



# PRIVATE UNIVERSITY PRODUCTS AND NEWS

APRIL 2024  
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TECHNOLOGY:  
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CLEAN WATER AND  
CLEAN AIR IN  
**MODERN AQUATICS  
FACILITIES**

CULTIVATING CAMPUS  
CHARM:  
**THE ROLE OF  
EXTERIOR  
AESTHETICS IN  
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### The Right Tools to Make the Right Impression

Jim Terenzio, Yale University’s superintendent of Landscape and Athletic Grounds, likes to think of himself as “director of first impressions.” When prospective students visit the prestigious university, they expect to be awed. That’s a lot of pressure for Terenzio’s lean staff of six, but they’ve mastered the tools, schedules, and methods to make magic happen on the grounds—from landscaping to athletic fields.



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### Clean Water and Clean Air in Modern Aquatics Facilities

As prospective students increasingly cite campus recreational facilities as an important factor in their choice of schools, universities have upped their game to accommodate them. That includes state-of-the-art aquatics facilities which are no longer designed for serious swimmers only. But is your campus armed with the best tools and protocols to maintain these facilities as student use continues to grow?



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Campus aesthetics have a profound impact on the college experience. Let’s explore the trends and popular amenities in landscaping and hardscaping that help shape the experiences of current students while making an impression on prospective students and their families.



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### Shared Values: How Mike Gunter Unites Students and Communities around our Common Love for the Earth at Rollins College

Mike Gunter, professor and chair of the Political Science department at Rollins College, sees the bridge between political science and environmental concerns as a launching point for student and public engagement. His interdisciplinary focus, bold initiatives, and books are playing a pivotal role in bringing people together to address universal concerns.

COVER PHOTO COURTESY ROLLINS COLLEGE

### GREEN TECHNOLOGY

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### Embracing Green Technology: Revolutionizing Campus Landscaping for Sustainability

With the sprawling expanses of college campuses comes the responsibility of maintenance, and in the pursuit of sustainability, institutions are increasingly turning to green technology.

# Editor's Letter

APRIL 2024



Dear Readers,

As we step into the vibrant spring season, it is with great pleasure that we present to you the latest edition of Private University Products and News magazine. With the thawing of winter's grasp, our campuses are bursting with renewed energy and enthusiasm, and it's our mission to capture and celebrate this rejuvenation.

In this issue, we delve into the meticulous landscaping efforts that go into preparing your campuses for the flurry of spring events and influx of visitors. From manicured lawns to vibrant flower beds, every detail contributes to creating an inviting atmosphere that embodies the spirit of spring. We understand the importance of maintaining aesthetically pleasing landscapes, not only for the enjoyment of your students and faculty but also for the enhancement of your campus's overall appeal.

Furthermore, we explore the "green" trends sweeping the landscaping industry, as sustainability becomes an increasingly vital aspect of campus management. From eco-friendly landscaping practices to energy-efficient lighting solutions, we're committed to supporting your efforts to incorporate environmentally conscious initiatives that not only preserve your natural resources but contribute to the long-term health of your campuses.

In addition to landscaping, we shed light on the critical role of aquatic facilities in campus life. Whether it's a serene pond or a bustling swimming pool, these amenities provide recreational opportunities while also serving as focal points for social gatherings. We emphasize the importance of proper water and air treatment to ensure the safety and enjoyment of all who utilize these facilities.

As we share these insights and stories with you, we want to express our heartfelt appreciation to you for choosing our magazine to stay abreast of the latest trends in campus excellence. Your support and engagement inspire us to continue striving for excellence in capturing the essence of your university and college campuses.

We invite you to immerse yourselves in the pages of this issue, in which each article, photograph, and feature reflects the dynamic spirit and rich tapestry of your academic communities. Thank you for joining us on this journey, and may the spring season bring you joy, inspiration, and renewed vitality.

Warm regards,

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PUBLISHED BY FLAHERTY MEDIA  
PO Box 1903, Pelham, AL 35124  
Toll Free: 800-705-5280  
Fax: 855-239-8093

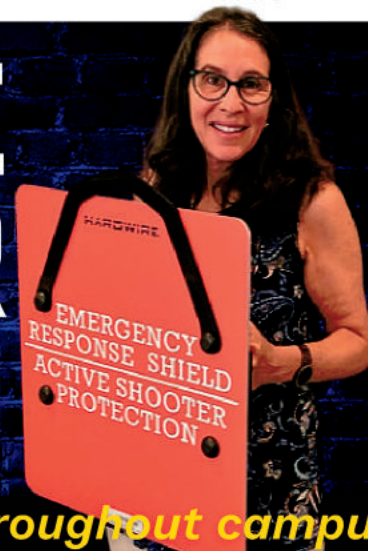
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In recent years, the escalating threat of gun violence has become an alarming concern for educational institutions across the United States. With mass shootings on the rise, it is imperative for private higher educational institutions to proactively address the safety of their staff and students. Recognizing the urgency of the situation, a comprehensive and immediate solution is essential. One such solution gaining traction is the implementation of Emergency Response Shields (ERS), a proactive measure designed to protect against active shooter incidents on campus.

### Ensuring Immediate Protection:

Just as fire safety protocols have been ingrained into the infrastructure of public buildings, a similar approach is crucial for addressing active shooter scenarios in private educational institutions. The ERS serves as the "Fire Extinguisher for Gunfire," offering immediate protection against assault rifles, shotguns, handguns, as well as blades and blunt force weapons. By empowering faculty and staff with this advanced tool, private higher educational institutions can bridge the gap between an incident occurring and the arrival of first responders.

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### Aligning with Best Practices:

The ERS aligns seamlessly with established safety protocols recommended by authoritative bodies such as the Department of Homeland Security's Active Shooter Preparedness Program (Run, Hide, Fight) and the Advanced Law Enforcement Rapid Response Training (ALERRT) principles (Avoid, Deny, Defend). This integration ensures that the use of defensive measures is in accordance with nationally recognized standards, maximizing the effectiveness of emergency response strategies.

### Derived from Military-Grade Technology:

The technology behind Emergency Response Shields is derived from armor technologies initially developed for Department of Defense Programs and extensively fielded on United States military vehicles. These advancements have been integrated into federal law enforcement body armor, assuring a high level of protection for educational institutions against potential threats.

### Creating a Secure Learning Environment:

Beyond the immediate safety benefits, the implementation of ERS has shown to contribute significantly to mental health and well-being within educational communities. As students and staff feel empowered and protected, a renewed sense of security and confidence permeates the campus environment. The visible presence of protective measures can also act as a deterrent, dissuading potential attackers from targeting well-prepared and armored educational institutions.

In the face of increasing threats, private higher educational institutions must prioritize the safety and security of their campuses. Emergency Response Shields offer a proactive and effective solution, aligning with established safety protocols and utilizing cutting-edge military-grade technology. By investing in these defensive measures, institutions can foster a secure learning environment, providing both students and staff with the confidence that their safety is a top priority.



