

American School & University®

SHAPING FACILITIES AND BUSINESS DECISIONS

May/June 2023
asumag.com | schooldesigns.com

ALSO INSIDE:

**Legionella
mitigation**
20

Limiting mold
22

fstop123 / iStock / Getty Images Plus

COME BACK

With the threat of Covid-19 subsided, schools and universities are hoping for student enrollment to bounce back.

16



**Architectural
Portfolio**

ENTER TODAY!

Visit [SchoolDesigns.com](https://www.SchoolDesigns.com)

FACILITIES
ARE SPOTLESS



EXPECT
PROFITS
TO SOAR

rethink
WHAT CLEAN MEANS
RETHINKCLEAN.ORG

Cleanliness has gone from plus-up to must-have. Boosting your cleaning standards will help to boost your bottom line.

ISSA
Advancing Clean.
Driving Innovation.



CENTURION[®]



Superior Reliability & Advanced Technology

◆ Compact, 1600-2000 MBH water heater

- Up to 65% less footprint vs. the competition

◆ Advanced Edge[®] Controller with O₂ Trim technology

- Self-adjusts and maintains optimal air-fuel ratios for peak efficiency, low emissions and maximum reliability

◆ Durable, corrosion-resistant AquaPLEX[®] duplex stainless steel

- Fire tube heat exchanger backed by a 15-year warranty



(817) 335-9531 | pvi.com/centurion

CONTENTS

VOLUME 95 • ISSUE 6 • MAY/JUNE 2023



COVER STORY

16 **COME BACK**

With the threat of Covid-19 subsided, schools and universities are hoping for student enrollment to bounce back.

FEATURES

20 **Raising the Grade in Health**

Legionella mitigation options for educational facilities.

22 **Breaking the Mold**

Best practices to limit mold exposure and loss in education institutions.

DEPARTMENTS

10 **Inside**

HVAC

12 **Construction Zone**

Event/auditorium facilities

28 **Knowledge Center**

Carpeting/flooring

34 **Profiles**

People, Places and Goings-on

VIEWPOINTS

25 **Facility Planning**

Sometimes You Just Need to "Get on with It!"

26 **Green Cleaning**

Authentic green products from "bad" companies

ALSO IN EVERY ISSUE ...

6 EDITOR'S FOCUS

8 ON THE WEB

30 PRODUCT SOLUTIONS

32 MARKET PLACE

33 AD INDEX

American School & University (USPS Permit 023-180, ISSN 0003-0945 print, ISSN 2161-7791 online) is published 7x a year (Jan/Feb, Mar/Apr, May/Jun, July, August, Sep/Oct, Nov/Dec) by Endeavor Business Media, LLC, 1233 Janesville Ave., Fort Atkinson, WI 53538. Periodical postage paid at Fort Atkinson, WI, and additional mailing offices. POSTMASTER: Send address changes to American School & University, PO Box 3257, Northbrook, IL 60065-3257. SUBSCRIPTIONS: Publisher reserves the right to reject non-qualified subscriptions. Subscription prices: U.S. (\$ 123.75); Canada/Mexico (\$ 98.75); All other countries (\$ 123.75). All subscriptions are payable in U.S. funds. Send subscription inquiries to American School & University, PO Box 3257, Northbrook, IL 60065-3257. Customer service can be reached toll-free at 877-382-9187 or at americanschool@omeda.com for magazine subscription assistance or questions.

Printed in the USA. Copyright 2023 Endeavor Business Media, LLC. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopies, recordings, or any information storage or retrieval system without permission from the publisher. Endeavor Business Media, LLC does not assume and hereby disclaims any liability to any person or company for any loss or damage caused by errors or omissions in the material herein, regardless of whether such errors result from negligence, accident, or any other cause whatsoever. The views and opinions in the articles herein are not to be taken as official expressions of the publishers, unless so stated. The publishers do not warrant either expressly or by implication, the factual accuracy of the articles herein, nor do they so warrant any views or opinions by the authors of said articles.

KÄRCHER

UNLEASH THE POWER OF CORDLESS VACUUMING

With the **Sensor Bp** vacuum from Kärcher, you can experience the freedom and flexibility of cordless vacuuming. With 60 minutes of battery runtime you can clean when and where you need to. Learn more about this and other professional cleaning solutions at [Karcher.com/us](https://www.karcher.com/us)



**COMING
SOON**



Riding out the shortage

By Mike Kennedy

One of the school experiences I missed out on was riding a big yellow bus. My grade school was within walking distance, a block away, so no vehicles were involved.

My high school did not offer bus service, so I rode the subway back and forth for four years.

It was only after I began writing about schools that I became aware that my experience was an outlier—more than 26 million students ride a bus to and from school each day, according to the National Association for Pupil Transportation (NAPT).

But that number may be shrinking if schools continue to have trouble finding qualified drivers to cover all their routes. The driver shortage has been a problem in some areas for years, but has grown worse since the Covid-19 pandemic. When students weren't coming to school, there was no need for buses, so many drivers were laid off.

Now that in-person instruction is back and classrooms are full, many of those drivers have not returned. Maybe they found better paying jobs, or ones that don't require them to split shifts between early morning and late afternoons.

Without enough drivers, student learning may suffer. Fewer drivers mean longer wait times at a stop and students end up getting to school late and missing classes.

At least a couple of districts in the Kansas City area (where I am) have decided they will no longer offer paid school bus service to middle and high school students who live closer than 2.5 miles to school. Why? They can't find enough drivers. Cutting the paid routes will give the districts a better chance to have drivers for the transportation that state law requires—students who live farther than 2.5 miles from school.

More money may be the answer for school systems that can afford it. In Pinellas County, Fla., the district tried to entice prospective drivers with a \$1,000 hiring, but it did not solve the problem. So in May, the board approved pay raises of 10% to 20% for school bus drivers. The starting pay for the district's bus drivers is increasing from \$16.25 an hour to \$19.79 an hour.

But the sad reality is that unless districts get more funding, they won't be able to pay drivers and other employees the wages they deserve. ■

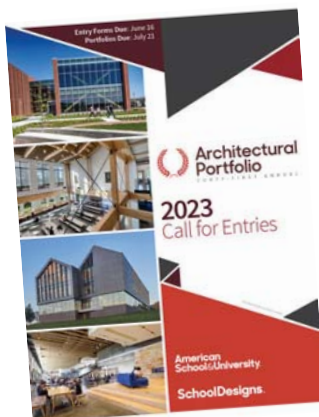
Senior Editor Mike Kennedy has written for AS&U on a wide range of educational issues since 1999.

EDITORIAL
ADVISORY BOARD

Bruce Mather
Executive Director of
Facilities Management
Elmhurst College, IL

Martin Montaño
Capital Projects Administrator
Rio Rancho Public Schools
Rio Rancho, NM

James E. Rydeen
FAIA, Armstrong Torseth
Skold and Rydeen, Inc.
Minneapolis, MN



Enter Architectural Portfolio 2023

This summer, *American School & University* magazine will assemble a panel of education and architectural professionals to judge the 41st annual Architectural Portfolio, the industry's most recognized awards program for education design excellence.

Selected projects will be published in the 2023 Architectural Portfolio issue this November—showcasing the best in education design. We invite you to include your latest outstanding education facility.

Visit <https://schooldesigns.com/architectural-portfolio/> to enter or for more information about the competition and 2023 entry benefits.

STAY ON TOP OF REFILLS



Red LED on the fill port indicates low soap levels



Now available with
Verge™ Soap & Faucet
and WashBar®



TOP FILL SOAP SYSTEM DELIVERS HASSLE-FREE MAINTENANCE

Save time and money with Bradley's top fill multi-feed soap system — the clean and efficient way to keep soap levels well-stocked — meeting today's demand for greater hand hygiene. The large capacity tank accepts bulk liquid or foam soap, and smart sensors indicate when soap is low to prevent messy overfilling. Count on Bradley for easy maintenance solutions. **Commercial Washrooms. Brought to Life.**



Scan the QR code to see how easy top fill soap can be.

bradleycorp.com/top-fill-soap



CONTENT DIRECTOR/ ASSOCIATE PUBLISHER

Joe Agron • jagron@endeavorb2b.com

SENIOR EDITOR

Mike Kennedy • mkennedy@asumag.com

ART DIRECTOR

Julie Whitty • jwhitty@endeavorb2b.com

AWARD PROGRAM MANAGER

Heather Buzzard •
hbuzzard@endeavorb2b.com

EDITORIAL CONTRIBUTORS

Stephen Ashkin; Paul Erickson; American Institute of Architects Committee on Architecture for Education

VICE PRESIDENT, BUILDINGS & CONSTRUCTION GROUP

Mike Hellmann •
mhellmann@endeavorb2b.com

GROUP EDITORIAL DIRECTOR— BUILDINGS & CONSTRUCTION GROUP

Mike Eby • meby@endeavorb2b.com

SENIOR PRODUCTION OPERATIONS MANAGER

Greg Araujo • garaujo@endeavorb2b.com

PRODUCTION MANAGER

Brenda Wiley • bwiley@endeavorb2b.com



ENDEAVOR BUSINESS MEDIA, LLC

CEO | Chris Ferrell

President | June Griffin

CFO | Mark Zadell

COO | Patrick Rains

CRO | Reggie Lawrence

Chief Digital Officer | Jacque Niemiec

Chief Administrative and Legal Officer
Tracy Kane

EVP, Buildings, Lighting, &
Digital Infrastructure
Lester Craft

SUBSCRIPTION CUSTOMER SERVICE:
(847) 559-7598
americanschool@omeda.com

CORPORATE OFFICE:
Endeavor Business Media
30 Burton Hills Blvd., Ste 185
Nashville, TN 37215
(800) 547-7377
endeavorbusinessmedia.com

Former community college campus in New Jersey sits empty

Six years after Rowan College at Burlington County moved its main campus from Pemberton Township, N.J., to Mount Laurel Township, the former campus sits mostly unused.

The Newark Star-Ledger reports that since the last class was held on the Pemberton Township campus in 2017, it has been largely abandoned. All attempts to sell or redevelop the property have failed.

