



Breaking News Story - October 2008

First State Office Building to Feature a Total Precast Structure Completed

West Sacramento-based Clark Pacific reports that it recently completed the precast construction on the Caltrans District 3 Office Building in Marysville.

The \$64 million, 211,000-sq-ft project is the first state office building to feature “All-in-One” total precast construction materials, consisting of high quality, architecturally finished precast column, beam and floor plank elements made from locally extracted materials joined in a hybrid moment frame system, according to Clark Pacific.



Clark Pacific says that total precast offers cost-effective, quick construction along with superior seismic performance, environmental friendliness and a high-end architectural appearance.

The design-build team led by architect AC Martin and general contractor, Turner Construction, is now applying for a LEED silver rating for the project.

“The Caltrans project was a great opportunity to create a unique design-build project,” says Richard Myren, project director for the State Department of General Services.

“The new precast structural system piqued our interest, especially because of the shorter construction period required -- that was a big benefit since the staff could move in more quickly. The precast structural system is striking in appearance and provides finished surfaces on the exterior so that the all-in-one system is easy to maintain and provides a graphic look.”



The new building’s design includes use of a Precast Hybrid Moment Frame construction system. By using PHMF, Clark Pacific says it cost-effectively increased the building’s seismic performance standards in a high-seismic region. One benefit of the precast concrete structural moment frame system is that there is no need for extensive sheer walls or interior cross bracing to strengthen the building – something required in steel frame and poured-in-place concrete buildings of this size. Without the bracing required in other types of structures, the floor plans in PHMF buildings are more open so natural light can penetrate deep into the building.

PHMF is considered by leading structural engineers to be the best performing system to reduce drift after a seismic event due to its unique self-righting ability. Clark Pacific says it is one of only a select few manufacturers that offer the hybrid moment frame.

“The new Caltrans headquarters was a highly collaborative project between Turner, its trades and the design team,” says Carey McLeod, lead architect for AC Martin. “The total precast design was the right solution for the right price to meet the user’s needs.”



The Caltrans' headquarters was constructed as a sustainable building by using locally extracted, environmentally friendly resources and manufactured materials. The total precast structure delivers up to 15% annual energy cost savings: less air conditioning is needed in the summer and less heat in the winter due to the high thermal density of the construction materials.

Other LEED elements include water conservation strategies; mature tree shading along the main entrance; recycled carpeting; and extensive daylighting with the help of high-performance glazing, light cells and a 4,800-sq-ft, four-story atrium canyon in the center of the building. The atrium has a south-facing window system at the top to filter in natural lighting throughout the interior. It also utilizes exhaust fans to perform night flushing of air to improve indoor air quality and reduce on air-conditioning usage.



The project will replace Caltrans District 3's 45,000-sq-ft, 71-year-old current building, located on the same site. Plans call for the old building to be demolished and a daycare center built in its place.

The new five-story structure will facilitate 776 employees in loft-like open offices with high ceilings. There will also be a cafe, 200-seat auditorium, teleconferencing rooms and an outdoor surface parking lot with 350 spaces.

"Clark Pacific is very proud of this project and congratulates Caltrans and the California department of General Services on its commitment to sustainable building principles," says Don Clark, president of Business Development at Clark Pacific. "To help the design team realize Caltrans' vision, we applied our expertise in structural precast concrete solutions to design and build a headquarters that achieves not only high-end aesthetics and sustainability, but superior durability and construction value. It will make an ideal workplace for the Caltrans staff for years to come."

The project took only 19 weeks to complete above-grade structure construction, and the precast components took only 14 weeks to manufacture.

"The integral exterior finishes and Clark Pacific's high quality control for those finishes are beyond reproach," says Myren. "AC Martin and Clark Pacific were creative in developing attractive thin brick panels that require little or no maintenance leaving very little area on the building that will ever need painting."