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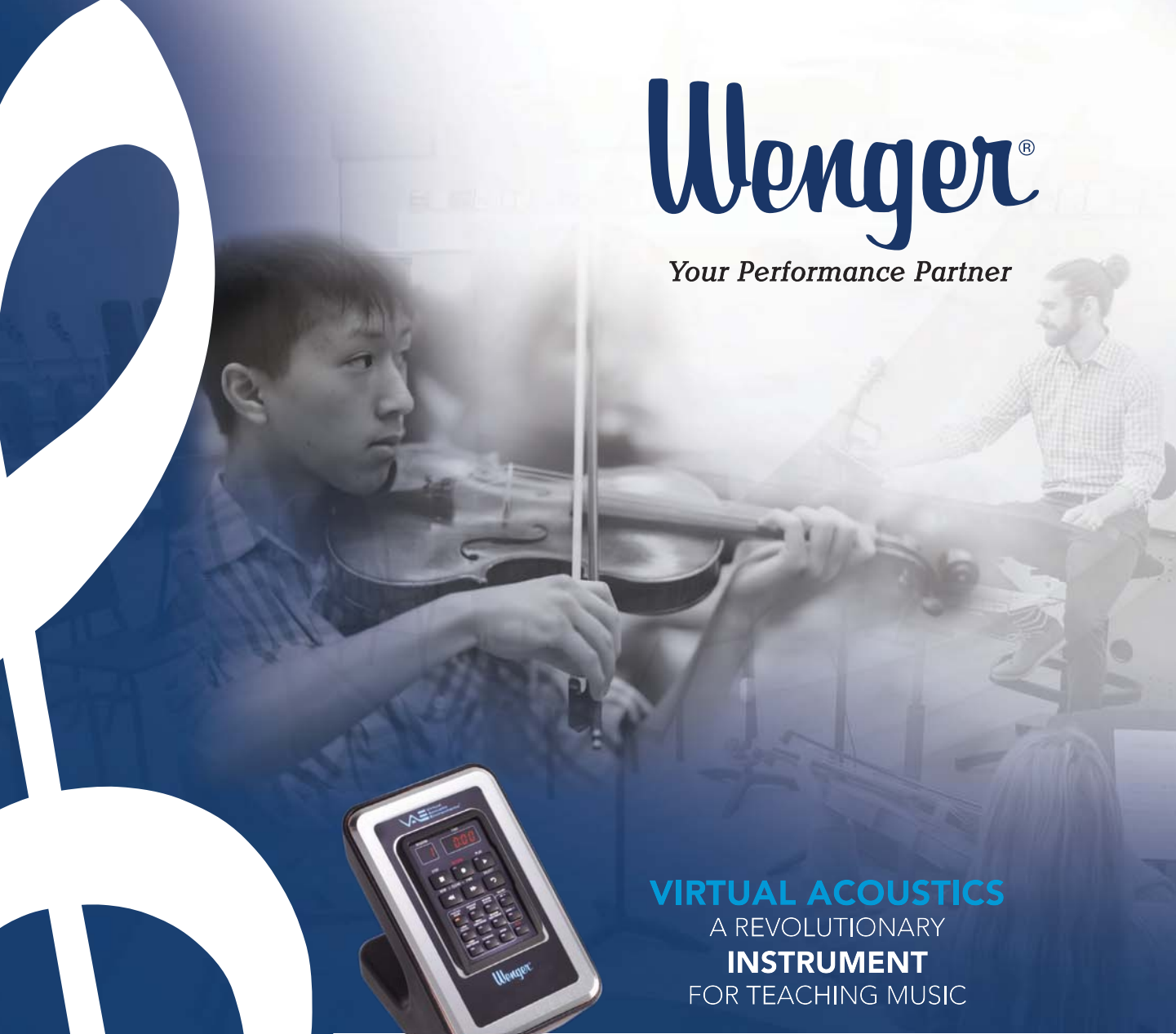

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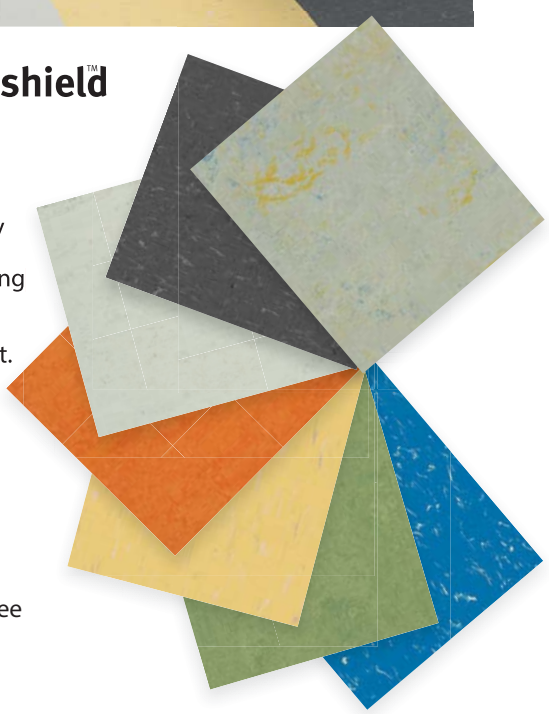

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LEARNING IN FEAR

The deadly shooting attack in Uvalde, Texas, marks another grim milestone in school violence.

Just a few weeks after I began writing for American School & University, two students at Columbine High School in Colorado unleashed a shooting attack that killed 12 of their classmates and a teacher.

Amid the shock and the sadness, there were still reminders that such acts of extreme violence were rare and that classrooms were safe spaces for tens of millions of U.S. schoolchildren. My son was a little more than a year away from beginning kindergarten, and post-Columbine worries about safety never entered my thoughts as I prepared for him to head off to school.

More than 23 years later, after the attack at Robb Elementary School in Uvalde, Texas, the reaction seems different. The specific circumstances of the shootings—19 children and two teachers massacred—are heartbreaking, but after Columbine, Virginia Tech, Sandy Hook, Parkland, and countless other school attacks not horrific enough to be remembered by name, can anyone say they were shocked?

At the same time, the belief that most schools are safe—*my school* is safe—has steadily eroded each time another headline tells us of the latest bloody episode. As the enormity of the Uvalde attack began to emerge, the internal chat network at our company, most of whom were nowhere near Texas, was filled with comments from people scared about allowing their children to go to school the next day.

The feeling is widespread, says U.S. Education Secretary Miguel Cardona.

"I would be failing you as secretary of education if I didn't tell you I was ashamed that we as a country are becoming desensitized to the murder of children," Cardona told a U.S. House committee two days after the attack. "I'd be failing you as secretary of education if I didn't use this platform to say that students and teachers and school leaders are scared."

This magazine has written a lot about how high-quality facilities can have a positive effect on learning. The opposite is also true: Inadequate facilities and unhealthful conditions create obstacles to learning. We've seen the disruption Covid-19 has inflicted on the nation's education system.

Unless people can set aside their political gamesmanship and try to seek workable solutions to school violence, the fears that students and teachers have about their day-to-day safety will continue to undermine education. ■

Mike Kennedy, senior editor, can be reached at *mkennedy@asumag.com.*

JEWISH SCHOOL BUYS FORMER CATHOLIC PARISH PROPERTY IN CHICAGO FOR $2.95 MILLION

The Joan Dachs Bais Yaakov – Yeshivas Tiferes Tzvi Elementary School, a Jewish day school, has bought the former St. Timothy campus in Chicago from the Catholic Archdiocese.

The St. Timothy Parish closed last year amid declining worship attendance, reports Block Club Chicago. The St. Timothy school closed in 1993.

Joan Dach Bais Yaakov bought the combination church-and-school building, rectory and parking lot from the Archdiocese of Chicago for $2.95 million, according to property records.

Image courtesy of Google

The archdiocese authorized the sale of the campus in 2021 after closing St. Timothy and merging it with nearby parishes.

