

SCHOOL REPORT

LISTENING TO CLIENTS

Lessons from Heery's Education Summit

The 2004 forecast for vocational school construction—more than \$866 million—is over 25% higher than the amount forecast to be spent in 2003.

Source: National Clearinghouse for Educational Facilities based on information from F.W. Dodge.

Heery's 3rd Annual Education Summit in Nashville, Tenn., featured a panel of distinguished clients and K-12 education leaders who participated in a facilitated group discussion about the issues, trends, challenges and frustrations of trying to deliver high-quality schools of excellence on shoestring budgets.

Led by professional moderator Randy Pennington, the group talked a lot about alternatives: alternative financing, alternative project delivery methods, alternative teaching methodologies that affect facilities, alternative contracts, alternative methods for overcoming overcrowding, and alternative ways to manage information. They also discussed roles: the role of the community, the role of the project manager, and the role of the board.



Funding and Financing

Ken East, Executive Director—Facilities, Maintenance & Construction, Monroe County (Fla.) School District, puts it succinctly: "Funding is far, far and away our largest challenge. Retired people have already put their kids through college and aren't interested in funding a tax burden."

On the other side of the country in suburban Portland, Ore., Rick Larson, Director—Business and Operations, Centennial School District, agrees: "The recession has hit the state very hard. We have to take \$3.6 million out of a \$42 million budget and it was very painful."

The school districts represented at the summit used a variety of funding mechanisms. The State of New Jersey is funded by the state legislature under a judicial mandate from the Supreme Court of New Jersey, while DeKalb County (Ga.) School System is funded through a Special Purpose Local Option Sales Tax (SPLOST) that causes cash flow to be unpredictable at times. Charleston County (S.C.) School District uses a combination of "eight percent money"—the district is allowed to bond for up to eight percent of the assessed value of property in the district without voter approval—and traditional bond issue funds. Seattle Public Schools just passed its second levy, more of a "pay as you go" plan that allows the district to build and repair schools up to a certain amount and bill the taxpayers. It is the largest school construction levy in the State of Washington's history.

Still, summarizes Joe Edgens, Executive Director, Facilities and Operations, Metro Nashville Schools, "Funding is always a challenge."

On the up side, the tough economy has brought more competition, so school districts are seeing more competition for their projects.

"More competition drives prices down," explains Donald Moore, Managing Director—New Jersey School Construction Corporation (NJSCC) Design and Construction. "Contractors who were busy with commercial construction during the past few years are now bidding on our projects."

Don Gillmore, Building Excellence Program Director for the Seattle School District, agrees: "We're trying to take advantage of good prices right now. These are tough times for the operational side of the group, but the capital side can see some great bargains."

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“Hard financial times are opportunities to excel,” asserts Bill Lewis, Executive Director of Facility Improvements, Charleston County School District. “Good contractors from the commercial side are now bidding public work. The challenge is how do you tap into those types of firms and transition your delivery systems to keep the good commercial guys working for you.”

Policy Trends that Affect School Facilities

Panelists commented extensively on the ways that policy can affect school facilities. Everything from mandatory testing, to meeting requirements for special needs students, to prescribed student/teacher ratios, has a facility implication that administrators, school planners and builders must address.

Consider testing. Seattle’s Gillmore discussed how the focus on testing has changed the district’s building designs.

“The State of Washington recently instituted a program for testing 4th graders, 7th graders and 10th graders, and if the 10th graders don’t pass the test, they can’t graduate,” he explains. “And so our whole district has re-established its orientation from being centered around teacher and classroom to being centered around learning.”

How has this changed Seattle’s school facility plans?

According to Gillmore, when they design a building now, they are more interested in spaces that can help students learn in an experiential way—other than lecture mode—to take these tests and pass them. Gillmore points out that when you apply this approach to a building, it takes a while to uncover the best solutions because you’re in uncharted territory.

Richard Palermo, Superintendent, Lynnfield (Mass.) Public Schools, agrees that high stakes testing and graduation requirements have an effect on school buildings. He’s noticed an increase in the number of legally-designated special needs students who require accommodations in meeting the new requirements. Accommodations range from technology to additional classes and programming to meet the students’ needs, which means a school needs space to house the programs or equipment.

Stan Pritchett, Associate Superintendent—Business and Plant Services, DeKalb County (Ga.) School System, recently experienced how policy can affect school facilities when the state of Georgia adopted a mandatory student/teacher ratio averaging 20/1, significantly less than DCSS’s previous 25/1 ratio.

