



## **BBS Architects completes \$18.1 million renovation and expansion of the 60,500 s/f Prospects School**

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BBS Architects, Landscape Architects & Engineers completed the \$18.1 million renovation and expansion of the 60,500 s/f Prospects School, located at 265 Peninsula Blvd. Accompanied by NYS senator Kemp Hannon and assembly speaker Earlene Hill Hooper, Nassau County executive Edward Mangano, and the Hempstead Union Free School District (HUFSD) officials, BBS principal Roger Smith, AIA, LEED AP welcomed 600 students into one of the most technologically advanced public kindergarten schools in the Greater New York area.

HUFSD has retained BBS to review the possibility of redeveloping, modernizing, and reopening the Prospect School, which was shut down and abandoned in 2003. BBS performed a review of the building's technical condition and analyzed the district's spacial and programming needs. HUFSD, at the time, utilized a high number of temporary, portable trailer-type facilities for educational purposes and was leasing properties for kindergarten-level schools.

The results of the analysis led to the development of a plan to convert the Prospect School into a kindergarten center that would serve the entire school district. BBS developed the initial design program and a preliminary budget.

On March 15, 2011, residents of the town voted to approve an \$18.135 million Prospect School Bond program to finance a renovation and reopening of the Prospect School. The majority of the bond was financed through a combination of public funds that included \$12.758 million from the NYS Building Aid program, a NYS Excel grant of \$4.887 million, and the district's own funds.

In addition to architect, interior designer, and MEP and civil engineer BBS, the project team included structural engineer Thomas Reilly, P.E., construction manager Elite Construction of NY, general contractor VRD Contracting, and food service consultant Bar-Boy.

Architecture and construction

Re-opening of the Prospect School marks a dramatic and positive turning point for the economically challenged community, which is receiving a state-of-the-art school for its youngest students.

"Our design efforts focused on redeveloping a dormant structure into a vibrant, ultra-modern educational facility within a beloved historic school building," said Smith, AIA, LEED AP. "The completion of this project signifies the community's and the district's commitment to providing students with life and professional opportunities, a quality education, and safe, contemporary, and hi-tech facilities."

The 16-month construction project encompassed a complete renovation and expansion of the original three-story Prospect School building, construction of a one-story addition, site improvements, and ADA compliance upgrades. The newly re-opened school will house approximately 600 students in the 2013-14 school year. It features 32 educational spaces, including 22 regular classrooms and nine small group and special instruction classrooms.

The renovation created one of the most technologically advanced public kindergarten facilities in the Greater New York area. The school features six computer stations for students and one teacher's computer in every classroom, interactive boards with projectors controlled by either the teacher's station or the central communication and data system, wireless Internet access throughout the entire school, a library with multiple computer stations, and extensive T-6 data and telecommunications wiring imbedded in the new walls for future technological upgrades.

"The new school will create a sense of community among the students and parents, because all of the kindergartners within the district will begin their education at the same building. The high quality of the school's design will allow all of the young students to enter the school system with a feeling of pride, a respect for education, and hope for the future," said BBS project manager Ken Schupner, R.A."

The 45,000 s/f existing building was completed in 1906, when the area still maintained a rural character. The school features brick infill walls and ornamental cast stone elements.

The renovation included the replacement of all windows (over 100) and doors, replacement of approximately 15 percent of the brick, and a complete cleaning and repointing of all of the exterior walls. During an early design phase it was discovered that the original brick had an intense, bright red, almost orange color, which was covered by soot and dirt for more than a century. The architectural team matched the color and shape of the brick when designing the addition in the back of the main building. The school features custom-made, double-hung, gridded, insulated windows with two glass panes, all of which were manufactured by Architectural Windows.

The exterior repairs also included restoration and replacement of several ornamental copper elements, including gutters and horizontal accents. When restoration was not possible, the original design was carefully replicated in durable aluminum. The crews replicated approximately 300 linear feet of ornamental metalwork.

The construction crews replaced the entire roof and repaired its structural support. The roof includes a flat section, now finished with the SBS modified bitumen roofing membrane system, and a pitched section, which features the GAF Timberline architectural shingles in mixed color tones.