Joan Dach Bais Yaakov has not said if it plans to move its existing school to the former St. Timothy campus or if it will open an additional campus in the neighborhood.

Joan Dachs Bais Yaakov was founded over 60 years ago and has grown into the largest Jewish elementary day school in the Midwest. It serves about 1,450 students, according to its mission statement.

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SOUTHERN METHODIST UNIVERSITY BEGINS $140 MILLION UPGRADE OF BUSINESS SCHOOL FACILITY

Southern Methodist University is embarking on a $140 million renovation and expansion of its Cox School of Business on the Dallas campus.

The David B. Miller Business Quadrangle project will expand the business school's footprint by 30% and will connect existing facilities with four new buildings, the university says in a news release.

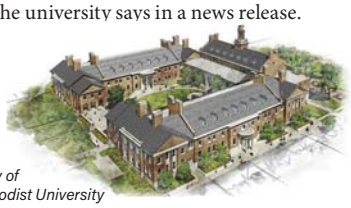

Image courtesy of Southern Methodist University

"We are retooling the Cox School to create a more collaborative environment – to give students and faculty easier access to collaborate, to gather and share ideas and gain inspiration from one another," said Cox School Dean Matthew B. Myers.

The project is expected to take about two years.

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NEW SCHOOL IN LAS VEGAS WILL FOCUS ON CONSTRUCTION TECHNOLOGY AND ADVANCED MANUFACTURING

The Clark County (Nev.) district is opening a school focused on construction technology and advanced manufacturing.

Image courtesy of Clark County School District

The yet-to-be-named school in Las Vegas will help students prepare for careers in those fields and earn experience and credentials, reports The Nevada Independent.

The school will accommodate about 250 students when it opens later this year and will expand in future years.

The construction program will cover general construction skills, as well as foundational skills related to electrical, plumbing and HVAC systems, the district said.

Classes in the manufacturing program will focus on safety, engineering design, power systems and principles related to electronics and instrumentation. The students will work with specialized equipment, including power tools.

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DEPARTMENT OF DEFENSE WILL REPLACE ELEMENTARY SCHOOL ON MARINE CORPS BASE IN HAWAII

The U.S. Defense Department will contribute $96 million to replace an aging elementary school on a Marine Corps base in Hawaii.

Image courtesy of Marine Corps Base Hawaii

The new school on Marine Corps Base Hawaii on the island of Oahu will replace the dilapidated Mokapu Elementary School, which had received a "poor" rating from the Defense Department.

The new campus is estimated to cost about $120 million. The state of Hawaii will allocate $24 million for the project, according to the Hawaii Department of Education.

The existing Mokapu Elementary campus was constructed about 70 years ago and consists of 12 permanent buildings and 10 portable structures.

The school has about 813 students enrolled, well in excess of the stated capacity – 627 students.

The new campus will be able to accommodate about 975 students in grades kindergarten through six.

Construction is projected to take about four years to complete. ■

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IMPROVING INDOOR AIR

By Mike Kennedy

To improve indoor air quality (IAQ) and combat the spread of Covid-19, schools have prioritized increasing outdoor air intake, the Center for Green Schools says in a new report.

The report, "Managing Air Quality During the Pandemic: How K-12 Schools Addressed Air Quality in the Second Year of Covid-19," surveyed districts from October through December 2021 and found that increasing outdoor air through HVAC systems was the most prevalent building engineering control measure carried out by schools. Opening windows in school facilities was the next most common step.

However, many schools also reported that their efforts to follow some of the recommendations for improving IAQ were stymied because their HVAC systems were not designed to enable greater outdoor air flow.

"The results highlight the urgent need to better support school districts with implementation of airborne infection control strategies to mitigate the immediate Covid-19 threat, as well as future pandemics, seasonal epidemics, and to improve the overall indoor air quality in the near- and long-term," the report says.

The Center for Green Schools survey, conducted with technical support from ASHRAE, is a follow-up to a 2021 report from the Center. The latest survey received responses from 88 districts representing over 4,000 schools and over 2.6 million students.

"There is a great deal of opportunity to improve IAQ in schools though more widespread implementation of HVAC ventilation and filtration, operable windows and germicidal UV," the report says.

Survey respondents said their efforts to take proper steps to improve air quality and ward off spread of Covid-19 was made more difficult by a flurry of information, quickly changing and sometimes contradictory, about the best measures to adopt.

"The confusion caused by the need to sort through a lot of rapidly changing information related to which Covid-19 controls to prioritize—and a barrage of marketing for air cleaning devices—to make decisions that can be accepted by the broader community was a common theme that emerged in focus groups," the report says.

Engineer with clipboard checking the installation of the ventilation system HVAC fan on the roof.
Image courtesy of Getty Images.

The survey also found that schools have been carrying out steps to improve IAQ with federal Covid relief funding rather than capital or operating funds. That raises the question of whether schools will be able to continue those initiatives once Covid relief funds dry up.

"Overall, only 54% of districts responded that they have access to funding to implement additional ventilation and filtration strategies or to make other building changes in schools," the report says; "23% responded that they do not, and 24% responded that they were unsure. Considering that at least 36,000 of the nation's 100,000 public schools are likely in need of HVAC system updates or replacement, the lack of capacity to implement additional measures is concerning."

The Center says that schools need to be give clear guidance so that they have the flexibility to use different strategies to improve IAQ depending on the varied characteristics and conditions found in specific school buildings.

"Communication to these districts with a variety of building challenges is important to ensure an understanding that multiple strategies can be deployed in different schools to achieve a similar level of air cleaning," the report says. "There does not need to be a single approach selected."

To further the discussion on how schools can address the need for better IAQ, the Center put forth these recommendations.

- Conduct a cost-benefit analysis that examines capital and operational expenses and weighs them against the health, healthcare, economic, and cognitive benefits of improved air quality. "Guidance from this analysis will especially impact decision-makers in school districts with disparate buildings and equipment who may be uncertain if changes like filter upgrades should be done in part or across the district," the report says.
- Conduct studies to evaluate the effectiveness and the combined effects of different building controls. This should include studies of technologies that districts are less familiar with but are recommended by federal agencies like the CDC, such as upper room germicidal ultraviolet light (GUV).
- Carry out a study of climate-specific best practices to better inform IAQ strategies in different regions of the United States. "This study should include considerations such as heat and humidity, as well as susceptibility to factors like wildfires or air pollution," the report says.
- Develop more informed decision-making strategies regarding how to balance the need for improving IAQ and concerning about increasing energy consumption and costs. "Tradeoffs, efficiencies, control measure effectiveness, sustainability goals, and budgetary concerns all contribute to analyzing these opposing considerations," the Center says. ■

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CLEAN FLOORS

By Mike Kennedy

Summer recess has arrived for many schools and universities, and that provides custodial crews with the opportunity to do more extensive cleaning of the floors in their facilities than might be possible when classrooms and corridors are clogged with students.

For some facilities, that means deep-cleaning carpets; for others, it may involve stripping and waxing resilient-flooring surfaces. At many schools, workers will be doing both, depending on a particular space and its function.

The U.S. Environmental Protection Agency acknowledges that both carpet and resilient flooring can be appropriate choices in schools.

"Carpet offers acoustical and comfort benefits that are generally not available with other floor coverings," the EPA says. "Many schools prefer to use carpet in classrooms and administrative areas. Resilient flooring is used for high-traffic areas including classrooms, hallways, cafeterias, art rooms, restrooms and anywhere liquid spills are likely."

What may be more important than the type of flooring a school chooses is committing to a thorough cleaning and maintenance program.

"Regardless of floor covering type specified, regular and effective cleaning and maintenance is essential to keep the floor covering dry and clean," the EPA says. "Designers should explicitly consider cleaning and maintenance issues when specifying flooring finishes for various uses in schools."

The EPA recommends that schools clean all of their carpets with hot water extraction at least twice a year. Schools should hold off cleaning carpet during summer months unless it can be dried within 24 hours.

If the products used to clean flooring emit gases that could be harmful, workers should schedule those cleaning jobs during times like summer vacation when the facility can be aired out and no students are present.