“It’s a good idea, but it impacted our facilities in a big way” explains Pritchett. “Five years ago, we started with 450 portable classrooms and we’ve built nearly 700 classrooms

HIGH PERFORMANCE

Classrooms

School officials and community stakeholders are constantly seeking innovative methods to decrease facility operational costs and increase building life span. The implementation of sustainability and green building concepts offers vast solutions. This need has driven the school design and construction industry to develop and market products and systems that are more environmentally and economically viable.

One example is the LEED (Leadership in Energy & Environmental Design) Green Building Rating System™, a priority program of the U.S. Green Building Council. It is a voluntary, consensus-based, market-driven building rating system that evaluates environmental performance from a “whole building” perspective over a building’s life cycle, providing a definitive standard for what constitutes a “green building”.

Unlike other rating systems currently in existence, the U.S. Green Building Council Membership, representing all segments of the building industry, instigated the development of LEED Green Building Rating System™.

LEED™ is a self-assessing system designed for rating new and existing buildings. It is a feature-oriented system where credits are earned for satisfying each criterion. Different levels

of green building certification are awarded based on the total credits earned. The system is designed to be comprehensive in scope, yet simple in operation.

According to the U.S. Department of Energy’s Rebuild America program, The Dalles Middle School, a new \$12.3 million state-of-the-art school in Oregon, is one of the most energy-efficient schools in the nation. Rebuild America states that The Dalles Middle School is the first constructed within the state of Oregon under the LEED™ program.

The Dalles Middle School was designed as a low-energy building through the use of numerous energy efficient features. The HVAC system operates in conjunction with a ground source heat pump that helps save 63 percent of the energy when heating and 48 percent of the energy when cooling. Wind-driven exhaust fans placed throughout the school allow for natural ventilation and are an effective means of cooling at least 20 percent of the year.

As one of the first schools in the nation to use a unique application of free geothermal energy, the middle school recently received the High Performance School Award from the Oregon Office of Energy and is anticipated to receive a gold certification, the second highest award possible within the LEED™ program.

Other school systems across the country have been recognized for high performance and energy efficient facilities. The U.S. Environmental Protection Agency selected the Wake County Public School System (WCPSS) as an ENERGY STAR Buildings™ Education Partner of the Year. By significantly reducing operational costs for energy efficiency, WCPSS distinguishes itself as a premier program among other public and private school systems and universities across the country.

◀ *South East Raleigh High School, part of Wake County Public School System, an ENERGY STAR Buildings™ Education Partner of the Year.*



since then. But, with mandatory class-size reductions, we still have over 700 portables at our schools.”

Bob Carlson, Director of Management Services for the Council of the Great City Schools, points out that even with these policy shifts, “We have not fundamentally re-engineered public education since the advent of the printing press 400-500 years ago. Every other service and industry understands how we can use technology to train people, but in most schools the computers are tucked away in the corner and the teacher is relying on textbooks last printed in 1977.”

Delivering Better Schools Faster

The length of time it takes to deliver a new or renovated school is too long, according to nearly all of the participants. They report that their organizations are using new delivery methods and strategies, such as contractor prequalification, to shorten timeframes and reduce costs. However, several participants noted that schedule speed-bumps are often the result of mandatory reviews and permitting requirements, rather than the construction itself.

“When taxpayers vote for a bond, they want the schools sooner rather than later,” asserts Charleston’s Lewis. “As the people in charge of delivering these schools, we have got to figure out a way to transition to commercial building systems, practices and approaches. The average citizen doesn’t understand why a shopping center can be designed and built in nine months, but a school takes four years.”

New Jersey’s Moore is hoping that different delivery systems will improve school design and construction schedules. “We’re experimenting with different delivery systems—design/build and construction management—which we think will improve our construction schedules, but we still must plan for community input into the design phase.”

Seattle’s Gillmore points out that his district is testing new delivery methods as well, such as its new GC/CM program, which gives the district access to a whole new range of contractors.

The State of Georgia has authorized school districts to take advantage of the full range of delivery methods, reports DeKalb County’s Pritchett. But perhaps one of the greatest advantages he’s seen has come from the district’s ability to prequalify contractors, which has brought in a host of non-traditional school district contractors with good results.

Veteran school builder Edgens has observed a few changes over the years that have stretched out the time it takes to renovate schools: the incredible shrinking summer.

“The school year is longer, and often the building is used for summer programs,” points out Edgens. “So we have to phase the work, do it at night and on weekends, instead of blitzing it during the summer.”

For new buildings, Edgens cites the dramatic increase in the number of agency reviews for school building plans. “It just takes a longer amount of time to get through the reviews so that we can produce the product.”

Edgens also reports that his district is looking at CM-at-risk as an alternative delivery method to traditional design/bid/build to see if they can get schools any faster.

