

Green Restrooms of the Future

Wait! Don't toss out that egg carton; we may be able to use it in the restroom.

Yes, egg cartons, milk containers, and cardboard are being recycled and made into restroom partitions—as they did at the Chicago Center for Green Technology in Chicago, Illinois. Although somewhat

The entire facility, which was opened in January 2003, has been rebuilt, virtually from the ground up, and has become a Green Mecca for building owners, designers, and managers. Designed by Farr Associates Architecture and Urban Design, Chicago, the building uses solar and geothermal energy, has a rooftop garden, and uses a



Photo Courtesy of Stiebel Eltron, Inc.

“The electric hand dryers are sensor activated, minimizing the touchpoints in the restrooms that can possibly spread disease, and use considerably less energy than many conventional dryers,”

Klaus Reichardt, founder and managing partner of Waterless Company LLC.

more delicate than conventional metal partitions and requiring a bit more care when cleaning, these recycled products are holding up quite well, thank you. They are cost-effective and have helped foster the use of more recycled materials for a variety of building construction uses.

natural habitat to help filter storm water.

Although the entire 40,000-square-foot facility is Green—enough to earn it LEED certification—it's in the restrooms that some of the most innovative technologies have been introduced. And the owners of the building, the Chicago Department of the Environment,

are so proud of their restrooms, they have plaques placed throughout telling visitors what recycled or sustainable materials were used for each surface or why a system or fixture was installed.

Slow March Toward Green

The building we see today is a far cry from what it once was. Developed in 1952 as an industrial facility, the 17-acre property had become

an illegal dumping ground for refuse of all sorts. In fact, more than 600,000 cubic yards of waste were found on the site. Things got so bad, the property was seized in 1999 by the U.S. government, which originally planned to tear down the structure, remove the tons of trash and garbage scattered about the location, and then try to sell the location as a vacant lot.

However, during cleanup opera-

tions, city officials realized the site could become an opportunity to showcase what can be done to create a healthy, sustainable, and Green facility out of the worst of conditions. It took \$9 million just to clean up the property, and another \$5.4 million was necessary for construction and renovation. Building materials and furnishings are recycled or have significant recycled content. Materials used in construction and furnishing account for as much as half of all the raw materials used in North America, so this has quite an impact.

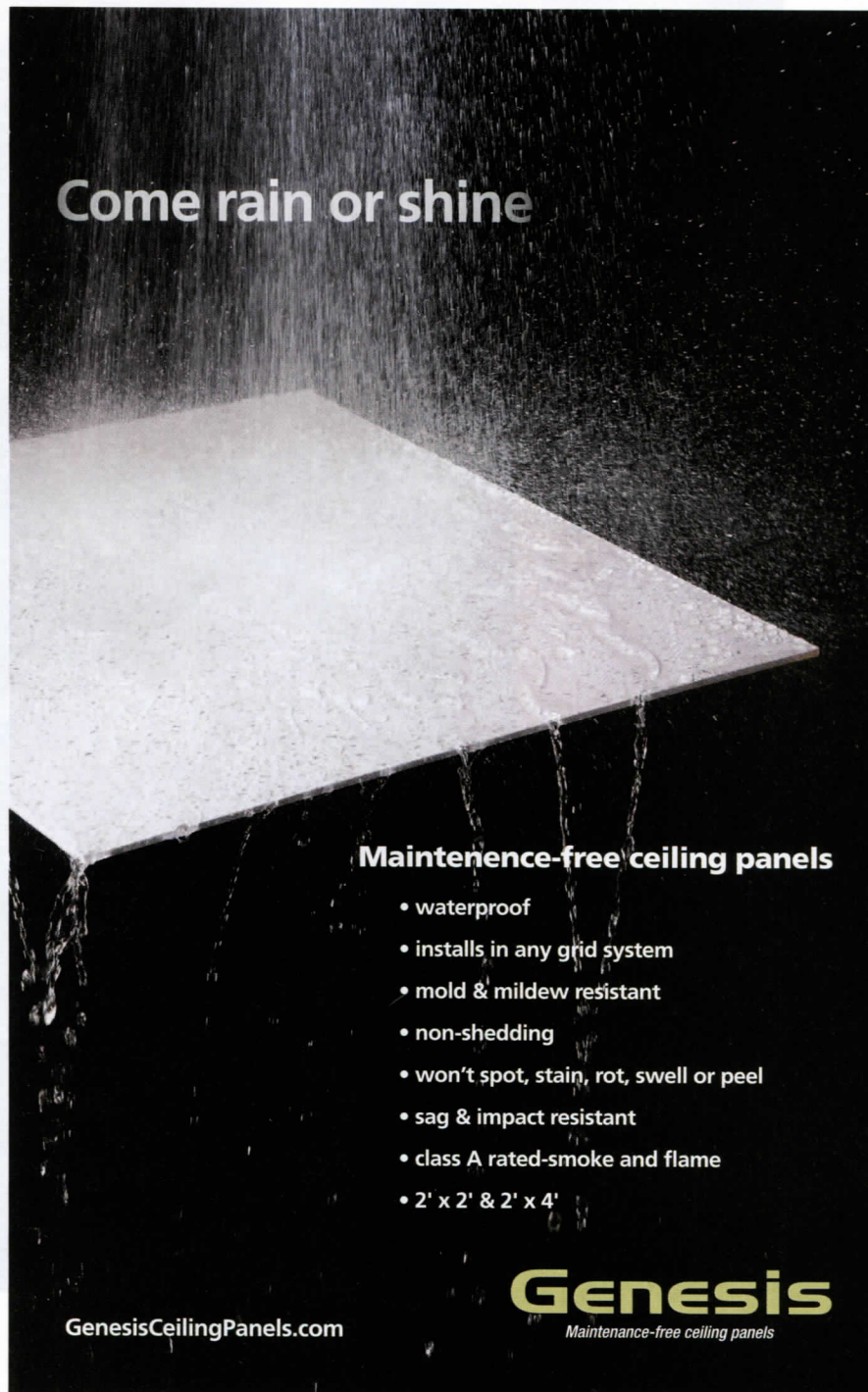
When the building reopened, it was hailed as one of the most energy- and water-efficient, sustainable, Green buildings in the country, incorporating some of the highest standards of Green technology. Some of the Green and sustainable items of note include:

