

SNAP

ARCHITECTURAL NEWS + PRODUCTS

VOLUME 8, ISSUE 5

FOCUS ON EDUCATION

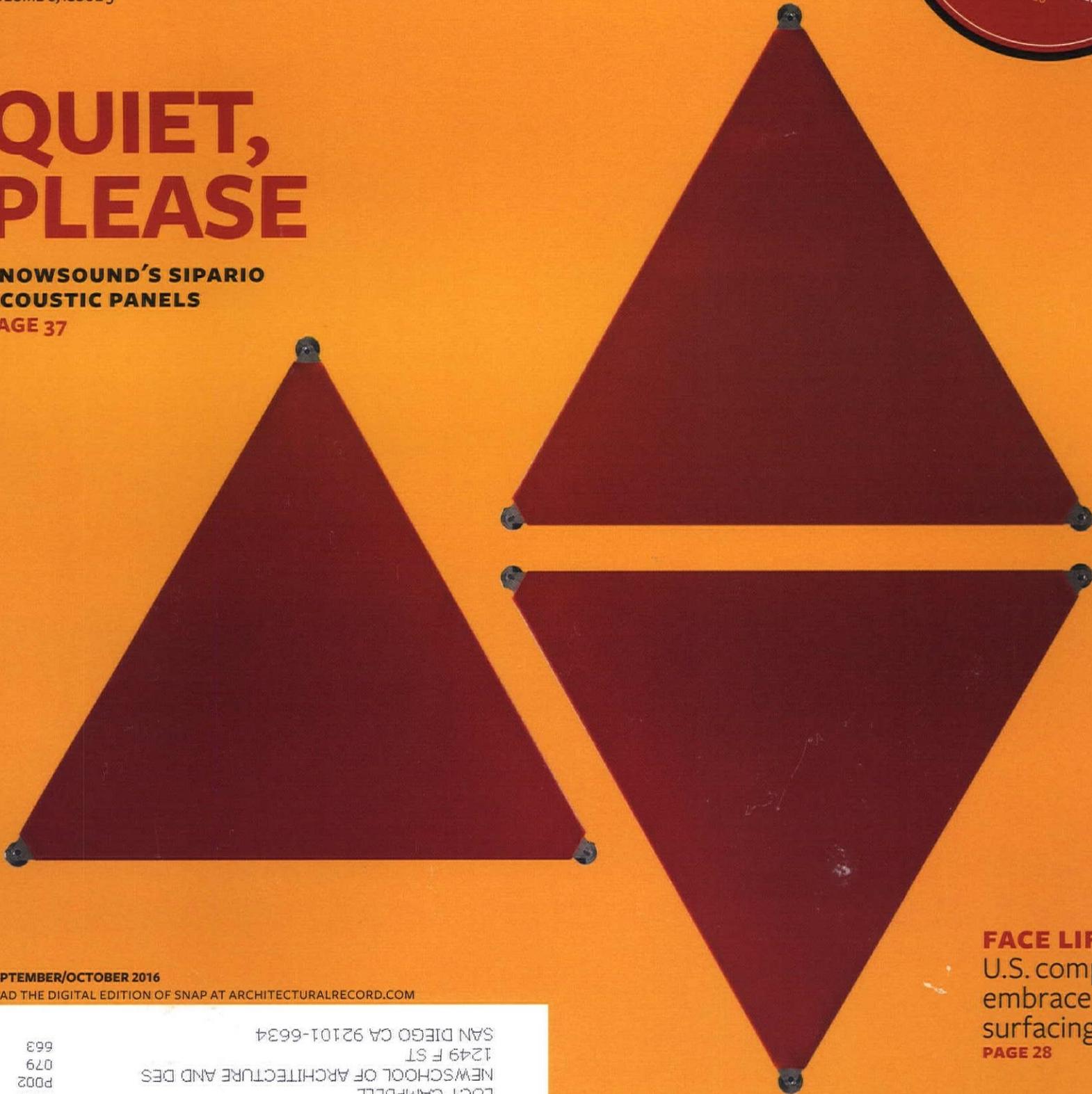
A UNIVERSITY BUILDING THAT EXEMPLIFIES AGILE LEARNING
PAGE 14

COMMON AREAS: THE LATEST STUDENT HOUSING AMENITY
PAGE 20

QUIET, PLEASE

SNOWSOUND'S SIPARIO ACOUSTIC PANELS

PAGE 37



FACE LIFT

U.S. companies embrace solid surfacing facades.

PAGE 28

SAFE HAVEN

A health clinic balances security with an open street presence.

PAGE 32

SEPTEMBER/OCTOBER 2016

READ THE DIGITAL EDITION OF SNAP AT ARCHITECTURALRECORD.COM

0001 P002 079 663
 # 911 1530136#
 LUCY CAMPBELL
 NEWSCHOOL OF ARCHITECTURE AND DES
 1249 F ST
 SAN DIEGO CA 92101-6634

#BYCNGF *****AUTO**SCH 5-DIGIT 92101 FSS



CHANGE SERVICE REQUESTED

SNAP, PO BOX 2145, SKOKIE, IL 60076

bnp
media

PRST STD
 U.S. POSTAGE PAID
 EAST GREENVILLE, PA
 PERMIT #984

100 Years Old and Looking Better Than Ever.



Spectacular restoration overcomes tight schedule and window replication challenges.

Sitting high on a hill, Cardozo Education Campus has overlooked our nation's capital since 1916. But thanks to an ambitious renovation, which resulted in LEED Silver recognition and featured more than 1,000 historic replication windows from Graham, it's still sitting pretty. The building's inclusion on the National Register of Historic Places and the need for National Park Service (NPS) approvals made the window portion particularly challenging. Despite a tight timeline, Graham came through.

Learn how Graham met this challenge: grahamwindows.com/ISNeducation

YOUR VISION. OUR EXPERIENCE.



grahamwindows.com 800-755-6274

Architectural Windows | Window Wall | Curtain Wall | Doors

NewSchool of Arch & Design



200897

contents

Richard Welsh Library
New School of Architecture & Design
1249F St., San Diego, CA 92101

SEPTEMBER/OCTOBER 2016



NEWS

8 | IN BRIEF

Two tweaked Humanscale classics are the first items to achieve full Living Product Challenge certification. Uponor and Belkin bring big data to plumbing.

72 | DATES + EVENTS

74 | TRADE SHOW NEWS

Designers and manufacturers continue to support flexible, open-plan workspaces with high-tech furniture, finishes, and flooring.

DEPARTMENTS

5 | EDITOR'S LETTER

10 | NEW PRODUCT ROUNDUP

80 | PARTNERS IN DESIGN

Fritz Hansen teams with Bjarke Ingels and his KiBiSi collaborators on a project-specific chair.

FEATURES

14 | OUT OF THE BOX

The University of Calgary's Taylor Institute for Teaching and Learning is a master class in multiuse space.

20 | ALL TOGETHER NOW

Common areas—in their many iterations—are increasingly critical in today's residence halls.

44 | MADE IN THE U.S.A.

Manufacturers scale the economic heights in Idaho, Oregon, and Washington State.

46 | GREENSOURCE

Bohlin Cywinski Jackson associate Patricia Culley describes the rigors of designing Pittsburgh's Frick Environmental Center.

PRODUCT SPECS

24 | EDUCATIONAL SOLUTIONS

28 | ROOFING + SIDING

32 | SAFETY + SECURITY

36 | ACOUSTICS

40 | BUILDING ENVELOPE

CONTINUING EDUCATION

50 | PUSHING PREFABRICATION

From entire structures to discrete components, the use of off-site construction is expanding across multiple building types.

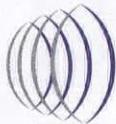
GET BUSY

Architect Richard Dattner worked with manufacturer Playworld to redesign his PlayCubes for a new generation (top left). Humanscale's sit-stand Float table (top right) has achieved full Living Product Challenge certification. Dero's laser-cut Veloport (left) can house two bikes.



REDEFINING ACOUSTICS & AESTHETICS

Take a fresh look at the diversity of ceiling design options that combine both sound absorption (NRC) and sound blocking (CAC) in one system. Learn about the benefits of Total Acoustics™ performance featuring total noise control and design flexibility at armstrongceilings.com/totalacoustics.



TOTAL
ACOUSTICS™
Sound Absorption (NRC) + Sound Blocking (CAC)

METALWORKS™
3D / Mesh™ / Tegular / Tin

MINERAL FIBER
Calla® / Ultima® / Ultima® Health Zone™ / Fine Fissured™
School Zone® / Cirrus® / Canyon® / Mesa™ / Georgian™

WOODWORKS®
Grille Tegular / Channeled Tegular / Tegular

Inspiring Great Spaces®



Armstrong[®]
CEILING SOLUTIONS

NEW
SHIMMER
LINE

WE UNDERSTAND

MAGICAL

Be bold with stunningly rich, deep color that sparkles and shines, helping bring your one-of-a-kind concept to life. With the new Shimmer Series color line from ALPOLIC, a leading maker of aluminum and natural metal composite materials, there is no limit to your designs. It's time to make your dreams a reality. Let's build.

Order your Shimmer Series sample colors at alpolic-americas.com/shimmer and find your inspiration.

SNAP 80

ALPOLIC[®]
MATERIALS

Let's Build

Common Core



I'M OFTEN STRUCK by how much overlap there is in office and educational design. Each camp may have its own lingo, with one talking about collaboration and smart workplaces and the other referring to group work and maker spaces. But the goal is the same: to create flexible, tech-infused environments that allow users to work and learn in a variety of ways.

In this issue, we explore this aim from several angles. The case study on the University of Calgary's **Taylor Institute of Teaching and Learning** (page 14) exemplifies

the principles of agile learning, with its emphasis upon multipurpose spaces, movable furnishings, and integrated technology. The feature "All Together Now" (20) looks at common areas in student centers and residence halls, detailing some of the formats these important amenities take. The Product Specs on educational solutions (24) and acoustics (36) report on available furnishings and finishes that can help you execute your designs.

Turning the focus back to offices, we include a roundup of the best offerings from the **NeoCon** trade fair (74). We also delve into prefabrication of both buildings and their components (50), an approach that is becoming increasingly popular in the hospitality and residential sectors.

May you enjoy the issue—and learn a few things along the way!

Warm wishes,

Julie Taraska

JULIE TARASKA *Editor*

PUBLISHER ALEX BACHRACH
EDITORIAL DIRECTOR CATHLEEN MCGUIGAN
EDITOR JULIE TARASKA
ART DIRECTOR CHRISTOPHER PIRRONE
COPY EDITOR KATHRYN DANIELS
CONTRIBUTORS
 BRAULIO AGNESE LAURA RASKIN
 JOANN GONCHAR, AIA REBECCA SEIDEL
 ALEX KLIMOSKI J. MICHAEL WELTON
 ALICE LIAO JANELLE ZARA
 CHRISTINE H. O'TOOLE

AUDIENCE DEVELOPMENT
CORPORATE AUDIENCE AUDIT MANAGER CATHERINE M. RONAN
DIRECTORY DEVELOPMENT MANAGER ERIN MYGAL

LIST RENTALS
SENIOR ACCOUNT MANAGER KEVIN COLLOPY
 (402) 836-6265
 KEVIN.COLLOPY@INFOGROUP.COM
SENIOR ACCOUNT MANAGER MICHAEL COSTANTINO
 (402) 836-6266
 MICHAEL.COSTANTINO@INFOGROUP.COM

CORPORATE DIRECTORS
PUBLISHING JOHN R. SCHREI
CORPORATE STRATEGY DIRECTOR RITA M. FOUZIA
INFORMATION TECHNOLOGY SCOTT KRYWKO
PRODUCTION VINCENT M. MICONI
FINANCE LISA L. PAULUS
CREATIVE MICHAEL T. POWELL
HUMAN RESOURCES MARLENE J. WITTHOFT
EVENTS SCOTT WOLTERS
CLEAR SEAS RESEARCH BETHA. SUROWIEC



BNP MEDIA HELPS PEOPLE SUCCEED IN BUSINESS WITH SUPERIOR INFORMATION

BNP CORPORATE TELEPHONE: (248) 244-6400

SNAP: (ISSN: Print 1947-2374 Digital 2470-1505) is published 6 times annually, bi-monthly by BNP Media II, L.L.C., 2401 W. Big Beaver Rd., Suite 700, Troy, MI 48064-3333. Telephone: (248) 362-3700, Fax: (248) 362-0317. No charge for subscriptions to qualified individuals.

Annual rate for subscriptions to nonqualified individuals in the U.S.A.: \$132.00 USD. Annual rate for subscriptions to nonqualified individuals in Canada: \$169.00 USD (includes GST & postage); all other countries: \$187.00 (int'l mail) payable in U.S. funds. Printed in the U.S.A. Copyright 2016, by BNP Media II, L.L.C. All rights reserved.

The contents of this publication may not be reproduced in whole or in part without the consent of the publisher. The publisher is not responsible for product claims and representations.

FOR SINGLE-COPY SALES OR BACK ISSUES: Contact Ann Kalbat (248) 244-6499 or KalBR@bnpmedia.com.

CHANGE OF ADDRESS: Send old address label along with new address to SNAP, P.O. Box 2145, Skokie, IL 60076

CANADA POST: Publications Mail Agreement #40612608. GST account: 131263923. Send returns (Canada) to IMEX Global Solutions, P.O. Box 25542, London, ON, N6C 6B2.

FOR SUBSCRIPTION INFORMATION OR SERVICE, PLEASE CONTACT CUSTOMER SERVICE AT: (847) 763-9534



LEARN & EARN

Earn your continuing education credits free online or with Architectural Record's Continuing Education App!*



NEW ON CE.BNPMEDIA.COM

Photo courtesy of Technoform Group



Designing for Sustainability

Sponsored by Mitsubishi Electric Cooling & Heating, Pella EFCO Commercial Solutions, Phifer Incorporated, SageGlass, Technoform Group, and Unilock
Credit: 1 AIA LU/HSW; 1 GBCI CE Hour; 0.1 IACET CEU

Photo courtesy of Lutron Electronics



Top Five Tips for Successful Daylighting Design

Sponsored by Lutron Electronics
Credit: 1 AIA LU/HSW; 0.1 IACET CEU

Photo courtesy of ROCKFON



Optimizing Acoustics for Effective Sound Design and Performance

Sponsored by ROCKFON
Credit: 1 AIA LU/HSW; 0.1 IACET CEU

© 2016 Huber Engineered Woods LLC



Overcoming Structural Floor Squeaks in Wood-Framed Construction

Sponsored by Huber Engineered Woods LLC
Credit: 1 AIA LU/HSW; 0.1 IACET CEU

Photo courtesy of Icnene



Moisture Control with Spray Foam Insulation

Sponsored by Icnene
Credit: 1 AIA LU/HSW; 1 GBCI CE Hour

© Zahid Ghafoor



Mind the Gap

Sponsored by LogiSon Acoustic Network
Credit: 1 AIA LU/HSW; 0.1 IDCEC CEU

Photo courtesy of Metl-Span



Insulated Metal Panels On the Roof

Sponsored by Metl-Span
Credit: 1 AIA LU/HSW; 1 GBCI CE Hour

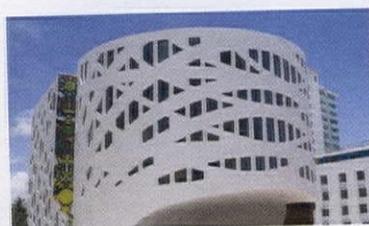
Photo courtesy of LEVER Architecture



Mass Timber in North America

Sponsored by reThink Wood
Credit: 1.5 AIA LU/HSW; 1.5 GBCI CE Hours; 1 PDH*

Photo courtesy of Thermocromex



Twenty-First Century High-Performance Limestone Plaster

Sponsored by THERMOCROMEX
Credit: 1 AIA LU/HSW; 1 GBCI CE Hour

Photo courtesy of Architectural Record



125 Years of Product Innovation and Evolution

Sponsored by Armstrong® Ceiling Solutions, Excel Dryer, Inc., Guardian Glass North America, NanaWall Systems, and National Terrazzo & Mosaic Association
Credit: 1 AIA LU/HSW

© David Wakely



The Characteristics of a High-Quality LED Luminaire

Sponsored by ELP Lighting
Credit: 1 AIA LU/HSW; 1 GBCI CE Hour; 0.1 IDCEC CEU

Photo courtesy of PORTELLA Steel Doors & Windows



High-Performance Steel Doors and Windows for Specifiers

Sponsored by PORTELLA Steel Doors & Windows
Credit: 1 AIA LU/HSW; 1 GBCI CE Hour

ALSO ONLINE AT CE.BNPMEDIA.COM

Sustainable Stone From Cradle to Gate
Sponsored by MIA+BSI: The Natural Stone Institute and the Natural Stone Council (NSC)

The Architect's Guide to Specifying Sustainable Single-Ply Roofing Membranes: NSF/ANSI 347
Sponsored by Duro-Last®, Inc.

Reflective Roofs and Urban Heat Islands
Sponsored by Duro-Last®, Inc.

Life Cycle Assessment and Environmental Product Declarations - The Next Level of Transparency
Sponsored by Armstrong Commercial Ceiling Systems

Digital Art in Architectural Projects
Sponsored by Forms+Surfaces

Medal-Winning Metal
Sponsored by Petersen Aluminum

Ceramic Tile: Solutions for Holistic Sustainability
Sponsored by Tile of Spain

Taking Sustainable Washroom Design Beyond LEED
Sponsored by The ASI Group

A New Option in Exterior Paving
Sponsored by HandyDeck

Advanced Building Envelope Solutions
Sponsored by BASF Corporation - North America

Artisanry, Architecture, and North American Glass Tile
Sponsored by Oceanside Glasstile

Use Cementitious Wood Fiber for Great Acoustical Design
Sponsored by Tectum Inc.

Managing Heat and Light Through Exterior Shading Systems
Sponsored by Draper, Inc.

Sintered Compact Surfaces For Building Facades
Sponsored by Neolith by TheSize Surfaces SL

The Benefits of Metal Building Systems From a Whole Building Perspective
Sponsored by Metal Building Manufacturers Association

Understanding Code-Compliant Integrated Ceiling Solutions
Sponsored by Armstrong Commercial Ceiling Solutions

To receive credit, you are required to read the entire article and pass the test. Go to ce.bnpmmedia.com for complete text and to take the test for free.

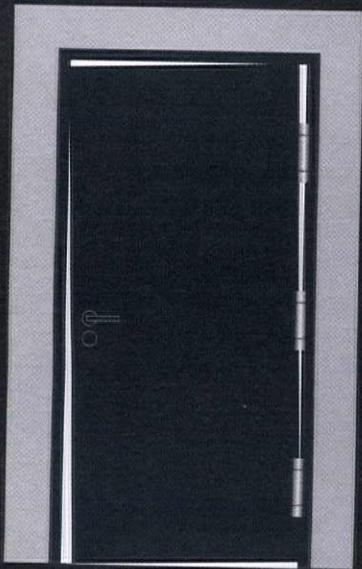
*All articles and presentations count toward the annual AIA continuing education requirement. All sponsored exams are available at no charge and are instantly processed, unless otherwise noted.
^This course may also qualify for one Professional Development Hour (PDH). Most states now accept AIA credits for engineers' requirements. Check your state licensing board for all laws, rules, and regulations to confirm.

VARIANT[®]

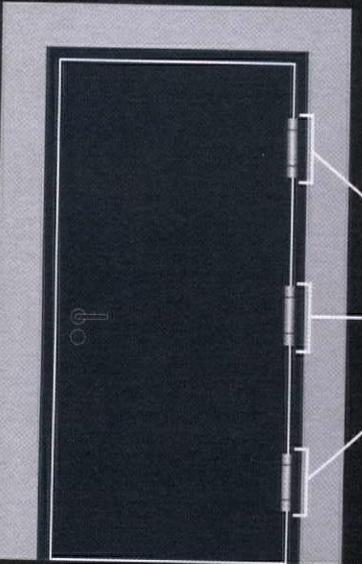
the adjustable hinge system for commercial doors.

Common door problems, e.g. door sagging, foundation wall settling, warpage, require door assembly adjustments to maintain the functionality and meet life/safety requirements.

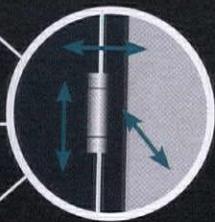
The VARIANT series hinge systems offer a simple three-way adjustability feature allowing the installer to meet precise installation and maintenance requirements with the turn of an Allen wrench.



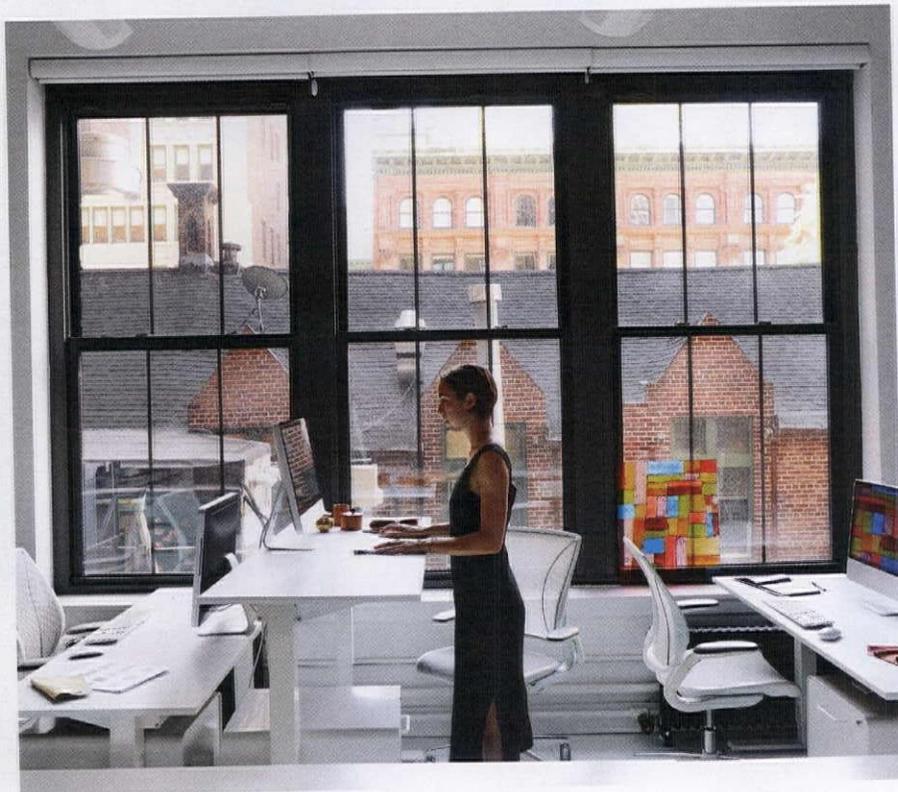
Standard Commercial Hinges



SIMONSWERK 3-Way Adjustable Hinge Systems



In brief



NET-POSITIVE THINKING

Humanscale's sit-stand Float table (left) and Diffrient Smart chair (above) are the first two items to meet all 20 of the Living Product Challenge's materials, environmental, and social-justice imperatives.

ILFI Names First Fully Certified Living Products

WHEN THE International Living Future Institute (ILFI) announced its Living Product Challenge in 2015, finding manufacturers to participate seemed a tall order. The LEED-like certification process for building materials and consumer products required companies to go beyond merely minimizing negative environmental impacts. Instead, they were to create items that, by meeting 20 imperatives, could actually improve global ecosystems. That challenge has been met, with **Humanscale** achieving the first two fully certified products.

The casegoods supplier earned certification by eliminating the PVC cable from its Float table, a manually powered sit-stand desk. The company also reformulated its Diffrient Smart chair, removing the perfluorinated compounds (a red-list material) from the textiles and switching production to a solar-powered facility outfitted with a rainwater collection system.

Jane Abernethy, Humanscale's sustainability officer, says the company had been independently incubating its environmental vision since January 2014, with the goal of working toward net-positive status. The Living Building Challenge "was a good fit, as it was looking at many of the things we already were," says Abernethy. The process took about a year, with Humanscale and the ILFI kicking it off in November 2015 with a charette.

ILFI shared Humanscale's news at the second annual Living Product Expo, held September 13 to 15 in Pittsburgh. At the event, the Institute also honored three other manufacturers, **Owens Corning** among them. The company achieved its second partial Living Product certification for EcoTouch PINK, a formaldehyde-free insulation with 65 percent recycled content. Two smaller firms also received partial certification. The Garden Tower 2, a composting small-space planter by **The Garden Project**, met the requirements in the water and materials categories; **Bureo** met them, too, for its recycled plastic resin and pellets sourced from Chilean fishing nets.

Of the 25 products currently participating in the Living Product Challenge pilot program, seven have achieved some level of certification. —Christine H. O'Toole and Julie Taraska

Uponor, Belkin Bring Metrics to Plumbing

PHYN, a joint venture between water-systems giant **Uponor** and electronics company **Belkin International**, wants to bring plumbing into the era of big data. To

that end it is planning a public beta-test program for Belkin's WeMo water sensor, hoping to advance the device from monitoring water use to also detecting leaks anywhere in a pipe.

Introduced last year, the sensor measures pressure waves in a plumbing system. It interprets each water-using device's signature wave to know what's on and how much water it is consuming. But the larger issue is leak detection, says Phyn CEO Ryan Kim, who developed the technology at Belkin. The products on the market that address the costly problem are "inelegant," according to Kim: nonintrusive sensors that infer flow or electronic pucks embedded in walls that await eventual contact with water. Kim's solution is to develop artificial intelligence that can precisely locate a leak as soon as it occurs.



Phyn's yearlong beta-test program will involve 500 domestic sensors in eight U.S. metropolitan areas. (The company is currently soliciting participants through phyn.com.) The goal, explains Kim, is to smarten the AI by gathering information about water dynamics "to account for seasonal changes, home types, and more."

Bringing this data to plumbing excites Uponor president Bill Gray. The industry, he notes, relies on broad estimates: "Once water enters a home, we don't really know what happens." Aside from alerting homeowners about leaks, Phyn's sensors could potentially provide information on, say, how much water is currently heated and how long it has been sitting in the system. Aggregating data from thousands of devices could revolutionize the plumbing industry and its product-design process. After all, says Gray, "You can only improve what you can measure." —Braulio Agnese

Zinc Earns Gold

Mundelein Village Hall, Mundelein, IL
Architect: Wight & Company
General Contractor: Weston Solutions
Installing contractor: Sullivan Roofing
Profiles: Snap-Clad, Snap-On, PAC-750 Soffit, 7.2 Wall Panels
Color: Zinc

Zinc-colored PAC-CLAD is an energy-efficient metal roofing that contributes to Mundelein Village Hall's LEED Gold certification.

SNAP-CLAD

Zinc - Energy Star - Cool Color

CASE STUDY

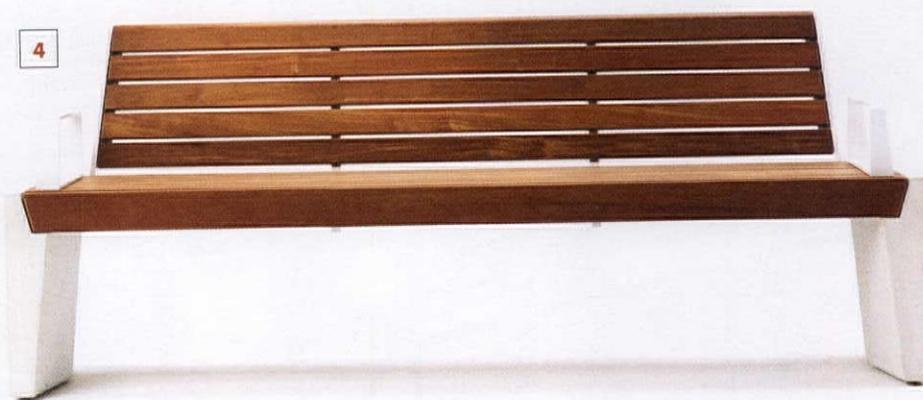


See us at METALCON - booth 2255



PAC-CLAD.COM | IL: 1 800 PAC CLAD | MD: 1 800 344 1400 | TX: 1 800 441 8661 | GA: 1 800 272 4482 | MN: 1 877 571 2025

SNAP 23



The latest finds for public places and residential spaces

1. SPOON SASH LOCK

MANUFACTURER: Kolbe
PERFORMANCE: The double-locking hardware with an Old World aesthetic not only secures windows but also allows sashes to be tilted in for cleaning.
PRICE RANGE: \$\$
APPLICATIONS: Available in eight finishes, the lock—an option on Kolbe's Heritage and Ultra Series windows—suits historic renovation projects.
KOLBE-KOLBE.COM
 (SNAP #200)

2. SITELINE COASTAL WITH IMPACTGARD

MANUFACTURER: Jeld-Wen
PERFORMANCE: Able to withstand up to 130 mph winds, these wood-frame windows have a laminated glass option that traps shards, preventing them from falling into a room.
PRICE RANGE: \$\$\$
APPLICATIONS: The windows come in several building and patio-door designs.
JELD-WEN.COM
 (SNAP #201)

3. FALLBROOK

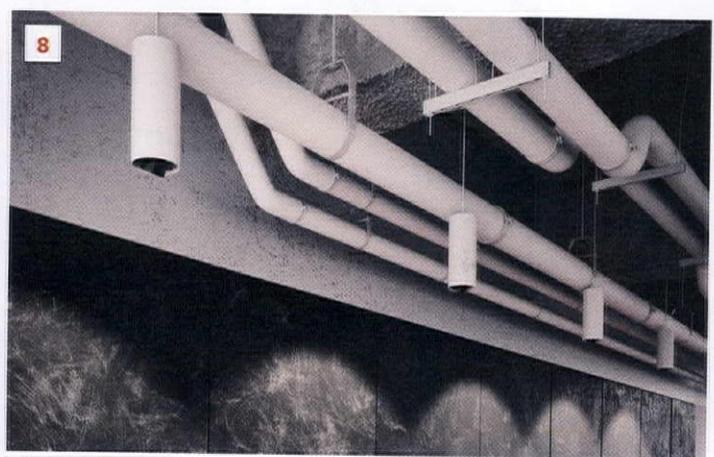
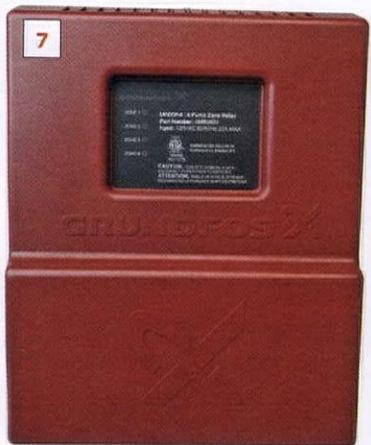
MANUFACTURER: C.R. Laurence
PERFORMANCE: This front-load, dry-glazed glass partition system featuring an ultrathin aluminum doorframe has no exposed fasteners.
PRICE RANGE: \$\$-\$\$\$
APPLICATIONS: Suitable for minimalist office decors, the frame—made to hold $\frac{3}{8}$ " or $\frac{1}{2}$ " monolithic tempered glass—is offered in two finishes.
CRLAURENCE.COM
 (SNAP #202)

4. STRATA BEAM BENCH

MANUFACTURER: Landscape Forms
PERFORMANCE: The bench's wood slats slot into faceted cast-end pieces made from ultra-high-performance concrete.
PRICE RANGE: \$\$-\$\$\$
APPLICATIONS: Designed for in- and outdoor public spaces, the Strata Beam bench comes in a backless version and with various arm options.
LANDSCAPEFORMS.COM
 (SNAP #203)

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

 = ECO-FRIENDLY ATTRIBUTES



5. ZONES

MANUFACTURER: Teknion
PERFORMANCE: A PearsonLloyd design, this movable suite of beech-frame tables, seating, and screens creates islands of privacy in open-plan offices.
PRICE RANGE: \$\$\$
APPLICATIONS: The pieces—ranging from semi-enclosed meeting spaces to 15 sizes and shapes of chairs, benches, and sofas—can be configured in dozens of ways.
TEKNION.COM
(SNAP #204)

6. PANELIZED CEILINGS

MANUFACTURER: Smith & Fong
PERFORMANCE: The carved-design ceiling panels made of FSC-certified bamboo possess sound-absorbing properties up to 0.70 NRC.
PRICE RANGE: \$\$\$
APPLICATIONS: The panels, offered in two thicknesses and 40 texture options, fit both standard ceiling grids and up to 4' by 10' custom applications.
PLYBOO.COM
(SNAP #205)

7. UPZC SERIES

MANUFACTURER: Grundfos
PERFORMANCE: The non-networked control manages circulator and boiler functions in hydronic heating systems.
PRICE RANGE: \$\$
APPLICATIONS: The side-mount or forward-facing control, which connects to standard thermostats and operates from a cold-start configuration, can manage up to six zones.
US.GRUNDFOS.COM
(SNAP #206)

8. TILT

MANUFACTURER: V2 Lighting
PERFORMANCE: This family of LED pendant, sconce, and surface-mount fixtures has field-adjustable 360° pan and 30° tilt optics.
PRICE RANGE: \$\$
APPLICATIONS: Providing up to 3000 lumens, the fixtures can be specified with an 83 or 98 CRI and 20°, 40°, or 60° reflectors. The 6"-diameter cylinder comes in a 7- or 15 3/8"-long shell.
V2LIGHTINGGROUP.COM
(SNAP #207)

CUTTING EDGE ACOUSTIC TECHNOLOGY!

