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ARCHITECTURAL NEWS + PRODUCTS

VOLUME 9, ISSUE 2

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WAC LANDSCAPE'S ACCENT LIGHT

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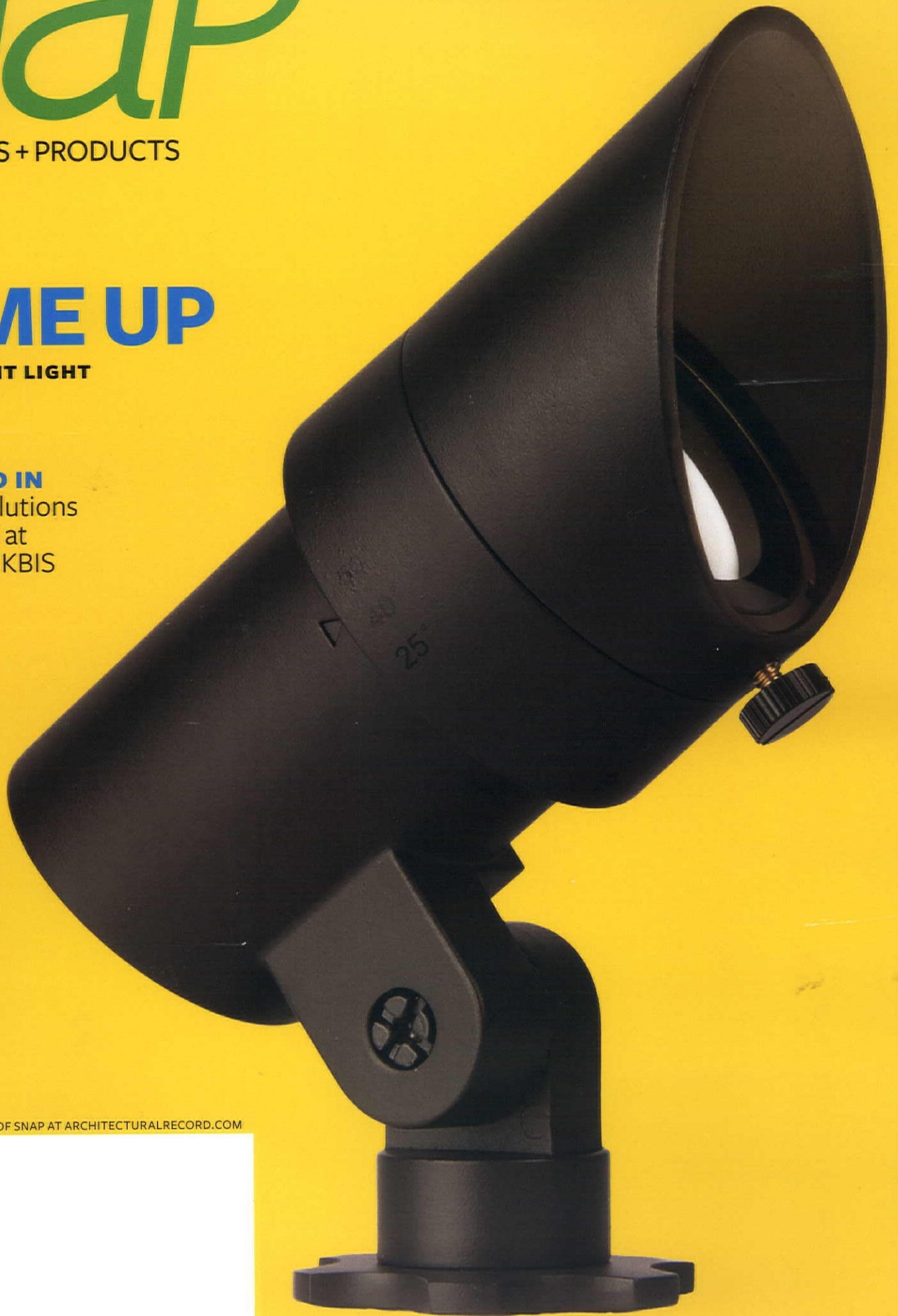
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MARCH/APRIL 2017



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BRIGHT IDEAS Robern's AiO collection of LED mirrors have amenities including USB charging ports (left). The Real Rain showerhead by Kohler utilizes its 775 nozzles to re-create the feel of a light summer storm (top left). The debut collection of Richard Meier Light includes Cycladic Globe, a ceiling fixture made of aluminum and handblown glass (above).

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Place-making in the 21st Century



AS THE DEFINITION of culture has broadened, so have the types of spaces where you can enjoy their creative fruits. Classic theaters and philharmonics still exist, but they do so alongside more fluid counterparts in which a dance piece can be staged one night and a string quartet can play on another. This expansion of use and scope has precipitated a complete reevaluation of venue design, calling into question acoustic properties and lighting as well as the ways both the audience and performers experience the event.

In this issue of *SNAP*, we examine some changes in the places where we create and consume culture. Our Case Study, "Back on Track" (page 14), concerns a disused rail yard in Arles, France, which the Luma Foundation is converting into an arts center, while "Standing Ovation" (page 20) details the practical and aesthetic decisions made in three performance spaces.

Elsewhere we report on the KBIS and IBS trade shows (page 68), highlighting the latest trends in the kitchen, bath, and construction industries. We also take a deep dive into select areas, with product specs on wood (page 24), plumbing fixtures (page 28), and concrete (page 40).

My warmest wishes,

Julie Taraska

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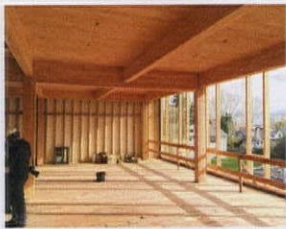
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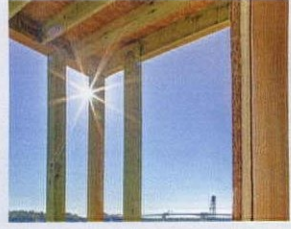
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Modern Masonry Using Pre-blended Mortar

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Photo courtesy of Huber Engineered Woods LLC



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Promoting Sustainable Design Through Life-Cycle Assessment Applications

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Crafting the Intersection Between Indoors and Outdoors

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Dramatic, Durable Interiors Using Sintered Stone

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Actively Pursuing Passivhaus Enclosures

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The New High-Privacy Toilet Compartment

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Design Innovation in Multifamily Housing#

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Suspended Wood Ceilings: Design to Delivery

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Innovations in Rainscreen Surfaces and Mounting Systems

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Specifying Extruded Aluminum Trim in Multifamily and Light Commercial Projects#

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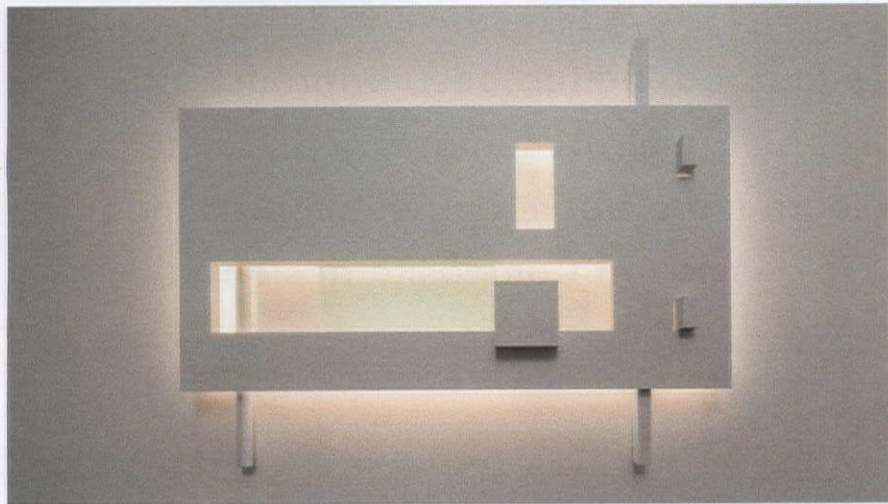
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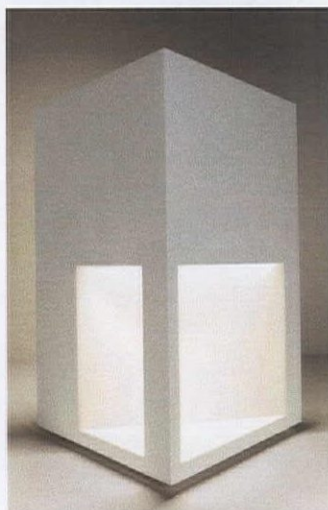
Richard Meier Light Launches

THE NEW LIGHTING venture from **Richard Meier** might bear his name, but the Pritzker Prize winner insists he didn't mastermind the first line of fixtures, which debuted in mid-March at the **Ralph Pucci** showroom in New York. "They're Ana's—she did the drawings," he says. "My role was to comment when asked."

That would be the architect's daughter, **Ana Meier**, an industrial designer and the creative director of the recently formed Richard Meier Light. "She and Hervé [Descottes, founder of the lighting consultancy **L'Observatoire International** and the third member of the partnership] have been working on these a long time," Richard says, "and they're phenomenal."

With their white hue, curvaceous forms, and interplay of light and shadow, the eight offerings—a mixture of LED pendants, sconces, and floor lamps—share the hallmarks of Richard's architecture. And rightfully so: Ana says the Barcelona Museum of Contemporary Art, a modernist masterpiece Richard completed in 1995, inspired two of the pieces, while houses on New York's Fire Island, a seaside community where Richard has built numerous private residences, sparked others.

The challenge, Ana explains, was distilling moments of these structures into simple forms that didn't compromise the originals' "sense of grandeur." "We achieved this with the choice of materials," she says of options such as Glacier White Corian and handblown glass. The pieces also have multiple light sources, adding depth to their forms.



DÉJÀ VU Debut fixtures from Richard Meier Light, which were inspired by the Pritzker Prize winner's buildings, include the limited-edition Barcelona sconce (left) and the Fire Island I floor lamp (center). Two Asian manufacturers received the dubious Plagiarus award for their knockoffs of Hansgrohe designs, including the Starck V and Metris Classic (top right). In both pairs, the original appears on the left and the copy on the right.

The fixtures' color temperatures range from a warm 2200K to a cool 3500K; some are tunable and dimmable. In addition, the company is developing control systems suited for various applications—including residential, hospitality, and large commercial use—to allow more flexibility with and continuity of the created light.

Bespoke maker **WonderGlass** is producing some of the fixtures; the rest are being manufactured in California and Brooklyn, New York. Richard's last effort to develop lighting occurred in 1988, when he designed a line of architectural fixtures for the Bronx, New York-based **Baldinger**.

"When I work with Ana and Richard, we start with the kind of atmosphere we'd like to feel and see," says Descottes, "and we shape the light fixture from there. We don't start from the object itself. Our process is different from most designers." —*Julie Taraska*

Plagiarus Winners Announced

TWO CHINESE COMPANIES were named and shamed for their copycat versions of **Hansgrohe** bathroom fixtures. **Taizhou Ranbo Sanitary Ware** and **Heshan Khone Sanitary Ware Technology**, both in



Zhejiang, earned Plagiarus awards for their rip-offs of the Starck V glass tap and the Metris Classic faucet, respectively. The prizes were bestowed February 10 at the event's 41st annual edition, held in Frankfurt during the Ambiente trade fair. Ten objects across a range of product categories were so honored; among them were office chairs, retractable dog leashes, and kitchen utensils.

"This award strengthens our position and raises awareness of the importance of proprietary rights," says Carmen Vetter, head of Hansgrohe's Proprietary Rights department. "We will continue to be relentless in our fight against product piracy, including taking legal action in Europe, China, and the rest of the world."

All Plagiarus-winning items, along with the originals, are on view at the Museum Plagiarus in Solingen, Germany. The German Industrial Designers' Association runs the museum and the juried awards; the organization took over both from designer **Rido Busse**, who started them in 1977 as a one-man crusade against counterfeiting. —*JT*



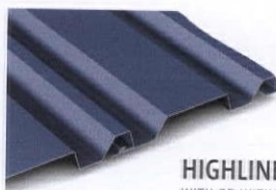
TAKE A SEAT The Li-Da table by architect Jean Nouvel served as the centerpiece of Roche Bobois's Dining By Design vignette. Created in conjunction with Gensler, the Space of Dining spearheaded the 20th edition of the annual DIFFA fundraiser, held March 16 to 20 in New York. The event raised approximately \$800,000 for HIV/AIDS awareness, prevention, and research.

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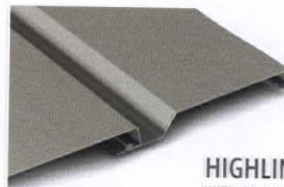
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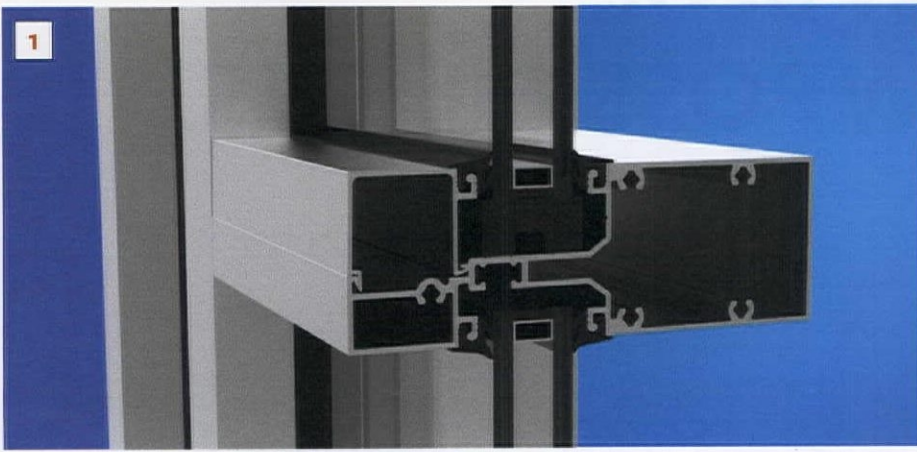
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Contract finds from the first crop of 2017 trade fairs

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MANUFACTURER: YKK AP America
PERFORMANCE: This offset, flush glazed framing system for storefronts accommodates insulating glass ¼ to 1 inch thick.
PRICE RANGE: \$
APPLICATIONS: An alternative to curtain walls, the system can be used for new or retrofit construction. It has a tall back leg for enhanced water resistance.
YKKAP.COM
 (SNAP #200)

2. GEOLUXE

MANUFACTURER: Geoluxe
PERFORMANCE: This mineral-based surface, which mimics the look of natural stone, is stain-, chemical-, scratch-, heat-, UV-, and frost-resistant.
PRICE RANGE: \$\$-\$\$\$
APPLICATIONS: Available in a slab or tile version and seven styles and edge profiles, the 100 percent recyclable Geoluxe may be used both indoors and out.
GEOLUXE.COM
 (SNAP #201)

3. CUBE CART

MANUFACTURER: Bretford
PERFORMANCE: The portable charging and storage solution features two locks: The one on the rear panel secures adapters, and the padlock on the front protects devices inside.
PRICE RANGE: \$
APPLICATIONS: Offered in two sizes and three standard colors, the steel units store up to 32 devices.
BRETTFORD.COM
 (SNAP #202)

4. TRADA

MANUFACTURER: Magnuson Group
PERFORMANCE: These 24-gallon steel waste and recycling receptacles have a closed top, adjustable glides, and internal bag ring.
PRICE RANGE: \$\$-\$\$\$
APPLICATIONS: Units can stand solo or linked; lids come in seven colors and a choice of three die-cut openings.
MAGNUSONGROUP.COM
 (SNAP #203)

KEY \$=VALUE, \$\$=MID-RANGE, \$\$\$=HIGH-END

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5



5.  **ECOPLUS WC CARRIER**

MANUFACTURER: Viega
PERFORMANCE: This in-wall toilet system offers dual flushing options (0.8 and 1.6 gallons) and saves up to 6 inches of floor space versus cistern models.

PRICE RANGE: \$\$
APPLICATIONS: With an adjustable ceramic height and a 10-year warranty, the system can be accessed through the wall plate, which comes in 65 manual and touchless designs.

VIEGA.US
 (SNAP #204)

6



6.  **ELINA**

MANUFACTURER: Création Baumann
PERFORMANCE: Delicately striped, the semitransparent laser-cut Trevira curtain allows soft light to filter in.

PRICE RANGE: \$\$\$
APPLICATIONS: Suited for commercial and hospitality environments, the 59-inch-wide white or black fabric is made from flame-retardant, PVC-free polyester.

CREATIONBAUMANN.COM
 (SNAP #205)

7



7.  **LANDSCAPE MINI ACCENT**

MANUFACTURER: WAC Landscape Lighting
PERFORMANCE: This watertight luminaire functions as an up- or downlight.

PRICE RANGE: \$\$
APPLICATIONS: Made in solid die-cast brass or corrosion-resistant aluminum, this light—in 2700 or 3000K—has four adjustable beam angles and delivers up to 365 lumens over a 70,000-hour life.

WACLIGHTING.COM
 (SNAP #206)



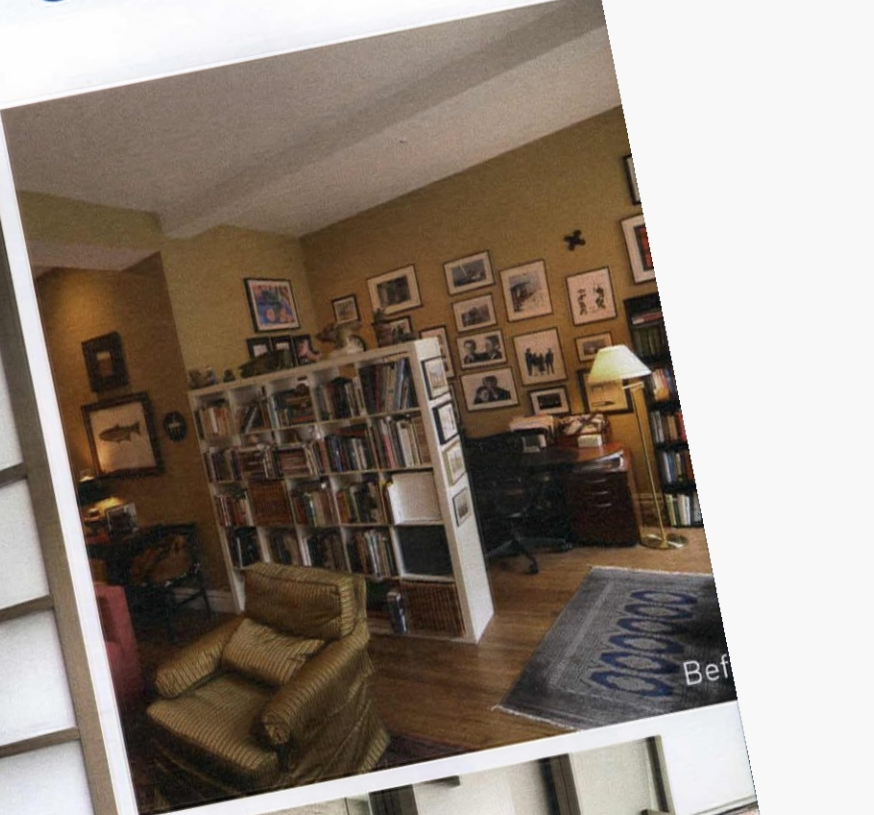
8.  **WOVEN VINYL**

MANUFACTURER: Architectural Systems
PERFORMANCE: Measuring roughly 19 by 39 inches, the floor tiles with nonskid backing come in nine patterns and can contribute to LEED points.

PRICE RANGE: \$
APPLICATIONS: Antibacterial, antifungal, and water-resistant, the sound-absorbing tiles can be installed in moisture-prone areas where wood or laminate flooring are not feasible.

ARCHSYSTEMS.COM
 (SNAP #207)

CASE STUDY



Project:
Private Residence - New York, NY
Architect:
Leila Satow Architect, PC
Credit:
VHT Studios - New York, NY
System:
Sliding Bypassing (SB4)

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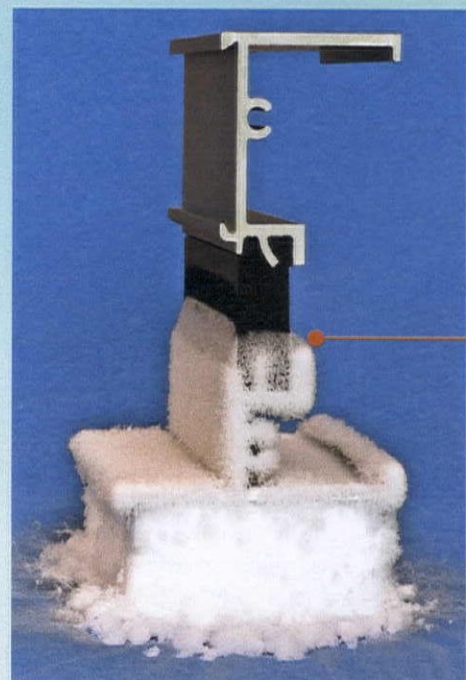
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LUMA FOUNDATION, ARLES, FRANCE

Back on Track

CHALLENGE: Transform a disused French rail yard into an arts center.
SOLUTION: Turn two of the site's limestone structures into gallery spaces by replacing their roofs, stabilizing their cast-iron interiors, and strategically placing additional natural and artificial light sources.

IN 1984, THE SNCF, France's national railway, shut down a rail yard—with a handful of handsome 19th-century industrial sheds—in the sun-washed southern city of Arles. The so-called Parc des Ateliers, where broken trains had been repaired since the 1850s, was a major employer in the town, which now numbers 54,000 inhabitants. But after the yards closed, the 16-acre sunken site remained unoccupied and unloved, a dust-bowl next to the Avenue Victor Hugo, one of Arles's main roads. Only the historic Roman amphitheaters and favorite spots of Van Gogh's (he produced 30 paintings here between 1888 and 1889) were able to shore up the town's fortunes with tourism.