Guides from the federal government and individual states offer education institutions recommendations for which types of flooring are compatible with which spaces.

Kitchens: Floor surfaces in kitchens must be easy to clean yet slip-resistant, says the U.S. Department of Education's Planning Guide for Maintaining School Facilities. Recommended floor surfaces for kitchens include terrazzo, vinyl composition tile, quarry tile, and sealed concrete.

Photo 213477268 © Daniel Ramos | Dreamstime.com

A guide from Maine education department says the floors in school kitchens should be sloped and have multiple drains so liquids can drain.

Bathrooms: Floors in gang bathrooms also should be sloped and have drains, the Maine guide says. "Specify ceramic tile or heavy, commercial-grade, welded, seamless, uric-acid-resistant vinyl flooring for gang bathroom," the guide says.

Band rooms: For cleanliness, schools should consider vinyl tile flooring, according to the Guidelines for School Facilities in Virginia Public Schools. Carpets installed in band rooms "are often soiled by human salivation with instrument use and may need to be replaced often," the guide says.

Dance rooms: Flooring in these spaces should be a sprung wood or resilient wood floor. "Concrete, tile, wood-over-concrete and wood-over-tile floors are not recommended due to the potential for injury from falls or repetitive jumping," the Virginia guide says.

Gyms: Floor coverings should be selected based on how the school intends to use the space. In elementary schools, where shared-use spaces such as the auditorium are the normal practice, consider high-density carpeting or cushion-backed play surfaces instead of vinyl composition tile or terrazzo, the Virginia guide recommends. Secondary school programs such as weightlifting or wrestling should consider high-density rubber flooring in the spaces to be used for the program.

The layout of a gymnasium should position bleachers and doors to minimize damage to floors from street traffic, the Maine guide says. In gyms with wood flooring, schools should make sure they are able to maintain appropriate humidity levels in the space so that the floor is not damaged by moisture.

Nearly every guide for specifying and maintaining flooring in schools strongly recommends using walk-off mats throughout a facility to prevent outside dirt from getting inside.

"Entry mat systems are critical in trapping soil, pollutants, and moisture that otherwise would spread into and throughout the building, as well as in reducing the cost to properly maintain the building," the EPA says.

Depending on location and climate, a school's walk-off mat setup requires a combination of mat materials, textures, and lengths, the EPA says.

Scraper mat: Minimum of 6 feet long, placed outside entry doors. It removes the bulk of dirt and snow with some form of knobby or squeegee-like projections. Generally, the higher the projection, the better the cleaning and holding capacity.

Absorption mat: Minimum of 6 feet long, placed just inside entry doors. They are generally made from nylon or combinations of nylon and heavily textured piles of polypropylene that can scrape and wick moisture.

Finishing mat: Minimum of 8 feet long; it follows immediately after the absorption mat. Generally made from polypropylene with a course fiber surface, it will both capture and hold any remaining particles or moisture. ■

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MEASURING WHAT MATTERS

Tips to help school custodians assess cleaning performance objectively.

By Stephen Ashkin

In 1956, a quote frequently attributed to management guru Peter Drucker declared, "If you can't measure it, you can't manage it." Author V. F. Ridgway soon responded in an academic journal that this measurement mantra was too simplistic: "Not everything that matters can be measured. Not everything that we can measure matters."

In custodial services for education institutions, some measurements actually do matter. Here are key performance indicators that school and university custodial managers should consider to objectively measure cleaning performance.

Routine surface cleaning

Far too often, cleaning performance is determined by meeting task and frequency requirements and using only visual inspection to measure performance. But this is woefully limiting because it is often the things we cannot see, such as viruses, bacteria, spores, dust contaminated with pesticides, insect droppings, and other contaminants that pose threats to health.

To help measure what matters, ATP (Adenosine Triphosphate) meters can objectively measure contaminants on the surface. The U.S. Green Building Council has developed a resource guide for using ATP meters and other devices. This guide brings ATP meters out of hospitals and food processing facilities and into custodial operations in a way that is meaningful, easy to use and cost-effective.

Changing mop bucket water

The traditional approach to changing mop bucket water is based on replenishment after a set number of rooms, when it "looks dirty" or "smells bad." The decision has little to do with the actual level of soil in the water. When water is dirty, cleaning personnel are just spreading contaminants.

To help measure what matters, turbidity meters are routinely used for monitoring water quality and can be adapted for custodial operations to objectively determine when mop bucket water needs to be replenished.

Dilution of concentrated disinfectants

Disinfectants help protect health; using concentrates that are diluted on site reduces costs and environmental impacts. Unfortunately, some dilution control devices may be extremely inaccurate, and the resulting solution may not have enough active ingredients to effectively perform against pathogens. Or, if too much concentrate is used, disinfectants are wasted and the risk of adverse health and environmental impacts increases.

Photo 199983100 © Lincoln Beddoe | Dreamstime.com

To help measure what matters, inexpensive test strips are readily available that determine the concentration of active ingredients in common disinfectants such as quats, chlorine and hydrogen peroxide. These test strips are easy to use and inexpensive (under 5 cents each). Considering the important role that disinfectants have in protecting student and staff health, school custodians should be objectively measuring the amount of active ingredients in these products.

Slippery floors

According to the Consumer Product Safety Commission, floors and flooring materials contribute directly to more than 2 million falls each year that result in injuries. Although slips and falls do not constitute a primary cause of fatal injuries, they do represent the primary cause of lost days from work and unnecessary injuries and liabilities.

To help measure what matters, coefficient-of-slip devices can objectively measure the conditions of floors to protect occupant health and reduce liability. These devices should be moved out of the laboratory and used in facilities where they can identify potential slipping problems, such as flooring material or floor coating; or slipperiness because of excessive detergent residue, moisture, dust, or ice melt.

These four objective measurement tools can help schools and universities measure and manage those things that are meaningful, as well as easy and cost-effective. ■

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

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STANDARDIZING SCHOOL FURNITURE FOR "FUTURE-READY" LEARNING

By Paul Erickson

Standardizing furniture selections is a great way for a school district to address "future-ready" learning, equity, inventory, and consistency for facilities. Architects, interior designers, and furniture vendors frequently collaborate to establish effective, sustainable standards for 21st-century classroom and furniture design. Thoughtful attention to furniture selection can enhance approaches to learning and teaching.

Developing furniture standards typically involves three major parts: standards development, test models, and furniture acquisition.

Standards development

An initial step in developing standards is to create principles to ensure that the furniture supports choices for each learner (i.e., one size does not fit all), takes ergonomics into account, enhances varied activities for learning formats (e.g., collaborative, project-based, individualized), and offers flexibility. Facility planners may be uncertain about balancing lecture-based classrooms and more collaborative settings. Teachers and staff will want to integrate classroom furniture that enhances multiple teaching and learning styles.

Select dealer partners with K-12 knowledge, architectural entities that specialize in school design, and products that fit a school district's purposes. Use the Building and Institutional Furniture Manufacturers Association as a standard for quality and durability. Overall criteria for selecting vendors should be based on product quality, warranty support, and contract compliance.

Compiling furniture standards into a manual enables planners to personalize each school site. Include an introduction (mission, purpose, procedures), product descriptions (specifications for chairs, tables, storage, tools), and exhibits (contact information, order form examples, idea starters, ergonomics protocols). The product descriptions specify product types, options from approved manufacturers, color choices, budget pricing, dealer information, and selection guides. Standardizing creates a streamlined design approach, incorporates specifications with planned updates, and promotes reduction in work repair orders.

Test models

For successful furniture selection, include time to test the finishes, equipment and cabinetry, component parts, and technology. Vendors may be asked to exhibit their items for staff and students.

Begin furniture planning early. Coordinate test model installations with vendors and establish checklists for evaluating furniture. For classroom systems, include cabinetry doors over open shelving for managing clutter, mobile smartboards for flexibility, and window seats and carpeted floors for learning variety.

