

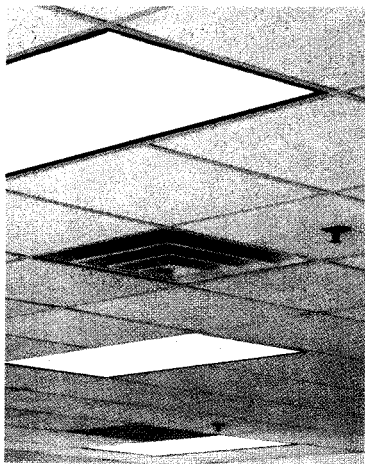
The Materials Man 80 Valerio Dewalt Train Goes Platinum 96
Joel Sternfeld's Sweet Earth 88 Home of the Year 61 A Different Kahlo 143

ARCHITECT

hanley wood



[Between us, ideas become reality.][®]



Before

no commercial interruptions

Now you can zone out the random clutter of technical services. The TechZone[™] Ceiling System organizes lighting, air diffusers and sprinklers into compact 6" technical zones. This innovative integration of function and design provides a custom, monolithic, uncluttered ceiling visual using large-size Optima[™] ceiling panels to create the field. And because it's a system of standard components that have been pre-qualified for fit and finish, you avoid design incompatibilities, long lead times and other hassles associated with custom ceiling systems. With TechZone, reality won't interfere with your design.

armstrong.com/techzone

1-877-ARMSTRONG



TechZone Partners:

CARNES[®]

FLEXHEAD
INDUSTRIES

LIGHTOLIER[®]

LITHONIA LIGHTING

neoney[™]

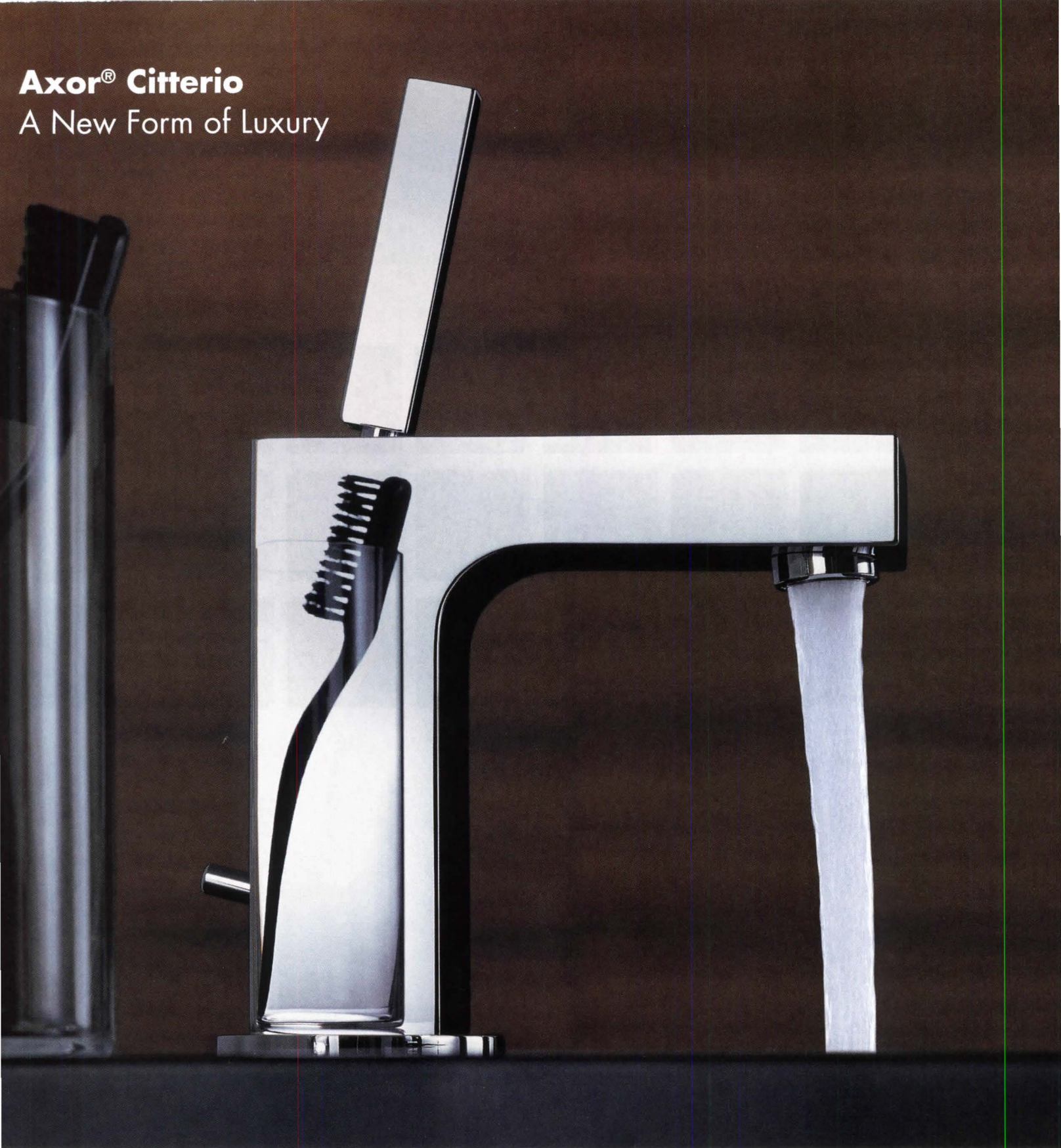
ZUMTOBEL

Circle no. 95 or <http://architect.hotims.com>



After with TechZone Ceiling System | Armstrong 4'x4' Optima,[™] Lithonia, Carnes | The Greenway Group | Atlanta, GA

Axor® Citterio
A New Form of Luxury



Designed by Italian architect and designer, Antonio Citterio, the Axor Citterio collection elevates the tone of luxury, revives the opulence of water, and redefines the purity of space. Each arch, angle and line weds clarity and harmony, uniting the senses and emotions. With a complete collection for the entire bath, Axor Citterio unites geometric precision with supple details to create a new form of luxury. To learn more about Axor Citterio, visit www.hansgrohe-usa.com or call 800-334-0455.

AXOR
hansgrohe

The Story



After 100 years of bathroom experience and 30 years of collaboration with some of the world's most creative professionals, such as Philippe Starck, Antonio Citterio, Jean Marie Massaud and Phoenix Design, it's only logical that Hansgrohe should set the standard for design superiority with the Axor brand. Through ongoing discussions with designers, architects, experts in plumbing and users, Axor demonstrates its commitment to finding the best solutions for the bathroom. The triumph of these efforts is proven by Axor's numerous design awards and prizes from international juries as well as by the success of the collections.

Axor understands that the bathroom doesn't just consist of four walls with a sink, tub and shower; it is a complete room for your enjoyment. With its complete collections of bathroom fittings, Axor makes our private bathrooms more attractive and also plays an important part in bathroom design around the globe in places such as the Turning Torso in Malmo, Sweden; YOO Apartments in New York; ICON Condominiums in Miami, Florida; or the Bulgari Hotel in Milano, Italy.

The Axor collections' design, quality and focus on the entire room have a worldwide appeal to anyone planning bathrooms. Wherever individuality and distinction play a role – in architecture, interior furnishing and bathroom design – Axor provides inspiration. Whether you prefer the authentic luxury of Axor Montreux, the streamlined designs of Axor Starck, the versatility of Axor Uno², or the geometric richness of Axor Citterio, the complete collections present options and expand the choices you have for living spaces.



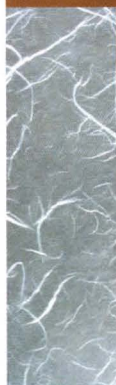
Axor Montreux



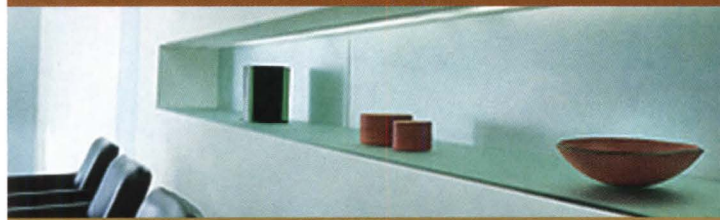
Axor Starck



Axor Uno²



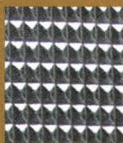
See glass
in a whole
new light.



FOR THREE GENERATIONS, Bendheim has made it our business to make it easier to design and build with specialty glass. Today, we develop, import, stock, process and ship our products worldwide. We maintain a vast inventory, foster innovative technologies and constantly invest in state-of-the art machinery. And we do all tempering, laminating, and back painting in-house. All to ensure that we provide our clients with optimum quality and fast, reliable delivery at reasonable cost.



BENDHEIM



New York Showroom 800 606-7621
Bendheim East 800 835-5304
Bendheim West 888 900-3499
www.bendheim.com



Circle no. 93 or <http://architect.hotims.com>

ARCHITECT

EDITOR IN CHIEF

Ned Cramer
ncramer@hanleywood.com

ART DIRECTOR

Abbott Miller, Pentagram

MANAGING EDITOR

Hannah McCann
hmccann@hanleywood.com

ASSOCIATE EDITOR

Braulio Agnese
bagnese@hanleywood.com

DESIGNER

Kristen Spilman, Pentagram

EDITORIAL DIRECTOR, E-MEDIA

John Butterfield

CHIEF DESIGNER, E-MEDIA

Thomas C. Scala

SENIOR WEB EDITOR

Rachel Arculin
rarculin@hanleywood.com

PROJECT MANAGER, E-MEDIA

Andrew Breychak

**DIRECTOR OF PRODUCTION
AND PRODUCTION TECHNOLOGIES**

Cathy Underwood

AD TRAFFIC MANAGER

Lauren Dobos

INSIDE SALES ASSISTANT

PRODUCTION MANAGER
Mark E. Fisher

PREPRESS MANAGER

Fred Weisskopf

DIGITAL IMAGING MANAGER

George Brown

MARKETING DIRECTOR

Lucy Hansen

EDITORIAL AND ADVERTISING OFFICES

One Thomas Circle, N.W.
Suite 600
Washington, DC 20005
Phone: 202.452.0800
Fax: 202.785.1974

Hanley Wood Business Media

PRESIDENT

Peter M. Goldstone
202.736.3304

**CHIEF FINANCIAL OFFICER/
CHIEF OPERATING OFFICER**

Frederick Moses

DIRECTOR/OPERATIONS

Ron Kraft

**VICE PRESIDENT/CIRCULATION AND
DATABASE DEVELOPMENT**

Nick Cavnar

VICE PRESIDENT/MARKETING

Ann Seltz

VICE PRESIDENT/PRODUCTION

Nick Elsener

CONTROLLER

Virginia Frazier

Published by Hanley Wood, LLC

CHIEF EXECUTIVE OFFICER

Frank Anton

CHIEF FINANCIAL OFFICER

Matthew Flynn

CHIEF ADMINISTRATIVE OFFICER

Frederick Moses

CHIEF INFORMATION OFFICER

Jeffrey Craig

**VICE PRESIDENT/CORPORATE
DEVELOPMENT**

Joe Carroll

VICE PRESIDENT/HUMAN RESOURCES

Wendy Entwistle

**VICE PRESIDENT/INFORMATION
TECHNOLOGY**

Nelson Wiscovitch

CONTROLLER

Randy Best

Volume 95, number 12. November/December 2006. ARCHITECT® (ISSN 0746-0554; USPS 009-880), formerly published as *Architecture*®, is published monthly, except for two issues in October and a combined issue for November/December, by Hanley Wood, LLC, One Thomas Circle, N.W., Suite 600, Washington, DC 20005. Copyright 2006 by Hanley Wood, LLC. Printed in the USA.

Periodicals postage paid at Washington, D.C., and at additional mailing offices.

POSTMASTER: Send address changes to ARCHITECT, P.O. Box 3572, Northbrook, IL 60065-3572.

Canadian Post International Publication Mail Sales Agreement No. 40655599. Send undeliverable Canadian addresses to Deutsche Post Global Mail, 4960-2 Walker Road, Windsor, ON N9A 6J3.

hanley wood





Presenting glass so cool it draws a crowd.

SageGlass® electronically tintable glass gives you the power to change your environment indoors without blocking your view to the outdoors. Now you can enjoy all of the sun's benefits while rejecting its undesirable qualities such as excessive heat gain. This grants you the freedom to design with more daylighting as you create a comfortable, productive and energy-efficient environment.

SageGlass glazing does what no other glass can do – it switches from clear to highly tinted at the push of a button. This provides an ultra-low solar heat gain coefficient when you need it, and high visible light transmission with spectrally selective properties when you don't. Revolutionary, but not unproven – SageGlass technology has been tested for years by the U.S. Department of Energy with outstanding results.

Why limit yourself to conventional glass with add-on solar control devices? Specify SageGlass glazing in your next building for a design that's hot, but a space that's not. To learn more, call **SAGE Electrochromics, Inc., 1-877-724-3321** or visit **sage-ec.com**.

SageGlass products are built with Pilkington TEC™ Glass.  **PILKINGTON**

SageGlass technology provides an unparalleled solar heat gain coefficient of 0.09 in its tinted state, so large expanses of glass are possible without compromising comfort, view, or energy conservation.



The only glass that:

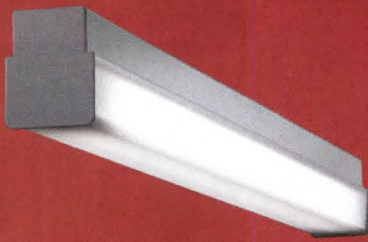
- Dynamically controls heat gain
- Actively controls daylighting
- Dramatically reduces all fading
- Stops glare

while always preserving the connection to the outdoors.

Sage Glass®
The power to change™

Circle no. 48 or <http://architect.hotims.com>

www.pdulite.com/snap



Simply. Put.

ARCHITECT

GROUP PUBLISHER

Patrick J. Carroll
pcarroll@hanleywood.com
630.705.2504

PUBLISHER

Russell S. Ellis
rellis@hanleywood.com
202.736.3310

REGIONAL SALES MANAGER/ MID-ATLANTIC AND SOUTHEAST

Nellie Callahan
ncallahan@hanleywood.com
202.736.3320

REGIONAL SALES MANAGER/WEST

Megean Coldwells
mcoldwells@hanleywood.com
626.577.0021

REGIONAL SALES MANAGER/MIDWEST

Michael Gilbert
mgilbert@hanleywood.com
630.705.2589

NORTHEAST AND INTERNATIONAL SALES MANAGER/NATIONAL

ADVERTISING MANAGER, LIGHTING
Cliff Smith
csmith@hanleywood.com
917.705.3439

REGIONAL SALES MANAGER/CANADA

D. John Magner
jmagner@yorkmedia.net
613.832.0576

ACCOUNT MANAGER/CANADA

Colleen T. Curran
ctcurran@yorkmedia.net
613.832.0576

FINANCIAL ANALYST/ SALES DATABASE MANAGER

Christina Covington

RESOURCE AND CLASSIFIED SALES

ACCOUNT MANAGER

Drew Ferrara
aferrara@hanleywood.com
202.736.3343

MEDIA KITS/CEU CLIENT SERVICES

Lisa Hirata
lhirata@hanleywood.com
630.705.2642

ANNUAL SUBSCRIPTION RATES

USA: \$59.00; Canada: \$69.00
Other countries: \$199

SINGLE-COPY PRICES

USA: \$10.00
Other countries: \$20

SUBSCRIPTION INQUIRIES, CUSTOMER SERVICE, AND BACK-ISSUE ORDERS

arch@omeda.com
888.269.8410 (toll-free in USA)
or 847.291.5221
Allow six to eight weeks for
delivery of first issue.

ADDRESS CHANGES

ARCHITECT
P.O. Box 3572
Northbrook, IL 60065-3572

REPRINTS

FosteReprints
866.879.9144



SNAP

[versatile, clean, simple]

Perfect for stairwells, hallways...
anywhere the understated is a statement in itself.

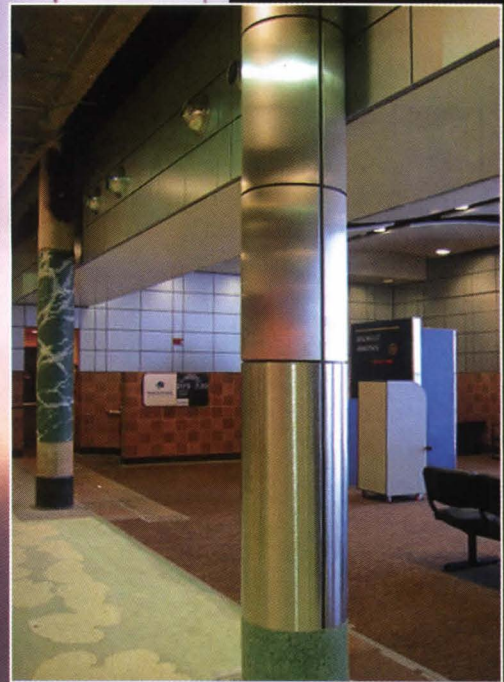
Light creates life. Create with Prudential Ltg.
Circle no. 79 or <http://architect.hotims.com>

HANLEY WOOD, LLC, is publisher of AQUATICS INTERNATIONAL, BIG BUILDER, BUILDER, BUILDING PRODUCTS, CONCRETE & MASONRY CONSTRUCTION PRODUCTS, CONCRETE CONSTRUCTION, THE CONCRETE PRODUCER, CUSTOM HOME, EL NUEVO CONSTRUCTOR, THE JOURNAL OF LIGHT CONSTRUCTION, MASONRY CONSTRUCTION, MULTIFAMILY EXECUTIVE, POOL & SPA NEWS, PROSALES, PUBLIC WORKS, REMODELING, REPLACEMENT CONTRACTOR, RESIDENTIAL ARCHITECT, and TOOLS OF THE TRADE magazines.

DISCLOSURE ARCHITECT® will occasionally write about companies in which its parent organization, Hanley Wood, LLC, has an investment interest. When it does, the magazine will fully disclose that relationship.

PRIVACY OF MAILING LIST Sometimes we share our subscriber mailing list with reputable companies we think you'll find interesting. However, if you do not wish to be included, please call us at 888.269.8410.

The best thing to happen to columns since the Romans.



FRYREGLET
ARCHITECTURAL METALS

column covers

A new era has dawned in the use and design of columns. Fry Reglet's pre-engineered column covers give architects greater flexibility than ever before. Whether for interior or exterior applications, column covers in various finishes and reveals add aesthetic appeal as well as easy access conduits for electrical, plumbing and data processing infrastructure.

Fry Reglet provides a total solution complete with detailed shop drawings, installation instructions and technical support second to none.

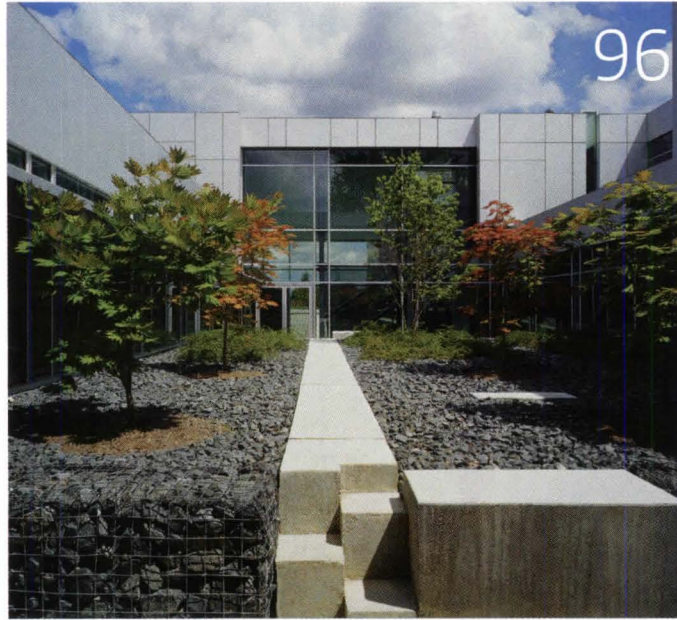
For more information on Fry Reglet Column Covers, call 1.800.237.9773, or visit www.fryreglet.com

Circle no. 376 or <http://architect.hotims.com>

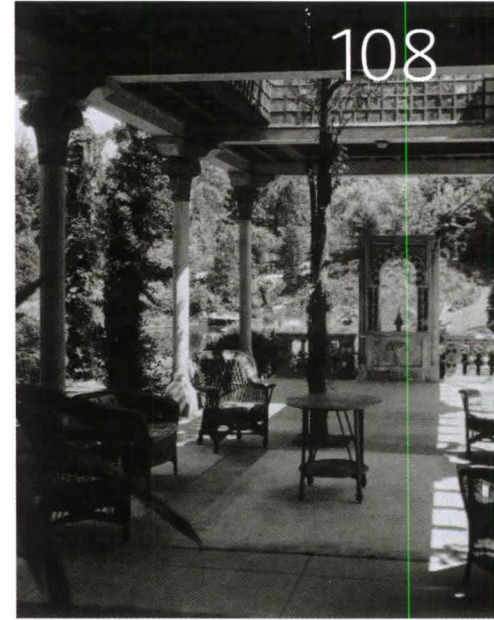
CONTENT



STEWART FEREBEE



BARBARA KARANT/KARANT + ASSOCIATES



METROPOLITAN MUSEUM OF ART

FEATURES

- 80 **Material Witness** BRAULIO AGNESE
Blaine Brownell is transforming the way architects research building products.
- 88 **Sweet Earth: Environmental Utopias in America** JOEL STERNFELD
An artist documents the growing reach of the sustainability movement by exploring Utopian communities across the United States.
- 96 **Transparent Technology** EDWARD KEEGAN
Valerio Dewalt Train took a nuanced approach to sustainable technology when it designed an expansion to the Kresge Foundation headquarters.
- 108 **Tiffany's Organic Idyll** LINDA HALES
Laurelton Hall, the home of glass master Louis Tiffany, destroyed by fire in 1957, rises from the ashes in an exhibit that seeks to re-create his dream house.
- 114 **Now You See It ...** BRADFORD MCKEE
Washington, D.C.'s city library system may abandon its Mies Van der Rohe-designed headquarters, leaving the building's fate unclear.



ON THE COVER

Blaine Brownell, an associate in NBBJ's Seattle office, is currently living in Tokyo on a one-year Fulbright fellowship to research sustainable design and material innovations in Japan. Photo by Steve West.

YOU SHOULDN'T
BE AWARE
OF SUSTAINABLE
TECHNOLOGY.
IT SHOULD
BE JUST A PART
OF THE AIR,
A PART OF THE
ETHER THAT
SURROUNDS US.

From "Transparent Technology,"
page 96



PPG Certified Applicators



www.linetec.com
 1-888-717-1472



www.keymarkcorp.com
 1-800-833-1609



www.traco.com
 1-800-837-7001



www.sapagroup.com/us/profiles
 1-800-547-0790

Make sure your specs are followed to the number with PPG's new Certified Applicator™ Program.

When you need to be sure that the color you specify will be the color that gets delivered, rely on the new PPG Certified Applicator Program. Members are quality audited by PPG to help achieve color consistency and maximum performance on window, door, storefront and curtainwall extrusion components. Plus, they use the same color-measuring software and hardware as PPG to minimize color variability.

Choosing a PPG Certified Applicator to support your color and design vision gives you more than color consistency. You get experience – with 40 years of proven performance from Duranar® extrusion coatings. You get choice – our global database features 75,000 unique colors, including the vibrant, high-gloss finish of Corafon® coatings. And now you also get the reliability of the PPG Certified Applicator Program.

To find a Certified Applicator and receive PPG's white paper on "Color Considerations," call 1-888-PPG-IDEA. Or visit www.ppgcap.com.





Techstyle[®]
ACOUSTICAL CEILINGS

The Right Angle on Design

At the Denver Art Museum, Techstyle Acoustical Ceilings provide a clean look and superior acoustical performance. But it's Techstyle's versatile fixture integration that quietly puts the spotlight on the art.

For more angles on art and architecture, visit www.hunterdouglascontract.com/dam



Project: Denver Art Museum, Frederic C. Hamilton Building,
Denver, CO
Architects: Studio Daniel Libeskind, Davis Partnership Architects
Product: Techstyle 2' x 5' panels, off white
For information call 866-556-1235

HunterDouglasContract

CEILINGS

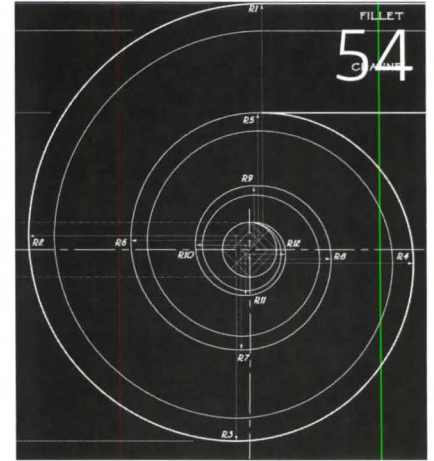
CONTENT



SETH SHERMAN

RIGHT Jurors' long-drawn deliberations netted the nine best home designs the industry has to offer. From left to right, jurors Marc Tsurumaki, Robert Hull, Kevin Alter, Julie Eizenberg, and Rocio Romero.

FAR RIGHT A new online guide teaches the fundamentals of classical architecture.



WWW.CLASSICIST.ORG/HANDBOOK

REPORT

- 36 **News**
Three Sullivan buildings in Chicago destroyed by fire this year; creating an artificial sky in Oklahoma; BuildingGreen's top 10 products for 2006; and more ...
- 48 **Market Intelligence**
Houston and nationwide
- 54 **Screen Capture**
An online guide to the fundamentals of classical architecture

DEPARTMENTS

- 61 **Home of the Year**
A special presentation of *Architecture* magazine's awards for residential architecture. These nine winners represent home design at its finest.
- 160 **Q&A Urs Ziswiler**
The Swiss ambassador discusses his new residence in Washington, D.C. *Michael Z. Wise*

CULTURE


- 143 **Object Lesson**
The photography of Guillermo Kahlo
- 147 **Books**
A study of chairs, Stern and others trace New York's architectural history, and more ...
- 148 **Exhibitions**
The "third" landscape, National Design Triennial, Tiffany's treasures, and more ...
- 150 **Events**
A month or two in the life of the profession

WWW.ARCHITECTMAGAZINE.COM

ARCHITECT ONLINE

- **Education**
Hanley Wood's Continuing Education Center is an easy way to stay sharp with ongoing education. Click on "Resources."
- **Divine Details**
ARCHITECT debuts its online gallery of construction details with entries from AIA Chicago's annual Divine Details competition. Check them out and submit your own.

SAVE THE PLANET. SCORE POINTS.



Every VT door can assist you with LEED points. Because no matter which color you choose, all VT doors are green. VT uses earth-friendly cores in each masterfully crafted architectural wood door. Some even offer the option of FSC-certified material. And you'll also have your choice of either veneer or HPDL face material. VT Architectural Wood Doors. Give the earth a break—they're the perfect way to score LEED points for any project. For more information, call 1.800.827.1615, EXT. 345.

50TH ANNIVERSARY
VT Architectural
INDUSTRIES Wood Doors
WWW.VTINDUSTRIES.COM

Circle no. 53 or <http://architect.hotims.com>

CONTRIBUTORS

Linda Hales *Culture, page 143; Tiffany's Organic Idyll, page 108*
The first design critic at *The Washington Post*, and before that, editor of the newspaper's Home section, Hales has also written for *Elle Décor*, *House Beautiful*, the *International Herald Tribune*, and *The Wall Street Journal*.

Amanda Kolson Hurley *Screen Capture, page 54*



The associate editor of *Preservation* magazine, Hurley has written about the architectural salvage trade and redevelopment. Before she started writing about the built environment, she was a literary critic, gaining a Ph.D. from the University of Bristol, England, and writing book reviews for the *Times Literary Supplement* and other publications. Her first book, on the Roman poet Catullus, was published in 2004.

Edward Keegan *Transparent Technology, page 96*



Chicago architect Keegan has written for *Architecture*, *Metropolis*, *Interior Design*, the *Chicago Tribune*, and *Crain's Chicago Business*. He has curated several exhibitions for the Chicago Architecture Foundation and teaches at Archeworks and Andrews University. *Chicago Architecture*, Keegan's second book, will appear in 2007.

Margot Carmichael Lester *Market Intelligence: Houston, page 50*



A freelance writer based in Carrboro, N.C., Lester covers business and pleasure for the *L.A. Business Journal*, *Playboy*, *MULTIFAMILY EXECUTIVE*, and *BUILDER*. She is the author of three books, including *Be a Writer: Your Guide to the Writing Life* (Leverage Factory, 2006), cowritten with Steve Peha.

Bradford McKee *Now You See It ... , page 114*

A former senior editor at *Architecture* and former arts editor at *Washington City Paper*, McKee is a contributing editor of *I.D.* magazine. He has written about architecture, design, and landscape for the *New York Times*, *Metropolitan Home*, *Metropolis*, and *Slate*.

Michael Z. Wise *Q&A: Urs Ziswiler, page 160*



Wise is the author of *Capital Dilemma: Germany's Search for a New Architecture of Democracy* (Princeton Architectural Press) and a contributing editor at *Travel + Leisure* magazine. His writing has appeared in many publications including *The Atlantic Monthly*, *The New York Times*, *The Los Angeles Times*, *Architecture*, and *ARTnews*. He has worked as a foreign correspondent in London, Vienna, and Prague, reporting for Reuters and *The Washington Post*.

Our Hands of Quality Stand Still

Design-Tec
LOCKERS

DesignLine
CABINETS

DesignRite
PARTITIONS

We stand for quality through our commitment to excellence. Our team of engineers and designers understands the wants and needs of architects and designers worldwide. The Young Group, Ltd. offers superior lines of solid phenolic lockers, specialty lockers, restroom and shower partitions and laboratory work surfaces. Suitable for high traffic public facilities, our phenolic lines are resistant to mold and mildew, corrosion and even graffiti. You can design a room or an entire facility with ease.

The Young Group, Ltd. where we build for a lifetime, not just one project at a time.

Circle no. 54 or <http://architect.hotims.com>



YOUNG
THE YOUNG GROUP LTD.

Since 1895

1054 Central Industrial Drive
Saint Louis, MO 63110
800-331-3080

fabproducts@theyounggroup.net

www.fabricatedproducts.net



Impressive Looks

Incredible Performance

The Interior Metal Framing Industry has changed...
...forever!



DIETRICH
UltraSTEEL™
 FRAMING

Tomorrow's Technology Today!™

Why Specify Dietrich UltraSTEEL™ Framing?

- A Better, Quieter Building
- Less Noise Transmission Through Walls and Ceilings
- A Nationally Recognized and Preferred Brand
- Better Acoustical Performance
- Improved Fire Resistance
- Greatly Reduces Screw Stripping
- Faster, Easier and Safer
- UL® Classified in Design V450
- Stronger Load-Carrying Capacity
- Greater Limiting Heights
- Stiffer, More Rigid Construction



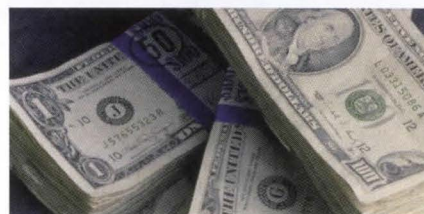
Faster...Easier...Safer!



Better Acoustical
 (reduce sound transmission up to 60%)



Improved Fire Test Performance!



Superior Performance at the SAME PRICE!



UL Underwriters Laboratories
Dietrich UltraSTEEL™ Framing Classification
 Wall Design No. V450 in the UL Fire Resistance Directory
 Steel Framing Members Fire-Resistance Classification
 See UL Fire Resistance Directory

Available Sizes: 1-5/8", 2-1/2", 3-5/8", 4" and 6"
Available Gauges (EQ): 25 EQ and 20 EQ
Patent Nos.: 6,183,879 & 5,689,990

Making Our Industry Better...



Visit dietrichmetalframing.com or call **412-281-2805**
 to discover the **NEW** standard for interior framing.

Circle no. 28 or <http://architect.hotims.com>

Over half of the world's population are urban dwellers. The global urban population increases by 1.25 million people every week. How can the cities of the 21st century cope with this development?

Urban_Trans_Formation

Challenging the 21st century

**Holcim Forum for
Sustainable Construction
Shanghai, China**

**April 19 – 21, 2007
Tongji University**

The Holcim Forum for Sustainable Construction 2007 is a two-day conference bringing together international experts from architecture, civil engineering, urban planning, natural and social sciences as well as representatives from business, politics, administration and civil society. This global platform will advance concepts for Urban_Trans_Formation towards tangible benefits to diverse communities and offer the possibility for individual discussions and networking, stimulated by keynote speeches, workshops, panel discussions and an optional full-day case study tour in the Shanghai region.

Program details and registration: www.holcimforum.org

Speakers include:

Rachid Benmokhtar, Morocco
Brenda Boardman, UK
Yung Ho Chang, China/USA
Kees Christiaanse, Netherlands/Switzerland
Fernando Diez, Argentina
Sheila Dikshit, India
Peter Head, UK
Jaime Lerner, Brazil
Enrique Peñalosa, Colombia
Rahul Mehrotra, India/USA
Saskia Sassen, USA
Klaus Töpfer, Germany
Eyal Weizman, Israel/UK
Siegfried Zhiqiang Wu, China



同濟大學
TONGJI UNIVERSITY



Holcimfoundation
for sustainable construction

Circle no. 377 or <http://architect.hotims.com>

A linoleum floor that
practically takes care of itself.



The truth about flooring is that its initial cost is relatively inexpensive, about 8% of the total cost over its lifetime. The other 92% is maintenance. That's why you should spec Tarkett Linoleum xf. It's easy to clean and has excellent resistance to abrasion, stains and chemicals. It requires no initial wax or polish, so there's no need to strip the floor. And it reduces maintenance costs by 30%, which gives your client a measurable return on investment. All that from a floor made of 100% renewable resources. Find out more by calling 1-866-688-2753 or at www.tarkett.com.

www.tarkett.com

Circle no. 38 or <http://architect.hotims.com>



LINOLEUM

© 2006 Tarkett

FACES, PLACES



NANCY FROELICH

Ned Cramer
Editor in Chief

WE'VE GOTTEN A LOT OF E-MAIL in reaction to the first issue of ARCHITECT. We've followed the threads on websites and blogs like www.apartmenttherapy.com, www.archinect.com, www.archnewspaper.com, www.mediabistro.com, *Slate*, and our own www.architectmagazine.com. And I must say we're pleased at the quantity and quality of the commentary.

Not that it's been a lovefest. Some readers seem off-put by the emphasis on people. It's an unusual approach for architecture magazines; our covers and coverage of individuals are going to take some getting used to. But given the nature of the comments about the cover of the first issue, I'd like to clarify our motives. We're not, as some have speculated, trying to perpetuate the culture of celebrity. We're trying to foster a sense of community. How many readers would have recognized Ross Wimer, a very talented and thoughtful architect, until he appeared in ARCHITECT?

So are we trying to mint new celebrities instead? No. We're trying to make connections among interesting and interested people—a mission that we believe has value, given the frantic pace and global scope of contemporary practice. Try to think of ARCHITECT as a convention in print, with an open invitation to meet the keynote.

This month, we'd like you to meet Blaine Brownell ("Material Witness," page 80). With two blogs, a weekly subscription e-mail, and a book, *Transmaterial*, Brownell identifies products that make a difference—aesthetically, environmentally, socially, and, yes, structurally. He's a one-man show, helping restore materials to the stature they enjoyed during the heyday of modernism—a time when they weren't just an afterthought, a necessary evil, but an integral part of the discipline of architecture. If you don't already subscribe to Brownell's e-mail, Product of the Week, you should. Visit transstudio.com/tm. There's no fee.

Readers do seem to appreciate the first issue's focus on process—on technology and business—and we're going to keep delivering. Witness, in this issue, the 12-page feature on Valerio Dewalt Train Associates' super-green headquarters for the Kresge Foundation ("Transparent Technology," page 96). Architect Joe Valerio has shared a wealth of proprietary drawings and data to help explain the processes and technologies behind his design.

Indeed, all the features in this issue of ARCHITECT address in some fashion the question of sustainability: Joel Sternfeld's remarkable essay on the history of America's Utopian communities ("Sweet Earth," page 88); Linda Hales' report on a lost project by Louis Comfort Tiffany, the father of organic design ("Tiffany's Organic Idyll," page 108); and Bradford McKee's investigation into the uncertain future of Washington, D.C.'s only building by Mies van der Rohe ("Now You See It ...," page 114). We hope you like what you see, and read.

Please keep the comments coming—positive or negative, we learn from them all. The making of a magazine is an evolutionary process. I'd be foolish to promise that everything in ARCHITECT will be to everyone's taste, but hopefully each issue will offer something of use.

Ned Cramer
Editor in Chief

WE'RE TRYING TO MAKE CONNECTIONS AMONG INTERESTING PEOPLE—A MISSION THAT WE THINK HAS VALUE, GIVEN THE FRANTIC PACE AND GLOBAL SCOPE OF CONTEMPORARY PRACTICE.

VERSATILE

FIRE-RATED GLASS CERAMIC

FireLite[®]

FAMILY OF PRODUCTS

- PERFECT ALTERNATIVE TO WIRED GLASS
- AVAILABLE WITH HIGH IMPACT SAFETY RATINGS
- FIRE-RATED FOR UP TO 3 HRS IN DOORS
(90 MIN. IN OTHER APPLICATIONS)
- MAY BE STOCKED AND CUT BY LOCAL DISTRIBUTORS
- CLEAR AND WIRELESS
- PASSES REQUIRED HOSE STREAM TEST

CALL OR VISIT US ONLINE
FOR YOUR FREE BROCHURE

1-888-397-FIRE (3473)
FIREGLASS.COM

SALES@FIREGLASS.COM



 **TGP**
Technical Glass Products[®]

HOHMANN AND BARNARD, INC.

SUSTAINABLE MASONRY SYSTEMS

HOHMANN & BARNARD'S

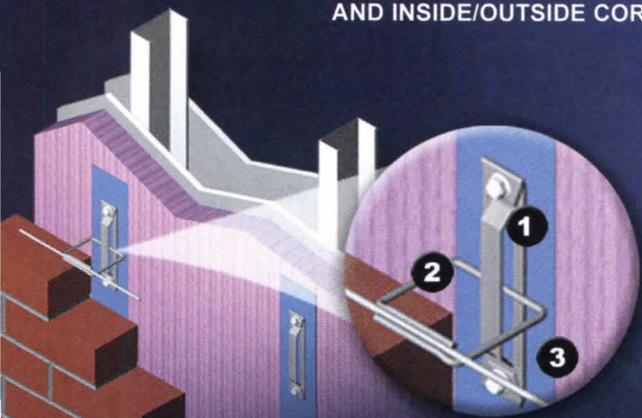
FLEX-FLASH™ FLASHING SYSTEM

FLEX-FLASH™ is a 40-mil thick product formulated with Elvaloy® Kee, and combines the best features of other types of flashing, making it a truly superior product. **FLEX-FLASH™** has a pressure-sensitive, clear adhesive that will not drool when exposed to UV or heat. **FLEX-FLASH™** may be used in thru-wall or surface-mount applications.

For specifications on this product go to www.h-b.com/spec25

*Elvaloy is a registered trademark of the DuPont Company

FLEX-FLASH™ SYSTEM INCLUDES
PRE-FORMED SEAMLESS END DAMS
AND INSIDE/OUTSIDE CORNERS.



- 1 X-SEAL®
- 2 BYNA-LOK WIRE TIE™
- 3 X-SEAL TAPE®

The X-SEAL Anchor meets or exceeds requirements of the Commonwealth of Massachusetts State Building Code for air leakage and water penetration.

HOHMANN & BARNARD'S

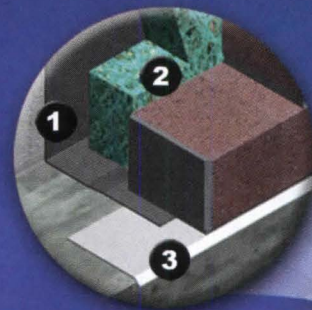
X-SEAL® ANCHOR SYSTEM

The new **X-SEAL®** Anchor is the next generation veneer anchor from H&B. The **X-SEAL®** Anchor improves upon the original DW-10-X® by moving the horizontal pronged legs from each end, enabling the backplate portion of the anchor to effectively seal the wallboard / insulation. This helps to maintain the integrity of the vapor barrier and prevents the ingress of air and moisture through the sheathing.

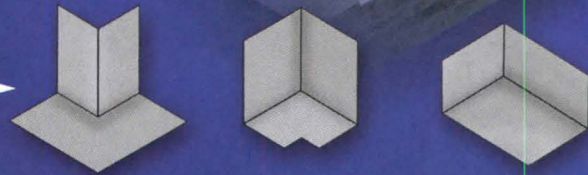
For specifications on this product go to www.h-b.com/spec25

U.S. PATENT NO. 6,925,768

U.S. PATENT NO. 6,584,746



- 1 FLEX-FLASH™
- 2 MORTAR NET™
- 3 DRIP PLATE



X-SEAL® WITH
VEE-BYNA
Wall TIE

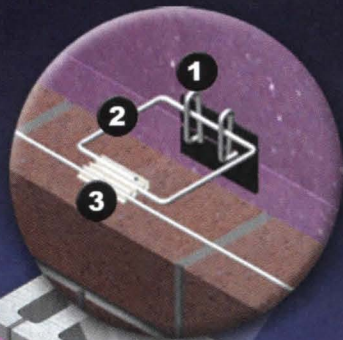


X-SEAL® WITH BYNA
LOK WIRE TIE™

HOHMANN & BARNARD'S

DUB'L LOOP-LOK™

REINFORCEMENT SYSTEM



DUB'L LOOP LOK™ offers features not available on typical hook-and-eye joint reinforcement assemblies. The vertical closed loops provide 100% protection against separation of the masonry wire tie from the reinforcement, and they will not clog with mortar as construction progresses. The loops are also welded shut and masons cannot install the wire tie beyond allowable eccentricity, thus maintaining structural integrity.

For specifications on this product, go to www.h-b.com/spec25

- 1 DUB'L LOOP-LOK™
- 2 BOX BYNA-TIE®
- 3 SEISMICLIP®

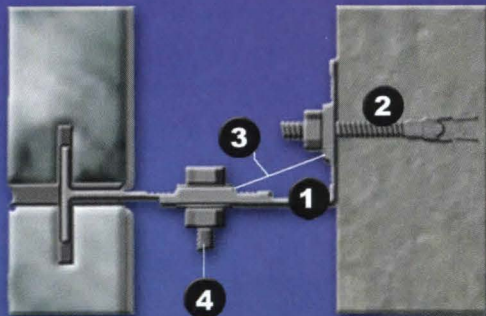
U.S. PATENT NO. 6,279,283

HOHMANN & BARNARD'S

SRX-PLUS™

STONE ANCHOR SYSTEM

U.S. PATENT PENDING



- 1 SRX-PLUS™ ANCHOR
- 2 EXPANSION BOLT
- 3 SERRATED PLATE WASHER
- 4 MACHINE BOLT, NUT & WASHER

The **SRX-PLUS™** is an innovative new product from H&B. The interlocking non-slip feature of the serrated design solves numerous jobsite anchoring problems.

Configuration of serrated slots allows vertical, horizontal and lateral adjustment without slippage in load bearing conditions

Reduces requirements for anchors of varying lengths

Reduces shimming requirements
Reduces labor costs
Eliminates field welding

- Fabricated from type 304
- Stainless Steel

For specifications on this product go to www.h-b.com/spec25

Circle no. 36 or <http://architect.hotims.com>

www.h-b-edu.com

MASONRY



EDUCATION SERIES

IN-HOUSE
AIA ACCREDITED
COURSES

Hohmann & Barnard offers in-house educational seminars on anchoring, flashing and masonry moisture management systems.

For more information, go to www.h-b-edu.com



www.h-b.com/spec25
800.645.0616



Building Green
For A Sustainable Future

FOR INFO ON
H&B GREEN
PRODUCTS, CALL
PATRICIA HOHMANN
AT 800.645.0616

Keep Asking

It was great to read your first issue of ARCHITECT and to learn that you are more interested in the questions of architecture rather than the conclusions. David Leatherborrow succinctly laid forth this thesis in his seminal text, *The Roots of Architectural Invention*, from which I have created my own mantra, "Buildings are the answer; architecture is the question."

I look forward to the many issues of ARCHITECT to follow, and the revealing questions they unearth.

Dale Mulfinger

Minneapolis

dmulfinger@salaarc.com

More Technology, Please

The new ARCHITECT magazine is a real improvement over the previous *Architecture* magazine. I encourage you to continue and expand your coverage of the technical aspects of the profession, as this is an area where there is currently a large void in architectural publications. In particular, I would suggest more in-depth articles analyzing programming, site development, mechanical/structural systems, and construction details. I'm sure that there are a large number of projects produced each year which demonstrate some innovation in one of these areas, and I would enjoy reading detailed descriptions of these aspects of the projects, explaining how the solutions were developed and what sort of problems were addressed and resolved during the design-development process.

I would love to see one or more details presented for every building featured along with cross-sections and other descriptive drawings which help explain the design solution. This would be much more interesting than just a series of pictures—if a project doesn't have something unique to convey at this level, it is probably not worthy of a review in the first place.

C. Jeffery Small, crsa

Mercer Island, Wash.

jeff@cjsa.com

Fresh Air

Not sure if what I received was the transformed remains of *Architecture* magazine transformed into your publication, ARCHITECT, but ... fantastic. More than fresh air, more than refreshing—a real update. The people in my office (actually we're landscape architects) need this very badly. I need this very badly. Thank you. Tremendous.

John D. Taylor

KTU+A, San Diego, Calif.

johnt@ktua.com

Your article hit one of my hot buttons. I wish you success with the magazine and the subjects you say you will cover. Maybe the 21st century is not entirely "the age of deception" after all. You could well be a breath of fresh air amidst the snobbery, esoterica, and faux-everything that circulates in the other architecture mags.

David L. Peacher

The Garrison Barrett Group

Birmingham, Ala.

dpeacher@garrisonbarrett.com

MAYBE THE 21ST CENTURY
IS NOT ENTIRELY
"THE AGE OF DECEPTION"
AFTER ALL. YOU COULD
WELL BE A BREATH OF FRESH
AIR AMIDST THE SNOBBERY,
ESOTERICA, AND FAUX-
EVERYTHING THAT CIRCULATES
IN THE OTHER
ARCHITECTURE MAGS.

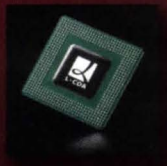
David L. Peacher

 imagePROGRAF®



What's next for technical drawings. Canon technology.

Introducing the 36" Canon imagePROGRAF® iPF700. D-size output in 40 seconds at 1200 x 1200 dpi.



Here it is: the perfect choice for technical design professionals. It all starts with our exclusive L-COA controller chip, which intelligently performs multiple tasks with great quality and speed. This allows for advanced, rapid output of CAD drawings, maps and other renderings requiring fine lines and text, all with remarkable accuracy and incredible consistency. Canon L-COA technology is present in our entire line of Corporate and CAD printers, such as the 17" iPF500 and 24" iPF600. Then there's our proprietary reactive ink technology, which combines matte black ink with cyan ink, to prevent ink bleed between color and black text. The results: clear text, smooth curves and sharp lines, regardless of media. All of which makes for the perfect blend of speed and quality for technical applications.

**The new Canon imagePROGRAF Corporate and CAD Series.
It's what's next for color.**

www.usa.canon.com/isg/whatsnextforcolor 1-800-OK-CANON

Circle no. 91 or <http://architect.hotims.com>

Canon
image*ANYWARE*

Dialogue

Practice A-Plus

ARCHITECT looks great with contents really related to the practice of architecture. Going from Vitruvius to tracking business trends with clarity and zap will be fresh and welcome. Congratulations and best wishes for a terrific run!

Don Myer

aspire2@earthlink.net

The Book and Its Cover

If you wanted to be talked about you did create the buzz. I was attending a healthcare design conference in Chicago, and people were talking about the magazine cover. However, all the comments were negative and mostly from women. They ranged from "pointless" to "what is this, *Esquire*?" Most can't take an architectural magazine seriously that is "soft selling sex." We all know sex sells, but come on.... As one employee put it, "Rip it off and hang it on the company dart

board." We did rip the cover off before it was circulated in the office.

Michael J. Gordon

Moiseev/Gordon Associates
Royal Oak, Mich.

michaelg@moiseev-gordon.com

I hate the title, the ego-centric focus on people instead of the art and process of architecture. The architect as God is not where it's at, never was. Boo hiss.

Marilyn Dudden

mdudden@cox.net

More of the Same

I just received my first copy of ARCHITECT. My first reaction is that nothing has been learned. Why would the first issue under your new name work so hard to reinforce the dominance of the white male architect that has been the perceived reality for the entire

history of my profession. If you were looking for a fresh start, you should have considered a cover with a montage of the many faces that are practicing architects. I am sick and tired of seeing architects that look like me. (Well, I am starting to go gray—and my nose is a bit more broad than Wimer's.) Sorry for the rant.

Kevin Sossong

Architecture By Design, Tallahassee, Fla.
ssosson@architecturebydesign.com

I have completed my review of ARCHITECT magazine. To me, it looks just like its predecessors; *Record* and *Progressive Architecture*. Do we really need more of the same?

Perhaps I am out of line. For me, a construction-defect architect, to be critical is like a mortician giving his two cents on the work of a plastic surgeon. I suspect our work is entirely unrelated—even if it is all architecture.

Are Your Specifications *Obsolete*?



Only BSD SpecLink:



- Verifies and updates **all** reference standards every year
- Immediately updates **every** section affected by a revised standard
- Includes a hyperlink to a free synopsis and a download or purchase opportunity at each citation
- Lets you decide with one mouse click whether to include **publication dates** on all reference standards
- Creates an optional consolidated list of all reference standards in your project - automatically

Our competition doesn't even come close!



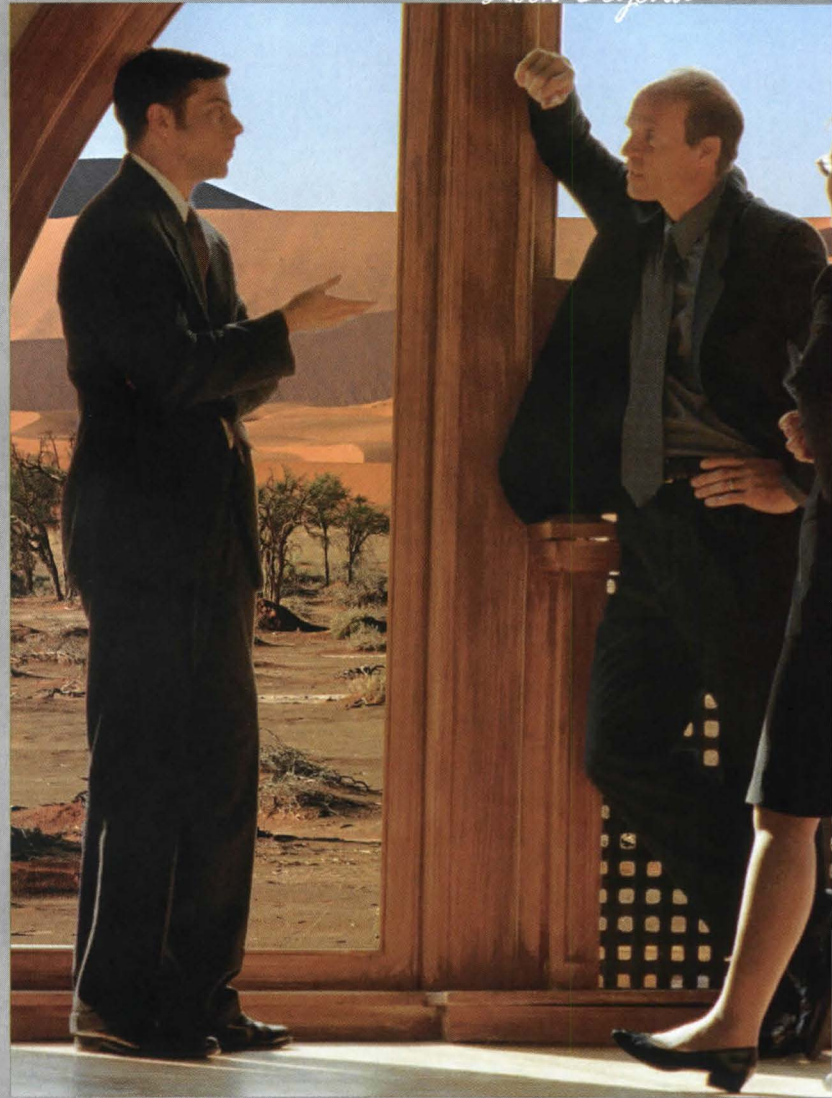
Call us today to set an appointment for a free, on-line product demo,
or download a free demo at www.bsdssoftlink.com
Circle no. 23 or <http://architect.hotims.com>

1-888-BSD-SOFT
1-888-273-7638

Feels great
at home and at the office.



Look Beyond®



Comfort Ti AC23™ from AFG.
The energy savings deserve a look.



To learn more, visit www.afglass.com or call 800-251-0441
AFG Glass • P.O. Box 929 • Kingsport, TN 37662 • www.afglass.com

Circle no. 21 or <http://architect.hotims.com>

The front cover tells the tale—we take ourselves too seriously. Even attorneys have humor sections in all of their publications. I know this because I am also an attorney—inactive for reasons that go way beyond this email.

I wish you luck in this latest endeavor. The profession is difficult to please. I often

feel like a practicing spectator, but like with any car wreck, it's hard to pull my eyes away.