But like plenty of other postindustrial sites—the power station in London that's now the Tate Modern and the distillery in Milan was reborn as the Prada Foundation—culture has flowed like water into the spaces

that industry left behind. In this case, a radical new arts campus is rising from the ashes of the rail yard, in the private hands of Maja Hoffmann, a Swiss pharmaceutical heiress, philanthropist, and collector of contemporary art who arrived in Arles at just a few weeks old and considers it her hometown. Her foundation, Luma, begun in 2004 with the mission of spurring artistic activity rather than just exhibiting its results, will spend a sum estimated to be north of \$100 million on the project. The centerpiece of the new Parc des Ateliers site is **Frank Gehry's** dazzling (literally, with its stainless-steel cladding) 185-foot-high tower for an art and research center, which will open in 2018. Its architect says the clustered blocks were inspired by the rock formations that occur naturally in the region.

In the meantime, New York-based **Seldorf Architects** completed the stunning conversion of two nearby buildings last summer: Les Forges, or the foundry building, and the Mécanique Générale, which had been the main repair space. The adapted structures have already hosted a range of events, including performances by Benjamin Millepied's L.A. Dance Project and an installation by artist Jordan Wolfson of a puppet in chains being thrown violently to the floor.

The firm's principal, Annabelle Selldorf,

was charged with not only turning the buildings into galleries but also creating a master plan for the Parc. She was a natural choice, having both a long-standing relationship with the art world and a reputation for subtle renovation projects, such as making over a Manhattan roller-skating rink as an art gallery for Hauser + Wirth in 2013. "My work is about proportions, light, and integrity of structure: what the building brings to the project," the architect says.

When Selldorf first visited Arles, she says, she "couldn't take in the incredible size of the site." The cavernous space is 23 feet below the street, on the same level as the railway. "You descend a slope to enter it. And this is not a park in the usual sense—there's all that dusty gravel and intense sun," she adds. Accordingly, Selldorf is working with the Belgian landscape designer **Bas Smets** on developing a softer context, with newly introduced undulations and greenery that will guide visitors from building to building and create what Hoffmann calls "a public garden for my fellow citizens."

At Les Forges, the architect inherited a gabled structure of soaring columns, steel trusses, and limestone walls. In this former foundry, Selldorf replaced the old roof and its terracotta tiles, stabilized the cast-iron framework, installed concrete floors, and

WORKSHOP REDUX

The Luma Foundation is creating an arts center in Arles, France, in a former SNCF train yard. Seldorf Architects is turning the limestone and stucco structures into gallery space, while Frank Gehry is constructing a stainless-steel tower for art and research.

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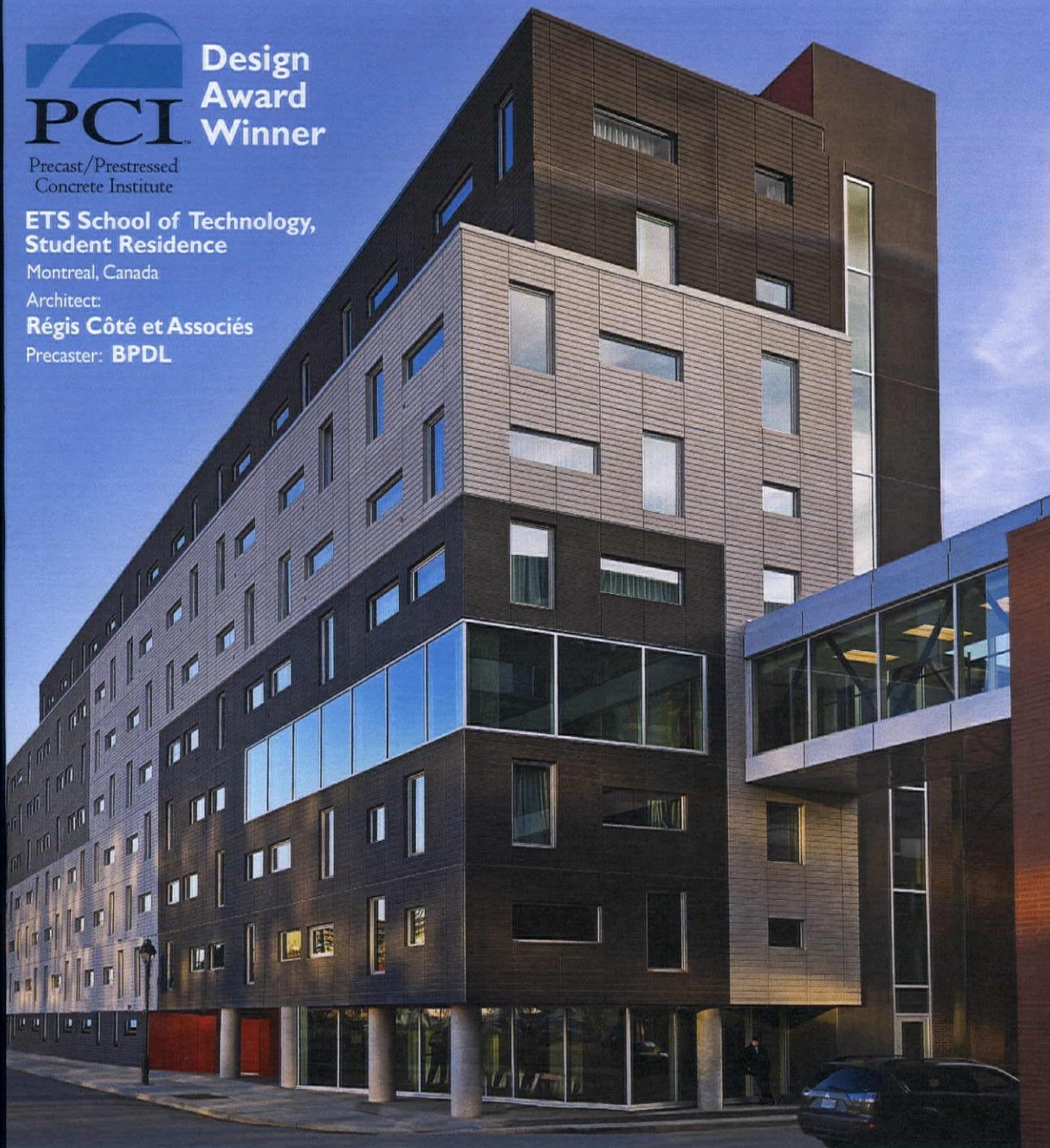
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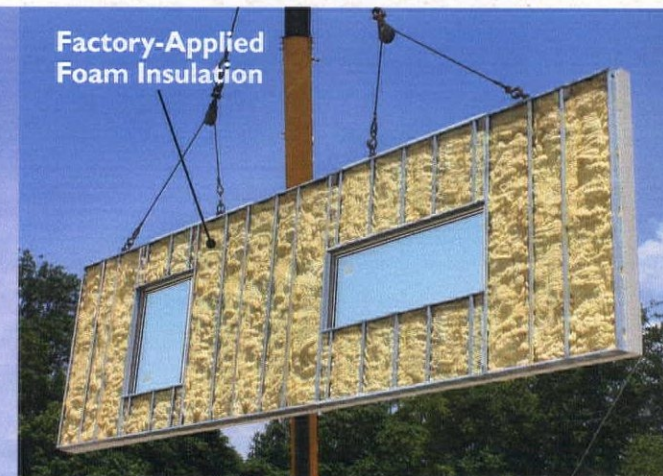
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CASE STUDY: ADAPTIVE REUSE

added a mezzanine level to create a total of 31,000 square feet of gallery space. To bring light to the interior, she inserted glazing in the upper and some of the lower windows, where smaller panes or plywood had been placed; she also added a few skylights. In the middle of Les Forges is an alfresco courtyard café, another amenity in this dramatic, elongated volume. “The galleries have worked really well for conferences and symposia through the winter, too,” notes Selldorf.

The Mécanique building now offers a heroic, open-plan exhibition space of 48,000 square feet, mostly on one floor. Here the cast-iron structure with stuccoed limestone walls needed less extensive repairs. But Selldorf has added a 65-foot-long, column-free extension along the west elevation that mimics the structure’s gabled bays—but with a dark gray concrete-block facade and zinc roof whose new materials allude to the building’s past: A section had burned down years ago, and the remaining part was simply sealed with concrete blocks. Selldorf has rewritten this history using contemporary architectural language.


The vastness and flexibility of the hall allows a multitude of uses. Last summer, the space accommodated a huge photography show with the insertion of diagonal walls while in an area behind that, dancers performed for an audience seated on

temporary bleachers. Washed by day with natural light entering through new elongated glass strips, the revitalized Mécanique felt surprisingly intimate at night.

The site’s other major building—a 54,000-square-foot old boiler house called La Grande Halle—was reconfigured in 2008 as a multipurpose structure. French architects **Alain Moatti** and **Henri Rivière** added a steel-mesh wall to the west side and a supersize LED screen on the north.

Several more renovations are in the works. Another redo by Selldorf, La Formation, is being made into a dance studio and an artists’ residence. A cluster of structures at one corner of the site, on part of the ground floor, has an orientation center, but more is planned there, including a hotel. All in all, the blossoming Parc des Ateliers is already creating its own history: the transition from industry to art that tells a truly 21st-century story. ■



 ARCHITECTS
Selldorf Architects
TYPE
Cultural center
PRODUCT
Opton spotlight
MANUFACTURER
ERCO

PERFORMANCE
This LED track light, which can rotate 360 degrees, has a cast-aluminum head that manages heat, prolonging the life of the fixture. RGB and multiple white color options are available.
APPLICATIONS
The dimmable light’s low height and

extensive beam span—ranging from a spotlight to wall washing—suit retail spaces. Output can range from 210 to 4920 lumens.
PRICE RANGE \$\$
ERCO.COM
(SNAP #208)

HEAVY METAL
In the 31,000-square-foot Les Forges, Selldorf created a gallery by adding a mezzanine with skylights and concrete floors. She also restored the structure’s cast-iron columns and steel trusses.

 = ECO-FRIENDLY ATTRIBUTES

KEY \$ = VALUE, \$\$ = MID-RANGE, \$\$\$ = HIGH-END

IN THIS PROJECT



AWS 57 RO.HI

MANUFACTURER: Schüco
PERFORMANCE: This roof window, which comes in many styles, has two thermal-insulation standards as well as outer frames in varying heights.
PRICE RANGE: \$\$\$
APPLICATIONS: The skylight, capable of operating manually or electrically, can open up to a 90 angle and accommodates multiple types of glass 1 to 2 inches thick.

SCHUECO.COM
(SNAP #209)




DELTA 10 SAINTE FOY

 **MANUFACTURER:** Imerys Toiture
PERFORMANCE: This interlocking clay roof tile is so water-resistant that it can be installed on shallow pitches.
PRICE RANGE: \$\$\$
APPLICATIONS: Ideal for renovation work, the slightly cambered tile—offered in five hues—has a variable gauge that allows it to top complex roofs without compromising its watertight properties.

IMERYS-ROOF-TILES.COM
(SNAP #210)




JANISOL PRIMO

 **MANUFACTURER:** Jansen Building Systems
PERFORMANCE: This series of thermally insulated steel windows has an installation depth of only 60 mm.
PRICE RANGE: \$\$-\$\$\$
APPLICATIONS: The windows are available in side-hung, tilt-turn, bottom-hung, and double-vent styles, with and without fixed side panels and skylights.

JANSEN.COM
(SNAP #211)

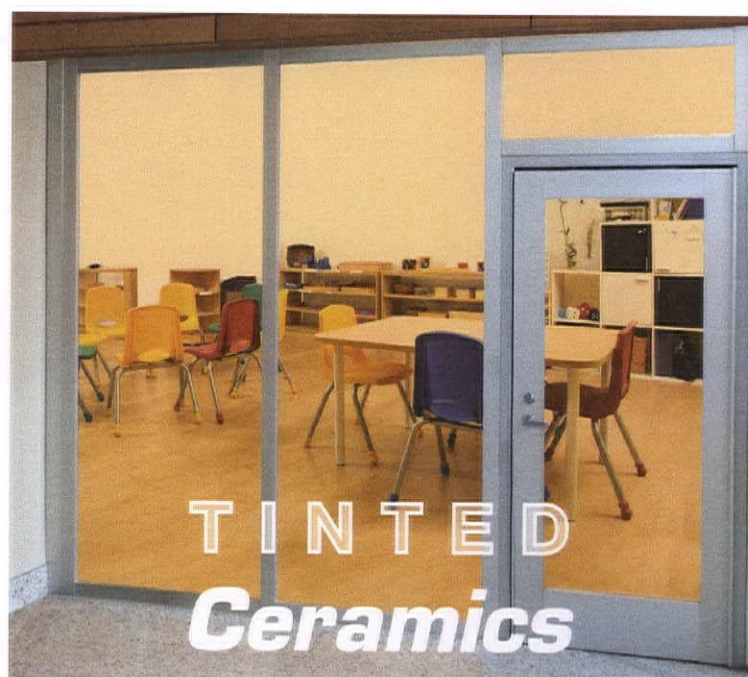


POPPACK PRO


 **MANUFACTURER:** Thorn Lighting
PERFORMANCE: This fluorescent batten range has a slim design, detachable LED engine, and mounting bracket that makes for tool-free surface installation.
PRICE RANGE: \$\$
APPLICATIONS: Suited to commercial and retail environments, the light comes in a DALI dimmable version with remote presence/daylight sensors to enhance energy savings.

THORNLIGHTING.COM
(SNAP #212)

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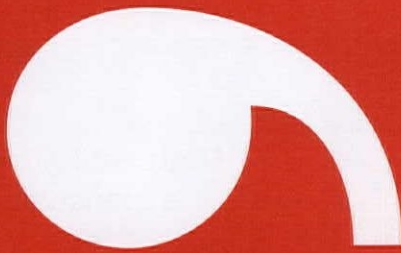
SNAP 25

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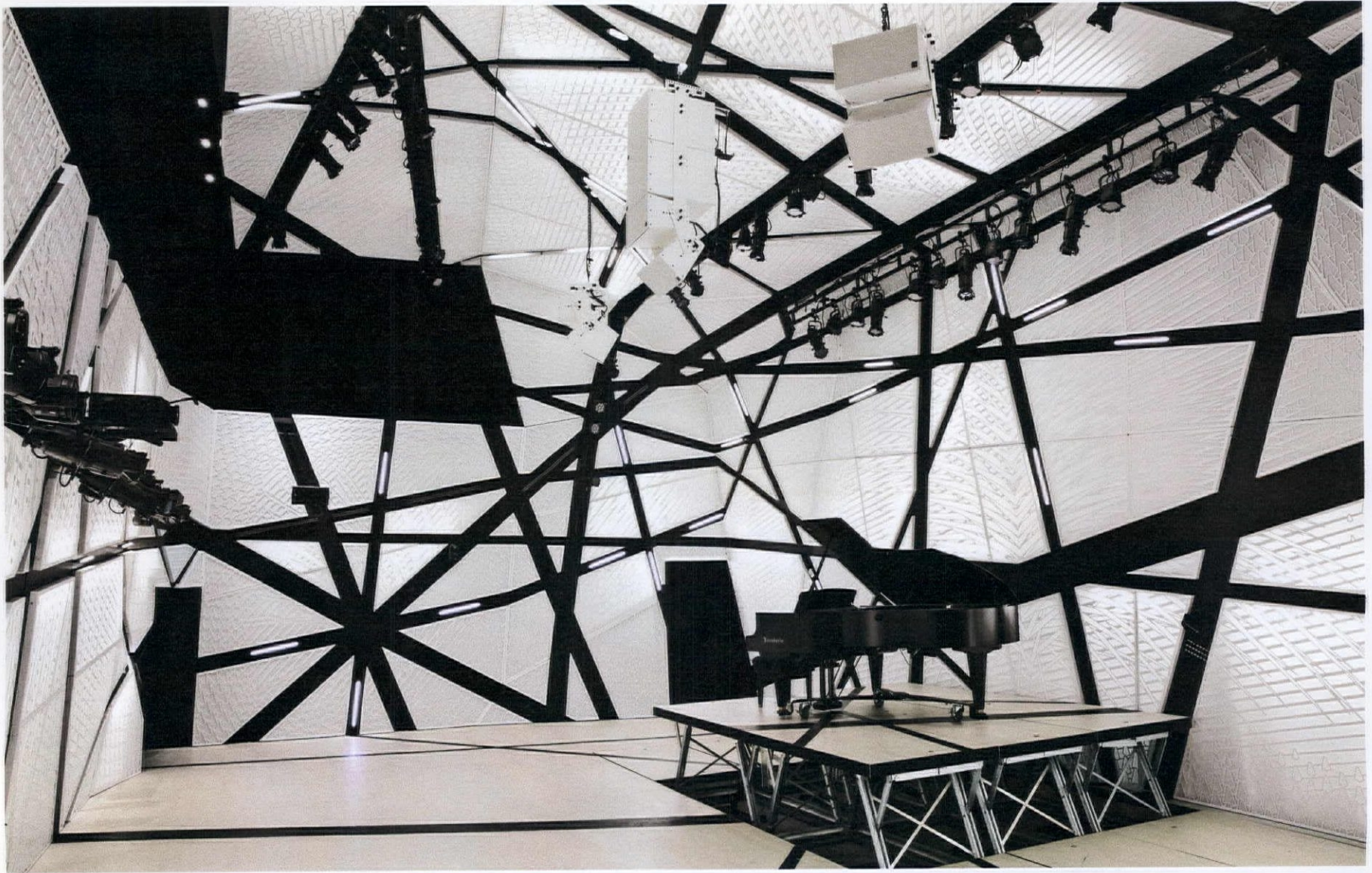
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SNAP 32

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TO THE POINT

The audience experience is central to National Sawdust, a music space designed by New York-based Bureau V. Sections of the stage can move up and down (top). The crowd can relax pre- and post-show in the lobby, a dramatic room clad in shiny black tile (right).

Standing Ovation

Visuals, acoustic strategies, and flexibility of use define the latest generation of performance venues.

BY ASHLEIGH VANHOUTEN

AN UNFORGETTABLE CONCERT or theater piece requires more than great artists. Crafting a space with an eye toward the acoustics, the audience experience, and players' needs can heighten the quality and intensity of the events held within its walls. With these three international venues, design considerations for all the senses take center stage.

NATIONAL SAWDUST, BROOKLYN

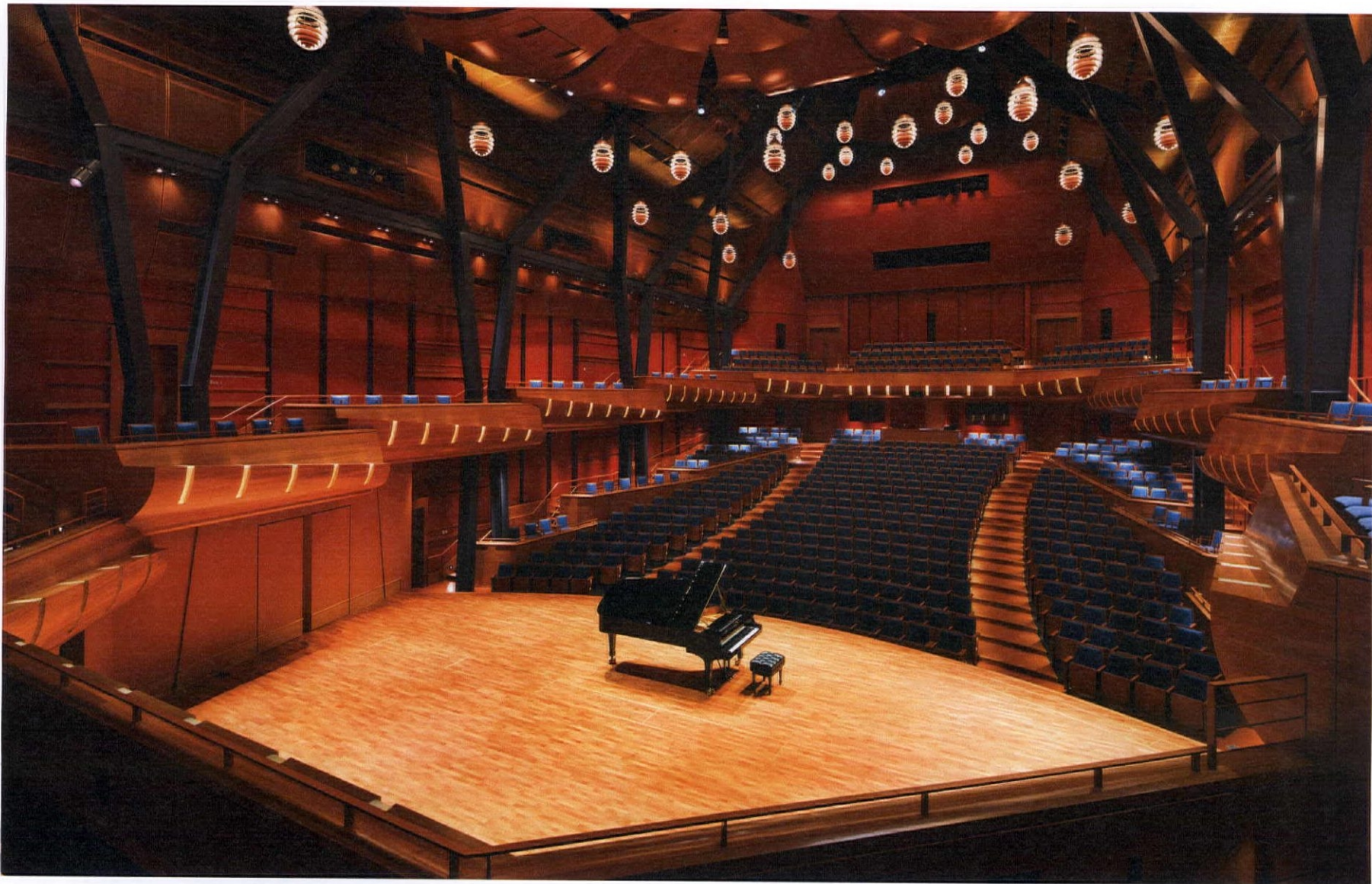
According to New York-based architecture firm **Bureau V**, how an audience perceives National Sawdust's physical space is as important as the musical events held there. The journey begins in the lobby, which is clad in black ceramic tile from **Design & Direct Source**. This transition area "juxtaposes the building's gritty, postindustrial exterior with its jewel-like interior," says firm principal

Peter Zuspan. A 10-foot-square acoustic door custom made by **Clark Door** slides into the ceiling for a dramatic reveal of the double-height performance space.