The 225-acre campus has a library, theater, pool, several athletic fields, thousands of parking spaces,



Google

but no prospective buyers. Township officials are still hoping the campus, now filled with overgrown weeds and wildlife, will be reused or developed into something useful.

A fire in April that damaged the former Academic Building and incidents of illegal trespassing and vandalism have raised questions about the future of the property.

Rowan College at Burlington County began moving its main campus from Pemberton Township to Mount Laurel in 2015. The decision to close the Pemberton campus was largely driven by the influx of students attending classes in Mount Laurel instead of Pemberton.

The Pemberton property went up for sale in 2018. Several developers have expressed interest in the parcel over the years, officials said. But for now, there are no proposals being considered for the property beyond demolishing the buildings.

www.asumag.com/21266265

Charter school will move into Anchorage, Alaska, elementary that is closing

The Anchorage (Alaska) School Board has approved a plan to move a district charter school onto the campus of an elementary that is closing.

The Anchorage Daily News reports that the Alaska Native Cultural Charter School, which serves K-8 students with a curriculum that incorporates Alaska Native values, will move into Abbott Loop Elementary's building.

Abbott Loop is closing at the end of the school year.

The charter school's supporters say the lack of space



Google

at its existing location, a wing of Bettye Davis East Anchorage High School, detracts from the learning environment and its cultural mission. The charter school also does not have access to its own gym, lunchroom or library.

Once it moves to the Abbott Loop building, the charter school will be housed there for a maximum of five years while the school's leadership board develops a plan to secure a long-term home for the charter school.

www.asumag.com/21264381

After merger plans unravel, private university in Buffalo says it will shut down

Medaille University in Buffalo, N.Y., will close this summer after a proposed acquisition by another college in Buffalo fell through.

The Buffalo News reports that Medaille's board of trustees voted to shut down the university after plans for Trocaire College to take over Medaille's campuses in Buffalo and Rochester unraveled.



Medaille University

Neither school disclosed details about why the plan fell apart.

Medaille was hard-hit by steep declines in enrollment in the midst of the Covid-19 pandemic. Student numbers fell from 2,600 in fall 2012 to about 1,600 during the recently completed school year.

The two schools had been working since last fall on an agreement for Trocaire to take over Medaille's campuses in Buffalo and Rochester and acquire

its programs, faculty, staff and students to avoid the disruption of closing completely.

Medaille saw growth through the 1970s, '80s and '90s. In 1991, it added two residence halls. Since 2011, the school completed capital projects that doubled the size of Huber Hall and expanded the Kevin I. Sullivan Campus Center to create a 3,000-square-foot fitness center, an events arena with a 750-person capacity, locker rooms and student group meeting spaces.

But the school has faced many of the same pressures as other private colleges across the nation. In 2020, amid pandemic-related losses, Medaille laid off 23 employees and gave early retirement incentives to 18 others.

Medaille traces its roots to 1875, when the Sisters of St. Joseph founded an institute to prepare teachers. In 1937, the order received a charter from New York State to grant baccalaureate degrees in education to women in religious orders, and the school was named Mount Saint Joseph Teachers' College. The school went co-ed and became Medaille College in 1968, according to the school's history on its website. ■

www.asumag.com/21266207



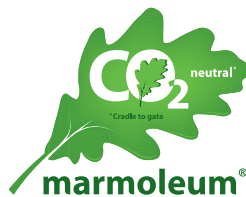
GET BEAUTIFUL, HEALTHY,
HIGH PERFORMING RESULTS
WITH FORBO MCT. GUARANTEED.

mct essentials | elementals

- **MCT Coordinates!** Bright pops of color combined with a neutral base to create balance in a range of inspirational colors, ensuring harmony of design. MCT's organic marbled texture provides a visual connection with nature bringing the outdoors in, while working well with primaries, secondary, and tertiary colors.
- Guaranteed installed cost
- EZvation adhesive solutions are available for installations with no need for moisture testing.
- Naturally healthy floor mitigates mold risk and is naturally free from phthalates, pesticides, and chemical agents.
- MCT now features our innovative new Topshield Pro finish, providing the best wear performance, stain resistance, and protection for long lasting appearance retention and easier cleaning. No initial maintenance required.

topshield™ PRO

Learn more at www.forboflooringNA.com



FLOORING SYSTEMS

1-800-842-7839 | www.forboflooringNA.com | email: info.na@forbo.com

Connecticut awards \$56 million to schools for HVAC upgrades

The state of Connecticut is distributing \$56 million in grants to public schools for upgrades to heating, ventilation and air conditioning (HVAC) systems.

The grants represent the first round of funding awarded through the HVAC Indoor Air Quality Grants Program for Public Schools, a newly established state program.

The program has been allocated \$150 million through two revenue streams: \$75 million from state bond funding and \$75 million from the state's share of federal American Rescue Plan Act funds.

Examples of eligible projects:

- Replacing, upgrading, or repairing boilers and other heating and ventilation components;
- Replacing controls and technology systems related to HVAC operations;
- Installing or upgrading air conditioning or ventilation systems; and
- Other similar work approved by the commissioner of the Department of Administrative Services.

Waterbury received the most total grants, worth \$15.9 million for eight elementary school projects. The Region 18 School District in Lyme and Old Lyme received \$12 million. Seven other school districts — Stamford, Fairfield, Ellington, Coventry, Guilford, Oxford and Region 10 — received between \$1 million and \$6 million.



Sprague Elementary School in Waterbury, Conn. has received a \$2.1 million state grant to upgrade its HVAC system.

Public school districts throughout Connecticut have already received more than \$165 million to support HVAC upgrades since the start of the Covid-19 pandemic in 2020, Gov. Ned Lamont's office says.

"One thing the COVID-19 pandemic exposed is that many school buildings, particularly those that are of a certain age, are in serious need of air quality improvements," Lamont says. "Modernized ventilation systems provide an important public health function that filtrate the air and reduce airborne contaminants, including particles containing viruses."

Vigo County (Ind.) district earmarks \$23 million for HVAC and plumbing upgrades

The Vigo County (Ind.) district plans to spend \$23 million to upgrade HVAC and plumbing systems at its three high schools.

The Tribune-Star reports that the district, based in Terre Haute, intends to allocate \$18 million in federal Covid relief funds to carry out the HVAC system improvements. It will issue \$5 million in general obligation bonds to pay for the plumbing work.

The district has three high schools—Terre Haute North Vigo



West Vigo High in West Terre Haute, Ind., is one of three high schools in the Vigo County district in line for HVAC upgrades.

High and Terre Haute South Vigo High in Terre Haute, and West Vigo High in West Terre Haute.

John Newport, the district's chief operating officer for facilities, says some of the equipment needed may take as much as a year to arrive because of continuing supply chain issues. For example, chillers may take 46 to 53 weeks from time of ordering to arrival.

Interim superintendent Tom Balitewicz says the upgrades at the high schools are overdue.

TVA grants will help schools in the Southeast improve their HVAC systems



Highland Elementary School in Greenville, Tenn., has been awarded a \$410,000 grant from the Tennessee Valley Authority to upgrade its HVAC system.

The Tennessee Valley Authority (TVA) has awarded \$2.6 million in grants to 64 schools across the Southeast for HVAC upgrades and energy efficiency training.

The grants are part of TVA's School Uplift program, which is expected to save participating schools an average of 10% on their energy bills this year.

The grants ranged from \$10,000 to \$410,000 and are going to schools in six states: Alabama, Georgia, Kentucky, Mississippi, North Carolina and Tennessee. Three schools in Tennessee will receive \$410,000 grants: Coleman School in Memphis, Madisonville Intermediate School in Madisonville, and Highland Elementary School in Greenville.

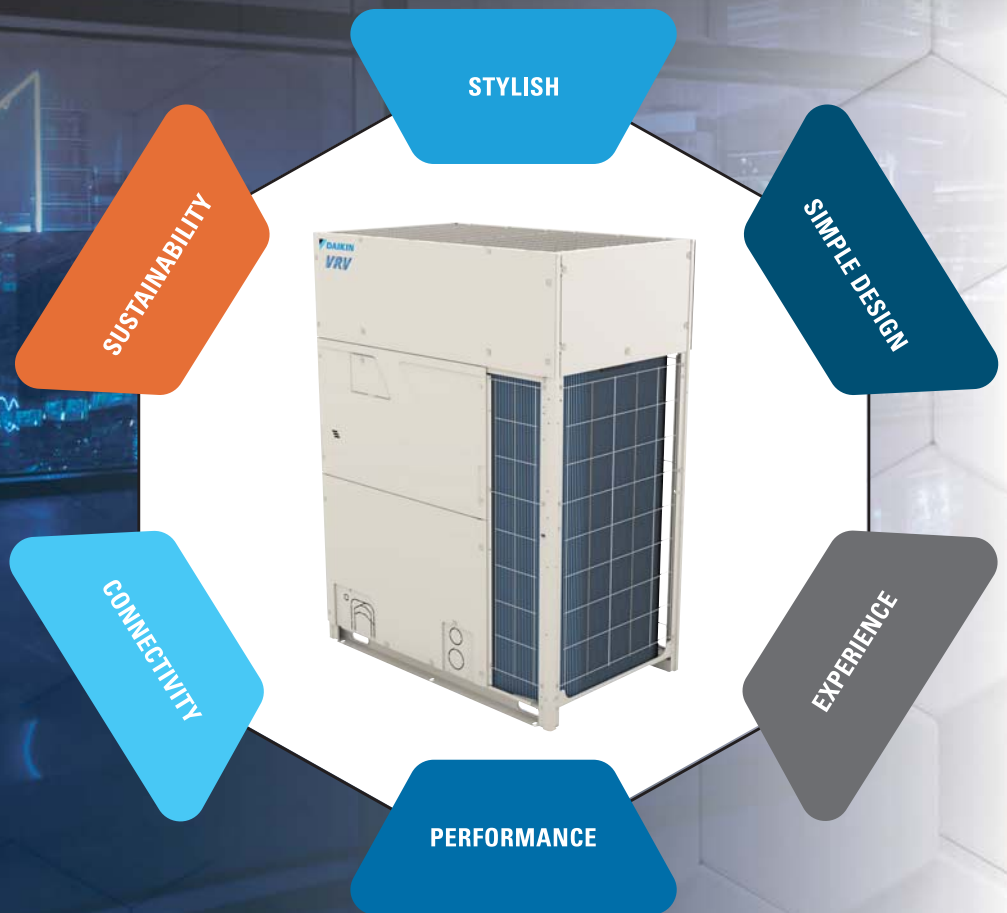
The TVA says the amount of each grant was dependent on the score a school achieved by cutting its energy waste. ■



VRV EMERION

From the world's #1 air conditioning company, discover a new level of *Air Intelligence!*

Daikin continues its tradition of providing localized HVAC solutions for the North American market with a completely reengineered VRV lineup. The new VRV EMERION offers new features and benefits with major improvements in design, performance, installation, maintenance, connectivity, and sustainability compared to previous models.



