

The Mass *School* Builder

Vol. I, No. I

A PUBLICATION OF THE MASSACHUSETTS SCHOOL BUILDING AUTHORITY

Summer 2008

Building for the future



MSBA brings new approach to funding school building

BY MEAGHAN CASEY

Five years ago, Massachusetts was struggling with out-of-control spending on school construction, often putting money into many unnecessary projects at the expense of more deserving projects.

State Treasurer Timothy P. Cahill linked the wasteful spending to an antiquated system of reimbursements and a lack of oversight, and responded by spearheading the effort to create the Massachusetts School Building Authority (MSBA) in 2004.

The MSBA faced a two-fold challenge: (1) to ensure that the hundreds of previously approved projects received the promised

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State Treasurer and MSBA Chairman Timothy P. Cahill joins MSBA Executive Director Katherine P. Craven and students at Quincy's Montclair Elementary School.

MSBA's priority: great schools

BY MEAGHAN CASEY

Revealing the highly-anticipated fruits of its labor, the Massachusetts School Building Authority (MSBA) announced in November 2007 the approval of 83 school building projects to move forward to feasibility studies.

In April 2008, three more districts were invited to join the feasibility category.

Those districts are in the process of collaborating with the MSBA to explore potential solutions for identified problems, which may include renovating existing spaces as an alternative to new construction.

"The work really is just beginning," said State Treasurer and MSBA Chairman Timothy P. Cahill. "Our hope and goal is to see all 162 priority projects go through. We have to work together and work at the local level to make sure that happens."

MSBA officials urged districts not to lose faith in projects that were placed on hold or designated in need of further assessment.

"It's not a waitlist, but a pipeline," stressed Katherine P. Craven, MSBA

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"The MSBA provides a solution that keeps the state's commitment to cities and towns..."

Timothy P. Cahill
State Treasurer and
MSBA Chairman

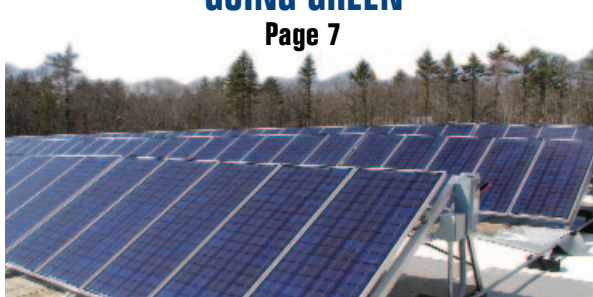
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Reforming how we fund school projects



Timothy P. Cahill

Since its inception in 2004, the Massachusetts School Building Authority has completely reformed the way we fund school construction in the Commonwealth. I am proud of this Authority, its staff and what we have accomplished. To date, we have:

- ◆ Made more than \$5.4 billion in payments to cities, towns, and regional school districts.
- ◆ Made full or partial payment to 369 of the 428 projects on the waiting list.
- ◆ Completed the first-ever statewide

needs survey of the 1,817 K-12 public school facilities in the Commonwealth.

- ◆ Instituted an accelerated audit program that completed more than 700 of the 800-audit backlog inherited from the former program. The accelerated audit program saved Massachusetts taxpayers more than \$700 million and generated \$2.1 billion in avoided interest costs to cities and towns.

- ◆ Instituted innovative financing programs – a loan program and a grant conversion program – for certain waiting list projects that have not started construction to help address project cost issues and get stalled projects started.

- ◆ Instituted a pay-as-you-go progress payment system which will help municipal cash flows, with MSBA providing funds as a project is constructed.

- ◆ Made more than 400 site visits to more than 140 school districts as part of the MSBA's review and due diligence process.

- ◆ Completed the most comprehensive revision of program regulations in 60 years.

As we move forward, we will fund up to \$2.5 billion in school construction over the next five years – and we will do it in a



Treasurer Timothy P. Cahill greets students from left, Dominic DiPalmo, Joseph Cochrane and Annie Waterman at Quincy's Montclair School.

fiscally responsible, collaborative manner. Every step of the process will be open, transparent and fair.

