

INSIDE: AIA '13 Offers the Latest Glazing Developments

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MAKING THE CONNECTION: The Architect-Glazier Interface

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on the cover

The AIA National Convention takes place this month in Denver at the Colorado Convention Center, designed by Fentress Architects. Photo by Ron Johnson. Turn to page 44 to read more.



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Lean on Me

When architects, installers and fabricators join forces collaboratively the resulting project can be a great success. Such was the case with the San Francisco Public Utilities Commission.



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The Top 20 List

Members of the window film industry discuss facts they want you to know about window film.

only online

Bonus sections only available online at www.usglassmag.com/digital/2013/Jun2013.pdf

Acquisitions & Mergers

Melrose Industries Plc, a London-based acquisition company, has signed a conditional agreement for the sale of Truth Hardware to Tyman Plc for a total consideration of \$200 million, payable in cash upon completion. Tyman Plc, also based in London, owns Amesbury, a North American hardware supplier.



AIA Show Education

The AIA National Convention will feature more than an abundance of new products; the event also offers numerous educational opportunities. Find out about some of the glass-related sessions that will take place.



Making the Design-Build Relationship Work

While the benefits of design-build may seem many, they do require the architect to give up some control to a trusted third-party who can bring the design vision to life. And although few glazing contractors may note this in their bid or on their website as a design-build sell, these same contractors point to trustworthiness as the key for building these partnerships.

And while you're there ...

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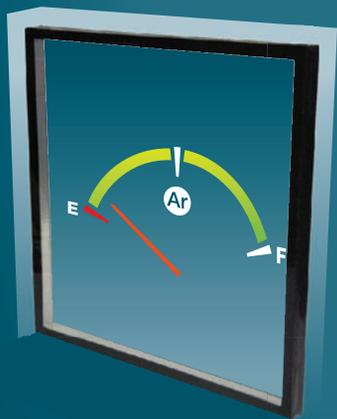
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Glaziers Aid in Recovery from Marathon Bombing

The nation held its breath in the four days following the April 15 explosion of two bombs near the finish line of the Boston Marathon, while local businesses, including glass shops, locked their doors until suspects Tamerlan and Dzhokhar Tsarnaev had been killed and taken into police custody, respectively. Hub Glass based in nearby Somerville, Mass., was one of the first businesses allowed to enter the Boylston Street area to board up (and later replace the glass) at one of the buildings affected in the blast near Marathon Sports. (Company officials declined to identify the specific building due to privacy concerns for the owners.)

“We got the phone call that afternoon to be on standby to get in and board up the building,” says Hub vice president Richard Carver.

“It was very eerie to be there that night,” says Randy Ibbitson, general manager for Hub. “We had seven to eight guys there starting at 6 at night and they worked there 13 hours straight just to get the five floors boarded up.”

The glass was broken on five floors of the building—23 pieces total. As for the type of glass installed, Ibbitson says the company is replacing the glass with the same type of glass that had been installed previously. The glass is being supplied by Sigco Inc. in Westbrook, Maine, and Solar Seal Co. in Easton, Mass.

“We went back to what was there—some of it was tempered, some of it was annealed,” he says.

The building also has a bump-out with a slight inverted slope with a laminated unit that was replaced, according to Ibbitson.

“The bomb blew right through it,” he adds.

“I’m glad we were able to help them out,” says Carver.

Glass shops in the area also felt the sting of the city’s shutdown. Prime Glass & Mirror in Watertown, Mass., was only three blocks away from the site where Dzhokhar Tsarnaev was captured in a police shootout, and was one of the many local businesses shut down during the impact. More than a month after the tragedy, the shop was close to getting back on schedule, reports manager Steve Logan. “We’re still recovering,” Logan says, adding that the only impact on the job was to scheduling, and not to employees.

As Logan explains it, “We were shut down for a whole day, so we pushed [scheduled jobs] back a day, and then every day after you have to bump jobs forward and forward, and so we’re still making up for lost time.”

Logan equated the delay to what the shop goes through regularly for major snowstorms, but noted that customers were extremely understanding of the inconvenience.

“Everyone was very sympathetic toward the issue. It was blasted all over the news so they knew exactly what was going on,” Logan says.

On the other hand, a representative of Sam’s Glass Inc. in Boston, one of the only glass shops close to the Boylston Street site where the marathon ended, said they felt minimal impact in the days following the tragedy. And a representative of New Angle Glass Co. in Watertown, Mass., commented only that rescheduling jobs posed no problem for the company, saying, “There was a couple [to reschedule] but, honestly, not many.” ■

—Megan Headley and Penny Stacey

How Guardian SunGuard made a 60-year-old feel young again. With light.

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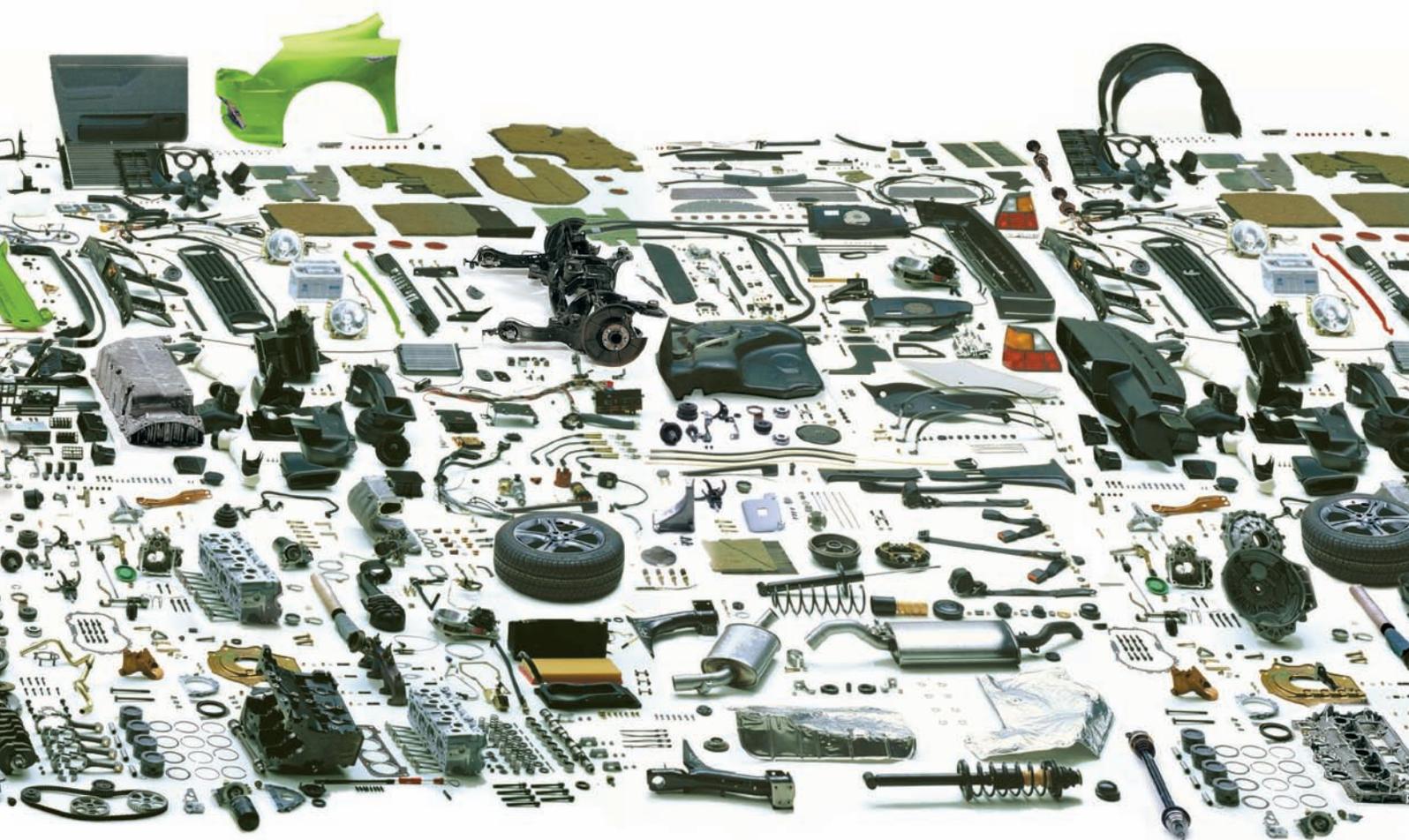
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ShopSavvy

Words of Wisdom from Henry Ford

What's the Top Benefit You Can Offer?

by Paul Bieber

I am a Chevy fan. My current car is a Ford Escape, but my seven previous cars were all Chevrolets. I changed because of a deal too good to pass up, but I might go back to Chevy in a couple of years. I disagreed with some of Henry Ford's politics, and let that color my past purchasing decisions. But Old Henry sure did a lot right, from Model A to Model T and beyond. So, my wife gave me this quote attributed to Henry, "The only thing worse than training staff and having them leave is not training and having them stay."

Wow. Think about it. So true.

HELP THEM LEARN

Do you train the employees in your company? Or do you hire them and expect them to have knowledge already? I recall a conversation with a glass shop owner; I mentioned to him that his new employee really did not know how to order tempered glass. He replied that he gave up hiring smart people, as they all left him and went into business on their own, becoming competitors. And yes, he went out of business a couple of years later.

You, as the business leader, have to train your employees to do their jobs the way you want them done—and to continuously improve. You need to set aside specific training time and enforce the participation. Every nurse, real estate agent, postal carrier and elementary school teacher is required to continue his/her education. While there is no national guideline for our industry, you can set your own for your company.

I recommend four half-days per year

Paul Bieber's first book, titled *The Five-Minute Consultant's Solutions to Everyday Business Problems*, is currently in production and will soon be available. Watch this column for more details in future months.



as training days, with three speakers at each day. One presentation should be on glass and/or metal, learning from your prime fabricator or float glass supplier. The second speaker should be from an ancillary supplier, such as a hardware supplier on new shower products, your framed mirror supplier or a vendor working with decorative glass. The third speaker should be more business-based, showing how to use a new tablet computer or smart phone, or explain ways to fully utilize your benefits programs. Ask a local architect to visit and talk about new designs and products within our industry.

You never need to pay for these speakers. Your vendors should be glad to work with you. (If not, look for a new vendor!) Your insurance broker or benefits advisor should jump at the opportunity.

Keep each session to no more than 45 minutes with 15 minutes for questions and answers (Q&A) from your crew. Have a short break between each speaker. Every quarterly training session should end with a Q&A session among employees and management.

Even more important is the field training. Periodically, ask the technical rep from a glass fabricator or metal supplier to go with your field crew for a day. They will have plenty of tips to pass on to your crew.

Have your salesperson practice

his sales pitch to you. Do you have an estimator? Is he current with the latest computer-aided drawing tools? Don't be afraid to send him to a course on this. Do you use the tools that the bigger companies offer for computer-assisted design? If you feel it is too complicated for your use, visit their websites and learn.

CONTINUING EDUCATION

Expect your employees to learn and improve themselves. Make this a prime criterion in your annual job review. Some employees will not know how to learn, or where they should turn. Help them. See what basic business courses are available at local community colleges, and help pay for them. When an employee wants to learn, and you don't have the tools available, giving him a \$700 computer and printer is by far cheaper than hiring a new person.

Every owner and manager should spend at least four percent of their time learning. This one day per month is the best investment you will ever make in your company's future. ■

the author



Paul Bieber has 37 years in the glass industry, with CR Laurence, and as executive vice president of Floral Glass in New York. He is now the principal of Bieber Consulting Group LLC and

can be reached at paulbaseball@msn.com. Read his blog on Tuesdays at <http://usgpaul.usglassmag.com>.



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GuestBook

Anticipating the Industry's Needs

IGMA Moves Forward with Technical Publications

by Margaret Webb

At the most recent Insulating Glass Manufacturers Alliance (IGMA) meeting held in New Orleans, La., a number of much-needed technical publications for the fenestration industry were approved. These included:

TM-1300-13, Design Considerations for Multiple Cavity Insulating Glass Units: The purpose of this document is to guide the design, fabrication and use of multiple-cavity insulating glass (IG) within the fenestration industry. It is not intended to duplicate pre-existing guidelines for single-cavity IG. Rather, it is meant to expand upon those guidelines where requirements for multiple-cavity IG differ from those of single cavity IG. These guidelines are applicable for the evaluation of the manufacturing processes of sealed insulating glass units and quality requirements.

TB-1500-13, Guidelines to Reduce Instances of Thermal Stress: This technical bulletin provides guidelines relating to thermal stress considerations for window glass products used in commercial and residential building envelope projects. Its purpose is to give the user specific guidelines and design assistance toward avoiding glass problems that arise from breakage caused by thermal stress conditions. The technical bulletin is intended to consider, but not be limited to, conditions known to be important to thermal stress in glass, a knowledge base of reference materials, available industry information, do's and don'ts guidelines for thermal stress and practical design considerations for the review and analysis of thermal stress. Conditions addressed in this publication are altitude, building design, design winter conditions, elevation (orientation), glass-edge conditions, post-installation films, risk conditions associated with framing

considerations, glass kind and type, heat traps (indoor conditions), number of glazing lites, solar radiation, spandrel and on-site storage conditions.

IGMA has agreed to provide the majority of the funding required to create the models for the development of an ASTM standard for the thermal stress for IGUs. Total funding required to develop the standard is \$75,000. This project has been on hold for the past three years. Previous solicitations to the industry for funding have been unsuccessful due to the economic hardships that the industry has endured. IGMA will be contacting other organizations to determine if there is interest in participating.

Both the documents should be available this fall.

TB-1700-13, Language of Sealed Insulating Glass Units: This document covers current terminology used by the industry in the design, development and manufacture of insulating glass units.

IGMA does not rest on our past accomplishments but continuously looks for new technologies and processes to improve the performance durability of insulating glass products. All IGMA standards are developed by leading-edge research and technology. Research projects are governed by the Emerging Technology and Innovation Committee, which has four active task groups:

Gas Permeability – currently the task group is reviewing the draft RFP for Phase 2, which encompasses a modification of the EN 1279 standard.

NREL Advanced Testing Fenestration Task Group is seeking to develop a “big hammer” test, which would result in faster test times as well as developing a new standard specification to test the

gas content of IGUs, which use exotic gases such as krypton and xenon.

The Vacuum Insulating Glazing Task Group is working on a white paper on VIG. Draft text was reviewed at the conference and this first complete draft of the document is close to completion.

The Life Cycle Assessment Task Group was provided an opportunity to review draft nine of the Product Category Rule for Fenestration Products. The completion of the document has been delayed due to complications with the use phase, specifically thermal performance of the fenestration system. This task group will be undertaking the development of a Product Category Rule for IGUs and their components (spacers, sealants and desiccants).

The Certification and Education Committee, specifically the Spacer and Integrated Spacer Systems Task Group, is looking at alternate ways to determine component equivalency. Currently the task group is reviewing performance attributes as the determination for equivalency rather than the spacer-bonding surface, which is currently used.

Registration is now open for the IGMA 2013 Summer Conference, held August 7-10, 2013, at the Marriott Harbourfront Hotel in Halifax, Nova Scotia and will focus on certification and testing, specifically in-house testing methodologies that manufacturers can use in their own plant. ■

the author



Margaret Webb is the executive director for the Insulating Glass Manufacturers Alliance in Ottawa, Ontario.

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GANAPerspectives

Southern Exposure

Fall Conference Offers Expanded Educational Program

by Ashley M. Charest

GANA's Fall Conference will be held September 18-20, 2013 in Charlotte, N.C., and this year's event will feature new pieces to the program. With technical and division activities as the foundation for the event, GANA has also expanded the program to offer top glass executives an ongoing educational program tailored for their daily needs in the industry, as well as an expanded "Energy Day" to accommodate many of the exciting and groundbreaking trends the industry is seeing in providing new sources of energy.

ENERGY SESSIONS

The GANA Fall Conference will kick off with a full day of energy, both literally and figuratively. The GANA Energy Division will hold its meetings, followed by presentations focused on designing high-performance buildings, barriers to new technology adoption, a panel of experts on energy and "whole building design," updates about the window and flat glass product category rules (PCR). The program also includes a code and advocacy update. Another significant part of the day features a keynote presentation by Envision Charlotte on what that organization is doing in regards to energy consumption and conservation in downtown Charlotte. With many exciting activities happening with that group, we anticipate great interest from those in the glass and glazing industry.

"We are really excited about our Energy Day during Fall Conference. With a mixture of presentations and panel discussions, which build on the topics from the last Energy Day, the day will have a focus on how to design high-performance building envelopes, how to ensure the desired result is achieved through commis-

sioning and how to reduce barriers to new technology adoption," says Helen Sanders with SAGE Electrochromics who serves as the GANA Energy Division chair.

SOMETHING FOR MANAGEMENT

New to the Fall Conference is our Management Day, which is an executive management session, designed specifically for principles, owners, senior float glass manufacturers, CEOs and senior management executives in the glass and glazing industry. Topics and presentations will include profit planning, employee retention and recruitment, succession planning and more. In addition, open session time is scheduled to allow attendees to dictate subjects of importance to them. This day is built off the successful GANA Northeast Roundtable that attracted several executives to Newark, N.J., late last year.

"I miss the involvement of so many of our executive representatives at the GANA meetings. Last spring, we did a reprise of the square table meeting that some of us oldtimers remember fondly: a meeting of the GANA executive representatives discussing current industry issues, in an interactive format. That event was very well received," says John Dwyer, president of Syracuse Glass Co. Inc. "We hope to build on that success, by offering to our execs, vendors and float glass suppliers across North America the opportunity to reconvene at the GANA Fall Conference. I'm really looking forward to the upcoming event in Charlotte, and hope to also see a new generation attend this executive day."

The GANA Fall Conference also offers two days for the remaining seven divisions to meet, plus our non-division committees. These groups have consolidated portions

of their agendas, eliminating duplicate reporting while allowing time for both task group work and big picture strategic planning for each. Also, each division will be given the opportunity to host a short educational session.

"Over the years, I've been very impressed with the way GANA's technical and advocacy activities have grown to meet challenges, and I think we're in the best shape on those activities than we've ever been. Much of this success is due to the hard work of the GANA staff and our member firms' technical representatives that hold working events at our Fall and Annual conferences," adds Dwyer.

LOCAL FLAVORS

Of course, we can't go to Charlotte without really experiencing some of the fun for which the city is known. GANA's host hotel is located in the EpiCentre entertainment district, which is a 12-block area filled with more than 150 restaurants, clubs and entertainment venues for all interests. But for one night we will be bringing the flavor of Charlotte directly to the hotel, when our New Professionals Committee hosts a Local Micro Brew Tasting reception. Known for its small barrel breweries, Charlotte is quickly becoming famous for its unique combinations while also crafting some award-winning flavors.

Registration for the event is online at the GANA website, www.glasswebsite.com. ■

the author



Ashley M. Charest is the account executive for the Glass Association of North America based in Topeka, Kan.

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SEE US AT THE AIA CONVENTION

CompanyNews

Demand by Architects Leads to Skylight Popularity

With the ever-increasing popularity of daylighting through design, architects continue to consider new ways to let in the light. Among the perennially popular options are skylights, and manufacturers are responding to this demand with new features.

Matt Snyder, sales and marketing assistant manager for Acurlite Structural Skylights in Berwick, Pa., has found that more architects are looking for ways to set their buildings apart. “Skylights are a great feature on a building and many architects are looking to put their personal touch on the skylights and use them as an important feature of the building,” he says. “We see much more demand from the architects for upfront design assistance and expanding the way skylights are used on buildings.”

As a result, skylight manufacturers are incorporating unique new technologies into their products.

“We have incorporated both photo-voltaics and electrochromic, or dynamic, glazing into our system. These products have gained a strong presence in our industry and allow the customer to have much more control over their space,” Snyder says.

These technologies allow for the connection to the outdoors without the drawback of direct sunlight adding too much in the way of glare and direct overhead light.

Mark Mitchell, marketing manager for Major Industries Inc. in Wausau, Wis., points out that although the technologies might be changing, the demands architects put on these products are much the same as they’ve ever been. “I think that, in most, ways architects are looking for a lot of the same things they’ve always been looking for: performance, value, durabil-



Skylights provide a way for architects to incorporate daylighting into their designs.

ity and aesthetics. Only there are now so many more options in terms of materials and options that it makes sorting through the choices that much more difficult. Ultimately, versatility and adaptability are key. Architects want a system that will go beyond simply meeting the project’s needs by becoming an integral and beneficial part of the building,” he says.

For Mitchell, that means skylight manufacturers must continue to find new ways to boost the envelope’s thermal performance.

“Lately, it seems that thermal performance is the key thing on customer’s minds. With the influx of green building design and improved technology, customers have become more educated about the products on the market,” he says. “That said, we’re still suffering from a slow economy, so while customers want the highest performing product for their building, they also want something that will fit into their budget.”

Even with budget-friendly options taking the brunt of demand, architects are looking at the long-term costs then selecting products likely to last and meet all of the latest ratings.

“Customers are demanding higher performance and quality products on

their buildings, and it is great to see,” Snyder says. For example, he adds. “We see much more demand and emphasis put on National Fenestration Rating Council [ratings] and condensation resistance factors (CRF).”

Indeed, CRF has driven Major’s latest product introduction. According to Mitchell, “We recently released a fiberglass framed translucent panel daylighting system ... that offers some enhanced corrosion resistance, as well as better condensation resistance than comparable aluminum framing.”

Looking down the road, manufacturers are watching the codes closely as they set out to develop the next wave of in-demand products.

“Moving forward, there will be a continued push toward higher and higher thermal performance standards both on the state and national level. The industry also is keeping a close eye on LEED and the changes that will be in place soon, as well as the proposed changes to the Energy Star program,” Mitchell says.

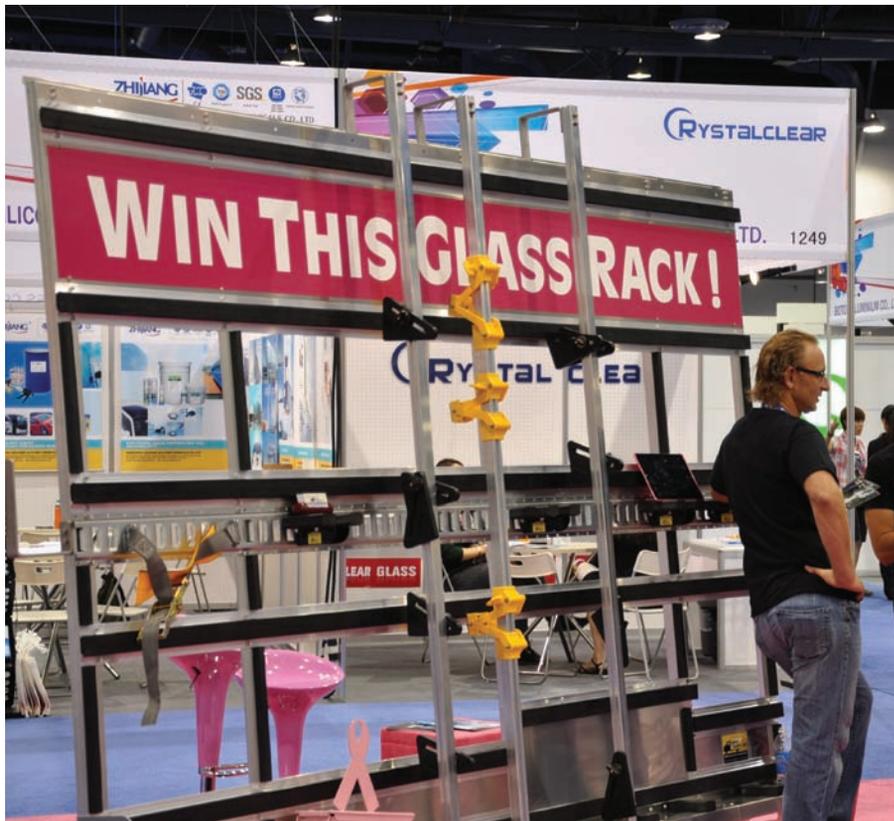
Snyder adds, “Many standards/codes change per geographic location. It is best to be aware of your local building codes. We see many more areas adopting the hurricane impact ratings.”