Performing arts center under construction at Cal State San Bernardino

California State University, San Bernardino, is scheduled to open a \$126 million performing arts facility during the 2024-25 academic year.

The university says the 73,337-square-foot Performing Arts Center that is now under construction will have a 500-seat theater and music instruction space. It is being built south of the university's existing Performing Arts Building.

The center will provide teaching, rehearsal and performance spaces necessary for a modern performing arts program. The 500-seat theater will be the only one of its size and quality in the Inland Empire region and will enable more of the area's community to experience the productions from Cal State San Bernardino student-performers and student-musicians. The building will also create a



Cal State San Bernardino is constructing a \$126 million performing arts center.
California State University, San Bernardino

new "front door" to the campus that shows a modern and forward-looking face to visitors and the larger community.

The architect is HGA Architects, and the general contractor is Rudolph and Sletten.

\$52 million performing arts venue under construction in Springdale, S.C.

Lexington (S.C.) School District Two is building a \$52 million performing arts center in Springdale that will open in 2024.

The district says the venue—the Lexington Two Performing Arts Center, or L2PAC for short—will provide a space for performances and special events. It will have a two-level balcony with seating for roughly 1,550, as well as four meeting and event breakout spaces.

The facility will have upgraded stage lighting and sound systems, along with dressing rooms, set storage and backstage areas, to accommodate a range of opportunities in dance, music and theater.

The primary mission for the center will be use by district students, schools and employees, with additional opportunities for use in professional development and planning, statewide conferences, conventions, and student competitions, as well as community and cultural events.



The Lexington Two Performing Arts Center is scheduled to open in Springdale, S.C., in 2024.

Lexington School District Two

The center also will provide space for school district offices.

The performing arts center is the final piece of the Lexington Two's \$225 million bond referendum approved by voters in 2014.

Western Illinois University is building a \$110 million performing arts center

Construction has begun on a \$110 million Center for Performing Arts on the Western Illinois University campus in Macomb.

The university says the 100,000-square-foot building will be outfitted with classrooms, offices, practice rooms, studios and performance spaces. The Great Hall, a 900-seat proscenium theater, will provide performance space for music, theater and dance productions as well as regional and national touring performances. A smaller black box theater will provide a more intimate space for campus productions.

The center is the first state-funded building for Western Illinois since the 1970s. It will enable the College of Fine Arts and Communication to consolidate into a more centralized location.

"The Center for Performing Arts will cement the foundation of excellence that is performing arts at Western Illinois University," says Billy Clow, dean of the College of Fine Arts and Communication. "When the center is complete, WIU will be *the* destination for arts and culture in our region and beyond."



The Center for Performing Arts at Western Illinois University is expected to be completed in 2024.

Western Illinois University

Construction is expected to be completed by fall 2024. The architects are Cannon Design and Pelli Clarke Pelli, and the builder is River City Construction.



School Security Solution Showcases

Real-World Applications to Keep Your Campuses Safer

AIPHONE SOLUTION SHOWCASE

Adding Security and Communication to a Private University

THE SCENARIO
During a professor's lecture one day at a private university, a menacing person burst in and threatened everyone with a weapon. Two students and the professor were able to subdue the individual until authorities arrived to handle the situation. Luckily, no one was harmed. In security risks, law campus was vulnerable from potential threats. Administrators recognized they needed to implement an entry security system.

Prior to selecting a system, administrators consulted with security personnel to gain insight on additional features needed for the campus. During the consultation, it was discovered there was recurring criminal activity in the university's parking lots. A method to call for help from these areas was also a must.

Administrators wanted a comprehensive system to provide staff with the ability to screen visitors before letting them inside any of the buildings on campus. They wanted the same system to provide students with help points across the various parking lots so they could call campus security in case of an emergency.

THE SOLUTION
Once the university's administrators determined their exact needs for entry security and emergency communication, they selected a versatile IP video intercom entrance locked during and after school hours.

Card reader stations were installed at exterior entrances of each building on campus. Staff now had their own convenient access with keycards while being able to safely identify visitors on the interior master station.

The system also integrated with dual call emergency stations with highly visible towers to reach help, even from the most remote parking lots on campus.

Keeping entrances locked 24/7, the IP video intercom provided staff with a reliable method to screen visitors before letting them inside.

AIPHONE SOLUTION SHOWCASE

Adding Security and Communication to College Dormitories

THE SCENARIO
After qualifying for an annual security grant from the federal government, administrators at this public campus decided to enhance the security of all six of their college dormitories. There were two dormitories on campus and the other four were located blocks away. These four buildings were not part of the original college campus. They were purchased after attendance capacity expanded through space to construct additional buildings on campus, leaving the buildings offsite was their only option.

Having a mix of dormitories on and off campus presented a challenge. Administrators wanted a method for each student to call a central security office directly from their dorm room. For those students who lived in the buildings same security office. They needed a system that could go long distances but would still provide a reliable means for all students to call for help or assistance from any one of the college's dorm buildings where they resided.

Staff also wanted the same system to provide help entry security so students could see and speak with visitors before letting them inside.

In case of an emergency, residents had a safe and easy way to call the security office directly from their dorm room.

THE SOLUTION
To accommodate the varied locations and distances of each dorm building, administrators opted for an IP wide-area video intercom.

Each dorm room had an interior tenant station, which gave student residents a safe and easy way to call the security office in case of an emergency. Security staff had a dedicated guard station where they could answer calls and assist accordingly.

All six dormitories had exterior entrance stations with touch-screen panels, which provided the added benefit of visitor screening. The intuitive touchscreen made it easy for visitors to see and students could easily access their own building with an assigned keycard.

Each dorm building had an interior tenant station, which gave student residents a safe and easy way to call the security office in case of an emergency. Security staff had a dedicated guard station where they could answer calls and assist accordingly.

All six dormitories had exterior entrance stations with touch-screen panels, which provided the added benefit of visitor screening. The intuitive touchscreen made it easy for visitors to see and students could easily access their own building with an assigned keycard.

Our reliable intercoms can help solve your toughest security challenges through unlimited possibilities and configurations.

Read our showcases to see why administrators at a private university, college dormitory, and school district selected our innovative systems



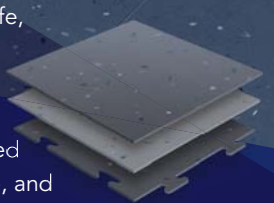
BLACK BASE



Designer MEETS DURABILITY

Heavy-duty can now be stunning

Protect-All Designer Series® flooring withstands the abuse of heavy use without showing wear. Its safe, slip-resistant surface repels microbes, chemicals, fire, and odors. Made from over 90 percent recycled material, it's easy on the eye, and the environment. Featuring a solid base color with varying accent colors throughout, this unique flooring can withstand high-traffic areas while enhancing the design of any space.



Enhance the aesthetics and performance of your next flooring project. Visit protect-allflooring.com or call 800.544.9538



OP Protect-All Designer Series Ad - OP040006 Orig:11_30_20 REV: 10,8,21
Protect-All® and Protect-All Designer Series® are registered trademarks owned by Oscoda Plastics, Inc.

■ construction zone | event facilities

Upgrades of performing arts facilities are nearing completion at College of William & Mary

The College of William & Mary in Williamsburg, Va., is expected to open updated performing arts facilities in fall 2023.

University officials say that when the construction work is completed, the dance department will join the theater department in the newly renovated Phi Beta Kappa Memorial Hall. The music department will move into its own new building.

The renovated Phi Beta Kappa Memorial Hall will have a new main stage theatre and space for recital, rehearsal and dance. It also will have a studio theater, scenic art and construction lab spaces, costume construction and conservation areas, media and design labs, dressing rooms and assorted acting labs, classrooms and seminar rooms.



Google

Renovations of Phi Beta Kappa Memorial Hall at the College of William & Mary are scheduled to be completed later this year.

The music building will have a concert hall, recital hall, choral rehearsal space and a recording studio. Other spaces include an electronic music lab, keyboard lab, music library and digital projects lab, as well as areas for instrumental rehearsal, instrument and score storage, and a specialized percussion studio.

Both performing arts buildings are being designed and constructed with sustainable initiatives in mind and are aiming to received LEED Silver certification.

Performing arts center open at high school in Nixa, Mo.

The Nixa (Mo.) school district has opened a \$14 million performing arts center on the campus of Nixa High School.



Nixa Public Schools

The Aetos Center for the Performing Arts opened earlier this year on the campus of Nixa High School in Nixa, Mo.

The district says the 1,150-seat facility will provide the district with a single location for band, choir, and theatre performances, and will enable all its schools to have a professional place for their performances. In addition, the Aetos will host national touring performances, drawing people to Nixa and providing economic opportunities for our businesses and organizations.

The funding to build the venue came from a 2019 bond issue approved by voters.

The performance hall inside of the Aetos Center will officially be known as the Meridian Title Performance Hall, the result of a \$300,000 five-year partnership between the Nixa district and Meridian.

High school in Fairfield, Calif., is adding a performing arts center

Fairfield High School in Fairfield, Calif., is undergoing a \$46 million upgrade that includes construction of a performing arts center.

