McCarthy Tops Out Concrete Construction for J. Craig Venter Institute on UCSD Campus

The new facility is designed to be the “greenest” research lab in the world and will support approximately 125 scientists and staff dedicated to advancing genomics

SAN DIEGO – (April 17, 2013) – With completion of the new J. Craig Venter Institute, La Jolla, later this year, San Diegans will have more reason to be proud of its reputation for being the nation’s leader in high-tech science and innovation and home of more Nobel Prize winning scientists than any other city.

McCarthy Building Companies, Inc. (www.mccarthy.com), one of the nation’s premiere research laboratory builders, this week topped off the last concrete pour for the three-story, 45,000-square-foot laboratory facility, located on a 1.75-acre scenic coastal site at 4120 Torrey Pines Road in La Jolla, Calif., within the University of California, San Diego (UCSD) campus. Zimmer Gunsul Frasca Architects (ZGF) is the architect.

Expected to be the most environmentally friendly and only “net zero energy” biological laboratory in the world, the new $39 million J. Craig Venter Institute will support approximately 125 scientists and other staff in their mission to further the Institute’s goals in genomic research and policy. The location of the facility, on land leased from UCSD at the Scripps Upper Mesa, was chosen for its proximity to and potential for collaboration with the many renowned academic research centers in the La Jolla area.

“The project team is targeting LEED Platinum Certification,” said Robert Friedman, director of the J. Craig Venter Institute’s California campus. “Through rigorous LEED tracking and high performance teaming, McCarthy has successfully maintained a smooth construction process and kept the project on schedule toward our targeted November 2013 completion date.”
The new J. Craig Venter Institute will be one building consisting of a single-story, 12,605-square-foot laboratory wing; a three-story, 28,600-square-foot office wing; a 3,560-square-foot loading dock area; and a partially below-grade parking garage. The laboratory and office wings will sit atop the roof/podium deck of the parking garage. Exterior features include cedar wood siding, a wood window curtain wall and storefront system, metal panels, interior wood flooring and exposed architectural concrete.

The concrete walls, columns, footings, slab on grade, slabs on metal deck, and podium deck utilize 30 percent fly ash. Use of the high fly ash content contributes to two LEED points in the category of “Recycled Content”. For optimum aesthetic appeal, the exposed architectural walls and columns use Type III cement. McCarthy self-performed all the concrete work.

“McCarthy has achieved notable success on other projects such as the Salk Institute, UCSD Student Academic Services Facility and Soka University in Orange County, where the quality of the concrete work was essential,” said McCarthy Project Manager Nate Ray. “For the J. Craig Venter Institute, we had the advantage of drawing on the expertise of the same concrete specialist who oversaw work on the Salk Institute, as well as the same ZGF design team we worked with on the Soka University project.”

Advanced technology is playing a key role in this project. The project team is utilizing BIM, Navis Works, and Blue Beam for the electrical plan room, as well as FTP sites that are allowing the team to be paperless throughout the LEED certification process.

To meet the client’s goal of creating the most sustainable laboratory in the world, the facility incorporates high performance architecture, low-energy-use systems, water conservation strategies and onsite renewable power generation. The building massing and envelope are designed to maximize the use of daylight while reducing overall building energy use. Being net-zero for electrical energy, the building will produce as much electricity on-site as it consumes annually. This will be made possible by integrating numerous energy efficiency measures throughout the building systems, using advanced building control technologies, incorporating operable windows and efficient lighting, and by reducing internal plug loads wherever possible.

On-site renewable energy will be generated through the sizeable photovoltaic roof. The project team has also pursued aggressive water conservation based on the combined strategies of infiltration and water reuse. Rainwater will be collected and stored in giant underground cisterns with a total capacity of 90,000 gallons. The water will then be filtered and reused for operation of cooling towers, toilet flushing and site irrigation. About two-thirds of the building’s water use will be supplied by rainwater.

Other sustainable design strategies include recycled content, natural ventilation and passive cooling, low-water landscaping, high-efficiency plumbing, sustainably harvested wood, and use of regional materials, the latter of which is helping to keep costs down.
“McCarthy was brought in early to perform preconstruction on this project with the purpose of significantly lowering construction costs while still allowing the client to aim for LEED Platinum status,” said McCarthy Project Director Craig Swenson. “This target value design approach is enabling us to maintain the integrity of the highly sustainable design while also making the budget work.”

KPFF Consulting Engineers is the structural and civil engineer; Integral Group is the mechanical, electrical, and plumbing engineer; Jacobs Consultancy is the laboratory planner; Andropogon Associates and David Reed are the landscape architects; SC Engineers are designing building controls; David Nelson & Associates is the lighting design consultant; and Sustainable SoCal is the construction manager.

The J. Craig Venter Institute is the world’s leading multidisciplinary genomic research organization, employing approximately 250 scientists and staff at locations in Rockville, Md., and San Diego, Calif. President and Founder J. Craig Venter, Ph.D. is regarded as one of the leading scientists and entrepreneurs of the 21st century, most famous for his role in constructing the first synthetic bacterial cell and sequencing the human genome. He and his staff are dedicated to human, microbial, plant and environmental genomic research, the exploration of social and ethical issues in genomics, and seeking alternative energy solutions through genomics.

About McCarthy Building Companies:

Recognized as one of the nation’s few true builders, McCarthy Building Companies, Inc., is the country’s 8th largest domestic general contractor (Engineering News-Record, May 2012) and the largest general contractor in California. The company is committed to the construction of high performance green buildings; progressive job site technology; and safer, faster and more cost-effective execution. In addition to San Diego, McCarthy has offices in Newport Beach, Sacramento and San Francisco, Calif.; Phoenix; Las Vegas; St. Louis; Dallas; Houston; Atlanta; Albuquerque; and Collinsville, Ill. McCarthy is 100 percent employee-owned. More information about the company is available online at www.mccarthy.com.

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