A Union of Professionals

BUILDING MINDS, MINDING BUILDINGS

Turning crumbling schools into environments for learning

OBAMA-BIDEN TRANSITION PROJECT

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COVER PHOTO BY PETER GARFIELD

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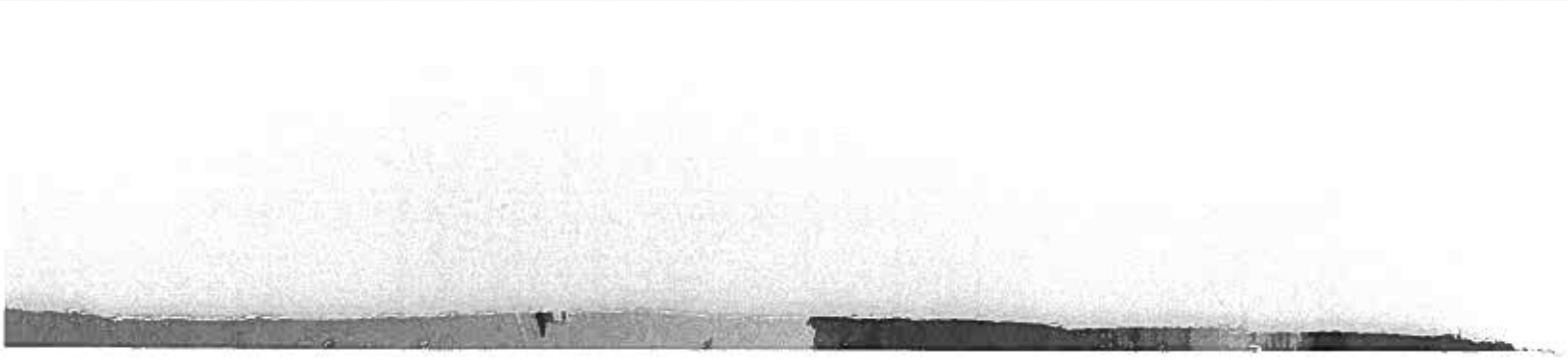

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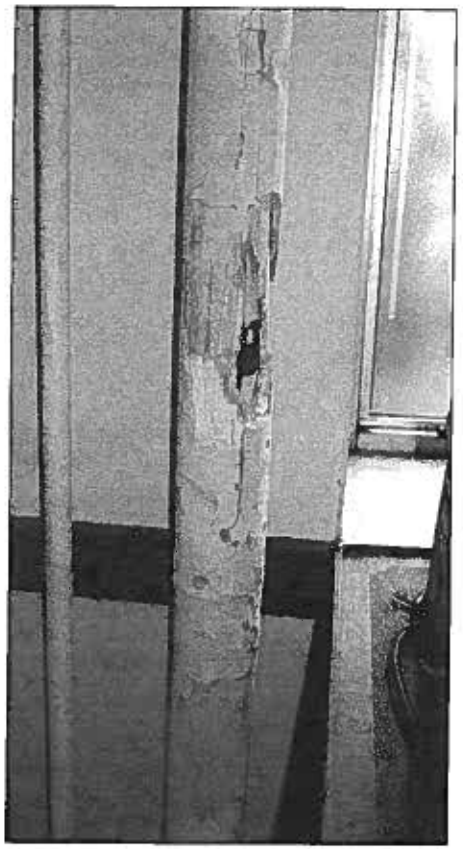

Deteriorating pipes can put students and staff in danger of falling debris and unknown contaminants.

Introduction

High-quality teaching and a challenging curriculum are not enough

NEARLY 20 YEARS AGO THE AMERICAN FEDeration of Teachers called for a "Marshall Plan" for urban schools, pointing out that the infrastructure of cities had deteriorated as federal funds were sharply reduced. Existing school buildings were crumbling and new schools were not being built. This problem has now spread far beyond the boundaries of urban school districts and touches nearly every school system in our nation.

Staff in these schools struggle to educate students in conditions that few corporations, much less building inspectors, would tolerate. Mold, leaking ceilings, extreme temperatures, raw sewage seeping into hallways, mice droppings, severely overcrowded classrooms—these unhealthy and/or unsafe conditions plague tens of thousands of old and new school buildings where millions of Americans age 5 and older must study and work. For the most part, officials have been unwilling to adequately confront this serious situation, which is affecting teaching and learning.

The AFT has long championed higher standards and greater accountability. We believe that these principles must be reflected not only in high-quality teaching and a challenging curriculum, but also in the planning, design, construction, maintenance and operation of our nation's schools. We continue to believe that the school environment cannot be separated from the academic agenda.

The U.S. Department of Education under the Bush administration commissioned a study (called for in Section 5414 of the No Child Left Behind Act) on the "health and learning impacts of environmentally unhealthy public school buildings on students and teachers." The study found "the overall evidence strongly suggests that poor environments in schools, due primarily to effects of indoor pollutants, adversely influence the health, performance, and attendance of students."[1] Sadly, the department shelved the study's unpleasant results.

Our report focuses on the problem of inadequate, unhealthy and unsafe public school building conditions; the consequences of poor conditions on learning, health and staff retention; the elements of well-designed, well-built, well-maintained schools; and recommendations for action at all levels to improve school buildings.

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Age and neglect have left the walls in some schools—like this New York classroom—literally crumbling.

The Problem

Inadequate, unhealthy and unsafe public school building conditions

TENS OF THOUSANDS OF PUBLIC SCHOOLS urgently need repairs, renovation, modernization or new construction because of health and capacity issues. Schools with poor building conditions can be found throughout the United States—in urban, suburban and rural schools, and in old and new schools alike. Every weekday, millions of children and school staff spend the day in buildings that can make them sick, injure them or diminish their productivity.

The root causes of these problems are lack of attention to maintenance/operations and inadequate funding.

- The General Accounting Office reported in 1995 that 25,000 public schools need extensive repair and replacement, and that it would take $112 billion to bring existing buildings into conformity with the minimum building standards. It also concluded that the air is unfit to breathe in nearly 15,000 public schools.[2]
- In its 35th annual "Maintenance and Operations Cost Study," *American School & University* found that in 2006 the median school district spent 7.58 percent of total expenditures on maintenance and operations (M & O), well below the 9.59 percent spent 10 years ago.[3]
- Three-quarters of schools reported in a 1999 federal study that they needed funds for repairs, renovations and modernizations to upgrade their school's overall condition to "good."[4]

The effects of inadequate funding and reductions in maintenance and operations are compounded by increased enrollment and decreased school capacity.

- A 2004 report from the U.S. Department of Education's National Center for Education Statistics notes that physical space limitations are a problem in schools, with 8.5 percent of our schools having exceeded their capacity for students.
- Almost one in three had temporary buildings serving as the primary learning environment for 160 students.
- In one out of five schools, teachers must routinely use common areas of the school for instructional purposes.
- One in four schools report teachers do

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not have their own classrooms due to a lack of space, and have to share rooms with others.[5]

Not surprisingly, in 2005, the American Society of Civil Engineers gave a D to America's schools on its "Infrastructure Report Card."[6]

The AFT's research supports these findings. In a 2006 survey, nearly 1,000 teachers and school staff reported such persistent school building problems as rodent infestation, mice droppings, fallen ceilings tiles, poor lighting, mold that has caused mushrooms to grow, crumbling exterior walls, asbestos, severely overcrowded classrooms and hallways, freezing rooms in the winter and extreme heat in the summer, old carpeting, clogged bathroom toilets and no stall doors, inadequate circuit breakers causing frequent outages, and poor ventilation.