PHOTO COURTESY ROLLINS COLLEGE

## Shared Values: How Mike Gunter Unites Students and Communities around our Common Love for the Earth at Rollins College

BY CYNTHIA MWENJA, PhD

Mike Gunter, Cornell Distinguished Faculty, Arthur Vining Davis Fellow, and professor and chair of the Political Science department at Rollins College, merges his interests in political science and environmental concerns to inspire action both within the classroom and beyond the campus. Gunter's books, his work with the Model United Nations program, and his efforts to embed United Nations Sustainable Development Goals in curricula across the Rollins campus all align with this unique focus.

### Political Science and Environmental Concerns

Prior to graduate school, Gunter was already looking for synergies between climate change and politics. He crafted a program in his graduate studies so that he could work within both disciplines. He added a certificate in environmental systems to his degree in political science to connect these personal interests. He felt environmental studies and political science had a natural synergy—both fields are interdisciplinary, and Gunter enjoys “moving between different groups of experts and helping them talk to each other.”

Meanwhile, Tom Lairson—currently professor of Political Science at Jindal Global University and professor emeritus of Political Science at Rollins College—had secured a grant to create a sustainable development program, and the campus needed someone to bolster it. Gunter applied, and he “was a natural choice” due to his interests in environmental concerns, says Lairson. During their tenure together at Rollins, the two had offices next to each another, and

they bonded over University of Kentucky basketball—both had graduated from that university, albeit years apart.

Maurice (Sucky) O’Sullivan, Kenneth Curry Professor of Literature Emeritus at Rollins, notes that Gunter “was impressive from the beginning,” combining excellent teaching, commitment to service, and an admirable research agenda. O’Sullivan points out that keeping a consistent focus on one’s own scholarship can be a challenge when teaching a full load; doing so takes the consistent commitment that Gunter has displayed. On one occasion, O’Sullivan and Gunter worked together on a grant-funded program about Florida’s Golden Age between 1880-1930. They invited people from around the state, and O’Sullivan still remembers Gunter’s presentation.

“(Gunter showed he) has substance to share both a breadth and depth of knowledge,” he says.

### NCAA Faculty Liaison

Taking on a role outside of his main interests in climate and politics, Gunter began serving as the NCAA faculty liaison for Rollins two years ago. In this position, Gunter is involved in supporting the academic success as well as the health and wellness of the student athletes. A self-professed “competition junky,” Gunter states that he dabbles in sports. Gunter may be downplaying his abilities; Lairson notes that Gunter is a valuable player on the faculty basketball team.

Gunter enjoys serving as the connecting point between athletics and academics and sees himself as a coach for the students outside of their sports. He supports the athletes by attending sports events as well, says Micki Meyer, Lord Family Assistant Vice President of Student Affairs for Engagement and Dean of Rollins Gateway in the Division of Student Affairs.

Gunter says he was attracted to being a professor because of the ability to move fluidly among different types of responsibilities, and





this role is no different. As an advisor and role model for the student athletes, Gunter helps them see how the lessons from their academics and sports apply to academics and other areas.

### **A Message that Transcends Politics**

Gunter's two most recent books examine the ways that everyday people can be spurred to engage in climate action through participating in ecotourism. His 2023 *Climate Travels: How Ecotourism Changes Mindsets and Motivates Action*, from Columbia University Press, is a domestic follow-up to his 2017 *Tales of an Ecotourist: What Travels to Wild Places and Teach Us about Climate Change*. In *Tales of an Ecotourist*, Gunter draws on his own experiential learning as a Fulbright scholar working on seven continents to explore essential misunderstandings about climate change.

*Climate Travels* focuses on core climate threats in the United States and offers potential solutions. Throughout the book, Gunter argues that people's direct

experience matters—that “ecotourism can be the medium by which we grow support” for decisive climate action. As he has promoted the book at various events, Gunter has appreciated the fun in “getting outside the ivory tower” to interact with different groups; he has also been glad to be able to reach the general public with his work. Lairson appreciates the broad audience that Gunter has connected with—he's not just helping the environment, but also “helping the average person understand why they need to be thinking about these issues and why they need to act.”

Gunter is now working on a project titled *Searching for Sustainability in the Sunshine State*, which explores the ways that Florida both serves as a model and falls short on climate action. Since Florida is an attractive destination for vacationers, he notes, many people are familiar with its various locales. Gunter sees alignment in his work with popular travel personalities from Mark Twain to Rick Steves, and he says he draws

*continued...*

He's not just helping the environment, but also “helping the average person understand why they need to be thinking about these issues and why they need to act.”

on the power of travel in similar ways: using high-profile destinations as springboards for connecting with his audience.

Gunter keenly appreciates the way that environmental tourist destinations such as America’s national parks transcend political identity. He points out that there are many “reasons to be concerned, regardless of political persuasion” and sees ecotourism as “a venue in which we can break through political polarization.” He has a vision for improving civil society by emphasizing what we do have in common. So far Gunter’s message has resonated with a wide audience, and he has been invited to give book talks around the country. This sort of interest and exposure, Lairson says, is “uncommon for an academic writer” and shows how distinctive his message is.

O’Sullivan takes it a step further. He says people also respond to Gunter’s message for because he takes the daunting subject of the

environment and “makes it fun.” In many cases, book events have had to be moved from the local bookstores to nearby auditoriums because the interest in attending was so high; Lairson attributes this demand for Gunter’s message to his skills in talking to people in ways they can understand, bringing them to consider his point of view.

Gunter’s audience extends well beyond his public appearances, says Alison Reeves of the History and Political Science Department: “His writings have been featured in Inside Higher Ed, and he’s a commentator on NPR, The Washington Post, and USA Today,” she says, “making him a voice in the broader conversation on environmental issues and sustainable practices.”

**Model United Nations**

In another form of experiential learning, Gunter teaches a Model United Nations course each fall. In the model United Nations

format, students take the persona of a nation and interact as that nation during the event. During the fall 2023 trip, the students were able to tour Washington, D.C., the U.S. Capitol, and the Library of Congress—though their time during the actual event had a tightly packed schedule from early in the day to late at night. Members of the Rollins delegation represented the Dominican Republic as they participated in the Human Rights Council, the Environmental Assembly, and Arms Control.

This experience allows students to apply the lessons they have learned throughout the class. While one or two students on the team participated in Model U.N. in high school, most are new to the concept, Gunter states. He notes that the majority of colleges have some sort of Model U.N. program, and they are lucky to have it funded at Rollins; the students only pay a small fee for administrative costs.

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Benjamin Mack-Jackson, a senior International Relations major at Rollins, was part of the Fall 2022 Model U.N. class which traveled to New York for its competition. He appreciates the experiential learning embedded in the class; it helped him understand his role in the world. Mack-Jackson says that Gunter has been an “incredible professor and leader” whose classes are special. “They bridge the gap between theory and practice,” he says. Mack-Jackson has taken classes from Gunter throughout his time at Rollins, and he appreciates Gunter’s support beyond the classroom. Mack-Jackson—now a freelance reporter and accredited journalist with the Ukrainian government—presented a museum exhibition documenting the war in Ukraine, and Gunter made it a point to visit the exhibition. This instance is just one example of Gunter’s “unwavering support” for his students, Mack-Jackson says.

