



MT. SINAI PEDIATRIC AND NEONATAL ICUS

breaking ground on a healing hospital

New York City contractor Vanguard Construction is targeting LEED Gold in its renovation within a fully operational Mount Sinai Medical Center

ABOVE: A rendering of Mt. Sinai's new pediatric and neonatal ICUs illustrates how the medical facilities will function after the difficult construction work is complete. Vanguard Construction is currently completing the renovation while the hospital remains open.

by Scott Heskes

Joe Tursi knew that Mount Sinai Medical Center's latest building project meant embarking on a new journey. The hospital project operations manager knew that there would be the normal challenges inherent in creating new pediatric and neonatal intensive care units (PICU/NICU) in the heart of New York City while keeping the rest of the hospital fully operational. But there would be new challenges as well, including LEED certification, a challenge for a facility as energy-intensive as a hospital. "It was one of our oldest buildings on the campus, and it had a poor infrastructure," Tursi says of the 1950s building. "One of the other difficulties was working in a confined space." The two-floor, 9,000-square-foot renovation is sandwiched midspan in an eight-story mid-rise—at the center of all of the hospital's activities.

Now well on its way to LEED Gold certification, the project is also part of a larger concept for the future planning of the hospital, envisioned by architect Perkins+Will and general contractor Vanguard Construction. Michael Strauss, president and founder of Vanguard, gives credit to the highly synergetic collaboration between the two companies. "Robin Guenther and Peter Syrett of Perkins+Will—both well regarded in their work on sustainable hospital design—were instrumental in helping Mount Sinai reach the decision to go LEED-certified," he says.

The concept of a healing hospital was foundational for the project team, which was faced with improving systems without disrupting the activities of the facility. "It is a fully operational children's hospital, and we are interacting during construction with the floors above and below all the time," Vanguard project manager Kevin Cslzmar says. "The PICU/NICU floors were completely stripped of their existing interiors, and we are rerouting all of the mechanical systems." Working with Rockmor Electric for electrical systems, the new wing Vanguard is building will consist of 15 patient PICU/NICU rooms and will include new administrative offices.

"This is the second renovation ever to happen on these floors," Cslzmar says. "Because it's a hospital, the infection-control standards are extremely high. And when you are dealing with children, the tolerances have to be very well managed." HEPA filters and tacking mats are used throughout to control airborne particulates, and plastic encasements are used as barriers from the construction work or whenever ceilings are accessed on other floors. To keep the active patient areas free of construction dust, negative air pressure is circulated through the mechanical systems. "A lot of work has to be done at off hours and on overtime to minimize the disturbance and keep the important work of the ... staff, patients, and family members as free of disruption as possible," Cslzmar says.

As a whole, the project is entirely PVC-free, from the flooring to the LightLouver window treatments, and wood products are all formaldehyde-free. "We are achieving additional credits for being within 100 miles for a lot of our products—like the doors and carpet are local," Cslzmar says. "On the third floor, inside the patient wing, we are designing a light shelf reflecting the natural sunlight back into the ceiling to provide more daylight and using less electricity." Vanguard president Strauss adds that new low-E windows are being installed on all exterior walls. "Because the perimeter wings are long and rectangular with windows on both sides, and [because] all the corridor walls are glazed, there is a lot of daylight that comes into the space," he says.

Manche Mitchell, Perkins+Will's project manager for the new hospital spaces, says that hospital design remains a challenge but that significant progress is being made. "Since hospitals are the second largest consumers of energy by building type, this remains a big challenge," Mitchell says. "We as a firm look to projects in Europe for inspiration, where the energy-use intensity [kBtu/square feet] is significantly lower. Reducing water use is another challenge within the medical environment. However, this too is beginning to be chipped away at as we are seeing less once-through cooling and other water-intensive equipment use in hospitals." **gb&d**

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