Silk Metal Ceiling & Wall Panels

The **ONLY** True Micro-Perforation Aluminum Acoustical Ceiling & Wall Panel!

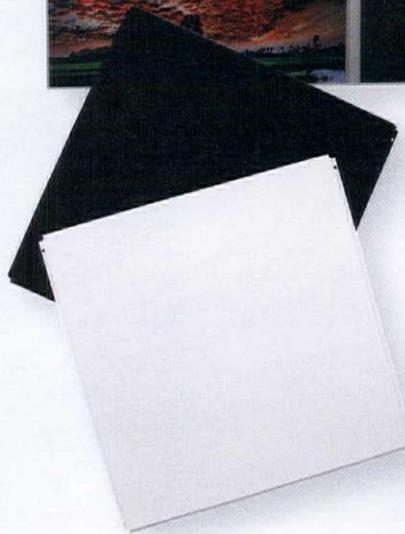
Our unique Silk Metal Ceiling Tiles are state-of-the-art micro-perforation sound absorbers which reduce echo and sound reflections. They have an elegantly-smooth appearance, with an **EXCELLENT NRC Rating of 0.80**. Resembling smooth silk fabric, these affordable tegular or flat tiles install easily into any standard 15/16" ceiling grid.

Features & Benefits:

- ▶ Exceptional acoustic performance
- ▶ Uncompromised aesthetics
- ▶ Hang like traditional wall panels with Z-clips
- ▶ Lightweight, impact-resistant and rigid
- ▶ Low reactivity to temperature and humidity change
- ▶ Fire retardant – ASTM E-84 Class A
- ▶ LEED points MR 4.1, MR 4.2 MR 6, EQ 4.4 available
- ▶ No added formaldehyde in fabrication
- ▶ Custom veneer species, stains and finishes, veneer cutting, and assembly available

Applications:

Auditoriums, schools, swimming pools, gymnasiums, music practice and band rooms, restaurants, bars, hotels, conference and boardrooms, open office areas, pro audio, medical facilities, entertainment venues, retail stores, theaters, convention centers, lobbies, laboratories, food preparation areas, recording studios, houses of worship, manufacturing and industrial facilities, airports and more.

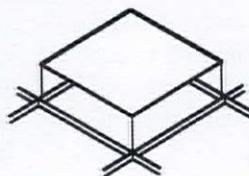


SILK METAL CEILING & WALL PANELS

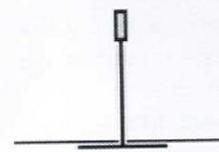
Custom Graphics & Colors Available:



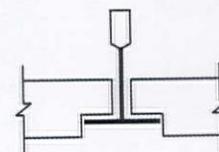
Details:



Standard Lay-in for 15/16" Grid



FLAT



TEGULAR

STOP NOISE

ACOUSTICAL|SURFACES, INC.

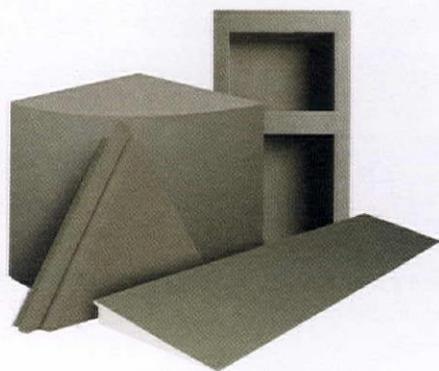
CELEBRATING 35 YEARS - SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION SPECIALISTS!
952.448.5300 | 800.448.0121 | sales@acousticalsurfaces.com | www.acousticalsurfaces.com

SNAP 150



HYDRO BAN[®] Shower System

A complete line of waterproof shower components including barrier free solutions.



Preformed Shower Accessories



Pre-Sloped Shower Pans



Linear and Square Drains



Scan for more information.



- Install over existing substrate or recess floor
- Designed for safety, comfort and easy access
- Waterproof and ready to tile
- Constructed with lightweight high density polystyrene

www.laticrete.com | 1.800.243.4788

SNAP 21



Globally Proven
Construction Solutions

*See Data Sheet 230-99 for complete warranty information.
A-8049-0916 ©2016 LATICRETE International, Inc. All trademarks shown are the intellectual properties of their respective owners.



CASE STUDY: EDUCATION

BY JANELLE ZARA



CALGARY, ALBERTA

Out of the Box

CHALLENGE: Create a facility where teachers can research and experiment with new ways of learning.

SOLUTION: Build a series of flexible spaces that can expand, contract, and be rearranged as needed.

INCREASINGLY, TEACHERS are abandoning the traditional method of lecturing in front of a class, replacing it with a more dynamic model of exchange with students. So for the University of Calgary's Taylor Institute for Teaching and Learning, architecture firm Diamond Schmitt designed a space that could be reconfigured to suit various education and learning styles.

In conjunction with partners Gibbs Gage Architects, the Toronto-based company constructed the 7,600-square-foot building on the foundation and main slab of the former Nickle Arts Museum (the structure had been vacant since 2013, when the university moved its holdings elsewhere on campus). "We would have liked to have rescued the steel," says Diamond Schmitt principal Matthew Lella, "but the demands of the new building

were so different from [those of] the old one that marrying the two would have been very inefficient."

The institute's layout emphasizes flexibility and mobility. At the building's heart is a light-filled atrium that the architects dubbed the spine, as corridors, classrooms, and breakout spaces branch off it. Up the stairs at one end of the atrium is a tiered seating area that can host talks and casual meetings, while in the mezzanine, open pods outfitted with desks and chairs offer more private places for conversation or study.

The multiuse mind-set is reflected throughout the building. The 400-seat auditorium, for example, can convert to half that capacity thanks to its retractable seats; in turn, floor space is freed up for a wider range of programs. The classrooms feature

MOVING ON UP
Designed to inspire educational innovation, the University of Calgary's Taylor Institute for Teaching and Learning features classrooms and public spaces that are simple to rearrange.

Inspiring Minds

When Entheos Academy announced a plan to build a new school, they invested not only in the building but also in the community it serves. The new structure utilizes an array of metal roof and wall panels to create a functional space designed to inspire the curiosity of young minds.

Learn more about this project at www.mbc.com/educate.



PROJECT: Entheos Academy

LOCATION: Magna, Utah

ARCHITECT: Architectural Nexus, Inc.

GENERAL CONTRACTOR: One West Construction

PANEL PROFILE: 7.2 Panel (Sandstone Metallic), Artisan® Series (Sandstone Metallic), FW-120 (Sandstone Metallic), PBD (Dove Metallic, Colonial Red)

Copyright © 2016 MBCI. All rights reserved.

SNAP 18

MBCI
40 YEARS
1976-2016

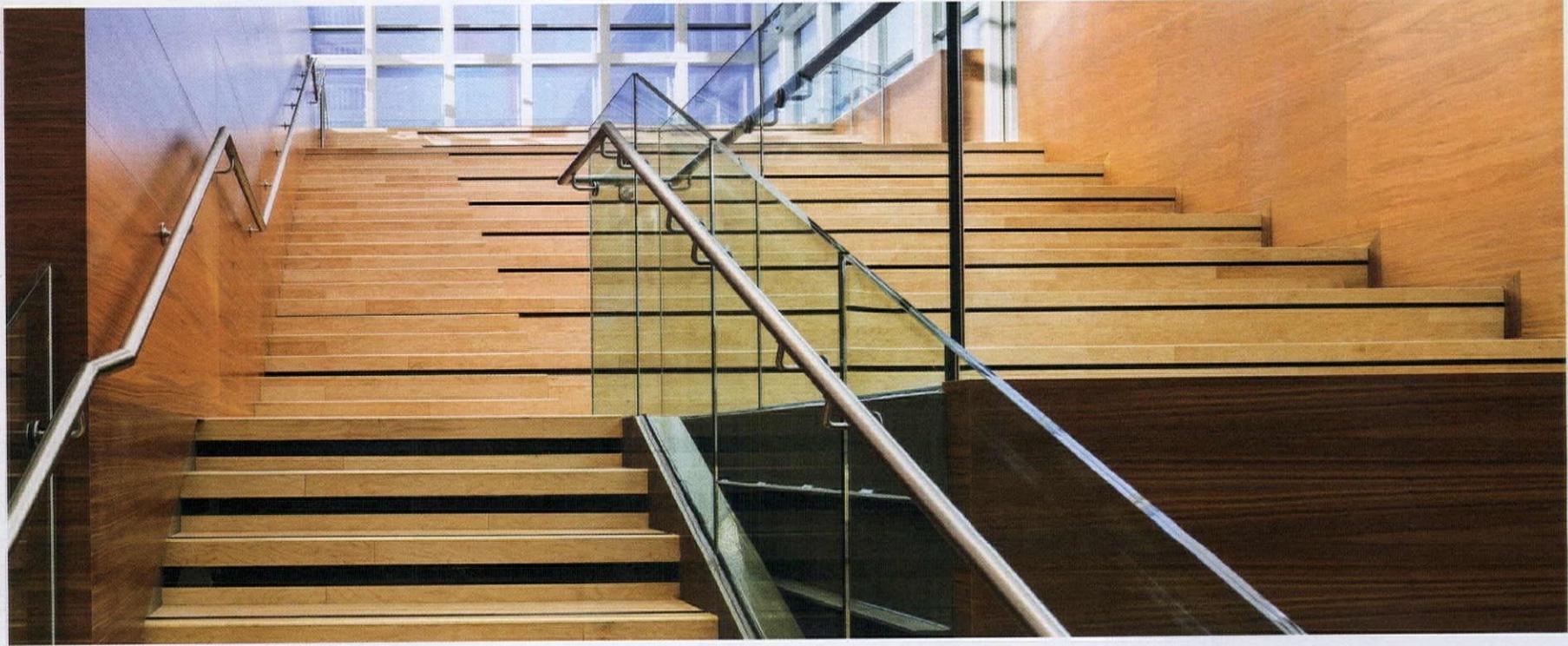
PHONE: 844.338.6650

E-MAIL: INFO@MBCI.COM





CASE STUDY: EDUCATION



motorized partitions that double as two-sided acoustic panels, reducing sound while reconfiguring the square footage. Also, many of the furnishings—tables and chairs included—are on casters so can be easily moved. “It’s really up to each professor and their students to choose how to assemble the room for any given time period,” says Diamond Schmitt’s Lella.

The palette of white walls and blond wood unifies the space, as does the dark polished concrete floor. The result is a learning center with a continuous flow between place and purpose. “You’re delighted by the building,” says Lella, “but it helps you focus on the people that you’re with.” ■

STEP LIVELY

Many features of the Taylor Institute fulfill multiple functions; this staircase with stadium seating can serve as an event space or a place to enjoy a cup of coffee.

IN THIS PROJECT



SYNC

MANUFACTURER: Ledalite
PERFORMANCE: Available as 65W fluorescents and 47W LEDs, these ultraslim fixtures cast a wide light and offer true direct and indirect performance without a louver.

PRICE RANGE: \$

APPLICATIONS: Offered in three standard finishes, Sync comes in suspended and wall-mount versions, with joinable 4- and 8-foot-long modules.

LEDALITE.COM
(SNAP #209)



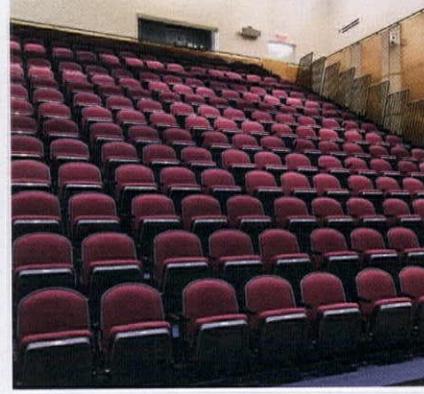
CUSTOM 19MM VENEER SLATS

MANUFACTURER: Lambri Wood Paneling
PERFORMANCE: These fire-safe Douglas fir slats provide substantial acoustic absorption.

PRICE RANGE: \$\$

APPLICATIONS: The versatile panels—which achieve up to a 0.9 NRC—suit universities, hospitals, concert halls, and restaurants. Finish options include whitewash and stained or blank polish.

LAMBRI.COM
(SNAP #210)



CENTAUR MODEL 5000 PRESTIGE

MANUFACTURER: Irwin Seating Company
PERFORMANCE: When these telescoping seats retract, the entire decking and end-rail system supporting them does, too.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for auditoriums and spectator venues, the seats come in an array of standard and custom upholstery; some models can be used outdoors.

IRWINSEATING.COM
(SNAP #211)



READY MIX COLORS

MANUFACTURER: Interstar
PERFORMANCE: This pure iron-oxide powdered pigment colors cement-based materials, such as floors, sidewalks, and poured-in-place construction.

PRICE RANGE: \$

APPLICATIONS: The sunfast, limeproof, and nonbleeding mix is available in 84 hues (four are for indoor use only).

INTERSTAR.CA
(SNAP #212)



ARCHITECT

Diamond Schmitt Architects

PROJECT TYPE

Education

PRODUCT

Maple Hardwood Flooring

MANUFACTURER

Nydree Flooring

PERFORMANCE

Thanks to its acrylic-infused top layer, this

engineered wood flooring is more durable than solid wood; for one thing, it’s less susceptible to expansion and contraction.

APPLICATIONS

FSC-certified, the 7/16-inch-thick planks come in three standard widths and finishes, seven tree species, and eight infused colors.

PRICE RANGE: \$

NYDREEFLOORING.COM

(SNAP #208)



= ECO-FRIENDLY ATTRIBUTES

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



GO AHEAD,
LEAVE THE BOOTS ON.

We've stood up
to your kind
for years.

T

O

L

I

TRUST THE EXPERIENCE™

WHEN YOU STEP INTO A SPACE it's the experience that matters. When you're choosing the flooring to complete that space, experience matters even more. For more than 95 years TOLI has been the premier manufacturer of the world's most beautiful resilient floor coverings—like our new TOLI® Mature Select™ premium sheet flooring. Its durable, no-wax finish is protected by our TOLI ClearGuard™ wear layer to stand up to high-traffic environments for years. Trust the experience. Trust TOLI.

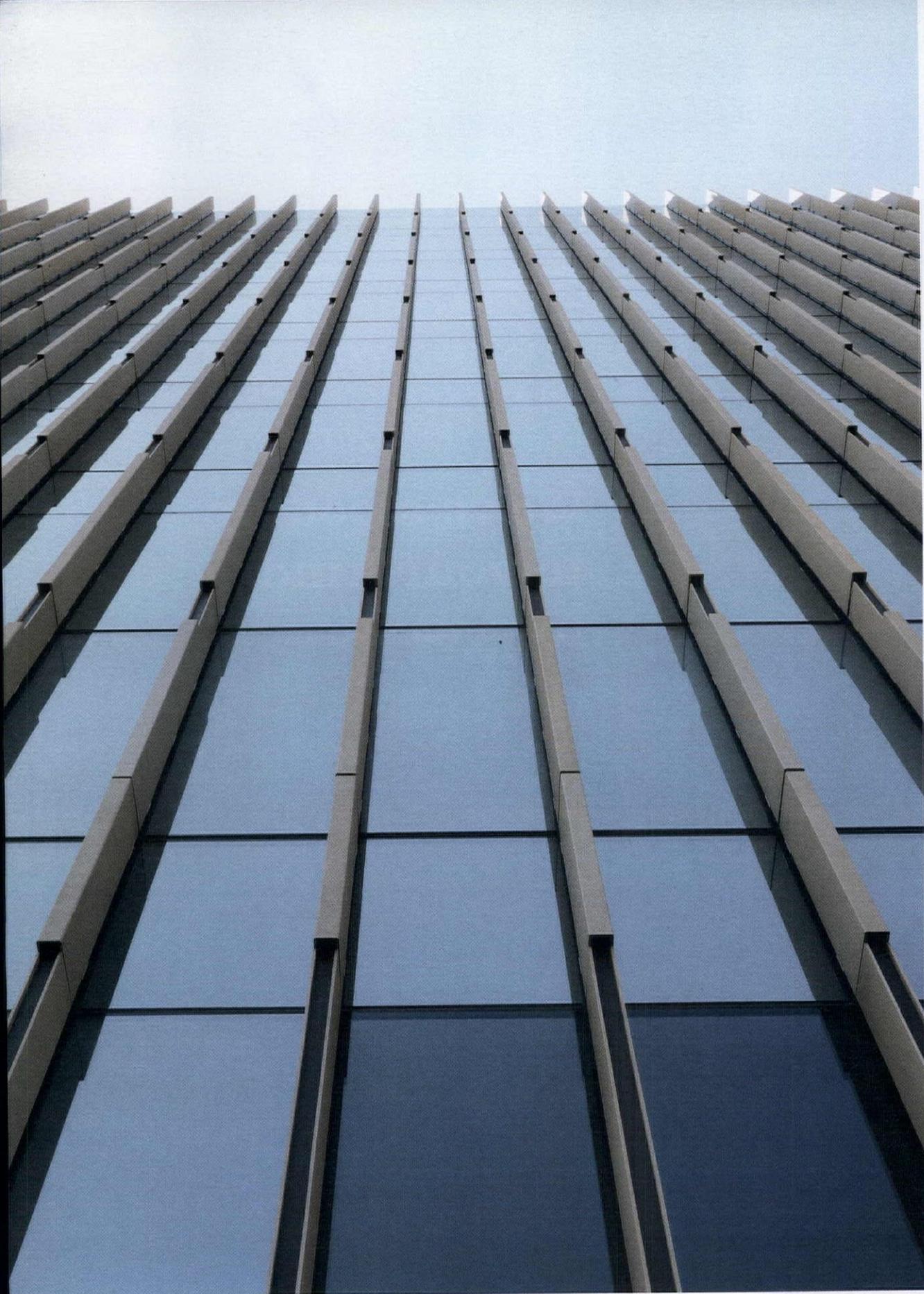


Exclusively from
CBC Flooring

LVT: LIGHTWOOD HVT: FASOLPLUS | LINOTESTA | PIESTA | VIALE SHEET: MATURE SELECT

SNAP 195

See the new TOLI Mature Select portfolio
cbcflooring.com/MatureSelect
919.230.8700



Boston University, Center for Integrated Life Sciences & Engineering
Payette | Turner | Ipswich Bay Glass



Hang concrete on curtain wall

- | 16,000 sqf formparts with only 1/2" thickness
- | Less sub-structure due to low weight and span width of formparts
- | Pre-assembly of fastening brackets off-site
- | Fast and unitized installation on-site, easy to hook in

Distributed by fibreC North America
1-877-740-0303 (toll free) | usa@fibreC.com | www.fibreC.us

SNAP 185



RIEDER

WE MAKE HISTORY. BETTER.

✕ MONUMENTAL OPERABLE WINDOWS

✕ HISTORICALLY ACCURATE DESIGN

✕ BROAD CUSTOM CAPABILITIES

WINDOWS • STOREFRONTS • CURTAIN WALLS • ENTRANCES

Preserve History. Conserve Energy. With Pella.

Pella provided historically accurate wood windows and trim for the headquarters of Utilicorp, a multinational energy company. While maintaining the original windows' aesthetic, we enhanced the windows' thermal efficiencies to address Utilicorp's commitment to energy conservation. Window elevations with curve-top openings re-created the elegance of the building's neo-Romanesque design while also allowing natural ventilation. Let Pella help you make history with your next project.



COMMERCIAL
SOLUTIONS

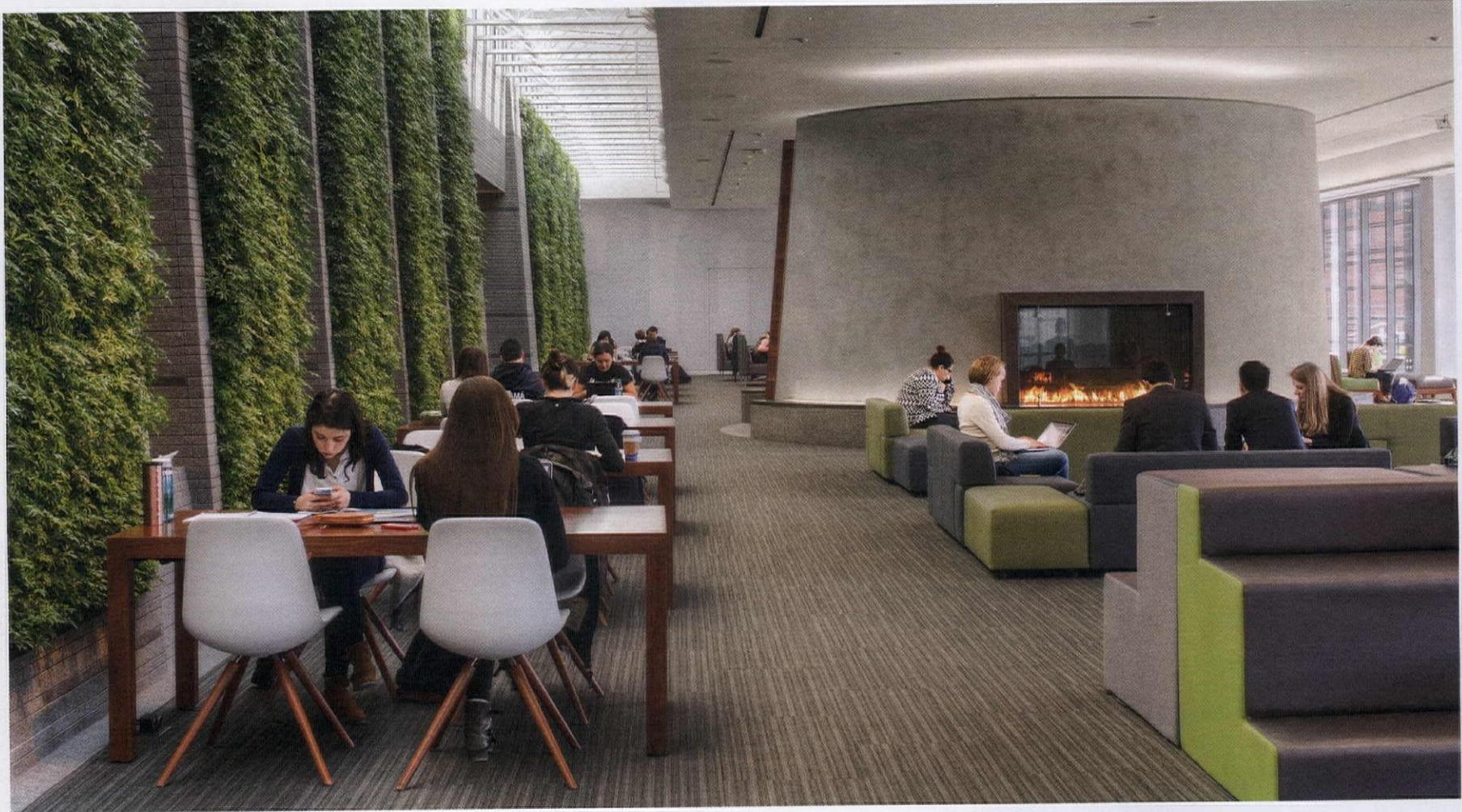
CHALLENGE US WITH YOUR
NEXT PROJECT.

pecsSNAP.com • 800.591.7777

Utilicorp United World Headquarters • Kansas City, MO • Architect: Gastinger Walker Harden Architects

© 2016 Pella Corporation

SNAP 121



LOUNGING AROUND

Featuring a living wall and glass curtain wall, the great room at Georgetown's Healey Family Student Center offers spaces to study and socialize (above and center). The center is housed in the New South residence hall (bottom).

All Together Now

Common spaces—in their many iterations—are a critical element of today's residence halls.

BY BRAULIO AGNESE

WHEN COLLEGE STUDENTS aren't seated en masse in the lecture hall, they're congregating elsewhere. Sometimes the place and purpose are planned—a group study session, for instance—while at other times, the rendezvous are impromptu. Universities engender these face-to-face gatherings by including common spaces within their buildings, providing spots where paths will cross. This particularly holds true for student centers and residence halls. These structures are dotted with shared areas of all sizes and designs that are shaped as much by their location as by their function: to support and foster students' social and academic growth.

HEALEY FAMILY STUDENT CENTER, GEORGETOWN UNIVERSITY

When Georgetown University was looking for a firm to renovate the ground floor of its centrally located New South residence building, it had two major criteria: that the space be devoted to student life and worthy of LEED certification. Princeton, New Jersey-based

Ikon.5 Architects achieved both goals in the 45,000-square-foot Healey Family Student Center, which features a great room, a coffee shop, and a pub as well as meeting and performance spaces.

The airy 8,500-square-foot great room exemplifies Ikon.5's design direction. For it, the firm referenced the traditional Georgetown rallying cry *Hoya Saxa* (an ancient Greek/Latin phrase for "What rocks!"), installing a massive granite wall whose live flora is supported by **GSky Plant Systems**. A long, narrow **Acurlite Skylight Systems** window floods the room and its interior alcoves with light.

A massive double hearth with **Paloform** steel-and-concrete surrounds divides the space. To the east, where the Bulldog Tavern sits behind a movable wall, a communal wood table by **CCN** and two- and four-person booths offer rest spots for computers, food, and drink. To the west, bounded by a stage, sit upholstered versions of **Allsteel's** modular Rise stadium seating.





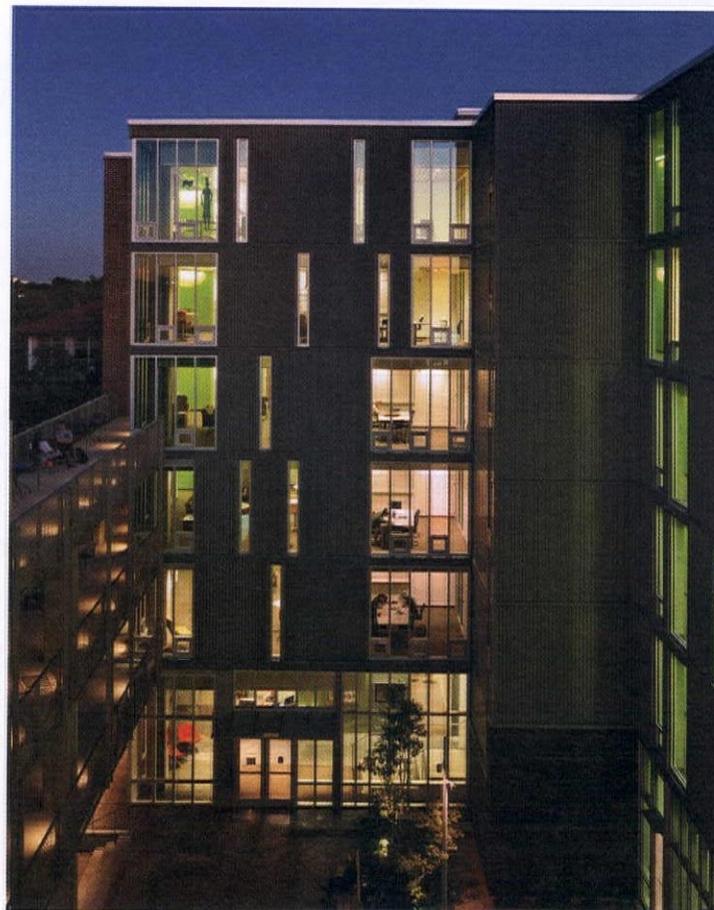
But despite the room's well-thought-out design and multipurpose uses, its most dramatic feature is not man-made. Instead, it's the stunning view of the Potomac River, visible just outside the glass curtain wall.

BARBARA GREENBAUM HOUSE, TULANE UNIVERSITY

Abutting New Orleans's residential Uptown and Carrollton neighborhoods, on the very edge of Tulane's campus, the Barbara Greenbaum House by **Architecture Research Office** (ARO) had to accomplish several things in a compact space. It needed to house as many students as possible yet be designed in a way that supported students' social lives. Plus it had to sit on an elevated ground floor with no basement for mechanicals, thanks to strict flood-safety codes.