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**Working with the United Nations’ Sustainable Development Goals**

Meyer appreciates that Gunter has spent his career focusing on finding pragmatic applications of the liberal-arts experience. He is most focused on getting students immediately engaged with important issues, particularly by using political science and environmental concerns to spur interest in taking action on climate issues. Toward that end, Gunter and Meyer have been working through Rollins’ Social Impact Hub to develop ways to “fuse the United Nations’ Sustainable Development Goals into curricula across campus at Rollins.” According to its website, the Social Impact Hub “is a co-curricular department on campus that focuses on approaching societal inequities and environmental challenges with innovation to develop creative and sustainable solutions. The Hub’s space is available for students and faculty to gather and innovate for social change.” The United Nations has 17 sustainable development goals, ranging from “no poverty” and “zero hunger” to “sustainable cities and communities” and “climate action.” Meyer says that students from all majors are interested in Gunter’s unique combination of political science and climate action. Their work with the Social Impact Hub is a great example of how Gunter helps students to “understand global challenges from multidisciplinary perspectives.”

Gunter’s work puts the liberal arts into meaningful action, serving as a model for faculty engagement with vital and pressing issues. His example of showing people that they have common cause, then motivating them through experiential learning to act, provides an inspiring blueprint for faculty members in all disciplines.



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**ABOUT THE AUTHOR:** Dr. Cynthia Mwenja teaches Composition and Rhetoric at the University of Montevallo.

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GREEN  
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# Embracing Green Technology: Revolutionizing Campus Landscaping for Sustainability

BY ED BAUER

With the sprawling expanses of college campuses comes the responsibility of maintenance, and in the pursuit of sustainability, institutions are increasingly turning to green technology. From efficient landscape equipment to eco-friendly practices, colleges are redefining the way they maintain their grounds.

In light of this fast-growing trend, we've looked into the latest landscape equipment needed to uphold the immaculate appearance of college campuses, explored the latest green technologies available, and identified top strategies for maintaining equipment to ensure seamless operations. Here's what we found.

## The Campus Oasis: Landscaping Needs and Challenges

College campuses serve as microcosms of society, bustling with life and activity. However, amid the buzz of academia, the serene landscapes play a pivotal role in fostering an environment conducive to learning and living. Maintaining these green spaces is no

small feat. Groundskeepers and maintenance crews face a myriad of challenges, from mowing vast lawns to pruning intricate gardens, all while adhering to sustainability goals.

### *Landscaping Equipment Essentials*

At the heart of campus maintenance operations lies a diverse array of landscaping equipment, each serving a specific purpose in the quest for pristine grounds. These essentials include:

1. **Lawn mowers:** From traditional gas-powered mowers to electric and even robotic variants, the choice of lawn mower greatly influences both efficiency and environmental impact.

2. **Trimmers and edgers:** Vital for maintaining neat edges along walkways and flowerbeds, trimmers and edgers come in electric or battery-powered models, offering alternatives to their gasoline counterparts.

3. **Leaf blowers and vacuums:** Keeping pathways clear of debris and fallen leaves is essential for safety and aesthetics. Electric leaf blowers and vacuums provide quieter and emission-free alternatives.

4. **Sprayers and spreaders:** For fertilizing lawns, controlling pests, and spreading seeds, sprayers and spreaders are indispensable tools. Opting for precision equipment minimizes waste and environmental harm.

5. **Utility vehicles and carts:** Transporting tools, plants, and waste across expansive campuses requires durable utility vehicles and carts. Electric models reduce emissions and noise pollution.

*Green Technology Revolutionizing Campus Landscaping*

In recent years, advancements in green technology have transformed the landscape maintenance industry, offering innovative solutions to traditional challenges. Colleges across the globe are embracing these eco-friendly alternatives to uphold their commitment to sustainability. Some notable technologies include:

- 1. Solar-powered equipment:** Leveraging renewable energy sources, solar-powered lawn mowers, trimmers, and even irrigation systems are gaining popularity. By harnessing the sun's energy, these tools significantly reduce carbon emissions and operating costs.
- 2. Battery-powered tools:** Lithium-ion battery technology has revolutionized landscaping equipment, offering

cordless alternatives to gas-powered counterparts. Battery-powered tools are quieter, emit zero emissions during use, and eliminate the need for gasoline storage.

- 3. Smart irrigation systems:** Water conservation is a paramount concern for campuses. Smart irrigation systems use sensors and weather data to optimize watering schedules, prevent overwatering, and reduce water waste.
- 4. Biodegradable landscaping products:** From mulch to fertilizers, colleges are increasingly opting for biodegradable and organic landscaping products. These eco-friendly alternatives minimize environmental impact while promoting soil health and biodiversity.
- 5. Precision landscaping technologies:** GPS-guided mowers and robotic lawn care systems offer precise and efficient

maintenance solutions. By mapping out designated mowing zones and avoiding obstacles, these technologies optimize resource utilization and labor efficiency.

**Maintaining the Fleet: Strategies for Success**

While embracing green technology is a pivotal step towards sustainability, maintaining the fleet of landscaping equipment is equally crucial to ensure uninterrupted campus operations. Key strategies for fleet maintenance include:

- 1. Regular inspections and maintenance:** Implementing a comprehensive inspection and maintenance schedule helps identify issues early and prevent costly breakdowns. Routine tasks such as oil changes, blade sharpening, and filter replacements are essential for equipment longevity.

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**2. Staff training and education:** Proper training ensures that maintenance crews operate equipment safely and efficiently. Training programs should cover equipment operation, maintenance procedures, and safety protocols.

**3. Inventory management:** Keeping track of spare parts and consumables is essential for minimizing downtime. Maintaining an organized inventory and establishing procurement protocols streamlines equipment maintenance and repairs.

**4. Data-driven maintenance:** Leveraging technology for predictive maintenance can preemptively address equipment failures before they occur. Utilizing telemetry systems and equipment diagnostics software provides insights into equipment health and performance.

**5. Sustainability integration:** Incorporating sustainable practices into fleet maintenance, such as utilizing biodegradable lubricants and eco-friendly cleaning products, aligns with campus sustainability goals and reduces environmental impact.

As colleges strive to cultivate sustainable environments, the role of landscaping equipment and practices cannot be overstated. By embracing green technology and adopting eco-friendly practices, institutions are revolutionizing campus maintenance operations while reducing their ecological footprint. Through careful maintenance and strategic investment in innovative solutions, college campuses can continue to flourish as vibrant oases of sustainability amid urban landscapes.

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# The Right Tools to Make the Right Impression

BY DREW CARL

Jim Terenzio, Yale University's superintendent of Landscape and Athletic Grounds, likes to think of himself as "director of first impressions."

One step onto the Ivy League institution's campus, and you can feel the prestige in every detail. For prospective students, athletic recruits, parents, and alumni donors, these details play a role in distinguishing Yale from other universities they may be considering.

*continued...*

“We have 60,000 people come in for the Yale-Harvard football game, and we have to put our best foot forward,” Terenzio says. “When it comes to the fields, the landscaping, the facilities, perfection is table stakes.”

Terenzio and his lean staff of six have their work cut out for them. They oversee Yale’s 40-acre athletic campus, which is home to

the practice and competition fields for fall and spring sports, including soccer, football, baseball, tennis, indoor and outdoor track, lacrosse, club rugby, and more. In the summer, Yale hosts major tournaments and camps, including a lacrosse showcase that requires the crew to paint 13 lacrosse fields in just a few days.