Nancy Jones

NRJ Architecture, San Diego, Calif.
NRJArchMed@aol.com

Politics

Congratulations on the first issue of ARCHITECT. The span of topics covered, from your interviews with a range of academics and professionals to an excerpt from Allan Greenberg's *Architecture of Democracy* is truly a breath of fresh air in the architectural community.

However, I do want to take issue with a quote in the article, "Jury Is Out on GSA's Choice for Chief Architect" discussing architect Thomas Gordon Smith's possible appointment as the U.S. General Services Administration's chief architect. In this article, ARCHITECT quotes Stanley Tigerman as saying, "A representative of the U.S. government needs to act on balance in the selection of architects ... and now [with] Smith, there seems to be a right-wing Republican pattern ..."

It is curious to see a person knowledgeable about architecture, as Tigerman has long been, revive the old canard that links a person's stylistic preferences in architecture (in Smith's case it's classical architecture) and his or her political position. Tigerman's statement is irrelevant to the practice of architecture and without any known foundation. As dean of a program that teaches classical architecture, I know many people designing classical buildings who are liberal Democrats. I also know many who make modernist designs who are, in fact, right-wing Republicans. I have found no correlation between architects' politics and their architectural preferences. It is disheartening to see Tigerman using the political tactic of unsupported allegations. It impedes the development of architecture for the public good that we all seek.

Once again, please accept my congratulations and high hopes for the success of what seems to be a much needed forum for dialogue and discussion on the real architectural issues of our time. I look forward to the next issue and many more.

Michael Lykoudis

University of Notre Dame
School of Architecture
mlykoudi@nd.edu

Correction

The location of the College of Architecture and Urban Planning at the University of Washington was misreported in "Seven-Point Perspective" (Premier Issue, page 82). The college is located in Seattle.



Fiber + Cement = Value

Value is defined as **quality over price** and with Nichiha fiber cement products we deliver on both: a quality product backed with a 50 year warranty and a lower installed cost compared to other facades. Now consider a large variety of textures and colors and using Nichiha fiber cement panels becomes easy. Nichiha offers the latest technological advances in fiber cement with the introduction Canyon Brick, Field Stone and Quarry Stone each is coated with a specialized finish using Nanotechnology. This finish creates a self cleaning façade that washes dirt and soot away with rain water. Nichiha is currently being specified in a number of different light commercial and multifamily applications; Office, Health Care, Education, Retail, Hospitality, Apartments, Assisted Living and Town Homes.

1-86NICHHA-1 or visit NICHHA.com



Design Flexibility

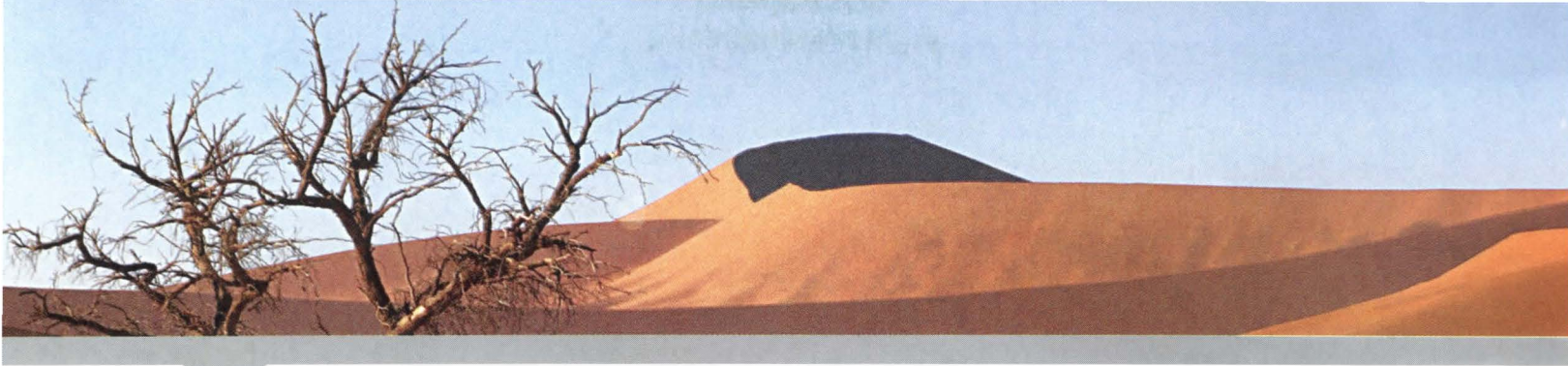
Available in a variety of textures and colors.



Quick Installation

Installs 9 sq. ft. (18' x 72") at a time





Comfort Ti AC23™ from AFG. The energy savings deserve a look.

Comfort Ti-AC23™ is a new low emissivity glass designed to maximize solar control and air conditioning efficiency in Sun Belt regions while maintaining a very attractive appearance. This next-generation low-emissivity product is the newest product innovation from industry leader AFG Glass.

With a solar heat gain coefficient of 0.23—among the lowest in the industry—the newest member of AFG's Comfort Ti™ family of low-emissivity (low-e) sputter-coated glasses is ideal for climates where air conditioning is the primary year-round energy concern. Comfort Ti-AC23, with its combination of low reflectivity, excellent light absorbing properties, and its ability to block the sun's most warming wavelengths of energy, provides one of the highest light-to-solar-gain ratios of 1.74 when deposited on clear glass. The product is ideal for coastal regions as it meets Turtle Code specifications. (<0.45 Visible Transmittance). Its unique combination of powerful solar control with a "neutral look" makes Comfort Ti-AC23 an ideal solution for a range of residential and commercial applications where heat-gain, glare, and aesthetics are a concern.

AFG Comfort Ti-AC23 Performance Data

Glass Thickness	Air Space	Winter U-value		Summer U-value		% Transmittance			% Reflectance			Shading Coefficient	SHGC	RHG	
		Air	Argon	Air	Argon	Visible	Solar	UV	Vis out	Vis in	Solar			Air	Argon
SGL	1/2"	0.30	0.24	0.28	0.22	41	20	20	11	11	34	0.27	0.24	59	56
1/8"	1/2"	0.30	0.24	0.28	0.22	40	19	19	12	11	33	0.27	0.23	58	55
5/32"	1/2"	0.29	0.24	0.28	0.22	40	19	17	12	11	31	0.27	0.23	58	55
3/16"	1/2"	0.29	0.24	0.28	0.22	39	18	16	13	11	29	0.27	0.24	58	56
1/4"	1/2"	0.29	0.24	0.28	0.22	38	18	16	13	11	27	0.27	0.23	58	55

All values are for center of glass and were obtained using LBNL's Window 5.2 software
All make-ups are Comfort Ti-AC23 outboard (coating on surface #2), 1/2" air space, and Clear inboard



To learn more, visit www.afgglass.com or call 800-251-0441
AFG Glass • P.O. Box 929 • Kingsport, TN 37662 • www.afgglass.com
Circle no. 386 or <http://architect.hotims.com>



ARCHITECTURAL APPLICATIONS OF EXPANDED METAL

DECORATIVE KITCHEN APPLICATION - PRIVATE RESIDENCE, WARREN, OH

- Cost effective alternative to perforated metals. You don't pay for the holes; there is no waste
- Mesh patterns available in diamond, "NEW" ExperTM round plus square, hexagonal & decorative expanded metal
- Custom widths and thicknesses can be manufactured to your specifications
- Available in a variety of material types and finishes including nickel, copper, brass, bronze, titanium, zinc, galvanized, precious metals and most any ferrous or non-ferrous material



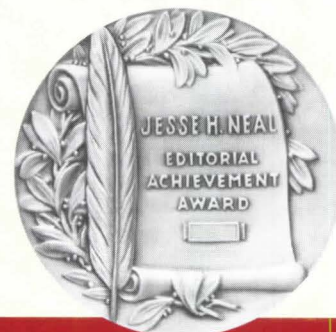
NILES EXPANDED METALS & PLASTICS

310 North Pleasant Avenue • Niles, OH 44446 • Toll Free: 1-800-321-2727
info@nilesexpandedmetals.com • www.nilesexpandedmetals.com

Circle no. 80 or <http://architect.hotims.com>

Hanley Wood Salutes the
Winners of the

Jesse H. Neal Awards




Hanley Wood's leading magazines are based on our commitment to publish quality content that serves the unique information needs of construction industry professionals. We congratulate our award-winning editors and all the winners of the prestigious Jesse H. Neal Awards.

BUILDER
BIG BUILDER
REMODELING
CUSTOM HOME
residential architect
MULTIFAMILY
EXECUTIVE
TOOLS OF THE TRADE
AQUATICS
INTERNATIONAL
BUILDER
Online

hanley wood

designtechniquesTM


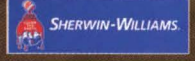


Wallcovering Solutions

Where
you
find *it*

Whether your spec is for an environmentally safe product with low VOC's, a hotel chain with a small budget or an indoor theater that needs accoustical wallcovering we have a solution.

Contact your Wallcoverings Representative
or Call 1-800-635-0038

13915.9/06

Circle no. 78 or <http://architect.hotims.com>



Pilkington **Eclipse Advantage**TM Reflective Low-E Glass

There was a time when architects could choose glass by color alone. Then along came Low-E, solar heat gain considerations, and all the inherent problems and compromises of soft coats. Pilkington **Eclipse Advantage**TM Glass, is the world's first pyrolytic reflective Low-E. An innovative Low-E glass that combines low emissivity with solar control, high visible light transmittance and glare control. For more information or glass samples, contact Pilkington at 800 221 0444, or visit www.pilkington.com.

Pilkington Building Products North America

811 Madison Ave., P.O. Box 799 • Toledo, OH 43697-0799

Main Office Phone: 419 247 3731; Fax 419 247 4517

E-mail: building.products@us.pilkington.com • Website: www.pilkington.com

©2003 Pilkington. **Eclipse Advantage**TM Glass, **Arctic Blue**TM Glass and **EverGreen**TM Glass are trademarks of Pilkington.

Circle no. 45 or <http://architect.hotims.com>



PILKINGTON

A member of NSG Group



A GOOD SIGN

visit encyclebacking.com to learn more

ANOTHER INNOVATION FROM THE MOHAWK GROUP...WHERE SUSTAINABILITY WORKS

KARASTAN
C O N T R A C T


DURKAN
C O M M E R C I A L

Lees

MOHAWK
C O M M E R C I A L

BIGELOW
C O M M E R C I A L

DURKAN
H O S P I T A L I T Y

 The Mohawk Group

ARCHITECTURAL MESH SYSTEMS

System: Solar

Attachment: Railway

Metal Fabric: Shade

Project: University of Arizona
Medical Research Building &
Thomas Keating Bioresearch Building -
Courtyard Ramada Structure

Architect: Zimmer Gunsul Frasca Partnership

Above a courtyard in Arizona,
Cambridge metal fabric
floats in the air
like a cooling mist.

Softening the sunlight,
sheltering the eye.

Linking two structures
with a high thin cloud
of stainless mesh.

TOLL FREE 1 866 806 2385
WWW.CAMBRIDGEARCHITECTURAL.COM

C A M B R I D G E
ARCHITECTURAL

A DIVISION OF CAMBRIDGE INTERNATIONAL

Circle no. 24 or <http://architect.hotims.com>



BUILD IT BEAUTIFULLY.

Charlotte, North Carolina, has experienced nothing short of an urban renaissance. It began when the people of CEMEX were selected to work on the Post Uptown Place. It was one of the first new structures in Gateway Village, which helped establish the architectural tone for others to follow. Split face concrete block was chosen to impart the aesthetics of limestone without the prohibitive cost. Other buildings quickly followed suit, including the new Charlotte Bobcats Arena, also a CEMEX project, which anchors the opposite end of the district. Gateway Village and CEMEX. Beautiful choices all around.

We invite you to learn more about this and other unique CEMEX projects at www.cemexusa.com.



Building the future™

Circle no. 94 or <http://architect.hotims.com>



ON STEEL

Lagrange

GETTING STARTED “In 1968, I was lucky enough to get a job at SOM in Chicago. They were just finishing the Hancock, which is an incredible steel structure. Beginning my second week in Chicago, I worked with Bruce Graham and Fazlur Khan, and I really started to understand steel through their teaching. They were incredible people with visions of buildings and structures.”

Lucien Lagrange. Principal. Lucien Lagrange Architects. Born in France, he moved to Montreal in 1959. He interned at Skidmore, Owings & Merrill, tasted Chicago, and couldn't stay away. Now one of the most creative classic designers Chicago has ever seen, he is busy leaving his imprint on the City with Big Shoulders, designing with steel.



DESIGN “You have to understand structure. You have to feel in your body how the structure behaves. You have to think one way about concrete, and then another about steel. There are elements of a structure which are similar; but with tall buildings, you have to understand how – and why – they stand up. You almost have to feel the structure yourself. Once you do that, you'll find that steel behaves very differently than concrete. Steel allows you more flexibility than concrete.”

WORK “You have to get emotional, otherwise a project becomes just a job. You have to have passion for your work.”

VALUE “Efficiency lends value, and steel is highly efficient. Steel offers longer spans than concrete and steel sections have narrower profiles than their concrete equivalents. Therefore, steel lends itself to utilizing the ceiling space to run mechanicals through members, which typically results in higher ceilings. The span capabilities allow us to create setbacks in the building more easily, and these are used for balconies and terraces, which add value to the building.”

COMMITMENT “During the design phase, we changed from a concrete structure to a steel structure. After this decision was made, my client wanted me to resign. I was moving too slow. I said, ‘You cannot fire me. You don't understand the complexity of steel. Later on, if you want to fire me, you can. But I have to finish what I started.’ He didn't fire me. Steel is different. It puts a different layer of complexity on the project that you do not have with concrete. With steel, it's more of a challenge, and you must make a commitment in order to succeed. I understand steel, but how do you really explain it? I was convinced in the end that my client would get a better building because of my belief in steel and my principles.”

CREATIVITY “If you want to be creative, use steel. Steel requires a bit more work from the designer, because you have to put together a ceiling, exterior wall... more pieces come together. When concrete is up, you're almost done. The opportunities for building transparency presented by steel structures are exceptional. This transparency lends an ephemeral quality to the buildings.”

FLEXIBILITY “There's a lot you can create with steel because it's steel. Steel is more straightforward. You can mold concrete, for example. But steel comes in pre-designed pieces, out of the mill. At Erie on the Park, a gentlemen bought two units on top of each other and wanted to connect them. We put a stairway next to the exterior wall. That would have been impossible in concrete. When you design a condo building structured in concrete, you have to deal with interior columns in the units. Because we used steel for Erie on the Park, the advantage was we didn't have any interior columns. We had full design freedom, with clear, open space from the core to the exterior wall.”

TEAMWORK “A creative structural engineer is an integral member of the team when designing with steel. At 175 W. Jackson, we wanted to do something more creative than simply span the space with a large member as we inserted a skylight into an atrium. Our vision was to have the glass appear to float freely above a poetic, light, minimal structure. This could only be done in steel, and our structural engineer helped us realize our vision.”

DETAILS “Designing with steel requires that we pay more attention to details. The integration of the structure with the enclosure, the placement and integration of the glazing, the mechanical coordination – this all requires thoughtful and judicious detailing to execute the building.”

CLIENTS “You have to challenge your clients. That's what designing – especially in steel – allows you to do. Convince the client to do it. They will get excited about getting a better building. They'll make more money. Our clients make money through our designs.”

STEEL “When you start with steel, it's very different. In my mind, when I look at steel, it creates a different emotion. It's exciting because it relates to tall structures, light material. When you think of concrete, you think about shape, heaviness. Intuitively, one usually doesn't relate high-rises with concrete. Steel makes you feel you can build as high as you want because it's light and strong. You can express the structure and it becomes part of your statement. There's so much emotion attached to doing a steel building. It's like a mechanical set...you build up in pieces, and it's exhilarating to follow the forces of the building to the ground. Major buildings – if not the major building of this century – can only be done in steel.”



www.aisc.org

866.ASK.AISC

Structural Steel: The Material of Choice
Circle no. 22 or <http://architect.hotims.com>

Preservation

Louis Sullivan's *Annus Horribilis* Fire destruction of celebrated architect's buildings shocks Chicago



Sullivan's Pilgrim Baptist Church on Jan. 17, nearly two weeks after the blaze that gutted it.

AP/W. SPENCER GREEN

WHILE CHICAGO CELEBRATED THE 150TH ANNIVERSARY of Louis Sullivan's birth during the last half of 2006, the architect's built legacy dwindled as fires destroyed two of his remaining designs.

During the early morning hours of Nov. 4, the 1888 wood frame George Harvey House, which had been undergoing unspecified repairs, was consumed by fire. The home's owner had considered demolishing the building earlier in the year but apparently reconsidered after receiving heavy local press coverage. The fire—which at press time was being investigated as a possible case of arson—came less than two weeks after the destruction of the 1887 Wirt Dexter Building on Oct. 24. An official Chicago landmark, the relatively small, six-story structure was notable for its unadorned brick façade and an exposed-iron-frame rear elevation. That conflagration was sparked by a worker's acetylene torch being used to demolish a boiler in the basement.

On Jan. 6, Adler & Sullivan's 1889 Pilgrim Baptist Church (originally the Kehilath Anshe Ma'ariv Synagogue) was gutted by a fire accidentally set by roofers. Although demolition by developers was once the greatest threat to Sullivan's buildings, fire now seems the architect's most potent foe. This year's unusual coincidences echo those of 1989—when Sullivan's Brunswick-Balke-Collender

Factory in Chicago and the suburban Aurora Watch Factory burned.

Sullivan designed approximately 125 buildings in Chicago during his 50-year career, according to City of Chicago cultural historian Tim Samuelson. With the loss of three buildings in the past year, the Art Institute of Chicago now lists 21 extant projects, although several of these structures bear few marks of the famed *Liebermeister*.

Chicago architect Ward Miller toured the Harvey House with two preservation advocates on July 24. The house had been considerably remodeled, but many of the alterations were almost a century old. "There were enough pieces that you could have gone back to the original Adler & Sullivan concept," says Miller. Earlier this year, Chicago-based preservation architect Gunny Harboe restored Sullivan's Carson Pirie Scott Store. He wonders what can be done to further protect the architect's legacy. "I don't know how much more vigilant the fire department can be," Harboe says.

It's ironic that fire has recently taken such a toll on Sullivan's structures. As a young architect, Sullivan initially moved to Chicago in 1873, lured by the building opportunities that existed in the wake of the Great Fire of 1871. EDWARD KEEGAN

Clips

The AIA's **Architecture Billings Index** for September was a

modest 51.4 (any score over 50 indicates an increase in billings). The billings index has been positive for 22 out of the past 24 months. The index of inquiries for new projects was 67.7, the highest level since December 1995 (68.7).

Moody/Nolan, among the nation's largest black-owned and -operated architecture and engineering firms in the country, has opened an office in Kansas City, Mo. The firm, whose headquarters are in Columbus, Ohio, also has offices in Cleveland, Cincinnati, Indianapolis, and Nashville, Tenn.

Partners in Preservation, a joint effort by American Express, the National Trust for Historic Preservation, and the World Monuments Fund, has announced the 13 awardees that will share in its \$1 million San Francisco Bay initiative: **Angel Island Immigration Station**, in San Francisco; **Fallon Building**, **Haas Lillienthal House**, **Japanese YWCA Building**, and **Spreckels Temple of Music**; in Oakland: **Cleveland Cascade Park** and **Fox Oakland Theater**; in Berkeley: **First Church of Christ, Scientist**, and **Tilden Park Carousel**; in New Almaden: **Casa Grande**; in Richmond: **Richmond Municipal Natatorium**; in Tomales: **Tomales Town Hall**; and in Pascadero: **Pigeon Point Lighthouse Station**.

Popular Science has named **Peter Eisenman** one of its 2006 Innovators of the Year for the stadium he designed for the Arizona Cardinals, citing its sliding grass field, retractable roof, and fan-friendly design. "Because I'm an architect and a football fan," Eisenman told the magazine, "I didn't want the architecture to get in the way of the football."

→ continued on page 38

A WARRANTY

that offers more than just fine print.



It's upfront and simple. When you specify DuPont™ Tyvek® CommercialWrap® with the Build It Right™ Warranty for your projects, you know the job will be done right. We make sure of it.

That's why we've introduced a no-nonsense 5-year product warranty with a documented job site service package for Tyvek® CommercialWrap®. And to back it up, a member from our national network of DuPont™ Tyvek® Specialists will provide on-site consulting and training for a successful installation of the Tyvek® CommercialWrap® system.

You'll also get the peace of mind in dealing with a company that for over 200 years has been committed to producing innovative, quality products to enrich lives and protect our environment.

DuPont™
Tyvek®
COMMERCIALWRAP®

Circle no. 29 or
<http://architect.hotims.com>



The miracles of science™

FOR MORE INFORMATION

1-800-44-Tyvek or www.Tyvek.com

Lighting Research

Capturing the Sunshine in Oklahoma

Architects and engineers at OSU near completion of daylighting lab for architectural models

AN ARTIFICIAL SKY is taking shape at Oklahoma State University (OSU). Designed to simulate both clear and cloudy weather, the sky dome will assist OSU students, practicing architects, and others in the research of daylighting systems.

There are five people at work on it: the architectural engineering team of professor Steven O'Hara, assistant professor Khaled Mansy, and student Aaron Lewis; and the electrical and computer engineering team of associate professor Thomas Webster Gedra and student Qamar Arsalan. Given their various schedules, Mansy says, they are able to work only one day a week on the sky dome, which is expected to be finished next summer.

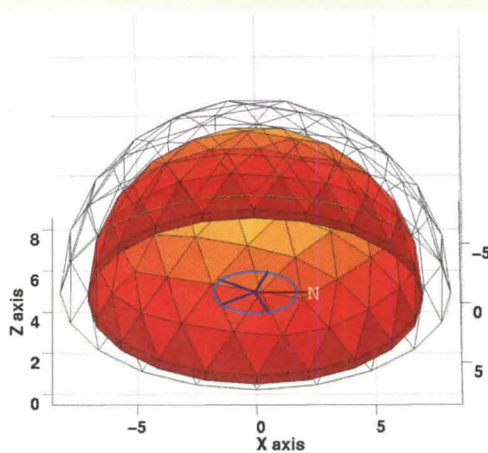
When complete, it will comprise two domes—an outer one, which will hold 341 incandescent halogen lamps; and an inner one, nearly 14 feet in diameter, made of translucent polycarbonate sheets—as well as the heliodon on which architectural models will sit. Mansy says the OSU sky dome will be best suited for models created at a half-inch scale.

It won't be the only artificial sky available to architects, of course. "There are sky domes that can only simulate overcast skies, [and others that] simulate clear skies," says Mansy. And then there is the one at the Welsh School of Architecture, Cardiff University, which simulates both clear and overcast skies, as OSU's will.

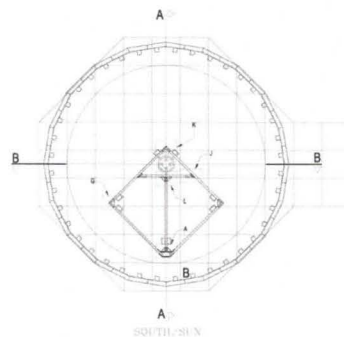
Built in 1999 and almost twice the diameter of the one under construction in Stillwater, Okla., the Cardiff sky dome has a similar geodesic structure for holding lamps. But it suffers from what Mansy calls the "star effect": When a light sensor is moved inside an architectural model sitting within the dome, it sometimes sees a different number of point-source lights, which causes incorrect jumps in illumination levels. Thus the translucent dome in the OSU structure, which will diffuse the light to achieve a smoother, more accurate gradation of illumination.

So why build a sky dome when there are other tools—formulas, daylighting nomographs, and computer simulations—available? According to a technical paper about the OSU project given at the American Society for Engineering Education's 2005 annual conference, Mansy, O'Hara, Gedra, and Arsalan say the first two "are not flexible enough to allow for innovation in the design of daylighting systems," while computer programs "[do] not suit beginning undergraduate students as a learning tool."

In 2003, Mansy received an \$85,000 grant from the National Science Foundation for the construction of the sky dome, and OSU contributed about \$37,000. It is being built at OSU's Advanced Technology Research Center and will be moved to the school's architecture building after renovations there are complete. Because the sky dome will consume a large amount of energy, says Mansy, users not affiliated with OSU will have to pay a fee. Until the structure is complete, however, he declines to speculate what the cost might be.

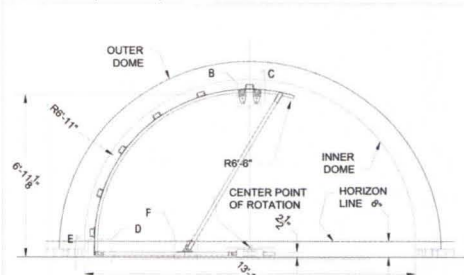


The sky dome's two domes, as seen from below.



This image shows the sky dome's octagonal raised floor; the diaphragm that holds the base plates carrying outer dome; the base of the inner, translucent dome; and the rotating square base of the heliodon.

SECTION AA (1/2" = 1'-0")



Seen here are the sky dome's three components: the outer dome, where 341 lamps will be mounted; the inner dome, which is translucent; and the heliodon arc, which adjusts the position of the sun.

Clips

For the past six years, Washington, D.C.'s **Hickok Cole Architects**

has been partnering with the Washington Project for the Arts\Corcoran (WPA\C) to hold Art Night, a private event at the firm's offices that showcases the work of local artists. This year's Art Night, held Oct. 26, was attended by a record 730 guests and generated more than \$30,000 in artwork sales. All proceeds from sales are shared by the artists and the WPA\C. The event has raised more than \$140,000 over the years.

Furniture maker Dennis Miller Associates will be launching the **Morris Lapidus Collection** in January 2007. Lapidus, who died in 2001, is best known for designing over-the-top Miami Modernist hotels such as the Fontainebleau and the Eden Roc. This will be the first time his furniture designs have been made available to the public.

On Oct. 23, **Alan Altshuler** announced that he will be stepping down as dean of the Harvard Graduate School of Design. Altshuler was appointed acting dean in July 2004 and assumed deanship in February 2005. He will continue to serve as dean until the end of the current academic year, after which he plans on a year's sabbatical from academia.

Coroflot (www.coroflot.com), a career and community site for creative professionals, runs an **online design salary survey** every year. For 2006, architects were included for the first time. The results: 256 respondents (186 of whom were self-labeled as in-house/corporate); average salary: \$49,356.

One sign that the sustainability/green movement continues to gain momentum: *The New Oxford American Dictionary's* Word of the Year for 2006 is "carbon neutral."

RETHINK PRECAST



Brad Feinknopf

High lets you take precast design farther than you ever dreamed possible. That's why internationally renowned architect Arata Isozaki relied on precast concrete to meet the unique challenges of the striking Center of Science and Industry (COSI) in Columbus, Ohio. High's unparalleled commitment to new technology and innovation has led to advancements such as carbon fiber reinforced CarbonCast®—precast that's stronger, lighter and more durable, allowing a virtually unlimited selection of colors, textures and

finishes at no additional cost. And the 15'-wide MEGA-Tee deck system enables wider spans and more open plans in total precast buildings and parking garages. Cutting-edge structures like COSI are possible with High's expert technical assistance in all phases of a project, from design to erection. High gives architects the flexibility to explore unique solutions while ensuring a job is completed on schedule and on budget. Call High to learn more about how to rethink precast.



HIGH CONCRETE GROUP® ■ CONCRETE INNOVATIONS & ANSWERS® ■ CALL US AT 800-PRECAST ■ WWW.HIGHCONCRETE.COM

Circle no. 35 or <http://architect.hotims.com>

BuildingGreen's Top 10 Products for 2006



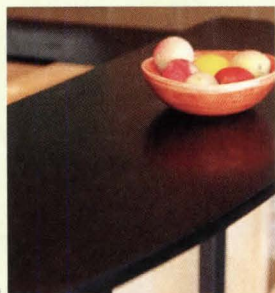
1



2



3



4



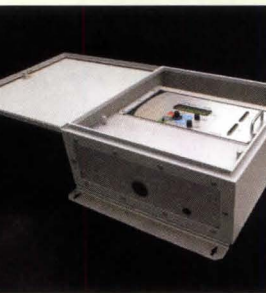
5



6



7



8



9



10

- 1 RetroPlate polished concrete system, by Advanced Floor Products Inc.
- 2 Underwater standing timber salvage, by Triton Logging Co.
- 3 SageGlass tintable glazing, by Sage Electrochromics Inc.
- 4 PaperStone composite surface material, by KlipTech Composites
- 5 Varia and 100 Percent panel products, by 3form Inc.
- 6 Recycled-content molding, by Timbron International Inc.
- 7 Water-efficient showerhead, by Delta Faucet Co.
- 8 WeatherTRAK smart irrigation controls, by HydroPoint Data Systems Inc.
- 9 Coolerado Cooler air conditioner, by Coolerado Corp.
- 10 Renewable energy credits from Community Energy Inc.

Deadlines Competitions and more

DEC. 15, 2006

Exhibit Design Awards

Exhibitor magazine's Exhibit Design Awards honor the world's best trade show exhibit designs. Categories include innovative materials, design concept, single element, small budgets and spaces, and more. Designs that debuted between Dec. 1, 2004, and Dec. 1, 2006, are eligible. www.exhibitoronline.com/awards

DEC. 27, 2006

Rotch Travelling Scholarship

The Rotch Travelling Scholarship provides \$35,000 for a young architect to travel the world. Entrants must be younger than 35 and either have earned a degree from an accredited school of architecture in Massachusetts and practiced for one year in a professional firm or graduated from an accredited U.S. school of architecture and practiced for one year in a Massachusetts-based firm. www.rotchscholarship.org

DEC. 31, 2006

Registration for Building a Sustainable World Competition

The Royal Institute of British Architects-USA presents a competition to develop a concept for a maximum-capacity, off-the-grid sustainable community or urban subdivision. Concept proposals are due Feb. 1, 2007. www.riba-usa.org

JAN. 3, 2007

Loeb Fellowship, Harvard Graduate School of Design

The Loeb Fellowship offers 10 midcareer professionals who have been engaged in their field for a minimum of five years the opportunity to study at Harvard University for one year. The central focus and goal of the fellowship is to improve the built and natural environments in the United States. www.gsd.harvard.edu/professional/loeb_fellowship

JAN. 15, 2007

Construction Specifications Institute Fellowship

Fellows of the Construction Specifications Institute are chosen by their peers. Nominees must be members in good standing for not less than five years and have notably contributed to the advancement of construction technology; to the improvement of construction specifications; to education; or by service to the institute. www.csinet.org

JAN. 15, 2007

Zero-Energy Building Award

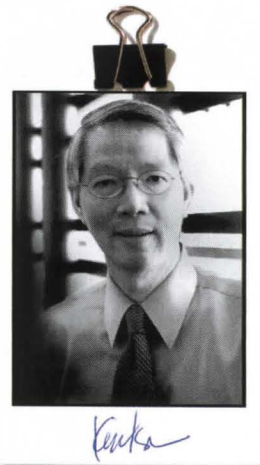
Presented by the Northeast Sustainable Energy Association. To be eligible, a building must have been occupied and documented net-zero energy use for one year. Buildings in the six New England states and New York, New Jersey, Pennsylvania, Delaware, and Maryland are eligible. www.zeroenergybuilding.org

My turn

Ken M. Tse, AIA, LEED AP
Senior Designer VP
HKS Architects, Inc.
Dallas, Texas

RadioShack® was looking for an innovative design that would reflect their transition from a "traditional" office environment to a new corporate culture of connectivity and collaboration.

I got Viracon involved early into the conceptual process – they're the resource I trust for glazing recommendations on many of my projects.



The Viracon team really listened to what we wanted to accomplish. They offered great options that gave us the look and performance we were looking for on this high-profile project.

We decided on Solarscreen™ VRE 1-46 Insulating Glass because of its high performance characteristics and the aesthetic properties it has to complement the beautiful urban location on the Trinity River.

Do you want a turn?
Contact us for details. Call
800.533.2080 or e-mail
glass@viracon.com.



RadioShack World Headquarters Riverfront Campus
VRE 1-46 (Viracon Radiant Low-E)
Fort Worth, Texas
Wes Thompson Photography



CASCADE COIL DRAPERY

www.cascadecoil.com

20 Years™

800-999-2645



Shanghai Lilly Restaurant
Las Vegas Nevada

Circle no. 81 or <http://architect.hotims.com>

REPORT NEWS

Products

10 Ways to Get to Green

BuildingGreen's annual list of top products highlights the range of ever-increasing options

FOR THE FIFTH consecutive year, BuildingGreen Inc. announced its top 10 green building products at the U.S. Green Building Council's Greenbuild Conference, held this year in Denver in mid-November. The publisher of *Environmental Building News*, a monthly newsletter, and the *GreenSpec Directory*, a national directory of green building products, creates its list from products added to the directory and covered by the newsletter over the previous year. This year's list (see "BuildingGreen's Top 10 Products for 2006," page 40) includes materials, glazing, an air conditioning system, products for greater water efficiency, a system for salvaging timber, and a process by which building owners can earn renewable energy credits.

"Part of the purpose in recognizing the top 10 products is to convey the breadth of green building products entering the market," says Alex Wilson, executive editor of *Environmental Building News* and co-editor of the directory. Yet keeping up with what's available can be a challenge at times. In just the past year at least 250 products have been added to the *GreenSpec* database (which now has more than 2,100 listings), and Wilson admits there is a backlog of products being reviewed and written up. "More and more companies are coming to us with products to evaluate," he says.

Not all of those companies are acting in good faith, however. In an effort to get in on the growing business of sustainability, some manufacturers engage in "greenwashing"—portraying a product as environmentally friendly when in fact it is not, or at least not to the degree touted. Wilson says the issue has "probably gotten more common" but notes that BuildingGreen's editors and researchers approach manufacturer claims with a "healthy skepticism."

BuildingGreen publishes "very specific" criteria for what constitutes a green product, says Wilson (go to www.buildinggreen.com/auth/article.cfm?fileName=090101a.xml). The five basic principles are products made with salvaged, recycled, or agricultural waste content; products that conserve natural resources; products that avoid toxic or other emissions; products that save energy or water; and products that contribute to a safe and healthy built environment. BuildingGreen's criteria are reviewed and modified at least yearly, Wilson says, usually to tighten the standards.

But BuildingGreen does not do any testing itself. Instead, it relies on certifications from such independent organizations as Green Seal (www.greenseal.org), the Greenguard Environmental Institute (www.greenguard.org), and Scientific Certification Systems (www.scscertified.com), which verify environmental claims or measure environmental performance. Editors and researchers also talk with users and building professionals to learn whether products perform as claimed.

"Because we don't carry advertising in any of our publications, and because manufacturers do not pay for listings in [the directory], we are able to be fully objective and independent in our designation of products as green," says Wilson.

Learn more about the top 10 products at www.buildinggreen.com.



Makes style and maintenance
ELEMENTARY.

evolvingstyles

SMOOTH RUBBER TILE & SHEET

Now you can design your high-traffic areas with a steady diet of style, yet still give them the durability and resilience to stand tall against daily wear-and-tear. That's Evolving Styles. Whatever life throws at it, Evolving Styles eats it up with minimal maintenance for a look that stays true from one day to the next.

Call us today for more information:
1.800.633.3151 www.flexcofloors.com

AVAILABLE IN TWO GAUGES, THREE TILE SIZES AND SHEET RUBBER FOR THESE APPLICATIONS AND MORE.

GYM > CLASSROOM > CAFETERIA > KITCHEN > HALLWAY > WAITING ROOM > PATIENT ROOM > OIL CHANGE SHOP > MALL > BOWLING ALLEY >

FLEXCO[®]
Flooring to the power of X.

Circle no. 382 or <http://architect.hotims.com>

ONE INNOVATIVE MICROWAVE. ENDLESS DESIGN POSSIBILITIES.



THE WORLD'S FIRST MICROWAVE DRAWER™

Convenience, accessibility and flexible design. The one-of-a-kind Sharp Insight Pro™ Microwave Drawer blends all the ingredients of the perfect kitchen appliance. The 30" and new 24" models open automatically with the touch of a button. Both are ideal under a counter, cooktop or wall oven, in islands and open plan kitchens, even in a wet bar or family room. To learn more about the most innovative idea yet for where to place the microwave, call 1-866-RANGE99 or visit sharpusa.com/microwavedrawer



©2006 Sharp Electronics Corporation



Insight Pro™ Microwave Drawer
Best New Kitchen Product 2005,
Kitchen and Bath Industry Show

SHARP®



Limited only by where you draw the line.

With new Formawall® Graphix Series™* wall system's unique segmented construction, the illusion of many panels is created from just one panel, easily and affordably. Call CENTRIA today to receive your free Graphix Series brochure and design guide.

FORMAWALL®
GRAPHIX
SERIES™ WALL SYSTEM



* Patent Pending

1.800.752.0549 www.CENTRIA.com

Circle no. 25 or <http://architect.hotims.com>



CERAMIC TILES OF ITALY. THE ART OF LIVING.

A masterpiece begins with the selection of the first building block.
Italy produces the world's largest range of styles, colors, designs and technological innovations in ceramic tile.
Before your next residential or commercial project, be sure to visit www.italiantiles.com to see the latest trends and find your closest source.

For more information, please contact:

Italian Trade Commission – Ceramic Tile Department – 33 East 67th Street – New York, NY 10021-5949 – ph (212) 980-1500 – newyork@newyork.ice.it
Ceramic Tiles of Italy, promoted by Assopiastrelle (Association of Italian Ceramic Tile and Refractories Manufacturers), is a registered trademark of Edi.Cer. S.p.a.,
the organizer of CERSAIE, International Exhibition of Ceramic Tile and Bathroom Furnishings – Bologna, Italy, October 2-6, 2007 – www.cersaie.it



Ceramic Tiles of Italy

Circle no. 387 or <http://architect.hotims.com>



Where windows are just the beginning.

Building On A Great Beginning

For more than a half-century, EFCO Corporation has been building on our reputation for providing discriminating designers beautiful, functional, energy-efficient windows for projects large and small.

On this basis, we've established our company as your comprehensive, single-source supplier of professional service and innovative products. That's a resource you can build on.

For a complete listing of EFCO products, please visit us online at efcocorp.com or call us at 800.221.4169

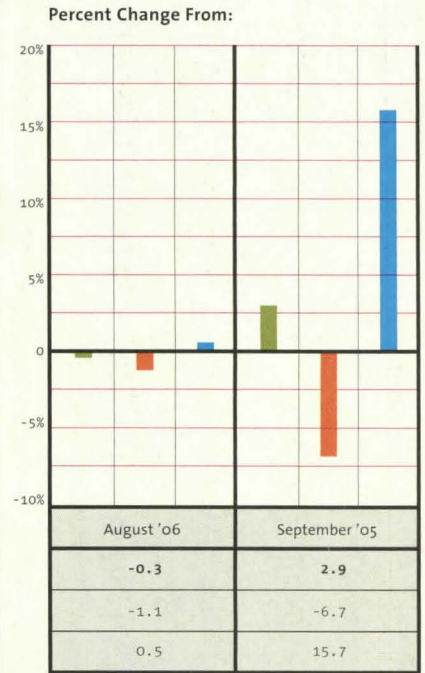
Circle no. 85 or <http://architect.hotims.com>

September 2006

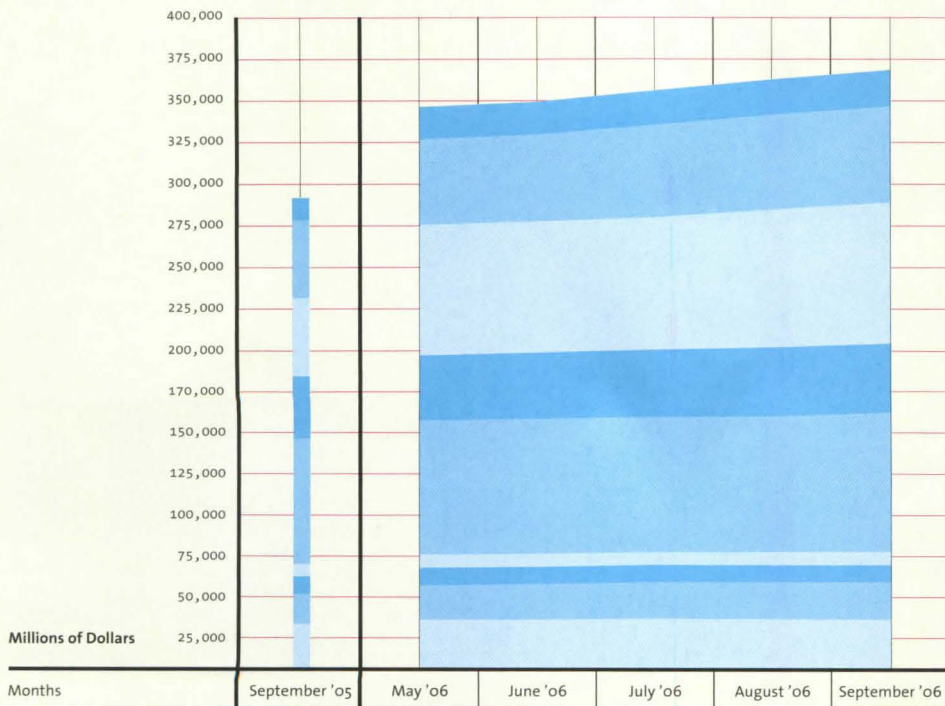
Construction Spending

From the U.S. Census Bureau's monthly report on the value of construction put in place

TOTAL CONSTRUCTION (SEASONALLY ADJUSTED)



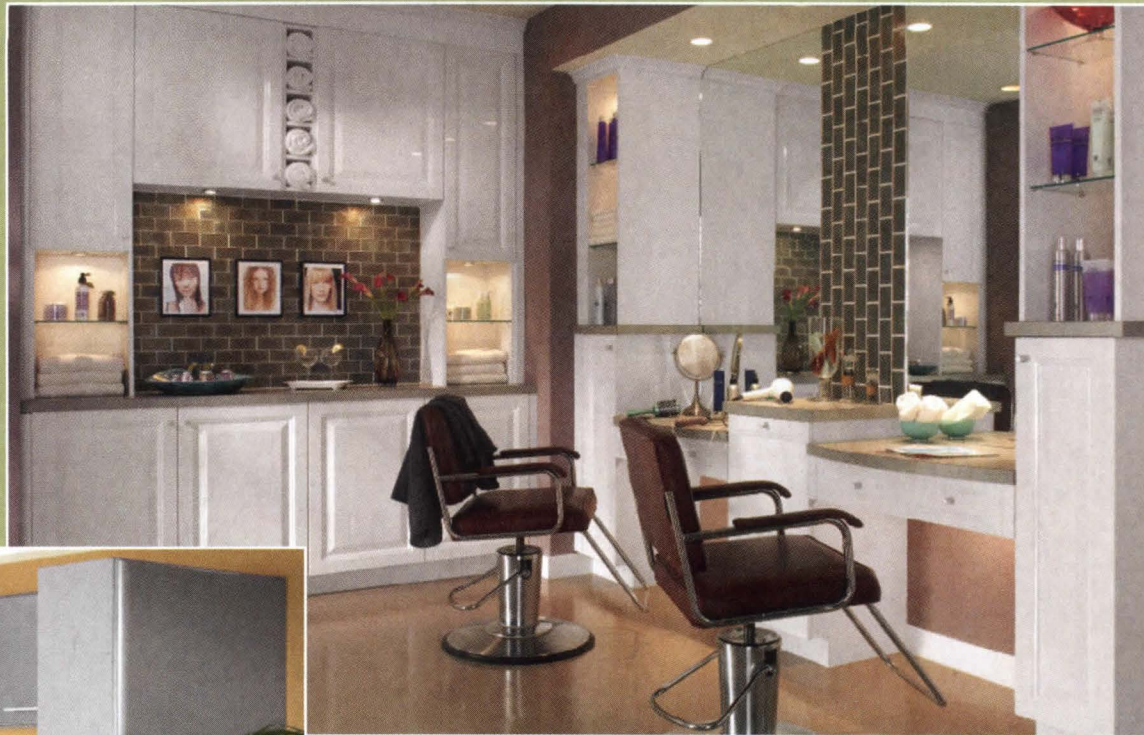
SELECT NONRESIDENTIAL CONSTRUCTION (SEASONALLY ADJUSTED)



Category (September '06 Total)

- Lodging (22,432)
- Office (58,701)
- Commercial (86,112)
- Health care (42,984)
- Educational (86,042)
- Religious (8,241)
- Public safety (10,759)
- Amusement and recreation (23,276)
- Transportation (30,279)

venicia™
BY KRAFTMAID®



Venicia by KraftMaid is perfect for light commercial as well as residential applications.

Introducing cabinetry that is no longer a stretch of the imagination.

Introducing cabinetry that no longer requires you to stretch the timeline and budget.

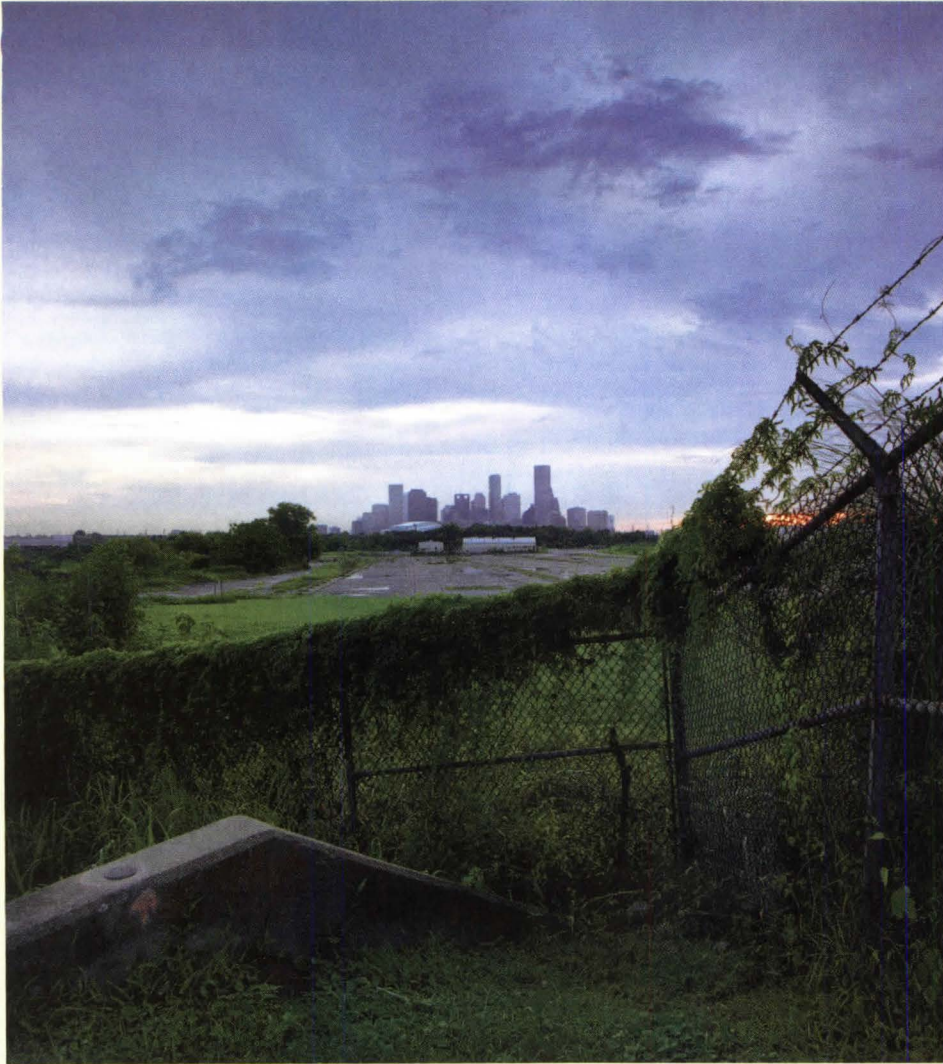
Introducing Venicia™ | A brand-new line of open frame Euro-style cabinetry from KraftMaid that allows you to bring your vision into your project designs. With Venicia, you'll enjoy the endless design opportunities that come with these sleek and sophisticated lines, along with the affordability, flexibility and short lead times you've come to expect from KraftMaid. Thanks to Venicia, the design of your clients' dreams is the same one you've been dreaming of designing.

For information and complete product specifications, visit kraftmaidspec.com or call 800-581-4484.

Made just for you.
KraftMaid
Cabinetry

www.kraftmaidspec.com

Circle no. 41 or
<http://architect.hotims.com>



JUSTIN CALHOUN

Estimates for how much land in Houston is open to development run as high as 300,000 acres.

Houston

Medicine and energy make Texas' largest city fertile ground for building

HOUSTON'S RAPIDLY GROWING business environment is fueled by two thriving industries: medicine and energy. These major corporate citizens spawn spinoffs, lure partner companies, and support service, retail, and restaurant concerns.

"With a wealth of healthy corporations and the largest and most advanced medical center in the nation [Texas Medical Center], building opportunities abound," says John Porretto, president of Sustainable Building Solutions. And with Houston's famous lack of zoning, any space is developable. Some observers estimate that up to 300,000 acres are available in the metro area.

"Houston enjoys a national reputation as a community that welcomes and encourages entrepreneurial endeavors," says Porretto, whose firm provides energy-efficient design/build services for commercial and residential customers in the greater Houston area.

Sustainable design is a growing submarket for architects in Houston, reportedly the most air-conditioned place on earth. The city includes LEED (Leadership in Energy and Environmental Design) certification in requests for qualifications for municipal projects, and the Greater Houston Builders Association has created a baseline for green building. "We have a large population, a challenging climate, and sprawl," says Amanda Tullos, a LEED-accredited architect with Heights Venture Architects. "Practicing green design here will not only bring us into better balance with the environment, but also raise quality of life." MARGOT CARMICHAEL LESTER

OFFICE MARKET

There are 225 million square feet of rentable office space in Houston; 3.5 million square feet are under construction. The city's office leasing market continues to strengthen at a steady pace. "During the third quarter, the Class A sector registered 726,173 square feet of positive growth, as the annual absorption figure increased to 2.6 million square feet," says Ariel Guerrero, the Texas client services manager at Grubb & Ellis Co., a commercial real estate advisory firm.

	OVERALL	CLASS A	CLASS B
3Q06 ASKING RATE	\$19.56/s.f.	\$22.81/s.f.	\$17.14/s.f.

RESIDENTIAL MARKET

Housing costs in Houston are 28 percent below the national average. "The housing bubble is still going strong here," notes Bob Cromwell, managing director for Moody Ramin Interests, a commercial real estate brokerage and management firm. "Big residential developers are buying 2,000 to 5,000 acres at a time."

MARKET STRENGTHS

- Strong population and job growth
- Robust housing and office market
- No zoning requirements

MARKET CONCERNS

- High energy consumption
- Below-average home appreciation
- No zoning requirements

GROWTH

Houston's 2.5 percent job growth is nearly double the nation's 1.3 percent. Multinational companies continue to establish headquarters here, fueling population growth. The city's population, which was 2 million in 2005, is expected to grow steadily through 2015.

DEVELOPMENT INCENTIVES

Companies using sustainable or green building practices are eligible for pollution-control property tax abatements from the city.

City property tax abatements are also available to new, expanding, and relocating operations that create or retain 25 or more jobs and invest \$1 million or more.

Businesses relocating or expanding into an enterprise zone (any census block group in which the poverty level is 20 percent or higher) can qualify for refunds of state and local sales taxes.

→ continued on page 52

Smart energy for a smarter world.

Electricity is everywhere in your daily life. Take baby Joey. When he looks through the window, it's a very lively world he sees. A world where he will feel just as safe as in his daddy's arms. Where, thanks to Schneider Electric, the world leader in the management of electricity and automation, technology becomes so effective that you forget it's even there. Together with its brands: Square D® — the best known name in NEMA type electrical distribution and control products, systems and services — Telemecanique® — one of the world's leading brands of automation and control products, systems and solutions — and TAC® — a leading provider of building automation solutions — Schneider Electric converts electricity into smart energy. Creating processes and solutions today that are simple, efficient and environmentally friendly. So tomorrow's world is a better place to be. Welcome to a new electric world.

Circle no. 75 or <http://architect.hotims.com>

1

This is where we control the building's energy usage.

2

This is where we automate the tunnel ventilation network.

5

This is Joey, who's happy to know he's never alone.

3

This is where we distribute power for the buildings.

4

This is where we safely provide electricity for Joey's baby monitor.



www.us.schneider-electric.com

Schneider
 **Electric**
Building a New Electric World

REPORT MARKET INTELLIGENCE LOCAL

NOTABLE PROJECTS



ASSASSI

The School of Nursing and Student Community Center, University of Texas Health Science Center at Houston, emphasizes energy efficiency, air quality, natural daylighting, and reduced emissions/runoff. The eight-story, \$57 million facility won a 2006 AIA Committee on the Environment Top Ten Green Award. Designed by BNIM Architects and Lake/Flato Architects.



JUD HAGGARD PHOTOGRAPHY

Westside Command Center, home to police officers, court employees, and jailers, underwent an \$8.5 million renovation that included a green roof, recycled glass paving, and native plantings. Designed by English + Associates Architects.



MORRIS ARCHITECTS

Lakewood Church spent \$75 million to turn the 600,000-square-foot Compaq Center, a sports arena, into a house of worship. The project includes a massive stage, a movable orchestra pit, three I-Mag screens, space for a 250-member choir, and seating for a 16,000-person congregation. Designed by Morris Architects.

