



MAKING THE MOST

Projects Highlight Safety, Sustainability Initiatives in Commercial Market

The current commercial office market is immersed in negative projections, but the construction projects that have broken through or wrapped up in the last year boast a lot of positives in terms of sustainability, safety, technology and training. The contractors and owners with work on the books are committed to going above and beyond to deliver office buildings that are packed with superlatives—the strongest, the largest, the smartest, the greenest—and promote industry best practices.

PIRTLE CONSTRUCTION (2)

BY JOANNA MASTERSON





Pirtle Construction, Davie, Fla., greened its new corporate headquarters from the inside out.

OF OFFICE SPACE

SAFETY ALL-STAR

Early next year, the first component of Phoenix's 7-acre \$900 million mixed-use CityScape project will open for business. The Phoenix office of Hunt Construction Group has been hard at work on the first phase 27-story Class A office tower and five-story underground garage since winning the

job in July 2007 and breaking ground in January 2008. RED Development, Scottsdale, Ariz., already has leased about 75 percent of the space—quite a feat considering the precarious economic shift that began just as financing was being finalized.

“Their ability to start the project and have success leasing is a real tip of the hat

from us as contractors,” says Brent Leif, Hunt's onsite construction manager. “They stuck with it and put together a big deal in uncertain times.”

Hunt was able to build off that momentum to pursue its goal of becoming the state's first general contractor to participate in the Arizona Division of Occupational



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Safety & Health (ADOSH) pilot Voluntary Protection Program (VPP). The firm began the application process on other jobs, but CityScape was the first opportunity it had to go above and beyond to apply for the program's Star Site designation.

"The application outlined all of our policies and procedures in terms of how we run safety on our jobsites, as well as how we run our subcontractors' safety programs. We had to make sure everybody had the same goal in mind for the health and safety of workers onsite," Leif says.

The process also involved a three-day inspection by ADOSH, which interviewed Hunt employees, subcontractors, foremen, safety personnel and the owner to ensure what was stated in the application was actually being practiced onsite.

"We took this on because we believe it's absolutely the right thing to do," Leif says. "We believe safety is the most important part of putting buildings together. If we can do things better and work with ADOSH, we can promote better safety and educate our peer group of contractors on how safety should be treated on all projects."

Hunt achieved VPP status last June and CityScape was named a Star Site, which means safety programs can be



HUNT CONSTRUCTION GROUP (2)

CityScape's first office tower features a unitized curtain wall system. The entire three-block project represents Phoenix's largest private investment to date.



self-administered onsite without regular compliance inspections by ADOSH. Once Hunt achieves VPP status on two more projects, then all of its future projects automatically will be deemed Star Sites.

Not only does this success set Hunt apart from its competitors and help get the pilot program off the ground, but it also benefits clients because VPP jobsites have a lost workday incidence rate of at least 50 percent below the average.

Streamlining the project even more was the design and construction team's use of building information modeling to coordinate mechanical, electrical, plumbing, fire sprinkler and chilled water piping systems. Hunt also tried out a new scheduling software to visualize potential



Louisville's Largest

American Life & Accident Insurance Company of Kentucky is now the proud owner of Louisville's largest vegetative roof. Perched atop the company's Mies van der Rohe designed corporate headquarters, the 17,000-square-foot green roof includes native species sedum mats and three test beds provided by Bernheim Arboretum and Research Forest as part of an ongoing study to identify plants that will excel in the region's rooftop environments.

The project furthers the company's efforts to reduce the iconic building's carbon footprint. Recently, multiple floors of the landmark underwent interior renovations, and energy-efficient HVAC equipment, lighting and energy management systems were installed.

The Louisville office of Turner Construction Company completed the green roof in September.

TURNER CONSTRUCTION COMPANY

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constructability and scheduling problems on the 3-D model.

“CityScape is a big project, but not overly complicated, so we can test different software and programs more easily,” Leif says. “We’re trying to push some boundaries on a lot of different fronts.”

Looking ahead at the three-block CityScape development—which is located near two light rail stations, the convention center, and entertainment and sports venues—Hunt will continue with phase two of Block 22, a retail and hotel building south of the office tower. The firm currently is performing preconstruction work and reviewing drawings from the architect for the first few levels of the structure, but has not yet received the green light to break ground. The Weitz Company is leading construction of a retail center above an existing parking structure on Block 23; details on Block 77 have yet to be released.