Even out of season, athletes practice year-round through individual and captains’ practice. To keep up, the team keeps a strict schedule of the facilities’ usage, so they can plan maintenance on synthetic and grass fields.

“We have to base our workday around the athletes’ schedule,” Terenzio says. “Stuff gets moved around due to rain and snow, so it’s hard to look more than a week out. Luckily, Yale understands the investments in equipment that give our people the bandwidth to create that elite atmosphere.”

### Recruiting Robotic Help to Paint Fields

Painting fields is a constant job for Terenzio and his crew. To paint outdoor fields, they must shoot the gaps between their use by athletes and temperatures warm enough for paint to adhere to the grass. In Connecticut, these days are few and far between. Soccer and lacrosse share a synthetic turf field for competition, so not all lines are sewn in. When lacrosse teams prepare to face an opponent on a grass away field, they practice on a grass field on Yale’s campus.

“We couldn’t do it without our field-painting robots,” Terenzio says. “It would take three or four people several hours to paint a single field manually. That’s unsustainable for this type of environment.”

Yale has used a field-painting robot for the past eight years or so, and the school purchased another in 2022. These robots allow users to drag and drop perfectly proportioned fields wherever they need them through a Google Maps interface. They run automatically to create fields from scratch—none of the usual staking and lining required. And they get the job done in a fraction of the time.

Hiring is one of Terenzio’s biggest challenges. The grounds crew is a union labor force, which operates by a progression system to hire from within. The ramp time to get a new crew member up to speed can be significant.

“Painting a field isn’t easy. A lot of people don’t have the patience for it. And when you find someone who does, and they leave, then you’re in a bind,” Terenzio says. “But our robots are so easy to use. New crew members catch on to the tablet really fast.”

While the robot runs, Terenzio notes, the operator can multi-task and get even more done. They can reseed the turf, check nets, and so on. Another advantage of the robot is the ability to shift fields by a few yards so

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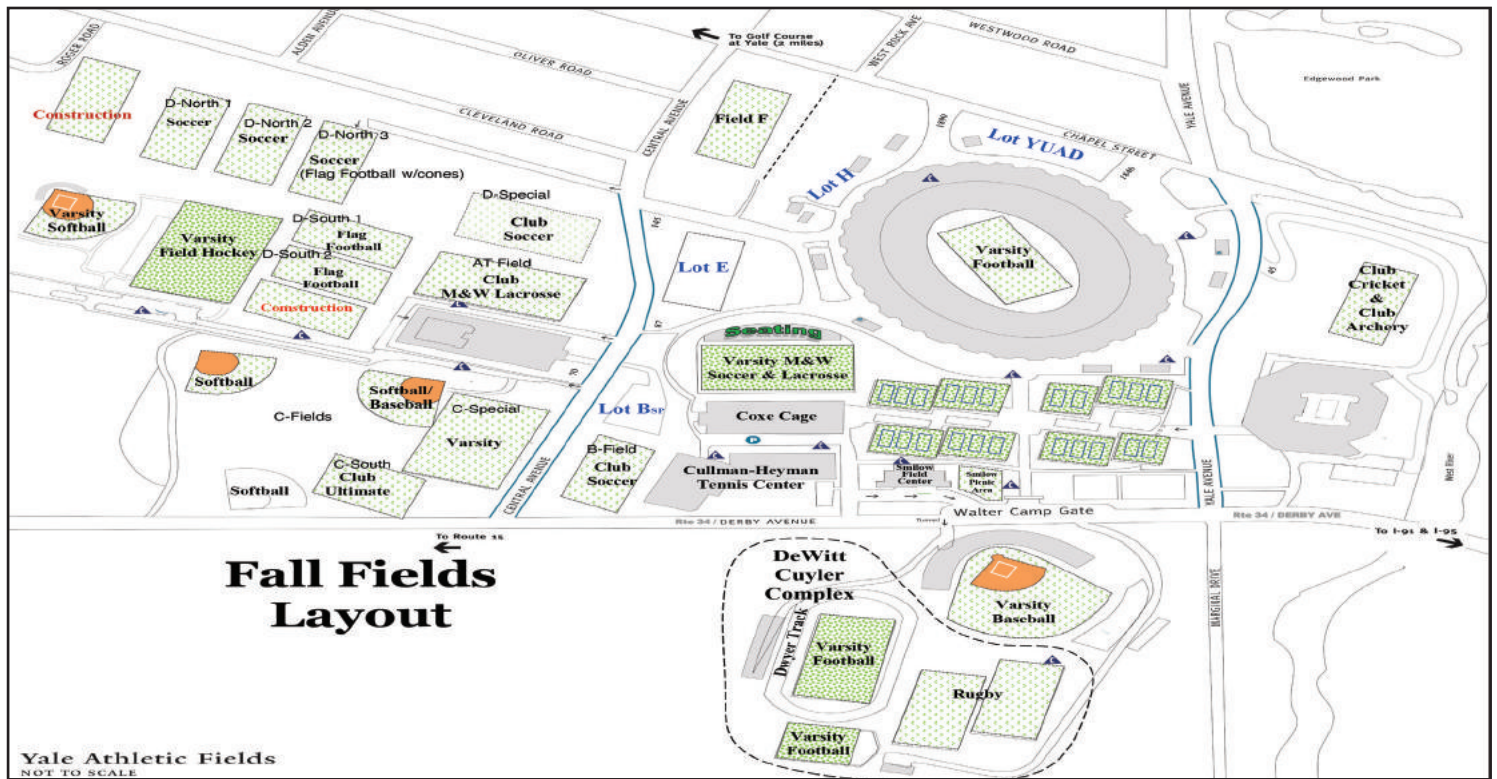
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players aren't wearing out the same areas all the time. This makes the turf easier to maintain and keeps the fields in top-notch condition.

"The lines themselves are hard to compete with, in terms of being crisp, straight, and bright," Terenzio says. "When you're looking at a field like that, it just says something. With the robots, even our club and intramural fields can get the same quality as the varsity squads. More people notice than you might think."

### Creating the total experience

If you're doubting whether the quality of, say, an intramural ultimate frisbee field has any impact on the impression of visitors and prospective students, Terenzio would advise you to think again.

It's not as if prospective students, athletes, and their parents have a checklist of details they check off as they peruse the campus. But at a place like Yale, any gaps in the Ivy-League atmosphere stick out like a sore thumb.

"This school has high standards, and that trickles down to us," Terenzio says. "When the administration comes out for larger events, they'll let us know if something is out of place. I'm proud to say I hardly ever get any calls because this place looks good all the time."

The fields come first, but when painting a field takes one person instead of four, the crew

can take the time to handle the finer details, like flower beds and landscaping in high-traffic entrance areas. Such details allow the university to present new buildings and campus features in their best light and keep older buildings looking fresh and well cared for.

### Putting the right tools in the right hands

Yale invests significant resources in progressing crew members through the ranks. Getting the right people is half the battle. Putting the right tools in their hands is the other half. Doing so allows them to use their skills at the highest level, which provides the highest return to the university.

The tools Terenzio and his team enjoy keep them ahead of the curve and keep them nimble when field and staff changes inevitably happen.

