GE Healthcare – LEED Gold Certified – Precast/Prestressed Insulated Sandwich Wall Panels

What else could you ask for – economical? fast installation? superb energy efficiency? structural utilization? Sure, we got that. Ten inch thick insulated precast & prestressed concrete sandwich wall panels, typically 37’4” tall and 10’0” wide, utilize carbon fiber truss technology for shear connectors between the inner and outer concrete wythes, to deliver superior non-thermal conducting material, reducing heat loss to provide an R value = 20.

The 181 panels supplied consisted of 2-1/2” exterior wythes and a minimum of 2” interior wythe. EPS insulation thickness varied from 3-1/2” to 5-1/2”.

The exterior finish was brown pigmented and lightly sandblasted. Panels are load bearing, supporting the outer bay roof joists near the top of the panel, and in some areas, also supporting a second floor at panel mid-height.

This project will be LEED ‘Gold’ certified. Precast contributed to points earned in the following LEED sections: Optimize Energy Performance, Construction Indoor Air Quality Plan During Construction, Construction Waste Management, Recycled Content (15% fly ash reduced cement consumption), and Regional Materials (84% of all materials from source to jobsite in less than 500 miles).

Thanks to David Wan, P.E., Oldcastle Precast Building Systems, who wrote “Oldcastle is proud to be part of the team and special thanks to Turner Construction and SMRT Architects and Engineers for leading the effort in achieving such a high level of LEED certification on this project.”
Long Time Industry Supplier A.L. Patterson Continues to Expand

A.L. Patterson has moved to an industrial park in Fairless Hills, Pennsylvania, expanding their corporate office and warehouse space by over 200 percent. The new facilities were constructed by PCANY member Oldcastle Inc., a global leader in construction products and materials. Oldcastle constructed 88 precast panels for use on Patterson’s new building, completing the project in just three weeks. Oldcastle’s reliability and consistent quality allowed for a smooth transition to the next phase of construction, which was a relief to Barry Fleck, A.L Patterson president and owner, who was concerned about the unpredictability of the season.

A.L. Patterson, a supplier and consultant group for precast concrete accessories and equipment, is known for selling a wide variety of production systems that decrease downtime and remedial costs while increasing efficiency and profits (and is a long-time Associate Member and supporter of PCANY – editor). Photos and article submitted by Rachel Adkinson, A.L. Patterson.

Luxury Oceanfront Condos Built with Girder Slab system

The Girder Slab shallow steel beam system with 8” hollow core plank is a steel and precast hybrid, which uses precast slabs with an integral steel girder to form a monolithic structural slab assembly. The lightweight assembly develops composite action enabling it to support residential live loads, making it attractive for use in mid-to high-rise residential construction.

For the Aqua, in Long Beach, NY, the system easily accommodated the curved plan of the building. The Hollow Core Plank and Girder Slab system was a value engineered proposal, winning over all cast-in-place construction. And in compliance with local codes, the structure was designed for both hurricane wind loads and seismic requirements. Approximately 85,000 sq. ft. of 8” thick by 8’ wide Spandeck planks were used, each listed as 2 HR U.L. fire rated. Erection proceeded through the winter months of January, February and March, 2008. The owner – General Contractor Aqua Construction / The Engel Group – has used precast planks on previous projects.

Thanks to David Wan, PE, LEED AP, for this article.
Second Total Precast Building For The Same Owner

The 11-story La Guardia Hampton Inn in Queens, NY is the second total precast building for the same owner. The first hotel was completed near the JFK airport in 2002. Erection of precast near the La Guardia airport through the summer of 2008 averaged one floor per week. The General Contractor, Gotham Construction Corp, has long been a proponent of precast, citing less trade coordination, fast construction cycle, concrete quality, fire protection, and low sound transmission as benefits.

Electrical boxes and conduits were cast in the precast walls. Precast shear walls with NMB splice sleeves provide the required lateral load resistance. What else does it take to build this structure? About 112,650 sq. ft. of 8” thick x 8’0” wide Spandeck planks, 283 pieces of 8” thick precast bearing walls, 46 pieces of 10” thick and 12” thick precast shear walls, 10 precast columns 24” x 36”, 8 precast inverted tee beams 24” x 19”, and 92 various precast stairs and landings. Nothing to it!

Credits – Architect: Ollie Cherniahivsky & Assoc; Structural Engineer: DiSimone; Precast Consultant: IECS; General Contractor: Gotham Construction Corp; Precast Erector: JEM Erectors; Precast: Oldcastle Precast Building Systems, South Bethlehem & Manchester, NY plants. Thanks to David Wan, P.E., LEED AP for this information.

Notes from the January 28 Annual Meeting will be posted on the PCANY website.

Welcome to our newest members:
Alexis Dugon, Sr. Project Manager, Keystone Associates, LLC, Binghamton, NY
Erik Watson, President, Watson Engineering, P.C., Owego, NY
Dave Glattly, Branch Manager, East Jordan Iron Works, Newark, NJ
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