Exteriors That Last!

Traditional stucco or exterior insulation and finish systems.

Either way, you need qualified plasterers to be sure the job is installed correctly.

Our highly trained plasterers know how to wrap openings, identify correctly flashed windows and doors, and prepare surfaces for proper caulking to ensure the integrity of any stucco or EIFS system.

For information about exterior systems and the right professionals to install them, call us.

Chicago Plastering Institute
5611 West 120th Street
Alsip, IL 60803
Ph. (708) 371-3100
Fax (708) 371-8290
This new middle school is built around the concept of small learning communities, with classrooms clustered into five distinct learning units. These learning communities are organized around an open circular media center, capped by a large skylight. Circulation routes pass through and around the media center to weave the building together. The school presents high-tech learning opportunities for its students, bringing together spaces for industrial science, family and consumer science, music, and art.

Photography: Design Photography Inc.
THE BEST GOLF OUTING of The Year!

Register Today. Scramble Format. All levels of play encouraged.

Invite and entertain clients, or join your ALA friends, suppliers, and contractors for golf and dinner. You will enjoy a wonderful day of relaxed golf and excellent food at Tamarack Golf Club, in Naperville, plus have many chances at great prizes and cash.

- Market Your Company -
BE A SPONSOR!

• Hole Sponsor - Display your company name on a sponsor sign - $250
• Lunch Co-Sponsors (2) - Kick off the outing as a Lunch Sponsor - $500
• Eagle Sponsor - Sponsor a par three hole - ‘Meet and Greet’ all the players - $400
• Putting Competition Sponsor - Give your company extra recognition and reward the best putters - $400
• 19th Hole Sponsor - Provide appetizers for the hungry golfers during the cocktail hour - $400
• Scratch Card Sponsor - Display your company name on the back of every scratch card - $500

Great Prizes including the $10,000 Hole – In – One!

Make your reservations today!
Register now on www.alatoday.org or call 847-382-0630
Reinventing an Industry

The Hill Group is helping to reinvent the building process by leading the way in Collaboration, Integrated Project Delivery, Building Information Modeling, Pre-Fabrication, Modular Construction, Commissioning, and Building Energy Efficiency.

Construction
Energy Efficiency/Sustainability
Service & Building Maintenance
Commissioning/Test & Balance/LEED Consulting
Building Operations/Stationary Engineers
Engineering Services
Facilities Solutions
Architectural Systems

THE HILL CAMPUS

Our 26-acre, state-of-the-art campus includes:

(A) 32,000 SF Corporate office space
(B) 104,000 SF Prefabrication shop
(C) 80,000 SF Modular construction space
(D) 21,000 SF Hill Collaboration Center
(E) Tools, logistics, high bay and crane area

“I personally invite you to tour our campus and witness the future of an industry today!”

Brian Tejema, Vice President
647.451.5000
hillgrp.com

Scan to watch Autodesk® video featuring The Hill Group.

BUILDING EXCELLENCE... through Experience and Innovation
This issue of “Licensed Architect” is our third Annual “Buyers Guide” which is a complete listing of all of the Association of Licensed Architects Affiliate Members, CEP Members and our Advertisers. The “Buyers Guide” is a valuable reference that all of our Professional Members use throughout the year. On behalf of the ALA Board and its members, I would like to thank all of our Affiliate members, CEP members and certainly our Advertisers for their continued support. When you are specifying or purchasing products or services, I encourage you to contact those who support our organization whenever possible. They are available to answer any questions and provide you with information on your projects.

Don’t miss our interview with Architect Julie Snow in this issue!

This issue also includes articles on Insurance, Legal, Code, ADA and an article “Second chances for Buildings: Don’t Get Snowed During Roof Improvement Projects” - a timely topic after this winter! Additionally, there is a contributed article from Bob Greenstreet on “The Value of Architects in Alternative Dispute Resolution”. I am sure you will not be disappointed! Check the ALA website (www.ALATODAY.ORG) for upcoming Lunch & Learn and After 5 Seminars.

Also, some upcoming important dates.....

- 2014 Design Awards Declarations of Intent are due by July 25th, 2014 (submit two or three of your best designs)
- Sign up for the ALA 2014 Golf Outing at Tamarack Golf Club in Naperville on Friday August 15th
- 2014 ALA Midwest Architecture Conference and Product & Product Show - Tuesday September 30th. This year’s Keynote Speaker is Gordon Gill. More educational sessions have been added and there is an evening session to accommodate our attendees’ busy schedules. You can earn up to 8.25 Learning Units this year.

I look forward to seeing you at one of our events!

Jeffrey Budgell
Jeffrey N. Budgell, FALA, LEED AP
President

---

**ALA Welcomes New Members - Summer 2014**

**Professional Members**
- Ms. Elizabeth Antonopoulos, ALA
- Mr. Dennis Cabala, ALA
- Mr. Timothy Clites, ALA
- Mr. Craig Elliott, ALA
- Mr. Kenneth Gruskin, ALA
- Ms. Jennifer Holtz, ALA
- Mr. Euisang Lee, ALA
- Mr. Alan Pickett, ALA
- Mr. David VanderKlok, ALA
- Mr. David Widick, ALA
- Mr. Hwai Yang, ALA

**Senior Members**
- Mr. William Fuller, ALA
- Mr. Stuart Owsey, ALA
- Mr. James Schloss, ALA
- Mr. Yusuf Shaikh, ALA
- Mr. Ron Stolarz, ALA

**Associate Members**
- Mr. Joshua Kasper

**CEP Members**
- Abbott Park, IL
- Oakbrook Terrace, IL
- Middleburg, VA
- Park City, UT
- Springfield, NJ
- Deerfield, IL
- Hoffman Estates, IL
- Pella, IA
- Lansing, MI
- West Chicago, IL
- Saint Louis, MO

---

**KELLY P. REYNOLDS & ASSOCIATES, INC.**
BUILDING CODE CONSULTANTS

NATIONWIDE
PHONE 1-(800) 950-CODE (2633)
Fax (866) 814-2633
Email: codexperts@aol.com
www.kellypreynolds.com
Free hot lines (members only)

Corporate Office
616 Executive Drive 16182 W. Magnolia Street
Willowbrook, IL 60527-5610 Goodyear, AZ 85338-5518
Introducing Modern Euro Collection

Highest Quality Standards

MADE IN EUROPE

DOORS® FOR BUILDERS®

Latest European Technology which combines the high-end look of a wood door with superior performance and durability.

www.doorsforbuilders.com  850 Lunt Avenue, Elk Grove Village, IL  847.981.9900
Julie Snow has been described as an architect who balances elegance with pragmatism, and her award-winning firm’s diverse portfolio of work has been lauded for its poetic qualities as well as practical use of materials. This duality, described by one awards jury as “invention within convention,” enables her to create designs that perform in extraordinary ways.

The firm she founded in 1995, Julie Snow Architects, Inc., became Snow Kreilich Architects in March of this year, recognizing Matthew Kreilich’s role as partner and design principal.

She and her firm have been recognized with numerous awards: the National AIA Honor Award, Holcim North American Bronze Award, Progressive Architecture Design Award, the Chicago Athenaeum’s American and International Architecture Awards, Architecture Magazine Annual Design Review, the Design Distinction Award from I.D. magazine, several Business Week/Architectural Record Awards and several GSA Design Excellence Awards and Citations. Snow also received the American Academy of Arts and Letters Architecture Award.

She has held several visiting professor positions including the Graduate School of Design at Harvard, University of Arkansas, University of Maryland, and Washington University, St. Louis. After teaching at the University of Minnesota College of Architecture and Landscape Architecture, she received the Ralph Rapson Award for Distinguished Teaching.

Why did you choose architecture as a profession?
My father was an internist, but he discouraged me from a career in medicine. He had a good friend who was an architect so my parents encouraged me to try it. I went to the University of Colorado to study architecture and haven’t looked back.

What’s your design philosophy?
Our design philosophy begins with the defining each projects architectural performance. We have seen a relatively recent expansion in expectations for design performance among our clients. This is exciting for us, as we read these expectations as increased design possibilities. Our approach to architecture is to design strategies that expand architectural performance.

Do you have a specialty?
We started out working for industrial manufacturing clients, who are very pragmatic. They were visionaries who wanted to use architecture to reinvent the way they worked. Rethinking the way our clients work and live and play is at the heart of what we do. You have to be willing to dig deeper into the functional requirements of architecture to do design that’s something special.

Our work has ranged from light rail transit to residential to installations at the Walker Art Museum. We’ve done a lot of work for businesses.

How is architecture responding to the changes in the workplace?
We are seeing more collaborative work and people are looking for a range of work settings. You may have a workstation that is your primary place to work, but you can pick up your laptop and go to another open space and work. Or you can go to a quiet place to focus. There are few office “kennels” (known as cubicles) anymore; there are better ways to produce collaborative and individual work. In addition, we find that an office redesign can be a way of accelerating corporate change and

“Rethinking the way our clients work and live and play is at the heart of what we do.”

(Continued on page 9)
of moving from individual-based work. We had a manufacturing facility that moved engineers and management in together; it effectively broke down barriers so that they functioned more as a team.

What are some challenges that you have faced in your work?

One of our challenges involves public projects and how to orchestrate a productive conversation between the public and an architect. We love being able to create more engagement. With the U.S. Land Port of Entry project in Van Buren, Maine, we were able to have open conversations with the public and allay their concerns about commercial traffic and economic effects. Another example is the redesign of Nicollet Mall in Minneapolis. We had strong engagement with the public and found the input fascinating. It’s especially important for a designer to understand the public’s expectations.

You’ve won numerous awards. How do you do it?

You have to apply! (laughs). Get a great photographer. Then be able to explain why the building is great, and what it does. We’re especially proud of the Business Week Architectural Record Awards and for being recognized by the business community for our work. We also appreciate honors such as the GSA Design Excellence Award for overall performance, including interiors, landscape and construction. When we design, we think of how architecture has to perform for our clients, and how it has to advance the architectural conversation.

What about sustainability?

There are certain things we can’t afford NOT to do, even if we sometimes have modest budgets. A lot of sustainability is common sense. And there’s not a client out there who doesn’t consider the cost of energy. Design for durability, or not at all. Our more enlightened clients, including the federal government, are looking for 100-year buildings.

What are some of your more recent projects?

A land port of entry in New York, a call center in Northern Minnesota for Delta Air Lines, also with Delta, reinventing the airport restroom, and Lowertown Ballpark, a 7,000-seat stadium for the St. Paul Saints. The Lowertown Ballpark project is all about entertainment and making the ballgame a super fun experience for the community of fans. There are 17 rows, so you’re really close to the field. And it’s a 360-degree walk around the playing field. It is also about being in a really cool district within the City of St. Paul.

What’s next?

Oh, how about spending time at the American Academy in Rome (laughs). We won an award for a 1200-square-foot Lake Superior weekend house, and we loved that, but we would like to do some larger projects. With those types of projects, which take years, there’s a great investment in design thinking. More than that, though, we want to continue to do projects for people who expect architecture to perform in extraordinary ways.

What has been your most gratifying project?

The best projects are the ones you are working on right now. All the possibilities are right in front of you. I do love doing residential projects. In many cases, these are people who just purchased the site they really love. Our job is simply to translate their lives on to that particular place.

Who are your architectural heroes?

Louis Kahn, whose work shows the strength and beauty of concrete, and at the Kimbell Art Museum in Fort Worth, he shows how lighting and mechanical systems can influence architecture in a profound way. I love the abstract and conceptual ideas of Mies Van der Rohe. The Barcelona Pavilion is so simple and tiny, yet the space has an abstract quality that is incredibly powerful.

And your current heroes?

There’s a vivid conversation going on right now in architecture. I love looking at everybody’s work, and from each person you’re learning something quite specific.

Do you have a message for young architects?