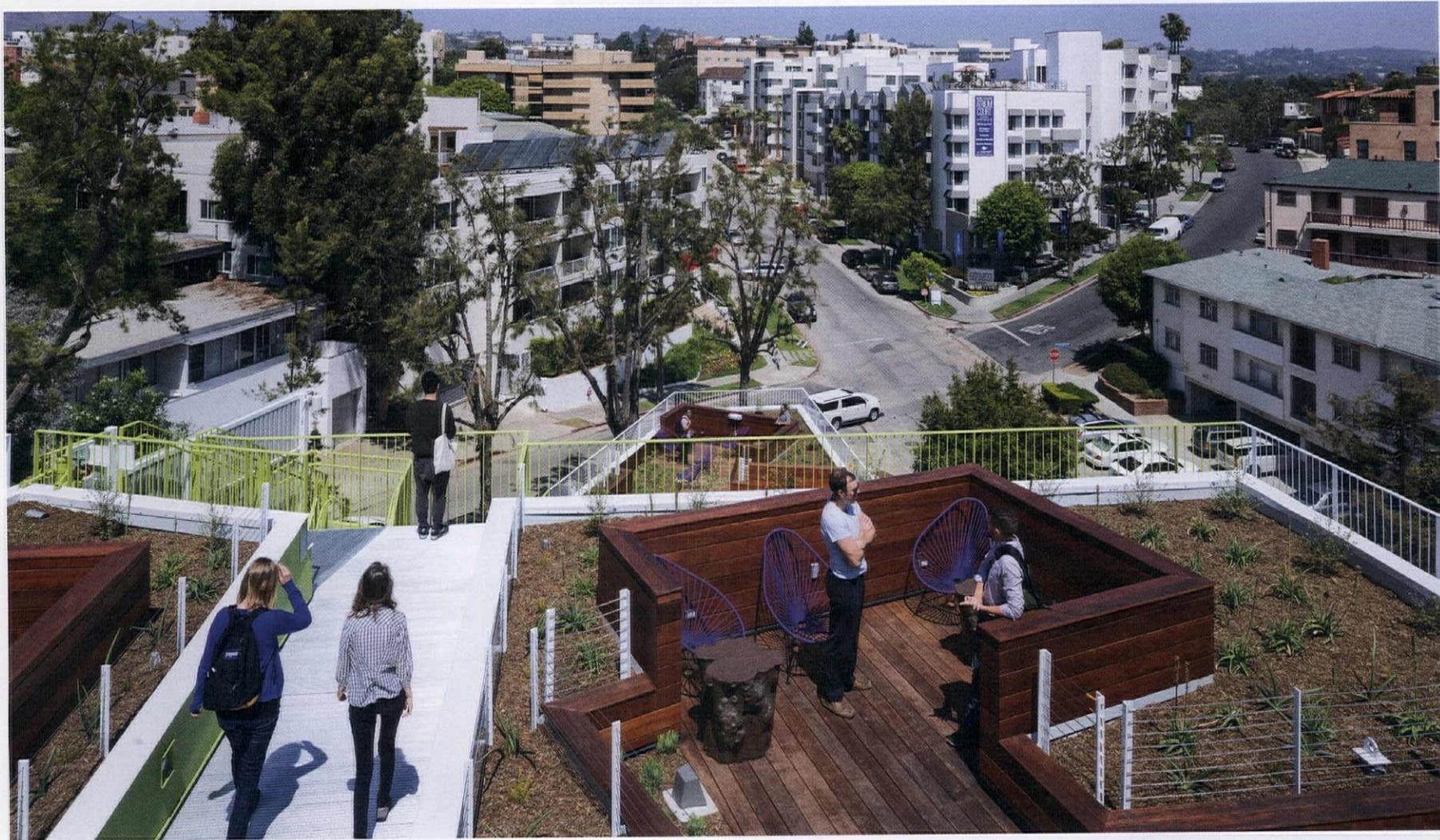
"We did a lot of test fits" to make sure the various pieces worked together, says ARO principal Adam Yarinsky. The answer revealed itself as a two-part box: One half of the building has four stories, with the structure's orientation forging a link to other nearby dorms, while the other has six stories, with the placement—and large opening on one corner—tying the section to the greater campus. A large interior courtyard unites the halves, as does a series of elevated outdoor walkways that connect them.

Inside the structure, the common areas cascade from smaller and more private to larger and fully public. The 256 student bedrooms on the upper floors are clustered into eight groups, with each cluster enjoying its own lounge area and study room (outfitted with **Enworks's** Impression tables). The courtyard-length common space on the ground floor, in contrast, serves all students. One end contains an event room, complete with demonstration kitchen; the other, next to the laundry facilities, serves as a lounge and features colorful seating, such as **Bernhardt Design's** upholstered Gaia lounge chairs.



SUM OF ITS PARTS

A shared lounge (above) and exterior courtyard (left) unite the halves of the Barbara Greenbaum House, a student residence located on the edge of Tulane University's campus.



GOLDEN STATE
All four of SL11024's shared spaces are outdoors, capitalizing on the sunny Los Angeles climate (above). The private residential building (left) houses numerous students from nearby UCLA.

Outside, the courtyard offers a shielded place in addition to spill-over space for the event room. Through the courtyard opening, the 4-foot drop to campus level is mitigated by a series of ramps and steps that, says ARO's Yarinsky, create a natural sense of flow "from building to campus and back again."

SL11024, UCLA

Part of a new wave of developer-driven, off-campus housing that targets college students, SL11024, located in a largely residential area just off the UCLA campus, has all its common areas outside. This is Los Angeles, after all.

Lorcan O'Herlihy Architects' solution for the triangular site—which has one end 50 feet lower than the other—is a building that proceeds terracelike down the slope. Thus the residence's four rooftop spaces span three levels. These shared spots also come in several shapes and sizes, from 471 to 1,429 square feet, and total almost 3,600 square feet.

In a nod to the Midcentury architecture that defines the complex's residential neighborhood (especially the **Richard Neutra**-designed apartments across the street), the architects created a calm exterior presence with white corrugated-metal siding from **Metal Sales**. But they updated the profile with apple-green cement board from **James Hardie** in all the common outdoor spaces. The choice provides a vibrant backdrop and pleasing contrast with the warm brown **Mangaris** wood decking and **Tata Enterprises** siding.

"The project was a perfect storm of criteria," says the firm's founding principal, Lorcan O'Herlihy. "Sometimes architecture is that way: When you embrace the challenge, it makes for better design." And when the challenge is accommodating the fluidity of college students' lives—whether in the heart of the campus, on its outskirts, or just beyond—the results can be as thoughtful and dynamic as the people who populate the spaces. ■

NEW BLUE. NEW POSSIBILITIES.

SNX 51/23 on **CrystalBlue**

“**New Guardian CrystalBlue™** is perfect for contemporary structures that are big on light, smart on energy. Our clients prefer its light blue color, and CrystalBlue pairs perfectly with the SunGuard® coatings we specify.”

Paulo Perkins, GraceHebert Architects

SN 68 on CrystalGray

Spandrel HT

Visit us at GlassBuild: **Booth #1028**

BUILD WITH LIGHT®

Order a sample at: GuardianGlass.com/commercial, or call 1.866.GuardSG (866.482.7374)

SNAP 36

©2016 Guardian Industries Corp.





Playtime Resumes

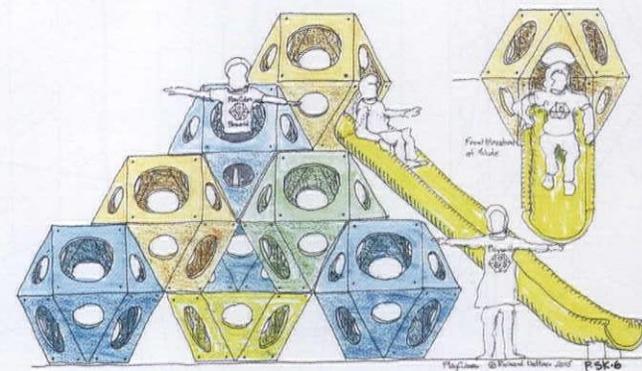
EARLY IN HIS CAREER, New York architect **Richard Dattner** turned his attention to playgrounds, envisioning more adventurous spaces for children to climb and explore. One of his boldest designs, a set of colorful geometric structures called PlayCubes, became a common sight in the late 1960s in urban parks. However, after falling out of use because of cost and safety concerns, the cubes are back, with an updated design and **Playworld** as their manufacturer.

Now made of rotomolded LLDPE plastic (the originals were glass fiber), PlayCubes come in single modules and preset configurations, with a slide option available for some models. Each roughly 16-foot cube has 13 circular cutouts children can play in or on—or crawl through. The roomier

design also offers onlookers increased visibility, ensuring that caregivers can always keep their charges in sight.

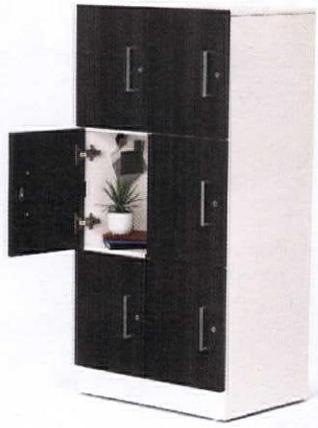
Michael Laris, vice president of global innovation for **PlayPower**, Playworld's parent company, explains that the use of rotomolded plastic allows for more efficient and affordable construction than the original model did. It also doesn't compromise the pieces' signature geometry and texture. Customers can select two-color combinations for the units, choosing from more than a dozen hues.

This spring, **Chinatown Park** on Boston's Rose Kennedy Greenway became the first location to install the redesigned PlayCubes. Dattner, whose books and projects changed how a generation played,



FUN CUBED Kids in Boston's Chinatown Park clamber over the redesigned PlayCubes (top), a playscape that architect Richard Dattner introduced in the late 1960s and updated for manufacturer Playworld. Dattner drew the sketch of the new preset eight-cube configuration (above), which comes with a slide.

is pleased with the result. "These structures provide children with the opportunity to use their senses to explore the environment and learn how their bodies work," he says, "and they do it free from parental micro-management." —*Rebecca Seidel*



ALIGN LOCKERS

MANUFACTURER: Allsteel

PERFORMANCE: These steel-frame lockers—available with one to six storage compartments—come with arch, square, straight, or integral pulls.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for education and work settings, the lockers can double as room dividers. Footed and nonfooted versions are offered with a choice of laminate or metal fronts.

ALLSTEELOFFICE.COM

(SNAP #213)



EXCLAVE

MANUFACTURER: Herman Miller

PERFORMANCE: This suite of products includes stacking boards, movable carts, tables, and rail-hung storage in a variety of styles and materials.

PRICE RANGE: \$\$

APPLICATIONS: Intended for collaborative work in offices and higher-education classrooms, the pieces feature a range of finishes, including colorful textiles and solid and patterned laminates.

HERMANMILLER.COM

(SNAP #214)



TRUA

MANUFACTURER: Keilhauer

PERFORMANCE: With its single-piece shell, this lightweight stacking chair comes in a choice of plastic (12 colors) or wood (in two hues).

PRICE RANGE: \$\$\$

APPLICATIONS: Suitable for gathering rooms and cafeterias, Trua is offered in arm and armless versions and as a barstool. Two bases and five finishes are also available.

KEILHAUER.COM

(SNAP #215)



VELOPORT

MANUFACTURER: Dero

PERFORMANCE: The laser-cut perforations in this modular, galvanized-steel bike storage shed assist in temperature control and visibility.

PRICE RANGE: \$\$

APPLICATIONS: A secure long-term parking option for one or two bikes, the shed is ideal for college campuses and transit hubs. Each bike is secured to the door via a U-lock, padlock, or keyed option.

DERO.COM

(SNAP #216)

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

Totally Wired

HOMAGO (short for “hanging out, messing around, geeking out”) is more than an energetic acronym. It’s the guiding philosophy behind the Digital Ateliers, two maker spaces that the **Convergence Design Lab at Columbia College Chicago** built at a pair of local, high-risk public schools.

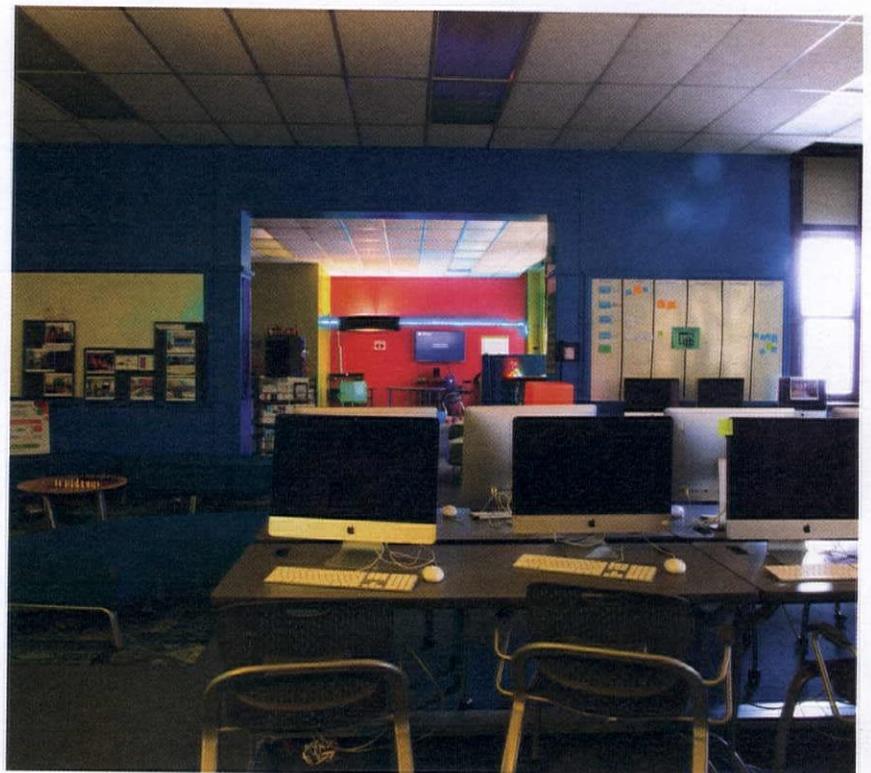
Stocked with robotics kits, 3-D printers, and multimedia production equipment, the spaces at **Morrill** elementary and **Tilden** high schools feature a computer lab with soft seating and workshop tables on one side; on the other is an informal lounge. Furnishings manufacturer **Bretford** supplied the movable furniture, from modular chairs to mobile boards, which maximizes flexibility for hands-on projects.

Convergence recently released the results from a two-and-a-half-year study of the Digital Ateliers in action, conducted with Bretford and Chicago think tank **Archeworks**. Researchers gathered striking evidence of how agile learning

spaces can boost students’ performance. For example, 74 percent of Tilden students used the Atelier during the 2014–15 school year, and 91 percent said that it makes them more excited about coming to school. That sentiment has played out in the school’s overall attendance, with the daily average jumping five points—from 76 percent to 81 percent—since the Atelier opened.

Mindy Faber, codirector of Design Lab overseer **Convergence Academies**, says the Ateliers can serve as a model for educators interested in a flexible, tech-driven approach. “Curricula and instruction are vital,” she says, “but it is the space and layout of resources that really make learning come alive.” —RS

HOOKED UP The Digital Atelier at Chicago’s Tilden high school exemplifies the principles of agile learning. It pairs multimedia equipment with flexible furnishings that can be rearranged to support solo work and collaborations.



SUPERSTORM SANDY TAUGHT US STORED IN PLACE **DRY FLOODPROOFING** SYSTEMS ARE **CRITICAL** FOR BUILDING RESILIENCY

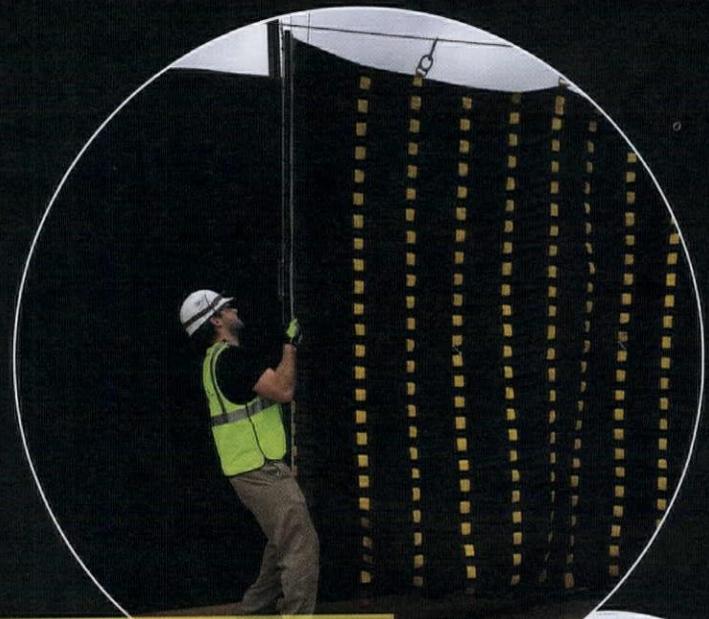


ILC DOVER
creating what's next

FLEX-WALL™

DEVELOPED BY THE DESIGNERS OF EVERY NASA SPACE SUIT SINCE APOLLO

- **Point-of-use Storage**
Eliminates the need for off-site storage and fees with Side and Vertical Deploy options
- **Rapid Deployment**
In minutes with minimal people and no heavy equipment
- **Scalable Designs**
Can be sized to fit any opening or threat - Robust Construction
- **Advanced Materials**
Layered Kevlar® structural webbing with coated fabric water retention layer



**COMMERCIAL
DRY FLOODPROOFING**

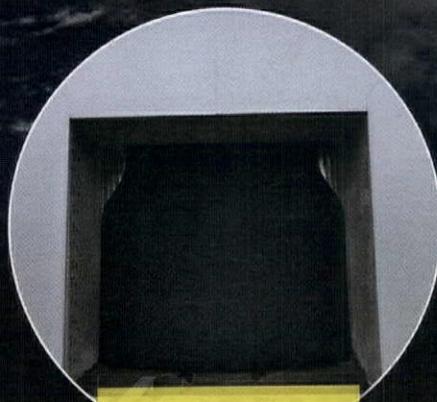
12' Flex-Wall™ Deployed System
during water testing



FLOODPROOFING OPTIONS FOR VIRTUALLY ANY APPLICATION



**STAIRWELL
FLEX-GATE™**



**PORTAL
FLEX-GATE™**



FLEX-COVER™



**RESILIENT
TUNNEL PLUG**



SMART VENT
Foundation Flood Vents

(877) 441-8368 • www.smartvent.com

SNAP 26

To request more information,
email flexwall@smartvent.com

WHEN THE BEST WANT THE BEST

TWO HOUR FIRE RESISTIVE CURTAIN WALL

2 HOUR FIRE RESISTIVE GLASS
INTERIOR/ELEVATOR ENCLOSURE
WITH SUPERLITE II-XL 120
IN GPX CURTAIN WALL FRAMING



Architect:
Sieger Suarez Architects
General Contractor:
Coastal Construction Group
of South Florida Inc.
Glazing Contractor:
Continental Glass Systems

RENDERING COURTESY OF METROSTUDIO.COM

SIEGER SUAREZ ARCHITECTS
60-STORY PORSCHE DESIGN TOWER

888.653.3333
WWW.SAFTI.COM

 **SAFTIFIRST**[™]
SAFETY AND FIRE TECHNOLOGY INC.





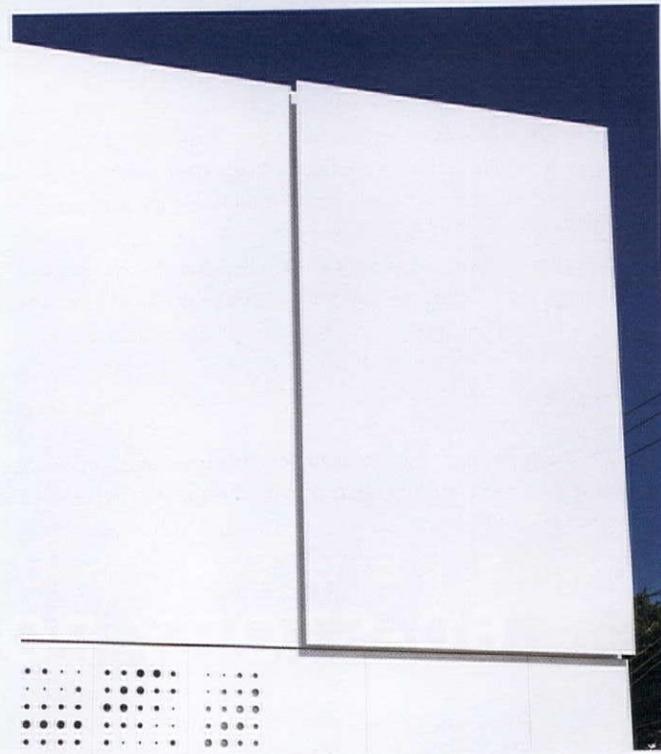
Taking It Outside

IN THE UNITED STATES, solid surfacing is probably best known for its interior applications. But Spanish manufacturer **Porcelanosa** is highlighting the material's exterior possibilities with the first North American installation of its Krion VF system on the company's 3,000-square-foot Houston showroom.

Designed by architect **Ignacio Vidal Traver**, who also serves as Porcelanosa's facade national sales and technical director, the system features a hundred 12-by-2½-foot Krion Lux solid-surface slabs; each is vertically hung using a mounting system specially developed by **Butech**, the company's engineering arm. Fabricated with tongue-and-groove joints, the slabs were assembled on site, glued, and hand finished to eliminate seams.

The absence of visible joints is an advantage of solid surfacing, notes Traver, pointing out that "there's no other cladding material that can achieve large surfaces without seams." Another advantage is its versatility, which the facade demonstrates with custom details such as a cutout motif on the ground floor, a thermoformed canopy over the entrance, and a backlit raised panel.

Because fabrication of the facades requires accuracy and precision, each Krion VF installation is made to order. However, the nonporous material, which is highly durable and performs well in all climates, offers a lot of possibilities. A second U.S. project, a T-Mobile store in New York City, has already been completed, with other buildings on the boards. —*Alice Liao*



ABOUT-FACE To demonstrate the durability of its Krion VF solid surfacing, Porcelanosa clad its Houston showroom with the material (top). The durable ventilated facade features custom cutout details (above).



STONEFACADE

MANUFACTURER: CertainTeed

PERFORMANCE: This manufactured stone veneer incorporates a 3/8-inch-thick stainless-steel rainscreen to mitigate the potential for mold and mildew.

PRICE RANGE: \$\$\$

APPLICATIONS: Ideal for residential use, the 8-inch-high panels—offered in three widths and four colors—can clad 110 square feet without repeat.

CERTAINTEED.COM
(SNAP #217)



FOAM-LOK 2800-4G



MANUFACTURER: Lapolla Industries

PERFORMANCE: This close-cell spray polyurethane foam creates a monolithic roofing seal that prevents heat transfer into and out of the building envelope.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for use on most new or retrofit substrates, the foam reduces building energy costs by up to 45 percent. It also resists wind uplift and acts as a water-proofing solution.

LAPOLLA.COM
(SNAP #218)



ECOBLEND



MANUFACTURER: DaVinci

Roofscapes

PERFORMANCE: Approved by the Cool Roof Rating Council, these polymer roof tiles—available in four new colors—reflect sunlight and heat away from a building.

PRICE RANGE: \$\$\$

APPLICATIONS: Suitable for residential and commercial applications, the shake- and slate-style roof tiles comply with California's 2016 Building Energy Standards.

DAVINCIROOFSCAPES.COM
(SNAP #219)



PAINTABLE GRAYNE

MANUFACTURER: Tapco Group

PERFORMANCE: While these paintable composite shingles mimic the look of plain-sawn white cedar, they're surface-treated to retain color better than wood or hardboard siding do.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for home exteriors requiring a custom color, the 5-inch shingles won't curl, warp, or fade over time.

THETAPCOGROUP.COM
(SNAP #220)

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



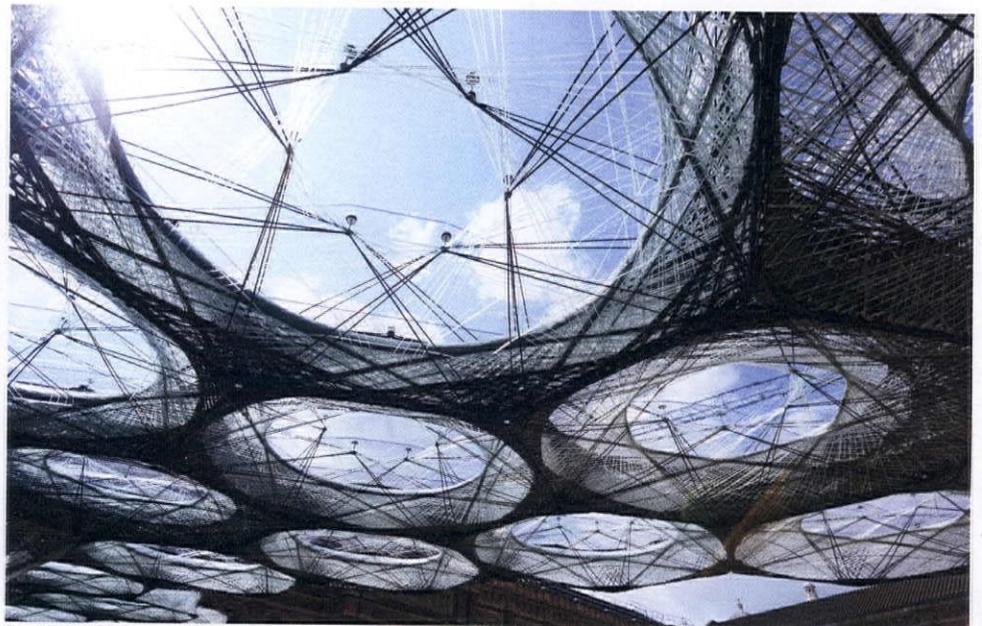
= ECO-FRIENDLY ATTRIBUTES

All Wound Up

THE ELYTRA FILAMENT PAVILION at London's **Victoria and Albert Museum** offers a glimpse of how stadium roofs could be built in the future. The temporary installation, whose design was inspired by the protective forewings of flying beetles, features a 2,100-square-foot canopy composed of 40 webbed hexagonal modules, each woven with carbon and glass fibers by a robot. That use of biomimicry and lightweight construction principles hold promise, as both could lead to the creation of lighter and longer roofs.

Architects **Achim Menges** and **Moritz Dörstelmann** worked with structural and climate engineers **Jan Knippers** and **Thomas Auer** to create the pavilion, which weighs less than 2 pounds per square foot. The architects chose carbon fiber over conventional materials such as concrete and steel because of its comparative lightness. The fiber "drastically reduced the dead load of the structure," according to Dörstelmann. Its high-tensile strength, extreme temperature tolerance, and low thermal expansion—the very qualities that make the material popular in the aerospace and high-end auto industries—also proved attractive.

Although identical in size and shape, each of the pavilion's hexagonal modules has a unique fiber arrangement determined by the structural and aesthetic requirements of its location. Sensors integrated into the pavilion collect data on visitor behavior and performance in relation to wind, shading, and radiation; the architects are using that data to decide where to extend the canopy during the pavilion's residence. The Elytra Filament Pavilion—and its explorations into material efficiency and lightweight construction—will be on view through November 6 in the V&A's John Madejski Garden. —AL



NICE WEAVE

A robot wove the hexagonal modules in the Elytra Filament Pavilion from a mix of carbon and glass fibers. The outdoor exhibit is part of the engineering season programming at the Victoria and Albert Museum in London.



Build modern.



My Block Wash Park | SA+R Architects | ARRIS.clip, Color: Limestone

- Natural Edge 
- Selection
- Solutions
- Education
- Innovation

Naturally-made, premium thin and full-bed stone products.

Only our Natural Process technology creates stone with aesthetics and durability of quarried stone, plus the design flexibility and installation benefits of a manufactured product. Discover our range of modern full-bed building stone for your contemporary designs.



FGP

landscapeforms®

True Global Design

Singular attention to form and detail in site elements for high-performance placemaking. The benefits of mass production + the richness of regionally sourced materials.

Designed by Francisco Gomez Paz.

Find us at landscapeforms.com or contact us toll free at 800.290.6240.

DESIGN. CULTURE. CRAFT.

SNAP 13



Safe Haven

GIVEN THE SECURITY issues a Planned Parenthood facility faces these days, from silent protests to outright violence, the organization's new **Diane L. Max Health Center** easily could have resembled a bunker. Instead, the two-story building is a bright, open presence on the street. "That was the central challenge: to make the Max Center feel welcoming" but also secure, says Manhattan architect Stephen Yablon, whose namesake firm designed the 14,000-square-foot facility, located in Long Island City, a formerly industrial neighborhood in Queens, New York.

On the building's front, where most of the public spaces are situated, sunlight streams through large expanses of **SaftyFirst** GPX Ballistic Resistant glass that is housed in blast-mitigating **Kawneer** 451T framing; both provide protection from gunfire and explosions. An L-shaped entry vestibule beyond the front door offers a second layer of safety. Here, visitors must sign in with a security person (seated behind ballistic safety

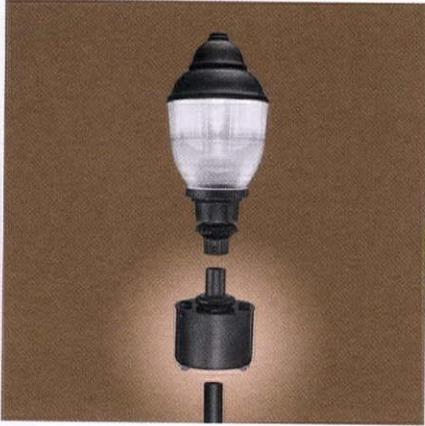
glass) and pass through screening equipment before being buzzed into the general reception area.

Inside, a color-based system—painted walls, dyed floors, and calm LED cove lighting—helps visitors navigate the building. There are also some multilingual signs pointing the way, but as few words as possible are employed. "People from more than 120 countries use this place," explains Yablon. "We are in one of the most diverse zip codes in Queens."

Last spring, at the Max center's opening, Planned Parenthood Federation of America president Cecile Richards praised the facility, saying, "This was built with the community, for the community, and by the community—and that is the spirit of Planned Parenthood in the next century." Since then, says architect Yablon, Planned Parenthood of New York City has hired his firm to review all its sites, bringing the Max center's patient experience, unified look, and secure environment to more service locations. —*Braulio Agnese*



NOTHING TO HIDE The Diane L. Max Health Center's bright interior (top) uses a color-coded system to help its multilingual clientele traverse the space. The Planned Parenthood facility has large, ballistic-resistant glass windows that facilitate a connection to the street (above).



TERES

MANUFACTURER: PennSMART
PERFORMANCE: This kit converts any lamppost fixture into a smart, energy-efficient surveillance system.

PRICE RANGE: \$\$

APPLICATIONS: The standard DIY package consists of a wireless communication system, cameras, speakers, and LED controls. Custom packages feature sensors for motion and sound detection as well as environmental monitoring.

PENNSMARTLIGHTING.COM
 (SNAP #221)



BEST SHELTER

MANUFACTURER: Stanley Security Solutions

PERFORMANCE: This scalable emergency-lockdown setup offers remote-control door locks, activation fobs, and a wireless communications system.

PRICE RANGE: \$\$

APPLICATIONS: Created for settings where a quick security response is essential, the system includes internal and external alerts and phased locked-door protocols.