I hope you find this publication useful and informative. Please do not hesitate to contact the MSBA if you have any questions. We look forward to working with you.

State Treasurer Timothy P. Cahill is chair of the Massachusetts School Building Authority.

TESTIMONIES TO MSBA SUCCESS

Dr. Joseph A. Keefe

*Former Superintendent
Natick Public Schools*

"Natick High School's 50-plus years of use have brought the community to the point where it sorely recognizes the need for the building's replacement. Participation with the (Mass. School Building) Authority in the process of planning and ultimate construction is the sole route available to meet this dramatic need. We were heartened by the reception that Natick officials received when we met to discuss the Natick High School project with the MSBA's team. The dialogue has prompted us to create a task force to develop a vision statement regarding the prospective curriculum for a new high school utilizing the educational expertise of our academic department heads. In addition, the School Committee has hosted community forums to solicit the input of the community members regarding the prospective curriculum for a new high school."

Dr. Christine L. McGrath

*Superintendent
Tewksbury Public Schools*

"A major benefit of the new MSBA program is that it affords us the ability to provide the community with the assurance that payments will be made at the outset and throughout the duration of the project. We are also impressed with the active involvement and oversight of the Authority prior to the selection of the architect and the development of detailed drawings for the project. All members of the Authority have been highly professional and very responsive during our meetings and throughout their site visitations to the district."

The Mass School Builder

A PUBLICATION OF:
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Building a new process for improving schools



Katherine P. Craven

The Massachusetts School Building Authority is committed to creating an efficient and financially sustainable program to fund school facility capital improvement projects. During the next five years, the Authority will collaborate with municipalities to equitably invest \$2.5 billion in your schools by finding the right-sized, most fiscally responsible and educationally appropriate solutions to create safe and sound learning environments. The Authority is focused on remedying the neediest and most urgent situations first.

In 2004, Treasurer Tim Cahill worked with the Legislature to create the Authority, a new separate state authority charged with reforming a school building program that had amassed \$11 billion in outstanding obligations with no clear funding source, and had built up a 10- to 15-year list of projects that were waiting for state reimbursement.

The Authority has made significant and

rapid progress in implementing major management and financial reforms to the state reimbursement and funding process for school construction projects. The Authority has provided more than \$5.4 billion in project reimbursements through its accelerated payment system to school districts which otherwise would have waited decades for payment. These payments saved cities and towns millions of dollars in interest payments, allowed them to lower tax rates, and freed up billions in municipal resources that under the former program would have been dedicated to school construction.

We will never over-promise and under-deliver on any project that we work on with a district. The key to the long-term success of the reformed school building grant program is to collaborate with school districts to identify and address school facility needs efficiently and equitably. The MSBA is creating a new era in which fiscal responsibility and dedication to education are combined to give our school children the best learning environments possible.

Katherine P. Craven is executive director of the Massachusetts School Building Authority.



On Oct. 17, 2007, MSBA Chairman Timothy P. Cahill and Executive Director Katherine P. Craven joined legislators for a presentation symbolizing the projects the MSBA has already funded since coming into existence in 2004.

MSBA gives back to cities and towns for school construction

BY MEAGHAN CASEY

Since its creation in 2004, the Massachusetts School Building Authority (MSBA) has paid a staggering \$5.4 billion in reimbursements to cities, towns and school districts for school construction projects.

The payments, including \$3.7 billion in accelerated payments-in-full, have saved municipalities millions of dollars in interest costs and dramatically reduced the state's \$10.6 billion in outstanding obligations. The state owed \$5.1 billion for 728 projects that had been receiving payments and \$5.5 billion for 428 projects on a wait list.

Many of the districts had been waiting indefinitely for their first payment from the state, prior to 2004.

"We had 10 years of payments building up and towns waiting for reimbursement," said Katherine P. Craven, MSBA executive director. "Out of 428 projects, 100 hadn't broken ground — even several years later — at the expense of other projects. Nothing was going through."