A GREEN HOME AWAY FROM HOME

After outgrowing its existing office a few years ago, Pirtle Construction Company, Davie, Fla., decided to build a new headquarters to provide a better work environment for employees and celebrate 40 years of business. Working with longtime partner Zyscovich Architects, Inc., plans were drawn and permits were pulled.

But when Pirtle completed its first LEED-certified project, the Broward Community College/South Regional Library, the firm realized its new office presented an opportunity to embrace the green movement taking hold in south Florida.

“When we finished our first LEED building, we decided that if we’re going to be part of this, it had to start at home,” says Bill Ellis, assistant vice president and project executive for Pirtle. “The best way to do that was to build our corporate headquarters as a LEED project.”



Reflective roofing materials and integrated lighting controls contributed to Pirtle's LEED Silver certification.

PIRTLE CONSTRUCTION

The firm coordinated with the architect to amend the original design for the building and approached the city with the new sustainable plans. With the support of Davie's mayor and city council, Pirtle moved forward on a \$5 million, 30,000-square-foot Class A office building featuring a kitchen, dining area, outdoor patio, high-end materials, and a gym and tenant space on the first floor.

The structure, located on a previously developed site, is comprised of block masonry, cast-in-place concrete and a silver pitched standing seam metal roof for solar reflectivity. Other energy-efficient components include glazed windows and foam insulation, and a lighting control system that monitors occupancy and

daylighting levels. Green power also was purchased to offset the building's anticipated energy use.

Additionally, to achieve LEED Silver certification—and deliver Davie's first green office—the project team:

- reduced water use for irrigation and plumbing by 50 percent and 42.7 percent, respectively, by planting native plants and installing low-flow pressure-assisted water closers, low-flow aerators and censored faucets;
- contracted with a waste management company for special dumpsters to recycle construction debris and divert 82 percent of waste from landfills;
- followed a strict indoor air quality management plan, including only using approved adhesives and sealants containing low volatile organic compounds;
- used 12 percent of materials with recycled content and purchased 23 percent of materials locally; and
- set aside parking for fuel-efficient vehicles and carpools.

Pirtle used the preconstruction phase and onsite meetings to educate subcontractors that had never built green before on the LEED certification process—from

The 300,000-square-foot Chevron Northpark office complex boasts Louisiana's heaviest and tallest tilt-wall panels.

MAPP CONSTRUCTION, LLC

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how to recycle debris onsite to ensuring ductwork was covered properly during construction.

“They stepped up to the plate, and it gave them the experience to pursue green projects in the future,” Ellis says.

The company also hired professionals from the University of Florida’s Center for Training, Research & Education for Environmental Occupations to hold classes in-house so managers could become LEED Accredited Professionals (APs). Pirtle now has 18 LEED APs on staff—a wise investment considering nearly 80 percent of the projects the firm bids on these days are pursuing LEED certification.