For others looking to boost the efficiency of their grounds crews, Terenzio recommends they ask teams what parts of the job frustrate them most. Which parts take too much time? Become unbearably tedious? Which tasks cause crew members to say, "There's got to be a better way?" What's keeping them from getting to everything on their lists?

"Solving the challenge of painting fields was a huge piece for us. It's literally how six people get everything done with no seasonal help," he

says. "It's all about finding where your biggest time-drainers are and seeing what's out there to streamline those types of jobs."

"Yale is a special place," Terenzio adds. "You can tell just by being here. When alumni come, they can see that the place they love is still going, alive and well. It's as perfect as they remember it being. Maybe even more so."



**ABOUT THE AUTHOR:** Drew Carl is a seasoned marketing professional with over 20 years of industry experience. Carl has leveraged his comprehensive mastery of traditional and digital marketing practices to increase awareness of TinyMobileRobots and assist in customer satisfaction and retention. His strengths lie in the crafting and execution of effective marketing campaigns that align with TinyMobileRobots' needs and goals.

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According to Sean Farrell, senior project manager at Layton Construction, establishing collaborative relationships is key to successful construction projects. One of the best examples of this maxim is a multi-phase university project for which Layton Construction is serving as construction manager. Layton, part of the STO Building Group, is a nationally-ranked commercial contractor with ten offices around the United States. The firm specializes in healthcare, industrial, warehousing, and higher education projects. As construction manager, Layton hires the sub-contractors and manages and oversees the project as part of a team.



“Since we were building windows and doors to make a brand new college, we needed a company with the methodology to produce the product like it was done 100 years ago.”

— Sean Farrell, Sr Project Manager  
Layton Construction

Hope's Brian Whalen, Vice President of Sales, acknowledges that the project was a real test of Hope's capabilities. He is especially proud that they Hope's was able to expedite the schedule even in the face of design changes and in the midst of the Covid-19 pandemic. The shop drawing approval process – including preparation of blueprints of windows and doors with all setting conditions, sizes, customized designs, and required testing – took longer than normal. Changes were made along the way that might have pushed back the delivery schedules for some, but Hope's made adjustments during the production process to deliver all materials on time. Whalen gave a nod to Joey Riggan and the team at Alexander Metals, the frame and glass installer team, saying the overall project went extremely smoothly once the frames were on site.

Says Whalen, “It was a fantastic collaboration among all the parties. Hope's worked closely as the manufacturer to fulfill the architect's design vision, and then the installer worked closely with us to make sure everything was installed executed properly.”



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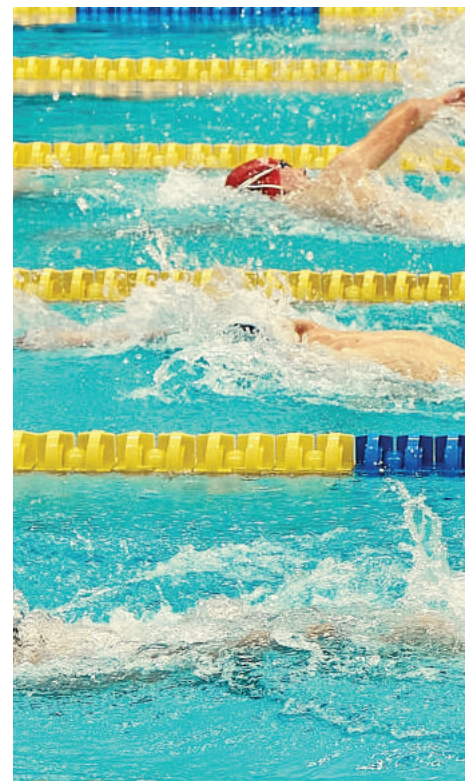


# Clean Water and Clean Air in Modern Aquatics Facilities

BY DAVID VINSON, PHD

In 2014, the National Intramural-Recreational Sports Association (NIRSA) commissioned Dr. Scott Forrester to analyze and interpret the responses of more than 33,500 students who participated in the NIRSA/NASPA Consortium Nationwide Survey. His expansive review of that data set, highlighted in *The Benefits of Campus Recreation* report, reveals that 68 percent of students surveyed reported that campus recreation facilities influenced their decision as to which institution they would attend.

*continued...*





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The report also shows that engaging in recreational activities during these formative years positively influences students' attitudes toward maintaining a healthy lifestyle. Forrester's findings affirm that an overwhelming majority of students attribute health and wellness benefits to their participation in campus recreation facilities, programs, or

services. In fact, nearly 40 percent of respondents indicated they participated three times per week or more, and nearly 80 percent indicated they participated at least one time per week. The findings are revealing, serving as an apt reminder of the impact that campus recreation facilities have on student recruitment and retention.

Across the country, private institutions of higher education have taken the findings to heart and are investing significant time and resources in these facilities not only to create more opportunities for students' health and wellness but to foster an appealing campus culture that may translate to campus-wide economic stability and growth.

Aquatic facilities are an essential component of campus recreation, serving as ideal spaces for the recruitment of students and student-athletes. The versatility of aquatic facilities is partly what makes them so appealing. Students can relax but also exercise with intent, and they can do so individually or in groups. These spaces may serve freshmen orientations, Greek life, collegiate sports, and as a general fitness center for all students. In past decades, university aquatic facilities were designed primarily for student-athletes who exercised and trained vigorously—but modern facilities are now used by a diverse array of students, in addition to faculty and staff. Accordingly, the amenities offered should meet the needs of all rather than a select few. This is reflected in one of the newer trends in modern aquatics programming, which is to design pools with deeper water for better, safer performance in competitive programs, and to provide shallower (almost beach-like entry) water to support recreation programs. Many aquatic facilities now incorporate dozens of water features and pool configurations. These may include a lazy river, beach entry, spray features, bubble benches, lounging ledges, vortexes, rain rings, rope swings, climbing walls, zip lines, movie screens, waterfalls, a band platform, water-fountain features, and even seating areas with Wi-Fi connections and charging stations for those who want to study or collaborate poolside.


#### Turnover Rates of Different Pool Types

It is not unusual for a modern aquatics facility to offer four different pool types, each with varying water depths and temperatures. Pool types usually include a swimming pool, an adaptive learning pool, a multi-purpose pool, and a spa. Careful consideration of turnover rates is a must if one is to keep aquatic facilities functional, attractive, and clean. Preventative maintenance to accommodate turnover rates is a challenge, however, due in part to the high demand of the facilities. Consider, too,

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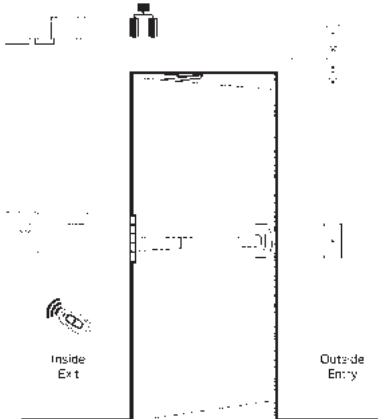