STANLEYSECURITYSOLUTIONS.COM
 (SNAP #222)



SAFETY GATE

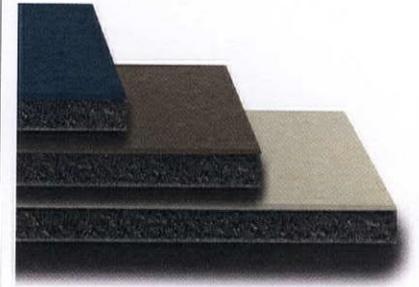
MANUFACTURER: Kee Safety

PERFORMANCE: OSHA-, ANSI-, and IBC-compliant, this self-closing safety gate is a retrofit solution for fixed roof hatches, restricted areas, and stair-access points.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for commercial, institutional, and industrial uses, the tubular steel gate comes in nine standard widths, from 18 to 48 inches, and in galvanized or RAL-listed powdercoat finishes.

KEESAFETY.COM
 (SNAP #223)



GALAXY RX

MANUFACTURER: Ecore

PERFORMANCE: With its 1/8-inch-thick rubber surface on a 1/2-inch-thick recycled-rubber backing, this slip-resistant flooring cushions falls and mitigates structure-borne sound.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for high-traffic healthcare and education spaces, Galaxy rx comes on a 6-by-30-foot roll and is offered in 12 earth tones.

ECORECOMMERCIALFLOORING.COM
 (SNAP #224)

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

= ECO-FRIENDLY ATTRIBUTES

The Great Escape

DESPITE THEIR MYRIAD FORMS, all buildings over 10 stories share a weakness: When emergencies render elevators unusable and stairs impassable, occupants have trouble reaching ground quickly and safely. The September 11 attacks crystallized the problem for many and galvanized some to action, including Yoav Barzilay, CEO/CTO of Israeli safety and security company **Bar-1**. The mechanical, harness-based evacuation system DoubleExit was his solution.

Bar-1 has a 25-plus-year track record of making rappelling equipment for military operations. But where the company's earlier products required expert training, DoubleExit is intuitive and easy for civilians to use. Packaged in a cabinet that attaches to a floor, a concrete column, or any interior spot with the necessary structural integrity, the system consists of two 330-pound-rated harnesses, 492 feet of cable, and a mechanism that provides a steady descent rate of three feet per second, regardless of the user's weight. When one person reaches safety, another dons the second harness and goes down; the action returns the first harness to the top for the next evacuee.

ASTM International-certified, DoubleExit, which costs \$3,500 per unit, is not the first rappelling evacuation system; there's also Rescue Reel, invented by physician Kevin Stone. But according to Bar-1's Barzilay, DoubleExit offers solutions that portable, single-use products like Rescue Reel do not: continuous operation, controlled descent, and no need to find a proper anchor point. "In emergency situations, people stop thinking," he says, adding that DoubleExit closes the circle by "adapting the operating environment to the operator." —BA



COME ON DOWN Prompted by the events of September 11, Bar-1's CEO Yoav Barzilay created DoubleExit (above), a civilian evacuation device for tall buildings. Included in the kit are two reusable harnesses, 492 feet of cable, and a mechanism that provides a steady rate of descent: precisely 3 feet per second (demonstration at left).

UNICO⁵

CUSTOM LED ILLUMINATED MIRROR

SNAP

The Unico 5 LED illuminated mirror is part of a series of frameless mirrors consisting of evenly placed bands of light. Custom sizes and optional features are available.

Explore all of our luxury mirror options available on our website at www.aamsco.com.



THE INTELLIGENT ALTERNATIVE SOURCESM

AAMSCO LIGHTING, INC.

100 Lamp Light Circle
Summerville, SC 29483

1-800-221-9092 • Fax 843-278-0000

Ohio Gratings, Inc.

Pedestrian Walkways & Fencing for parks and recreation



OGI Offers:

- Experienced sales & detailing staff
- In-house project management
- Value engineered solutions
- On-site powder coat line
- Custom fabrication

Products Featured Here:

- Carbon Steel Presslock with galvanized finish (42PL21 for handrail infill & 42PL10.5 for fencing)
- Aluminum Plank diagonal punch with a slip resistant metal spray surface (ALPlank8)

Other Applications:

- Ceiling Grilles & Security Screens
- Sunshades
- ADA Walkways
- Fencing & Gates
- Metal Grilles

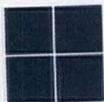
All Photos:
Harahan Bridge
Memphis, TN



OGI Architectural Metal Solutions
an Ohio Gratings Company

5299 Southway Street SW □ Canton, OH 44706 □ www.ohiogratings.com
SNAP 20 1-800-321-9800 □ Fax 330-477-7872





Reaching New Heights

NATATORIUMS POSE a plethora of acoustic challenges, from sounds ricocheting off the hard surfaces to the cavernous space's tendency to amplify noise. Acoustic treatments are also susceptible to water damage, so they are generally avoided on these buildings' interior walls.

Bing Thom Architects (BTA) faced these dilemmas and more when charged with adding a 112,000-square-foot aquatic facility to the **Guilford Recreation Centre** in Surrey, British Columbia. Reduced surface space and a desire to retain the center's distinctive ceiling elements led the Vancouver-based firm to look up: to the rafters, that is.

BTA, working with **StructureCraft Builders** and acousticians at **BKL Consultants**, directly mounted custom-cut, water-repellant **Rockfon** Sonar Activity panels on the facility's 100-foot-long ceiling trusses; in addition, the team installed Sonar CDX concealed panels above the spectator seating and mezzanine lobby area. Providing a 0.9 NRC and 22 CAC rating, the stone-wool panels resist humidity so won't sag. Plus, their smooth white surfaces reduce the need for artificial illumination by reflecting up to 85 percent of the center's indirect light—including that which streams through the pool-deck windows. The result is a serene aquatic facility that serves the growing community both healthwise and aesthetically. —Alex Klimoski



IN THE SWIM Faced with a dearth of usable space for acoustic treatments, the team behind the Guilford Recreation Centre's aquatic facility mounted panels from Rockfon's Sonar collection on the building's rafters (above) and over the viewing area (right).

PHOTOGRAPHY © SALE ORBINE/CONCRETE PHOTOGRAPHY



SIPARIO

MANUFACTURER: Snowsound
PERFORMANCE: The lightweight triangular panels contain layers of tightly woven polyester fiber that absorb mid- and low-range frequencies.

PRICE RANGE: \$\$\$

APPLICATIONS: The frameless, two-sided design may be freestanding or mounted to the wall or ceiling. Fire-resistant and 100 percent recyclable, Sipario achieves up to a 1.0 NRC and is Greenguard Gold-certified.

SNOWSOUNDUSA.COM

(SNAP #225)



ECOUSTIC VENEER

MANUFACTURER: Unika Vaev
PERFORMANCE: These FSC-certified wood veneers mounted to a polyester core absorb sound, offering a 0.8 NRC.

PRICE RANGE: \$\$

APPLICATIONS: Suiting walls and ceilings, the 11-by-106-inch panels come in 11 woods and interlock for easy installation. Both perforated and nonperforated options are available.

UNIKAVAEV.COM

(SNAP #226)



BUZZIBLINDS

MANUFACTURER: BuzziSpace
PERFORMANCE: The aluminum-frame room divider features five telescoping acoustic blinds that can be opened to varying degrees to reduce ambient noise and create visual privacy.

PRICE RANGE: \$\$

APPLICATIONS: Made with 100 percent upcycled plastic-bottle waste, the blinds come in four new shapes, two standard heights, and 12 colors.

BUZZI.SPAC.COM

(SNAP #227)



CITY PROPER

MANUFACTURER: Milliken
PERFORMANCE: The three designs in this contract carpet collection draw their inspiration from the urban landscape, such as sidewalks and power cables.

PRICE RANGE: \$\$

APPLICATIONS: Made with solution-dyed nylon type 6,6, the 19¾-inch-square tiles for office and hospitality use are stain- and soil-resistant; they also have a cushioned, PVC-free backing.

MILLIKEN.COM

(SNAP #228)



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



= ECO-FRIENDLY ATTRIBUTES

Striking the Right Chord

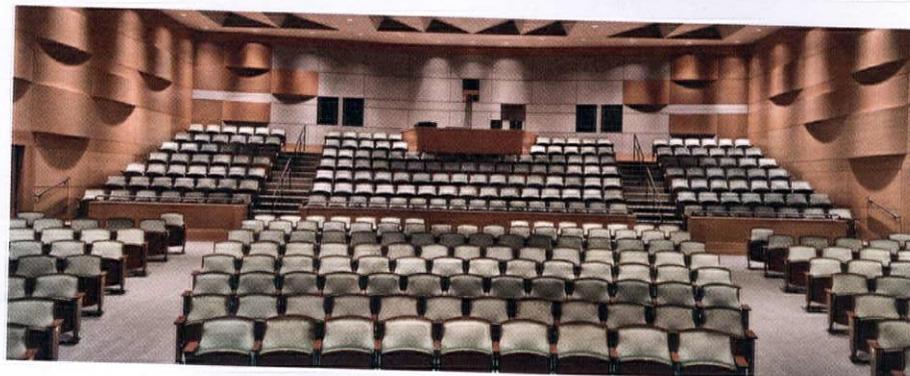
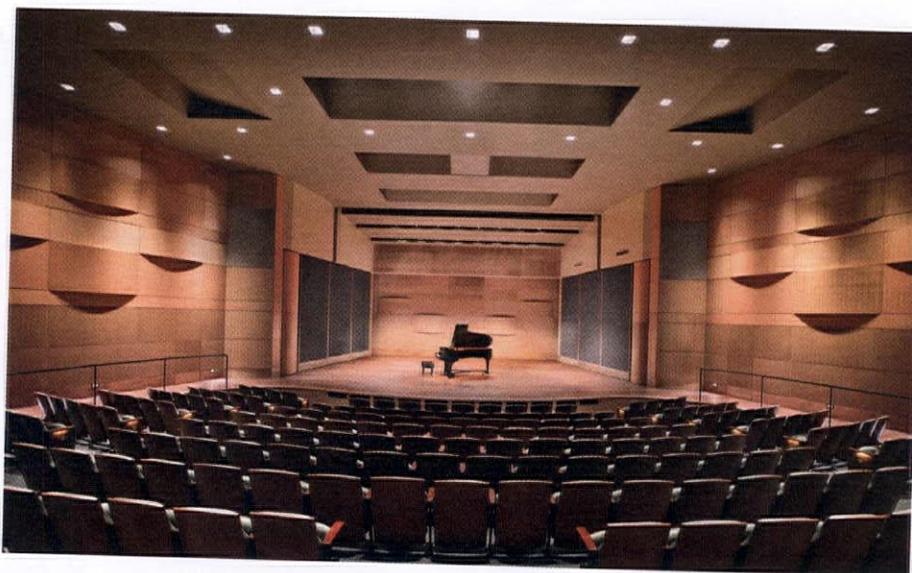
ROTHERNBERG HALL—a 388-seat auditorium at the **Huntington Library, Art Collections, and Botanical Gardens** in San Marino, California—hosts programming ranging from guest lectures to chamber-music recitals. To manage these varied acoustic needs, San Francisco-based **Architectural Resources Group** worked with acousticians from nearby **Charles M. Salter Associates** to create a changeable balance of sound reflection, diffusion, and absorption.

“We wanted to have a good reverberation time that was long enough for music but short enough for clear speech,” said Salter Associates vice president Philip N. Sanders. To do so, the team employed an elegantly curved surround with a white-oak veneer. The piece, which combines flush and protruding panels, wraps the stage and seating area, modifying and scattering sound.

Scalloped panels on the stage can be rotated to reveal a wood surface that reflects and amplifies sound or a fiberglass-and-acoustic fabric option that absorbs it. An additional acoustic drape can be drawn across the upstage wall to quiet loud films and instruments. The venue’s thick drywall ceiling also absorbs other noise frequencies ricocheting around the room.

With these interventions, the intimate venue, located in the Huntington’s **Steven S. Koblak Education and Visitor Center**, helps welcome visitors with acoustically tailored performances. Now, *that* sounds good.—AK

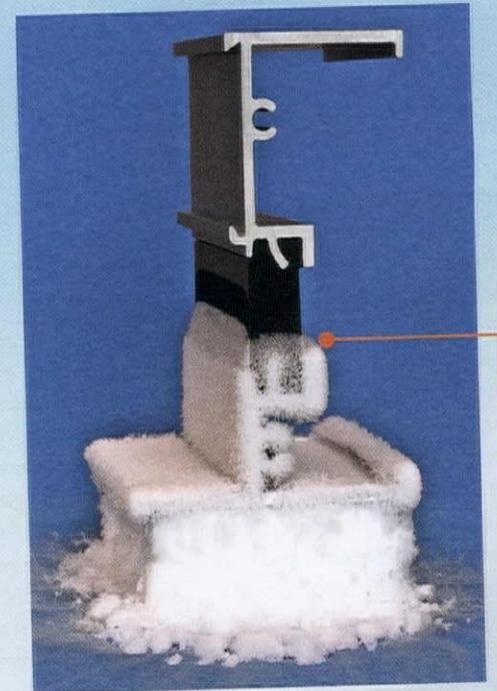
TUNED IN Interventions such as a white-oak surround, an acoustic drape, and rotating panels that reflect or absorb sound allow the Rothenberg Hall in San Marino, California, to stage varied live events.



Azon Saves Energy

Daylighting systems produced with Azon structural thermal barrier technologies—the **MLP™** or **Dual Cavity**—for aluminum windows and high performance glazing components for insulating glass, will yield a fenestration system capable of upholding the highest efficiency and sustainability standards.

- Polyurethane polymer with superior insulating properties for the best balance of energy efficiency and performance
- NEW: MLP™ (mechanical lock profile) and dual cavity designs for fenestration products used in the most demanding climates and conditions
- High strength for larger spans—industry's strongest thermal barrier for aluminum storefront, curtain wall and windows
- AZO/Tec® technical services with expertise in window design



Extreme cold temperatures of -100°C (-148°F) will not transfer through an aluminum frame with a modern pour and debridge thermal barrier (and neither will high temperatures in very hot environments)



1 HSW Learning Unit

SNAP 138

1-800-788-5942 | www.azonintl.com



Learn about the role of Azon thermal barriers in energy conservation.



You're not just building a structure. You're building a reputation.

With **Owens Corning® Enclosure Solutions** you can choose from a range of options for different construction types with customizable components that best fit your project, all supported by the expert advisors and technical resources of Owens Corning. For your next project, let **Owens Corning® Enclosure Solutions** deliver total confidence, total convenience and total choice—to protect your building and your reputation.

Learn more at owenscorning.com/enclosure

Ronald McDonald House, Toledo, OH

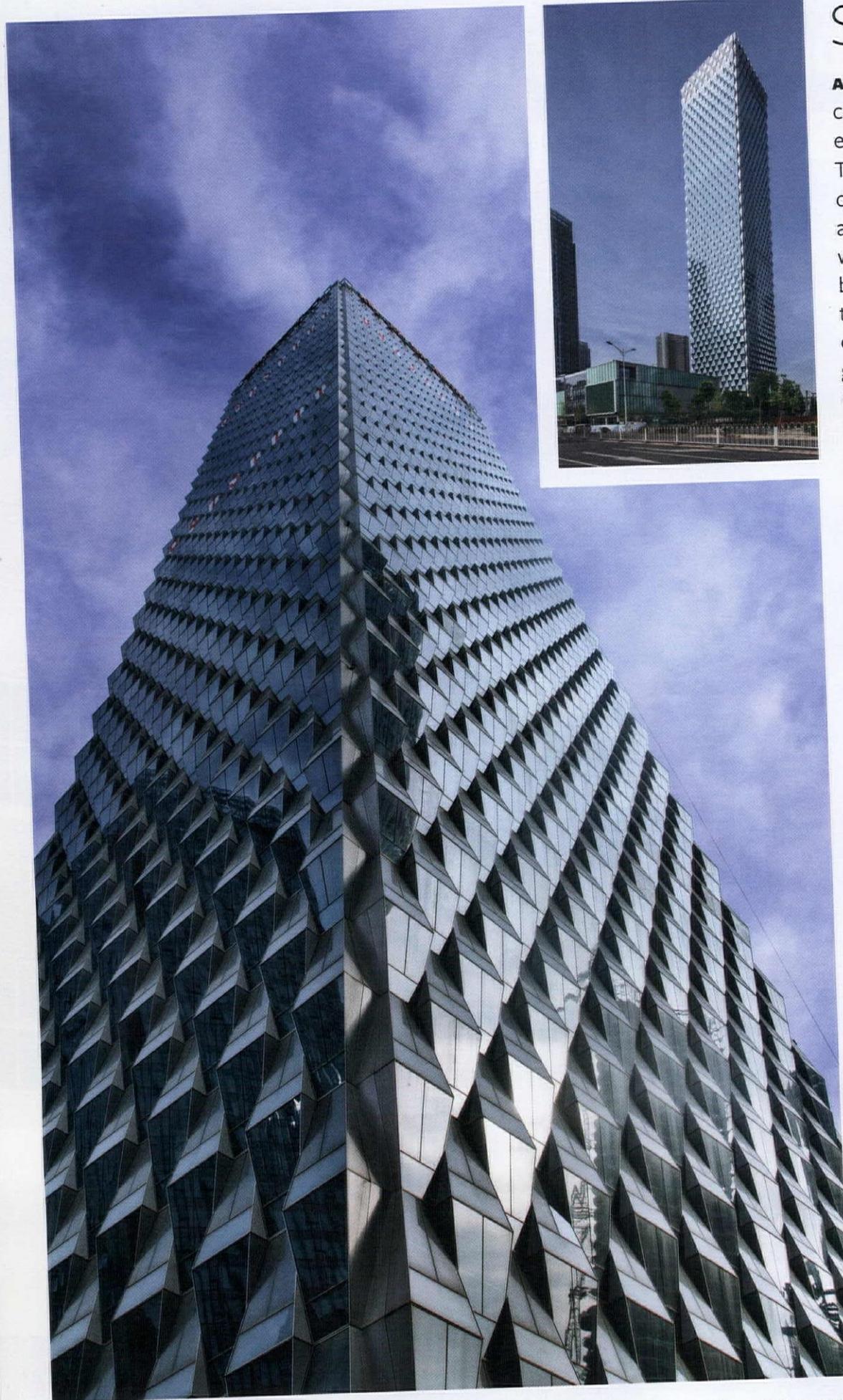
OWENS CORNING® ENCLOSURE SOLUTIONS



OWENS CORNING INSULATING SYSTEMS, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659
1-800-GET-PINK®
www.owenscorning.com

Printed in U.S.A. April 2016.
THE PINK PANTHER™ & © 1964–2016 Metro-Goldwyn-Mayer Studios Inc. All Rights Reserved. The color PINK is a registered trademark of Owens Corning. © 2016 Owens Corning. All Rights Reserved. © 2016 Thermafiber, Inc. All Rights Reserved.

#GREATMINDSTHINKPINK



Shady Business

AGAINST THE OVERCAST skies of the Chinese capital, the **Beijing Greenland Center** sparkles, an effect multiplied by its complex faceted facade. Trapezoidal glass panels in the 55-story tower, designed by **Skidmore, Owings & Merrill**, meet at alternating concave and convex angles, creating a weave-like pattern on all 478,000 square feet of the building's surface. As the sun shifts location throughout the day and year, the texture "creates an ever-transforming pattern of shade and shadow, giving the impression that the tower itself is always changing," says SOM associate architect Neil Katz.

Besides creating a dynamic spectacle on the city skyline, the tower's undulating surface boosts the building's energy performance. Using environmental analysis software including **Autodesk's** Ecotect and **GNU Group's** DIVA, the architects determined the optimal angles for the 1/4-inch-thick, low-E-coated glass panels to meet so that they would cast the most possible shadow on the structure—with the self-shading helping slash the building's solar heat gain.

Although geometric facades such as this were once cost-prohibitive, new parametric modeling tools streamline the design process. "Many of the analytic tasks traditionally done by engineers are being done by architects," Katz says. "Form can be optimized early in the process, giving you the confidence that the structure will perform as intended."

—Janelle Zara



MULTIFACETED The completed Beijing Greenland Center, with its intersecting units and undulating facade, is located in the capital city's Dawangjing business district (above and inset). Parametric modeling helped the team at Skidmore, Owings & Merrill determine the most energy-efficient angles at which to place the building's trapezoidal glass panels in order to maximize self-shading (right).



FLATWRAP UV HOUSEWRAP

MANUFACTURER: Benjamin Obdyke

PERFORMANCE: When used in conjunction with a rainscreen, this tri-laminate barrier for open-joint claddings provides bulk water drainage, vapor permeability, and UV protection.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for commercial and residential projects, the black wrap comes in 500-foot rolls; its seams do not need to be taped.

BENJAMINOBDYKE.COM

(SNAP #229)



THERMALSAFE PANELS WITH NONEXPOSED FASTENING

MANUFACTURER: Metl-Span

PERFORMANCE: Unlike other fire-resistant wall technologies, these mineral-wool panels have a flush appearance and one-step installation thanks to interlocking side joints.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for exterior separation walls or interior demising walls, the panels are 4 to 8 inches thick and offer one to three hours of fire protection.

METLSPAN.COM

(SNAP #230)



METALWRAP INTEGRATED SERIES

MANUFACTURER: Centria

PERFORMANCE: These insulated composite backup panels—made of two steel skins permanently bonded to a foam core—serve as an air, vapor, and moisture barrier.

PRICE RANGE: \$\$\$

APPLICATIONS: Ideal for mixed-media exteriors, the panels—available in two thicknesses and widths—may be installed horizontally in up to 24-inch spans.

CENTRIAPERFORMANCE.COM

(SNAP #231)



WALKER TEXTURES

MANUFACTURER: Walker Glass and PPG

PERFORMANCE: This ¼-inch-thick glass now comes with the option to use a full-surface or patterned acid-etched finish on one side and a choice of three Solarban low-E coatings on the other.

PRICE RANGE: \$\$

APPLICATIONS: The 96-by-130-inch panels are available with standard, decorative, and bird-friendly patterns as well as clear and colored glass.

WALKERGLASS.COM

(SNAP #232)

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

= ECO-FRIENDLY ATTRIBUTES

Modern History

THE TERRA-COTTA FACADE of Howard University's **Interdisciplinary Research Building**, designed by international architecture firm **HDR**, uses materials to tell the story of the institution's past, present, and future. The earthy **Shildan** rainscreen that wraps the 81,000-square-foot building nods to and yet updates the Georgian-style masonry seen on older structures on the school's Washington, D.C., campus. The screen's alternating ribbed and smooth textures also recall traditional African textiles and arts, honoring Howard's legacy as the country's premier historically black college.

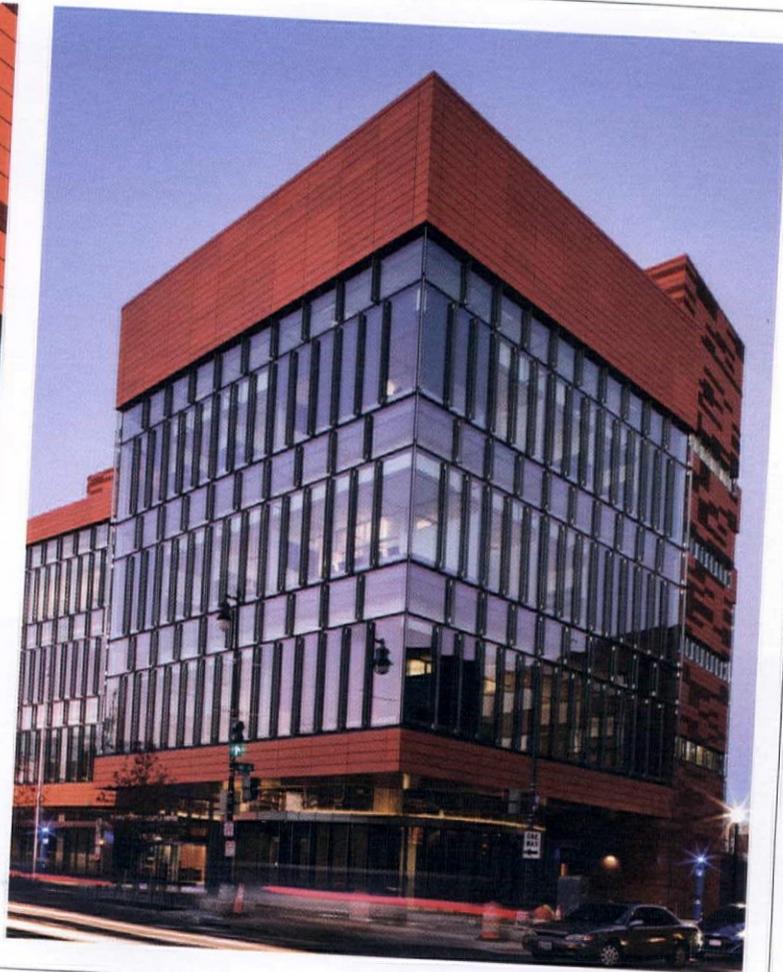
Aesthetic symbolism aside, the rainscreen improves the building's environmental performance. It allows air to circulate behind the panels, preventing water absorption and mildew growth, while its structurally glazed, unitized curtain-wall system—manufactured by **Oldcastle BuildingEnvelope**—features an integrated exterior fin that shades the structure, decreasing solar gain.

The glass facade “creates an aesthetic connection between the university and its neighbors,” says HDR senior associate Michael Vinkler. It also permits passersby a glimpse at research activities taking place within the facility, which includes a cleanroom and wet and dry labs. The net effect, continues Vinkler, is “a highly visible presence for the university along Georgia Avenue, one of the major boulevards leading into our nation's capital.” —JZ

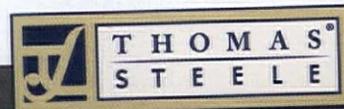


WOVEN IN PLACE

Referencing Howard University's cultural and architectural history, the rainscreen on the college's Interdisciplinary Research Building (right) features smooth and woven clay-colored panels (above) reminiscent of African textiles.



Crafting Site Furnishings for a Lifetime



At Thomas Steele, we are committed to helping you identify solutions that work for your project. We are confident there is a Thomas Steele product that will not only meet your project needs, but enhance the beauty of your space.

Customer Satisfaction Made Easy

Our *CableRail* stainless steel cables are a great choice for your customers who are looking for a view-friendly railing infill option that's attractive, durable, and ultra-low maintenance. Services such as shop drawings and engineering reports combined with our packaged cable assemblies and automatic-locking *Quick-Connect*® fittings make design, preparation, and installation a breeze.

CABLE·RAIL
by feeney®



feeney
makes it easy

Free catalog and dealer locations 1-800-888-2418 or visit www.feeney6.com

SNAP 9

Rarefied Air

Manufacturers scale the economic heights in Idaho, Oregon, and Washington State.

BY J. MICHAEL WELTON



THE FORESTRY sector may not dominate the Pacific Northwest the way it once did, but the region's wood products are still in demand.

D.R. Johnson Wood

Innovations, based in Riddle, Oregon, is the first U.S.-certified firm to manufacture cross-laminated timber (CLT), a new category of building material. Two local structures will feature the company's goods: the Richard Woodcock Education Center at Western Oregon University, located in Monmouth, and the Albina Yard mixed-use building, in North Portland.

Companies in Washington State also utilized the recession to experiment with new products, including CLT. Others, such as custom-railing maker **AGS Stainless** on Bainbridge Island, took the time to retool. Five years ago, the 15-employee company began reaching out to architects through advertising, sponsorships, and programmed events. The approach paid off. "Today we have 50 employees and state-of-the-art laser machines," says Kevin Harris, AGS's director of sales and marketing.

Idaho is seeing expansion as well. "Big companies that manufacture here, like **Woodgrain Millwork**, make wooden doors, molding, and flooring that is being sold in Home Depot and high-end stores," says Steve Hatten, executive director of **TechHelp**, the state's Manufacturing Extension Partnership center.

In Boise, where **Smoke Guard** manufactures smoke- and fire-rated curtains for elevator lobbies, on-floor staff grew from 15 to 20 over the last five years. By adding product and quality engineers, the company embraced lean manufacturing processes. And it introduced a new product portfolio. "Our products are spec'd and designed by architects," says Curtis Gonzales, Smoke Guard's president. In addition, he notes that the firm aims to maintain short lead times by working with its supply chain.

Timber may no longer be king of the Pacific Northwest, but innovation is alive and kicking.

Idaho, Oregon, and Washington



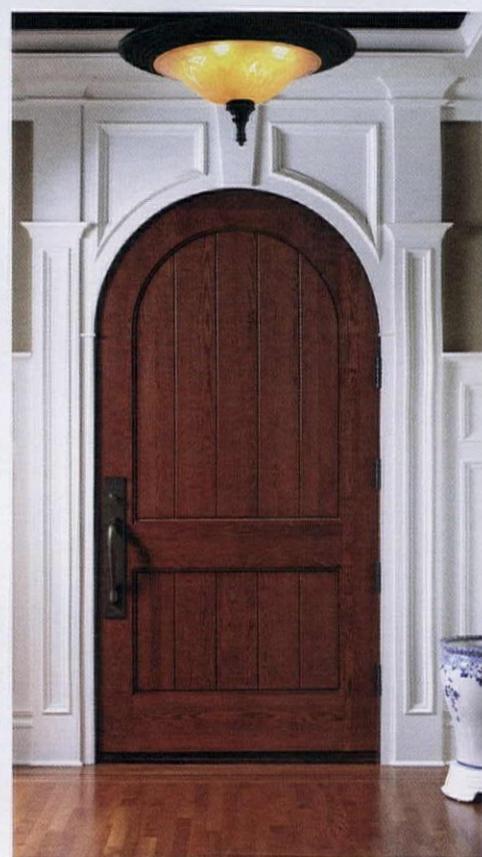
1 MANUFACTURER: AGS Stainless
LOCATION: Bainbridge Island, Washington
PRODUCTS: Prefabricated and custom-designed glass and stainless-steel railing systems for residential and commercial use.
FOUNDED: 1988
EMPLOYEES: 50
PRICE RANGE: \$\$\$
AGSSTAINLESS.COM



2 MANUFACTURER: Lumicor
LOCATION: Renton, Washington
PRODUCTS: Recycled-resin architectural panels for walls, ceilings, and furniture.
FOUNDED: 1977 **EMPLOYEES:** 100
PRICE RANGE: \$\$-\$\$\$\$ **LUMICOR.COM**



3 MANUFACTURER: Insulfoam
LOCATION: Puyallup, Washington
PRODUCTS: Roof, structural, wall, and below-grade insulation made with expanded polystyrene (EPS), graphite polystyrene (GPS), and geofoam lightweight fill.
FOUNDED: 1959 **EMPLOYEES:** 57
PRICE RANGE: \$ **INSULFOAM.COM**



4 MANUFACTURER: Simpson Door Company
LOCATION: McCleary, Washington
PRODUCTS: Interior, exterior, and fire-rated wood doors for all applications.
FOUNDED: 1912
EMPLOYEES: 225
PRICE RANGE: \$\$
SIMPSONDOOR.COM

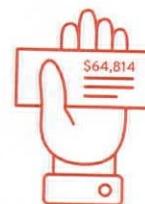
SNAPSHOTS

IDAHO

In 2015,
62,200

people worked at Gem State manufacturing companies.

Idaho's manufacturing industry produced **\$8.14 billion** worth of goods in 2014, with sector employees earning an average of **\$64,814** a year.