—Megan Headley

“Pinked Out” Campaign Earns Recognition

For MyGlassTruck.com, pink is its signature color—and for a good reason. The Central and South Jersey Affiliates of Susan G. Komen for the Cure have acknowledged the company for generating more than \$10,000 in do-

Nancy Healey, executive director of the Central and South Jersey Affiliate of Susan G. Komen for the Cure, wrote, “To date, the ‘Nice Rack’ Fundraisers have raised over \$10,000 ... Thank you to everyone who has participated. We deeply appreciate your support of our vision of a world without breast cancer and



During trade shows, MyGlassTruck.com displays a pink-themed booth in support of breast cancer awareness.

nations with its “Nice Rack” campaign. Launched in September 2011, the campaign makes a donation to the Susan G. Komen Breast Cancer Foundation for every glass rack sold by MyGlassTruck.com.

In a letter to MyGlassTruck.com,

look forward to our continued partnership. Together, we are truly saving lives.”

“We would like to thank our customers for making this accomplishment possible,” says Rustin Cassway,

continued on page 18

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Company News

continued

president of MyGlassTruck.com. “MyGlassTruck.com is proud to raise funds for an organization that assists individuals battling breast cancer today while supporting scientific research to find a cure in the future.”

SAGE Awarded 250th Patent for Dynamic Glass

SAGE has received approval for its 250th global patent pertaining to its SageGlass electrochromic glazing technology. The patent is for a new kind of laser device that will enable SageGlass to be repaired in the field without having to remove it from the window, skylight or curtainwall system.

“This milestone advances our mission to improve the way people save energy and experience daylight in buildings,” says John Van Dine, SAGE CEO and founder.

Recently, SAGE was also awarded a patent for its unique thin-film sputter coating process, which will help the company manufacture its product in high volumes and low costs at its new 320,000-square-foot manufacturing facility in Faribault, Minn.

Tubelite Expands in Dallas/Fort Worth Area

Site selection is currently underway for a new, 25,000-square-foot regional facility for Tubelite in the Dallas/Fort Worth area.

“We are extremely proud and excited to be expanding upon our already-established presence within the Texas and South Central market with this new facility,” says president Ken Werbowy. “This new facility will allow us to provide even faster lead-times and damage-free shipments to our existing customers in the region through the use of on-site CNC machining for door and frame fabrication, as well as warehousing stock products.”

Existing client services personnel, who currently are working out of the company’s Mesquite, Texas, offices, will relocate to the new facility, joining new hires for the operation. ■

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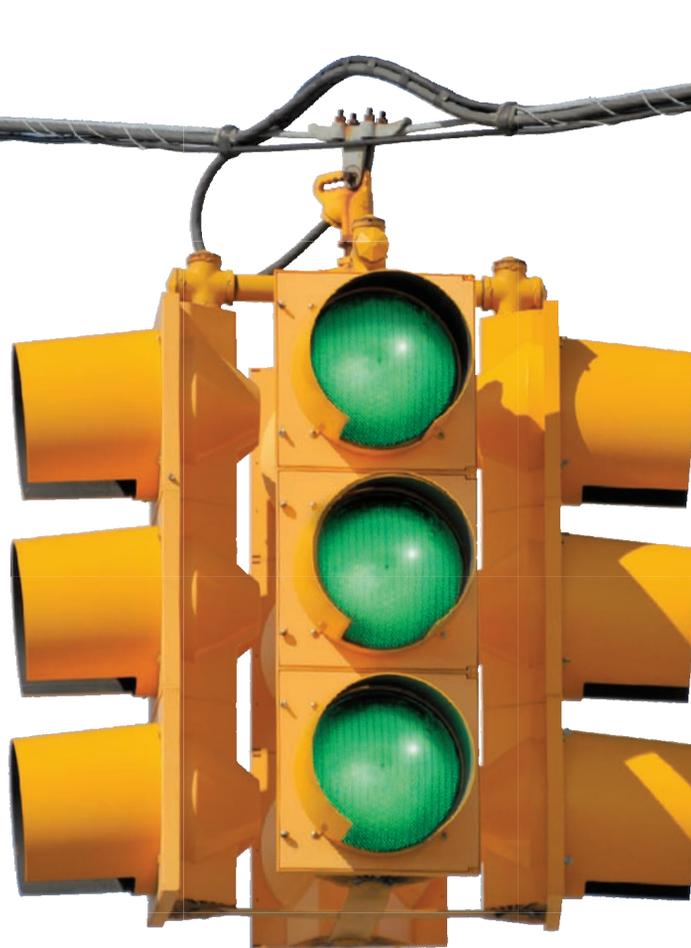
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Distribution & Production

New Water Treatment System Helps Keep JEB in the “Green”

Reduce, reuse and recycle are more than just words for JE Berkowitz LP (JEB) in Pedricktown, N.J. The company is continually adding to its operational “green portfolio.” Most recently, JEB installed a new filter press water treatment system at its Pedricktown, N.J., site.

According to the company, the new

closed loop water system offers an environmentally safe, economical and efficient method of recycling rinse water. The system’s separation process removes glass grinds used in manufacturing to be recovered as solids, thus eliminating down time due to clogged drain lines. By recycling clean water the system signifi-



In addition to its new water treatment system, JE Berkowitz employs a number of green attributes, including its solar power roof-mounted system.

MGS Distributing Up and Running With New Des Moines Facility

MGS Distributing, a Redglaze Group Company, held a grand opening for its new glass and metal fabrication facility in Des Moines, Iowa. According to Emily Holmes, marketing coordinator for Redglaze, the company spans 200,000 square feet across three facilities allowing for a full scope of glass and metal fabrication capabilities. She says the newest facility was built to handle multiple national construction programs while continuing to produce for individual projects across the Central U.S.

The new facility is equipped with a glass tempering furnace, CNC automated cutting line, automated insulating glass line, automated retrieval and storage system, water jet cutter, laminating line and complete metal and spandrel fabrication equipment.

According to the company, attendees engaged in tours of the 110,000-square-foot facility. Additionally, product representatives from more than 15 suppliers were on-hand.

BIM technology and AutoCAD training with Autodesk were provided by IMAGINiT Technologies, and attendees were able to watch a glass-breaking demonstration that emulated the WMFL detention glazing standard. In addition, all three of MGS Distributing facilities distribute Dow Corning and Tremco sealants, along with a full range of building materials.



MGS Distributing’s new Des Moines facility is equipped with a number of capabilities, including glass tempering.

cantly reduces the plant’s overall water consumption.

The new water treatment system joins a number of other green initiatives. The facility features a 7,212-paneled solar power roof-mounted system, ships with returnable steel racks, and has a fuel-efficient fleet.

FNT to Distribute for Quanex in Turkey

Quanex Building Products announced that FNT Alüminyum, based in Istanbul, will distribute its products in Turkey. The two companies became acquainted during the Glass Expo Istanbul 2013.

“Turkey is the central hub for insulating glass and window and door fabrication systems in Europe, Middle East and Central Asia,” says Ramsey Bader, director, international sales and marketing. “We’ve had great experiences at Glass Expo Istanbul the past two years with many educational and networking opportunities.” ■

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New

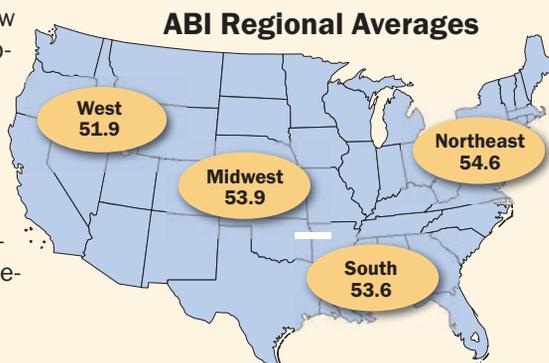


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Industry Outlook

More Positive Momentum for Architectural Billings

The Architecture Billings Index (ABI) continues to show an upturn in design activity. The ABI reflects the approximate nine to 12 month lag time between architecture billings and construction spending. The American Institute of Architects reported the March ABI score was 51.9. Though down from the February score of 54.9, it still represents an increase in demand (any score above 50 indicates an increase in billings). The new projects inquiry index was 60.1, down from the reading of 64.8 the previous month.



Dodge Momentum Shows Further Growth in April

The Dodge Momentum Index rose 5.2 percent in April from the previous month, according to McGraw Hill Construction.

Gains have been reported for the Momentum Index in each of this year's first four months, and since December 2012 the Momentum Index is up 23 percent. The April increase brings the Momentum Index to 114.4, the highest level since mid-2009, according to the report.

Dodge Momentum Index

2000=100

	March 2013	April 2013	% Change
Dodge Momentum Index	108.7	114.4	5.2
Commercial building	108.0	117.2	8.5
Institutional building	109.6	110.9	1.2

Source: McGraw Hill Construction

Experts Predict Increases in Nonresidential Construction Spending for 2013

The nonresidential construction industry is expected to see a 5-percent rise in spending this year, according to the American Institute of Architects

(AIA) semi-annual Consensus Construction Forecast, and is expected to grow at a faster rate than the overall U.S. economy. AIA officials expect a high demand for hotels and retail projects to lead the commercial sector. Overall, a 7.2 percent increase in spending is predicted for the overall construction market for the year.

Market Segment Consensus Growth Forecasts

	2013	2014
Overall nonresidential	5.0%	7.2%
Commercial/industrial	8.6%	10.7%
Hotels	15.7%	12.6%
Retail	7.8%	9.6%
Office buildings	7.3%	11.4%
Industrial facilities	5.0%	6.4%
Institutional	1.2%	4.7%
Healthcare facilities	4.4%	4.8%
Religious	2.6%	4.9%
Education	1.1%	4.5%
Amusement/recreation	1.8%	5.5%
Public safety	-1.7%	0.8%

Building Construction Employment Stable from March to April

The number of building construction employees remained stable from March to April 2013 with a slight 0.1 percent increase, according to the latest report from the Bureau of Labor Statistics (BLS). The BLS estimates that approximately 1.262 million (seasonally adjusted) were employed in building construction-related jobs in March 2013, compared with 1.263 million in March 2013.

This represents a 2.6-percent increase over last April, at which time approximately 1.231 million were employed in building construction-related jobs.

On the nonresidential side, construction-related employment was down 0.7 percent from March to

April—from 682,200 to 677,400. Year-to-year numbers also were up on the nonresidential side, with a 2.7-percent increase from 659,700 in April 2012 to 677,400 in April 2013.

In residential construction, employment increased 1.1 percent from March to April—from 580,200 to 586,400. Year-to-year, residential construction-related employment was up 2.5 percent from 572,000. ■

Employees in Building Construction (seasonally adjusted)

	March 2013	April 2013	Percent Change from March to April
Construction of buildings	1,262,400	1,263,800	0.1
Nonresidential building	682,200	677,400	-0.7
Residential building	580,200	586,400	+1.1

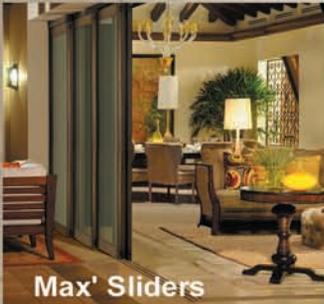
Source: Bureau of Labor Statistics

Guam

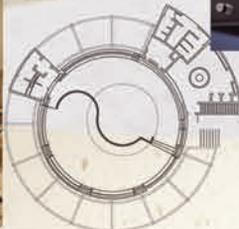


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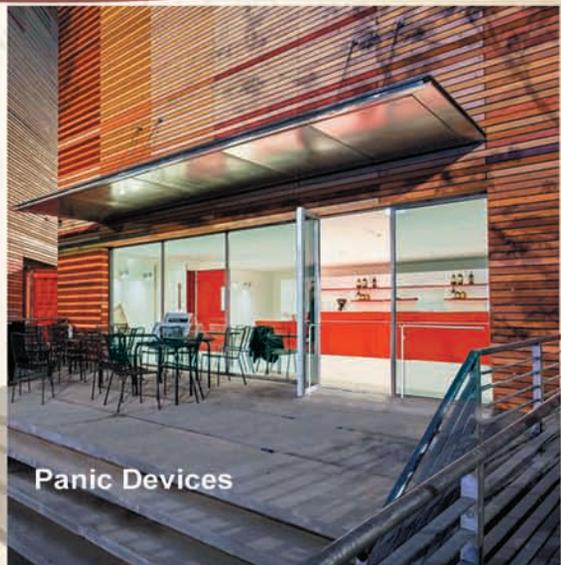
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FinancialFlash

PPG Exec Points to Glass as Indicator for Commercial Construction Upturn

The business unit that has the clearest indicator of commercial construction activity is the flat glass business,” PPG CEO Charles Bunch said of the company’s first-quarter results. “There we’ve seen early signs that we are improving in U.S. commercial construction.”

First-quarter 2013 glass segment sales were \$256 million, a match with the prior

year’s sales for the same quarter. Company officials say higher flat glass volumes were more than offset by lower fiberglass pricing, resulting from reduced demand. The company also reported glass segment earnings of \$5 million for the quarter, down \$3 million from the prior year-quarter, due to lower fiber glass pricing, reduced equity earnings and the negative impact of inflation, in-

PPG Glass Segment Information		
3 Months Ended March 31 (in millions)		
	2012	2013
Net Sales	256	256
Segment Income	8	5

Apogee Sees Architectural Segment Revenues Up Nine Percent

Minneapolis-based Apogee Enterprises Inc. has reported that its fiscal-year 2013 (FY2013) revenue was at \$700.2 million, up 6 percent from last year. The company’s operating income was \$27.4 million, compared to \$3.8 million for the previous year.

Its architectural segment saw revenues increase 6 percent, with an operating income of \$9.2 million compared to an operating loss of \$12.1 million last year.

For the fourth quarter, Apogee reported an overall revenue of \$179.7 million, up 7 percent from the same period last year. The company saw an operating income of \$6.1 million for the quarter, up from \$2.8 million from last year.

The architectural segment saw an increase of 9 percent in its fourth-quarter revenues, with an operating income of \$2.2 million compared to an operating loss of \$0.5 million for the same period last year.

Backlog was \$297.0 million, compared to \$300.4 million in the third quarter and \$237.0 million in the prior-year period.

“I am very pleased with our fiscal 2013 results, as our earnings per share more than tripled to \$0.66 on revenue growth of 6 percent in commercial construction markets that continued to be flat,” says Apogee CEO Joseph F. Puishys. “Our architectural backlog is up 25 percent from the previous year end, and we generated \$41 million in operating cash flow to support \$35 million

in capital investments for growth, productivity and product capabilities.

“During fiscal 2013, architectural segment revenues grew 6 percent, led by the installation, storefront and window businesses, and operating income improved by more than \$20 million, driven by improved architectural glass pricing and product mix, good operational performance across the segment and earnings on revenue growth,” continues Puishys.

Looking to the future, Puishys is optimistic.

“We are experiencing stronger bidding activity for future work, and margins on new orders are improving,” he says. “The outlook for U.S. commercial construction markets in fiscal 2014, based on

Apogee’s lag to McGraw-Hill forecasts for the segments we serve, is for low single-digit market growth. We again expect to outperform market growth by several percentage points.”

Architectural Business Segments Information (Unaudited)

	Thirteen Weeks Ended March 2, 2013	Fourteen Weeks Ended March 3, 2012	% Change	Fifty-two Weeks Ended March 2, 2013	Fifty-three Weeks Ended March 3, 2012	% Change
Sales	\$160,268	\$147,417	9%	\$620,283	\$583,933	6%
Operating income (loss)	\$2,208	(\$475)	N/M	\$9,185	(\$12,072)	N/M

cluding higher natural gas costs.

Company officials say, however, they are indeed seeing signs of improvement in the commercial construction market and noted the flat glass business as a leading indicator.

“If you look at the Architectural Billings Index, that’s up slightly. It’s still lagging what we’re seeing in residential, but we think it’s coming. We think commercial construction is building. It was the last to go and went down probably two years later than residential ... but we’re seeing early signs of improvement,” said Bunch.

Overall, the company reported first-quarter net sales of \$3.3 billion, also equal with the prior year. First-quarter 2013 adjusted net income from continuing operations, excluding nonrecurring charges was \$235 million, compared with \$216 million from the same period last year—an 8.1 percent drop.

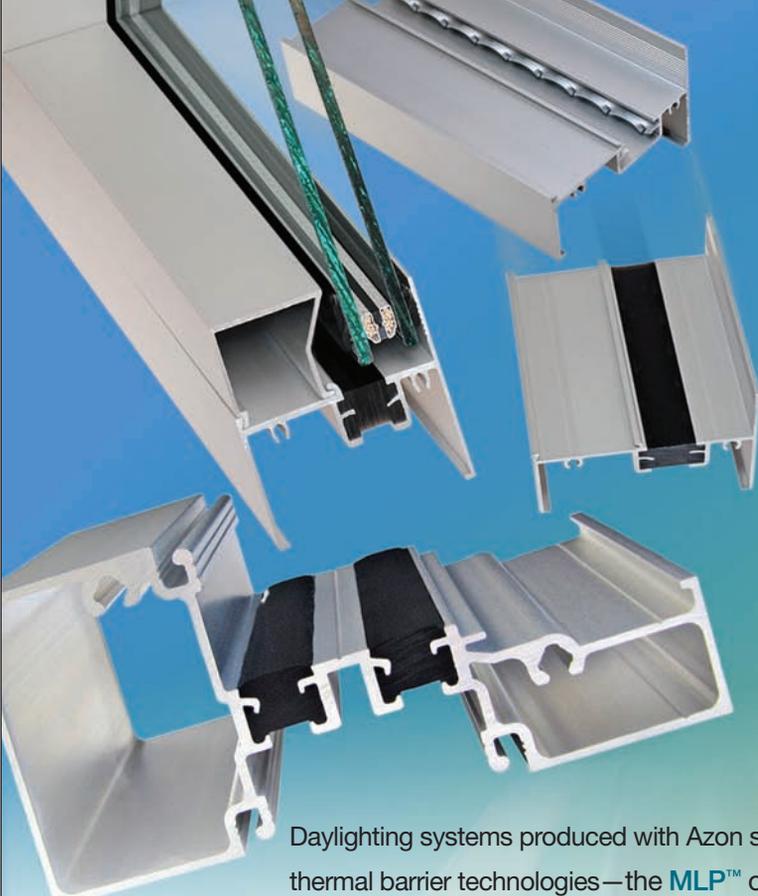
“Looking to the second quarter, we anticipate positive momentum in the United States and Asia to continue, while conditions in Europe remain challenging with limited prospects for near-term improvement,” Bunch added.

Quanex Reports Net Sales Increase for EPG

In releasing its first-quarter 2013 financial results, Houston-based Quanex Building Products reported sales of \$106.1 million for the Engineered Products Group (EPG), compared to \$99.4 million for the same period last year—a 6.7 percent increase.

EPG’s first-quarter 2013 operating income was \$2.8 million compared to \$1.8 million a year ago. While higher than first quarter 2012 results, EPG’s profitability “was negatively impacted by lower solar edge tape sales and an

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unfavorable product mix,” according to the Quanex report.

Overall, Quanex reported consolidated first-quarter 2013 net sales of \$185.7 million, compared to \$161.6 million a year ago. The first-quarter 2013 net loss was \$8.1 million, or \$0.22 per diluted share compared to loss of \$6.7 million, or \$0.18 per diluted share in the year ago quarter.

The increased first quarter net loss per share was due primarily to higher corporate expenses from acquisition-related transaction costs and ongoing ERP implementation costs. ■

Engineered Products Group First-Quarter Results (in millions)			
	2012	2013	Percent Change
Net Sales	\$99.4	\$106.1	+6.7
Operating Income	\$1.8	\$2.8	+55.6
EBITDA	\$8.8	\$10.3	+17.0

ContractGlazing

Committee of Unsecured Trainor Creditors is Settling Payment Claims

The committee of unsecured creditors appointed in the bankruptcy case of Trainor Glass has begun to settle a few of its preferential payment claims to obtain funds paid to a number of industry companies and others in the 90 days before Trainor filed for Chapter 11

last March.

Among these, the committee has reached a settlement with Dorma Glass Inc. by which Dorma will return \$8,500 to the Trainor estate, according to court documents; the committee had alleged that the company owed it \$18,705.37.

Mapes Industry Inc. has agreed to a settlement of \$15,026.40, according to court documents; the committee had originally made a claim against the company of \$16,736.

Technical Glass Products has agreed to a settlement agreement by which it will return \$10,000 to the estate, compared with the \$63,209.39 claim made against it by the committee.

Under the terms of the settlement agreements, "the Committee shall be deemed to have released, waived and discharged the transferee[s] from any and all liabilities, obligations, actions, suits, judgments, claims, causes of action and demands, known or unknown, whatsoever at law or in equity arising from, in connection with or related to the avoidance claims respecting the transfers and the complaint."

"The transferee[s] shall further be deemed to have released, waived and discharged any right of indemnification or recoupment against any third party for the settlement sum or any releases related to this settlement agreement," write attorneys for the committee in the settlement agreements.

The committee had alleged that during the 90-day period preceding the petition date, between December 10, 2011, and March 9, 2012, Trainor had "continued to operate its business affairs, including the transfer of property, either by checks, cashier

IPAT Amends Complaint Against CBO and "Alter Egos"

The International Painters and Allied Trades Industry Pension Fund (IPAT) filed an amended complaint against Alden, N.Y.-based CBO Glass, along with Seneca CBO Glass LLC and South Buffalo Glazing LLC, which the complaint references as CBO's "alter egos." The suit, which alleges that the company "failed to pay amounts due under the Labor Contracts, Trust Agreements and Plan," was originally filed in March 2012.

The amended complaint describes CBO Glass and South Buffalo LLC as "alter egos or a single employer." "Thus, South Buffalo is liable to the funds for CBO Glass' obligations," writes counsel for IPAT. Likewise, the complaint describes Seneca Glass as "an alter ego/successor of CBO Glass and/or South Buffalo" and alleges it also is liable for the obligations of all three companies.

The complaint alleges that all three companies have substantially identical officers and management, are all operated at the same address, share employees and equipment, have the same or similar type of customers, and that Seneca and South Buffalo have had "full awareness and knowledge of CBO Glass' unpaid obligations to the fund."

"Seneca Glass does business with the Fund that is sufficient to create personal jurisdiction over Seneca Glass in this district and a substantial part of the events or omissions giving rise to the claim occurred from transactions with the Funds' offices in this district," reads the complaint.

The complaint alleges that CBO "was party to or agreed to abide by the terms and conditions of collective bargaining agreements ... with one or more local labor unions or district councils affiliated with IPAT, AFL-CIO [and/] CLC."

In addition, the company is alleged to have agreed to abide by the terms of "the agreement and declaration of trust of the fund, made between certain employers and employee representatives in an industry affecting interstate commerce to promote stable and peaceful labor relations, and the plan documents for the ERISA funds."

IPAT alleges that the company agreed to make full and timely payments to the Funds and to file monthly remittance reports with the Funds, detailing all employees or work for which contributions were required under the labor contract.

checks, wire transfers, direct deposit, or otherwise to certain entities ...”

The companies against whom the preferential payment claims were filed were considered debtors to Trainor during this time period and “each preferential transfer constituted a transfer of interest of the debtor in property,” according to court documents.

“Each preferential transfer was made to or for the benefit of the defendant, within the meaning of § 547(b)(1) of the Bankruptcy Code, because each preferential transfer either reduced or fully satisfied a debt then owed by the debtor to the defendant,” wrote the committee in its numerous preferential payment complaints, filed in April. “Each preferential transfer was made for or on account of an antecedent debt owed by the debtor to the defendant before such transfer was made. The debtor was insolvent throughout the preference period because the sum of its representative debts was greater than the fair value of its respective assets.”

Further, the committee alleged that “each preferential transfer enabled the defendant to receive more than the defendant would have if the [Trainor’s] case was brought under chapter 7 of the Bankruptcy Code; the preferential transfers had not been made; and the defendant had received payment of such debt to the extent provided by the Bankruptcy Code.”