From Montana to Manhattan, school staff described conditions that at best are highly disruptive to learning and at worst are dangerous and make serious learning impossible.

"Temperature extremes range from being so cold in the winter that students/teachers have to wear their coats and gloves (making it difficult to write) and so hot in spring and fall (up to 98 degrees in some classrooms) that children have nosebleeds and vomiting, and teachers feel faint and nauseated."
—a New York City teacher

"Our building is a sick building. That is what we call it. The ventilation system was designed in the 1950s."
—a Monongalia County, W. Va., art teacher

"Our school has been built on a former landfill. On hot days, the stench rises from beneath the pavement. On our worst days, we're forced to have early dismissal because so many get sick from the smell."
—a Boston third-grade teacher

"The mold is so bad that in one of the teachers' bathrooms, mushrooms are growing."
—a Greenburgh, N.Y., math specialist

"[Our school has] broken ceiling tiles, plumbing in bathrooms that have not been updated since the '60s, dirty carpets and electrical outlets that don't work (this causes the use of extension cords across the room), and finally roaches everywhere!"
—an Oklahoma City paraprofessional

"We have few common areas due to the overcrowding. We use the conference room as a classroom and double teachers and classrooms together."
—an office specialist at an alternative high school in Volusia County, Fla.

"I believe learning is affected when it rains in the room."
—a Guam teacher

"[We have] leaks and even the occasional icicle from my computer lab ceiling, asbestos coming up off the floor, the exterior walls are crumbling. We feel forgotten by our community and state and federal funding."
—a Minnesota technology coordinator

Damaged ceiling tiles were removed in this California classroom, exposing students to electrical wiring and insulation fibers.

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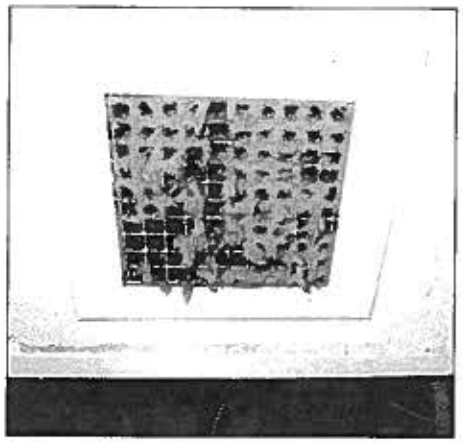
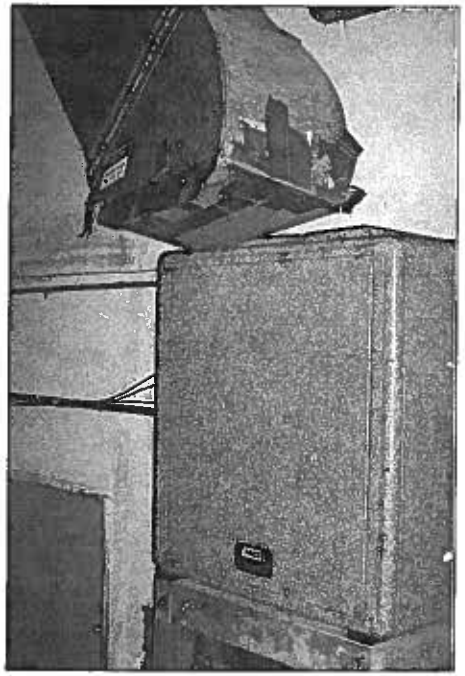


Many problems are maintenance issues, such as this long-neglected air vent.



HVAC systems in many schools are in a bad state of disrepair.

The Consequences

The effects of poor conditions on learning, health and staff retention

SOME SUPPORTERS OF INCREASED accountability in our schools change the subject when the discussion turns to the condition of the buildings where our children learn. Their lack of attention to the inadequate, unhealthy state of tens of thousands of our schools calls into question our commitment as a nation to raising academic achievement and helping every child reach his or her potential.

Unhealthy and unsafe school conditions make it difficult for students to concentrate, for teachers to teach, and for staff to do their jobs. Such conditions also lead to lower student attendance and reduced teacher and staff retention, at a time when testing requirements make attendance more important than ever and retaining good teachers is seen as a key ingredient in raising student achievement.

Poor school building conditions leave in place a terrible pattern of inequity—a facilities gap— in which low-income and minority children are disproportionately affected by often appalling physical conditions. The 21st Century School Fund, announcing its new report, states that "minority children from low-income communities, particularly in central cities, had less than half the school building investment of children from the most affluent communities."

The failure to invest in school buildings sends a cynical message of indifference to students, rather than showing them that we value their education.

Effect on Learning

As a Peoria, Ill., accounting clerk said, "Nowhere can you spend six to eight hours a day with unhealthy conditions and NOT have it impact learning or the health of students or staff."

Making schools conducive to learning means providing a healthy environment. Schools, students and teachers are being held accountable for improved academic performance, but the task is extremely difficult in subpar buildings.

Air quality: Poor air quality in schools contributes to students' asthma, absences due to illness, difficulty concentrating and lower achievement.

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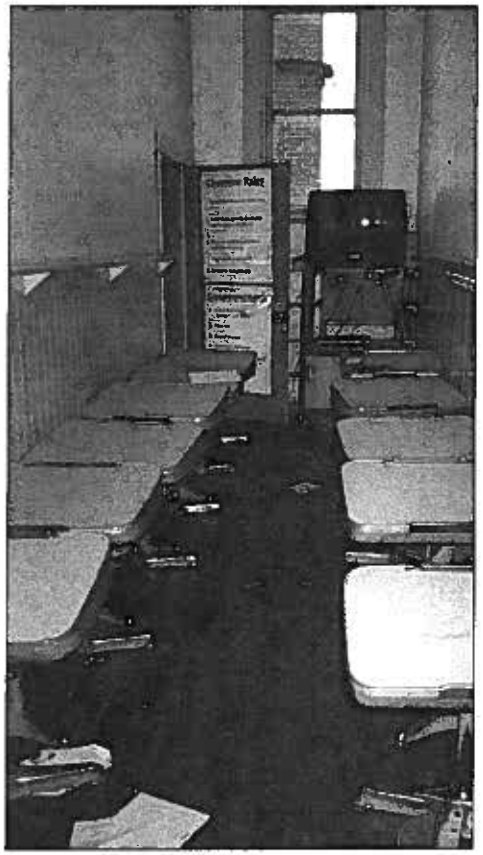
■ The American Lung Association found that American children missed more than 12 million school days in 2000 because of asthma exacerbated by poor indoor air quality.[7]

■ Air quality also affects students' ability to concentrate.[8]

■ A 2002 study noted that, "Researchers have repeatedly found a difference of between 5 and 17 percentile points in the achievement of students in poor buildings and those students in standard buildings, when the socioeconomic status of students is controlled."[9]

Noise: Poor acoustics is linked to classroom distraction. Background noise from obsolete and poorly maintained lighting, heating or cooling systems can cause errors on complex tasks and increase the likelihood that students will give up.[10] The ambient noise present in classrooms as a result of lighting, heating and electrical systems and outside sounds is often too loud for students to be able to listen effectively. Adding even well-behaved students makes the noise level even higher. Speech recognition by regular education students under noisy conditions can drop from an average of 95 percent to as low as 30 percent. The effects on speech recognition are particularly harmful for younger students and students with special needs.[11]

