



September 2011

DESIGNING CUTTING EDGE SCHOOLS IN A CHALLENGING ECONOMY

Architectural design trends in K-12 and higher education point to where the future is headed and reveal what's possible now. The growing trend for school campuses is to design schools to be more vertical, compact, and developed on less property; the emphasis on sustainable, green design; cutting edge technology; and community responsive master plan design elements are among those trends contributing to the schools of tomorrow. Edgewater High School is one example of this design trend.



Case Study: Edgewater High School - Taking a Landmark High School Into the 21st Century

Edgewater High School, one of two original Orlando heritage schools dating back to the early '50s, was due a general overhaul to upgrade, expand and house state-of-the-art facilities for a new 21st century urban high school. Its location on College Park's main drive and significance as a neighborhood landmark made for an interesting and often intense discussion and consensus-building effort.

According to OCPS' records, the resulting CTH+A's prototype design ultimately provided Edgewater High School with a project that came in well under budget, and approximately \$3 million less than the traditional courtyard high school of a comparable size during the same time frame as noted below.

Prototypes	Board Adopted Budget at Bid	Current Board Adopted Budget	Estimated Cost to Complete
Edgewater HS	\$ 82,669,689	\$ 68,438,742	\$ 68,212,037
Evans HS	\$ 75,255,798	\$ 77,028,745	\$ 75,255,798
Oak Ridge HS	\$ 82,715,136	\$ 75,366,039	\$ 71,370,634

"In the current economic climate, we are very proud to have saved OCPS and the taxpayers of Orange County significant amount of money with the design of this project, said C.T. Hsu, FAIA, LEED AP. "Additionally, we are very proud to have worked so closely with OCPS and the College Park community to help them realize their vision. It was a great team effort," C.T. added. "The Edgewater Eagles now can soar to their future with a first-class high school that will serve the community well for generations to come."

The project included 84,300 gross square feet (GSF) of renovations, 323,000 GSF of new space, and a student capacity of 2,454 upon completion. The campus was expanded from 29 to 48 acres with the purchase of adjacent properties to accommodate the new buildings and facilitate phasing, which shortened the construction schedule and allowed school operations to continue uninterrupted.



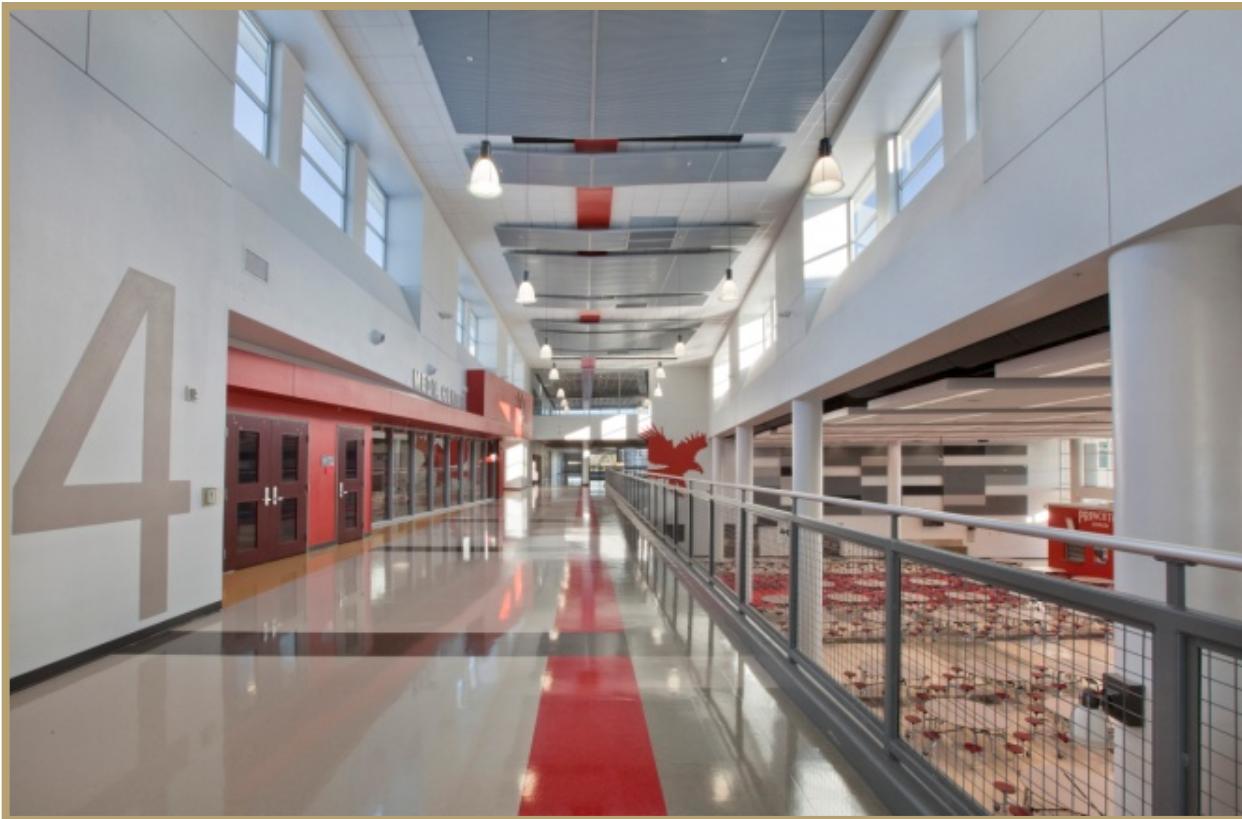
The new Edgewater High School consists of new classroom buildings and all new core facilities including a gym, auditorium, music suite and multi-story student commons. The 750-seat auditorium incorporates an LED based theater lighting system that integrates the first use of the new OCPS theatre standards.