How do you succeed as an architect today? Just start. There are so many practice models, but you need to look carefully at how you start. It will really influence how your firm develops. If you start your firm doing a lot of residential work, you may not get beyond that. Be very clear about why you are opening a practice. Are you offering something quite unique?

What’s your advice on weathering the hard times?

If you diversify your practice, you don’t have the kinds of ups and downs that come with economic uncertainty. We have always maintained a high quality of staff, but we are not a big firm. We are agile. We also don’t have specialists. We have people who can work on the design, the research and all the way through to CA.

What do you do to relax?

I read a lot. And we have a weekend house. And of course, a glass of great wine.
A decision issued last year by an Illinois appellate court was unpublished and therefore does not constitute legal precedent. Nevertheless, it addresses a number of issues of interest to those in the construction industry, and carries with it at least one major, obvious lesson on the subject of obtaining payment for one's services.

The plaintiff, Robert Kasinecz, was a general contractor. The defendant, Joseph Duffy, was the owner. Duffy worked with Kasinecz's sister who introduced her to Kasinecz. Duffy was looking to do some real estate investment, and she showed him some properties including one in Downers Grove, Illinois. Duffy was interested in rehabbing and flipping the house. Kasinecz had been a contractor for more than twenty years.

By the time Kasinecz and Duffy finally entered into a written contract, the project was expanded to include demolition of most of the old house, and the construction of a new one at a cost of $477,000. Work began based on approved drawings, and Duffy made about four progress payments totaling about $42,000. Duffy neither asked for nor received a sworn contractor's statement.

Early in 2005, Kasinecz requested another progress payment. Duffy asked to see backup, e.g., copies of checks, receipts, evidence of payments to subcontractors, etc. Kasinecz eventually handed these over, but they only caused Duffy's suspicion to be aroused, especially about whether one of the signatures on a lien waiver had been forged. Duffy confronted Kasinecz at the site, and this confrontation lead to Duffy calling the police. Kasinecz left the site, took his tools and workers with him, and did no more work. He also recorded a mechanics lien.

Kasinecz foreclosed on his mechanics lien, filing suit against Duffy, the lender and others. The case went to trial and, after Kasinecz put on his evidence, the defendants moved for a judgment in their favor on the basis that Kasinecz had not given Duffy a sworn contractor's statement as required by the mechanics lien statute. The court granted the motion, ruling in favor of the defendants. The case went up on an initial appeal, and the trial court was overturned on the grounds that, because Duffy had not requested a sworn contractor's statement, and because he was not prejudiced by the absence of such a statement (the time for subcontractors to lien the project had passed), Kasinecz's failure to provide a sworn statement would not bar either his mechanics lien or breach of contract claim.

The case was remanded back to the trial court, and the trial was resumed where it had left off before the first appeal. Unfortunately for Kasinecz, he fared no better the second time around. Indeed, he did worse. The same trial court judge ruled against him on each of his claims and also awarded Duffy attorneys' fees. She initially decided that Kasinecz first breached the parties' contract by not giving Duffy written invoices before seeking payments, and subsequently by removing his tools and workers from the project site. Secondly, she concluded that Kasinecz never reached substantial completion, and so could not recover in mechanics lien. Finally, she found that Kasinecz had failed to meet his burden to establish the value of his work, and so did not allow him to recover under an equitable theory, quantum meruit.

Kasinecz appealed a second time. However, this time the trial court was upheld, across the board. With regards to the breach of contract action, the appellate court held that Duffy was not obligated to pay Kasinecz until after he submitted written invoices. In demanding payment in the absence of written invoices, then walking away from the job for lack of payment, Kasinecz breached the contract first, which excused any later breach by Duffy, assuming such a breach occurred.

During the trial, Kasinecz tried testifying that he had invoiced by way of "verbal" invoices. While the contract language was a little vague, it merely required "invoicing," the trial judge had interpreted this provision to call for written invoices, and the appellate court affirmed. The "invoicing" requirement in the contract called for written invoices, period, end of story.

Kasinecz also tried arguing that Duffy had never actually requested written invoices. However, this argument was rejected because, pursuant to the contract, no payment was owed without an invoice. Kasinecz walked off the site due to lack of payment, but Duffy was justified in not paying based on the lack of a written invoice alone. Importantly, the appellate court noted that Duffy had made a few progress payments without having received an invoice, and raised the possibility that he might thereby have waived the written invoice requirement. However, because Kasinecz never argued "waiver" per se, the court on appeal did not take up that issue.

On Kasinecz's mechanics lien claim, the appellate justices noted that, if a contractor does not complete its work, it is not entitled to lien rights securing the owner's obligation to pay for equipment, labor or material provided before the stoppage of work. They went on to further note that, while full performance is not necessary, substantial completion of the work is. However, they also then went on to delineate the evidence put on at trial to substantiate how far short of substantial completion fell Kasinecz, e.g., interior finishes not yet begun, no installation of mechanical equipment, missing doors and windows,
Sustainability – it’s serious business.

CertainTeed Gypsum is committed to preservation of natural resources, recycling, waste management, and reclamation in our operations.

We are part of Saint-Gobain, the world’s largest gypsum wallboard manufacturer. Our innovative, sustainable building materials can contribute to the built environment’s indoor environmental quality, acoustics management, fire resistance, and materials recycled content.

To see how sustainability suits you, visit: www.CertainTeed.com/Sustainable
Changes that occur during a construction project are one of the most litigated issues in construction. No matter how well your project is designed, managed and administered, changes will inevitably occur due to any number of reasons that are not the fault of the designer including changes in site conditions, hidden and unforeseeable conditions, or even owner requested changes. Proper documentation of all changes that occur during the construction project is paramount to mitigating your exposure to these types of claims.

Common causes for Change Orders are the following: (a) the project’s work was incorrectly estimated, (b) the customer or project team discovers obstacles or possible efficiencies that require them to deviate from the original plan, (c) the customer or project team are inefficient or incapable of completing their required deliverables within budget, and additional money, time, or resources must be added to the project, (d) during the course of the project, additional features or options are perceived and requested, (e) the contractor looks for work items to add to the original scope of work at a later time in order to achieve the lowest possible base bid price, but then add work items and fee back on once the contractor has been hired for the work. This is an exploitative practice and a project manager then typically generates a Change Order that describes the new work to be done (or not done in some cases), and the price to be paid for this new work. Once this change order is submitted and approved it generally serves to materially alter the original contract such that the change order now becomes part of the contract.

There is an unwritten understanding in the design and construction community that the average number of change orders on a project run from 3%-5% of the value of construction of the project, and as high as 10%-15% for renovations work. Add to that fast track the percentages can be even higher. We say unwritten because the above listed ranges is where the statistical averages have run. There is a recent movement to attempt to codify this percentage in the hopes of creating a floor for standard of care discussions.

Error/Omission Change Order Policy.
XXX reserves the right to recover from the A/E all or a portion of the costs associated with change orders issued to correct errors or work omitted in the construction documents prepared by the A/E. Consequential damages, including any delay of work or damages incurred by other parties due to errors and omissions may be included in the recovery.

Withholding of Payments.
XXX may withhold payments, in whole or in part, for a material breach of the agreement, including but not limited to, the A/E’s failure to perform services or meet the schedule, design errors or omissions, failure to pay consultants and failure to adhere to terms of this agreement.

The problem with the above two clauses for the design professional is that your client is the judge and jury in determining your negligence vs. a court of law or mediator. In neither case are the parties rendering decisions on the standard of care sophisticated enough to understand the underlying causes of the need for Change Orders.

Solutions?
The negative consequences of Change Orders can be prevented with proper planning and implementation of sound change order documentation practices.”

(continued on page 34)
Chicago’s Energy Savers

Understanding the constantly changing International Energy Conservation Code, IL Energy Conservation Code and Chicago Energy Code requirements for roofs can be a challenge. Insulation, Air Barriers, Roof Top Reflectivity all are key components for rooftop compliance.

How can roofing designers, building owners and managers stay on top of all these changes? Just rely on the Chicagoland Roofing Council. Chicagoland Roofing Council Contractors stay on top of the issues that affect cost and performance of the complete rooftop as a system.

They guide you through the selection process for the best energy efficient, most competitive and long lasting roof possible.

Chicago Land Roofing Council Contractors – One Call, Single Source Responsibility, for everything on top of the roof and a building envelope system that works too.

Call 708.449.5266 or visit www.chicagoroofing.org to find the best Roofing Professionals.

Chicagoland Roofing Council

www.chicagoroofing.org
Don’t Stop Playing!

by Kimberly Paarlberg, RA
Senior Staff Architect, ICC

“Don’t stop playing because we grow old. We grow old because we stop playing.”

– George Bernard Shaw

How can recreational facilities be made accessible? By providing an accessible route to that facility, and in some situations, ways to move into that play environment. The intent of the recreational requirements in the International Building Code (IBC) is to allow for persons with mobility impairments to participate to the best of their abilities. It is not the intent to change the playing or nature of the game or recreational activity, but rather to allow for diversity and creativity.

Requirements for accessible recreational facilities have been in the IBC for a long time, however, in the 2015 IBC recreational facilities will have its own section in Chapter 11, Section 1110. The Code Technologies Committee, through the work of a committee looking at coordination between the 2010 ADA Standard for Accessible Design and the IBC, developed proposals to coordinate the two documents. This was all part of continuing the work in the 2009 ICC A117.1 Accessible and Usable Buildings and Facilities (ICC A117.1). The 2009 edition of the ICC A117.1 is referenced in the 2012 and 2015 IBC; and has a Chapter 11 that includes all the technical criteria for how to make recreational facilities accessible.

Probably the most significant piece of the changes is not actually in Section 1110 of the 2015 IBC, but in Chapter 2 – a definition for the term "area of sport activity."

AREA OF SPORT ACTIVITY. That portion of an indoor or outdoor space, where the play or practice of a sport occurs.

The broad term, "area of sport activity,” addresses indoor and outdoor courts, fields and other sport areas. Examples are basketball and tennis courts; practice areas for dance or gymnastics; baseball, soccer and football fields; skating rinks; running tracks; or skateboard parks. The phrase ‘portion…where the play or practice of a sport occurs’, varies depending on the sport. Football fields include the playing field boundary lines, the end zones and the space between the boundary lines and safety border. Players may run or be pushed into this safety zone during play. In football, this safety zone is used as part of the playing field, and is therefore included in the area of sports activity. Some of the areas listed under the recreational facilities specifically addressed in Section 1110 (i.e., bowling lanes, exercise equipment facilities, miniature golf, and pools) are also considered areas of sport activity; however, they have additional requirements.

The overall basic scoping in the IBC requiring recreational facilities to be accessible has not changed greatly in the 2015 edition of the model building code. In Group R-2, R-3 and R-4 occupations 25%, but not less than one of each type of recreational facility provided must be accessible. If there are multiple buildings on a site, with each one or each group having its own facilities, this scoping would apply to each group. For example: If an apartment complex provides one pool and three tennis courts, this would mean that the pool and at least one tennis court would be required to be accessible. For all other occupancies, all recreational facilities must be accessible. What was added is that if the Group R-2 or R-4 contains Accessible units, then all recreational facilities must be accessible. This may affect facilities such as college dormitories.

The major change was actually the clarification of what was required to make a recreational facility accessible, and a series of exceptions. The basic idea was to allow for someone with mobility impairments to get to the recreational facility and participate to the best of their ability. It is not the intent that the basic nature of the game to be changed.

For areas of sports activity not specifically scoped with additional requirement in Section 1110, an accessible route is required to the area of sports activity. The area itself is not subject to any other accessibility requirements such as surface requirements (e.g., the playing surface can be made of grass, sand or dirt), slope (e.g., the surface can be curved or sloped at any angle such as a skateboard park) or subject to protruding object criteria (e.g., the net on a volleyball court can be elevated across the playing surface).