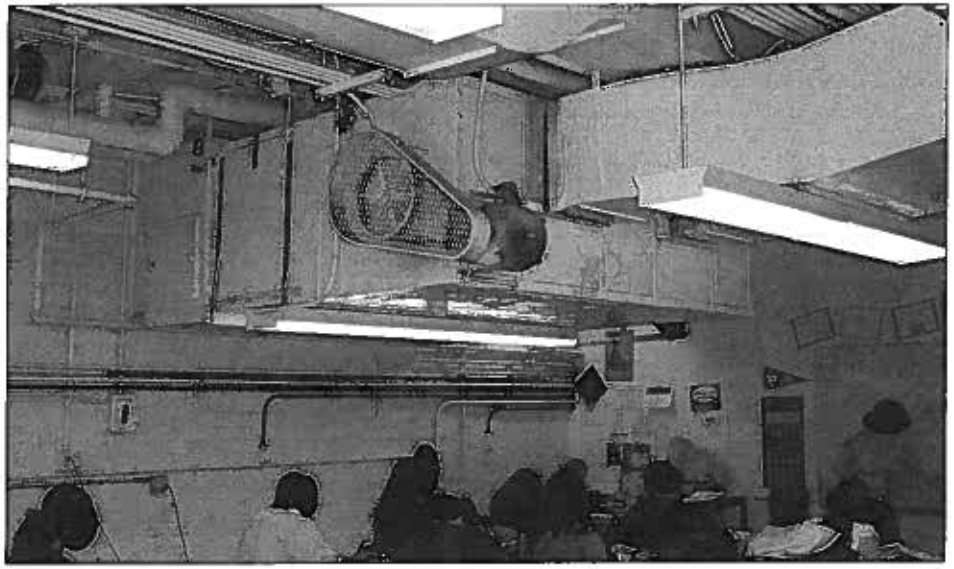


Overcrowding: In addition to noise, overcrowded classrooms result in increased disciplinary problems, less individualized attention and unacceptable distractions. A well-regarded Tennessee study that followed the academic progress of students placed in smaller classes concluded that reduced class size improves achievement levels.

It is a myth that overcrowded conditions exist mostly in urban areas. Many AFT members in suburban and rural schools are concerned about overcrowding. A Billings, Mont., teacher observed that her building was designed for 1,600 students but currently has more than 2,200. A Lewistown, Mont., teacher reported that "Neither students nor teachers can walk through the aisles of the classroom. There are too many people in the room." An Anchorage, Alaska, paraprofessional noted, "Children are rushed through lunch—some eat almost right after breakfast in order to fit them all in."

Special needs students have particular difficulty with overcrowded schools. An elementary teacher in Cortland, N.Y.,

Overcrowding has forced many schools to put classrooms in improper locations, such as in janitors' closets (left) or in basement spaces (below) where students attend class while seated under active ventilation systems.



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explained, "Students with disabilities are affected the most. Having had a student with autism, and many with ADHD, I have found it very difficult to find a quiet area for them to work. It is a DAILY concern as I teach, and it makes learning difficult, at best, for some."

Effect on Health

Most students and school employees spend at least six hours a day, five days a week, in school. That's a significant portion of their life to be in a sick building.

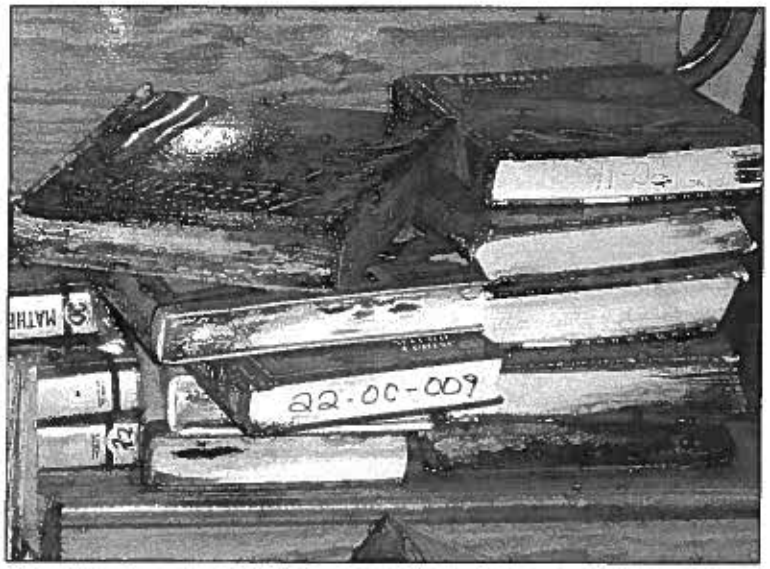
A Pennsylvania teacher reported, "Health problems include fatigue, nausea, headache, vomiting." Another member in Brazosport, Texas, said, "We have had many health issues with the mold. A teacher was not even allowed by a doctor to return to work in a portable building because of mold."

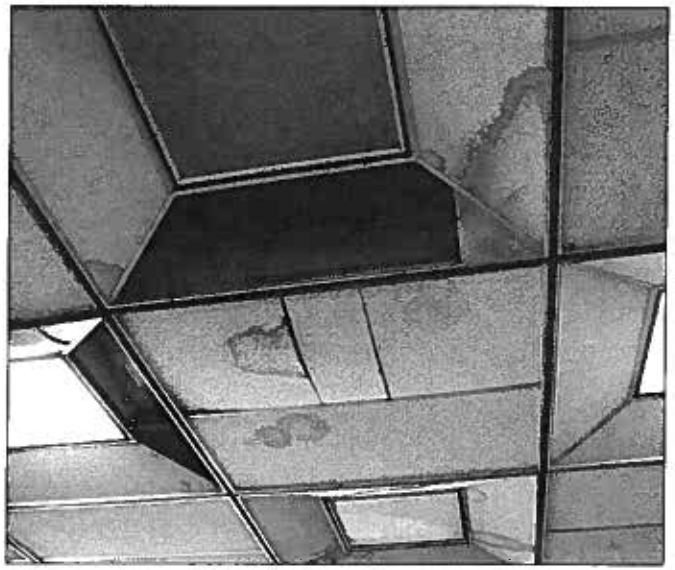
Asthma and other respiratory ailments have become an increasing concern, especially for minority populations, according to the National Institutes for Allergy and Infectious Diseases. Asthma can be attributed to persistent exposure to air pollution and poor ventilation, which appear to be prevalent in school buildings.

- In a 1999 report on the condition of public school facilities, 26 percent of schools reported their ventilation as unsatisfactory and 18 percent reported unsatisfactory indoor air quality.[12]
- Nearly one in 13 school-age children have asthma, and the percentage of children with asthma is rising more rapidly in preschool children than in any other age group, according to the U.S. Environmental Protection Agency.[13]
- Among children ages 5-17, asthma is the leading cause of school absence due to a chronic illness. This translated to an annual loss of more than 14 million school days per year, or approximately eight days for each student with asthma.[14]
- The death rate from asthma for children ages 5-14 doubled from 1980 to 1998,[15] with African Americans four to six times more likely to die from asthma problems.[16]
- In a 2002 national survey of urban school teachers, 26 percent of Chicago teachers and more than 30 percent of Washington, D.C., teachers reported health-related problems caused by their school facility. Most of these problems were related to poor indoor air quality, with teachers reporting that asthma and other respiratory problems were the main adverse health effect.[17]

An elementary media specialist in Lake County, Fla., put it very well when she said, "Think of how much learning could take place if heads were clear, noses were not running, and coughing was not a constant distraction."

Water damage at schools can lead to excessive mold growth (left) or damaged ceiling tiles (right).





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Effect on Staff Retention

Poor school building conditions have a serious impact on the work environment and effectiveness of school staff. A Dade County, Fla., teacher said, "We are sick all of the time. There are people quitting by the day or leaving the profession because of these factors."