Fairfield-Suisun (Calif.) district officials say the facility will be used by other high schools in the district and will be available for community events, reports *KCRA-TV*.

“There is a lot of research showing that students involved in visual performing arts and theater tend to be very active and involved in school and their community,” said Superintendent Kris Corey.

In addition to the performing arts space, the renovation of the high school will update and expand the kitchen, repair and relocate athletic fields, and add a sports medicine and weight room. ■



A \$46 million upgrade of Fairfield High School in Fairfield, Calif., will include construction of a performing arts center.

Fairfield-Suisun Unified School District

*According to a 2021 study.

Cut Your Waste Collection Budget

Data shows Smart Waste™ trash sensors can save your campus thousands

Before Smart Waste: The University of Idaho had a two-man waste management team that spent 16 hours every day manually checking to see if waste and recycling bins were full across campus.

After Smart Waste: That same team now monitors fill levels from their computer to see which ones need emptying and schedules pickups accordingly. They've cut their fuel emissions in half and put the school on track to save \$100,000 every year.*

Ready to join them? Contact your Landmark rep today.



LANDMARK
STUDIO DESIGN



1-888-839-3853
LandmarkStudio.com

COME BACK

With the threat of Covid-19 subsided, schools and universities are hoping for student enrollment to bounce back.

By Mike Kennedy

Public school enrollment has not yet returned to pre-pandemic levels.

Some things seem unimaginable until you experience them yourself.

In 2020, people had been hearing about something called the coronavirus and health experts were warning that a lot of people were at risk of getting sick. But in March 2020, the spread of the virus reached a tipping point, the World Health Organization declared Covid-19 a pandemic, and in the days that followed, most of the nation's schools and universities abruptly shut down in-person instruction.

Education institutions were not alone in being unprepared when their normal operations ground to a halt, but the effects of shutting down schools affected every community from coast to coast. Amid uncertainty about whether schools were a safe and healthful environment for students and

staff, millions of students were sent home. Schools and universities hurriedly put together plans for offering classes remotely so that students could have access to some semblance of instruction.

Students, teachers and administrators had little choice but to try to adapt to the changes that Covid-19 forced upon them. Some students were able to continue their learning in online or hybrid settings, and some who had trouble adjusting fell behind academically or struggled mentally. Among disagreements about the effectiveness or necessity of strategies like masking and social distancing, all of those in education, as well as the rest of society, were looking forward to the day when the Covid-19 pandemic was in the rearview mirror and they could get back to "normal."

Now, after more than three years and 1.1 million deaths in the United States, the federal government



32426329 © Robbie Schubert | Dreamstime.com

has officially declared that the Covid-19 Public Health Emergency has ended, and schools and universities have returned to mostly normal operations—instructors providing in-person instruction to classrooms of unmasked students.

But something has been missing in the return to normal: many of the students. According to enrollment data from the National Center for Education Statistics (NCES) Elementary and Secondary Information System, the number of K-12 students enrolled in U.S. public schools dropped by about 1.3 million from fall 2019 to fall 2020—from 50,720,122 to 49,366,089. The fall 2021 total was about the same as the year before: 49,352,997.

Higher education experienced a comparable decline. Statistics from the National Student Clearinghouse Research Center show that undergraduate enrollment dropped from 16,284,724 in

fall 2019 to 15,686,317 in fall 2020. That decline has continued; enrollment in fall 2022 was 15,050,669, the center says.

Projecting enrollment

To develop accurate projections, districts keep track of data about population trends and planned housing developments to predict how many students are likely to enroll. But Covid-19 threw those calculations out of whack.

In 2019, before the pandemic, the NCES projected that public elementary and secondary enrollment in fall 2020 would be just short of 51 million and would increase to more than 51.1 million in fall 2021.

For an individual district, an unanticipated dip in student numbers can disrupt budget planning and cause serious problems. Having fewer students almost always means getting less state funding, and if the decrease is sizable and prolonged, a school district may have to increase class sizes, lay off employees or even close facilities.

Other options

A report by the consulting firm EY-Parthenon, “Where have all the students gone?” suggests that many families have not returned to public schools because of a dissatisfaction that is attributed to more than their pandemic experience.

“Although health and safety played a prominent role during the height of the pandemic, today, families appear to be reacting more to their perception that school districts do not best serve the needs of their children,” the report says.

Mandatory masks, social distancing and hybrid schedules disrupted student learning for the better part of 3 years.



213652202 © Arrowsmith2 | Dreamstime.com



215433443 © Gpointstudio | Dreamstime.com

An increase in homeschooling is one factor in the decline of public school enrollment since the Covid-19 pandemic.



Some desks in classrooms are empty because student enrollment in public elementary and secondary schools has dropped by more than 1 million.

Several schooling alternatives may have become more appealing to those families during the pandemic. Charter schools accounted for 7.5% of public school students in 2020-21, compared with 6.8% in 2019-20, according to the National Alliance for Public Charter Schools.

A report from the Urban Institute estimates that between fall 2019 and fall 2021, private school enrollment increased by

4.3%, and homeschool enrollment grew by 30%. Many areas also have reported significant growth in virtual education for students who prefer the online instruction they experienced in the pandemic.

The end of ESSER

In the short term, school funding has been supported by the billions of dollars in Covid-19 aid from the federal government. But that aid, known as ESSER funding, expires in September 2024, and some schools may be confronted with a budget shortfall.

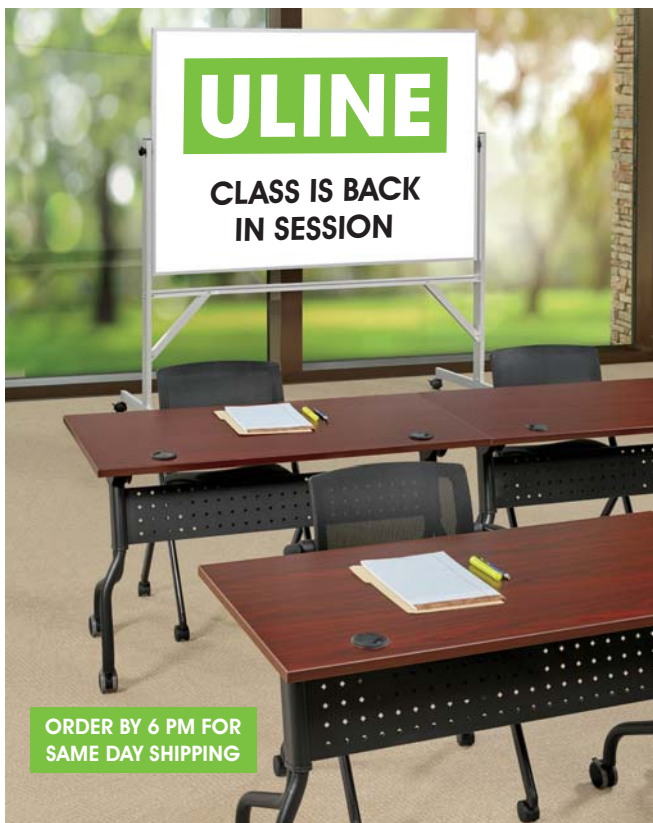
“If declining enrollment translates to a reduction in funding, districts will likely need to decide between cutting budget lines entirely, reducing the breadth or depth of offerings, or pursuing free or cheaper solutions,” the EY-Parthenon report says. “Districts may need to look for efficiencies in spending to trim costs, while still supporting strong teacher-led instruction.”

Evolving needs

To get students who have opted out of traditional public schools to return, educators and administrators may have to embrace new strategies.

“States and districts may need to better understand the evolved needs of their students and parents following the pandemic,” the EY-Parthenon report says. “Investment in new ways of delivering education...can enhance educational engagement and outcomes. District schools may need to truly evaluate how to ‘compete’ for students, which may require significant innovation and use of marketing and communication tools to engage parents.”

New approaches also may help schools better serve students who are included in their enrollment statistics but are disengaged because of chronic absenteeism. Attendance Works, a non-profit group that works to combat chronic absenteeism, says that in 2020-21, at least 10 million students—more than one in every five students—was chronically absent, missing at least 10% of the school year.



ORDER BY 6 PM FOR SAME DAY SHIPPING

COMPLETE CATALOG 1-800-295-5510



60782509 © Christopher Galford | Dreamstime.com

FutureEd, a think tank at Georgetown University, and Attendance Works have developed “Attendance Playbook: Smart Strategies for Reducing Chronic Student Absenteeism Post-Pandemic,” to offer steps schools can take to address issues that lead to absenteeism.

“The pandemic’s long months of remote learning, hybrid schedules and repeated quarantines frayed bonds among students and between students and educators and fractured routines of attending school,” the playbook says. “Left unaddressed, these high levels of absenteeism threaten to undermine the unprecedented investment of federal Covid-relief funds in public schools.”

The playbook divides its recommended interventions into three tiers:

Tier 1: School-wide prevention. These strategies are aimed specifically at preventing absenteeism among all students. Examples of strategies include setting expectations about when students show up to class and recognizing improvement in attendance.

Tier 2: Targeted support. These interventions are designed to remove barriers to attendance for students at heightened risk of chronic absenteeism, such as those who are close to or already missing 10% of the school year. Schools need to give these students and their families more personal attention to help them understand the importance of coming to school and create a plan to address the barriers they are facing.

Tier 3: Intensive support. These interventions provide intensive support to students most at risk of chronic absenteeism and typically require case management customized to an individual student’s challenges and can involve health, housing and social services agencies. Students missing 20% or more of the school year benefit from this level of support.

“Attendance strategies work best when other, underlying conditions are present in schools, including physical and emotional health and safety, a sense of belonging among students and educators, academic challenge and engagement, and students and educators who are able to navigate school life socially and emotionally,” the playbook says. ■



Simple. Safe. Utility. Control.

LSP-GO

The simplest gas controller to install, operate and service.

(FOR SCHOOL SCIENCE LABS AND OTHER APPLICATIONS)





- **Simply** controls access to gas in science classrooms. Helps prevent accidents and vandalism.
- **Everything you need** to control gas in science labs is included in one compact box, including pre-wired and tested gas valve assembly.