Centennial School District’s Larson concurs. “It takes us 12-18 months to get all of our wetlands, city infrastructure and other agency approvals.”

Public Confidence and Community Involvement

Panelists describe a link between public confidence in a school organization and funding and support of that organization. “The issues around funding have to do with public confidence in K-12 education, and even with all of the widely reported problems, referendums are passing,” points out

Client Panelists:

Bob Carlson, Director, Management Services, Council of Great City Schools

Ken East, Executive Director – Facilities, Maintenance & Construction, Monroe County (Fla.) School District

Joe Edgens, Executive Director Facilities and Operations, Metro Nashville Schools

Don Gillmore, BEX Program Director, Seattle School District

Rick Larson, Director – Business and Operations, Centennial School District, Portland, Ore.

Bill Lewis, Executive Director of Facility Improvements, Charleston County School District

Donald Moore, Managing Director – NJSCC Design and Construction, New Jersey Schools Construction Corporation

Rick Palermo, Superintendent, Lynnfield (Mass.) Public Schools

Stan Pritchett, Associate Superintendent – Business and Plant Services, DeKalb County (Ga.) School System

Council of The Great City Schools’ Carlson. “It is as if the public is saying they believe we’re on the right track.”

One of the keys to developing strong public confidence in a district seems to be the district’s ability to keep its word. On time and on budget are mandatory, but so is dealing creatively with the community.

“It’s not so much that we deliver schools on time and on budget,” comments Gillmore. “We allowed community input into the buildings and we’ve returned to them schools that reflect that input.”

New Jersey’s Moore suggests that a coordinated communications plan for managing community input, activity and communication is a key strategy in developing public confidence.

DeKalb County’s Pritchett notes that his district made specific promises about the last referendum: a multi-purpose physical education building at every elementary school; the technology plan implemented at every school; and retirement of outstanding bond indebtedness. By delivering on the promise of the last referendum, the district was able to pass another one in Spring 2002.

“Our community knows that when we build a school it will be there for 40-50 years and they want to be involved,” points out Monroe County’s East. “They are engaged and they want to be engaged.”

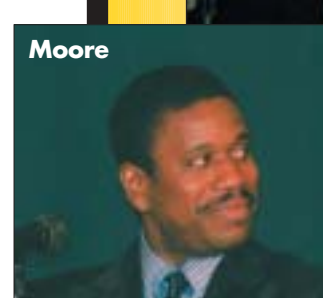
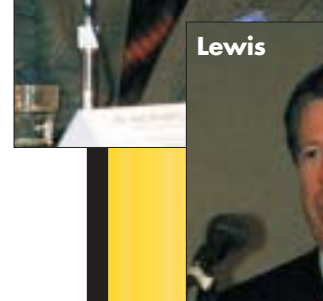
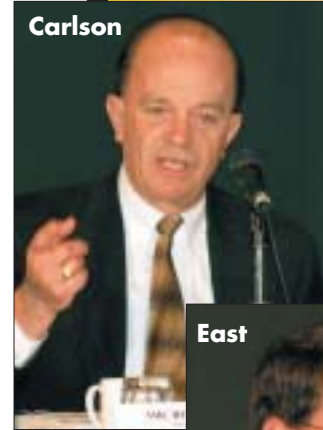
East cites the district’s unique marine vocational track as an example of how the community expects its specific needs—Monroe County stretches along the Florida Keys and is largely a marine-based economy—to be addressed by school system programming.

Palermo reminded the group that occupied schools have their own special communication needs with the local community. “Communicate early and often with the people in the trenches—principals and teachers,” he advises. “Avoid deliveries during bus times and loud construction work during testing times.”

No Child Left Behind

And what about “No Child Left Behind”? Larson explained the effect of the legislation on districts with just one high school: “If the high school falls behind, then students can transfer to a neighboring district, and the money follows the student, which means less funding for the already troubled school. In tight economic times, where you make the cuts can make all the difference, and most districts do everything they can to protect the teacher and the classroom.”

As all of the panelists repeated throughout the day-long session, the primary product of the education system is learning—not the building.



CHARLESTON COUNTY

School District



▲ During renovation work, Media Specialist Becky Williams managed a mobile library, visiting six classrooms a day. “It [media center] was worth waiting 20 years for,” says Williams. “It feels like home.”

▼ “I love the storefront windows.”
— Principal Roberta Papineau.

It’s a familiar story – the ugly duckling to the swan, the maid to the princess – but the transformation of some Charleston County (S.C.) Schools is truly a fairy tale. One in which deplorable conditions and overcrowding have become state-of-the-art educational facilities. Morale is up, test scores are up. In general, the present and future are bright for this coastal city, one that takes such pride in its physical and environmental surroundings.