- A 2004 study concluded that "Facility quality is an important predictor of the decision of teachers to leave their current position."[18] This is significant because a key factor in raising student achievement is the recruitment and retention of good teachers.
- Among Washington, D.C., and Chicago teachers who graded their facilities with a C or below, more than 40 percent said that poor conditions have led them to consider changing schools and 30 percent are thinking about leaving teaching. The numbers are even higher for teachers who have experienced health effects related to poor facilities: About 50 percent of Chicago teachers and 65 percent of Washington, D.C., teachers are considering changing schools; and about 40 percent of Chicago and Washington, D.C., teachers are thinking about leaving the profession entirely.[19]

"Learning has been affected. Some teachers have asked to be reassigned and other staff have gone out on leave," said a teaching assistant in Middletown, N.Y.

Our understanding of the destructive effects of poor school facilities is experiential and research-based. The graphic depictions here of unhealthy school buildings must be seen in the context of research showing a connection between school facilities and student achievement.

The AFT does not consider these deplorable conditions as an excuse for schools to escape accountability. But we will not shirk our responsibility to advocate for our members and their students by ignoring the situation.

A trash can and a glass jar are used to catch water from multiple leaks in this school's basement.

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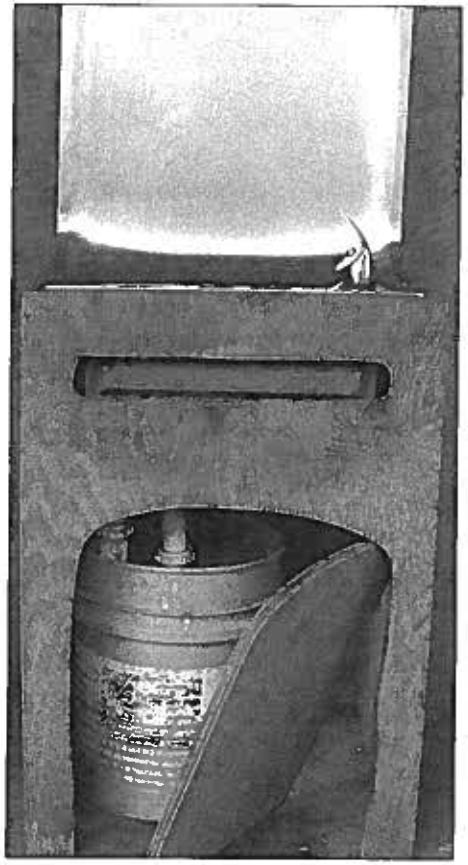

Water efficiency is a key element of sustainable design, sorely lacking in this Virgin Islands school.

The Elements

What makes a well-designed, well-built, well-maintained school?

WITH THE CONSEQUENCES OF CRUMBLING schools in mind, it is important to recognize that schools can be planned, designed, built, renovated and maintained with a commitment to high standards.

There are a few key elements to look for:

- Proper siting, taking into account the environmental impact;
- Building and classroom sizes that are conducive to learning;
- Design appropriate to climate and region;
- Adequate ventilation, heating and air conditioning systems;
- Extensive use of natural daylight;
- Acoustic materials that reduce noise levels that interfere with learning;
- Safety and security concerns effectively addressed;
- Technology that is integrated into academic and building design;
- An infrastructure that supports special needs students and adults; and
- Adequate staffing to keep schools clean and well-maintained.

These conditions can be achieved in old and new buildings alike. Many schools have used the Environmental Protection Agency's Tools for Schools program, which helps to improve indoor air quality and reduce the risk of student and staff exposure to asthma triggers. At the Energy Department, the EnergySmart Schools program provides helpful information on energy efficient solutions.

Another important initiative is the growing movement for sustainable buildings. According to the Sustainable Buildings Industry Council, sustainable buildings are those that are "healthy and productive for students and staff because the environment is comfortable, occupants can easily see and hear in their surroundings, there is abundant natural daylight, and the indoor air quality is excellent." These facilities are cost-effective to operate and maintain because they take into account the trade-offs between long-term savings and short-term costs.

These types of school facilities are found across the country—and they have a powerful effect on teachers, staff and students.

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At the J.J. Pickle Elementary School in Austin, Texas, solar lighting, direct and indirect light fixtures, and dimming features reduced cooling loads and peak energy demand by 40 percent and cut total energy costs by 25 percent.

The Maywood Academy in Los Angeles saw a 30 percent improvement in its energy performance by better use of daylight and dimming systems, ventilation, doors and windows with HVAC interconnects, and reusing reclaimed water to irrigate the landscaping.

"Our school is brand new and state of the art. It has almost everything you could ever want and it makes me very sad to think back on the school that I left in this same county. Money needs to be spent to bring ALL schools up to this level."

—Martin County, Fla.

"The facilities in which I work have all been renovated in the last five years. They are attractive, comfortable temperature-wise, and lighting is excellent. The noise level is from students who are learning. But space is already beginning to be tight."

—Garland, Texas

WHAT ARE THE ELEMENTS OF SUSTAINABLE DESIGN?

■ In its *Guide for Educational Facility Planning*, the Council of Educational Facility Planners International, identifies these key elements of sustainable design:

Acoustic comfort, including limiting sound reverberations inside the classroom; reducing noise from HVAC systems; and isolating music rooms, gyms and other noisy activities from study areas.

Daylighting—bringing natural light into the school building through windows, skylights and roof monitors—can mean higher student performance and lower energy costs.

Energy-efficient building shell

Environmentally preferable materials and products

Environmentally responsible site planning

High-performance electric lighting

High-performance heating, ventilating and air conditioning (HVAC)

Life-cycle cost analysis, which "not only includes initial costs for design and construction, but also takes into account operating costs, such as utilities and personnel as well as maintenance and replacement costs."

Superior indoor air quality, which is achieved by "controlling contamination, providing adequate fresh air in the building, preventing moisture accumulation, and implementing an appropriate maintenance program."

Water efficiency

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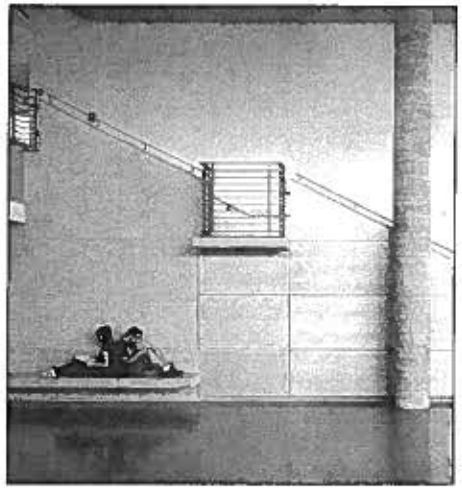
Recommendations

Actions at all levels that can improve school buildings



PHOTOS BY MICHAEL MATHERS FOR BOORA ARCHITECTS

With thoughtful designs and strong maintenance standards, school buildings can be places that students look forward to spending time in every day.

NATIONAL LEADERSHIP, WHICH CAN DRIVE local action, should make the case for high-performance school facilities by highlighting best practices, and exposing and seeking to change unhealthy conditions. It should promote sustainable schools by encouraging school districts to adopt the concepts of high-performance and sustainable design. But national leadership must go a step further to make sure that school districts have the resources they need to renovate and build schools.

The confluence of rising enrollments, aging school facilities and the need to modernize schools to meet 21st century educational challenges requires a partnership at the federal, state and local levels. Solutions involve not only securing funding, but creating the best possible environment for students and school employees.

