





HIGH STYLE, LOW ENVIRO IMPACT

BY MARGE O'CONNOR

THE HILTON VANCOUVER HOTEL
SETS ITS GREEN GOALS SKY HIGH



PHOTOS BY MICHAEL MATHERS

MOST HOTEL GUESTS JUST WANT COMFORT AND A WELCOMING ATMOSPHERE. BUT DO TRAVELER COMFORTS SAVE ENERGY? • At the new upscale Hilton Vancouver Washington the answer is yes. Guest comfort and the environment equally are important at the 226-room hotel and conference center in downtown Vancouver. Opened in June 2005, the property is owned by Vancouver's Downtown Redevelopment Authority (DRA) and operated by Beverly Hills, Calif.-based Hilton Hotels Corp.

MOST ENERGY SAVINGS come from lighting and occupancy sensors in the 30,000-square-foot (2787-m²) conference and meeting area.



PROJECT TEAM

OWNER

DOWNTOWN REDEVELOPMENT AUTHORITY,
Vancouver, Wash.,
www.ci.vancouver.wa.us/conferencecenter

DEVELOPER

FAULKNER USA,
Denver, www.faulknerusa.com

OPERATOR

HILTON HOTELS CORP.,
Beverly Hills, Calif.,
www.hiltonworldwide.com

ARCHITECT

FLETCHER FARR AYOTTE,
Portland, Ore., www.ffadesign.com

LANDSCAPE ARCHITECT

MURASE ASSOCIATES,
Portland, www.murase.com



GOING GREEN / In its request for proposal for the project, DRA included some sustainable requirements. But Portland, Ore.-based Fletcher Farr Ayotte (FFA), lead architect on the project, suggested the project be even more sustainable. As a result, the property is the first hotel on the West Coast to apply for certification according to LEED 2.1 for New Construction. Certification is expected this month.

Mike Shea, LEED-AP, FFA's sustainability manager for the project, says the results were rewarding. "At first we didn't realize the energy savings we could achieve because our focus was to be sustainable even if it didn't save a lot. But our energy modeling showed about 23 percent less usage and a payback of one

year on most items. When we told the city these conservation measures, including LEED documentation, would add only \$125,000, they allocated it."

The facility, including contents and debt service cost about \$73 million.

Although this is the first LEED-certified property for Hilton Hotels, the company already conserves energy on some properties with solar technology, co-generation and fuel cells.

ENERGY AND POLLUTION WISE / The hotel's energy-saving and pollution-reducing measures are found throughout the property. Most energy savings come from lighting and occupancy sensors in the 30,000-square-foot (2787-m²) conference and meeting area. All fluorescent lighting features dimming controls. In addition, the Hilton Hotels chain has selected an energy-efficient light-emitting diode system as its new construction specification for red channel letter lighting and red border lighting. For more information about this, read "Seeing the Light," page 47.

Carbon dioxide (CO₂) sensors control outside air flowing into meeting areas. "Human beings exhale CO₂, and the sensors bring in more outside air as more CO₂ fills the space. When occupants leave, sensors close down air dampers. In ballrooms that hold 500 or more people, the savings really add up," Shea notes.

The hotel conference space has a gravel roof. The room tower has a mineral cap sheet with a reflective polyvinylchloride coating, which reflects heat from the sun, lowering air-conditioning costs. Reflective roofing on the conference area was not an option because it would reflect into hotel guest rooms, and a vegetative roof was not viable because of the podium's long-span trusses.

Transportation measures also save energy and reduce pollution, including the location near public transportation, bike parking with locker rooms and showers for employees, and an underground parking lot that saves land and reduces heat islands.

FRESH AIR / Guest-room comforts include operable windows and fresh airflow. The structure's HVAC is decentralized, and heating and cooling systems are separate from ventilation. Each guest room's ventilation system brings in a continuous outdoor air supply and exhausts it through a bathroom vent. This constant flow of fresh air is heated or cooled, depending on outside temperatures. A separate heating and cooling unit in each room adds to occupant comfort. When a guest opens a window, only that room's energy use slightly is affected.

Only one floor features a wing of guest rooms designated for smoking. The central airflow system helps circulate fresh air in these rooms, and an exhaust system at the end of every floor's corridor removes any smoke that flows into the corridor.

OTHER GREEN INITIATIVES / Carpeting, adhesives and paint are low VOC. In fact, carpeting meets the Carpet & Rug Institute's (www.carpet-rug.org)



GREEN PRODUCTS & SOURCES

WINDOW SYSTEMS / Kawneer North America, Norcross, Ga., www.kawneer.com

LOW-VOC PAINT / Pittsburgh Paints, Pittsburgh, www.pittsburghpaints.com

CARPETS / Brintons USA, Kennesaw, Ga., www.brintonsusa.com; **Atlas**, Los Angeles, www.atlascarpetmills.com; **Mannington Mills**, Salem, N.J., www.mannington.com; **Couristan Inc.**, Fort Lee, N.J., www.couristan.com; **Bentley Prince Street**, City of Industry, Calif., www.bentleyprincestreet.com; and **Durkan Merit** from **Mohawk Industries**, Calhoun, Ga., www.durkancommercial.com

