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## Natomas midrise proves going green doesn't have to be costly

Predicted energy savings would more than offset increased building expense

Sacramento Business Journal - by [Anne Gonzales](#) Correspondent

One new office building in Sacramento is bringing two firsts to Natomas.

Natomas Gateway Tower made its vertical debut in South Natomas this year. At 12 stories, the Class A office building is the tallest in Natomas, and one of the first privately developed projects in Northern California with a coveted energy-efficiency rating aimed at boosting sustainability.

It's anticipated the building will earn Leadership in Energy and Environmental Design certification from the **U.S. Green Building Council**. The most recent addition to Natomas Corporate Center, the 345,000-square-foot building has reshaped Sacramento's skyline.

It's not unusual for public-sector buildings in Sacramento, such as the **California Environmental Protection Agency** headquarters and the **California Public Employees Retirement System** building, to achieve LEED certification, said Curtis Owyang, an architect with LPA Sacramento who worked on the Natomas project. But to get a private developer to embrace the idea of a "green" building was a leap forward.

"People think it's too expensive, but this is a great example of that not being true," Owyang said.

LEED certification awards points for energy-efficiency and environmentally friendly measures in the construction and maintenance of a building.

Owyang said his firm always brings LEED certification to the table when working with clients, but many reject the idea. In the case of Natomas Gateway Tower, private developers **Bannon Investors** liked the concept and ran with it.

The building has an air filtration system equivalent to hospital standards and photovoltaic solar panels on carport roofs scattered throughout the parking lot. It includes conservation features expected to save almost 6 million gallons of water annually. Its energy use will beat California's stringent energy standards by almost 20 percent.

But the increased construction cost was minimal — less than 1 percent more than traditional buildings, Owyang said. Meanwhile, the building will cost less to maintain, and the green elements bring value and strengthen the building's marketing advantage.

### Value in keeping it local

From Interstate 5, Natomas Gateway's curtain wall is striking. The building has curved glass walls similar to the other two smaller buildings in the business park.

"That's where the curvatures of the building come from," Owyang said. The new building extends that design feature, but adds three-dimensional elements to show layering and texture, highlighted with LED fixtures.

"At night, you'll be able to see bands of light accentuating the architecture."

The general contractor on the project is impressed by the sweeping views from the top floors of the building.

"When you go upstairs, the views of downtown Sacramento are just amazing," said Dave Higgins Jr., president of **HMH Builders**. "Because of the position of the high-rise, you're able to step back, in a way, from downtown and view it. There's a greenbelt, and you're looking back at the downtown area and the freeway. It's very striking."

The building is predominantly a glass curtain wall, so the windows are high-performance, insulated, double-paned glass, which allows natural light in while reflecting ultraviolet rays, Owyang said. Other exterior materials are pre-cast concrete panels made in West Sacramento.

"Many of the products and materials for this building were manufactured and purchased locally, which is another sustainable point, because it cuts down on shipping distances and boosts the local economy," Owyang said.

### 'A new wave of design-build'

Natomas Gateway's construction used integrated project delivery, a design-build process that creates a team from the owners, architects, engineers, general contractors and subcontractors, Higgins said.

"Sometimes, on traditional projects, these different parts can be adversarial, but in this case, we forced them into a relationship where they help each other," Higgins said of the 14-month construction period. "I felt that spirit of camaraderie, where we were all working



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High-performance, double-paned glass allows for natural lighting while keeping out UV rays.

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toward the same goal.”

The design-build process resulted in very few change orders during construction, he said. For instance, the steel fabricator, working with the team, made the frame with smaller gaps between the window frames and the glass so there were fewer adjustments after window installation.

“That saved money, and it was all part of the agreement before construction even started,” Higgins said.

The owner wanted “zero change orders,” Higgins said, so his firm had to work diligently to connect the glass and steel frame, using new three-dimensional modeling technology, to build the project as efficiently as possible.

Natomas Gateway also presented significant engineering challenges, said Ron Migliori, executive vice president at **Buehler & Buehler Structural Engineers Inc.**, but the collaborative design-build process kept prices down. He noted that all the subcontractors were brought on board at the beginning, including those working with the pre-cast tile, structural steel, elevator and even the window washing contractors.

“This is the new wave of design-build, because when you get everyone involved, it saves time in the long run,” Migliori said. “You work all of the snags out before, instead of having all these idiosyncrasies pop up later.”

#### **Risks, challenges, rewards**

The owner’s proactive approach led to cost savings and innovation, said Keith Bauer, senior associate of Buehler & Buehler. For example, contractors ordered the steel even before they got a building permit. That risky move locked in a lower steel price, Bauer said.

But designing for LEED certification had its challenges.

Migliori said seismic requirements and hiding the braces along the interior stairwells, elevators and near restrooms made the engineering design difficult.

“It’s an engineering challenge, because we like to have the braces on the perimeter,” he said. “It took lots of modeling to get it right.”

Tweaking the lateral load design and using new “buckling restrained brace frames” cost an extra \$30,000 but saved \$500,000 in steel and foundation costs, Migliori said.

Another challenge in the project design was to recycle as much water as possible, including incorporating landscaping on 14 acres that uses 5.7 million gallons of recycled water annually. That required collaboration with the city of Sacramento, because the building’s landscape irrigation water will also be used for fire suppression, a first for Sacramento, he said.

The solar panels on parking roofs create renewable energy, contributing 3 percent of the building’s total energy demand. Another 72 percent of the project’s electrical needs will be met with wind, solar and geothermal energy through the **Sacramento Municipal Utility District’s** Greenergy program.

Owyang said the lobby design is striking, using all fluorescent and LED lights and cherry wood paneling harvested from sustainable forests.

“This is a very good example of how aesthetics, sustainability and economics can come together to create a viable and market-sensitive building,” Owyang said.

#### **Natomas Gateway Tower**

**Address:** 2020 West El Camino Ave., Sacramento

**Height:** 12 stories

**Square footage:** 345,000

**Developer:** Jon Kelly

**Architect:** [LPA Sacramento Inc.](#)

**Engineer:** Buehler & Buehler Structural Engineers Inc.

**General contractor:** HMM Builders