Section 1110 has some additional criteria for specific types of facilities. Exceptions for accessibility were added that are based on how (Continued on page 22)
Introduction to

Featured Architects

pages 16-17, 18-19, 20-21
Exp Federal is a member of the exp family of companies and delivers Federal customers best-in-class services in architecture, engineering, technical consulting, commissioning, and program and project management. Exp has been supporting U.S. missions across the country and around the globe for more than 50 years. With 3,000 professionals in over 100 offices, exp provides highly specialized expertise, innovative approaches, management solutions, and technology applications. Exp Federal's success is earned by an ability to seamlessly integrate best practices, innovations, and technologies into Government projects.

Exp Federal specializes in mechanical, electrical, plumbing, architectural design, and fire protection engineering services for a wide range of customers and, most notably, the U.S. military. The company has, for example, held multiple IDIQ contracts and executed more than 75 projects for the Army Corps of Engineers over the past 5 years. Other Federal customers include the Naval Facilities Command, the Department of State, the Department of Energy, GSA, the FAA, the Veterans Administration, and the intelligence community. Our website, www.expfederal.com, features a variety of recent projects.

Government customers require a focus on quality, timeliness, and cost efficiency. Exp Federal's success is reflected in high evaluation ratings and accolades from our valued Federal customers.

**Brigade Combat Team (BCT) Headquarters Complex**
Fort Stewart, GA

Exp Federal performed surveying, full design, and construction management services for a two-story brigade complex that included a network operations center, data center, Sensitive Compartmentalized Information Facility (SCIF), battle operations center, and several tactical operations offices. The 40,000 sf building was designed to LEED Silver criteria and included anti-terrorism/fire protection (AT/FP) features.

**Warriors in Transition Complex**
Fort Bragg, NC

Exp Federal provided site design and engineering services for the 15-acre complex at Fort Bragg. In coordination with USACE, Fort Worth COS HQ, and the individual base master planners, Exp Federal provided site design, survey, utility coordination, transportation engineering, and geotechnical investigation services for the MATOC RFP package.
Featured Architect

Warren Burger Federal Building & U.S. Courthouse
St. Paul, MN

Exp Federal provided exterior and interior design of the 485,000 sf Federal building including a redesign of the entry plaza, security integration, interior renovations, and the addition of five new District and Magistrate Courtrooms. This project received the Distinguished Building Award, Divine Detail Award from AIA Chicago, and the Design Excellence Award.

Organizational Training Center
Fort Stewart, GA

Exp Federal provided architectural, site, and civil engineering services, as well as surveying and construction administration for this new single-story 16,000 sf brigade training center at Fort Stewart. This facility features electronic training classrooms based on the 21st Century training doctrine and has been designed to achieve a LEED Silver rating.
Celebrating over 90 years of service, frk architects + engineers is one of the most established architectural firms in the state of Iowa. Our team of professionals serves clientele from both the public and private sectors – designing facilities for educational, community, commercial, and recreational activities. We approach each project, large or small, as an opportunity for a unique and creative solution tailored to the client and site. Known for the technical quality of our documents and efficiency of our designs, frk coordinates complete architectural services, allowing us to manage the entire process of successfully transforming an initial concept into the finished project. Throughout the years, frk has designed a wide variety of building types; with an emphasis in the design of educational facilities. We have become known as one of the leading architectural firms in educational design, serving numerous school districts and Higher Ed institutions. Sustainable design plays a key role in each of our projects, with an emphasis on healthy environments, use of sustainable materials, and energy efficiency as a means to create architecture that serves not only the client’s needs but the greater community as well. frk’s staff includes talented architects, inventive engineers, creative designers and responsive administrative personnel. We take pride in being attentive listeners and dedicated partners who share a common goal of helping our clients build innovative, beautiful and economical facilities.

Clinton High School Pool Addition
Clinton, Iowa

This athletic addition to the Clinton High School replaces an outdated pool with a new state of the art, eight lane competition swimming pool. The design also includes a warm-up/cool-down and instructional pool adjacent to the main pool. Windows are positioned to allow diffuse natural light into the space while avoiding glare for both swimmers and spectators. The facility also provides an additional gymnasium, wrestling, aerobics and wellness spaces for the district, with a planned phase two renovation of the existing building.

Eagle Heights Elementary
Clinton, Iowa

Situated on a hilly site with adjacent wooded areas, the building is designed to take advantage of the slope and views. The plan is arranged as a two story structure that tucks into the hillside, acting as a "walkout" on the lower level, allowing access to the building at grade on both levels. The two story classroom wings fan out along the main circulation spine and contain alcoves in each room with large sun shaded windows. The light filled main entry is situated between the classroom wing and the common spaces and allows the building to function for after hours use by closing off the entire classroom area.
Johnston High School
Johnston, Iowa

This new high school is the first step in the implementation of a master plan to re-configure the Johnston Community School District to better serve its growing enrollment. frk teamed with Perkins+Will to facilitate a series of user driven workshops that shaped the future of how Johnston high school students would learn. The concepts developed out of the workshops informed the design of the new facility. Filled with natural light and open spaces that foster collaboration and teamwork, the 360,000 SF facility will break ground in the summer of 2014.

Rendering: Perkins+Will

Summit Middle School
Johnston, Iowa

This new middle school is built around the concept of small learning communities, with classrooms clustered into five distinct learning units. These learning communities are organized around an open circular media center, capped by a large skylight. Circulation routes pass through and around the media center to weave the building together. The school presents high-tech learning opportunities for its students, bringing together spaces for industrial science, family and consumer science, music, and art.

Photos: Design Photography Inc.

Waukee High School Addition
Waukee, Iowa

The academic addition and renovation to Waukee High School adds 22 new classrooms increasing the capacity from 1,200 students to 1,800. The classrooms are organized around a dynamic glass enclosed library which includes an open reading loft. The project also successfully introduces more color and vibrancy to the school by means of updated finishes and a prominent gold wall that extends from interior to exterior of the building, and acts as a way-finding device.

Photo: Paul Gates Photography
STR creates environments that enrich the learning experience for both students and teachers. The firm’s spaces not only facilitate and complement education, but also delight and inspire students and educators.

Celebrating its 45th year of commitment to and leadership in school architecture, STR continues to respond to the natural evolution of pedagogy, technology, and society. STR’s 21st-century learning spaces encourage collaboration, problem-solving, and project-based learning. The firm integrates the latest technology in instruction, holistically engages stakeholders in the design process, and promotes sustainable, healthy environments.

STR’s architectural design practice is uniquely complemented by two independent, dedicated resources: STR Consulting, experts in cost estimating and scheduling, and STR Building Resources, experts in the art and technology of the building envelope. Headquartered in Chicago, STR operates offices in Arlington Heights, IL, Milwaukee, WI, Madison, WI, and Indianapolis, IN.

Leading STR’s exceptional practice are Jan Taniguchi, AIA, LEED AP, CEFPI-REFP; Michael Henderson, AIA, LEED AP, CEFPI-REFP; Colby Lewis, AIA, LEED AP; and Jennifer Costanzo, AIA, LEED AP.

SARAH E. GOODE STEM ACADEMY
Chicago, IL

An example of STR’s commitment to sustainability, Sarah E. Goode is the first LEED Platinum certified new high school in Illinois. Sustainable features include ground-source heat pumps with central energy recovery, demand-control ventilation, solar thermal hot water pool heating, green roofs, and continuous dimming daylight controls. The building performs at a 40% savings over ASHRAE 90.1-2004.

Rusticated horizontal bands of textured brick create subtle shadows and texture to the building envelope. The extensively landscaped site connects students to the community and includes trails, bike paths, community gardens, bird sanctuary and athletic fields. An STR-designed cistern diverts potable water from roofs to irrigate public gardens.

Note: STR-Nia Collaborative is the firm for this project

Photo by: Jim Steinkamp, Steinkamp Photography
**LINCOLN MIDDLE SCHOOL**  
Schiller Park, IL

Lincoln Middle School’s design is a reflection of a progressive child-centered curriculum and project-based approach to education. The 3-story “Wow Space” with inset compass greets students, and is an organizational and inspirational building feature. Grade-level floors include classrooms, labs, project rooms and learning terraces, all outfitted with mobile furnishings. The second-floor learning center opens onto an outdoor green reading terrace. The cafeteria doubles as a theater with retractable tiered seating and a stage.

The building’s copper cladding pays homage to the Lincoln penny, while the angular aluminum canopy references the aircraft wings at nearby O’Hare Airport.

Photos: Steve Hall/Hedrich Blessing

---

**TIOGA AND JOHNSON ELEMENTARY SCHOOLS**  
Bensenville, IL

The embodiment of 21st Century learning environments, these two modern schools reflect the evolving pedagogy and philosophy of the client. Flexible six-room classroom houses are designed for both large and small-group instruction and collaboration. House “living rooms,” Innovation Labs, and contemplation spaces create a variety of opportunities for formal and informal learning experiences.

Crisp white brick exteriors combined with natural stone walls and colored glass-accented window systems create visual interest and vibrancy. The unique design of each building’s high-bay learning centers and dining areas serve as identifying signatures.

Photos: Steve Hall/Hedrich Blessing
the elements are used and for safety concerns. The criterion is logical, which makes it very easy to follow. The next portion of this article will step through some of the scoping criteria. Each will indicate if the allowance was in previous editions or is new.

- **Remaining** - Since bowling lanes repeat each other, only 5% of bowling lanes and their associated team or player seating areas are required to be on an accessible route.

- **Remaining** - If you have court sports, most games have you switch sides during the course of the game. An accessible route is required to both sides of the court without leaving the immediate area.

- **Remaining** - Boxing and wrestling rings are raised to allow for a line of site from the audience to the ring – similar to a stage. These unique types of facilities are not required to be on an accessible route or be accessible.

- **Remaining** - In order for a judge or referee to see the entire playing surface, they may be sitting on a raised platform or high chair. Areas used solely for refereeing, judging or scoring are not required to be accessible or be on an accessible route.

- **New** - Animal containment areas that are not public use areas are not required to be accessible. ‘Public use area’ is defined as ‘...made available to the general public’. There may be areas of a facility, such as a horse riding arena, where portions of the facility are not open to the general public (i.e., horse stalls and corrals). Those areas are not required to be accessible or be on an accessible route. Areas such as the riding arena would have to be on an accessible route. The arena itself could be a dirt floor.

- **New** - Amusement rides that move a person through a fixed course and along a specific route are required to be accessible to the extent specified. Typical examples would be a roller coaster, a ferris wheel, a ride that moves the rider along to view different scenes (i.e., omnimover), swing or pendulum rides. Note that there is an exception for these types of rides that are mobile or portable. There are also types of rides that do not have a fixed course. For example, the portable amusement rides that come in each year for the State or County Fair are not required to be accessible. In an amusement park, rides such as bumper cars, do not move along a fixed course. These rides should have the entrance on an accessible route, but they are not required to provide additional accessible features.

Rides that are covered need a route to the load and unload areas, and either a way to allow for a person to transfer from their wheelchair to a seat on the ride or to move the wheelchair onto the ride. Practically speaking, you also need a place to leave the wheelchair while someone is on the ride. Rides specifically designed for children or rides that do not have seats, are not required to provide this transfer capability.

- **New** - Boat piers that serve boat slips or launch ramps are required to be part of an accessible route and to have some locations that allow for transfer from the pier to a boat. The number or transfer locations are dependent on the type and number of slips provided. In the ICC A117.1 standard there are allowances for locations where the ramp between the land elevation and the water elevation vary greatly because of tides or topography.

- **New** - Fishing piers and platforms are also required on an accessible route. In the ICC A117.1 standard there are allowances for locations where the ramp between the land elevation and the water elevation vary greatly because of tides or topography, similar to boat piers. There is also the intent to coordinate with safety requirements due to concerns about falls. If a 42" high guard is provided, the requirement for a lower portion of rail to allow for a sitting person to fish is waived.