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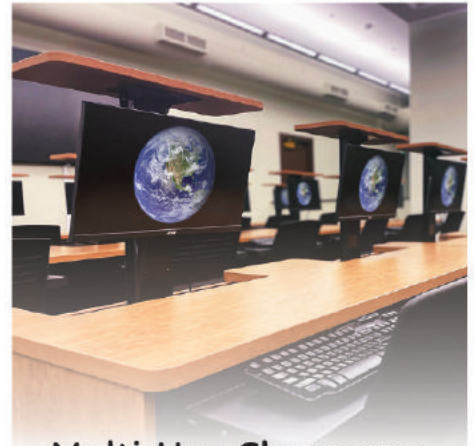
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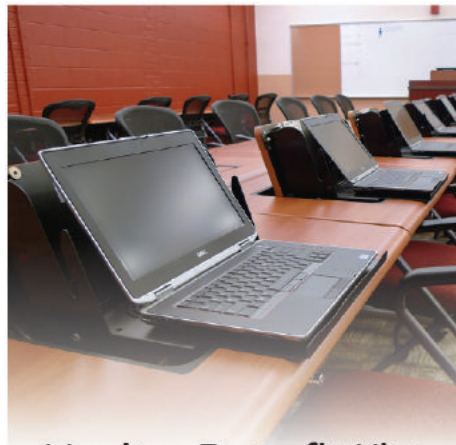
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that more bodies in the water translates to scarcer opportunities to perform preventative maintenance that addresses residue from body oils, sunscreen, and other forms of human debris. A swimming pool which offers water depths of three to 13 feet or deeper and water temperature of 78 to 84 degrees F is required by most states to have water recirculated within six hours or less. But with heavier occupancies, this requirement may prove insufficient; it isn't unusual to see a two- to four-hour turnover rate for a modern recreation pool. A similar challenge applies to adaptive learning pools, multi-purpose pools, and spas. An adaptive learning pool offers water depths of two to eight feet and water temperatures of 82 to 90 degrees F, with a two- to four-hour turnover rate. A multi-purpose pool has a two- to four-hour turnover rate as well, and it has depths up to five feet or greater. Finally, a spa has water depths between three and six feet, a significantly higher temperature rate of 100 to 104 degrees F, and a significantly lower turnover rate of 20 to 30 minutes.

**Preventative Maintenance and Innovative Technologies**

Smart pool monitoring systems are among the most significant innovations in preventative maintenance. These systems use sensors and other advanced technologies to monitor different aspects of pool water quality, such as pH levels, chlorine levels, and water temperature. All can be monitored from a smartphone for convenience. The monitoring systems notify pool operators if an issue with water quality occurs, allowing them to take prompt action. Some smart pool monitoring systems can be synced with other smart devices, enabling operators to control pool settings remotely. The use of automated pool cleaners is another useful method in preventative maintenance. Recent advances in technology have made automated pool cleaners more efficient and effective. Robotic pool cleaners, for example, are small, wheeled machines that use advanced algorithms to navigate the pool and clean it. They are equipped with an electric motor that creates suction to remove dirt and

*continued...*

Smart pool monitoring systems are among the most significant innovations in preventative maintenance. These systems use sensors and other advanced technologies to monitor different aspects of pool water quality, such as pH levels, chlorine levels, and water temperature.

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debris, placing them in a catchment area. Robotic pool cleaners also crawl up and down the pool walls. The technology uses low voltage motors, making them reliable when cleaning the pool for an extended period of time. Some models also include built-in sensors that detect the shape and size of the pool, which allows the cleaner to optimize its cleaning patterns.

Liquid pool chemicals pose a challenge in terms of gauging how much to apply. Chemical dosing systems are another innovation that make preventative maintenance more efficient and reliable. These systems automatically dispense the precise amount of chemicals needed, those such as chlorine and pH adjusters. To do so ensures that the

water remains balanced and free of harmful contaminants without having to monitor and adjust them on a regular basis. Ultraviolet (UV-C) water treatment, another preventative maintenance technology, uses ultraviolet light to disinfect pool water. The technology kills bacteria and other harmful pathogens, making it an ideal swimming pool acid alternative. Moreover, UV-C water treatment reduces the amount of chlorine needed in the pool, which benefits those sensitive to chlorine or who prefer a more natural approach to pool care. Saltwater chlorinators are yet another preventative maintenance option. Instead of using traditional chlorine tablets or liquid, saltwater chlorinators generate chlorine from salt to be added to pool water, resulting in a more natural and gentle method of pool disinfection. Saltwater chlorination also reduces the need for frequent manual cleaning by preventing the buildup of algae and other contaminants.

A final example of preventative maintenance technology is an organic carbon dioxide (CO<sub>2</sub>) system. This water system is designed to reduce the amount of chemicals needed to treat pool water and is considered a more ecofriendly swimming pool acid alternative. In an organic CO<sub>2</sub> system, small amounts of carbon dioxide gas are injected into the pool water. This produces a natural acid that regulates pH levels for a safer and more comfortable swimming environment. The system is fully automated, and an advanced control panel regulates the flow of CO<sub>2</sub> gas into the water, ensuring the stability of the water's pH levels.

Technology has made pool cleaning and maintenance far easier, more convenient, and modernized. Pool operators now have access to a range of innovative solutions and can enjoy crystal-clear, sanitary swimming environments while also reducing the time and effort required to maintain campus-based swimming pools.

### Managing Air Quality in Aquatic Facilities

When one notices a “pool smell,” it’s commonly mistaken for chlorine. It is actually a symptom of a larger air-quality issue in indoor pools. Pool indoor air quality (IAQ) is driven by off gassing disinfection byproducts such as chloramines and chloroform, which form when the pool disinfects dirt and organics in the water. Indeed, the air quality can be impacted by both the number of occupants as well as

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the pool recirculation system. Occupancy load wastes build up in the water, and chemical reactions occur. These reactions allow waste products to be broken down, which in turn release gases into natatorium air. Inadequate turnover rates and chemical feed systems lead to poor air quality and a corrosive environment for the building and its equipment.

Improving air quality is a process-oriented endeavor, one that includes the use of preventative maintenance technologies that address pool water quality, increased air turnover rates, and healthier air distribution. One option for addressing air quality is to introduce more outside air to dilute the pollution indoors. Many pool dehumidifiers include a function called “purge,” which allows for large amounts of outside air to be brought in and then exhausted out. This may not prove to be an entirely effective solution, however—depending on how the system is designed, corrosive air can recirculate too. Pollution is diluted but not entirely removed.

A more effective solution is to address air pollution at its source, thereby eliminating the need for excess outside air. Source-capture

ventilation, in which the HVAC system recirculates nothing but clean air, can effectively relieve the room of bad air. All air being supplied is chloramine free, and the “chloramine bubble” above the pool is disrupted. This reduces the risk of stratification problems indoors, just as it reduces the risk of chloramine recirculation and corrosion to the HVAC system.

As university campuses continue to up their game when it comes to aquatic facilities—accommodating more people than ever before and creating a wide variety of ways for students to take advantage of new, modern pool features—proper maintenance to ensure clean water and clean air are essential. At the same time, the industry has also kept pace with new technology and protocols that make it easier for schools to maintain safe and healthy aquatic facilities—a win-win for students and maintenance crews alike.



