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Private builder reaches green milestone

by Mike McCarthy, staff reporter

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A construction company and its insurance brokerage partner are trying to get the Sacramento office building they just completed certified as the first "green" commercial building in Northern California.

The builders are **DPR Construction Inc.** and ABD Insurance and Financial Services, DPR's brokerage. Whether they get the hard-to-win environmental accolade or not, the building at 2480 Natomas Park Drive could become a milestone in north-state construction.

The offices use such tactics as waterless urinals, open cubicles for executives, advanced air-conditioning coils and other techniques and equipment. The aim is to ease its impact on the environment, cut costs and boost employee health and productivity.

The DPR/ABD building cost \$6.2 million to build, or \$84,000 more than conventional methods would have cost. Using green methods is expected to save \$435,000 in building expenses, including energy, during the next 10 years. "We wanted to show that this can be done and that it's economical to do it," said Craig Greenaugh, DPR's director of sustainable construction.

But more builders aren't building green because of the up-front cost.

"The DPR building will make inroads in showing the benefits of this kind of project to developers and tenants," said Brian Sehnert, a senior architect with the Sacramento Municipal Utility District and a sparkplug of the local green-building movement.

The movement is spreading. Local architects and other industry professionals are forming a Sacramento-area committee of the national U.S. Green Building Council of Washington, D.C. The council oversees the

methods used to build green buildings and certifies a structure's green or "sustainable" status. Only two have been certified in Northern California so far.

The local committee, filled with industry leaders, could be influential in spreading the word.

"It's important to have this, because this region poses one of the greatest opportunities today to implement the principles of sustainable design," said Bruce Starkweather, president of Lionakis Beaumont Design Group Inc., Sacramento's largest architectural firm. "The principles are very important in how we're going to shape our community."

Meanwhile, the new California Department of Education building in the state's five-building East End project has been certified as green by the council, said Ken Hunt, a spokesman for the state's General Services Department. It's the first state-owned building in the country to achieve the certification, said Taryn Holowka, a spokeswoman for the council.

The 800,000-square-foot expansion of the state's Franchise Tax Board complex in Rancho Cordova is also a contender for true-green status. But the state's budget for seeking certificates like this has been cut, said Matthew Shigahara, an associate Lionakis Beaumont architect working on the project. So the architects working on the project are volunteering to work on the certification.

Naturally lighted: DPR and AMD developed their 53,300-square-foot building and hired LPA Sacramento Inc. to design it in line with the guidelines of the Green Building Council's Leadership in Energy and Environmental Design program.

The design eliminated walled executive offices to let more natural light into each floor. Executives at DPR and ABD work in no-wall cubicles that are the same size as those of the other workers.

"Studies show that if you're in a dungeon with no windows, you won't be the most productive," Greenaugh said. "If your employees love their building and are more productive, that's where the big money is." The studies also show that light can improve morale and reduce sick days, he added.

Each floor does have four small conference rooms at the corners, placed to block the least amount of light.

Filters are important: One of the more peculiar green concepts in the new building is the waterless urinals in the men's rooms. They work on gravity and have a filter cartridge to kill smells, Greenaugh said.

Toilets have two buttons. One sends a 0.8 gallon-flush into the bowl, or half the maximum allowed by the state building code. The second button sends 1.6 gallons.

The toilet was designed by Australians trying to cope with the country's long drought. Between them, the urinals and toilets are projected to save 175,000 gallons of water a year in the building.

Outside in the garden, water use for landscaping was cut by a projected 112,000 gallons a year, or 50 percent, largely by using drip irrigation and reducing the amount of lawn.

Another green technique is expected to reduce the possibility of mold in the air-conditioning system. When air-conditioning systems are started in new building, Greenaugh explained, they usually suck in dust and other contaminants hanging in the air from construction work.

The crud settles in the system's ducts, where it can foster mold. The DPR building's ducts were cleaned before installation and shipped to the site sealed in a wrap. The ducts remain sealed until the building is fully cleaned. A filter is installed in the system to further block dust.

The building's improved energy efficiency was accomplished by, among other things, using an air-conditioning system in which the refrigerant coils are not only fanned (the usual method), but are also sprayed with water.

Such measures made the heating and air-conditioning system 34 percent more efficient than the minimum required in the state's building code, he said.

The energy savings should pay for the air system in five years. "We can just pocket the money," Greenaugh said.

The Sacramento Municipal Utility District helped with technology, he added.

Other green measures include:

- Buying as many goods as possible from local manufacturers to reduce long-distance shipping and the exhaust emissions that go with it.
- Using recycled building materials.
- Trying to eliminate building materials that contain volatile organic compounds, such as toxic gases that emanate from new carpeting.
- Using light-colored roofs that reflect sunlight.
- Skepticism: Why doesn't everyone build green? "It's cost," said Bob Early, president of Sundt Construction Inc.'s Northern California office.

Developers typically figure only how much the "up-front, first cost" of construction will be, because construction lenders will eyeball those costs. And green buildings are typically pricier up front, largely because of the need to use recycled materials.

The other way of analyzing cost is by the life cycle of a building, just as DPR did. Governments or big companies that supply their own funding, he said, are more likely to use that kind of analysis. In California, for instance, two of the biggest certified green projects are owned by Ford Motor Co. and Toyota Motor Sales.

Also, the green-building trend has only begun to emerge during the past few years. It's a bit early for it to have a strong impact, he said. On the other hand, building green saves money long term and is seen as a politically correct trend, so it's likely to gain momentum.

One's here, one's in Menlo Park: California's state government adopted the council's green methods during the Davis administration, General Services' Hunt said.

The most dramatic result is the recently completed five-building East End project. The Department of Education headquarters at 16th and N streets is the only state-owned building in the country to achieve the Leadership in Energy and Environmental Design's second-highest certification level, the "gold" certificate, said Taryn Holowka, a spokeswoman for the Green Building Council.

The council breaks certification into four levels: platinum, gold, silver and plain "certified." The council has certified only 65 green buildings in the country, including six in California.

The only other Northern California certification is for the William and Flora Hewlett Foundation building in Menlo Park, even though the council got its start in San Francisco in the early 1990s.

The remaining four buildings in the 1.5 million-square-foot complex are applying for the silver certification, Hunt said.

The city of Sacramento is seeking certification for its new building at 10th and I streets that houses the California Environmental Protection Agency.

Also going for the silver is the 550,000-square-foot new headquarters of the California Public Employees' Retirement System, now being built on R Street.

CalPERS got the green building concept going locally before the council ever emerged. The agency's Lincoln Plaza headquarters on Q Street, completed in 1986, was the most advanced energy-efficient local project, said Diana Proctor, manager of the new headquarters building.

"In the long run we will benefit as the owner in the cost return for energy efficiency," she said. "Also, what's good for the environment is good for CalPERS. And the good air quality and lighting makes for a more comfortable work environment and more productivity."