- **New** - Where exercise equipment is provided, an accessible route is required to at least one of each type of machine provided. There are no requirements to provide transfer devices, or change the nature of the equipment itself. (ICC A117.1 has a specific exception for operable parts on exercise equipment.) Access to exercise equipment is necessary for persons who are in a recovery process from a temporary disability, and for persons with disabilities that need to maintain the muscles that they use to operate their equipment.

It is not the intent to require an accessible route to each group of exercise bikes if they happen to be by different manufacturers. When there is a question, looking at the specific group of muscles the exercise equipment is intended to develop provides a clue to determine different types.

- **New** - Miniature golf has been a family pastime for decades. Undulating or sloped playing surfaces, changes in level, shooting through an object with a surprise as to where it comes out; all help make the game interesting. Half of the holes provided must be on an accessible route and meet the technical criteria in the ICC A117.1. The standard allows for the accessible route to be on the playing surface or adjacent where a certain reach can be maintained. Limited curbs are permitted across the route in order to keep the ball in play.

In order that a person does not have to move through other holes that may be in play, the accessible route must not travel through non-accessible holes. There can be a one break in the route for the accessible holes, as long as the last hole is included in the route. Traditionally that is the hole where the player can shoot to win a free game or a prize. For example, in an 18-hole course, you could make holes 1 through 5 and 15 through 18 the accessible holes. Possible routes will vary depending on the layout of the facility.

- **New** - Swimming pools are required to have a route to them and a route into the water. The ICC A117.1 offers several different options for access into the water depending on the type and size of the pool. There is an exception for the route into the water for...
### Architectural Firms

**Studio Design-ST**  
Cheryl Tkacz  
1529 S. Wayne Road  
Westland, MI 48186  
clt.studiodesign@sbcglobal.net  
www.studiodesignst.com  
734-728-5040

### Concrete

**PCI-IW**  
Dawn Parker  
910 West Roscoe Street #1  
Chicago, IL 60657  
d.parker@pci-iw.org  
www.pci-iw.org  
312-505-1858

### Business Consultants

**Practice Clarity**  
Jean Leathers  
21335 North Park Drive  
Cleveland, OH 44126  
jean@practiceclarity.com  
www.practiceclarity.com  
440-773-6587

**R M Klein Consulting**  
Rena Klein  
978 E. 11th Ave.  
Spokane, WA 99202  
rena@rmklein.com  
www.rmklein.com  
206-898-9740

### Code Consultants

**B&F Technical Code Services, Inc.**  
Richard Piccolo  
PO Box 957648  
Hoffman Estates, IL 60195-7648  
bftech@bftechcs.com  
www.bftech@bftechcs.com  
847-490-1443

### Conveying Equipment

**Access Elevators, Inc.**  
Frank Wasilewski  
1000 Industrial Dr., Ste 2C  
Bensenville, IL 60106  
lynda@allaboutaccess.net  
www.allaboutaccess.net  
630-616-6249

**EHLS/To The Top Home Elevators**  
Elizabeth Crandall  
210 W. Campus Dr., Ste B  
Arlington Heights, IL 60004  
elizabeth.crandall@ehls.com  
www.tothetopelevators.com  
847-403-0120

### Digital Printing and Document Distribution

**ARC Imaging Resources**  
Glen Prezembel  
1429 Jeffrey Drive  
Addison, IL 60101  
glen.prezembel@e-arc.com  
www.arcimagingresources.com  
630-629-6900

**Image Grille**  
Ronald Schatz  
1032 West Drive  
South Elgin, IL 60177  
rrps@imagegrille.com  
www.imagegrille.com  
847-214-8283

**Konica Minolta Business Solutions, U.S.A., Inc.**  
Bruce Thorne  
2001 Butterfield Rd., #900  
Downers Grove, IL 60515  
bthorne@kmbs.konicaminolta.us  
847-725-7945  
kmsb.konicaminolta.us  
Cell: 847-217-0919
<table>
<thead>
<tr>
<th>Company</th>
<th>Contact Person</th>
<th>Address</th>
<th>Phone Number</th>
<th>Email</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northfield, an Oldcastle Company</td>
<td>Stephen Hunt</td>
<td>One Hunt Court, Mundelein, IL 60060</td>
<td>.847 949-3600</td>
<td><a href="mailto:steve.hunt@oldcastle.com">steve.hunt@oldcastle.com</a></td>
<td><a href="http://www.northfieldblock.com">www.northfieldblock.com</a></td>
</tr>
<tr>
<td>Northfield, an Oldcastle Company</td>
<td>Stephen Hunt</td>
<td>One Hunt Court, Mundelein, IL 60060</td>
<td>.847 894-2190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rauch Clay Sales Corporation</td>
<td>Christian Metz</td>
<td>3037 S. Christiana Ave., Chicago, IL 60623</td>
<td>.773-254-0775</td>
<td><a href="mailto:christian.metz@rauchclay.com">christian.metz@rauchclay.com</a></td>
<td><a href="http://www.rauchclay.com">www.rauchclay.com</a></td>
</tr>
<tr>
<td>Rauch Clay Sales Corporation</td>
<td>Christian Metz</td>
<td>3037 S. Christiana Ave., Chicago, IL 60623</td>
<td>.773-457-0901</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stone Design</td>
<td>Tom Ozzello</td>
<td>598 Mitchell Road, Glendale Heights, IL 60139</td>
<td>630-545-4205</td>
<td><a href="mailto:tozzello@stone-design.com">tozzello@stone-design.com</a></td>
<td><a href="http://www.stone-design.com">www.stone-design.com</a></td>
</tr>
<tr>
<td>Stone Design</td>
<td>Tom Ozzello</td>
<td>598 Mitchell Road, Glendale Heights, IL 60139</td>
<td>630-545-4205</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tesko Custom Metal</td>
<td>Robert Skonieczny</td>
<td>7350 W. Montrose Ave., Norridge, IL 60706</td>
<td>.708-452-0045</td>
<td><a href="mailto:nancyhayden@teskoenterprises.com">nancyhayden@teskoenterprises.com</a></td>
<td><a href="http://www.teskoenterprises.com">www.teskoenterprises.com</a></td>
</tr>
<tr>
<td>Andersen Windows, Inc.</td>
<td>Kellan Dillon</td>
<td>2310 Cowper Ave., Evanston, IL 60201-1844</td>
<td>.312-375-1876</td>
<td><a href="mailto:kdillon@andersencorp.com">kdillon@andersencorp.com</a></td>
<td><a href="http://www.andersenwindows.com">www.andersenwindows.com</a></td>
</tr>
<tr>
<td>Andersen Windows, Inc.</td>
<td>Kellan Dillon</td>
<td>2310 Cowper Ave., Evanston, IL 60201-1844</td>
<td>.312-375-1876</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors For Builders, Inc.</td>
<td>Yuri Nekrasov</td>
<td>850 Lunt Ave., Elk Grove Village, IL 60007</td>
<td>.773-964-6043</td>
<td><a href="mailto:yuri@doorsforbuilders.com">yuri@doorsforbuilders.com</a></td>
<td><a href="http://www.doorsforbuilders.com">www.doorsforbuilders.com</a></td>
</tr>
<tr>
<td>Doors For Builders, Inc.</td>
<td>Yuri Nekrasov</td>
<td>850 Lunt Ave., Elk Grove Village, IL 60007</td>
<td>.773-964-6043</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marvin Windows &amp; Doors</td>
<td>Vivian Kahler</td>
<td>4142 Milford Lane, Aurora, IL 60504</td>
<td>.630-470-0119</td>
<td><a href="mailto:viviankahler@marvin.com">viviankahler@marvin.com</a></td>
<td><a href="http://www.marvin.com">www.marvin.com</a></td>
</tr>
<tr>
<td>Marvin Windows &amp; Doors</td>
<td>Vivian Kahler</td>
<td>4142 Milford Lane, Aurora, IL 60504</td>
<td>.630-470-0119</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pella Windows &amp; Doors, Inc.</td>
<td>Chris Carpenter</td>
<td>2505 Enterprise Circle, West Chicago, IL 60185</td>
<td>.630-675-4750</td>
<td><a href="mailto:ccarpenter@pella.com">ccarpenter@pella.com</a></td>
<td><a href="http://www.pella.com">www.pella.com</a></td>
</tr>
<tr>
<td>Pella Windows &amp; Doors, Inc.</td>
<td>Chris Carpenter</td>
<td>2505 Enterprise Circle, West Chicago, IL 60185</td>
<td>.630-675-4750</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tee Jay Service Co., Inc.</td>
<td>Thomas Safran</td>
<td>PO Box 369, Batavia, IL 60510</td>
<td>.630-406-1406</td>
<td><a href="mailto:tsafran@teejaydoors.com">tsafran@teejaydoors.com</a></td>
<td><a href="http://www.teejaydoors.com">www.teejaydoors.com</a></td>
</tr>
<tr>
<td>Tee Jay Service Co., Inc.</td>
<td>Thomas Safran</td>
<td>PO Box 369, Batavia, IL 60510</td>
<td>.630-406-1406</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tubelite Inc.</td>
<td>Walt Lutzke</td>
<td>3056 Walker Ridge Dr. NW, Suite G, Walker, MI 49544</td>
<td>.616-808-2549</td>
<td><a href="mailto:wlutzke@tubeliteinc.com">wlutzke@tubeliteinc.com</a></td>
<td><a href="http://www.tubeliteinc.com">www.tubeliteinc.com</a></td>
</tr>
<tr>
<td>Software</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphisoft</td>
<td>Kent Brown</td>
<td>2178 Vermont Street, Rolling Meadows, IL 60008</td>
<td>.847-338-8165</td>
<td><a href="mailto:kbrown@graphisoft.com">kbrown@graphisoft.com</a></td>
<td><a href="http://www.graphisoft.com">www.graphisoft.com</a></td>
</tr>
<tr>
<td>Specialties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moen Incorporated</td>
<td>Mark Madden</td>
<td>340 West Potomac, Lombard, IL 60148</td>
<td>.630-661-3994</td>
<td><a href="mailto:mark.madden@moen.com">mark.madden@moen.com</a></td>
<td><a href="http://www.moen.com">www.moen.com</a></td>
</tr>
<tr>
<td>Toto USA</td>
<td>Mike Harrigan</td>
<td>500 N. Wells Street, Chicago, IL 60654</td>
<td>.847-433-8980</td>
<td><a href="mailto:mharrigan@totousa.com">mharrigan@totousa.com</a></td>
<td><a href="http://www.totousa.com">www.totousa.com</a></td>
</tr>
<tr>
<td>World Dryer</td>
<td>John Potts</td>
<td>5700 McDermott Drive, Berkeley, IL 60163</td>
<td>.815-258-6443</td>
<td><a href="mailto:john.potts@worlddryer.com">john.potts@worlddryer.com</a></td>
<td><a href="http://www.worlddryer.com">www.worlddryer.com</a></td>
</tr>
<tr>
<td>World Dryer</td>
<td>John Potts</td>
<td>5700 McDermott Drive, Berkeley, IL 60163</td>
<td>.815-258-6443</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automation Design + Entertainment</td>
<td>Peter Cook</td>
<td>6475 Technology, Suite A, Kalamazoo, MI 49009</td>
<td>.269-217-2350</td>
<td><a href="mailto:peter@automation-design.com">peter@automation-design.com</a></td>
<td><a href="http://www.automation-design.com">www.automation-design.com</a></td>
</tr>
<tr>
<td>Nelson Testing Laboratories</td>
<td>Mark Nelson</td>
<td>717 Industrial Dr., Elmhurst, IL 60126</td>
<td>.630-501-0230</td>
<td><a href="mailto:mnelson@nelsontesting.com">mnelson@nelsontesting.com</a></td>
<td><a href="http://www.nelsontesting.com">www.nelsontesting.com</a></td>
</tr>
<tr>
<td>Nelson Testing Laboratories</td>
<td>Mark Nelson</td>
<td>717 Industrial Dr., Elmhurst, IL 60126</td>
<td>.630-501-0230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>License Type</td>
<td>Company Name</td>
<td>Contact Name</td>
<td>Address</td>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------------------------------------</td>
<td>-------------------</td>
<td>--------------------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>Advanced Building Products, Inc.</td>
<td>Patrick Duffy</td>
<td>283 Inverway, Inverness, IL 60067</td>
<td><a href="mailto:pduffy@abpcorp.net">pduffy@abpcorp.net</a></td>
<td>.847-705-9190</td>
<td></td>
</tr>
<tr>
<td>BITEC</td>
<td>Brandon Keefe</td>
<td>39W372 W. Mallory Dr. Geneva, IL 60134</td>
<td><a href="mailto:bkeefe@bi-tec.com">bkeefe@bi-tec.com</a></td>
<td>.630-746-8497</td>
<td></td>
</tr>
<tr>
<td>CertainTeed Gypsum</td>
<td>Amy Lee</td>
<td>P.O. Box 860 Valley Forge, PA 19482</td>
<td><a href="mailto:building.solutions@saint-gobain.com">building.solutions@saint-gobain.com</a></td>
<td>.800-233-8990</td>
<td></td>
</tr>
<tr>
<td>Chicagoland Roofing Council</td>
<td>Bill McHugh</td>
<td>4415 W. Harrison St., #436 Hillside, IL 60162</td>
<td><a href="mailto:bill@chicagorooftop.org">bill@chicagorooftop.org</a></td>
<td>.708-449-5266</td>
<td></td>
</tr>
<tr>
<td>IKO</td>
<td>Greg Pietraszek</td>
<td>6 Denny Rd, Suite 200 Wilmington, DE 19809</td>
<td><a href="mailto:greg.pietraszek@iko.com">greg.pietraszek@iko.com</a></td>
<td>.312-576-5243</td>
<td></td>
</tr>
<tr>
<td>LP Building Products</td>
<td>Amber Hitch</td>
<td>414 Union St., Suite 2000 Nashville, TN 37219</td>
<td><a href="mailto:amber.hitch@lpcorp.com">amber.hitch@lpcorp.com</a></td>
<td>.615-986-5611</td>
<td></td>
</tr>
<tr>
<td>NexGen Building Supply</td>
<td>John Mandigo</td>
<td>1099 Greenleaf Ave., Elk Grove Village, IL 60007</td>
<td><a href="mailto:jmandigo@gonexgen.com">jmandigo@gonexgen.com</a></td>
<td>.847-303-9800</td>
<td></td>
</tr>
<tr>
<td>Parksite</td>
<td>Matthew Reed</td>
<td>38W631 Callighan Place Geneva, IL 60134</td>
<td><a href="mailto:mreed@parksite.com">mreed@parksite.com</a></td>
<td>.800-338-3355</td>
<td></td>
</tr>
<tr>
<td>Prosoco Inc.</td>
<td>Gary Hayes</td>
<td>PO Box 7, Batavia, IL 60510</td>
<td><a href="mailto:gary.hayes@prosoco.com">gary.hayes@prosoco.com</a></td>
<td>.630-715-6375</td>
<td></td>
</tr>
<tr>
<td>Shaffner Heaney Associates, Inc.</td>
<td>Phillip Eenigenburg</td>
<td>2508 South Main Street South Bend, IN 46614</td>
<td><a href="mailto:phile@shaffnerheaney.com">phile@shaffnerheaney.com</a></td>
<td>.847-651-2002</td>
<td></td>
</tr>
<tr>
<td>Traco</td>
<td>Michelle Goodeve</td>
<td>6110 Hilly Way Cary, IL 60013</td>
<td><a href="mailto:michelle.goodeve@alcoa.com">michelle.goodeve@alcoa.com</a></td>
<td>.312-965-3517</td>
<td></td>
</tr>
<tr>
<td>Tremco Barrier Solutions</td>
<td>Erik Schremp</td>
<td>471 Wren Lane Hudson, WI 54016</td>
<td><a href="mailto:Eschremp@tremcoinc.com">Eschremp@tremcoinc.com</a></td>
<td>.952.221.6010</td>
<td></td>
</tr>
<tr>
<td>Window Treatments</td>
<td>Baird’s Drapery Services</td>
<td>Robert Zenk</td>
<td>14007 S. Bell Road #305 Homer Glen, IL 60491</td>
<td>.312-226-3300</td>
<td></td>
</tr>
<tr>
<td>Wood, Plastic and Composites</td>
<td>Chicago Regional Council of Carpenters</td>
<td>Keith Jutkins</td>
<td>12 E. Erie Chicago, IL 60611</td>
<td>.312-787-3076</td>
<td></td>
</tr>
<tr>
<td>Wood Products Council</td>
<td>Archie Landreman</td>
<td>1405 16th Street, Suite 2481 Racine, WI 53403</td>
<td><a href="mailto:archie@woodworks.org">archie@woodworks.org</a></td>
<td>.262-672-4746</td>
<td></td>
</tr>
<tr>
<td>Weyerhaeuser</td>
<td>Joe Youman</td>
<td>220 Brookshire Ct. Naperville, IL 60540</td>
<td><a href="mailto:joe.youman@weyerhaeuser.com">joe.youman@weyerhaeuser.com</a></td>
<td>.630- 778-7070</td>
<td></td>
</tr>
</tbody>
</table>
Become a member of our dynamic, affordable, growing organization of architects.