KEY ARCHITECTS

BNIM ARCHITECTS

Recent project: School of Nursing and Student Community Center, University of Texas Health Science Center at Houston

In business for 36 years, the firm's other, primary office is in Kansas City, Mo.

GENSLER

Recent project: an expansion of BP's West Houston campus with a 390,000-square-foot facility to meet LEED certification

Established in 1965, the firm reported \$410 million in global billings in 2005.

KIRKSEY

Recent project: Institute of Health Sciences—Houston Center, Texas Woman's University

Founded in 1971, the firm has planted more than 5,000 trees in the Houston metro area since 1987.

KEY DEVELOPERS AND BUILDERS

HINES INTERESTS

Recent projects: a six-story, 170,000-square-foot office building and a 30,000-square-foot amenities center for Shell Oil Co.

Founded in 1957, the company has developed nearly 50 million square feet in Houston alone.

NEWLAND COMMUNITIES

Recent projects: Summerwood (1,500 acres) and Eagle Springs (1,360 acres), two master planned communities

Headquartered in San Diego with offices in Houston, the company received the 2006 Environmental Impact Award from the North Houston Association.

TRAMMELL CROW CO.

Recent project: Energy Center, a 13-story, 330,000-square-foot office building and the first high-rise, Class A structure constructed in Houston's Energy Corridor since 2000

The Houston office has been in operation for 40 years. In late October, the company agreed to be acquired by CB Richard Ellis.

FORECAST

With the energy, medical, and aerospace industries all performing well, the future is bright, says Cromwell of Moody Ramin Interests. "It's simply a matter of who acts first in terms of taking advantage of residential and commercial development demand." Adds Wendy Teas Heger, LEED-accredited chief of design and construction for the City of Houston: "Houston is one of the most affordable cities to live in in the United States. We have reasonably priced housing, great restaurants, extensive cultural diversity, lots of trees and parks, and friendly people."

Smart energy for a more productive world.

Electricity is everywhere in your daily life. At the office, Paul is so comfortable, he sometimes forgets what time it is. His boss? Delighted. His wife? Less so. Thanks to Schneider Electric, the world leader in the management of electricity and automation, technology becomes so effective that you forget it's even there. Together with its brands: Square D® — the best known name in NEMA type electrical distribution and control products, systems and services — Juno Lighting Group — a leader in the design and manufacturing of recessed, track and decorative lighting fixtures — and TAC® — a leading provider of building automation solutions — Schneider Electric converts electricity into smart energy. Creating processes and solutions today that are simple, efficient and environmentally friendly. So tomorrow's world is a better place to be. Welcome to a new electric world.

Circle no. 76 or <http://architect.hotims.com>

1

This is where we provide efficient lighting.

This is where we distribute electrical power and save energy.

2

3

This is where we regulate the lighting and temperature.

4

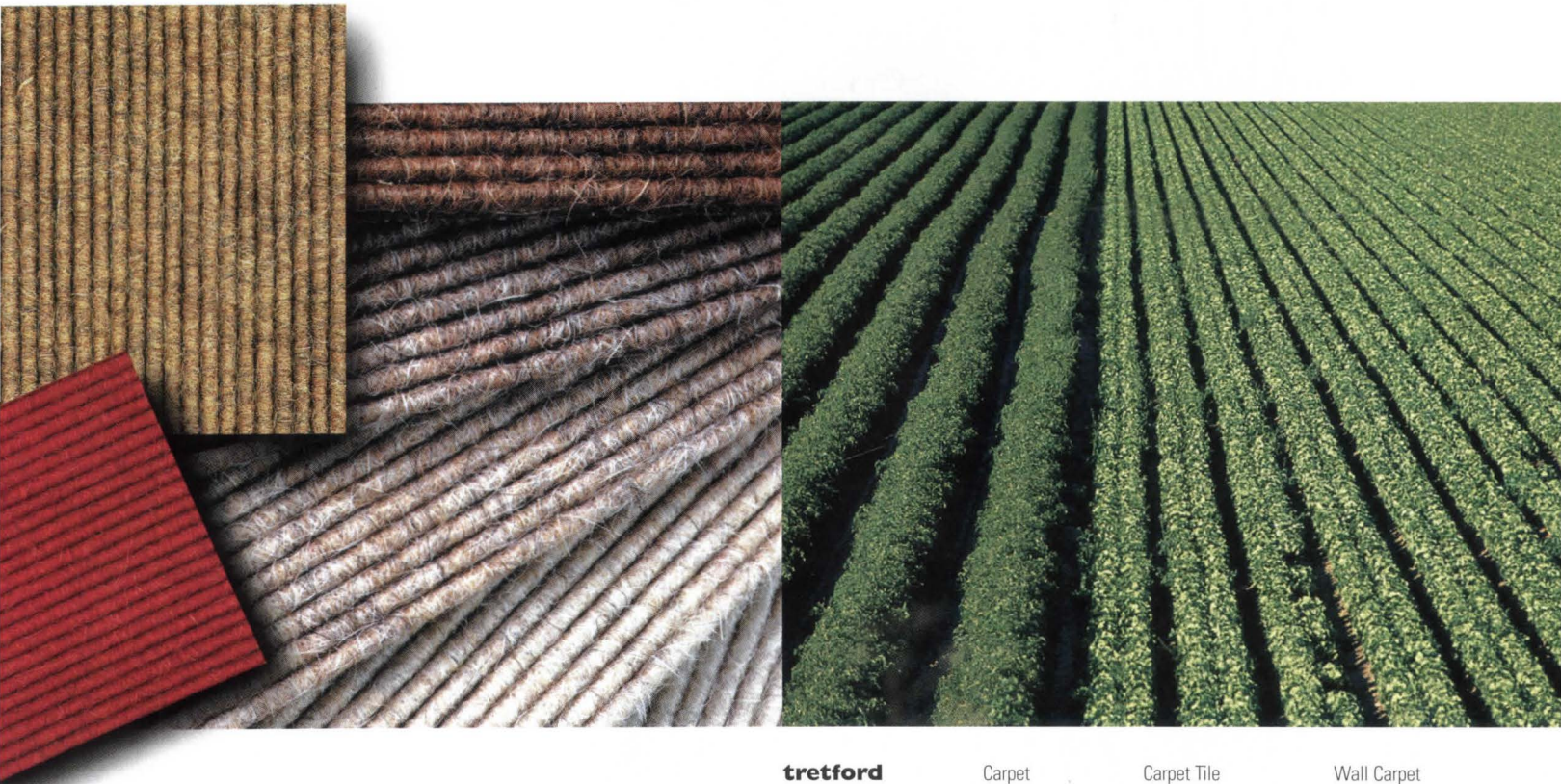
This is Paul. He feels so good that sometimes he forgets to go home.



www.us.schneider-electric.com

Schneider
 **Electric**
Building a New Electric World

The new age had come and gone.
The old returned with its familiar ribbed grace
and was received as a dear remembered friend.



tretford

Carpet

Carpet Tile

Wall Carpet

Fiber cured.

No-ravel edge.

2-meter width.

Wall carpet Class A rated.

51 colors.

Carpet tile with composite back,
32 colors.

EUROTEX

Exploring surfaces

Uncommon solutions for floors and walls

165 West Ontario Street
Philadelphia, PA 19140 USA
Tel 800.523.0731
Fax 215.423.0940
speceurotex@prodigy.net

www.eurotexinc.com

Circle no. 99 or <http://architect.hotims.com>

Our 6,000-plus decorative synthetic
millwork products deliver sharp, crisp,

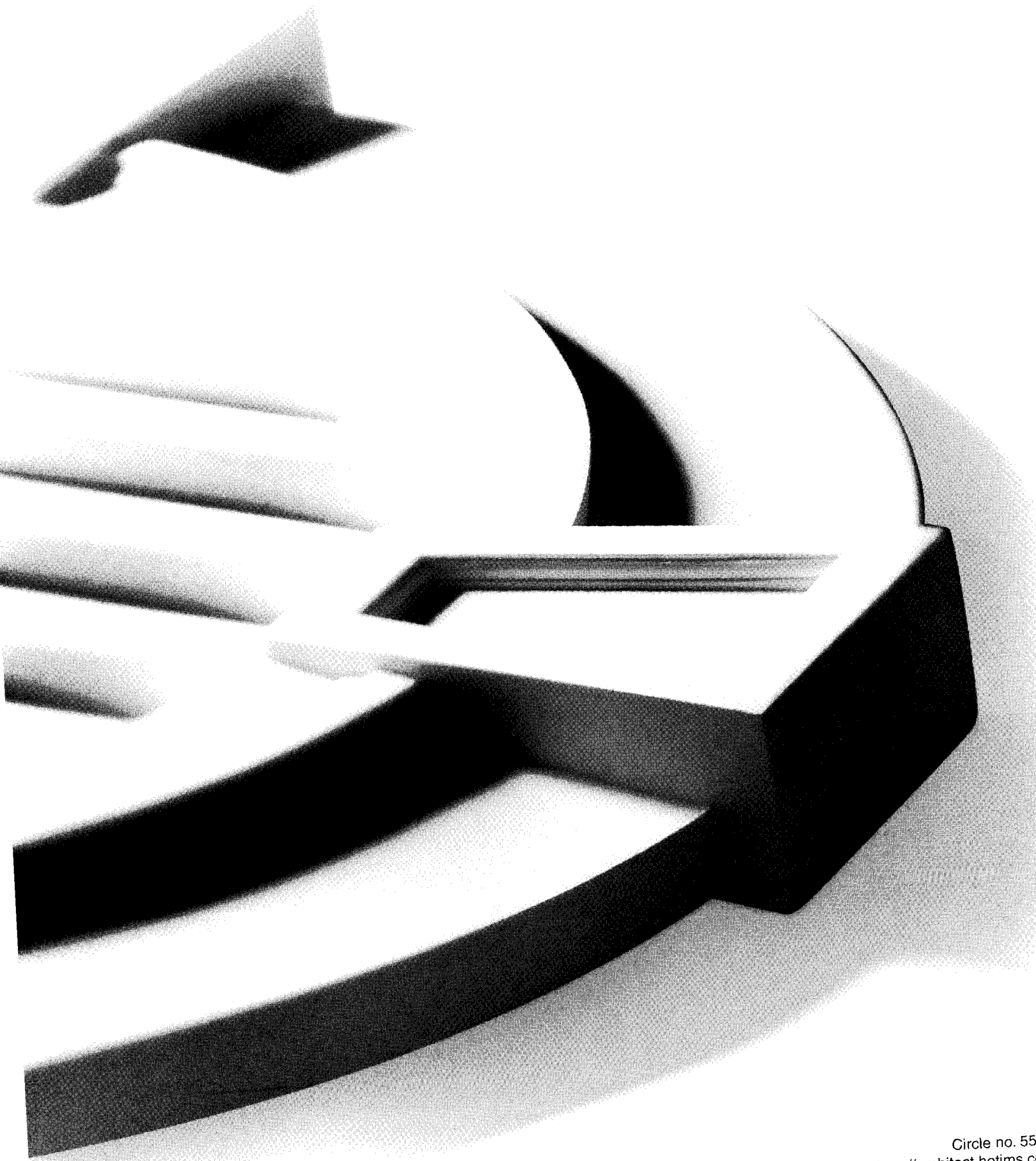
FINALLY. MILLWORK THAT LOOKS GOOD ON PAPER.

lasting details. Cast in lightweight,
laborsaving materials, they'll push you
to the ends of your imagination—not
to the end of your budget. At Fypon,[®]
millwork doesn't just make things
beautiful. It also makes sense.



www.specifypon.com • 800.446.3040

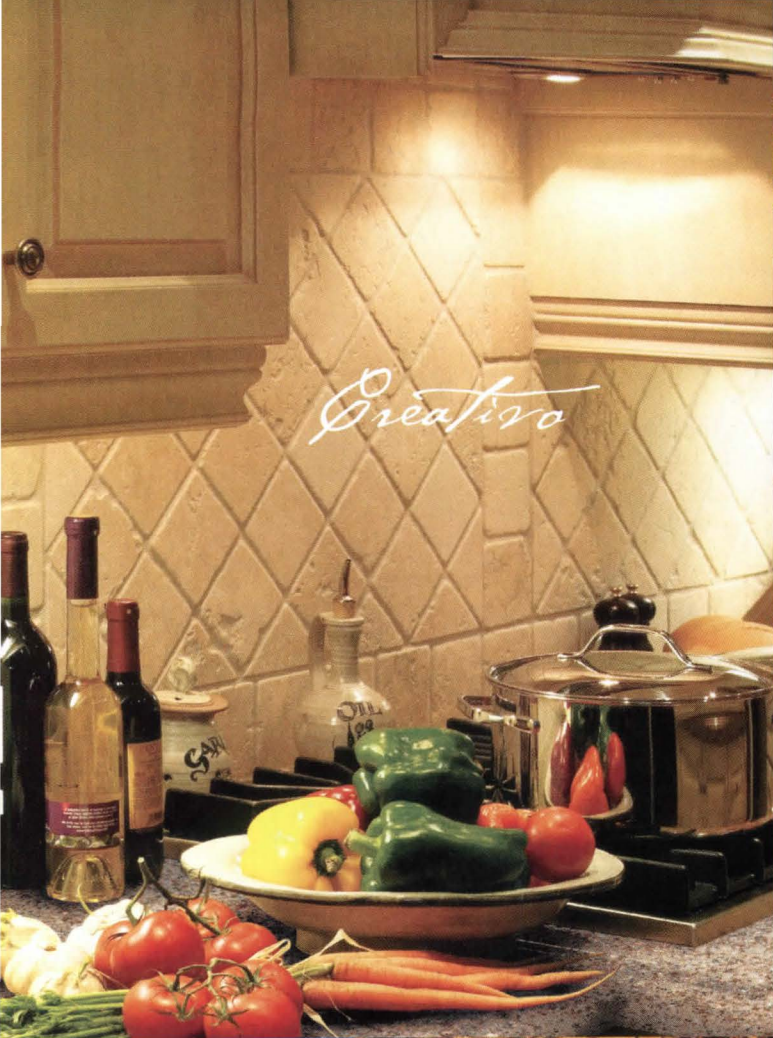
To schedule a consultation, call our toll free number or visit
our website for more information.





innovation
design
technology
diversity





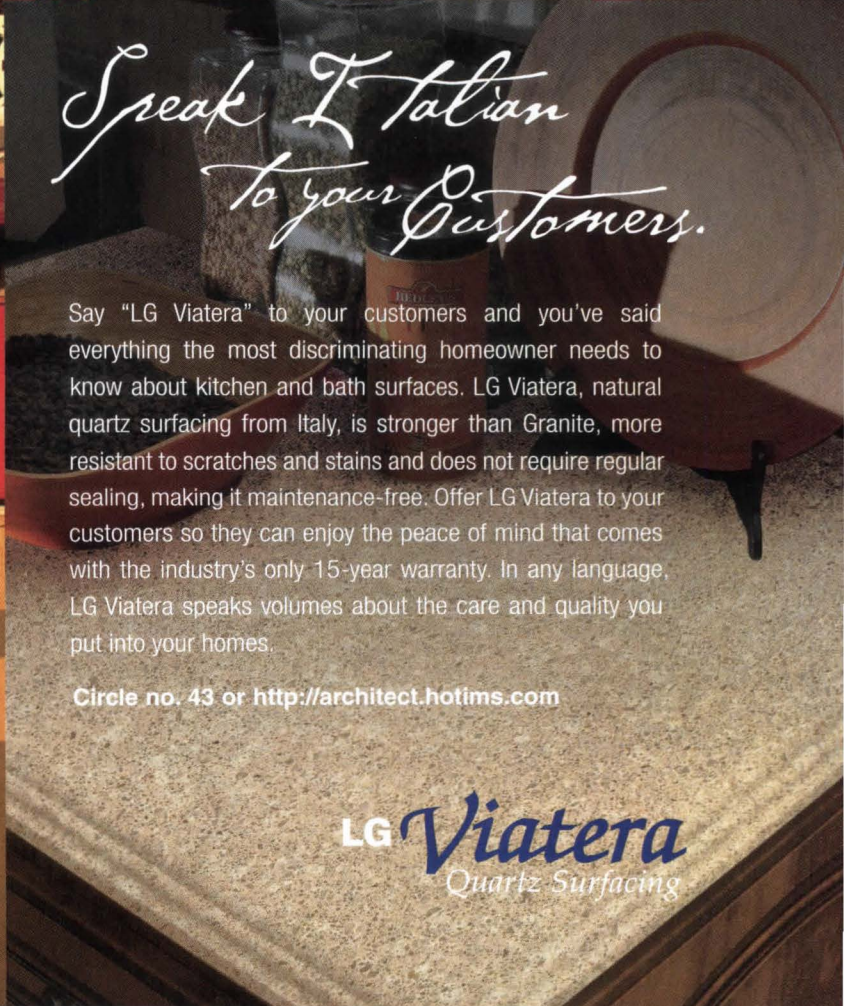
Creativa



Elegante



Classica



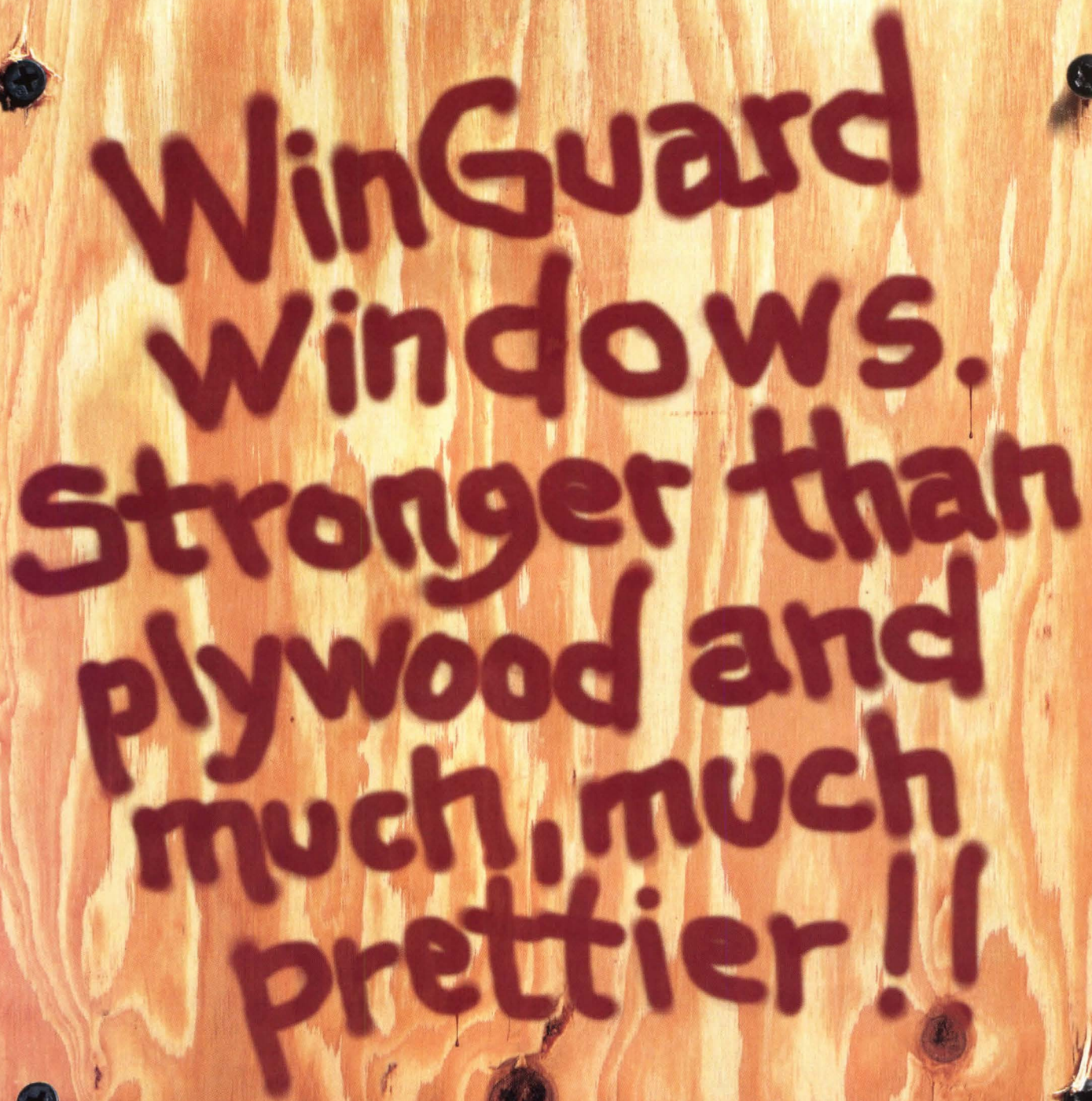
*Speak Italian
to your Customers.*

Say "LG Viatera" to your customers and you've said everything the most discriminating homeowner needs to know about kitchen and bath surfaces. LG Viatera, natural quartz surfacing from Italy, is stronger than Granite, more resistant to scratches and stains and does not require regular sealing, making it maintenance-free. Offer LG Viatera to your customers so they can enjoy the peace of mind that comes with the industry's only 15-year warranty. In any language, LG Viatera speaks volumes about the care and quality you put into your homes.

Circle no. 43 or <http://architect.hotims.com>

LG Viatera
Quartz Surfacing

15 Year
Fully Transferable
WARRANTY



WinGuard
windows.
Stronger than
plywood and
much, much
prettier!!

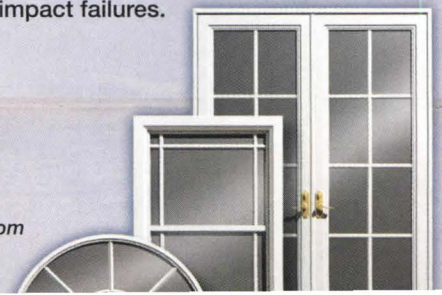
WinGuard® Impact-Resistant Windows and Doors spell the end of plywood. The end of unsightly shutters and brackets, too.

WinGuard maintains the look of your design, and even enhances it with a wide variety of custom shapes and sizes. But as beautiful as these windows and doors are, they're also tough. WinGuard protects against strong winds and flying debris, meeting the strictest hurricane code requirements in the nation. In fact, even after the extraordinary 2004 hurricane season, with over one million units installed, WinGuard had zero reported impact failures.

EFFORTLESS HURRICANE PROTECTION™

PGI **WinGuard**
IMPACT-RESISTANT WINDOWS & DOORS

To learn more, visit Architect View at www.NoMorePlywood.com
or call 1-877-WINGUARD



Home of the Year

A special presentation of *Architecture* magazine's awards for residential architecture

The Jury

KEVIN ALTER is Sid W. Richardson Centennial Professor of Architecture and associate dean for graduate programs at The University of Texas at Austin. He is a graduate of Bennington College and of Harvard University and has practiced professionally in Massachusetts, New York, and Texas. His professional work has received several design awards, including a 1998 AIA Honor Award.

JULIE EIZENBERG is a principal of Koning Eizenberg Architecture, which she established with partner Hank Koning in 1981. She is a peer reviewer for the GSA Design Excellence program and recipient of the 2004 Design Excellence Award from the Association of Women in Architecture. Based in Santa Monica, Calif., Koning Eizenberg Architecture was named the 2004 Residential Architect Firm of the Year.

ROBERT HULL and his partner David Miller founded their Seattle firm in 1977, after both had graduated from Washington State University and served in the Peace Corps. Some 70 percent of Miller|Hull's projects involve public funding, and they range in scale from neighborhood park structures and single-family houses to a \$54 million laboratory and classroom building. Miller|Hull was named AIA Firm of the Year in 2003.

ROCIO ROMERO is the owner of Rocio Romero, a Perryville, Mo., firm that designs, builds, and sells prefabricated houses in two models: the LV series and the Camp series. Romero received her master's of architecture from the Southern California Institute of Architecture and her bachelor of arts degree in environmental design with a major in architecture from UC Berkeley.

MARC TSURUMAKI is a cofounder of the New York City firm Lewis.Tsurumaki.Lewis. He has taught at institutions including Columbia and Barnard colleges and Parsons The New School for Design. In 2002, Tsurumaki was named a trustee of the Van Alen Institute. His firm's recent projects range from a collection of wall coverings for Knoll Textiles to a 47,500-square-foot residence hall for the College of Wooster, Ohio.

The Winners

Platform House

Platte County, Mo.
Rockhill and Associates

Modular 3

Kansas City, Kan.
Studio 804

Plaza Apartments

San Francisco
Ledy Maytum Stacy
Architects and Paulett
Taggart Architects

1+3=1

Venice, Calif.
Leisner Trigas Jeevanjee

ROAR_one

Vancouver
LWPAC

3-in-1 House

Santa Monica, Calif.
Roger Sherman
Architecture + Urban
Design

Ceruti House

Cleveland Heights, Ohio
Thom Stauffer Architects

Streeter House

Deephaven, Minn.
Salmela Architect

Multifamily Housing

San Francisco
Stanley Saitowitz/
Natoma Architects





RADICAL CHIC

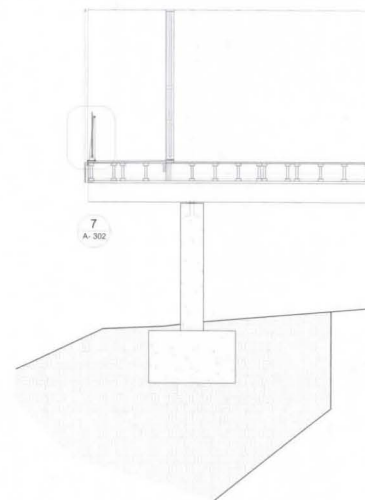
LOT Two-hole mixer with cover plate

DORN
BRACHT

the SPIRIT of WATER

LOT is the sculpture among kitchen faucets. Architecturally pure, clean and noble. Its formal language is extremely reserved which makes it even more striking. LOT was designed by Sieger Design. To request a copy of our publication the SPIRIT of WATER / kitchen, please contact: Dornbracht USA, Inc., 1700 Executive Drive South, Suite 600, Duluth GA 30096, Phone 866-818-3199, E-Mail literature@dornbracht.com www.dornbracht.com

Chicago: ADVANTAGE KITCHEN & BATH GALLERY, Phone (847)965-4444. COMMUNITY HOME SUPPLY, Phone (773) 281-7010. **New York:** DAVIS & WARSHOW, Phone (212) 688-5000



Modular 3

Kansas City, Kan.
Studio 804, University of Kansas

KEVIN ALTER: While there are things that are awkward about it, I like the way it sits on its foundation, the sense of being affordable, being made off-site, being a part of the public domain. It's still elegant and ambitious even as a very modest building.

MARC TSURUMAKI: There is a kind of innovation in terms of process.

JULIE EIZENBERG: It has taken the idea of what you can do in a prefab system as far as it could go—in a simple, elegant, stylish way. That's great.

CLIENT El Centro, Community Development Corp.

PROJECT TEAM Studio 804, Dan Rockhill, instructor

ENGINEERS Barney Schwabauer, Norton and Schmidt

GENERAL CONTRACTOR Studio 804, Dan Rockhill, instructor

COST \$155,000 (sale price)

PHOTOGRAPHER Dan Rockhill

©2005 DuPont. All rights reserved. The DuPont Oval Logo, DuPont™, The miracles of science™ and Corian® are registered trademarks or trademarks of DuPont or its affiliates.



**VERSATILE HUES THAT
ADAPT TO ANY ENVIRONMENT.**

When you work with Corian® you can choose from the most extensive **COLOR** palette of any solid surface. See all the potential of DuPont™ Corian® Solid Surfaces in our Possibilities Magazine. Call 800-436-6072 or visit coriandesign.dupont.com for your copy.

DESIGNER Harry Allen
TITLE *Core Vase*
MEDIUM **CORIAN®**



The miracles of science™



Plaza Apartments

San Francisco

Leddy Maytum Stacy Architects, Paulett Taggart Architects

JULIE EIZENBERG: It's hard to do multiunit housing in this country.

ROBERT HULL: Well, there's a good example right here. Of course, there's much fewer units.

EIZENBERG: I think that's a masterful project: It's classy in its own way. Some people have problem with the tops and the bottom. But that rhythm is really quite beautiful.

HULL: I do like the way they related it to an existing structure. I think there's a concept in there.

CLIENT Public Initiatives Development Corp.

PROJECT TEAM Richard Stacy, Paulett Taggart, Roberto Sheinberg, Kelton Dissel, Beverly Choe, Michael Hennessey, Chris Cote, Laura Klingler, Chris Weir

ENGINEERS OLM, M/E/P Engineers, Telamon

GENERAL CONTRACTOR Nibbi Brothers General Contractors

COST withheld at owner's request

PHOTOGRAPHER Tim Griffith





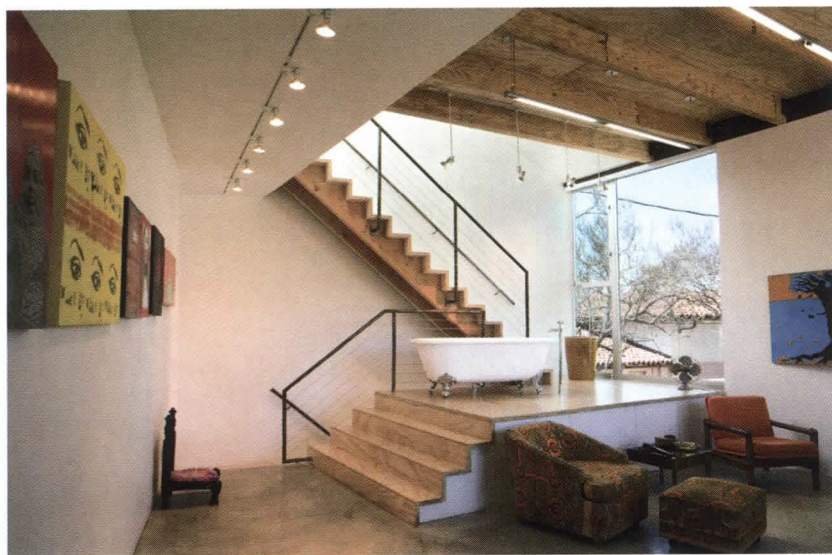
Why is this house and its beautiful windows upside-down? And where's the headline on this ad? By the way, do you know how to make a "Mary Got Hit by a Chicken Truck?" Well, you will. Because we're dropping the recipe right here in the middle of the copy.

MARY GOT HIT BY A CHICKEN TRUCK
10 oz. tomato juice
1 oz. pepper vodka (optional)
1 tsp. horseradish
dash of hot sauce
pinch of salt
fresh ground pepper

There. That's what we call freedom. Upside-down windows. No headline. Mary Got Hit by a Chicken Truck.

Freedom. It's our mantra. And that's why we offer fifty standard colors, nine wood species, and eleven interior finishes. Not to mention our new VisionGuard™ jobsite protective film. You like the freedom? We think you will.





1+3=1

Venice, Calif.

Leisner Trigas Jeevanjee Architects

MARC TSURUMAKI: As a strategy for addition, it is unexpected: this bookending of the existing volume with two new structures. They engulf the house but also set up a series of new exterior spaces. It reminds me of some of the architectural holdouts—this history in New York City of massive buildings being built over and around completely unassuming modest structures.

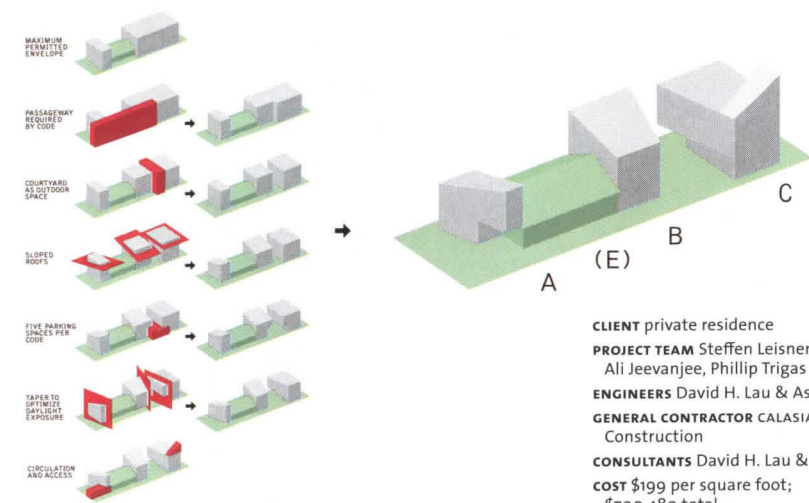
JULIE EIZENBERG: It breaks all the rules of what you are meant to do to be contextual.

ROBERT HULL: It's being added on to a mundane little building and because of the way it has been bookended, it has been gracefully—

EIZENBERG: It's not graceful. The irony of it is that it has been exaggerated.

HULL: Maybe graceful is not the word, but lots of times when you see a renovation or especially a remodel, the remnant that is left is embarrassed to be there.

EIZENBERG: But there's an exaggeration here. It is really a game of small and smaller or big and bigger. I mean there's an absurdity to it, which saves it from looking embarrassed.



SUBTRACTIVE MASSING STRATEGY

CLIENT private residence
PROJECT TEAM Steffen Leisner,
 Ali Jeevanjee, Phillip Trigas
ENGINEERS David H. Lau & Assoc.
GENERAL CONTRACTOR CALASIA
 Construction
CONSULTANTS David H. Lau & Assoc.
COST \$199 per square foot;
 \$700,480 total
PHOTOGRAPHER Christopher
 Culliton



Powered by Dell Small Business



Dell recommends Windows® XP Professional

I DON'T JUST DESIGN HIGH-PERFORMANCE SOLUTIONS. I WORK WITH ONE.



Dell™ 19" 1907FP Flat Panel Display, add \$309.

ENHANCE YOUR WORKSTATION



DELL™ 3110cn COLOR LASER PRINTER Lease as low as \$499 \$14/mo., (48 pmts.*)



DELL™ 2407WFP 24" ULTRASHARP™ WIDE ASPECT FLAT PANEL LCD MONITOR Lease as low as \$799 \$22/mo., (48 pmts.*)

DELL PRECISION™ 690 WORKSTATION

Nicely equipped for your business, starting at \$1869 Lease as low as \$50/mo., (48 pmts.)*

Ultimate Workstation Performance, Highly Expandable Chassis

- Featuring Dual-Core Intel® Xeon® Processor
 - Intel® Xeon® Processor 5110 (1.60GHz, 4MB L2 Cache, 1066MHz FSB)
 - Intel® PRO/Wireless 2200 802.11b/g Internal Wireless
- Genuine Windows® XP Professional
- 1GB DDR2 Fully Buffered DIMM Memory
- 80GB* SATA 3.0GB/s Hard Drive
- 16x DVD+/-RW* Drive
- 128MB PCI Express x16 NVIDIA Quadro NVS 285 Graphics Card
- Monitor Not Included
- 3-Yr Economy Service Plan (Next Business Day On-Site Service,* Hardware Warranty Support)



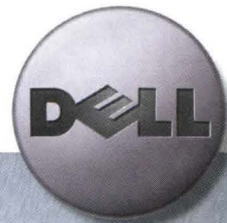
0% 24-Month Lease!* Available for well-qualified customers.

MY DELL PRECISION 690 WORKSTATION HAS THE HIGH-PERFORMANCE POWER TO KEEP UP WITH MY CREATIVITY.

The Dell Precision 690 lets me multi-task and deliver the high-quality designs my customers expect, allowing me to add up to 64GB* of memory, dual or quad monitor displays, RAID options, and new dual-core Intel® Xeon® Processors. And because Dell works with Independent Software Vendors to test and certify every Dell Precision Workstation, my 690 runs high-end applications powerfully and efficiently. I even saved money with my AIA membership discount. After all, every small business is unique. That's why every Dell solution is purely you.

Circle no. 96 or http://architect.hotims.com

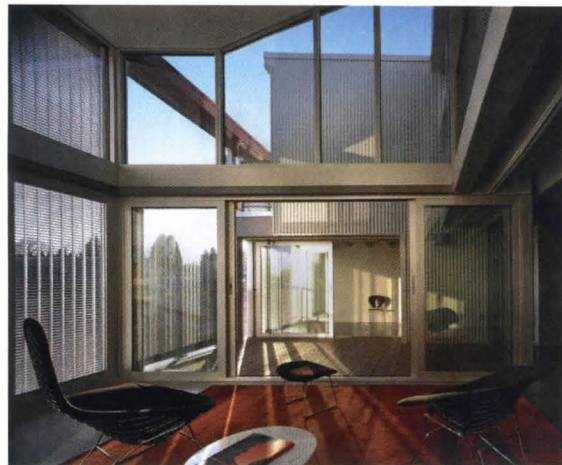
Get your AIA savings at dell.com/architect12



Purely You

call 877.378.DELL toll free

Call: M-F 7a-8p, Sat 8a-5p CT *Pricing/Availability: Pricing, specifications, availability, and terms of offer may change without notice. Taxes, fees, shipping, handling and any applicable restocking charges extra, vary and are not subject to discount. Offers may be combined with other select offers or discounts. U.S. Dell Small Business new purchases only. LIMIT 5 DISCOUNTED OR PROMOTIONAL ITEMS PER CUSTOMER. In case of customers leasing under these promotions, please note that items leased will be subject to applicable end-of-lease options or requirements. Dell cannot be responsible for pricing or other errors, and reserves the right to cancel orders arising from such errors. On-Site Service: Service may be provided by third party. Technician will be dispatched, if necessary, following phone-based troubleshooting. Subject to parts availability, geographical restrictions and terms of service contract. Service timing dependent upon time of day call placed to Dell. Hard Drive for Dell Precision: For hard drives, GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less. With Dell Factory Image Restore installed, Windows Vista users will have 10GB of their hard drive capacity set aside for a recovery image. Dell Precision 64GB Memory: The total amount of usable memory available will be less, depending on the actual system configuration. To utilize more than 4GB of memory requires a 64-bit OS. 0% Leasing Offer: Applicable for 24-mo. QuickLease with Fair Market Value (FMV) end-of-lease purchase option for hardware products only. 0% Implicit lease rate, assuming, at the end of the lease term, lessee does not exercise a fair market value purchase option and timely returns the leased equipment to lessor, and disregarding any charges other than 24 rent payments (such as taxes, fees, shipping or handling charges); all terms subject to credit approval and availability, and can change without notice. QuickLease arranged by Dell Financial Services L.P., ("DFS"), an independent entity, to best-qualified Small Business customers. Leasing: Monthly payment based on 48-month QuickLease with Fair Market Value ("FMV") end-of-lease purchase option, does not include taxes, fees, shipping and handling charges and may vary based on creditworthiness. QuickLease arranged by Dell Financial Services L.P. ("DFS"), an independent entity, to qualified Small Business customers. Minimum transaction size of \$500 required. All terms subject to credit approval and availability, and can change without notice. DVD+/-RW: Discs burned with this drive may not be compatible with some existing drives and players; using DVD+R media provides maximum compatibility. Trademark/Copyright Notices: Dell, the stylized E Logo, E-Value, UltraSharp, CompleteCare and Dell Precision are trademarks of Dell Inc. Intel, Intel logo, Intel Inside, Intel Inside logo, Xeon, Xeon Inside, Intel Core, Core Inside are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. ©2006 Dell Inc. All rights reserved. Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.



ROAR_one

Vancouver

Lang Wilson Practice in Architecture Culture, Hotson Bakker Boniface Haden Associated Architects

CLIENT ROAR_Ventures

PROJECT TEAM Oliver Lang, Cynthia Wilson, Alayne Kaethler, Don Chan, Shaun McIntyre, Marcello Mejia, Roberto Bottazzi, Pia Habekost, Dario Oechsli, Tak Ming Chan, Fei Cai, Bruce Haden, Roland Kupfer, Deryk Whitehead

ENGINEERS Fast + Epp, Stantec, Marceau Evans Johnson, Pioneer

GENERAL CONTRACTOR Haebler Group

CONSULTANTS Eckford and Associates, BTY Group, Geopacific, BKL Engineering

COST \$3,622,000, construction

PHOTOGRAPHER Nic Lehoux

ROCIO ROMERO: It is fun and playful, and it shares spaces. It has the same feel as those Greek communities where the roof of one home is the patio of another. You can't really distinguish between one apartment and the next, and that's nice when you are in a multifamily situation.

JULIE EIZENBERG: It would be nice to live there because the space is just easy and flowing.

MARC TSURUMAKI: It stacks different typologies of units. The spaces between units seem quite well-handled: The whole building becomes porous. It has a slightly informal, tough quality to it, which I appreciate. There are moments when it almost feels slipshod, but that's also part of the appeal.

Style and technology combine with impact
creating the most comprehensive energy
efficient lighting strategy for your business.

Get more WOW now...with

Sea Gull Lighting's complete line of
ENERGY STAR® qualified lighting and
ceiling fan collections. Reaching your
customers with catalogs, promotional
materials, utility programs, and service.

Sea Gull Lighting makes it easier than ever to
translate our lighting to every lifestyle.

Raise your profile. Raise your profits.

Visit www.SeaGullLighting.com today.

raise your **WOW** factor.



sea gull lighting®

above all

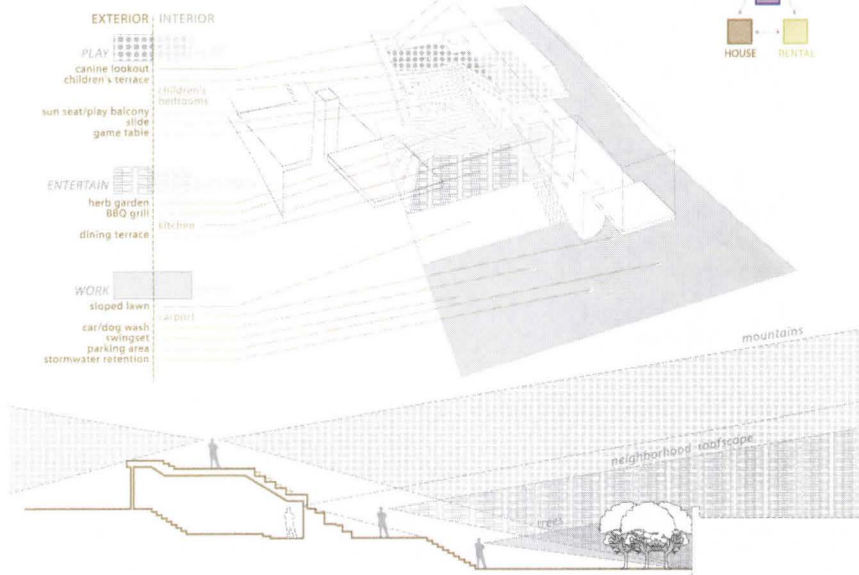


A Generation Brands Company

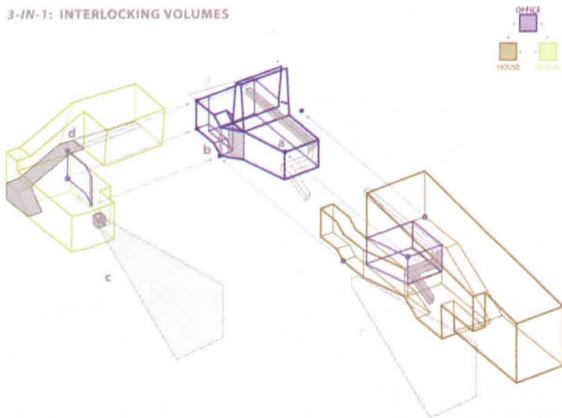
Circle no. 383 or <http://architect.hotims.com>



DOMESTIC LANDSCAPE



3-IN-1: INTERLOCKING VOLUMES



3-in-1 House

Santa Monica, Calif.

Roger Sherman Architecture + Urban Design

MARC TSURUMAKI: What's interesting here is the interlocking of three very different typologies: single-family house, live-work office space, and rental unit.

JULIE EIZENBERG: You've got to love an interior that you're allowed to make a mess in.

MARC TSURUMAKI: It doesn't have the overly precious quality of some of the other buildings.

ROCIO ROMERO: I love the fact that they have wallpaper. It fits; it works really well.

TSURUMAKI: There are these odd moments, which is what makes it more interesting.

ROMERO: It is the idea of unfinished with the finished.

ROBERT HULL: The play of forms and functions is really skillful. It takes a lot of work. It is opposite of the overly simplified forms that we've been seeing.

EIZENBERG: It's warm. There's a heart to it.

CLIENT Jennifer Schab
PROJECT TEAM Greg Kochanowski,
 Roger Sherman
ENGINEERS Frankie Chiu
GENERAL CONTRACTOR owner/
 builder
CONSULTANTS The Desk of Lola,
 Dry Design
COST withheld at owner's request
PHOTOGRAPHER Tom Bonner

Celebrating 60 Years of Quality

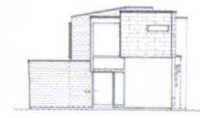
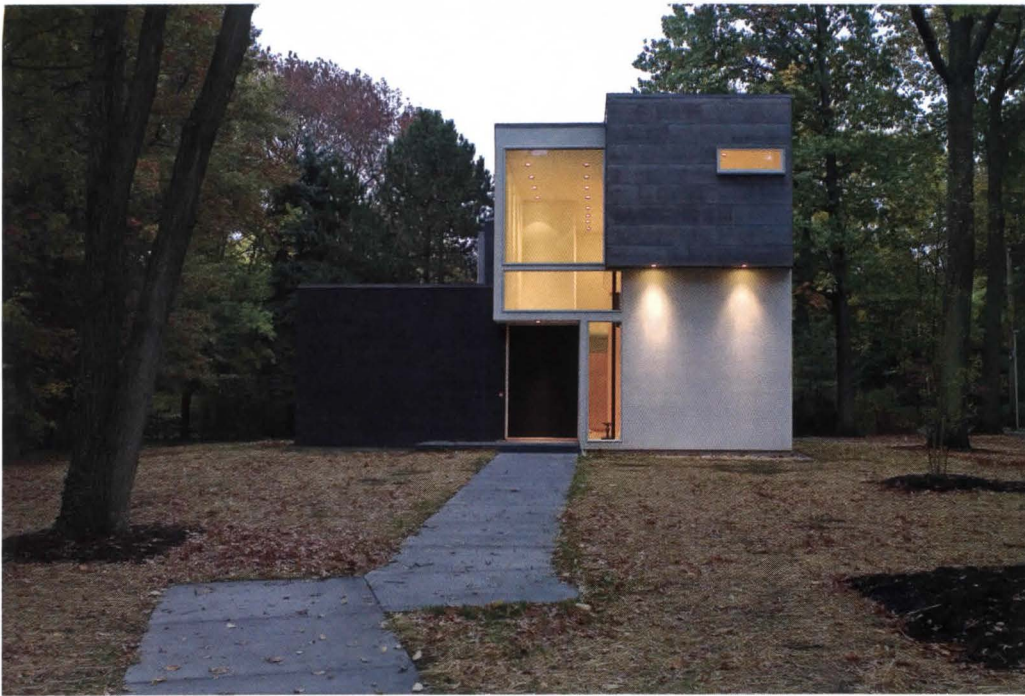


After 60 years, Kolbe is best known for windows and doors that exemplify superior quality, custom craftsmanship, attention to detail, as well as innovative and unique designs. With many options to choose from, Kolbe windows and doors are the perfect choice for any project. For more information visit www.kolbe-kolbe.com or call 1.800.955.8177.

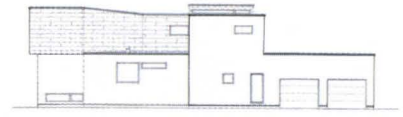


See the Difference Quality Makes

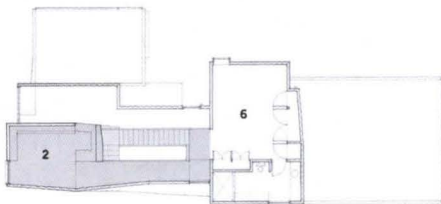
Circle no. 40 or <http://architect.hotims.com>



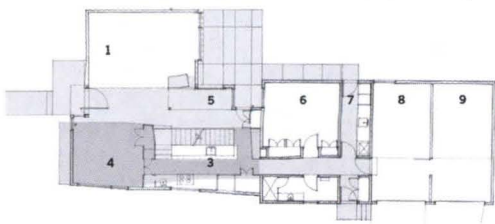
west elevation



10' south elevation



second floor plan



first floor plan

- | | | |
|-----------|-----------|-----------------|
| 1 living | 4 dining | 7 laundry |
| 2 library | 5 cafe | 8 metals studio |
| 3 kitchen | 6 bedroom | 9 garage |

Ceruti House

Cleveland Heights, Ohio
Thom Stauffer Architects

KEVIN ALTER: It combines quite an extraordinary inventiveness in form and space with not so much in the way of construction.

ROBERT HULL: The front elevation sells it to me. The front elevation is almost nicer than the side, but it is still alive, that same idea: light forms and dark and somber projecting forms. And there's real invention in terms of the interiors: That stair really clicks.

ALTER: It does have a formal inventiveness without a kind of dogmatic position behind it, which I appreciate.

ROCIO ROMERO: It is really clear. You really see that in the front elevation.

CLIENT Dorothy Ceruti

PROJECT TEAM Greg Stroh, Kathryn Strand, Jason Turnidge, Allen Slamic, Jonathan Kurtz, Elizabeth Leidy

ENGINEERS Glen Dreyer

GENERAL CONTRACTOR Tim Yoder Construction

CONSULTANTS Leff Electric, Steel Fabrications, Quick Service Welding, P.K. Wadsworth, Grand River Rigging, Joe Gromofsky, Skip Yoder

COST \$500,000

PHOTOGRAPHER Bruce Keifer

grab mold by the spores

www.getmoldfacts.com

Myth: Mold-resistant building materials are the answer to the mold issue.

Fact: Mold-resistant products are used only for a limited measure of protection should a system failure allow moisture to develop. Product solutions are just one element of a larger strategy focused on sound design and construction practices.

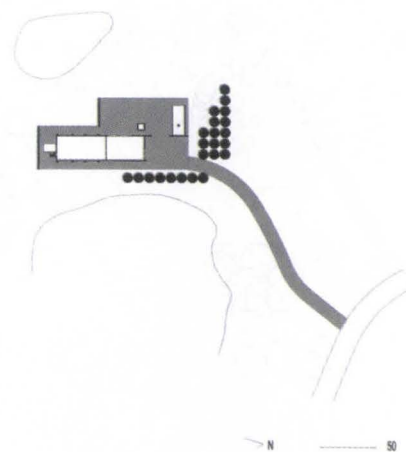
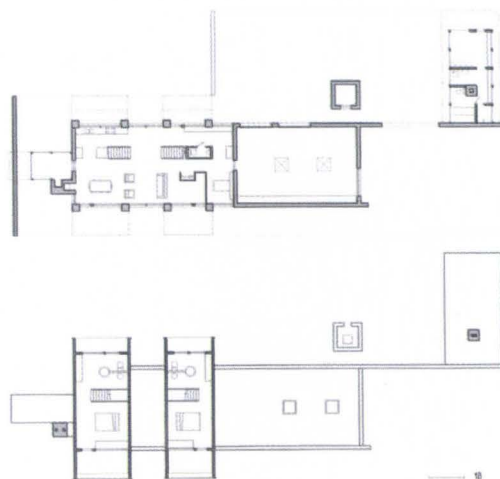
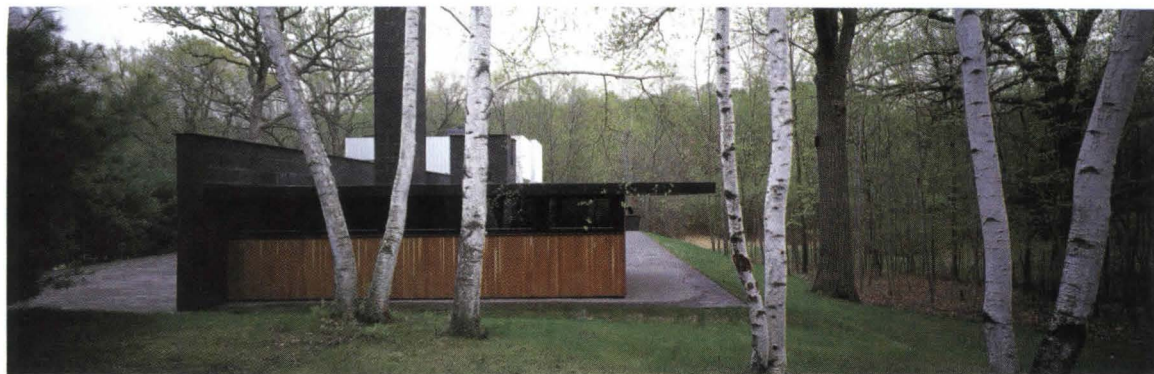
Want to learn more of the myths? Get the whole story at www.getmoldfacts.com.



Control moisture. Control mold.

©2006, USG Corporation

Circle no. 56 or <http://architect.hotims.com>



Streeter House

Deephaven, Minn.
Salmela Architect

CLIENT Kevin Streeter
PROJECT TEAM David Salmela,
 Carly Coulson
ENGINEERS Bruno Franck
GENERAL CONTRACTOR
 Coen + Partners
CONSULTANTS Streeter & Associates
COST \$233 per square foot;
 \$700,000 total
PHOTOGRAPHER Peter
 Bastianelli-Kerze

JULIE EIZENBERG: This gels together, but each of the pieces has a clear place in the volume, as a mold.

KEVIN ALTER: It is a very beautiful ensemble—these two stunning white boxes that hover over the base.

ROBERT HULL: What are those boxes? Does anybody know?

EIZENBERG: They're decks to bedrooms, I think.

ALTER: With a separate stair up to each room?

HULL: Sort of recognizing that need for privacy.

ROCIO ROMERO: It seems kind of lofty, the fact that there are stairs to one room.