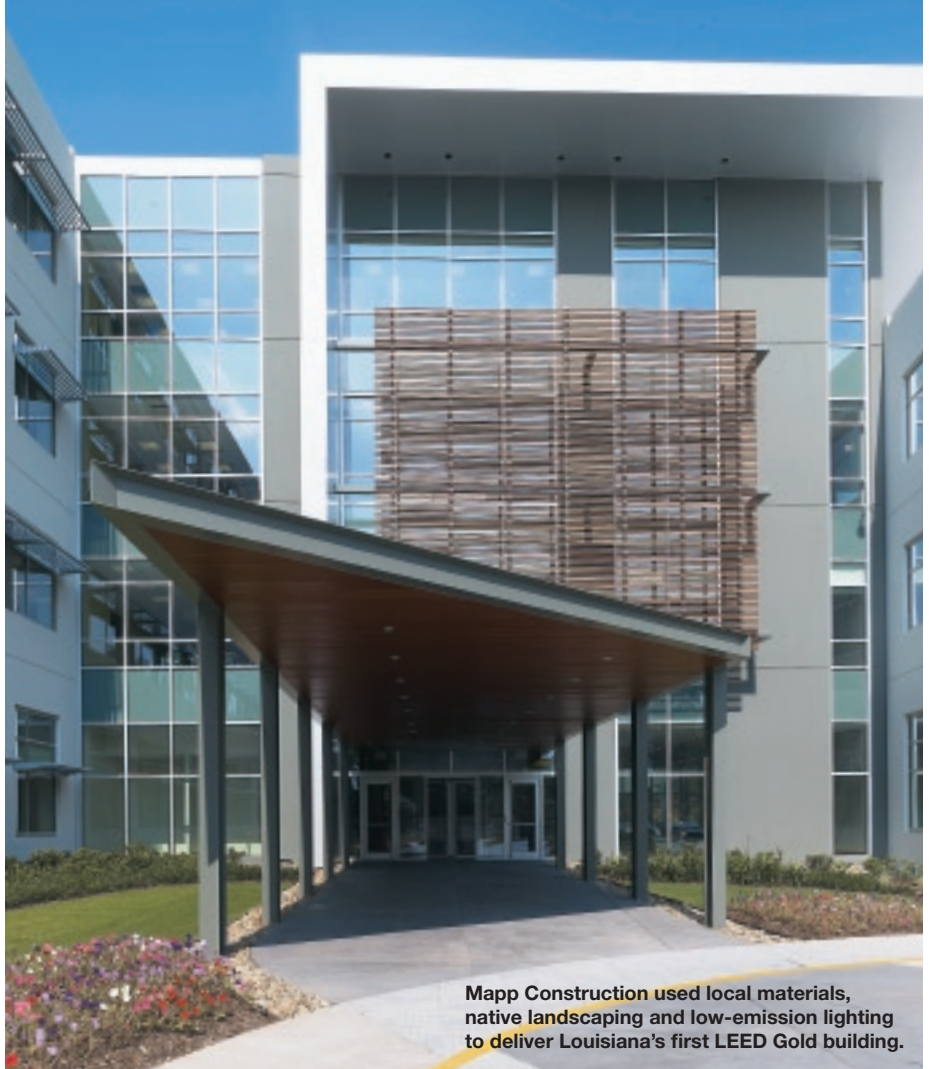
Plus, the firm now knows what it’s like to build green as both a contractor and a client. “This perspective has helped us work with owners going forward,” Ellis says. “We’ve experienced some of the same things and can answer questions.”



TILT-WALL GOLD

In April 2008, Chevron Corporation unveiled its new Northpark headquarters in Covington, La.—a four-building complex containing 300,000 square feet of Class A office space for its North American Exploration and Production Company’s Gulf of Mexico Business Unit. Barely more than a year earlier, the project team responsible for delivering the \$70.6 million headquarters faced a variety of challenges: The 22-acre project had to be sustainable, strong enough to meet Miami-Dade Hurricane Standards and completed in just 14 months.

The joint venture of Mapp Construction,



Mapp Construction used local materials, native landscaping and low-emission lighting to deliver Louisiana’s first LEED Gold building.

MAPP CONSTRUCTION, LLC (2)

LLC, Baton Rouge, La., and St. Louis-based Clayco Corporation was up to the task, executing two shifts per day, seven days a week, for 600,000 manhours without a lost-time incident. Such a stringent schedule required the speed and cost-effectiveness of tilt-wall construction.

“The architect [Forum Studios] and developer [Koll Development Corporation] had built several fairly large office buildings around the country with tilt-wall, and we do a lot of tilt-wall, but it was one of the first in Louisiana,” says Mapp President and CEO Mike Polito. “It required a lot of pre-task planning among each trade’s supervisors to figure out the sequencing of the panels.”

These weren’t just any tilt-wall panels; they were the heaviest (220,000 pounds) and tallest (a fraction of an inch under 70 feet) in the state—designed with 52-foot braces to badgers to withstand 120 mph winds and erected with a 300-ton track crane with 16 points for lifting.

Another first for the state and the client was LEED Gold certification, and Northpark was the largest green project Mapp had undertaken. Sustainability

challenges included finding a hauler that could accommodate the separation of wood, plastic, metal, paper, glass and trash; mitigating wetlands; and removing trees from the virgin land, which Mapp offset by recycling them into mulch and paper.

The project team also elected to install a raised flooring system throughout the building—requiring 63 tractor trailer loads—to allow for under floor air flow, which reduces cooling costs and energy consumption.

“The team we put out there didn’t have a lot of experience with LEED, so we learned a lot on the job,” Polito says, noting the firm took the time to study the LEED points system and the selection of sustainable materials even though they ultimately were the architect’s responsibility. “In Louisiana, if we have four to five projects on the table, at least three of them want to build sustainably or are considering LEED certification. We want to come to the table with more expertise and assist earlier in the process.”

Joanna Masterson is senior writer of *Construction Executive*.