**Member Benefits**

**Professional, Senior & Emeritus Members**

- Professional Designation
- Membership Wall Certificate
- Online listing in searchable member directory
- Job Postings
- Quarterly Magazine – "Licensed Architect"
- FREE unlimited access to 16 short form legal contracts
- Educational programs offered throughout the year.
- Free Consultant Hot Lines – Legal, Code, Insurance, Fire, and ADA
- Annual Events: Summer – Golf Outing; Fall – Conference and Product Show
- Logging of ALA CEU hours
- Design Awards Program for Members Only
- Member Discounts
- Networking
- Legislative Monitoring
- Volunteer Opportunities
- Mediation Services
- Voting Privileges
- Health Insurance for Individuals, Families or Firms
- Disability Insurance at a substantial discount
- Project Leads

**Associate, Student, New Graduate and Honorary Members**

Same benefits as professional members with the exception of voting privileges, professional designation and short form electronic contracts.

**Affiliate Members**

- Same benefits as professional members with the exception of voting privileges and professional designation
- Advertising Opportunities
- Sponsorship Opportunities
- Lunch and Learns and “After 5” programs hosting by ALA
- Special member rates at the Annual Conference and Product Show
- Free listing in Annual Buyer’s Guide

"I value the networking opportunities. It has helped us get business. This is a nice organization to be a part of that gets us in front of architects. The architects are involved and engaged with ALA."

TERRI NIELSEN
Dealer Account Rep Andersen Windows
Member since: 2002
ALA is . . .
focused on meeting your needs. Committed to You.
Determined to make a significant and positive impact
on the Architecture Profession.
Our aim is to help you succeed today and into the future.
Join ALA, and put the power of ALA membership to work today.

Application Form
Association of Licensed Architects

You may join online at www.alatoday.org.
Click on "Membership".

Stay current and involved in your profession.
ALA delivers value at affordable rates.

Join Us!

Full Name (Please print) Last First Middle

Current Professional Status (Check one)  ☐ Partner/Principal ☐ Firm Architect ☐ Academic ☐ Other

(Please check one box for desired mailing address)
☐ Office ☐ Residence

Firm Name

Work Address Home Address

City State Zip City State Zip

Telephone (Include area code) Telephone (Include area code)

Fax Fax

E-mail Address/Business Website E-mail Address

Corporate Affiliation (for Industry and Professional Affiliate Members)

State of License (Professional Members) Registration No.

Project types

Current Membership in other Professional Organizations

Referred by

ALA Membership Category

Choose one. Make checks payable to: ALA
☐ Professional–Licensed Architects . . . . . . . . . . . . . . . . . . . . . . . . . $ 150.00
☐ Senior–(65 years or older) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $ 65.00
☐ Associate–Industry or related professionals . . . . . . . . . . . . . . . . . $ 250.00
☐ Associate–Those who are Non-Licensed . . . . . . . . . . . . . . . . . . . . . $ 65.00
☐ Student–Full time/Accredited Schools . . . . . . . . . . . . . . . . . . . . . . . . . $ 25.00
☐ International Members–add for postage. . . . . . . . . . . . . . . . . . . . . . . . $ 40.00
☐ New Graduate–1 year free membership
  Must provide copy of diploma

All dues may be deducted as a business expense
but not as a charitable contribution

Association of Licensed Architects
One East Northwest Hwy.
Suite 200
Palatine, Illinois 60067

For more information contact:
Joanne Sullivan,
Executive Director,
T: 847.382.0630,
F: 847.382.8380
E: joanne@alatoday.org
W: www.alatoday.org

☐ Check Enclosed
☐ Pay by Credit Card

Credit Card # Date

Signature

You may join online at www.alatoday.org. Click on “membership”.

LICENSSED ARCHITECT • VOL 18 NO. 2 • SUMMER 2014 29
Arbitration established a solid foothold in the dispute resolution of construction disputes several decades ago, largely due to the high volume of cases which were causing a significant backlog in the traditional system of litigation. The alleged advantages of arbitration — speed, cost, efficiency, convenience, privacy and expertise — were well received at the time, and it became a successful alternative to the existing court system.

Regardless of the much vaunted (although occasionally debatable) benefits of arbitration in speed and cost, the biggest shift in dispute resolution was arguably the introduction of a legion of new professionals into the process drawn from architecture, engineering and the construction fields. These individuals brought their specific expertise and experience to complex disputes, providing insights into construction issues that legally trained personnel — attorneys and judges — might lack. They could also, it was argued, demystify the legal complexities and jargon of a hearing, cut through the usual jurisprudential requirements and strategies of the traditional courtroom (summary judgments, extensive depositions, etc.) and generally simplify the whole matter. For architects, arbitration became a useful additional professional pursuit to which their architectural skills could be put to good use.

Arbitration became a legitimate alternative to the courts, becoming a prerequisite in standard forms of contract (such as the series produced by the American Institute of Architects) and was eventually supplemented by the addition of mediation as another viable means of alternative construction dispute resolution. Once again, mediators were drawn from diverse professional fields, including architecture, to infuse the resolution of disputes with non-legally trained but equally valuable individuals.

By all accounts, arbitration and mediation are still viable forms of alternative dispute resolution within the construction industry, but to what degree has the infusion of design professionals into the process been successful?

Statistical evidence would suggest that, despite the initial encouragement of architects to join the arbitration ranks, the field has become largely the province of the legal profession. A recent article estimates that 63% of arbitrators on the American Arbitration Association Construction Panel are attorneys, while only 7% are architects. At an observational level, it is also obvious at continuing education seminars and workshops that the great majority of attendees are lawyers and only a handful of practicing arbitrators represent alternative fields. Certainly, in the author’s experience, many of the arbitrators and mediators drawn from the ranks of architecture have either ceased to practice dispute resolution or are called upon so rarely as to make their mandatory continuing education questionable.

While disappointing for non-attorneys, the domination of the ‘alternative’ dispute resolution process is perhaps not entirely surprising. As many arbitrators are chosen based upon the advice of attorneys, it should not be surprising that they would demonstrate a preference for being judged by others within their own discipline. Fellow attorneys (or former judges) will understand disputes from a legal perspective, and be more attuned to the language and the legal strategies that will be employed by the attorneys at each hearing. They will be well versed in the rules of evidence which, although these don’t necessarily apply in arbitrations, provide well-tested rules of engagement for the participants and are less likely to be ignored or misunderstood. Perhaps most pertinent, they will share a common approach to dispute resolution based upon their education, training and experience, and are therefore more predictable in their deliberations. By contrast, architects (notoriously right-brained, kinetic types)

"Architects should not give up on alternative dispute resolution, and should be encouraged to pursue training in arbitration and mediation."