Examples of this Cinderella story are seen throughout the district, particularly schools like Ladson Elementary. What was once a hodgepodge of additions dating back to the 1920s, open pod-style classrooms and gloomy interiors, has blossomed into a beautiful and functional neighborhood school.



▲ At Ladson and Pepperhill Elementary Schools, 1970s-style pods were converted to modern classrooms.

Prior to its \$5.3 million renovation, Ladson Elementary was virtually windowless with insufficient lighting. “One of the first things I thought [when I entered the school] was that they didn’t have the lights on,” says Principal Roberta Papineau.

Now Papineau proudly points to the storefront-style windows as her favorite design element within the school. Opening into an

enclosed courtyard, the storefront windows in the cafetorium allow a great deal of natural light and create a connection to the outdoors.

Pepperhill Elementary was also “plagued” by 1970s-style pods. “This is a big improvement over the pods,” says teacher Steve Zwicky. “Sometimes it was so loud, you couldn’t hear yourself think.”

The school’s major addition and renovation included roofing repairs, HVAC repairs, fire safety upgrades, 10 new classrooms to replace portables, renovation of the existing classroom pod design, cosmetic renovations, renovation of toilets, and technology upgrades.

In terms of new construction, the district’s awesome flagship campus, West Ashley High School, is a lesson in possibilities. Raising the bar for secondary educational facilities in Charleston County, West Ashley HS boasts 14 computer labs, 15 science rooms, and a home economics area with 10 kitchens.

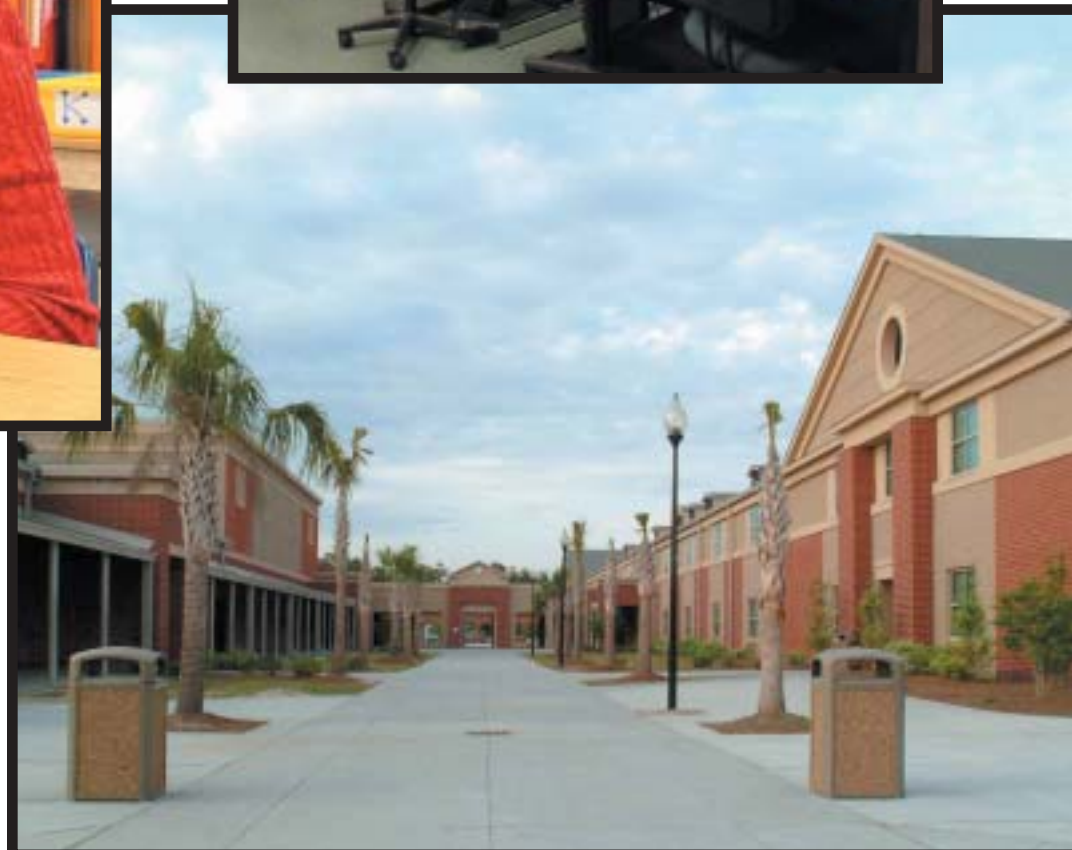
Outfitted with the latest technology and designed acoustically for professional performances, the 900-seat auditorium serves as a major site for Spoleto and other regional cultural events, as well as school performances.