LOW-VOC ADHESIVES / Franklin International, Columbus, Ohio, www.franklini.com; **Mannington Mills; Johnsonite**, Chagrin Falls, Ohio, www.johnsonite.com; **Buell Flooring Group**, Dallas, www.buellfloor.com; and **3M**, St. Paul, Minn., www.3m.com

ZERO-FORMALDEHYDE CASEWORK / Sierra Pine Composite Solutions, Roseville, Calif., www.sierrapine.com, and **Panolam ThermoFused Melamine** from **Panolam Industries**, Shelton, Conn., (800) 672-6652

WOOD DOORS / Algoma Hardwoods Inc., Algoma, Wis., www.algomahardwoods.com

RECYCLED-CONTENT STEEL DOORS / Curries, Mason City, Iowa, www.curries.com

RECYCLED-CONTENT DRYWALL / Georgia Pacific, Atlanta, www.gp.com

STEEL FRAMING / Dietrich Metal Framing, Pittsburgh, www.dietrichindustries.com

RECYCLED-CONTENT CEILING TILES / Armstrong Ceiling Systems, Lancaster, Pa., www.armstrong.com

AIR HANDLERS / model 56732-RL-2303-0-FUOR-EE from **AAON Heating and Cooling Products**, Longview, Texas, www.aaonnet.com; model RD 5800-CLY from **McQuay International**, Minneapolis, www.mcquay.com; and model WC070 ON4E from **Desert Aire**, Milwaukee, Wis., www.desert-aire.com

CHILLER / McQuay AGS300B27ER10 from **McQuay International**

COMBINATION CARBON DIOXIDE AND WALL SENSOR / model CWLSXTHX1F from **Veris**, Portland, Ore., www.veris.com

LIGHTING CONTROL PANELS / PCI Lighting Control Systems, South Burlington, Vt., www.pcilightingcontrols.com

DIMMING SYSTEM / Electronic Theater Controls (ETC), Middleton, Wis., www.etcconnect.com

ALUMINUM LIGHT FIXTURES / Eleek Inc., Portland, Ore., www.eleekinc.com

ROOFING / Johns Manville, Denver, www.jm.com



During construction, **75 PERCENT** of the waste was recycled. Many of the new materials and products have recycled content, including rebar, gypsum board, ceiling tiles, and ballroom and meeting area light fixtures made from recycled aluminum.

Green Label Indoor Air Quality Testing Program requirements. The program identifies low-E products by requiring representative product samples to meet scientifically established standards.

About 22 percent of the furnishings were sourced within 150 miles (241 km). "The impetus to source locally just sort of trickled down from construction materials to furnishings. Now the restaurant chefs buy food from the farmers' market across the street rather than other suppliers. It's interesting how the ideas just flow down," Shea comments.

Storm water is circulated into the ground, keeping it out of the city's storm sewers by funneling runoff into a cistern that naturally filters pollutants before percolating water into the soil. Native landscaping also reduces watering requirements.

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BETTER FUTURE / This project seems to have set a precedent for better things for hotel guests and the environment.

Shea notes: "Hospitality is doing more sustainable things than they realize, especially in operations. We weren't pushing the envelope on this, but Hilton [Hotels] wants everything to work for the comfort of guests, and commissioning is a standard Hilton [Hotels] requirement. Hotels could be in sync with LEED or other guidelines without much difficulty but their fractioned ownership and management may make it difficult. The lesson on this project and really all buildings is that you get what you pay for. You can always make it cheaper, but a little forethought and some extra cost create a much larger return." 🌱



SEEING THE LIGHT

HILTON HOTELS SAVE ENERGY WITH LEDS



BY DAVID SCHUELLERMAN

Beverly Hills, Calif.-based Hilton Hotels Corp., which owns and operates more than 530 hotels and franchises, as well as 1,500 properties in the United States, buys into the value of light-emitting diodes (LEDs). An ENERGY STAR partner since 1996, Hilton Hotels has selected an energy-efficient LED lighting system as its new construction specification for red channel letter lighting and red border lighting.

In addition to an 80 percent energy-cost reduction compared with neon lights, LEDs offer a longer rated life (up to 100,000 hours), fewer system changes, lower maintenance costs and fewer disruptions during their life cycle. To date, end users, such as Hilton Hotels, original equipment manufacturers, architects, lighting designers and sign contractors, have embraced LED light engines as a leadership product.

LEDs can be used for signage and architectural applications in hospitality, retail, restaurant and commercial settings. LEDs provide the look of neon and light output comparable to neon, as well as robustness, low-voltage operation, unmatched cold-weather operation and ease of installation and maintenance.

Edwin Figueroa, Hilton Hotels' director of engineering operations, states on the ENERGY STAR Web site (www.energystar.gov) that LEDs align with the chain's economic and environmental goals. "The first line of defense against escalating energy costs lie within our control. Energy efficiency is the key to lowering operating expenses. The best way to save money is not to spend it. Likewise, the best way to save energy is not to consume it."



▲ Beverly Hills, Calif.-based Hilton Hotels Corp. has chosen the Tetra light-emitting diode as its new construction specification for red channel letter lighting and red border lighting. The product is manufactured by GELcore LLC, Valley View, Ohio. Visit the company's Web site at www.gelcore.com.

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