Inside, faceted panels of acoustic-speaker fabric and perforated aluminum—fashioned by the local **Seetin Design Group**—give the room an intimate feel. "We wished to create a soft, patterned envelope that would wrap the audience and become part of each performance," Zuspan explains. Fluorescent fixtures from **Bartco MiT8** provide warm house lighting, while linear Plexineon LED strips from **iLight Technologies** placed in recessed channels, offering discreet, consistent illumination.

The performance hall has no trap doors, curtains, or wings: It's a single open space. **Nivoflex** and **Steeledek** helped design the





flexible stage system, which is composed of a dozen 3-by-6-foot platforms that can rise independently from the floor. The entire stage—or parts of it—can ascend or disappear as needed, allowing performers and their audience to explore new dynamics of interaction.

TAYLOR CENTRE FOR THE PERFORMANCE ARTS, MOUNT ROYAL UNIVERSITY, CALGARY, ALBERTA

“We wanted a multipurpose concert hall for all types of music,” says Pfeiffer Partners principal William Murray of Bella Concert Hall, part of Mount Royal University’s **Taylor Centre for the Performing Arts**. The Los Angeles– and New York–based firm created the 773-seat space for the Western Canadian institute in association with local practice **Sahuri + Partners Architecture**. Sound consultants **Talaska** assisted with acoustic design.

The team sought to offset the hall’s large scale (it has 10 theater boxes and an 89-seat choir loft) by creating a second structure within the space. To reference Calgary’s prairie heritage, the architects opted for a wood-based design complete with sloping, barnlike ceiling. Beehive-shaped PH Louvre pendants from **Louis Poulsen** add a warm glow.

More than 9,800 square feet of acoustic material is layered throughout the room, reducing reverberation. Rigid panels cover the ceiling, while the walls feature **AccuRoll RW-20** Variable Acoustic banners. Made with a heavy velour, the latter are “more cost effective and look better” than a basic drape, says Pfeiffer’s Murray.

An acoustic reflector shaped in the image of the Alberta wild rose, the province’s official flower, hangs above the stage. Fashioned from wood backed with shotcrete, it prevents the music from rising to the ceiling and dissipating. “Single petals of the rose reach out over the seating area



to help reflect sound to the audience and the balconies,” says Murray. The reflector also allows the members of the orchestra to hear themselves.

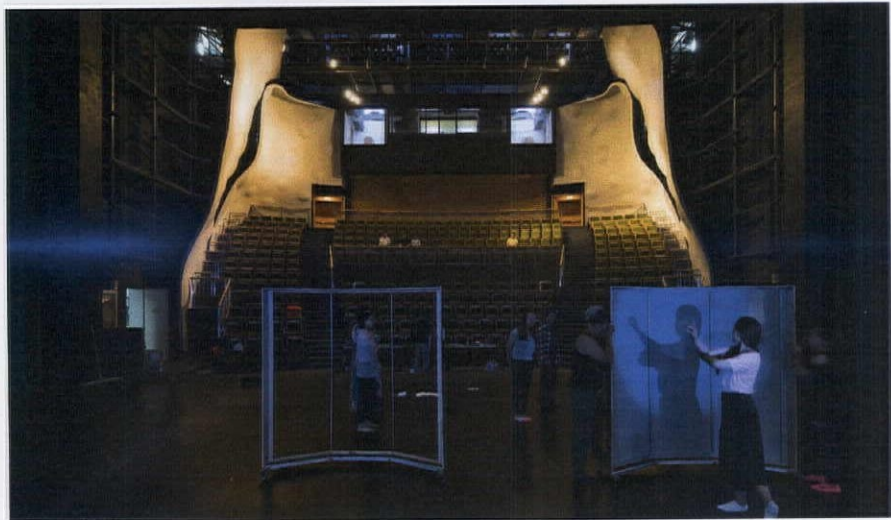
SHANGHAI INTERNATIONAL DANCE CENTER, SHANGHAI

Completed in September 2016, Asia’s first professional dance center is a 970,000-square-foot campus designed by international firm **Studios Architecture**. Consisting of a 1,200-seat theater, 300-seat recital hall, and dance school, it also serves as Shanghai Ballet and Dance Troupe’s headquarters and rehearsal studios.

As one would expect, the performers’ needs were key to the design of the center. To attract and accommodate performances from the East and

DOWN HOME

The region’s barns and prairies spurred the rustic wood accents of Bella Concert Hall (top). Architects Pfeiffer Partners referenced the hall’s Calgary location by installing a sound reflector (above) shaped like an Alberta wild rose, the province’s official flower.



LOOKING OUT

To help attract global talent to the Shanghai International Dance Center, Studios Architecture included two recital spaces: a main one (above) and a rehearsal space (left). The firm outfitted each with a full fly tower to ensure maximum creative flexibility.

West, the smaller recital hall has a full fly tower for hoisting curtains, lighting, scenery, and other stage effects. “This is very unusual for a rehearsal theater,” says Thomas Yee, a principal at Studios’ New York office.

In the main theater, acoustic considerations help artists concentrate. Fabric-wrapped panels on the rear wall of the auditorium muffle audience members’ voices, while cushions on the seats also absorb sound. In areas where the performers need to hear, glass-reinforced gypsum panels—painted to emulate wood—line the ceilings and walls. Each 50mm-thick panel has an insulated backing that creates a richer sound for listeners.

It is further proof that the way a performance is experienced by audience and player alike relies heavily on the venue’s design. After all, architectural embellishments can transport you from a concert hall to a rural barn, a stage can bring guests and artists together, and optimized acoustics can ensure you don’t miss a single note. ■

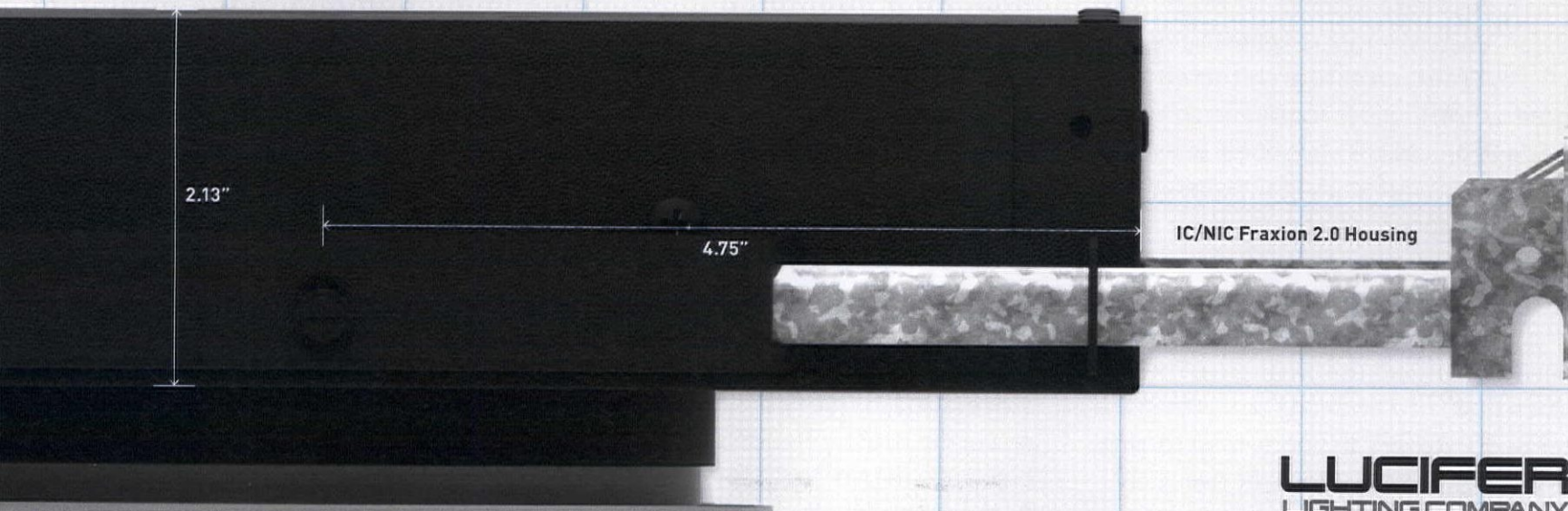
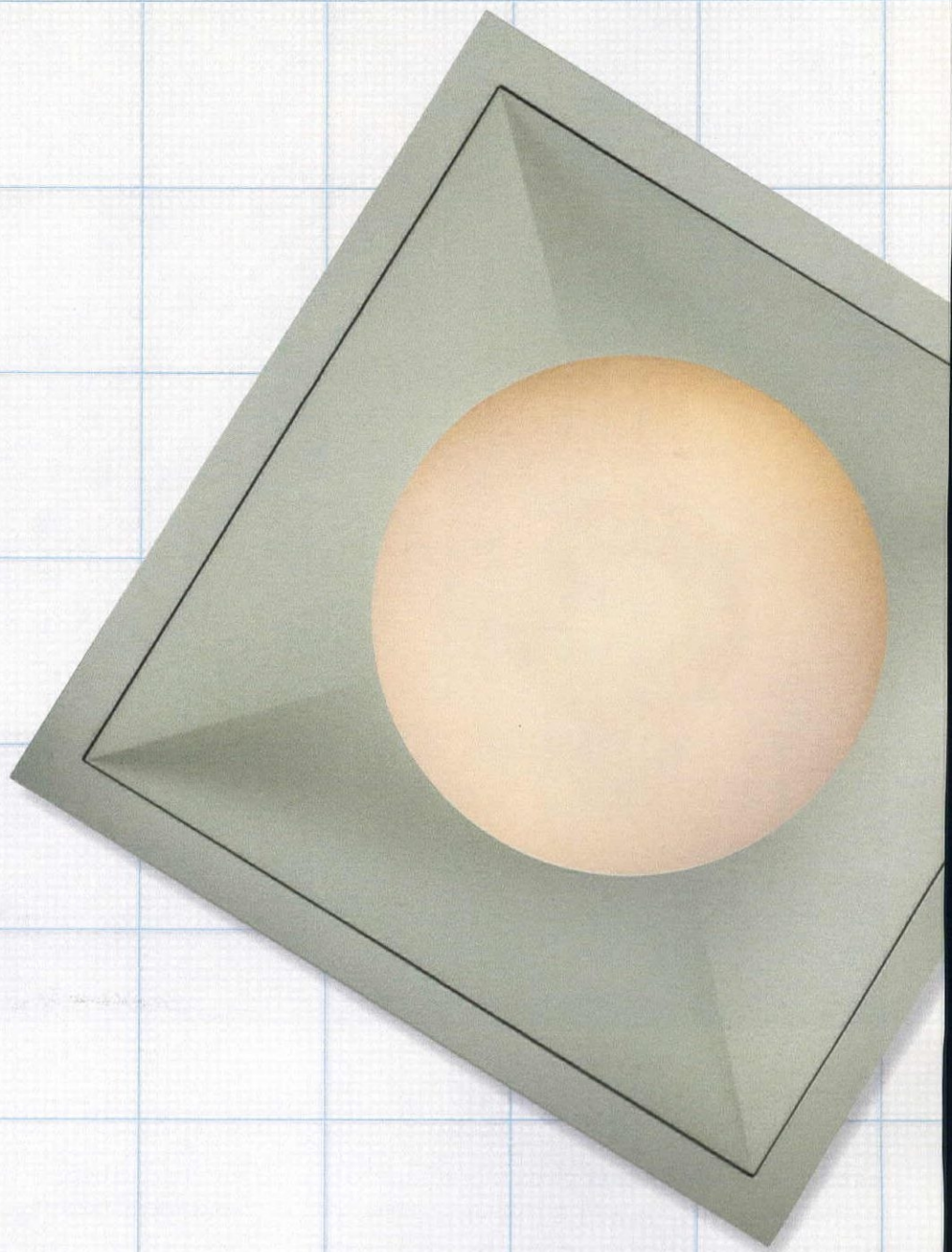
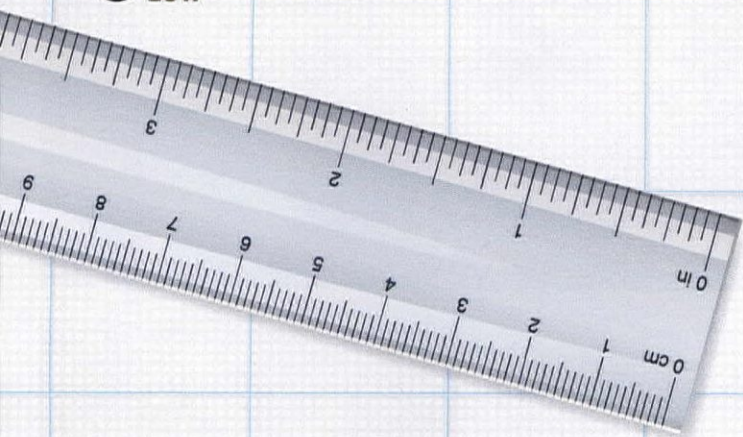
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SNAP 30



Branching Out

ARCHITECTS ARE RARELY given the latitude to let their creativity run wild. But when architects are both designer and client, they have the opportunity to really push the envelope. In the case of Patch22, an Amsterdam apartment building constructed by **Frantzen et al architecten** and financed by firm founder Tom Frantzen's **Lemniskade Projects**, the envelope in question is a striking wooden one featuring a staggered box composition and exposed-truss pattern.

Frantzen drew inspiration for the signature redwood trusses from the building's surroundings: an industrial harborside neighborhood that is being transformed into a mixed-use urban area. These 450-millimeter-wide-by-800-long beams span the front exterior of Patch22's six floors, crisscrossing plate-glass windows that overlook the river IJ. Douglas fir impregnated with fungicide clads the east and west elevations. All sides of the building's

interior structural wood elements are 80 millimeters thicker than standard dimensions, to increase burn time and meet fire regulations. Patch22, in fact, is the first apartment building in the Netherlands to use this approach to fire safety, as the country has no precedent for wooden residential structures.

Patch22's industrial aesthetic carries through to the interiors, which feature glue-laminated and cross-laminated timber trusses paired with raw concrete floors and beams. Much of the building's ground floor is wrapped in glass rather than wood, a decision Frantzen made as he envisioned the various functions for this level, retail and office space included. The floor's transparency gives the rest of the structure—also the tallest residential building in the Netherlands—the appearance of floating above the site. Adds Frantzen, "It looks as if the wind shook up all the floors." —*Sharon Katz*



DUTCH DESIGN The wood envelope Frantzen et al architecten constructed for Amsterdam apartment building Patch22 has a staggered box shape, with trusses zigzagging across its front (top). The structure's interior adheres to an industrial aesthetic, with raw concrete floors and exposed beams (above).



HAND GRADE COLLECTION

MANUFACTURER: Havwoods
PERFORMANCE: All models in this engineered-wood line have a 6-millimeter European oak wear layer finished with hard-wax oil, a water- and boil-proof plywood core, and a European oak base.

PRICE RANGE: \$\$\$

APPLICATIONS: Available in two surfaces and numerous stains and grain patterns, the series suits residential and commercial settings. The planks—up to 13 feet long by nearly 1½ feet wide—are FSC- and Cradle to Cradle Bronze-certified.

HAVWOODSUSA.COM
 (SNAP #213)



SEXTANT

MANUFACTURER: MDC
PERFORMANCE: Constructed with sustainably sourced timber, this wood-veneer wallcovering with a paper backing comes on a 1-yard-wide by 12-yard-long roll.

PRICE RANGE: \$\$-\$\$\$

APPLICATIONS: Interior designer Jamie Beckwith reinterpreted the Moorish arabesque shape for commercial wall and ceiling applications in seven hues of large-scale, inlaid wood. The class A fire-rated covering can also be used on curved surfaces.

MDCWALL.COM
 (SNAP #214)



BRUSHED TUSK PALM

MANUFACTURER: Smith & Fong
PERFORMANCE: Inspired by and sourced from rural India, these floor planks with a sugar-palm top and birch plywood base measure ½ inch thick by 3¼ wide; lengths can vary up to 5 feet.

PRICE RANGE: \$\$

APPLICATIONS: Rated for residential and commercial applications alike, the visually intriguing flooring is ideal for everything from retail stores to education facilities to government interiors.

PLYBOO.COM
 (SNAP #215)



BILDENWOOD

MANUFACTURER: Wolf-Gordon
PERFORMANCE: Precoated with matte lacquer, the veneer wallcoverings resist fading and eliminate the need for sanding and finishing. The proprietary backing was specially developed for installation on drywall.

PRICE RANGE: \$\$

APPLICATIONS: The commercial-grade BildenWood series is lightweight and flexible enough to wrap curved walls and columns. The sheets, in 2-foot widths and 8- or 10-foot heights, come in six wood species.

WOLFGORDON.COM
 (SNAP #216)

KEY \$ = VALUE, \$\$ = MID-RANGE, \$\$\$ = HIGH-END

= ECO-FRIENDLY ATTRIBUTES

Room to Breathe

TRANQUILITY CAN BE hard to find in distraction-rife New York. To aid in the process, entrepreneur Khajak Keledjian developed **Inscape**, a 6,000-square-foot guided-meditation studio in Manhattan's Flatiron district.

Keledjian tapped local firm **Archi-Tectonics**, led by **Winka Dubbeldam**, to help him realize his vision. Understanding that "meditation requires a different state of mind, a transition into a completely 'other' space," says Dubbeldam, she fashioned an immersive environment that creates "an erasure between ceiling and walls and a continuous surface of light and shadows."

The architect opted for a series of soft ellipsoid spaces, the most dramatic of which is the main room; it contains a spiraling 10-foot-high bamboo dome draped with light-transmitting sailcloth. The ½-inch-wide bamboo latticework extends from the ceiling to the structure's base, meeting the Plyboo—bamboo plywood—bench that encircles the room. A floor of flat-grain Plyboo completes this natural wood wrapper.

At the base of the dome, LEDs produce a low, brightly illuminated ring that recalls a horizon. Graded light travels upward toward the ceiling, glowing softly through the fabric before culminating in a brilliant spot located in the center of the latticework. "The open oculus symbolizes eternal space and an opening of the mind," says Dubbeldam of that crowning feature. "Once inside the dome, with its controlled environment of light, sound, and air, one can concentrate on oneself, leaving the world outside." —SK



STATE OF MIND A 10-foot-high bamboo dome sits in the main room at New York's **Inscape**, a meditation studio designed by Archi-Tectonics. The dome is backlit with colorful LEDs and draped with light-emitting sailcloth.

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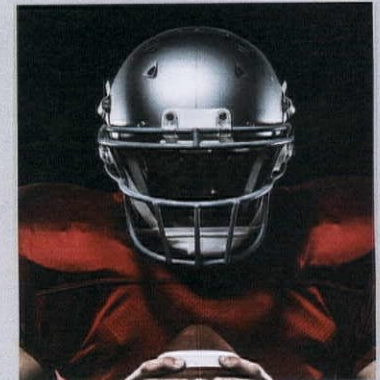
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TOUGH BEAUTY London-based yacht design company H2 specified Graff's Luna faucets (above) for the bathrooms of luxury charter ship *Talisman C* (right) because of the fixtures' looks and ability to withstand exposure to saline and humidity.

Smooth Sailing

TASKED WITH PROVIDING the perfect bathroom faucets for *Talisman C*, a three-floor, 230-foot charter ship, London-based yacht design studio **H2** considered more than aesthetics. Of course the fixtures had to be luxurious, matching the Art Deco motif of the ship's lounges, bedrooms, and fitness area. But the pieces also had to be able to withstand salt, sand, and moisture.

Graff's Luna hardware fit the bill. The collection's most dramatic fixture—the 39-inch-long, wall-mount vessel filler—floats above the sinks, freeing up the limited counter space. Water streams down the fitting's curved length; a wall-mount lever controls its flow.

Yet it was the finish of the sculptural piece—Graff's patented polished chrome over solid brass—that sealed the deal. The highly durable combination is “well suited for environments with elevated humidity and salinity,” says Javier Korneluk, senior director of global sales and marketing. The finish also inhibits discoloration of the fixtures, corrosion of the metals, and other signs of wear and tear. Luna was a moon shot that has proved seaworthy indeed. —Ashleigh VanHouten





NOKORI OVAL 6737

MANUFACTURER: BainUltra

PERFORMANCE: This freestanding acrylic tub with 40 air jets holds 66 gallons of water—and two bathers.

PRICE RANGE: \$\$\$

APPLICATIONS: Ideal for residential and hospitality applications, the oval tub may be customized with chromatherapy, thermotherapy, and hydrotherapy options; a remote control is included. The integrated waste and overflow are available in three finishes.

BAINULTRA.COM

(SNAP #217)



CONCETTO

MANUFACTURER: Grohe

PERFORMANCE: The ADA-compliant faucet with a metal lever and single-hole installation can be operated with one hand.

PRICE RANGE: \$\$

APPLICATIONS: Offering an eco-friendly 1.2gpm flow rate, the collection includes center- and wideset options in a chrome or polished-nickel finish. The unit features Grohe QuickFix technology, which reduces installation time by up to 40%.

