building team has

By the numbers

also partnered with a local company to provide another convenient option to clients—weekly farm-share bags delivered right to their office door. It's those small things that often signify a true leader in the eyes of TOBY judges, who seem to appreciate The Tower Companies' approach, handing them a regional Earth award in 2015. "As a small company with almost 100 people, that was a huge honor for us," Webb says. "We've been building up to this for a long time and the team earned it."

PHOTO: JIM LEWIS (BIKE ROOM & SOLAR PANEL ARRAY)

PHOTOS: RON BLUNT (FITNESS CENTER)

27%

After establishing a baseline in 2010, energy use nosedived by 27% in 2014, well ahead of the established 20% goal by 2020.

50%

The whopping drop in water use efficiency over the 2010 baseline

30kW

The solar array size that is located on the roof of the building. It produces 40,000kWh annually, which is equivalent to running 3 elevators for one year.

50%

The amount the building has managed to ratchet down their waste stream in recent years