



# New York Construction

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## Cover Story - March 2006 Big Questions

*New York City Hopes for Billions in School Construction*

by Tom Stabile

The start of a new \$13.1 billion, five-year capital plan for the New York City School Construction Authority seemed to show great promise. The agency let a record \$2.2 billion in work in the first year.

But there are no guarantees that funding for the next four years of the 2005-09 capital plan will stay on pace.

"We could see the pace of construction slow down considerably," said Steven Lawitts, the agency's senior vice president for budget, finance, and administration.

The record 2005 fiscal year owed mostly to a decision by Mayor Michael Bloomberg to reassign \$2.2 billion in municipal funds, letting dozens of projects begin. But his decision to move the money grew from a legal battle between the city and leaders in Albany over the level of state school aid.

The city built its five-year school capital plan in 2004 on the expectation that the state would directly fund half - \$6.5 billion - of the amount and the city would fund the other half. That expectation was based on a state court's order for Albany to provide the city with \$9.1 billion for school capital projects, part of a broader ruling in a lawsuit that the Campaign for Fiscal Equity won in 2003.

But though the city was counting on the first funds from that \$9.1 billion to arrive in the current 2006

fiscal year to keep its 2005-09 plan on track, the state appealed the court's award. An appellate court ruling was expected early this year.

The ruling could decide whether a new round of SCA awards this spring will use only the \$1.3 billion the city has programmed for the 2006 fiscal year or also use \$1.8 billion in state money - the first of the \$6.5 billion. In other words, the authority could let either \$1.3 billion or \$3.1 billion before July [\[see Finance sidebar\]](#).

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And it's ready to do so, Lawitts said.

"Assuming the best case that the appellate division rules in favor of the city, the state budget process would identify new funding at best in April," he added. "We would have projects ready to go to bid."

Should the city lose, or the state lose but appeal, the authority would likely delay projects - a dire consequence for a strapped system, said Noreen Connell, executive director of the Educational Priorities Panel, a local advocacy group.

"We've had overcrowding in our schools for more than 20 years," she said. "We had hoped there would be an acceleration of construction of new schools. Our expectations were very high. We wanted the agency to regularly reach \$2 billion a year in spending." Another point of concern was the planned departure on Jan. 30 of William Goldstein, the SCA's president and CEO since 2002, who oversaw various reforms of contracting, policy, and design guidelines that were intended to improve efficiency and make working with the agency easier for contractors. His exit to head the building of a memorial and museum at the World Trade Center site was to come before the authority had a sense of how its capital funding struggle would play out.

### **Heavy Workload Under New Rules**

The authority has at least one fiscal bright spot - its effort to trim historically high design and construction costs.

Four years ago, Bloomberg pushed for the agency to lower its construction bid prices for new projects to \$325 per sq. ft., from a prior average of \$415 per sq. ft. The agency has hit the mark, even as construction costs were rising, Lawitts said. A mayoral report put the 2005 figure at \$365 per sq. ft., under the inflation-adjusted target of \$368 per sq. ft.

"The bids have come in close to our estimates," Lawitts added. "We have stayed within target for every new school award."

The new costs apply to three dozen active projects the authority has in various stages from design to construction, said Bruce Barrett, its vice president for architecture and engineering. The mix includes 18 new buildings, 12 rehabilitation projects, and seven additions - with a dozen already in construction.

"We're looking to complete all of those projects by next fiscal year," she added.

The volume of work raised concerns that the authority was not finding enough bidders in an already-busy construction market, Lawitts said. The agency even rebid some awards to get better prices.

"Toward the end of the bidding season last year, some of the regular contractors were becoming fully subscribed, especially electrical," he added. "But we were able to award all of the projects we needed to."

One contractor taking on a large share is the DeMatteis Organizations of Elmont, N.Y. The company won four school projects last year - Bathgate High School and P.S./I.S. 189 in the Bronx, Frank Sinatra High School for the Arts in Queens, and Staten Island's I.S./H.S. 43.

Contractors had eagerly awaited last spring's flood of bids, said Steven Tartaro, the firm's vice president of construction.

"It wasn't surprising," he added. "The prior year, there were supposed to be projects awarded, but they weren't, so we knew they would all come at once."