GROHE.COM

(SNAP #218)



SKYLAR

MANUFACTURER: Newport Brass

PERFORMANCE: With an integrated diverter, this freestanding brass tub and hand-shower set offers maximum flow rates of 2 (for the hand shower) to 6.5gpm (spout).

PRICE RANGE: \$\$\$

APPLICATIONS: With its spout reaching 38 inches from the floor, the ADA-compliant Skylar comes in three finishes; it also offers a rough-in fitting option for concrete subfloor installations.

NEWPORTBRASS.COM

(SNAP #219)



VERGE LAVATORY WITH WASHBAR TECHNOLOGY

MANUFACTURER: Bradley Corp.

PERFORMANCE: This handwashing solution pairs a quartz-composite basin with a chrome-plated steel bar containing a soap dispenser, faucet, and hand dryer.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for high-traffic public facilities, the unit comes in 15 colors and one-, two-, and three-person models. A 0.5gpm flow rate is standard; an ultrahigh-efficiency 0.35gpm option is available.

BRADLEYCORP.COM

(SNAP #220)

KEY \$=VALUE, \$\$=MID-RANGE, \$\$\$=HIGH-END

= ECO-FRIENDLY ATTRIBUTES

Go with the Flow

IN DECEMBER, plumbing systems manufacturer Sloan donated 15 of its high-efficiency Hybrid urinals to the **Metropolitan Water Reclamation District** (MWRD) of Greater Chicago. Installed in the agency's office just off the Magnificent Mile, the urinals are on track to save 585,000 gallons of water annually. They also are part of a wider pilot program seeking to slash Chicago's use of carbon-intensive potable water.

A shared desire to protect nearby Lake Michigan drove the partnership, says Sloan chairman Chuck Allen. The Hybrid models were chosen, he adds, because of their water-free operation, odor-control, and automatic-cleaning features. Indeed: Exactly one gallon of water flows through each unit's housing and pipes every 72 hours, removing sediment and preventing buildup in the lines.

As the first local government unit in Cook County to install such urinals, the MWRD is now challenging neighboring municipalities to reduce their public water consumption as well. "Anything we can do to conserve resources," says agency president Mariyana Spyropoulo, "is a win for everybody." —AV



FLUSH WITH PRIDE As part of a pilot plan targeting water use, Greater Chicago's Metropolitan Water Reclamation District installed 15 Hybrid urinals from Sloan (sampling above) in its office. Thanks to the fixtures, the agency is projected to save 585,000 gallons of water a year.



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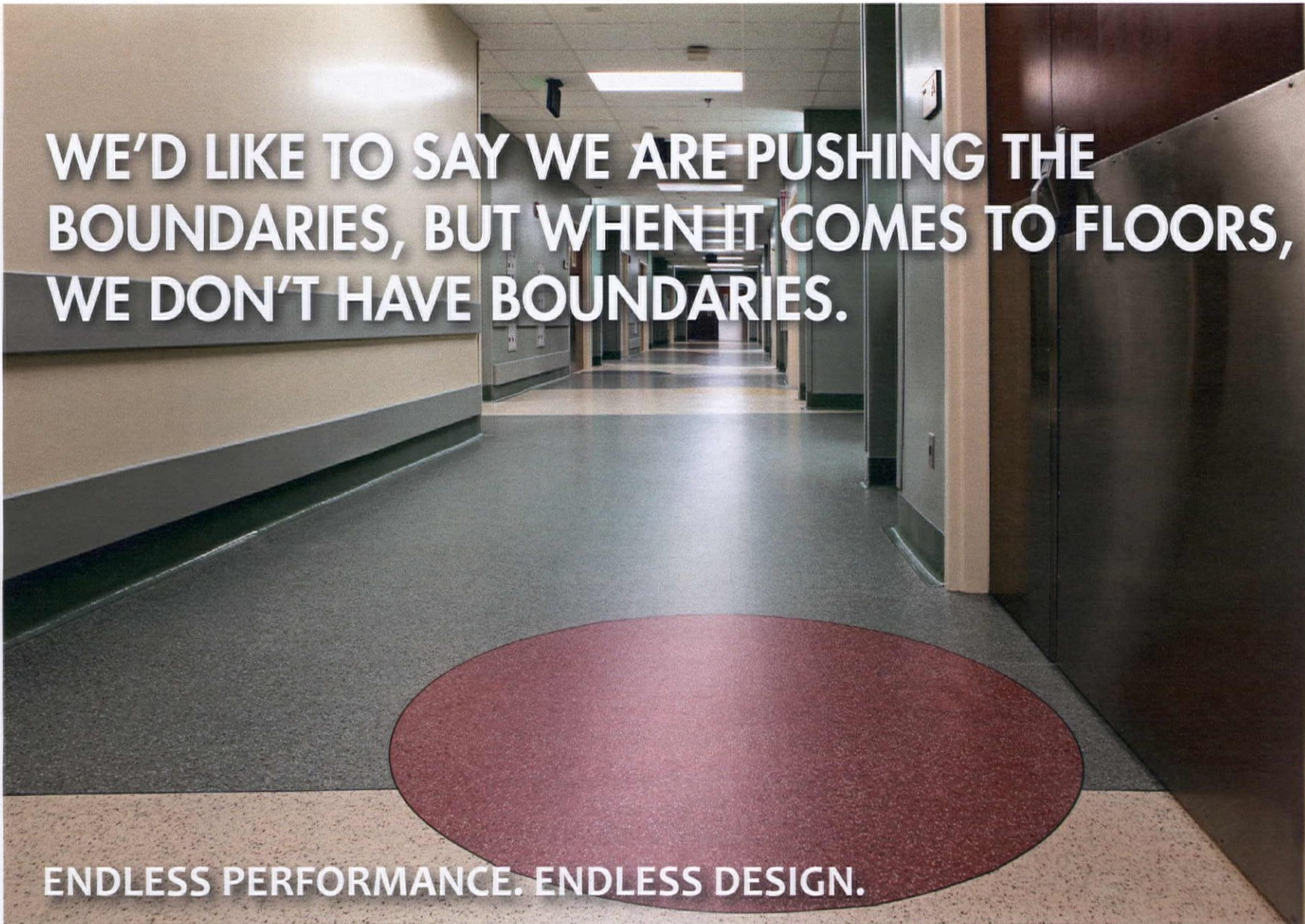
LIGHTFAIR.COM



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SNAP 68



The Big Breezy

SACRAMENTO, CALIFORNIA, benefits from a temperate climate that encourages outdoor living. Expansive, operable openings are common in the buildings and homes as everyone—the local NBA team included—wants to take advantage of the region’s cooling Delta Breeze. To that end, design and engineering firm **AECOM** added five lift-strap bifold doors from **Schweiss** to the primary entrance of **Golden 1 Center**, a 17,500-seat arena that serves as the home base of the Golden State Warriors.

Each door weighs about 28,000 pounds and measures 41½ feet high by at least 29 feet wide. Three lean from the building at an 11-degree angle, allowing them to provide shade and prevent glare. When closed, the doors don’t reach the ground; rather, they sit atop a permanent, conventionally scaled turnstile entryway system.

Figuring out how to produce the canted doors required eight months of effort and numerous customizations.

Where openings of this size would normally require at least 10 straps per door, the architects insisted on only five, says Schweiss owner Mike Schweiss. The client also requested that the fasteners be spaced so they would disappear behind the doors’ vertical mullions when viewed from the exterior. To achieve both aims, the fabricators extended the straps to six inches—double the normal size—and reengineered the lift widgetry to accommodate the larger spans. Glaziers **Bagatelos Architectural Glass** also added a three-inch-deep aluminum curtain wall to accommodate the doors’ massive expanses of steel-tube framing.

The copious light, fresh air, and natural cooling provided by the Schweiss entryways are some of many reasons that Golden 1 received a LEED Platinum rating, a first for an enclosed arena. Says Schweiss of the project: “It took us out of our comfort zone and tested us in every which way.”

—*Braulio Agnese*

OPEN UP Schweiss developed five custom canted doors to allow for natural ventilation at the LEED Platinum Golden 1 Center arena in Sacramento, California.



RAGNAR

MANUFACTURER: Krownlab

PERFORMANCE: Featuring an integrated leveling system that simplifies installation, this ADA-compliant sliding-door system can hold panels measuring 3/8 to 2 inches thick and weighing up to 400 pounds.

PRICE RANGE: \$\$\$

APPLICATIONS: Ragnar's single, bipart, and bypass doors are designed for interior use. Options include two stainless-steel finishes and top-, face-, and glass-mount hardware.

KROWNLAB.COM

(SNAP #221)



CLIMACLEAR

MANUFACTURER: NanaWall

PERFORMANCE: This frameless, all-glass sliding system has a single track, interlocking panels, and transparent vertical weather seals that protect against rain and wind.

PRICE RANGE: \$\$\$

APPLICATIONS: Ideal for commercial and residential projects, the ADA-compliant system accommodates 1/2-inch-thick glass up to 10 1/2 feet high and just over 4 feet wide. There's also a swing-door version.

NANAWALL.COM

(SNAP #222)



4880 DOOR

MANUFACTURER: Ply Gem

PERFORMANCE: This thermally insulated, sliding pocket patio door features adjustable tandem rollers that enable smooth operation and a custom fit.

PRICE RANGE: \$\$

APPLICATIONS: Designed for homes in temperate climates, the aluminum 4880 comes up to 16 feet wide by 8 feet high. It's offered in two colors, eight glass options, and multiple configurations.

PLYGEM.COM

(SNAP #223)



FORGENT

MANUFACTURER: Kolbe Windows & Doors

PERFORMANCE: Made of Glastra, a durable hybrid of fiberglass and UV-stable polymers, this series of weld-sash windows comes with integral nailing fins for easy installation.

PRICE RANGE: \$

APPLICATIONS: Suitable for residential and commercial projects, Forgent comes in multiple colors, window types, hardware finishes, and glass options. Windows can be either all Glastra or wood on the interior.

KOLBEWINDOWS.COM

(SNAP #224)

KEY \$=VALUE, \$\$=MID-RANGE, \$\$\$=HIGH-END

A Different Shade

ELECTROCHROMIC GLASS is a modern marvel. It goes from translucent to opaque when a charge is added, offering privacy and minimizing solar heat gain, thus eliminating the need for blinds or drapes. This optic effect has historically been created by coating two panes with tin oxide—which makes the glass electrically conductive—and then adding a layer of tungsten oxide to one of them. When voltage is applied, the oxide's ions undergo a chemical reaction, temporarily turning dark blue. Since tungsten is always used, all activated electrochromic glass is blue. But that might soon change.

In early January, Germany's **Fraunhofer Institute for Applied Polymer Research** (Fraunhofer IAP) announced a manufacturing method for electrochromic glass that could allow for multiple color options. The new process replaces the reactive oxide coating with a mixture of organic monomers, resin, and electrochromic molecules. Alter the particular monomer, the researchers discovered, and you alter the color of the glass.

Monomers have advantages beyond aesthetics. According to Fraunhofer IAP scientist Volker Eberhardt, they require less energy than oxides to react; their reaction time is also up to 30 times faster. (This new process turns a 13-square-foot pane of glass totally dark in 20 to 30 seconds, rather than the 10 minutes it now takes.) Furthermore, the resin fortifies the electrochromic glass, making it sturdier than current iterations. "A pane comprising just two layers can be used as overhead glazing or in surfaces meant to be walked upon," says Eberhardt of the new formulation, noting it now takes three or four panes to achieve similar strength. Using less material means cost savings. That's some shady business we all can get behind. —BA



SEE CHANGE

Germany's Fraunhofer Institute of Polymer Research worked with yacht glazing specialist TILSE Formglas to develop a method of producing electrochromic glass that allows for pane colors other than the standard blue.

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Ventura College Applied Science Center – Gensler

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SNAP 34

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Sustainable Surfaces

IN FEBRUARY, furnishings giant **Ikea** launched Kungsbacka, a line of kitchen cabinetry fronts like no other. Designed with Swedish studio **Form Us With Love**, the anthracite-gray, matte-finish surfaces are made entirely of recycled waste, namely PET bottles and reclaimed industrial wood.

Ikea began the development process in March 2015, working with **3B**, a Salgareda, Italy-based research and development company, to develop a plastic-foil veneer derived from PET, a recyclable plastic resin used in food packaging, clothing, and carpets. This material is laminated upon particleboard fronts made from reclaimed wood, resulting in an impact-resistant and

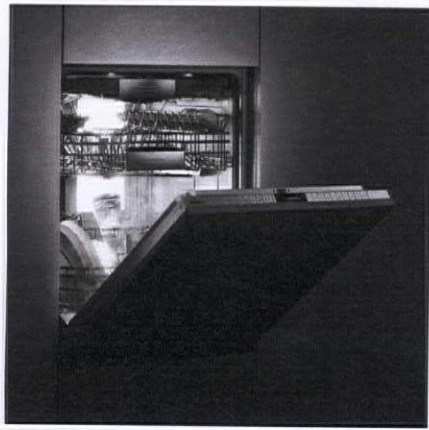
easily cleaned surface that Ikea backs with a 25-year limited warranty.

Available in the United States and Sweden, the Kungsbacka collection features six pieces, including a toe kick, a 15-by-30-inch door front, and a two-door corner-base cabinet set. The line can be used with a range of Ikea kitchen systems.

“What we do has a big effect on the environment because we work with such large quantities,” says Anna Granath, an Ikea product developer. “With the new material, we can avoid using an oil-based plastic and produce more sustainably—without having to compromise quality, form, or price.” —*Aileen Kwun*



COME TOGETHER
Designed by Form Us With Love, Ikea’s Kungsbacka cabinet fronts (top and center) are fashioned from recycled PET and reclaimed wood (left).



400 SERIES DF 480/481

MANUFACTURER: Gaggenau
PERFORMANCE: Available this fall, this dishwasher with LED backlighting features a handleless push-to-open door, eight program options, and six wash-cycle settings.

PRICE RANGE: \$\$\$

APPLICATIONS: Measuring 23 5/8 inches wide, the Energy Star-certified appliance—offered in two heights—completes cycles in less than an hour, at a quiet 40dBA.

GAGGENAU.COM/US
 (SNAP #225)



TOURNANT

MANUFACTURER: Kohler
PERFORMANCE: This faucet with three spray settings (one each for cleaning, filling pots, and food prep) has a pull-down sprayhead that magnetically docks in place.

PRICE RANGE: \$-\$\$

APPLICATIONS: Bringing professional performance to residential settings, the single-lever fixture has a 1.5 gpm flow rate and is available in three finishes: polished chrome, polished nickel, and stainless steel.

US.KOHLER.COM
 (SNAP #226)



CBS 1360

MANUFACTURER: Liebherr
PERFORMANCE: The slim refrigerator-freezer tower features a BioFresh technology that maintains varying humidity levels throughout the unit. The SmartSteel exterior is scratch- and fingerprint-resistant.

PRICE RANGE: \$\$\$

APPLICATIONS: The narrow 24-inch profile makes the model ideal for condos, small dwellings, and galley kitchens; it can be left freestanding or installed as a semi built-in.

LIEBHERR.COM
 (SNAP #227)



CLEAR ICE MACHINE WITH ARCTIC ILLUMINICE

MANUFACTURER: Marvel
PERFORMANCE: Able to produce up to 39 pounds of ice daily, the stainless-steel unit features waterproof LED lighting and multifunction controls with smart settings.

PRICE RANGE: \$\$-\$\$\$

APPLICATIONS: The three installation options include an ADA-compliant one; several door choices are available, glass among them.

AGAMARVEL.COM
 (SNAP #228)

KEY \$ = VALUE, \$\$ = MID-RANGE, \$\$\$ = HIGH-END

= ECO-FRIENDLY ATTRIBUTES

The Connected Kitchen

IF THE HOUSE IS A machine for living, it only follows that the kitchen is a machine for cooking—one that's increasingly powered with wireless technology as industry players keep moving toward automated systems.

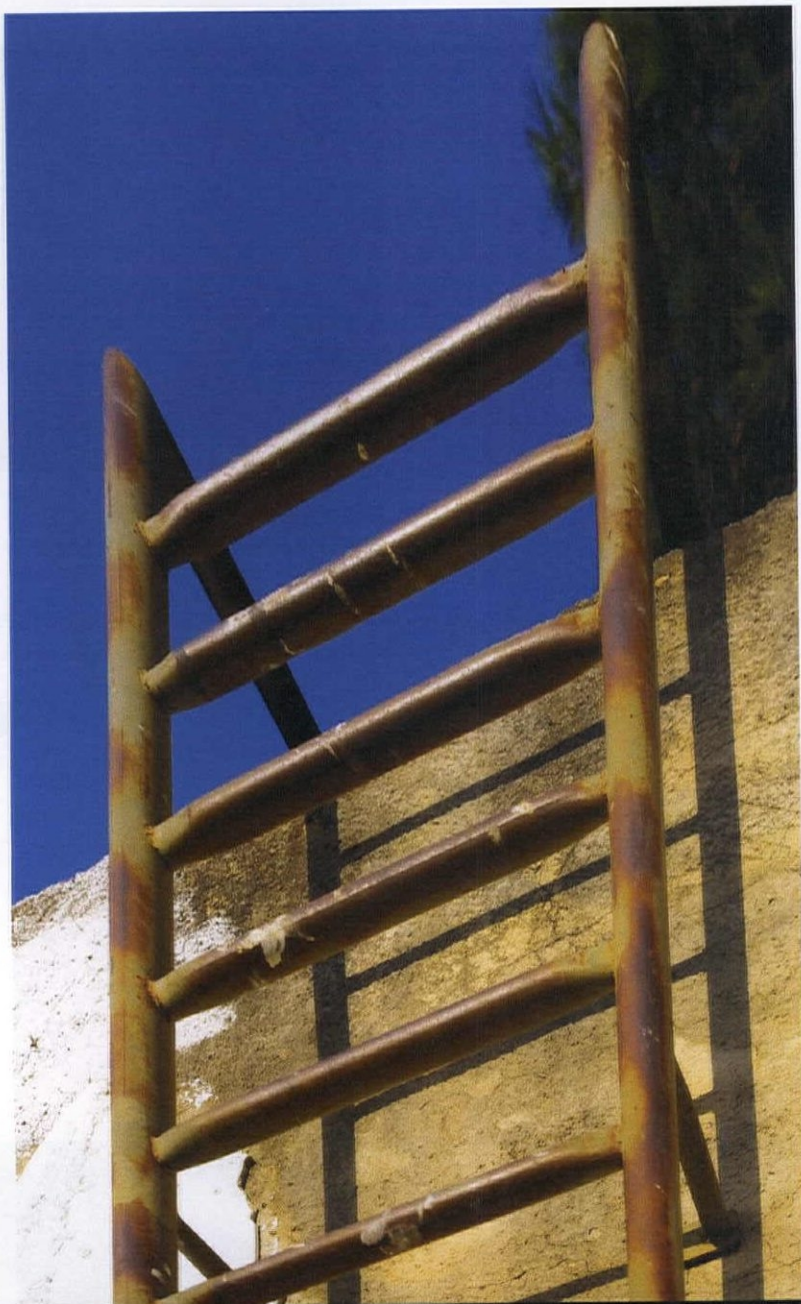
At January's Kitchen and Bath Industry Show (KBIS), Italian manufacturer **Elica** added models (an aspirating cooktop among them) to its Stream collection, which uses wireless sensory technology to optimize ventilation and cooking settings. European kitchen brand **Bosch** also launched its cross-platform Home Connect collection; these smartphone-enabled appliances include refrigerators, coffeemakers, ovens, dishwashers, and washers and dryers. Operable with iOS and Android devices—as well as compatible with **Amazon** and **Nest** proprietary software and controllers—the new offerings allow for remote activation and automated safety measures. For example, a Nest Protect smoke alarm can sync with a smart oven, warning a user via a push notification on her smartphone that she should change her oven settings or turn off the appliance to avoid burning the food.

Beyond the screen of a smartphone app, **GE Appliances** will continue to roll out its new Geneva voice assistant: the first Amazon Alexa "skill" to be applied to a broad range of kitchen appliances. Geneva will be compatible with the brand's 70-strong line of existing WiFi-connected kitchen appliances, plus more than 40 additional products launching this year. Aside from convenience and energy savings, this feature is "an important tool for mobility and accessibility," says Bill Gardner, GE Appliances' program manager for voice integration. "Everyone thinks technology is for the young," he points out, "but these kinds of tools are made for many types of users and abilities." —AK



TUNED IN Smart appliances continue to transform the kitchen, with products such as GE's Profile combination oven (left), Elica's aspirating cooktop (top), and Bosch's Benchmark dishwasher (above) gaining networking and voice-activation capabilities.

IT'S HOW YOU GET TO THE TOP THAT MATTERS!