Helps keep students, teachers and schools safe.

#1 Utility Controllers in U.S.

5-YEAR LIMITED WARRANTY

DESIGNED IN THE USA AND ASSEMBLED





903.781.6994 • isimet.com

Legionella

The legionella organism lives and proliferates in a temperature between 68°F and 122°F.

Raising the Grade in Health

Legionella mitigation options for educational facilities

By Sri Deivasigamani

An outbreak of Legionnaires' disease last year in the Bronx borough of New York City resulted in dozens of people contracting the disease and several fatalities. Students and staff who spend many hours in educational facilities are just as susceptible to the legionella bacteria that causes the disease, so it's important for administrators to understand how the organism develops and multiplies and how to mitigate the risks

Scope of the problem

About 6,000 cases of Legionnaires' disease are reported each year in the United States, according to the Occupational Health and Safety Administration. Scientists believe the number of

actual cases is much higher, given the difficulty in distinguishing Legionnaires' disease from other types of pneumonia. The most recent U.S. population-based study estimated that 8,000 to 18,000 people are hospitalized each year with Legionnaires' disease.

The legionella organism lives and proliferates in a temperature between 68°F and 122°F. In temperatures below 68°F, it doesn't die; it simply goes dormant and is less likely to replicate. Additionally, the organism can survive at 122°F for eight hours and doesn't instantly die until temperatures reach 176°F. This organism is tough and can thrive in many locations.

Plenty has been written about the most common breeding pools for legionella: cooling towers; spas and hot tubs; fountains and similar water features. But there's been far less discussion about legionella risks in domestic-use water systems.

About 6,000 cases of Legionnaires' disease are reported each year in the United States.

Photo 213331487 © Chernetskaya | Dreamstime.com

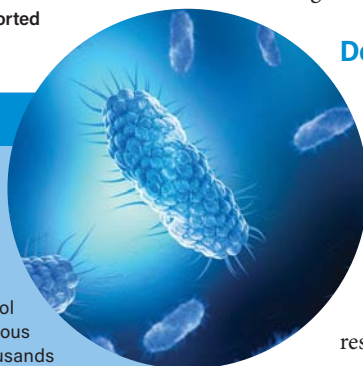
LEGIONELLA AWARENESS

Legionella was discovered in 1976 after an outbreak among people attending a Philadelphia convention of the American Legion. Those who were affected suffered from a type of pneumonia that eventually became known as Legionnaires' disease.

In 2020, the Covid-19 pandemic heightened school administrators' awareness of potentially dangerous diseases that could spread in their buildings. Thousands of schools and universities across the nation shut down their facilities to combat the coronavirus, but those empty classrooms and campuses created conditions for a different potentially deadly disease.

Empty school buildings meant unused water systems and tanks and pipes with stagnant water—a prime breeding ground for legionella

In the aftermath of the pandemic, several schools discovered the presence of legionella in their water systems as they prepared to re-open their facilities.



Domestic-use water

Three primary conditions are required for legionella growth:

- low water temperature (that is, somewhere between 68°F and 122°F)
- stagnant water
- the presence of biofilm

These conditions may be found in the plumbing systems of school buildings and university residence halls. So let's examine how each contributes to the risks.

Water temperature: Depending on the facility or application, the required hot water temperatures in a system will differ. For example, a sink in a residence hall room or a restroom might be limited to 120°F, but laundry and dining facilities might need to have water 130°F or higher. Engineers often solve this issue with mixing valves, but mixing valves can mess with the system

equilibrium and may create pockets of stagnating water because of oversized piping, dead piping, or poorly balanced systems.

The water in a typical hot water storage tank is stratified by temperature—some of which is inhospitable to legionella. However, there may be pockets of water where the temperatures are more friendly to the organism.

Water quality and movement: To meet the requirements of residence halls, many hot water systems are oversized to accommodate peak-demand times when many students are seeking to use hot water at the same time. Some residence halls even add a backup hot water storage tank for insurance. It's in this stored (stagnant) water where legionella has the potential to develop if temperatures in the system are not properly maintained.

Water quality in a storage tank is rarely uniform. Sediment of various types gathers at the bottom of the tank; this sediment can be both a food and an insulator for organisms. So, all it takes is for a disruptive event to the tank – for example, a water hammer or fire hydrant used nearby – for the tank to stir and create an environment more favorable for legionella.

Biofilm: Biofilm is simply a polymeric solution that is excreted from certain organisms. It forms a protective and adherent substrate, is a great insulating factor, and is also a food source, making it a popular breeding ground for bacteria. As an insulator, biofilm can exacerbate the stratification in a hot water storage tank, making some areas even more attractive for legionella.

Biofilms can even grow in high-velocity situations where lots of water moves across a surface.

Legionella does not produce biofilm directly, but it does feed on it.

Reducing risk

To prevent Legionnaires' disease, it's imperative to reduce the risk of legionella growth and transmission in water systems. Schools and universities can achieve this through a combination of design options, operating practices, and maintenance activities. Here are some options to consider:

- Install commercial-grade tankless water heaters. Tankless technology does not eliminate all legionella risks, but it does remove a potential bacteria source from the system.
- Design the piping system so it's as short and direct as possible. Do not oversize pipes.
- Recirculate water in the system continuously, if possible, to eliminate pockets of stagnant water.
- Remove dead ends and dead legs in existing pipework.
- Properly insulate pipes and water storage tanks to maintain water temperatures that prevent bacteria growth (i.e., lower than 68°F or higher than 122°F).
- Regularly flush out shower heads and faucets that are infrequently used.
- Periodically analyze water samples to check for bacteria. ■

Sri Deivasigamani is the founder and CEO of Intellihot, a manufacturer of tankless water heaters. He has a bachelor's degree from Manipal Institute of Technology, India, and a master's degree in mechanical engineering from Clemson University.



Daylighting

productivity

In order to be most productive, one needs to be comfortable first. Add superior light quality, views to the outdoors and natural ventilation to enhance indoor environmental quality, and people thrive. Daylighting done right has been proven to increase productivity, reduce absenteeism and improve mood. Kalwall works hard so employees can work smart.

ingenuity

With 60+ years of daylighting expertise, we invest in materials science and incorporate the most recent gains in knowledge into our products. All of this contributes to the Kalwall difference, allowing us to provide the best aluminum facesheet technologies and composite products for sustainable, energy-efficient daylighting design.

excellence

Kalwall products are utilized in over 1,000 LEED-certified projects—and for good reason. Kalwall and our family of products are regularly recognized by the United States Green Building Council for unmatched performance and industry impact, and many projects that feature Kalwall boast similar records. The proof is in the performance.

KALWALL[®]

kalwall.com

high performance translucent building systems

Facades | Skyroofs[®] | Skylights | Canopies

When a school or university identifies a mold problem, it is important to promptly locate and abate moisture sources.

Photo 211926968 © Andrey Sayfutdinov | Dreamstime.com



BREAKING THE MOLD

Best practices to limit mold exposure and loss in education institutions.

By Mallori Thompson and Kate Dion

Mold is one of the oldest life forms on the planet, and it continues to be a hot topic among health experts – as well as those operating and maintaining education facilities.

Most types of mold grow in high-moisture areas. Mold plays an important part in our ecosystem and can have various beneficial uses, but prolonged exposure to elevated levels of certain mold types can cause allergic reactions and respiratory problems, which may be severe.

Complaints about mold at education institutions may arise from students, employees or visitors. Unlike many contaminants, however, there may be few clear regulatory or health-based limits to define acceptable versus unacceptable levels for mold. Given that, plus the different types of mold and different levels of personal sensitivity, determining the risk from mold exposure can be complicated.

Often, the initial response made following a mold complaint is immediate testing; however, the process, scope, and type of testing may raise more issues that must be addressed.

To test or not test

Before a decision is made to test, several issues should be considered in consultation with tech-

nical and legal resources that are experienced in dealing with mold issues. Those issues include:

- Determining which test method(s) to use, and how best to carry out tests in a specific setting
- Ensuring that the selected test method(s) are carried out properly
- Interpreting test results
- Determining “action levels” (i.e., results that warrant follow-up action), and what such action should be
- Confirming that the institution is prepared to promptly commit the resources necessary for such action

Testing for mold may be more complex than expected. Unlike most contaminants, mold is ubiquitous in nature as well as in built environments. The many different types of mold further complicate the picture. Some molds always produce toxins, other molds produce toxins only in certain environments and some molds do not produce toxins in any environment. Contributing to the problem, the U.S. Centers for Disease Control and Prevention does not recommend routine sampling for mold because there are no established standards for determining what constitutes a “normal” level.

If a decision is made to proceed with testing for mold, the uncertainties potentially associated with such testing make it necessary to consider how to appropriately manage information and discussions resulting from such testing. Depending on the context, it also may be appropriate to consider whether and to what degree confidentiality or attorney-client privilege protections are warranted.

Prevent, detect and abate

The time and costs required for testing and the potential value of test results should be weighed against the value of prevention, detection and abatement strategies. These strategies include:

- Periodically checking for possible moisture sources that could create mold issues in interior spaces
- Conducting visual or odor checks for mold, and using enhanced cleaning regimens in potential problem areas

For moisture sources, mold experts assess not only for potential sources of liquid water (e.g., plumbing leaks), but also for water vapor (e.g., hot, humid exterior air entering air-conditioned interiors, leading to condensation). Vapor is a particular challenge on college campuses at the beginning and end of the academic year when students or visitors prop doors open to facilitate move-in or move-out.

When an institution identifies a mold problem or becomes aware of a mold complaint, it is important to promptly locate and abate moisture source(s) at the specific location as well as any surrounding areas that may also be affected. The immediate response should take into account how it will affect students or employees who report having allergies or other respiratory problems. Such persons should be relocated immediately until mold removal professionals can clean the affected areas.

One prevention method schools should consider is educating students on the instrumental role they play in causing or preventing the growth of mold. Encouraging best practices for student spaces and common areas can help institutions lower the risk of significant mold growth.