The one-story, steel-framed addition features a slab-on-grade foundation, a brick facade with cast stone architectural details, and a flat roof. Its strongly articulated entrance serves as the new main entryway into the entire school complex. Quoins (extruding corner bricks) accentuate the solid, dependable look of the building. The brick of the new section matches the dimensions and color of the original school's exterior.

The largest space within the addition, the 2,667 s/f, 22-foot-high gymnasium/playroom/cafeteria/multi-purpose room, features two rows of windows, including large, arched upper clerestory windows. The extensive glazing allows high amounts of natural light into the space and provides cheerful views of the external playground. The upper windows feature brick arches. The gymnasium's systems include innovative, high-efficiency LED lighting fixtures.

In order to create a large space uninterrupted by columns, the designers utilized long-span steel roof beams in the gymnasium, with the longest one extending 56.3 feet. The roof above the gymnasium is elevated in order to provide additional height.

In addition to the multi-purpose room, the new section's interior spaces include six, 900 s/f classrooms, a 700 s/f kitchen adjacent to the gymnasium/cafeteria; hallways; storage and utility rooms; and a stair/elevator vestibule. Each classroom is equipped with a children's bathroom and a sink.

The addition is connected to the original building through a stair/elevator vestibule. The two buildings do not share an extensive wall in order to maximize a number of windows in the classrooms adjacent to the connection area.

The renovated and expanded school features a new four-stop elevator located in a shaft that's a part of the addition. The old school did not include an elevator, a necessary ADA element. In order to fulfill ADA requirements, the school's new main entrance is located at a grade level and doesn't feature stairs.

The main building's layout presented the designers with several challenges. The old classrooms were small and did not meet current educational standards. The original design featured many obstacles, such as structural elements, three stairs, and five chimneys. The existing building's systems were deteriorated. BBS redesigned the layout while minimizing the amount of necessary construction and preserving the building's valuable historic elements, such as stairways with ornamental iron handrails.

The architects maintained the original location of the main hallways and stairs, but removed all dividing walls in order to create large, modern kindergarten classrooms. As in the addition, the main building's classrooms feature bathrooms and sinks, which required installation of a new, extensive plumbing infrastructure.

The main building has three floors, including a lower floor located below the grade level. The elevator stops at three main building levels and at grade level, which is an elevation of the addition. The original building now houses 16 classrooms, a 1,055 s/f library, a 1,548 s/f playroom/gymnasium, two special education classrooms, nine teacher conference rooms for small group instruction, a main office, a nurse's office, a faculty room, and storage and utility rooms.

The architects specified interior materials with focus on durability and an ease of maintenance. The renovated interiors feature gypsum board walls painted in cheerful yellow and green colors, patterned vinyl enhanced tile (VET) and sheet flooring coordinated in color with classroom walls, acoustical tile ceilings, and recessed fluorescent lighting fixtures.

#### Sustainability

BBS Architects, which designed the first LEED-certified public school in New York State, incorporated a high number of sustainable features in the new school. One of the most significant ones is a so-called "tight-envelope," a design approach that insulates structural elements and building interiors from the influence of the outside temperature through low-e windows, wall and roof insulation, and other design elements. This solution provides very significant energy savings. The school features low volatile compound (VOC) paints and finishes and no carpet flooring, which protect the quality of interior air. The building is also equipped with highly efficient heating and cooling equipment. The redevelopment and re-use of the existing building also provided very significant savings in energy use, cost, and manufacturing effort.

#### Site work

The small, 2.3-acre site is located in an urban area. It is adjacent to a busy Peninsula Blvd. and surrounded by private and commercial properties. The designers maximized the tight size plan by skillfully accommodating each necessary use within a small area. The site features a new, wider access roadway, front and rear surface parking areas, a playground, a small outdoor sitting area landscaped with grass, and building perimeter shrub landscaping along the new building's perimeter.

The playground includes a perimeter grass area; a two-colored, blue and black poured rubber safety

surface; and an age-appropriate jungle gym.

The team upgraded the site utilities, including sewer line, power supply, and a gas line.

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