

## School Modernization PPP boosts construction industry

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Edition: February 2, 2012 | Volume: 40 | No: 4

*Adds 3,225 jobs in 2011 as Puerto Rico program serves as model for overseas districts*



*Puerto Rico's school-modernization program was developed in collaboration with Fielding Nair International (FNI), a global leader in facilities planning and architectural design.*

As of Jan. 1, \$544.8 million in contracts had been awarded for the School Modernization Public-Private Partnership (SMPPP), creating 3,225 jobs and counting in Puerto Rico, and contributing in large part to the recent increase in cement sales and production.

As a result of this public-private partnership (PPP), 70 to 100 direct jobs are being created each week, and those numbers are growing. In 2011, the number of construction jobs on the island increased by 2,500 to a total of 30,000. Industry sources believe that without the school-modernization program, dubbed Schools for the 21st Century, the construction industry would have suffered additional losses.

Puerto Rico's school-modernization initiative involves a total investment of \$756 million, financed by American Recovery & Reinvestment Act (ARRA) stimulus funds, in the construction and renovation of 103 schools throughout the island, with at least one school being renovated in every municipality.

"We need to do more projects like these schools," said Alejandro Brito, president of the Home Builders Association. "They keep construction companies afloat and workers employed until the residential construction market rebounds. Also, the cement companies don't care whether they're pouring cement in a school or a residential development."

Cement sales are currently 12% higher than they were during the same period last year.

There are 71 schools under construction and an additional five in the design and permitting phase. Five schools in the towns of Ciales (two), Arecibo, Bayamón and Ponce will be completely renovated.

"The effect of the ARRA funds has taken time to impact the economy, because from designation to construction there is a lag due to the permitting process and the design," Brito said. "I believe the ARRA projects will begin to have a significant positive impact on the economy this year."

Currently in the works is a program for renovating or reconstructing 48 schools in urban zones, for which the issuance of Quality Zone Academy Bonds (QZAB) will raise \$120 million. The first phase of the project consists of the expenditure of \$60 million by Jan. 31, with the other \$60 million spent the following year. There are currently 10 requests for proposal (RFPs) in the bidding stage.



QZABs are a relatively new financing instrument that can be used to carry out much-needed school renovations and repairs as well as other improvements (any use except new construction). The federal government covers, on average, all the interest on these bonds, thus enabling schools to save up to 50% of the costs of these construction projects.

#### **LEARNING AT THE LEADING EDGE**

An example of the scope of the SMPPP is Escuela Urbana de Guaynabo (EUG), which has stood vacant and inoperative since it was brought to near-completion more than 10 years ago. The first phase of final renovations was recently completed with an investment of \$4 million, and the school will be fully operational by fall, once the second phase, a \$5 million investment, is completed this summer.

**"This Public-Private Partnership has been so successful thus far that it is being replicated by other school districts."**

—David Álvarez,  
executive director of the  
Public-Private Partnerships Authority

This new full-immersion elementary school will consolidate two other elementary schools in Guaynabo, Baldorioty de Castro and Los Álamos. Drop-off and pick-up at Baldorioty de Castro, which has a large enrollment of students with learning disabilities, has been a significant problem due to the limitations of the access route. EUG has two specially designed pick-up and drop-off areas that will alleviate traffic congestion and help create a safer environment for students.

The modern classrooms at EUG are designed with high ceilings, cross-

ventilation and natural lighting. As a result, air conditioning isn't needed and the electricity costs from illumination are minimized. The school is also connected to the Internet via fiber-optic cable, providing the backbone for ultrahigh-speed Internet and Wi-Fi access throughout the facilities.

A large portion of the school is equipped for students with varying degrees of learning disabilities. All classrooms are equipped with modern, ergonomically designed furniture and have interactive Smart Boards, or interactive whiteboards, and computers.

The innovative multiuse pavilion at EUG provides an enclosed, yet well-ventilated, area for the school and the larger community. Not just a space for sporting activities; the pavilion is equipped with a stage and can be used for the celebration of birthdays, weddings and other activities.

"The administration encourages the community to use the school's facilities and play an active role in the education of its children," said David Álvarez, executive director of the Public-Private Partnerships Authority.

The school incorporates several open courtyards into its design that provide separate, open spaces where children of different ages can be divided into groups. There are also designated areas where children with severe disabilities can engage in recreational and treatment activities. In addition, the entire school is completely wheelchair accessible and meets all Americans with Disabilities Act codes.

### MODEL PROGRAM

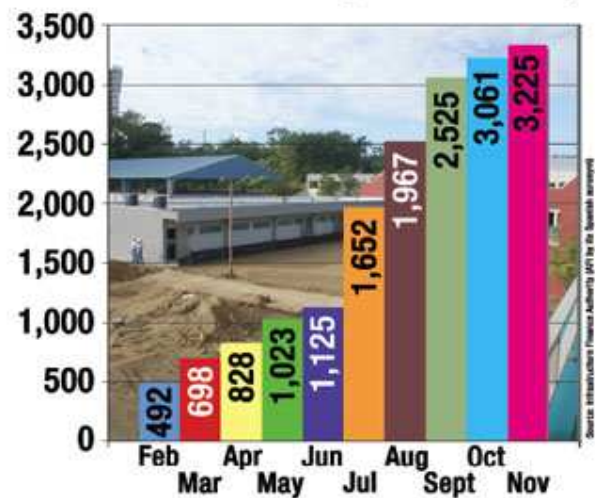
The municipalities of Barranquitas, Canóvanas and Toa Alta, meanwhile, will each be getting new schools through the SMPPP. Upon completion of the school projects, contractors included in the consortium are responsible for maintenance during the first year of operations, with the opportunity for extensions.

Puerto Rico's SMPPP model has drawn attention for its innovation and is being emulated abroad.

"This PPP has been so successful thus far that it is being replicated by other school districts," Álvarez said. "A school district in Alberta, Canada is adopting the PPP model for the renovation of 13 of its schools, and so is the Yonkers school district in the state of New York."

The Puerto Rico SMPPP was developed in collaboration with Fielding Nair International (FNI), a global leader in facilities planning and architectural design. FNI plans and designs schools with one primary goal in mind—to improve learning. They have clients in 33 countries and on five continents, and principals of the firm have published dozens of important pieces in architectural and educational journals and won several

### Schools for the 21st Century Total Jobs Created (Feb-Nov 2011)



major industry awards for excellence, including the CEFPI MacConnell Award and International Planner of the Year.



According to the report prepared by FNI, "the primary problem was that school buildings represented the most visible manifestation of an obsolete educational model—one better suited to the now-defunct industrial era than one designed to prepare students for 21st century lives and careers."

The report further highlights the benefit of integrating sustainable practices in their designs, such as positioning schools with the proper orientation and shading devices to minimize heat gain from the sun, utilizing solar, wind and geothermal energy onsite, implementing water harvesting and recycling techniques, the use of

indigenous building materials, increasing natural ventilation to reduce dependence on air conditioning and preserving old-growth trees for shade.

### Number of schools awarded – 76

(In the process of design, permitting or construction)

Total Investment – \$544.8 million