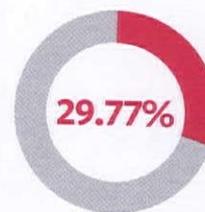
SOURCE: NATIONAL ASSOCIATION OF MANUFACTURERS

OREGON

The Beaver State exported

\$17.8 BILLION

in manufactured goods in 2014.



That same year, Oregon manufacturers accounted for **29.77 percent** of the state's total output and employed **10.43 percent** of its workforce.

SOURCES: UNITED STATES BUREAU OF ECONOMIC ANALYSIS; U.S. CENSUS BUREAU

WASHINGTON

The Evergreen State's 1,700+ forest-products businesses employ some

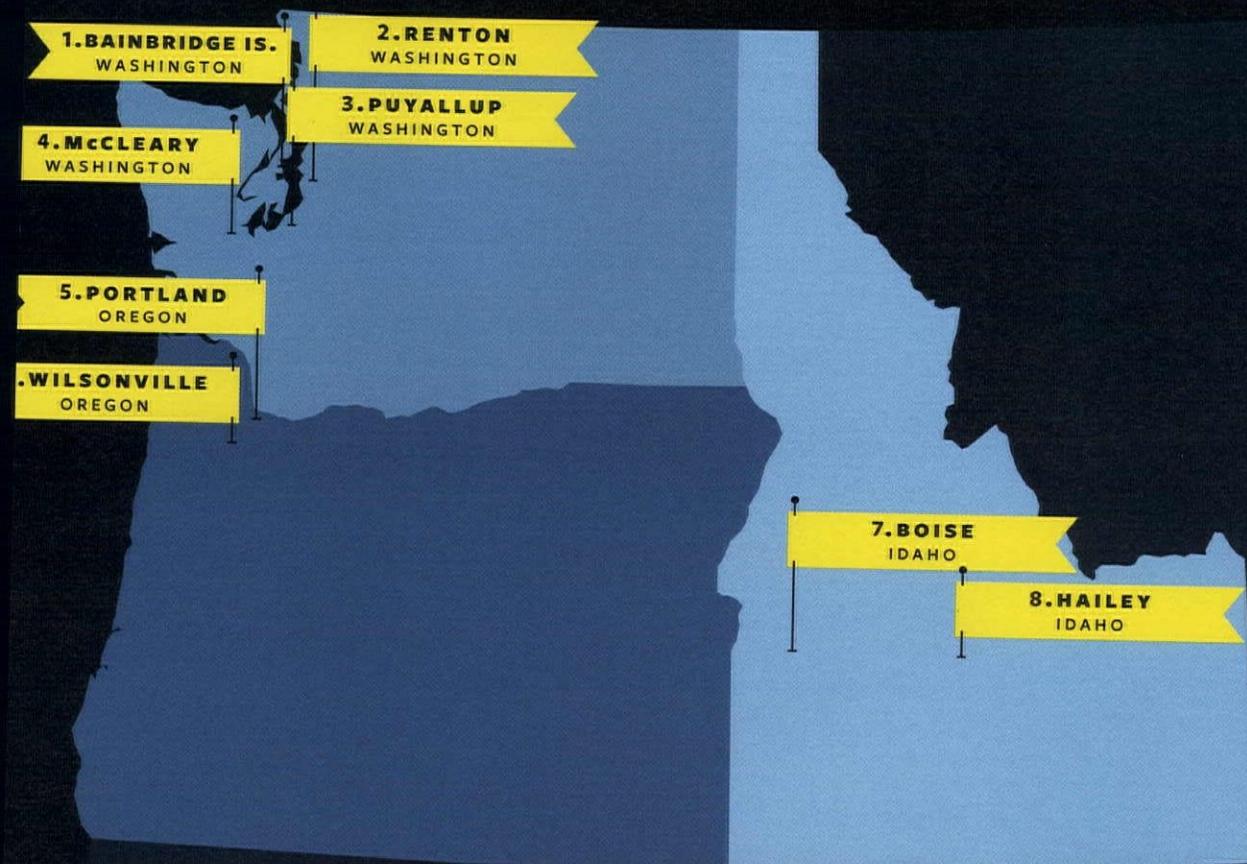
105,000

workers who earn nearly **\$5 billion** in annual wages.



More than **10 percent** of Washington's forestry-related jobs are green.

SOURCE: CHOOSEWASHINGTONSTATE.COM



5 MANUFACTURER:

Huntco Site
Furnishings
LOCATION: Portland, Oregon
PRODUCTS: Benches, bollards, receptacles, and bike lockers and racks.
FOUNDED: 1980
EMPLOYEES: 3
PRICE RANGE: \$\$
HUNTCO.COM



6 MANUFACTURER:

Collins
LOCATION: Wilsonville, Oregon
PRODUCTS: Hardwood, softwood, pine particleboard, and engineered wood siding and trim.
FOUNDED: 1855 **EMPLOYEES:** 772
PRICE RANGE: \$-\$\$\$ **COLLINSWOOD.COM**

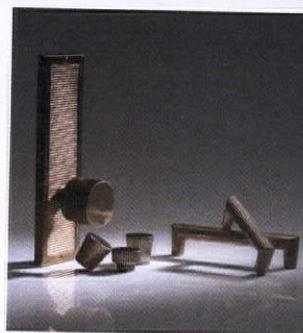


7 MANUFACTURER:

Smoke Guard
LOCATION: Boise, Idaho
PRODUCTS: Fire and smoke containment systems for elevators and buildings.
FOUNDED: 1991
EMPLOYEES: 35
PRICE RANGE: \$\$
SMOKEGUARD.COM

8 MANUFACTURER:

Rocky Mountain
Hardware
LOCATION: Hailey, Idaho
PRODUCTS: Bronze tile; fittings; lighting; cabinet and door hardware; indoor and outdoor accessories.
FOUNDED: 1994
EMPLOYEES: 150
PRICE RANGE: \$\$\$
ROCKYMOUNTAINHARDWARE.COM





BACK TO NATURE

Working with various municipal agencies and the Pittsburgh Parks Conservancy, Patricia Culley of Bohlin Cywinski Jackson (above) helped make the Frick Environmental Center a paradigm of eco-friendly building.

No Walk in the Park

Bohlin Cywinski Jackson associate Patricia Culley describes the rigors of designing Pittsburgh's Frick Environmental Center to meet the highest green-building standards.

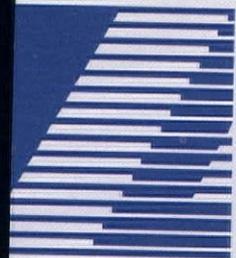
BY LAURA RASKIN

WHEN IT OPENED on September 10, the **Frick Environmental Center (FEC)** brought a new educational and community resource to the residents of Pittsburgh. The two-story building, a joint venture between the city and the Pittsburgh Parks Conservancy, features classroom, gallery, and office spaces; it also sits at the edge of the 644-acre Frick Park, linking the lush, undeveloped area with the residential Squirrel Hill neighborhood.

Yet the project, shepherded by local architects **Bohlin Cywinski Jackson (BCJ)**, is notable for another reason: It's the latest in Pittsburgh's lineage of cutting-edge green buildings. Following in the footsteps of other city projects, such as the **Center for Sustainable Landscapes at Phipps Conservatory**

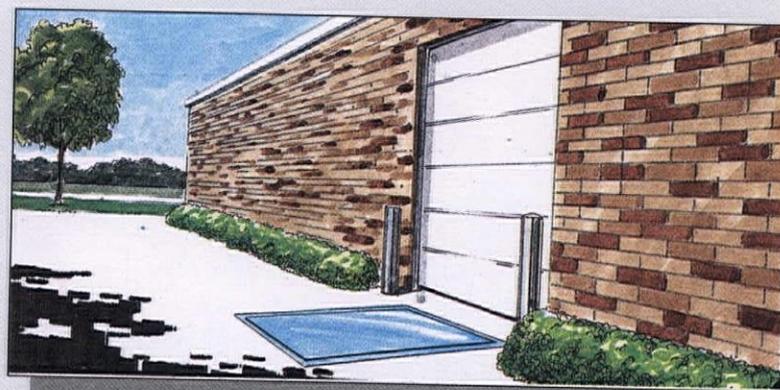
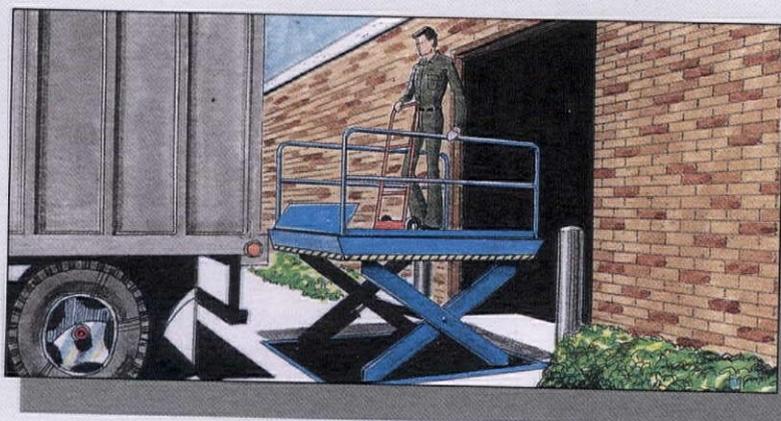
and Botanical Gardens (2012) and Gensler's **Tower at PNC Plaza (2015)**, the Frick is aiming to meet some of the most stringent environmental benchmarks and achieve not only LEED Platinum status but also full Living Building Challenge (LBC) certification.

The latter, a rating created by the International Living Future Institute, has seven rigorous performance categories, or Petals, which mandate everything from energy use to material sourcing. If the Frick (does obtain its LBC rating, it will join the currently nine buildings worldwide (including the Phipps) to have done so. Project architect Patricia Culley walks SNAP through the process of developing the Frick's green credentials.



ADVANCE LIFTS[®]

DISAPPEARING DOCK LIFT



NOW YOU SEE IT

NOW YOU DON'T

***AN ADVANCE DOCK LIFT IS THE ONLY EQUIPMENT
THAT CAN SERVICE ALL TRUCKS.***

- **WHITE PAPER (SELECTION GUIDE)**
- **LIFT SPECIFICATIONS SHEETS**
- **ARCHITECTURAL SPECIFICATIONS**
- **PIT & PAD DRAWINGS**

AVAILABLE AT ADVANCELIFTS.COM



**ISO 9001:2008
Certified**



1-800-843-3625



Philadelphia's Green Genes

The city's stable of environmentally friendly buildings just keeps on growing. Here are three outstanding examples.

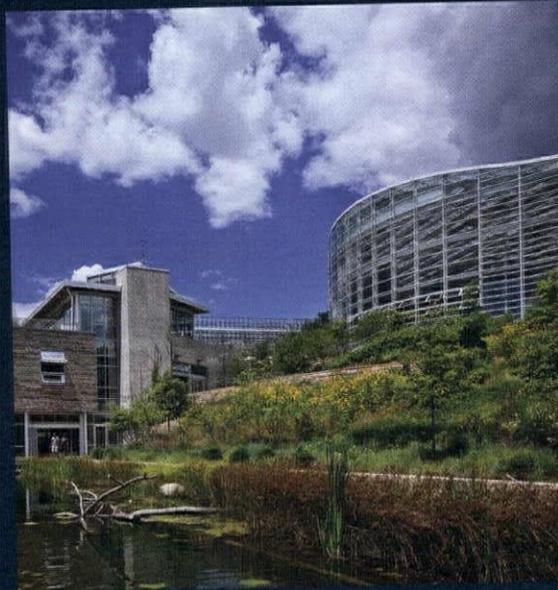
CENTER FOR SUSTAINABLE LANDSCAPES AT PHIPPS CONSERVATORY AND BOTANICAL GARDENS

ARCHITECT: The Design Alliance Architects

YEAR BUILT: 2012

DESCRIPTION: Besides being net positive for energy and net zero for water—meaning it creates more power than it consumes—this education and research facility captures and treats all rainwater falling on-site. Community involvement, bioclimatic design technology, and land use analysis were all essential components of the integrated design process.

CERTIFICATIONS: Living Building Challenge; WELL Building Platinum; LEED Platinum; Sustainable Sites Initiative (SITES) four-star rating



HOW DID PITTSBURGH'S REPUTATION FOR GREEN BUILDINGS INSPIRE THE FRICK CENTER?

I think Phipps Conservatory was key in making the Parks Conservancy aware of the Living Building Challenge [LBC] certification. The decision to aim for it was driven by the Parks Conservancy and our team, although the city was also supportive. It was still a question—even through the start of construction—whether or not we could fully achieve the certification. It is a time-consuming, exhausting, and relentless process, but a wonderful goal.

THE LBC'S WATER PETAL IS ESPECIALLY DEMANDING AS IT REQUIRES USING STORMWATER FOR INTERNAL BUILDING NEEDS, WHICH OFTEN CLASHES WITH MUNICIPAL WATER REGULATIONS. WAS THAT THE CASE HERE?

Yes. Our facility is designed to use city water, not reclaimed water, for potable; otherwise we would have had to become our own water authority, which we couldn't do. We tried to brainstorm ways that the city could change the rules, but Philly is trying to ensure the health and safety of the public and you have to respect that. However, we budgeted for adding filtration systems in the building if the municipal rules change. Demonstrating this allows us to still fulfill the Petal and potentially achieve full LBC certification.

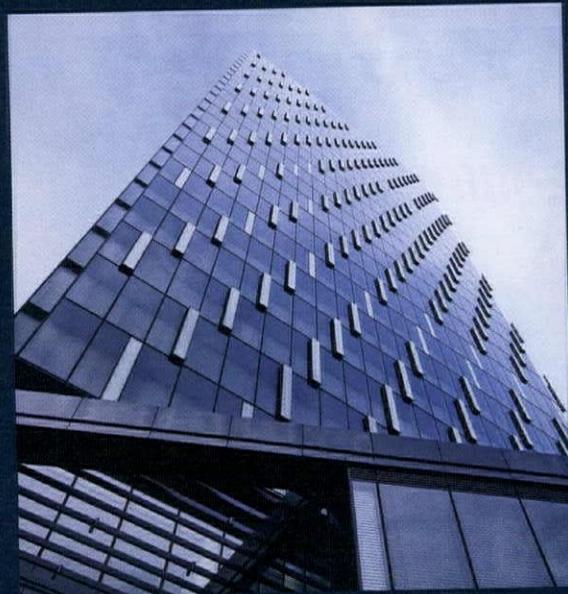
WHAT OTHER CHALLENGES DID LBC FULFILLMENT POSE?

We found the Material Petal hardest to achieve. First you have to research each product, making sure no [harmful] red list chemicals are included. Then there's transparency: LBC wants ingredient labels on the materials, much like those for food. We got caught up in the research, lost sight of the transparency piece, and didn't bid on the project until 90 percent of the products were vetted. It was frustrating that as a designer, you had very little leverage to get manufacturers to open their books.

On the other hand, the Beauty Petal is interesting and unique as it requires projects to have elements of aesthetics, inspiration, and education. At Bohlin Cywinski Jackson, we believe that for a building to be truly sustainable, it needs to be beautiful, so users will want to serve as its stewards.

DID YOU LEARN ANYTHING DURING THE DESIGN AND CONSTRUCTION PROCESS THAT YOU CAN APPLY TO THE NEXT PROJECT?

The Living Building Challenge is very well named. I never assumed that it would be as rigorous and difficult as it was. But because of my experience with it, I'm learning about other green certifications, including the WELL Building Standard, which is primarily about operations and human health. So taken together, LEED, LBC, and WELL encompass the whole range of sustainable building. They are my new interest.



THE TOWER AT PNC PLAZA

ARCHITECT: Gensler

YEAR BUILT: 2015

DESCRIPTION: The 33-story building is one of the few naturally ventilated office towers in the country thanks to its double-skin facade, heat-capturing solar chimneys, and operable poppers (narrow windows) and floppers (interior vents at sill level) that let fresh air flow into and out of the structure.

CERTIFICATION: LEED Platinum

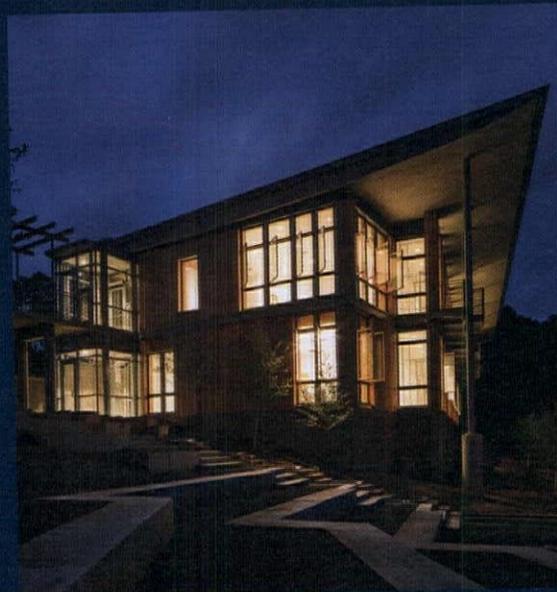
FRICK ENVIRONMENTAL CENTER

ARCHITECT: Bohlin Cywinski Jackson

YEAR BUILT: 2016

DESCRIPTION: Providing educational facilities for K-12 students—as well as hundreds of thousands of visitors each year—the building incorporates such sustainable features as ground-source heat pumps, radiant floors, a photovoltaic array, and a reclaimed water system that provides captured and filtered stormwater for irrigation and nonpotable building uses.

CERTIFICATIONS: LEED Platinum and Living Building Challenge, both targeted





THE POSSIBILITIES
ARE **ENDLESS.**

Our team has been trusted for over 40 years to provide technical expertise and project support in the exploration of segmental paving product options.

Optimizing color, finish, texture and size, we have what it takes to bring your vision to life.



UMBRIANO

The look of granite without the cost. Ideal for roof deck or on-grade installations. Zero-bevel edge. Easy to clean. Rich, vibrant colors. Non-slip texture.

PROJECT: Loews Hotel Roof Deck. Chicago, IL

DESIGN: Wolff Landscape Architecture

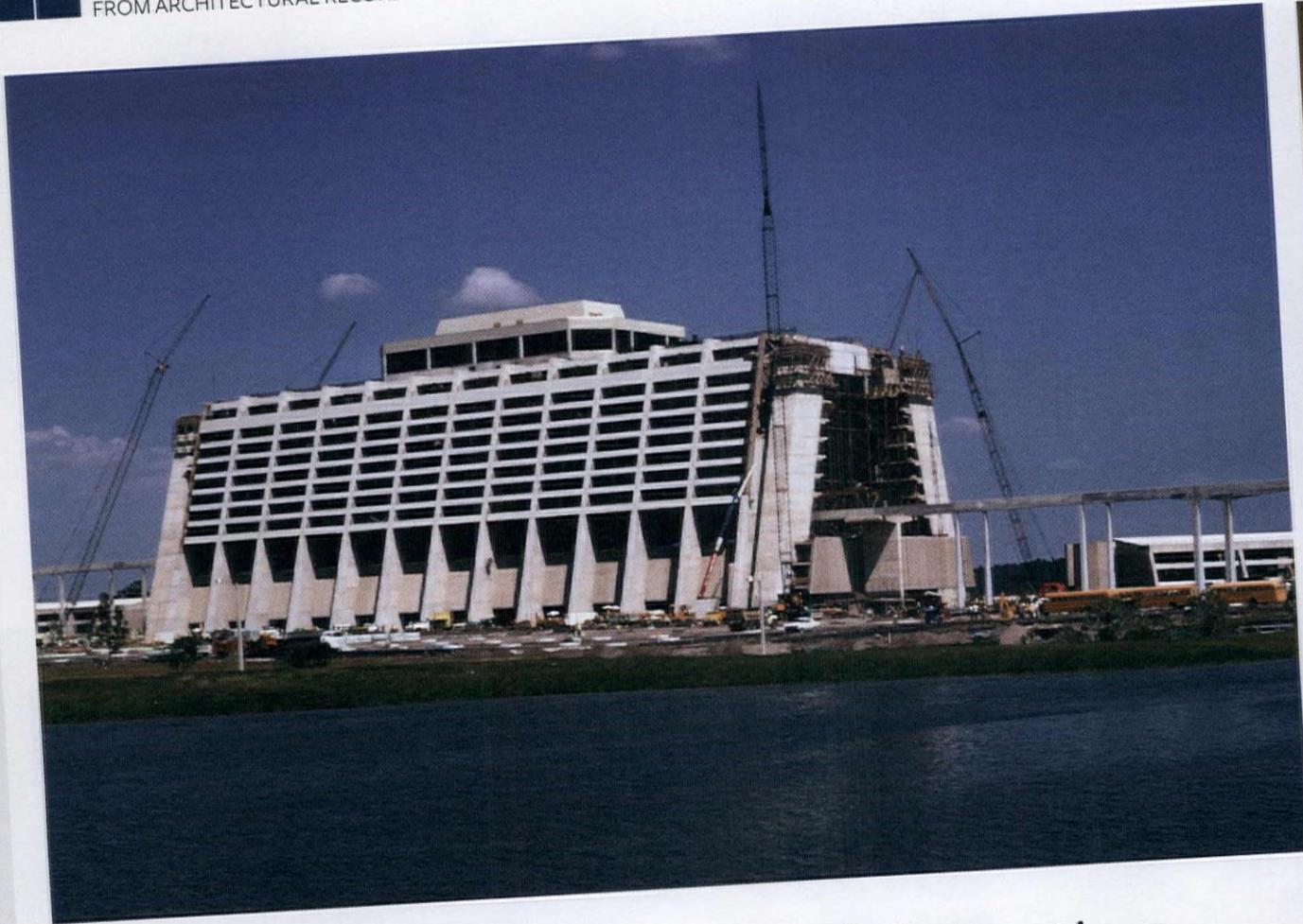
PRODUCT: Umbriano®

Contact your Unilock Representative for samples, product information and to arrange a Lunch & Learn for your team.

SNAP 169

UNILOCK
DESIGNED TO CONNECT.

UNILOCK.COM 1-800-UNILOCK



PREFAB PIONEER

Disney's Contemporary Resort hotel in Orlando (above), designed by Welton Becket, opened in 1971; its nearly 500 prefabricated guest rooms were built in a factory less than two miles away. The citizenM hospitality chain constructs all guest room modules in Poland (opposite).

Pushing Prefabrication

From entire structures to discrete components, the use of off-site construction is expanding across multiple building types.

BY RUSSELL FORTMEYER

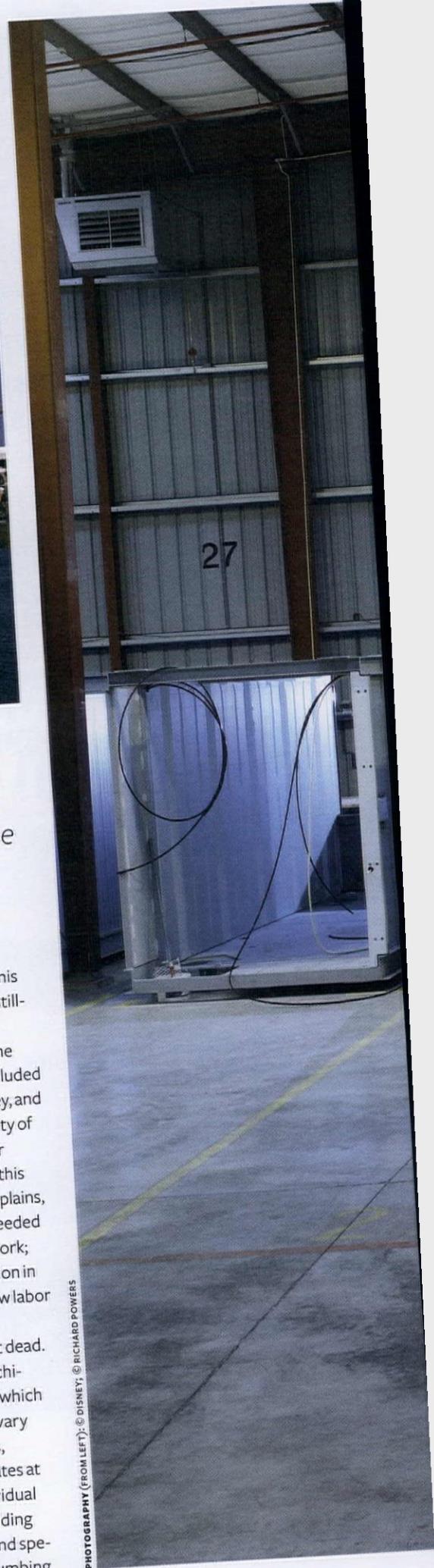
THE LOS ANGELES structural engineer Richard Bradshaw reflects on his first experience with large-scale prefabricated construction in terms that are less than affectionate: "It never really made sense to me," he says, more than 45 years later. Bradshaw worked with architect Welton Becket, who was collaborating with United States Steel and the Walt Disney Company to build a hotel, the Contemporary Resort, for Disney's theme park in Orlando.

The three collaborators conceived the hotel, which opened in 1971, to demonstrate the potential for prefabricated steel construction. U.S. Steel manufactured the nearly 500 rooms for the building's main trapezoidal tower in a purpose-built factory on Disney property a couple of miles from the site. There, workers not only constructed the individual room chassis—each approximately 9 feet high, 15 feet wide, and 30 feet long—but also installed interior finishes and furniture, including the television set. Once the modules arrived at the site, they were craned directly into the superstructure and

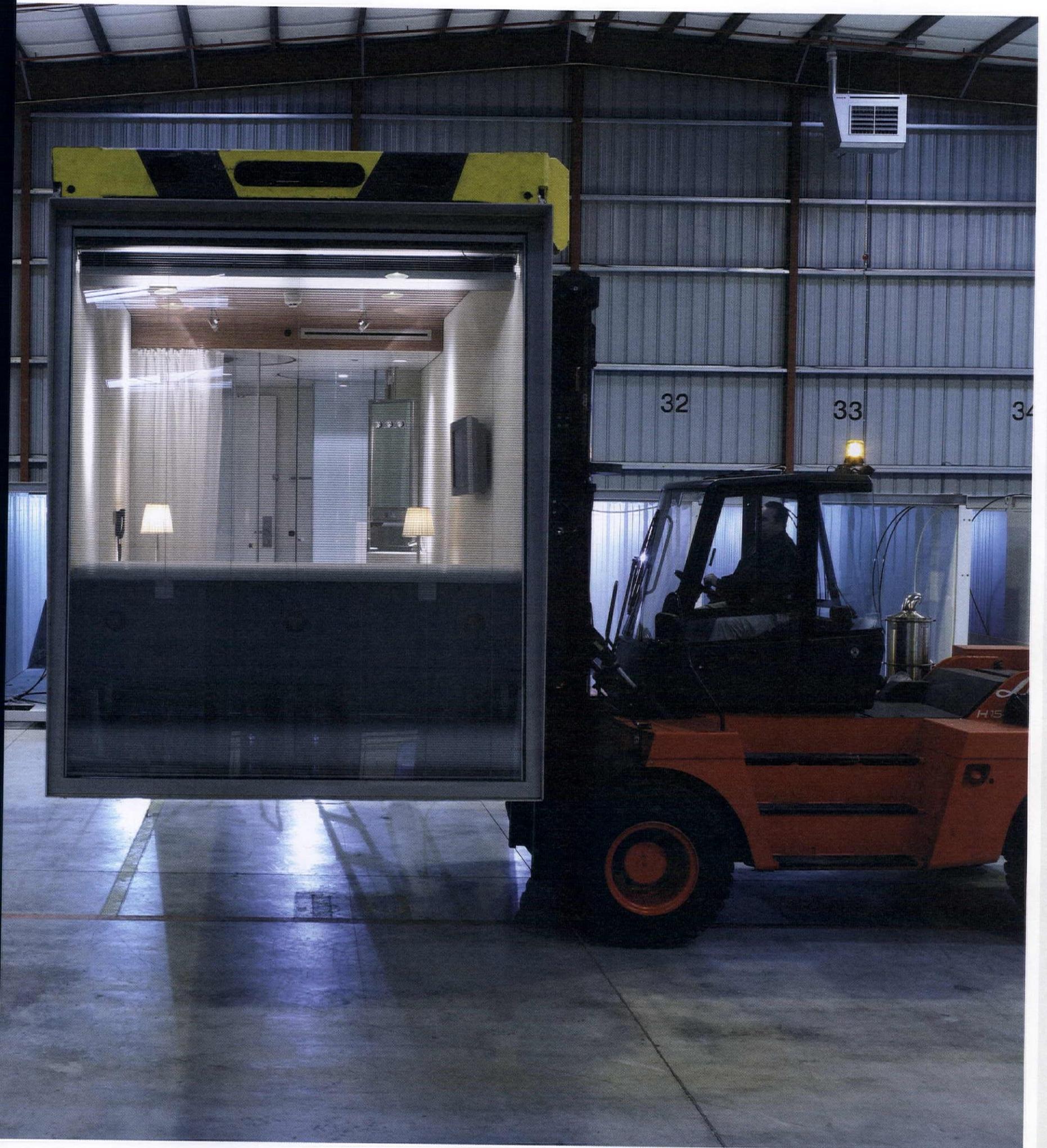
hung on cables from its top bracing. To this day, each room is suspended above the still-operating hotel's central atrium.

Like many prefabrication projects, the Disney hotel had several aims. These included accelerating construction, saving money, and illustrating Walt Disney's vision of the city of the future. But "this was the end of their experiment," says Bradshaw. Prefab at this scale did not immediately take off, he explains, because of the immense investment needed to establish a nationwide factory network; the lack of predictable, precise execution in the precomputer era; and relatively low labor costs for conventional construction.