For furniture systems, organize furniture groupings by grade level and allow flexibility for swing classes. Provide a variety of table shapes and sizes to accommodate groupings of different sizes; select adjustable-height seating for multigrade groupings and provide casters on most chairs.

Furniture acquisition

Furniture acquisition typically occurs in several stages. Form a planning group at each school (principal, teachers, specialists) and conduct workshops about the available choices. Work with grade-level teams to complete "kit-of-parts" forms for furniture.

Prepare contract documents for furniture vendor bidding, place orders, and install furniture at sites. Prepare a project manual that includes products, layouts, contact information, policies and procedures for additional purchases, and warranty replacement data. The manual should be used as a reference for confirming installations as well as a training document to help teachers and students use furniture as intended.

Furniture standardization and a well-organized process help schools provide sustainable and "future-ready" ergonomic furniture for 21st-century learning. Now may be the time for your school district to standardize furniture selection and installation to enhance student learning and to maintain a manageable furniture program. ■

Paul W. Erickson, AIA/NCARB/REFP, executive officer & partner, is past president of ATSR Planners/Architects/Engineers *(www.atsr.com),* a Minneapolis, Minn., firm specializing in PreK-12 and postsecondary school planning and design. Erickson has 40+ years of specializing in school planning, design, and construction. He can be reached at *perickson@atsr.com.*

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MODERNIZED PERFORMANCE SPACE AT CONNECTICUT COLLEGE

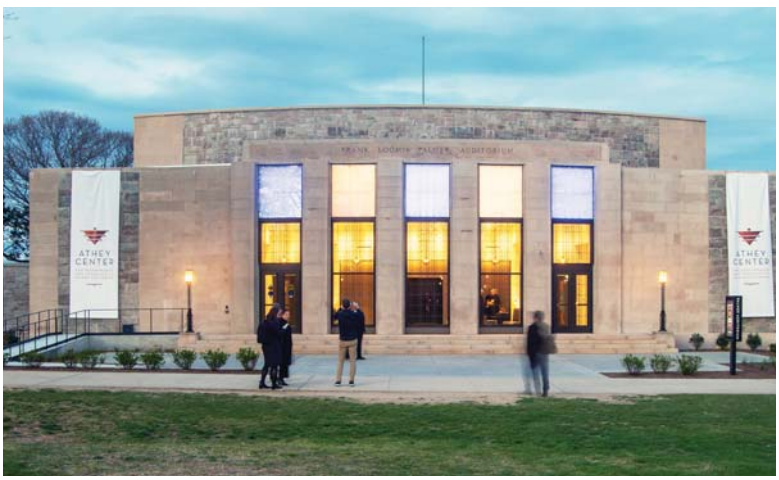
Connecticut College in New London, Conn., has renovated its campus performing arts space and renamed it the Athey Center for Performance and Research at Palmer Auditorium.

The $23 million project has modernized the Palmer Auditorium, a theater designed in 1939. The upgrades include a new entrance, a complete façade renewal, and interior renovation to the auditorium, lobbies, lounge, costume and workshop, as well as teaching, administrative, and support spaces.

"The renovations have resulted in a magnificent transformation that promises to make the Athey Center a destination for the region and an inspiration for future generations of student performers ready to make a difference with their art," Connecticut College President Katherine Bergeron said.

The renovations emphasize the historic nature of the auditorium by enhancing the art deco metalwork on the exterior of the building, restoring the stone, and replacing deteriorating spandrels with light boxes, as well as restoring the original lighting fixtures, which now hold a more prominent place in the lobbies.

The improvements reshape the auditorium seating to comply with the Americans with Disabilities Act, and enhance sightlines to heighten the sense of intimacy throughout the auditorium. The transformation also reshapes the auditorium ceiling for better acoustics and upgrades lighting and audio and visual technology.



Connecticut College's Athey Center for Performance and Research at Palmer Auditorium.
Photo courtesy of Ennead Architects/Aislinn Weidele

The facility also has a new lounge area and box office with an expanded public lobby. The lobby spaces on two levels were reimagined to serve as informal teaching and study spaces.

The architect is Ennead Architects.

Rendering of McClarty Center for Fine and Performing Arts at Reedley College in Reedley, Calif.
Photo courtesy of Darden Architects

CALIFORNIA COMMUNITY COLLEGE'S PERFORMING ARTS CENTER WILL BE CAMPUS FOCAL POINT

Reedley College, a community college in Reedley, Calif. has begun construction of a $28 million performing arts center.

The college says the 25,000-square-foot McClarty Center for Fine and Performing Arts will be situated just north of main campus parking lot. That will enable the facility to become a focal point as visitors come to campus.

Spaces in the McClarty Center will include a 500-seat performance hall, box office, concession stand, art gallery, greenroom and a large lobby area.

Construction is expected to be completed in June 2023.

The architect is Darden Architects.

ILLINOIS DISTRICT EXPANDS MIDDLE SCHOOL AUDITORIUM

The Deerfield (Ill.) district is renovating and expanding the auditorium at Caruso Middle School.

Rendering of expanded auditorium at Caruso Middle School in Deerfield, Ill.
Photo courtesy of Deerfield Public Schools District 109

The $6.3 million upgrade will add modern seating, backstage dressing rooms for performers, improved equipment storage space, and enhanced stage and house lighting systems *The Daily Herald* reports. The adjacent band and orchestra room will be enlarged.

The auditorium hasn't been upgraded since it was built as part of a 1976 addition to the school, officials said.

The existing space does not have permanent seating and does not meet accessibility standards for people with disabilities. District officials said folding chairs or other arrangements often have to be used for performances.

The Deerfield park district is contributing $1 million to the auditorium upgrade. It has used the existing auditorium and will use the upgraded space as well.

The project is expected to be completed by January 2023.

COLBY COLLEGE IS BUILDING AN $85 MILLION PERFORMING ARTS CENTER

An $85-million, 74,000-square-foot performing arts center is under construction at Colby College in Waterville, Maine.

The Gordon Center for Creative and Performing Arts will be the new home for the college's theater and dance, music and cinema studies programs.

The facility will have a dynamic performance hall as well as Colby's first arts incubator to facilitate and nurture emerging art forms, the college says. The building will have dedicated film editing, screening, and recording rooms and will incorporate the latest multimedia and interactive technologies.

Rendering of the Gordon Center for the Creative and Performing Arts at Colby College in Waterville, Maine.
Photo courtesy of Colby College

The building is named in honor of Trustee Michael Gordon, an alumnus from the Class of 1966, whose commitment to the arts will provide expansive arts opportunities for Colby students and the broader Waterville community.

The interdisciplinary nature of the building will also enable more students in fields beyond music, dance, and theater to create, perform, and engage with the arts. The center also has been designed to connect with the community through a range of uses, from informal gatherings to impromptu performances.

At the heart of the building will be a 300-seat performance hall that can be adjusted to accommodate larger audiences and ensembles, including a full symphony orchestra. The center also will have a dark studio equipped with full theatrical lighting, a "sandbox" studio for experimental work, and a dance studio.

The center is scheduled to open in fall 2023.

The architect is William Rawn Associates. ■

BILLIONS FOR BUILDINGS

Large, growing school systems are in a continual race to construct and maintain the facilities needed to provide students high-quality learning environments.

By Mike Kennedy

The United States has more than 13,400 public school districts. The overwhelming majority—more than 11,000—have enrollments of less than 5,000 students and operate and maintain just a handful of campuses. In those districts, constructing a new school may be a once-in-a-generation event.

Then there are the school systems at the other end of the spectrum: sprawling enterprises that need dozens if not hundreds of campuses to accommodate tens of thousands of students; where no one blinks an eye at a billion-dollar bond issue and a crammed calendar of capital improvement projects; where new construction may add 5,000 classroom seats in just one summer.

In these districts, planning, constructing and renovating facilities are embedded into the regular course of business, not a special occasion. Providing that volume of classroom space comes with its own headaches, but one of the benefits of building so many schools is that you get pretty good at it.