Outside, the campus features a 6,000-seat stadium, eight-lane all-weather track, six tennis courts, three practice fields, and a baseball/softball complex that exemplifies Title IX at its finest.

With all its amenities and its gorgeous park-like setting, the thing that stands out the most is pride. The building has been open for three years and it looks like it did on day one.

Heery has been providing construction program management to the Charleston County School District since 1997.

▼ West Ashley High School



▲ West Ashley High School

THE CALL FOR PROTOTYPES

As the current economic recession continues to hit state coffers and deplete revenues, state and school system officials nationwide are searching for more economical ways to develop school facilities.

Consider a recent example from Massachusetts. In a February 2003 article in *The Boston Globe*, Massachusetts Inspector General Gregory Sullivan publicly urged the state Department of Education to create design prototypes that cities and towns across the state could use to build schools. In doing so, he cited lower design costs and other efficiencies, as well as the assurance that each new school building would meet the state's design and technology mandates.

School planners caution, however, that prototypes are not a universal remedy for cutting school building costs. In urban districts with limited site options, experts warn that site-adapting a prototype can cost as much as if the district had developed a site-specific design. Also, if a district builds only one new school every few years, changes in educational and technical specifications and regulations could render a prototype obsolete. On the softer side, some communities value having site-specific schools that reflect the history and context of their areas, making the school the center of the community.

"Many urban districts prefer individual schools," explains Ralph Rohwer, Heery vice president in Seattle, Wash. "The combination of a limited number of sites and cultural diversity makes it practical to design community-specific schools."

"A good set of educational specifications and design guidelines helps provide consistency throughout a district when prototypes aren't in use," explains Rob Chomiak, Heery area manager in Dallas, Texas, and a veteran of several large-scale school construction planning efforts. "These tools allow the district to still achieve some efficiencies and economies of scale."

The majority of school planners state that prototypes work best when a district is planning to build multiple schools quickly and has abundant land for potential school sites. The efficiencies range from lower design costs to faster construction and easier maintenance.

The design fees associated with re-using a prototypical design usually run approximately 4-6% of construction cost, as opposed to 6-8% for a new design. Another benefit is faster design and agency review timeframes since the reviewers have seen the plans before. School facilities departments have also



Dunwoody Springs Elementary School

noted that using prototypes reduces building-related change orders—building related change orders should be incorporated into the drawings after the first use. However, because each site is different, districts can still expect to see site-related change orders. The maintenance department benefits as well, since identical systems in the same locations in the building make it easier to diagnose and resolve problems.

In Orange County, Fla., four elementary schools were delivered in record time—11 months from start to finish, compared to the normal 20 months, using prototype designs and a construction management process. One of the reasons: a construction superintendent experienced in building the prototype.

Some fast-growing districts develop several different prototypes from which they can choose. Consider Wake County (N.C.) Public School System (WCPSS), which has used 19 different prototypes to deliver 61 schools in its massive building program.

"There is a common educational specification among the prototypes for Wake County's elementary schools," states Robert Corbin, Heery's program manager working with WCPSS. "Having several different prototypes on a building

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▲ *Dunwoody Springs (top) and Ocee (bottom) Elementary Schools, part of the Fulton County (Ga.) School District, were built from the same prototype.*



Ocee Elementary School

COMMUNICATIONS

An Integral

Schools house our most precious asset, our children, and the facilities we educate them in are of integral importance to the community as a whole. In new construction, this typically means acquiring the best site, getting the best design, and meeting all the stakeholders' needs. In school renovation projects, however, community issues are even more complex. School renovations directly affect the lives of current students, their families, staff and taxpayers. All stakeholders have a desire, and a need, to be informed of the ongoing changes to their surroundings.

Heery is one of the only construction management firms in the country with an in-house agency that assists and directs with community/public relations to support schools construction projects. Heery blends the technical information with an aggressive community outreach program



Trenton (N.J.) Central High School



Long Branch (N.J.) High School

that reinforces the school district's own public information functions.

We have assisted school districts across the country with sensitive school renovation programs.