However, the dream certainly isn't dead. For if the aims of prefabrication in architecture remain the same, the ways in which architects harness its potential now vary widely. In addition to entire buildings, contemporary prefabrication operates at several scales, including that of individual modular spaces like bathrooms, building components such as facade units, and specific systems like mechanical and plumbing



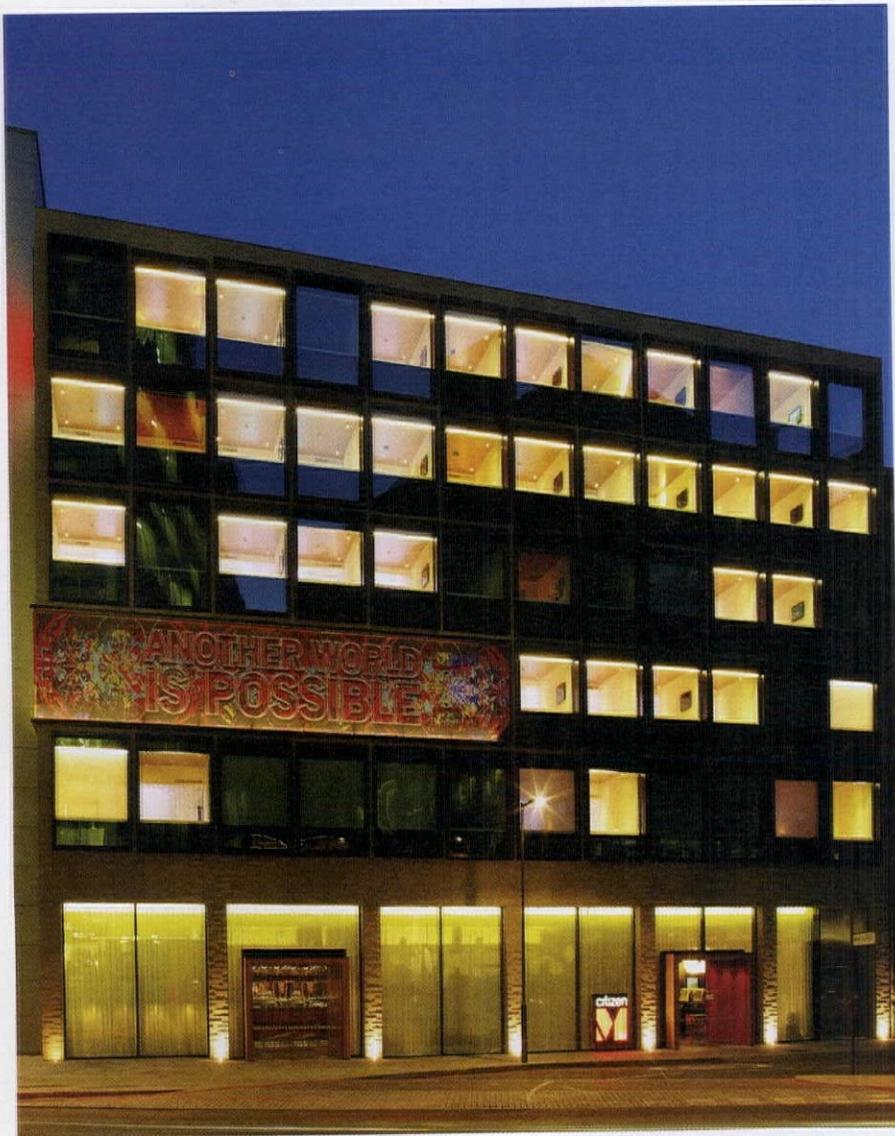
PHOTOGRAPHY (FROM LEFT): © DISNEY; © RICHARD POWERS





CONTINUING EDUCATION: PREFABRICATION

FROM ARCHITECTURAL RECORD



distribution. Prefabrication also represents a substantial share of new single-family residential construction.

Building typologies with significant programmatic repetition—hotels, multifamily housing, and student housing—still reap the greatest benefits from prefabrication. In 2004, the Dutch architecture firm Concrete conceived of its first prefabricated hotel project, for the citizenM hotel brand. The Amsterdam hotel comprised a concrete core of elevators, stairs, and service risers and a concrete superstructure plinth stacked with modular guest rooms built by the Polish manufacturer Polcom. The architects designed the rooms so that a single fully furnished module fit within a shipping container, for ease of transport.

The chain now has nine hotels. On a recently completed 370-room citizenM near the Tower of London, contractors stacked 30 units a week, shortening construction time by several months when compared to a conventionally built hotel. The brand's newest project, slated to open in 2017 on New York's Lower East Side, features 300 prefabricated guest rooms atop of a three-story concrete plinth. Concrete worked with local firm Stephen B. Jacobs Group to take its concept through construction. To save time, inspectors from New York City's buildings department are conducting their checks at Polcom's factory so that when each module arrives on-site, it is ready for installation.

"We didn't start with the idea of making the hotel prefabricated," says Concrete's head of architecture Erikjan Vermeulen. "We started with the idea of creating a better experience with less money, designing smarter in a room of limited size, and giving that saved space back with a ground-floor living room where people could socialize."

The original citizenM concept featured conventionally built infill corridors, but Vermeulen says the design created too many unknowns that delayed construction. The new hotels incorporate the corridor into the room module. On-site, the contractors connect the plumbing, mechanical, and electrical services for each module; the highest floor of the concrete plinth—usually at level three—includes the building services equipment that feeds upward through the 15-story guest-room tower.

Prefabrication helped San Francisco-based architect David Baker reduce on-site construction time by nearly a year on a Union City, California, housing project called Union Flats. The client needed to accelerate the process to qualify for public money for transit-oriented development. So the architect took a modular approach for the 243 units, which included live-work lofts and one- and two-bedroom apartments.

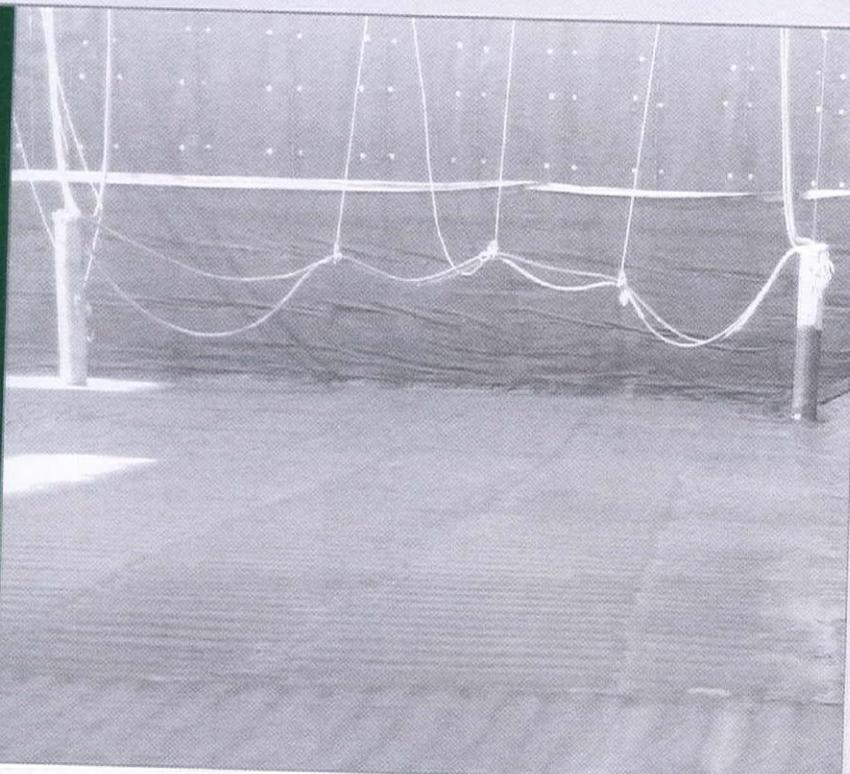
Working with Guerdon, a manufactured-housing fabricator in Boise, Idaho, Baker utilized wood-frame modules measuring 15 feet, 4 inches wide, 11 feet high, and up to 74 feet long to maximize shipping efficiency.

PACKING LIGHT

The citizenM hospitality chain has nine hotels worldwide, including a London location (above). The rooms, transported in shipping containers, arrive at the site with plumbing fixtures and furnishings already installed (right).



Epro's Fully Integrated Field Installed Composite Waterproofing System Provides the Most Protection, Fastest Installation, Lowest Cost and Best Warranty in the Industry Today!



Four New Field Installed Systems Available ...

- System III CWB Concrete / CMU Wall Waterproofing
- System III RDB Roof / Deck Waterproofing
- System III MBB Waterproofing / Gas Barrier
- System III LWB Blindside Waterproofing / Gas Barrier

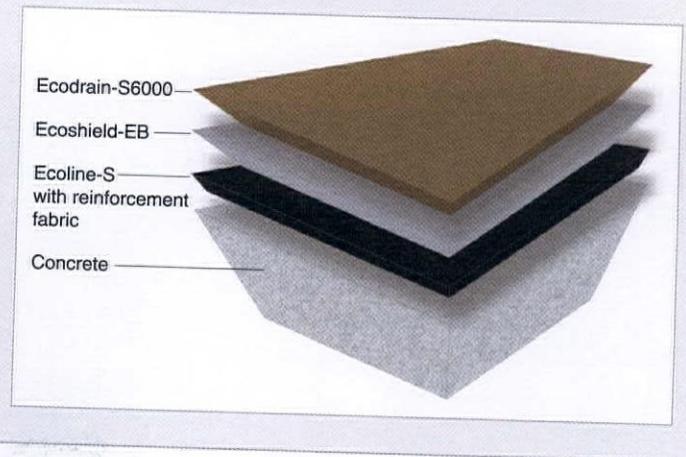
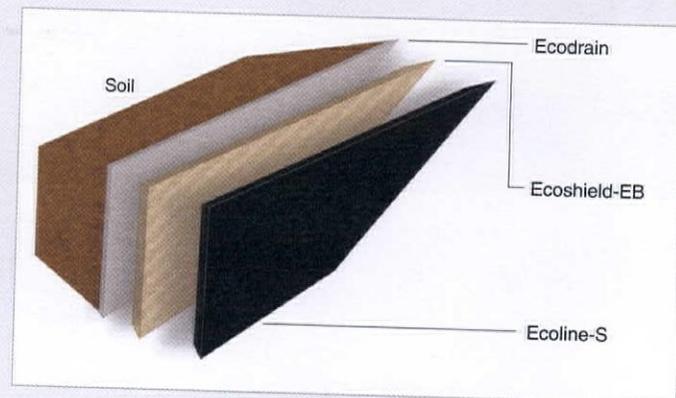
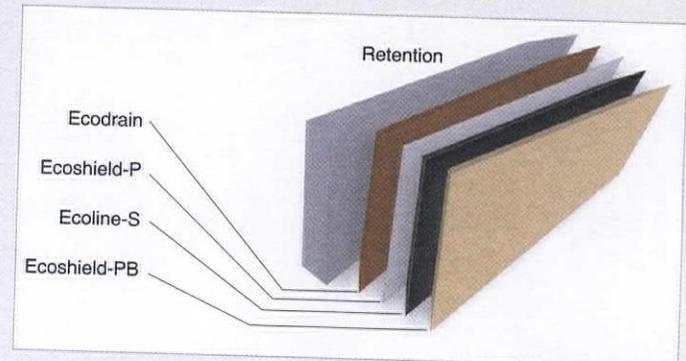
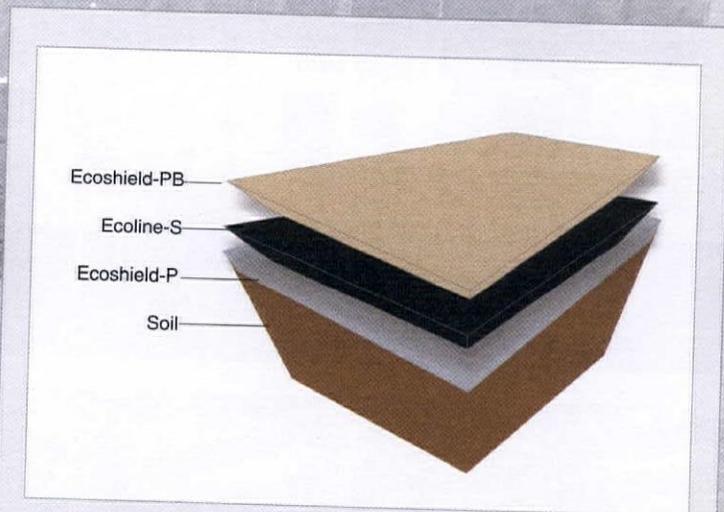
Excellent Strength and Chemical Resistance - the result of the unique field installed composite system design utilizing HDPE.

Seamless - The highly flexible spray or fluid applied membrane forms a monolithic barrier.

Exceptional Adhesion - The sprayed or fluid applied membrane bonds tenaciously to almost any substrate in almost any condition including green concrete or a damp substrate.

Self Sealing - The bentonite layers seal at any penetration of the system.

Redundant Protection - Multiple waterproofing protection courses and drainage plane.



eepro™
Waterproofing Systems

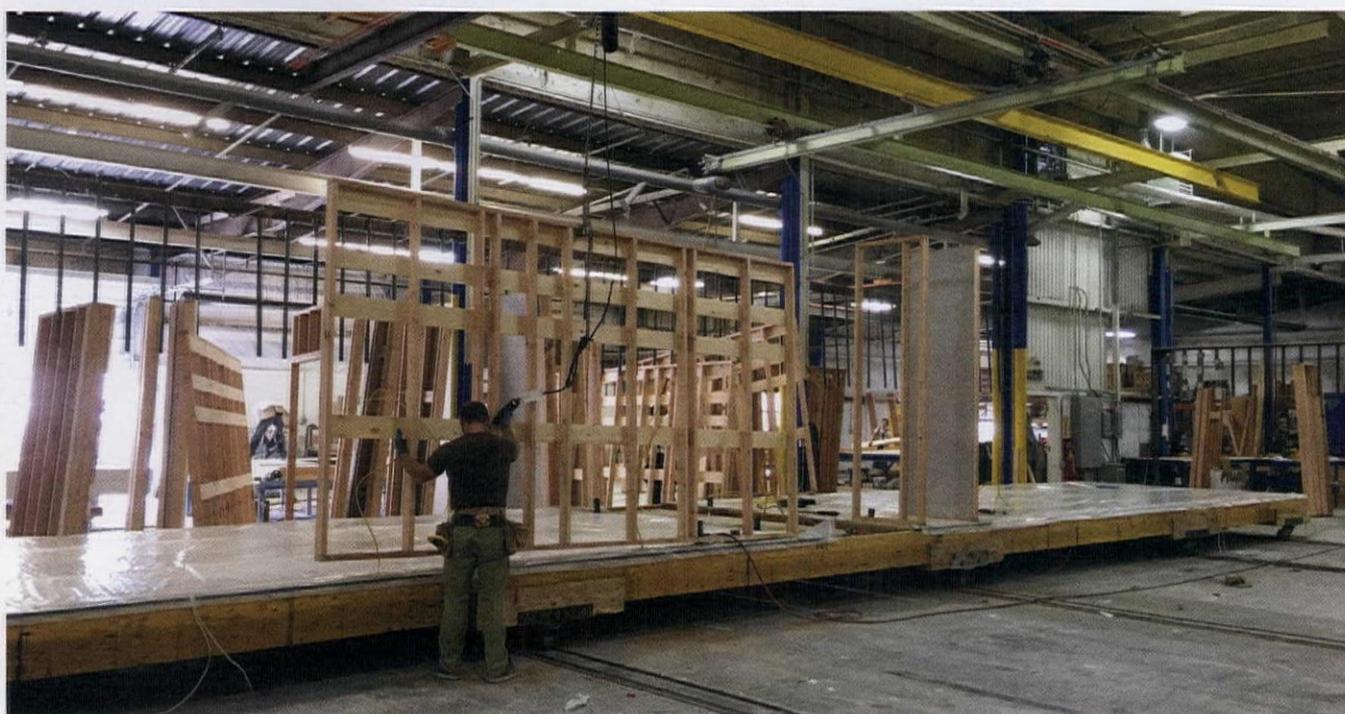


800-882-1896 • www.eproserv.com



CONTINUING EDUCATION: PREFABRICATION

FROM ARCHITECTURAL RECORD



STACKING THE DECK

David Baker's Union Flats, a 243-unit apartment building in Union City, California (above), is made of modules built in Idaho (left). Cladding is installed on-site after the modules are stacked (below).

Two modules create two one-bedroom apartments mirrored across a corridor through the middle, while three modules are needed for two-bedroom apartments in a similar configuration. To vary the floor plan, on-site contractors can cut the modules in half through the corridor.

As with the citizenM hotel rooms, inspections are conducted in Boise, so the units can remain locked throughout installation to avoid interior damage. Each module's framing sits within a steel chassis. Once this is set in place, structural tabs on the modules are fastened to adjacent modules, creating a consolidated structural system.

"Before the recession, we had a number of modular projects, but then framers needed jobs and costs came down for conventional construction," Baker says. "Now in many cities, modular wood-frame construction is competitive again with union-labor costs." In a factory, he adds, even union labor often costs less. The controlled conditions also lead to higher quality, simpler construction methods, and fewer hazards compared to on-site circumstances.

Despite his enthusiasm, Baker believes prefabrication sometimes has a negative impact on design. Shipping constraints prescribe dimensions, and connections for building services often dictate kitchen and bathroom placement. Prefabrication can also compromise the appearance of a modular housing project, especially if the design emphasizes the technology's inherent repetitiveness.

Baker notes that the Union Flats project looks indistinguishable from the conventionally constructed housing project his firm





NEW ALBANY MEDICAL CENTER



Louis Stokes VA Medical Center



St. Catherine's Medical Center

500

colors

20

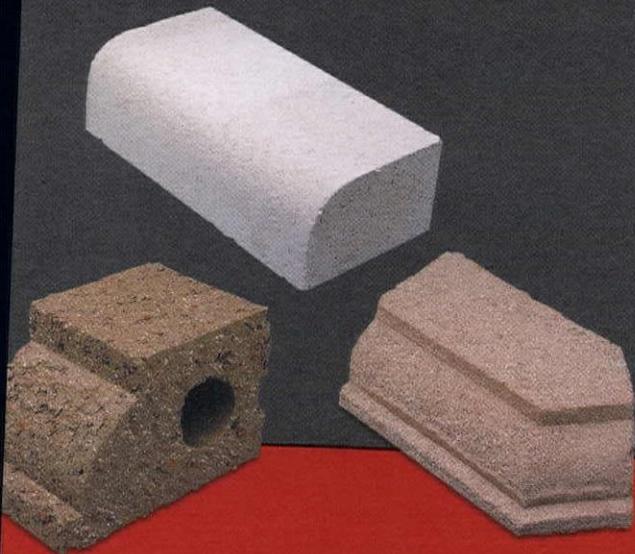
sizes

13

textures

Unlimited

shapes



beldenbrick.com

SNAP 5

BELDEN
THE BELDEN BRICK COMPANY



Akron Children's Hospital

PROVEN PERFORMANCE, ENDLESS POSSIBILITIES

The Belden Brick Company is privileged to serve hospitals and healthcare facilities throughout North America with more options than any other brick manufacture in the world. As the industry leader in delivering the largest selection of more than 500 colors, 20 different sizes, 13 textures and unlimited shapes, Belden will meet all your product needs with the time-honored quality and experience we've mastered.

The Standard of Comparison Since 1885

An ISO 9001 Compliant Quality Management System.
An ISO 14001 Compliant Environmental Management System.



CONTINUING EDUCATION: PREFABRICATION

FROM ARCHITECTURAL RECORD



MADE TO ORDER

By using modular prefabrication, NBBJ was able to construct the OhioHealth Riverside Methodist Hospital at \$21 million under budget—despite significant changes made midway through the project.

designed across the street. Since the units arrive on-site as waterproof boxes wrapped in a single-ply membrane, a variety of cladding systems can be applied after they are stacked to conceal the joints between modules.

The biggest challenge to prefabrication is the irregularity of sites in dense urban environments, says Baker, since maximizing leasable living space often outweighs the construction-cost savings from standardization. In dense cities, he contends, prefabricated kitchen and bathroom modules make more sense than full dwelling units.

Baker also recommends that owners and architects weigh potential construction-cost savings against the expense of a large on-site crane, which often accounts for the single-most significant construction expense for multifamily housing. “If you’re good at it, you’re lifting four units a day, but if you’re really good, you can lift 12 units a day,” Baker says, noting that at Union Flats, they averaged 11 or 12 modules a day. He predicts that prefabricated multifamily housing could one day displace conventionally built apartment buildings in California, given the endemic housing shortages in the state.

Modular construction is also making inroads in healthcare facilities but not in the manner one might expect. Prefabrication has not been widely adopted for hospital

patient rooms. However, architects have found that some individual systems within these complex buildings lend themselves particularly well to prefabrication.

Designers from the Columbus, Ohio, office of architecture firm NBBJ initially developed a prefabrication approach to patient toilet rooms, head walls, casework, and building-services utility racks for Dayton’s Miami Valley Hospital, which opened in 2010. The client was interested in the idea of a universal patient room, where standardized systems and architecture could serve a variety of clinical situations, from intensive care to basic medical-surgery nursing units. But after studying the potential for a fully prefabricated room—akin to the citizenM hotel approach—the architects found scant possibility for savings. Instead, they worked with construction manager Skanska toward more discrete prefabricated components to realize savings in time and money.

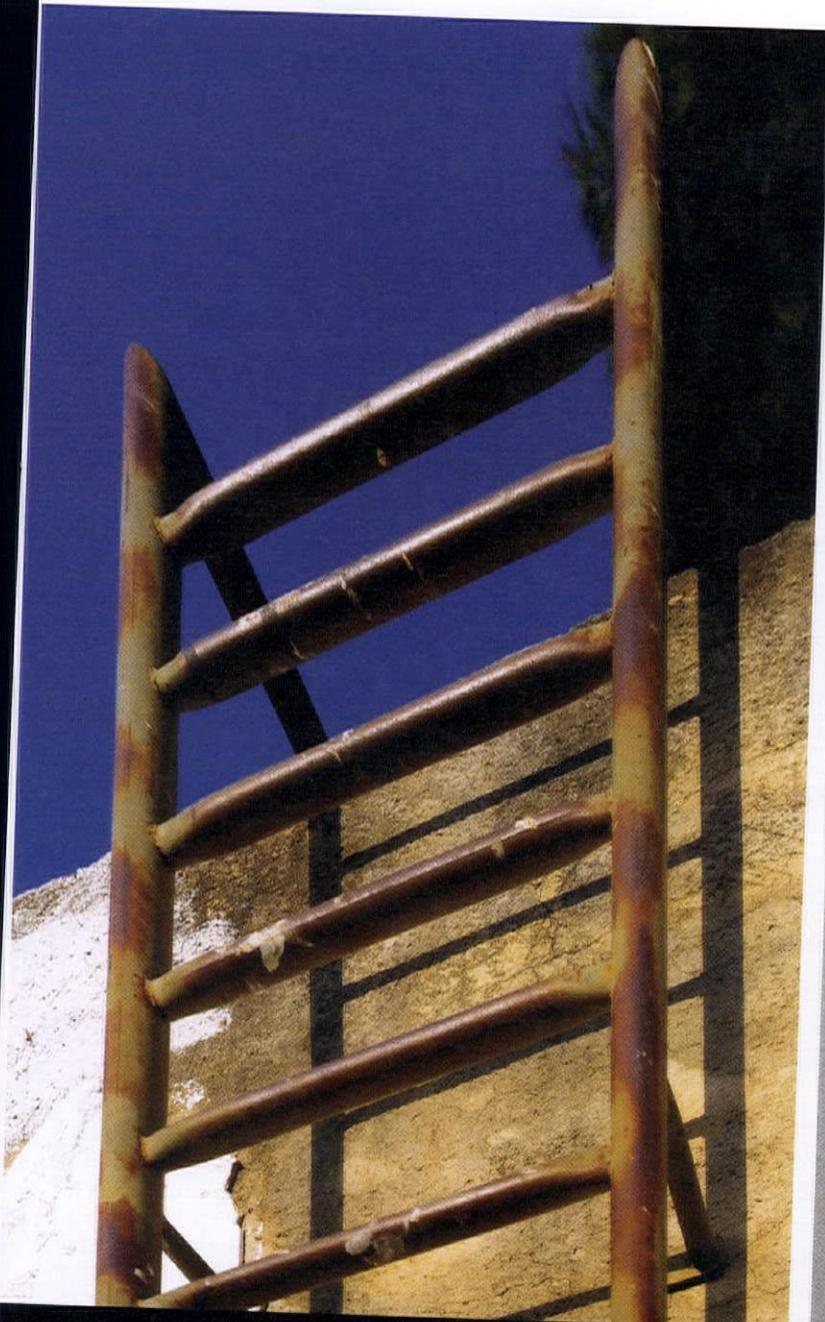
“We learned a lot from Miami Valley,” says Tim Fishking, an NBBJ principal. The biggest lesson was minimizing the need for warehouses to temporarily store prefabricated components prior to on-site installation. So for its second prefabrication project, the OhioHealth Riverside Methodist Hospital, which opened in 2015 in Columbus, NBBJ worked with the contractor to streamline

the schedule to engender a “just in time” approach for the prefabricated systems. This allowed elements such as head walls and utility racks to be shipped to the site for the 224-bed, 437,000-square-foot neuroscience, vascular, and cardiac-care hospital as soon as they were ready.

At Riverside, whole mechanical and electrical distribution racks were laid out in the prefabrication shop based on the hospital’s corridor design and GPS coordinates established on the construction site. Joints in the racks aligned with the radius of the corridor’s curve, so each 20-foot-long by 8-foot-wide section could be transported to the site, hung from the ceiling, and attached to adjacent sections to create continuous runs of services such as chilled and hot water, oxygen, nitrogen, and fire sprinklers. “You didn’t have this scenario of ‘who got there first’ that forces trades to reroute their work around others’,” says Fishking. “It also improves the owners’ ability to maintain the facility, because they know each rack is identical.”

Prefabricated systems and components at Riverside included single-stall toilet rooms, head walls in patient bays and exam rooms, utility racks above the operating rooms, plumbing zone valve boxes, and even entry canopies. The project was completed six months before the planned opening date,

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



Steel Ladder



O'Keeffe's Aluminum Ladders

- ✘** Heavy and difficult to install
- ✘** Susceptible to rust
- ✘** Requires maintenance and costs money over time

- ✓** Lightweight, high strength aluminum
- ✓** Resistant to rust
- ✓** Maintenance free and low cost

SNAP 24



Proudly made in USA

www.okeeffes.com

Toll Free: 888.653.3333

O'Keeffe's Inc.

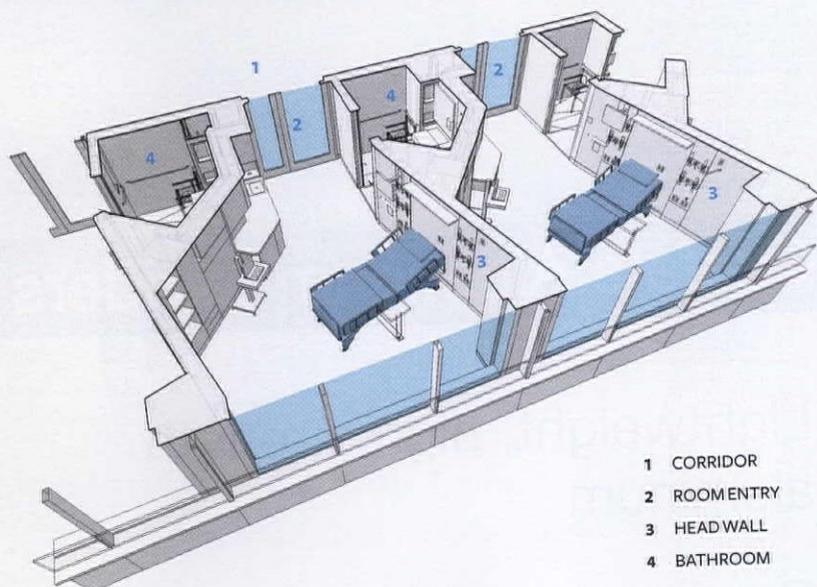
ALUMINUM LADDERS
ACCESS · SHIP · CAGE · CUSTOM





CONTINUING EDUCATION: PREFABRICATION

FROM ARCHITECTURAL RECORD



HEALTHY APPROACH
NBBJ's OhioHealth Riverside Methodist Hospital incorporated prefabricated patient room head walls and toilets (top and middle) to shorten construction and simplify multi-trade coordination.

an accomplishment Fishking attributes in large part to prefabrication.

Ryan Hullinger, another principal in NBBJ's Columbus office, says successful prefabrication depends on getting it right in virtual design. "So much work has to go into testing patient rooms for dozens of clinical scenarios to ensure it works in those situations," says Hullinger, who also recommends extensive physical mock-ups.

Some of the firm's upcoming hospital projects include extensive renovation, and

Hullinger envisions even more benefits from a prefabrication approach. "A typical hospital-wing renovation includes demolition and significant downtime while you build new rooms," he says. "With prefabrication, you could build the patient rooms off-site during the demolition phase and vastly reduce that downtime." It's similar to the schedule savings on new construction projects, in which site preparation often occurs in parallel with the factory fabrication work.

With the renewed interest in prefabrication, it can be easy to overlook the fact that unitized facade systems remain the most common form the method takes in buildings. But some industry experts believe that prefabrication is also the answer for facades with complex geometries that would otherwise have to be achieved through time-consuming on-site labor. Technologies such as 3-D printing and robot-enabled construction could eventually pave the way for envelopes with even more exuberant shapes and a higher level of intricate detail. But regardless, the aims will be the same as they have always been—to build faster, better, and more cheaply. ■

RUSSELL FORTMEYER LEADS SUSTAINABLE DESIGN FOR THE LOS ANGELES OFFICE OF ARUP AND TEACHES AT THE SOUTHERN CALIFORNIA INSTITUTE OF ARCHITECTURE.

Continuing Education



To earn one AIA learning unit (LU), including one hour of health, safety, and welfare (HSW) credit, read "Pushing Prefabrication," review the

supplemental material at architecturalrecord.com, and complete the online test. Upon passing the test, you will receive a certificate of completion, and your credit will be automatically reported to the AIA. Additional information regarding credit-reporting and continuing-education requirements can be found online at continuingeducation.bnpmmedia.com.

Learning Objectives

- 1 Describe how project teams are using prefabrication as an alternative to traditional construction methods, and then explain how the approach can reduce construction waste and save time and money.
- 2 Outline which building typologies and components are best suited for prefabrication.
- 3 Explain why off-site construction can result in better-performing buildings and safer construction sites.
- 4 Discuss the role of virtual construction and digital technology in prefabrication.

AIA/CES Course #K1609A

FOR CEU CREDIT, READ "PUSHING PREFABRICATION" AND TAKE THE QUIZ AT CONTINUINGEDUCATION.BNPMEDIA.COM, OR USE OUR ARCHITECTURAL RECORD CONTINUING-EDUCATION APP, AVAILABLE IN THE ITUNES STORE.



FORMAWALL® INSULATED METAL VERTICAL JOINT
THE NEXT CHAPTER IN INNOVATION

Introducing a joint venture in art and engineering. Formawall® Insulated Metal Vertical (IMV) Joint is the new standard in CENTRIA Formawall insulated metal panel systems. The Formawall IMV joint enhances the exterior aesthetic by replacing traditional exposed gaskets at end joints with metal joinery while providing an improved thermal barrier at the end joint.

Discover the next chapter in innovation at
CENTRIperformance.com/IMV
To learn more call 1.800.250.8675

SNAP 190



CENTRIA

REIMAGINE **METAL**

MANUFACTURERS' SPOTLIGHT SECTION

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



Designed to be used alone or in groups, the Nik desk (Peter Pepper Products) has a glass privacy panel and two adjustable dock shelves that can hold devices or serve as bookends. (SNAP #23)

TABLE OF CONTENTS

Doors, Windows

Page 60

Doors, windows, storefronts, entrances, skylights, framing systems, glazed curtain walls, and translucent wall and roof assemblies.

Electrical, Lighting

Page 60

Products for generating, transmitting, distributing, and transforming electrical energy, such as light fixtures and power supplies. Includes intercom equipment.

Equipment

Pages 60, 62

Electrical and tech goods for a broad range of uses, including audiovisual, multimedia, and controller systems. Also covers elevators and appliances.