"Experience is extremely valuable in any endeavor, and it is very valuable here, too," says Rory Salimbene, acting chief facilities officer for the

All images courtesy of Orange County Public Schools

In the last 20 years, the Orange County (Fla.) district has built 59 new schools, including Castleview Elementary in Orlando.

The cafeteria at Windermere High School, which opened in Orange County, Fla., in 2017.

Orange County (Fla.) school district, which has more than 200 campuses that provide classroom space for over 200,000 students. "We don't come upon many issues that we haven't seen before and don't know how to deal with."

21st-century construction

When a school district covers a lot of territory, and that territory is experiencing continual growth, facility planners will be kept busy finding spots for new campuses and breaking ground. That's the case in Orange County, Fla. For decades, it has been one of the more rapidly growing county in one of the more rapidly growing states. From 1980 to 2020, Census figures show Florida population has more than doubled, from 9.7 million to 21.5 million, and Orange County population has tripled—from 471,016 to 1,429,908.

And because Florida has countywide public school systems, the burden of addressing Orange County's extraordinary demand for more classrooms falls on one district. To provide classrooms for a student population that has doubled since 1990, Orange County Public Schools has spent the early years of the 21st century constructing new campuses and renovating existing ones. From 2003 to 2021, the district says, it has opened 59 new schools to address crowding and it has renovated or replaced 132 existing schools.

And they're not done. Between 2022 and 2030, the plans call for building another 20 campuses. That includes five schools—three elementary, one K-8, and one middle—that will open later this summer and bring the number of campuses in the district to 210.

Money to build

As one considers the volume of construction that the Orange County district has completed in the last 20 years, the question that immediately occurs to other education administrators is "How can they afford it?" Many schools and universities have urgent needs for new or upgraded facilities, but the money made available to them is insufficient to pursue such projects—funding controlled by state legislatures or other government entities is inadequate; voters are unwilling to approve property tax increases to pay for capital improvements; or school boards opt to allocate funds to areas they deem more pressing.

But in the Orange County district, facility planners have been able to secure enough money for construction without those obstacles.

"We're fortunate to have the funds to do what we need," Salimbene says.

The booming nature of Orange County's economy helps generate funding that isn't available to less thriving areas. Most of the money to build and renovate existing schools comes from a half-cent sales tax earmarked for school construction and impact fees imposed on new development.

School systems in other areas benefit from sales tax revenue, but only the Orange County area has Disney World, Epcot, Universal Studios and other tourist magnets. In 2019, before the Covid-19 pandemic decimated travel and tourism, more than 75 million people visited metro Orlando, and they came with money to spend. From January 2003, when the county's half-cent sales tax for school construction began, through June 2021, the district has received $3.5 billion, and 55% of the revenue comes from visitors to the county.

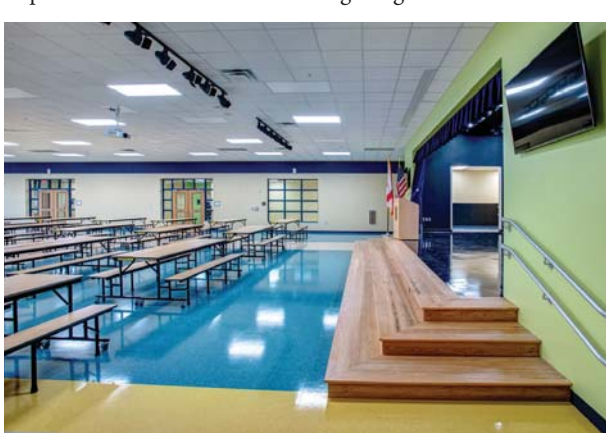
The courtyard at Lake Buena Vista High in Orlando, one of two high schools the Orange County district opened in 2021.

The gymnasium at Horizon West Middle School, which opened in Windermere, Fla., in 2019.

Impact fees, imposed on new developments to help defray the cost of infrastructure improvements brought on by the development, also bolster the budget for school construction. Orange County Public Schools collected $61.1 million in impact fees in 2020-21. In many cases, developers recognize the value of having school campuses near the homes and businesses they are building and provide the district with potential school sites in return for impact fee credits.

"Most of our property that we get for new schools is property set aside by the developer," Salimbene says.

Another advantage of having sufficient funding for facilities is that the district is able to prioritize needs with a minimum of political machinations and in-fighting.



The cafetorium at Castleview Elementary School, which opened in Orlando, Fla., in 2019.

FUTURE DEVELOPMENT IN FORNEY

Even as the cost of constructing modern school facilities climbs, it's still rare for a single school system's bond request to surpass $1 billion. And when a price tag gets to be that large, the district in question is usually one of the nation's largest, with plenty of facilities to build and maintain, and a growing number of students to accommodate.

But on the first Saturday of May, when dozens of Texas school districts asked voters to the polls to approve bond proposals for facility upgrades, the largest request came from the modestly sized (at least for now) Forney Independent School District.

Enrollment statistics for 2020-21 from the National Center for Education Statistics show that the Forney school district, about 20 miles east of Dallas, was the 98th largest in Texas, with 12,765 students.

But Forney was growing, and the district sought and won approval in 2019 of a $623 million bond proposal. It has provided funds to build four elementary schools, a combined middle/intermediate grade campus, and career college and career facility that Forney has dubbed "the OC" for Opportunity Center.

Then, in 2022, the descriptions of growth in Forney began to carry a more urgent tone—"staggering" and "unprecedented." The district said that more than 9,750 homes had been built in the district in the last five years, and more than 28,000 home lots have been approved for construction or are in the planning stages.

Student numbers had risen to 14,349 in fall 2021, and the latest projections said that enrollment would soar to more than 35,000 by 2031.

So the district placed a $1.29 billion bond proposal on the May ballot, and voters approved it by comfortable margin.

It will provide funds for an additional five elementary/early childhood schools, four middle/intermediate schools, a third high school and other facility upgrades.

The playground at Vista Pointe Elementary School, which opened in 2020 in Orlando.

Impact fees, imposed on new developments to help defray the cost of infrastructure improvements brought on by the development, also bolster the budget for school construction.

"Because of what we've been able to do with renovations and replacements," Salimbene says, "we're generally able to spend money where the most urgent need is, without having to worry about "Is it in this [board] member's district?" We don't have those kind of pressures."

Plenty of practice

After building so many schools, the Orange County facilities department has had years to anticipate and solve problems that may arise in a typical project.

"The processes have been refined over time; we produce consistent results," Salimbene says. "We've never not had a school ready for its scheduled opening. It's because of that experience we've gained over the years of doing it over and over again."

The district also regularly conducts facility condition assessment to keep on top of how its schools are aging and when repairs are needed.

"We do it about every five years," Salimbene says. "It's a tool we use to forecast renovation requirements—when I need a new roof or a new air conditioning system."

The number of projects the district has completed also has given the facilities staff a greater awareness of the quality of contractors and vendors available in Central Florida.

A television studio at Castleview Elementary School in Orlando, Fla., one of dozens of schools built in the last 20 year in the Orange County district.

Evolving prototypes

Orange County is able to streamline the design process for new schools by adopting prototype designs that are repeated several times. The district now is working to develop new prototypes.

"We've been using the prototype for elementary for more than a decade," Salimbene says.

During that time, the shooting attack at Marjory Stoneman Douglas High School in Parkland, Fla., ratcheted up concerns throughout the state about school security. So Orange County officials are updating their prototypes to address those concerns, as well as incorporate a growing emphasis on sustainability in school designs.

"We decided, 'Let's more or less start with a clean sheet of paper' and see if we can't make improvements in what we're doing," Salimbene says

Pandemic response

The Orange County district has had to deal with many obstacles in the hundreds of facility projects it has carried out, but "the pandemic was a new one," Salimbene says.

"It has impacted some of the renovation work," he says. "Everything we see on the renovation side is surprisingly expensive. There's been some significant escalation to what we've previously estimated. For some materials, the delivery times have been stretched out."