ALTER: If you look at the plan, it is quite handsome: the way you wander up one stair to get to one bedroom and another stair to get to the other. You wonder if there is an acoustic issue, but beyond that, it is a very lovely way to separate these things.

T~trak™

Track Lighting with a Twist

The first true two-circuit, hand-bendable line-voltage track system.

Presenting Two-Circuit T~trak from Tech Lighting. Track lighting with yet another twist!

Two-Circuit T~trak offers the smallest profile of any line-voltage two-circuit system today. Because it is a true two-circuit system, each circuit has its own dedicated neutral for two separately switchable 20 amp circuits. Control, aesthetics, flexibility and performance – all from one system.

All T~trak systems incorporate a wide selection of architectural heads and pendants – and an extensive range of illumination options including incandescent, CMH and fluorescent configurations. Available in both Satin Nickel and White.



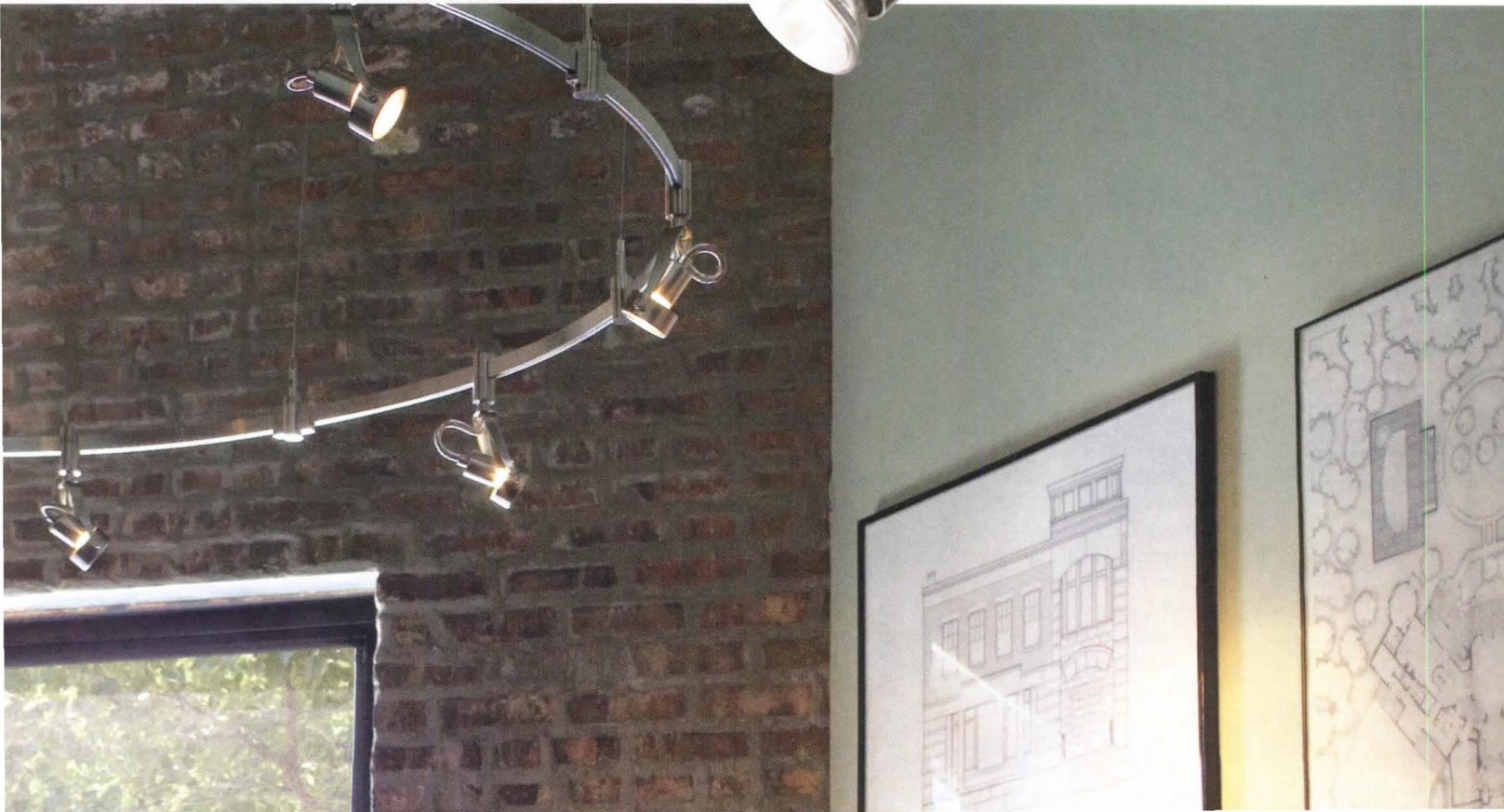
TECH LIGHTING®

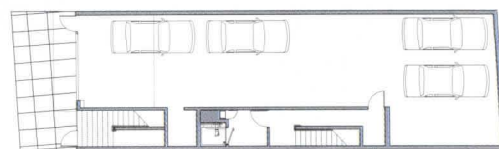
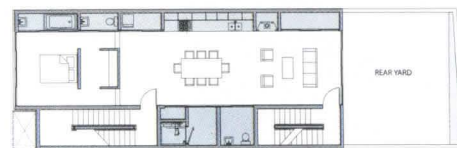
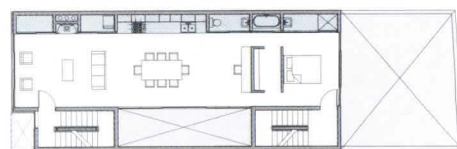
Circle no. 384 or <http://architect.hotims.com>

techlighting.com



Two-Circuit T~trak shown with Soma and Tweak CMH Heads





0' 10' 20'

SECOND FLOOR PLAN
1028 NATOMA

Multifamily Housing

San Francisco
Stanley Saitowitz/Natoma Architects

JULIE EIZENBERG: This is really classy, a system with a simple, small tweak that re-energizes it completely.

ROCIO ROMERO: It's elegant.

KEVIN ALTER: This is clearly a kind of sage, an experienced hand. It is somebody that is able to—

EIZENBERG: Are you saying it is somebody old? Somebody wise, I see.

ALTER: It is extremely well done and done with great subtlety and care compared to something that is much looser but has great ambitions.

ROBERT HULL: One of the things that's really nice about this project, it recognizes its neighbors. That rift does something more than if the building were simply right up against the next one.



CLIENT 1028 Natoma Partners
PROJECT TEAM Stanley Saitowitz,
Neil Kaye, Alan Tse, John Winder
ENGINEERS Santos, Urrutia
COST withheld at owner's request
PHOTOGRAPHER Tim Griffith



Through his research, his writing, and his design, architect Blaine Brownell is changing the profession's awareness of building products and materials.

material witness

PRODUCTS ARE THE STUFF OF ARCHITECTURE, in a very literal sense, and yet it's fair to say that the building products industry and the profession of architecture maintain an awkward alliance. As a rule, architectural education prioritizes abstract principles over real-world applications, and in practice, the process of design generally takes precedence over the selection of products. On the other side, manufacturers are creating innovative products all the time—the kinds of things architects should be enthusiastic about—but they have difficulty getting the attention of designers and specifiers.

Enter Blaine Brownell, an associate at NBBJ's Seattle office who keeps busy in his off-hours transforming the profession's perception of building products. Given that the disconnect is partly a matter of marketing, of architects and manufacturers speaking different languages, Brownell's accomplishment begins with a shift of word choice: materials, not products. He uses a mix of media—e-mails, blogs, and more recently a book, *Transmaterial: A Catalog of Materials that Redefine Our Physical Environment*—to convey a new message about materials: That they can be exciting, surprising, and, perhaps most important, of benefit, not just to buildings, but to people and to the environment.

These days, Brownell is on a leave of absence from NBBJ. Having received a Fulbright fellowship to research sustainable design and material innovations in Japan—which he first experienced as the son of a Fulbright grantee and where he worked as an architect in 1991 and 1997—he's moved his family to Tokyo until next July.

"The thing that drives me," says Brownell, "is not the subject matter so much as the potential. New materials can be fun to study, but they get really exciting when we use them. And if we can harness the creative energy stored in these new products to create a technologically advanced, intelligently crafted, and ecologically proactive world, wouldn't that be a marvelous thing?" Indeed.

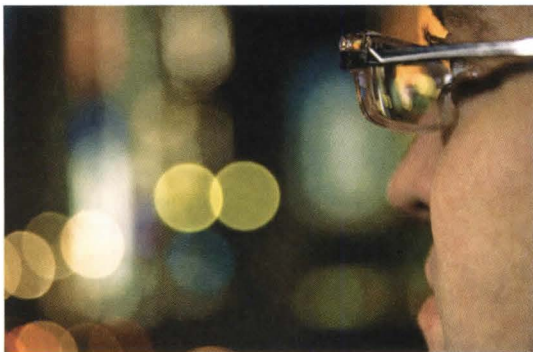
Of Books and Blogs

From the first, *Transmaterial* was intended to be a wallet- and satchel-friendly addition to the libraries of architects, students, and even nondesigners. "My colleagues, publisher, and I agreed that ... to have a significant positive influence, [the book] would have to be accessible, portable, and affordable," says Brownell. And if the book's pages appear similar to the entries on his *Transmaterial* blog (transstudio.com/tm)—small images, to-the-point descriptions—well, that was by design too.

The entire project started about six years ago as an occasional e-mail, called "Product of the Week," that resulted from Brownell's work as a materials researcher. (In November 2005, he started posting his e-mails as blog entries.) Ultimately, the digital medium inspired its paper counterpart. "After all," Brownell says, "*Transmaterial* is [meant to be] a gateway to resources. The sooner people can understand ... innovative materials, the sooner we can spread innovation within our physical environment."

He seems to have struck just the right note. The Product of the Week e-mail has 4,000 subscribers, and *Transmaterial* is already into its second print run after the initial 10,000 copies sold out. "It's one of our best-selling titles," says Katharine Smalley Myers, publicity director at Princeton Architectural Press. A second volume is in the planning stages.

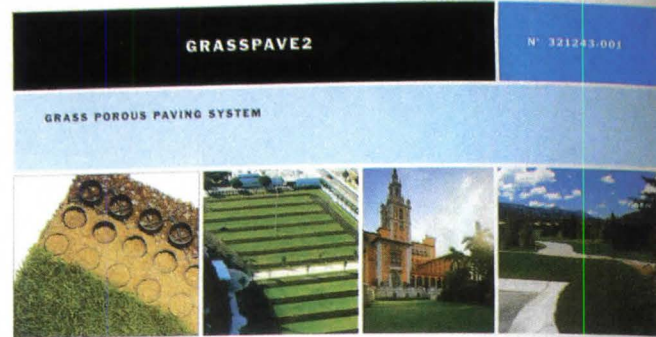
Brownell's other blog, *Transstudio* ("a forum for the major environmental, social, and economic issues that are transforming our physical world"), is for the moment on the back burner as he focuses on his research in Japan and maintaining his product e-mails. But he has every intention of rejuvenating it. "It's actually part of a long-term plan to write a book on the subject," Brownell says.



While he's in Japan, Brownell—who minored in East Asian studies at Princeton—is affiliated with the Tokyo University of Science. For him, the country is an excellent example of a first-world nation grappling "significantly" with environmental, urban population, and energy issues.

PLASTIC

REPURPOSED PRODUCT



Grasspave2 is a recycled plastic porous paving system designed to add green space and environmental benefits while providing a paved surface. The Grasspave2 system is comprised of a sandy gravel base course, a Hydrogrow polymer-fertilizer mixture, the Grasspave2 ring-and-grid structure, sharp concrete sand, and grass seed or sod.

Grasspave2 provides incredible load-bearing strength, while protecting vegetation root systems from compaction. High void spaces within the entire cross-section enable excellent root development and storage capacity for rainfall from storm events. Stormwater is slowed through Grasspave2 surfaces, which deposits suspended sediment and increases discharge time. Suspended pollutants and moderate amounts of engine oils are consumed by active soil bacteria, which are aided by the system's excellent oxygen exchange capacity.

CONTENTS

100% recycled HDPE plastic, hydrogrow (polymer/fertilizer)

APPLICATIONS

Turf reinforcement for parking lots, fire lanes, emergency access drives, driveways, trails, golf cart paths, infiltration basins, swale reinforcement, pedestrian access

ENVIRONMENTAL

100% recycled plastic, urban heat island mitigation, stormwater runoff mitigation, hydrocarbon and other pollutant filtering, groundwater recharge, airborne dust capture and retention, air-conditioning effect

TESTS / EXAMINATIONS

Compression tests

LIMITATIONS

Low speed (vehicle) and low frequency travel: 2 days on, 1 day off (or 5 days on with 1 day off), maximum speed 25 mph (40 kph)

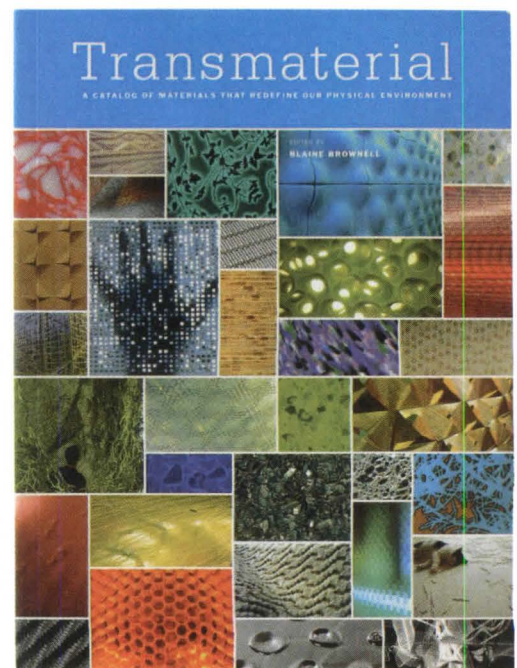
CONTACT

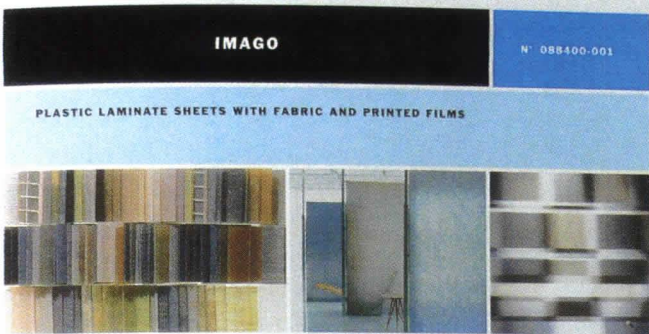
Invisible Structures, Inc.
1600 Jackson Street
Suite 310
Golden, CO 80401
Tel: 800-233-1510
www.invisiblestructures.com
sales@invisiblestructures.com

TRANSMATERIAL

112

Despite its bright cover (right), high-quality paper, and four-color printing, *Transmaterial* is not your typical architectural book. Sized and styled more like a travel guide, it places maximum importance on informing readers without a lot of distractions, as can be seen in a typical spread (above). Reinforcing the idea that this is a book to be carried around, thumbed through, marked up, and otherwise used instead of admired, Brownell provides a key (opposite page) to help readers decipher each entry's numerous elements.





Plastic

RECOMBINANT PRODUCT

Designed by Suzanne Tick and introduced by KnollTextiles in 2000, Imago is a family of products made through a patented process that encapsulates fabric in high-performance resin. The resulting hard surfaces combine the best qualities of fabric, resin, and glass, changing tone with the amount and direction of cast light, and thus affecting the perception of space beyond.

Introduced in 2003, ImagoPrints represent the next generation of translucent hard surface materials. Rather than incorporating actual fabrics, ImagoPrints use printed vellum-like layers to create visual depth and a "parallax effect," whereby the image appears to shift with the movement of the viewer. ImagoPrints patterns are created by the careful registration and printing of two customer-selected layer colors. Separated slightly from each other, the layers give the patterns a greater sense of depth and dimension.

Imago and ImagoPrints are half the weight of glass, scratch and fingerprint resistant, designed to withstand a variety of chemicals, maintained with common cleaning agents, and may be sawed, drilled, punched, riveted, bolted, hot-stamped, die-cut, thermoformed, and cold-bent. The material is available in six gauges, custom colors, custom surface textures, and a markerboard finish.

CONTENTS

Imago: PETG, fabric;
ImagoPrints: Lexan, printed
films

APPLICATIONS

Panels, screens, wallcoverings, markerboards, tabletops, window treatments, shelving, light diffuser lenses

TYPES / SIZES

4 × 8' (1.2 × 2.4 m) standard sheet size; 9 standard Imago patterns and 3 standard ImagoPrints available in 6 gauges from 1/16" (.2 cm) to 1/2" (1.3 cm) thick; custom patterns and a custom 4 × 10' (1.2 × 3 m) sheet size available

ENVIRONMENTAL

Recyclable

TESTS / EXAMINATIONS

Technical information available upon request

LIMITATIONS

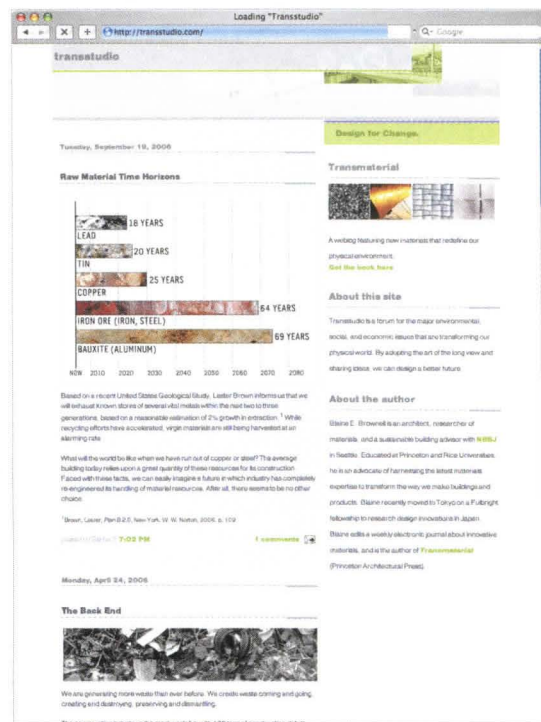
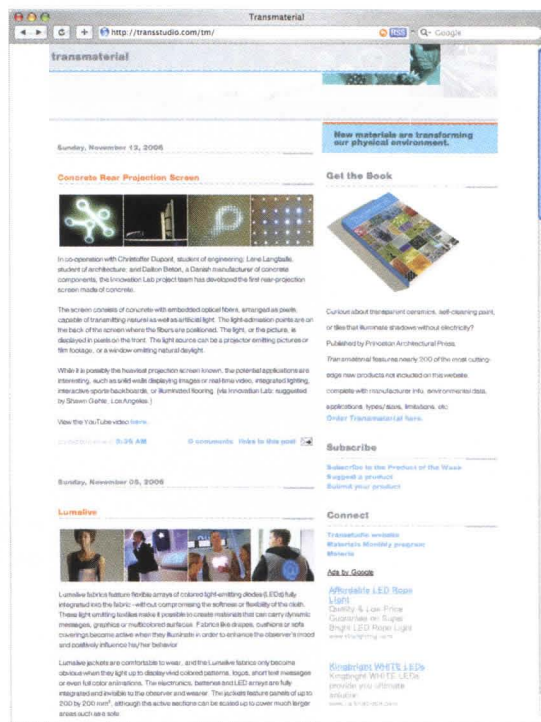
Not recommended for exterior use

CONTACT

KnollTextiles
76 Ninth Avenue
New York, NY 10011
Tel: 718-230-8032
www.knolltextiles.com

TRANSMATERIAL

113

**A. NAME**

Entry's trademarked name

B. NUMBER

Entry's nine-digit identification number

C. DESCRIPTION

A brief explanation of the entry

D. CATEGORY

Refers to the basic material of the entry described; the primary means of organization in *Transmaterial*

E. SUMMARY

A basic description of the entry

F. TREND

Each entry is assigned one of seven trends: ultraperforming, multidimensional, repurposed, recombinant, intelligent, transformational, or interfacial

G. TYPE

Defines each entry as a material, product, or process

H. ADDITIONAL DATA

Additional information to more fully describe each entry

Brownell is a blogger, twice over. *Transmaterial* (top) is his continually updated journal of innovative products (none of which appear in the book). *Transstudio* (bottom) is a more philosophical effort aimed at engaging people in conversation about diminishing natural resources, the man-made world, and how we can effect positive change. As he notes in his first entry, "Design will play a

fundamental role in this new epoch, and creativity will be the ultimate criterion for success. Since new problems will require new solutions, we can only preserve the future by letting go of present conventions."

Keep It Sustainable

As awareness about humanity's impact on the health of the planet continues to grow, green design and sustainability have become hot topics for the architectural community as well as for those who work, live, and play in and around its structures.

Buildings utilize almost half of all resources, notes Brownell. If architecture is ever going to maintain an ecological footprint more in balance with the requirements of its context, he says, then change needs to begin with the people who create the built environment. "[We] must place as much emphasis on research and teaching as [we] do on practice," he says. "In addition to function and form, I believe that foresight considers the "entire ecology" of the material and energy resources that go into a building.

To that end, throughout his book Brownell makes a point of noting, when applicable, the environmentally friendly aspects of a product or material—whether it's how it is manufactured; the benefits it confers to buildings, their users, and the surrounding environment; or how it can be put back into the production stream. Shown on these two pages is a small sample of what he's discovered.

Green and sustainable products come in many forms and exist for every part of a building: inside, outside, and within the ceilings, floors, and walls. Some, like ERCO Virtual Luminaires (opposite page, bottom right) can be used before the first shovel breaks ground. Others, like Panelite (right), are among the last things to be put in place.

> PRODUCT Ductal

WHAT IT IS
Ultra high-performance concrete

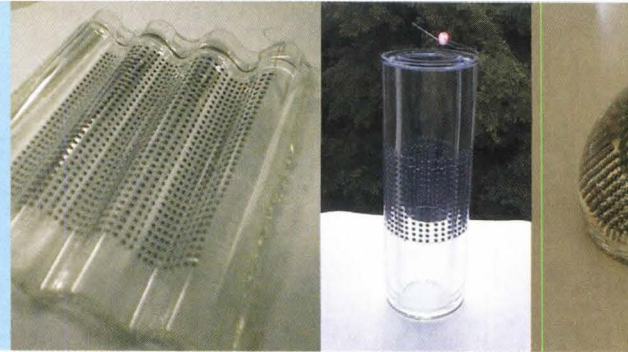
ENVIRONMENTAL ASPECT
Partially manufactured from recycled industrial byproducts



> PRODUCT Sphelar

WHAT IT IS
Spherical micro solar cells

ENVIRONMENTAL ASPECTS
Renewable energy source; less embodied energy; fewer materials than conventional photovoltaics



> PRODUCT Aluma Floor

WHAT IT IS
Aluminum floor tiles and panels

ENVIRONMENTAL ASPECTS
Made from recycled postindustrial content; fully recyclable



> PRODUCT Tingwall

WHAT IT IS
Leak-free glazing system

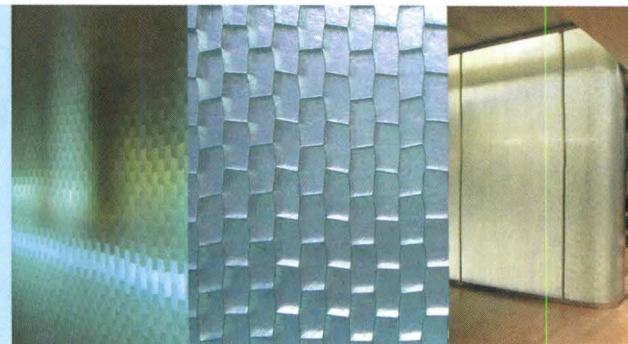
ENVIRONMENTAL ASPECT
Prevents poor indoor air quality related to mold growth



> PRODUCT Panelite

WHAT IT IS
Insulated glass unit with tubular polycarbonate core

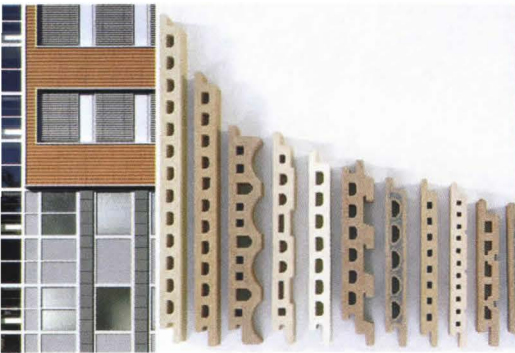
ENVIRONMENTAL ASPECTS
Recyclable components; natural daylighting; efficient use of materials





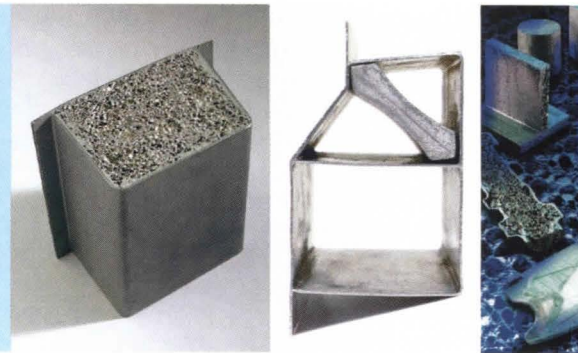
< **PRODUCT**
Ecosmart
WHAT IT IS
High-volume fly-ash concrete
ENVIRONMENTAL ASPECTS
Reduces greenhouse gas emissions; improves long-term strength and durability; reduces the need to put waste materials in landfills

> **PRODUCT**
Syndecrete
WHAT IT IS
Recycled-content, precast concrete surfacing material
ENVIRONMENTAL ASPECTS
Recycled carpet fiber, fly ash, and recycled decorative aggregates; no off-gassing



< **PRODUCT**
Terrart
WHAT IT IS
Architectural terra cotta façade panels and elements
ENVIRONMENTAL ASPECTS
Fully recyclable; increases a building's energy efficiency

> **PRODUCT**
Alulight
WHAT IT IS
Aluminum foam
ENVIRONMENTAL ASPECTS
Fully recyclable; efficient use of material



< **PRODUCT**
Geometrix
WHAT IT IS
Lightweight recycled metal ceramic tiles
ENVIRONMENTAL ASPECT
Contains 90 percent recycled content

> **PRODUCT**
Solarwall
WHAT IT IS
Solar air panels
ENVIRONMENTAL ASPECTS
Lowers energy load; reduces fossil-fuel dependency and carbon emissions



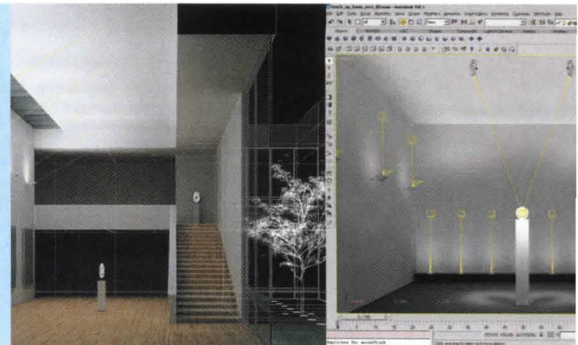
< **PRODUCT**
Durra
WHAT IT IS
Lightweight wheat straw and paper construction system
ENVIRONMENTAL ASPECTS
Uses agricultural byproducts and recycled materials; no added chemicals; efficient use of material

> **PRODUCT**
Grasspave2
WHAT IT IS
Grass porous paving system
ENVIRONMENTAL ASPECTS
100 percent recycled plastic; heat-island and stormwater-runoff mitigation; hydrocarbon filtering; groundwater recharge



< **PRODUCT**
UltraTouch
WHAT IT IS
Natural cotton-fiber insulation
ENVIRONMENTAL ASPECTS
Recycled content; no volatile organic compounds or harmful chemicals

> **PRODUCT**
ERCO Virtual Luminaires
WHAT IT IS
Virtual luminaire models for digital lighting simulation
ENVIRONMENTAL ASPECT
Simulation studies may prevent wasted energy from poor lighting solutions

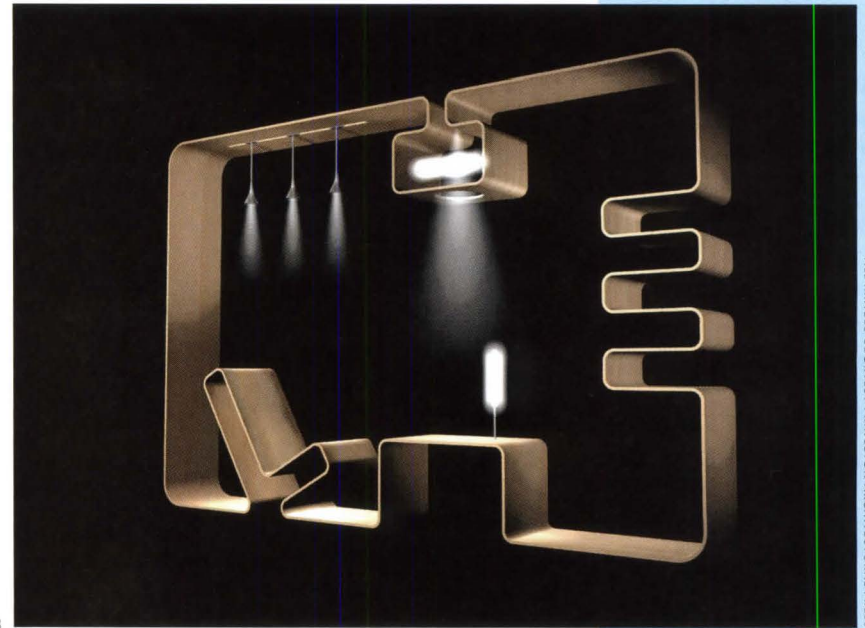
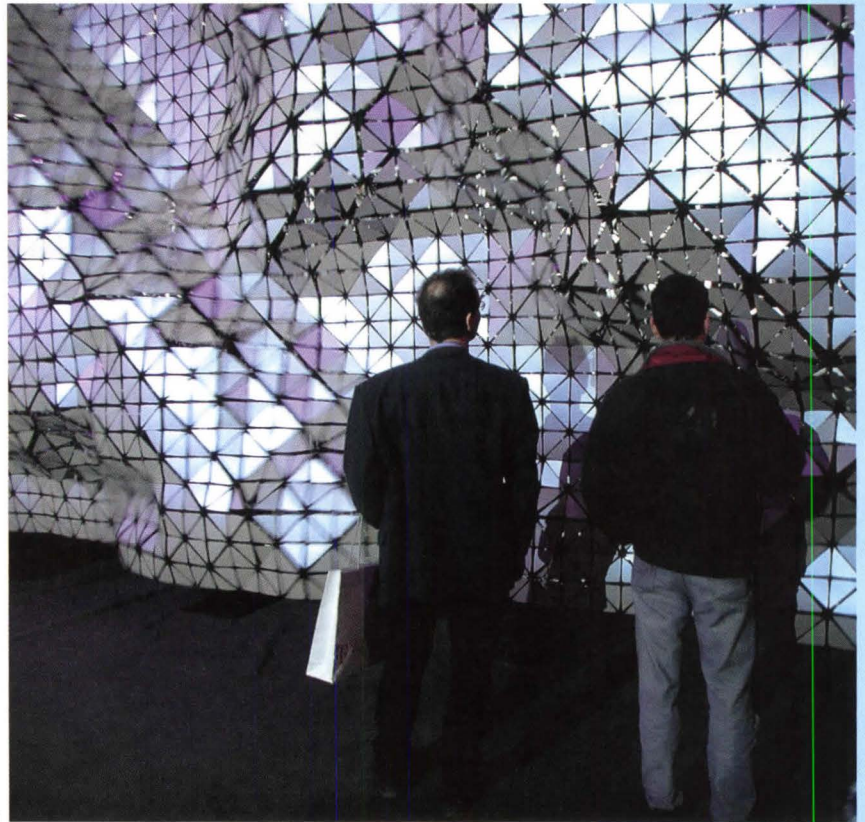


Futureworld

Not everything in the *Transmaterial* universe has an obvious use. Throughout Brownell's book and blog are entries on products and materials with names like Body Index, Aegis Hyposurface, Dimension Elevator, Super Cilia Skin, Lumalive, and Cubix. Reading the descriptions and looking at the images, you might think these high-tech, odd, or flat-out mysterious items came from the pages of a science-fiction novel or an episode of *Battlestar Galactica*. But they are very real.

Yet Brownell, although enthusiastic about advances in manufacturing and application, prefers not to see technology as an end in itself. "I think we must maintain a critical distance," he says. "Technology can bring us amazing things, but we should always be vigilant about where it is taking us. Marshall McLuhan said that the artist is essential to society because he/she can foresee the changes technological development will bring about."

And by informing other architects about the progress that researchers, manufacturers, and designers are making—whether it's a bleeding-edge use of computer-aided design or a new application of an existing material or product—Brownell hopes they will begin to think this way too.



1. Aegis Hyposurface:

Environmentally responsive architectural surface. Applications: Interactive art, feature wall

2. **Protrude, Flow:** Magnetic fluid art. Applications: Exhibits, interactive art

3. **Wood.e:** Electrified pre-formed wood. Application: Furniture

4. **Interactable:** Interactive table. Applications: Conference rooms, showrooms, exhibitions

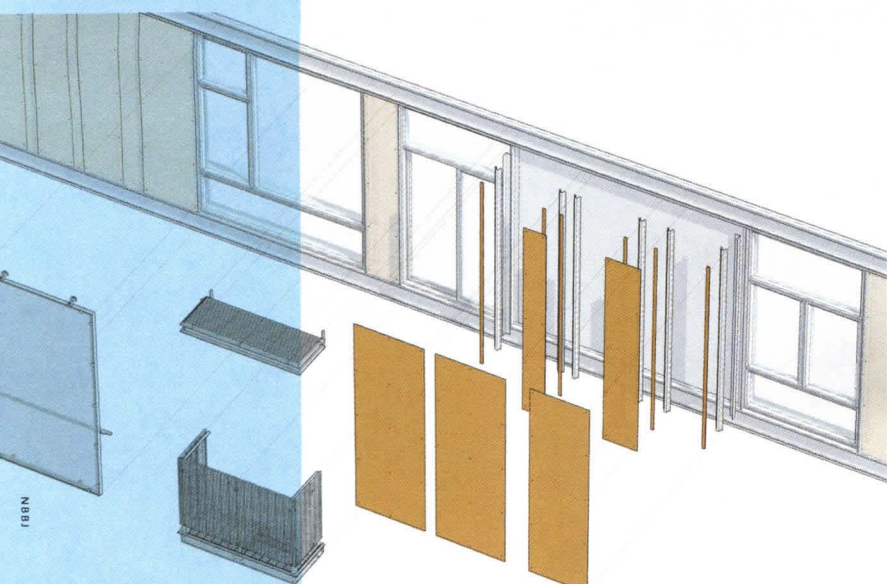
Applied Knowledge

ALLEY24, SEATTLE

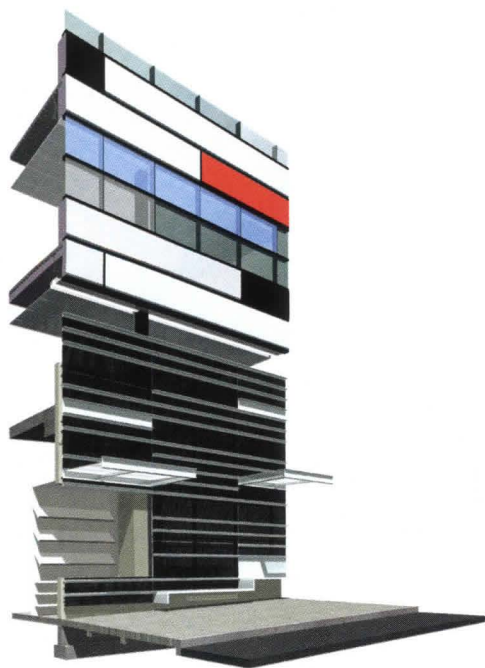
Located in the South Lake Union neighborhood, Alley24 is a 381,000-square-foot project designed by NBBJ. The two-building, city block–sized development is among Seattle’s first mixed-use projects to be built under the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) standards.

Brownell and Andrew McCune led the team that designed the housing/retail building’s façade. In the process of researching cladding materials, McCune suggested Richlite, a resin-impregnated, paper-based material frequently used for interior applications. The beauty of Richlite, says Brownell, is that it requires no labor-intensive finishing, is highly durable, and can be cut to precise dimensions at the factory. Also, it comes from Forest Stewardship Council–certified sources and contains low volatile organic compounds.

After testing by NBBJ to ensure LEED compliance and local building code conformity, Richlite was specified for the 180-unit building. It is the first time the product has been used on such a scale.



Richlite, the brown panels in the illustration above, was chosen as the cladding for Alley24’s housing/retail building, in part because it resists mold so well.



The University Center Office Building (above, left to right) incorporates a number of products in its façade (right), including clear, tinted, and reflective glazing; insulated metal panels; and perforated steel panels. Brownell wants to make use of reused or recycled materials whenever and wherever possible.

UNIVERSITY CENTER OFFICE BUILDING, SEATTLE

The University Center Office Building is a 50,000-square-foot structure that would be built atop an existing parking garage. The land, which has been in one family’s possession for decades, was previously home to Chevrolet and Mazda dealerships.

NBBJ’s proposal is an attempt, says Brownell, who leads the design team, “to connect the history of the site ... with the design character and materiality of the building.” How would this be accomplished? The façade, with its multiple glass types, colored metal panels, and LED light sources at the garage level, would be an abstract representation of the automobile in the urban setting, suggesting energy and movement. On a more literal level, Brownell says he is “passionate” that NBBJ make use of reused/recycled car materials in the building’s construction, “particularly in the metal façade panels, glazing, screen elements, and even flooring (recycled tires, plastics).”

Still on the boards, the project has received enthusiastic support from both the client and the University District community.

Sweet Earth

Experimental Utopias in America

In the Sweet Earth series of photographs and accompanying texts, artist Joel Sternfeld documents Utopian communities across the United States—several centuries' worth of experiments in alternative place-making.

PHOTOS AND TEXT JOEL STERNFELD

**Paolo Soleri at Arcosanti,
Cordes Junction,
Ariz., August 2000**

Throughout the 20th century, architects have been particularly ready to offer their visions of an idealized urban future. For Le Corbusier, a "Radiant City" would be appropriate to the machine age, providing a highly efficient and organized grid to facilitate modern life. For Frank Lloyd Wright, it was critical that everyone have their own patch of earth on which to realize their individuality: thus his "Broadacre City" not only necessitated personal land to live on, but a car to get there. The Italian-born architect Paolo Soleri is far less well-known to the public than Le Corbusier or Wright, but in the Arizona desert he is quietly building what is perhaps the world's only true prototype of a futurist city.

Arcosanti is an "Arcology," a word used by Soleri to describe the harmonious marriage of architecture and ecology. Unlike Wright, with whom he studied, Soleri believes that it is the physical dispersal in the landscape permitted by the automobile that has led to moral and spiritual dispersal in society. By contrast, Arcosanti, planned for 5,000 inhabitants, will occupy only two percent of the land normally taken up by a suburban development. Residents work no more than a 10-minute walk from their homes, eliminating the need for cars within the city—consistent with Soleri's prophecy of the eventual extinction of the automobile. Reminiscent of the historic center of Italian cities, every aspect of Arcosanti's design, including numerous balconies, terraces, and piazzas, encourages a maximum of social interaction.

Soleri is also critical of excessive consumption of resources. To avoid wasting materials, gardens, solar heating, and natural cooling move the community toward self-sufficiency.

Arcosanti has been under construction for 35 years, self-funded by the sale of distinctive wind chimes and bells that are forged on site. It is being built by students and volunteers—progress is at once achingly slow and surprisingly fast. Visitors will find a substantial and unusual small community of about 50 permanent residents, and significant glimpses of a city that feels ancient and futuristic as it rises.







**Ruins of Drop City,
Trinidad, Colo.,
August 1995**

Three of the original founders of Drop City met as art students in Lawrence, Kan., in 1961. They referred to their practice of painting rocks and dropping them from a loft window onto the busy street below as "Drop Art."

By 1965 the founders' desire to live rent free and create art without the distraction of employment led them to a six-acre goat pasture outside Trinidad, Colo., which they purchased for \$450. Naming their community after their gravity-driven art was the easy part; building it a little harder. But having recently attended a lecture by Buckminster Fuller and now joined by a would-be dome builder from Albuquerque, N.M., they began with scrap materials and visionary optimism. Sheet metal was stripped off car roofs (for which they paid a nickel or a dime) and attached to the grid of a dome. These building materials not only provided shelter, but they also emblemized the group's refusal to participate in consumerist society. Money, clothing, and cars were shared, and they lived as quasi-dumpster divers.

Initially the community flourished. With a core group of 12, it functioned as the founders had intended, a hotbed of art-making. But a steady flow of publicity in underground and mainstream media, encouraged by resident Peter Rabbit, led to a torrent of guests. It has been reported that Bob Dylan, Timothy Leary, and

Jim Morrison visited, but the historian's chestnut, the primary account, may be less than reliable when it comes to the 1960s. By the time the community decided to abandon its open-door policy, it was too late: The founding members had left, and conditions had taken hold that would bring about a final dissolution in 1973. In 1978 the site was sold; proceeds helped rent space in New York City for exhibitions of the group's work and to publish it in *Crisscross* magazine.

The domes sat on the land of A. Blasi and Sons Trucking Co. until recently, when they succumbed to gravity.



**The Farm,
Summertown, Tenn.,
March 2003**

When Stephen Gaskin, a charismatic philosopher from San Francisco, went on a speaking tour in 1970, his adherents followed him in buses and vans. After each engagement, a few more vehicles would follow along, until hundreds of people were in the caravan. Eventually, they bought 2,000 acres of land in Tennessee and began living communally as the Farm.

They lived according to "Agreements," including a personal and collective dedication to "harmlessness, right livelihood, right thinking, etc., while maintaining a sense of humor." All members agreed to a vegan diet, nonviolence, a shared purse, and voluntary poverty. Housing for the first several years consisted of used Army tents and the buses and vans in which they had traveled.

As the population steadily grew to 1,400, the Farm gained self-sufficiency in food production and took on the aspect of an at-once primitive and technically advanced small town, dedicated to humane enterprise. Soybean farming and research led to commercial sales of soy products such as tofu, tempeh, soy yogurt, and Ice Bean, an ice cream equivalent.

When an earthquake devastated Guatemala, the Farm sent its charitable arm, Plenty, with carpenters and workers to aid in rebuilding; an ongoing relationship with communities in Central

America resulted. When municipal ambulance service in New York City's South Bronx became unconscionably inadequate, the Farm began its own voluntary ambulance corps there.

As the Farm grew, Plenty expanded, and satellite farms in 20 states and foreign countries were founded. To stay in touch, a group of ham radio operators living at the Farm developed innovative space-based communications and an electronics manufacturing center, which helped serve the Farm's broader environmental aims.

The Farm has developed solar hybrid vehicles, the doppler fetoscope (for amplifying the heartbeat of a young fetus), portable concentrating solar arrays, and numerous other inventions, but the one device that has remained constantly in production and a financial success is the Nukebuster, a pocket-sized Geiger counter with a built-in alert system. After the Three Mile Island and Chernobyl disasters, sales of Nukebusters boomed. The resulting profits played a critical role in saving the Farm during a crisis in 1983, when crushing debt and a national recession nearly brought to an end one of the most important alternative communities of the modern era.



**Sonora Cohousing,
Tucson, Ariz.,
March 2005**

In many ways Sonora Cohousing is typical of all cohousing—numerous environmentally sound practices are woven into the 36 homes and throughout the 4.7-acre site. Townhouses sit in groupings of three or four units around highly landscaped “placitas,” forming natural conversation points in the landscape. The “green-built” homes are energy efficient, with active and passive solar energy elements, and are structured to facilitate water harvesting. The community’s 3,500-square-foot common house is built from straw bale. Sonora’s social practices are also typical of cohousing: community, collaboration, conservation. But the most unusual aspect of the community is no longer visible to the eye: Sonora cohousing is intentionally built on an urban infill site.

“Infill development” refers to the practice of making use of underutilized or empty sites within urban areas. The founding members of Sonora wanted to avoid destroying untouched desert—“blading unbladed land”—or becoming part of the suburban sprawl that requires new roads, sewers, and schools every time a developer “leapfrogs” to build a community further out from the city center (developers are motivated to do so because the farther land may be less expensive—and offer better “access to nature”). The founders of Sonora not only

made a choice for infill, they also adhered to the criteria that the site must be accessible by public transportation (in this case bus transportation) and that shopping must be within walking distance. What’s more, they chose a neighborhood with a high crime rate by Tucson standards, and yet they refused to become a gated community. This has meant that bicycles, and charcoal grills and watermelons, are occasionally stolen—but it also allows for meaningful interactions with neighbors (the three nine-year-old girls who stole the watermelon came back and sought out its grower to apologize).

Something else invisible in this photograph: When the garden was being built, resident Don Arkin helped to create a compost area by building a wall around it. The much-disliked, stucco-like material he used was referred to as “doncrete.” An artist resident, Kendra Davies, created the mural that covers it without going through the community approval process. To date no one has objected.



**An Earthship at
Earthaven Ecovillage,
Black Mountain, N.C.,
April 2005**

Earthships, invented by American architect M. K. Reynolds, derive their name from his idea of them as “independent vessels to sail on the seas of tomorrow.” They are generally made from tires filled with rammed earth, though sometimes of bottles and cans. They are often configured to maximize the surface area on which solar panels can be placed and typically have rain catchments and a filtration system for water (the circular object seen at the corner of the building is a cistern). Not visible in this photograph is an all-glass south facing wall. In the winter when the sun is low in the sky, sunlight pours through it directly into the home. The warmth that results is retained by the high insulating coefficient of the three earthen walls enabling the house to be 68 degrees with minimal heating. In the summer, when the sun is overhead, the cool earthen walls maintain 68 with little or no additional cooling. This home is sited so that on Dec. 21 the sun is just over the horizon of the ridge to the east.

The house is one of numerous innovative structures that comprise Earthaven Ecovillage. Because Earthaven's 320 acres are mostly mountainous forest, all dwellings are built on slopes, leaving flat ground available to become agricultural fields. Though still under construction, Earthaven has been completely off the grid since its inception in 1994. The central village is

powered by a micro-hydro system, and the water supply comes from a natural spring and is stored in a 10,000-gallon water tank. Homes in the community are built of natural or recycled materials, and the entire site has been planned as a model of permaculture design.

Members pay annual dues, share title to the land, and participate in a consensus decision-making process. Each community member is responsible for earning his or her own living. The village-scale economy includes numerous ecologically sound businesses, such as Red Moon Herbs and *Permaculture Activist* and *Communities* magazines.

The community doesn't have a single village-wide spiritual practice. “What many of us have in common is a reverence for the Earth and our land, and the belief that our land is alive and conscious and it's our sacred duty to honor and care for it.”



**Heathcote Community,
Freeland, Md.,
May 2005**

When Ralph Borsodi founded the School of Living in the 1930s, the terms “permaculture” or “sustainability” did not exist. Borsodi was simply a philosophical man whose life led him to believe that a return to the land was the cure for all that ailed civilization.

His background might have predisposed him to think this way: His father had written the introduction to Bolton Hall’s *A Little Land and a Living*, a book which led to the founding of Little Lander colonies in California. But the real impetus occurred in the early 1920s when the house in which he and his wife were living was sold, and they found themselves without a home. They moved to the country and began homesteading. As he acquired the skills necessary to live in the country with self-reliance, Borsodi began to work on his ideas, producing treatises such as *This Ugly Civilization* and *Flight from the City*. His writings influenced many, including Helen and Scott Nearing who moved to the country a few years later and whose own writings also encourage self-reliant, agricultural life.

The School of Living was founded to teach the pragmatics of small-scale subsistence farming and living, such as carpentry, organic gardening, and food storage. Self-sufficiency was at the core of his belief system, but he also considered the broader aspects of modern society and was particularly concerned

about the overuse of nonrenewable resources—a topic of great importance today.

After World War II, Borsodi’s mission was taken up by Mildred Loomis. In 1965, under her leadership, the School of Living purchased a 150-year-old gristmill in Maryland to serve as the center of a community where the pursuit of personal and spiritual growth could be interwoven with a lifestyle respectful of the land.

Heathcote, as it was named, has thrived, and in accordance with its communal belief that we live on a planet in crisis, it practices and teaches permaculture. A contraction of the words “permanent agriculture” and “permanent culture,” permaculture is a philosophy that informs an approach to planning, building, and maintaining sustainable systems, the ultimate expression of which is a sustainable community. Nature itself is the model for permaculture; close observation and working in concert with the natural world are at the heart of this thinking.

The long foreground of Heathcote—from Borsodi’s personal transformation to Mildred Loomis’s assumption of leadership; from Heathcote’s formation as a 1960s commune to its present role as a center of permaculture—offers a model of communal evolution.



**Prairie Crossing,
Grayslake, Ill.,
May 2005**

Six weeks before this photograph was made the lawn was on fire—in a controlled burn. At Prairie Crossing, homeowners are encouraged to integrate native plantings and restored prairie into their landscaping and to recreate the true natural cycle of the prairie by burning it periodically.

Prairie Crossing is a privately funded community, founded by Vicky and George Ranney and Dorothy and Gaylord Donnelly when a large parcel of farmland threatened by high-density development became available for purchase. They decided to use the land in a manner that was consonant with the rural character of the area. Funds generated from the sale of homes in the community have gone toward restoring surrounding prairie: 60 percent of the 677-acre site is protected open space, including 165 acres of restored prairie and 20 acres of restored wetlands. Sixteen acres of old hedgerows—tough trees planted in columns to act as a wind block—have been preserved at Prairie Crossing, not only for their historic interest but also because they function as a wildlife corridor.


Hardier and more sustainable native plants require less water and maintenance than conventional flora, and serve an important function in cleansing storm water as it flows into local lakes. Prairie Crossing's Lake Aldo Leopold has water of such high

quality that it was selected as a site for breeding endangered species of fish.

Besides its commitment to environmental protection and enhancement, many other aspects of the community's development plan—an on-site organic farm, a regional trail open to the public for hiking, biking, horseback riding, and cross-country skiing, and a policy favoring economic and racial diversity—serve to indicate that private development can not only be responsible, it can take a proactive role in saving and preserving endangered landscapes and promoting societal good. In the words of Vicky Ranney, "You couldn't save all the land you needed to if you depended on the government."



transparent



technology

VALERIO
DEWALT
TRAIN'S
NEW KRESGE
HEADQUARTERS
INCORPORATES
SUSTAINABLE
MEASURES
INVISIBLY.

Text Edward Keegan **Photos** Barbara Karant/Karant + Associates
Illustrations Valerio Dewalt Train Associates

THE KRESGE FOUNDATION supports green building in a big way. The 82-year-old organization dispenses grants from its \$3 billion in assets toward the capital campaigns of other nonprofits to advance the well-being of humanity. These substantial investments help finance the development of hundreds of buildings each year. In 2003, Kresge created its Green Building Initiative to stimulate sustainable and green building practices by its constituents. To date, the program has supported planning for 64 projects, including a building in New York City that promises to be off the grid entirely.

The need to expand its own headquarters in Troy, Mich., provided the Kresge Foundation with an opportunity to demonstrate these values itself. Since 1983, the foundation's home has been a collection of 19th century landmark stone structures that constitute the Brooks Farm. The organization had outgrown an earlier addition to the complex.

Kresge chose Chicago-based Valerio Dewalt Train Associates to design the facility. Principal Joe Valerio embraced the foundation's interest in building green, but he didn't want to create buildings that looked like they were trying too hard. "You shouldn't be aware of sustainable technology," he says. "It should be just a part of the air, a part of the ether that surrounds us." Valerio's nuanced approach informed every design decision—including more than three dozen distinct sustainable features—that shaped his 19,500-square-foot structure.

Valerio razed the aging 20-year-old structure—whose glassy façades proved highly unsustainable—and used the original farm structures as a point of reference.

"The 19th century farm floated on the iconic American prairie," Valerio explains. "It used sustainable technologies; it was off the grid; it was independent in terms of its energy," he continues. "It changed nature, but it harmonized with nature."



The environmentally unsound green lawn that had surrounded the farm's structures for the last 20 years was plowed under, replaced by a prairie landscape native to the area. All but one of the original farm buildings were moved by the architects to create a better sense of place and to integrate them with the new addition. This isn't just a sustainable strategy, Valerio notes; it's also traditional. Farmers often moved their outbuildings as farm functions expanded and changed over time.