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SNAP 24



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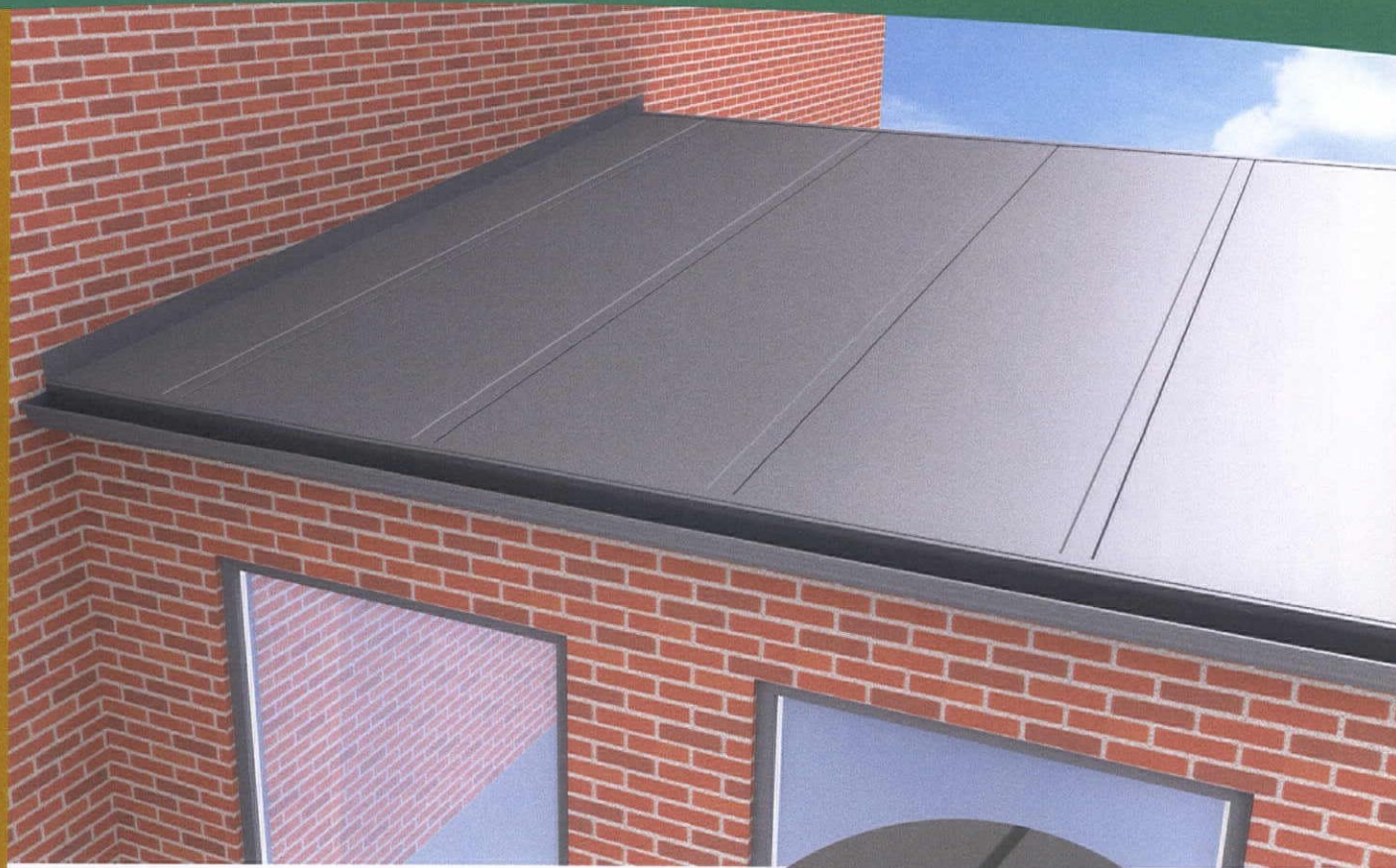
Thermal and Moisture Protection Roof and Wall Panels

Division 7 Thermal and Moisture Protection Specification Section 07411 - Manufactured Roof Panels

The Overly *Evolution* metal wall and roof system is without raised batten or standing seams and exposed fasteners. The system consists of a hidden drain channel, compression bar, cover cap and cladding sheets. The smooth, contemporary design appears monolithic when viewed from just a short distance. It's an 'Evolution' to all the standard metal wall and roof systems available throughout the history of the industry.

Applications

The Overly *Evolution* system can be installed on sloped roofs and vertical walls. Panels can be curved and/or tapered for barrel vaults and domes or spherical shapes. The system features hidden fasteners and an internal drainage component which removes any moisture that migrates into the system and skillfully designed joints which allow for expansion and contraction. The system is the exterior exposed component of a wall/roof composite assembly. Several composite assemblies are available ranging from thin to thick as determined by aesthetic preferences or as necessary to meet performance requirements such as thermal, structural and fire ratings.

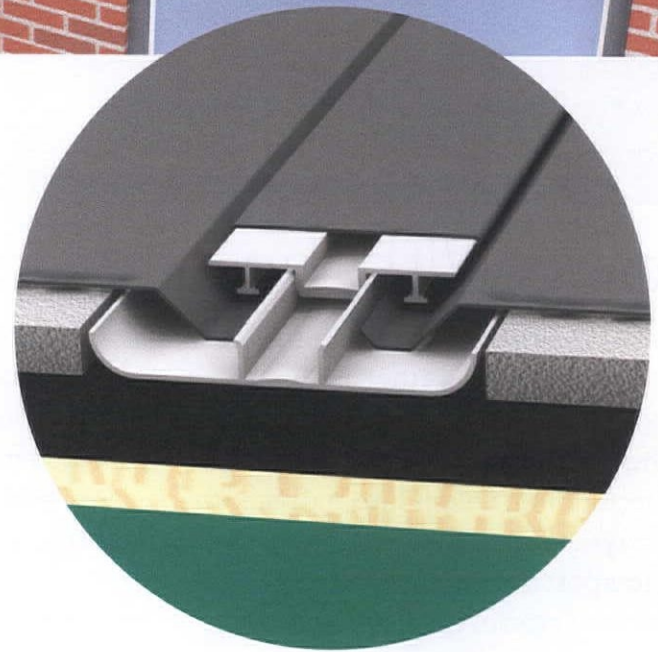


Materials

- Aluminum Alloy 3003-H14, Standard Thickness 18 gauge (.040")–16 gauge (.050") available in painted K500 finishes, brushed and mill finishes
- Stainless Steel type 304 and type 316, 24 gauge (.024")–20 gauge (.036") available in 2B, 2D, #4 and several custom directional and non-directional finishes
- Titanium Grade 1, gauges .018"–.024" available in standard mill or matte finishes
- Zinc, gauge .028"–.032" available in natural or pre-weathered finishes
- Recycled content varies upon material selected. 100% recyclability of all metal components

System Design Data

- Width of Compression Cover: 2.75"
- Minimum/Maximum Spacing between Compression Covers: 12"–48"
- Maximum Length of Panels: 40'
- Compression Extrusion Thickness: .056"
- Channel Extrusion Thickness: .056"
- Test data in accordance with ASTM E 283, ASTM E 330, ASTM E 331 and UL 580 (Class 90 available upon request)



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Going With the Flow

IN SOUTH CENTRAL TEXAS, where the San Antonio River meets the San Pedro Creek, a sculptural pavilion is taking form. **Confluence Park**—designed by local architectural firm **Lake|Flato** and slated to open by year-end—will serve as an educational outpost and recreational facility for the San Antonio region. Its signature structure will be made from 28 concrete panels, each between 20 and 27 feet tall and shaped like a flower petal. They will direct water into a 100,000-gallon belowground storage tank, where the contents will be filtered and reused elsewhere in the park.

Andrew Kudless, of the San Francisco-based design studio **Matsys**, devised the pavilion's form. "Andrew's work is based on an understanding of material, biology, and sustainability," says Lake|Flato associate partner Tenna Florian. After initial investigations into a shed-like building, Kudless began to envision the structure

as a series of curved pieces that would funnel rainwater the way "the leaves of a calla lily bring water down to its stem and root system," he explains.

While Kudless and the client considered constructing the structure from glulam or steel and tensile fabric, they settled on concrete for its durability and aesthetic qualities. "Conceptually, it had the desired monumental look," says Kudless. In a variation on tilt-slab construction, the panels are being cast on-site with fiberglass forms. The pavilion's interior will have a smooth finish while the exterior—open to the air during fabrication—will be rougher in texture.

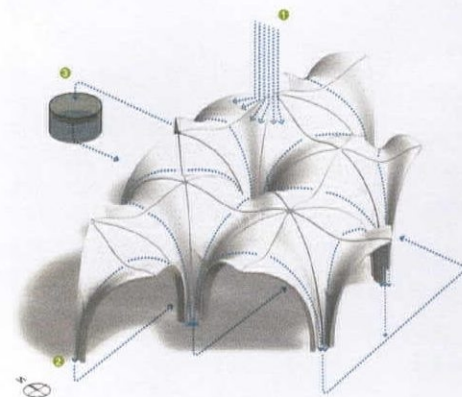
Once cast, the petals will be lifted into place and stand about 4 inches apart from one another. "The pavilion wasn't designed to be a watertight refuge," Kudless explains. So like its organic inspiration, he adds, "when it rains, it will celebrate the rain." —*Miriam Sitz*

Water Conservation Design

1 RAINWATER COLLECTION: The pavilion's geometric concrete forms funnel water throughout the pavilion.

2 WATER TRANSPORT: The lofty pavilion provides shade and shelter while allowing visitors to witness and understand the water cycle.

3 WATER CISTERN: The fallen rainwater is fed to a below ground system of pipes into a 100,000-gallon storage tank for sand filtration. Filtered stormwater is sent to the park's multi-purpose building for use.



PETAL POWER Calla lilies provided inspiration for the shape of the pavilion at Confluence Park in San Antonio (top), which will open by the end of the year. Designed by Lake|Flato in conjunction with architect Andrew Kudless of Matsys, the concrete structure will funnel rainwater into underground cisterns (above), where it will be filtered and used in the park.



APLOMB LARGE

MANUFACTURER: Foscarini
PERFORMANCE: Weighing fewer than nine pounds, this LED suspension lamp with a superthin concrete shade offers a wide beam of downlight.

PRICE RANGE: \$\$\$

APPLICATIONS: Providing 897 lumens of 2700K light, this luminaire designed for residential and hospitality use has a 17 3/4-inch diameter and comes in three finishes.

FOSCARINI.COM

(SNAP #229)



EPOXY CONCRETE REPAIR

MANUFACTURER: Quikrete
PERFORMANCE: The two-part epoxy mends concrete, brick, stucco, tile, and other substrates.

PRICE RANGE: \$\$

APPLICATIONS: The quick-curing substance can repair cracks, holes, breaks, and spalls a half inch and larger on vertical and horizontal surfaces; it also can bond concrete and masonry surfaces.

QUIKRETE.COM

(SNAP #230)



WILLOW

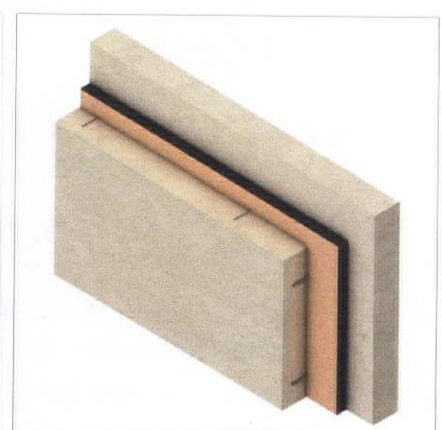
MANUFACTURER: Ann Sacks
PERFORMANCE: This textural concrete wall tile from the Itai Bar-On collection has a raised center, behind which one can install LED lights.

PRICE RANGE: \$\$

APPLICATIONS: Offered in black, gray, and white, the 8-by-32-inch tile is suitable for indoor drywall applications, for example in living spaces, powder rooms, and kitchens.

ANNSACKS.COM

(SNAP #231)



KOOLTHERM K20 CONCRETE SANDWICH BOARD

MANUFACTURER: Kingspan
PERFORMANCE: Designed to enable thin wall assemblies, this rigid thermoset offers R-values ranging from 13.5 to 40.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for tilt-up and precast-concrete walls, the CFC-free board is resistant to the passage of water vapor as well as to solvents, fungi, and pests.

TRUSTGREENGUARD.COM

(SNAP #232)

KEY \$=VALUE, \$\$=MID-RANGE, \$\$\$=HIGH-END

= ECO-FRIENDLY ATTRIBUTES

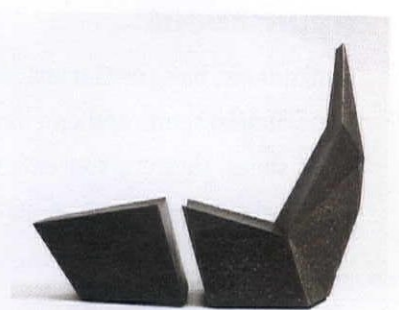
Solid as a Rock

CONCRETE HAS LONG been trying to shake its reputation as that reliable but dull building material. Now, thanks to a spate of high-concept outdoor furniture pieces, the humble substance might finally achieve its goal.

Holly Hunt's Cachalot table series highlights concrete's visual capabilities. "The pieces' backs absorb color and light, providing a flat and even tone," explains design director Alberto Valez of the sculpted and polished forms, "while their flat tops reveal the material's more familiar depth and texture."



Modeled after quartz crystals, Alexander Lotersztain's QTZ Concrete Edition of exterior furniture debuted in April at the haute Rossana Orlandi gallery in Milan. It was first seen stateside in November, during Design Miami, when manufacturer **Ivanka** displayed the massive limited-edition pieces—which include lounge chairs with and without a headrest, a table, and a footrest—in select galleries and along city streets.



TOUGH STUFF Dowdy concrete gets a lively makeover in a trio of faceted outdoor pieces. Standouts (from far left) include the Cachalot side table (Holly Hunt), the Strata bench (Landscape Forms), and the QTZ Concrete Edition chair and ottoman (Ivanka).

Finally, **Landscape Forms** continues working with Meldstone, its proprietary ultrahigh-performance concrete. Products like the modernist Strata bench take advantage of the material which, unlike traditional cast-concrete efforts, allows designers to create "thin, strong forms that are structurally robust while visually light and fluid," says Kirt Martin, vice president of design and marketing. Just call it romancing the stone. —Julie Taraska

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Alumiline Linear Metal Ceiling System planks are available in elegant 8', 10', or custom lengths. This industry-first in ceiling plank design is made from extruded aluminum and is not pan-rolled like traditional metal ceiling panels. Alumiline is an excellent choice for external applications or high-humidity environments such as soffits, carports, or swimming pools. For projects requiring sound absorption, recycled cotton acoustical backer can be installed above the Alumiline ceiling.

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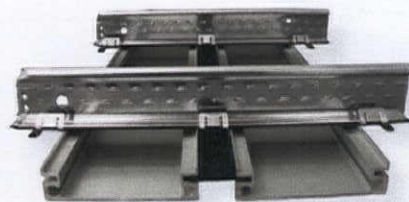
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Alumiline – Top View



Alumiline – Bottom View



**Alumiline
Wall Install
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on YouTube!**



Please search "YouTube/Acousticgreen" to see our NEW Alumiline wall install video, and other product installation videos."

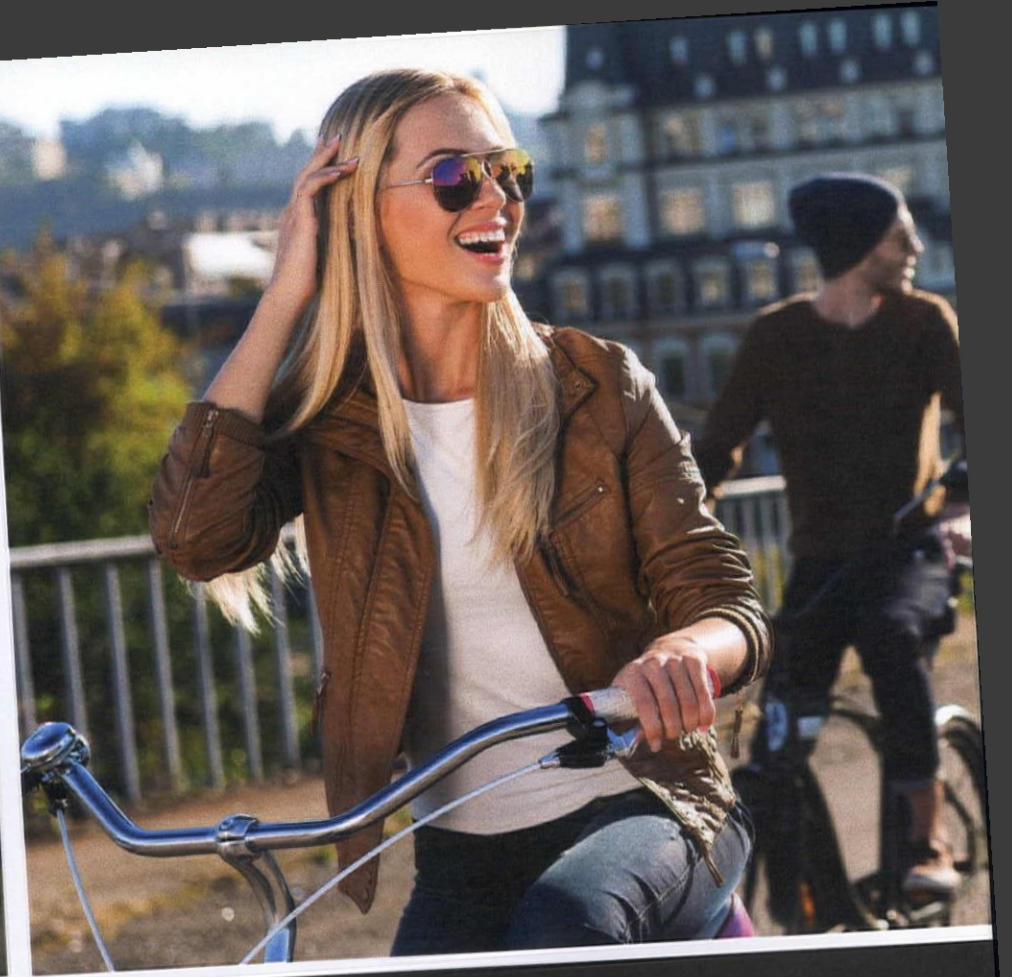
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SNAP 150



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Catching the Wave

Activity is surging down south.

BY J. MICHAEL WELTON



MANUFACTURING in the Gulf Coast region is positively humming along. Five years ago, the **Manufacturers**

Association of Florida began laying a foundation for future growth. Turning to the state's lawmakers, the Tallahassee-based group sought to remove business "roadblocks," says director Amanda Bowen, including a sales tax on manufacturing equipment. "A year ago, we were successful in getting legislation passed for permanent exemption," she says. "And that has made the state very competitive."

Next door in Alabama, **Robinson Iron** is enjoying a profitable mix of product sales and restoration projects. "We're doing work on governors' mansions and government buildings, including in Washington, D.C.," says Luke Robinson, sales and marketing manager of the Alexander City-based company. "We're very adaptable, and that's our biggest strength."

At **Acme Brick** in Fort Worth, production has ramped up but not to pre-2008 levels. As housing starts rise nationwide, the company's many face-brick-making facilities are revving up; they're now operating at 75 percent capacity. "One-and-a-half-million starts a year is ideal, and we surpassed one million last year," says Ed Watson, senior vice president of production. "Experts say it may be three to four more years before we return to where we were—as long as there's not another dip."

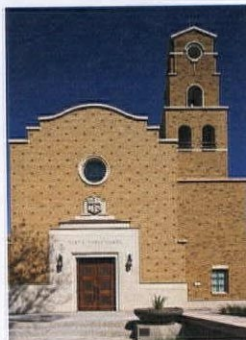
Louisiana is sitting pretty, at the top of a market awash in liquefied natural gas produced by fracking in North Dakota, Pennsylvania, and Texas. Pipelines connect these sites to five Louisiana deepwater ports that can readily dispatch gas to eager markets in Japan, Korea, and Taiwan. "As the pricing structure has changed, the gas has become more affordable," says Don Pierson, Louisiana's secretary of economic development, of the surge.

On the Gulf Coast, the good times are back at last.

Alabama, Florida, Louisiana, and Texas

1 MANUFACTURER:

Acme Brick
LOCATIONS: Fort Worth (corporate office); multiple manufacturing facilities throughout Texas
PRODUCTS: Face-brick products for residential and commercial applications.
FOUNDED: 1891
EMPLOYEES: 2,200
PRICE RANGE: \$\$ BRICK.COM



2 MANUFACTURER:

XtremeInterior Architectural Solutions
LOCATION: Stafford, Texas
PRODUCTS: Extruded-aluminum trims for interior applications.
FOUNDED: 1971
EMPLOYEES: 77
PRICE RANGE: \$\$
XTREMEIAS.COM



3 MANUFACTURER: Reef Industries

LOCATION: Houston
PRODUCTS: Vapor barriers and retarders.
FOUNDED: 1957
EMPLOYEES: 150
PRICE RANGE: \$\$
REEFINDUSTRIES.COM/VAPOR-RETARDERS.PHP



4 MANUFACTURER: RoyOMartin

LOCATIONS: Alexandria, Louisiana (corporate office); Chopin and Oakdale, Louisiana (manufacturing facilities)
PRODUCTS: Southern yellow pine oriented strand board (OSB), plywood, and timber.
FOUNDED: 1923
EMPLOYEES: 1,100
PRICE RANGE: \$\$
ROYOMARTIN.COM



SNAPSHOTS

ALABAMA

In 2016, there were more than

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There are **23 million** acres of timberland in Alabama, accounting for 69% of its **total land area**.

SOURCE: ALABAMA FORESTRY COMMISSION

FLORIDA

The Sunshine State is home to over

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manufacturers that employ more than 331,000 workers.

Florida produces a wide array of goods, including batteries, pharmaceuticals, communications equipment, and aerospace products.



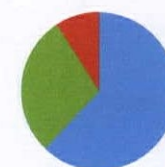
SOURCE: ENTERPRISE FLORIDA

LOUISIANA

The Pelican State's forest-products industry contains 900 firms in 45 parishes and directly employs over

25,000

people.



Private landowners own 62% of the state's 13.8 million acres of forestland, **forest-products industries** own 29%, and the **general public** owns 9%.