But the district is on track to have the five schools that have just been built ready to open this summer.

"We have been fortunate in timing with the schools that we're opening this summer," Salimbene says. "For the most part we've gotten out ahead of the more significant issues that we've seen in the supply chain. As we've gotten down to the end, some new issue comes up every week. But we have always targeted early June for completion of new schools to give a little buffer before schools open. So we certainly have weathered the storm." ■

Mike Kennedy, senior editor, can be reached at *mkennedy@asumag.com.*

YOU'RE WELCOME

Community engagement can enhance a school's operations and facilities.

By Ben Thompson

The Covid-19 pandemic has led to a drop in public school enrollment. Student numbers fell by 3% nationwide in the 2020-21 school year compared with 2019-20, according to the National Center for Education Statistics. At the same time, people's confidence in public schools also has declined. Recent Gallup polls say only 32% of people have "quite a lot" of confidence in the school system; in 2020, that number was 41%.

As they emerge from more than two years of pandemic-related disruption, schools must find new ways to bring people together by engaging their local communities, and in doing so, gain back institutional confidence.

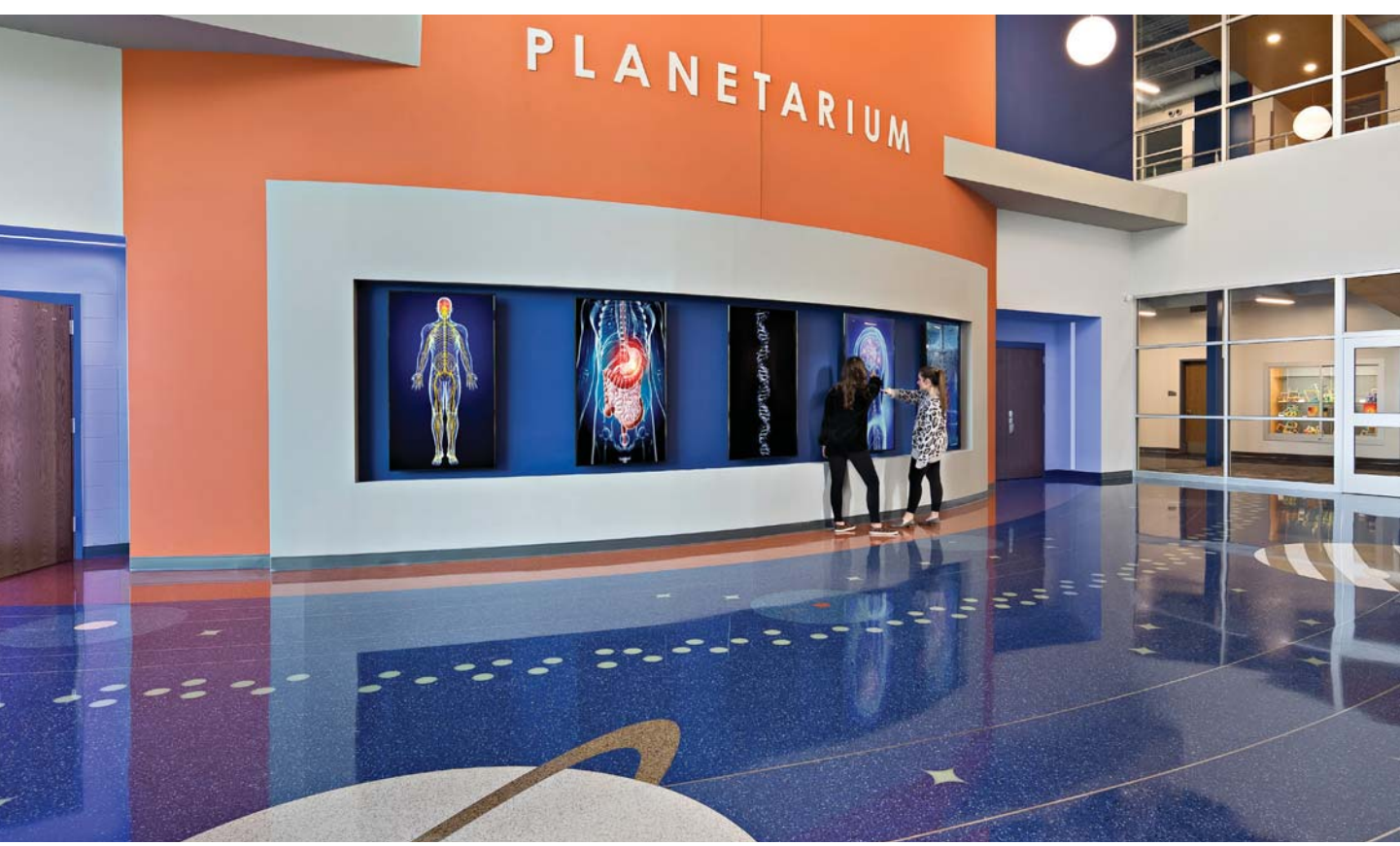
School systems can reap several benefits from investing in facilities. A well-designed facility that taps into community engagement as a resource can have a positive influence on both staff retention and student enrollment.

Facilities can be designed to accommodate innovative educational experiences that community members and local businesses can engage with after school hours. When schools leverage these facilities and maximize their use, the long-term value outweighs the initial costs and construction disruptions.

Community support is a two-way street

Community-oriented facilities not only improve the curriculum and educational experiences of students, but also create new opportunities for the community to support the school. For instance, one of the amenities included when Fairforest Middle School in Spartanburg, N.C., opened a new campus in 2019 was a 108-seat planetarium. The new facility enhances the STEM-based school's astronomy, science and social studies curriculum.

Fairforest Middle also provides opportunities for the community to take advantage of the planetarium during after-school events. The proceeds from ticket sales support the operational costs of the planetarium, and families, local businesses and community groups are able to use Fairforest Middle to enrich their own lives.



The cosmic design of the planetarium at Fairforest Middle School in Spartanburg, S.C., gives students and the community a fun and exciting place to learn. *Image courtesy of Kris Decker & Firewater Photography*

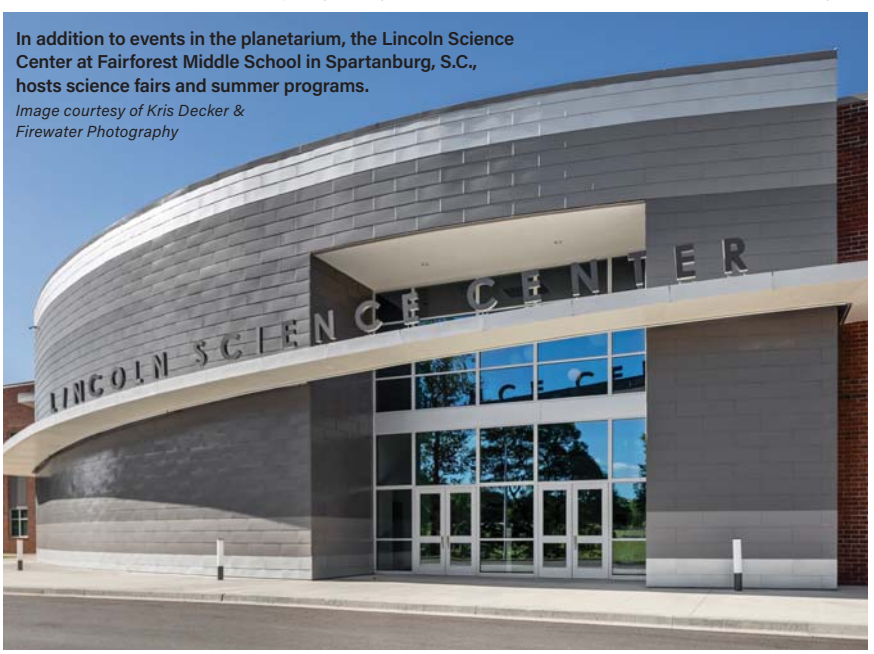
Extracurricular opportunities

Incorporating community-oriented facilities into schools has clear benefits for students. The variety of ways that districts encourage community use of these facilities can alleviate expenses, foster public/private partnerships, and engage the public at large.