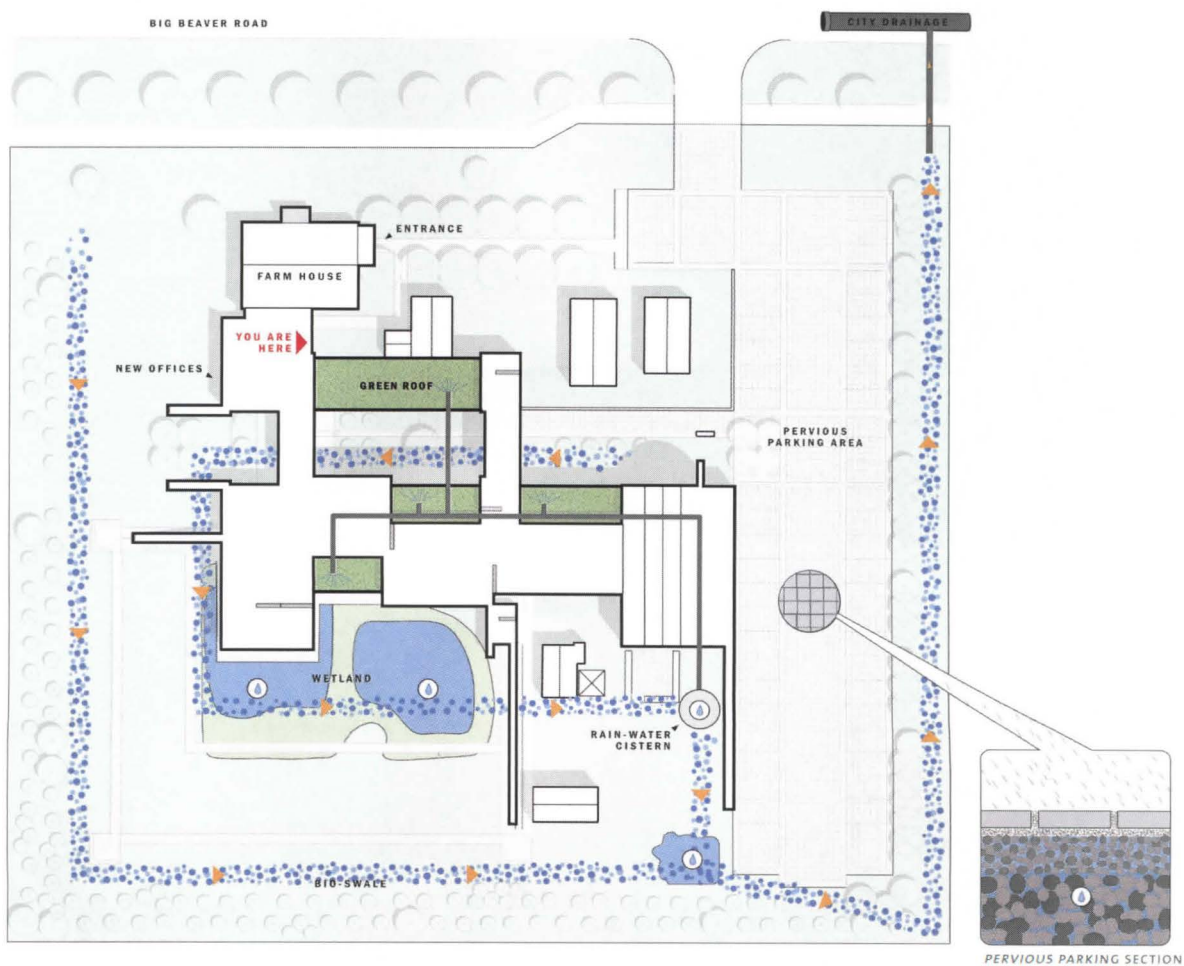
Valerio eschewed overt "green" features, integrating sun-shading devices within a sleek contemporary aesthetic. The glass-and-metal façades of his building look no more sustainable than the addition it replaced. A preliminary survey indicates that the facility will achieve at least a gold, and possibly platinum, LEED rating. More important, Kresge has demonstrated that sustainability doesn't have to impede good design. In a capable designer's hands, it can be as invisible as the air.

All but one of the original farm buildings were moved by the architects to create a better sense of place and to integrate them with the new addition. This isn't just a sustainable strategy, Valerio notes; it's also traditional.

water movement

The historic farmstead retains its character, thanks to Valerio's decision to embed his addition a full level into the ground (facing page). The upper floor of two-story structure is level with ground floor of farm-house (at left) and barn.

The three-acre site was developed to capture rainfall and direct water movement (right). A bio-swale defines the perimeter of the property, and impervious surfaces are eschewed. The parking lot retains water within 18 inches of crushed rock below the permeable pavers. Water is collected in the reconstructed wetland and then pumped into a cistern, where it is used to water the green roofs.



WATER RETENTION AREA



GREEN ROOF IRRIGATION



DIRECTION OF BIO-SWALE FLOW



JENS UMBACH

THE ARCHITECT

Name: Joe Valerio

Age: 58

Firm: Valerio Dewalt Train Associates

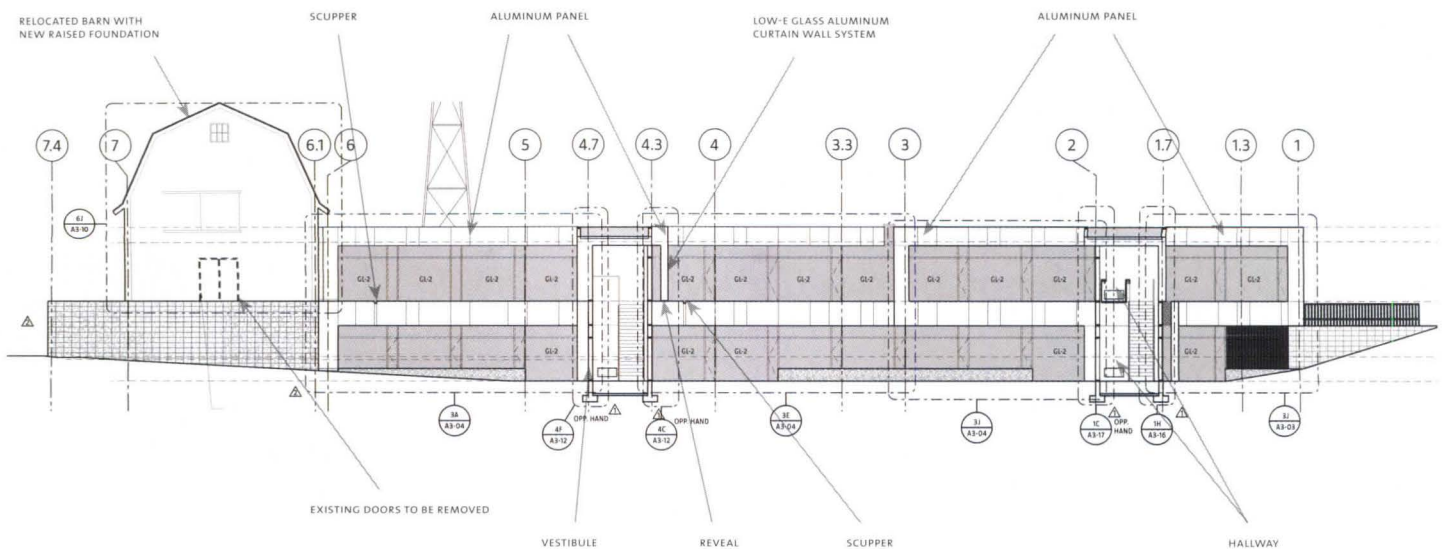
Employees: 52

Education: B.Arch., University of Michigan; M.Arch., UCLA

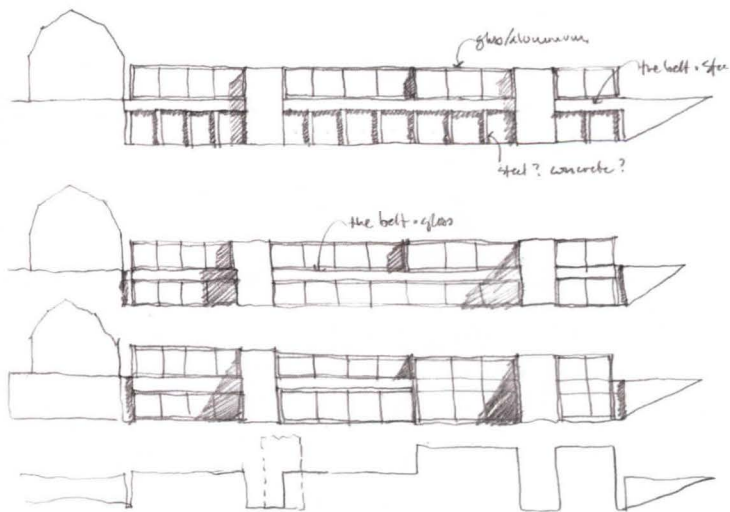
The primary entrance for the staff is at the lower courtyard level, accessed via an outdoor ramp adjacent to the barn (left). The barn houses the staff lunchroom and mechanical equipment—recapturing the barn’s traditional role as primary support structure for the complex.

The north and south elevations are extensively glazed (building section, below), while the east and west façades are generally opaque. The opaque façades, as well as the roof, are light-colored and superinsulated to retain heat within the building during the winter and retard solar gain during the summer months.

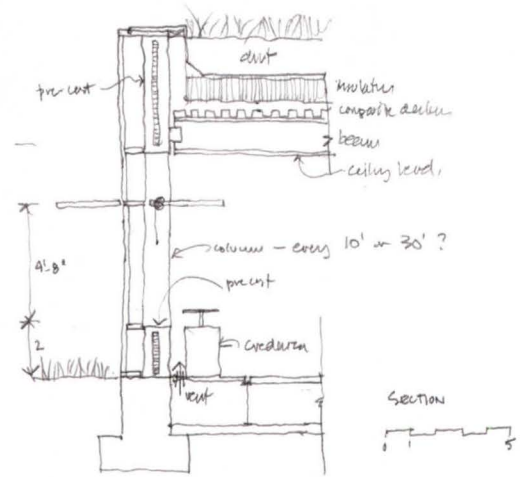
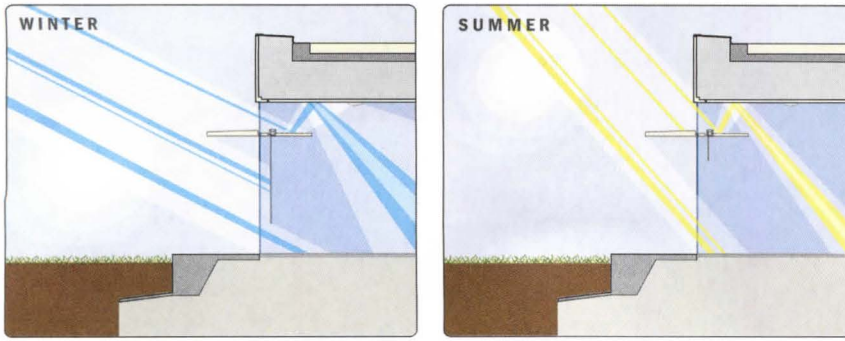
The new offices face either the central courtyard (facing page, top and bottom) or a restored wetland to the south. The subtle palette of glass and custom light-gray recycled aluminum panels complements the stone of the original Brooks Farm.



You shouldn't be aware of sustainable technology. It should be just a part of the air, a part of the ether that surrounds us. *Joe Valerio*

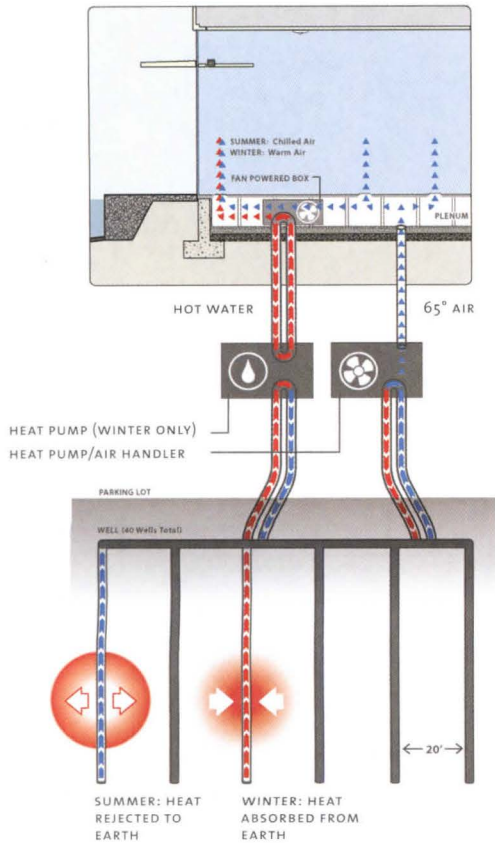


harvesting daylight



Two-thirds of the office space in the building is at what the architects euphemistically call the courtyard level—or the basement. Maximizing light was essential. “The staff of the foundation reads thousands of pages of grant applications every year,” explains Valerio. The workspaces are thoughtful and serene—a cloister for the 21st century. Attention to detail extends to every aspect of the interior environment. A daylight-harvesting system distributes natural light. Occupancy sensors and light control maintain constant levels of illumination and conserve energy whenever possible. A raised floor system permits individual control of HVAC for maximum comfort. Operable windows are used to the extent practical.

geothermal warmth

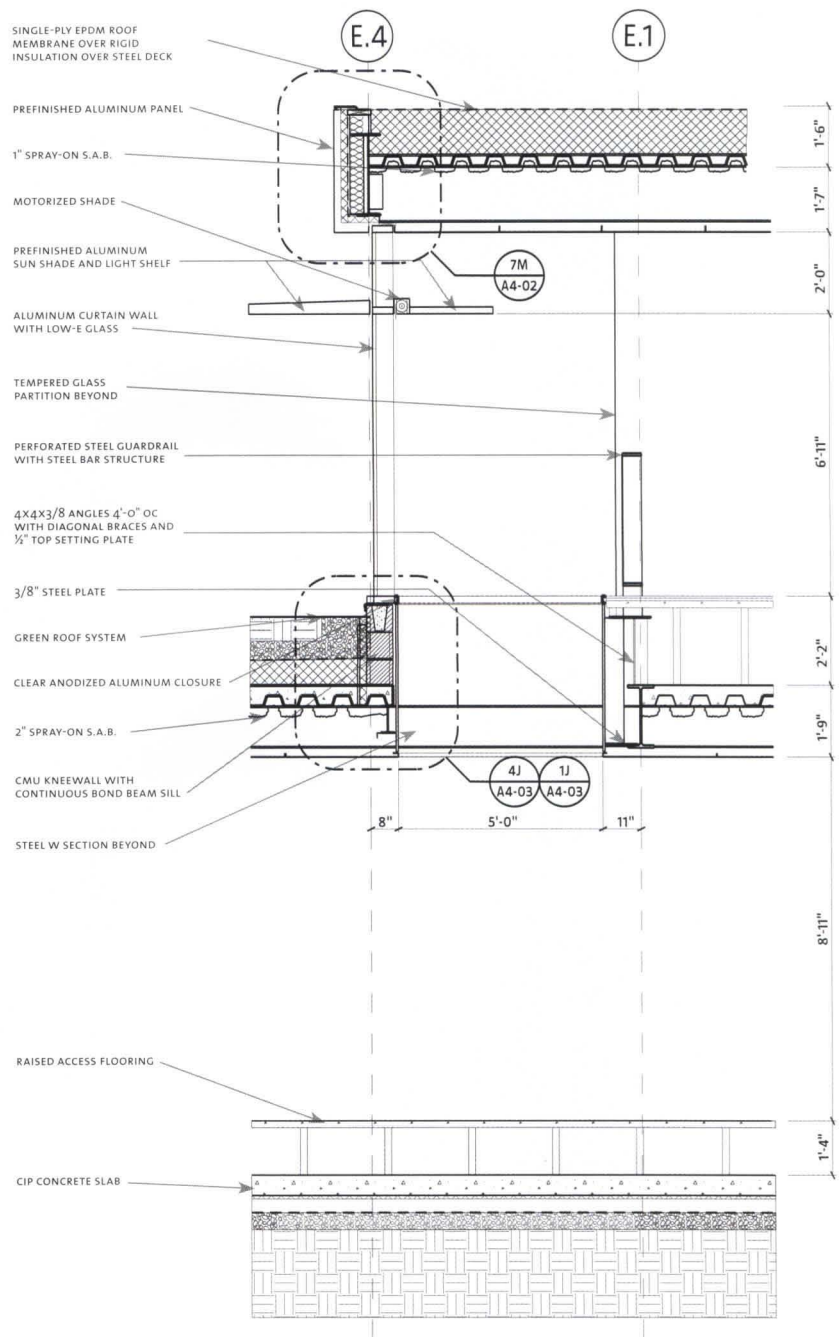


The architects implemented more than three-dozen sustainable strategies within their design, from simple sun-shading techniques to a sophisticated geothermal system (left). “The area under the parking lot is like a huge battery,” explains Valerio, referring to the geothermal system that provides heating and cooling for the complex. Some 40, 400-foot-deep wells on a 20-foot grid are detectable only by the dark paving stones that cap them. A closed loop system of 1/4-inch-diameter plastic piping moves water from the wells to three heat pumps. A balance is maintained throughout the year—extracting heat from the earth during the winter and dispelling it from the building during the summer. Kresge’s project manager, Ron Gagnon, notes some of the difficulties implementing these advanced strategies: Parking ordinances generally require vast swaths of impervious asphalt. Building inspectors typically don’t understand geothermal energy. “You have to educate them about all of these new ideas,” he says.



Some staff receive private offices for acoustical privacy (above), although each space remains visually open via floor-to-ceiling glass. Detailing is clean and simple, with doors matching glass panel sizes. Clerestories help illuminate the circulation spaces.

green roof

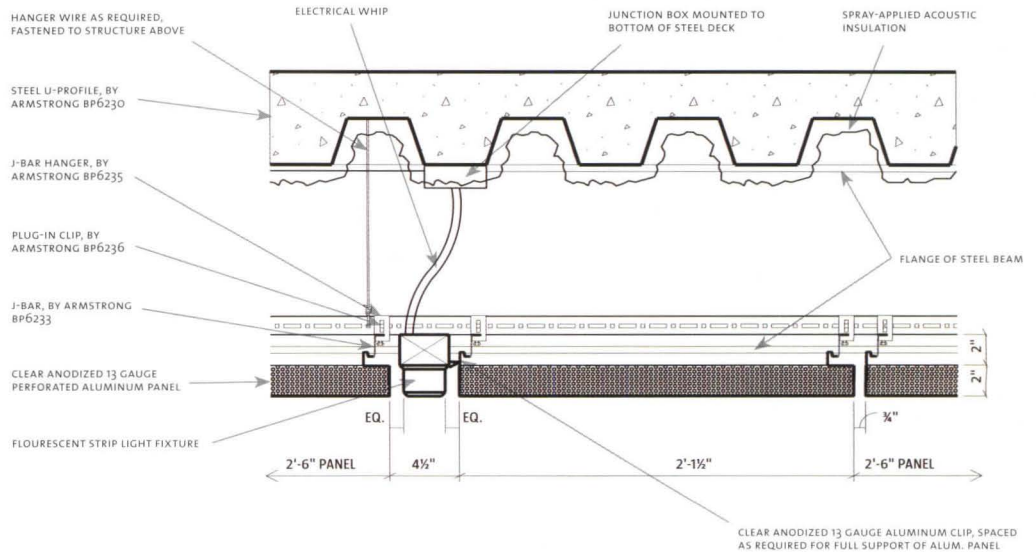
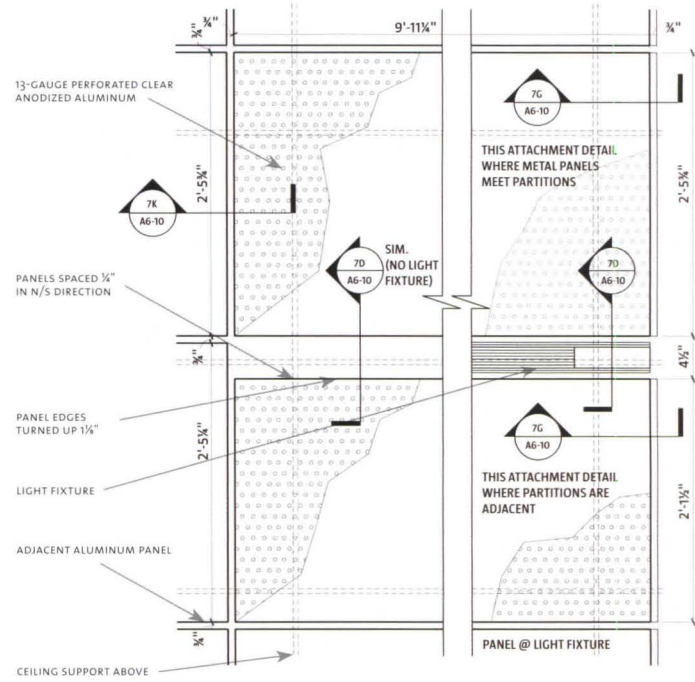


The complex section of the two-level building (above) incorporates light shades, green roofs, clerestory windows, and other features that promote environmental responsibility.

ceilings



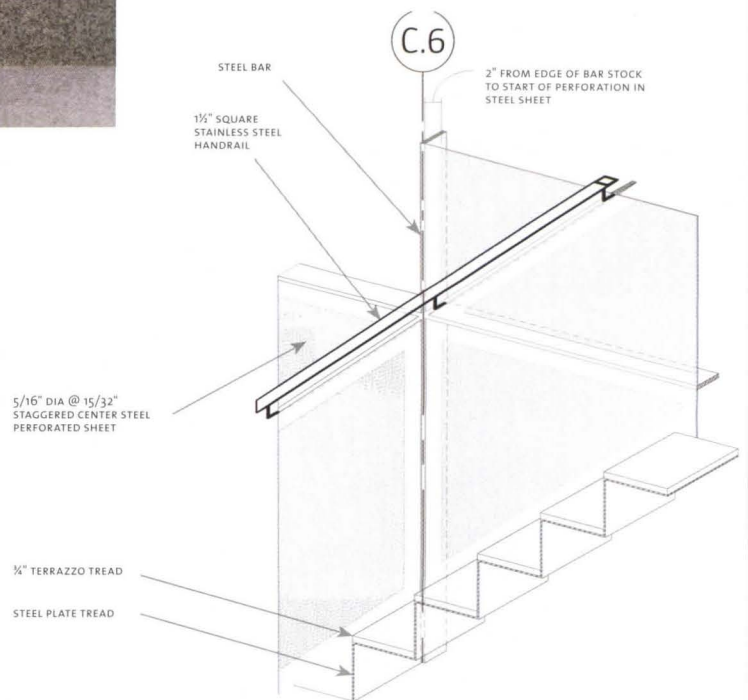
Double-height glazing facing west dramatically illuminates a small seating area outside the conference room—a strategic choice made for aesthetic effect (left). Although inconsistent with the design's more energy efficient features, the architects found that careful implementation of such anomalies had a negligible impact on the overall energy use of the building. Metal ceiling panels (details, below) thematically relate to the building envelope and contrast with warm wood floors and walls in key locations.



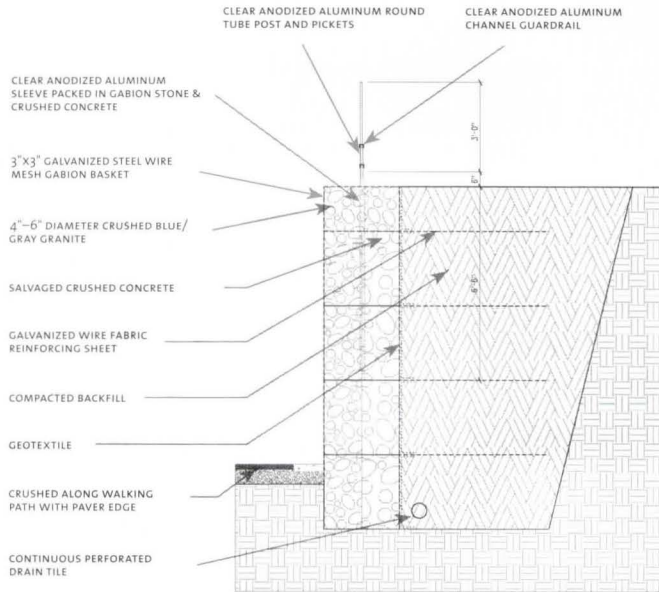
CLEAR ANODIZED 13 GAUGE ALUMINUM CLIP, SPACED AS REQUIRED FOR FULL SUPPORT OF ALUM. PANEL



Two required fire stairs enclose the east and west edges of the central courtyard (above, left and right). Although occupied spaces on these elevations are generally opaque, Valerio clad the circulation spaces in glass. Energy is saved by simply tempering the air in each area to avoid extreme swings in temperature rather than providing full heating and cooling. Consistent with the rest of the building, the stairs are simply detailed in steel plate with precast terrazzo tread surfaces (detail, right).



gabion wall



Retaining walls are 3-foot-thick gabions faced in crushed Michigan blue granite (above). Each basket is filled primarily with recycled paving materials, including the previous paving from the site. Crushed asphalt and concrete was also "harvested" from nearby sites, making Kresge a local landfill for these waste materials.

A steel-framed pavilion (right) provides an outdoor sheltered terrace overlooking a restored wetland.

A lower-level conference room (below) looks onto a retention pond on the south side of the site.



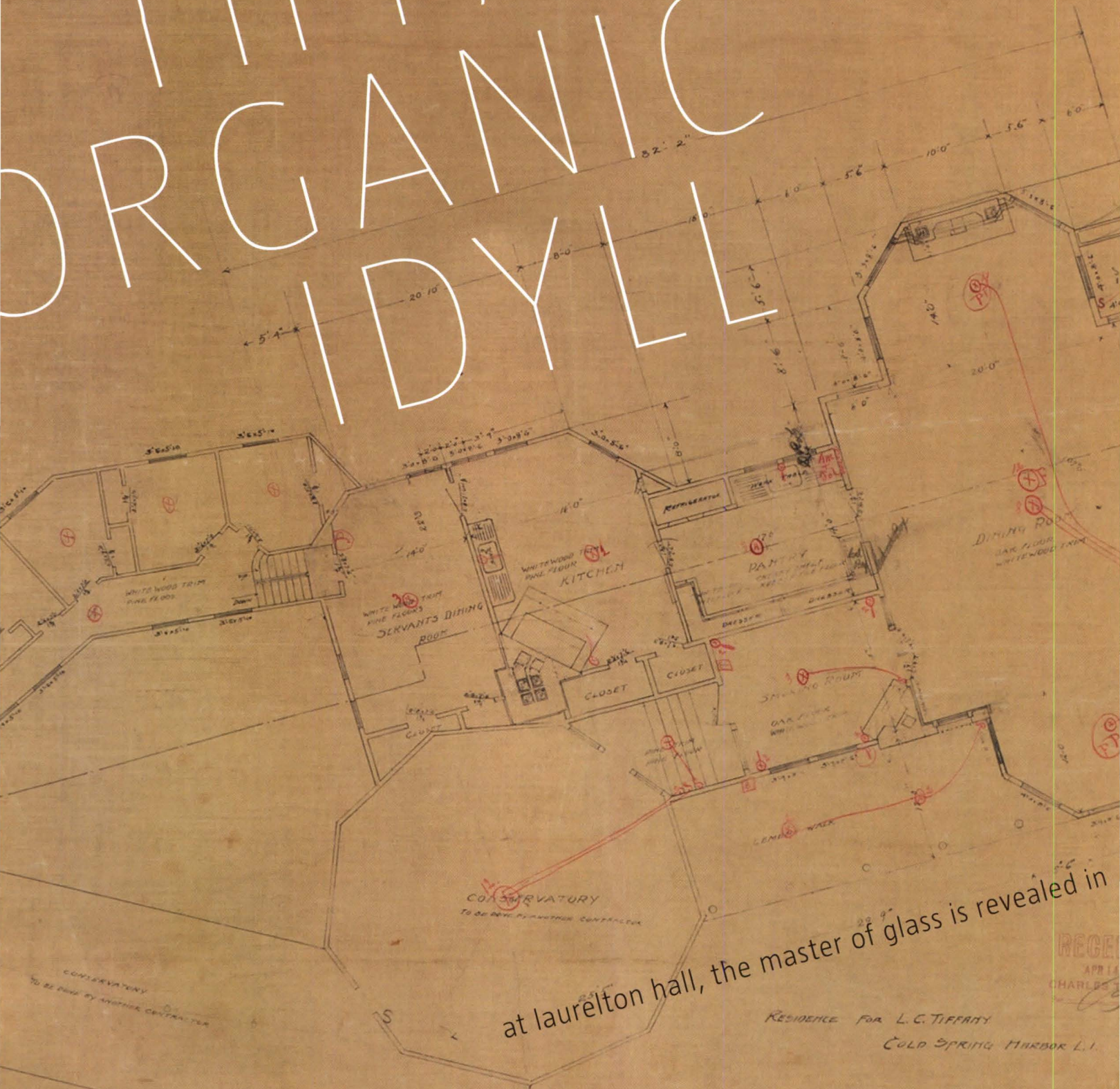


leed status report

LEED CERTIFICATION GRADING SCALE: CERTIFIED 26-32 POINTS, SILVER 33-38 POINTS, GOLD 39-51 POINTS, PLATINUM 52-69 POINTS

12	0	2	SUSTAINABLE SITES		14
YES			Prereq 1	Erosion & Sedimentation Control	Required
YES			Credit 1	Site Selection	1
		NO	Credit 2	Urban Redevelopment	1
		NO	Credit 3	Brownfield Redevelopment	1
YES			Credit 4.1	Alternative Transportation, Public Transportation Access	1
YES			Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1
YES			Credit 4.3	Alternative Transportation, Alternative Fuel Refueling Stations	1
YES			Credit 4.4	Alternative Transportation, Parking Capacity	1
YES			Credit 5.1	Reduced Site Disturbance, Protect or Restore Open Space	1
YES			Credit 5.2	Reduced Site Disturbance, Development Footprint	1
YES			Credit 6.1	Stormwater Management, Rate or Quantity	1
YES			Credit 6.2	Stormwater Management, Treatment	1
YES			Credit 7.1	Landscape & Exterior Design to Reduce Heat Islands, Non-Roof	1
YES			Credit 7.2	Landscape & Exterior Design to Reduce Heat Islands, Roof	1
YES			Credit 8	Light Pollution Reduction	1
3	0	2	WATER EFFICIENCY		5
YES			Credit 1.1	Water Efficient Landscaping, Reduce by 50%	1
YES			Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	1
		NO	Credit 2	Innovative Wastewater Technologies	1
YES			Credit 3.1	Water Use Reduction, 20% Reduction	1
		NO	Credit 3.2	Water Use Reduction, 30% Reduction	1
10	1	6	ENERGY & ATMOSPHERE		17
YES			Prereq 1	Fundamental Building Systems Commissioning	Required
YES			Prereq 2	Minimum Energy Performance	Required
YES			Prereq 3	CFC Reduction in HVAC&R Equipment	Required
YES			Credit 1.1	Optimize Energy Performance, 20%	2
YES			Credit 1.2	Optimize Energy Performance, 30%	2
YES			Credit 1.3	Optimize Energy Performance, 40%	2
		NO	Credit 1.4	Optimize Energy Performance, 50%	2
		NO	Credit 1.5	Optimize Energy Performance, 60%	2
		NO	Credit 2.1	Renewable Energy, 5%	1
		NO	Credit 2.2	Renewable Energy, 10%	1
		NO	Credit 2.3	Renewable Energy, 20%	1
YES			Credit 3	Additional Commissioning	1
YES			Credit 4	Ozone Depletion	1
YES			Credit 5	Measurement & Verification	1
YES			Credit 6	Green Power	1
8	0	5	MATERIALS & RESOURCES		13
YES			Prereq 1	Storage & Collection of Recyclables	Required
		NO	Credit 1.1	Building Reuse, Maintain 75% of Existing Shell	1
		NO	Credit 1.2	Building Reuse, Maintain 100% of Shell	1
		NO	Credit 1.3	Building Reuse, Maintain 100% Shell & 50% Non-Shell	1
YES			Credit 2.1	Construction Waste Management, Divert 50%	1
YES			Credit 2.2	Construction Waste Management, Divert 75%	1
		NO	Credit 3.1	Resource Reuse, Specify 5%	1
		NO	Credit 3.2	Resource Reuse, Specify 10%	1
YES			Credit 4.1	Recycled Content, Specify 25%	1
YES			Credit 4.2	Recycled Content, Specify 50%	1
YES			Credit 5.1	Local/Regional Materials, 20% Manufactured Locally	1
YES			Credit 5.2	Local/Regional Materials, of 20% Above, 50% Harvested Locally	1
YES			Credit 6	Rapidly Renewable Materials	1
YES			Credit 7	Certified Wood	1
14	0	1	INDOOR ENVIRONMENTAL QUALITY		15
YES			Prereq 1	Minimum IAQ Performance	Required
YES			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
YES			Credit 1	Carbon Dioxide (CO ₂) Monitoring	1
YES			Credit 2	Increase Ventilation Effectiveness	1
YES			Credit 3.1	Construction IAQ Management Plan, During Construction	1
YES			Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1
YES			Credit 4.1	Low-Emitting Materials, Adhesives & Sealants	1
YES			Credit 4.2	Low-Emitting Materials, Paints	1
YES			Credit 4.3	Low-Emitting Materials, Carpet	1
YES			Credit 4.4	Low-Emitting Materials, Composite Wood	1
YES			Credit 5	Indoor Chemical & Pollutant Source Control	1
YES			Credit 6.1	Controllability of Systems, Perimeter	1
		NO	Credit 6.2	Controllability of Systems, Non-Perimeter	1
YES			Credit 7.1	Thermal Comfort, Comply with ASHRAE 55-1992	1
YES			Credit 7.2	Thermal Comfort, Permanent Monitoring System	1
YES			Credit 8.1	Daylight & Views, Daylight 75% of Spaces	1
YES			Credit 8.2	Daylight & Views, Views for 90% of Spaces	1
5	0	0	INNOVATION & DESIGN PROCESS		5
YES			Credit 1.1	Innovation in Design: Recycled Content 17.25%	1
YES			Credit 1.2	Innovation in Design: Educational Display	1
YES			Credit 1.3	Innovation in Design: Green Building Initiative	1
YES			Credit 1.4	Innovation in Design: Regional Material Pt Exceeded another 20%	1
YES			Credit 2	LEED™ Accredited Professional	1
52	1	16	PROJECT TOTALS		69

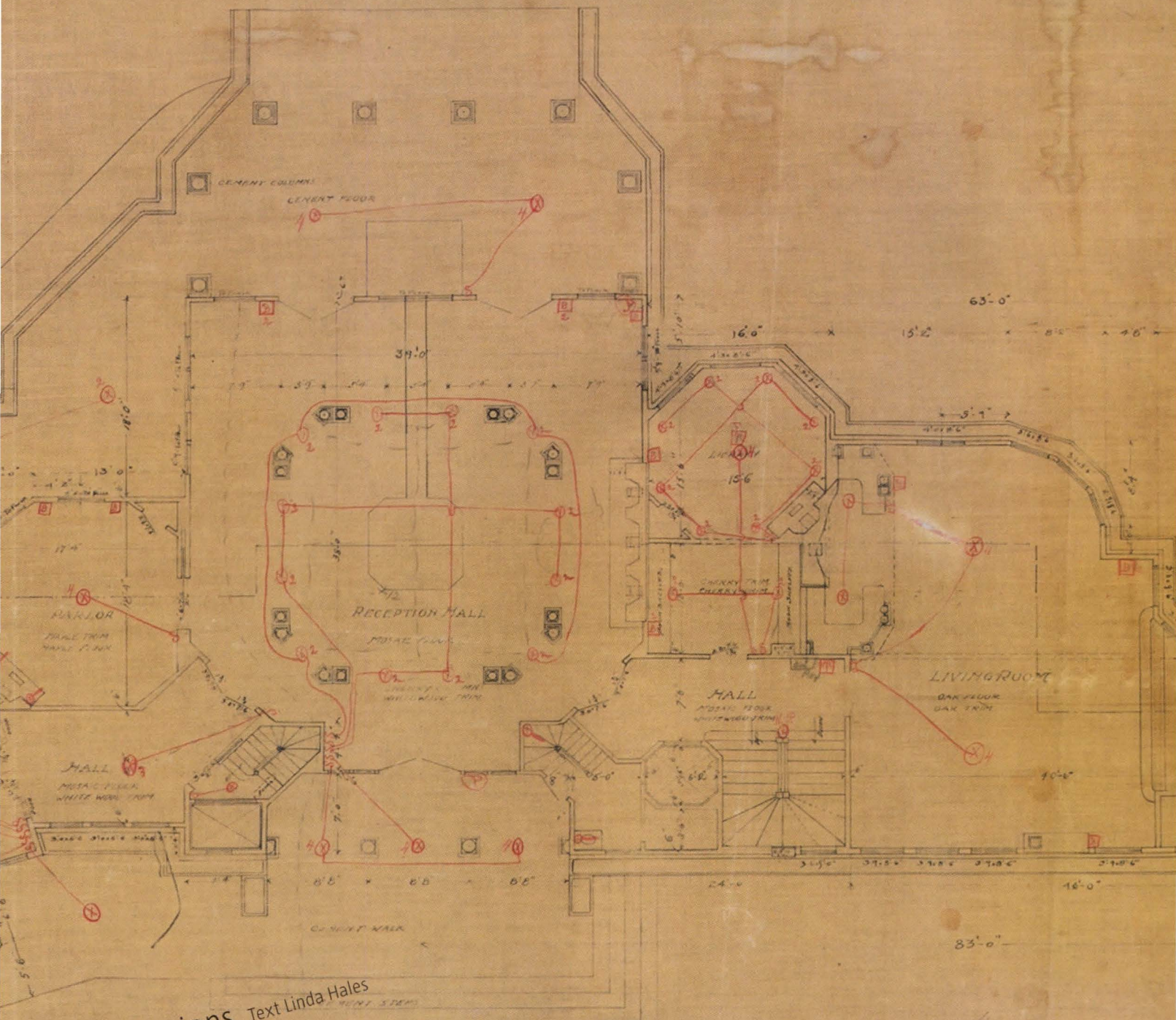
TIFFANY'S ORGANIC IDYLL



at laurelton hall, the master of glass is revealed in

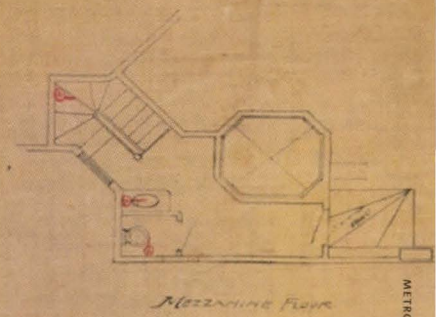
RESIDENCE FOR L. C. TIFFANY
COLD SPRING HARBOR L.I.

RECEIVED
APR 14
CHARLES
[Signature]



natural reflections Text Linda Hales

FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

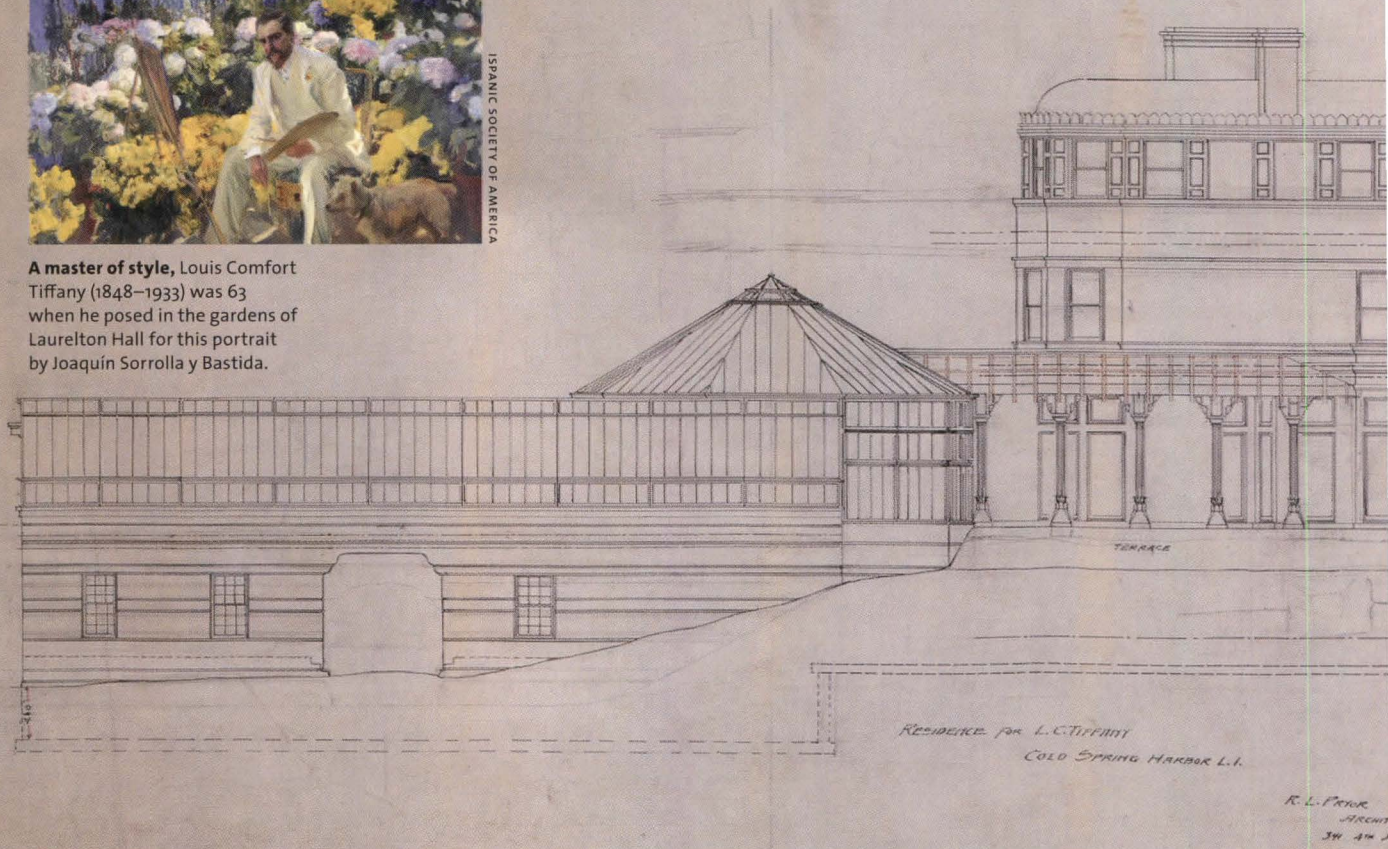


"Nature is always right. ... Nature is always beautiful." With these words, Louis Comfort Tiffany defined the fluid guidelines for his 50-year career as an artist, designer, and American champion of the Art Nouveau.



ISPAIC SOCIETY OF AMERICA

A master of style, Louis Comfort Tiffany (1848–1933) was 63 when he posed in the gardens of Laurelton Hall for this portrait by Joaquín Sorolla y Bastida.



TIFFANY IS BEST KNOWN FOR HIS brilliantly colored leaded-glass lamps, which fetch astonishing prices on the antiques market. But the full impact of Tiffany's vision played out at Laurelton Hall, his 600-acre estate on the north shore of Long Island in New York. Tiffany designed and built an 84-room house on the property, decorating every exotic inch in homage to the restorative powers of the natural environment.

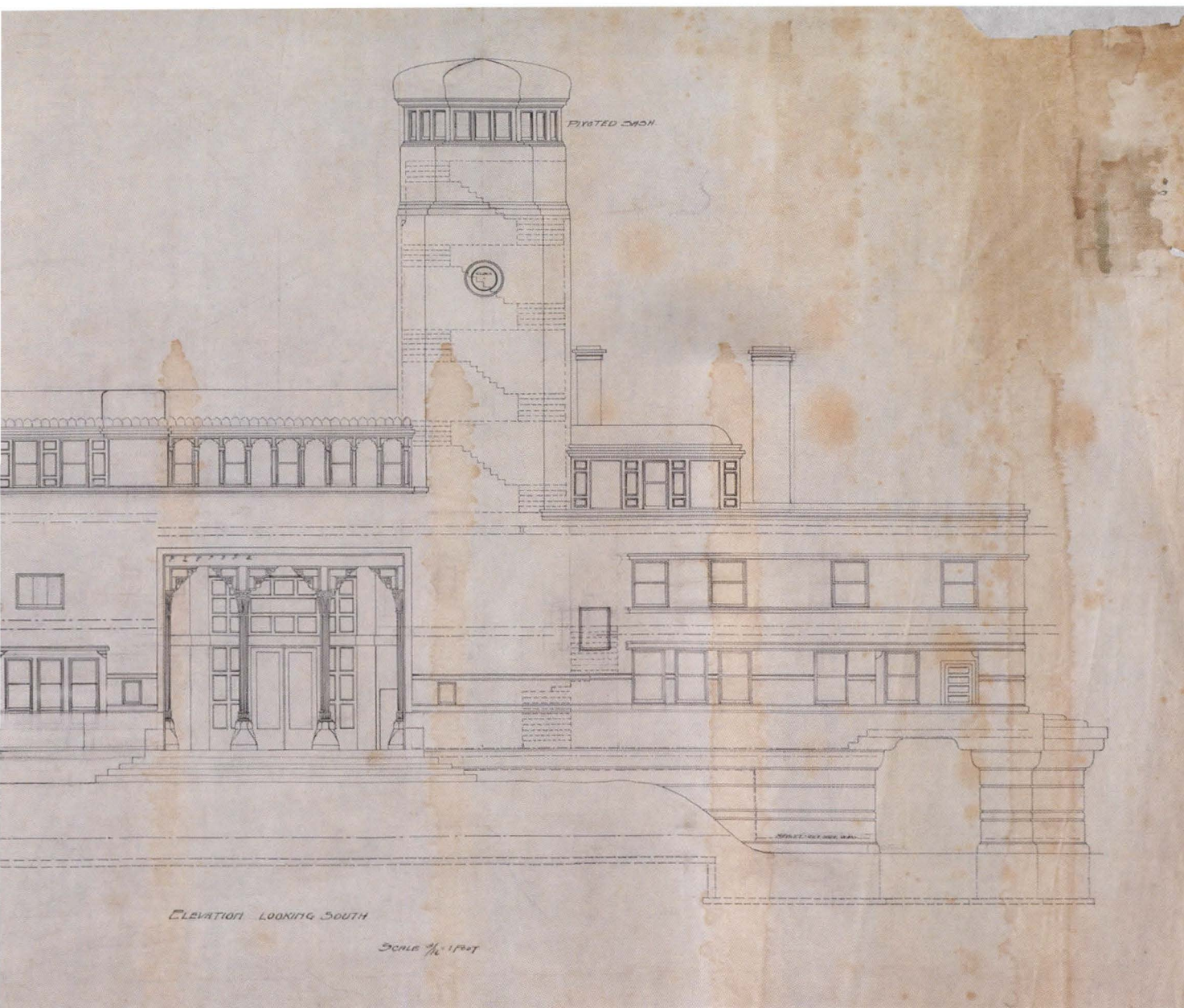
"Nature really drove a lot of what Laurelton Hall was," says Alice Cooney Frelinghuysen, curator of "Louis Comfort Tiffany and Laurelton Hall: An Artist's Country Estate," at the Metropolitan Museum of Art in New York. The exhibition, which opened in November and runs through May 20, 2007, seeks to recreate Tiffany's lost idyll—the house was destroyed by fire in 1957.

Frelinghuysen's selection of 250 salvaged architectural elements and other extraordinary objects from the house suggests the aesthetic power of a forgotten masterpiece, while providing a worthwhile reminder that nature was a preoccupation in architecture long before the advent of the green movement.

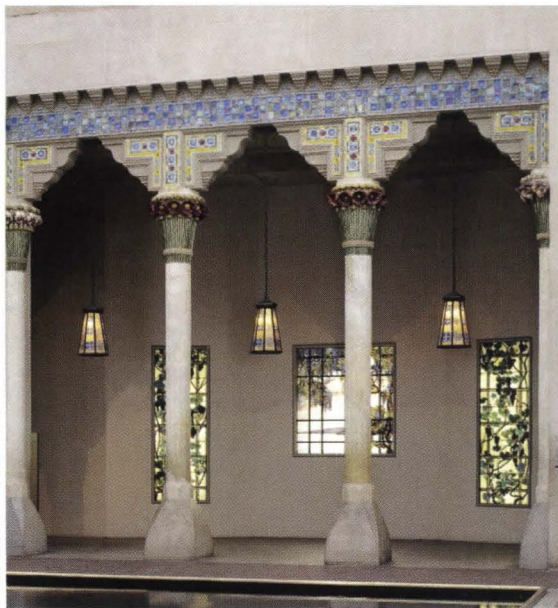
Tiffany directed a seemingly infinite number of designs for objects, interiors, and houses. His best-remembered architectural project is a mansion his father commissioned for the family at Fifth Avenue and 72nd Street in Manhattan. Completed in 1888, the 57-room Romanesque Revival residence was officially the work of Stanford White, but its design bears young Tiffany's unmistakable signature, especially on the interior. Outfitted with art glass and objects from Japan, India, and Pompeii, the Fifth Avenue interiors served as a showcase for Tiffany's emerging vision. But even this astonishing beauty was eclipsed by the Long Island dream house.

Laurelton Hall was a total work of art and an aesthetic argument for the benefits of living in harmony with nature. Tiffany devoted himself to its design from 1902 to 1905. Vintage photos show a sprawling, vaguely Moorish manse; its oxidized copper roof formed a brilliant green canopy over a stucco façade. Windows glowed with spectacular mosaics of amethyst wisteria, burnt orange pumpkins, and goldfish. Column capitals were dressed up with motifs of blooms cultivated on the landscape, which

To design his exotic 84-room country house in Cold Spring Harbor, Long Island, N.Y., Tiffany borrowed architectural elements from the Orient. An elevation (top) with the notation "looking south," shows R. L. Pryor as the architect of record.



METROPOLITAN MUSEUM OF ART



A vintage photograph records the grandeur of Laurelton Hall's special effects, including a four-column loggia decorated with colored glass and pottery capitals in the form of flowers.

Fire ravaged the estate, but elements of the loggia were salvaged and resurrected in 1980 in the Charles Engelhard Court of the Metropolitan's American Wing, a gift of Tiffany collectors Hugh F. and Jeannette G. McKean. The Charles Hosmer Morse Museum of American Art, which Jeannette McKean founded in Winter Park, Fla., shared its holdings to produce the Metropolitan museum's exhibition.



descended to a private beach on Long Island Sound.

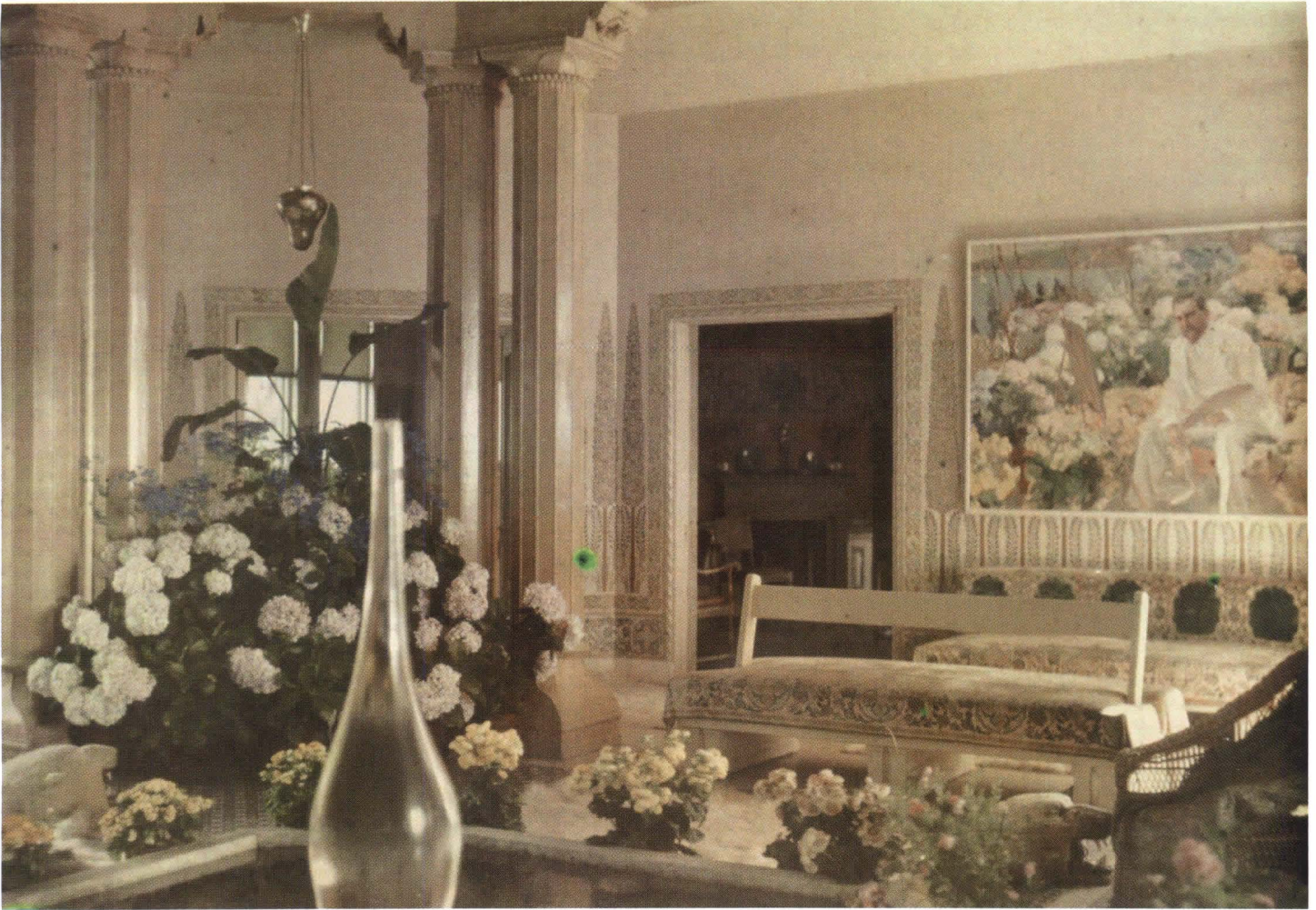
Tiffany had intended for his estate to sustain future generations of artists. But the Utopian dream of a creative summer colony began to fade after the 1929 stock market crash. In 1932, a year before Tiffany's death, his studio declared bankruptcy. Laurelton Hall's furnishings and objects were not dispersed until a five-day auction in 1946. Three years later, the property was sold, with leaded windows in place, for \$10,000, but the house was largely unoccupied. The disastrous and still mysterious fire, which lasted for 24 hours, sealed Laurelton Hall's fate.