SOURCE: LOUISIANA DEPARTMENT OF AGRICULTURE AND FORESTRY

TEXAS

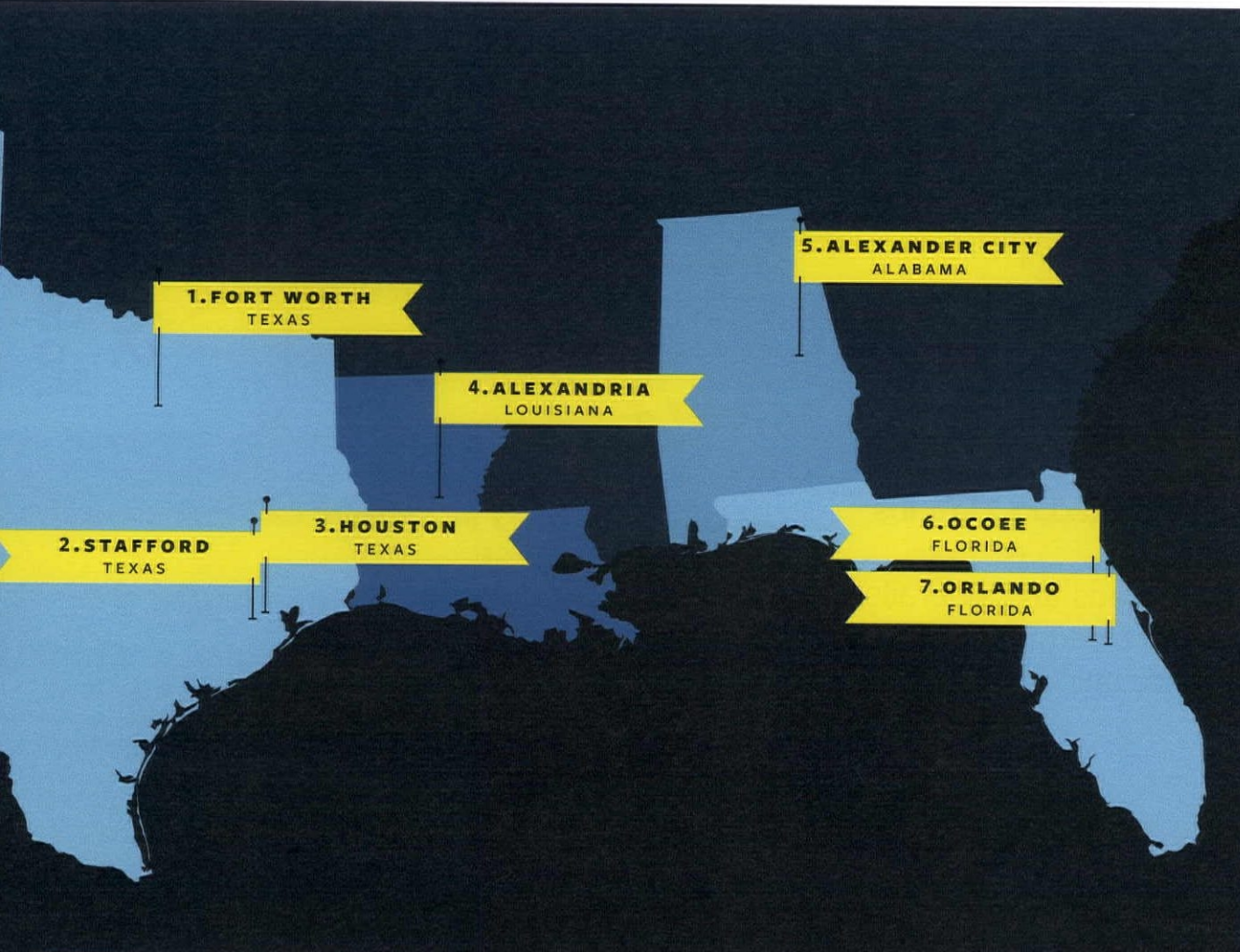
February was the **eighth straight month** that factory activity increased in the Lone Star State.



At the same time, the state's **manufacturing employment index** posted a second positive reading in a row, edging up from

6.1 to 9.6.

SOURCES: TEXAS MANUFACTURING OUTLOOK SURVEY; FEDERAL RESERVE BANK OF DALLAS



5 MANUFACTURER: Robinson Iron
LOCATION: Alexander City, Alabama
PRODUCTS: Cast metal, bronze aluminum, and iron for interior and exterior uses.

FOUNDED: 1973
EMPLOYEES: 35
PRICE RANGE: \$\$\$

ROBINSONIRON.COM

6 MANUFACTURER: American Sanitary Partition

LOCATION: Ocoee, Florida
PRODUCTS: Toilet partitions and shower dividers.

FOUNDED: 1932
EMPLOYEES: 30+
PRICE RANGE: \$-\$\$\$

AM-SANITARY-PARTITION.COM



7 MANUFACTURER: Bluworld of Water

LOCATION: Orlando
PRODUCTS: Custom water features such as fountains, pools, waterfalls, and water walls.

FOUNDED: 1998
EMPLOYEES: 75-100
PRICE RANGE: \$-\$\$\$

BLUWORLDUSA.COM

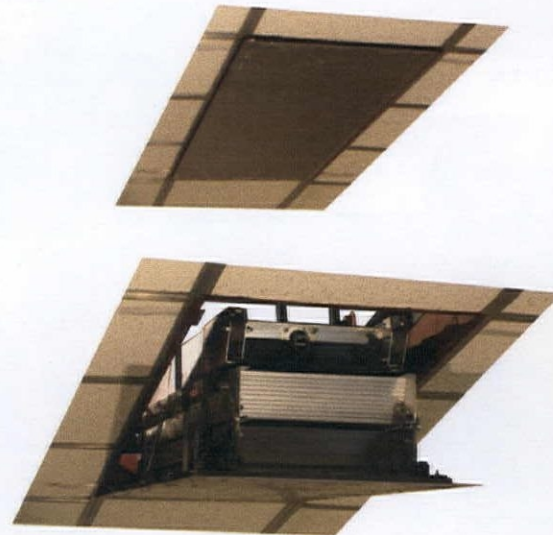
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SNAP 36

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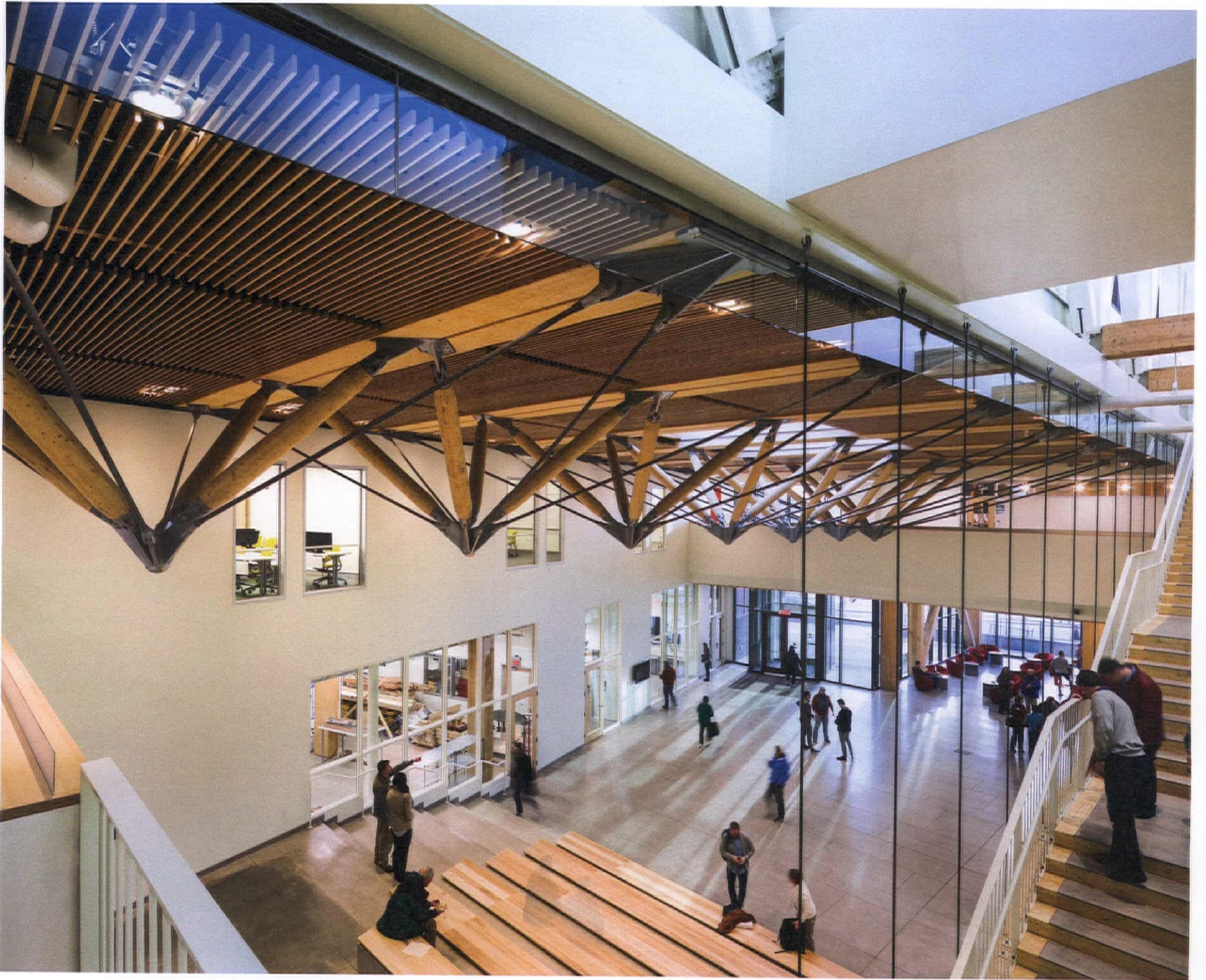


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SNAP 37

Kreider Commons, Lebanon, PA



Into the Wood

The new Design Building at the University of Massachusetts Amherst eschewed steel, becoming the largest academic facility made of technologically advanced timber.

BY BELINDA LANKS

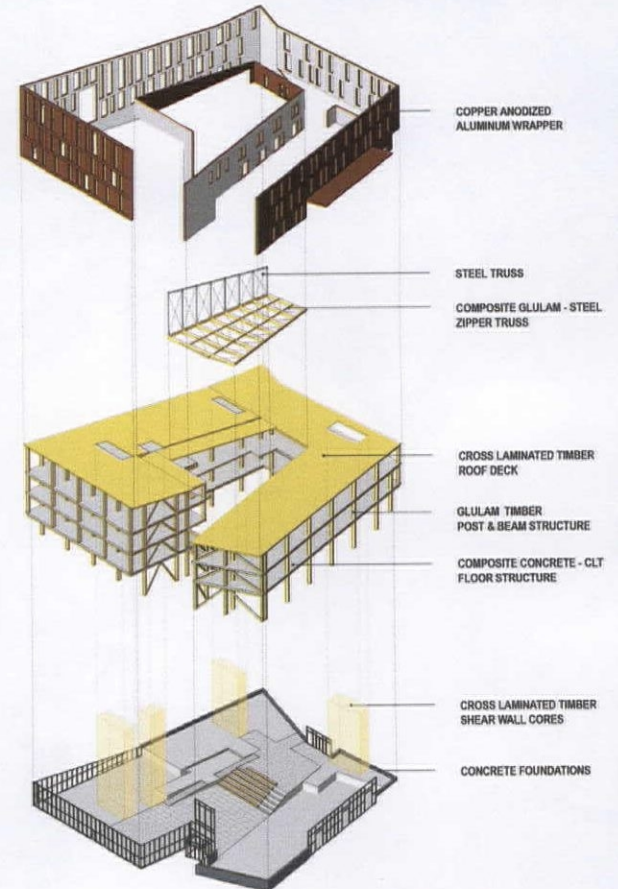
THE BUILDING AND CONSTRUCTION TECHNOLOGY (BCT) program at the University of Massachusetts Amherst has built a reputation on its research of innovative wood-construction technologies. So when the school announced a plan to bring under one roof all its design disciplines—BCT, architecture, and landscape architecture and regional planning—the faculty seized the opportunity to put its academic work into practice. The result is the recently completed 87,500-square-foot Design Building. Created by Boston-based **Leers Weinzapfel Associates (LWA)**, the structure is not only the first academic facility to be made of engineered cross-laminated timber (CLT), an environmentally friendly superplywood developed as an alternative to stone, masonry, concrete, and steel. It

also is the first building in the United States to use a composite flooring system made of cast-in-place concrete and CLT.

“Many people think of wood as just an old material,” says BCT program director Alex Schreyer. “Our group wanted to show how we could work with it in contemporary terms.” To that end, LWA demonstrated CLT’s ability to handle horizontal and vertical loads by utilizing the material for the building’s exposed glulam frame as well as on the various shaft walls for the stairs, elevator tower, and mechanical systems. In the two-story atrium, where exposed CLT panels span up to 65 feet in an open common area, the architects pushed the material further: They collaborated with engineering firm **Equilibrium Consulting** on an innovative “zipper” truss

GOING THE DISTANCE

Strong CLT panels at UMass Amherst’s Design Building handle lateral and vertical loads, which made it possible for architects Leers Weinzapfel Associates to create an open, ground-level commons with a long-span, steel-wood truss system.



ALL IN PLACE

In the faculty offices (above), radiant-heat panels and natural light help reduce energy costs. To maximize the New England sunshine, the architects placed glass on the building's west side as well as along the interior-courtyard walls (top right). CLT was used for the shear-wall cores, floor structure, and roof deck (above right).

system of glulam beams and steel rods that would support the CLT-concrete composite floor above and the weight of the building's green roof.

"All the members of the seven trusses converge at a single midpoint like a closed zipper," says LWA principal Tom Chung, "hence the terminology." Aside from their visual impact, he explains, the trusses are more materially efficient than thick steel or wood options. They also eliminate the need for vertical supports. "We probably cut the number of beams required in a steel structure by half," he adds.

The finished form departs from the expected, both inside and out. "Most mass-timber buildings in the United States have been basically rectangular boxes," says Chung. By contrast, the Design Building has a cantilevered entryway and, in response to a sloping site, stands four stories on its downhill side and three on the uphill side.

Although the use of CLT makes a substantial contribution, it is just one of the building's green features. For example, LWA maximized natural light by adding glass fronts to the structure's office spaces, which wrap around an outdoor courtyard that doubles as an open-air classroom. The firm also placed skylights in the ceiling of the lower floor to draw light into the building's interior. The architects minimized solar heat gain through the calculated placement and size of windows as well as by specifying self-shading electrochromic glass, which tints in response to direct light, on the south- and west-facing curtain walls.

The building's high-performance envelope has two-part insulation: mineral wool along the outside of the sheathing and behind the rainscreen, plus staple

insulation in the cavities of the metal-stud drywall backup assembly. In addition, LWA broke up the mechanicals into zones. Four air-handling systems serve their respective areas so that heating and cooling aren't wasted on empty space. Radiant heat on the ground floor and chilled beams throughout the building increase the energy savings.

Finally, in the upstairs exterior courtyard, integrated landscaping by local studio **Stephen Stimson Associates** includes a stormwater management system that directs roof runoff to a series of bioswales. Principal Lauren Stimson says her team opted for native mosses, ferns, young spruces, and evergreens instead of the standard sedum which, although drought-resistant, "doesn't feel like New England." The structure's green roof reduces the heat island effect and slows stormwater runoff.

UMass Amherst's design departments hope their new building will encourage CLT construction to take greater hold in the United States. One hindrance to the material's adoption, the architects say, is that utilizing it requires a special permitting process. The designers also had to correct the misconception that heavy timber is less fire-resistant than steel.

In the case of the Design Building, it might have taken extra effort to use CLT, but the result satisfies the design faculty's goal of showcasing a large-scale application of its research. "It demonstrates this sustainable technology is feasible and cost-efficient," says Schreyer. In fact, the \$52 million Design Building—which is aiming for LEED Gold certification—is one of those rare instances of innovation coming in on budget. ■



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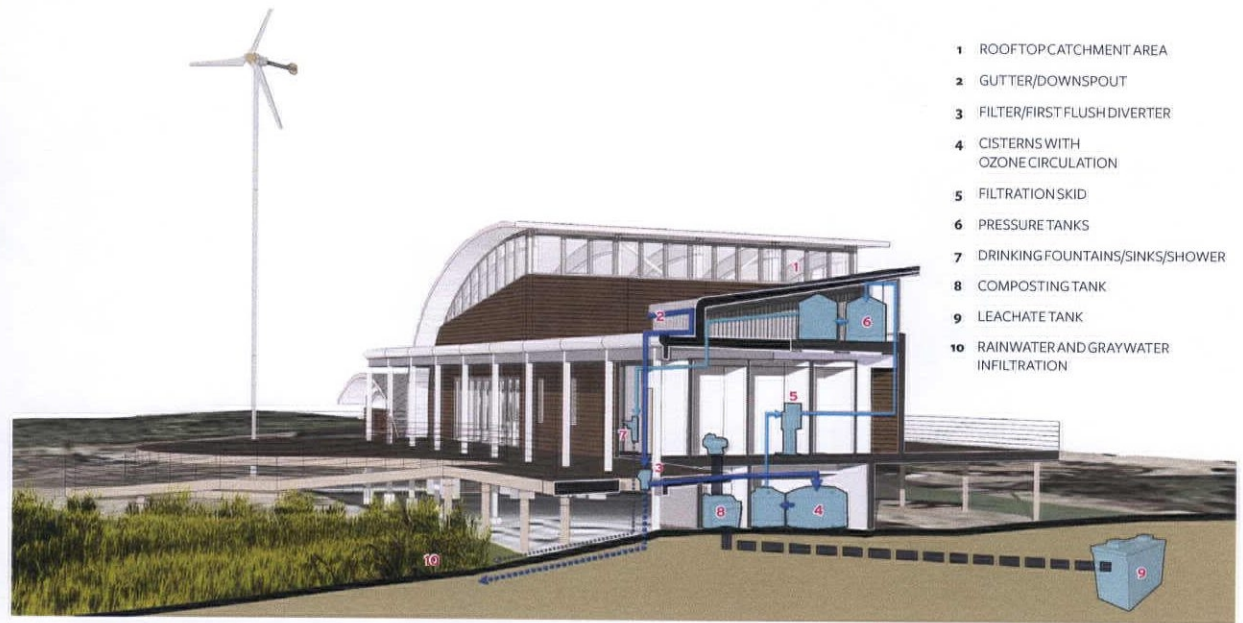
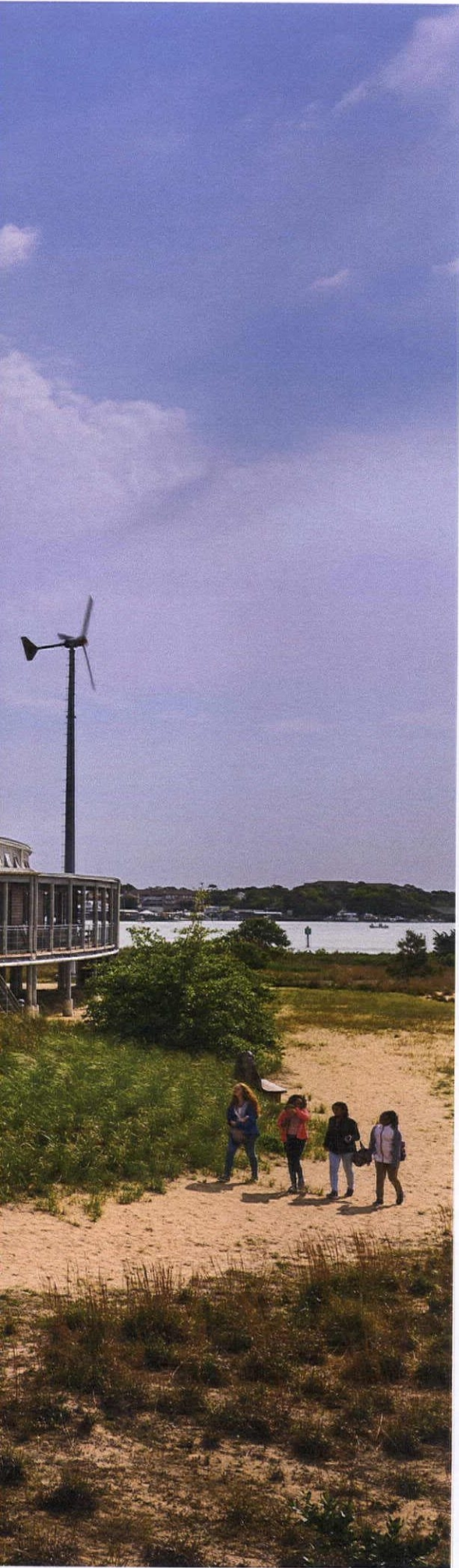
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- 8 COMPOSTING TANK
- 9 LEACHATE TANK
- 10 RAINWATER AND GRAYWATER INFILTRATION

A Thirst for More

Forward-thinking project teams regard water as a precious resource.

BY JOANN GONCHAR, AIA

SOME HAVE DECLARED California's water woes over. As of early last month, precipitation in many parts of the state was on track to make this winter one of the wettest on record. Reservoirs were filling up—so much so that one dam in Northern California seemed on the verge of collapse.

But others say not so fast. At press time, much of the middle and southern part of California was still considered in moderate to severe drought. And in fact, the state's Water Resources Control Board announced an extension of its existing conservation regulations on February 8, with prohibitions against practices such as watering lawns after rainstorms and hosing down sidewalks and driveways. The board cited still-depleted groundwater supplies and the lingering effects of the drought on agriculture, fish, and wildlife.

Those who follow water-use issues closely, however, say that conservation is not just for drought-plagued regions and arid places. Rob McDonald, the lead scientist for the Global Cities program at the

DRINKING IT IN
SmithGroupJJR's Brock Environmental Center in Virginia Beach, Virginia (left), is the first commercial building in the country permitted to capture and treat rainfall as drinking water. The rain goes through a multistep journey to be turned into potable water (top).

Nature Conservancy, points to the effects of climate change. Water supplies all over the world will see the results of warming temperatures, shifting precipitation patterns, and more extreme weather.