A number of the preferential payment complaint claims remained outstanding as of press time. More than 30 of these were filed against industry-related companies.

In other news with Trainor, the U.S. Bankruptcy Court for the Northern District of Illinois approved the sale

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of its impact glazing systems assets to Miramar, Fla.-based Aldora Holdings LLC for \$10,000.

The impact glazing system assets include 12 sets of engineering drawings for wall systems designed to withstand the impact of objects blown by hurricane winds, according to court documents. The drawings had been submitted to the Miami-Dade County Product Control Division, which approved the products in the drawings “as having been designed to comply with the Florida

Building Code, including the High Velocity Hurricane Code.”

The sale of the drawings included Trainor’s “title and interest in the engineering drawings, the test reports relating to the drawings, the notices of acceptance from Miami-Dade, and the right to use the extrusion dies for the products.”

The assets were sold “as is, where is, without any representations or warranties.” Trainor had marketed the assets to 11 prospective buyers and Aldora had the highest bid. ■

Legislation & Legal

International Painters, CBO Glass, Settle Labor Contract Case

The International Painters and Allied Trades Industry Pension Fund (IPAT) has settled its suit filed last year against Alden, N.Y.-based CBO Glass, along with two companies affiliated with CBO, Seneca CBO Glass LLC and South Buffalo Glazing LLC, according to court documents filed in the case (see related story in May 2012 USGlass, page 18). Details of the settlement have not been disclosed.

The suit, filed in March 2012, alleged that CBO had “failed to pay amounts due under the Labor Contracts, Trust Agreements and Plan.” An amended

complaint was filed earlier this year describing the two other companies as “alter egos” of CBO and alleging that they were liable as well in the case.

IPAT alleged that the company agreed to make full and timely payments to the Funds and to file monthly remittance reports with the Funds, detailing all employees or work for which contributions were required under the labor contract.

The U.S. District Court for the District of Maryland, where the case was under review, had granted CBO, Seneca and South Buffalo Glazing an extension to respond to the complaint until May 20, but on May 14

the court filed a settlement order, noting that it had been “been advised by the parties that the above action has been settled, including all counterclaims, cross-claims and third-party claims, if any.”

“This action is hereby dismissed and each party is to bear its own costs unless otherwise agreed, in which event the costs shall be adjusted between the parties in accordance with their agreement,” wrote the court. “The entry of this order is without prejudice to the right of a party to move for good cause within 30 days to reopen this action if settlement is not consummated.” ■



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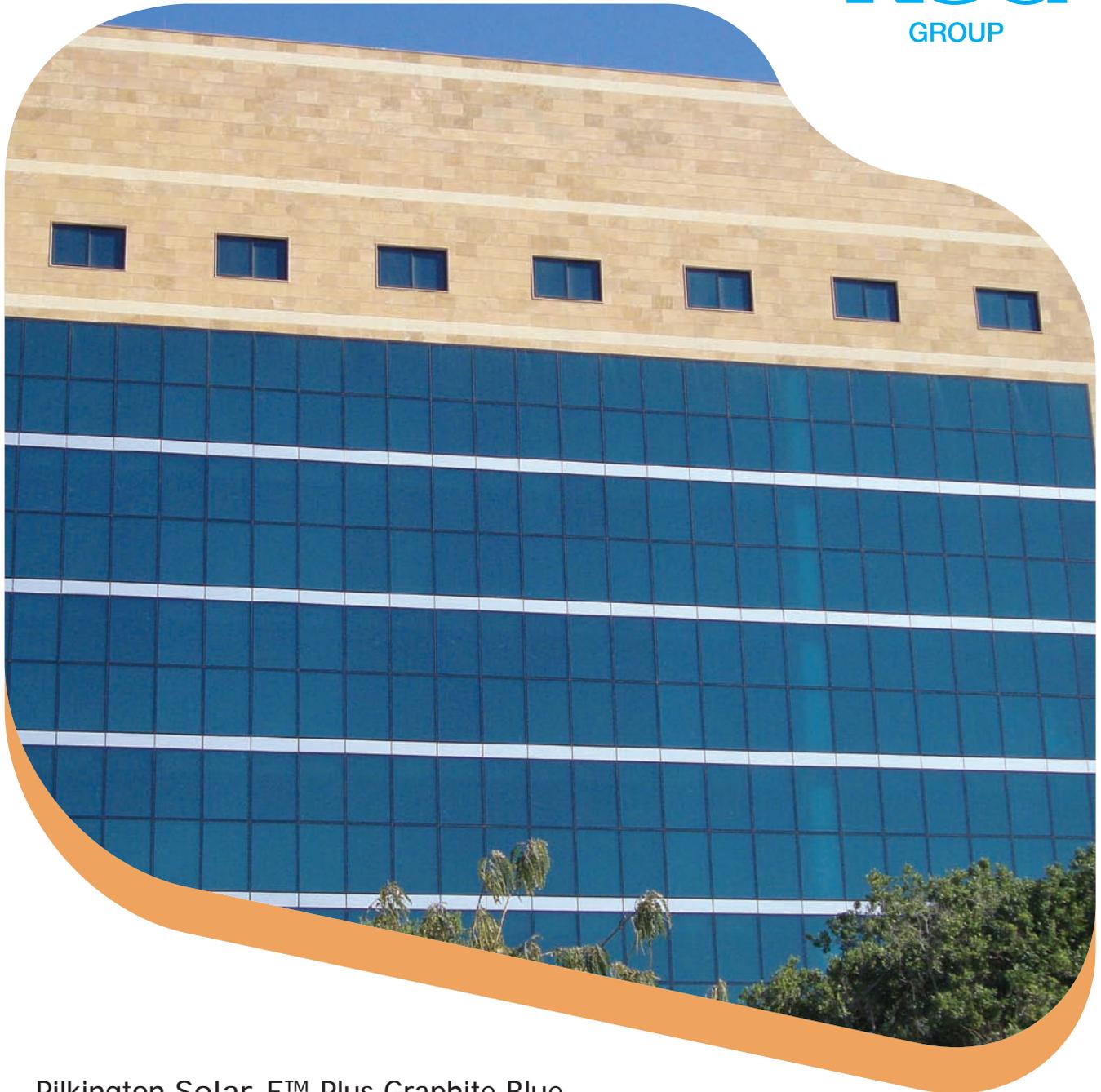
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Codes & Regulations

Many Approved ICC Code Proposals Will Affect Glass Industry

A number of code proposals pertaining to the use of glass and glazing products were up for discussion when the International Code Council (ICC) held its committee action hearings April 21-30 in Dallas. Proposals were presented on behalf of a number of industry organizations, such as the Glazing Industry Code Committee (GICC) and the American Architectural Manufacturers Association (AAMA), among others. Take a look at this recap of some proposals and their results.

- A proposal to revise Table C407.5.1(1) in the International Energy Conservation Code (IECC) was approved. Presented by Thomas Culp of Birch Point Consulting LLC on behalf of the GICC, the change adjusts the wording in the table to read “Opaque Doors” rather than “Doors.” It also changes “Glazing” to “Vertical Fenestration Other than Opaque Doors.”

According to Culp, “This corrects the terminology in the performance path table to be consistent with the rest of the chapter. Doors can include both glazed and opaque doors, but the intent was clearly meant to be opaque doors, since it is referring to only the U-factor in Table C402.2 ... This proposal clarifies the three fenestration rows as ‘opaque doors,’ ‘vertical fenestration other than opaque doors’ and ‘skylights.’”

- A proposal that will adapt the IECC commercial portion to note that doors with more than 50-percent glass area “shall meet the provisions of Section C402.3.3 for vertical fenestration” also passed. The proposal, CE133-13, was put forth by Jeremiah Williams of the U.S. Department of Energy. In addition, the

change adds a section to the code that defines “opaque doors” as “doors that are at least 50-percent opaque in surface area.”

- CE36-13, which aimed to add a requirement that the location of daylight zones on floor plans be included in construction documents to section C103.2 of the IECC, “Information on construction documents,” was approved. The proposal, filed by Culp on behalf of the GICC, “will help code enforcement by reformatting this section as a clear list rather than a cluttered paragraph, and also adding a requirement to show the location of daylight zones on floor plans, which will aid enforcement when daylight zones are used in sections C402.3.1-C402.3.3 (window and skylight area and properties), C405.2.2.3 (daylight controls) and C406.3 (efficient lighting path).”

- The committee also approved CE75-13, which will adapt section C401.2.2 of the IECC. The change was proposed by a variety of groups including the Alliance to Save Energy and the Energy Efficient Codes Coalition. Proponents noted that “the purpose of this code change is to create a new code section to clarify that whenever an entire new fenestration product or assembly replaces some or all of an existing fenestration product ... the new fenestration product must meet the U-factor and SHGC requirements of the fenestration table. Section C401.2.1 of the 2012 IECC already requires that additions, alterations and repairs comply with C402 (thermal building envelope) – as a result this proposal does not add any ad-

ditional requirements. However, this proposal will further clarify the application of the requirements, increase effective enforcement, and reduce the likelihood of confusion and differing interpretations.”

- CE148, also proposed by Culp on behalf of the GICC, was approved. It will adjust section C402.3.2 of the IECC to change the definition of “minimum skylight fenestration area” to apply to a space greater than 2,500 square feet, rather than the previous 10,000 square feet.
- RE5-13, proposed by Shaunna Mozingo of City of Cherry Hills Village, representing the Colorado Chapter of ICC Inc.,

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Codes & Regulations

continued

was approved and removes Section R202 from the IECC. The section had defined entrance doors as “fenestration products used for ingress, egress and access in nonresidential buildings, including, but not limited to, exterior entrances that utilize latching hardware and automatic closers and contain over 50-percent glass specifically designed to withstand heavy use and possibly abuse.”

• RE68-13, proposed by Daniel Walker of Thomas Associates Inc., representing the National Sunroom Association, sought to revise section R402.3.5 of the International Residential Code (IRC). It proposed setting the U-factor requirements the same for all the climate zones where requirements exist, and “would correct [a] discontinuity in the code between the requirements in Climate Zones 2, 3 and 4.” The proposal was approved.

• EB37-13, proposed by John Williams, chair of the ICC’s ad hoc committee on healthcare, and Carl Baldassarra, chair of the ICC code technology committee, was approved as submitted. The proposal suggested that in section 805.5.2, nursing homes be added to the types of buildings in which the code requires that “all transoms in corridor walls in work areas shall either be glazed with ¼-inch (6.4 mm) wired glass set in metal frames or other glazing assemblies having a fire-protection rating as required for the door and permanently secured in the closed position or sealed with materials consistent with the corridor construction.”

• EB15-13, proposed by Jeff Inks of the Window and Door Manufacturers Association (WDMA), was approved with modifications. The proposal sought to adapt sections 702.4, “Window opening control devices,” and section 702.5, “Emergency escapes and rescue openings.” ■

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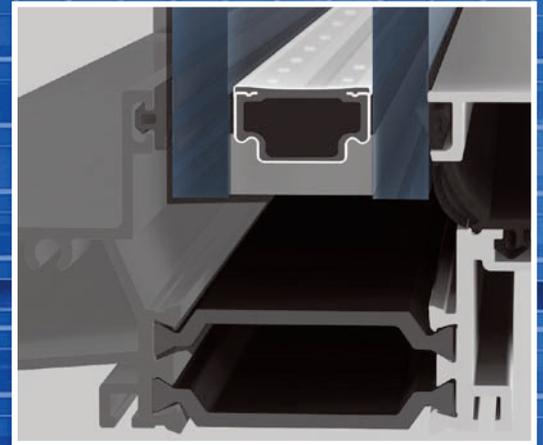
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Energy & Environment

Industry Concerned About Reduction of Glass Usage in Buildings

It has been déjà vu all over again for the technical experts at the Glass Association of North America (GANA) who have sat listening to members of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) approve proposals to dramatically reduce buildings' window-to-wall ratio (WWR).

In 2010 the glass industry successfully overturned a proposal in ASHRAE 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, to reduce prescriptive glazing area by 25 percent, from 40 to 30 percent. That proposal was not long forgotten by ASHRAE, however. This time around the standard in question is ASHRAE 189.1, *Standard for the Design of High-Performance, Green Buildings*, and a new addendum introduced to the green standard would reduce the glazing area allowed in the prescriptive path from 40 percent WWR

to 30 percent WWR for buildings less than 25,000 square feet.

According to Dr. Thomas Culp of Birch Point Consulting LLC in La Crosse, Wis., more than 75 percent of all buildings, and a third of all floor space, is less than 25,000 square feet, meaning this proposal would have a major impact on green building design.

"This flawed proposal takes a shallow viewpoint, ignoring why designers put in windows in the first place, and the potential negative human impacts from reducing access to daylight and views," Culp says. "It is particularly concerning that this is a green standard whose scope specifically includes indoor environmental quality and occupant wellbeing."

GANA technical director Urmilla Sowell adds, "Windows are not just a structural component of the building envelope anymore, and WWR alone is not an adequate metric for measur-

ing the potential of building energy efficiency. In fact, a lower WWR may conflict with tenant demands for daylighting. Daylighting is one of the many non-energy related benefits of windows. When you compare a wall or an opaque area to a window, occupant productivity, focus, health and wellbeing must be balanced against a sterile measure of energy efficiency. Glazing allows natural light to enter the building. It gives the building occupants a view to the outside, which increases productivity in employees, focus in students and recovery time in hospital patients. ASHRAE 189.1 is supposed to evaluate indoor environments as well as occupant comfort and well-being, so such a drastic reduction in WWR based on energy savings alone is not in line with the green standard objectives."

At present, members of GANA's Energy Division's Building Standards Subcommittee and the Aluminum Extruders Council, among other organizations, are submitting comments in response to the proposal. Culp notes that architects, lighting designers and other related trades have likewise expressed concerns about the restrictive nature of the addendum. Sowell adds that GANA is encouraging other industry organizations and companies to submit comments as well.

While the squeeze on windows has been the focus of concern for glass industry experts during recent ASHRAE meetings, it's not the only change proposed.

ASHRAE 189.1 also includes a proposed change to how the prescriptive criteria is set. Instead of maintaining tables of prescriptive U-factor and solar heat gain coefficient (SHGC) re-

Green Building Committee Favors LEED for GSA Buildings

The Green Building Advisory Committee established by the General Services Administration (GSA) has recommended that the Leadership in Energy and Environmental Design (LEED) green building certification system be used for all GSA buildings as the best measure of building efficiency, according to a release from the U.S. Green Building Council (USGBC).

"GSA has been a leader in energy and sustainability, and we are thrilled to see the leaders in the public and private sectors continue to recommend LEED as the best choice for GSA to maintain its leadership status while improving sustainability, reducing energy and saving money for its buildings," says Roger Platt, senior vice president of global policy and law for USGBC. "Consensus-based and market-driven, LEED has been and continues to be invaluable to thousands of building professionals and remains the best option for the GSA and any governmental agency looking to save taxpayer dollars and increase energy efficiency."

quirements in coordination with the ASHRAE 90.1 base code, addendum “al” would simply apply a multiplier to be a notch above the base code. For example, Culp explains, wall and window U-factors will be 10 percent lower than ASHRAE 90.1. The window SHGC would be 10 percent lower, but only on the east and west sides in zones four through eight. Culp notes that, on the latter point, ASHRAE committee members didn't feel it appropriate to go lower than the 0.25 SHGC already specified in zones one through three, and found that lowering SHGC in zones four through eight would only save energy if applied on the east and west sides.

The ASHRAE 189.1 proposal was open for public comments through June 17, at which point the 189.1 committee will hold discussions on the responses during the summer. If appeals from the glass and other industries are not successful, the addendum will have a final presentation and a vote for publication late this fall, although Culp notes there may be a final opportunity for appeal in 2014.

Meanwhile, small changes have taken place with regard to ASHRAE 90.1. According to Culp, the committee has dropped a proposal that would have required switches on all operable windows and doors to turn off the HVAC system when opened. Culp notes that the added cost to integrate the switches into the HVAC system would likely have caused designers to switch from operable to fixed windows, “thus hindering the ability to have natural ventilation.” Instead, addendum “ba” is being modified to apply only to doors without automatic closing devices.

—Megan Headley

Company Works with NREL to Develop Solar Window

Columbia, Md.-based New Energy Technologies Inc. has entered into Phase 2 of its Cooperative Research and Development Agreement (CRADA) with the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) to advance the development of its SolarWindow technology.

Under terms of the groups' agreement, researchers are working toward optimizing the deposition of various coatings on flexible surfaces; these layers will allow for electricity to be generated on the windows, according to information from New Energy.

Legislation to Develop National Energy Efficiency Strategy Moves Forward

U.S. Senators Jeanne Shaheen (D-NH) and Rob Portman (R-OH) insist that it's time to put political ideology aside for the sake of the nation, re-introducing legislation they both hail as a bipartisan roadmap to an improved national energy efficiency strategy. And the two celebrated a success when that bill, which calls for state-based commercial energy-efficiency programs that leverage private financing, was passed by a Senate Committee in May.

First introduced a year ago, the Shaheen-Portman Energy Savings and Industrial Competitiveness (ESIC) Act is designed to increase the use of energy-efficiency technologies across the economy, while also creating jobs and making the nation more environmentally-friendly with decreased emissions. The legislation calls for strengthening energy-efficiency requirements in building codes, making supply chains more efficient, requiring efficiency measures in the federal government and encouraging energy-efficiency upgrades, such as high-performance glass

and window products, as recommended in the International Energy Conservation Code (IECC), at industrial facilities.

“As we know, we're still too dependent on foreign oil – that affects our national security,” Shaheen said during a press conference in Washington, D.C. “We're too dependent on fossil fuels. This is an energy savings that everyone can get behind. It doesn't matter whether you're from the Northeast, the South or the West – we all benefit from energy efficiency. It's a win, win, win.”

The bill must be approved by the full Senate as well as the House of Representatives before reaching President Obama. It has been tweaked somewhat since first being introduced in 2011. Several spending provisions were removed, according to *The Hill* newspaper, including an expansion of a federal loan guarantee program for energy-efficient projects and a revolving state grant program.

The new draft instead calls for state-based commercial energy-efficiency programs that leverage private financing. Some other elements of the previous bill

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were included in a manufacturing efficiency bill passed in December. The provisions were more research-based, such as asking the Department of Energy to examine barriers to energy efficiency in the industrial sector and to identify best practices for advanced metering. It also

called for federal facilities to track energy and water consumption.

The timing might be right this time around as Obama has cited energy efficiency as a priority in his second term, calling for the U.S. to whittle its energy consumption in half over the

next two decades.

Shaheen and Portman were quick to note the bipartisan support for their latest effort toward that end, addressing the many industry leaders, energy efficiency advocates and environmental stakeholders on hand for the Capitol Hill gathering to voice their support for the legislation.

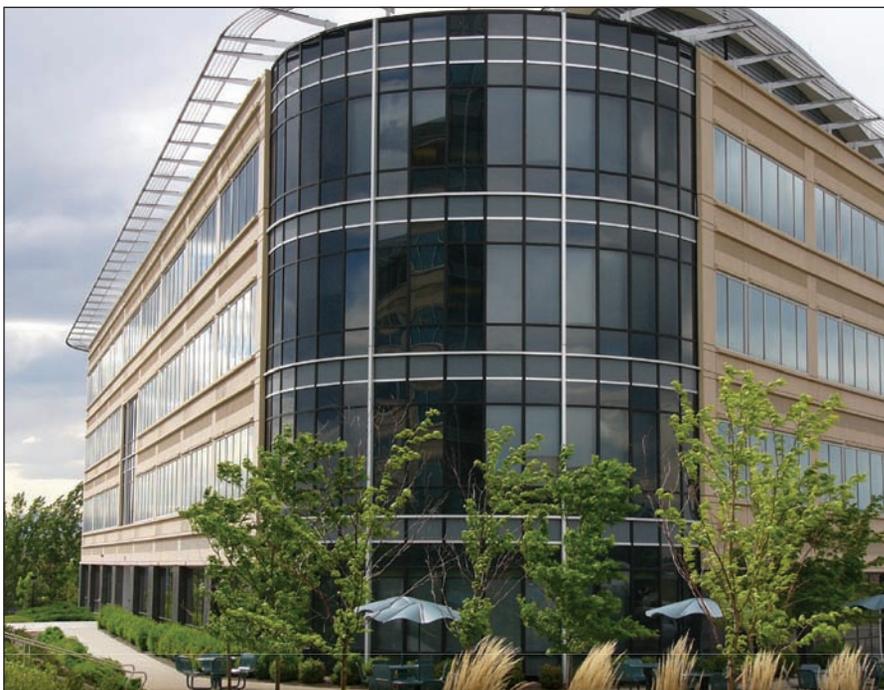
Among other things, the re-introduced Shaheen-Portman legislation aims to strengthen building codes making new homes and buildings more efficient. It will also require the federal government—the country's largest energy user—to adopt strategies to conserve the electricity used for computers.

A recent study by the International Council of Chemical Associations (ICCA) estimated that products of chemistry such as window and roofing coatings, insulation, piping and lighting could help achieve a 41-percent reduction in energy use and a 70-percent reduction in greenhouse gas emissions by 2050 when combined with a shift to lower carbon fuels.

The increased industrial energy efficiency is expected to help make American manufacturers more competitive with their foreign counterparts.

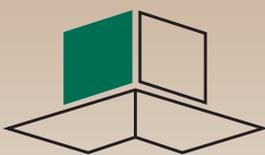
Portman said he and Shaheen have identified a plan to offset the cost of the legislation, but hope to finalize it in committee. Meanwhile, staffers for both lawmakers have already begun engaging talks with House Energy and Commerce Committee members to gauge their interest in taking up the legislation. House Republicans have said they see energy efficiency as a key area of compromise with the Democratic-controlled Senate.

The updated legislation is again leaning on Congressional support for energy efficiency legislation by embracing a bipartisan approach that spurs the use of energy efficiency technologies in the residential, commercial and industrial sectors. A study by experts at the American Council for an Energy Efficient Economy found that initial version of ESIC would have saved consumers \$4



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Energy & Environment

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billion by 2020 and helped businesses add 80,000 jobs to the economy.

Several industry groups have come out in support of the legislation.

According to Mark Silverberg with Technoform who is part of the Glass Association of North America's Energy Division, the group welcomes the news. In fact, on May 8, the day the bill was voted out of committee, representatives of the division met with Sen. Portman, and four other key senators' staffs, to emphasize support for this bill, and renewing and extending the 179D tax deduction.

"This important bipartisan effort seeks to create a national strategy to increase the use of energy-efficiency technologies in the residential, commercial and industrial sectors of our economy, while also fostering job creation," says Silverberg. "Such efforts will work best when government agencies, such as the DOE, work in part-

nership with private sector partners."

He continues, "Our objective is to foster a productive dialogue between key code and regulatory influencers and the architectural glazing industry so that future policy decisions are made on the basis of good science and serve the goals of energy efficiency and human well-being."

Ben Gann, director of legislative affairs and grassroots activities for the Window and Door Manufacturers Association (WDMA), points out that a previous version of the legislation would have established a "zero-net-energy" building performance goal by 2030. However, after negotiations with Sens. Shaheen and Portman that language was removed and no longer includes provisions to create a de facto federal energy code administered by DOE.

"Any increase in efficiency standards for new building codes would be com-

pletely voluntary," says Gann. "The [DOE] is still allowed to offer building efficiency targets, as part of the IECC and ASHRAE Standard 90.1, but Shaheen-Portman requires DOE to establish all targets and determinations related to national model codes through public notice and comment rulemaking procedures."

He adds, "The bill does require DOE to make publicly available the analysis and methodology it uses to calculate energy savings as IECC/ASHRAE codes and standards are revised from one version to the next, and incorporate economic considerations, including return on investment and small business impact review analysis."

Additionally, Gann points out that the legislation could provide funding to "those states that achieve and document full compliance with both the commercial and residential building energy codes."

—John Hollis ■



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Problem Prevention in ONE Simple Step

How an Evolving Market is Heightening the Design-Build Benefits

by Megan Headley

When things go wrong on the job—and we can all admit to ourselves that they do—it can be helpful to have a partner in the construction process that works closely with you to set things right. However, this article isn't about what happens when you place the wrong order or the glass shows up onsite ¼-inch too short. It's about the times you've wanted to bang your head against your desk, thinking, "How can the architect not have seen this coming?"