On Frelinghuysen's initial visit, little more than a Moorish minaret inset with iridescent blue tiles, which Tiffany had designed as a smokestack, remained amid houses built in the early 1960s. Had Laurelton Hall's richly organic interiors survived intact, she believes, Tiffany's country home would have been "the most important historic house in America." If the house is lost to history, the exhibition's recreation of Tiffany's rooms will inspire today's architects, who are forging a new kind of relationship between building and nature.

Tiffany selected every detail and feature of his interiors to create a harmonious environment. For the dining room, he combined floral patterned walls and leaded glass windows trailing with wisteria vines to obscure the boundary between indoors and out.

Terraced gardens descended from the mansion to a private beach on Long Island Sound, past stables, tennis courts, greenhouses, a chapel, a studio, and an art gallery.





METROPOLITAN MUSEUM OF ART



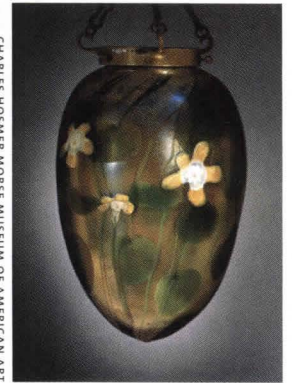
METROPOLITAN MUSEUM OF ART



CHARLES HOSMER MORSE MUSEUM OF AMERICAN ART

Tiffany entertained in the Fountain Court (top), a room inspired by the Alhambra in Spain. Displays of glass vases complemented the centerpiece, a 4-foot-tall vase in the shape of a teardrop, from which water flowed.

From the loggia to the Daffodil Court, profusions of flowers ornamented column capitals in glass and terracotta relief (left).



CHARLES HOSMER MORSE MUSEUM OF AMERICAN ART

Tiffany installed leaded-glass exhibition windows, including the Pumpkin and Beet window (above, center), created for the 1900 Exposition Universelle in Paris, in his living hall.

The invention of iridescent, color-infused Favrite glass, considered Tiffany's greatest innovation, enabled craftsmen to embellish this blown glass lamp from the Fountain Court (above, right) with variegated leaves and vines.

Text Bradford McKee Photos Stewart Ferebee

Like many U.S. cities, Washington, D.C., is booming. But capital expansion comes at a price. The city's library system may abandon its Mies-designed headquarters. The site is ripe for redevelopment, and the building's future is unclear.

Now You See It ...



IT WOULD BE HARD TO DESIGN a major public library more dismal than the Martin Luther King Jr. Memorial Library in downtown Washington, D.C. The blame lies only partly with the building itself. The MLK Library, as it is called, opened in 1972 as the city's central facility and was one of the last designs by Ludwig Mies van der Rohe. It resembles one of the architect's handsome skyscrapers, only one lopped off at the fourth floor. From the outside, on G Street, near the heart of downtown, the black building with tinted windows has a rational purity that precedes its purpose. Its colonnade spans almost a block. The building's frame is set on a 30-foot grid to allow a large, airy lobby and bright reading rooms. When it opened, the building was in many ways the classical ideal of a library made modern.

These days, the library usually seems empty. At the entrance, there are no signs to direct visitors. The lobby terrazzo is worn, and the fluorescent lights overhead are harsh. Few of the library's moving parts work correctly,

owing to decades of deferred maintenance. The elevators are unreliable, and the stair halls are dark, hidden, and, like many of the corridors, depressing.

Collections like those for periodicals and black history occupy airless rooms with no natural light. The amenity of the rest rooms is best described by three words posted inside them: "No Bathing Loitering," though homeless people routinely ignore that injunction.

There isn't much that people in Washington agree on, but most concur that their public libraries are shabby, and that the MLK Library, especially, is practically unusable. Over the past decade, as cities from Nashville to Seattle have opened grand new libraries, the MLK Library's condition has only saddened while its neighborhood has revived around it.

The once-slatternly east end of Washington, where the 400,000-square-foot library sits between two major subway stations, has recently surged with sparkling blocks of new offices, hotels, and restaurants surrounding a



new sports arena and two newly renovated Smithsonian museums. And the library's block of G Street, long a pedestrian plaza, has reopened and swirls with traffic. Amid this activity, the library is a holdout of the abandonment that defined Washington's years under its former mayor, Marion Barry.

Although the MLK Library is roundly seen as broken, there are sharp differences about the best way to fix it—or even if it should be fixed at all. Washington's outgoing mayor, Anthony Williams, waited about five years, until his final months in office, to acknowledge the condition of the library.

Two years ago, Williams began pushing a plan that involves closing and leasing the Mies building and using the money to help build a new library nearby on a site formerly occupied by the old Washington Convention Center. It would accompany 1.5 million square feet of offices, housing, and stores on the four-block site being developed by Hines Interests and its architect, Foster and Partners. But the mayor seems uninterested in the fate of the library building—the only Mies building in the District of Columbia.

The city's disdain for the MLK Library did not begin with Williams. The building's condition has worried local architects and preservationists at least since the mid-1990s.

In 2000, on behalf of the local American Institute of Architects chapter and at the request of the library's board of trustees, Washington architect W. Kent Cooper led a volunteer team of six other architects in conducting a detailed study of ways to renovate the Mies building.

In recent years, Cooper has worked to preserve the National Mall's open space from increased pressure to install new memorials. Cooper began focusing on the MLK building in the 1990s, when two officials with the Downtown Business Improvement District alerted him to talk of tearing it down and replacing it with an office building as downtown's redevelopment got under way.

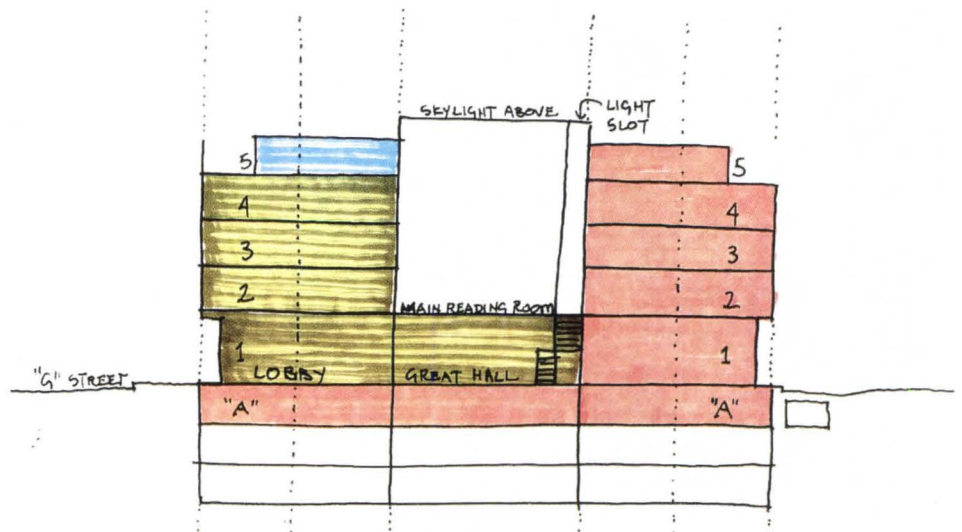
"I got into this because I want to have a really good library," Cooper says, "but I was really trying to save the Mies building."

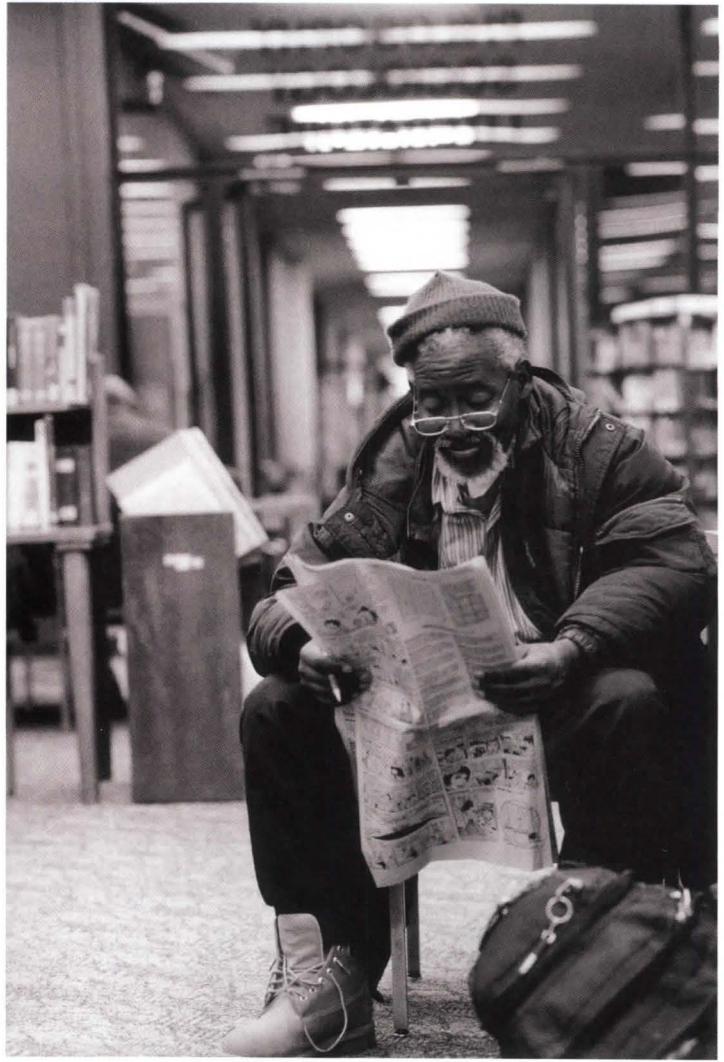
His study showed that the library could be retrofitted to serve the city more effectively while preserving its Miesian character. The library staff have complained that the placement of stacks near perimeter windows has caused books to bake in the sun. Cooper's plan would replace the tinted glass with new lights that would block ultraviolet rays and protect the collection.

But the principal overture of Cooper's concept is to carve out a daylight atrium at the core of the building that would serve as a new main reading room and become a social heart for the building. (The space that would be lost would be replaced in a new fifth floor that Mies intended but that was never built.)



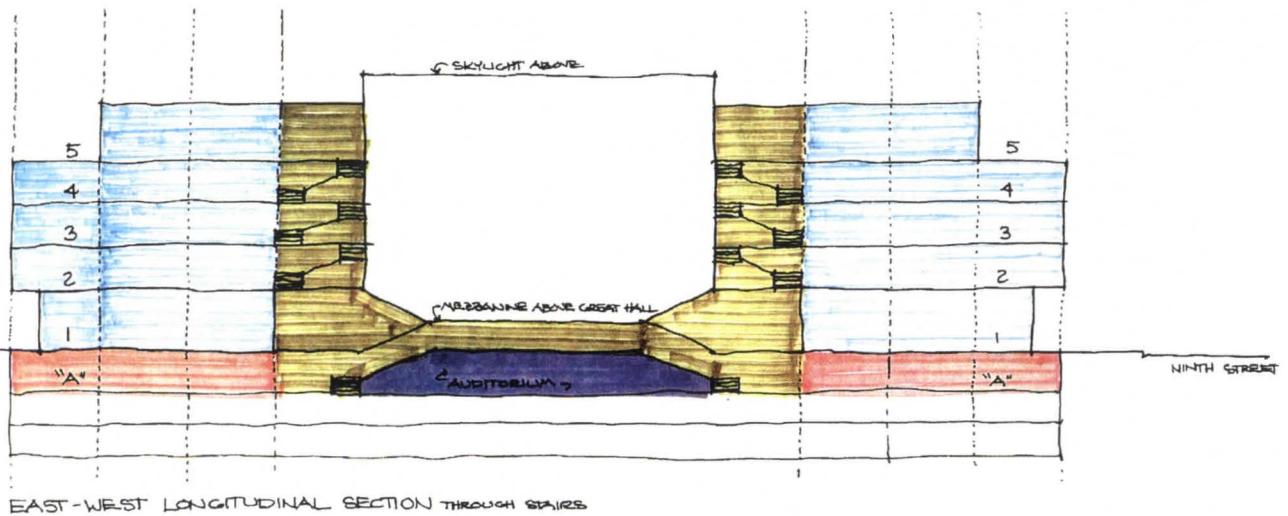
I got into this because I want to have a really good library, but I was really trying to save the Mies building. Kent Cooper

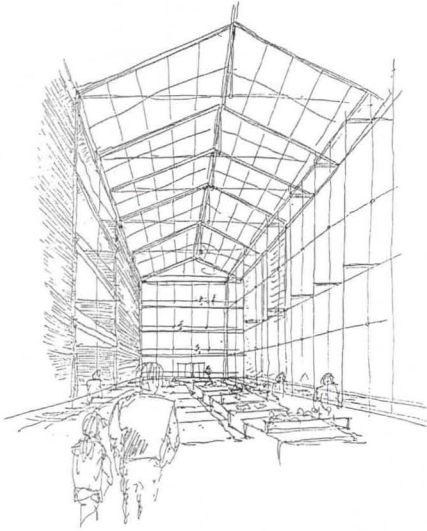




The library's champion, architect Kent Cooper (facing page), conducted a study for the building's renovation at the behest of the AIA D.C. chapter and the library board.

His proposal entails the reworking of the interior program and the addition of a fifth floor to the building (below and facing page, bottom), as Mies originally intended.





A new reading room carved out of the library's core (above) is at the physical and conceptual center of Kent Cooper's proposal.

D.C. Library Renaissance Project director Robin Diener (right) argues that Cooper's renovation plan has been unjustly ignored.



It's a beautiful plan, simple, and bigger than anything the mayor is proposing.

Robin Diener

"From the second floor up, it's a free span," making a central atrium structurally feasible, Cooper says, "which would make it kind of an interesting contemporary building of the kind Mies would be doing now if he were still alive—skylit, sustainable."

Cooper believes that renovating rather than replacing the library would be the city's most sustainable option in any case. When his plan was done, his team presented it to library and city officials. "The library board was ecstatic," Cooper recalls. But the city's then-planning director, Andrew Altman, was less so. "What we didn't know was that he was planning to move the library," Cooper says. Six years went by. "Our design got very nice press in the architectural community, and I put it on a shelf, and nobody said anything to me."

The local AIA chapter, which sponsored the renovation study, did not contact Cooper earlier this year when its directors changed position and decided to support a new library on the eve of a hearing in June before the D.C. Council's library committee. The committee was to consider legislation submitted by the

mayor that would finance a new building with proceeds from a 99-year lease on the MLK building, with payment accepted in lieu of taxes from a developer, who would have to treat the older structure "in a manner that preserves the historic character of the building."

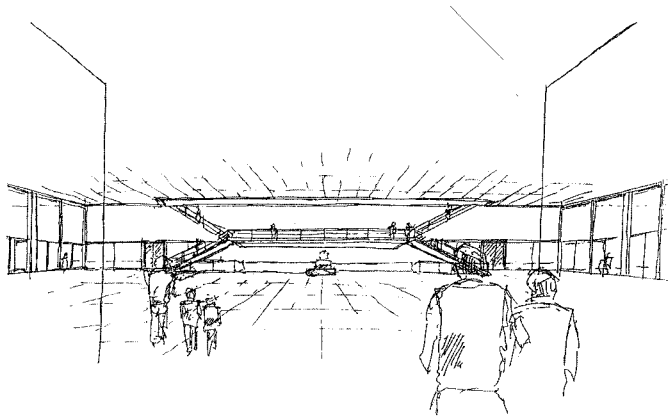
The AIA's testimony to the council supported a new library. It stated that the chapter supports preserving the exterior of the MLK Library building and "adapting its interior" to a different public use, but that it no longer favors updating the building as a library "because of its inherent limitations" in accommodating the latest information technology. Cooper says he found the building infinitely more adaptable to rewiring than many older masonry libraries that have been upgraded.

The local AIA chapter's executive director, Mary Fitch, said that the board changed position because "there are different factors involved now," namely a plausible site and palpable will to build a new library, which hadn't existed previously. As for Cooper's proposal, Fitch says, "Some people find the

retrofit a little alarming. Some find it a possibility to be useful."

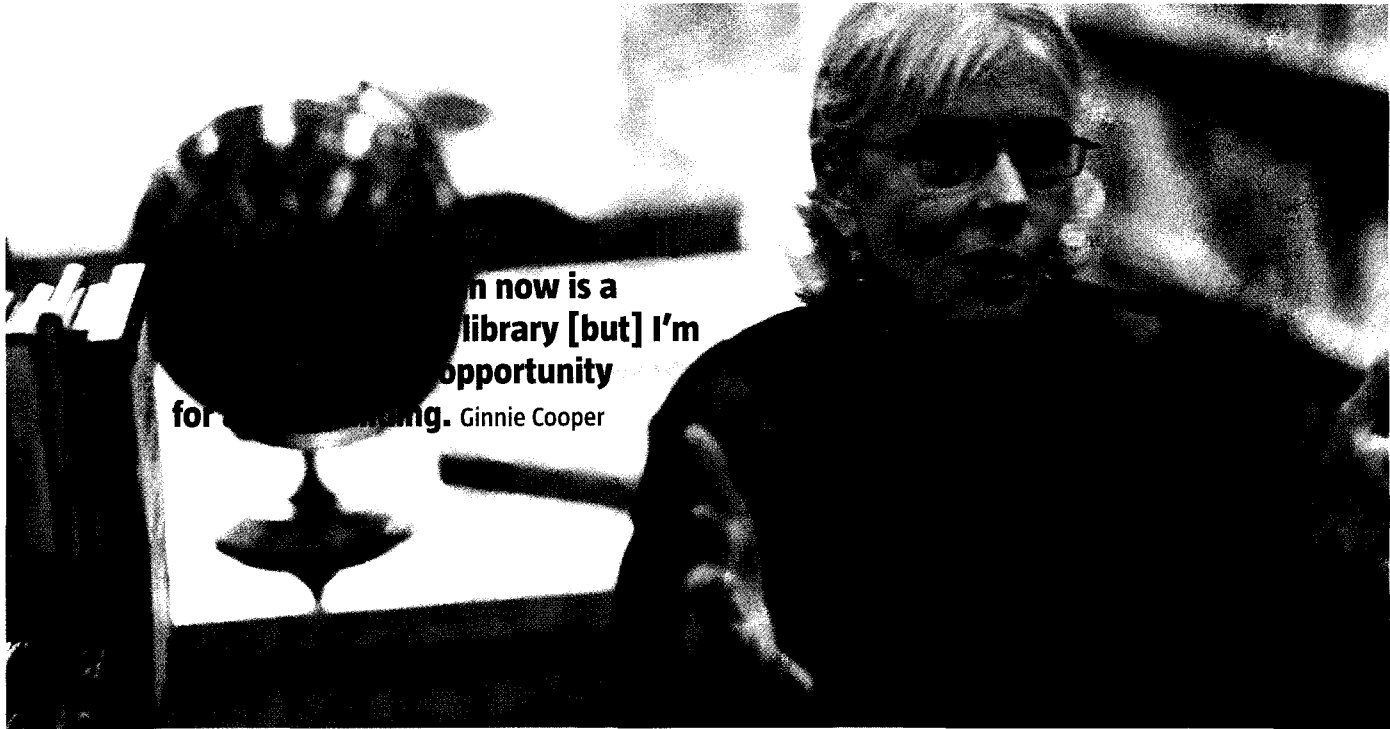
The AIA "made an about-face," says Robin Diener, the director of the D.C. Library Renaissance Project, a nonprofit group founded by consumer advocate Ralph Nader to rehabilitate the city's libraries. Diener supports Cooper's proposal because "it's a beautiful plan, simple, and bigger than anything the mayor is proposing." The mayor has proposed a 350,000-square-foot library—50,000 square feet smaller than the MLK building. The city hired Polshek Partnership Architects to study the new site and at the council hearing presented a stacking diagram of a library at this summer's hearing.

Richard Levy, a Washington developer and library trustee who chairs its facilities committee, says the Polshek study was troubleshooting to determine "whether a 350,000-square-foot library would fit on a 50,000-square-foot site... whether we can get the adjacencies." Levy says it will work: "We could fit what we need and in a much more efficient way."



A sketch of Cooper's renovated lobby (left) shows a new staircase to the mezzanine and main reading room above.

Ginnie Cooper (below) D.C.'s new head librarian, has begun neglected repairs to the MLK Library but would like to build a new building.



If the council approves a new library, the city would conduct a new search for an architect, he says. But there has been a hang-up over the cost. At the June council hearing, the library's construction director, Jeff Bonvechio, said that building a new library would cost \$206 million and that restoring the MLK building would cost \$40 million more.

But in September, the city's chief financial officer, Natwar Gandhi, wrote to Councilmember Kathleen Patterson, who chairs the Committee on Education, Libraries, and Recreation, that his review of a cost-comparison study by design firm PSA-Dewberry found that the costs of renovating and building anew are roughly equal, though higher than either previous estimate at \$275 million.

Diener believes that the city's renovation cost figures are excessive because they account for closing the MLK building and moving the library to temporary space. One option the city has not explored, she notes, would be to keep the building open during renovation, an idea supported by Cooper and also by the architect Arthur Cotton Moore, who completed the

renovation of the Library of Congress without its closing.

"But it's just not worth it," Diener says. "This isn't the Library of Congress." A more sensible option, she says, would be simply to close the MLK building during renovation. Special collections could be moved to other city libraries for use. Otherwise, she says, "there's not a book in there you can't get somewhere else."

In any case, the bricks-and-mortar debate, Diener says, ignores the "extraordinary internal problems" of the library system, which had been without a permanent director for three years until this year, when the trustees hired Ginnie Cooper, who arrived this year from the Brooklyn Public Library in New York.

Cooper has overseen construction of new libraries before. She has already prompted repairs of "little things and big things" within the Mies building—fixing leaks, painting, repairing elevators. "There are many ways in which this building I'm sitting in now is a fine and wonderful library," she says from her office in the MLK Library. Yet, she adds, "I'm excited about the opportunity for a new building."

Diener says that building a new library would be throwing good money after bad, unless there are major staff reforms in the library system.

"We have evidence of incredible abuses—people who work for [the library] and draw a salary and rarely come to work," Diener says. "It's a no-work culture. That's why we think it's stupid to put all this emphasis on buildings right now when we don't even know that they can maintain an elevator or a roof or a bathroom, and they can't deliver a reasonable level of customer service."

If Ginnie Cooper can assemble a competitive staff—and union rules will be problematic—then, Diener suggests, it will be time to spend some money on renovating the Mies building. And, she says, Kent Cooper's plan provides a sensible place to start.

After all these years, however, Cooper sounds resigned never to see his plan picked up again. "If they want to move the library and can get a good library, as a citizen, I don't want to pay through the nose," he says. "The Mies building really does need to stay. I hope they get a good library."

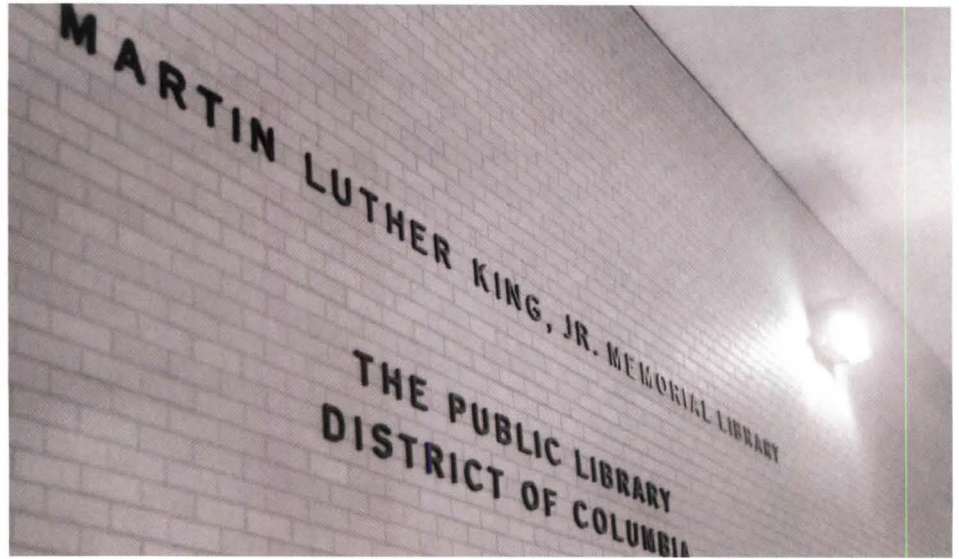


Missing lamps (above) represent the least of the MLK Library's problems. Perimeter stacks (below) near windows and direct sunlight may harm book

collections. Card catalogs (below, right) remain as a vestige of the unwired library.

Pedestrian life has thankfully begun to return to the MLK Library's neighborhood (bottom). Nonetheless, the Mies-designed building (far

right) broods a little too much for some people who live and work in downtown D.C.





PUBLIC LIBRARY

ARCHITECT
ACEAWARDS
ARCHITECT'S CHOICE FOR EXCELLENCE

hanley wood

CHOSEN BY ARCHITECTS
AWARDED BY ARCHITECT MAGAZINE

Recognizing durability,
customer service,
value and design.

2006 WINNERS



From The Publisher

contents

Kohler Co. **126, 127**

The Vistawall Group.... **128, 129**

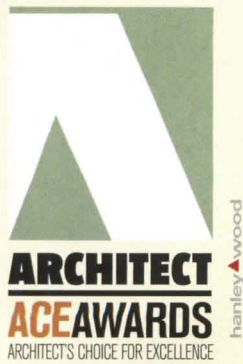
It is with great pleasure that we announce the 2006 winners of the Architect's Choice for Excellence (ACE) Awards, sponsored by ARCHITECT magazine. Now in its fifth year, the ACE Awards Program is known throughout the industry for recognizing manufacturers and companies that offer superior product durability, timely customer service, great value and advanced designs. Given the wide variety of excellent firms serving the architectural and design community and the number of new companies and products that regularly enter the field, to be chosen to receive an ACE award is a singular honor indeed—a distinction that demonstrates the company is highly regarded for its commitment to innovation, durability, high-quality and superior customer service.

We salute all of the winners, as voted by our readers, for their commitment to product excellence. Innovation, customer collaboration, and superior performance are hallmarks of all these companies as they strive to meet and exceed design expectations, cost criteria, and demanding deadlines. Awards also recognize the "Most Innovative", "Most Respected", and the "Most Specified" suppliers for 2006.

Thanks also to all who took the time to select this fine group of winners. We appreciate your efforts in this endeavor to celebrate the best the market has to offer. Cheers to the best in the business.

A handwritten signature in black ink, appearing to read 'Russell S. Ellis'.

Russell S. Ellis
Publisher



2006 ACE Award Winners

The following list highlights the top three winners within each product category ranked in alphabetical order, with special mention provided to the top voted company.

Most Innovative

1. Armstrong
2. Herman Miller
3. USG

Most Respected

1. USG
2. Herman Miller
3. Marvin

Most Specified

1. USG
2. Armstrong
3. Herman Miller

MASONRY

Masonry/Brick

1. Belden Brick Company

Boral Bricks
Eldorado Stone Corp.
Glen-Gery Corp.
Hanover

Concrete/Concrete Materials

1. L.M. Scofield

Bromanite
Davis Colors
Lehigh Cement Co.
MAPEI Corp.
Master Builders Inc.

THERMAL AND MOISTURE PROTECTION

Building Insulation

1. Owens Corning Fiberglass

CertainTeed Insulation Corp.
Dow Chemical Corp.
Johns Manville
U.S. Gypsum

Shingles, Roof Tiles & Roof Coverings

1. CertainTeed

Celotex
GAF
James Hardie Building Products
Ludowici

Metal Roofing & Wall Panels

1. Centria

Alcoa Building Products
Fry Reglet Corp.
Kalwall
Petersen Aluminum

Membrane Roofing

1. Carlyle Syntec Systems

DuPont Dow Elastomers
Firestone Building Products
Johns Manville
Sarnafil Roofing

EIFS Systems & Stucco

1. Dryvit Systems

Georgia-Pacific
Parex Inc.
Senergy
Sto Corp.

Ventilation

1. American Aldes Ventilation

DOORS & WINDOWS

Metal Doors & Frames

1. Kawneer Company

Ceco Door Products
EFCO
Overhead Door Corp.

Wood & Plastic Doors & Frames

1. Pella Corp.

Algoma Hardwoods
Andersen Windows
JELD-WEN
Kolbe & Kolbe Millwork

Entrances & Storefronts

1. Kawneer

EFCO
Pilkington
PPG Industries
Vistawall Architectural Products

Metal Windows

1. Kawneer

EFCO
Hope's Windows
Kalwall
Wausau Window & Door Systems

Wood Windows

1. Pella Corp.

Andersen Windows
Kolbe & Kolbe Millwork
Marvin Windows & Doors
Pozzi Wood Windows

Skylights

1. Velux-America

Andersen Windows
Kalwall
Naturalite
Vistawall Architectural Products

Hardware

1. Schlage Lock

Forms & Surfaces
Hafele America
IR Security & Safety
Von Duprin

Access Doors & Panels

1. The Bilco Company

Acudor
Karp Assoc.
Milcor Inc.
Nystrom Products

Window Treatments**1. Hunter Douglas Contract Window Coverings**

Levolor
Mecho Shade Systems, Inc.

Glass**1. PPG Industries**

Joel Berman Glass
Pilkington
Technical Glass Products
Viracon

Glazed Curtain Walls**1. Kawneer**

PPG
Vistawall Architectural Products

Translucent Wall & Roof Systems**1. Kalwall**

Major Industries
Polytronix
Suntuf Inc.

FINISHES**Paint/Stains & Finishes****1. Benjamin Moore & Co.**

ICI Dulux Paint Centers
The Sherwin-Williams Co.

Architectural Moldings

Fypon

Gypsum Board**1. USG**

Georgia-Pacific
National Gypsum

Gypsum Fabrications**1. Formglas**

Hyde Park
Pittcon Industries
Plastglas Inc.

Ceilings**1. Armstrong**

Chicago Metallic
USG

Ceramic Tile**1. Datile**

American Olean
Ann Sacks
Crossville Ceramics
Wausau Tile

Resilient Flooring**1. Armstrong**

Azrock
Forbo
Mannington
Tarkett

Rubber Flooring**1. Roppe**

Azrock
Johnsonite
Nora Rubber Flooring

Laminates, Plastic**1. Wilsonart International**

Formica
Nevamar

Laminate Flooring**1. Bruce Commercial**

Mannington Commercial
Pergo

Carpet Tile/Modular**1. Interface Flooring Systems**

Milliken
Shaw

Carpet Fibers

Antron

Broadloom**1. Shaw**

Karastan
Mohawk

Solid Surfacing**1. DuPont Corian**

Avonite
Formica
Wilsonart

Wallcoverings**1. Koroseal**

The DesignTex Group
Maharam

SPECIAL CONSTRUCTION**Fabric Construction/Cable Systems/Metal Wall Panels****1. DuPont**

Birdair
Jakob

Security Access & Surveillance**1. Schlage**

Essex Industries
Von Duprin

MECHANICAL**Plumbing Fixtures****1. Kohler**

American Standard
Toto USA

Kitchen & Bath Hardware**1. Kohler**

Bobrick
Moen

CONVEYING SYSTEMS**Elevators/Escalators****1. Otis Elevator**

KONE
Schindler Elevator
ThyssenKrupp Elevator

ELECTRICAL**Lighting****1. Lightolier**

Artemide
BEGA-USA
Kim Lighting
Lithonia

FURNISHINGS**Furniture Systems****1. Herman Miller**

Knoll
Steelcase

Seating**1. Herman Miller**

Haworth
Knoll

Casegoods**1. Herman Miller**

Haworth
Steelcase

Outdoor Furniture**1. Smith & Hawken**

Knoll
Landscape Forms

COMPUTER/SOFTWARE**Computer/Software****1. Autodesk**

Dell Computer
Sketchup

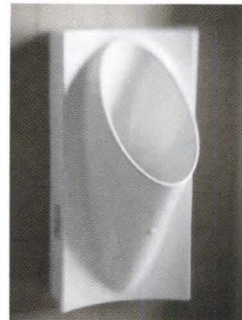
METHODOLOGY

The official ACE ballot and manufacturers list runs in the April, May and June issues of ARCHITECT Magazine. Each ballot reaches the publication's full 88,000+ nationwide circulation. In addition, e-mail campaigns are conducted to ensure the broadest base of response. Ballots are provided and collected at the AIA and other industry conferences. ARCHITECT also does random sampling, consults with industry experts, and the list of nominated manufacturers is subject to review by an in-house publishing team.

The voting criteria are based on outstanding product durability, exceptional customer service, superior value, and innovative designs. In addition to nominating manufacturers by product category, architects were asked for their opinion as to which companies overall are known for being most innovative, respected, and specified. Hundreds of companies are nominated by ARCHITECT readers. Results are tabulated by the publisher within the product categories.



Plumbing Fixtures



Kohler Co.

Industry Insight
Kohler Co. is renowned for driving product innovation and performance to meet customer needs. The company is deeply committed to its environmental surroundings and preserving precious resources—notably water.

Kohler broadens extensive portfolio of water-conserving products.

Kohler Co., which already offers an extensive portfolio of environmentally friendly products, has recently introduced several low-consumption products for residential and commercial applications that further strengthen its leadership position and offer high-performing plumbing products that save water.

KOHLER Cimarron Comfort Height™ 1.28 gpf Toilet

The new Cimarron Comfort Height 1.28 gpf toilet with Class Five EcoSmart (EST) technology is an excellent solution for people seeking a high-efficiency toilet (HET) that meets LEED requirements and select EPA and water utility rebate programs yet delivers an extraordinary combination of water conservation and flushing performance. The toilet utilizes a flapperless flush tower design that ensures consistent, reliable performance.

KOHLER Steward™ Waterless Urinals

The Steward Waterless urinals by Kohler offer the opportunity to save water and reduce sewage and maintenance costs while also providing outstanding performance and stylish design. Unlike traditional urinals which require consistent flushing to remove waste and maintain a hygienic environment, KOHLER waterless urinals feature a unique cartridge-free integral trapway that is filled with KOHLER Waterless Urinal Sealing Liquid. This design allows liquid waste to pass through the sealing liquid in the trapway and into the waste pipe. Once the

liquid waste has passed through, the less dense sealing liquid maintains its position at the top of the trapway, thus providing an impermeable barrier that blocks odors.

KOHLER 1.28 gpf Touchless™ Flushometer

Kohler has introduced the industry's first 1.28 gpf flushometer and a high-efficiency bowl specifically engineered to accommodate this water-efficient flush. Designed to work together, this commercial toilet and flushometer make it easy to conserve water without sacrificing performance reliability and also ensure heightened cleanliness.

2.0 gpm MasterShower™ Eco Showerhead And Handshower

The new MasterShower Eco showerhead and handshower make showering more ecological without sacrificing the quality of water coverage or temperature control. The 2.0 gpm sprayheads—as opposed to the industry standard of 2.5 gpm—reduce water consumption by up to 20 percent. Meeting LEED requirements, the MasterShower Eco showerhead and handshower each feature a full coverage spray, soothing aerated spray and rejuvenating massage spray.

Kohler offers myriad products that offer varying levels of potential water savings to users. For more information about water-conserving products from Kohler visit KOHLER.com/conservation.

Circle no 2

CONSERVATION. INNOVATION.™



Highline™ toilet with
1.28-gallon flushometer

Environmentally conscious KOHLER® plumbing products conserve water without sacrificing industry-leading performance or enduring design characteristics. These High-Efficiency Toilets, innovative waterless urinals, Touchless™ products and eco-showerheads help save our natural resources while remaining true to a singular level of quality.



Steward™
waterless urinal



Touchless
gooseneck faucet

Whether you're specifying products that meet the criteria for LEED initiatives or accommodating the individual preferences of homeowners, we believe it's important to offer exceptional bathroom fixtures and faucets that help you address the challenging demands of your customers. For more information on our water-conserving products, visit us at KOHLER.com/conservation.

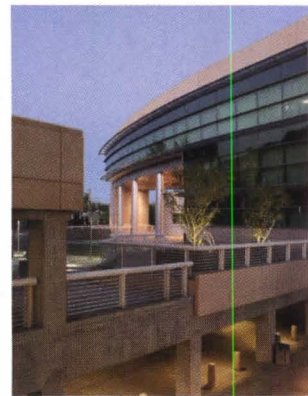
THE BOLD LOOK
OF **KOHLER**®



**ARCHITECT
ACEAWARDS**
ARCHITECT'S CHOICE FOR EXCELLENCE

hanley wood

Entrances & Storefronts | Glazed Curtain Walls | Skylights



The Vistawall Group

Industry Insight
The Vistawall Group offers one-stop shopping—engineering, extrusion, fabrication, anodizing, painting and testing—all from one location. The company also can direct the entire material flow for a project, which can result in lower project costs, ease of installation, and fewer jobsite headaches.

Distinguished by its ability to offer a complete and innovative exterior package—including curtain walls, entrances, storefronts, skylights and windows—The Vistawall Group has emerged as a leading supplier of architectural products. Demonstrating its solid reputation for on-time delivery, quality products, outstanding service, and one-source responsibility, the company has supplied numerous projects around the globe, ranging from the Marine Corps Museum to the historic Ferry Building in San Francisco.

Thanks to strategic acquisitions, internal expansion, and a staff 1,800 strong, The Vistawall Group provides architects in the United States and around the world with the benefits of their distinguished divisions: Vistawall Architectural Products provides storefronts, entrances, window walls, high-rise curtain wall systems, blast and hurricane-resistant framing, sun control products and thermally enhanced systems. Naturalite Skylight Systems offers an extensive line of skylight designs, as well as heat and smoke vents, and Moduline Window Systems provides high-performance, architectural-grade windows. Skywall Translucent Systems offers translucent skylight and wall panel systems. Combined, these companies offer a package of building-envelope products from one recognized name and a single-source

capability that allows for expanded convenience and value for architects.

Quality control is a top priority for the company, which maintains complete control through every phase of production, ensuring that only the best products are shipped to each job site. At the company's half million-square-foot production, fabrication, and distribution facility located in Terrell, Texas, Vistawall has the capability to direct the entire material flow for a project—engineering, testing, extrusion, anodizing, painting, and fabrication are all accomplished at this state-of-the-art facility. In addition, ongoing research and development keep Vistawall on top of a highly competitive and technically challenging market. Products such as the world's first pressure wall to the new Reliance-TC™ Thermal Composite Curtain Wall system have made Vistawall an innovation leader.

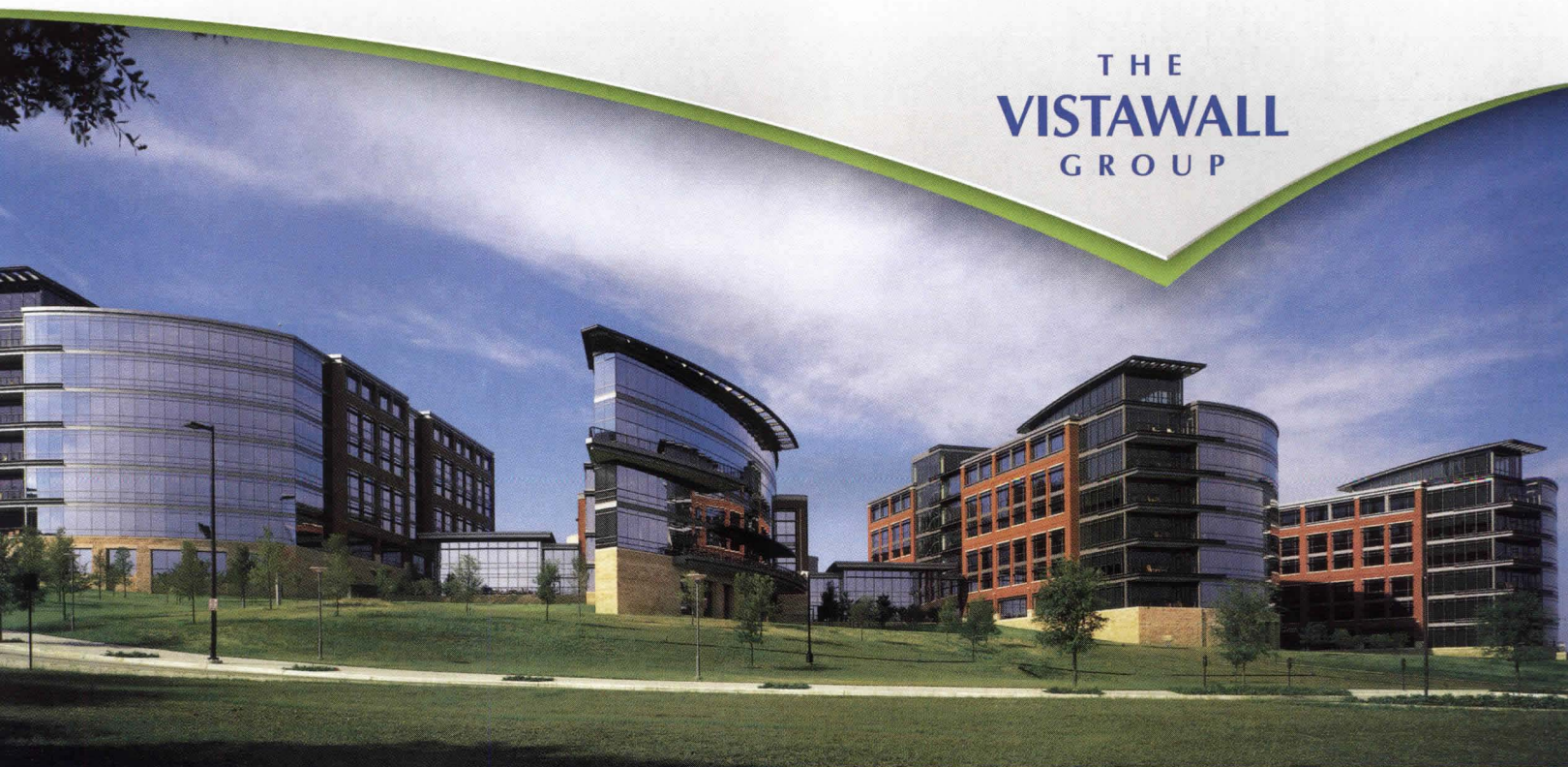
For more information call 1-800-869-4567 or visit www.vistawall.com.

Photos: LEFT: The Shops At Tanforan (Naturalite Skylight Systems); TOP RIGHT: Henderson City Hall (Vistawall Architectural Products); BOTTOM LEFT: Rice School (Skywall Translucent Systems); BOTTOM RIGHT: SKY55 at Central Station (Moduline Window Systems).

Circle no 1

One company ...
taking a wider view.

THE
VISTAWALL
GROUP



*RadioShack® Corporate Headquarters – Fort Worth, TX
Architect: HKS, Inc. – Dallas, TX*

Our wide range of products covers the full landscape of design possibilities.

From grand entrances to grand views, sunny atriums to airy offices, The Vistawall Group has it all covered, with custom **Vistawall** curtain walls, entrances and storefronts, plus our popular **Moduline** window systems, **Naturalite** skylights and **Skywall** translucent systems. And with streamlined production, aesthetic consistency, precise structural integration, on-spec performance and peerless project management, we've covered all the other bases, too. When you're selecting products for the exterior of your next building, give us a call.

The Vistawall Group
A BlueScope Steel Company

vistawall.com
1.800.869.4567

Circle no. 52 or <http://architect.hotims.com>



WEATHER SHIELD WINDOWS AND DOORS PRESENTS

USING HIGH-PERFORMANCE WINDOWS IN RESIDENTIAL APPLICATIONS

A new breed of glazings for residential window systems optimizes occupant wellness and increases energy efficiency.

By Elizabeth West



High-performance windows offer aesthetic value and increased energy savings.



ARCHITECT MAGAZINE CONTINUING EDUCATION

This course requires supplemental online reading in addition to the following article. For details on accessing the supplemental reading and to learn how to take the test, please see page 133.

The importance of sunlight and its affect on human behavior, mood, and performance has been the subject of intensive study over the last 20 years (see online material for list of salient studies). Research performed in office buildings, retail environments, and hospitals shows that sunlight can contribute to worker performance, increase the likelihood of purchases, and even help accelerate recovery rates for patients. The physical and biochemical mechanisms behind these results often remain elusive to scientists, but in many studies, a spectrum of benefits seems clear.

Improved visibility due to higher illumination—Higher illumination increases visibility and the accuracy and speed at which people perform tasks.

Improved visibility due to light quality—Daylight is diffuse light and provides many advantages over electrical lighting, including better distribution, better

color rendition, lack of flicker, and more noticeable highlights and shadows.

Improved alertness—High illumination levels decrease the production of melatonin, a brain hormone that causes drowsiness. Any source of light could contribute to this reaction, but the variability of daylight is also significant.

Improved mood and behavior—Many people report improved mood when exposed to sunlight. The effects of mood have proven to influence buying patterns, patient recovery rates, and more. Doctors now use sunlight to treat some types of depression and cancers.

Considering these benefits, it stands to reason that homeowners also value sunlight in their own homes. When it comes to optimizing exposure to sunlight, window choice is an obvious starting point. The number of windows, their total area, and the clarity of the glazings all contribute to the amount of sunlight that infiltrates a home. There are many other considerations, however, that must be balanced with the desire to increase occupants' exposure to sunlight when choosing windows for a residential application.

A QUESTION OF ENERGY

Windows have historically posed a major challenge to architects and builders when it comes to the energy efficiency of a home. According to the United States Department of Energy, a home's windows can consume up to 3.8 quadrillion BTUs of energy annually in the form of heating and cooling expenses. And while they allow for beautiful views and natural lighting, windows are a major factor in the \$30 million

LEARNING OBJECTIVES

Understanding the impact of window choice on building occupants and the environment.

Key points include:

- The effects of sunlight on building occupants
- How window choice effects a building's energy consumption
- Comparison of several types of glazing systems
- Components of high-performance windows
- Energy Star climate zones and criteria for efficient windows

homeowners spend every year in the U.S. to control their indoor environments. In addition, the energy consumed in residential HVAC systems is a major factor in urban and suburban air pollution.*

In the past, architects and builders may have chosen to limit the number and size of windows in a home in an attempt to control the heat that enters and leaves through window glazings and frames. Or, they may have chosen dark tints for glazings, dramatically reducing the building's overall heat gain, but also reducing the amount of visible light transmitted into a home. Advances in window manufacture to include high-performance glazings have significantly increased both design freedom for the architect and potential benefits of daylight infiltration for homeowners, while maintaining high efficiency standards.

For example, a typical single-glazed window made with clear glass allows the greatest amount of natural daylight to enter a building, transmitting about 90 percent of visible light. The solar heat gain coefficient (SHGC), which measures how much heat passes through a window into a building, comes in very high at 0.87, which means that only 13 percent of the sun's heat is prevented from entering the home through the center of the glazing. The U-Value, which measures the amount of heat that leaves the building through a window, is another liability, especially in the winter months. A clear, single-glazed window rates a fairly dismal 1.04 for U-Value. Today's high-performance window glazings, on the other hand, can maintain sunlight infiltration at as much as 52 percent, while reducing the SHGC to 0.25 and U-Values to as

low as 0.19. (For a comparison of seven types of window glazings, see "Key Ratings" chart on this page.)

HOW THEY WORK

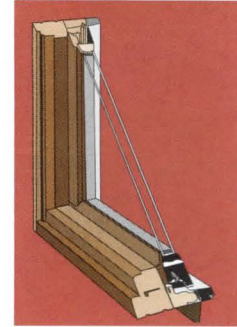
Today's highest performing window systems are enhanced in four basic ways: with multiple glazings, LowE surface coatings, inert gas fills, and warm-edge technology. When combined, these enhancements can create window systems that compare favorably to insulated walls when it comes to energy efficiency.

Multiple glazings—Employing multiple glazings in window construction provides additional protection against heat gain and heat loss. When compared with a single-glazed window, a double-glazed product can cut heat transmission in half by providing an insulating layer of air between the panels. Multiple-glazed windows that are sealed at the edges are also known as insulating windows—though their actual performance can vary widely depending on materials and construction. Triple-glazed windows, allowing for two gas filled spaces, increase the insulating properties.

Low-emittance (LowE) surface coatings—Low-emittance coatings have helped to replace tinting technologies in high-performance window systems. While tinting provides protection against heat transfer, it also blocks a significant amount of visible light from entering a building. LowE coatings, on the other hand, are metallic or metal oxide coatings applied to the surface of the glass and are more transparent to visible light. They are used in combination with multiple-glazed window systems in which the LowE

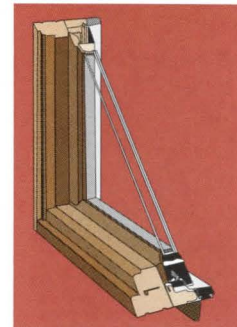
PUTTING IT ALL TOGETHER

DOUBLE-GLAZED, TRIPLE-COATED, INSULATED



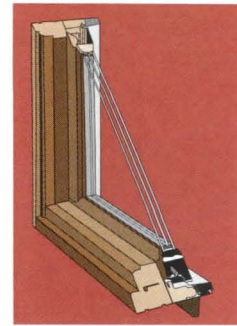
- Two panes of glass
- One three-layer silver coating
- One inert gas-filled insulating airspace
- One warm-edge spacer

DOUBLE-GLAZED, LAMINATED, TRIPLE-COATED, INSULATED



- Three panes of glass w/ one laminated interlayer between two panes
- One three-layer silver coating
- One inert gas-filled insulating airspace
- One warm-edge spacer

TRIPLE-GLAZED, LOWE², TRIPLE-COATED, INSULATED



- Three panes of glass
- One three-layer silver coating
- One two-layer silver coating
- Two inert gas-mix-filled insulating airspaces
- Two warm-edge spacers

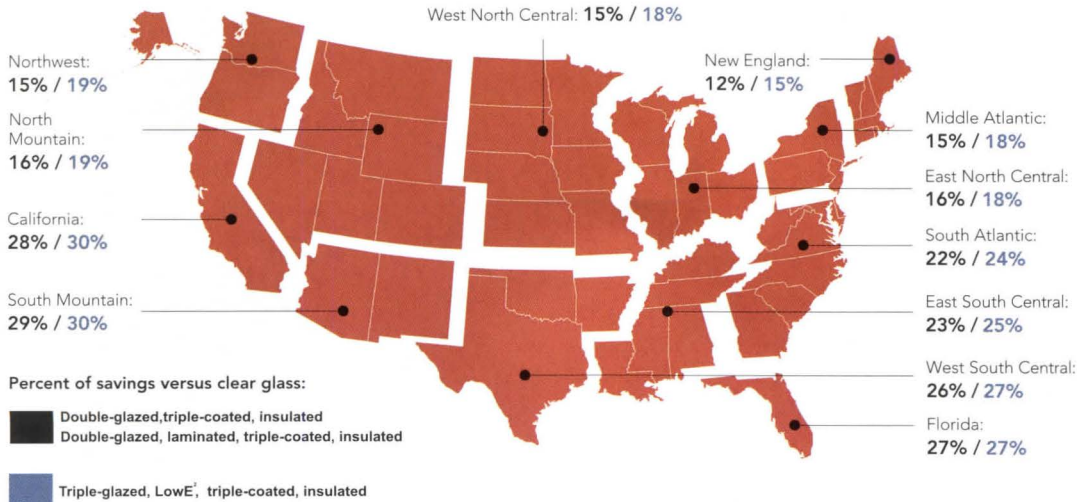
KEY RATINGS

	VT	U-VALUE	SOLAR HEAT GAIN
Clear single-glazed	0.90	1.04	0.87
Clear insulated	0.82	0.48	0.78
Gray tinted insulated	0.56	0.48	0.60
Standard LowE insulated	0.72	0.30	0.42
Double-glazed, triple-coated, insulated	0.65	0.24	0.27
Double-glazed, laminated, triple-coated, insulated	0.64	0.23	0.27
Triple-glazed, LowE ² , triple-coated, insulated	0.52	0.19	0.25

* 50% of air-conditioning costs are due to high solar heat gain windows. For more information on how air-conditioning and heating affects the environment, visit www.energystar.gov.

USING HIGH-PERFORMANCE WINDOWS IN RESIDENTIAL APPLICATIONS

ENERGY SAVING WHERE YOU LIVE



Savings are relative to a double pane clear glass window. Based on a national average size house (2,300 sq. ft., 2-story), with 18% window to floor area ratio, 15% shade usage, gas heat and electric air conditioning. Long term national average energy prices of \$1 per therm for natural gas and \$0.09 per kWh electric. Actual savings will vary by climate region, house type, homeowner operational characteristics, and local energy prices.

coating is positioned to face the air space between the glazings. The function of these coatings is to bounce heat off the surface of the window—keeping heat from the sun outside and interior heat in the home. Standard LowE coatings have proven to reduce SHGC to 0.42, while advanced, triple-coated window systems have cut that figure by another 35 to 40 percent.

Inert gas fills — Insulating, multiple-glazed windows are usually filled with gas just prior to sealing. The air currents between the two panes of glazing carry heat to the top of the unit and settle into cold areas at the bottom. Filling the space with a less convective or slower-moving gas minimizes the convection currents within the space. As a result, convection through the gas is reduced and the overall transfer of heat from the outside to the inside (and vice versa) is reduced.

Argon and krypton have become the gas fills of choice for high-performance windows, and there are slight differences in their insulating properties. Argon is inexpensive, non-toxic, non-reactive, clear, and odorless. The optimal spacing for an argon-filled unit is the same as for air, about 1/2 inch. Krypton has better thermal performance than argon, but is more expensive. It is particularly useful when the space between glazings must be thinner than

normally desired. A mixture of krypton and argon gases is also used as a compromise between thermal performance and cost.