Other sources make the case that conserving water means saving energy. They point to a

relationship known as the “energy-water nexus.” The term is used to describe the interdependence of the water used for energy production and the energy consumed to extract, purify, heat, or cool water, and then to clean and dispose of wastewater.

“Treating and moving water around has a substantial energy footprint,” says Justin Stenkamp, a senior associate in the Seattle office of engineering firm PAE. The amount of energy expended on water varies greatly by region, but nationwide it accounts for about 4 percent of electricity consumption, according to a 2002 Electric Power Research Institute report.

Using less water also means improved water quality. Amy Vickers, an independent water-planning and -policy consultant based in Amherst, Massachusetts, cites the problem of algae growth in waterways caused by runoff from farms and yards.

But what can architects and their consultants do about these problems at the scale of individual buildings? With so much water policy set at the state and regional levels, it is only natural for design teams to assume that there is little they can do beyond selecting efficient plumbing fixtures or specifying native landscaping. However, architects can help reduce water use dramatically by looking at their projects holistically. One possible road map is offered by the water-conservation ambitions of the stringent Living Building Challenge certification program (LBC), which requires “net-positive” water performance. According to the International Living Future Institute (ILFI), the nonprofit organization that oversees the LBC, this means that a project's water supply must come from captured precipitation or recycled water; stormwater and wastewater also should be managed on-site



CONTINUING EDUCATION: WATER CONSERVATION

FROM ARCHITECTURAL RECORD



FINE-TUNED For the R.W. Kern Center at Hampshire College in Amherst, Massachusetts (from top), Bruner/Cott and Berkshire Design closely studied the roof and gutter details to optimize the performance of the rainwater-harvesting system.

through reuse, a closed-loop system, or infiltration. The idea is that a Living Building is one that “has a positive impact and restores the ecosystem around us,” says ILFI CEO Amanda Sturgeon.

Those familiar with the standard will know that water is only one of its many aspects. Achievement of “living” status entails satisfying 20 imperatives organized into seven performance areas: place, energy, materials, equity, beauty, and health and happiness—in addition to water. Full certification has proved tough to attain, with only 12 projects, so far all in the U.S., certified as full Living Buildings since the program’s launch in 2006.

The small number of certified projects is not surprising, given that one of the aims of the LBC program is to challenge established practices and transform the design and construction industries. The net-positive water imperative is no exception: Many of its recommended strategies conflict with building codes and health department regulations in some jurisdictions. In cases when these conflicts can’t be resolved, ILFI does grant exceptions as long as a project team can

demonstrate that it has been an advocate for change.

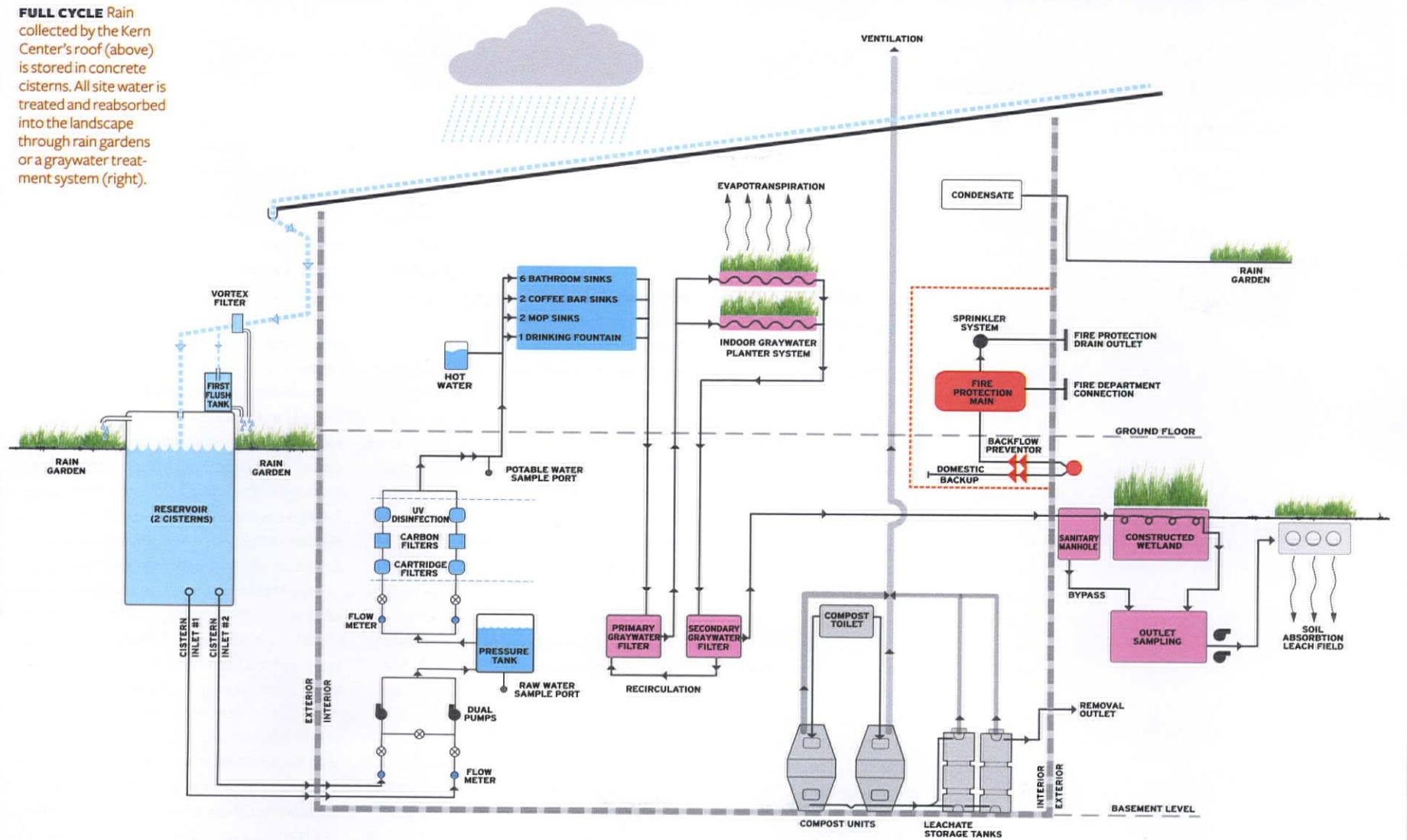
Lately, however, LBC projects have had some success implementing progressive water strategies. One such project is the Chesapeake Bay Foundation’s Brock Environmental Center in Virginia Beach, Virginia, designed by SmithGroupJJR. The 10,000-square-foot structure hosts the nonprofit’s educational and outreach programs and houses offices for its staff. Completed in late 2014 and LBC-certified in the spring of 2016, Brock is the first commercial building in the continental U.S. permitted to capture and treat rainfall for use as drinking water.

The toughest part of realizing this rain-to-potable-water system, according to Greg Mella, SmithGroupJJR’s director of sustainable design, was devising a waterworks that would satisfy the requirements of Virginia’s Department of Health and its Office of Drinking Water but would also be easy to maintain and scaled appropriately for the building’s modest size. In the resulting system, rainfall is captured from about half the structure’s 10,000 square feet of arced and sloped standing-

PHOTOGRAPHY: © ROBERT BENSON



FULL CYCLE Rain collected by the Kern Center's roof (above) is stored in concrete cisterns. All site water is treated and reabsorbed into the landscape through rain gardens or a graywater treatment system (right).





CONTINUING EDUCATION: WATER CONSERVATION

FROM ARCHITECTURAL RECORD



BREAK IT DOWN Composting systems digest the Kern Center's waste, also reducing the building's overall water use.

seam roofs and stored in two 1,650-gallon cisterns. The water then undergoes numerous filtering and disinfecting steps, including treatment with UV light and ozone, and—at the insistence of local authorities—chlorine. It is then supplied to the low-flow fixtures, including bathroom and kitchen sinks, water fountains, and a shower. (Instead of conventional toilets, Brock has composting ones.) Once used, the relatively clean wastewater from the plumbing fixtures, known as graywater, along with excess runoff from the roofs, is piped to rain gardens. These landscaped depressions naturally filter the water and allow it to slowly infiltrate into the ground.

The Brock project team was not the first to try to permit a potable-rainwater system in a commercial building. Several years before, the Bullitt Center in Seattle covered the same ground. But the Miller Hull–designed 52,000-square-foot, six-story office building, completed nearly four years ago, does not yet have the necessary regulatory approvals to begin using the rainfall collected from the structure's roof and stored in a 56,000-gallon basement cistern to supply showers, sinks, and drinking fountains. In the meantime, the center has an exemption from ILFI allowing it to rely on the municipal utility for its potable water and still satisfy the certification

system's water requirements (the building received LBC certification in 2015).

The foundation has made progress toward obtaining the permissions needed to make Bullitt's rainwater system operational, but one problem has yet to be resolved: the lack of National Sanitation Foundation (NSF) certification of the already installed rooftop photovoltaic (PV) panels as part of the drinking-water catchment system. Because of its commitment to the concept of rainwater reuse, the client continues to work with the PV manufacturer on a retroactive NSF designation, even though the building has already earned its LBC designation, says Jim Hanford, a Miller Hull principal. The foundation has been "pugnacious" in pursuing net zero water, he says. "It's pretty impressive."

Regardless of the outcome of the Bullitt's efforts to obtain a permit for its rainwater system, the building can claim several water-related innovations, including the world's first six-story composting system. The building's overall water consumption is also remarkably low—only 1.1 gallons per square foot over the past 12 months, compared to a 14-gallon-per-square-foot average for Seattle office buildings. But more important, the project has spurred significant regulatory changes. One "triumph," according to Sturgeon, is a set

of new city- and state-approved standards for graywater established as a result of the project. These allow the water from the showers, drinking fountains, and sinks to be treated by a constructed wetland on one of the building's terraces and then infiltrated through a street-level planting strip instead of being drained to the sewer. If widely adopted, the approach could help relieve pressure on the city's infrastructure, in addition to helping replenish groundwater aquifers.

Some regions seem especially receptive to the LBC and its water-conservation imperative. In Western Massachusetts, there are four completed projects pursuing certification or already certified: Smith College's off-campus Bechtel Environmental Classroom, in West Whately; the Class of 1966 Environmental Center, at Williams College in Williamstown; and the Hitchcock Center for the Environment and the R.W. Kern Center, both on the campus of Hampshire College in Amherst. Each building benefited from the regulatory successes of the previous project. "By the third one, the permitting process was almost routine," says Christopher Chamberland, a civil engineer with the Northampton, Massachusetts–based Berkshire Design Group, which has been involved in some way with the water systems of all the area's projects.



WATER MISER Tozer Design's residential project Desert Rain (from above left) in Bend, Oregon, captures precipitation from its butterfly roofs for all potable uses. It is designed around a daily water budget of 42 gallons per occupant.

The four projects in Western Massachusetts depend on a handful of core strategies: All but Bechtel, which has a well, collect and treat precipitation for their potable-water supply; all purify graywater with devices such as constructed wetlands or rain gardens before reintroducing it into their sites' natural hydrological system; and all have composting toilets.

In addition to being similar to each other, these projects' water-conserving features are remarkably similar to those deployed at Bullitt and Brock. But that doesn't mean that the water systems are interchangeable. They must be tailored to the site and the climate, the program, and, especially, the architecture, says Chamberland. He points to the 17,000-square-foot Kern project, designed by Cambridge, Massachusetts-based Bruner/Cott and dedicated in September. Almost every aspect of the concrete, stone, and timber structure, which serves as a campus social hub and houses administrative offices and classrooms, was the product of intense examination by both the architects and Berkshire Design.

Just one example of the many scrutinized elements are those relating to Kern's roof, which is a critical part of the rainwater-harvesting system. The two firms studied details such as the optimal slope, the relationship between the overhang and the gutters, and the best way to attach screens to keep leaves and other debris out of the water. "The performance criteria can't be separated from the architecture," says Chamberland.

Such functional elements are important in any locale, but in dry climates, they take on heightened relevance. This was the case for Desert Rain, a recently LBC-certified single-family residential project in Bend, Oregon, designed by local firm Tozer Design.

As the name of the compound of five wood-frame buildings with butterfly roofs implies, the project depends on precipitation for its potable supply and was one of the first in Oregon to take advantage of new state guidelines for rainwater harvesting.

Since Bend averages only 12 inches of precipitation per year, and in some years gets as little as seven, the Desert Rain team needed to capture every drop—even with a scant water budget of 42 gallons per occupant per day, says Morgan Brown, president of Whole Water Systems, the firm responsible for design of the project's water technology. (A typical budget is more than twice that, he says.) One innovation was the substitution of a device known as a first flush diverter, or FFD, which disposes of the initial runoff from a roof surface and any contaminants that come with it. Instead, Brown devised ground-level gravel filters positioned under each roof downspout. These remove unwanted debris while capturing up to 15 percent more water, he explains.

In addition to rainwater harvesting, Desert Rain also took advantage of a rule for graywater reuse issued when the project was already under way. The system directs the water from sinks, showers, and washing machines through a constructed wetland for remediation before it is used for irrigation. Partly because of the newness of all the regulations and officials' unfamiliarity with the proposed systems, the project took almost seven years to complete. "Normally we could have designed something like this in a few weeks," says Brown. But he's pleased to have been part of a project that broke new ground and takes its cues from nature's water cycle, he adds. "It's the ultimate example of biomimicry." ■

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Learning Objectives

- 1 Explain why water conservation is important even in regions not prone to drought.
- 2 Describe the goals and the structure of the Living Building Challenge.
- 3 Identify the elements in a potable rainwater-harvesting system.
- 4 Discuss some of the regulatory challenges that may be encountered by projects trying to implement ultra water-conserving strategies.

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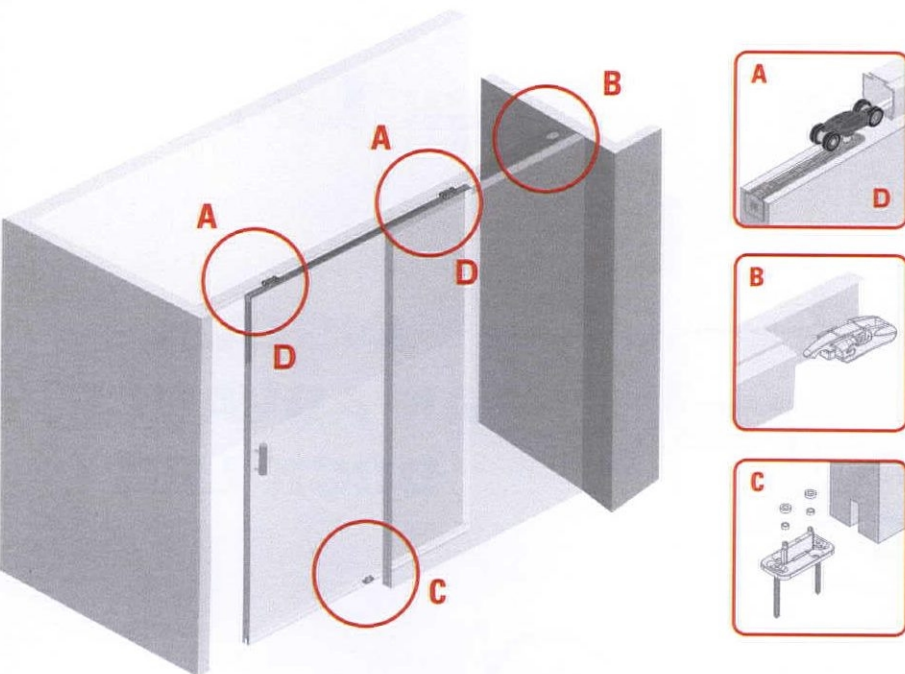
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SNAP 54

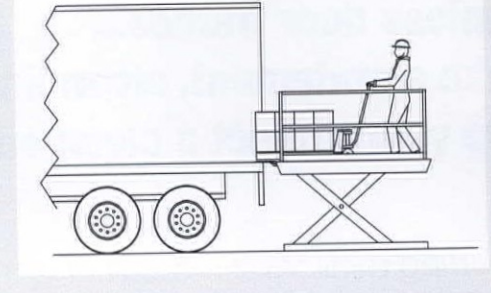
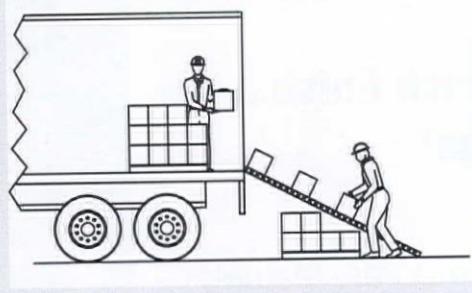
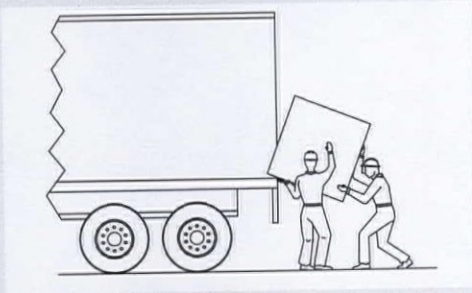
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Look to these pages for products brought to you directly from manufacturers. You'll find price, application, performance data, and contact information—the facts needed to make the right decisions. Use the reader service card in the issue or go online at architecturalrecord.com to request further details.



Available in seven edge profiles, Geoluxe's proprietary stone surfacing is resistant to stains, scratches, heat, frost, chemicals, and ultraviolet rays. (SNAP #233)

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<p>Doors, Windows Page 62</p> <p>Doors, windows, storefronts, entrances, skylights, framing systems, glazed curtain walls, and translucent wall and roof assemblies.</p>	<p>Landscaping, Sitework Page 62</p> <p>Exterior improvement products such as site furniture, bollards, pavers, landscape edging, and exterior green walls. Also includes gazebos and other site structures.</p>	<p>Roofing, Siding, Thermal & Moisture Protection Page 63</p> <p>Goods for constructing the building envelope, such as exterior wall and roof panels, sheathing, thermal insulation, and waterproofing.</p>
<p>Equipment Page 62</p> <p>A broad range of electrical and tech goods, among them audiovisual, multimedia, and control systems. Also covers elevators and appliances.</p>	<p>Materials Page 63</p> <p>Basic products used in construction, among them lumber, concrete, and masonry units. Includes paint, coatings, and structural materials and fittings.</p>	<p>Specialty Products Pages 64-65</p> <p>Products for special applications or that apply to more than one category, such as gates, ladders, columns, signage, awnings, canopies, and railing systems.</p>
<p>Interior Finishes, Furnishings Page 62</p> <p>Products for finishing and furnishing building interiors, including flooring, wallcoverings, ceilings, furniture, shelving systems, and window treatments.</p>	<p>Mechanical Systems, HVAC, Plumbing Page 63</p> <p>Products for conditioning, moving, holding, and controlling air, water, and other fluids. Examples include fans, ventilators, and boilers.</p>	

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SNAP 236

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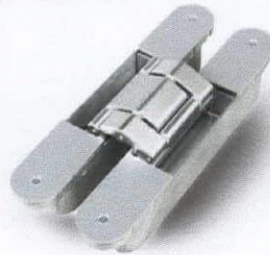
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Circle 238

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SNAP 239

INTERIOR FINISHES, FURNISHINGS

INTERIOR FINISHES, FURNISHINGS

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Product Data

- Exceeds ASTM C936 and CSA-A231.2



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SNAP 243

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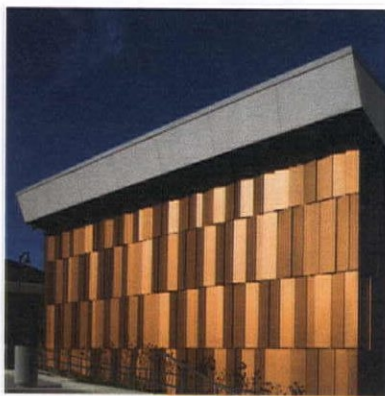
Product Application

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Performance Data

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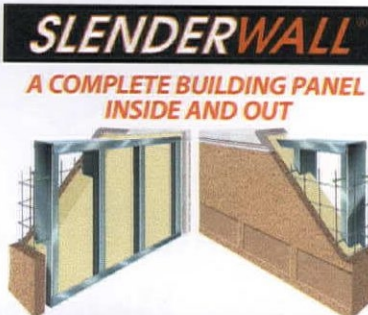
Product Application

- Johns Hopkins Hospital, Baltimore, MD
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Performance Data

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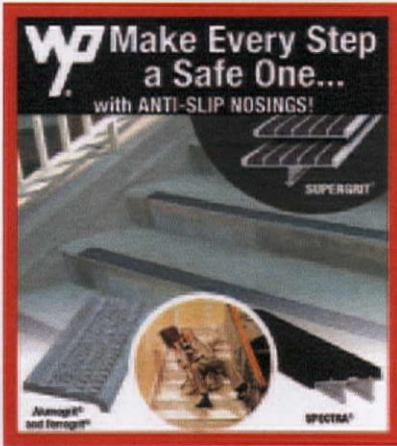
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NEW AND UPCOMING EXHIBITION

Frank Lloyd Wright at 150: Unpacking the Archive

NEW YORK CITY

June 12–October 1, 2017

Marking the 150th anniversary of the architect's birth, this exhibition at the Museum of Modern Art will comprise 450 works made from the 1890s through the 1950s. They will include models, architectural drawings, building fragments, films, television broadcasts, prints, furniture, tableware, textiles, paintings, photographs, and scrapbooks, a number of which have never been displayed. For more information, visit moma.org.

ONGOING EXHIBITIONS

Yayoi Kusama: Infinity Mirrors

WASHINGTON, D.C.

Through May 14, 2017

A celebration of the Japanese artist's 65-year career, *Yayoi Kusama* is taking place at the Smithsonian's Hirshhorn Museum. Visitors will have the opportunity to discover six of Kusama's Infinity Mirror Rooms along with a selection of other key works, including paintings from her most recent series, "My Eternal Soul," which will be shown in the United States for the first time. For more information, visit hirshhorn.si.edu.