The answer to that question could be because your team wasn't involved early in the design process. Many glazing contractors find that getting involved early, through a design-build partnership, can help the design and construction team prevent many of the most common budget, material and other challenges before they happen. The only challenge left is letting the design community know you're a resource that can help bridge a path to success.

What is Design-Build?

Definitions of just what "design-build" means can vary, but according to the Design-Build Institute of America (DBIA), "design-build is a method of project delivery in which one entity—the design-build team—works under a single contract with the project owner to provide design and construction services." This approach is opposed to "design-bid-build," where design and construction are separate contracts and the work is distinctly separate, and that of the more traditional construction management approach.

At the very least, design-build means

that a glazing contractor is able to get involved in a project on the ground floor, so to speak, offering input and sway into the types of products used (and how they're used) as a partner in a collective team.

More simply, "The advantage of design-build, if done properly and thoroughly, is that the design phase gives an opportunity to avoid those unexpected challenges on the jobsite," says Charles Bostick, senior project manager and sales engineer international for seele sedak, headquartered in the United States in New York.

It's a construction approach that, according to DBIA, has grown considerably in the last 15 years—although some glazing contractors argue that growth has slowed dramatically as a result of the recent construction downturn.

"Back in the '80s and '90s we had a lot more design-build projects where you got on board with the general contractor, helped the architect design it and walked all the way through it," says Ross Ullrich, commercial estimator for Pikes Peak Glass in Colorado Springs, Colo. "That market is starting to come back now, but not like it was."

For designs that are being put to paper today, many contractors see that the bid remains the deciding factor for selecting a subcontractor rather than the sub's skill as a project partner.

"In today's market there are a lot of challenges because of the purported lack of opportunities, which is slowly changing. Everyone seems to be bidding work out," agrees Jim Hatton, president of glazing contractor BCIndustries in Tampa, Fla.

Ironically, many contractors agree

that one of the biggest benefits of a design-build partnership is the fact that it keeps budgets on track. And in a market where budget is the deciding vote, who wouldn't want that?

Bottom Line Advantages

DBIA points to the advantages of a design-build partnership as being faster delivery, reduced litigation and a higher profit margin for contractors. Glazing contractors point overwhelmingly to the budget as the big winner for designers when it comes to design-build projects.

"Advantages [include] the tailoring of the execution in regard to budgets, such as with an initial guaranteed maximum price offer where the actual contract for execution is let after the design engineering phase. [This] allows the owner to look at alternates to come up with that perfect mix of maximum value for minimal cost, as opposed to the prevalent 'value engineering,' which often results in minimum value for lower cost," Bostick says.

Getting that foot in early, and guiding the product selection process, in many ways can make the glazing contractor an effective mediator between the architect's vision and the owner's budget.

"For example, if the owner says—and this is usually the way it starts—'we have \$10 million allocated for our budget,' you know very quickly that this is not a \$10 million deal. Your challenges are not necessarily to help him understand conditions but to help him understand why it's a \$12 or \$13 million deal," Hatton says.

He elaborates, "We just were involved



Some glaziers have found that architects can be infamous for glossing over engineering requirements, leaving the glazing team to later puzzle over measurements.

in a situation where it was a \$25 million deal and the owner wanted to spend \$18 million. At the end of the day he's in the \$23, \$24 million range and he's realized that he's developed some bad data, and that's so easy to do." On this project, the owner was working to incorporate LEED and other energy requirements, but quickly found that those requirements are moving targets in today's energy-focused glass industry. "His targets might have been years old. A lot of companies are dealing with yesterday's news. They think that what I could have done for x dollars yesterday should be cheaper today. Not necessarily," Hatton points out.

Hatton offers another recent example of how his early involvement helped repair a budget problem. "We were working on a project where the financials were upside down and the job was coming out of the ground and the contractor ... needed timely answers and information." He explains, "What we did was to 'tear up' the project into various segments. For example, there were panels, windows, window wall, curtainwall, and we broke it up into modules, and tried to slowly get

everything to be compatible on the building, and everything within budget. In this particular case we were successful in not only changing some of the window systems so that they became more in line with the financial requirements, but also worked on the job structurally.

"It's a hard process to go through, but if you've got the right tools available and you can present them and lay them on the table, sometimes the budgets are flexible. You might not be able to get below their budgets, but you can get very close," Hatton says. "Once the owners get involved in it, they start to weigh the 'do I want to save money or do I want a better product?' And then there's some compromise in between and it makes it easy for them to choose."

Dave Ranker, president of glazing contractor RankerAMG Inc. in Sacramento, Calif., agrees that the budget benefits big-time from an effective design-build partnership. The challenge he sees is finding architects willing to fully embrace that partnership and accept the glazing team's

input on reaching a realistic budget. "We're the ones who are most sensitive to the budget because we're the ones who are providing it. But when you start talking budget, that's where [architects] disconnect," Ranker says.

He adds, "There are certain things we can do to adjust here and there to align with the intent that [the architect] put out there, but they have to be willing to accept what we're doing and not resist it. Architects have a really hard time designing to a budget to begin with. The budget becomes the disconnect. Then we have to turn to the contractor." And at that point, the partnership can become a muddled chain of command and the birthplace of problems down the line.

Ranker does acknowledge that his team works on projects where glass is but one of many types of cladding. As a result, he finds that architects seem to be less willing to heed his team's design

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Problem Prevention in ONE Simple Step

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advice—when in truth it seems the cladding diversity should make the architect more willing to listen to the reigning expert on the topic. “They always seem to resist. It’s crazy. I wish they could embrace the process here: we’re design-build, let us do it,” he says.

Ullrich offers his empathy on this topic of control. He’s found the design-build projects that haven’t gone as planned are the ones that are partnerships in name only. “The ones that didn’t work out well are when the architect really didn’t want to talk to us and drew up whatever he thought would work. Then you get pricing issues, when the architect moves along with his own thoughts on what it should be. I’m not saying that’s wrong,” Ullrich quickly amends, but, he adds, it does make pricing a challenge.

Drawing in the Details

Objectively, a design-build contract allows glazing contractors to get involved early to select the best possible products for a particular design and ensure quality in the connecting details.

According to Bostick, being in a design-build partnership means that the glazing contractor can refine details in connection with a specific project, ensuring that the end result is not only unique, but well suited to the project for which it was built.

“Further benefit can be obtained through the optimization of details during design engineering that results in better value for the same price, or even better value for a lower price. The goal is to work out details that are better. The design engineering phase allows testing and engineering analysis that hopefully result in façades that are less prone to condensation, heat loss, unwanted solar gain, leaks, etc.,” he says.

More specifically, “Being involved earlier in the project can lead to changes in the design, such as doing a glass beam in two pieces instead of one where it is logistically necessary. Normally this might be rejected by the owner and his architect. However,

the design-build process leads to full exploration of all possibilities from aesthetic as well as economical viewpoints and allows consensus on the final execution,” Bostick says.

The first step for the design-build subcontractor often might be helping the designer understand the products available to help realize his vision while also meeting practical considerations.

“We try to help an owner understand what kind of products he might need on the building,” Hatton explains. “That might be anything from a multistory residential tower to a 30-, 40-story office building; totally different products. In helping them pick the right products out, you help them determine realistic budgets, which is the key in the market today,” Hatton says.

Those product differences can become complex, Hatton says, “Because you have energy codes that you have to deal with, there are aesthetics that you have to deal with, etc. We try to qualify all of [these factors] and talk to architects about where the value is versus what the image might be. So for value X, you might have to select this type of product, but if you want to increase the height of the building, or you want to increase the slab-to-slab, these are the other types of products. We get them thinking about where their budgets might be and help them really zone in on what they really need.”

Muddling Through

These glazing contractors are quick to point out that trust is the key to a successful design-build partnership (see “*Making the Design-Build Relationship Work*” in the *Only Online* section of *this issue*). It’s surprising, then, that an area where these partnerships can face problems is when it comes to trusting the glazing team to select appropriate products for the project. More specifically, these subcontractors find it challenging when an architect goes straight to the product manufacturer, doing the spec work alone while only considering one aspect of the

product and not how it relates to the building as a whole.

“I see a common error of architects going to the manufacturers . . . which a lot of times is great. There’s no problem with that,” Ullrich says. “The problem I see is they’ll call a ‘wrong’ manufacturer and they will put in, of course, whatever [that manufacturer is] selling.” That could mean that the specs show windows where a curtainwall should be, and the glazing contractor is left to explain why it’s time to go back to the drawing board.

Or, as Hatton puts it, “Sometimes the architects say ‘I like this glass, it’s blue, and this company has the best color’—but there are other things that have to go with this.” Blue may look good on paper, but doesn’t begin to address energy ratings, acoustic levels and the all-important consideration of pricing. “So now all of a sudden the prices might be escalating and you have to backpedal and take them down a notch to say ‘here’s your budget, you’ve got started on the wrong foot, let’s readdress the glass,’” Hatton adds.

Ideally, Ullrich would reach out to architects and ask that they flip the process and start working through the design basics with a glazing contractor before adding in a manufacturer’s brand name.

“I suggest architects go to a glass company that they trust, that has been around a long time, before they go to the manufacturer,” he says. “[The manufacturers] are going to sell what they’ve got even if it’s not quite the right product.”

Although these glazing contractors bring their own manufacturer preferences and relationships to the table, they ask that the architect consider them a knowledgeable and objective third-party that can look at the big glass picture and select a product that works with the final intent.

“Our people are well trained on the glass make-ups and what the options are and we have everything computerized

and we go through the models, then we will call on the manufacturers for their assistance if we need it," Hatton says.

Still, picking up on material conflicts is all part and parcel of a design-build project, Ranker says. "In other words, we see this is how it's going to have to be designed, yet their schematic drawings don't consider what's really going to happen here, or reconcile between materials or a corner," he says. "With design-build we have to go forward in time and we can discover these things early and design to them, and that's huge. We're solving the problem before we get there; a good design-build subcontractor can see it and address it head on and avoid it. It's like this whole building information modeling resolution; do I need a computer to tell me that when I turn this corner I change from curtainwall to metal panel or plaster or whatever? We're experienced enough we should be able to do that but ... being in design-build mode you can actually try to foresee all these routine problems and take care of them."

Tolerating Other Trades

In terms of working around design problems before they happen, Ranker has found that architects can be infamous for glossing over engineering requirements, leaving the glazing team to later puzzle over measurements.

"It seems like they always expect the window or curtainwall to compensate for all the other [trades'] tolerances. Good architects will pick up on that and allow that into their design and others won't," he says. "They never leave enough room for the things that need to happen to allow for anchoring, etc."

It's a common complaint.

"The most common problem I see with glass and glazing is related to the size/span of both the curtainwall system and the glass units themselves. Architects often have little understanding regarding the maximum span a curtainwall system can support, which leads to additional structure being re-

quired," says Jimmy Evans, senior estimator with glazing contractor Juba Aluminum Products in Concord, N.C. "We serve as a resource to architects to help eliminate these issues up front."

Gregg Haeberle, virtual design and construction coordinator with Juba Aluminum, points to one project that involved "several cases of gaps in scope." According to Haeberle, "We were able to identify and communicate these gaps back to our design-build partner along with proposed solutions for those gaps. In doing this, we were able to foster a better relationship by approaching them with solutions and not just problems."

Bostick would agree that becoming involved early in the process can smooth out the most common problems with designing to tolerances. By way of example, he explains, "Tolerances are sometimes problematic, though critical, for the installation of an aluminum façade on another contractor's steel frame where the façade contractor might have little control over the quality of installed steel. A quick 3D laser survey can determine where the steel is out of tolerance, locating where special out-of-tolerance connectors may be required as the connectors on that particular project are visible and their small size aesthetically important. However, such a survey can usually only be done at a time when all of the custom connectors likely are fabricated and delivered. The additional necessary 'out of tolerance' special connectors generate extra costs."

Bostick continues, "In a design-build scenario the percent or number of special connectors can perhaps be estimated—let's say 10 or 20 percent of all connectors. Then 80 or 90 percent of the normal custom connectors can be fabricated and delivered on time for start of work onsite. The special connectors are then fabricated and delivered a little later, but earlier than otherwise, with the installation crew having plans showing where the special over-

/under-sized connectors are to be placed. All this is done in agreement with the owner and his project team. Of course, the special connectors cost extra but, if planned, there are then less normal connectors made and no construction site delays while everyone studies the problem and agrees what to do after the fact. This normally results in a fraction of the extra costs—those costs being made known earlier so they can flow into the project budget as expected costs."

Preventative Maintenance

In the end, design-build is about opening communication at the architect-glazier interface in order to prevent the most common problems, be it off-track schedules, exploding budgets or too-tight tolerances.

According to Michele King, Juba Aluminum's director of communications, "The biggest way a design-build relationship can be beneficial to architects is that, as a specialty contractor, the glazier can help the architect achieve his design intent practically with constructability in mind. To the glazier it is beneficial because it forces improvement by having to think of ways to achieve the construction and installation of more difficult designs. There is an understanding of the project and the challenges associated with it," King says.

For those who believe two or more heads really are better than one, design-build presents a way to erect a better building.

"The benefit of design-build, in my opinion, is not solving problems better, but rather avoiding problems altogether," Bostick says. ■

the author



Megan Headley is special projects editor for USGlass magazine. She can be reached at mheadley@glass.com.

The Green Mile

Many AIA Exhibitors will Focus on Energy Efficiency and Sustainability When They Visit the Mile High City

Denver, one of the greenest cities in the nation, will host hundreds of energy-conscious architects when the 2013 American Institute of Architects (AIA) National Convention takes place there June 20-22. Glazing products certainly have a lot to offer to those looking for sustainable, eco-friendly options.

Here's a look at some of the products you can expect to find when you walk the halls of the Colorado Convention Center.

curtainwall

Let's Do the Lamboo – Booth #1752



Lamboo Inc. will debut its curtainwall system technology, allowing visitors a chance to see how it has integrated the sustainable natural resource of bamboo into curtainwall members and storefront system components.

The Renewal series is made for both residential and commercial applications, bringing what the company describes as “warmth and longevity” to projects “while exceeding aluminum system’s performance through longer unsupported spans, higher fire rating, and thermal performance.” The split mullion design allows for integration of Lamboo materials with aluminum coverings for applications such as storefronts, curtainwalls and conservatories.

The coupling mullion pre-fabricated frames can be finished in the fabrication shop with base profiles, interior gaskets and glass supports.

▶▶ www.lamboo.us

Going Together – Booth #1323

The combined Kawneer and Traco exhibit space will highlight a range of products including sun shading, impact-resistant and high thermal performing products and systems. Kawneer will feature its new 1630 SS IR curtainwall, which the company says is designed to deliver performance under pressure. It has undergone rigorous testing to hurricane and blast mitigation standards and offers an additional line of defense against high winds, heavy rains and hurricanes. It is available in wet (silicone) glazed and dry glazed options, and offers a 3-inch sightline.

This year, Kawneer will also be presenting an on-site CEU Session, “Components of a LEED Strategy in Division 8: Glass & Glazing” on Thursday, June 20 from 10:30 to 11:30am.

The latest high-performing Traco window products will also be featured at the show.

▶▶ www.kawneer.com

dynamic glazing

Tint on Demand – Booth #2111



SAGE will showcase its electronically tintable SageGlass® for windows, skylights and curtainwalls. The glass can be tinted or cleared enabling users to control the sunlight without shades or blinds, while maintaining views to the outdoors and reducing energy consumption.

According to the company, SageGlass tints on demand and can be zoned to better control solar heat gain and glare at any time of day. The company adds that its next-generation SageGlass, now available, has in-pane zoning capabilities allowing building occupants to change the tint in three different sections in a single pane of glass.

▶▶ www.sageglass.com

finishes

Germ Free is the Way to Be – Booth #3139



Photo: BE&K Building Group of Charlotte, N.C., courtesy of Linetec.

Linetec has introduced the use of antimicrobial protection for high-touch, architectural metal products' exterior and interior surfaces, such as doors, windows, curtainwall, entrances, panels and column covers.

Antimicrobial protection is infused into select polyvinylidene fluoride (PVDF) finishes to inhibit the growth of stain and odor causing bacteria on the coating of aluminum surfaces for health care facilities, educational campuses and other buildings.

► www.linetec.com

glass

How Low-E Can You Go? – Booth #1736



PPG Industries has introduced Solarban® 67 glass, a solar control, low-E glass with what the company calls a soft, imperceptible neutral coating that gives buildings a crisp, clean and clear exterior appearance along with solar control performance.

Engineered with a proprietary double-silver, magnetron-sputtered vacuum deposition (MSVD) coating, PPG says Solarban 67 glass reflects the true timbre and brightness of ambient light and color accurately and au-

thetically. The low-E coating also gives the glass levels of solar control performance not typically associated with highly transparent glass, according to the company. In a standard 1-inch insulating glass unit (IGU) with conventional clear glass, Solarban 67 glass has visible light transmittance (VLT) of 54 percent and a solar heat gain coefficient (SHGC) of 0.29, which yields a light-to-solar gain (LSG) ratio of 1.85.

► www.ppgideascapescapes.com

It's Super Secure – Booth #1347

Safti First announced the addition of the SuperSecure II-XLS 45-120 minutes to its product line. SuperSecure II-XLS achieved a Class A-1 rating per the California Department of Corrections (CDC) 860-09a testing requirements and meets ASTM E-119/UL 263/NFPA 251 with hose stream up to two hours, according to the company.

SuperSecure II-XLS does not incorporate wired glass, giving it a clear, wire-free appearance. Designing with SuperSecure II-XLS provides maximum security protection; protection against fire, smoke and dangerous radiant heat; high STC ratings and it comes with a five-year manufacturer's warranty.

► www.safti.com



silicone solutions

Air Tight Options – Booth #1650

A number of silicone-based innovations designed to improve the sustainability, energy efficiency and durability of new and retrofit buildings will be on display in Dow Corning's booth. Featured products will include the company's silicone air barrier system, a complete air and weather barrier solution designed to provide airtight moisture control for more energy-efficient building envelope designs. The company will also offer its architectural insulation modules, which the company says is a design-enabling high-performance insulation solution for next-generation curtainwalls. Also on display will be the building insulation blanket, a thin, environmentally safe insulating material that offers freedom of design coupled with improved energy efficiency, according to the company.

► www.dowcorning.com

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AIA Show

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doors and windows

Kolbe Does Commercial – Booth #334

Kolbe now offers a door and window product line for commercial buildings, the Kolbe 4500 Series. Created for hospitality, multi-family and mixed-use projects, the Kolbe 4500 Series includes fixed and tilt-turn windows, tilt and slide doors and outswing hinged doors. The steel-reinforced uPVC products are designed to meet commercial building requirements for enhanced energy efficiency, occupant safety, low-maintenance and longevity, according to the company.



Kolbe 4500 Series doors and windows are available in two frame styles: North American 3-1/4-inch frame with nailing fins and European 2-3/8-inch frame. Dual overlapping neoprene gaskets provide a seal against air and water infiltration. One-inch insulating glass is standard, and 1-3/8-inch triple pane insulating glass is available, which allows fixed windows to achieve U-values as low as 0.17, according to the company, which also states that window units with laminated glazing options attain sound transmission class (STC) ratings as high as 39.

▶▶ www.kolbecommercial.com

Panda Lift & Slide – Booth #1939

Panda Windows and Doors has announced the newest addition to its lift-and-slide door line, the thermally-broken aluminum wood clad lift-and-slide system (TS.13), which the company says is set to be its most weather performing system yet.



The TS.13 lift-and-slide is insulated to ensure comfort and energy efficiency in high-end applications, according to the company, and the wood interior is available in several species such as mahogany, cherry, maple, pine and oak. The thermally-isolated aluminum frames make the system strong and resistant to the harshest elements and do not require constant finish maintenance. The company says this is because the technology consists of separating the aluminum profile and placing a glass fibers integrated polyamide iso-bar in the middle to provide maximum strength and 500 times less thermal conductivity than non-extruded aluminum.

All of its lift-and-slide systems operate by “a simple turn of the handle” for a smooth operation. All frames are finished with custom colors in powder coat, kynar or anodized. The option to produce a two-tone color piece is also available.

▶▶ www.panda-windows.com

Viracon Features New Glass Options – Booth #2939

Viracon will showcase a number of new innovations in its booth. Among its new coating selections, the company offers RoomSide™ low-E, an interior surface coating de-



signed to improve the u-value of a dual pane insulating glass unit by as much as 20 percent. Also available is Cyber-Shield, a glass coating specifically engineered for infrared shielding applications. VUE-30 is a high-performance coating designed to reduce solar heat gain, while VE-45 is a low-E coating that offers improved balance between visible light transmittance, solar control, and enhanced u-values, according to the company.

In addition, the company will feature its ExtremEdge warm-edge spacer, which it says is designed to improve edge of glass u-value, and the ClearPoint point-supported insulating glass system designed to increase the transparency of glass façades. Also on display will be the company's DigitalDistinctions, a digitally printed glass product.

▶▶ www.viracon.com

On a Roll – Booth #1903

Klein USA has introduced its new Rollglass Self self-closing sliding glass door system. Designed to replace a traditional swinging door, the system features a single, frameless interior sliding glass door in series with either one, two or three fixed frameless glass panels. After the door is opened, the door panel closes by itself according to eight different adjustable speed settings.



The sliding glass panels are available up to ten feet high with either 3/8-inch or 1/2-inch thick glass. The design of the glass installation allows in natural light, and the system is ceiling mounted so no floor track is required.

▶▶ www.klein-usa.com

Do You Know the Way to Monterey? – Booth #2518

C.R. Laurence (CRL) and U.S. Aluminum are bringing what they together call expert design and energy-efficient products. U.S. Aluminum offers a suite of high-performance thermal doors that it says can offer low U-factors ranging from 0.57 to 0.31 and a high condensation resistance factor rating.

U.S. Aluminum is also showing its new Monterey series bi-folding sliding glass wall, what it calls a modern and flexible system. It is available in standard and thermally-broken and converts from a glass wall into a flexible open space.

Other products the companies will feature include the Essence series headerless sliding shower door system, the new Guarda protective security screen door and window screens and more.

▶▶ www.crl-arch.com



Monterey Series Bi-Folding Sliding Glass Wall System

hardware

Euro Stylin' – Booth #3251

Amesbury Hardware has introduced two new styles of hardware and locking systems, the P2000/3000 Euro Style aluminum door hardware and an ADA-compliant handle.

The P2000/3000 Euro Style aluminum door hardware works with both P2000 and P3000 locking systems and has a gear box system that uses the company's single point P2000 lock box and cover plate. The gearbox, face bar/drive bar and shoot bolt are all stainless steel and available in 35-mm, 45-mm and 60-mm backset.

The non-handed pull and twist latch bolt reverses easily, according to the company, with the lock installed and accepts handle sets with 92-mm hole spacing (center of spindle to center of key cylinder). All locking points are engaged by lifting the handle and the company says the line is easy to install since it allows for the use of its standard handle and backplate options. They come with U.S.

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AIA Show

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style cylinders for easy re-keying and installation.

An extended lock turn is workable without the need to grip and the U-shape handle meets fire safety requirements, according to the company. It is AAMA 902-certified, works with standard lock sets, fits all three Amesbury backplate options and is available in all Amesbury standard brass finishes.

▶▶ www.amesbury.com

Visit USGlass magazine!

Be sure and stop by booth #3617 to visit with the staff of USGlass magazine. You can pick up free copies of the magazines, sign up for our free e-newsletters, as well as our many other publications. We look forward to seeing you in Denver!

panels

Mape the Most of It – Booth #707

Mapes Architectural Panels announced the development of its new Mapes-R Plus infill panels. These modified panels have additional insulation, which the company says allows for previously unattainable R-values to be achieved without modifying the existing glazing pockets.



Mapes-R Plus panels are designed to fit any size glazing pocket and can increase R-values by more than 200 percent, according to the company, which also states that values up to R=27 are possible within a 1-inch glazing pocket. Mapes-R Plus panels can also be used in glazing pockets as small as ¼-inch for retrofit application.