Designed to restructure the

management of the distribution of state school building grant funds, the MSBA assumed the financial liability for the costs of 1,150 local school construction projects. It was a huge endeavor and one requiring significant structural changes.

"We were faced with the prospect of asking for more money from the state, during a budget crisis, or canceling the program altogether and telling the cities and towns they wouldn't be paid," said Craven. "Instead, we reinvented the entire way of doing things."

The created Authority combines new money with reforms that fund school construction projects based on need and urgency.

"It's a total revision of the way the state

"We're trying to change the process and go in early to preserve and extend the lives of the schools."

Katherine P. Craven
MSBA Executive Director

looks at funding," said Craven. "In the past, the state was paying on spec, without knowing where those dollars were really going. We had to develop a system of communication and accountability throughout the project. We're looking at designs from the start and setting realistic expectations. Our best friend will be clarity."

During the next five years, the MSBA will invest up to \$2.5 billion in schools across the Commonwealth, finding the right-sized, most fiscally responsible and educationally appropriate solutions to create safe and sound learning environments.

"Our goal is to stretch the \$2.5 billion," said Timothy P. Cahill, state treasurer and MSBA chairman, who explained that \$20 billion had been spent on school

construction across the state since 1990.

To do so, districts are required to focus on one priority project at a time and are encouraged to pursue renovations as opposed to new construction when fit.

"We're trying to change the process and go in early to preserve and extend the lives of the schools," said Craven.

The MSBA is also reinventing its funding process to aid districts in a timely manner. It will be auditing invoices in real time as projects are being built. It has implemented a pay-as-you-go construction payment plan for projects on the wait list, which will give communities the funds on time, as they build their projects. In the past, districts might have waited 10 years to receive the first payment from the state which would have then continued for 19 more years.

"You might wait for the green light on a project, but you won't have to wait for money from us," said Craven. "The former practice where entire generations of schoolchildren would go through a building before the Commonwealth would finish paying its share will now end."

Building a legacy of learning

New Lawrence High School creates greater academic environment



Top, student Darlene Garcia chats with classmate Jesus Flores at Lawrence High School; above, view of the spiral stairwell at the new high school.

BY MEAGHAN CASEY

Serving as a gateway to college access and a brighter future, the new \$110 million Lawrence High School features one of the nation's most cutting-edge facility designs.

"The Massachusetts School Building Authority, partnering with the City of Lawrence, has built the most state-of-the-art high school campus in the country," said Lawrence Mayor Michael J. Sullivan. "We all benefit from this because we all benefit from a quality education."

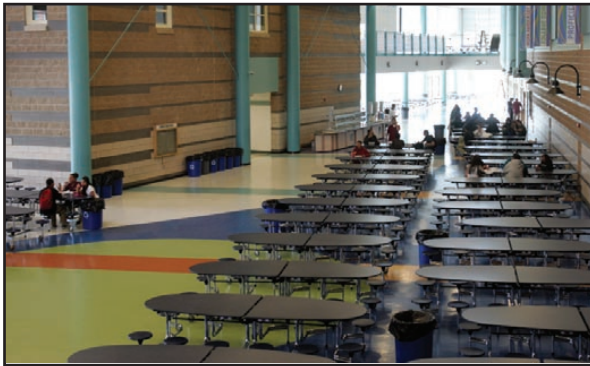
The 565,000-square-foot facility, comprised of six separate academies, opened earlier this school year. It replaced the city's comprehensive high school, designed for 1,800 students but housing nearly 3,000 students and 160 teachers in recent years.

"Over the last decade, the City of Lawrence has been experiencing tremendous growth," said Sullivan. "With the student population growing and more parents choosing public education, the old facility could no longer provide a proper learning environment. It was critical to build a new facility."

"While the original Lawrence High School served the City of Lawrence admirably, after almost 150 years, our students deserved a new campus," said Dr. Wilfredo T. Laboy, superintendent of schools.

"Educational reformers across the country are crying out for fundamental high school changes. The new Lawrence High School campus gives us the opportunity to build a legacy of learning for all our students."