Interior Finishes, Furnishings

Page 62

Products for finishing and furnishing building interiors, such as flooring, wall coverings, ceilings, furniture, shelving systems, and window treatments.

Landscaping, Sitework

Page 62

Exterior improvement products, such as site furniture, bollards, pavers, landscape edging, and exterior green walls. Also includes gazebos and other site structures.

Materials

Pages 62, 64

Basic products used in construction, such as lumber, concrete, and masonry units. Includes paint, coatings, and structural materials and fittings.

Mechanical Systems, HVAC, Plumbing

Page 62

Products for conditioning, moving, holding, and otherwise controlling air, water, and other fluids. Includes plumbing products, fans, ventilators, and boilers.

Roofing, Siding, Thermal & Moisture Protection

Pages 64, 66

Products for constructing the building envelope, such as exterior wall and roof panels, sheathing, thermal insulation, and waterproofing.

Specialty Products

Page 66

Products for special applications or that apply to more than one category, such as railing systems, gates, ladders, columns, signage, awnings, and canopies.

STUNNING STREETSCAPES STEAL THE SHOW

When architects needed **1,195 pieces of custom precast concrete** – totaling 2.3 million pounds – for an overhaul of the iconic, 10-acre Cleveland Public Square, they turned to Tectura Designs for our incomparable custom capabilities.

Have a bold idea that's worthy of the spotlight?
Let our custom precast concrete turn it into a bold and beautiful show-stopper.



  800.388.8728

Visit TecturaDesigns.com
to learn how our products
can bring your vision to life.

SNAP 50

TECTURA
designs™ 

A WAUSAU TILE INC. BRAND

DOORS, WINDOWS

SLEEKLINE CANOPY SYSTEM USES MAKROLON® POLYCARBONATE SHEET

Covestro LLC

Sleekline canopy systems combines design flexibility with exceptional affordability. The low profile Makrolon® polycarbonate glazed panel system is durable, sustainable, and aesthetically pleasing for today's urban landscape.



www.sheets.covestro.com
www.duro-gard.com

SNAP 234

CLIMA-TITE™ - ADVANCED TRANSLUCENT WALL SYSTEMS
WR | GREEN

Major Industries, Inc. - Skylights, Canopies and Wall Systems

Clima-Tite™ translucent wall systems feature pultruded fiberglass framing for enhanced thermal performance and high corrosion resistance compared to traditional aluminum framed systems.

Product Application

- Corrosive environments - wastewater/coastal areas
- Cold-weather climates
- Office buildings / schools

Performance Data

- Great CRF and SHGC numbers mean more occupant comfort and smaller energy bills

www.majorskylights.com
888.759.2678 | sales@majorskylights.com

Booth: #815

Greenbuild

SNAP 235



MAJOR INDUSTRIES

CLOSURE SYSTEMS

MobilFlex Folding & Rolling Closures Inc.

MobilFlex provides imaginative options for a wide range of storefront entrance and space delineators.

Product Application

- Malls, window protection, banks, schools, hospitals, airports, ships, reception desks

Performance Data

- Any layout, any radius curve
- Large spans – up to 19 ft high, 200 ft wide
- Distinctive looks, rugged protection

www.mobilFlex.com
800.501.3539

SNAP 236



DOORS, WINDOWS

CLEAR SOLUTION FOR ALL 45-MIN. APPLICATIONS

NEW | S

SAFTI FIRST Fire Rated Glazing Solutions

There's nearly clear—then there's clear. SuperLite II-XL 45 offers the best clear solution for all 45-minute applications at a better price than ceramics. Proudly USA-made.

Product Application

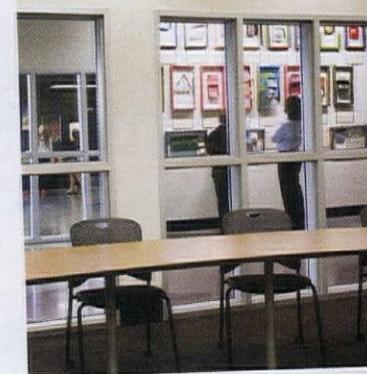
- Doors
- Windows, sidelites, transoms

Performance Data

- ASTM E-119 with hose stream
- CPSC Cat. II safety
- 40 STC
- UL/WHI listed in large sizes

www.safti.com/best45
888.653.3333

SNAP 237



DOORS, WINDOWS

ADJUSTABLE CONCEALED HINGES

\$\$\$ | NEW

Rocyork Architectural Opening Solutions

The Rocyork 6-way adjustable concealed hinges offers designers and architects a solution for concealing hinges on modern contemporary interiors. Manufactured in Italy Rocyork offers the best of European design and quality.

Product Application

- Condominiums, multifamily
- Offices, residential, health care

Performance Data

- Fire rated
- Available in a variety of weight capacities

www.rocyork.com
800.675.8023

Circle 238



ROcyork
Architectural Door Furniture
New York - Melbourne - London

ONE-PIECE HYDRAULIC & LIFT-STRAP BIFOLD DOORS

WR

Schweiss Doors, Moving Walls

Schweiss Doors manufactures unique custom doors. One-piece hydraulic doors and patented Lift-Strap opening/closing bifold doors.

Product Application

- Moving doors and walls
- You think it, they build it
- Custom-designed storefronts and more

Performance Data

- Faster, safer operation
- Zero lost headroom
- Superior design that keeps working

www.schweissdoors.com
507.426.8273 | schweiss@schweissdoors.com

SNAP 239



DOORS, WINDOWS

LED RAIL LIGHT KITS FOR ALUMINUM RAILINGS

WR | GREEN

Feeney, Inc. (DesignRail®)

All-weather, energy efficient LED lighting kits for DesignRail® aluminum railings with high-bond installation adhesive strips, special snap-on light-diffusing lenses, and remote control dimmers

Product Application

- Fits into top & bottom rails of all DesignRail® railings
- Residential, commercial, institutional settings
- Outdoor lighting accent & visual aid for low-light areas

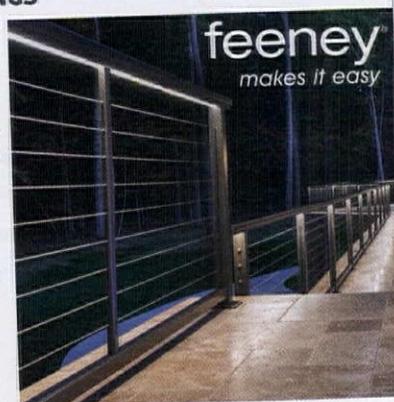
Performance Data

- High CRI (80) LEDs for excellent color rendering, rated 50,000 hrs.
- 24 volt DC, fully weatherproof, plug & go components

www.feeney6.com
800.888.2418 | Trang Soriano, tsoriano@feeney-

Booth: 3300 AIA Expo

SNAP 240



feeney
makes it easy

SERIES 3000 DOCK LIFT- UPDATED & EXPANDED

Advance Lifts, Inc

Advance Lifts Inc. The nations #1 dock lift builder has recently updated and expanded their 3000 series of pit mounted dock lifts.

Product Application

- This newly expanded line brings lower lowered heights and a significant cost reduction to dock lifts with capacities between 8,000 and 20,000 pounds.

Performance Data

- With the industry's leading warranty and most complete lines of surface and pit mounted dock lifts, every dock needs and Advance Lift.

www.advancelifts.com
1.800.843.3525 | michaelr@advancelifts.com

SNAP 241



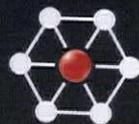
EQUIPMENT

FAST-TRACK YOUR BEST IDEAS

MUROX

THE PREFABRICATED BUILDING ENVELOPE SYSTEM
THAT SETS YOUR IMAGINATION FREE

Take design-build to a whole new level with Murox, the fast-track construction solution that accelerates your projects without compromising your creative vision. Our prefabricated wall panels are factory-built to your exact specifications and delivered construction-ready to your worksite. Coupled with our **BuildMaster** approach, **Murox** reduces commercial, industrial, and institutional build times by up to 50%. So forget your prefab preconceptions and experience Murox. You'll never look back.



CANAM
BUILDINGS

SNAP 52
canam-construction.com
1-866-466-8769

EQUIPMENT

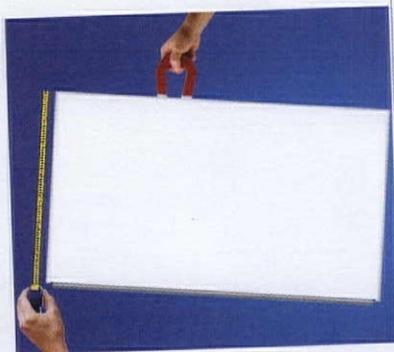
NEW IDEAS

Da-Lite

The new IDEA™ line provides optimal touch performance, and is the best screen on the market for interactivity. New standard features include a magnetic surface and thin frame.

Product Application

- Erasable
 - Compatible with any dry erase marker
- Performance Data
- Hotspot free



SNAP 242

www.da-lite.com/NewIDEAs
800.622.3737 | info@da-lite.com

INTERIOR FINISHES, FURNISHING

SILK METAL™ ARCHITECTURAL CEILING & WALL PANELS

Acoustical Surfaces, Inc.

The Silk Metal Architectural Ceiling & Wall Panel System is a state-of-the-art absorber that has an elegant smooth appearance while reducing sound reflections and echo.

- Residential, Commercial, Restaurants, Classrooms
- Pro Audio/Studios, Swimming Pools, Conference Rooms
- Hospitals, Auditoriums, Airports, Train Stations, Concert Halls

Performance Data

- Excellent NRC Rating – 0.80 NRC (per ASTM C423) with a 4 inch Airspace, No Liner Needed
- www.acousticalsurfaces.com
800.448.0121 | sales@acousticalsurfaces.com



SNAP 243

LANDSCAPING, SITEWORK

SHELTERS WITH A VIEW

ICON Shelter Systems Inc

Vista Series Shelters are the first of their kind. This two story shelter features a circular stair that leads to an upper level observation platform. Several sizes and styles are available.

Product Application

- Perfect for scenic overlooks
- Locate near amphitheaters for private party seating
- Excellent for scoring platforms in sports complexes

Performance Data

- Second story open or covered
- Can be built into a berm for catwalk access
- Structure designed for concrete 2nd floor deck

www.iconsshelters.com
800.748.0985 | info@iconsshelters.com



Booth: 1643 ASLA

SNAP 244

FUNCTIONAL & PHENOMENAL FLOOR

Stonhard, a brand of The Stonhard Group

Stontec, epoxy and urethane flake systems cleverly combine durability and long-life cycle with creative color palettes and fresh design. Stontec floors are long-term performers; stain, impact and slip resistant, and easy-to-clean. Flake palettes are unlimited, from bright and bold to earthy and soothing.

Product Applications

- Formulated for cafeterias, kitchens, multipurpose rooms, classrooms, locker rooms, restrooms & stadium concourses
- Large, small and micro-flake sizes available

Performance Data

- Easy to maintain, wear resistant against continuous foot and wheeled traffic
- Matte or gloss finish. No waxing required

stonhard.com 800.257.7953

LANDSCAPING, SITEWORK



SNAP 245

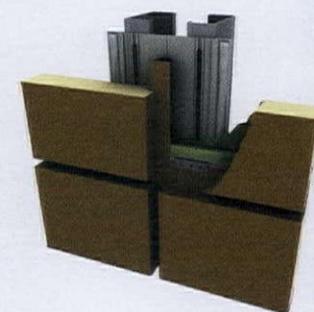
CENTRIA FORMAWALL PE SEAL PLATE

CENTRIA

CENTRIA's Formawall® insulated metal panel system now offers enhanced moisture and thermal control with Formawall Pressure-Equalized (PE) Seal Plate. PE Seal Plate equalizes pressure at the end joint of each panel forming a solid shield against air and moisture penetration. With an integral gasket, a vented drain channel and a non-curling butyl seal, PE Seal Plate provides multiple lines of defense against moisture and air infiltration. Any moisture that enters the panel system is expelled to the exterior by the vented, pressure-equalized drain channel. To ensure the highest performance, PE Seal Plate allows for the seal to be inspected for consistency along the vertical seal plate.

Performance Data

- Equalizes pressure at the end joint of each panel
- Forms a solid shield against air and water infiltration
- Minimizes the force that can drive water through the wall system
- Allows the seal to be inspected for consistency



Formawall PE Seal Plate

CENTRIperformance.com/PESealPlate
800.250.8675

SNAP 246

MATERIALS

TOTAL ACOUSTICS™ PERFORMANCE

WR | GREEN | NEW

Armstrong Ceiling Solutions

Ceiling design options that combine both sound absorption (NRC) and sound blocking (CAC) in one system for total noise control and design flexibility.

Product Application

- Office
- Healthcare
- Education

Performance Data

- Good: NRC 0.60-0.65 and CAC 35+
- Better: NRC 0.70-0.75 and CAC 35+
- Best: NRC 0.80+ and CAC 35+

armstrongceilings.com/totalacoustics
1.877.276.7876 | techline@armstrongceilings.com



SNAP 247

MATERIALS

3135EC ECLIPSE SOFT-CLOSE UNDERMOUNT NEW

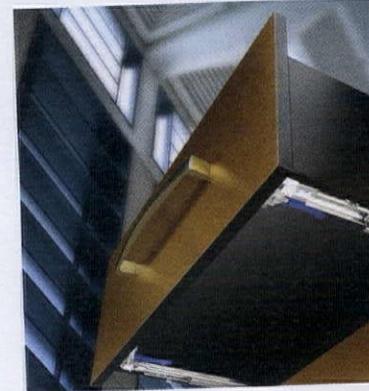
Accuride International

Tough enough for commercial use, model 3135EC Eclipse Undermount Easy-Close slide delivers flawless movement, easy adjustment, and superior soft-close action for jobs up to 30" wide.

Performance Data

- Reliable soft-close action
- Multiple drawer front adjustment for easy installation
- Up to 100 lb. load rating
- ADA compliant with 4.8 lbs. of pull force
- Quiet operation

accuride.com/eclipse



SNAP 248



TRUST IN RESEARCH

Strategic, full-service market research solutions focused on measuring...

- BRAND POSITION — attitudes, awareness, usage, image
- CUSTOMER EXPERIENCES — satisfaction, wants/needs, likelihood to recommend, loyalty/advocacy
- MARKETING EFFECTIVENESS — target audience reach, message impact, ability to cause action
- PRODUCT DEVELOPMENT — concept testing, product needs identification, nomenclature, pricing, marketing

To know what we know, please contact us at 248-786-1683 or info@clearseasresearch.com

BUSINESS-TO-BUSINESS & CONSUMER INDUSTRY EXPERTISE

- | | | | |
|---------------------|---------------|-------------------|--------------------------|
| • BUILDING ENVELOPE | • HVAC | • FOOD & BEVERAGE | • PACKAGING |
| • ARCHITECTURE | • ENGINEERING | • GAMING | • SECURITY |
| • PLUMBING | • ROOFING | • MANUFACTURING | • DISTRIBUTION/LOGISTICS |

Clear Seas
RESEARCH
Making the complex clear

www.clearseasresearch.com

CENTRAL LOCATION TESTING | EXECUTIVE INTERVIEWS | FOCUS GROUPS | SURVEYS

MECHANICAL SYSTEMS, HVAC, PLUMBING

STAINLESS STEEL 16-GAUGE INDUSTRIAL SINKS

\$\$ | GREEN | NEW

Just Manufacturing

ARMOR Series: 16-gauge type 304, seamlessly die drawn, true gauge industrial-grade stainless steel drop-in and under-mount sinks.

Product Application

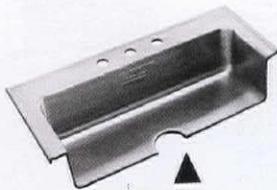
- Commercial and industrial applications
- Full range of sizes; available in ADA-compliant and standard depths
- Max capacity straight sided bowl configuration

Performance Data

- 25% thicker compared to standard 18 gauge
- Just Sinks are made in the USA from domestic stainless steel of 90% recycled content

www.justmfg.com

847.678.5150 | Customer Service



16 GAUGE

Seamlessly Die-Drawn, Heavy Duty, 16 Gauge, Type 304 Stainless Steel for use in commercial applications.



SNAP 249

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ARCHITECTURAL PRECAST CONCRETE CLADDING PANELS

GREEN | WR

Easi-Set Worldwide Licensed Precasters

SlenderWall is an Ultra Hi-Performance 28 lb/sf award winning architectural precast concrete with integral heavy-gauge steel-stud frame building envelope panel system. Wind-load tested to 226 mph.

Product Application

- Johns Hopkins Hospital, Baltimore, MD
- BioInnovation Center, New Orleans, LA
- Westin Luxury Hotel, Virginia Beach, VA
- US Army Legal Headquarters, Ft. Belvoir, VA

Performance Data

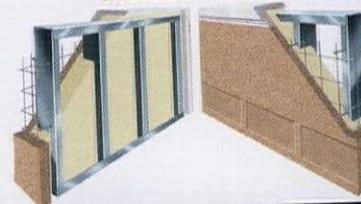
- Factory-installed continuous closed-cell foam insulation - compliant with all IECC/ASHRE energy codes

www.SlenderWall.com

800.547.4045 | info@easiset.com

SLENDERWALL®

A COMPLETE BUILDING PANEL INSIDE AND OUT



- Fewer on-site trades - Faster installation
- Lower structural cost - Class "A" finishes

SNAP 250

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

THE ULTIMATE WATER TABLE WATERPROOFING SYSTEM

Epro Services, Inc., Wichita, KS 67211

Product Application

- Complete field-installed composite
- Cost effective, timely application
- Adaptable project design
- Flexible for unique construction conditions
- High productivity

Performance Data

- Seamless, self-sealing system
- Excellent strength and durability
- Exceptional chemical resistance
- Fully bonded to slab
- Redundant protection

www.eproserv.com

800.882.1896 | info@eproserv.com



SNAP 251

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

FROET CHAMELEON DOWNSPOUT NOZZLE

\$ | NEW

Froet Industries LLC

Industry first color coordinated downspout nozzle. Fifteen standard colors and many custom colors. Available optional color coordinated flapper cover.

Product Application

- Labor savings
- Fits all commonly used pipe materials
- Unique Attachment design
- Low profile to wall surface
- Architecturally pleasing

Performance Data

- Powder coated finish-Zero VOC's

www.froetindustries.com

815.626.7922 | info@froetindustries.com



SNAP 252

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

DECORATIVE GLASS RAINSCREEN SYSTEMS

WR

Bendheim Wall Systems Inc.

Elegant, budget-smart glass over-cladding systems refresh facades & offer durable protection against moisture damage. Glass can be replaced without deglazing surrounding panels, for easy maintenance.

Product Application

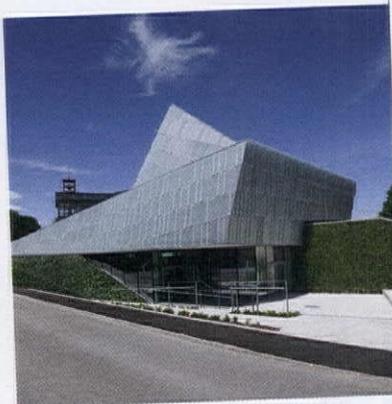
- 3001 Orchard Pkwy Facade, San Jose, CA
- 328 W Wisconsin St. Entrance, Chicago, IL

Performance Data

- Rigorously tested in accordance with ASTM & AAMA
- Non-combustible

www.BendheimRainscreens.com

800.221.7379 | rainscreens@bendheim.com



SNAP 253

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

PERFORATED IMAGING ON VA PARKING STRUCTURE

WR

Dri-Design

Dri-Design's Perforated Imaging technology can reproduce virtually any image by varying the size, density and location of the perforations.

Product Application

- Carl T. Hayden VA Medical Center parking garage
- Phoenix, AZ
- Perforated and Perforated Imaging Panels

Performance Data

- Available in a variety of materials and colors.
- Fully tested to exceed ASTM standards and the latest AMMA 508-07.
- Not laminated or a composite material.

www.dri-design.com

616.355.2970 | sales@dri-design.com



SNAP 254

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

WALL PANELS

\$\$ | GREEN | NEW

Petersen Aluminum Corporation

PAC 1/2" and 7/8" corrugated panels offer unmatched flexibility for both walls and roofing. Panels can be perforated for a variety of exterior projects, as well as interior acoustical applications.

Product Application

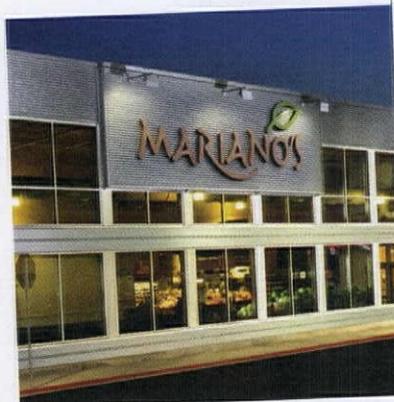
- Mariano's Fresh Market, Oak Lawn, IL

Performance Data

- 30-year non-prorated finish warranty
- 70% full PVDF-finished metal
- Available in 38 colors

PAC-CLAD.com

800.722.2523 | Rob Heselbarth



Booth: 2255 METALCON

SNAP 255

DRY AND WET FLOOD PROTECTION

NEW | WR | GREEN

Smart Vent Products, Inc. Flex-Wall™

Smart Vent has expanded its line of ICC-ES Certified Foundation Flood Vents to bring you the most advanced dry floodproofing solution on the market.

Product Application

- Commercial buildings in flood zones benefit from eliminating the need for off-site storage and fees.

Performance Data

- Rapid deployment in minutes
- Can be sized to fit any opening
- Layered Kevlar® structural webbing
- Coated water retention layer

smartvent.com

877.441.8368

DRY FLOODPROOFING



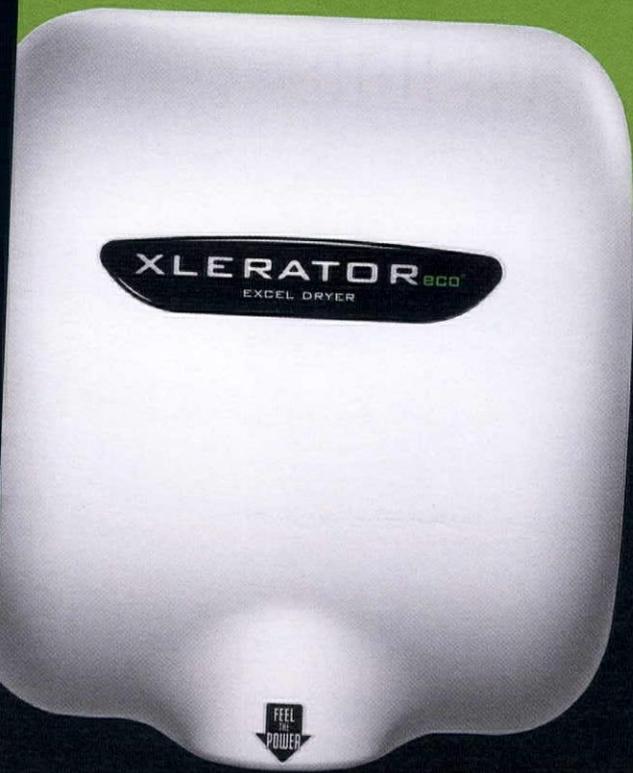
Booth: S1428 IBS

SNAP 256



"We conduct research about climate science and sustainable construction, so we need to lead by example. Manufacturers like Excel Dryer - who continue to innovate sustainable products like the high-speed, energy-efficient XLERATOReco® Hand Dryer - allow us to do that."

**- Dan Fernbank, Energy Manager
at the University of Reading**



XLERATOReco Uses 55% Less Energy Than UK Blade-Style Dryers

XLERATOReco uses innovative technology to dry hands fast while only using 500 watts, making it the most energy efficient and environmentally friendly hand dryer on the planet. When the University of Reading compared the independent research, they found that XLERATOReco used **55% less energy** than the blade-style hand dryer, representing an annual **savings of \$2,155.20**.

Spec the Best. Call Today!



TIME TO THROW IN THE TOWEL®

SNAP 19

888.799.0779

exceldryer.com

sales@exceldryer.com



SPECIALTY PRODUCTS

ANTI-SLIP STAIR TREADS & NOSINGS

\$
Wooster Products, Inc.

Anti-Slip Stair and Walkway Products for new construction and renovation. Brand names include Supergrit, Spectra, Alumogrit, Stairmaster and NITEGLOW.

Product Application

- Commercial and residential buildings
- Transit systems
- Stadiums and ballparks

Performance Data

- Indoor and outdoor use
- ADA, New York MEA, IBC, and IFC compliant
- Available in a variety of profiles and colors

www.wooster-products.com
 800.321.4936



SNAP 257

EXTRUDED FENCE SERIES

\$\$ | GREEN | NEW

Ogi Architectural Metal Solutions - an Ohio Gratings Company

Extruded Fence is manufactured from 6000 series aluminum and can be custom fabricated to meet privacy and security requirements by offering up to 100% visual block.

Product Application

- Multi-Family Complex - Boston, MA
- Tampa Premium Outlets - Tampa, FL

Performance Data

- Easily customized and most assemblies integrate channel or tube frames and mounted to posts
- Can be powder coated to match any color

www.ohiogratings.com
 800.321.9800 | Alex Stuhldreher



SNAP 258

SPECIALTY PRODUCTS

STANDARD & CUSTOM METAL PRESS BOXES

WR

Sturdisteel

For new or existing facilities, Sturdisteel's modular design construction ensures a completed building in a fraction of the time.

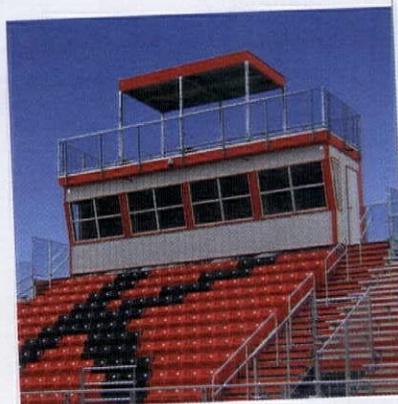
Product Application

- High schools & colleges
- Arenas & rodeos
- Motorsports

Performance Data

- 26-gauge type R metal panels
- Non-combustible steel framing
- Pre-wired for local power connection

www.sturdisteel.com
 800.433.3116 | info@sturdisteel.com



SNAP 259

FOLDING STAIRWAY

\$\$ | NEW

Precision Ladders, LLC

Automatic Super Simplex Folding Stairway opens and unfolds at the press of a button. New patent-pending stair can be operated from above or below for ceiling heights up to 16 ft.

Product Application

- University of Memphis Clock Tower, Memphis, TN
- I-78 Toll Plaza, Blackwood, NJ
- Fort Saskatchewan Hospital, Edmonton, Alberta

Performance Data

- 500-lb load rating with actual shear of rivets tested to 1,175 lb; steel frame, extruded aluminum treads

www.precisionladders.com
 800.225.7814 | Steve Fugate



SNAP 260

The Best Pavements Are Invisible



Grasspave²
 grass porous paving



invisiblestructures.com • 800-233-1510

SNAP # 261



Gravelpave²
 gravel porous paving





YOU **CREATE** IT.
WE **BUILD** IT.

Introducing new **BIMCreate™** and **CABCreate™** design tools from Otis

As the world's largest manufacturer and maintainer of people-moving products, Otis has long been the easy choice for millions of customers around the world. By placing new innovative design tools at your fingertips, we're making the decision that much easier.

Both tools are simple ways to see exactly why Otis makes sense in your building – even before it's built. [Check them out at Otis.com.](http://Otis.com)

BIMCreate™

Enables architects to create customizable, configured 3D Revit® files for integration into overall building plans, rather than selecting from pre-existing files

CABCreate™

Allows architects, building owners and general contractors to design their own elevator aesthetic package and view highly sophisticated, realistic renderings

SNAP 81

© Otis Elevator Company 2015. All Rights Reserved.

OTIS
United Technologies

Advertisers in this issue

A		F		O	
Aamsco Lighting Inc.	34	Feeney, Inc.	43, 60	Owens Corning	39
Accuride	62	Froet Industries	64	P	
Acoustical Surfaces	12, 62	G		Pella Corp.	19
Advance Lifts Inc.	47, 60	Graham Architectural Products	IFC	Petersen Aluminum Corp.	9, 64
Armstrong Ceiling Solutions	2-3, 62	Guardian Industries	23	Precision Ladders LLC	66
Arriscraft Corp.	30	I		R	
Azon USA	38	Icon Shelter Systems Inc.	62	Rieder Smart Elements GmbH	18
B		Invisible Structures Inc.	68	S	
Belden Brick	55	J		SAFTI FIRST	27, 60
Bendheim Wall Systems Inc.	64	Just Manufacturing	64	SAFTI FIRST O'Keeffe's Inc.	57
C		L		Schweiss Doors	60
Canam	63	Landscape Forms	31	Simonswerk	7
CBC Flooring	17	Laticrete International	13	Smart Vent Inc.	26, 64
Centria	59, 62	M		Stonhard	62, 75
Covestro, LLC	60	Major Industries	60	Studco Building Systems	60, 73
D		MBCI	15	Sturdisteel	66
Da-Lite	62	Mitsubishi Plastics Composites American Inc., ALPOLIC ...	4	T	
Dri-Design	64, BC	Mobilflex Folding & Rolling Closures Inc.	60	Thomas Steele	42
E		O		U	
Easi-Set Industries	64	Ohio Gratings Inc.	35, 66	Unilock	49
Epro Services Inc.	53, 64	Openaire	77	W	
Excel Dryer Inc.	67	Otis Elevator Company	69	Wausau Tile Inc.	61
		Overly Manufacturing Co.	IBC	Wooster Products Inc.	66

SNAP Advertising Sales

New England and PA

Joseph Sosnowski
610-278-7829
Fax: 610-278-0936,
sosnowskij@bnpmedia.com

Southeast, Mid-Atlantic

Wesley Loon
859-414-3795
Fax: 248-502-9104
loonw@bnpmedia.com

Midwest (IA, IL, MN, MO, WI)

Bruce Smith
224-216-7836
smithb@bnpmedia.com

Midwest (IN, MI, OH), TX, OK, Eastern Canada

Lisa Zurick
513-345-8210
Fax: 513-345-8250
zurickl@bnpmedia.com

West, Western Canada

Bill Madden
503-260-9679
Fax: 503-557-9002
bill@maddenandassociates.net

FL, KS, NE, ND, NY, SD, International

Risa Serin
646-849-7130
Fax: 248-786-1393
serinr@bnpmedia.com

LEADERS NEVER STOP INNOVATING

THE NEXT GENERATION OF GLASS RAILING IS HERE



Just when the competition *thought* they had caught up, C.R. Laurence again took dry glaze railing to the next level. Introducing the all-new TAPER-LOC X® Glass Railing System with patent-pending Safety Seal Technology.

FASTER

Our patented system allows one-person installation and reduces install time by 50%. The preset precision torque tool optimizes installation and ensures you'll never have to worry about over-tightening.

LIGHTER

An Architectural Record award winner, our base shoe features an engineered multiple hollow design that makes it 30% lighter for easier handling and lower costs.