▶▶ www.mapespanels.com

BIM

Guardian Debuts BIM – Booth #1916

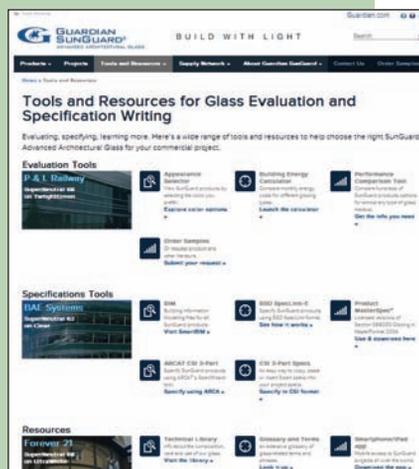
Guardian Industries will launch a first-of-its-kind building information modeling (BIM) solution as well as a new SunGuard low-E glass for commercial applications.

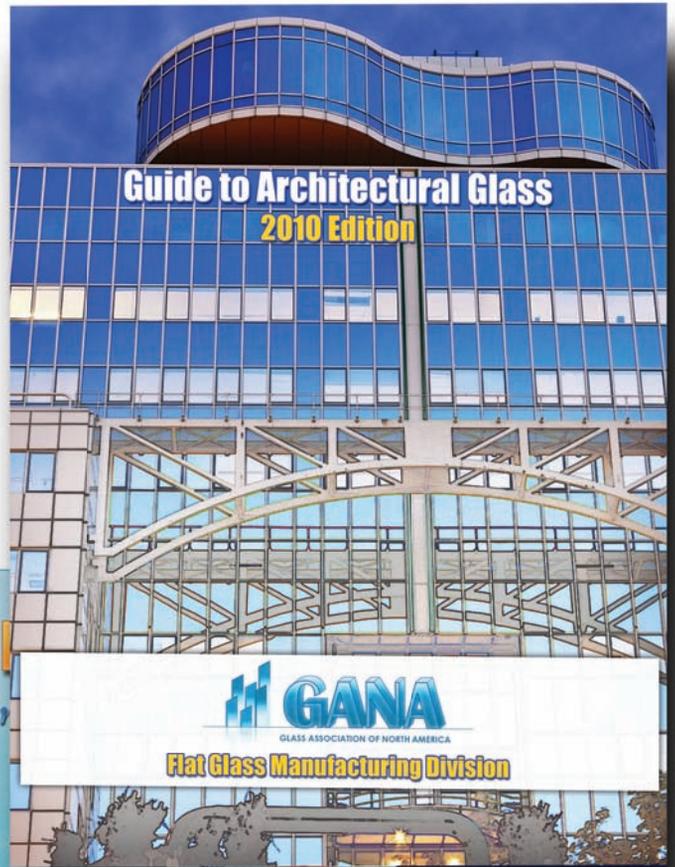
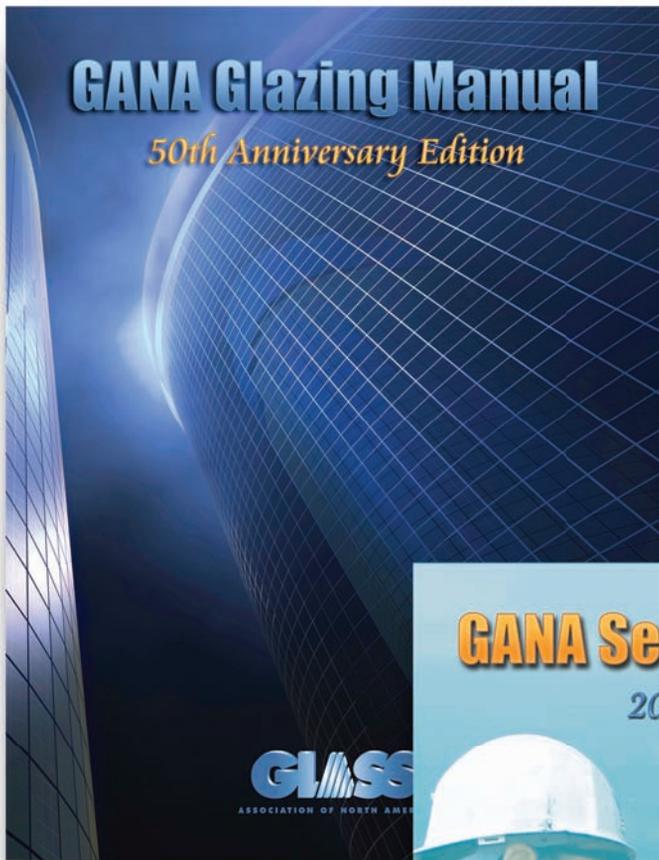
The company's new web-based BIM Generator, available at www.sunguardglass.com, populates manufacturer data for thermal and optical performances of project specific customer IG make-ups in the BIM format. The BIM Generator creates detailed content that represents the correct thickness and color of the inboard and outboard lites. By leveraging visibility settings, users can control the level of detail depending on the desired scale of the view. The content is created for Revit 2013 to take advantage of Revit's material analytics for energy simulations. In addition to specific customized makeups, standard makeups will be available for download at www.sunguardglass.com, Autodesk Seek, and SmartBIM.

Also making its debut is SunGuard Neutral 78/65, a commercial glass product that provides high visible light, high solar heat gain and a neutral color. Neutral 78/65 can be used in double- or triple-glazed units, and in combination with the SunGuard portfolio of high performance low-E coatings.

Guardian will also present its InGlass interiors portfolio, including Guardian Reveal, glass that transitions from transparent to privacy in a single click.

▶▶ www.guardian.com





Technical Manuals

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In Good Health?

Glass Companies Weigh in on the Impending Healthcare Act

by Ellen Rogers



“We don’t have the volume that larger employees have to maybe eliminate health insurance and pay the fine. Plus, morally, I couldn’t do that to our employees ... it’s the responsible thing to do.”

—Bill Sullivan, Heartland Glass



Nearly 1,200 miles separate Waite Park, Minn., from Syracuse, N.Y. Waite Park is a small, upper Midwest town with a population of about 6,700. Syracuse, home to more than 145,000, has been dubbed the economic and educational hub of Central New York. The day-to-day struggles for small towns may be unlike those of a larger city, but these two locations have at least one thing in common: they are both home to glass companies that have concerns about the pending Affordable Care Act.

Heartland Glass in Waite Park, Minn., is a contract glazing company with 22 employees; Syracuse Glass in Syracuse, a fabricator/distributor with 85 employees. Like so many others, both have been struggling these past years with the construction market being so hard hit. Now, despite the fact that business is slowly beginning to percolate, they find themselves faced with yet another challenge: increasing health care costs.

After years of debate it seems comprehensive health care reform—via President Obama’s Affordable Care Act—is set to go into effect January 1, 2014. What impact will this new plan, and healthcare in general, have on companies in the glass industry? While the plan details numerous provisions and the mandates are

Moral Responsibility

Costs are certainly a big deal for many when it comes to health care, but that wasn’t the reason Gilkey Windows chose to cease its offerings. Visit our sister magazine **DWM** online at www.dwmag.com and read the June issue to find out why Gilkey decided to pay the penalty and forego offering health insurance to its employees.

many, some of the biggest concerns simply fall back on the question of cost.

Market Exchanges

Bill Sullivan is the president and CEO of Heartland Glass Co. Inc. He sees the health care act as a good thing “because it is attempting to address the health care issues that this country faces.” But he is quick to add, “I don’t necessarily agree that the act is the best way to address those issues, however. I believe it is too complicated and will be hard to enforce.”

Sullivan says that as the plan has been explained to him, it seems as though there are a lot of unknowns, in particular, the Exchange Market being an option for some employers. Specifically called the “Affordable Insurance Exchanges,” these will be marketplaces that will allow individuals and small businesses to compare and choose private health plans. Each state will take the lead in designing its own menu of options.

“Those companies with fewer than 50 employees will be pooled into their own group and for us, we are on the high end of our insurance carrier’s premium level,” he says. “As it was explained to me, when you’re in this pool there will be those who had been paying at the high end and those at the low end and then they’re all grouped together for the average. So we’re expecting our premium to decrease once the legislation is enacted and in that case it would be good for us.”

He continues, “What gets messy is that each state can select to administer the Exchanges themselves, or they can elect to have the Federal Government administer or a combination of both. The State of Minnesota has elected to administer the program

and it is ahead of the Federal program already and will be ready to go live when the time comes.”

Currently, Heartland Glass offers its employees insurance through a regional carrier and Sullivan says the company pays 75 percent of the employee and family costs of the premium.

“If a family of four has a premium of \$1,000, we pay \$750 and they pay \$250,” says Sullivan. “We only offer health insurance; we do not offer dental, etc. We probably pay a little more than most employers in this area, from what I understand.”

He says, though, this is a rather new plan for his company, as it just began this past January.

“We were previously with Blue Cross/Blue Shield but we made the strategic move to this carrier,” he says. “When we switched we got a lower rate, but we are still at the highest tier as far as premiums. However, if we had stayed with Blue Cross/Blue Shield there were still a couple tiers above us and we were afraid they could kick us up a few notches once the health care act takes affect.”

He continues, “Because of our size, we don’t have the volume that larger employees have to maybe eliminate health insurance and pay the fine. Plus, morally, I couldn’t do that to our employees. We consider health care part of their compensation package and it’s the responsible thing to do to provide that to employees.”

Now, with January 1, 2014 only months away, Sullivan says he is making every effort he can to learn of what’s coming and to prepare for the new law.

“We’re trying to get educated as

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In Good Health?

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“It looks like we would be better off paying the tax or penalty and getting out of the health insurance business entirely, but we’ve got a long tradition of paying for great coverage for our employees and their families here, and that’s not the direction we want to go.”

—John Dwyer, Syracuse Glass

best we can so we can communicate the changes and options that will be available,” he says. “We’ve been attending health care seminars that are being put on by brokers to try and get

the information we need to know about it as it becomes available.”

He adds, “This should be interesting when it all shakes out and from what I can tell there will need to be modifications for those scenarios that were not thought of before.”

Small Business News: Tax Breaks Go Largely Unclaimed

While employers with fewer than 50 employees are not required to offer health insurance under the new health care law, the government does offer tax credits, in the hopes of enticing more small employers to offer insurance.

The tax credit is available to “small employers” with fewer than 25 full-time equivalent employees who pay an average wage of less than \$50,000 a year, and pay at least half of employee health insurance premiums, according to the Internal Revenue Service (IRS).

For tax years 2010 through 2013, the maximum credit is 35 percent for small business employers and 25 percent for small tax-exempt employers such as charities. An enhanced version of the credit will be effective beginning January 1, 2014. (Additional information about the enhanced version will be added to IRS.gov as it becomes available. In general, on Jan. 1, 2014, the rate will increase to 50 percent and 35 percent, respectively.)

Surprisingly, the General Accounting Office (GAO) says fewer small employers claimed the Small Employer Health Insurance Tax Credit in tax year 2010 than were estimated to be eligible. While 170,300 small employers claimed it, estimates of the eligible pool by government agencies and small business advocacy groups ranged from 1.4 million to 4 million, according to a GAO report. The cost of credits claimed was \$468 million.

One factor limiting the credit’s use, the report continues, is that most very small employers, 83 percent by one estimate, do not offer health insurance. According to employer representatives, tax preparers, and insurance brokers that GAO met with, the credit was not large enough to incentivize employers to begin offering insurance. Complex rules on full time employees and average wages also limited use. In addition, tax preparer groups GAO met with generally said the time needed to calculate the credit deterred claims. Options to address these factors, such as expanded eligibility requirements, have trade-offs, including less precise targeting of employers and higher costs to the Federal government.

The Bottom Line

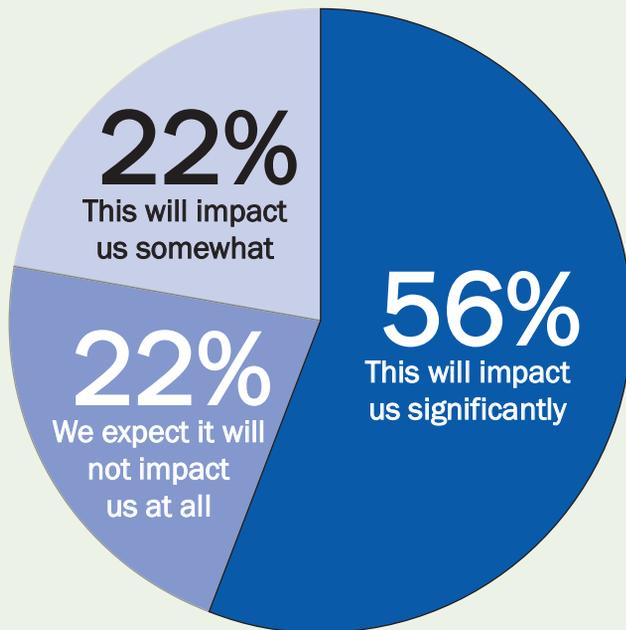
For John Dwyer, president of Syracuse Glass Co., much of his concern about the upcoming law centers on cost.

“Our insurance broker is telling us to expect an 18-percent increase in premiums when our policy renews on December 1,” he says. “I don’t know what’s responsible for this, whether it’s the Affordable Health-care Act or New York state. In New York employer-provided health insurance is already very expensive, and has been for years.” This, he says, is due to the broad, inclusive state mandates on what has to be covered.

According to Dwyer, when he first learned of the new legislation he didn’t expect his company would be affected, since so much is included in the new plan and in New York, he points out, health insurance coverage is already significant.

“I really thought in a lot of states where there are not a lot of mandates the costs would go up, but I didn’t think it would in New York, as well,” he says. “We

How the Glass Industry Feels About the New Health Care Act



We asked readers what impact they think the upcoming Affordable Health Care Act will have on their business. While the majority believe it will take a significant toll, those who expect minimal impact—or none at all—were tied.

Is That It?

The answer to that question is a simple no. With this massive plan about to take effect, employers may still have additional concerns. For more answers on the Affordable Care Act, look to the Frequently Asked Questions section found on the Department of Labor site. The mammoth health care plan requires 15 separate FAQ sections.

<http://www.dol.gov/ebsa/healthreform/#acaimplementationfaqs>

and getting out of the health insurance business entirely, but we've got a long tradition of paying for great coverage for our employees and their families here, and that's not the direction we want to go."

Dwyer continues, "This almost reminds me a little of the changes made 30 years ago with pension plans. Everyone started offering a 401k because pensions were so expensive and it became socially acceptable to no longer offer pensions," he says. "And now most companies don't offer them. With this [health care legislation] being so complicated and expensive and if enough employers say they are not going to offer health care it could become really catastrophic. If you just look at the money side you can see where there could be an advantage [to not offering it], but you can't do that. It's not socially acceptable. But, the more expensive and complicated, the potential [to not offer] it gets bigger and bigger, and I would hate to see that happen." ■

the author



Ellen Rogers is the editor of **USGlass** magazine. She can be reached at erogers@glass.com. Follow her on Twitter @USGlass and like **USGlass** magazine on Facebook to receive updates.

will try to push back on this increase, but there's actually only one insurance company that will write policies in our area, the local Blue Cross/Blue Shield," he says.

The challenge, he says, is that coverage continues to get more and more expensive.

"We've been fortunate to be able to keep paying these huge increases," he says. "Business is improving and we'll see what next year brings."

Dwyer says, though, they have had to pass on some cost to employees.

"We pay 85 percent of the employee cost and 75 percent of dependent coverage. We used to pay it all, but we're limited as to how much we can do that," says Dwyer, who explains the company actually looks to its employees for input on the direction to go in terms of health coverage and the increasing costs.

"Each time we're facing a big increase we will survey our employees and ask them what they'd want to do: cut back and have a co-pay or pass on more cost in terms of say a weekly contribution, i.e., taking [a portion] out of their checks, etc.," says Dwyer. "And usually they want us to take out a little more."

It can also be somewhat of a challenge to prepare for a change such as this.

"Business is better [this year compared to] last year. Our sales are up, but our profits have not increased like the sales have. So, we'll keep monitoring our projected increase, keep working on our efficiency, and we'll do a budget for next year later on this year and that will help us determine what we will have to do," says Dwyer. "Financially, it looks like we would be better off paying the tax or penalty

Narrow and Focused

A Look at How One Company is Ready for Its Start Up

by Ellen Rogers

It's no secret: There are a lot fewer fabricators in the glass industry today than there were five years ago; fewer still looking ten years back. Some closed their doors completely, while others were consolidated, acquired or merged. The regional, independent glass companies, once such a booming, distinct part of the glass industry make-up, have whittled down to just a few.

The industry, though, is changing. Construction is picking up and talks of "cautious optimism" are evolving into true optimism. Could the time be right to start up a new business? The answer, at least for one company, is a resounding "yes."

Located in Flushing, N.Y., Tempco Glass Fabrication is one of the newest—if not the newest—glass fabricators on the block. The company is backed by private investors, with John Chiang as the majority owner. Chiang, who originally hails from Taiwan, has more than 30 years of experience as a glazier and business owner involved with storefront fenestration, small curtainwall systems and windows in the New York area. While he provided the capital investment for Tempco and the initial strategic direction setting, he does not play an active role in the company's operations. Steven Powell, who previously served as general manager for Oldcastle BuildingEnvelope® in Hauppauge, N.Y., was brought on to lead the start-up and serve as general manager.

But why now? Why at a time when there has been so much uncertainty about the future of construction?

"I work with smart people and they realized sometimes the best time to get involved is when the industry is at the

bottom," says Powell. "They recognized this was a weak time for the industry and the cycle was going to turn. So, they felt it was a good time."

Tempco, which officially opened its doors March 22, is currently operating in a 20,000 square foot facility with initial capabilities of tempering, cutting, edging and drilling. Powell says plans are also in the works to add an insulating glass line in the near future.

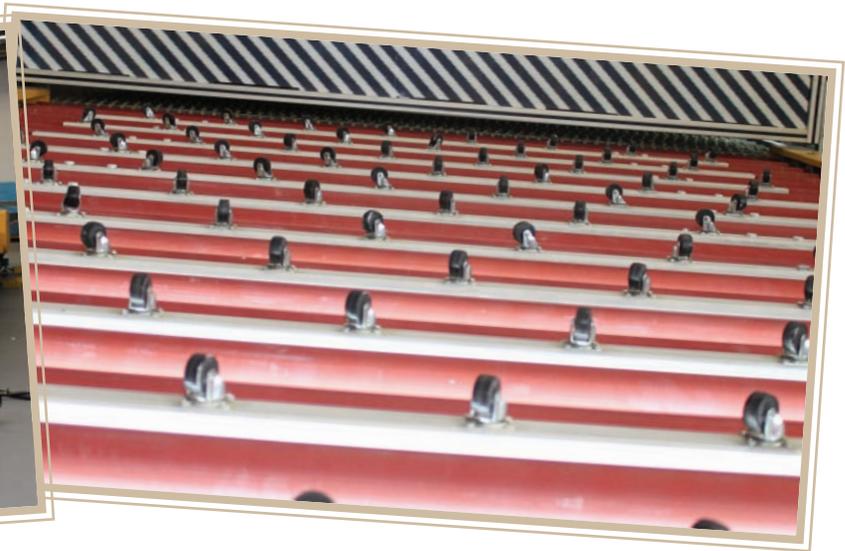
Tempco's target customer base consists primarily of local glazing contractors and glass shops, but Powell says there is also potential to sell to window manufacturers. He sat down with USGlass magazine in Tempco's offices and talked some about being involved with a start-up and how the company plans to grow and evolve.

Please tell me about your background in the glass industry and how you came to be involved with this start-up? I was with Oldcastle Glass for seven and one-half years and as they say, once you're in the glass industry you can't get out. The opportunity came about to get involved with this and, since I had some experience, I made the decision to help and get it started up. I left Oldcastle in September 2011 and we started this process in November 2011. It was a year in the making. The thought process was to service mid-size glass companies that might not get the service they need from the bigger guys... the customers that have short-term needs. Although there are plenty of tempering furnaces in the area, there is a need in this particular market—in this borough—not to mention the proximity we have to Manhattan. And right now everyone wants more glass; the interior market is booming.



Steven Powell, in Tempco's reception area, is serving as the general manager of the new company.

Tempco is starting off with a number of fabrication processes, including glass edging.



Tempco is providing several production capabilities, which include glass cutting.

The tempering line Tempco is operating includes a furnace supplied by North Glass.

How many employees are you starting with and how do you expect to grow? We're starting with 12 employees and expect to be around 25-30 once we're fully operational.

How are you marketing/promoting your business? We're starting with limited marketing—direct mail plans, etc. We will work on quality because the better that is the more we will be able to do.

How do plan to differentiate from other regional fabricators? We will handle 1/8-inch glass because the demand for thin glass is not being met. I think we'll be the local guy who customers will call and we'll build the relationship to help that customer out. Our service level will be different because we offer a simplified process throughout business.

What worries you most about this venture? How are we going to make sure we can produce quality glass? It's difficult to find people who have experience and are dedicated to maintaining quality. How do we get the right people to help build business? There's the location—where can we be located that makes sense and gives us proximity to see a growing potential market? Then there's the equipment—what type do we need and where do we get it? And then, what type of company do we want to be? We want to be a good supplier with good quality and good service consistently. We are not going to be everything to everyone. Our thought process is to be narrow and focused. We won't have every product that other large fabricators have, but for the customers we do have, we will service them properly and take care of them.

How are you handling logistics? We have our own delivery trucks. Currently we only do pick ups and are just starting with the New York metro area, about 50-75 miles.

What type of machinery and equipment are you operating? We stayed with the plan of what we were going to supply, so we focused initially on the tempering furnace. From there we went backwards. We looked for the cutting table to support that and then drilling, washing machines etc. And, of course, price is a consideration, but we looked at a lot of spreadsheets, did a lot of research, visited manufacturers, visited sales reps, attended trade shows ... the easy

part is the purchase. It's all the work up to that [that's hard]. We selected a furnace from North Glass and the cutting table is from the Italian company Maver.

Who are your glass suppliers? There is not one supplier in particular we're focused on. We're talking to all of them and we're interested in supplying customers what they want. We follow the 80-20 rule: 20 percent of the products produce 80 percent of the business, but [there will always be] customers who need something for a special project.

What have you found to be surprising about getting the company up and running? We were pretty well planned and knew things would be coming at us ... but people have been surprised to hear something [like this] is happening. We're putting manufacturing in an area where most others probably would not put manufacturing jobs. Plus, the economy is still not robust. But so far things have gone smoothly.

About what are you most nervous? I came from the retail business and back then we would say 'once you open the doors you can't close them.' March 22, our grand opening, was that day for us. So what I'm most nervous about is that we satisfy the customer and do the right thing the first time. We want the first impression to be good and one that will help us gain more business. We want to build relationships.

About what are you most excited? I'm excited everyday when I come to work and see what has happened and what has been done; what was accomplished and what we're going to accomplish. I'm excited to see any order come in—even for just one piece of glass. We're learning everyday and everyday I'm excited.

What would you like the industry to know about this new business? We're not trying to compete with the regionals and we're not trying to say anything bad about anyone. We just want to come in and do our thing and be a good supplier to our customers who need our service. We just want to serve those customers who have a need.

In a year from now, what can we expect to see from this company? Expect a thriving business with a great attitude and above average quality and great customer service—and a lot more equipment. ■

NO

BOUNDARIES

Interior Glass Is Set to Play an Ever-Growing Role in Architecture

by Jenna Reed

In a learning institution you're creating building blocks that will set the future in motion, where you can not only see what is in front of you, but what lies beyond the walls, and when you look up you see pockets of blue sky. Imagine a place where glass plays a subtle yet vital role in the architecture and drives the learning experience.

Glass was infused throughout the layout of the Berkeley Law School addition in the form of skylights, walking planks and even transparent/semi-transparent wall systems that allow light to filter into two below grade levels.

And the use of glass in interior architecture goes further. At Villanova's Falvey Library, a glass partition system takes center stage to offer a visual connection to a nearby tutoring and conference space. And in the Seidman University Hospitals Cancer Center in Cleveland, Ohio, glass takes on a more practical purpose since it is much more difficult for germs to survive on its non-porous surface.