(Continued on page 31)
could have the perception of being less predictable in what they may allow in the more informal hearing proceedings of an arbitration, what they will understand of the jurisprudential crafting of an argument and ultimately in the formulation of their final decisions. Given the considerable costs of dispute resolution, even in arbitration, the stakes are high and some level of predictability in the likelihood of the outcome is inevitably a priority.

While perhaps a reasonable argument can be made to prefer legally trained arbitrators over design-based ones (at least from the lawyer’s perspective), there is still, however, a very good rationale for including architects in three-person arbitrations when dealing with highly complex technical disputes. Their perspective and experience can provide a valuable viewpoint to the intricacies of the case that can complement and inform the legal viewpoint. However, there is an even stronger argument to include architects in mediations, when they are the sole facilitator in the resolution of a dispute.

For a start, mediators do not provide a binding decision on a dispute, but merely facilitate discussion and try and help the parties to reach agreement on a mutually agreeable (or perhaps mutually disagreeable) solution. Attorneys displeased with their performance are therefore not disadvantaged during the proceedings. They can walk away at any time during the proceedings, or pursue more formal dispute resolution alternatives at the conclusion of the mediation. More importantly, design professionals are trained in a way that gives them skills eminently suited to mediation. Unlike the legal profession which is trained in the adversarial approach to dispute resolution, architects are trained to collaborate with the diverse parties in the building process, to compromise their design ideas in the face of financial, legal and regulatory forces (not to mention client preference) and to think creatively about various alternatives that could meet the design problems in question. These are all attributes that can facilitate a satisfactory conclusion to the dispute, and are coupled with their expert insight into the construction field. In fact, there are even arguments that individuals schooled in the adversarial approach of law lack the necessary collaborative skills to satisfactorily conclude mediations, and that previous professional experience — such as legal practice — may be an impediment to the process.

Architects should not give up on alternative dispute resolution, and should be encouraged to pursue training in arbitration and mediation. While their presence may not always be preferred within the law-dominated system, they bring unique skills to the table that can be effective in resolving construction disputes, and have a valuable part to play in the process.

swimming pools that serve Type A and Type B dwelling units in Group R-2, R-3 and R-4. Group R-2 with Accessible units, such as dormitories, cannot be used for this exception. When hot tubs are grouped, 5% must be accessible. Per ICC A117.1, the accessible hot tub can use a pool lift or a transfer wall to allow access into the water. Raised diving boards, diving platforms and water slides are not required to be accessible. When the swimming pool at the bottom is only for the slide, swimmers are not permitted there for safety reasons. This catch pool is not required to have an accessible route into the water.

New - There are a variety of shooting facilities that are used for target practice. Typically this is a practice range for shooting handguns, rifles, shotguns or archery, and where the participants aim at fixed targets, decoys or clay pigeons. These facilities can be constructed inside or outside. An accessible route is required to at least 5% of the firing position at each type of arrangement provided.

There are technical criteria of golf courses and playgrounds in the ICC A117.1. At this time, the IBC does not include any specific exceptions or allowances for these types of recreational facilities.

Facilities that support recreational facilities, such as parking lots, concessions stands, locker/bathrooms, team and player seating, viewer seating, must be accessible per the scoping requirements through Chapter 11 of the IBC. The intent of these provisions is to allow for equal access for all persons to participate in sport and recreational related activities to the best of their ability. This could be considered analogous to the approach, enter and exit requirements for employee work areas. We all need a place to work, live and play.

ADAADVICE
(continued from page 22)

“...steps sideward into another reality; the playing child advances forward to new stages of mastery.”

Erick H. Erikson

LEGAL ISSUES
(continued from page 10)

openings to the elements in the roof and only framing and sheathing of walls completed. On this evidence, the trial judge held that Kasinecz had not substantially completed and so had no lien rights against the property. She was affirmed on appeal on this same basis.

When it came to quantum meruit, the appellate court ruled against Kasinecz on an alternative ground, namely that he could not recover under this quasi-contractual cause of action because, simply, he had entered into a written contract. Quantum meruit is an equitable substitute when, for whatever reason, the parties have failed to enter into a valid contract. However, Kasinecz did enter into a contract with Duffy, and even though he couldn't recover under it, he couldn't recover in quantum meruit either due simply to the existence of that contract.

While not a precedent under the law due to its being unpublished, the Kasinecz case provides some excellent nuts-and-bolts guidance for those looking to avoid some common pitfalls. For starters, if you want something in writing, whether it be approvals, certifications or, as in this case, invoices, be sure to make that a contract requirement. Duffy slid by with some contract language that frankly was a little ambiguous, but a party is almost always better off with clear, unambiguous contract language at the start rather than a clear, unambiguous appellate court ruling at the end, and only after a trial.

If the contract spells out a requirement, no matter how seemingly mundane or even superfluous, do it. The only exception would be if the parties agree, in writing, either to waive that particular contract requirement or amend their contract so as to no longer include it.

If the contract calls for the other party to do something, insist they do it or you may waive that requirement. What's more, that waiver might turn out to be a big mistake. Here once again, Duffy came out smelling like a rose, but quite possibly only because Kasinecz failed to raise the issue, a happening upon which a party would be well-advised neither to count nor to rely.

If you intend to assert mechanics lien rights, make sure your work either is substantially complete or that you have a legally justifiable reason for not having been able to reach substantial completion. By way of example only, being terminated without cause would be one such justification.

Finally, and most significantly, always periodically bill in writing and exactly as called for by the contract terms. Regular, periodic invoices are just good business practice in any event. However, as Kasinecz learned the hard way, not invoicing can result in a complete forfeiture of one’s ability to recover for work performed but never compensated.

1 Illinois Supreme Court Rule 23(e)(1) provides in pertinent part that unpublished orders are “not precedential and may not be cited by any party except to support contentions of double jeopardy, res judicata, collateral estoppel or law of the case.”

2 That initial appeal, Kasinecz v. Duffy, No. 2-10-0156, 2011 Ill. App. Unpub. LEXIS 834 (2d Dist. Mar. 10, 2011), also resulted in an unpublished decision and so it also does not constitute precedent under the law. In fact, this was recently noted by another Illinois appellate court, in a published opinion which refused to excuse a party's failure to provide a sworn contractor's statement. See Cityline v. Roberts, 2014 Ill. App. (1st) 130730, ¶ 22.

3 Quantum meruit is pleaded in the alternative. It assumes the absence of a contract, but nevertheless allows for recovery to the extent of the value of the work performed.

4 Kasinecz v. Duffy, 2013 Ill. App (2d) 121329-U. 3

5 This was actually the same ground upon which the trial court denied Kasinecz quantum meruit relief before the first appeal, before denying him such relief the second time around based on his failure to prove the value of his services.

James K. Zahn, FALA, ESQ, SABO & ZAHN
Attorneys at Law
401 North Michigan Avenue • Suite 2050
Chicago, Illinois 60611
(312) 655-8620 • E: jzahn@sabozahn.com
What To Expect in the 2015 I-Codes - PART 2

by Kelly P. Reynolds
ALA Code Consultant

In the last issue I explained some of the changes coming to the 2015 editions of the IBC, IRC & IMC.

Here are selected changes for other 2015 I-Codes.

**2015 INTERNATIONAL FIRE CODE**
- Decorative material requirements were revised to be more comprehensive and provide more details for healthcare occupancies.
- Section 910 was revised to address overall smoke removal. Mechanical smoke removal requirements are now revised and clarified.
- CO (carbon monoxide alarms) requirements revised to make installation requirements clearer and relocated by Section F360-13. Educational (E use group) occupancies were added as regulated occupancies.
- Limited area fire sprinkler system provisions are now more comprehensive.
- A new IFC (and IBC) Section 915 replaces and greatly expands upon existing Section 908.7 on CO detection and alarm provisions.

**2015 INTERNATIONAL PLUMBING CODE**
- Public toilet facilities are not required for occupancies that have limited areas for public access. (Author's Note) This would include places where you just pick up your meal or product and leave and that do not have seating. I have battled for this for years. There is still a requirement for employee toilets.
- Water temperature limiting devices are required for footbaths and head shampoo sinks.
- In a replacement water heater installation when a nearby drain point is unavailable for the required pan, a code modification permits the pan to be used without a drain line.
- Fixtures such as water closets and urinals that utilize nonpotable water must be identified with words and a symbol indicating such. The color purple has been established for identifying water distribution piping conveying nonpotable water.
- The application of a primer to drain, waste and vent PVC piping and fittings prior to solvent cementing is not required for pipe that is 4-in. or less.
- Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooking equipment must be connected to the appliance or equipment to prevent water damage if the pump fails.
- The ventilation system for enclosed parking garages must operate continuously or be automatically controlled for intermittent operation utilizing both CO and nitrogen dioxide detectors.
- New text regulates the design and construction of exhaust shafts that serve domestic kitchen exhaust systems in multi-story buildings.
- Remove obsolete requirements that encouraged oversize piping of hot water piping to restrooms. Insulation of nearly all hot water pipes in new commercial buildings. (Ever have to run the water for a long time until it becomes hot? This code change should resolve that problem.)

**2015 INTERNATIONAL FUEL GAS CODE**
- The section on protection of piping has been completely rewritten.
- Line regulators installed in rigid piping must have a union installed to permit removal of the regulator.
- Specific installation requirements were added for the safe installation of ANSI Z21.69 connectors to commercial cooking appliances.
- Some new text recognizes the use of dryer exhaust duct power ventilators (DEDPV) for installations that exceed the allowable exhaust duct length for clothes dryers.

(Continued on page 34)
### 2015 INTERNATIONAL ENERGY CONSERVATION CODE

- Climate-appropriate alternative added for buildings located in Tropical Zones.
- In the residential requirements, the inclusion of the Energy Rating Index Compliance Alternative as another path adds more flexibility of the IECC.
- Separate Chapters relating to existing buildings were created in both IECC-Commercial and Residential Provisions.

### 2015 EXISTING BUILDING CODE

- Requirements related to the addition of sleeping units and dwelling units as they relate to the requirements for Accessible units. Type A units and Type B units have been relocated to Chapter 11 on Additions.
- The different levels of change of occupancy as required in Chapter 10 have been clarified.

### 2015 INTERNATIONAL SWIMMING POOL & SPA CODE

- The term "pool and spa" replaces the previous "aquatic vessel" throughout the code.
- Fall protection guards for springboards that are greater five (5) feet above the pool deck are now required. The guards will significantly reduce injuries from falls from the springboards.
- Public pools are now required to have signage indicating how to contact emergency services by phone.

---

### INSURANCEINFO

(continued from page 12)

Consider the following:

- Utilize the site visit to properly document the progress of the file to head off Change Orders by:
  - Establishing actual status of the work versus where the progress should be
  - Document and communicate any deviation of the construction schedule to Owner and Contractor

- Put every change order in writing in a change order log describing the change intended and why the change order was requested.

For example:

- Owner requested
- Material substitution due to unavailability of the specified materials
- Difference in site condition (information furnished by others)
- Hidden or latent defect on the site
- Contractor requested
- Change in law after Contract Documents submitted for permitting
- Subsequent and contradictory interpretation of code after Contract Documents submitted for permitting

- Create a Change Order Excel Spreadsheet that is maintained and able to be quickly furnished to the owner and contractor.
- Organize a meeting of key players in advance, including the general contractor and subcontractor to discuss Change Orders and come to agreements relative to the reason for same.
- Conduct an in-house peer review of working drawings, specifications and other key documents.
- Scrutinize drawings closely from project concept to the final stage and invite outside review.
- Keep communications open with ongoing, on-site project meetings.
- Review and revise critical documents several times during the life of a project.
- Create and use functional checklists.
- Participate in workshops and training related to improving document quality.
- Establish accountability for everyone at every stage of document development.
- Update any system that obstructs development of quality documents.
- Carry out a timely project post mortem to identify problem areas.
- Have a strict company policy, that no one be able to explain what happened with more than "he said and I said."