In New Jersey, Heery is managing a multitude of school construction projects. Many of the schools in the State are very old and require intense renovation programs. We developed communication plans for each district to serve as a guideline during the construction process. Elements of these

THE CALL FOR PROTOTYPES

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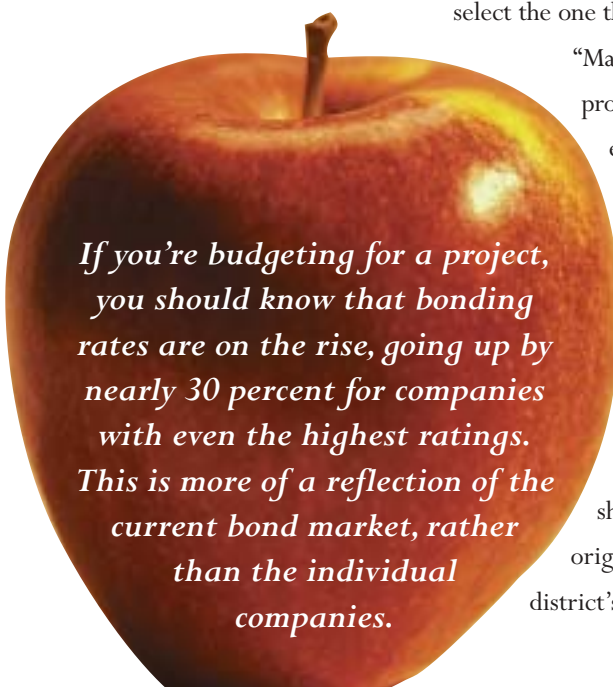
program this large makes sense because it allows the district to select the one that can be site-adapted most easily."

"Many of our taxpayers assume we don't use prototypes because we make an effort to select exterior materials and colors that blend with the local neighborhood," comments Mike Burriss, assistant superintendent for facilities. "I periodically update the Board of Education on the number of prototypical schools we have in place and the savings we've realized."

Burriss estimates that WCPSS has saved as much as 25-40% of original design fees and shaved as much as four to six months off the original design schedule for each use of the district's prototypical designs.

Prototypes have made their way into renovations and additions at existing schools as well. Many districts are developing prototypical designs for media centers, cafeterias, kitchens, and gymnasiums, among other things, that can be used to streamline the design and construction process for schools undergoing renovation. But, as always when dealing with existing schools, there are many unknowns.

"As part of the program at DeKalb County (Ga.), prototypical physical education buildings were utilized at the district's elementary schools," explains Lee Summey, Heery's SPLOST (Special Purpose Local Option Sales Tax) Team program manager. "This has truly been a double-edge sword in that the prototype building has provided many building economies, but site development costs at many older land locked elementary schools have been significant."



If you're budgeting for a project, you should know that bonding rates are on the rise, going up by nearly 30 percent for companies with even the highest ratings. This is more of a reflection of the current bond market, rather than the individual companies.

Part of a Successful Construction Program

plans include close coordination with the principal, weekly briefings with faculty and staff, and formal notification of hazardous abatement work.

Lead and asbestos removal are always of special concern to faculty and parents and to help ease anxiety about this process, Heery prepared and distributed fact sheets on the abatement process. The fact sheets (see example) were even available in both English and Spanish to accommodate the multi-cultural nature of the community.

In Massachusetts, Heery is managing a \$63 million program for Lynnfield schools. The program, involving four schools, includes the complete renovation of a 128,000-square-foot high school, while occupied. As part of our communications plan, Heery has prepared and distributed regular newsletters to the students, families and faculty

outlining the construction progress and notifying of any significant upcoming activity that could impact students.

For a \$200 million program in Portland, Ore., close communication with school staff was a major priority for our client. Heery developed a plan that involved regular meetings with staff to update them on progress and to detail future activity. Heery also coordinated the writing, production, and distribution of a regular newsletter for students' families. In addition, project team members maintained a constant line of communication with school principals.

LEAD

WHAT IS LEAD?

Lead is a soft grey metal that has been used for centuries in a variety of ways including in paint. Lead was used in paint to make the paint more durable and weather resistant.

WHERE IS LEAD IN OUR SCHOOL AND WHY ARE WE REMOVING IT NOW?

Lead paint can be found in many schools across the United States on a number of surfaces such as exterior walls, interior walls, concrete stairs, railings and window sills. Lead is generally considered safe when it is present in an undamaged condition. However, during the renovation of your school, surfaces that contain lead might become damaged by construction activity. To prevent any possible problems, the lead paint will be removed from these surfaces prior to construction to ensure the safety of everyone.

WHEN WILL IT BE REMOVED?

The lead materials will be removed when the building is empty, which means the building will not be occupied by students, teachers or staff. This action is required to ensure the safety of the building's occupants. The removal will only take place on weekends or during breaks.

IS THE BUILDING SAFE?