The use of interior glass in architecture can help bring the outdoors inside as well as increase the spread of natu-

ral light throughout a building, which can help bolster social interaction.

"The primary benefit in our work [in interior glass] is the extended connections to shared daylight," says Michael L. Prifiti, FAIA, of Philadelphia-based BLT Architects. "Beyond the glazed walls, we are more frequently including transom or sidelites in office construction."

Sherman C. Aronson, AIA, LEED AP, also of BLT Architects, adds, "Glass has so many facets—the design can exploit its transparency, so that there is both an image or color, and the ability to see through to borrow daylight and to create interior effects. Through the use of translucency, we can obscure vision to areas that are more private, while allowing a sense of connection and perception of lighting.

"It may also provide an opaque finish on a wall, counter or interior finished facing material," he continues. "And the use of textured glass, with a three-dimensional surface, adds activity and life to the situation and catches light in a variety of ways."

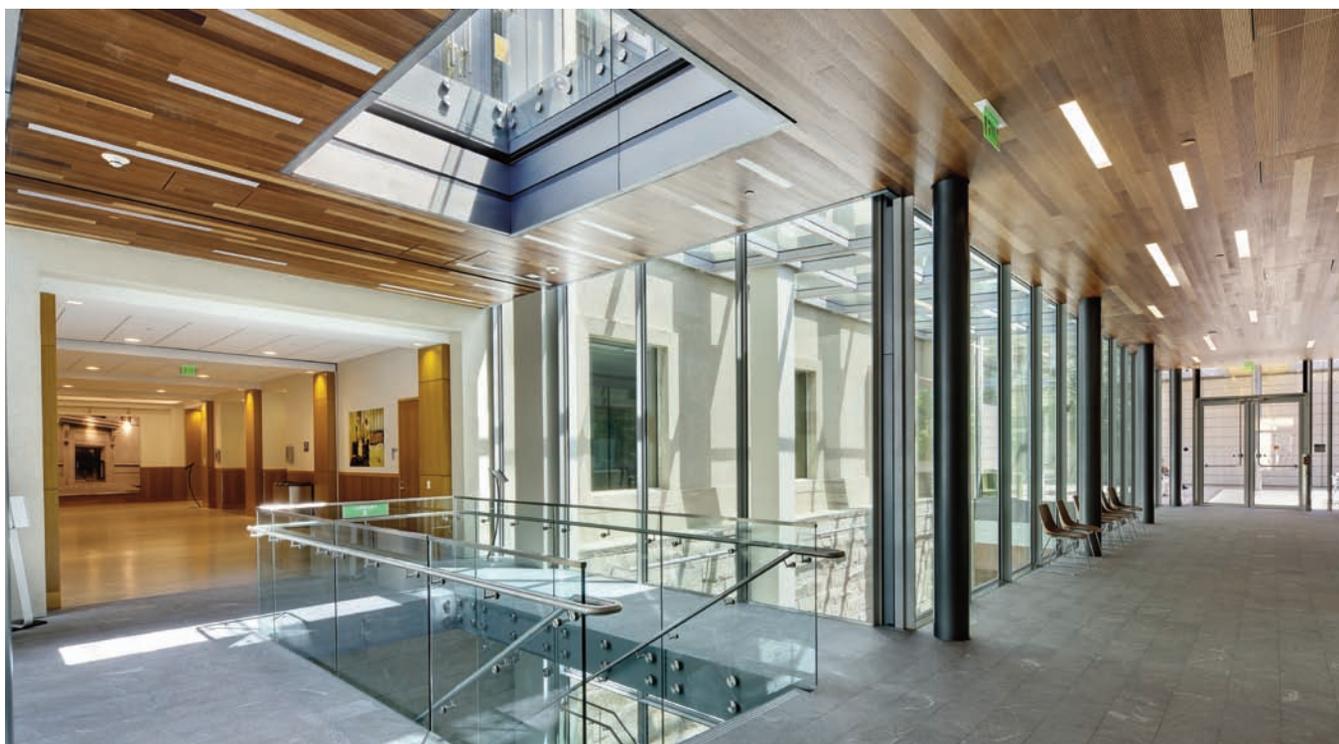


Photo: ©2012 Steve Whittaker/whittpho.com

Left and above: Ratcliff used glass when working on the addition to the UC Berkeley Law School to create visual interest and social interaction.

Meanwhile, Joseph Nicola, associate principal and director of academic practice at Ratcliff in Emeryville, Calif., says the use of interior glass can help lend an atmosphere of social interaction.

“At the UC Berkeley Law School project, we were able to foster social interaction, enhance the quality of the surroundings, unifying the indoor and outdoor elements, while strengthening connections with the surrounding courtyards and campus,” says Nicola. “Interior glass enabled exciting views between the new addition and the existing building’s classrooms, creating visual interest and cohesion to students’ experiences.”

Also extolling the benefits of interior glass in architecture are officials with Paulsboro, N.J.-based McGrory Glass, a flat glass fabricator and consultant to the architectural glass industry.

“Glass provides unlimited options in colors and patterns, encases beauty and visibility, and contributes to the aesthetic disposition of the environment,” says Gary McGrory, vice president of McGrory Glass.

“Warm colors and subdued tones set a mood for business in a more consultative and creative architecture, whereas bright, bold shades in health care settings can help build a positive attitude and sense of well-being,” he adds.

Projects Turning to Interior Glass

There are numerous options for incorporating interior glazing into projects. For instance, at Villanova’s Falvey Library BLT used the DIRRT glass partition system in a renovation of an entire floor into a new learning commons, according to Kevin W. Aires, AIA, LEED, BD + C of BLT Architects. DIRRT is a company that makes demountable glass partition wall systems.

“A central ‘street’ concept was developed with floor-to-ceiling glazed partitions along both sides of an entire lounge cor-

ridor providing visual connection to adjacent tutoring services and conference spaces,” says Aires. “This has created a stronger community among the different programs located in the learning commons and enlivens the whole facility.”

The company also utilized interior glazing at Revel Resort in all the office administration areas.

“With the use of film, we were able to create a sense of an open office, yet still maintain privacy within,” adds David M. Smallets, AIA, LEED AP, of BLT.

As for multi-family housing projects, Aires says, “We see growing potential for interior glazing within the club room facilities, where smaller breakout spaces can be created for private gatherings, while still allowing them to be experienced as part of the larger amenity facilities.”

Prifti, also of BLT, notes, “We are incorporating glazed walls where a visual connection—yet acoustical privacy—is required and where perimeter daylighting is intended to penetrate into the building core. This is occurring in commercial, educational and institutional market sectors.”

Further discussing what his company used in the Berkeley Law School project, Nicola, says, “The ability to bring light to the two below grade levels was paramount to the success of the project. By providing glass skylights, glass walking planks, transoms, sidelites and transparent/semi-transparent wall systems, natural light was able to filter through the occupied spaces to provide a connection to the outdoors.

“Novum was the main supplier of all the building glass systems and Teknion provided the movable interior partition system,” he adds. “We also created a dynamic and kinetic glass-enclosed central staircase that creates vertical sightlines between floors and when illuminated, casts a lantern’s

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NO BOUNDARIES

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Photos: McGrory Glass

At left and Above: Seidman University Hospitals' Cancer Center in Cleveland, Ohio, also takes advantage of the qualities interior glass can offer.

glow within and without.”

While interior glass has been utilized in warm weather climates for quite some time, Nicola says that over the last 10 to 15 years, with the advances in high-performance glass and exterior enclosures, interior glass is becoming more prevalent in cold weather climates.

McGrory Glass officials are seeing the most interior glass usage with health care facilities.

“Seidman University Hospitals Cancer Center in Cleveland, Ohio, utilized back-coated wall cladding glass for the lobby and elevator areas,” McGrory says. “Translucent acid-etched glass [was used] for the stairwells and custom-laminated glass [was used] for the offices and patient rooms to provide privacy.”

He adds, “Every architect and designer has his or her custom signature that is applied to their creations. The common thread is a uniqueness derived from years of creative endeavor. Prestigious walls with depth and clarity are punctuated by textures and shapes. Safety and beauty are enveloped in thrilling and mesmerizing interiors where glass becomes the background for a foreground of grouped function centers.”

Interior Glass a Growing Trend Going Forward

All the officials agree that looking to the future, the usage of interior glazing in architecture is likely to continue growing.

“In our academic projects, we have proposed interior glazing systems much more often of late, especially for areas that are looking to create an open feeling to the campus community, while still maintaining an ability to close up after hours,” says Aires.

Aronson adds, “We see more use of interior glass, espe-

cially in hospitality projects, with no end in sight. And the inventiveness of the manufacturers is always astounding, leading to more unconventional uses. In particular, the ability to create custom images set into laminated glass offers endless options for creativity.”

Nicola also says he sees interior glass usage continuing to gain ground.

“With the advent of technology to offer high performance and efficient glass systems and manufacturing ability to produce glass systems which are both aesthetically beautiful, energy efficient and cost effective, there are fewer limitations and a wider array of opportunities to bring light and connectivity into buildings,” he says.

McGrory says he expects even more health care facilities to turn to interior glass in the near future.

“There is a trend to use more glass in health care facilities due to the inability of bacteria to survive on the hard, non-porous surface of glass, especially in applications such as wall cladding and marker boards,” he explains.

So whether being used for more practical purposes in health care, or to bring the outdoors in and foster an increased sense of natural light, it appears the trend toward utilizing interior glazing in architecture is poised for further growth. ■

the author



Jenna Reed is a contributing editor for USGlass magazine. She can be reached at jreed@glass.com and followed on LinkedIn.

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ON LEAN ON ME

Teamwork is What Made Construction of the San Francisco Public Utilities Commission a Big Success

by Ellen Rogers

If an architectural specification came across your desk calling for more than a dozen unique curtainwall types what would you do? Gather up a team of strong players and work together to make the vision a reality. That was the case with the newly-constructed San Francisco Public Utilities Commission (SFPUC) headquarters. Designed as a joint venture by KMD Architects and Stevens Architects, the project has been dubbed a “poster child of sustainability” and was one made possible with a multitude of glass products in hundreds of shapes and sizes.

Completed in 2012, the 14-story tower spans 277,511 gross square feet and earned a Leadership in Energy and Environmental Design (LEED) platinum rating. It features about 50,000 square feet of glazing fabricated by Hartung Glass Industries with PPG as the primary glass supplier. In addition to its energy performance, the project also had to be designed and built with seismic considerations in mind.

At first glance a project like this may seem intimidating for some, but Benson Industries in Portland, Ore., was up

A number of glazing products were used extensively on the recently constructed San Francisco Public Utilities Commission building.

for the task.

John Beaulieu, vice president of business development, says it all started when his company was invited to put together a proposal for the project.

“Once we saw the building [plans], the curtainwalls and specialty nature of the work we felt it was something we would eventually want to build,” he says.

Jeff Rosenberg, SFPUC project manager with Benson, adds, “Every project we do is a completely custom curtain-wall.” He adds, “We went in with the architect and worked with them to design a system to match their aesthetic requirements, thermal requirements, etc.”

“Special buildings are what we have been doing for decades,” adds Beaulieu. “Architects bring [those designs] to us and it gives us the opportunity to put it together into reality.”

The resulting project stands as a testament to just what can be achieved when all parties involved come together solely focused on bringing innovative architectural designs to life.

FRESH START

“We start every project with a clean canvas and take what the architects want and make it buildable,” says Rosenberg, pointing out they built about 200 new dies specifically for this project. “Every job is 100-percent custom,” he says.

Beaulieu adds, “Each architect wants to improve upon the past and bring a new freshness to the end result and every project requires that custom design, built to suit.”

As a result, more than a dozen different curtainwall types were built and installed for the SFPUC. One unique detail of the project can be seen on the east elevation. Rosenberg explains this area features cold-formed units.

“As you build the frame in the shop the glass is built out of square and as you install it the units are intentionally warped and anchored to the building,” he says, noting this creates a curved glass detail, and that you have to anticipate the out-of-square component.

To help aid in the design, 3-D modeling was essential.

“Everyone [on the project] provided a 3-D model to coordinate warping of the structure, etc.,” says Rosenberg, who adds, “As building [designs] get more complex, [constructing them is becoming] more complex and so a lot is done now with 3-D modeling.”

“The software is getting better and better and we’re able to use it more and more [to create these models] we can then share with others [on a project].”

Beaulieu agrees, “We’re seeing BIM requirements specified on almost every major project.”

Also adding to the project complexities, Benson was responsible for all components of the exterior envelope.

“What Webcor (the general contractor) likes to do on its projects is have one subcontractor responsible for everything on the enclosure of the building,”

says Rosenberg. “And we were awarded everything on the outside of the building ... we even did the roll-up garage doors.” Other elements for which they were responsible included granite walls, sloping curtainwalls, exterior Venetian blinds, all of the interior roller shades on vertical walls, exterior sunshades and light shelves, among others.

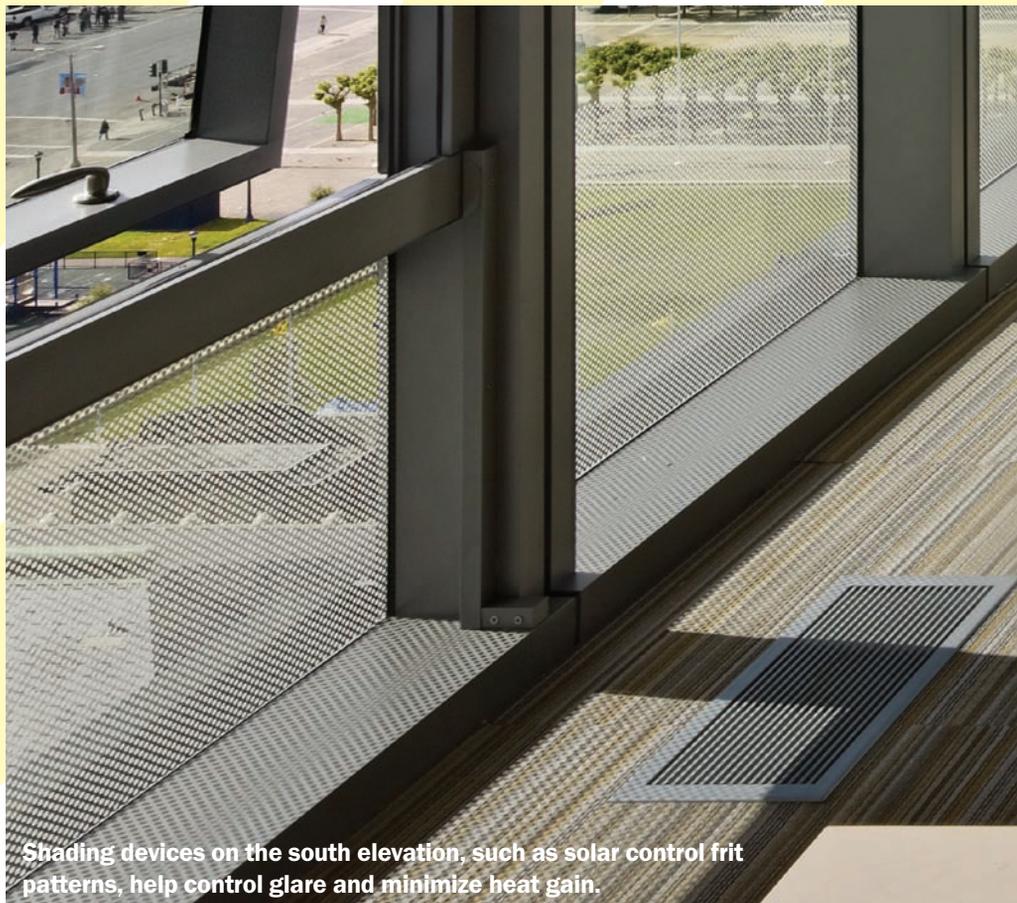
“This building has just about every type of glazing you can imagine,” he adds.

Another unique feature is the wind tower on the north elevation, which also warps to create a ventricle effect.

“The glass forms a wind foil so as the wind comes up it funnels into four vertical wind turbines and the glass is doing the work of funneling the air,” says Rosenberg.

The new SFPUC headquarters officially opened its doors last June, though

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Shading devices on the south elevation, such as solar control frit patterns, help control glare and minimize heat gain.

LEAN ON ME

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the project began about two years prior for Benson. It took about a year before the team moved into the field where they had a six-month timeframe for installation. Rosenberg says this wasn't necessarily a tight schedule to complete a 14-story tower, but the difficulty was the complexity of the project.

PIECE BY PIECE

"With this many systems and us responsible for everything it was challenging to accomplish," he says.

Beaulieu says there really were no challenges or out-of-the-ordinary concerns with the installation, aside from being in a downtown location.

"Once engineering and logistics are complete it's a process of execution and so the difficulties in the field were more in line with the warped glass, but the actual construction was within the normal category of what we do," he says.

With so many systems and so much glass, having a solid team on which to rely is critical. Hartung Industries was one of those important players.

According to Bob Morse, northwest sales manager with Hartung, his company got involved with this project since they are a PPG certified fabricator and

PPG glass was specified for the job, specifically Solarban 70 and Starphire.

"The architect held firm in staying with that," says Morse. "So the main debate was coating after tempered and that was a concern because of roller wave distortion. We were able to achieve less than 5/1000th of an inch in roller wave distortion and everyone was happy."

TALK IT THROUGH

"That was challenging because there is a portion of the front façade that leans at an angle as you are standing in front of it. When you look up at that angle it will be really evident if you have roller wave or any type of distortion," adds Kirk Johnson, Hartung COO.

Morse says Hartung's scope was to supply roughly 50,000 square feet of vision Solarban 70 over ¼-inch Starphire. There was a portion that was also fritted and they supplied the glass for the wind tower, which features ½-inch tempered Starphire glass. Due to the uniqueness of the project with its many different shapes and sizes, Morse says the glazing for the wind tunnel was the only high-volume portion of the project.

Glazing is also used significantly on the interior and for that Morse says they worked with Progress Glass based in San Francisco.

As most everyone will agree, building and construction practices are changing rapidly, and becoming increasingly complex.

"When I started 30 years ago buildings were square or rectangular high rises ... and as software has improved architects are taking advantage of that and they are twisting and warping (the buildings) creating these free-form designs," says Rosenberg. "As buildings get more complex geometrically it takes more communication among the trades. Plus, thermal requirements have increased; everything has gotten more and more complex."

Beaulieu agrees and says it is almost the norm now to have extensive collaboration. He says the glazing side of a



project needs to be on board throughout this process—as do the others involved—because buildings “are being designed for the environment in which they live and the environment dictates this collaboration taking place.

"I don't know of any one firm that has all of this expertise on board to address all of the issues and that's why collaboration is necessary," he says.

Such coordination was also essential. In fact Morse of Hartung attributes the main cause of their success to the pre-planning.

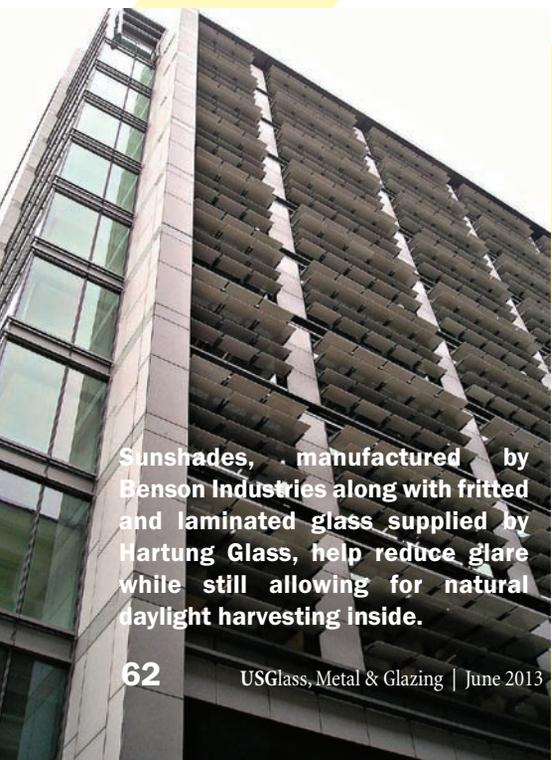
"We had numerous meetings with the fabricators and project managers at Benson," says Morse. "There was lots of project coordination and a lot involved and that paid off."

Johnson explains that prior to shipping any glass a representative from Benson visited their facilities to inspect the glass and make sure it was acceptable.

Rosenberg says this is not unusual for Benson.

"We visit our partners routinely and we inspect the goings on as part of the quality control," he says.

"The structural integrity of the insulating glass was important," says Morse. "They were concerned about edge deletion, the PIB and making sure it was continuous, overall thickness of the unit and roller wave distortion."



Sunshades, manufactured by Benson Industries along with fritted and laminated glass supplied by Hartung Glass, help reduce glare while still allowing for natural daylight harvesting inside.



The SFPUC project, which has been called a “poster child of sustainability” earned LEED Platinum certification.

And Rosenberg agrees that working with Hartung was a smooth process.

“It went well with them and they were there to back us up when we needed it,” he says.

All in all, fabrication took three to four months.

Johnson says communication was also important because besides the significant volume of glass Hartung was producing, the company was also depending on its numerous branches working together. In fact some products traveled as far as 200 miles between facilities in Vancouver and Washington.

“... This project was a success for us in terms of our locations working closely together to provide a win for our customer,” says Johnson. “We are very good at doing tempered, laminated, insulating, Argon filling, ceramic frit ... multiple processes at different locations. We’re good at having all of our players on the team working together.”

How does Hartung make this work among its facilities?

“Typically we have a gatekeeper. That person is the project manager who works with a key person at each location,” says Johnson. “We build a team for the project and one person is the head. We use technology such as gotomeeting.com, etc., to meet and discuss the progress. It’s also a

collaborative effort with the customer and we bring them in for regular meetings.” Johnson adds that they also limit the dialog on the project to those working on it so others are not getting involved.

Morse also points out that just as with the intricate geometries of the job, if you don’t have all the pre-planning done properly the end results might not be successful.

“Benson is very well run and well organized and that pre-planning made the difference,” he says.

DEFINING DETAILS

In addition to the overall unique aesthetic the completed project features, those involved say there are also a number of details that stand out. For Rosenberg this includes being involved with the exterior Venetian blinds, the interior roller shades and the overall lighting requirements of the building.

“We were very involved with all of that and how [light] interacts with interior offices space,” he says.

Seismic requirements were also part of the job, so glazing had to be anchored to the framing, but Rosenberg and Beaulieu agree their company’s designs are all conducive to these zones.

“As complex as it is, it’s the norm these days,” says Rosenberg. “We have a

large engineering staff to lean on to design these projects.”

With no two projects being exactly the same, there is always something new to take away from a project. For Beaulieu, however, it’s hard for him to say just what that is with the SFPUC headquarters.

“It was a complicated, custom curtainwall and ... it’s difficult to point out what we learned as we’re involved with these on a daily basis,” he says. “However, as architects become more involved with complex, high-performance cladding, we all grow day-to-day. Look at the thermal requirements of the last 20 years and you see nothing is like what we were doing 45 years ago. It’s just the evolution of change.”

Johnson is also excited about the outcome and looking forward to taking on similar projects in the future.

“We like this work and we’re geared for it; this is our sweet spot and we like seeking this type of project,” he says, adding they are doing more on the front end to get involved in specifications.

“We see the value of being involved further upstream and we’re looking to grow there,” he says. “As a company we’re investing in our own capabilities and want to service these future projects and meet those demands.” ■

The Top

What You Need to Know About Window Film

by Casey Neeley

Window films are probably a little lower on the list of architectural priorities. They may be seen as an afterthought, a retrofit solution for older buildings or a detail dictated by building codes the general contractor will sort out.

Window film professionals beg to differ, however. Here is what they think you need to know about window films and their benefits.