Recommendations for action at the federal level:

The need for additional federal support for state and local efforts to build repair and modernize schools is tremendous. An appropriate level of federal assistance to help local communities build and modernize their schools will improve opportunities for more children to receive a high-quality educational experience.

1. Pass funding legislation.

The AFT is calling for passage of three bills that would provide funding to modernize and build new schools.

■ **America's Better Classrooms (ABC) Act.** This legislation would make $24.8 billion in school modernization bonds available for construction of new schools, and renovation and modernization of existing schools. Under this bill, spearheaded by Rep. Charles Rangel and Sen. Jay Rockefeller, the federal government would provide tax credits to bond holders in lieu of interest payments on school modernization bonds, and the state or school district would be responsible only for repaying the principal. All decisions regarding what schools to build or repair would be left to states and local school districts. The federal role would be limited to making an initial allocation

of the bonds and to providing a tax credit instead of interest to bond purchasers. This proposal would save millions of dollars in interest payments for states and districts, and would help communities stretch their limited resources to pay for additional school construction.

■ **Qualified Zone Academy Bonds (QZABs).** Renewal of this legislation would provide $400 million a year to renovate and repair schools, expand technology and support innovative education programs.

■ **21st Century High-Performing Public School Facilities Act of 2006.** This bill, introduced by Reps. George Miller, Lynn Woolsey and Ben Chandler, would authorize grants and loans to school districts for modernization and construction. Priority would be given to those districts that have a greater number or percentage of low-income children and that show a need to modernize schools or build new ones.

We believe that the federal government should go one step further. Any time federal dollars are committed to a project, the local school districts should have access to specific information that illustrates how new schools can be built in accordance with current best practices, including third party commissioning before the doors are opened to ensure that everything works.

2. Require a "learning environment index" be used under NCLB.

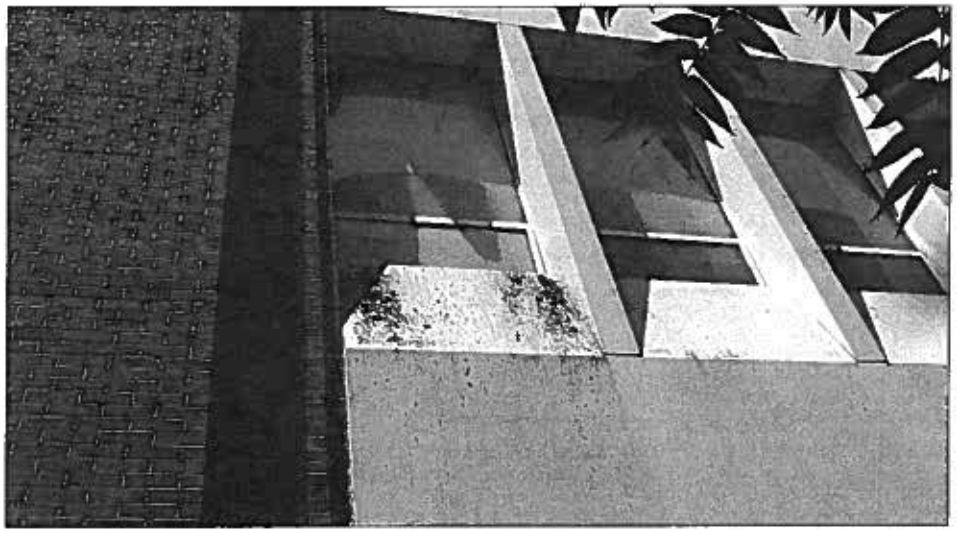
The AFT is calling for a new "learning environment index" requirement under the No Child Left Behind Act to improve environmental conditions to raise student performance. Although NCLB establishes high-stakes consequences for staff and students, many of the schools not making adequate yearly progress (AYP) do not have adequate facilities, safe conditions, teacher retention incentives, and the financial and professional supports necessary to succeed. A learning environment index would identify and measure teaching and learning conditions that are known to contribute to increased student achievement. Schools that fail to make AYP would be required to show improvement on their learning environment index, and states and districts would be required to provide the resources to ensure that schools address the teaching and learning conditions identified for improvement. This would be the first step to shared responsibility for student learning.

3. Conduct more research.

The AFT is calling for research on student health and sound building science.

■ The federal government should fund multiagency research on the structural

Mold *outside* classroom windows is evidence of more serious problems inside the building.



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and environmental approaches that best suit a school building, including integrating ever-changing technology into routine building maintenance.

■ The National Institute for Occupational Safety and Health (NIOSH) should be given the power to examine hazardous exposures of children. Currently NIOSH is permitted to investigate hazards in the workplace for adults, but not children.

Recommendations for action at the state level:

States and local governments have the dual challenge of regulating the indoor environments of existing buildings and providing guidance and assistance to school districts when new schools are built.

1. Provide resources for state agencies.

States should provide resources to state public health, environmental and education departments to develop extensive guidance on operation and maintenance of existing schools, and best practices for renovation and maintenance, and to create a complaint and investigation process. These agencies could also offer training, technical assistance and consultation to schools (California, Minnesota and Washington have produced documents for this purpose).

2. Establish and enforce state requirements.

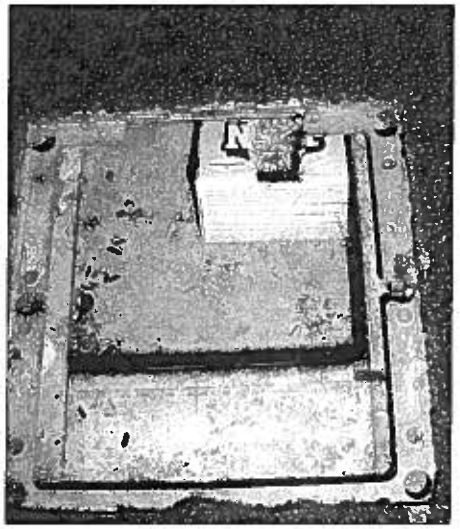
States should have requirements—with strict enforcement practices—for:

■ Annual or routine inspection, with written reports, of buildings and building systems for environmental and safety hazards.

■ Written operations and maintenance plans for every school, available on request to staff, parents, students and other community members.

■ School district policies on renovation when school is in session, with notification requirements for staff and parents and effective measures for protecting building occupants from construction hazards.

■ Integrated pest management programs with notification procedures.



At the state level, there must be stronger standards for inspections of buildings, utility systems and pest management programs so schools don't have to rely on rat poison, shown here in an accessible floor outlet, to control rodents.

RECENT STATE ACTION

California has taken the lead in researching many aspects of indoor air quality, such as the problems found in portable classrooms. California also requires heating, ventilation and air conditioning systems to be inspected annually and inspection records to be made available. This standard can help to ensure that schools are well-maintained. In addition, California sanitation codes require that water leaks and other sources of water intrusion be controlled.

Connecticut requires school boards to adopt and implement an indoor air quality (IAQ) program that provides for ongoing maintenance and facility reviews. Schools must be inspected every five years and the boards must report conditions annually to the commissioner of education.

In **Maine**, the Occupational Safety Rules and Regulations Board works with the Bureau of Public Improvements to evaluate the indoor air quality and ventilation of public schools and to propose more stringent air quality standards. Maine's commissioner of public education is required to inspect a school to test the air quality when it is requested by 50 percent of the school's parents or 20 percent of the voters in the school district.

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■ Mold assessment and remediation practices.
■ Complaint and investigation procedures for staff and parents.
■ School dismissal when temperature and humidity levels exceed the standards set by the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE).