**ABOUT THE AUTHOR:** Dr. David Vinson has a PhD in English with specializations in transatlantic

literature and cultural studies. He is a committed scholar, teacher, and dad. If you ever meet David, avoid the subject of soccer. His fandom borders on the truly obnoxious.





# Cultivating Campus Charm: The Role of Exterior Aesthetics in College Life

BY ED BAUER

As a steward of your college's environment, you understand the profound impact that campus aesthetics have on the experiences of your students and visitors. The exterior landscaping and outdoor gathering places serve as more than embellishments; they are integral components of the collegiate experience, fostering a sense of community, tranquility, and inspiration.

*continued...*

Beyond the visual appeal, outdoor gathering spaces play a vital role in fostering social connections and community engagement.

What makes these spaces significant? It's all about how students, faculty, staff, and campus visitors use them, and how they help define the college experience. Lifelong memories are built around games of frisbee on a pristine campus lawn or favorite outdoor spots for lunch with friends. Let's explore the trends and popular amenities that shape student preferences in choosing their educational home.

### **Creating a Welcoming Atmosphere**

Imagine stepping onto a college campus and being greeted by meticulously manicured lawns, vibrant flowerbeds, and inviting outdoor seating areas. The aesthetic appeal of a campus not only captures attention but sets the tone for the entire educational journey. As the saying goes, "You never get a second chance to make a first impression." For many prospective students and their families, the exterior aesthetics of a campus serve as the initial introduction to the institution's values, culture, and commitment to excellence.

### **Fostering Social Connections**

Beyond the visual appeal, outdoor gathering spaces play a vital role in fostering social connections and community engagement. Whether it's a shaded courtyard, a cozy fire pit area, or a sprawling green space, these areas serve as catalysts for spontaneous interactions, intellectual discourse, and collaborative endeavors. In our digital age, where face-to-face interactions are increasingly rare, these outdoor spaces provide invaluable opportunities for students to connect, collaborate, and build lifelong friendships.

### **Promoting Wellness and Well-being**

In today's fast-paced world, stress and anxiety have become prevalent among college students. It's imperative that campuses offer serene outdoor environments for individuals to unwind, recharge, and prioritize their well-being. From tranquil meditation gardens to dynamic recreational areas, these outdoor spaces offer a reprieve from the rigors of



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academic life, encouraging students to embrace mindfulness, physical activity, and self-care practices.

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As you strive to meet the evolving needs and preferences of your student body, it's essential to incorporate modern amenities and sustainable practices into your campus design. From outdoor Wi-Fi connectivity to solar-powered charging stations, technology plays a pivotal role in enhancing the functionality and accessibility of outdoor spaces. Moreover, as environmental stewardship gains prominence, integrating sustainable landscaping practices, such as native plantings and rainwater harvesting systems, not only reduces your ecological footprint but also instills a sense of environmental responsibility among students.

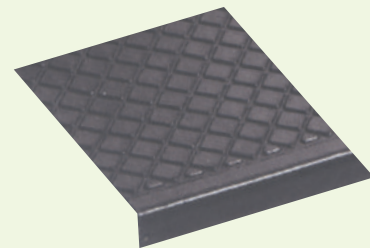
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### Embracing Multifunctional Design

One of the emerging trends in campus design is the concept of multifunctional outdoor spaces that can adapt to various activities and events. Whether it's hosting outdoor classes, cultural performances, or recreational sports, these flexible spaces maximize the utility and

versatility of campus grounds. By embracing adaptable design principles you can create dynamic environments that cater to the diverse needs and interests of your student body, ensuring that your campus remains a vibrant hub of activity year-round.

### Student Preferences and Campus Selection

In a competitive higher education landscape, students are not only seeking academic excellence but also holistic campus experiences that enrich their personal and social development. When choosing a school, students consider a myriad of factors, including campus aesthetics, amenities, and overall atmosphere. Investing in exterior landscaping and outdoor gathering places goes far beyond curb appeal—it's about attracting and retaining top talent, fostering a sense of belonging, and creating memorable experiences that resonate long after graduation. In your ongoing commitment to maintain a unique and inviting campus environment, continue also to prioritize outdoor spaces that inspire, engage, and enrich the lives of your students and visitors. By leveraging innovative design strategies, embracing sustainability practices, and staying attuned to evolving student preferences, you'll ensure that your college remains a beacon of beauty, vitality, and community for generations to come.

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**ABOUT THE AUTHOR:** Ed Bauer has been in publishing for over twenty years. In his early career years, he worked on the staff at Mount Union College and for the last twelve years as publisher and managing partner at Flaherty Media has been privileged to tour many private higher education campuses and talk with numerous staff members who manage these multiple building facilities. He can be reached at [ed@pupnmag.com](mailto:ed@pupnmag.com).

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# Product Spotlight

## BioFit Launches the FBT™ Series of Fold & Roll Booths

BioFit Engineered Products, a developer and manufacturer of ergonomic seating, tables and accessories, has introduced its FBT series of fold & roll booths designed to maximize versatility and functionality across private university and college campuses. Developed in collaboration with award-winning designer Bruce Fifield of Studio Fifield, Milan, Italy, the FBT series was designed to provide unique, versatile furnishing alternatives in learning, dining, and collaborative environments.

*“The FBT series of fold & roll booths represents a transformative solution designed to meet the need for flexible furniture alternatives in fast-paced, ever-changing educational spaces,” says BioFit President Jim Connell. “Working closely with Studio Fifield and after conducting focus groups with real-world users, we took an entirely different approach to addressing the challenges facing educators to rapidly transform spaces while enhancing student interaction.”*

**For more information on BioFit and the FBT series folding booth, visit [www.biofit.com](http://www.biofit.com).**



## Extron Introduces ShareLink Pro ConferenceShare for Wireless Teams or Zoom Meetings

As hybrid environments become more common, seamlessly integrating local room cameras and microphones into Unified Communications meetings has become imperative. ConferenceShare offers a solution by effortlessly sharing video and audio captured by in-room USB devices with Windows or macOS laptops during Teams or Zoom meetings. With ConferenceShare enabled on their laptop, users gain access to USB devices connected to the ShareLink Pro Wired and Wireless Presentation System, simplifying the process of incorporating in-room resources in remote meetings. Experience the convenience of wireless integration with ConferenceShare and ShareLink Pro, making in-room USB devices readily available for enhanced collaboration.

*“We’re excited to introduce ConferenceShare, the latest innovation to our renowned ShareLink Pro Wireless Presentation Systems,” says Casey Hall, Chief Marketing Officer for Extron. “Empowering your ShareLink Pro systems, ConferenceShare seamlessly integrates local room cameras and microphones, bridging the gap between on-site and remote participants and fostering more engaging and productive meetings.”*

ConferenceShare works in conjunction with ShareLink Pro software and ShareLink Pro 1100 and ShareLink Pro 500 units to not only share content from a user’s local computer, laptop, or mobile device to the room display, but also share video and audio from a local USB camera or microphone with remote participants using Teams or Zoom. It also supports integration with Microsoft 365 Calendar to streamline UC meeting connections. Adding ConferenceShare features to a ShareLink Pro system expands wireless sharing capabilities beyond the local room to any location via Teams or Zoom. ConferenceShare requires an Extron LinkLicense on the ShareLink Pro unit connected to the USB room devices.