- More than 50 percent of the facility's building materials were manufactured or assembled within 300 miles of the city, cutting down on fuel and transportation costs.
- The rooftop solar systems provide 20 percent of the building's energy.
- Heating and air-conditioning are located near occupants to increase comfort levels.
- When energy demand is high, for instance during the heat of summer, HVAC systems are programmed to dim lights or scale back other electrical mechanicals to avoid spikes and conserve power.

And the restrooms, which look much like conventional restrooms, have been referred to as the "Green restrooms of the future." Scores of recycled materials have been used from the floor up, and the toilets, urinals, and faucets are some of the most water-conserving fixtures available.

The Green Restrooms of the Future

Upon entering the so-called Green restrooms of the future, one of the



Come rain or shine

Maintenance-free ceiling panels

- waterproof
- installs in any grid system
- mold & mildew resistant
- non-shedding
- won't spot, stain, rot, swell or peel
- sag & impact resistant
- class A rated-smoke and flame
- 2' x 2' & 2' x 4'

Genesis
Maintenance-free ceiling panels

GenesisCeilingPanels.com

first things noticed are the wall and floor tiles. These are made from predominantly recycled glass, tile, porcelain, and ceramic materials. They are proving to be durable, resilient, easy to clean, and low maintenance.

“Of interest, the restrooms are equipped with both hand towels—using only recycled paper, of course—and electric hand dryers,” Klaus Reichardt, founder and managing partner of Waterless Company LLC. “The electric hand dryers are sensor activated, minimizing the touchpoints in the restrooms that can possibly spread disease, and use considerably less energy than many conventional dryers.”

Both are installed because so many users still prefer paper to dry their hands. However, it is hoped that the building occupants will accept the electric systems, which would be more cost-effective and likely Greener in the long run.

The partitions, as we have noted, are made from an assortment of cardboard-related products.

The water-conserving toilets and urinals, the next items on our tour, open some eyes and may raise some eyebrows. The toilets have a green handle on them. Although there are now a variety of high-efficiency toilets (HET) being manufactured, the green-handle models selected for the center are dual-flush systems. The user is instructed—via another plaque—to pull the handle up for liquid waste and down for solid.

The systems use approximately .8 and 1.6 gallons of water or less per flush, depending on which way the handle is pulled. In many facilities, toilets and urinals are the biggest water users except for landscaping. This is why planners and architects believe it just makes sense to focus on these two fixtures to reduce water usage. Further, because so many of today’s older toilets use more than the standard 1.6 gallons per flush, switching to a dual-flush system can

reduce water usage by an estimated 67 percent.

Even though high-efficiency urinals (HEU) are available, which use no more than 0.5 gallons of water per flush, the planners decided to take water conservation a step further and install no-water urinal systems in all of the men’s restrooms. “Waterless urinals can save an estimated 25,000 to more than 40,000 gallons of water per urinal per year,” explains Reichardt. “And they have proved to be reliable and durable, even under heavy-use conditions, and are odor free.”

Cleaning Green

After taking all of these steps to make the facility’s restrooms Greener and more sustainable, it would be counterproductive to use conventional cleaning chemicals and equipment to maintain them. Recognizing this, cleaning staff use only environmentally preferable cleaning chemicals and products both in the restrooms and throughout the facility. Further, they have been taught

how to use the products safely and effectively and informed about why Green products have been selected.

As to the restrooms in particular, the bowls in early HET systems had a tendency to discolor and were difficult to clean. “However, new technologies have increased water pressure without increasing the amount of water used and have helped eliminate this problem with most systems,” adds Reichardt. “Further, the waterless urinal systems are cleaned essentially the same ways as are conventional urinals. Many cleaning professionals even say they are easier to clean than comparable water-based urinals.”

The goal of all these Green features is to prove that facilities can be built and maintained using a variety of recycled materials and environmentally preferable products and still be functional and healthy as well. ♦

Dawn Shoemaker is a writer for the professional cleaning, health care, education, and construction industries. She may be reached at info@alturasolutions.com.

Anti-Ligature Rx Family

NEW Introducing MRX Series ANSI Grade 1 Mortise Lockset Institutional Privacy Function (Patented Clutching Action)

Institutional areas require the ability to control locking and unlocking independent of inside thumb turn. In areas where there is potential for someone on the inside controlling the thumb turn this product allows unlocking or locking from the outside. Product automatically unlocks when door is closed.

Optional Antimicrobial Coating
Introducing SANIGUARD™ antimicrobial protected products










BEFORE



AFTER

REJUVENATOR™

One Box One Stop One Fix

Compatible with all brands* including:
 + Arrow + FOG + Schlage
 + Best + Marks + Yale
 + Corbin + Sargent + Tolo

*NOTE: Through hole mortise case applications only.

Never Make 2 trips to fix one lock...
Get the job done the first time.

The REJUVENATOR™ works as an all-in-one fix for most tapping and broken stems. Make your knob locks ADA compliant.

TownSteel
www.townsteel.com

707 N. Barranca Ave., Bldg. #6
Covina, CA 91723
T: 877-858-0888 | F: 626-858-3393