Performing arts centers are another type of venue that can easily be made available for community use. These facilities can be built or upfitted to accommodate outside attractions like touring musical and theatrical productions. Students are given an opportunity to observe trained professionals up close; many touring groups are happy to host student-centric previews or learning experiences prior to an evening performance.

School district athletic facilities also can provide greater connection to the community. In addition to hosting district sporting events, athletic facilities with ample capacity can host conference and statewide tournaments. The proceeds from these events can be used to support student programs. These ideas are not new, but designing a facility with both internal and public uses in mind is key to getting the most value from a school venue.

The Anderson Institute of Technology's partnership with Michelin gives students access to industry-standard equipment and provides a fast track to full-time employment.
Image courtesy of Kris Decker & Firewater Photography



In addition to events in the planetarium, the Lincoln Science Center at Fairforest Middle School in Spartanburg, S.C., hosts science fairs and summer programs.
Image courtesy of Kris Decker & Firewater Photography

Worker training

Workforce development and vocational training programs provide additional ways for public school systems to establish and enhance community connections. In Anderson, S.C., the Anderson Institute of Technology (AIT) bolsters its facilities and programs through partnerships with companies like Michelin that provide facility upgrades in exchange for recruitment access to the trained student workforce. Since the start of the partnership in 2019, Michelin has trained more than 30 AIT students through a youth apprenticeship program and welcomed more than 20 students as full-time employees after they completed the program.

Corporate sponsorships are an excellent way for schools to provide or maintain the latest technology and professional-level equipment for student use in exchange for naming rights or internship programs.

These partnerships work best when clearly defined operating agreements are in place. It's important to create a structure that allows private entities to use school facilities in certain capacities in exchange for staffing assistance or financial support. But the school systems must take steps to ensure that student safety and access never is compromised.

If schools are progressive and intentional in designing their facilities, strategic partnerships will come naturally. Large events, tournaments, conferences and other events will spike the demand for unique and attractive venues.

Benefiting the entire community

Community-oriented educational amenities are uniquely poised to enrich student learning experiences and the culture of the surrounding communities.

Administrators should seek out opportunities to use pre-existing assets wisely. Feasibility studies can determine whether renovation of existing assets or new construction will create the best chance for a positive result.

Through thoughtful design and planning, education systems can ensure their facilities support the operations of schools without straining budgets or resources. These facilities can become community hubs — enriching camaraderie among community members with activities that bring people together. ■

Ben Thompson, AIA, ALEP, leads McMillan Pazdan Smith's K-12 Studio. His work focuses on solutions that support student outcomes through programming, master planning, design and project management. He can be reached at *bthompson@mcmillanpazdansmith.com*

ROOM TO MOVE

Avoiding pitfalls when specifying furniture for schools and universities

By Joaquin Abrego, Emilee Keith

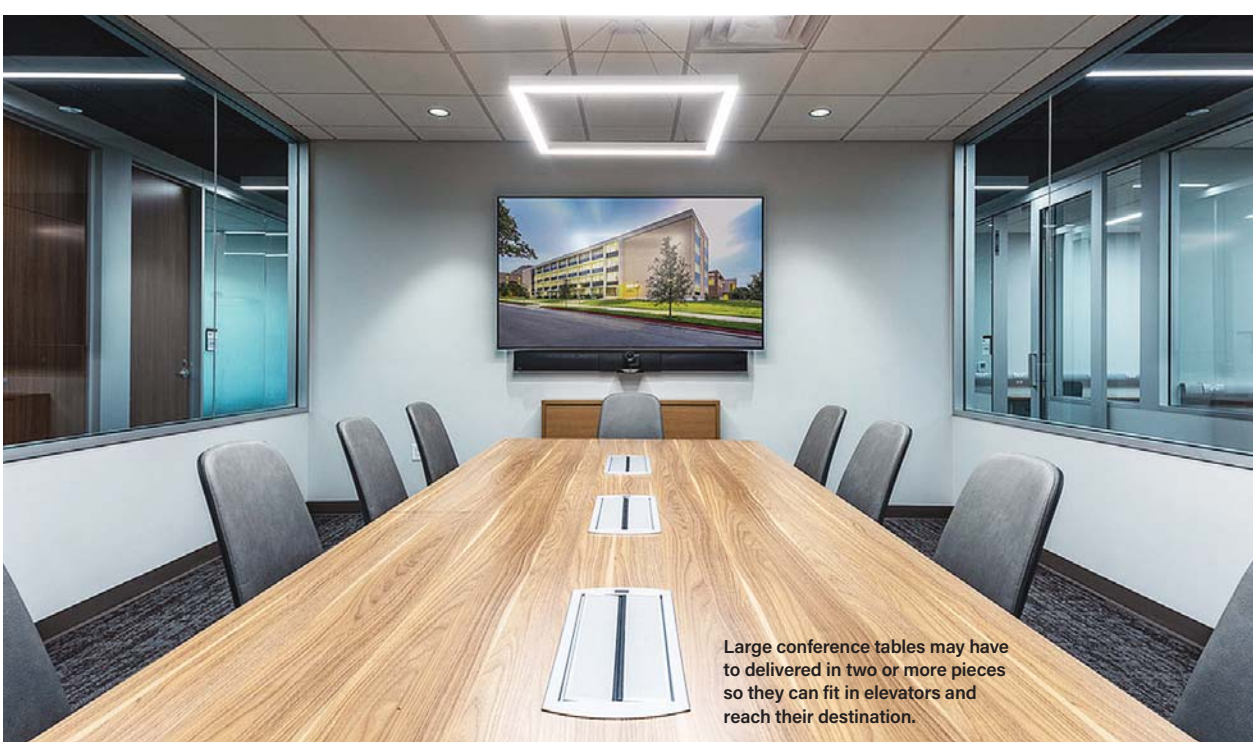
All Images courtesy of PBK

Specifying furniture can be complex and overwhelming for education institutions. Facility planners have finite resources when they decide how to outfit their facilities with furniture, fixtures and equipment (FFE), so it is important to choose wisely as they carry out their furniture procurement processes.

With schools and universities nationwide allocating millions of dollars, interior designers need to avoid the pitfalls and oversights that may arise when they specify furniture. This means not only choosing the right pieces for an educational space, but also preparing the space so that potential problems can be anticipated and the FFE fits seamlessly into the space.

Because of disruptions brought on by the Covid-19 pandemic, lead times on some construction projects have increased significantly and can throw a wrench into the timeline for FFE ordering and delivery. That has forced some education institutions to revise their delivery timelines and move-in dates. But with careful coordination, management, and review, FFE budgets can see a cost savings of $2,000 to $200,000 on a single project and can even get ahead of the long lead times.

Specifying height-adjustable seating can provide the flexibility needed for stools and chairs to fit in multiple locations.



Large conference tables may have to delivered in two or more pieces so they can fit in elevators and reach their destination.

Designers need to make sure furniture is positioned so that it is accessible to power and data outlets.

Planners need to coordinate power sources, data connections, signage, switches and control panels during the furniture selection process.

Here are five key tips to consider when navigating the obstacles that may arise in furniture selection.

Power & Data Coordination

Planners need to coordinate power sources, data connections, signage, switches and control panels during the furniture selection process. Having the wrong connections or installing them in the wrong locations may lead to several problems.

One of the most common issues is having floor boxes that have not been coordinated with a room's furniture. Identifying the infeed and table leg type will help determine where to place a power source. The type of floor box used is just as important to coordinate. Letting a contractor know whether a table is hardwired or soft plugged is just as important as the location.

Poorly placed connections, e.g., a data port situated too far from a power outlet or behind a bookcase, can result in an awkward or uncomfortable workspace. To avoid these missteps, measure

the applicable distances and clearly label them on design specs.