These best practices include preventing mold growth by:

- Hanging wet towels or sweaty clothes to dry
- Using exhaust fans when showering
- Mopping up spills immediately, whether on floors, on countertops, inside cabinets, or elsewhere

- Ensuring any rugs or carpets that receive spills or tracked-in rain, snow, or ice do not stay wet
 - Immediately reporting any wet rugs or carpets that cannot be easily dried
 - Immediately reporting any odors
- Another important prevention method is diligent building maintenance. One of

MURDOCK® MAINTENANCE ADVANTAGE

Our Ordinary is Extraordinary. Our way since 1853.

Meticulously designed products simplify maintenance and reduce labor costs in the field.

Replace your Bottle Filler with a BF12!

One key tool unlocks the Murdock Maintenance Advantage features on our A171 and A172 water coolers. This tool removes the strainer, which automatically stops the water.



Single Mechanical Button

Single mechanical button with no complicated maintenance.

Replace the Filter with Ease

No removing the shroud with our EZ Door™ Filter! Swap filters in four quick steps.



Number of Parts

Ours: Only 27 parts
Theirs: 60+ parts

Replace your Water Cooler with an A17 Series!

Universal Bracket is compatible with several popular water cooler brands for seamless retrofit

All Metal Enclosure

Refrigeration via Tube Evaporator

Eliminates tank of stored water that could potentially harbor bacteria

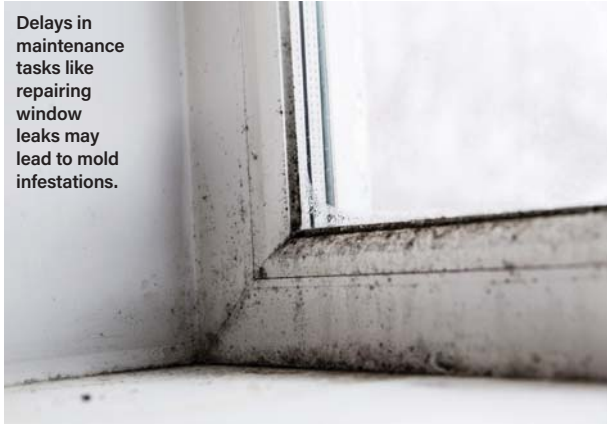


170 years
Murdock
EST. 1853

MEMBER OF
MORRIS GROUP
INTERNATIONAL
www.morrisgroup.ca

(800) 591-9081 • SALES@MURDOCKMFG.COM • www.murdockmfg.com

Photo 179779102 © Ilija Burdun | Dreamstime.com



Delays in maintenance tasks like repairing window leaks may lead to mold infestations.

the many dangers of deferred maintenance, particularly in older buildings, is the growth of mold. Delays in tasks like repairing window or roof leaks or insulating piping can lead to mold infestations. Although deferring seemingly minor repairs might save costs in the short term, it can necessitate future mold remediation that may be urgent and far costlier and could expose the institution to bad publicity or legal liability.

For example, a 2019 class action lawsuit against Indiana University Bloomington cited widespread mold infestation in university residence halls because of chronically leaking pipes,

condensate leaks from heating and cooling systems, roof leaks, and many other unaddressed maintenance deficiencies. The university's response included installing air filtration systems, but those led to noise complaints and an expansion of the lawsuit. The university was ultimately successful on appeal, but not before compensating 2,458 students a total of \$7.7 million and enduring high-profile negative publicity.

Before significant mold problems occur, institutions can employ prevention methods such as:

- Performing regular building and HVAC inspections that include scrutiny of potential mold sources or hot spots
- Routing vents outdoors for all moisture-generating appliances
- Avoiding carpet installation in high-humidity spaces such as basements
- Assessing and if necessary, controlling humidity levels in all interior spaces

Although mold is ubiquitous, serious mold infestations and resulting class-action lawsuits do not have to be. With planning and preventive action, education institutions can limit mold-related exposure and loss. ■

Mallori Thompson, J.D., (mctompson@rc.com) is an Associate with the Robinson+Cole law firm in Hartford, Conn. **Kathleen Dion, J.D.**, (kdion@rc.com) is a Partner with Robinson+Cole.

Reserve a Q&A page in the **AUGUST 2023** Educational Interiors Showcase

Showcase your insights, leadership, projects, and more.

- > A full color page devoted to your company
- > You choose three questions and answers to showcase your expertise
- > Three images of your leadership and/or your work
- > Company logo
- > Contact information
- > Great for architectural firms, interior designers, and design and building professionals who work with schools or universities
- > Discounts for design competition entrants

Contact Heather Buzzard at hbuzzard@asumag.com for more information.

American School & University SchoolDesigns™





By Paul Erickson

Sometimes you just need to “Get on with It!”

Are you developing an educational curriculum for a program that requires “future-ready” learning space? The time has come to design and construct space for the program, but more research and development is needed to perfect the program.

Sometimes you just need to “get on with it” and move forward with design and construction before program details are finalized. It is likely that a facility is needed for the new program. Deadlines loom for program development, hiring staff, marketing, and building or remodeling the facility. Don’t wait too long to get design and construction started, even though every detail of the curriculum is not set. After all, the curriculum is ever-changing and developing.

To be confident that the new program will be supported by the facility design, do the following:

- Select an architectural firm with extensive experience in developing designs that support new types of educational programs. The designers should have a portfolio of facilities examples that successfully support and enhance unique programs.
- Talk to an architect’s clients about how the firm approaches projects, engages user groups, and incorporates flexibility and adaptability into facility solutions.
- Investigate how well an architectural firm partners with clients in modifying designs as the educational program is refined. Frequently the best solutions occur when program development and design move along “hand in hand.”
- Establish trust with an architect to ensure that the design will be flexible enough to adapt to program changes.

An experienced educational architect understands that designs must adapt to change. Explorations such as Outcome-Based Education (OBE), Madeline Hunter’s Model of Lesson Design, Open-School/Plan Concept, School-within-a-School, Phonics/Whole-Language and International Baccalaureate have been embraced at one time by educators only to be refined or replaced as information about learning evolves.

One example of a design planned for flexibility is a 2,400-student comprehensive high school in Minnesota designed in 1990 as a school-within-a-school, supporting an OBE curriculum. The architects designed the 384,000-square-foot facility to support the intricacies of OBE. More than 30 years later, the original design has been flexible enough to supported numerous curricular and organizational changes.

Design and even construction may need to begin before a new program is finalized. To move forward with design, it is essential that an architect have the skill sets to:

- Understand fundamentals such as the building capacity needed to support student enrollment.
- Grasp the mission of the program and curriculum so spaces can be conceptually “sized” and “placed” to support enrollment and student flow.
- Acknowledge that change is a constant. Even the greatest curriculum and the perfect program will evolve once the learning process has begun and a facility is occupied.
- Engage user groups in the design process. It is advantageous to refine the curriculum and program as a design progresses from concept to development. Design tools such as 3D computer modeling provide opportunities for teachers and students to experience spaces “virtually” during design. This experience triggers creative ideas for enhancing spaces that would otherwise be untapped.
- Design a variety of spaces to support various learning activities. An experienced educational architect knows that spaces are needed for individual study and research, small-to-large group activities, performances and presentations, and support areas. The key is that the design concept provides for flexibility and adaptability.

Developing a curriculum for a program is complex. Even if the curriculum is still being developed, you may just need to “get on with it” and begin the design and construction. Don’t let the opportunity to have a significant effect on a child’s education become just another good idea that could have been. ■

Paul Erickson, AIA/NCARB/REFP, executive officer and partner, is past president of ATSR Planners/Architects/Engineers. He has 45 years of experience in school planning, design, and construction. Erickson can be reached at perickson@atsr.com.



By Stephen Ashkin

Authentic green products from “bad” companies

It takes only one rotten apple to spoil the barrel.

Schools and universities understand the importance of cleaning and rely heavily on their vendors to accomplish the tasks necessary to protect student and staff health, as well as the buildings themselves. This relationship has proven extremely successful; the cleaning industry is composed of amazing companies, many of whom are recognized as global leaders. These truly “good” companies are valued by their customers, treat their employees with respect and pay them equitably. They are conscientious about their communities and the broader environment and excel financially so they will be around for years to come.

The “good” companies may represent 99% of the industry, but as the adage goes, “It only takes one rotten apple to spoil the barrel.” Thus, the challenge faced by schools and universities is that it is often hard to distinguish the “good” from the “bad” apples.

It is especially challenging when “bad” isn’t simply one that obviously violates the law or appears on an OSHA Safety Data Sheet. Green certifications may address product and service-related health and environmental impacts, but when every vendor has certified products and services, purchasers are looking even deeper as they try to differentiate among prospective offerings.

“Bad” companies

Green cleaning has become a major part of the global cleaning industry. Today, hundreds of companies with thousands of products have been certified to the green standards from the likes of EPA’s Safer Choice program, Green Seal and Underwriters Laboratories. It is the assurance from these certifiers that in fact qualify these products or services as being “authentically” green. They help address the issue of greenwashing—when some “bad apples” make false, misleading, or unsubstantiated claims about their products.

But now that green cleaning products have become so widely available, purchasers are starting to think more deeply about the fundamental reasons they want green products or services in the first

place. These purchasers now may be wondering if a certified Green product or service can truly be “authentic” if it is made by a “bad” company?

What purchasers want to know

School and university purchasers increasingly want to know more about the suppliers’ own efforts relative to sustainability and ESG (environment, social and governance) issues to better align their supply chain with their values and to minimize risk to their reputations. For example, purchasers want enough information to determine if a green product or service:

- Uses slave, child or forced labor when making products or when mining or harvesting raw materials. Unfortunately, this happens far too often, especially when materials are made or extracted in developing countries.
- Discriminates against workers by race, religion, gender, age, sexual orientation, or disabilities. These practices can be found anywhere from the hiring and treatment of frontline workers to senior managers and ownership itself.
- Uses unfair labor practices such as hiring workers as independent contractors or paying workers cash under the table. Regrettably, illegal contracting is far too common.
- Pollutes air and drinking water or otherwise harms the environment because of the inefficient use of resources such as water and energy (including fuels), and poor handling of waste.