3. Enact regulations or legislation.

States should pursue policies, through regulation or legislation, that:

■ **Adopt the "school as center of community" concept,** involving all stakeholders in the design of new buildings and preserving structurally sound schools that have historic and community value.
■ **Require environmental site assessment,** so that schools are not built on inappropriate sites such as wetlands or former industrial sites that have not been remediated.
■ **Ensure training and education** for all school staff on the operations and maintenance of healthy and high-performing schools.
■ **Establish a recertification process** (by USGB or another certifying agency) to guarantee that schools are operating efficiently and the environmental quality of the school is sound.
■ **Guarantee portable or modular units meet minimum standards** of environmental quality, acoustics and energy efficiency.

Recommendations for action at the community level:

Involvement by teachers, support staff, parents and other members of the community is vital to address unhealthy conditions and to insure that new construction and modernization projects are planned, designed, implemented and maintained in a manner that produces conditions conducive for teaching and learning.

The BEST Collaborative, in its report *Recommended Policies for Public School Facilities,*[20] points out that, "Broad community involvement in school facility planning means an open, regular, public process, which can help identify educational and community need and create solutions for school building and other neighborhood and community problems. It also can increase long-term community support for schools, which yields benefits for the community and for students."

The report notes, "Very often most decisions in the school facility planning and design process are considered the domain of school administrators, professional planners, architects and engineers, with local school constituents and com-

Conditions like those found in these Chicago classrooms will persist if states and districts do not intervene.

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munity involvement included at the end of the process."[21]

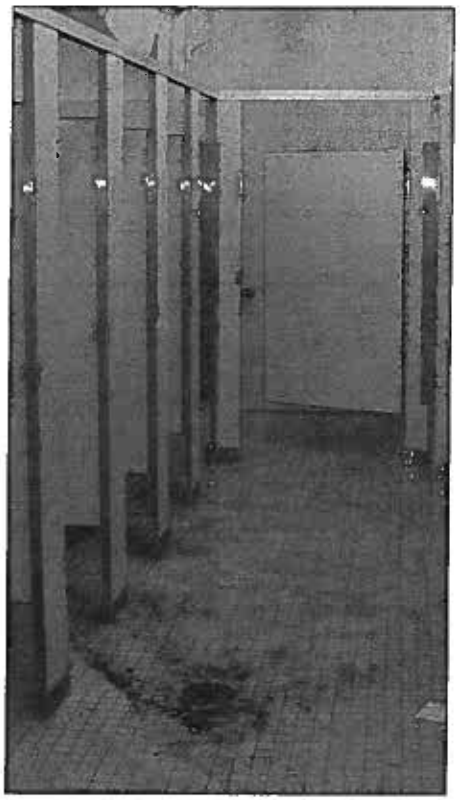
The AFT is working to ensure a much more inclusive process, one in which our members and other stakeholders can bring to bear vital perspective and expertise, and a passionate concern that schools are built, renovated and maintained to high standards. For example:

■ **In Newark, N.Y.**, the AFT local union played an active role when the district undertook a $50 million building project in 2000. Union members sat on districtwide planning committees. Union leadership followed the process closely as construction proceeded, particularly when classes were conducted during construction. The union requested copies of air quality reports as they were issued; accompanied building and fire inspectors on their tours after construction was completed and before certificates of occupancy were issued; and made sure "things were in order" before certificates cleared.

The union was vigilant about ventilation systems for science labs and technology rooms, where it continually monitored gas jets, chemical showers, chemical storage closets with locks, and other safety issues. Once construction was completed, the union continued monitoring and reporting problems to district administrators, such as leaky roofs, incomplete classroom finishing work, malfunctioning parking lot lights, heating and air ventilation problems, and improperly mounted equipment (e.g., projection screens and televisions) that could fall. The district's director of facilities believes "that the input of staff is critical. The issues and concerns the union brought forward were helpful to the long-term goals of this project."

■ In **Chicago, Ill.**, the AFT local union regularly monitors the condition of schools with a three-step process. First, members are encouraged to report problems to the building-level Professional Problems Committee, which makes sure the principal follows up with a work order for necessary repairs. Second, if repairs aren't made, the union then directly contacts Chicago Public Schools officials. Finally, if the problem is not fixed, a complaint is filed with the Illinois Department of Labor, which will visit the site and issue citations, if necessary. Examples of recent problems reported include large amounts of dust in a building from external sandblasting, ceiling tiles falling on the heads of students and staff, and dangerously loose floor tiles. The union newspaper regularly highlights unsafe building conditions as well as the union's actions to protect students and staff.

With union and community input, dangerous conditions inside and outside the school can be fixed.



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■ Renovation while school is in session was a serious problem for **New York City** staff and students. There were numerous health complaints associated with dust and other byproducts of construction. Noise from construction, which interfered with teaching, also was a frequent issue.

The United Federation of Teachers was instrumental in changing the policy of the district on renovation. The UFT developed and negotiated a unique protocol with the New York City school board that required the contractor to isolate the school community from exposure to the construction's hazards and noise.

This union initiative led to the board altering its renovation practices; as much as possible, it now schedules renovation in the summer or during periods when students and staff are not in school. When renovation during school can't be avoided, the protocol is followed.

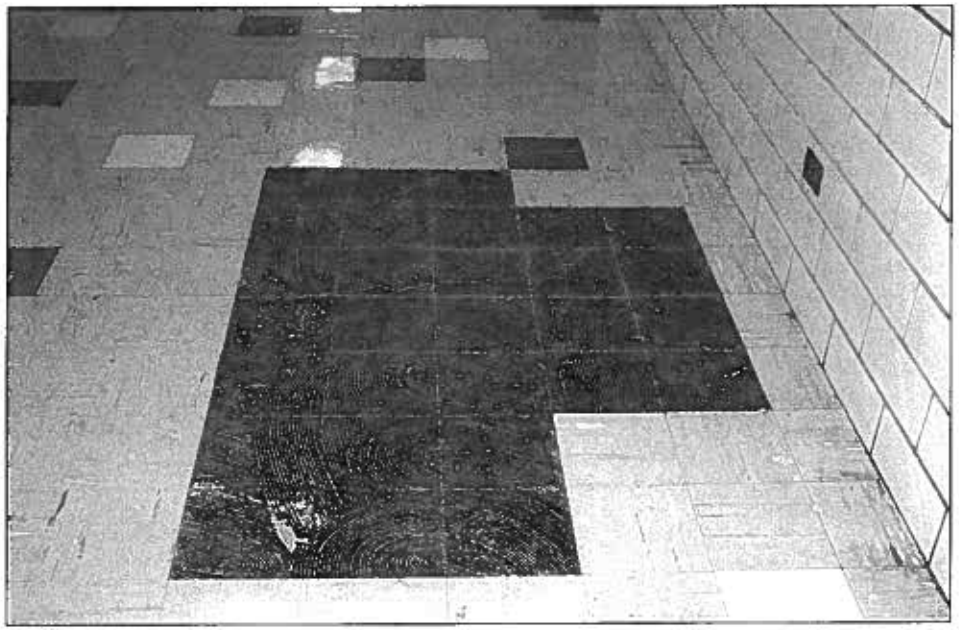
■ In **Berkeley, Calif.**, the union contract includes a section on safety and establishes a joint labor/management committee to discuss facilities issues and personal safety issues. The Berkeley AFT local has also been very active on IAQ issues. As a result, the district is addressing problems created by a subterranean moisture problem in a room with a 20-year history of making teachers ill.