1 “One of the common misconceptions is that window film is that ‘purple, bubbly stuff I see on cars.’ Another misconception is that window film is just colored plastic, not a high-performance material. It is not widely known that window film as a retrofit item can be one of the quickest and simplest energy conservation measures available, as well as the most cost-effective. In regard to new construction, window film can be used as an energy-control boost to glass performance and/or to achieve a desired look.”
 —Tom Niziolek, director of sales and development, architectural for Woburn, Mass.-based Madico Window Films

3 “The most important thing architects should know is how versatile decorative window film is now. By utilizing the available technology, the ability to customize film with a custom graphic or message makes decorative film a highly appealing option.”
 —Gus Arredondo, marketing manager for Ontario, Calif.-based AmGraph Group

2 “Solar radiation from the sun is divided into three components; visible light we can see, and infrared and ultraviolet rays which we can only feel. As solar radiation strikes a piece of glass, window film acts as a ‘sunscreen’ to block harmful UV rays as well as regulate the levels of heat and light passing through the glass. The amount of heat and light rejected is all dependent on the type of window film selected. They are the cost-effective alternative to tinted or decorative glass replacement.”
 —Sam Lee, president of Buena Park, Calif.-based Wintech Window Films

4 “Window film is eligible for the tax credits approved by Congress and the tax incentive can cover up to 10 percent of the cost of the installation of window film to a maximum of \$500.”
 —International Window Film Association (IWFA)

11 “It is a more economical alternative to ordering and shipping huge sheets of tinted glass. It is also more efficient than glass installation because it is a faster installation.”
 —Lee

13 “Communicating with the film installer is important. We have to find out what the problem is; what is the reason you’re asking for this film? Explain the reason you want to tint and why you want to put the film on.”
 —Simon

14 “Architects should know that, with film, they can now have all of the benefits of custom glass without the inherent problems and cost associated with custom glass.”
 —Arredondo

16 “There are also several safety and security benefits for using window films. Along with personal safety, films also protect against damage to or loss of physical property (anti-intrusion, graffiti control), business interruption, and natural disasters (blast-mitigation, violent storms, etc.).”
 —Niziolek

12 “Global energy conservation is one major benefit. According to the World Business Council for Sustainable Development (WBCSD), 40 percent of global energy is consumed by commercial buildings. Roughly one-third of the power consumption of a commercial building is due to excess load placed on HVAC systems from solar heat gain (SHG). High-efficiency window films can reduce SHG by 50-75 percent, often without requiring a drastic change in aesthetics from either the interior or exterior view. Window films help manage SHG by controlling the transmission, absorption and reflection of solar energy.”
 —Niziolek

15 “The State of California has become the first in the nation to add window film in the new building code for 2014. This gives further legitimacy to window film as a cost-effective energy saver.”
 —Lee

20 List

5 “There are so many types of different film for many different purposes including building envelopes, fenestration systems and security systems. Film can be applied to all commercial or residential settings and there are selections of films safe for dual-pane windows including storefronts, anywhere you want to block glare in offices and homes on any window, large or small. Films can also be used anywhere you need to protect interior furnishings and valuables from fading caused by UV damage from the sun.” —Lee

7 “If architects contact the installer or distributor, that will help them. I’ve dealt with architects who said they wanted a specific type of film then changed their mind once it was installed.”

—Rick Simon, owner, Ideal Glass Tinting in Rancho Cucamonga, Calif.

6 “Most architects are not aware of the advancements that have been made in decorative film. Gone are the days of having to cut the film with a plotter to achieve any kind of custom graphic. The capability to print directly on the film in any color including white ink enables us to print any custom graphic or gradient in 1000 dpi high definition. The fact that the PET film is recyclable and environmentally friendly is certainly an appealing concept as well.” —Arredondo

6 “Window film was originally designed as a retrofit product to enhance glass performance. It is a polyester based film that typically has a multi-layer construction. Products range from 1-mil to 15-mil in thickness. High-tech, high-performance films have revolutionized the industry in the last 10 years.” —Niziolek

8 “Architects can use window films for retrofit applications for new, green buildings or renovations as an alternative to window replacement.” —Lee

10 “With more people choosing to stay in their homes and remodel them to accommodate their needs as they age, updating windows with window film will prevent UV exposure and allow natural light to penetrate the living space without harm. Window film blocks up to 99 percent of harmful UV rays.” —Darrell Smith, IWFA

17 “We wish architects knew that they need to know more about window film. It is gaining recognition over the years and we do believe window film education will become more comprehensive in the future. No one can argue the numerous advantages of window film over tinted glass. It is one of the most effective, economical methods of controlling energy costs.” —Lee

19 “Because film installation is usually the last option after the entire construction or retrofit process is complete, architects may think it’s not necessary, but the numerous benefits that come from film are underrated simply due to lack of exposure in the architectural industry. The need for film is often realized later down the road, often due to complaints of glare, high cooling costs during the summer or the need for privacy. Do not let someone else take the job that you can finish off yourself.” —Lee

18 “In California, there are nearly 9,000,000 dwellings built prior to the energy building codes. By professionally installing window film on just 900,000 dwellings or 10 percent, ConSol [a California based energy consulting firm] conservatively estimates window film may cut a typical dwelling’s annual energy use by 10 percent. Taken together this could add up to 7,150,250,000-kilowatt hours. The savings is comparable to what three power plants could produce annually, or the conversion equivalent of 4,000,000 barrels of oil, according to ConSol.” —IWFA

20 “Window film contributes to green buildings, specifically the US Green Building Council LEED program. It is the most often overlooked opportunity to save energy and money. Window film creates sustainable sites by controlling light pollution, provides glare and thermal control and regulates heat gain. Filming your windows is a simple, cost-effective and passive way to conserve energy and offset greenhouse gas emissions.” —Niziolek

ShowCase

railings

Unlock This PanelGrip®



The PanelGrip system is the latest development in railing technology from the Wagner Companies. It utilizes what Wagner calls a unique locking mechanism of high-strength aluminum

and pvc isolators combined with a lightweight aluminum shoe moulding. When assembled with tempered or laminated tempered glass of the appropriate size, PanelGrip enables the installer to fabricate a structural glass railing system with significant reductions in labor and freight costs over standard wet glaze options, according to the company.

▶▶ www.wagnercompanies.com

decorative glass

In This Image

One-way vision glass from Imaging Sciences incorporates a film with exact registration printing on a PET film that is laminated into safety glass. According to the company, the film adds tensile strength of 20,000 PSI to the penetration resistance of laminated glass, making

penetration almost impossible. The exact registration graphic provides directional viewing—the view from the outside into the facility is obscured, but people inside can easily see visitors outside.

In addition to its security features, one-way vision glass makes it possible to incorporate decorative and graphic options, improve solar heat gain performance, perform as safety glass by holding pieces together when shattered to prevent injury, and make the environment quieter—all without interfering with the occupants' view of the outdoors, according to the company.

▶▶ www.imaging-sciences.com

machinery and equipment

The Right ExactaBlend

Graco Inc. introduced the ExactaBlend AGP advanced glazing proportioner. The company says ExactaBlend AGP is designed to solve the inherent challenges of on-ratio mixing for silicones that are often used in manufacturing curtainwall and insulating glass and the system's real-time ratio assurance also is said to reduce material waste by shutting down automatically if off-ratio conditions occur.

The ExactaBlend AGP is easy to operate, according to the company, because the unit's electronic controls remove the



guesswork from ratio setting and maintenance while the controls provide simple set up of ratios and also allow operators to make ratio changes on the fly.

Optional data reporting capabilities allow window manufacturers to track key information such as ratio, material usage, flow rate, alarm events and system errors, which can be gathered via USB data download and used to streamline the production process and increase effectiveness of the line.

▶▶ www.graco.com

Feel the Tension

Breco/Brecoflex Co. is offering the new generation SM5 universal tension meter. The SM5 tension meter is designed to measure the frequency (Hz) of all belt types, regardless of the belting and tension member material, according to the company.

The new generation SM5 tension meter provides a belt-frequency reading of 7Hz to 450 Hz +/-5 Hz.

The function of the pre-tensioning belt is to maintain tension at all times in order to achieve maximum belt performance by eliminating belt under-tensioning or over-tensioning. The new generation SM5 universal belt tension meter ensures correct belt tensioning, which results in accurate measurement results of optimal belt performance and life. The company says this saves production and down

glass

You're In Control

Vision Control® by Unicel Architectural is designed for daylight and vision control. The product is constructed as an insulating glass unit that incorporates a patented, hermetically sealed system combining louvers within glass.

According to the company, the louvers can be customized to virtually any shape for interior or exterior glazing applications and its technology eliminates strings, ensuring alignment and no maintenance.

When installed in exterior applications, it reduces energy consumption in support of LEED® certification requirements.

▶▶ www.unicelarchitectural.com



time with quick readings, fulfilling quality system requirements with traceable certification and integrating with the company's online calculation program.

▶▶ www.brecoflex.com



cleaners Foam Party

Spray-X glass cleaning foam, distributed by Strybuc, is billed as a versatile cleaner that works on glass, windows and other hard surfaces. The non-ammoniated foam is described as "heavy duty" and is said to cling to vertical surfaces and work safely on tinted surfaces.

According to the company, the cleaner meets current volatile organic compounds regulations and uses an SD-40B cosmetic grade alcohol that is 200 proof and 99.9 percent pure.

▶▶ www.strybuc.com

hardware Sturdy Door Hardware

Von Duprin has unveiled a suite of products for facilities in code-driven regions and humid, salty and high wind conditions that require extra protection. These products feature coatings that inhibit rust and those that are designed, tested and certified to WS9827/9927 and 237 standards, which both meet the FEMA 361 and 320 building codes for wind-storm resistance.

For exit devices that are exposed to extreme conditions and need additional protection against the elements, Von Duprin offers a clear protective coating to the exterior and interior of an exit device's mechanical parts to help prevent the effects of weather or chemical corrosion. According to the company, this coating improves chemical and corrosion resistance and additionally provides antimicrobial protection.

▶▶ www.w3.securitytechnologies.com



These Strikes Are In

HES offers a number of hardware products including its 9600 series--a surface-mounted electric strike designed to exceed ANSI windstorm testing. The series can accommodate rim exit devices with a 3/4-inch throw latchbolt. All components are encased within its 3/4-inch thick stainless steel housing. It is also UL1034 burglary-resistant listed and meets all ANSI/BHMA Grade 1 standards. It is field selectable for fail secure and fail safe opera-

tion, and for 12 or 24VDC. The series also features an optional latchbolt monitor and latchbolt strike monitor to indicate whether the door is locked, or to notify operators that a door is secure.

Also available, the 9400 series is a slim-line, surface-mounted electric strike that does not require cutting on the frame, according to the company.

The series exceeds Grade-1 standards for not only strength, but also performance and is field selectable for fail secure and fail safe operation with 12 or 24VDC. It is also UL1034 burglary-resistant rated.

▶▶ www.hesinnovations.com

continued on page 68

glass handling and transportation Metal Master

Wood's Powr-Grip has introduced its Panel Master vacuum lifters, which the company says offer safe, efficient handling and installation of most insulated metal panels while also reducing time on the job site.



Available in configurations specifically designed to support longer, heavier panels, the vacuum lifters enable users to install panels easily, while preventing damage from flexing or bending, according to the company. Designed with safety in mind, Panel Master vacuum lifters come standard with Powr-Grip's Dual Vacuum System, in which vacuum pads are divided up between two different vacuum circuits. If one circuit experiences vacuum loss, vacuum pads from the other circuit continue to maintain sufficient vacuum to prevent load damage and possible injury.

With the Panel Masters, vacuum pads attach directly to the face of the panel, so there is no need for slings or hooks. Edges are kept free for exact panel placement, while quick attachment-and-release increase productivity, according to the company. Optional pad frame extension arms and rocker arms can handle roof panels more than 60 feet long and weighing up to 1100 pounds. In addition, the company's optional remote control system allows users to operate a vacuum lifter from up to 250 feet away.

▶▶ www.powrgrip.com

ShowCase

continued

window film **3M Feeling Safe and Secure**

3M safety and security window films are designed to contain broken glass fragments together within the window or door frame in the event of breakage. Doing so, according to the company, creates a strong barrier, reduces the chance of injury, and helps impede entry into applications.

According to the company, rigorous testing is conducted to ensure its safety and security window films meet or ex-

ceed industry standards for impact performance, tear resistance and durability.

▶▶ www.3mwindowfilm.com

doors and windows **On the P(R)L**

PRL has introduced its new exterior accordion sliding bifold door system, which has thermally broken doors and frames for what the company says is increased energy efficiency and the ability to have differing finishes inside and out. The doors can be used in a wide range of applications and configurations.



Exterior aluminum bifold doors by PRL can be glazed with dual or triple pane insulating glass; they can also be stacked, according to the company, creating a completely unobstructed opening.

▶▶ www.prlglass.com

Fold 'Em Efficiently

LaCantina Doors announced new options for its folding doors that include NFRC ratings of 0.30 and lower. According to the company, it received new NFRC ratings for the current year and can help those looking for appropriate NFRC-rated products for building, renovating, remodeling or replacing existing doors while still reducing heating and cooling costs and maximizing energy savings.



In addition, the company now offers what it says is the first folding door ADA-compliant ramp sill. The ramp complies with Code #1124B that requires gaps in walking surfaces to be no greater than 1/2-inch. The new ADA ramp sill is ideal

switchable glazing **Switcheroo**

Switchable Projection Windows by Scienstry, an innovator in the film LCD field, are said to be able to turn virtually any window into a TV screen while retaining the full function of a normal window. The Switchable Projection Window (SPW) consists of two parts: 3G switchable glass and outdoor rotary blinds. 3G switchable glass is a liquid crystal display (LCD) and can be turned from opaque to clear with the flip of a switch. In its opaque state, the glass can be used as a projection screen. An outdoor rotary blind functions as a light shutter.

In its clear state, SPW has normal window functions such as opening, closing and visibility. By switching the privacy function from clear to opaque, users are able to use the projection screen function to show high quality of images for HD TV, movie, presentation and dry-erase whiteboard functions. It also can be converted into a touch screen.

According to the company, SPW has a wide range of application temperatures from -22° Fahrenheit to 176° Fahrenheit (-30° Celsius to 80° Celsius), is UV stable and water resistant. 3G switchable film can be directly installed on existing windows at approximately the same cost as motorized window shades, and the opacity can be gradually controlled in different levels, according to the company.

▶▶ www.scienstry.us

Now You See It, Now You Don't

Switchable products from Glass Apps are available as both laminated glass, as well as a film that can be retrofit and adhere to existing glass.



The switchable crystal polymer products transform from clear to opaque, as the on/off and dimmable controls allow for various states of privacy, dynamic partitioning, lighting control and heat management.

In addition, the products provide a surface for high-definition (HD) projection and display advertising, offering HD quality projection in its opaque state and holographic imaging in its clear state.

▶▶ www.glass-apps.com

for commercial applications including schools, libraries, restaurants and retail storefronts where the interior and exterior floor levels are the same and a maximum sill height from the finish floor of a 1/2-inch is required.

▶▶ www.lacantinadoors.com

Opcon Adds New System

The Opcon automatic door operator conversion system from Opcon USA LP utilizes a case and chassis assembly to convert automatic door operation to complete an underground or in-floor system. In addition, the UL 50 rated water-proof installation keeps the system completely concealed.

The system is compatible with all standard automatic door operators by all leading automatic door operator manufacturers, the company says.

▶▶ www.opconusa.com

surface protection Keep it Clean

Unelko Corp. has developed a new 3D nano-coat technology for glass cleaning and protection. Called Repel, the patented product can provide a nano-scale "barrier coating" that shields and protects glass against soiling, staining and buildup, all while cleaning. It can be used to protect windows, facades, partitions, tempered glass, laminates, sandblasted glass, tables, solar panels and skylights.

Periodic cleaning and maintenance can also be reduced by as much as 90 percent, according to the company.

▶▶ www.unelko.com



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NewsMakers

appointments



Jim Waldron

Wausau Window and Wall Systems has a new president, **Jim Waldron**. Most recently, he was president of Metal Sales Manufacturing Corp. (MSMC), a provider of metal roofing, siding and building components for the commercial construction market. Prior to running MSMC, he was with The Timken Company, a provider of high-performance bearings and steel, for more than 20 years.

Waldron has a master's degree in business administration from Illinois Benedictine College in the Chicago area and a bachelor's degree in mechanical engineering from Georgia Institute of Technology in Atlanta. He reports to Joseph Puishys, CEO of Wausau's parent company, Apogee Enterprises.

The company also has several new sales managers. **Russell Williams** is its architectural sales representative serving customers in upstate New York, Connecticut, western Massachusetts, Vermont and southern Quebec and southern Ontario.



Russell Williams

Williams previously worked with Wausau's long-time customer, Colorado-based glazing contractor J.R. Butler Inc. as a project manager, plant manager and project engineer.

Dan Cherney is serving as architec-



Dan Cherney

tural sales representative for Maine, New Hampshire, Rhode Island and eastern Massachusetts. Most recently, Cherney concluded a total of 16 years as a regional sales manager with CPI Daylighting Inc. of Illinois.

The company also hired **David Baer** as its architectural sales representative serving Tennessee, Kentucky, Mississippi, Alabama and Louisiana. Most recently, he worked for Eldorado Stone as a southeast regional architectural sales representative.



David Baer

promotions

Thermal Industries, a division of Atrium Corp., has promoted **Richard Hardie** to regional operations manager. He has been with the company for 32 years.

"During Richard's 32 years of service at Thermal Industries, he has been instrumental in helping define the operational methods of our distribution facilities around the country," says Scott Jeffreys, vice president of sales. "In most recent years, he has been very helpful in supporting the efforts of our East Coast distribution facilities, and we have decided to expand his role to the entire distribution network."

kudos

Alissa Warnemunde Schmidt, an architectural design manager for Viracon, received the 2013 Distinguished Young Alumni Award from Minnesota State University Mankato.



Alissa Schmidt

She is one of 11 2013 alumni award winners.

Schmidt graduated from Minnesota State Mankato in 1999 with a bachelor's degree in interior design. Distinguished Young Alumni Awards go to graduates 35 years old or younger who have reached professional achievements early in their careers and have positively impacted their communities.

Also at Viracon, **Nicholas Peake**, architectural design specialist, earned accreditation as a Leadership in Energy and Environmental Design Green Associate from the U.S. Green Building Council.

Peake joined the company's architectural design department in March 2012 with a bachelor's degree in environmental design and a master's degree in architecture, both from North Dakota State University.

new hires

Tubelite Inc. has recently added a number of new employees to its roster. **Greg Hall** is the new product development engineer for the company's facility in Dallas/Fort Worth, Texas. Previously, he worked for



Greg Hall

ten years with Oldcastle BuildingEnvelope® (formerly Vistawall) as a senior product development designer.

The company also announced three new client development managers. **Mike Kwasny** will serve



Mike Kwasny

Obituaries

IGMA's Allison Beck Passes Away



Allison Beck

Allison Beck, who served as the administrator for the Insulating Glass Manufacturers Alliance (IGMA) passed away in April after a brave battle with cancer. She died at Ottawa General Hospital surrounded by her family and lots of love.

Beck worked for the industry since joining the Insulating Glass Manufacturers Alliance of Canada (IGMAC) team in 1995 and was part of the transformation team after the merger with the Sealed Insulating Glass Manufacturers Association in October 2000. She organized IGMA events and in the past few years had managed the IGMAC Certification Program.



Scott Dooley

Utah and southern Colorado. Most recently, he worked as a sales representative for Manko Windows Systems in Colorado. **Scott Dooley** will focus on Alabama and the Florida panhandle. He most recently worked at Oldcastle BuildingEnvelope® where he was a sales representative for 14 years.

And, **John Wiemer** will serve clients in Arkansas and Oklahoma. He spent 30 years as an architectural sales representative for Kawneer and most recently worked for Valley Building Specialties.



John Wiemer

Heitmann & Associates Inc. in St. Louis hired **Dennis Dueing** as an architectural consultant and **Colin Long** as a drafting technician.

Dueing has significant building enclosure field experience and holds a bachelor's degree in architecture from Drury University. He has worked as an architect in the St. Louis area for many years, according to the company.

Colin is a recent graduate of ITT Technical Institute with a special emphasis in computer-aided drafting and design technology.

Roger McGuire has joined the sales and architectural promotion team for Walker Textures acid-etched glass and mirror products. McGuire has more than ten years' experience in the architectural industry and in his new position will be responsible for Texas, Missouri, Kansas, Oklahoma and Arkansas.

He has worked for various companies in the construction field, including Bayer Materials LLC where he managed the architectural presentation team for the commercial building envelope, spray foam insulation and roofing system divisions.



Find out *more* at [www.stgroup.com!](http://www.stgroup.com)

associations

The Aluminum Extruders Council (AEC) presented two "Volunteer of the Year Awards" during its Volunteer Recognition Ceremony, held at its March meetings.

This year's awards went to **Gary Jones**, operations manager for IlSCO Extrusions Inc. in Greenville, Pa., and **Henry "Hank" Lowman**, formerly of PPG Industries Inc. in Springdale, Pa., who was recognized posthumously.

Jones was a long-time member of

the AEC Technical Services Committee and was integrally involved in helping the Council reach a reasonable compromise for the heat treatment standard issue known as "Footnote 9," according to the AEC.

Lowman was a member of the Council's Finishing Committee and was actively involved in developing the educational programs for the AEC Finishing Workshops. Lowman's award was accepted on behalf of his family by Scott Moffatt, director of marketing for PPG. ■

[datebook]

Reviews & Previews

From Hardware to Social Media, Glass Expo Midwest 2013 Offers Diverse Seminar Program



Glass Expo Midwest 2013 is set to take place October 31-November 1 at the Renaissance Schaumburg Convention Center Hotel in Schaumburg (Chicago), Ill. Co-sponsored by the Illinois Glazing Association, the Indiana, Ohio, Minnesota and Wisconsin Glass Associations, Detroit Glass Dealers Association, the Association of Glazing Contractors and USGlass magazine.

Thursday, October 31

8:45 - 9:45 a.m.

Event Welcome & Keynote

William Grenier will present the latest market outlook both globally and in the U.S., complete with the economic data to help attendees chart their companies' future.

Speaker: William Grenier, chief investment officer of Mariner Wealth Advisors

10:00 - 11:00 a.m.

Taking Hard Out of Hardware

This seminar will explain the types of hardware commonly used in glass and metal applications and will detail what to look for and why.

Speaker: Mary Hester, outside sales manager for JLM Wholesale

11:00 a.m. - 12:00 p.m.

Getting to Know the Revised FTC Green Guides

The Federal Trade Commission (FTC) has revised its Guide to Environ-

mental Marketing Claims, known as the Green Guides. The guides provide valuable advice to all industries, including glass companies, regarding what you can and can't say when making green claims.

Speaker: Elizabeth Scott, staff attorney for Federal Trade Commission

11:00 a.m. - 12:00 p.m.

Construction Site Protection and Maintenance of Architectural Glass

Learn how to cultivate an awareness of key factors that promote glass surface corrosion; identify handling and storage precautions that can minimize the probability of glass surface staining at warehouses and construction sites; elucidate the influence of local environments on the accumulation of soils and debris on glass; and more.

Speaker: Paul Duffer, Ph.D., technical adjunct for the Glass Committee, IWCA

1:15 - 3:00 p.m.

Stop Marketing Like it's 1999

This presentation will provide you with a roadmap to prepare your marketing and sales team for success in the online future.

Speaker: Bob DeStefano, online marketing strategist and speaker

1:15 - 3:00 p.m.

What Architects and Contract Glaziers Want

Learn what information architects are receiving and what products and considerations are on the forefront of their job designs.

Panel will be led and moderated by *Lyle Hill, technical director of Keytech N.A.*

Friday, November 1

8:00 - 9:00 a.m.

School Safety!

Schools and educational facilities can be designed and built as bright, open, transparent learning environments that are also safe and secure. Learn how glass and glazing products can be used in these projects and the many benefits that they can provide.

8:00 - 9:00 a.m.

Facebook + Twitter + Groupon! Oh My!

Learn how to combine your company's social media content with sharing through social networks to create targeted marketing results. Become more than just an "updater."

Speaker: Deb Levy, president of Key Communications Inc.

9:00-10:00 a.m.