Other technology features include Wi-Fi, sensor activated lighting controls, video surveillance, and a centrally controlled HVAC system that includes partial ice storage technology. All classrooms are fitted with computer controlled interactive smartboards and digital projectors as well as an audio enhancement system for improved learning. The Engineering, Science & Technology Magnet program spaces are fully prepared to support instruction in subjects ranging from web design and animation to computer aided design and engineering technology / testing.

C.T. Hsu + Associates (CTH+A) embraced the design of technologically advanced schools at both the K-12 and higher education levels. The firm knew it required more than just a flashy new look. It is about creating a safe, comfortable and effective environment where students have the tools they need to learn and where teachers have the tools they need to educate a generation of students raised in a world of smart phones, MP3 players, video game systems and the Internet. The importance of integrating cutting-edge technology into the modern learning environment could not be overlooked.



A New Urban Campus Design

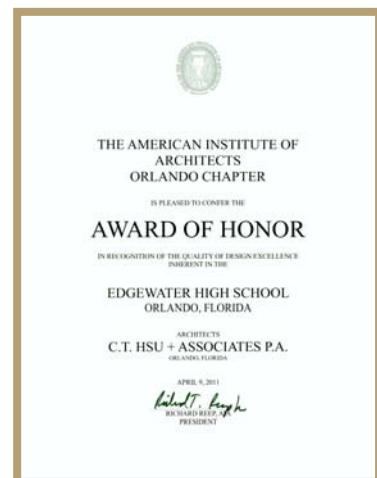


Edgewater High School's urban design reinterprets the large, often desolate courtyards so prevalent in Florida high schools by collapsing the open space and turning it vertically to form an internalized academic spine. The spine is anchored by the gym and music facilities at one end and the administration and auditorium at the other end along the "main street". At the center of this three-story day-lit atrium is the campus commons with the media center overlooking the cafeteria and outdoor dining area at ground level. Three story classroom wings are organized along the axis allowing all instructional spaces to receive natural light. The design includes energy efficiency and environmental design features where possible in an effort to make the school more comfortable for students and faculty. The compact design optimizes internal communication and supervision while maximizing exterior space for athletic events, parking, and on-campus community events.

In addition to a new public green space on Edgewater Drive, the design preserved some of the local history by naming the school snack bar after the Princeton Diner, an old-time neighborhood favorite that was lost in the school expansion. C.T. Hsu + Associates also renovated the remaining campus buildings for use as a ninth grade academy.

"The energy of the students is the best thing. You can feel it. They are so appreciative," said Edgewater High School Principal Michele Erickson. "There's nothing that I would change."

The project received the 2011 Award of Honor in Design Excellence from the Orlando Chapter of the American Institute of Architects.



Lessons Learned From Microsoft's School of the Future and Trendsetting School Districts

Many of the concepts used at Edgewater High School were lessons learned from Microsoft's School of the Future in Philadelphia and from the Los Angeles Unified School District.

In 2006, CTH+A President C.T. Hsu, FAIA, LEED AP, and Senior Designer Rene Alvarez, R.A. visited the School of the Future in Philadelphia. This revolutionary partnership between The School District of Philadelphia and Microsoft Corporation is a model for interactive learning environments where technology is front and center in the students' daily learning experience. C.T. and Rene learned much from meeting with the Microsoft project team behind the School of the Future.

Also in 2006, C.T. visited the Los Angeles Unified School District (LAUSD), the second largest in the U.S., to learn about its \$20 billion, 12 year construction program. Three days of tours and seminars presented by LAUSD focused on high schools of the future, high performance schools, urban schools as centers of the community and new schools/better neighborhoods. A year earlier, C.T. toured Las Vegas City Schools (LVCS) and gained additional perspective regarding lessons learned in urban school design.

C.T. presented these progressive design concepts to the facilities departments of Orange County Public Schools and Seminole County Public Schools in a report titled Lessons Learned from LAUSD. The invaluable insight and an exchange of ideas gained from these collective experiences helped solidify CTH+A as one of Central Florida's preeminent educational facilities design firms.

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