■ Under the umbrella of the AFT's Tools for Schools grant from EPA, the United Teachers of New Orleans launched a project with the New Orleans Public Schools in four pilot schools on August 16, 2005. The goal was to improve air quality by reducing the exposure of students and staff to mold and other indoor contaminants; and educate parents, staff and students on the health & safety impacts of poor air quality. The project got off the ground very quickly with one school completing checklists and assessments by August 22 and the other three targeted for completion by September 13. Mother nature and the failed levee system brought those plans to a grinding halt.

Today in **New Orleans, La.**, over 50 schools stand empty. Staff and students in the 56 functioning schools face a myriad of problems similar to those in other systems—rodents, mold, poor air quality. A decentralized administration has made follow-up difficult. The union is making efforts now to meet with community leaders and parents to bring these problems to the attention of state and local elected officials.

■ In **Baldwin, N. Y.**, AFT members participate in the district's very active health and safety committee. The committee formulated an IAQ document that is used as a standard in other districts. Air quality issues are investigated within 24 hours of a complaint being filed. When an addition was built to Baldwin's middle school,

More funding for school maintenance would go a long way to ensuring that minor repairs—like replacement of flooring—occur in a timely manner.



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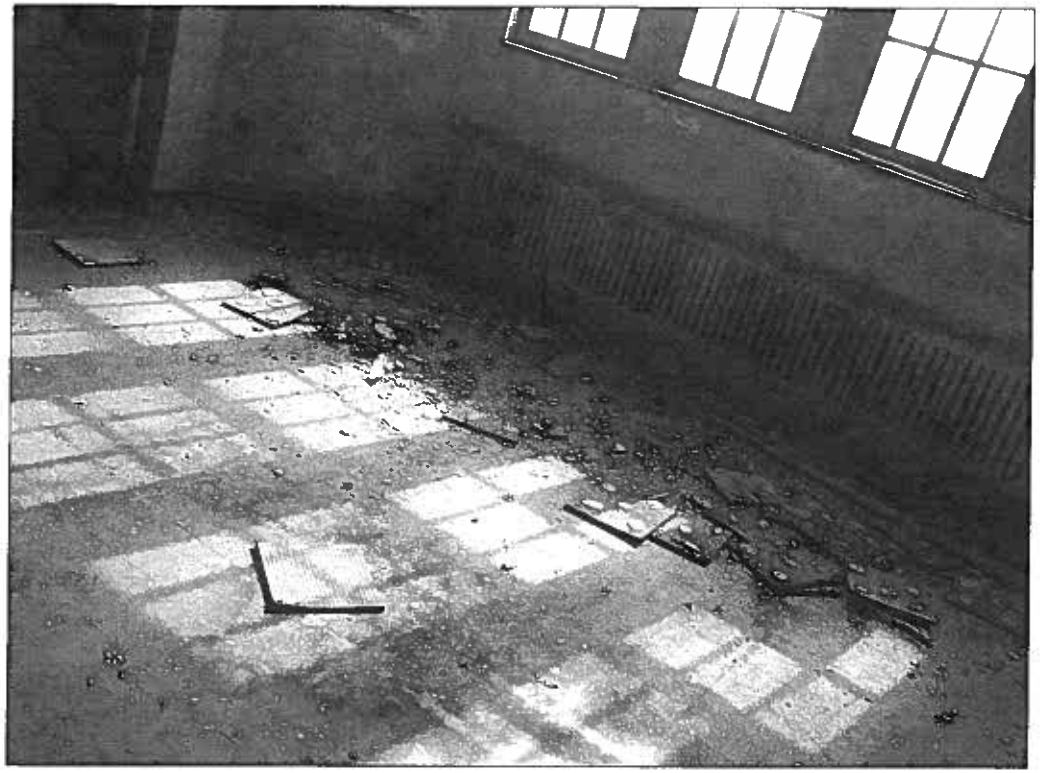
all members of the committee were furnished with hardhats and invited on walk-throughs during the construction.

■ In **Lincoln, R.I.**, the AFT local president was on the selection committees for both the architect and the general contractor/construction company for several building renovations and for the construction of a new middle school. She was able to communicate directly with both committees about any area of concern to members.

AFT members bring to the school facilities process a vital institutional memory, a deep understanding of how the school building can help or hinder the learning process, and an abiding concern for the well-being of students and colleagues.

We believe our members should get involved at the very beginning of the process, when funding is sought for school modernization or new construction, and stay involved to make sure projects are well-planned and money is well-spent. We need to insist—and monitor—that adequate resources are devoted to maintenance and operation.

Greater emphasis must be placed on creating and enforcing guidelines for material storage.



Where possible, we can modernize and reclaim once grand school buildings with historic and community value like this structure in New York.

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Extreme Classroom Makeover

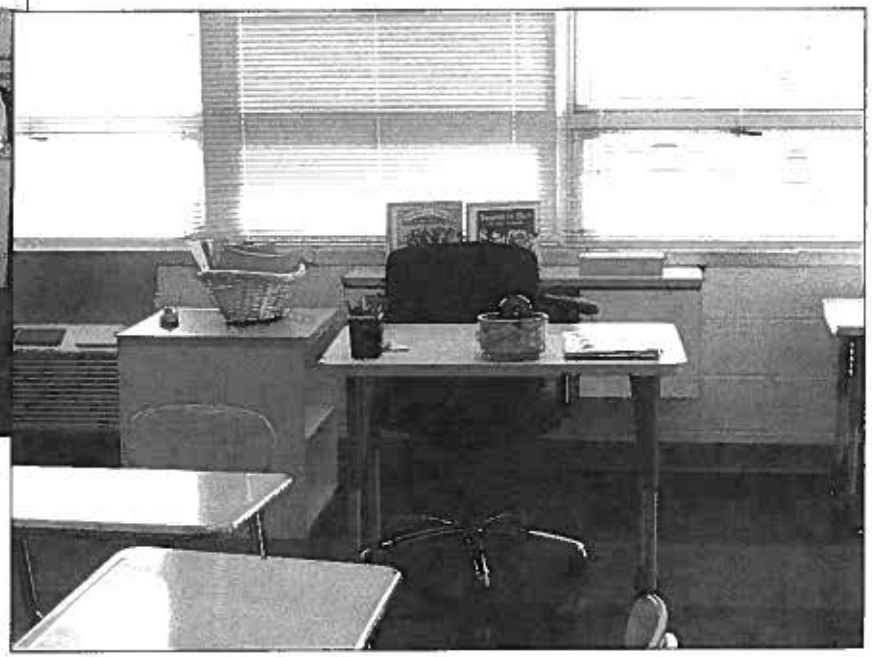
Chalkville Elementary School,
Jefferson County, Ala.

IN JEFFERSON COUNTY, ALA., THE UNION LAUNCHED AN "extreme makeover" project in which teachers submit applications for a makeover of their classroom. Community groups, labor unions and local businesses donated funds, supplies and labor to the project.

Recognizing that schools can't be effectively or efficiently renovated one classroom at a time, the Jefferson County AFT continues working with the school district's indoor air quality committee to adopt best practices for school district maintenance and training for school staff.

The union is also working to pursue state legislation on high-performing schools in collaboration with the AFL-CIO, the Alabama School Boards Association and Alabama Power.

Before: Poor design and lack of storage space creates a cluttered environment that distracts students and teachers.



After: A redesigned space that is much cleaner, more spacious and better organized.

