

# The Hartford Courant.

## Yale Gets Green Honors Lab Renovation Aids Environment

By KIM MARTINEAU  
Courant Staff Writer

November 7, 2006

NEW HAVEN -- Where do all those blue jeans go? Some wind up behind the walls at Yale.

That's what happens when architects and builders go green.

The Yale School of Medicine used cotton - some from shredded blue jeans - as insulation in two of its newly renovated research labs. Unlike the fiberglass batting stuffed between attic rafters, cotton grows from the earth and is safe on the lungs. Yale used it to win points with the U.S. Green Building Council, which sets the standards for building green.

With the addition of a new, fresh air ventilation system and more windows to bring in natural light and views of trees in their fall reds and yellows, both labs met the council's Leadership in Energy and Environmental Design "gold" standard.

Sustainable design is the hot trend in architecture. Companies are building green to save money on energy. But they also want to send the message that they're concerned about global warming and the depletion of natural resources, and that they care about the health and happiness of their workers.

Bank of America's corporate headquarters, under construction in Manhattan, has the council's "platinum" rating, the highest. Software maker Adobe Systems and the biotech firm Genzyme also have built headquarters with platinum ratings.

Yale is shooting for the same as it designs a new home for its School of Forestry & Environmental Studies, with solar panels and geothermal heating and cooling.

Bricks and mortar have become another way for companies to build a green corporate brand, said Daniel Esty, a Yale professor whose new book, "Green to Gold," explains how environmental thinking can also be profitable. "It operates as a symbol," he said. "The companies are trying to say they care about the environment, they care about their employees and that they are concerned citizens."

The firm that renovated Yale's medical labs, Svigals + Partners, is perched on the top floor of a former furniture store in New Haven. Expansive windows overlook a steakhouse and hip coffee shop. The firm's founder, Barry Svigals, a thin man with white hair and blue eyes,

went to Yale for college and architecture school. He likes to ponder man's connection to nature. Like plants, people thrive on light and fresh air, he says.

"These things are not crazy ideas," he said. His partner Jay Brotman, sipping a cup of green tea, agreed. "They're old ideas being reborn."

Sustainable buildings don't have the mark-up of, say, organic milk or grass-fed beef, but they do cost more - 2 percent on average. Boosters say the investment pays itself back in energy savings and employee health and productivity.

Svigals has spent the past decade renovating Yale's main medical school building. The neurobiology and genetics labs were designed to the "gold" standard. That meant diverting demolition debris into scrap piles of plastic, metal and wood, keeping more than 80 percent of the debris out of the landfill.

Yale also used recycled and renewable materials that don't give off toxic fumes. The cabinets and shelving are faced with blond maple but underneath is wheat straw board, a material made from the discarded portion of wheat plants. Mixed with non-toxic glues, wheat straw becomes as rigid as plywood, saving trees.

The floors and hallway wainscoting are linoleum, made from linseed oil. The carpeting has no volatile organic compounds. After construction, buildings are typically heated for three days to allow the chemicals to "bake out." That wasn't needed in the Yale

renovation: It passed the air test immediately.

Since 2004, California has required new state buildings meet the council's "silver" standard or better. Washington, Arizona, Rhode Island and now Connecticut have adopted similar standards. In 2004 the new museum building at the Mark Twain House and Museum in Hartford was the first structure in Connecticut to earn LEED certification. It's heated and cooled mainly by geothermal wells deep below the building. A bright, gently rising staircase minimizes elevator use, saving energy.

Pfizer opened the state's first green lab at its drug-testing facility in New Haven this year. It was designed to feel more like a hotel than a laboratory. Glazed, energy-efficient windows let in plenty of sunlight, and non-toxic paints and carpeting were put in. Pfizer wanted to be sure nothing in the building would skew scientific results. "It needed to be as non-toxic as possible," said Robert Pulito, an architect with the S/L/A/M Collaborative in Glastonbury, which designed the lab.

Colleges, too, are becoming as competitive about energy conservation as academic rankings. The Massachusetts Institute of Technology, the University of North Carolina at Chapel Hill and Carnegie Mellon University require a minimum "silver" rating on new construction. Connecticut's state universities have added green-certified dorms and two science centers. Yale's new engineering and chemical research buildings are also certified.

UConn designed its new football complex and training center to the "gold" standard, the first college sports facility of its kind. The turf in the training center was made with ground-up sneakers and tires. An infrared-radiant heating system directs heat to the playing field, saving energy and minimizing dust. Architects eliminated paved surfaces by burying plastic mats under the grass to make it sturdier for delivery trucks.

A new social sciences building at UConn with a rooftop park, designed to a silver rating, also is in the works. Covered in plants, the roof will conserve heat in winter and stay cool in summer. Native

grasses, shrubs and even trees will absorb rainwater, minimizing storm water pollution.

At Yale, the renovated labs have been warmly received. A graduate student working by a window overlooking Cedar Street recently thanked architect Robert Skolozdra as he walked through the lab. Ergin Beyret sat near a shelf of *Drosophila* flies in test tubes in the golden afternoon light. Beyret later compared the old labs to dungeons, placeS designed for robots, not humans.

A pleasant work environment benefits the body and mind, he said. "After all, scientists are human, too."