- Be specific. To avoid misunderstandings, Change Orders should spell out in detail the additional work that is requested or necessary, and they should be signed and dated by all applicable parties. They should always include whatever drawings, specifications, cost estimates, new deadlines and payment terms are necessary to complete the additional work.

- Don’t agree to open-ended Change Orders. Also known as “time and materials agreements,” these can blow up your budget and strain contractor/owner relationships since they allow the contractor to charge for work as it proceeds and materials and supplies as they are needed. Instead, owners are wise to ask for a fixed sum agreement that obligates the contractor to perform work for an agreed upon sum. The contractor must absorb costs if they are greater than estimated or, conversely, can make a greater profit if costs are less than budgeted.

- Confirm conversations with a letter immediately. If you have to see a lawyer, you will be able to explain what happened with more than "he said and I said."

Willis A&E is the specialist practice group within Willis exclusively dedicated to providing insurance and risk management solutions to Architects and Engineers. Contact Tom Harkins at Tom.Harkins@willis.com.
Open Cell Spray Foam Insulation in Commercial Buildings

A high performance affordable option for wall and roof assemblies

provided by ICYNENE, Inc.
by Peter J. Arsenault, FAIA, NCARB, LEED-AP

Learning Objectives:
After reading this article, you will be able to:

• Identify the characteristics of open cell spray foam that make it suitable for high performance roof / attic assemblies and exterior wall assemblies.

• Investigate the inherent energy performance and cost saving effectiveness of low density open cell insulation when insulation and air barrier are provided in one.

• Recognize the ability of open cell spray foam insulation to combat moisture infiltration into construction assemblies and add to building durability.

• Assess the various ways that open cell insulation contributes to environmentally sensitive and green buildings.
When selecting insulation products, architects have a broad range of choices. Foam insulation products are often selected because they have consistently been shown to provide superior overall thermal performance contributing to greater energy and operating cost savings. In particular, open cell spray foam insulation can insulate and air seal wall and roof/attic assemblies in commercial buildings quite effectively, economically, and efficiently.

Overview of Open Cell Low Density Spray Foam Insulation

Spray foam insulation relies on using two distinct manufactured ingredients that are mixed and formed in the field by skilled applicators. As soon as the two parts are mixed, a chemical reaction begins causing the liquid mixture to foam, expand, and eventually take its final shape. This type of application means that the sprayed insulation readily conforms to the shape of the surfaces it is being applied to while its chemical make-up ensures that it adheres to those surfaces.

Within the industry, there are several common types of spray foam insulation. For purposes of this article, we are going to focus on low density, open cell insulation.

For context, low density foam is has an installed density of approximately one half pound per cubic foot compared with medium density at two pounds. Some high density foam is also available at approximately three pounds per cubic foot.

"An environmental issue specifically related to spray foam insulations is the required use of a blowing agent to allow the spray foam to be mixed and installed."

Open cell spray foam insulation effectively blocks heat transfer with a tested R-value of approximately R-3.5 to R-3.7 per inch. Its softer make-up means that it can seal around the edges and perimeter of stud cavities and any penetrations in a flexible manner. Some of the other benefits of open cell insulation are acoustic control, vapor permeability, and cost efficiency.

Low-density open cell spray foam insulation can be used in many common commercial building envelope locations such as exterior walls where it is sprayed from the inside against sheathing or roof/ceiling assemblies where it is similarly sprayed inside of sheathing or roof decks. It can also expand the horizon of better performance opportunities compared with fibrous or rigid board insulation options because of its inherent air tightness. This is particularly true in non-typical locations such as cathedral ceilings, cantilevered floors, unconditioned space separations, and other unusual shapes. Further, it is particularly good at filling in and sealing around irregularities in any of these locations.

When it comes to code compliance, many low-density spray foam products are approved for all construction types indicated in the International Building Code (IBC) including type I, II, III, IV, and V construction (check with manufacturer for specific compliance details). Low-density spray foam can also be used in assemblies that require a fire rating and can meet specific IBC fire requirements for the use of plastics in wall assemblies. When used in framing cavities, the IBC is clear about requiring a protective barrier, designated as a thermal barrier, such as a layer of _ inch gypsum board (or an intumescent coating) on interior surfaces.

Integral Air Barrier Creates Optimal Building Performance

For commercial projects, open cell spray foam insulation delivers very high building performance by providing three distinct capabilities in a one-step application. First, it controls conductive heat flow through an assembly by virtue of its direct insulating value. A second means of optimizing performance with open cell spray foam comes from its inherent ability to prevent air to flow through it unlike fiberglass insulation.

Third, and perhaps as significant as R-values, is the ability of the open cell spray foam to act as a full, integral air barrier that controls air leakage into and out of construction assemblies and the building.

It should be noted that while open cell insulation is an effective air sealant, it does allow water vapor to diffuse through it. Hence, in cold climates (climate zones Marine 4 and higher) a warm side vapor retarder (e.g. vapor retardant paint) will be needed to control vapor diffusion in an exterior wall or unvented attic assembly.

Overall, the use of spray foam insulation, then, goes beyond just R-values and truly addresses a comprehensive way to optimize energy efficiency making the thermal performance arguments for using open cell spray foam insulation very compelling.
Cost Effectiveness of Open Cell Insulation

Achieving the multiple properties of thermal insulation and air sealing in a single step obviously saves labor and material costs. This is usually seen as the first and most obvious contributor to the cost effectiveness of open cell, low density insulation. Some architects working in cold climates (all of Canada and Zones 5 to 8 in the U.S.) may still select medium-density foam thinking that they can also get an integral vapor barrier in the one product. However, the cost difference between the higher density foam is much greater than the cost of using a simple vapor retarder.

From an installation standpoint, open cell low-density foam can be applied in a single continuous application without regard for depth. This is in contrast to most closed cell medium density insulation that is limited to 2" lifts to allow setting and curing. Hence, the open cell installation is quicker and therefore reduces labor cost.

Perhaps one of the biggest contributors to the cost effectiveness of open cell, low density insulation is its inherently high yield. In this context, yield is a measure of the coverage capability of foam. Low-density foam has a yield that is three to four times higher (100:1 versus 30:1) than medium density foam.

Enhancing Building Durability with Open Cell Insulation

Durability of a construction assembly and a building relies on the integrity of materials remaining intact during the full service life of the building. The biggest common threat to that integrity is damage from moisture seeping into enclosed cavities and causing damage to materials or structural components of a system. According to ASHRAE, moisture damage contributes to 90% of all building and building material failures.

The predominant source of this unwanted damage causing moisture is from air leakage which carries that moisture with it through openings or irregularities into wall and roof assemblies. In this case, low-density open cell spray foam insulation can play multiple roles in preventing moisture laden air from penetrating into a building assembly. By creating an effective air seal to begin with, the potential for air leakage and moisture penetration is reduced notably. If any moisture does get through, the insulation itself helps to prevent it from condensing by keeping the moisture laden air from meeting cold exterior surfaces.

In roof assemblies, this quality can make it easier to spot the source of leaks and thereby...
permit any roof repairs to be made more easily.

Separate from air leakage, the other means for vapor to enter an assembly is direct diffusion through materials. This raises the question of whether or not a vapor retarder is needed to stop that diffusion when open cell spray foam insulation is used. In the warmer U.S. climate zones 1 through 4, an interior vapor retarder is not required by code, with the exception of places where high interior relative humidity is present such as indoor swimming pools. In other climate zones or locations where a separate vapor retarder is required, it can often be achieved by using vapor retarder paint which creates a full and continuous barrier to moisture diffusion.

Properly designed and installed then, roof and wall assemblies in commercial buildings that use open cell spray foam insulation and appropriate vapor retarders will notably reduce the chance of moisture damage and contribute to the overall durability and long term integrity of the building.

Environmental and Green Building Contributions of Open Cell Insulation

For architects, building owners, contractors, and occupants, low-density open cell spray foam insulation has been shown to be a valuable component of green and sustainable building design.

Both LEED 2009 and LEED v. 4 place a strong emphasis on reducing the use of fossil fuels and increasing the use of non-polluting renewable energy. Open cell low density spray foam insulation has been shown to contribute to excellent thermal performance both by contributing to higher, more complete R-values and by reducing air infiltration. In order to receive points in the Energy Optimization category the building must demonstrate a percentage increase in energy savings in accordance with ASHRAE standards. The number of points available depends on the degree of energy savings.

“For architects, building owners, contractors, and occupants, low-density open cell spray foam insulation has been shown to be a valuable component of green and sustainable building design.”

From a life cycle analysis standpoint, the high yield of low-density foam makes it more resource-efficient than medium-density foams, requiring fewer raw materials to achieve equivalent thermal performance. Overall, because of the impact on energy use reduction, the average building life cycle savings can be 10 times the initial investment in construction costs.

The ability to help keep moisture out of construction assemblies allows open cell low density insulation to safeguard indoor environmental quality a focus of LEED. Not only does it help prevent mold and other problems from forming, it doesn’t contribute to problems either. The blowing agent for open cell insulation is water so there are no chemicals that can out-gas or create environmental health concerns. Further, some open cell insulation products are compliant with Collaborative for High Performance Schools (CHPS) EQ 2.2Section 01350 in accordance with the California Department of Health Services Standard Practice.

An environmental issue specifically related to spray foam insulations is the required use of a blowing agent to allow the spray foam to be mixed and installed. Materials used as blowing agents are rated based on their Global Warming Potential (GWP) by comparing it to other materials. The reference point for GWPs is the most basic greenhouse gas of carbon dioxide with a GWP rating of 1, the lowest on the index. Since many open cell spray foam insulations use only water and carbon dioxide the lowest possible GWP is achieved.

CONCLUSION

Open cell spray foam insulation is a logical and proven choice for commercial buildings as well as residential buildings. It can reduce upfront insulation costs by taking advantage of its higher yield and ability to provide an air barrier without complex air sealing and finishing procedures and materials. It also makes it easy to address hard-to-insulate areas like floor areas over unconditioned space, complicated framing, etc. It allows architects to explore high performance design options not feasible with other forms of insulation in buildings with complex angles, curves, domes, etc. From an energy standpoint, it has been shown to reduce ongoing energy costs by up to 50% by creating an integral air-barrier to minimize air infiltration, while maintaining long-term thermal (R-value) performance. These lower energy requirements can translate to lower HVAC loads and associated equipment costs. From a user perspective, the open cell insulation can improve the indoor environment with more consistent building envelope performance to enhance workplace productivity, performance and occupant comfort. For the architect and design team, open cell low density spray foam insulation provides a high performance solution that enhances, not limits, design possibilities in commercial buildings. For the building owner, it contributes to a durable, efficient building that can attract higher occupancy rates and building values well into the life of the finished building.
Open Cell Spray Foam Insulation in Commercial Buildings

by Peter J. Arsenault, FAIA, NCARB, LEED-AP

Learning Objectives:

- Identify the characteristics of open cell spray foam that make it suitable for high performance roof / attic assemblies and exterior wall assemblies.
- Investigate the inherent energy performance and cost saving effectiveness of low density open cell insulation when insulation and air barrier are provided in one.
- Recognize the ability of open cell spray foam insulation to combat moisture infiltration into construction assemblies and add to building durability.
- Assess the various ways that open cell insulation contributes to environmentally sensitive and green buildings.

Program Title:
Open Cell Spray Foam Insulation in Commercial Buildings

ALA/CEP Credit: This article qualifies for 1.0 HSW LU of State Required Learning Units and may qualify for other LU requirements. (Valid through June 2016)

Instructions:
- Read the article using the learning objectives provided.
- Answer the questions.
- Fill in your contact information.
- Sign the certification.
- Submit questions with answers, contact information and payment to ALA by mail or fax to receive credit.