TAPER-LOC X
DRY GLAZE RAILING SYSTEM
crlaurence.com/taper-loc

SMARTER

CRL partnered directly with the International Code Council to develop acceptance criteria to take the guesswork out of code compliancy—something no other railing manufacturer has done.

SAFER

New Safety Seal Technology means contractors no longer have to dangerously reach over glass to roll in the drop-side rubber seal. CRL also offers a complete selection of certified monolithic and laminated tempered systems that are 2015 IBC compliant.

SEE US AT **ABX2016** Architecture Boston, **BOOTH 437**

SNAP 6

CRL
US ALUMINUM



NEW AND UPCOMING EXHIBITIONS

Nick Cave: Until

NORTH ADAMS, MASSACHUSETTS

October 16, 2016–September 4, 2017

Conceived as a one-year concatenation of community events, music, theater, and art, *Until* will incorporate performances by dancers, singer-songwriters, pop artists, poets, and composers as well as panel discussions, community forums, and other forms of creative public debate and engagement. As part of the event Nick Cave will use MASS MoCA's signature football field-size space to create his largest installation to date, which will comprise millions of beads and thousands of found objects. For more information, visit massmoca.org.

Voukos: The Breakthrough Years

NEW YORK CITY

October 18, 2016–March 15, 2017

Trained as a traditional potter, Peter Voukos defied Midcentury craft dictums of proper technique and form to completely reinvent the medium. He combined wheel throwing with slab building, traditional glazes with epoxy paint, and figuration with abstraction; he also made huge ceramic structures with complex internal engineering. The exhibition—the first to focus on Voukos's early career—will feature approximately 31 examples of his work, most of which have not been exhibited on the East Coast in four decades. Also included will be three of the artist's rarely seen works in oil on canvas, which help demonstrate how Voukos concurrently developed his ideas in pottery, sculpture, and painting. For more information, visit madmuseum.org.

ONGOING EXHIBITIONS

Hippie Modernism: The Struggle for Utopia

BLOOMFIELD HILLS, MICHIGAN

Through October 9, 2016

Presenting a broad range of art forms and artifacts of the era, *Hippie Modernism: The Struggle for Utopia* features experimental furniture, alternative living structures, immersive and participatory media environments, alternative publications and ephemera, and experimental film. The exhibition, organized by Minneapolis's Walker Art Center, covers one of the most vibrant and inventive periods of the not-too-distant past: one that continues to resonate culturally today. For more information, visit cranbrookart.edu/museum/exhibition.

KieranTimberlake: Drawn + Quartered

PHILADELPHIA

Through October 14, 2016

On view at the Harvey and Irwin Kroiz Gallery and the subject's office, *KieranTimberlake: Drawn + Quartered* is an architecture exhibit that surveys the execution of line and prototype in the firm's design process. Presented by KieranTimberlake and the Architectural Archives of the University of Pennsylvania, the exhibit includes drawings, scale models, and mock-up experiments. For more information, visit kierantimberlake.com.

15th International Architecture Exhibition: Reporting from the Front

VENICE

Through November 27, 2016

Taking place in the Arsenale, the Giardini public park, and various other venues in Venice, this annual blockbuster show features success stories in which architecture helped expand the possible. Designed to attract a broad audience, *Reporting from the Front* explores what it's like to improve the quality of life while working within the margins, under tough circumstances, and facing pressing challenges. In a collective effort to better the built environment, the exhibition asks, What does it take to be on the cutting edge and to conquer new fields? For more information, visit labiennale.org.

Narcissus Garden at Johnson's Glass House

NEW CANAAN, CONNECTICUT

Through November 30, 2016

To celebrate the 110th anniversary of the great architect's birth and the 10th anniversary of his most famous residence's being opened to the public, Philip Johnson's Glass House hosts an installation by Japanese artist Yayoi Kusama. *Narcissus Garden*, created for the 33rd Venice Art Biennale, in 1966, is incorporated into the 49-acre site around the Glass House. The piece consists of 1,300 steel spheres floating on a newly restored pond, providing a dramatic view leading up to the house. For more information, visit theglasshouse.org.

Form/Unformed: Design from 1960 to the Present

DALLAS

Through December 31, 2016

Showcasing more than 30 works drawn largely from the Dallas Museum of Art's collection dating from the 1960s to the present, this exhibition reveals the transformation of ideology and forms that have shaped international design in the last half century. From the technological and formal ideals of modernism to the influence of the handmade object, the pieces reflect increasingly complex and vibrant relationships between concepts of function, aesthetics, and material expression. Featured are designs by Verner Panton, Frank Gehry, Aldo Rossi, Ettore Sottsass, Robert Venturi, Donald Judd, Zaha Hadid, Louise Campbell, and Fernando and Humberto Campana. For more information, visit dma.org.

Model Behavior: Snøhetta at SFMOMA

SAN FRANCISCO

Through January 14, 2017

This exhibition at the San Francisco Museum of Modern Art explores the design process behind Snøhetta's expansion of the storied art institute. Architectural models, sketches, an interactive app, and a narrated walk-through of the building reveal how Snøhetta responded to the built environment and cultural context of the expansion-to-be, chronicling how the firm arrived at the space that opened its doors on May 14. For more information, visit sfmoma.org.

Tracing Displacement and Shelter

NEW YORK CITY

Through January 22, 2017

This MoMA exhibit explores how architects and designers have considered the meaning of shelter in light of global refugee emergencies. Works on

display examine such trends as the strengthening of national borders in response to influxes of migrants and the growing need for affordable, adaptable, and mobile housing for transient populations (currently estimated at more than 60 million worldwide). For more information, visit moma.org.

FESTIVALS, CONFERENCES, AND COLLOQUIA

Archtober 2016

NEW YORK CITY

October 1–31, 2016

Archtober is New York City's monthlong festival of activities, programs, films, lectures, and exhibitions that focus on the importance of architecture and design in everyday life. The many participating organizations aim to inform, entertain, and build a lasting civic and international recognition of the richness of New York's built environment. For more information, visit archtober.org.

International Bauhaus Colloquium

WEIMAR, GERMANY

October 26–29, 2016

The 13th International Bauhaus Colloquium at the Bauhaus-Universität Weimar is entitled *Dust and Data*. It will reflect on the almost 100-year history of the Bauhaus at its original sites—Weimar, Dessau, and Berlin—as well as the history of its international reception and migration. Because the conference is a historiographical laboratory of sorts and a barometer of shifting political landscapes, the 2016 iteration will celebrate this legacy by examining both architectural history and methods in order to address contemporary political transformations. For more information, visit bauhaus-kolloquium.de.

ARCHITECTURAL RECORD

Women in Architecture Forum & Awards

NEW YORK CITY

November 2, 2016

ARCHITECTURAL RECORD will present the magazine's third annual awards program to recognize and promote women's accomplishments in the fields of design and architecture. The afternoon symposium will be followed by a reception honoring this year's awardees in five categories: design leader, new-generation leader, innovator, activist, and educator or mentor. For more information, visit arwomeninarchitecture.com.

ARCHITECTURAL RECORD Innovation Conference East

NEW YORK CITY

November 3, 2016

Join ARCHITECTURAL RECORD for a one-day conference on architecture and making in the postdigital age. *Innovation East*—the East Coast counterpart to the summer conference in San Francisco—will bring together imaginative and forward-looking figures to exchange ideas about the built world of today and the future. Speakers and participants will range from principals of large firms to materials experts to architects practicing outside the discipline. Attendees will leave the conference inspired by brave and original approaches to some of the most relevant problems in the industry. For more information, visit ariceast.com.

NeoCon East

PHILADELPHIA

November 9–10, 2016

The 14th edition of this annual design expo and conference for contact, healthcare, and office interiors will feature talks and special events created with a host of regional design organizations. It also will highlight the latest products and services across a spectrum of vertical markets. For more information, visit neoconeast.com.

World Architecture Festival 2016

BERLIN

November 16–18, 2016

In addition to awarding prizes for building projects both completed and proposed, this year's World Architecture Festival will feature a robust roster of seminar speakers—Richard Rogers and Moshe Safdie included—who will touch on large-scale topics such as housing in dense cities, housing for refugees, housing and luxury, and housing and energy efficiency. There will also be panels focused specifically on the revitalization of post-Wall Berlin as well as architecture tours of the area. Additionally, attending architects and designers will be able to participate in on-site crits at which they will receive real-time feedback on their projects. For more information, visit worldarchitecturefestival.com.

COMPETITIONS

Laka Competition '16: Architecture that Reacts

Submission deadline: November 1, 2016

The architecture organization Laka invites designers from around the world to submit ideas for architecture that can dynamically respond to current needs. Proposals should demonstrate community engagement; take into account social and economic circumstances; and be capable of reacting to unpredictable conditions and environmental, natural, and social risks. They also should promote social revitalization and increased safety and freedom for their users. For more information, visit lakareacts.com.

eVolo 2017 Skyscraper Competition

Registration deadline: January 24, 2017

Established in 2006, the annual Skyscraper Competition recognizes outstanding ideas that redefine skyscraper design through the implementation of novel technologies, materials, programs, aesthetics, and spatial organizations. Entrants should seek to investigate the role of public and private space—as well as that of the individual and the collective—in creating dynamic vertical communities. There are no restrictions in regard to site, program, or size. For more information, visit evolo.us.

Nikon Photo Contest

Submission deadline: January 27, 2017

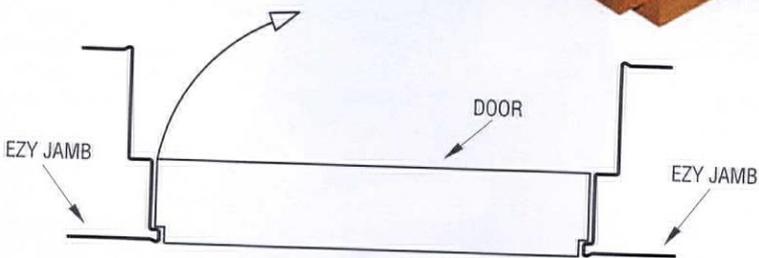
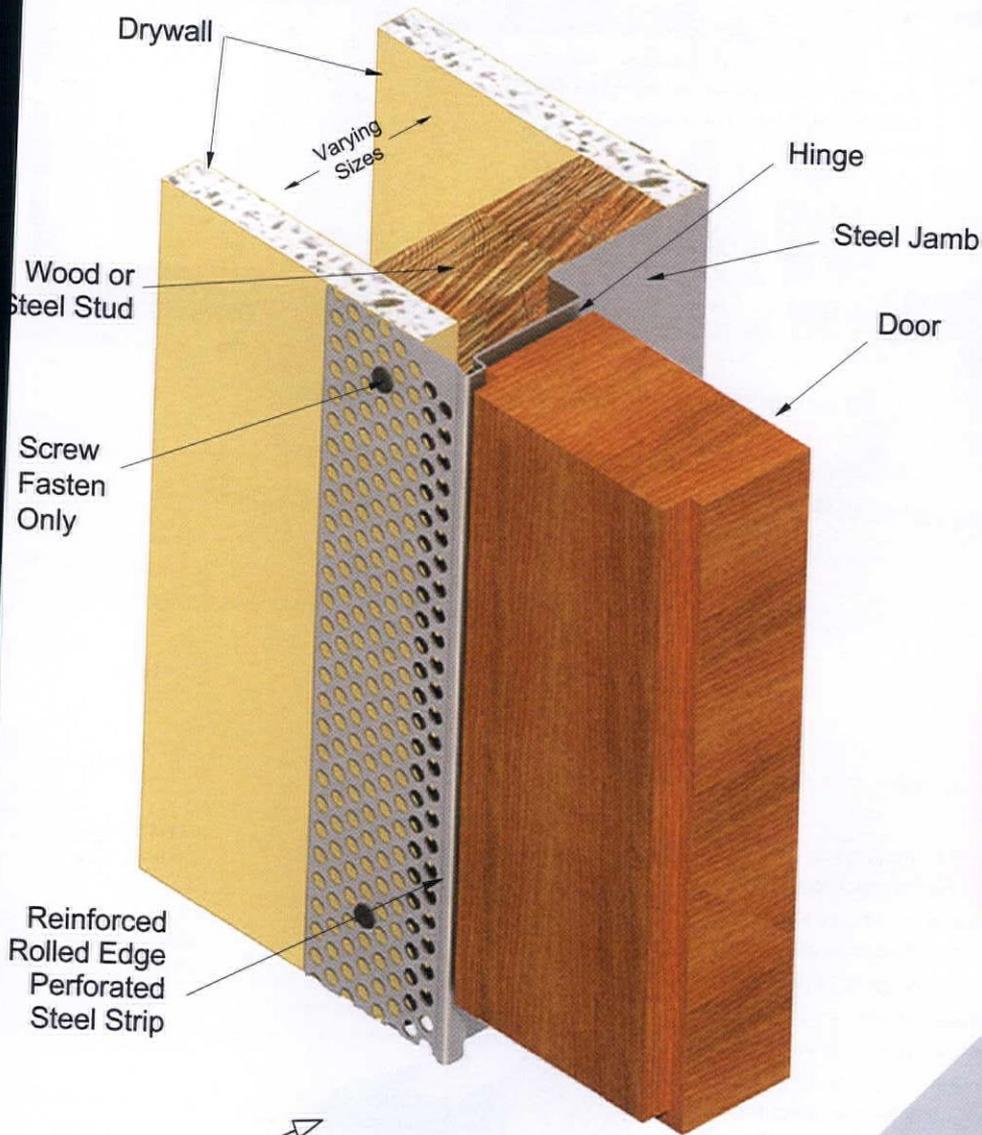
The Nikon Photo Contest supports filmmakers and photographers who wish to use images to share stories and influence how people think. This 36th edition of the contest will include two new categories: the Nikon 100th Anniversary Award, which celebrates the company's centennial in 2017, and the Next Generation Award, for anyone under the age of 30. World-renowned graphic designer and art director Neville Brody will serve as lead judge. For more information, visit nikon-photocontest.com.

CLEAN LINES! ... The Flush Finish Door Jamb System

Trimless door frames... Make a statement, clean lines, flush finish... Give your project a clean cut edge!

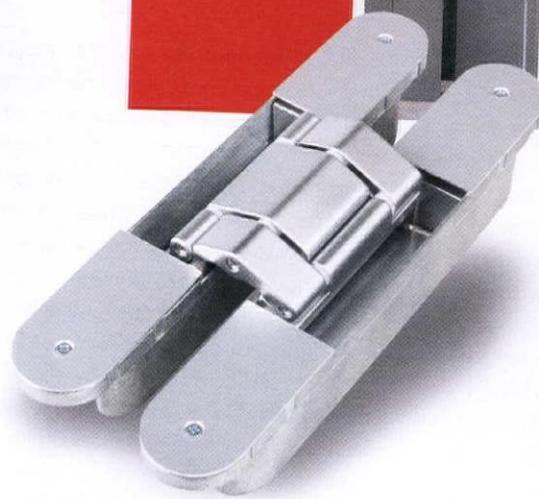
The **EzyJamb InSwing ISD Trimless door frame** is simple to install, and requires no special maintenance. InSwing is designed to be flush to the wall on the exterior side of the opening, but allows the door to swing into the room. The system is complemented by a range of hardware to suit different applications.

The completed jamb is flush finished and can be painted in with the whole wall area to fully conceal any fixing, achieving simple clean lines around the door face. The incorporation of reinforced edges overcomes the continual damage door jambs are subjected to by normal everyday use.



EZYJamb®

EZYJamb Inswing - ISD
(PATENT PENDING)



ROCYORK™

EZYJamb is complemented by a range of Concealed, Standard and Mortised hinges from Rocyork.

www.ezyjamb.com

PH: 800.675.8023

SNAP 60

ANOTHER PRODUCT FROM:

EZCONCEPT

Global Architectural Solutions



WE'D LIKE TO SAY WE ARE PUSHING THE BOUNDARIES, BUT WHEN IT COMES TO FLOORS, WE DON'T HAVE BOUNDARIES.

ENDLESS PERFORMANCE. ENDLESS DESIGN.

Manufactured and installed, we bring you proven floor solutions. Seamless, long-lasting, stain, impact and abrasion-resistant floors for industrial and commercial environments. From libraries to labs, we take full responsibility for products and installation.



FLOORS FOR EVERY ENVIRONMENT

STONHARD  liquidelements
artfully poured floors

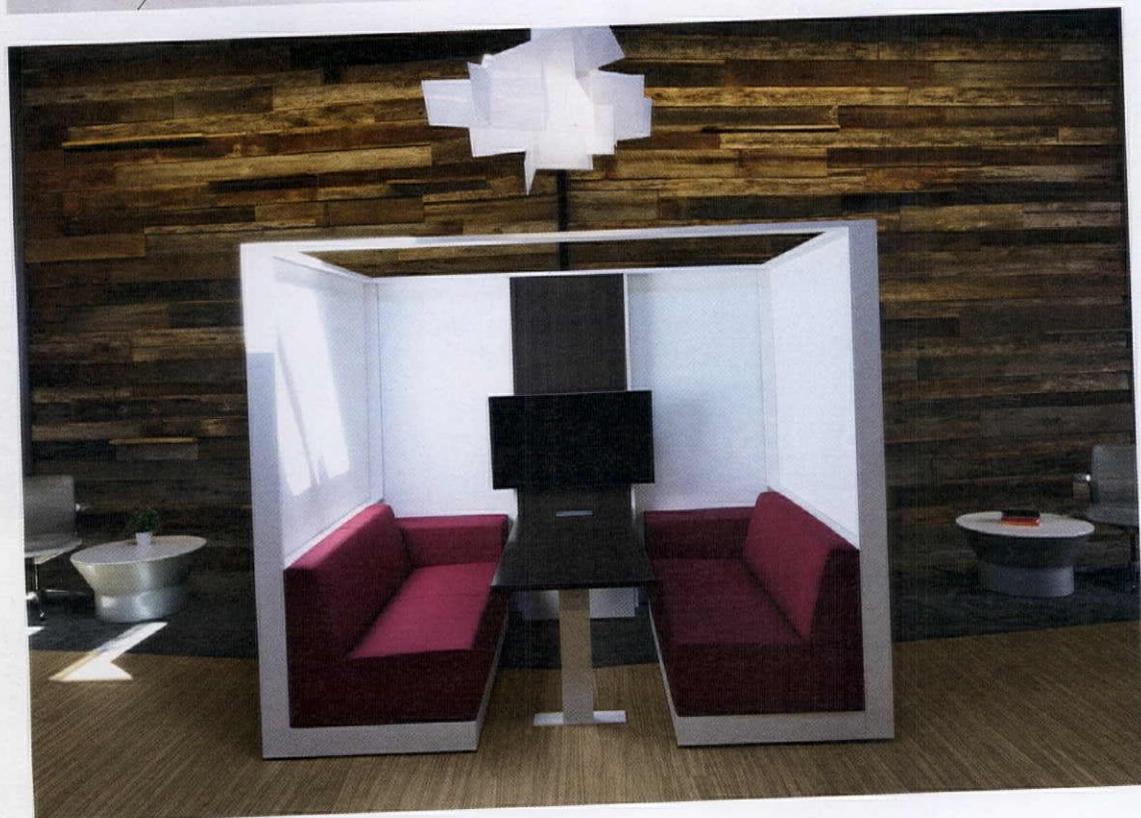
800.257.7953 | thestonhardgroup.com

1000 East Park Avenue, Maple Shade, NJ 08052 USA

© 2016, The Stonhard Group



including writable boards, desk dividers, and fixed and movable partitions—which create varying degrees of visual and acoustic seclusion. In the same vein, **West Elm**'s second Workspace collection with **Inscape** features screens in two heights and three widths. Clients have the choice of finishing screens in whiteboard or upholstering them in custom **Designtex** fabrics.



Speaking of finishes, **Teknion** launched its **Luum** division (formerly known as **Teknion Textiles**) with the Starting Point collection. Designed by **Suzanne Tick**, the nine lines of contract upholstery come in a mix of textures and scales; three designs are bleach-cleanable and three exceed 100,000 double rubs. **Wolf-Gordon**'s Rampart wallcoverings also suit heavy-traffic areas, with the five colorful patterns able to withstand surface abrasion and hard-body impact. Plus **Stinson** debuted its antimicrobial Effervescence, a non-PVC-coated fabric patterned with a mixture of fine lines and bubbly waves. The fade- and stain-resistant textile is available in 12 saturated colorways.

As for flooring, **Tarkett** tapped five textile, graphic, and interior designers—**Tick**, **2x4** cofounder Georgianna Stout, and **K & Co.**'s Krista Ninivaggi included—for Collections Infinies, a digitally printed line of luxury vinyl tile. Users can customize the various patterns, adding color layers and transitions to suit their taste. **CBC Flooring** introduced a no-wax resilient sheet flooring for healthcare facilities, **TOLI**'s Mature Select, which offers a two-tier antibacterial wear layer for increased durability.



ON MY OWN
Fixed and movable structures that allow employees to focus and enjoy a bit of quiet continue to appeal. Among the options are, clockwise from top left, the updated Brody WorkLounge (Steelcase), LineaCube (Maars Living Walls), glassSCREENS (Carvart), Frame screen system (West Elm Workspace), and Clubhouse (Allsteel).





BEFORE & AFTER
transformation

Opening up Possibilities

OpenAire is a world leader in cutting edge retractable roof enclosures and skylights for every size of venue or business, from private homes to world-class attractions. Why conform to conventional building when you can offer visitors views of the open skies above? OpenAire's operable roofs and skylights are able to frespan over 150 feet, offering an outdoor, sunlit and naturally ventilated atmosphere when open, but closing at the touch of a button during inclement or cool weather to provide shelter.

OpenAire's team transforms destinations of every size into vibrant, naturally lit spaces that are simply unforgettable.



CONTACT THE DESIGN TEAM TO GET YOUR PROJECT STARTED
1-800-267-4877 sales@openaire.com www.openaire.com

Planning | Design | Engineering | Manufacturing | Construction



THE FINISH LINE Clockwise from top left: Stinson's antimicrobial Effervescence adds whimsy to hospitality projects, while Starting Point marks the debut of Teknion's Luum textile division. TOLI Mature Select by CBC Flooring has no visible seams; Tarkett's Collections Infinies includes the first-ever digitally printed LVT options. Wolf-Gordon's Rampart wallcovering is ideal for heavily trafficked areas.

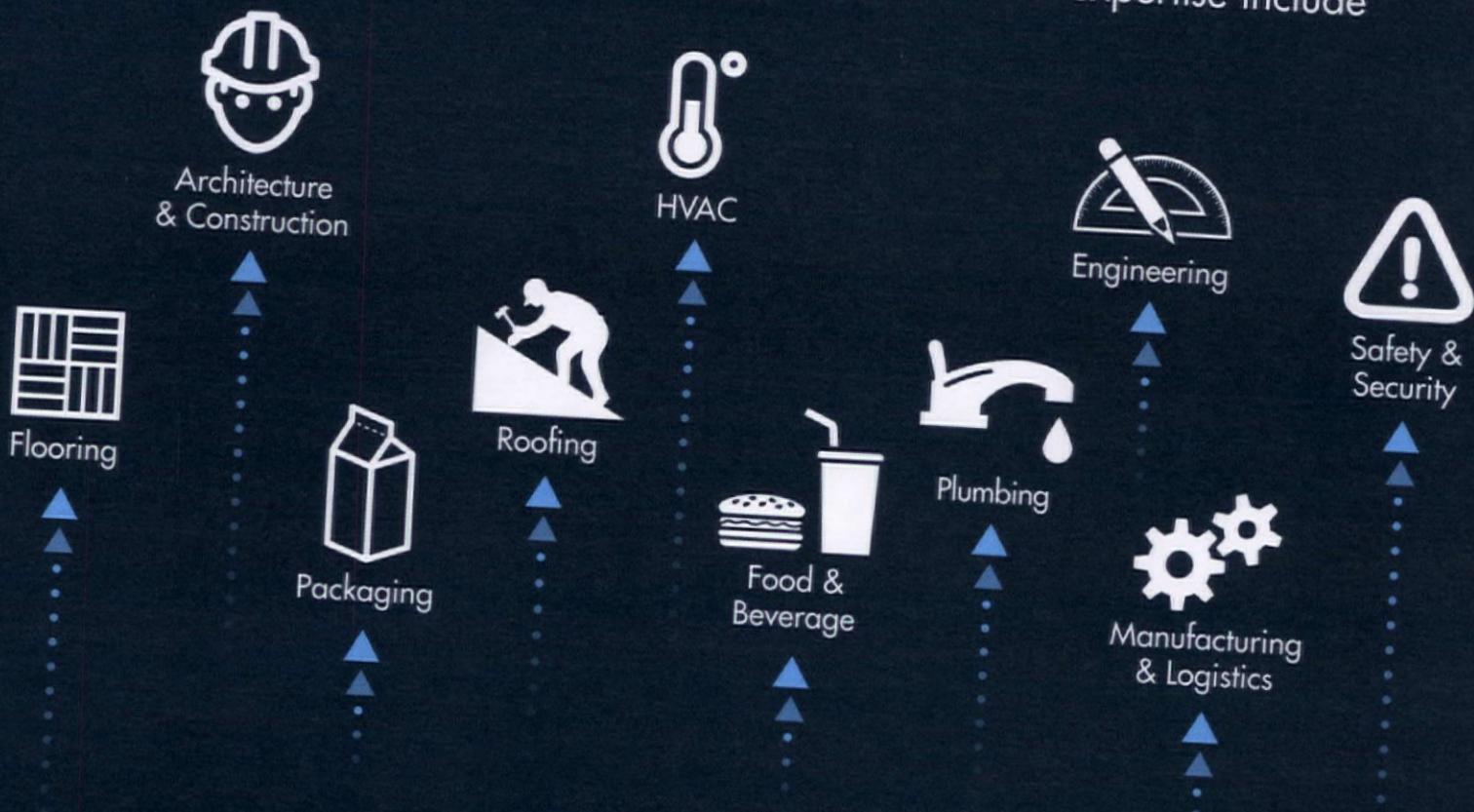
While plenty was displayed within the Merchandise Mart's halls, much was on view outside them, too: NeoCon marked the unveiling of the building's three-year refurbishment. Overseen by New York design firm **A+i**, the \$40 million project renovated the Mart's first and second floors, including the grand staircase, food hall, and lounge. The latter,

furnished with products from permanent residents **Allermuir, Bernhardt Design, Davis, HBF, Herman Miller, Masland Carpets,** and **Stylex**, provided a primer on recent innovations and a respite from the action. The upshot? Even if you missed the riches of June's NeoCon, you can sample its offerings anytime. —*Julie Taraska*



B-to-B SAMPLE YOU CAN TRUST

myCLEARopinion provides access to a panel of skilled industry decision makers for your marketing research needs. Our areas of expertise include



YOUR CLEAR CHOICE
For Skilled Industry B-to-B Sample

myclear
opinion
PANEL



PARTNERS IN DESIGN

BY ARLENE HIRST



KIBISI

Founded in 2009, the Danish product-design firm—consisting of designer Lars Larsen, entrepreneur Jens Martin Skibsted, and architect Bjarke Ingels—creates everything from watches to bikes.

kibisi.com



CHRISTIAN ANDRESEN

Fritz Hansen's design director recently joined the furniture company after serving in the same role at Henning Larsen Architects.

fritzhanzen.com

ARCHITECT BJARKE INGELS and his partners in KiBiSi, an ad hoc Danish product-design firm, had long discussed teaming up to create furniture for a specific building. The precedents were there: Think Mies van der Rohe's Barcelona chair (designed for the German Pavilion at Barcelona's 1929 International Exposition) and Arne Jacobsen's iconic Egg and Swan chairs (made for the SAS Hotel in Copenhagen). So when Ingels and his firm, BIG, began drawing up plans for Via 57 West, an apartment complex on Manhattan's far West Side, the time felt right. And who better to work with than Fritz Hansen, the Danish manufacturer of Jacobsen's classics?

Thus began a five-year collaboration on the Via 57 chair. "We were constantly making changes," says Fritz Hansen design director Christian Andresen, explaining that the alterations often impacted the fabrication process. According to Ingels, "It took as long to design the chair as it did the building."

The result, an upholstered lounger with a curved steel frame and round wooden legs, pleased all involved. "The design grew out of an existing typology: the corner chair," says KiBiSi's Lars Larsen, who led the development team. And better still, two Via 57s can be pushed together to form a small sofa. "In the contract world," Larsen notes, "it's like Lego for architects." (SNAP #270)



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.

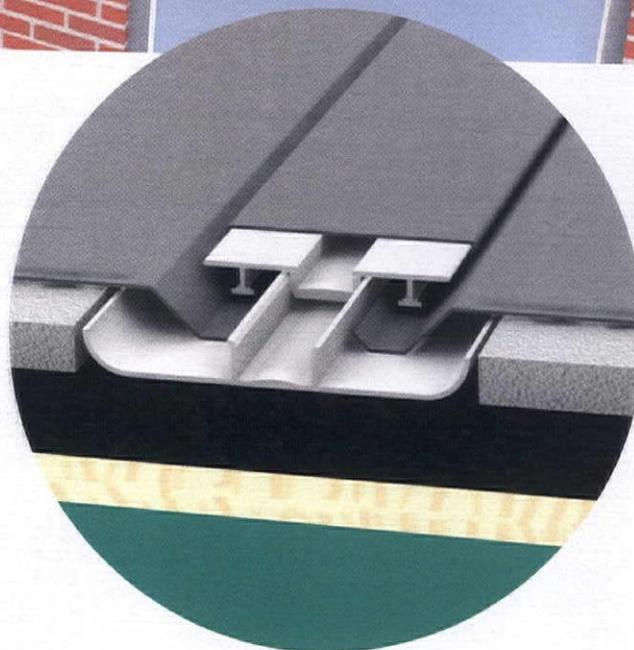


Materials

- 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)



It's more than metal...it's personal.

OVERLY
MANUFACTURING COMPANY

P.O. Box 70
Greensburg, PA 15601-0070 USA
Phone: (724) 834-7300
Fax: (724) 830-2877
E-mail: overly@overly.com
Website: www.overly.com

UNIQUE. DISTINCT. FACADES.

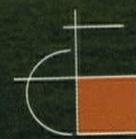


WHY DRI-DESIGN?

Dri-Design Wall Panels with perforated imaging are the perfect blend of form and function. By varying the size, density and location of the perforations, areas of light, dark, and shades in between are created. And, because we can create the picture from any image or design, you have an endless palette of artistic expression. These perforations also perform a function by providing needed airflow and/or shade to a structure. ART and PERFORMANCE in one.

- No sealants, gaskets or butyl tape means no streaking and no maintenance for owners.
- Not laminated or a composite material, so panels will never delaminate.
- At Dri-Design, we have a strict policy of recycling and creating products that the world can live with.
- Fully tested to exceed ASTM standards and the latest AAMA 508-07.
- Available in a variety of materials and colors.

SNAP 41

 **dri-
design**
WALL PANEL SYSTEM

616.355.2970 | dri-design.com

UMASS Lowell Parking Garage – Lowell, MA
Architect: Bertaux + Iwerks Architects