The authority has tried to appeal to contractors by overhauling accounting and audit systems to pay promptly on invoices and change orders, Lawitts added.

"The School Construction Authority is one of the best New York City agencies to work for - tough but fair and they pay within 30 days," said Gary Segal, president of Five Star Electric, a New York-based electrical contractor.

The authority has also tried to smooth out paperwork of warranties, punch lists, certifications, and tests to avoid backlogs, said Chester Yee, the SCA's vice president for project management and operations.

Another attraction for bidders was the authority's project labor agreement with local labor unions last year. It lets contractors on rehabilitation projects run night and off-peak shifts - when children are out of school - and pay only a 5 percent premium instead of full overtime.

The agreement "has provided hundreds of millions of dollars of work for union contractors by leveling the playing field so that all bidders' costs are equal," said Fred Levinson, president of the Subcontractors Trade Association of New York and head of Levinson & Santoro Electric of College Point, N.Y.

The SCA also is more productive because Goldstein carried out Bloomberg's directive to formally fold it into the Department of Education, dropping the independent agency model it had used since it was created in 1989, Connell said.

"The agency rivalry between the SCA and the Board of Education was very frustrating," she added. "They were constantly trying to embarrass each other. It works much better as a unit in the department."

### **Diverse Collection of New Projects**

One of the agency's most important reforms was its push four years ago to overhaul design standards and lower costs.

Barrett attributed most construction cost savings the authority has achieved to the design changes, such as replacing dual-fuel steam boiler and chiller systems with new rooftop HVAC units or eschewing interior masonry walls in favor of tile and gypsum board. The effort evolved into a holistic design approach that fosters constant communication between the agency and its consultants and contractors to build a consensus, Barrett said.

"We meet every two weeks," she said. "We go over every design decision, weighing it against the cost, the value to the project, the durability, and ease of maintenance in the final product."

Yee said these new approaches are in use on the authority's current slate of projects, including two it will open in September - Bathgate High School in the Bronx [see Bathgate sidebar] and the High School of Architecture and Urban Planning in Queens. They are also part of major projects awarded last fall, such as P.S. 93 in Manhattan, a new school on which New York-based Bovis Lend Lease is contractor; and P.S. 260 and P.S. 263 in Queens, on which New York's Hunter Roberts Construction Group is contractor.

A big project on the boards is a \$130 million, four-school, 2,000-student complex planned for a 14-acre site in the Mott Haven area of the Bronx that is slated to break ground this year. Another is the \$97 million, 998-student Frank Sinatra school in Queens, which will have a concert-style auditorium with high-end acoustics, sound, lighting, and stepped seating.

Another ongoing construction effort breaks up large high schools serving 3,000 to 4,000 students into smaller ones.

"We have to do the reconfiguration over 82 days in the summer months," Yee said.

The effort at 20 large high schools this year requires converting classrooms to administrative space, rewiring intercom and fire alarm systems, and repairing and upgrading infrastructure. Yee said the bids will go out in mid-winter, with contractors sorting out construction drawings, material delivery scheduling, and other preconstruction tasks in the spring.

The authority also is in various stages of negotiation for nearly 60 sites for future schools under the current capital plan, Barrett said. Ten sites would be for new schools, 14 would house additions, and 34 would convert leased space.

"Some neighborhoods are burgeoning," she said. "Finding sites is a major challenge for us. But we need the seats."

### **More Changes Are on the Horizon**

Despite a murky funding picture, the authority is also trying to build stability through a new annual process of inspecting its building stock and reviewing demographic shifts in order to set better capital spending priorities, Lawitts said.

The system entails an annual amendment to the five-year plan outlining projects to be awarded in the coming year based on capital priorities and funding availability. The agency released a draft 2006 amendment in December and sought public comment. It sends a final version to the City Council this month.

Further changes may be afoot, such as design revisions to account for a new city law that requires new municipal buildings, including schools, to use sustainable design standards and to exceed state code on energy efficiency, Barrett said.

"That energy efficiency part of the law has the potential of impacting our new school costs," she added. "We have to figure out how to hold down costs and realize the 20 percent energy savings."