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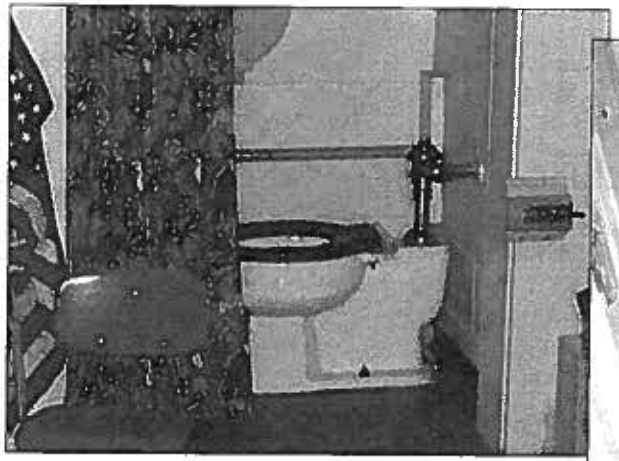

Before: Only a thin curtain separated this bathroom from the classroom.

After: An almost-renovated bathroom will be much more sanitary and easy to maintain.

A construction team member (above) working hard to provide school children with improved space (right).

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Conclusion

The critical element

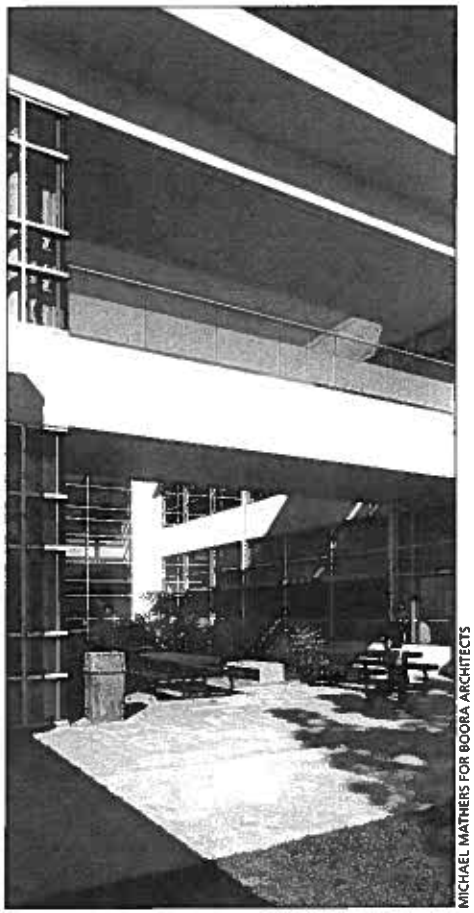
"My building is only 6 years old and it is gorgeous. It feels happy there. It is bright and colorful. We have capabilities for state-of-the-art technology, and we use it in class! Our temperature is great because the AC actually works in this building, and the light is good. It feels safe, quiet and a positive learning environment all around. My school is a fabulous place to be!!!"

—Houston, Texas

THE URGENT CONVERSATION ABOUT EDUcational improvement in our country is usually missing one critical element—the physical condition of many of our schools. That omission is unfair to students and the staff who work with them, and inhibits the advances in achievement we need to build a more equitable society and a stronger economy.

High-performing schools—healthy and sustainable; designed, built and maintained to spark learning and generate pride—cannot be reserved for select communities. They must be part of the academic agenda for every American student.

If this nation is committed to high academic standards, we must stop ignoring the impact that the physical environment plays in students' health and learning. And to allow school staff to perform at their best, we must expect that school buildings meet the highest standards of facility excellence.



MICHAEL MATHERS FOR BOORA ARCHITECTS

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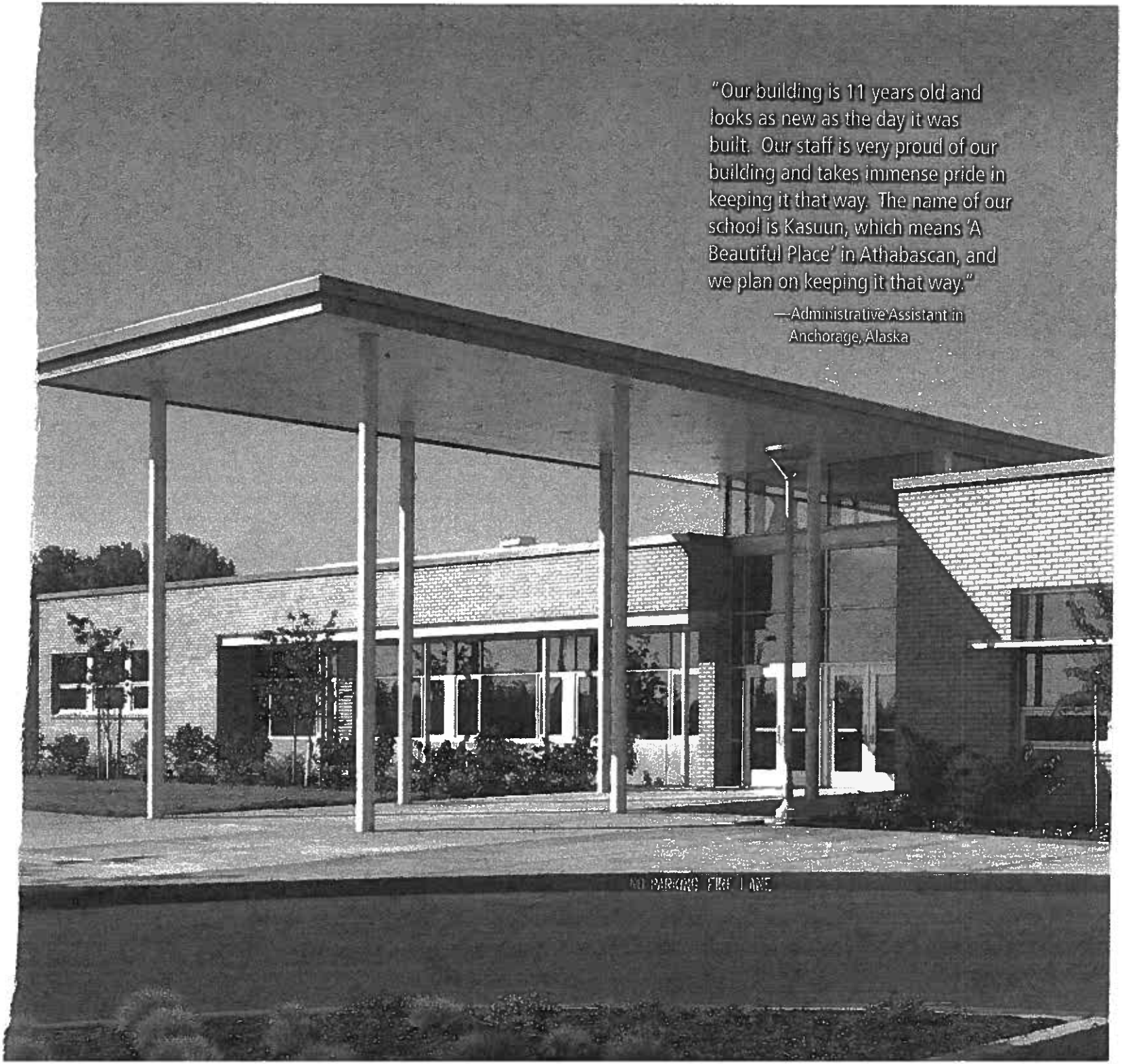

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"The school atmosphere has had a positive effect on both student and staff. The feeling of the space and the natural light is very refreshing. I recently visited my former school, which was built 20 years ago, and I was shocked at how dark, dingy and cramped it was."

—Texas music teacher

A Union of Professionals

American Federation of Teachers, AFL-CIO
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