

BEST OF  
**2007**  
AWARDS

## Joan and Joel Smilow Research Center

AWARD OF MERIT: Higher Education

The project team working on the New York University School of Medicine's new Joan and Joel Smilow Research Center had the task of constructing a 13-story, 235,000-sq-ft building next to the East River with adjacent buildings supported by wood piles.

It also had to build the structure on a 12,500-sq-ft footprint on land made from fill from the river.

The \$135 million project broke ground in October 2002 and was completed in November 2006. The new facility contains new research laboratories and associated support spaces, including a 10,000-sq-ft cage animal facility to allow the recruitment of 50 new scientists by the school of medicine.

"What made the project challenging and rewarding was solving complex technical and programmatic problems in a manner that was respectful of the existing campus, enhanced the cityscape and provided a good working environment," says James R. Braddock, a partner with Mitchell/Giurgola Architects LLP, which designed the facility.

To prevent the adjacent wood piles from dying out, a perimeter foundation system of "secant piles" – essentially a stockade fence of overlapping 30-in.-diameter drilled concrete piers – was selected for the foundation.

In addition to the hundreds of drilled concrete secant piles and the matt slab, there were nearly 1,000 driven steel piles.

Due to the limited staging area at the site, the project team elected to employ a tops-down foundation construction methodology, whereby the courtyard slab was poured after piles were installed but



prior to excavation for the animal facility.

As the cellar was excavated, it was necessary to temporarily brace the secant wall with steel whalers and cross bracing. Steel piles temporarily supported the courtyard slab but were removed and replaced with concrete columns after excavation was complete.

The steel structure and composite metal deck framing system for the building was erected next, followed by an exterior enclosure system of aluminum curtain wall and conventional brick masonry selected to match the campus. Exterior aluminum sunscreens on the east and west facades prevent low-angle sunlight from making laboratories uncomfortable, while permitting natural light to penetrate deep within the floor plate.

The fit-out of the laboratories was based on the use of custom wood laboratory casework. Wood was used extensively in the conference center and faculty commons at the ground and first floors of the building. <<

### Key Players

**Owner:** New York University School of Medicine, New York, N.Y.

**Construction Manager:** Turner Construction Co., New York, N.Y.

**Architect:** Mitchell Giurgola Architects, LLP, New York, N.Y.

**Landscape Architect:** WORKSHOP - Ken Smith Landscape Architect, New York, N.Y.

**MEP Engineer:** Jaros Baum & Bolles Consulting Engineers, New York, N.Y.

**Structural Engineer:** Severud Associates, New York, N.Y.

**Geotechnical Engineer:** Mueser Rutledge Consulting Engineers, New York, N.Y.

**Curtain Wall Consultant:** R.A. Heintges & Associates, New York, N.Y.

**Interior Design:** Studios Architecture DC/PC, New York, N.Y.

**Laboratory Design Consultant:** JACOBS Consultancy, Tarrytown, N.Y.

**Environmental Consultant:** Allee King Rosen & Fleming, Inc., New York, N.Y.