Numerous safety precautions have been put in place to ensure the safety of building occupants. The removal of the materials that contain lead will be in accordance with Federal and State regulations. During the removal of the lead material, a New Jersey State Department of Community Affairs-Certified independent environmental consultant will monitor the activities. In addition, the areas where removal will be taking place will be enclosed in plastic with the air properly ventilated and filtered to ensure that lead dust particles do not release into the building. No one will be allowed to enter the school until the final wipe test shows that the area outside and inside the work area is free of lead dust and the New Jersey State Department of Community Affairs gives its approval (i.e., Certificate of Occupancy).

WHO CAN I CONTACT FOR MORE INFORMATION?

If you have any questions or would like more information, please feel free to contact...

¿QUE

El plomo es un metal gris suave que se ha utilizado durante siglos en una variedad de formas, incluyendo la pintura. La pintura con plomo se utilizó para hacerla más duradera y resistente a las intemperias.

¿DONDE

El plomo puede encontrarse en muchas escuelas en los Estados Unidos en una variedad de superficies, como paredes exteriores, paredes interiores, escaleras de concreto, barandillas y alféizares de las ventanas. El plomo generalmente se considera seguro cuando está presente en un edificio sin daños.

¿CUANDO SE ELIMINARA?

Las materias con plomo se removerán cuando el edificio este vacío, lo que significa que el edificio no estará ocupado con estudiantes, maestros ni empleados. Esta acción es necesaria por precauciones de seguridad hacia los ocupantes del edificio. Este proceso ocurrirá sólo durante fines de semana o durante tiempo de vacaciones.

¿ES SEGURO EL EDIFICIO?

Numerosas precauciones de la seguridad han sido establecidas para mantener el bienestar de ocupantes del edificio. La eliminación de las materias que contienen el plomo será de acuerdo con regulaciones Federales y del Estado. Durante la eliminación de las materias con plomo, un consultor especialista del medioambiente, independiente y certificado por el Departamento de Asuntos de Comunidad del Estado de Nueva Jersey, controlará las actividades. Además, las áreas donde la eliminación estará sucediendo se encerrarán en plástico con el aire ventilado y filtrado apropiadamente, para asegurar que polvo con plomo no se libere en el edificio. No se le permitirá a nadie entrar a la escuela hasta que la prueba final de trapos muestre que el área fuera de y dentro del área del trabajo es libre de polvo con plomo y el Departamento de Asuntos de Comunidad del Estado de Nueva Jersey de su aprobación (en otras palabras, el Certificado de la Ocupación).

¿POR QUIEN PUEDO PREGUNTAR PARA OBTENER MÁS INFORMACION?

Si usted tiene cualquiera pregunta o si usted quiere más información, por favor llame las personas siguientes...

WHAT IS ASBESTOS?

Asbestos is a naturally occurring mineral that was used until the mid-1970s in a variety of building materials to make them fire resistant and durable. Asbestos is no longer used in building materials produced in the United States. However, Asbestos Containing Materials (ACMs) remain in many buildings and homes throughout the country.

WHERE IS ASBESTOS IN OUR SCHOOL AND WHY ARE WE REMOVING IT NOW?

Asbestos can be found in many schools across the United States, in products such as wall plaster, floor and ceiling tiles, pipe insulation, and vermiculite.

Asbestos is generally considered safe when it is present in an undamaged condition. However, during the renovation of your school, materials that contain asbestos might become damaged by construction activity. To prevent any possible problems, the asbestos will be removed from these surfaces prior to construction to ensure the safety of everyone.

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¿QUE ES ASBESTO?

El asbesto es un mineral natural que se usó hasta mediados de los años 1970s en una variedad de materiales de construcción para hacerlos resistentes al fuego y duraderos. En el presente, el asbesto no es usado en materiales de construcción producidos en los Estados Unidos. Sin embargo, Materiales que contienen Asbesto (ACM – por sus siglas en inglés) permanecen en muchos edificios y hogares a través del país.

¿DONDE HAY ASBESTO EN NUESTRA ESCUELA Y POR QUE LO ESTAMOS ELIMINANDO AHORA?

El asbesto puede ser encontrado en muchas escuelas a través de los Estados Unidos, en productos tales como el yeso de pared (aplicaciones de estucados y/o empañetados), losetas de piso y techo, aplicaciones de aislantes para tuberías y calderas, y productos para tratamiento de techos.

El asbesto se considera generalmente seguro cuando esta presente en una condición ilesa. Sin embargo, durante la renovación de su escuela, los materiales que contienen asbesto quizás lleguen a ser dañadas por la actividad de la construcción. Para prevenir problemas, estos materiales se removerán antes de la construcción, para mantener la seguridad de todos.