Students choose between six thematic small learning academies, each housed in separate wings and functioning independently with its own administration and staff. The academies were designed to create a more intimate learning environment to foster educational success. With smaller populations of about 500 students and 35 faculty members per school, there is a heightened



Top, Lawrence High School students, from left, Karol Tejada, Karley Candelario, and Krystal Parra study in the library; above left, view of the new cafeteria; the school features a courtyard.

sense of community, responsibility and collaboration.

"In a large comprehensive high school, anonymity tends to creep in," said Headmaster Thomas Sharkey, who oversees the six schools. "Now, we're developing a personalized learning community. I call it the Cheers mentality, where everybody knows your name."

"In a school of 3,000, you can be sick or happy, struggling or succeeding, and not be seen," said Eric Juli, the school's director of curriculum. "In a school of 500, everyone knows you and you know everyone."

The six thematic schools give students the ability to study with like-minded peers. The Business Management and Finance High School; Health and Human Services High School; Humanities and Leadership Development High School; International High School; Math, Science and Technology High School; and the Performing and Fine Arts High School each provide students the specialized instruction, technology and resources necessary to turn the dream of college success into a reality.

"Every school has the same goal: to prepare students for college," said Juli. "The themes are the vehicles to help engage them in learning and identify

with students and teachers of the same interests."

Each of the 147 classrooms on campus features at least four computers with access to projectors and large flat-screen monitors. The campus also houses a 200-seat library and media center, 150-seat lecture hall, large professional development center, auditorium, field house, baseball field and newly renovated Lawrence Memorial Stadium.

The high school also offers four on-site child care centers and a comprehensive health center to address the basic medical needs of students. The 1,000-seat two-level cafeteria minimizes the number of lunch periods needed, maximizing instructional time.

The campus, designed by Flansburgh Associates with construction managed by Heery International, is the single largest high school to be constructed in the state.

"This facility is a vital step towards meeting all our student needs," said Laboy. "In our community, where college success and preparedness has not always been the norm, this new facility sends a clear message to parents and students that we are invested in their success."

Despite the features, the cost of the new facility per student is among the lowest in the state, at \$26,312. The state average is \$49,962. To date, the MSBA has reimbursed the city \$91.2 million of the total construction costs. The MSBA has utilized a pay-as-you-go construction payment plan, which

gives communities the local cash infusion as they build their projects.

"If not for our reform plan, Lawrence would have had to borrow for the cost of the full project and then wait for at least 20 years for reimbursement by the state," said State Treasurer Timothy P. Cahill, chairman of the MSBA. "Instead, this state-of-the-art construction project is being audited and reimbursed monthly."

"The pay-as-you-go model allowed us to monitor the growth and completion of the project in an ongoing manner," said Laboy.



Above, Leticia Candelario swipes her ID card at the security desk in Lawrence High School's main building.



A Lawrence High School teacher conducts class in a lecture hall.



LeTizha Torres, left, and Estefani Gonzalez take notes during math class.



Lawrence High School students gather outside at the end of the school day. PHOTOS: REBA SALDANHA



MSBA is helping cities and towns to build for the future

HISTORY: from Page 1

level of state funding and (2) to create framework for a new, financially sustainable program by July 1, 2007, when a four-year moratorium on new projects expired. The statute which created the MSBA places tremendous emphasis on planning, due diligence and prioritization of MSBA resources.

“The MSBA provides a solution that keeps the state’s commitment to cities and towns, provides an ongoing revenue source for new school construction for our children, and presents a significant opportunity for new economic development,” said Cahill. “This reformed program is not only the largest grant program in the Commonwealth, but it offers a fiscally-responsible blueprint for future school construction and provides a strong foundation for our children.”

At the time of its creation, the MSBA assumed the management, financing and auditing of the \$11 billion debt to which the Commonwealth was committed for more than 1,150 school construction projects. The Massachusetts Department of Education first implemented a school building assistance program as a pilot program in 1948. From 1950-1960, 35 million square feet of new building space was constructed. That figure stayed consistent until the 80’s

when it dropped to 5 million square feet. It rose again in the 90’s and hit an all-time high of 46 million square feet four years before the moratorium ended.