Designers also should make sure the planned furniture layouts of classrooms, collaboration spaces, conference rooms and private offices take into account the location of light switches and sensors. Marker boards or bookcases against walls can inhibit the operation of sensors or access to switches, so the type of furniture and where it is situated must not interfere with those functions.

Surface heights and seating coordination

Pay close attention to the apron size on built-in counters; the wrong measurements may result in inadequate leg room. Generally, it is ideal to have 10 inches to 12 inches between a seat and the bottom of a work surface apron. Mixing up counter height and bar height can cause a lot of heartache and added cost. Specifying a height-adjustable chair or stool can provide the flexibility needed to accommodate the various ranges needed for multiple surfaces. Another quick on-site fix is having the installers cut down furniture legs to accommodate the necessary height.

Specifying undercounter appliances like an ice maker and fridge also should be coordinated with the surface heights. Verify that the appliances being purchased are compliant and will fit in the space.

Placing furniture orders early provides flexibility and gives designers time to adjust to changes that arise because of construction delays.

Elevator coordination

Whether a project is new construction or renovation, planners need to pay close attention to the size of the elevator cabs early in the specification process. A space may have ample room for large items like a conference table or a marker board, but if a furniture piece won't fit in an elevator and is too unwieldy to make it up a stairwell, the items may never get to their destination.

On one project, the existing elevator was not large enough to accommodate the 4-foot-by-12-foot, single-piece markerboards chosen for the space. The installers had to walk them up the stairs to all four floors. Later, on the same project, the elevator car proved to be too small for the large 10-person conference tables that were specified on each of the four floors. In addition, the shape of the conference tabletops made it unfeasible for workers to bring them up the stairs. But by anticipating the elevator's limitations, planners were able to avoid the problem. The tables were specified to be delivered in two pieces instead of one, and the elevator's size was no longer an issue.

If furniture installation requires access to an elevator, the installation schedule needs to be coordinated with those in the facility to make sure the elevator is operational and available to workers delivering the furniture.

Detailed specification sheets

It's all in the details when it comes to furniture specifications. Overlooking the details or missing changes made in the quantities ordered may result in not only a cost impact, but also unnecessary extra furniture. A change in the specification on recent project reduced the number of desks by three, but the change was not caught by the vendor. That could have resulted in a cost increase of $3,000 and three desks without a home. But, by combing through the quotes, the design team spotted the discrepancy before delivery.

Errors may make their way into quotes during the furniture specification process, so designers need to be vigilant about doublechecking documents. In one case, the fabric for a furniture piece was correctly specified, but it was listed in the wrong location. Had this not been

Whether a project is new construction or renovation, planners need to pay close attention to the size of the elevator cabs early in the specification process.

caught before it was sent to production, a very different final product would have been delivered. This one piece and one fabric would have been a $12,000 mistake.

Another important specification of which to be mindful is choosing legs and glides on furnishings that are appropriate for the spaces where they will be placed. This helps avoid damage to the flooring.

Early preparation

Designers have no control over lead times, price increases, delivery complications or building setbacks, but they can ensure the specification book and quotes are prepared much earlier in the design process. The sooner that designers can start furniture selection, the sooner the orders can be placed. In a recent construction project, completion was delayed by three to four weeks, but designers had completed the furniture package and ordered it in plenty of time. Placing the order early enabled the school to avoid annual price increases and gave designers time to adjust to the changes caused by the construction delays. They were able to coordinate with installers to keep the FFE items in their packaging on site until construction was completed.

Another tip that can help cut lead times: Be aware of manufacturers' quick ship items. During the pandemic, many manufacturers have shifted their focus and resources and prioritize keeping their popular items produced and stocked.

Furniture selection represents a long-term investment for schools and universities, and when it is done carefully and correctly, it can positively influence the experience, performance, and attitude of students and staff. Being aware of the possible pitfalls that may be encountered in the specification process will help ensure that the selection and installation of furnishings is part of a smooth and successful facility upgrade. ■

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Emilee Keith RID, NCIDQ is a principal of Interior Design at PBK. She leads the interiors team with 15 years of experience and has a keen eye for space planning, design features and furniture projects. She can be reached at *emilee.keith@pbk.com*

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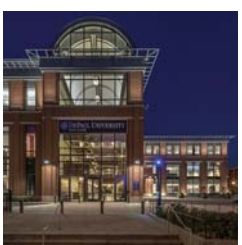

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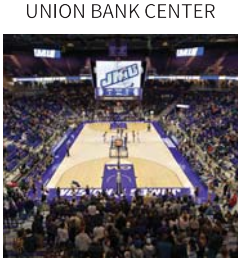

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DALLAS DISTRICT CHOOSES NEXT SUPERINTENDENT

Less than two years after she departed for another job, the Dallas school board has asked a former administrator to return to the district as superintendent.

Photo courtesy of Austin Independent School District

The board announced in May that it has named Stephanie Elizalde as the lone finalist for district's top job.

Elizalde was the chief of School Leadership in the Dallas district until August 2020, when she was hired as superintendent of the Austin (Texas) district. Dallas is the state's second-largest district and has nearly twice as many students as Austin—153,784 compared with 80,718, according to the Texas Edcuation Agency.

The state of Texas requires school boards to wait 21 days before they can offer prospective superintendents a contract for employment.

Elizalde would replace Michael Hinojosa, who announced earlier this year that he was relinquishing the superintendent's job.

A native Texan, Elizalde is a third-generation public school educator who has served in various roles such as teacher, principal, assistant superintendent, and deputy chief.

Austin school board president Geronimo Rodriguez expressed appreciation to Elizalde for her brief tenure there.

"Thank you to Dr. Elizalde for her steadfast leadership through what has been an unprecedented and challenging two years," Rodriguez said. "Her commitment to our...mission allowed our community to safely move through the pandemic and stay laser-focused on academic achievement."

Photo 75760247 © Andreykr | Dreamstime.com

OPEN ENROLLMENT FOR ALL STUDENTS IS COMING TO KANSAS

Starting in June 2024, Kansas students will be allowed to go to any public school district in the state, as long as space is available.

Gov. Laura Kelly has signed legislation creating open enrollment in all of the state's districts, *The Kansas City Star* reports.

The law directs school districts to develop guidelines spelling out how many total students the district can handle, and how many nonresident students they can accept into each grade. Once districts determine their capacity, families can begin applying to transfer their students to the school of their choice. If the number of applicants exceeds the spaces available, a district will have to randomly select students before July 15 each year.

Students who successfully enroll in a new district will be able to remain there until they graduate.

Non-resident students can be denied admittance to a district only if there is not enough space. They cannot be admitted or denied on the basis of ethnicity, gender, income, nationality or for having a disabling condition. School districts also can't admit students for their athletic ability or measure of achievement. If a student is denied enrollment, the school is required to send the family a note explaining their decision.

Some high-performing districts in more affluent communities voiced opposition to open enrollment. They fear their schools will be overwhelmed with transfer requests from non-residents.

DEKALB COUNTY (GA.) DISTRICT FIRES SUPERINTENDENT AFTER LESS THAN 2 YEARS

Photo courtesy of DeKalb County School District

The **DeKalb County (Ga.)** School Board has fired its district superintendent after less than two years on the job.

The Atlanta Journal-Constitution reports that the board approved a separation agreement in April with Cheryl Watson-Harris, effective immediately. She was DeKalb's sixth superintendent in a decade.

Watson-Harris had been serving as first deputy chancellor for the New York City Department of Education in June 2020 when the DeKalb County Board hired her.

After Watson-Harris was dismissed, the board said its relationship with Watson-Harris had been "deteriorating for some time to the point the association became irreconcilable."

"The Board lost confidence in Mrs. Watson-Harris' ability to provide the leadership the district needs in the face of significant challenges," the board's statement said.

Watson-Harris said the board's action "blindsided" her. "I was unaware that my contract for employment would be discussed."

Vasanne Tinsley has been named interim superintendent. She was formerly deputy superintendent of student support and intervention. ■

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