So back to the original question: Can authentic green products and services be made, distributed or otherwise provided by “bad” companies? The answer unfortunately appears to be “yes,” but as more information is made available to school and university purchasers, this may change for the better for education institutions, as well as the entire cleaning industry, especially the “good” companies that are trying to do the right thing. ■

Stephen Ashkin operates the Green Cleaning Network, a 501(c)3 not-for-profit educational organization.

Entry Forms Due: June 16
Portfolios Due: July 21



Architectural Portfolio

F O R T Y - F I R S T A N N U A L

2023 Call for Entries

Entry Forms Due June 16. Portfolios Due July 21.

- Discounts for multiple projects and multiple pages.
- Open to projects completed since January 1, 2018.
- Entry categories for pre-K through higher-education. New construction, renovation, and work in progress.
- Featured in the fall 2023 Architectural Portfolio issue, full-screen galleries on SchoolDesigns, and our e-newsletter.
- Larger circulation, including expanded reach to school boards and industry event partners.
- National recognition for you, your project, and the school or university.
- Free print-ready PDF for multiple entries and multi-page projects.

Contact Heather Buzzard at hbuzzard@endeavorb2b.com or visit [SchoolDesigns.com](https://www.SchoolDesigns.com) to enter today.

Presented by

**American
School & University**

SchoolDesigns™

Photo credits: (top to Bottom) 1. San Jacinto College, Anderson-Ball Classroom Building- Kirksey Architects- Joe Aker; 2. Bristol County Agricultural High School- HMFH- Photo Credit- Ed Wonske Artwork; 3. The Northfield Mount Hermon School | The Gilder Center- Flansburgh- Photo Credit- Robert Benson; 4. Ann Richards School for Young Women Leaders- O'Connell Roberson- Photo Credit- Sterling Stevens

IN THE SUMMERTIME

By Mike Kennedy

Keeping carpeting and flooring clean and well-maintained is a year-round responsibility for education institutions, but for most schools and universities, the approach of summer provides an opportunity to carry out the more extensive maintenance and thorough cleaning that isn't feasible the rest of the year when corridors and classrooms are crowded with students scuffing the floors and tramping in dirt.

For carpeting, periodic wet extraction cleaning will help carpet last longer and maintain its appearance; extraction also will remove substances trapped in a carpet that less extensive cleaning methods have left behind.

Inadequate carpet cleaning may result in dirt and other substances to become ground into the carpet backing; at that point, removing the dirt becomes more difficult and may damage carpet fiber, and the carpeting may have to be replaced. In the meantime, the allergens, dirt and other potentially harmful substances left behind may lead to poor indoor air quality and cause health problems for students and staff.

Scheduling deep cleaning when facilities are mostly empty in the summer will help workers avoid the traffic and obstacles that could make cleaning inefficient or ineffective.

The Collaborative for High Performance Schools Best Practices Manual recommends that schools carry out extraction cleaning of carpets before classes resume in late summer or fall. Crews should minimize the amount of cleaner used. "Excess cleaner can lead to rapid resoiling of the carpet," the manual states.

Workers also should make sure that their extraction equipment is operating properly. If the equipment is not extracting the maximum amount of moisture from a carpet, what is left behind "can lead to serious IAQ problems from mold and mildew growth," the manual says.

After extraction, crews should use fans and natural ventilation for 48 hours to air out the space and dry the carpet properly and prevent the growth of mold and other harmful substances.

Summer is also an opportune time for schools and universities to do more extensive cleaning of their hard floor surfaces. Stripping and waxing remove the dirt and other unwanted substances that build up on the floor. The cleaning process creates

a barrier between the floor and the dirt tracked in by students. Most experts recommend stripping and rewaxing resilient floor surfaces at least once a year. Areas with a high volume of foot traffic like a school corridor may need to be stripped and waxed more frequently.

The CHPS Best Practices Manual emphasizes that a floor finish should be compatible with the stripping solution used. Schools should give preference to stripping solutions with a neutral pH (closer to 7), and seek stripping solutions that emit little or no volatile organic compounds.

Periodic buffing with a slow speed buffer will remove most scuff marks and light scratches. Buffing also will add luster while dislodging dirt and blending touch-up spots. Difficult scuff marks that aren't removed by mopping or buffing can be removed using a nylon scouring pad. Use a solution of neutral floor cleaning detergent, rub gently, and rinse well afterward, the manual recommends.

A finish that is more durable will reduce the need for additional buffing, restoring and recoating.

Movable chairs, tables, desks and other objects that may dig into the floor should be outfitted with floor guards or casters on the bottoms of each leg to prevent scuffs and scratches.

Be sure floors are thoroughly cleaned and dried before applying a finish. Never apply a finish to a dirty floor because it will trap the dirt under the surface.

Wood flooring is a less common surface in school facilities, but it is frequently found in gymnasiums. Wood floors require annual screening and resealing with a water-based sealant, the manual says. Again, summer may be the best time to do that, but school administrators must be mindful of summer schedules, even if no students are attending classes in the building. Districts often open up such facilities for use by summer camps or recreation programs and their schedules may conflict with the staff's cleaning plans.

Once summer is over and students have returned to class, the intensive summertime cleaning will be more effective if crews stay vigilant with sweeping, mopping, spot cleaning and other daily maintenance during the school year. ■

Scheduling deep cleaning in the summer will help workers avoid the traffic and obstacles that could make cleaning inefficient or ineffective.

Reprints

To purchase custom reprints or e-prints of articles appearing in this publication contact reprints@endeavorb2b.com.

Archives & Microform

This magazine is available for research and retrieval of selected archived articles from leading electronic databases and online search services, including Factiva, Lexis-Nexis and Proquest.

Privacy Policy

Your privacy is a priority to us. For a detailed policy statement about privacy and information dissemination practices related to Endeavor Business Media products, please visit our website at endeavorbusinessmedia.com.



Joe Agron

Director of Sales
Buildings & Construction Group
941-200-4778
jagron@asumag.com

Brian Sack

Account Manager
East & Northeast
732-629-1949
bsack@endeavorb2b.com

Randy Jeter

Account Manager
South & West
512-263-7280
rjeter@endeavorb2b.com

Bill Boyadjis

Account Manager
Midwest
973-829-0648
bboyadjis@endeavorb2b.com

Steve Suarez

Account Manager
816-588-7372
ssuarez@endeavorb2b.com

■ product solutions

Desktop power center

The dash™ Desktop Power Center provides designers a higher degree of customization and gives users easy access to power and data at the work surface. Available from 2 to 6 cubes, the unit can accommodate options that include a tamper-resistant 15A outlet, combo 15W USB A/C ports or a blank keystone module for data connectivity. The desktop unit is available in either white or graphite finishes with a 6-foot braided fabric cord. It complements, not detracts, from the design of the space.

<https://www.legrand.us/markets/commercial-office/dash-desktop-power>



BuzziRugs absorb sounds



BuzziRugs by BuzziSpace feature absorption qualities that dampen sound throughout a space. Perfect for a classroom or library, BuzziRugs help decrease loud sounds. The back of the rug has anti-skid felt to prevent slipping and is finished in a piping outline for a detailed touch. The BuzziRugs collection is available in small, medium, and round sizes, and in gold, seal, moss, jean, and cloud colorways to fit any context.

<https://www.buzzi.space/acoustic-solutions/buzzirugs>

Directional destratification fan

Greenheck has introduced its model DDF, a directional destratification fan that improves comfort and reduces energy costs by efficiently mixing air from floor to ceiling for uniform temperature distribution. Model DDF is available in three sizes: a 10-inch diameter for ceilings up to 25 feet, a 12-inch diameter for ceilings up to 45 feet, and a 14-inch diameter for ceilings up to 60 feet.

<https://www.greenheck.com/products/air-movement/fans/directional-destratification-fans>



Carpet tile is a study in color



EF Contract has launched WaterColors, its latest carpet tile. Near solid color for each tile spans from neutrals to bold, chromatic colorways. Set against patterned flooring, WaterColors tile brings out those patterns and is excellent at delineating spaces and wayfinding. EF Contract's Encore® SD Ultima nylon fiber creates a unique, warm texture and is engineered to maximize appearance retention with exceptional color performance and sustainability. With 20 colorways, WaterColors tile enables designers to create desired moods for spaces through the use of color—from bold color to energize a space to an earthy color to relax.

<https://www.efcontractflooring.com/product/watercolors/>

Eco-Conscious Cleaning and Disinfecting

Clorox EcoClean™ is a new product line for cleaning professionals in schools and universities who want more sustainable products to help keep facilities clean and healthy. The EcoClean™ line includes a Disinfecting Cleaner, All Purpose Cleaner and Glass Cleaner. All three use EPA Safer Choice and Design for Environment certified ingredients and are available in 25% post-consumer recycled plastic.

<https://www.cloroxpro.com/products/clorox/clorox-ecoclean/>

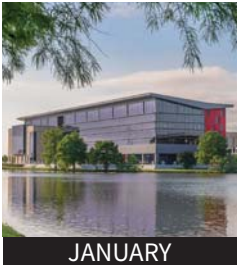


Performance vinyl tile from Ecore

Heritage Motivate is a high-performance flooring surface from Ecore, a company that transforms reclaimed materials into high-performance products. As the first performance vinyl tile from Ecore, Heritage Motivate is designed to be safer, quieter and more ergonomic than traditional luxury vinyl tile products. Featuring a fiberglass reinforced 2mm vinyl surface layer bonded to a 5mm vulcanized composition rubber base layer, the 21mil wear layer provides commercial grade durability paired with the in-demand looks of realistic wood.

