

THE MAGAZINE FOR THE PEOPLE
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CONSTRUCTION

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Manson Construction Co. makes the transition from family to employee ownership.

SHIP SHAPE:

Two \$1 billion projects will help the Port of Long Beach increase its capacity.



Equipped To Lead

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A New Space

TISHMAN GETS CREATIVE ON THE JACOB K. JAVITS CONVENTION CENTER. BY MARTA JIMÉNEZ-LUTTER

Institutional | TISHMAN CONSTRUCTION, AN AECOM COMPANY: JACOB K. JAVITS RENOVATION PROJECT

In 2004, the New York legislature gave the green light for the expansion and renovation of The Jacob K. Javits Convention Center in Manhattan.

Although it was delayed many times due to budget cuts and the economy, the work finally began in 2009 with construction manager Tishman Construction, an AECOM company, orchestrating the work based on architects FXFOWLE and Epstein's designs for the 110,000-square-foot addition. The addition needed to be operational by July 2010 to start the renovation of the existing facility, which is scheduled to be completed by the end of 2013.

One of the project team's challenges is that the center has to remain open during construction, meaning work proceeds among the presence of thousands of daily visitors. "The Javits Center is probably one of the more highly utilized centers in this country," explains Barbara Lampen, president of the convention center. Javits hosts a variety of functions, including major trade shows, televised events and graduation and awards ceremonies.

Close collaboration among all the parties is expected to result in the \$465 million project

finishing \$40 million under budget. Glen Johnson, project director for Tishman, says his company "put together packages that didn't lend themselves to adding extra cost and buying during a slow economy. The biggest hurdle with this project was managing the downtimes and then working overtime to complete activities around the shows' schedules."

Creativity and Innovation

Expansion of the facility added more than 100,000 square feet of space to the original center. This phase was completed in spring 2010 with a pre-engineered structure that allowed construction to be fast-tracked so the renovation phase could begin.

Johnson explains that the renovation involved replacing the shell and roof of the older building and the replacement of 93 rooftop mechanical units. Tishman had to do some preliminary work in the fourth quarter of 2009 to prepare for the roof work. "The original units had the electrical, fire alarm and system cables all running to the units above the roof," Johnson says. "That was a problem from

Tishman Construction, an AECOM Company: Jacob K. Javits Renovation Project

www.javitscenter.com

www.tishmanconstruction.com

- **Project value:** \$465 million
- **Headquarters:** New York, N.Y.
- **Tishman Construction employees on site:** 75 to 200
- **Scope:** Convention center addition and renovation

a maintenance standpoint because you couldn't change the roof or repair it, since all the conduits were on the roof."

Tishman re-wired the existing units to connect under the roof and then installed the rooftop units in phases. "We did these [rooftop units] in 10 sequences," Johnson explains. "We would remove the rooftop units, replace the roof and install the new rooftop units. While we were in that phase, we would also put in all-new lighting, fire alarm system and paint the hall, below which was closed."



Tishman Construction is rehabbing the Jacob K. Javits Convention Center in Manhattan.

Green Roof

Javits is targeting LEED Silver for the renovation, with improved thermal performance in the new skylights, HVAC sensors, better insulation and 6.5 acres of green roof. "It will be the largest green roof this side of the Mississippi," President Barbara Lampen says.

The size of the roof – 12 acres – and the weight of the units – 20,000 pounds each – required Tishman to come up with a creative solution. "We developed a rail system where we had carts on rails that went north to south across the roof, which would transport a unit from the landing platform to the work zone," Johnson explains. "We lifted them to the landing platform at the edge of the building, pushed them on the carts for about 800 feet and then they would be lifted by a gantry system, similar to the ones used to lift boats out of the water, which also worked on a track system"

The gantry system was developed by the Tishman group to work around the issue of not being able to use a crane to lift the units. "We had to use the gantry system because of the reach. It's such an expansive building that the cranes could only make it to the perimeter of the building, but we couldn't reach the interior units," Johnson notes. "So we worked our way out from south to north in each work zone, replacing units and refurbishing the hall."

New Light

Another challenge came in the form of glass. The "crystal palace" section of the Javits Center, located in the front of the building, contains 11 cubes of glass in a pyramid shape with a skylight on top and curtain glass on all sides.

The original structure, built in 1986, had 8,000 panes of dark, mirrored glass. FXFWLE and Epstein specified replacing the glass with low-e translucent glass and installing new skylights atop the 155-foot-high crystal palace. The work included repainting the entire frame and replacing the lighting and alarm system.

"To work there and keep the space operational, we worked with the building department and we developed an overhead platform that encompassed the whole space about 25 feet above the floor level," Johnson says.

Passageways and stairways inside the scaffolding allowed workers to access all phases of the work. "It was like a building inside a building," Lampen comments. ♦



One of the biggest challenges on the project was replacing all 8,000 panes of glass in the building's "crystal palace" section with low-e glass and installing new skylights. <<



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BUILDING SYNERGY

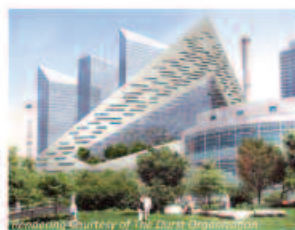
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