Warm-edge technology — Spacers are a fact of construction for insulating window units. The multiple glazings must be held in place to maintain the air spaces that provide insulating properties. Sometimes made with aluminum (for its light weight and relative strength), spacers have been responsible for increased heat conductivity and condensation spreading to as much as a 2.5-inch-wide ring around the unit — effectively reducing the efficiency of the overall window system. Manufacturers are now creating spacers out of a variety of less-conductive materials, such as foam, vinyl, and fiberglass to prevent this effect.

A significant benefit to warm-edge technology is the rise in interior surface temperature at the edge of the window, which is most subject to condensation or frost. With an outside temperature of 0° F, a thermal spacer can result in temperature increases of 6° to 8° F inside the window. Beyond its insulating properties, warm-edge technology may also provide noise reduction.

SEASONAL SAVINGS

When specifying windows for a home, it is important to consider not only the key ratings

themselves but also how they relate to the local climate zone of the building project. ENERGY STAR®, a joint partnership between the Environmental Protection Agency and the U.S. Department of Energy, has instituted specific criteria for windows tailored to four different climate zones. By specifying windows with high-performance glazings that combine the latest coatings, spacers, and gas-fill technologies, architects and builders contribute to lowering energy demands, while homeowners can realize significant cost savings year-over-year (see supplemental online reading for ENERGY STAR® requirements and a map of climate zones).

The highest performing, triple-coated insulated window systems provide protection against heat transfer in both the summer and winter months, with their excellent U-Value and SHGC ratings. The map above shows average annual savings in 12 specific regions of the United States, when the efficiency of high-performance window systems are compared to that of clear, double-paned wood windows.

In 2005, the federal government issued specifications of how to earn a tax credit for houses built or retrofitted with ENERGY STAR® windows. The tax credits are in effect for purchases made throughout 2006 and 2007. For more information, see the supplemental online reading, and click on “Save Energy, Earn Tax Credit.”

TO ACCESS SUPPLEMENTAL READING: Go to www.architectmagazine.com and select "Resources" then select "Continuing Education Center". There you can download PDF files of this course and the required supplemental information.

TAKE THE TEST ONLINE FOR FREE: New users must create a new account. Returning users may log in. After logging in, click on "My Courses". Then select this course title to launch your test. A score of 80% or higher earns 1 AIA/CES LU hour of health, safety and welfare credit. Valid for credit through December 2008.

TEST QUESTIONS

1. In what ways do humans respond to exposure to sunlight?
 - a. Improved mood
 - b. Accelerated healing
 - c. Improved alertness
 - d. All of the above
 - e. None of the above
2. What challenges do windows pose to the environment?
 - a. Heat loss from the interior of a building drives up energy consumed to cool the building
 - b. Heat gain from the sun to the interior of a building drives up energy consumed to heat the building
 - c. Inefficient windows drive up heating and cooling demands which, in turn, leads to pollution.
 - d. All of the above
 - e. None of the above
3. When specifying windows for a home in Florida, it would be preferable to choose
 - a. High SHGC, Low U-Value
 - b. Low U-Value, the SHGC is not important
 - c. Low U-Value, Low SHGC
 - d. Low SHGC, the U-Value is not important
4. In what ways do high-performance LowE coatings outperform tinted glass?
 - a. Tinted glass breaks more easily
 - b. Tinted glass obscures the view
 - c. Tinted glass reduces light transmittance
 - d. All of the above
 - e. b and c
5. How does conduction differ from convection?
 - a. Conduction is heat transfer through liquid, convection is heat transfer through a solid
 - b. Conduction is heat transfer through a window spacer, convection is through air
 - c. Convection is heat transfer through liquid, conduction is heat transfer through a solid
 - d. None of the above
6. What is the purpose of using gas filled spaces between glazings in a window?
 - a. Gas-filled spaces cause heat to rise to the top and cool air to sink to the bottom of a window and escape.
 - b. Gas-filled spaces require less room between glazings
 - c. Gas-filled spaces further reduce the heat transfer between the glazings because gas is thicker and less prone to currents than air
 - d. Gas-filled spaces reduce the conduction of heat between the glazings of a window
7. In order to receive a tax credit for installing energy efficient windows in a home or building project, the owners should save the following ...
 - a. Receipts from their purchase
 - b. ENERGY STAR® or NFRC labels
 - c. The additional tax form
 - d. All of the above
8. Window spacers are now made out of ...
 - a. Aluminum
 - b. Vinyl
 - c. Fiberglass
 - d. Foam
 - e. All of the above
 - f. b and c
9. The highest performing triple-coated insulated windows transmit how much visible light into a home?
 - a. 70%
 - b. 62%
 - c. 52%
 - d. 14%
10. Homeowners spend \$30 million every year to heat and cool their homes. What percentage of air conditioning costs are associated with high solar heat gain windows?
 - a. 50%
 - b. 30%
 - c. 10%
 - d. 27%



Using High-Performance Windows in Residential Applications

You have the option of taking the test online free of charge or you may mail your test along with a check in the amount of \$10. A score of 80% or higher earns 1 AIA/CES LU hour of health, safety and welfare credit. Certificates of completion are available upon request and delivered by email.

test>	1.	a	b	c	d	e	6.	a	b	c	d
	2.	a	b	c	d	e	7.	a	b	c	d
	3.	a	b	c	d		8.	a	b	c	d e f
	4.	a	b	c	d	e	9.	a	b	c	d
	5.	a	b	c	d		10.	a	b	c	d



MAIL-IN TEST: Photocopy this page. Clearly circle the letter of the correct answers. Mail this test with the completed form and check for \$10, payable to ArchitectCES, to:

ArchitectCES
PO BOX 11911
Mount Lebanon, PA 15228

Last Name _____ First Name _____ Middle Initial/Name _____
 Firm Name _____
 Address _____ City _____ State _____ Zip _____
 Tel _____ Fax _____ E-Mail _____
 AIA ID Number _____ Completion Date (M/D/Y) _____

Please email me a certificate of completion upon scoring 80% or higher.

Material resources used: Article addressing issues concerning health, safety, and welfare.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature _____ Date _____

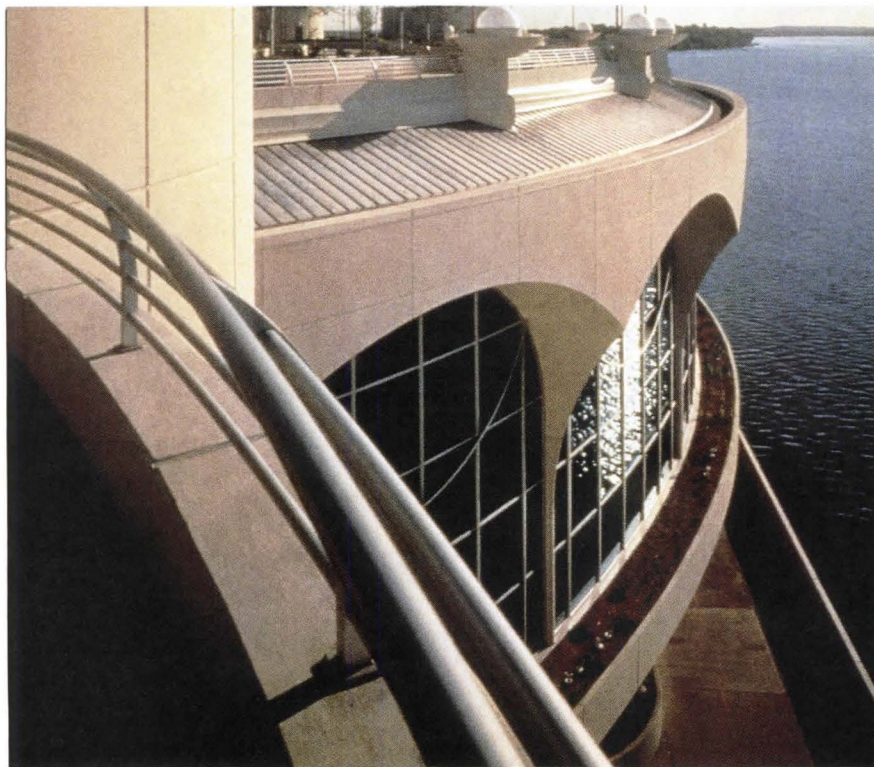
LEHIGH[™]
WHITE CEMENT

LEHIGH CEMENT COMPANY PRESENTS

WHAT IS WHITE CEMENT? ITS APPLICATIONS, ATTRIBUTES AND ADVANTAGES

White cement has come into its own, as builders and designers look to low-maintenance, highly flexible materials for projects that range from ornate, upscale hotels to safety and security barriers.

By Elizabeth West



The use of white cement plays an integral role in imaginative and innovative architectural creativity.



ARCHITECT MAGAZINE CONTINUING EDUCATION

This course requires supplemental online reading in addition to the following article. For details on accessing the supplemental reading and to learn how to take the test, please see page 137.

Most people, including architects and builders, use the terms concrete and cement interchangeably. Though the two materials are related, they are technically not the same. Portland cement starts as a dry powder mixture made from limestone, calcium, silicon, iron, and aluminum, plus lesser amounts of other ingredients. This mixture is heated in large kilns to about 2,700°F (1,480°C) to form a product called clinker, which ranges in size from a fine powder to nodules that roughly resemble marbles. Clinker is ground with gypsum to a very fine powder creating the gray or white substance known as cement. When water is added to cement, a chemical process called hydration occurs, yielding a hardened stone-like material.

Concrete, on the other hand, uses cement to bind together gravel or crushed stone, sand, and water. Cement makes up about 11 percent of the total volume of concrete, while 6 percent is air, 41 percent is gravel or stone, 26 percent is sand, and 16 percent is

water. The combination of these materials known as concrete is a very strong and versatile material often used to build sidewalks, driveways, roads, and a wide variety of buildings—from shopping malls to skyscrapers. Material innovations in cement and concrete, along with new construction techniques, continue to make these products among the most widely used in building projects and infrastructure development around the world. As new demands are made of this time-tested material, designers and users alike are turning to white cement for its versatility, consistency, and strength.

WHITE CEMENT VS. GRAY CEMENT

White cement is similar to gray cement with equal or greater durability, strength, and other comparable physical characteristics. The main differences lie in the color and manufacturing process of white cement and the design flexibility that white cement ultimately provides for a building project.

White cements are manufactured with carefully selected raw materials that are very low in Ferric Oxide (iron), which accounts for the gray color of regular concrete. These select raw materials are heated in rotary kilns to form clinker, which is ground with gypsum to form white cement. Like gray cement-makers, white cement manufacturers use x-ray machines and other test equipment to ensure consistent performance and reliable strength. In addition, white cement must conform to stringent controls for color consistency. A device called a Hunter Meter assigns color values or “L values” that range from 0 (pure black) to 100 (pure white), with positive and negative “a” and “b” values to measure red, green, blue, and yellow tints. Reputable white cement manufacturers

LEARNING OBJECTIVES

This article covers how the choice of white cement and white-cement concrete can contribute to design flexibility, building durability, and architectural innovation.

Key points include:

- The composition of white cement and white-cement concrete
- ASTM Specifications and types of cement products
- Design considerations and applications for white cement-based products
- Environmental considerations

control their product by targeting consistently high L values and low a and b values.

ASTM SPECIFICATIONS FOR CEMENT

ASTM International categorizes several types of portland and masonry cement products and recommends them for specific usage under ASTM C 150 and ASTM C 91.

ASTM C 150 PORTLAND CEMENTS

- Type I Normal
- Type II Moderate Heat & Sulfate Resisting
- Type III High Early Strength
- Type V Severe Sulfate Resisting

ASTM C 150 specifies certain physical requirements for each type of cement. These properties include fineness, soundness, consistency, setting time, compressive strength, heat of hydration, and chemical composition. Each one of these properties has an influence on the performance of cement when mixed to create concrete. The fineness of the cement, for example, affects concrete's rate of hydration. Greater fineness increases the surface area available for hydration, causing greater early strength and more rapid generation of heat.

For general construction, Type I portland cement is used. Typical applications include paving, floor slabs, and building columns. Type II cement is also used in general applications, but it is especially applicable when lower heat of hydration and greater resistance to sulfate attack is desired. Type II white cements can be used for retaining wall construction and in concrete exposed to heavy concentrations of deicing salts, such as bridge decks. Type II white cement is also recommended for use when there will be exposure to marine environments and sulfate attack. Type III cement is a high-early strength cement. Type III is chemically similar to a Type I but is ground finer. This provides more reaction surfaces so hydration occurs more rapidly. Type III can be used for the manufacture of concrete block, precast and prestressed structures, as well as in ready mix where high-early strengths are necessary, such as in the winter months. Type V white cement is specifically designed for concrete exposed to severe sulfate environments. Concrete that will be exposed to significant concentrations of sulfates should be engineered with a low water-to-cement ratio, mineral admixtures, and Type V cement.

ASTM C 91 MASONRY CEMENTS

Masonry cements are manufactured for the masonry

industry for use as a bonding agent for brick and block. White masonry cements are white portland cement-based products designed for making white and colored mortars as designated by ASTM C 270 Mortars for Unit Masonry. Manufactured to meet ASTM C 91, these products blend white portland cement with finely ground white limestone, and select process additions to enhance water retention, workability, boardlife, and durability. ASTM C 91 provides specific criteria for physical requirements and performance properties of masonry cements.

ASTM classifies three types of masonry cements according to their average 28-day compressive strengths:

- Type N Normal 6.2 MPa (900 psi)
- Type S Moderate . . . 14.5 MPa (2100 psi)
- Type M High 17.4 MPa (2500 psi)

White Types N and S are readily available and have unique applications. When considering which masonry cement to use, it is important to keep in mind that stronger may not be better. Builders should specify a masonry cement that will produce a mortar with less compressive strength than the building unit they are using. Movement due to settlement, changes in temperature, or moisture conditions should be accommodated in the joint as a hairline crack between the unit and mortar (step cracking). A crack in a mortar joint is more easily repaired and less noticeable than a cracked building unit.

WHY SPECIFY WHITE CEMENT?

Clearly, white portland cement and white masonry cement pass muster when it comes to durability. But white cement really excels when questions of creativity, innovative design, and versatility are posed. It has become a material of choice for architects who are looking for that rare combination of low maintenance, high quality, versatility, and aesthetic appeal that will allow them to stretch their design aspirations in a variety of applications.

Architectural Precast – Architectural precast concrete may be expressed in shapes and sizes, colors and textures, and forms which are virtually without limits. They are produced in manufacturing plants where forms are painstakingly designed, constructed, and prepared to reflect the architect's creativity.

Precast concrete units may be used as load bearing or non-load bearing wall panels, as well as conventionally reinforced or prestressed structural members. The design advantages are enhanced

by the reflectivity of white cements, which lend themselves to energy-efficient curtain wall units that effectively reduce cooling costs and allow for custom design.

Glass fiber reinforced concrete (GFRC) – This precast product is comprised of cement, sand, water, and polymers mixed with alkali-resistant glass fibers. The fibers are similar in purpose to the reinforcing steel that is placed in tensile stress areas of concrete. The mix yields panels with superior flexural and tensile strength, allowing GFRC panels to be quite thin. GFRC architectural panels have the look of standard architectural concrete with the added advantage of being impact resistant, strong, and lightweight.

As with any concrete, GFRC panels manufactured with white cement are readily colored with pigments for greater aesthetic versatility and value (see supplemental online reading).

Cast-in-place – As an architectural design medium, cast-in-place white concrete offers unique opportunities for creativity, ingenuity, and superior building engineering. White cast-in-place concrete enables a cost-effective creation of unusual and intricately designed building components, from the simplicity of circles and squares to the complexity of large,

SPECIFICATION HOW-TO

White cement products adhere to both ASTM C 150 and ASTM C 91, and can be used in all instances where regular gray cement is specified. However, it is important for architects and builders to specify the material properly to ensure its use. The Portland Cement Association recommends the following specification when white cements are desired.

Portland cement specification – Cement shall be white portland cement conforming with the requirements of Standard Specification for Portland Cement ASTM C 150, for Type ____ (I, II, III, V) portland cement, except that it shall contain not more than 0.50% by weight Ferric Oxide (Fe2O3)

Masonry cement specification – Cement shall be white masonry cement conforming with the requirements of Standard Specification for Masonry Cement ASTM C 91, for Type ____ (N, S) masonry cement, except that it shall contain not more than 0.50% by weight Ferric Oxide (Fe2O3)

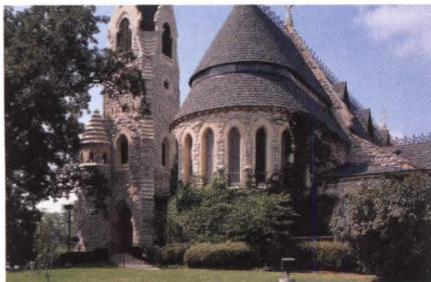
WHAT IS WHITE CEMENT? ITS APPLICATIONS, ATTRIBUTES AND ADVANTAGES



Architectural Precast



Terrazzo



Architectural Cast Stone



Perimeter Security

For additional applications and a discussion of environmental considerations regarding white cement-based products and white concrete, please refer to the required online reading at www.architectmagazine.com.

multi-story arches, canopies, and columns. Cast-in-place white concrete can be textured to achieve increased aesthetic effects, such as sandblasting, or can be cast in smooth curving walls for an entirely different feel.

Portland cement stucco – Low-cost, durability and application ease make portland cement stucco an ideal surface finish for interiors and exteriors. It is non-combustible and resistant to termites, rot, fungus, cracking, and chipping. It provides commercial, industrial, and residential versatility in a surface material that improves and grows even stronger with age. White cement is used where a white or bright colored top “color coat” is desired. From a safety standpoint, when installed properly, stucco can be used to encapsulate asbestos siding on homes and buildings.

Terrazzo – Genuine white portland cement terrazzo combines the lasting beauty of marble with the strength and durability of concrete. Absorption-resistant portland cement terrazzo affords a low-cost, low-maintenance, non-VOC emitting flooring or wall surface for spaces subject to heavy traffic volume or severe weather conditions. White cement-based terrazzo is a durable, long lasting, fire-resistant material that withstands heat and open flame.

Architectural cast stone – Cast stone is a highly refined architectural precast concrete building product manufactured to simulate precision-cut natural stone. It is generally used as a masonry product, as an architectural feature, such as trim or ornamental facing on buildings and other structures.

Architectural masonry block – In addition to design flexibility, concrete masonry construction offers a reliable and affordable structural scheme. Numerous surface textures can be achieved with smooth, split-faced, ground-faced, or other customized concrete block. The option of adding colored pigment provides a wealth of color schemes. Glass block units installed with mortar made from white masonry cement can also add an exciting design dimension.

Concrete roof tile – For many years, roof tiles have held their place as a durable and beautiful building material. Today, innovative architects, builders, and homeowners value the reflectivity and creative, luxurious appeal concrete roof tile made with white cement. The safety aspect

of concrete roof tiles is that they are fire resistant. They are also bug proof, durable, and wind resistant, and the use of white cement in concrete roof tile helps minimize the heat island effect.

Tile Grout – Tile grouts are designed not only to complement the beauty of ceramic tile, but to permanently secure it in place and protect it from water damage. White portland cement remains the leading base for most tile grouts because of its color uniformity. A wide variety of pigments provides an infinite palette for unique color composition.

Pools and spas – To ensure the pristine beauty of an in-ground concrete swimming pool or spa—pool plaster and pebble finishes made with white cement, are excellent choices. Plaster and pebble finishes can be either mixed at the jobsite or obtained as a prepackaged product. When properly applied to the interior of concrete pools and spas, pool plaster made with white cement creates a sparkling, long-lasting, and refreshing setting.

Infrastructure – Visibility of gray concrete barriers, bridges and bridge parapets is a concern, especially at night or in stormy, wet weather. The visibility of a concrete surface can double or even triple with the use of white cement due to its reflectivity.

Hardscaping and Ornamental – The use of white cement in concrete balustrades, planters, fountains, and other ornamental designs creates an exceptional opportunity to enhance the interior and exterior surroundings of any commercial or residential project. Pavers made with white cement add beauty and value to any property. The wide variety of finishes, pigments, and aggregates allows for infinite color combinations and textures.

Signage – White cement in concrete masonry units and white masonry mortar for signage enhances the look of commercial properties.

Perimeter security – According to the National Capitol Planning Commission Report, “Designing for Security in the Nation’s Capital”: Temporary barriers intended to protect our people and institutions have the negative effect of inflicting damage to our physical, historical, and cultural heritage. White cement used to create concrete anti-ram planters, bollards, spheres, and barriers are the perfect solution for integrating aesthetic design into modern security.

TO ACCESS SUPPLEMENTAL READING: Go to www.architectmagazine.com and select "Resources" then select "Continuing Education Center". There you can download PDF files of this course and the required supplemental information.

TAKE THE TEST ONLINE FOR FREE: New users must create a new account. Returning users may log in. After logging in, click on "My Courses". Then select this course title to launch your test. A score of 80% or higher earns 1 AIA/CES LU hour of health, safety and welfare credit. Valid for credit through December 2008.

TEST QUESTIONS

1. Clinker is a product manufactured specifically to create...

- a. Cement
- b. Concrete
- c. Both cement and concrete
- d. None of the above

2. Cement makes up approximately what percent of concrete by volume?

- a. 11%
- b. 21%
- c. 6%
- d. 15%

3. "L Values" are measured by the Hunter Meter to regulate what during the manufacture of white cement?

- a. Density
- b. Strength
- c. Color
- d. Setting time

4. What is the difference between Type I and Type III white cement?

- a. Type III is stronger
- b. Type III is ground finer to increase reaction surfaces
- c. Type III is often used for concrete block, precast, and prestressed structures
- d. Both a. and b.
- e. Both b. and c.

5. Why is Type M or "high-strength" masonry cement not always better?

- a. It may not accommodate stresses by allowing hairline cracks in the mortar and could compromise the building unit
- b. It is too heavy for regular use

- c. It is severely affected by changes in temperature and moisture conditions and could compromise the building unit
- d. None of the above

6. How much more reflective is white cement than gray cement?

- a. It does not have increased reflectivity
- b. More than 30%
- c. More than 60%
- d. More than 15%

7. How does white cement and white-cement concrete add to design versatility?

- a. Strict color control makes a consistent neutral base for pigments and aggregates, giving the designer more control
- b. It can achieve many types of textures and surface treatments
- c. Its aesthetic value makes it at home in upscale applications
- d. All of the above

8. When compared to the durability of gray cement, how does white cement stack up?

- a. It is slightly less durable but more versatile for intricate designs
- b. It is equally or more durable than gray cement
- c. They are totally different materials, so they shouldn't be compared
- d. They are exactly the same

9. White cement exhibits increased reflectivity, which is a distinct advantage when dealing with

- a. Heat island effect in urban and suburban areas
- b. Applications exposed to high levels of sulfates
- c. Roadway safety
- d. Both a. and c.

10. True or False. White cement precast concrete units may be used as load bearing or non-load bearing wall panels, as well as conventionally reinforced or prestressed structural members.

- a. True
- b. False



What is White Cement? Its Applications, Attributes and Advantages

You have the option of taking the test online free of charge or you may mail your test along with a check in the amount of \$10. A score of 80% or higher earns 1 AIA/CES LU hour of health, safety and welfare credit. Certificates of completion are available upon request and delivered by email.



MAIL-IN TEST: Photocopy this page. Clearly circle the letter of the correct answers. Mail this test with the completed form and check for \$10, payable to ArchitectCES, to:

ArchitectCES
PO BOX 11911
Mount Lebanon, PA 15228

test>	1.	a	b	c	d	6.	a	b	c	d	
	2.	a	b	c	d	7.	a	b	c	d	
	3.	a	b	c	d	8.	a	b	c	d	
	4.	a	b	c	d	e	9.	a	b	c	d
	5.	a	b	c	d	10.	a	b			

Last Name _____ First Name _____ Middle Initial/Name _____

Firm Name _____

Address _____ City _____ State _____ Zip _____

Tel _____ Fax _____ E-Mail _____

AIA ID Number _____ Completion Date (M/D/Y) _____

Please email me a certificate of completion upon scoring 80% or higher.

Material resources used: Article addressing issues concerning health, safety, and welfare.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature _____ Date _____

National 
Gypsum®

NATIONAL GYPSUM PRESENTS

A PRIMER ON THE NEW ASTM STANDARDS FOR HIGH-PERFORMANCE WALL SYSTEMS

These all-encompassing standards classify enhanced gypsum wallboards based on performance, eliminating confusion, and maximizing design efficiency.

By Alison Golub



Abuse- and impact-resistant gypsum wallboard with fiberglass scrim proved an ideal material for the Bobcats Arena in Charlotte, North Carolina, standing up to crowds and high-energy sporting events.



ARCHITECT MAGAZINE CONTINUING EDUCATION

This course requires supplemental online reading in addition to the following article. For details on accessing the supplemental reading and to learn how to take the test, please see page 141.

In response to heightened industry demand for enhanced wall systems, the American Society for Testing and Materials (ASTM) established abuse- and impact-resistance standards to measure the ability of gypsum wallboard to withstand surface abrasion, indentation, and cavity penetration. Entitled Standard Classification for Abuse-Resistant, Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels (ASTM C 1629), this newly issued standard is the culmination of an industry push for a testing method unification first launched in the mid-1990s.

Understanding the ASTM testing methods, as well as the optimal usage for an assortment of enhanced gypsum wallboards, is integral to maximizing durability, design flexibility, and the long-term cost efficiency of high-traffic and intense-use areas.

UNDERSTANDING THE ASTM STANDARDS

The benefit of the new ASTM C 1629 classification system is that architects can now confidently determine

which enhanced gypsum wallboard will work best for their design, selecting such products from reputable manufacturers that adhere to these industry standards for high-performance wall systems. In order for architects to fully capitalize on the ASTM classification system, however, they must be aware of the two types of potential damage that can occur when specifying a wall system for a high-traffic or intense-use area:

Surface damage—Abrasion or scuffing due to high traffic during standard use, and indentation of the wall surface from low-energy or occasional impact
Penetration—Damage due to high-energy or continual impact that breaks into the stud cavity

These types of damage can clearly occur in any building, whether residential, institutional, or commercial. But it is also clear that the amount of potential wear and tear expected for a sports arena would far exceed the wear and tear expected for a residential garage. The new ASTM testing and classification standards serve specifiers well by allowing them to specify the most appropriate materials for their particular application.

ASTM STANDARD TESTING METHODS

SURFACE ABRASION (ASTM D 4977)

Purpose: To measure the ability of a wall system to withstand scuffs and abrasions.

Method: A sample is laid flat in an environment with 50 percent relative humidity. It is then subjected to

LEARNING OBJECTIVES

This article covers how comprehension of the new, industry-wide ASTM Standards for enhanced gypsum wall systems contributes to the durability, design flexibility, and long-term cost efficiency of high-traffic and intense-use areas.

Key points include:

- Potential damages to wall systems
- Established ASTM testing methods for high-performance wall systems
- Decoding the ASTM classification system for enhanced gypsum wallboards
- Performance comparison of five types of wall systems
- Common applications

50 abrasion cycles of a wire brush weighted with a total load of 25 lbs. The abrasive motion creates surface wear that is measured to determine abrasion resistance.

SURFACE INDENTATION RESISTANCE (ASTM D 5420 GARDNER IMPACT)

Purpose: To measure the ability of a wall system to resist dents.

Method: A sample is laid flat and impacted by a 5/8" hemispherical head raised to a height that provides 72 in./lb. of impact energy. The depth of the indentation is measured to determine the level of indentation resistance.

SOFT BODY IMPACT TEST (ASTM E 695)

Purpose: To measure the ability of a high-performance wall system to withstand single impact force from a soft object.

Method: A sample wall system is assembled to the manufacturer's guidelines. A leather bag is loaded with steel pellets to a weight of 60 lbs. The bag is suspended and dropped at an angle, with the point of impact occurring at the mid-height of the test panel. The sample is impacted in a stud cavity by progressively higher, 6" drop distances until structural damage occurs. Surface damage and deformation are reported following each impact in ft.-lbs. The level of energy required to cause structural failure is also recorded.

HARD BODY IMPACT TEST (ANNEX A1)

Purpose: To measure a high-performance wall panel's resistance to penetration by a hard object, such as a baseball bat or a boot heel.

Method: A 2' x 2' wall panel sample is mounted to a rigid frame. The sample is impacted with a ramming arm fitted with a cylindrical steel head measuring 2-3/4" and weighted with 20 lbs., all of which is mounted on a pendulum. The pendulum is dropped from a fixed height. Weights are progressively added to increase the impacting energy. The maximum force that the sample can withstand without penetration into the stud cavity is reported in ft.-lbs.

DURABILITY CLASSIFICATION

According to the ASTM results, the tested gypsum wallboard product is then identified by ASTM C 1629 classification levels:

- Class 1:** Lowest performance that meets the standard
- Class 2:** Performance that falls in the middle

Class 3: Always the highest performance

Each classification level refers to an individual ASTM test and requires a minimum performance for that test (see Chart 1 "ASTM C 1629 Classifications and Performance Requirements," below). Because of this, a single product will likely achieve several different classification levels, depending upon its results for the individual ASTM tests. For example, fiber-reinforced gypsum wallboard with fiberglass scrim achieves a Class 3 rating for both ASTM E 695 Soft Body Impact and Annex A1 Hard Body Impact. However, it only achieves a Class 1 rating for ASTM D 5420 Surface Indentation, and no classification for ASTM D 4977 Surface Abrasion. It is important for architects to compare and contrast the performance of the different wallboard systems in all ASTM tests when selecting a wall product for high-traffic areas.

GYPSON WALLBOARD PRODUCTS COMPARED AND DEFINED

Specialized high-performance gypsum wallboard products classified by ASTM C 1629 vary in their construction and intended use. For example, only fiber-reinforced gypsum wallboard with fiberglass scrim and abuse- and impact-resistant gypsum wallboard with fiberglass scrim are intended to withstand hard-body impact that can occur in very high-traffic areas. Abuse- and impact-resistant gypsum wallboard with fiberglass scrim garners better overall results in each ASTM test category than other high-impact wall systems. See all results below:

TYPE X GYPSUM WALLBOARD

What it is: Originally designed for fire resistance, this wallboard is enhanced with fiberglass to achieve

fire resistance ratings but provides minimal resistance to surface damage and penetration.

ASTM Characteristics:

- Surface Abrasion Test 0.576"
- Surface Indentation Test 0.230"
- Soft Body Impact Test 120 ft.-lbs.
- Hard Body Impact Test N/A

Classifications: Type X gypsum wallboard does not qualify for ASTM classification for Surface Abrasion, Surface Indentation, or Hard Body Impact. However, standard 5/8" Type X gypsum wallboard does achieve an ASTM C 1629 Class 1 rating for Soft Body Impact.

FIBER-REINFORCED GYPSUM WALLBOARD

What it is: Designed for use where surface damage is a concern, this wallboard is enhanced with the manufacturer's proprietary materials.

ASTM Characteristics:

- Surface Abrasion Test 0.197"
- Surface Indentation Test 0.138"
- Soft Body Impact Test 180 ft.-lbs.
- Hard Body Impact Test N/A

Classifications: Fiber-reinforced gypsum wallboard achieves a Class 1 rating for the ASTM Soft Body Impact Test. It does not, however, qualify as a high-performance material under ASTM classifications for Surface Abrasion, Surface Indentation, or Hard Body Impact.

ABUSE-RESISTANT GYPSUM WALLBOARD

What it is: Designed for use where surface damage is a concern, abuse-resistant gypsum wallboard features an enhanced gypsum core wrapped with abrasion-resistant paper.

CHART 1. ASTM C 1629 CLASSIFICATIONS AND PERFORMANCE REQUIREMENTS

	ASTM D 4977	ASTM D 5420	ASTM E 695	ANNEX A1
Class	Abraded Depth Max.	Indentation Max.	Impact Min.	Impact Min.
1	0.126 inches	0.150 inches	90 ft.-lb.	50 ft.-lb.
2	0.059 inches	0.100 inches	195 ft.-lb.	100 ft.-lb.
3	0.010 inches	0.050 inches	300 ft.-lb.	150 ft.-lb.

A PRIMER ON THE NEW ASTM STANDARDS FOR HIGH-PERFORMANCE WALL SYSTEMS

ASTM Characteristics:

- Surface Abrasion Test 0.09"
- Surface Indentation Test 0.132"
- Soft Body Impact Test..... 210 ft.-lbs.
- Hard Body Impact Test..... N/A

Classifications: Abuse-resistant gypsum wallboard achieves a Class 3 rating for ASTM-tested Surface Abrasion; a Class 1 rating for ASTM Surface Indentation; and a Class 2 designation for ASTM Soft Body Impact.

FIBER-REINFORCED GYPSUM WALLBOARD WITH FIBERGLASS SCRIM

What it is: Enhanced gypsum fiberboard with a core reinforced by fiberglass mesh; designed

for use where both surface damage and stud cavity penetration are concerns.

ASTM Characteristics:

- Surface Abrasion Test 0.284"
- Surface Indentation Test 0.11"
- Soft Body Impact Test > 480 ft.-lbs.
- Hard Body Impact Test > 160 ft.-lbs.

Classifications: Fiber-reinforced gypsum wallboard with fiberglass scrim does not qualify for ASTM classification for Surface Abrasion. It does, however, achieve a Class 1 designation for Surface Indentation; a Class 3 for Soft Body Impact resistance; and a Class 3 for Hard Body Impact resistance.

ABUSE- AND IMPACT-RESISTANT GYPSUM WALLBOARD WITH FIBERGLASS SCRIM

What it is: An enhanced moisture-resistant core is reinforced by fiberglass mesh and wrapped with heavy abrasion- and moisture-resistant backing; designed to resist surface damage and stud cavity penetration.

ASTM Characteristics:

- Surface Abrasion Test 0.009"
- Surface Indentation Test 0.114"
- Soft Body Impact Test > 720 ft.-lbs.
- Hard Body Impact Test >160 ft.-lbs.

Classifications: Abuse- and impact-resistant gypsum wallboard with fiberglass scrim achieves a Class 3 designation for Surface Abrasion; a Class 1 classification for Surface Indentation; a Class 3 classification for Soft Body Impact; and a Class 3 designation for Hard Body Impact.

APPLICATIONS

Every building is different, with varying exposure to high-traffic and potential damage. Because of this, there is no industry standard to define a particular type of space as a Class 1, 2, or 3 space in correlation with the ASTM material testing standards. Instead, the architect or other material specifier must understand the utility and potential damage conditions of the particular space, as well as the wall system's ASTM test results, before making a final decision about what type of material to use. The following applications give insight as to the types of areas that commonly need high-performance gypsum wallboard materials.

ABUSE-RESISTANT APPLICATIONS

Residential, institutional, and commercial buildings often have areas that are prone to

surface abrasion and indentation. In residential properties, areas such as stairwells and garages are the most intuitive applications. Institutional applications can include hospital observation rooms, operating rooms, cafeterias, dormitories, and day care centers. Commercial properties often require extra durability in corridors and public areas that experience high traffic, such as lobbies or entry areas.

Weighing the options: Either abuse-resistant gypsum wallboard or fiber-reinforced gypsum wallboard is the ideal product choice for areas that are prone specifically to surface indentation. Abuse-resistant gypsum wallboard, however, receives a higher ASTM rating for areas that need stronger resistance to surface abrasion. For protection against both surface abrasion and indentation, then, abuse-resistant gypsum wallboard would be the most effective material choice.

IMPACT-RESISTANT APPLICATIONS

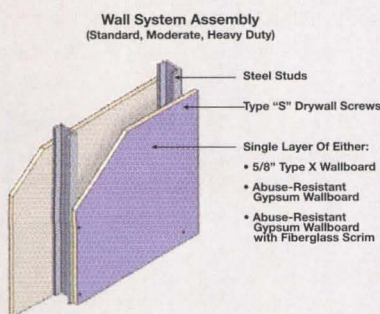
Multi-family housing is one of the only residential applications that calls for impact-resistant materials, due to their very high-traffic stairwells and corridors. Institutional buildings present the most intuitive application for impact-resistant materials and can range from high school classrooms and gymnasiums to public areas, workshops, and psychiatric wards. Commercial applications are common as well, with mailrooms and loading areas (or any area where heavy machinery is operated regularly) topping the list. Very heavily trafficked office corridors and public areas could also qualify.

Weighing the options: In all of these areas, abuse- and impact-resistant gypsum wallboard with fiberglass scrim and fiber-reinforced gypsum wallboard with fiberglass scrim are appropriate choices. Both products achieve Class 3 ratings for ASTM Soft Body Impact and ASTM Hard Body Impact, proving high resistance to cavity penetration. The abuse- and impact-resistant gypsum wallboard with fiberglass scrim offers additional protection against surface abrasion, giving the area increased durability. Concrete masonry units (CMU) are another option for areas that require heavy impact resistance, cost is often a deciding factor in these cases (for costs details, see "The Value Proposition" in online material).

PROPER ASSEMBLY FOR HIGH-PERFORMANCE WALL SYSTEMS

Standard, moderate, and heavy duty

- Single layer 1-hour fire assembly
- 3-5/8", 20-gauge steel studs, 16" O.C.
- Standard duty—Type X gypsum wallboard
- Moderate duty—Abuse-resistant gypsum wallboard or fiber-reinforced gypsum wallboard
- Heavy duty—Abuse-resistant gypsum wallboard with fiberglass scrim or fiber-reinforced gypsum wallboard with fiberglass scrim



High-performance gypsum wallboard systems discussed in this learning unit are not recommended for use in high-risk facilities, such as maximum-security prisons, bank vaults, or political embassies. Such areas are beyond the scope of this article.

TO ACCESS SUPPLEMENTAL READING: Go to www.architectmagazine.com and select "Resources" then select "Continuing Education Center". There you can download PDF files of this course and the required supplemental information.

TAKE THE TEST ONLINE FOR FREE: New users must create a new account. Returning users may log in. After logging in, click on "My Courses". Then select this course title to launch your test. A score of 80% or higher earns 1 AIA/CES LU hour of health, safety and welfare credit. Valid for credit through December 2008.

TEST QUESTIONS

1. The new ASTM testing methods for enhanced wall systems measure what types of potential damage?

- a. Abrasions
- b. Indentations
- c. Cavity penetration
- d. All of the above

2. The ASTM Hard Body Impact Test (Annex 1) records a wall panel's resistance to damage from...

- a. A wire brush weighted with an additional 25 lbs.
- b. A leather bag loaded with steel pellets to a weight of 60 lbs.
- c. A ramming arm fitted with a cylindrical steel head measuring 2-3/4 inches and weighted with 20 lbs.
- d. A 5/8" hemispherical head providing 72 inches/lbs. of impact energy

3. Type X Gypsum Wallboard...

- a. Derives its fire resistance solely from a non-combustible core
- b. Is a proprietary material
- c. Offers enhanced fire resistance over regular wallboard
- d. None of the above

4. Type X Gypsum Wallboard qualifies for ASTM classification in which category(s)?

- a. Soft Body Impact only
- b. Soft Body Impact and Surface Indentation
- c. Surface Indentation and Surface Abrasion
- d. Surface Abrasion only

5. In which category of building are impact-resistant gypsum wallboards specified most often?

- a. Residential
- b. Commercial
- c. Institutional/Public
- d. High-security

6. ASTM D 3273 moisture-resistant gypsum wallboard can withstand application in what types of areas?

- a. Around doors and windows
- b. Tub and shower surrounds
- c. Saunas and steam rooms
- d. All of the above

7. Architects consider ASTM performance requirements when selecting enhanced gypsum wall systems because...

- a. All ASTM-classified gypsum wall panels are recommended for heavily trafficked and intense-use areas
- b. Utilizing ASTM-classified enhanced gypsum wallboards is required by law
- c. Using ASTM performance guidelines can improve durability and reduce maintenance costs
- d. All of the above

8. When performing a cost analysis for high-performance wall systems, one must consider...

- a. ASTM performance requirements
- b. Design flexibility
- c. Ease of repairs
- d. All of the above

9. Should heavy-duty gypsum wallboard assemblies be used in maximum-security prisons or other high-risk facilities?

- a. Yes
- b. No

10. Various high-traffic and intense-use areas are determined according to ASTM C 1629 classification levels 1-3.

- a. True
- b. False



A Primer on the New ASTM Standards for High-Performance Wall Systems

You have the option of taking the test online free of charge or you may mail your test along with a check in the amount of \$10. A score of 80% or higher earns 1 AIA/CES LU hour of health, safety and welfare credit. Certificates of completion are available upon request and delivered by email.

test>	1.	a	b	c	d	6.	a	b	c	d
	2.	a	b	c	d	7.	a	b	c	d
	3.	a	b	c	d	8.	a	b	c	d
	4.	a	b	c	d	9.	a	b		
	5.	a	b	c	d	10.	a	b		



MAIL-IN TEST: Photocopy this page. Clearly circle the letter of the correct answers. Mail this test with the completed form and check for \$10, payable to ArchitectCES, to:

ArchitectCES
PO Box 11911
Mount Lebanon, PA 15228

Last Name _____ First Name _____ Middle Initial/Name _____

Firm Name _____

Address _____ City _____ State _____ Zip _____

Tel _____ Fax _____ E-Mail _____

AIA ID Number _____ Completion Date (M/D/Y) _____

Please email me a certificate of completion upon scoring 80% or higher.

Material resources used: Article addressing issues concerning health, safety, and welfare.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature _____ Date _____

Slimline Series



TODAY'S FASHION
Tomorrow's Stile



Circle no. 58 or <http://architect.hotims.com>

Slimline...

Smooth, Sleek...

A Sure Fit...

Slimline Door Rails, offer the Architect a new look for their all glass door design.

Featuring a 1" and 1-3/8" rail profile, paired with 12 standard finishes, and field adjustability, makes the Slimline Door Rail a viable choice for your next interior build out project.

Send us an e-mail at Slimline@doralco.com to request a sample or receive product specifications.

Slimline ~ Sure Grip

A Class Act...

Contact us Today!

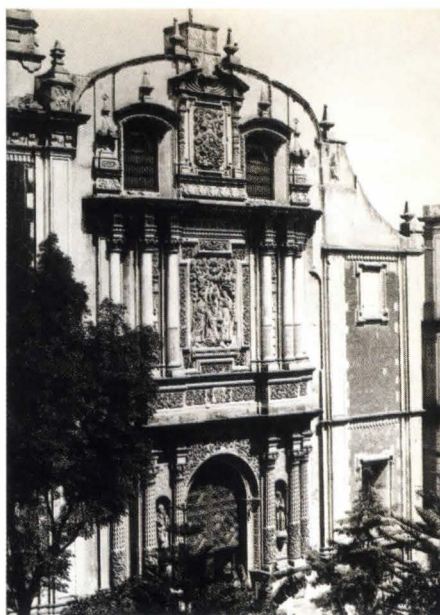
Tel: 888 / 443 - 6725
Fax: 708 / 388 - 9392
www.doralco.com

CULTURE

OBJECT LESSON
EXHIBITS
BOOKS
EVENTS



THROCKMORTON FINE ART



OBJECT LESSON

A Baroque Perspective

Guillermo Kahlo's photographic survey of colonial architecture in Mexico

Guillermo Kahlo (1872–1941), the German-born father of artist Frida Kahlo, devoted his career to capturing, in silver gelatin prints, the urban environment of Mexico during its turn-of-the-century boom. He began his career as a photographer working for commercial clients, who asked him to document the major buildings and boulevards of Mexico City. He went on to do his most important work at the behest of the Mexican government, recording through the symbolism of architecture both the nation's progress and the legitimacy of President Porfirio Diaz's regime.

The Ministry of Finance commissioned Kahlo to create an exhaustive survey, the *Photographic Inventory of Spanish Colonial Church Architecture of Mexico*. Decades in the making, the *Photographic Inventory* remains Kahlo's most important contribution to Mexican culture. The photographer limited himself to only one exterior and one interior of each subject, but nonetheless managed to fill six volumes.

Kahlo's church images are devoid of people but rich in detail—testaments to the deeply graven façades and altars of the indigenous Baroque style. New York art dealer Spencer Throckmorton, whose gallery has uncovered a cache of rarely available prints, applauds Kahlo for “very well thought-out angles,” which exploited the central axis of a design while using asymmetry to convey depth. Kahlo often shot from above, which allowed him to reveal hidden details from a powerful, almost heavenly, perspective.

Sightings of Kahlo's work are rare. The bound copies of the *Photographic Inventory* remain mostly in the possession of Mexican museums. The Mexican government has so far not exploited the commercial potential of reproductions, which the dealer suggests “would be a great source of revenue.”

The price of architectural history: \$1,500 to \$2,000 at Throckmorton Fine Art in New York. Bargain hunters shopping eBay this summer bid \$255 for a 1907 bank photo, but failed to meet the reserve. **LINDA HALES**

OBJECT Vintage prints
ARTIST Guillermo Kahlo
DATE Circa 1920
PRICE \$1,500–\$2,000
SOURCE www.throckmorton-nyc.com

PASS THE ARE



Archiflash

NEW 6th EDITION
Revised For ARE 3.1

OVER 13 YEARS OF SUCCESS

Prepare for the Architect Registration Exam with Archiflash.® Each set contains 1,152 expertly written flashcards covering all six multiple choice tests; Pre-Design, General Structures, Lateral Forces, Mechanical & Electrical Systems, Building Design/Materials & Methods, and Construction Documents & Services. Learning is easy with timesaving charts, definitions, diagrams, and multiple choice Q & A. More info than you ever thought possible in an easy-to-use flashcard format.

Pay Only \$109.95. Individual sections available for \$27.00

archiflash.com

800 411 7314

Circle no. 388 or <http://architect.hotims.com>

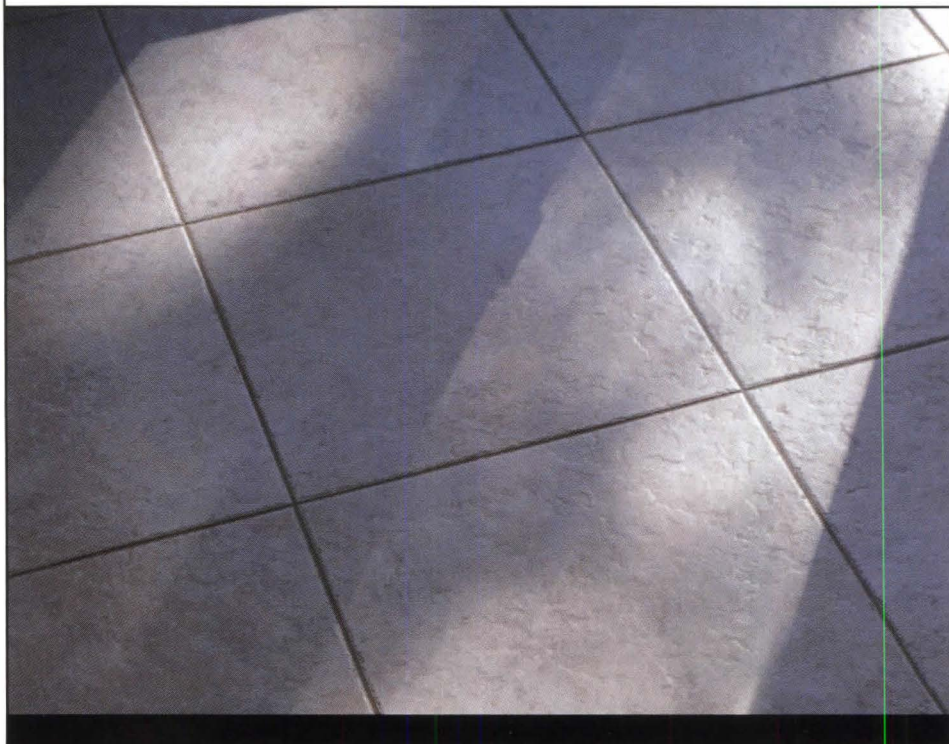
LOOKING TO SPEC FLOORING PRODUCTS?

We have more than
8,100 to choose from.

Now you can find all the product information
you need instantly.

SEARCH. FIND. COMPARE.

You'll find top manufacturers of wood, laminates,
vinyl, and ceramic tile, as well as descriptions, specs,
installation instructions, and dealers within minutes.



hanley wood

ebuild

www.ebuild.com

ebuild. The professional's guide to building products™

W E P R O M I S E .

N O B O R I N G
C O N T I N U I N G E D .

Architect magazine is committed to working with manufacturers to provide architects with the most dynamic, informative and genuinely interesting continuing education materials available – always at no cost to architects. We've assembled a creative team of experts dedicated to producing course content that architects will actually find worthwhile, valuable, helpful, media rich and easy to use.

Plus, architects not only get AIA credit. They get important feedback on questions they miss, and confirmation on questions they answer correctly.

Manufacturers who sponsor courses can count on accuracy, fast turnaround, full AIA compliance and data administration, and compelling presentations of the objective features and benefits of their products and systems. Plus, product managers will really appreciate that our data collection system allows real-time, on-line monitoring of any program you sponsor.

Whether produced in print, online, or as a lunch-and-learn program, we're committed to making our continuing education programs the best of breed.

Access *Architect* magazine's new Continuing Education On-line Programs through Architectmagazine.com

Manufacturers interested in sponsoring a course, please contact Russ Ellis, Publisher, at 202.736.3310.

Architects interested in taking a course, please visit, www.architectmagazine.com, click on Resources, then Continuing Education Center.

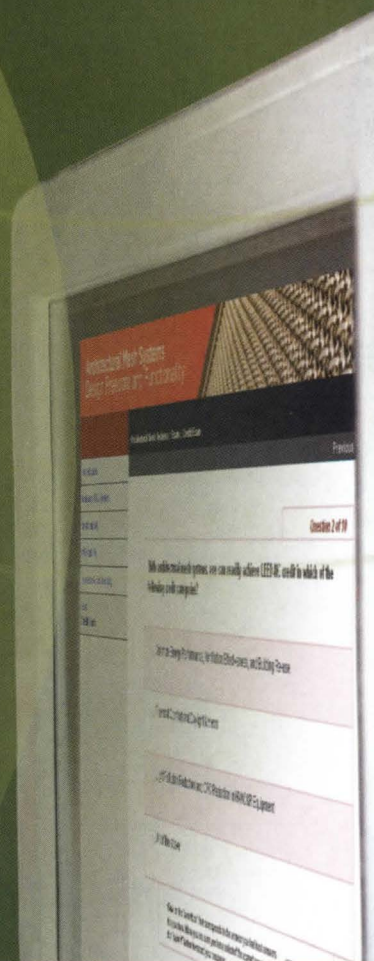
ARCHITECT

Continuing education that holds your interest

hanley▲wood

Course development and content management provided by

ARCHITECTCES



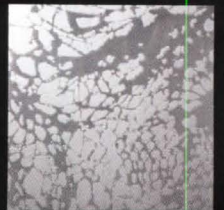
Take Innovation to the wall.



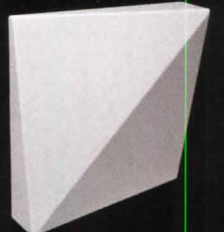
Premium Wood Veneers
in Mahogany, Cherry,
Red Oak & Maple



Back Painted Glass



Powder Coated Metal



Three-Dimensional Metal

Brushed Aluminum

graph

FRYREGLET
ARCHITECTURAL METALS

An alternative to expensive and labor intensive custom millwork, Graph is a non-progressive wall system that takes innovation to another level. Engineered with a unique grid system, Graph offers the design flexibility of premium wood veneers, etched and brushed metals, back-painted glass, translucent resins, bold graphics and even three-dimensional shapes.

