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Owner:

Alexandria County Public
Schools

Project Cost:

n/a

Square Footage:

n/a

Cost per Square Foot:

n/a

Completion Date:

under construction



Project Description:

The new TC Williams High School is designed to replace the existing school, which houses grades 10-12. A projected increase in enrollment from 2,100 students to 2,500 students over the next 5 to 7 years, and a worn existing building, created the need for a new school building. With no available land in the City of Alexandria large enough to accommodate a facility of this size, it was determined that the existing school site was the only practical location for the new high school. Consequently, the project will be phased over time while the existing school remains in operation until the new school is completed. The school site is adjacent to the existing Chinquapin Park and Recreation Center and will share athletic facilities.

In an effort to decrease the perceived size of a 2,500 student school, the classroom portions of the building will be broken down into five academic houses, each having its own decentralized administrative offices. This arrangement allows the educational flexibility to offer traditional departmental and interdisciplinary style teaching methodologies. Each student will have access to a personal lap-top computer and can connect from a wireless transmitter from anywhere in the school building. The academic houses are split into 2 three-story sections that are on either side of a new centralized student dining/commons area that provide natural light from clerestory windows and a roof garden above. This commons area also opens to a small outside amphitheater allowing the students an outdoor space for dining on campus.

There is a curved wall which defines the main circulation spine East to West through the building, which anchors a 1,200 seat auditorium at one end and a 3,000 seat competition gymnasium at the other end. The Media/Technology Information Center is located on the second floor between the two academic houses. This space has a large expanse of north-facing glass to allow indirect natural light into the reading room. Also located on the second floor are a series of technology and art related classrooms. Science classrooms are located within each academic house.

Green Features:

The new TC Williams High School has been registered to go through the US Green Building Council's LEED Green Building Rating System. One of the biggest features of the high-performance design is a large cistern that will collect rainwater from the building's roof surfaces and store it for use in toilet flushing, irrigation, and air conditioning operations. Rain gardens will cleanse rainwater from parking and driving surfaces, and a roof garden covering a portion of the building's overall roof surface will provide storm water management, educational opportunities, and aesthetic benefits. Within the school building, waterless urinals will be another visible expression of the school's commitment to water conservation. Air conditioning and heating will be accomplished with dedicated outdoor air ventilation systems coupled with indoor temperature control elements. The ventilation systems will provide dehumidification and exceptional indoor air quality while the indoor elements provide individual space temperature control resulting in long-term energy savings for the school district. A permanent measurement and verification system will track water and energy usage at the facility. Data collected will be made available to the students using the building. The indoor air quality of the building will be protected throughout the construction process, and building materials will be selected based on environmentally friendly criteria. Many of the strategies selected as part of the LEED process will be integrated into curriculum, allowing the school building itself to be used as a teaching tool.