**Visit [www.extron.com](http://www.extron.com) to learn more.**



# Product Spotlight

## Bradley's Collection of Elvari™ Washroom Accessories Unifies and Beautifies Restroom Designs with Form and Color

Bradley Company, the industry leader in providing the most advanced commercial restroom solutions, introduces the coordinated Elvari™ Washroom Accessories Collection. This complete suite of stainless steel accessories – available in a palette of modern finishes – is designed to unify and elevate design in any commercial washroom space.

Featuring a modern euro style pill-shape design with smooth curves and soft edges, the complete collection effortlessly integrates restrooms' handwashing and toilet areas while making them more functional. With over 650 individual products, Elvari offers the widest range of commercial accessories available, such as grab bars, paper and soap dispensers, waste receptacles, LED mirrors, hooks, shelves and more.

In addition to satin finish stainless steel, Elvari models are available in five popular colors using an exclusive color-coating process for consistency and high durability. These new finishes are easy to clean and resist fingerprints, stains and corrosion to ensure long-lasting beauty. Elvari color selections, including Brushed Black, Brushed Bronze, Brushed Brass, Brushed Nickel, and Brushed Stainless, complement other Bradley product line colors and finishes enabling completely coordinated washroom designs.

For more information on the visit:  
[bradleycorp.com/elvari](http://bradleycorp.com/elvari)



## Moisture Meter for Wood Floors



### The Ligno-VersaTec All-in-One: Pin, Pinless Hygrometer and In-situ RH

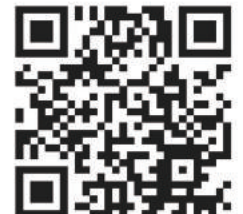
When the relative humidity is at a critical level above or below 30-50%, wood floors can be affected.

Too much moisture and floor planks will expand. Too little moisture and floor planks will shrink and gap.

Regular moisture and humidity checks will indicate a possible problem and steps can be taken to prevent further damage. **Item V2-M+RH.**



For more information:  
800-227-2105 or [www.Lignomat.com](http://www.Lignomat.com)



## Villanova University Recognizes John G. Drosdick's Ongoing Commitment to the College of Engineering's Building Expansion Project by Naming the Building in his Honor

VILLANOVA, Pa. (March 11, 2024)—Villanova University President, the Rev. Peter M. Donohue, OSA, PhD, today announced that in recognition of \$20 million in support of the College of Engineering building expansion project by John G. Drosdick '65, retired chief executive officer and president of Sunoco, Inc., the College's soon-to-be-completed new building will be named Drosdick Hall.

"I cannot thank John enough for his unwavering support of Villanova and the College of Engineering," said University President the Rev. Peter M. Donohue, OSA, PhD. "This is a momentous time for the College of Engineering and the entire Villanova University community. Drosdick Hall will enhance the Villanova Engineering experience for generations."

This most recent commitment by Drosdick continues his longstanding support of Villanova Engineering and will go toward the Engineering building capital project and to creating an endowment to support Drosdick Hall and the College of Engineering. Drosdick was an early supporter of the Engineering building expansion, including an investment in the Drosdick Innovation Lab, which will provide students with increased opportunities for hands-on, experiential and collaborative learning in a space that supports scalable real-world engineering projects. Previously, he also endowed the College of Engineering deanship through the Drosdick Endowed Dean's Fund, which supports the ongoing strategic priorities of the College, as well as the John G. Drosdick Endowed University Scholarship, which supports Engineering students with demonstrated financial need.

"I have seen how a Villanova education can have a profound impact on the path a person chooses to take. It is for that reason that I wanted to give back," said John G. Drosdick '65. "I am extremely grateful to Villanova for the Engineering education it provided me and how it helped me to grow both personally and professionally. I want to make sure that tomorrow's engineering students have the same transformative experience I had at Villanova.

This new building will create these opportunities for our future engineers."

Villanova began construction on the 150,000-square-foot addition to the primary academic building of the College of Engineering in 2022. More than doubling the size of the existing building, the expansion will provide a new home for the College of Engineering and elevate the College's academic and student experience by offering improved and expanded research facilities that focus on interdisciplinary connections, as well as state-of-the-art instruction spaces for hands-on, problem-oriented and team-based learning.

"Drosdick Hall will serve as a crossroads for innovation for Villanova Engineering students, faculty and staff, and transform the educational experience for the mid-century and beyond," said Michele Marcolongo, PhD, Drosdick Endowed Dean of the College of Engineering. "We are so thankful for the generous support of John Drosdick to the College of Engineering."

When the building opens its doors to students in Fall 2024, Drosdick Hall will unite the Villanova Engineering community under one roof. Every aspect of the expansion has been designed to foster connections and facilitate collaborative discovery and cross-disciplinary advances. The new facility will increase the space available for innovative teaching and learning, and will also provide 20+ new engineering labs, furthering the College's commitment to interdisciplinary research. For more on the Engineering expansion project, visit [www1.villanova.edu/university/strategic-plan/ceer-expansion.html](http://www1.villanova.edu/university/strategic-plan/ceer-expansion.html)

John G. Drosdick '65 (College of Engineering), retired as the chief executive officer and president of Sunoco, Inc., in 2008. A former chair of the Villanova University Board of Trustees, Drosdick earned his Bachelor of Science in Chemical Engineering at Villanova and a Master's in Chemical Engineering from the University of Massachusetts at Amherst. He began his career with Exxon in 1968, where he held a wide variety of management

positions. In 1987, he was named president of Tosco Corporation and, in 1992, president of Ultramar Corporation. Four years later, Drosdick became president and chief operating officer of Sunoco and was elected chairman and chief executive officer in May 2000.

**About Villanova University College of Engineering:** *Founded in 1905, Villanova University College of Engineering is committed to an educational program that emphasizes technical excellence and a liberal arts education within the framework of the University's Augustinian Catholic tradition. The result is rigorously educated, socially grounded, conscientious thinkers and doers who are professionally prepared to make meaningful change in the world.*

**About Villanova University:** *Since 1842, Villanova University's Augustinian Catholic intellectual tradition has been the cornerstone of an academic community in which students learn to think critically, act compassionately and succeed while serving others. There are more than 10,000 undergraduate, graduate and law students in the University's six colleges—the College of Liberal Arts and Sciences, the Villanova School of Business, the College of Engineering, the M. Louise Fitzpatrick College of Nursing, the College of Professional Studies and the Villanova University Charles Widger School of Law. Ranked among the nation's top universities, Villanova supports its students' intellectual growth and prepares them to become ethical leaders who create positive change everywhere life takes them. For more, visit [www.villanova.edu](http://www.villanova.edu).*

# EDUCATION

## LARGE DISPLAY SOLUTIONS



### LASER PROJECTION

Perfect for any size classroom or lecture hall, Optoma high brightness laser projectors deliver exceptional, life-like images and crystal clear text. Laser light source provides up to 30,000 hours of maintenance-free operation with no lamps, no filters!

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Being incredibly versatile and easy to install, our projectors are a dream for designers and installers everywhere. We have a laser projector that suits any installation – classroom, lecture hall, auditorium, cafeteria, or really any size venue.



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