Architecture of Independence—African Modernism

NEW YORK CITY

Through May 27, 2017

The exhibition *Architecture of Independence* explores the complex legacy of modern architecture and nation-building in 1960s and '70s postcolonial Africa, when many sub-Saharan countries gained their independence and turned to experimental and futuristic architecture to express their national identities. Held at New York's Center for Architecture, the show features original photography by Iwan Baan and Alexia Webster. For more information, visit aiany.org.

Go

CHICAGO

Through June 4, 2017

The second installment of the Art Institute of Chicago's Modern Series explores how artists have responded in different ways to experiencing the world in our accelerated age. *Go* offers a range of sensory encounters; through paintings, sculpture,

works on paper, photographs, designed objects, textiles, books, and films, the show reveals not only how speed has been celebrated but also how it has been managed and resisted. For more information, visit artic.edu.

Moholy-Nagy: Future Present

LOS ANGELES

Through June 18, 2017

This exhibit, the United States' first László Moholy-Nagy retrospective in nearly 50 years, reveals a utopian artist who believed that art could work with technology to help humanity. *Moholy-Nagy: Future Present*, taking place at the Los Angeles County Museum of Art (LACMA), examines the career of this pioneering painter, photographer, sculptor, and filmmaker. Included are more than 250 multimedia works from public and private collections across the USA and Europe. For more information, visit lacma.org.

Bureau Spectacular: insideoutsidebetweenbeyond

SAN FRANCISCO

Through August 13, 2017

For its first West Coast museum presentation, architecture studio Bureau Spectacular has designed a large-scale installation further developing its ideas on past, current, and future architecture, as seen in founder Jimenez Lai's drawing *insideoutsidebetweenbeyond*, acquired by SFMoMA in 2015. The Los Angeles–based studio views architecture as a medium capable of rewriting cultural narratives. Reconsidering urban architecture inside, outside, between, and beyond the monotonous rectangular buildings seen in most city skylines, the exhibit offers an urban landscape littered with surrealistic architectural forms and jarring environments. For more information, visit sfmoma.org.

The Jazz Age: American Style in the 1920s

NEW YORK CITY

Through August 20, 2017

In the exhilarating 1920s, American patronage and creativity emerged on the world stage of design and decoration. *The Jazz Age*, at the Cooper Hewitt, will focus on American tastes during the period while considering Eastern and Western European influences. The exhibition will examine the strong connections between the United States and France and Austria, as talent, craftsmanship, urbanity, and experimentation flowed back and forth across the Atlantic. For more information, visit cooperhewitt.org.

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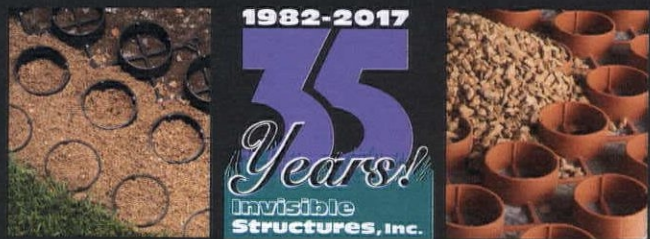
Product Application

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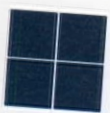
Schweiss Doors designed and built the glass bifold doors for the Golden 1 Center in Sacramento, CA

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Remote Control

At IBS and KBIS, tech solutions abounded, with apps and software introduced to streamline the construction process and manage devices within homes and buildings.

UNLIKE ITS PREVIOUS three editions, which were held in Las Vegas, Design and Construction Week headed south for 2017. Literally—to the Orange County Convention Center in Orlando—where from January 10 to 12 more than 2,000 exhibitors and 80,000 attendees convened at the International Builders Show (IBS) and the Kitchen and Bath Industry Show (KBIS). If one conclusion was to be drawn from the two fairs, which showcased thousands

of building and construction products, it was this: Smart systems are here to stay, with manufacturers finding ever-increasing residential and commercial uses for them.

Take the model home from the **Google**-owned **Nest Labs**. The 784-square-foot structure, located in the convention center's parking lot, was outfitted with **Works with Nest** partners—a consortium of companies whose Internet of Things devices may

be monitored and adjusted via Nest's Learning Thermostat and automated software platform. Featured products included **August's** Doorbell videocam, **Yale's** forthcoming Linus lock, **Hunter Douglas's** PowerView motorized shades, and **Rheem's** Professional Series tankless and hybrid electric water heaters; all can be operated solo or in concert with Nest technology to save money and increase ease of operation.

HIT THE FLOOR
Technology loomed large at the 2017 International Builders Show (above), with exhibitors showing off digital wares alongside traditional construction materials.



The NextBUILD pavilion at IBS moved the automation idea from residential to contract applications. On hand were 75 tech companies offering building and drafting solutions, from **Buildertrend** and **PlanSwift** (purveyors of cloud-based construction management software) to **Graphisoft** and **Chief Architect Software** (providers of CAD- and virtual reality-powered modeling options). Their mass presence highlighted how from ideation to execution, the building process has shifted from physical to digital.

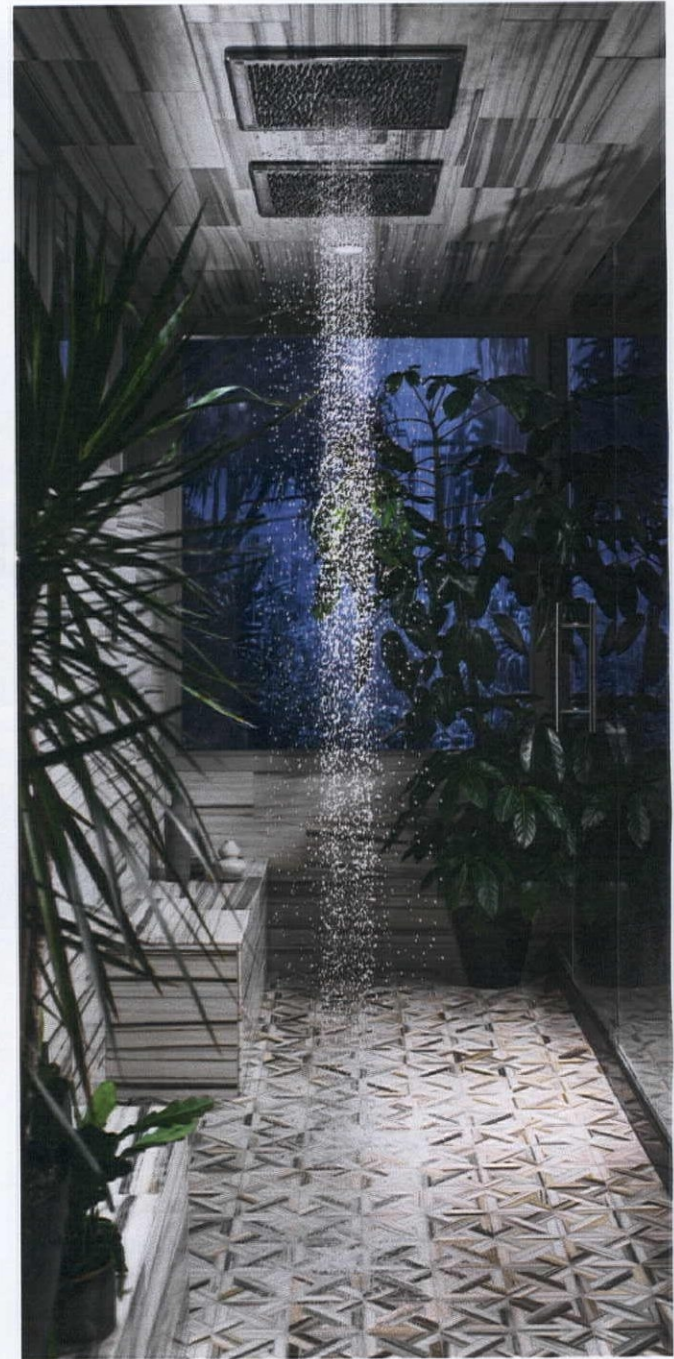
Over at KBIS, electronic innovations were most evident in the bathroom. **Ronbow** and **Fleurco** offered pencil-edge mirrors that emitted an ambient glow and were tricked out with integrated LED lights and USB charging docks; **Robern's** AiO collection bested them, though, with units that incorporated touchscreens and Bluetooth speakers. Customized options were rampant, with nearly everything specifiable, down to the color of a pattern and the grain of a surface.

GET SMART
 (Clockwise from above) Nest Labs' model home featured devices that sync with the brand's automation software; LED medicine cabinets and mirrors, by Robern and Ronbow, respectively, have such amenities as USB docks and touchscreens. Geoluxe's Pyrolithic Stone offers an alternative to marble; Caesarstone's elegant Transform slabs can top an existing surface.





CURVES AHEAD Kwa concrete tiles from Ann Sacks' s Itai Bar-On line can be outfitted with an LED light and double as a sconce (above). Thanks to its 775 nozzles and intentionally irregular water flow, Kohler's Real Rain showerhead (right) replicates a summer rainstorm, while Liquid Forms tiles by Walker Zanger (below) bring waves in motion to mind.



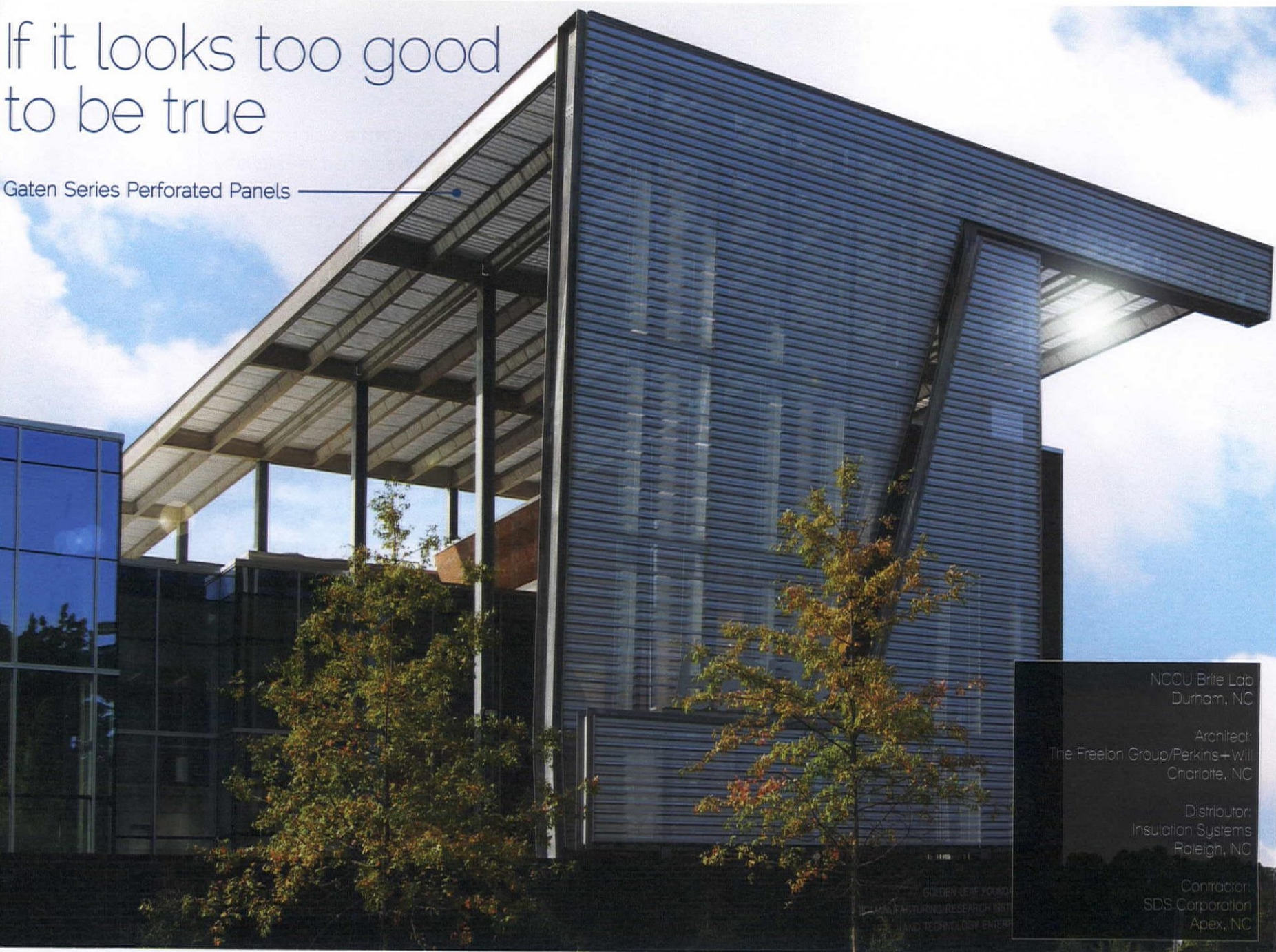
Manufacturers from **Geoluxe** to **Caesarstone** presented new materials, including increasingly sophisticated and durable alternatives to natural stone. The former expanded its Pyrolithic Stone options, which are made from a mix of mineral-based materials; the latter launched Transform, a line of superthin scratch-, stain-, and heat-resistant slabs that can be placed directly atop an existing surface, no demolition required.

The surfaces category also featured beautiful sculptural forms, most notably in concrete. **Walker Zanger's** sinewy Liquid Forms tile can be combined into a number of curvilinear compositions. **Ann Sacks's** Itai Bar-On collection of poured and cured concrete tiles offers a textural take on the trend with the made-to-order Kwa, which includes a single upturned corner, able to double as a built-in sconce with the simple addition of an LED light.

With technological solutions and embedded digital features vying for attendees' attention, the occasional nod to Mother Nature was a welcome sight. **Kohler's** Real Rain showerhead proved the most successful effort, with its 775 uniquely shaped nozzles releasing water droplets at random to replicate the look and feel of a summer rainstorm. Although the inconsistent stream was simulated, it nonetheless conjured a sense of escape that, even within the buzz of the convention center, momentarily swept you up. —*Aileen Kwun*

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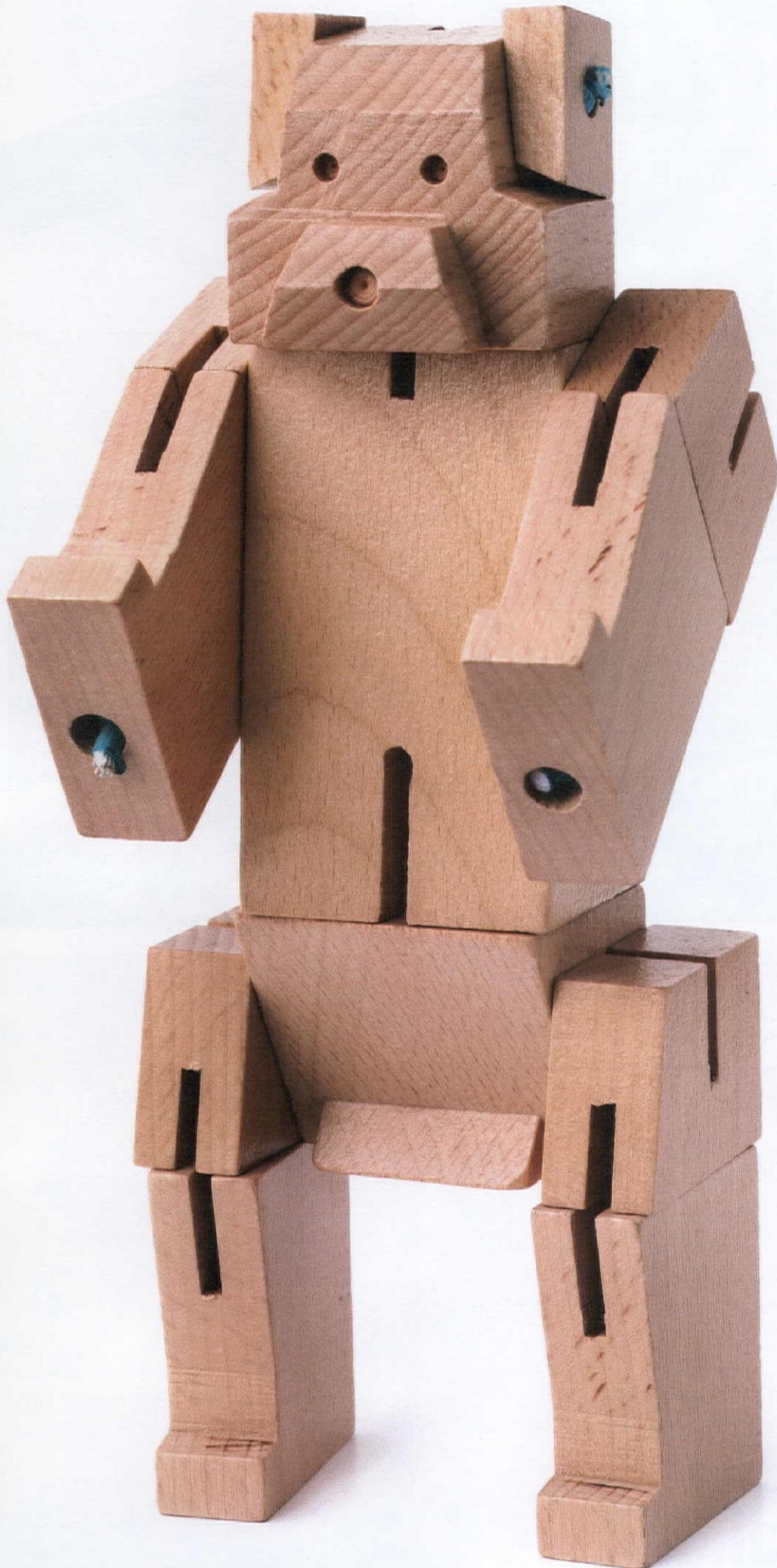


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SNAP 03



WHILE PLAYING WITH action figures with his son, David Weeks had an epiphany. The Brooklyn-based designer, celebrated for his modernist kinetic chandeliers, was looking to move into other mediums. He had already designed a best-selling chair for British retailer Habitat and a line of upholstered furniture for Ralph Pucci. But Weeks, who'd trained as a sculptor and painter, was still restless. He found himself studying the toys' joints to see how they were fashioned. Then it clicked: He would create a line of wooden animals.

"It was cathartic," Weeks says of hand-making the first creature, Hanno the Gorilla. More mammals followed, each increasingly complicated in form and function. When the project turned from escape to burden, the designer pivoted: He dreamed up CubeBot. Based on traditional Shinto Kumiki puzzles, the blocky figure has a blank expression and the ability to strike a pose—many a pose, in fact. The toy was an immediate social-media sensation.

With SquareBear, Weeks evolves yet again. The fold-up beechwood figure, manufactured by Kikkerland, has gentle curves and a searching look: "a face, a personality, and an attitude," explains Weeks. It's also the first installment of his BlockBeasts collection, in which he plans to explore volumes beyond squares, such as cylinders and pyramid shapes.

The toy celebrates the 25th anniversary of Kikkerland, which is fitting since company CEO Jan van der Lande has known Weeks about that long. "David has a good sense of shape and design," says Van der Lande of the attraction. It also was a practical decision: "We are doing a lot of wood projects, so his fit in well" with the brand's roster and production abilities, he adds.

In the near decade since creating Hanno, Weeks has expanded his repertoire, designing rugs for Christopher Farr, wallcoverings for Flavor Paper, and a limited-edition tabletop collection. But the toys stay close to his heart. "They're visceral," he says, "and very satisfying." (SNAP #270)



DAVID WEEKS

Raised in Athens, Georgia, Weeks received a B.F.A. in painting from RISD. His modernist lighting—as well as his furniture, rugs, wallcoverings, and toys—mix industrial materials with an artist's sensibility. davidweeksstudio.com



JAN VAN DER LANDE

The CEO of Kikkerland, Van der Lande founded the New York-based company in 1992; it originally imported and distributed Dutch products. It has since expanded to showcase emerging and established designers from around the globe. kikkerland.com



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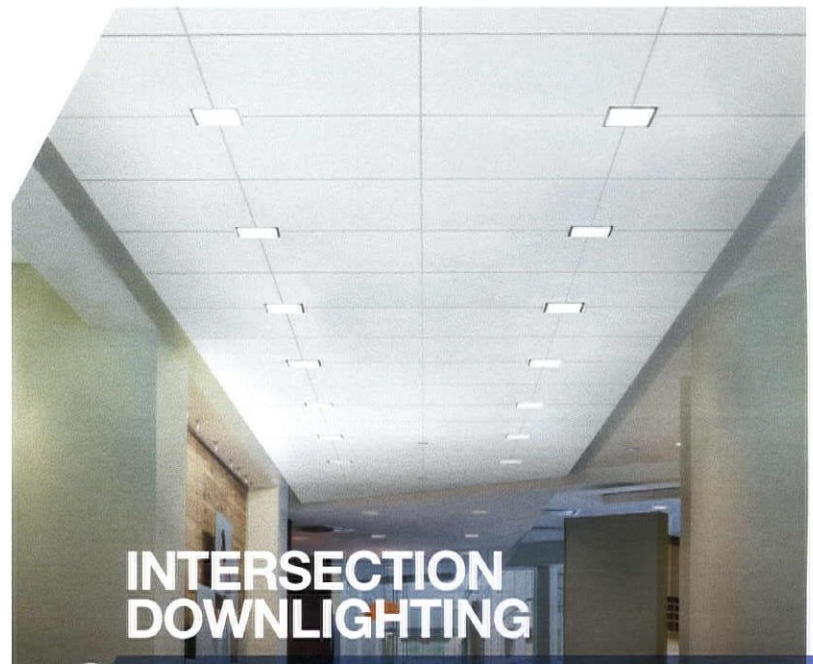
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