“The original program was intended to accommodate the baby-boomers and should have ended in 1951,” said Katherine P. Craven, who was appointed the first executive director of the MSBA. “Instead, we inherited 1,150 projects, out of a possible 1,817. Almost every school throughout the Commonwealth was on this list.”

Craven was faced with the challenge of the largest scale revision since 1948 of the rules and regulations governing the state’s role in local school construction.

“We were changing a culture that was in existence for 60 years,” said Craven. “You can’t expect to do that overnight.”

The reformed MSBA process makes certain that the Commonwealth’s investment in local school construction will be equitable for all districts and will be consistently applied to ensure the short-term and long-term financial viability of the new program. Authority members are committed to protecting the taxpayer’s dollar by improving the school building grant process and avoiding past mistakes in the funding and construction of school facilities.

“We’re learning lessons of past architectural maladies,” said Craven. “We’re trying to improve and not make the same

errors or fall prey to faddism.”

In 2006, the MSBA created the Designer Selection Panel, which is authorized to select and recommend the best available design firms for the modernization and construction of the public school facilities. This ensures that state dollars are invested in schools that are structurally safe, of the highest quality and conducive to learning.

“Since reforming this program in 2004, we have focused on making school construction more accountable and fair,” said Cahill. “The creation of this panel comprised of design and construction experts and local officials will help to secure the best possible input to deliver better designed schools that encourage better teaching and student learning for our children.”

By the end of 2006, MSBA made more than \$3 billion in accelerated payments to communities awaiting funding from the state and distributed \$792 million for 728 schools built between 1985-2003. The authority also reduced the backlog of 800 audits, saving more than \$700 million in avoided long-term local interest costs. It opened its new grant program in 2007, and is diligently working to move 162 priority projects forward in the school building process.

MSBA’s priority: great schools

PROCESS: from Page 1

executive director. “Because we are ahead of schedule, the MSBA will be able to accelerate projects along our standard planning process that ensures that both state and local taxpayers are considering all reasonable options when undertaking school construction projects involving state money.”

The announcement was a result of the MSBA’s thorough, hands-on approach to school building priorities. During the program’s four-year moratorium, officials established a new application process, containing the following steps:

- ◆ Identify the problem. Local communities identify deficiencies in school facilities through a Statement of Interest (SOI) process.

- ◆ Validate the problem. MSBA and local communities work together to validate the deficiencies.

- ◆ Evaluate potential solutions. MSBA and local communities work to identify potential solutions.

- ◆ Confirm the solution. MSBA and local communities agree on solution and appropriate course of action.

- ◆ Implement the agreed upon solution. MSBA and local communities continue collaboration through design and construction.

In total, the MSBA reviewed 423 SOI submissions from 162 districts over the course of 18 months. Of the submissions, 206 were received during July 2007, three prior to the July 31 deadline. Each district was required to choose one priority for the MSBA to review.

MSBA employees spent the summer and fall of 2007 analyzing each request to determine which school facilities were in most need of attention. Craven and her team visited more than 400 schools to conduct senior studies with teams of architects and engineers, examining facility conditions, space and programmatic issues. The group also reviewed educational programs and enrollment trends and forecasts, and met with local officials.

“Through the new formula, we prioritize based on the needs and the urgency of the school buildings,” said Craven. “Every district has unique circumstances, so it’s important to have direct dialogue. You tell us what the problem is.”

Craven targets overcrowding as a universal issue throughout the state.

“Our task was to look at the range of what overcrowded meant,” she said. “One school might have crowded hallways in between classes. Another might have six lunches, starting at 10 a.m. Then you go to a school that has six lunches, and classes held in the gym. You have to first assist the school with the most need.”

The MSBA held meetings throughout this spring with all districts moving forward in the process. In April 2008, the board approved the concepts for targeted schematic design for 11 projects and voted to approve a project budget and scope agreement for an additional five districts. Because it is a rolling pipeline, more projects are expected to progress to the feasibility study phase during the course of the year.