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Los materiales de asbesto se removerán cuando el edificio este vacío, lo que significa que el edificio no estará ocupado con estudiantes, maestros ni empleados. Esta acción es necesaria por precauciones de seguridad hacia los ocupantes del edificio. Este proceso ocurrirá sólo durante fines de semana o tiempo de vacaciones.

¿ES SEGURO EL EDIFICIO?

Numerosas precauciones de seguridad han sido establecidas para mantener el bienestar de los ocupantes del edificio. La eliminación del asbesto será de acuerdo con regulaciones Federales y del Estado. Durante la eliminación de los materiales de asbesto, un consultor especialista del medioambiente, independiente y certificado por el Departamento de Asuntos de Comunidad del Estado de Nueva Jersey, controlará las actividades. Además, las áreas donde la eliminación estará sucediendo, se encerrarán en plástico, con el aire ventilado y filtrado apropiadamente, para asegurar que el asbesto no se libere en el edificio. El aire circundante al área de trabajo se monitoreara constantemente durante y después de las actividades de eliminación, para asegurar la calidad del aire en el edificio. No se le permitirá a nadie entrar a la escuela hasta que la prueba aérea final muestre que el aire es "seguro" y el Departamento de Asuntos de Comunidad del Estado de Nueva Jersey de su aprobación (en otras palabras, el Certificado de la Ocupación).

Habrá letreros en las puertas de la escuela y en el área de trabajo que le alertarán sobre los momentos en que este trabajo esta ocurriendo. Por ley, los signos de aviso deben estar presentes durante la duración del proyecto. Sin embargo, esto no significa que la eliminación de asbesto sucede durante el día. La eliminación sólo sucede en fines de semana o durante tiempo de vacaciones cuando la escuela esta vacía.

¿POR QUIEN PUEDO PREGUNTAR PARA OBTENER MÁS INFORMACION?

Si usted tiene cualquiera pregunta o si usted quiere más información, por favor llame las personas siguientes...

ASBESTOS

GAINING A NEW PERSPECTIVE

On Books and Buildings



◀ In February 2003, more than 400 parents and children gained a hands-on perspective of their library's future main branch during Jacksonville Public Library's "Much Ado About Books". After reviewing layouts for the children's floor, families frosted pretzel columns, Hershey bar windows and other delectable materials

to elevations of the new Robert Stern design. Once fully decorated, all four elevations were joined together for a truly new perspective of the \$95 million building and its architectural elements.

▼ More than 150 eager third graders in Youngstown (Ohio) City Schools constructed models of their new schools based on actual floor plans. First students learned basic concepts of architecture, engineering and construction. Then – decked out in their Heery Construction Team t-shirts – the teams set to work to build a scale model of their new school using a floor plan, graham crackers, frosting and plenty of candy! Heery coordinated the program as a way to involve students in the design and construction activities that are taking place at their schools over the next few years. According to one student, "this was the best project we've ever done at school!"



BACK TO CLASS

in Seattle

School choice, virtual classrooms, school within a school, changes in grade configurations, year-round curriculum, matching learning and teaching styles – education is changing, and having a profound effect on the traditional school building.

How do designers and construction professions keep up with the education evolution? It's back to class for some involved in the Building Excellence Program (BEX) for Seattle Public Schools.

Heery Vice President Ralph Rohwer, who leads the firm's construction program management efforts for Seattle Public Schools, spent a half-day with second-graders at Highland Park Elementary.

"I read to kids one-on-one in the classroom, helped supervise the class at the library, and ate in the cafeteria," said Rohwer.

Things that surprised him most were the amount of time the teacher spent on crowd control and getting children to listen, as well as the wide range of student abilities.

"I have a greater appreciation for the teacher's challenges in day-to-day teaching and the need to vary the teaching styles for the kids who can't sit still," said Rohwer. "Everyone associated with school facilities should spend a day in the shoes of the people who are to benefit from our efforts."

Heery Project Manager Kathryn Hawkins enjoyed a similar experience while working on an addition to a Seattle Public School. To get a better understanding of the staff and students, she spent a half-day with the K-5 school's Head Teacher.

Hawkins observed how students interact in their current space and thought about ways to improve the new addition in order to facilitate a better learning environment.

"From Mr. Sanger's reading group in Portable #9 to the speech class in the Winnebago, I quickly realized the need this school has for an improved building," said Hawkins. "From that day forward, I have gone through the project with a better understanding of the school's needs and in turn they have felt more comfortable coming to me with questions about the project."

Highland Park Elementary



HEERY

www.heery.com

For additional information, please contact Editor at 800/52Heery.

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