For more information or a Graph sample kit, call 1.800.237.9773, or visit www.fryreglet.com

Circle no. 33 or <http://architect.hotims.com>

Carrère & Hastings Architects

By Mark Alan Hewitt, Kate Lemos, William Morrison, and Charles D. Warren; foreword by Allan Greenberg; preface by Paul LeClerc
A two-volume, boxed set encapsulates the work of Carrère & Hastings, designers of the New York Public Library, the Frick Collection, and the original House and Senate office buildings. Acanthus Press, New York; \$175

Design for Ecological Democracy

By Randolph T. Hester
A veteran planner, Hester suggests a new approach to urban design, combining environmental and social responsibility. The MIT Press, Cambridge, Mass.; \$39.95

Details in Contemporary Architecture

Edited by Christine Killory and René Davids
The first in a series of books revealing technical secrets of architects and firms such as David Chipperfield, Herzog and de Meuron, Morphosis, and SHoP. Princeton Architectural Press, New York; \$55

Ian McHarg: Dwelling in Nature: Conversations With Students

Edited by Lynn Margulis, James Corner, and Brian Holt Hawthorne
A 1970 lecture by the legendary landscape designer, published for the first time as part of a "conversations with students" series. Princeton Architectural Press, New York; \$19.95

Frank Lloyd Wright: Prairie Houses

By Allan Weintraub; text by Alan Hess with Kathryn Smith
A photo-driven presentation of more than 70 Prairie Style houses by the master of masters. Rizzoli, New York; \$50

The Perfect \$100,000 House: A Trip Across America and Back in Pursuit of a Place to Call Home

By Karrie Jacobs
The former editor of *Dwell* asks a very good question: Why does an average subdivision house cost \$150,000 and a modernist house by an architect half a million? Viking, New York; \$25.95

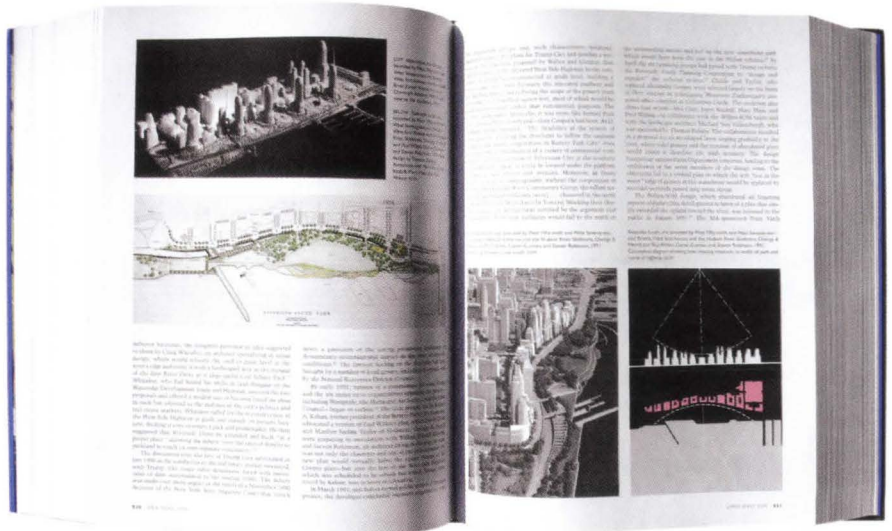
The Queen Anne House: America's Victorian Vernacular

By Janet W. Foster; photographs by Radek Kurzaj
More than 200 photographs of 19th century Queen Anne houses. Think gabled roofs, corbelled chimneys, balconies, cut-stone foundations, and lots and lots of porches. Harry N. Abrams, New York; \$50



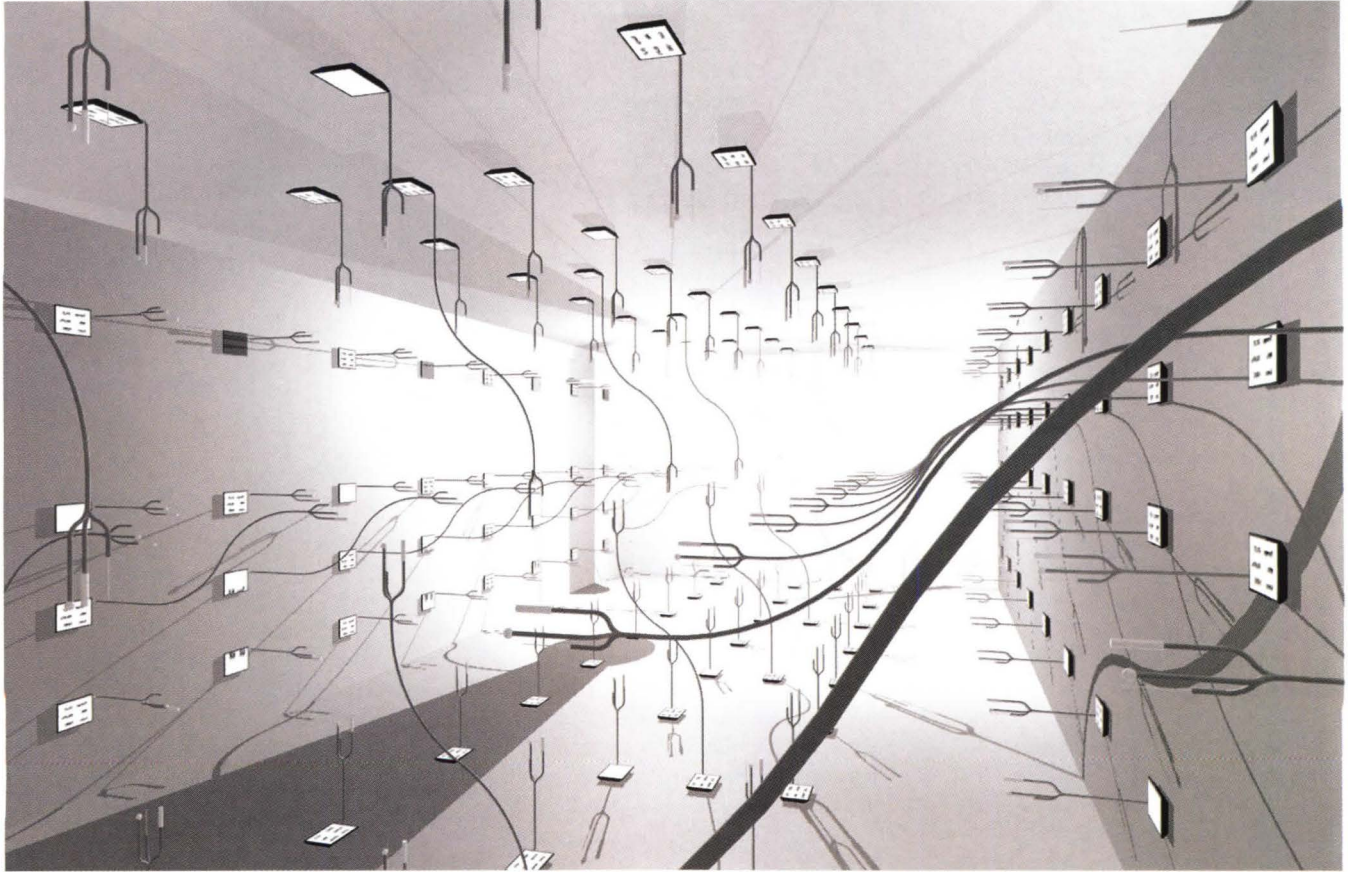
Chairs: A History

By Florence de Dampierre
A lavishly illustrated study of the essential piece of furniture, as it defines space and reflects culture around the world. Dampierre presents her subject with the kind of gravitas typically reserved for fine art, moving in stately chronological order, a chair or two per page, from ancient Egypt to the present day. Not surprisingly, her sources include such rarified institutions as the Vatican, the Louvre, and the Getty. *Chairs: A History* is a useful reference tool; it also makes for pleasant and lively browsing. Dampierre, a design historian, knows her subject, and she's not afraid to approach it with a little humor. Witness the electric chair on page 10. Harry N. Abrams, New York; \$65



New York 2000: Architecture and Urbanism From the Bicentennial to the Millennium

By Robert A.M. Stern, David Fishman, and Jacob Tilove
At 1,520 pages, Stern & Co.'s latest architectural history of New York is exhaustive, to say the least. It encompasses the big stories of Manhattan's recent past, including the development of Battery Park City and redevelopment of Times Square, while making room for quieter accomplishments in the outer boroughs. The narrative consistently portrays New York's built environment in the light of forces that shape it, such as zoning and real estate. Stern has already shown us New York circa 1880, 1900, 1930, and 1960, in as many volumes. The unsung heroes of this massive undertaking are his collaborating researchers, writers, and historians, a rotating cast of talent that includes Fishman and Tilove, and also Gregory Gilmartin, John Massengale, and Thomas Mellins. The Monacelli Press, New York; \$100



MÉTÉOROLOGIE D'INTÉRIEUR

MONTREAL

Environment: Approaches for Tomorrow
Canadian Centre for Architecture
 Through April 22, 2007

French landscape architect Gilles Clement and Swiss architect Philippe Rahm join forces to present alternative visions of environmental design. Clement, who is known for pioneering the concept of a "third" landscape created by human interference, turns theory into three dimensions with a chandelier of acrylic teardrops filled with bits of junk and seeds. Rahm's specialty is "interior weather." He uses temperature, humidity, and light to generate fresh thinking about the impact the elements have on space. *Above: Installation at the Canadian Centre for Architecture by Philippe Rahm Architects*

CHICAGO

Learning from North Lawndale: Past, Present + Future
Chicago Architecture Foundation
 Through Nov. 13, 2006

Stories from a historic Chicago neighborhood, home to notables such as Benny Goodman, Martin Luther King Jr., Golda Meir, and Dinah Washington.

Sustainable Architecture in Chicago: Works in Progress
Museum of Contemporary Art
 Through Jan. 6, 2007

Seven works in progress show environmentally responsible approaches to land use, materials, and energy consciousness that support Mayor Richard Daley's vision for "the greenest city in America."

MIAMI BEACH

Modernism in American Silver: 20th Century Design
The Wolfsonian
 Through March 25, 2007

More than 200 works of American silver, made between 1925 and 2000, convey the rich aesthetic possibilities of a timeless material.

LOS ANGELES

Breaking the Mode: Contemporary Fashion from the Permanent Collection
Los Angeles County Museum of Art
 Through Jan. 7, 2007

Over 100 examples of subversive dress show how 40 fashion designers revolutionized the structure, materials, and technology of contemporary clothing.

The Gen[H]ome Project
MAK Center
 Through Feb. 18, 2007

Architects and artists transform L.A.'s landmark Schindler House into a conceptual genetics lab. Among the many scientific methodologies referenced are astronomy, robotics, and algorithms.

Skin + Bones: Parallel Practices in Fashion and Architecture
The Museum of Contemporary Art
 Through March 5, 2007

Architectonic garments and buildings inspired by fabrics are only the starting point for a groundbreaking exhibition of 300 examples of avant-garde clothing and buildings by 46 designers, all housed in an Arata Isozaki-designed building.

MILWAUKEE

Biedermeier: The Invention of Simplicity
Milwaukee Art Museum
 Through Jan. 1, 2007

The first comprehensive exhibition of Biedermeier presents approximately 300 examples of paintings, furniture, decorative arts, and works on paper from early 19th century Central Europe.

MINNEAPOLIS

Streamline Design: The Essence of Speed

Minneapolis Institute of Art
Through Sept. 28, 2007

The acquisition of a 1936 Tatra T87 automobile inspired this display of aerodynamicism in objects created by America's 20th century superstars: Norman Bel Geddes, Raymond Loewy, and Henry Dreyfuss.

NEW HAVEN, CONN.

Some Assembly Required: Contemporary Prefabricated Houses
Yale University School of Architecture
Through Feb. 2, 2007

Eight studios, including Resolution: 4 Architecture, Steven Holl, and Michelle Kaufmann, take prefabricated dwellings to the next level.

NEW YORK

Mid-Century Modern: The Interior and Furniture Design of Florence Knoll

New York School of Interior Design
Through Dec. 16, 2006

Inspired by an exhibition at the Philadelphia Museum of Art, this focused exhibit celebrates the architect, space planner, and furniture designer—and her preference for light, elegant, open spaces.

Looking Back from Ground Zero
The Brooklyn Museum

Through Jan. 7, 2007

Paintings, photos, prints, and drawings of Lower Manhattan drawn from the museum's permanent collection mark the five-year anniversary of Sept. 11, 2001.

Clip, Stamp, Fold: The Radical Architecture of Little Magazines 196x-197x

Storefront for Art and Architecture
Through Jan. 14, 2007

Short-lived and self-published, the pamphlets and manuals in this exhibit allowed theory to evolve during a fertile time for the avant-garde. (The Xs in the exhibit title are intentional.)

Simply Droog: 10+3 Years of Creating Innovation and Discussion

Museum of Arts & Design

Through Jan. 14, 2007

A traveling retrospective of the Dutch collaborative includes 150 pieces that turned the tide of style.

Tropicalia: A Revolution in Brazilian Culture

Bronx Museum of the Arts

Through Jan. 28, 2007

Creative recall of the late 1960s, when daring experiments in art, music, film, architecture, and theater converged in Brazil.

Louis Comfort Tiffany and Laurelton Hall—An Artist's Country Estate

The Metropolitan Museum of Art
Through May 20, 2007

An examination of the artist's Long Island home, built at the turn of the last century and, except for fragments, objects, and photos, now lost.

Made to Scale: Staircase Masterpieces from the Permanent Collection

Cooper-Hewitt National Design Museum
Through June 3, 2007

A rare sighting of 19th century French staircase models offers technical virtuosity and design fancy on an intimate scale.

National Design Triennial: Design Life Now

Cooper-Hewitt National Design Museum
Dec. 8, 2006–July 29, 2007

For the third time since 2000, a team of curators assesses contemporary design culture at the front lines. Only the prosaic will be left behind.

PITTSBURGH

Louis Comfort Tiffany: Artist for the Ages

Carnegie Museum of Art
Through Jan. 15, 2007

In its final venue, this traveling exhibition offers more than 130 works of art, including a bifold door from the Mark Twain House in Hartford, Ct.

SAN FRANCISCO

Alexander Girard: Vibrant Modern
San Francisco Museum of Modern Art
Through Feb. 25, 2007

Ethnic motifs and extravagantly bright colors were hallmarks for Girard, one of America's great postwar designers.

TEMPE, ARIZ.

New American City: Artists Look Forward
Arizona State University Art Museum
Through Jan. 27, 2007

Local artists weigh in on the future of Phoenix, a city beset by astronomical growth despite the supposed limits of its desert setting.

WASHINGTON

Two Windows on the Willard: The Photographs of Carol M. Highsmith and Frances Benjamin Johnston

American Institute of Architects
Headquarters Gallery

Through Jan. 5, 2007

Archival and contemporary photographs present the history of a legendary Washington, D.C., hotel.

The Green House: New Directions in Sustainable Architecture and Design
National Building Museum

Through June 3, 2007

Innovative "green" residences from around the world and a furnished modular house by California modernist architect Michelle Kaufmann provide a consumer-friendly picture of eco-design. Lectures include off-the-grid strategies and how to incorporate sustainable principles into residential home design.



FLORIAN HOLZHER

NEW YORK

Design Life Now: National Design Triennial 2006

Cooper-Hewitt National Design Museum, Dec. 8–July 29, 2007

Practitioners point the way forward in disciplines as diverse as architecture, animation, and medicine. A section devoted to the transformative power of design draws lessons from the Seattle Central Library by Rem Koolhaas and NASA's robotics experiments. A video-inspired skate park, which glides from land into the sea, and a rethink of the classical botanical garden as a place for ecology and urbanism show the power of design to enhance everyday experiences. Above: *Soft Cell*, a silicone and rubber installation by architect Michael Meredith

CULTURE EVENTS



ART BASEL MIAMI BEACH

Art Basel Miami Beach

MIAMI BEACH

DEC. 7-10

The American counterpart to Switzerland's exclusive Art Basel event is vying for the title of world's most important art fair, aided by a high-profile companion festival of design as art in the Miami Design District. Last year's four-story, site-specific installation by Pritzker Architecture Prize-winner Zaha Hadid will be hard to top, but more than 200 established and emerging galleries will present work by 1,500 20th and 21st century artists, some recognizable.

www.artbaselmiami.com

DECEMBER

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Constructing the Swiss Landscape

CAMBRIDGE, MASS.

DEC. 2

A symposium at Harvard University's Department of Landscape Architecture.

www.gsd.harvard.edu

Cityscape 2006

DUBAI, UNITED ARAB EMIRATES

DEC. 4-6

The fifth annual exhibition and conference in the Persian Gulf's rapidly expanding commercial and residential development zone.

www.cityscape.ae

Ecobuild Federal and AEC-ST Federal

WASHINGTON, D.C.

DEC. 5-7

A gathering place for information and contacts on sustainable architecture.

www.ecobuildfederal.com

Tenth Conference of the International Association for the Study of Traditional Environments

BANGKOK, THAILAND

DEC. 15-18

This year's theme is "Hyper Traditions," addressing the effects of globalization on traditional and indigenous environments.

www.arch.ced.berkeley.edu/research/iaste

JANUARY

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

World Class Cities

BANGKOK, THAILAND

JAN. 3-5

The seventh symposium of the International Urban Planning and Environment Association considers environmental design.

www.upebangkok.org

New Architecture and Urbanism: Development of Indian Traditions

NEW DELHI

JAN. 11-14

A symposium organized by the International Network for Traditional Building, Architecture & Urbanism, under the patronage of Prince Charles, seeks inspiration from the past.

www.intbau.org

Workshop for the 2006 Guidelines for Design and Construction of Health Care Facilities

PHOENIX

JAN. 19-20

A two-day review of codes and standards for health care facilities, including changes and new material in Guidelines 2006.

www.aia.org

Export Alliance Construction

MONTREAL

JAN. 29

The sixth annual residential and commercial building products trade show.

www.exportalliance.com



When A Wall Is Better

TRACO TR-700 Window Wall

The TR-700 is ideal for demanding thermal and structural applications such as high-rise office and multi-family buildings. This versatile product can be used in various applications including horizontal ribbon windows or punched openings.

Consider the TRACO TR-700 Window Wall — the perfect solution for a wall of glass design.

Beyond Windows. Beyond Doors.™



TRACO®

The Windows And Doors That Greet The World

Windows • Doors • Storefront • Entrances

1-800-837-7002

market@traco.com • www.traco.com

Circle no. 50 or <http://architect.hotims.com>

You're just a click away from the No. 1 source for information on natural stone.

For a beautiful stone-clad building full of information regarding natural stone, both residential and commercial applications, all you need to know is www.marble-institute.com.

The Marble Institute of America's newly updated web site has it all, including an online bookstore with many stone industry publications including the *MIA Dimension Stone Design Manual*, the world's premier resource when it comes to using granite, marble, limestone, travertine and other natural stones.

On our web site, you'll also find a wealth of listings for technical bulletins, videos and other materials that can help you create exciting applications with natural stone.

There's also an easy-to-use locator directory for residential stone fabricators/installers and commercial contractors/installers and links to a variety of other resources of importance to users of natural stone.

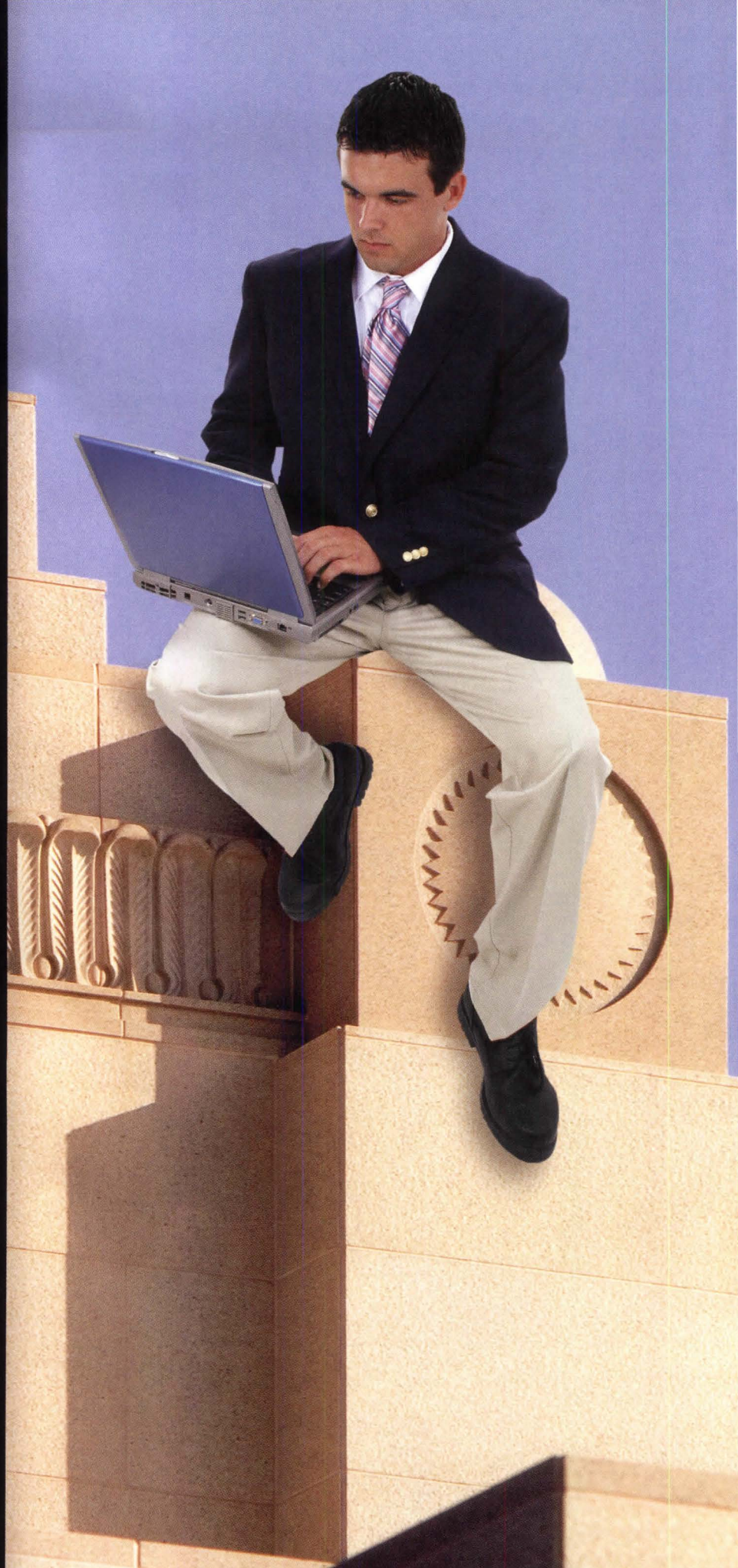
Need real information about real stone? There's only one place to go: www.marble-institute.com, the official web site of MIA, representing more than 1500 of the leading natural stone companies worldwide.



**MARBLE
INSTITUTE**
of America

Marble Institute of America
28901 Clemens Road • Suite 100
Cleveland, OH 44145
Phone: 440.250.9222
Fax: 440.250.9223
www.marble-institute.com

Circle no. 44 or <http://architect.hotims.com>





Viracon
VRE-59 Insulating Glass makes a high profile debut as the glass product for the new Seven World Trade Center building in NY offering a balance of aesthetic quality and energy performance. 1-800-533-2080. www.viracon.com.

Circle no. 88



Fry Reglet
Innovative Interior Wall Panels
Fry Reglet's Graph is a grid system of decorative panels that rivals expensive millwork. A prefabricated aluminum gridwork and proprietary clip allows Graph panels to be applied quickly, securely and in perfect position. Many distinctive surface options available. 1-800-237-9773. www.fryreglet.com.

Circle no. 13



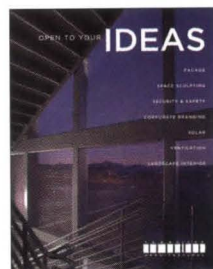
Fypon
The William E. Poole Collection by Fypon includes 25 cupolas that resist rot, moisture, insects, weather and decay. Cupolas are made of Fypon PVC and urethane, and come in three sections for fast assembly. 1-800-446-3040. www.fypon.com.

Circle no. 14



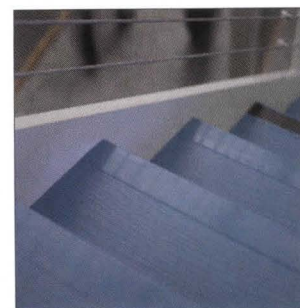
Delta®
Experience urban vibe in a faucet collection. The Urban Collection for kitchen and bath. With uptown looks, downtown feel. For condos, lofts, homes, or any building with an urban vibe. Delta®. We work wonders with water™. www.urbanfaucet.com.

Circle no. 6



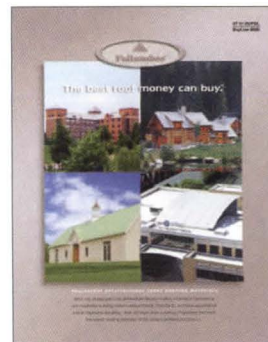
Cambridge Architectural
Cambridge Architectural's Velocity attachment method for mesh Security & Safety applications is engineered to meet the requirements of coastal and hurricane regions, withstanding wind gusts to 176 mph. Velocity incorporates a tension release mechanism. 1-866-806-2385. www.cambridgearchitectural.com.

Circle no. 4



Johnsonite®
Johnsonite® adds 2 tile textures into its rubber stair tread offering—Bamboo and Cubis. Both combine pattern and color for commercial environments. 1-800-899-8916. www.johnsonite.com.

Circle no. 18



Follansbee
Follansbee introduces a breakthrough in metal roofing technology with TCS Satin™, a stainless steel substrate plated with Follansbee's patented ZT® alloy and micro-embossed with a pattern resembling the soft satin patina of pure zinc plate. 1-800-624-6906. www.follansbeeroofing.com.

Circle no. 12



Hansgrohe, Inc.
With new Raindance AIR shower products, Hansgrohe has again revolutionized showering by making it more intense, natural and sensual than ever before. Feel the difference that AIR makes. 1-800-334-0455. www.hansgrohe-usa.com.

Circle no. 15



Marble Institute of America
MIA Stone Swatch
A natural stone gallery of 330 swatch cards featuring beautiful marbles, granites, and travertines with technical data and physical and mechanical features. 440-250-9222. www.marble-institute.com.

Circle no. 70

Resource

SPECIAL ADVERTISING SECTION



PILKINGTON

A member of NSG Group



Pilkington

New OptiView™ Anti-Reflective Glass minimizes glass reflections by reducing visible light reflectance to less than 2%, while blocking more than 99 percent of UV transmittance using Pilkington's online pyrolytic process.

1-800-221-0444. www.pilkington.com.

Circle no. 71



SAGE Electrochromics, Inc.

At the push of a button, energy-saving SageGlass® electronically tintable glazing darkens to block solar heat gain, glare, and the radiation that causes fading, while always maintaining the view and connection to the outdoors.

1-877-724-3321. www.sage-ec.com.

Circle no. 73



Kolbe

Ultra Casement

Redesigned to include an extruded aluminum sash to match the frame, corrosion resistant stainless steel hardware and more. Quality materials and innovative engineering allow for some units to achieve ratings up to DP85.

1-800-955-8177. www.kolbe-kolbe.com.

Circle no. 19



KraftMaid

KraftMaid Cabinetry offers the perfect combination of affordable quality, style, selection and reduced lead times to provide the solution for all of your commercial cabinetry needs.

Contact us for a free copy of the KraftMaid Commercial Cabinetry Brochure.

1-800-581-4484. www.kraftmaidspec.com.

Circle no. 20

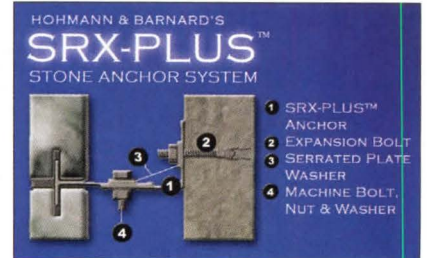


VT Industries, Inc.

VT Industries introduces its EQcountertops using low-emitting particleboard core, water-based adhesives and Greenguard certified laminate. This new product can contribute toward achieving credits under the LEED Green Building Rating System™.

1-888-287-8356. www.vtindustries.com/countertops.

Circle no. 87



Hohmann and Barnard, Inc.

The new SRX System features a configuration of serrated slots that allows vertical, horizontal and lateral adjustment without slippage in load bearing conditions. This system reduces requirements for varied length anchors, and reduces shimming requirements.

631-234-0600. www.h-b.com.

Circle no. 17

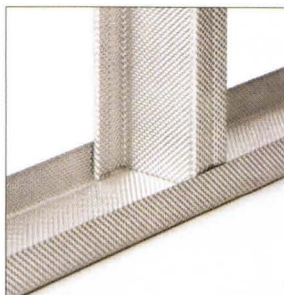


Eagle Window & Door

New Ascent™ door series includes 8" or optional 12" bottom rails, venting sidelites, raised panels and mid-rail options. Available in 50 colors, endless custom colors, 11 interior finishes, 9 wood species and 7 anodized finishes.

1-800-453-3633. www.eaglewindow.com.

Circle no. 11

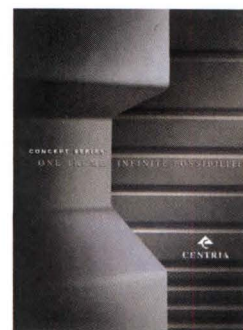


Dietrich Metal Framing

Dietrich UltraSTEEL™ Framing is a next-generation roll-forming technology that significantly increases product performance when compared to traditional interior metal stud framing. UltraSTEEL™ is an internationally patented method of altering the characteristics of the base strip steel providing higher strength material.

412-281-2805. www.dietrichmetalframing.com.

Circle no. 7



CENTRIA

CENTRIA Concept Series™ concealed fastener panels in 12" and 16" widths feature an asymmetrical geometry and identical side joinery permitting integration of multiple profiles within a single elevation for a customized exterior wall.

412-299-8218. www.CENTRIA.com.

Circle no. 5



Doralco

Intertec has a long history of fabricating custom aluminum sunshades and custom aluminum grillework. We pride ourselves on high quality, excellent customer service and the best lead time in the industry.
708-388-9324. www.doralco.com.

Circle no. 8



Duron Paints & Wallcoverings

Colors of Historic Charleston
Sherwin-Williams and Duron Paints & Wallcoverings are proud to offer Colors of Historic Charleston. Whether you're looking for a historically accurate palette for a restoration project, or simply want to incorporate the stately grace of Charleston into your design, this palette can fulfill your colorful dreams.
1-800-72DURON. www.sherwin-williams.com.
www.Duron.com.

Circle no. 10



Traco

The TRACO TR-700 Window Wall has been designed to provide a Curtain Wall look while offering superior air, water and structural performance. The TRACO Window Wall is ideal for demanding thermal and structural applications.
1-800-837-7002 www.traco.com.

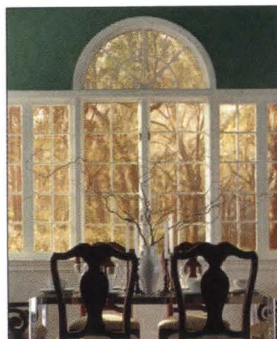
Circle no. 74



Flexco Floors

FLEXCO Evolving Styles™ is a rubber tile that can be maintained without additional waxes or high maintenance requirements. Available as tiles or as sheets, FLEXCO Evolving Styles™ offers two color combinations: Creative Elements™ and Wood Elements™.
1-800-633-3151. www.flexcofloors.com.

Circle no. 72



Duron Paints & Wallcoverings

George Washington's Mount Vernon Estate of Colours®
Colors Inspired by History, Reinvented for Today...
Sherwin-Williams and Duron Paints & Wallcoverings are proud to offer George Washington's Mount Vernon® Estate of Colors™ paint collection. The beauty of Washington's home inspired the colors featured.
1-800-72DURON. sherwin-williams.com. Duron.com.

Circle no. 89



USG

Formaldehyde-Free Ceiling Panels
To help building professionals create healthy spaces, USG offers many CLIMAPLUS™ ceiling panels and tiles that contain no formaldehyde or levels below the most stringent standards. Visit our web site to learn about the many sustainable qualities of USG ceilings, our ceiling recycling program and why we're the green building knowledge leader.
www.sustainableceilings.com.

Circle no. 86



The American Institute of Steel Construction, Inc. Steel Solutions Center

A free service from AISC helps designers find, compare, select and specify the right system for their project. A conceptual solution includes: framing system comparisons, optimized column layouts, and cost/scheduling information.
1-866-ask-aisc. www.aisc.org.

Circle no. 3

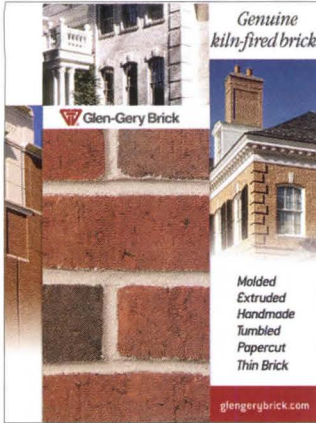


DuPont™ Corian® Solid Surfaces

When you work with Corian® it's malleability lets you create unprecedented, free flowing designs. See all the potential of DuPont™ Corian® Solid Surfaces online or call for more information.
1-800-436-6072. www.coriandesign.dupont.com.

Circle no. 9

PRODUCT REVIEW



Glen-Gery Brick

America's premier manufacturer of genuine clay brick, Glen-Gery offers an extensive range of extruded, machine molded, Authentic Handmade, glazed and FBX facebrick, Thin Brick, pavers, and a complete line of standard and custom shape units -- quality craftsmanship backed by over a century of experience.

www.glengerybrick.com

Circle no. 300



Build A Chair Online To Reflect Your Own Taste

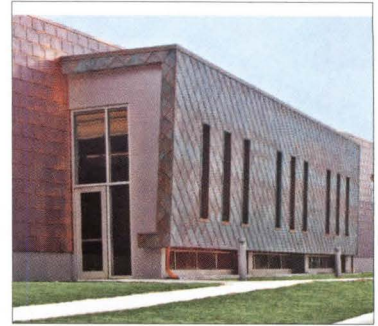
BioFit introduces the seating industry's first online Build Your Own Chair (BYOC) configurator for designing ergonomic chairs to meet specific styles and needs. See how different components and options would look and perform in your own application, and get a quote within one business day. All BioFit products are backed by an industry-best 13-year warranty. Try BYOC today -- visit www.biofit.com/ship_now/byoc.html

BioFit Engineered Products

1-800-597-0246

biofit@biofit.com

Circle no. 301



Metal Design Systems, Inc.

NEW Series 60 Flat-Lock 2mm Alpolic® copper composite panel system is available in diamond and rectangular patterns. Photo: natural copper and pre-patinaed copper. MDSI offers custom wall and ceiling systems, glazed joint systems, sunscreens, canopies, column covers, custom finishing, EIFS replacement and rain screen/pressure equalized systems. Downloads available at www.metaldesignsystems.com

P-319.362.7454

F-319.362.7456

mdietsch@crmdsi.com

www.metaldesignsystems.com

Circle no. 302



GAGE Decorative Metal Ceilings

The Gage Corporation International has been designing and manufacturing decorative metal ceilings since 1989. Gage ceilings feature more than 50% post-consumer recycled material and are visually rich, functional, and versatile as a design medium. Custom collaboration is encouraged.

800-786-4243

gage@centurytel.net

www.gageceilings.com

Circle no. 303



GAGE Stainless Steel Floor System

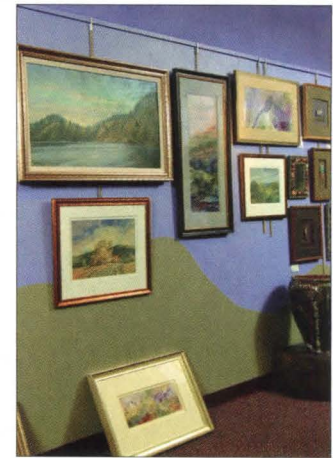
Gage Corporation

The Gage Stainless Steel Floor System is a durable, high-tech flooring solution designed in Italy for purity of form and ease of installation. The embossed stainless steel finish has been specifically designed to prevent traffic wear and is virtually indestructible. "The system is the solution"

866-855-4243

gage@centurytel.net

Circle no. 304



Walker Display

Life's all about change and so are we when it comes to art presentation. The Walker system frees you to explore all your options. No-More-Holes frees you to rearrange your artwork with ease and speed. Embrace change!

800.234.7614

www.walkerdisplay.com

Circle no. 305

CLASSIFIEDS



**Rice School of Architecture
Assistant Professor
Tenure Track Position for Fall 2007**

Rice University invites applications and nominations for a tenure track appointment at the level of Assistant Professor. This full time position is available beginning Fall 2007 for a person qualified to conduct design studio and lecture courses at both the graduate and undergraduate level. Candidates should hold a Master of Architecture degree or its equivalent. Prior teaching and professional experience, a record of scholarly work, and particular focus are desirable. Applications will be considered until January 4, 2007. Letter of interest and curriculum vitae should be forwarded to: Faculty Search Committee, c/o Professor John J. Casbarian, FAIA, Associate Dean, Rice University, School of Architecture, MS-50, 6100 Main Street, Houston, TX 77005-1892.

Rice University is committed to affirmative action and equal opportunity in education and employment. Rice does not discriminate on the basis of race, color, religion, sex, sexual orientation, national or ethnic origin, age, disability or veteran status.

Circle no. 306



Cornell University

The Department of Architecture in the College of Architecture, Art and Planning at Cornell University invites applications for one or more positions in each of the following areas: (1) environmental systems; and (2) design within the area of digital and emerging technologies. Appointments may be filled for fixed terms, typically one semester to three years, or as tenure track or tenured positions, depending on the qualifications and interests of the candidates.

ENVIRONMENTAL SYSTEMS

Desirable qualifications include a strong record in teaching environmental systems; evidence of significant research and/or scholarship; graduate and/or professional degrees in architecture and environmental systems; and an interest in integrating environmental technologies and design practice.

Applications should be sent to Environmental Systems Search, Department of Architecture, 143 E. Sibley Hall, Cornell University, Ithaca, NY 14853, and should include the following items: (a) letter of application including a brief statement outlining teaching and research/scholarship objectives; (b) curriculum vitae; and (c) contact information (phone, mail, email) for three referees.

DESIGN WITHIN THE AREA OF DIGITAL AND EMERGING TECHNOLOGIES

Desirable qualifications include a strong record in teaching architectural design; graduate and/or professional degrees in architecture and related fields; and evidence of significant research related to design and contemporary practice in one of more of the following areas: fabrication/production, visualization, networking/communication, and interactive environments.

Applications should be sent to Digital Design Search, Department of Architecture, 143 E. Sibley Hall, Cornell University, Ithaca, NY 14853, and should include the following items: (a) letter of application including a brief statement outlining teaching and research/scholarship objectives; (b) curriculum vitae; (c) contact information (phone, mail, email) for three referees; and (d) portfolio.

Applications for both positions will be considered beginning November 15, 2006. Appointments are expected to begin Fall 2007. "Cornell University is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from women and under-represented minorities."

Circle no. 307



Cornell University

CHAIR DEPARTMENT OF ARCHITECTURE

The Department of Architecture in the College of Architecture, Art, and Planning at Cornell University invites applications for the position of department chairperson. Applicants for this position must possess the ability to oversee an ambitious program of curricular development that reflects an ongoing commitment to excellence in architectural education at Cornell, to develop opportunities for greater interdisciplinary collaboration within the College and within the University as a whole, and to build upon already extensive contacts and interactions both in the US and internationally. The chair will have responsibility for the management of the department's academic and operational affairs in Ithaca as well as at the College's longstanding program in Rome and at its recently initiated New York City program. The ideal candidate will possess a record of distinction in professional practice, scholarship, and/or teaching, will have a developed and ambitious pedagogical vision, and will have proven administrative expertise. Salary and benefits are highly competitive.

Please send letter of intent and curriculum vitae to Chair Search Committee (Architecture), Office of the Dean, College of Architecture, Art, and Planning, 129 Sibley Dome, Cornell University, Ithaca, NY 14853-7301. Applications should be received by January 2, 2007.

Please visit: <http://www.aap.cornell.edu/aap/arch/faculty/chair-search.cfm>

"Cornell University is an Equal Opportunity/Affirmative Action Employer
and actively seeks applications from women and under-represented minorities."

Circle no. 308

CLASSIFIEDS

**DEAN
COLLEGE OF ARCHITECTURE AND PLANNING
BALL STATE UNIVERSITY
MUNCIE, INDIANA**

Ball State University invites nominations and applications for the Dean of the College of Architecture and Planning, the only such publicly supported college in Indiana. The dean leads a talented faculty of approximately 60 in the Departments of Architecture, Landscape Architecture, and Urban Planning. The college also hosts five centers and institutes, design centers in Indianapolis and Muncie, and a program in historic preservation. The college offers baccalaureate and master's degrees to over 700 students. For detailed information, visit www.bsu.edu and www.bsu.edu/cap.

The college seeks a dean who has attained distinction in the design professions and who is an outstanding leader with a strong vision that builds on the historic strengths of the college in environmental sustainability and community-based projects. The dean will promote the national visibility of college programs, foster interdisciplinarity and creative collaborations, and manage well the college's human, fiscal, and physical resources. The dean will lead the college in developing immersive learning experiences for students, in creating an entrepreneurial environment in which innovation will flourish, and in deepening the engagement of faculty and students with community partners. In addition, the dean will cultivate and maintain relationships with external constituents, including benefactors and alumni.

Minimum qualifications: master's degree and credentials that will merit a tenured faculty appointment as full professor in one of the departments in the college; demonstrated record of success in scholarly productivity and/or professional practice; demonstrated success in developing external funding or fundraising; successful accomplishments in teaching and administration; demonstrated ability to communicate clearly and effectively; demonstrated commitment to diversity. Preferred qualifications: doctoral degree; demonstrated success in academic administration; outstanding record in professional practice; demonstrated commitment to the teacher-scholar model; demonstrated commitment to the interdisciplinarity of the design professions.

Applicants and nominees should send a letter of application, curriculum vitae, and the contact information for five references to: Dr. Michael A. Maggiotto, Chairperson, Selection Committee for Dean of Architecture and Planning, Office of the Provost, Ball State University, Muncie, IN 47306. Review of applications will begin January 8, 2007, and will continue until the position is filled. The position is available July 1, 2007.

Ball State University is an equal opportunity, affirmative action employer and is strongly and actively committed to diversity within its community.

Circle no. 309

WATERCOLOR RENDERINGS

Fortune 500 clientele, Watercolor: 11" x 17", 3 days. Evocative, Poetic, Cost Effective. QUICK SKETCHES TOO! Visa, MC, AmEx. Mayron Renderings, 1800-537-9256, 1-212-633-1503. Visit www.mayronrend.com

Circle no. 310

Healthcare Facility Architect B.A. in Architecture or its equivalent, and 5 years experience in healthcare architecture, or in the alternative a master's degree (MA) in Architecture with 5 years of experience in healthcare architecture.

Healthcare Facility Architectural Designer M.A. in Architecture plus 3 years experience in healthcare architectural design.

Georgia Ford, 13335 Maxella Ave., Marina del Rey, CA 90292

Circle no. 311

Architectural Designer Intern - Prepare detailed drawings of architectural design/plans as well as various construction documents, including shop drawings, working drawings, unit design and field sketches for individual projects including residential, commercial and industrial, using Auto CAD and Photoshop. Coordinate the implementation of construction documents, which include architectural and related issues which develop between contractors and subcontractors, and/or officials of the City of Chicago who are enforcing local building codes. Conduct field observation of construction and ensure proper execution of construction documents.

Requires BA in Architecture and 3 years experience which must include construction scheduling and field engineer experience. Send resume to:

Raymond Hartshorne at Hartshorne Plunkard, Ltd.,
232 N. Carpenter, Chicago, IL 60607.

Circle no. 312

CAREER OPPORTUNITIES

JR Walters Resources, Inc. specializing in the placement of technical professionals in the A&E field. Openings nationwide.

PO Box 617, St. Joseph, MI 49085-0617

Phone: 269-925-3940 www.jrwalters.com

Email: jrwawa@jrwalters.com

Circle no. 313

ARCHITECTURAL CONSULTANT needed w/Bachelors or foreign equiv. in Architecture & 2 yrs exp to prepare schematic design, construction document for building projects using 2D & 3D AutoCAD, 3ds Max, Adobe Photoshop, Illustrator & Acrobat. Update & maintain internal CAD standard. Create blocks based on approved designs & industry standards. Mail res to: Fuller & D'Angelo, PC, 45 Knollwood Road, Elmsford, NY 10523, Attn: Joseph F. fuller, Job Loc: elmsford, NY.

Circle no. 314

FOR INFORMATION

on how to be a part of the next
ARCHITECT special advertising section,
contact Andrew Ferrara at 202.736.3343.

hanley▲wood

Advertiser	Page	Circle	Website	Phone
Ace Advertorial	122-125	—	www.architectmagazine.com	
AFG Glass	27, 29	21, 386	www.afgglass.com	800.251.0441
American Institute of Steel	35	22	www.aisc.org	866.ASK.AISC
Archiflash	144	388	www.archiflash.com	800.411.7314
Architect CES	145	—	www.architectmagazine.com	202.736.3310
Armstrong	C2-1	95	www.armstrong.com/techzone	877.ARMSTRONG
Belden Brick	C3	82	www.beldenbrick.com	330.456.0031
Bendheim Wall	6	93	www.bendheim.com	800.606.7621
Building System Design	26	23	www.bsdssoftlink.com	888.BSD.SOFT
Bulthaup	62	60	www.bulthaup.com	800.808.2923
Cambridge Architectural	33	24	www.cambridgearchitectural.com	866.806.2385
Canon	25	91	www.usa.canon.com/isg/ whatsnextforcolor	800.OK.CANON
Cascade Coil	42	81	www.cascadecoil.com	888.999.2645
CEMEX	34	94	www.cemexusa.com	
Centria	45	25	www.centria.com	800.752.0549
Cersaie	46	387	www.italiantiles.com	212.980.1500
Dell	70	96	www.dell.com/architect12	877.378.DELL
Dietrich Industries	17	28	www.dietrichmetalframing.com	412.281.2805
Doralco	142	58	www.doralco.com	888.443.6725
Dornbracht	64	97	www.dornbracht.com	866.818.3199
DuPont Corian	66	84	www.corianandesign.dupont.com	800.436.6072
DuPont Tyvek	37	29	www.tyvek.com	800.44.TYVEK
Duron	30	78	www.duron.com	800.635.0038
Eagle Windows and Doors	68	30	www.EagleWindow.com	888.74.EAGLE
EFCO	47	85	www.efcocorp.com	800.221.4169
EMMA	159	98	www.emma-assoc.org	312.332.0405
ERCO	2-3	92	www.ercocom.com	
Eurotex	55	99	www.eurotexinc.com	800.523.0731
Flexco	43	382	www.flexcofloors.com	800.633.3151
Fry Reglet	9, 146	376, 33	www.fryreglet.com	800.237.9773
Fypon	56-57	55	www.specifypon.com	800.446.3040
Hansgrohe	4-5	34	www.hansgrohe-usa.com	800.334.0455
High Concrete	39	35	www.highconcrete.com	800. PRECAST
Hohmann and Barnard	22-23	36	www.h-b.com/spec25	800.645.0616
Holcim Foundation	18	377	www.holcimforum.org	

Advertiser	Page	Circle	Website	Phone
Hunter Douglas	12-13	378	www.hunter douglascontract.com/dam	866.556.1235
Kohler	126-127	2, 39	www.KOHLER.com/conservation	
Kolbe and Kolbe	74	40	www.kolbe-kolbe.com	800.955.8177
Kraftmaid	49	41	www.kraftmaidspec.com	800.581.4484
Lehigh Cement	134-137	—	www.architectmagazine.com	
LG Hi-Macs	C4	42	www.lgvolcanics.com	866.LG.HIMACS
LG Viatera	59	43	www.lgviatera.com	877.VIATERA
Marble Institute of America	152	44	www.marble-institute.com	440.250.9222
National Gypsum	138-141	—	www.architectmagazine.com	
Nichiha	28	380	www.NICHIHA.com	1.86NICHIIHA-1
Niles Expanded Metals and Plastics	30	80	www.nilesexpandedmetals.com	800.321.2727
PGT WinGuard	60	381	www.NoMorePlywood.com	877.WINGUARD
Pilkington	31	45	www.pilkington.com	800.221.0444
PPG Industries	11	46	www.ppgideaspec.com	888.PPG.IDEA
Prudential Lighting	8	79	www.prulite.com/snap	
Sage Glass	7	48	www.sage-ec.com	877.724.3321
Schneider Electric	51, 53	75, 76	www.us.schneider-electric.com	
Sea Gull Lighting	72	383	www.SeaGullLighting.com	
Sharp	44	83	www.sharpusa.com/ microwavedrawer	866.RANGE.99
Tarkett	19	38	www.tarkett.com	866.688.2753
Tech Lighting	78	384	www.techlighting.com	
Technical Glass Products	21	49	www.fireglass.com	800.397.FIRE
The Mohawk Group	32	379	www.encyclebacking.com	
Traco	151	50	www.traco.com	800.837.7002
Trade Commission of Spain	58	385	www.spaintiles.info	305.446.4387
USG	76	56	www.getmoldfacts.com	
Viracon	41	51		800.533.2080
Vistawall	128-129	1, 52	www.vistawall.com	800.869.4567
VT Industries	15	53	www.vtindustries.com	800.827.1615
Weather Shield Window & Doors	130-133	—	www.architectmagazine.com	
Young Group	16	54	www.fabricatedproducts.net	800.331.3080

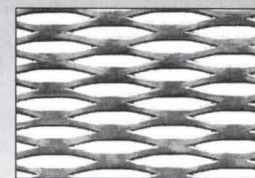
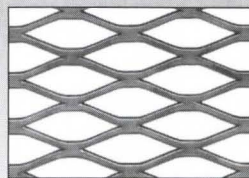
Volume 95, number 12. November/December 2006. ARCHITECT® (ISSN 0746-0554; USPS 009-880), formerly published as *Architecture*®, is published monthly, except for two issues in October and a combined issue for November/December, by Hanley Wood, LLC, One Thomas Circle, N.W., Suite 600, Washington, D.C. 20005. Copyright 2006 by Hanley Wood, LLC. Printed in the USA.

Periodicals postage paid at Washington, D.C., and at additional mailing offices. POSTMASTER: Send address changes to ARCHITECT, P.O. Box 3572, Northbrook, IL 60065-3572.

Canadian Post International Publication Mail Sales Agreement No. 40655599. Send undeliverable Canadian addresses to Deutsche Post Global Mail, 4960-2 Walker Road, Windsor, ON N9A 6J3.

**EXPANDED METAL YIELDS A COST SAVINGS OF
UP TO 50% OVER PERFORATED**

NEW EXPANDED METAL DESIGNS



- Solid areas within the sheet
- Virtually no scrap
- Stretches the metal rather than punching holes
- Makes a stronger product
- Architecturally inspired
- The exciting alternative to perforated
- Great for security uses such as window guards, gates & fencing



Expanded Metal Manufacturers Association

www.emma-assoc.org or call NAAMM

312-332-0405

Circle no. 98 or <http://architect.hotims.com>

THE SWISS AMBASSADOR TO THE UNITED STATES DISCUSSES HIS NEW RESIDENCE IN WASHINGTON, D.C. DESIGNED BY STEVEN HOLL AND JUSTIN RÜSSLI, THE BUILDING SITS ADJACENT TO A 1959 CHANCERY DESIGNED BY THE SWISS-AMERICAN MODERNIST WILLIAM LESCAZE.

Interview Michael Z. Wise Photo Nancy Froehlich

URS ZISWILER

What role does design play in diplomacy?

We're very free-trade oriented. We held a public competition for the embassy residence, and there were 10 finalists. In the end we chose a Swiss-American joint venture, a perfectly 50-50 deal between Holl and Rüssli, who is a colleague and former student of Holl. I'm very happy that it is a joint venture because it shows how well the United States and Switzerland cooperate.

Did Holl, an American, succeed in evoking Switzerland?

If you stand before the house, you don't think it is in the middle of the Alps, but it reflects the nature of Switzerland—one third of the whole country is covered by mountains and glaciers. The mountains are not very high and not always covered by snow, but look white and charcoal black like the façade of the residence.

What's it like to live here?

We feel very comfortable. Our flat on the upper floor has a terrace with a beautiful view of Washington. From my bedroom, the first glimpse in the morning is the Washington Monument. It places me geographically. I have to emphasize that this residence is not only my home; it is an expansion of my workplace. We run about 400 events a year with more than 3,000 guests.

How important is ecology to the design?

Switzerland is very ecologically oriented, and we have very strict legislation. We didn't want to build abroad without respecting the legislation we have at home and are very proud of. The building has a sophisticated energy-recovery system, a sunshade system, and a green roof. The snow-white glass is also specially designed and imported from Europe because it is energy saving.

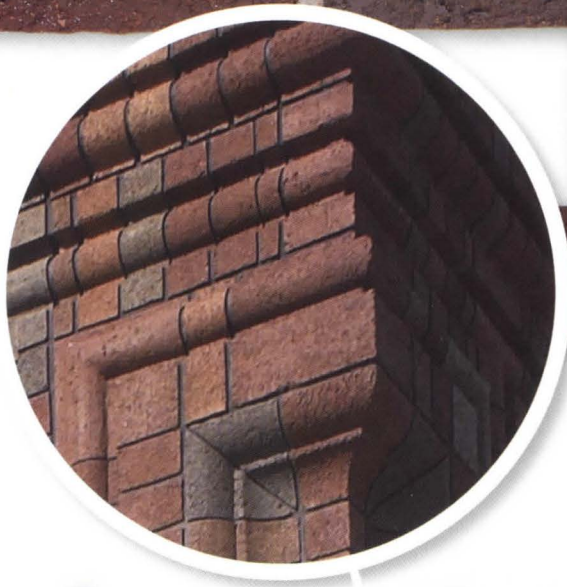
Was it difficult to achieve the quality of construction in Washington that you can get in Bern?

The architect from Holl's office who covered the day-to-day oversight of the project, Olaf Schmidt, studied architecture at the Federal Institute of Technology in Zurich. He's perfectly familiar with what we expect. We still have a significant punch list. In the next two to three months, we are going to insist that it's done to our standards. It's an important building, and we want a perfect finish since Switzerland is famous for its precision work.



*Not Just Another
Brick In The Wall.*

With Belden Brick you get more than just another brick in your wall. You get unrivaled quality and durability. Belden Brick products are available in a variety of colors, textures, sizes and shapes. All in all ... Belden Brick - more than just another brick in the wall.



BELDEN
THE BELDEN BRICK COMPANY

Canton, Ohio / (330) 456-0031
www.beldenbrick.com

An ISO 9001:2000 Registered
Quality Management System

Circle no. 82 or
<http://architect.hotims.com>

15 Year
Fully Transferable
WARRANTY

*Moonscape.
World's away from the ordinary.*

Take your designs to a new altitude with LG HI-MACS Acrylic Solid Surfacing. Experience the improved color palette. The surreal color selections are just the thing you need to make your projects out of this world. All LG surfaces are backed by the industry's longest 15-year transferable warranty, offering your clients a superior value and lasting luxury, making them a choice that is very down to earth!

866 / LGHI-MACS
www.lgcountertops.com
www.lgvolcanics.com

LG HI-MACS
Acrylic Solid Surface

LG HI-MACS
Volcanics

Circle no. 42 or <http://architect.hotims.com>