Anti-Terrorism and Blast Mitigation Aluminum Glazing Systems

1 LU HSW

This session will focus on the requirements of the Department of Defense's Unified Facilities Criteria and test methods developed to validate the ability of a system to provide protection from flying glass.

Speaker: John Johnson, architectural sales representative for YKK AP America

9:00 - 10:30 a.m.

Understanding the Customer of the Future

How do you define your customer? This is a great question, and one that will determine the future success of your business. Learn how to build business with people not like you.

Speaker: Kenja Purkey, director of Strategic Plan ■

[datebook]

Up&Coming

NORTH AMERICAN EVENTS

August 6-9, 2013

IGMA Summer Technical Conference 2013
Sponsored by IGMA
Halifax Marriott Harbourfront Hotel and Resort
Halifax, Nova Scotia, Canada
Contact: www.igmaonline.org

September 10-12, 2013

GlassBuild America 2013
Sponsored by AAMA, BEMA, GANA, IGMA and NGA
Georgia World Congress Center Atlanta
www.glassbuild.org

September 18-21, 2013

GANA Fall Conference
Sponsored by GANA
Location TBA
Charlotte, N.C.
www.glasswebsite.com

September 18-20, 2013

Auto Glass Week™
Co-sponsored by **AGRR™** magazine, the Auto Glass Safety Council™ (formerly the AGRSS Council), the Independent Glass Association, the National Glass Association and the National Windshield Repair Association. Includes Auto Glass Repair and Replacement Olympics
Tampa Marriott Waterside Hotel and Marina and the Tampa Convention Center Tampa, Fla.
Contact: www.autoglassweek.com

September 18-20, 2013

International Window Film Conference and Tint-Off™
Co-sponsored by **USGlass** magazine, WINDOW FILM magazine and the International Window Film Association
Tampa Marriott Waterside Hotel and Marina and the Tampa Convention Center Tampa, Fla.
Contact: www.windowfilm-mag.com/IWFC

October 14-17, 2013

74th Conference on Glass Problems
Organized by the Glass Manufacturing Industry Council and Alfred University
Greater Columbus Convention Center
Columbus, Ohio
Contact: <http://glassproblem-conference.org>

October 15, 2013

GANA Northwest Roundtable
Sponsored by GANA
Location TBA
Tacoma, Wash.
www.glasswebsite.com

October 31-

November 1, 2013
Glass Expo Midwest™ 2013
Sponsored by **USGlass** magazine
Renaissance Schaumburg Convention Center Hotel Chicago (Schaumburg), Ill.
Contact: www.usglassmag.com/gems

November 20-22, 2013

Greenbuild 2013
Sponsored by the U.S. Green Building Council
Pennsylvania Convention Center Philadelphia
Contact: www.greenbuild-expo.org

INTERNATIONAL EVENTS

October 1-3, 2013

Metalcon International 2013
Sponsored by Metal Construction Association
Georgia World Congress Center Atlanta
Contact: www.metalcon.com

October 23-26, 2013

Vitrum
Sponsored by the Italian Machinery Manufacturers Association (GIMAV)
Fiera Milano Milan, Italy
Contact: www.vitrum-milano.it

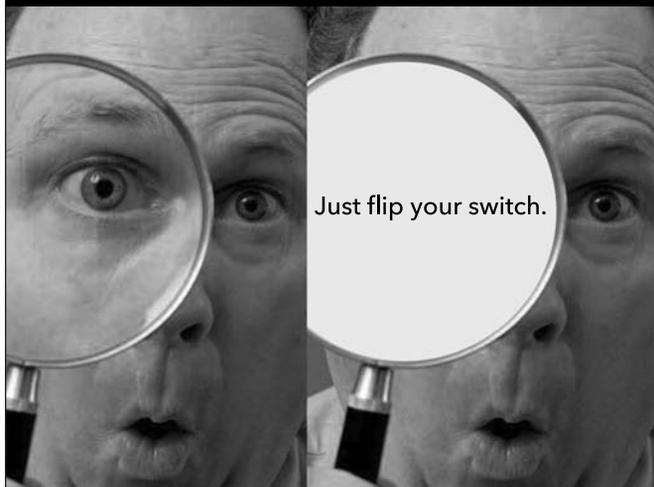
July 7-14, 2014

GPD USA 2014
Organized by Glaston Finland
Pennsylvania Convention Center Philadelphia, Pa.
Contact: www.gpd.fi

To see the full event schedule or add your own events, visit www.usglassmag.com/events.php.

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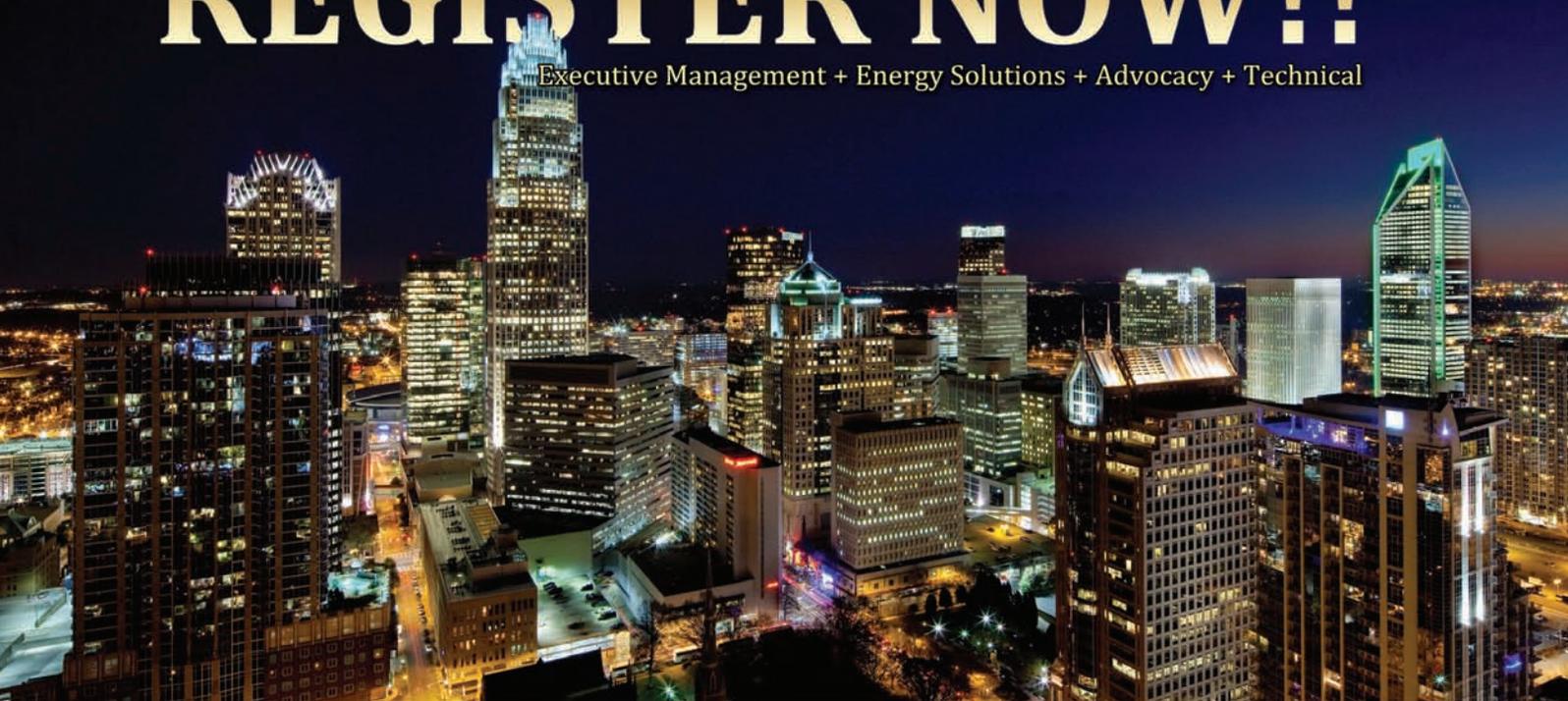
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Number Three: Primary Manufacturers Sales Personnel. As a handful of survey takers pointed out, these folks are often the first to come through with important technical information and help even when they know that their assistance might not lead to a sale for them. They tend to be well-trained, professional and good representatives of our industry.

Number Four: Manufacturer's Sales Reps. This group finished in a virtual tie with Number Five and this came as a little bit of a surprise to me. One comment that I think echoed the sentiment of many was ... "While some of the reps are notorious for starting and keeping industry-wide rumors alive, they are at heart a bunch of hardworking, helpful and trustworthy people."

Number Five: Company (Direct) Sales Personnel. As noted, this cate-

gory was a virtual tie with the rep category and received a number of solid compliments. In a world where sales people are often not held in too high of a regard, the glass industry people are well thought of and appreciated for their efforts and "trustworthiness."

Well, the results are in and this is the way it rolled out. Thank you to those who participated and particularly so on such a compressed time frame. Now go buy lunch for a CSR, hug a salesperson and keep reading USG! ■

theBusiness

Who You Gonna Trust???

by Lyle R. Hill

I was totally surprised ... no wait, that's not strong enough so let me start again. I was absolutely stunned ... no, that's not good enough either. One more try. Here we go. I was so completely blown away by what I had just finished reading that I literally dropped the magazine from my hands and ran to get a drink of cold water.

The article causing this reaction was in the June 2013 edition of *Readers Digest* and was titled "The Most Trusted People in America." Purportedly, the article was based on a national poll conducted jointly by RD and the Wagner Group and the results were nothing short of eye opening and maybe even jaw dropping.

For example, the article listed the most trusted person in America: Tom Hanks. Now I ask, does this make any sense? I mean, Hanks is a very fine actor and I'm sure he's probably a nice guy but what do we really know about him other than the fact that he usually plays good guys in the movies? And second on the list: Sandra Bullock! In fact, five of the top ten were actors or actresses although the one that really blew me away the most was seeing Judith Sheindlin, aka "Judge Judy," finish well ahead (number 28) of any of our actual supreme court justices – Ruth Bader Ginsberg (number 36) was the closest.

Now I didn't expect to see any used car dealers or personal injury attorneys on the list, but I gotta tell you, the list was an absolute shock to me. And then I started thinking ... maybe I am out of touch. Maybe my view of the world and the people herein is just not in step with that of the general population. These thoughts quickly morphed over

into my professional world ... the glass industry. And I thought, who do we in the glass industry trust? Now I knew it would be impossible to put out a list of a hundred names and ask people to rank the trustworthiness of each person and realistically, what hundred

“And I thought, who do we in the glass industry trust?”

names would be put forth? In many ways the industry is regionalized and in some cases even localized so a national poll would be difficult if not totally meaningless. But I wanted to try something along these lines and so after a bit of pondering ... I do this a lot ... usually in the middle of the night ... I came up with an idea. Specifically, I decided to put out a list of general industry categories and then send this list to a hundred people within the industry on a random basis and ask them to rank the categories. I also strongly encouraged the participants to add any of their own comments if they felt so compelled. I threw as many categories into the pot as I could ... maybe too many even because I included everyone from credit managers to field installers, to CEOs, to architects and even consultants. You see, I wanted to include everybody who works within or around the industry. Originally I split the survey into two groups. The first was "who do you trust the most" and the second was "who do you trust the least." I had intended to publish both lists but was discouraged (editorially so to speak) from getting into the negative side of this so I am just going to list the top five "**Most Trustworthy**" from my study.

Now I have to admit that I was a little surprised by the results, but I understand the reasoning behind the placements for the most part. So without further delay, my not very extensive, semi-scientific, perhaps totally inaccurate results of who we, as an industry, are inclined to **TRUST THE MOST** are as follows. Although I had numerous categories, for the sake of space, time, and possible argument, I am only choosing to show the **top five** here.

Number One: USGlass Magazine Columnists. As one survey participant stated, "The USG writers, with the exception of Lyle Hill, are informative, accurate and timely and if it gets into USG, I know I can rely on it." While a lesser person might be inclined to be offended, I was just happy for my fellow USG writers. Truthfully, my fingers trembled just now as I typed that!

Number Two: Customer Service Representatives (CSRs). A number of survey responders had positive things to say about the hardworking, dedicated and trustworthy CSRs who are on the frontline of many companies. As one person stated, "I have learned to TRUST the judgment and actions of my CSRs. I would be lost without them."

continued on page 79

the author



Lyle R. Hill is the managing director of Keytech North America, a company providing research and technical services for the glass and metal industry. Hill has more than 40 years experience in the glass and metal industry and can be reached at lhil@glass.com. You can read his blog on Wednesdays at lyleblog.usglassmag.com.

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Problem Prevention in ONE Simple Step

by Megan Headley

Making the Design-Build Relationship Work

While the benefits of design-build may seem many, they do require the architect to give up some control to a trusted third-party who can bring the design vision to life. And although few glazing contractors may note this in their bid or on their website as a design-build sell, these same contractors point to trustworthiness as the key for building these partnerships.

"In the design build-process the relationship is crucial," says Steven Burnett, president of glazing contractor Walters & Wolf Curtain Wall in Mukilteo, Wash. "We look for a mutual trusting relationship, and we look to partner with people who have experiences with the design-build process."

These relationships can be crucial in allowing the glazing contractor's push for exactitude to go forward. While these glazing professionals point to design-build as a construction management method that can prevent many of the biggest design challenges, it must be embraced by the full team to succeed.

"The critical things we look for are a commitment to work with us in a collaborative nature: a willingness to think outside the box, to be a good communicator," says Michele King, director of communications for Juba Aluminum Products in Concord, N.C.

King's colleagues at Juba agree that

trust is likely the most important aspect of the design-build process. There needs to be trust between all parties and a commitment to the project, this subcontractor has found, further pointing out that this typically begins with the relationship-building at the early stages. For high-level collaborative work on difficult projects to be successful, trust is an absolute necessity and it is through relationships that trust is built.

"If you're going to give us control you need to trust that we're going to be responsible with it, we're not going to derail the train because we're not paying attention. Relationships definitely help. There has to be a mutual trust," adds Dave Ranker, president of RankerAMG Inc. in Sacramento, Calif.

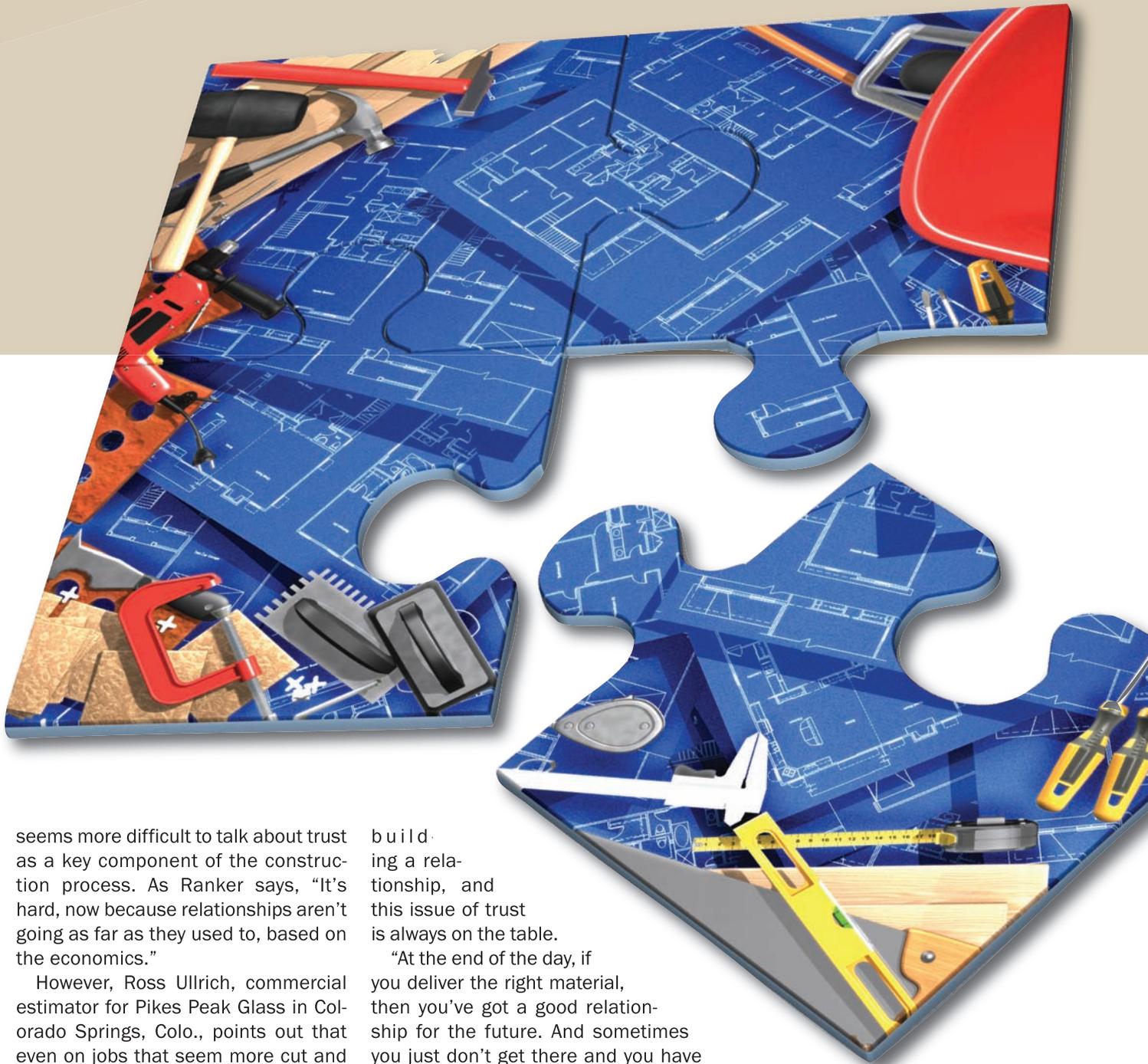
"I think the relationship is important," agrees Jim Hatton, president of glazing contractor BCIndustries in Tampa, Fla. "I think someone needs to have the confidence that what you're telling them is factual. If you're just telling them something to get them to like you, to get their attention, to get the budgets done, you're going to have a problem in the long run. You've got to lay all of your cards on the table and tell them 'okay, we're going to compromise something on price, we're going to give up a little on performance' and they understand that."

One hopes they understand. Trust on the design, however, means relinquishing control, and Ranker points to that as a primary challenge that can derail this management style in the earliest stages of design.

"We would hope the design-build partner would actually take what we say and allow us to design-build it; in other words accept our service and not resist," Ranker says. "We do a lot of these design-builds but they end up more design-assist because the architect won't take what we give them and actually implement it. They block the process, and I don't know why."

And Ranker points out that this relationship building is crucial for all parties involved in making major design decisions. "I have to trust the contractor too, that if I give him information, he knows how to handle the information," Ranker adds. "He can't just bury his head in the sand. It's everybody at the table talking about what needs to happen, openly and honestly, and making the right decision on the owner's behalf. And the owner should be part of that too."

In some ways, the scarcity of major jobs makes the crucial component of relationship-building less central, and other ways it has become more crucial to these jobs. In today's environment it



seems more difficult to talk about trust as a key component of the construction process. As Ranker says, “It’s hard, now because relationships aren’t going as far as they used to, based on the economics.”

However, Ross Ullrich, commercial estimator for Pikes Peak Glass in Colorado Springs, Colo., points out that even on jobs that seem more cut and dry—government projects, for example—the relationship remains key.

“It is definitely more of a relational part of the business, where they do trust where I’m coming from,” he says of these government jobs which have made up his company’s bread and butter in recent years.

Hatton points out that every completed job goes a long ways toward

building a relationship, and this issue of trust is always on the table.

“At the end of the day, if you deliver the right material, then you’ve got a good relationship for the future. And sometimes you just don’t get there and you have got to be able to say we can’t do it or we don’t want to compromise what we’re doing for the sake of dollars, and you just have to say we can’t do it,” Hatton says. Sometimes saying no can prove the point that, for your company, quality comes first—and that can be a prudent selling point on the next job that comes around. ■

the author



Megan Headley is special projects editor for USGlass magazine. She can be reached at mheadley@glass.com.

Mergers & Acquisitions

Amesbury Parent Acquires Truth Hardware for \$200 Million

Melrose Industries Plc, a London-based acquisition company, has signed a conditional agreement for the sale of Truth Hardware to Tyman Plc for a total consideration of \$200 million, payable in cash upon completion. Tyman Plc, also based in London, owns Amesbury, a North American hardware supplier.

Tyman officials described the pending acquisition as “a strategic opportunity to enhance the [hardware] Group’s position in the North American door and window components market where Tyman sees significant opportunity for continued growth.”

Company officials also noted that Truth Hardware provides an “excellent strategic fit” with Amesbury Group’s North American division. In particular, the acquisition will give the Group: an ex-

panded and highly complementary product portfolio especially in casement hardware categories; an enlarged and strategically positioned manufacturing footprint, including a facility in Canada; and the potential for a meaningful market share in Canada, according to Tyman.

“The Board believes that overall, the acquisition of Truth Hardware will significantly strengthen the Group’s existing business model and underpin its growth objectives,” reads the statement.

“The acquisition is fully in-line with Tyman’s stated strategy of growth and represents a strategic opportunity to further develop our business in North America,” adds Louis Eperjesi, Tyman chief executive. “We look forward to welcoming Truth Hardware employees into our organization to expand our existing positions across North America and beyond.”

For the full-year 2012, Truth recorded sales of \$126.0 million, operating profit of \$18.6 million and EBITDA of \$22.5 million, according to Melrose.

“We are very pleased with the progress Truth has made since our acquisition of FKI Plc in 2008 and we believe it is now well placed for the future. As planned at acquisition, we are disposing of Truth at the early stages of what appears to be a recovery in the United States housing market,” reads a statement from Melrose. “Tyman is well-positioned to add further value to the business and we wish them and Truth all future success.”

The consideration is on a debt- and cash-free basis. Melrose, which has owned Truth since June 2008, said it intends to use the proceeds to pay down existing borrowings. Completion of the deal was expected to occur in June. ■

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The Green Mile

Learning Opportunities

The AIA Conference will offer more than 160 educational opportunities—some are even available without even leaving the show floor. Here's a glimpse at some of the show floor educational opportunities.

Thursday June 20

10:30-11:30 a.m.

Components of a LEED Strategy in Division 8: Glass & Glazing

1 LU/HSW

Provider: Kawneer

Friday, June 21

2:00-3:00 p.m.

Opening Glass Wall Solutions for Large Openings booth 4166

1 LU/HSW

Provider: Nanawall

Saturday, June 22

10:30-11:30 a.m.

Code Considerations in Fire-Rated Glass

1 LU/HSW

Provider: Safti *First*

Visit USGlass magazine!

Be sure and stop by booth #3617 to visit with the staff of USGlass magazine. You can pick up free copies of the magazines, sign up for our free e-newsletters, as well as our many other publications. We look forward to seeing you in Denver!

Experts Weigh in on Preventing Bird-Glass Collisions

1.50 LU HSW

2-3:30; Room 607

Each year in the United States, up to 1 billion migratory birds are killed in collisions with windows or glass buildings. Other than habitat loss, glass collisions are the largest man-made cause of bird deaths. These bird deaths are preventable, though, through design. There are now recognized techniques for reducing collisions, and, in many cases, bird-safe design tools help architects meet other design objectives, such as energy reduction, aesthetics, branding, and privacy. A seminar taking place will address this topic.

Titled "Designing Bird-Safe Buildings: How to Prevent Bird-Glass Collisions," the course is designed to help attendees recognize hazards for birds in the built environment by assessing project location and design, use of glass, lighting and surrounding landscape. They will learn how to design projects that are bird-safe by using best practices to reduce bird-glass collisions. The course will also review and comply with current legislation and initiatives that mandate or encourage bird-safe design and sup-



port the science of bird-safe design by testing the effectiveness of innovative design solutions and new bird-safe products.

Anne Lewis, FAIA, president, City Wildlife Inc., Washington, D.C., is the course provider. Also taking part are Bruce Fowle, FAIA, LEED, and founding principal, FXFOWLE Architects in New York;

New York-based architect Guy Maxwell, AIA, LEED BD+C; and AnMarie Rodgers, MLA, manager of Legislative Affairs, City & County of San Francisco Planning Department.