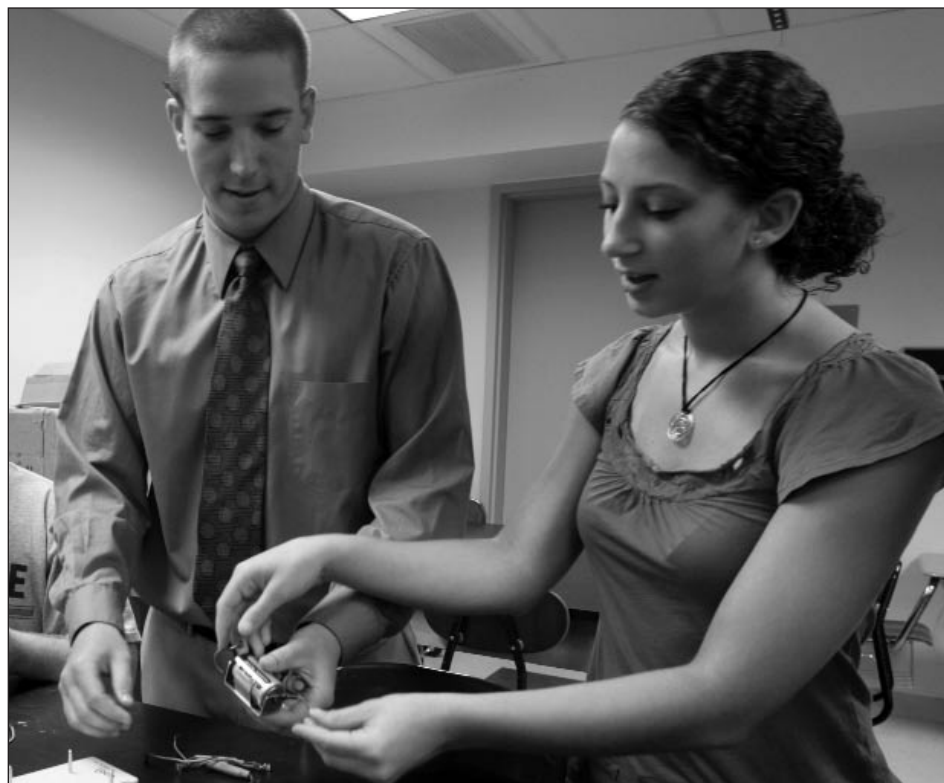
Chelmsford High School undergoes major improvements

CHELMSFORD: from Page 8

tables and equipment on the perimeters. The building is also now equipped with a new roof, fire alarm system and improved heat and ventilation systems.

“Although our town moved ahead with the project during the moratorium, (MSBA Executive Director) Katherine Craven and her staff met regularly during that period to keep us informed of how regulations were being modified and advising us of potential barriers to funding,” said Pat Maloney, chairman of the School Building Committee in Chelmsford. “That help and advice were key components to our eventual success.”

“The new (MSBA) regulations prevent waste and provide for parity across school districts,” said Yeoman. “This has been a major positive change in the way the state does business to protect the taxpayer.”



Chelmsford High physics teacher John Morris works with Jeannette Lupoli, a member of the Class of 2008.

Board has MSBA headed in right direction

The seven-member board of the Massachusetts School Building Authority (MSBA) consists of **State Treasurer Timothy P. Cahill**, who serves as chairperson, two state finance and education designees, and four members appointed by the Treasurer. The current board is a diversified group, providing expertise in education, design, finance and management.

Jeff Wulfson is the Associate Commissioner for School Finance and District Support in the Mass. Dept. of Elementary and Secondary Education. He oversees the DOE's major school funding programs, special education circuit breaker and transportation. Wulfson is also responsible for school choice programs,

charter schools, special education appeals and regional district governance issues. He is the designee of Commissioner of Elementary and Secondary Education Mitchell D. Chester.

Matthew J. Gorzkowicz serves as the Assistant Secretary for Finance Operations and Budget of the Commonwealth's Executive Office for Administration and Finance. He is the designee of Secretary of Administration and Finance Leslie A. Kirwan.