<https://www.ecoreintl.com/performance-vinyl-tile/heritage-motivate>

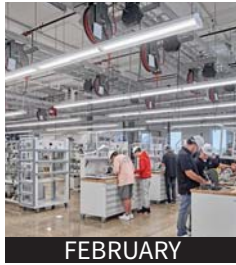
COLLEGE OF THE
MAINLAND, STEAM/
ALLIED HEALTH BUILDING



JANUARY



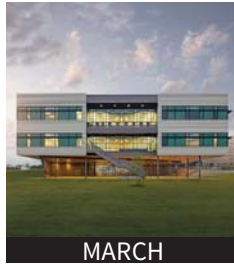
HOBBS CTECH



FEBRUARY



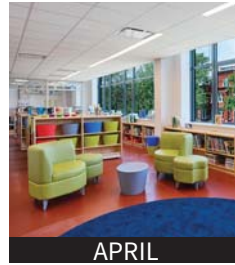
BLUE RIDGE ISD,
BLUE RIDGE
ELEMENTARY SCHOOL



MARCH



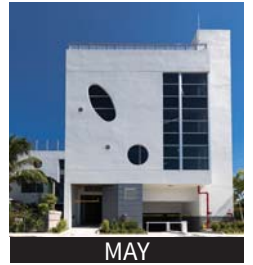
GARRISON
ELEMENTARY SCHOOL



APRIL



KLA ACADEMY



MAY



TEMPLETON
ELEMENTARY SCHOOL



JUNE



IBI GROUP

Click, Print, Plan.

2023 Industry Events Calendar Free at SchoolDesigns.com.

Visit [SchoolDesigns.com](https://www.schooldesigns.com) today to print your complimentary copy of the 2023 *American School & University/SchoolDesigns.com* Calendar of Industry Events. Includes a detailed list of 2023 live and virtual conference and event dates. Plus a comprehensive directory of industry organizations with complete contact information. Each month showcases an outstanding school or university project.

Visit [SchoolDesigns.com](https://www.schooldesigns.com) to get your copy today!

KETTERING UNIVERSITY
LEARNING COMMONS



JULY



AMERICAN SCHOOL
FOUNDATION OF
GUADALAJARA



AUGUST



DELAWARE CITY
SCHOOLS, DEMPSEY
MIDDLE SCHOOL



SEPTEMBER



AFTER SCHOOL MATTERS
WING OF GATELY PARK



OCTOBER



IVAN G. SMITH
ELEMENTARY SCHOOL



NOVEMBER



ECHO EDUCATIONAL
ENRICHMENT
CENTER & DR. DEBRA
PARRISH-HOOKS
ADMINISTRATIVE CENTER



DECEMBER



American
School&University

SchoolDesigns



TOUCHLESS HANDWASHING TRANSFORMED

For unparalleled touchless performance, count on the new Verge™ Faucet line from Bradley for worry-free operation. **Commercial Washrooms. Brought to Life.**



bradleycorp.com/harmony



mct

Check out our new **MCT Coordinates** collection at:
www.forboflooringNA.com




FLOORING SYSTEMS

kalwall.com

Daylighting⁺



+ mastery

Kalwall has been leading the diffuse daylighting revolution for more than 65 years with its high-performance translucent building systems. No other company in the world has dedicated more years, resources, creativity and innovation to the science and art of daylighting.

KALWALL®
high performance translucent building systems

NEW COLORS
BLACK BASE



Designer MEETS **DURABILITY**

Heavy-duty can now be stunning

Enhance the aesthetics and performance of your next flooring project. Visit protect-allflooring.com or call 800.544.9538




© 2022 Protect-All. All rights reserved. For more information, visit protect-all.com.

H₂O-To-Go!®

Touchless Drinking Fountains & Bottle Fillers Designed with you in mind!

Fill Up. Cool Down. Get Going.

Our indoor sensor-operated filling stations provide unlimited fresh water for any application.



Ask about our custom colors, logos, and designs!

EZREACH™ COMPACT SURFACE MOUNTED CHILLED BOTTLE FILLER
MODEL NO. BFEZ168-BCD



INTERESTED? LET'S TALK.

TO PLACE AN ORDER, CONTACT US BY PHONE AT (800) 591-9081, OR EMAIL US AT SALES@MURDOCKMFG.COM

CENTURION®

Superior Reliability & Advanced Technology



Compact, 1600-2000 MBH water heater

Advanced O₂ Trim Technology



pvi.com/centurion

AD INDEX

| ADVERTISER | PAGE | WEBSITE |
|-------------------------------------|--------|--|
| 2023 Educational Interiors Showcase | 24 | hbuzzard@endeavorb2b.com |
| 2023 Industry Events Calendar | 31 | www.SchoolDesigns.com |
| ABM Industries, Inc. | CT | www.abm.com/SimplifyEV |
| Aiphone Communications Systems | 13 | www.aiphone.com |
| Architectural Portfolio 2023 | 27 | hbuzzard@endeavorb2b.com |
| Bradley Corporation | 7, 32 | www.bradleycorp.com/top-fill-soap |
| Carrier Corporation | BC | www.carrier.com/k-12 |
| Daikin Comfort Technologies | 11 | www.daikincomfort.com |
| Facilities Expo | 29 | www.facilitiesexpo.com |
| Forbo Flooring | 9, 32 | www.forboflooringNA.com |
| ISIMET | 19 | www.isimet.com |
| ISSA | IFC | www.rethinkclean.org |
| Kalwall Corporation | 21, 32 | www.kalwall.com |
| Karcher North America, Inc. | 5 | www.Karcher.com/us |
| Landmark Studio Design | 15 | www.LandmarkStudio.com |
| Morris Group International | 23, 33 | www.murdockmfg.com |
| NeoCon 2023 | IBC | www.neocon.com |
| Protect-All Flooring | 14, 32 | www.protect-allflooring.com |
| PVI Industries, Inc. | 3, 33 | www.pvi.com/centurion |
| Uline | 18 | www.uline.com |

This index is a service to our reader. Every effort is made to maintain accuracy, but American School & University cannot assume responsible for errors or omissions.

Redesign at Rice University will move founder's statue to a less prominent spot

Rice University in Houston has embarked on a redesign of its Academic Quadrangle that will move a statue of the university's founder to a less prominent location.

The university says in a news release that changes to the Academic Quadrangle were necessary because it includes a statue of the university's founder, William Marsh Rice, who was a slave owner.

The university describes the Quadrangle as the architectural centerpiece of the campus.

In 2021, the university's Task Force on Slavery, Segregation and Racial Injustice recommended that the Quadrangle "can and must be significantly redesigned to reflect more accurately Rice's values, the history of the university, and the current diversity of the campus, and in a way that clearly and visibly rebukes the institution's segregationist founding and decades of racial exclusion."

Design plans call for moving the statue of William Marsh Rice from its limestone pedestal at the center of the Academic Quadrangle to a less prominent spot within the Quad. The redesign will also seek to add trees for shade and protection from the sun, and



A statue of the founder of Rice University, who was a slaveowner, is being moved to a less prominent location in the school's Academic Quadrangle.

Rice University

spaces for outdoor instruction, gathering, performance, and study.

In addition to moving the Founder's Memorial statue, the university will place artwork in the redesigned Quad landscape that celebrates the beginning of integration at Rice.

Palm Beach County (Fla.) district is buying metal detectors for all high schools

The Palm Beach County (Fla.) school board has approved a \$2.25 million contract to acquire metal detectors for the entrances of all 23 of its high schools.

The Palm Beach Post reports that the board approved the contract even though the district has yet to begin a pilot project that calls for installing metal detectors in four schools.

Superintendent Mike Burke told the board that the contract would lock in the price for the districtwide



School District of Palm Beach County

metal detectors, but it wouldn't require the district to buy the equipment until school board was sure it wanted to.

The pilot project at the four high schools would help the district determine if scanning up to 3,000 students would cause delays at the start of the school day.

The district had hoped to run the pilot program this spring, but supply-chain issues have pushed back delivery of the equipment.

Utah district sued over possible school closings

A group of parents has sued the Alpine (Utah) School District to block the possible closing of five elementary schools.

KSL.com reports that the lawsuit argues that the district hasn't followed the law as it explores the possibility of closing Lehi, Valley View, Lindon, Windsor and Sharon elementary schools.

The parents contend that the district has not followed the spirit or the letter of Utah law for school closures and boundary changes, which requires parents and leaders of affected cities be given a 120-day notice to allow for study and comment.

During a November board meeting after a \$595 million bond election failed, the board requested a districtwide boundary study to explore possibilities around restructuring or consolidating boundaries and evaluating school buildings for potential closure.

In March, the district sent an email to parents and city mayors, councils and administrators, notifying them that the five elementary schools were being considered for closure or boundary adjustments.

However, the lawsuit contends that at a Feb. 28 board meeting, the board in effect voted to close the five elementary schools and carry out the associated boundary and program changes.



A lawsuit contends the Alpine district hasn't followed proper procedure as it considers whether to close some of its schools.

Google

District officials say the vote didn't decide the fate of the five schools but, instead, was a vote to initiate the formal study process. They maintain that no final decision has been made regarding closings. A final decision likely won't come until the end of June. ■



Together

We
Design

NeoCon® is a registered trademark of Merchandise Mart Properties, Inc.

June 12–14,
2023

NeoCon

The world's leading platform
for commercial design

THE MART, Chicago
neocon.com

Produced by:

THE MART
A VORNADO PROPERTY



Billions in funding.

NO TIME TO WASTE.

Connect with Carrier for the solutions and expertise you need to make the most of your Elementary and Secondary School Emergency Relief (ESSER) funding before it's too late. With deadlines for ESSER funding fast approaching, now is the time to make upgrades and enhancements that will drive student health and safety, building efficiency and sustainability for years to come.

Carrier can help you use ESSER funding to:



Make upgrades to HVAC systems to improve ventilation, filtration and indoor air quality



Modernize fire safety technologies and emergency response plans



Leverage access control and mobile credentialing technologies to customize access and reduce physical touch points



Implement advanced controls and the Abound™ platform to reduce energy usage and drive toward net zero



Ensure ongoing performance and optimization with BluEdge™ service for the entire lifecycle

Count on Carrier to help you optimize the health, safety and performance of your school with confidence – **even under a tight timeline.**

Visit carrier.com/k-12 to get started

