

'We couldn't use brick...because that would have been cost-prohibitive.'

At the 3rd Avenue Marriott ExecuStay building in New York City, two exterior walls cantilever 8 feet over existing buildings. Thin precast panels were light enough to permit the cantilevers, which in turn provided 20,000 square feet of added space in the building.

Lighter Panels

On the East Coast, New York City architect Thomas O'Hara has designed thin precast panels for two residential buildings, a 32-story Manhattan high-rise and a Queens mid-rise. "We would use precast again," says O'Hara, president of H. Thomas O'Hara Architects PLLC. "We're now looking at precast concrete panels for a 22-story high-rise in Manhattan. It's not definite, but it's on the table."

O'Hara says that, in effect, the use of thin architectural precast panels for the 32-story Marriott ExecuStay allowed the building to contain enough space to make it economically viable. Two sides of the building, on floors 12 through 32, must cantilever 8 feet over existing buildings to gain 20,000 square feet of rentable space. The extra space fetches enough additional rental income to make the building's economics work within air rights regulations.

The 2-inch-thick precast panels make the 8-foot cantilevers work. Heavier, conventional 6-inch thick panels would have placed too much dead load on the cantilevered floor slabs, explains Ashley

Smith, vice president of marketing for the precaster, Smith-Midland Corp. in Midland, Va. The thin panels weigh just 30 pounds per square foot, which is about one-third the weight of conventional precast panels. "We couldn't use brick because it would have required scaffolding on the roofs of adjoining buildings, and that would have been cost-prohibitive."

The building's Slenderwall brand architectural panels feature a high-strength precast concrete face that incorporates a heavy-gauge steel stud frame. To prevent thermal transfer from the precast into the building, Smith-Midland designed a half-inch air space between the steel stud frame and the concrete face. The steel frame was anchored into the concrete with stainless steel Nelson studs. "The system isolates the skin from movements of the structure," says Smith.

At the Marriott, the typical Slenderwall panel has a buff architectural precast finish with a light acid wash. A replicated brick feature provided accents in some panels. "It looks like real brick, but it's precast," says Smith.



The architectural panels at the 32-story Marriott executive office building are buff-colored with a light acid wash and a precast brick accent feature.

Fact Sheet

Project: 3rd Avenue Marriott ExecuStay

Type: Multifamily High Rise

Location: New York

Owner: Maidman & Mittleman LLP, New York

Architect: H. Thomas O'Hara Architects, New York

General contractor: BrawnMade Construction LLC, New York

Precaster: Smith-Midland Corp., Midland, Va.

Precast specialty engineer: Engineering & Marketing Services EMS, Jdeidet El-Metrn, Lebanon

Size: 32-story apartment building; 130,000 gross square feet

Design goals: Create an executive apartment building that maximizes the use of air space

Precast solutions: Design a building exterior with architectural precast panels

Components: 377 precast concrete panels

Project construction cost: \$49,300,000

Precast cost: \$3.6 million