One change Barrett said contractors shouldn't expect from the authority is the use of design-build. The method fared poorly last year in a pilot for P.S. 244, a Queens early childhood center.

"We had high hopes, but didn't get the bids we wanted," Barrett said. "Our contracting population really wants to build. They don't want to be shepherding designers. It was reflected in the bids."

Whatever the method or standards, Barrett said her office is eager to build.

"We're happy to be so busy," she said. "We look forward to the schools being occupied. We want to see the kids."

### **A Lesson on Fast-Track Work at Bathgate High School**

*by Tom Stabile*

A new 140,000-sq.-ft. high school in the Bronx is teaching the New York City School Construction Authority how fast it can build.

The project team on Bathgate High School is squeezing the agency's typical two-year construction timeframe into 14 months.

"We need to deliver that school," said Chester Yee, the authority's vice president for project management and operations. "We can't be one day late."

The agency did not issue a notice to proceed to the contractor, the DeMatteis Organizations of Elmont, N.Y., until June 28 last year, despite needing the building by this September, because of delays in obtaining capital funding and negotiations with the Port Authority of New York and New Jersey, which owns the site. As a result, DeMatteis had no lead time to prepare its preconstruction tasks or to demolish a one-story warehouse at the Bathgate Industrial Park, which sits south of the Cross Bronx Expressway and three blocks west of Crotona Park.

Finishing those tasks and the new construction in 14 months required overlapping trades that typically don't cross paths on a school job, said Steven Tartaro, vice president of construction at DeMatteis.

"It's an accelerated project that changes the normal sequence of construction," he said. "We had to come up with different ways to have five guys working in the same place at the same time. The key is starting with a well thought-out schedule and preplanning of project management tasks."

Authority staff, DeMatteis, and New York's John Ciardullo Associates, the architect and engineer, have met on a weekly basis.

"Everyone is working hard to make sure we deliver," Yee said.

The project has hurdles that could slow even a normally paced job. One is that the school system is leasing the space from the Port Authority, a setup requiring the project to meet city school design guidelines but also secure Port Authority approval of design and construction documents, Yee said. One Port Authority requirement was for the new school to reuse nearly all of the steel from the old warehouse.

Reusing the steel was no small task, because the original columns - though built to tall warehouse heights - needed modifications because the school has two stories, said Scott DeMatteis, senior executive vice president and COO of DeMatteis.

"It was a big issue to overcome and stay on schedule," he said.

Before shipping the steel to a mill in Canada for refabrication, lengthening of the columns, and strengthening, the team had to carefully strip the warehouse's masonry and systematically dismantle the columns and girders both to prevent damage and to track each one so that crews could later reinstall modified pieces in the same order.

"It's like a big Erector set," DeMatteis said.

Another major task was in the foundation work. The design team determined that while the existing warehouse foundation could not handle loads of more than 750 lb. per sq. ft. - short of what the two-story building needed - it made little sense to remove the old footings. Ciardullo's plan preserved the original foundation, but incorporated elements that strengthened it or reduced the building's weight.

One strategy was to preserve the interior poured-in-place footings but to drill through them and insert 5-in. micropiles, capped by steel plates, to support the lengthened interior columns - a strategy that essentially bypasses the existing footings, Ciardullo said. Another approach was to eschew the typical all-masonry exterior in city school design guidelines in favor of a lighter metal panel system on most of the exterior that will reduce loads on the existing perimeter foundation.

The metal panel installation was also quicker than masonry work, helping to stay on the aggressive schedule, Tartaro said. The team is also working double shifts on most days as well as weekends.


Conforming to a citywide effort to break up large high schools, Bathgate will have three 600-student academy-style schools with individual identities and their own entrances, classrooms, administrative space, common areas with skylights, and other educational facilities. Ciardullo said he located the schools on the second floor and reserved the first floor for common areas for the whole facility - or use by the general public - such as a gymnasium, auditorium, and cafeteria.

By early winter, the crews had completed steel erection and were assembling the exterior and installing ductwork, drywall, electrical, and plumbing. The team is on schedule to deliver a completed building to the authority by August.

"This project is a huge undertaking in 14 months," Yee said. "In the end, all of our design standards will be followed."

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