Richard J. Bertman is a founding principal of Childs Bertman Tseckares, Inc. His architectural firm has been the recipient of more than 175 design awards, including the Urban Land Institute's Global Award for Excellence for the Prudential Center

Redevelopment, as well as the City of Boston's first annual Green Business Award.

Terry Kwan is a former educator with unique skills in curricular and facilities design. She has worked on public school building projects in Massachusetts for more than 30 years, both professionally and as an elected official. She taught middle school before becoming a science supervisor and teacher trainer and has consulted with a number of school communities on the design and construction of science facilities.

Dr. Mary Grassa O'Neill currently serves as the Secretary of Education for Archdiocese of Boston where she oversees all Catholic school education in the Archdiocese. She formerly worked as the Director of the

Principals' Center, Managing Director of Professional Education and a member of the faculty at the Harvard Graduate School of Education. She has been a teacher, curriculum advisor, principal and zone superintendent in the Boston Public Schools and superintendent of the Milton Public Schools.

Lisa Turnbaugh is the program management leader for Bank of America. As an accomplished leader in program and construction management, she has managed the design and building selection process for various projects and is proficient at coordinating the design development process between public entities, operating agencies, and the design/building team.

Whitman-Hanson goes green

BY MEAGHAN CASEY

As rising energy prices and climate change dominate news headlines, more and more green schools are getting the green light.

In Whitman, the 234,500-square-foot Whitman-Hanson Regional High School opened in 2005 as a pilot project for the Massachusetts Green School Initiative – a partnership between the Massachusetts School Building Authority (MSBA) and the Massachusetts Technology Collaborative. The school incorporates green technology that reuses rainwater for flushing and draws on solar energy for power. A 51-kW solar electric system is installed on the school's roof, supplying approximately five percent of the building's annual energy use.

The school's design takes advantage of natural light on the 63-acre campus. In the center of the building is a courtyard, which allows for sunlight into every classroom and reduces the need for traditional electric lighting. The library, a two-story lecture hall, a

performing arts center and a double gymnasium also all use natural light and daylight sensors to improve energy savings. Large skylights in the cafeteria also help to reduce energy consumption.

"The school was designed to move into the 21st century," said Principal Edward Lee. "The science labs are well designed, the state-of-the-art tools enhance global education and the learning environment is one that elevates the sense of respect and motivation among students."

The building was designed by Architecture Involution, based in Wayland. In 2006, the MSBA named the design one of the 10 best in the past decade in its School Building Design Awards contest.

The total construction cost for Whitman-Hanson was \$49 million, averaging to \$37,800 per student. It is estimated that its annual energy savings is \$100,000 and its annual water savings in 603,500 gallons.



Top photo, view of the library at Whitman-Hanson Regional High School. Above, view of the exterior of the school. At right, a 51-kW solar electric system installed on the school's roof supplies approximately five percent of the building's annual energy use.





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Extreme MAKEOVER SCHOOL EDITION



Biology students, from left, Colson Leary, Lora Damon and Matt Whippen at Chelmsford High.



Chelmsford Director of Public Facilities Gary Persichetti, left, and Superintendent of Schools Dr. Don Yeoman are happy with the school's progress.

Chelmsford High undergoes major improvements

BY MEAGHAN CASEY

If Extreme Makeover visited Chelmsford, crew members would be impressed. The high school reopened with a fresh new look and state-of-the-art features, following an \$18 million renovation project.

The facility, built in 1974, was in dire need of updates.

"Our greatest problem was a lack of modern and safe facilities," said Dr. Donald R. Yeoman, superintendent of schools. "Our science labs were unsafe, obsolete and too small."

"When the school was built, there were very few rooms for special education and almost no computers or computer labs," said Principal Allen Thomas. "The science labs were undersized and didn't meet state standards, air circulation was poor and we had no auditorium."

Renovations included expanding science classrooms from 800 to 1,200 square feet and setting up seating in the middle for lectures and lab

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