QUIZ QUESTIONS

1. Open cell spray foam insulation effectively blocks heat transfer with a tested R-value of approximately:
   a. R-5 to R-7 per inch
   b. R-3.5 to R-3.7 per inch
   c. R-2.5 to R-5 per inch
   d. R-3.17 per inch

2. When it comes to code compliance, many low-density spray foam products are approved for construction types in the International Building Code (IBC) including:
   a. Type I construction
   b. Type III construction
   c. Type V construction
   d. All of the above

3. A means of optimizing performance with open cell spray foam comes from its inherent ability to:
   a. prevent air to flow through it unlike fiberglass insulation
   b. allow air to flow through it just like fiberglass insulation
   c. accelerate convection currents in a framing cavity
   d. None of the above

4. The yield of open cell low density spray foam compared to closed cell medium density spray foam is:
   a. the same between the two
   b. low-density open cell foam yields 3 to 4 times more coverage than medium density closed cell
   c. medium density foam yields 3 to 4 time more coverage than low density
   d. low density foam yields 100 times more than medium density

5. An obvious labor and material saving of open cell spray foam insulation is:
   a. it’s very low initial cost
   b. it’s very high R-value reducing energy costs over time
   c. it’s ability to completely insulate and air seal a framed wall cavity in one step
   d. It’s pre-mixed make-up from the manufacturer

6. Low-density open cell spray foam can be used in fire-rated wall assemblies:
   a. True
   b. False

7. The open cell make-up of low density spray foam insulation helps manage any bulk water present by:
   a. acting as a vapor barrier to prevent it’s intrusion
   b. trapping it inside the cells and preventing it from moving
   c. allowing it to drain away and enhancing the ability of the assembly to dry out
   d. filling the cavity completely so no water can get in

8. In all U.S. climate zones an interior vapor retarder is not required when open cell spray foam insulation is used.
   a. True
   b. False

9. Since many open cell spray foam insulation uses only water and carbon dioxide as the blowing agents it’s Global Warming Potential (GWP) is rated at:
   a. 3,400
   b. 2,700
   c. 20
   d. 1

10. From a life cycle analysis standpoint, the high yield of low-density foam makes it more resource-efficient than medium-density foams, requiring fewer raw materials to achieve equivalent thermal performance.
   a. True
   b. False

Contact Information:

Last Name: __________________________
First Name: ___________________________ Middle Initial: __
Firm Name: ____________________________
Address: ______________________________
City: __________________ State: ______ Zip: ______
Tel.: __________ E-Mail: ______________________
Credit Card No: _______________________
Expiration Date: __________ Security Code: ________

PAYMENT: ALA/CEP Credit or Certificate of Completion:
Cost: $15 (ALA Members) $20 (non-members)
☐ Check or ☐ Credit Card
☐ Please send me a certificate of completion (required by certain states & organizations) that I may submit.

Your test will be scored. Those scoring 80% or higher will receive 1 LU HSW Credit.
Fax: 847-382-8380
Address: Association of Licensed Architects,
One East Northwest Highway, Suite 200
Palatine, IL 60067
Attn: ALA/CEP Credit

Certification: (Read and sign below)
I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the ALA Continuing Education Guidelines for the reported period.

Signature: __________________________ Date: __________
Second Chances for Buildings: Don’t Get Snowed During Roofing Improvement Projects

by Timothy M. Crowe, ALA, SE, PE
Wiss Janney Elstner Associates, Inc.

Building renovation and adaptive reuse projects often involve exterior envelope upgrades. Ideally, this is done while maintaining the character of these older buildings. When modifying older roof systems, there are opportunities to enhance their energy performance. Energy conservation codes have recommended the increasing the insulation within building exterior envelopes, such as the walls and roofs to reduce energy consumption needed to heat and cool buildings. This is clearly a worthwhile venture, but the consequences of adding insulation must be considered. Upon looking at roof systems, initial reviews using snow loads based on codes in effect at the time the structure was originally constructed may conclude that supplemental insulation results in a negligible amount of additional load to the structure. However, in cooler climates, it is also important to consider the snow loads associated with adding insulation to increase the R-value to the roof. (Note that R-value is a measure of resistance to heat flow through a given thickness of material.)

Starting with the R-value

To illustrate the implications of adding additional R value to an existing roof, it is necessary to review the design criteria in effect when the building was constructed. As recently as approximately thirty years ago, the building industry seemed to pay little attention to the need for insulation in roof systems. Prior to the 1970s, no specific insulation requirements were imposed on buildings. Uniform Building Codes from the 1960s through the late 1970s only stipulated that the use of combustible insulation was permitted, provided it was covered with an approved material in all types of construction, but no R-value requirements were noted.

Energy usage first became a concern within the building code organizations after the oil embargo of 1973. About this time, the National Conference of States on Building Codes (NCSBC) asked the National Bureau of Standards (NBS) to develop a draft performance standard for energy efficient buildings. The NBS issued an interim report 74-452, which was further developed by the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE). ASHRAE subsequently released a consensus standard 90-75 in conjunction with the U.S. model building code organizations. This ASHRAE 90-75 document was ultimately published by the Council of American Building Officials (CABO) and became known as the Model Energy Code (MEC) in 1977. However, there was resistance in the building industry and it was not until the late 1980s that building codes began to include requirements to improve energy performance.

Figure 1. Excessive snow and snow drifting accumulation on commercial building.
The 1976 Uniform Building Code (UBC) required that insulation should be a rigid type that suitable to receive a roof covering. The 1976 UBC required that a "vapor barrier" be installed over the roof deck when the average winter temperatures were expected to be below 45 degrees for where excessive moisture conditions were anticipated within the building. This code still did not include minimum R-value requirements.

The first US code to include an Energy Conservation Section was the 1978 Building Officials Code Administrators Building Code (BOCA). In this document, R-value requirements were quite low by today's standards. The 1978 BOCA established minimum R-values of the entire roofing assembly for commercial buildings ranging from 10 to 17, based on heating degree days for the region in which the building was located. For roof/ceiling assemblies in which the finish interior surface is essentially the underside of the roof deck, such as a wooden cathedral ceiling, the R value could be reduced to 12.5 for any heating degree day area, for residential buildings less than three stories. Similarly, at this time the UBC included comparable requirements and referenced the MEC.

Through the 1980s, ASHRAE further developed its standards for commercial and high-rise buildings, and in 1989 published Standard 90.1-1989, "Energy Efficient Design of New Buildings Except Low-Rise Residential." This standard, which only applied to new construction, utilized an equation to calculate insulation requirements. Subsequently the International Energy Code has evolved and additional requirements for insulation increases have followed. The most recent edition is the 2012 International Energy Code. This code includes R-value requirements for insulation alone in the commercial roof systems that range from 25 to as high as 49.

**Considering the Snow**

While changes in insulation requirements were occurring, adjustments were also being made to code prescribed snow loads. More specifically, the American Standards Association, Inc. ASA A58.1 which preceded the American National Standards Institute, Inc. ANSI A58.1, and are the predecessors to the American Society of Civil Engineers Minimum Design Loads for Buildings and other Structures (ASCE7), are consensus standard that had been the basis for design snow load criteria for the model building codes. The International Code Council ICC adopts ASCE7 for building design loads. The following is a brief outline of snow load changes over the past sixty years:

- **ASA A58.1 - 1955**, provided snow load maps that identified estimated weight of snow pack for a ten-year reoccurrence, based on information provided by the U.S. Weather Bureau at that time. Reductions in snow loads were permitted for roof slopes that exceed 20 degrees, but a minimum roof live load of 20 psf was maintained, to consider loads attributed to roof repair and maintenance. Requirements for special snow load conditions were deferred to the local building official. The standard states that the designer must be cognizant of such conditions but no criteria were presented for drifting snow loads.

- **ANSI A58.1 - 1972** provided snow load maps for 25 year, 50 year, and 100 year mean reoccurrence intervals for ground snow load. The reoccurrence levels would be applied based on anticipated risk to human life or building occupancy (i.e., a 25 year reoccurrence for buildings with no human occupants or negligible risk to human life; a 50 year reoccurrence for all permanent structures; and 100 year reoccurrence for high risk of hazard to threat to life and property, in case of failure). Snow load reductions were permitted for slopes that exceed 30 degrees (an increase from the previous version), and up to a 40 percent reduction was permitted at fully clear exposed roofs, unobstructed by wind. The standard also included provisions for drifting snow, with drift height limit equal to three times the ground snow load, where the snow density was assumed to be 15 pcf. Special snow load zones were recognized through the mountain regions in the western United States.

- **ANSI A58.1 - 1982** provided a single snow load map and introduced importance factors to adjust loads for building occupancies and anticipated risk considerations. Factors were also added to adjust loads based the building being heated or not (thus, considering melting snow potential), and based on the texture of the roof surface. Calculations further permitted snow load reductions where roof slopes exceed 15 degrees, depending upon heated/unheated conditions and roof surfaces. The snow density was also characterized as being 15 pcf to 25 pcf, based on the probable ground snow load. Additional snow load reductions were permitted for roofs with...
clear exposure. Snow drift loads were applied on top of the balanced snow load, resulting in a maximum snowdrift load that was about three times the probable ground snow load, similar to the 1972 version of the standard.

- **ASCE-7-88** revised ANSI A58.1-1982 and the subsequent versions of ASCE7 have become the referenced document for design loads in the current ICC building codes. ASCE7 criteria changed to drift heights to correspond with building geometry. Prescribed drift heights for design loads were altered to consider the extent of roof area that could provide drifting snow, and the drift height was only limited by the building profile. Consequently, drift loads increased significantly. Later versions of ASCE7 and included information regarding windward and leeward snow drift scenarios.

To summarize, drifting snow loads were not specifically addressed in the model building codes until well into the 1970s. The model Building Codes from the 1950s through the mid-1970s only required a uniform snow load and an unbalanced snow load. Drifting snow loads were not mentioned and the code only stated that the roof structure design was to account for extra snow loads at roof valley locations. Consequently, the actual loading required was highly subjective. Where potential for snow drift loads did occur, the codes stated that these "special loaded areas were to be determined by the building official." For the BOCA building codes, ANSI A58.1-1972 was referenced in the 1975 BOCA, and later ANSI A58.1-1982 was referenced by in the 1987 BOCA. It was not until the around 1990 that the snow drift loads as required by current code requirements came into effect.

**This affects me how?**

So what does this all mean for buildings today? In general, changes to code requirements are slow moving. Partly in an effort to be sympathetic to building owners and operators, code upgrades are not all instantaneous and do take time to be adopted by different jurisdictions. As a result, if you have a building that was constructed during or before the early 1970s, it is very possible that the building was originally designed with very little, if any, roof insulation and that the roof may have been designed for a roof snow load as low as 12 psf. To help understand the significance of these loads, 12 psf is roughly equivalent to an 8 inch depth of snow cover, assuming a 17 pcf density. 

(Studies of snow weight accumulation on building roofs, performed after the Chicago storms of 1979, revealed that the weight of snow ranged from about 12 to 24 pounds per cubic foot, with an average of about 17 pcf.) For a building with a 20 psf design load and no drift provisions, snow load capacity may be limited to a snow depth of about 14 inches to maintain acceptable deflections and stress levels within roof structure. With minimal insulation, older building designs with reduced load capacities can be serviceable structures that stand the test of time, as in heavy snow conditions a significant portion of the snow accumulation will melt off from heat escaping through the roof. As a result, these roofs may have not yet experienced code prescribed loading event. Realizing drifting snow conditions can become more likely when energy code requirements are imposed.

Thus, when adding insulation as part of roof replacement project, it is important to understand the roof structure’s adequacy to support both the added weight of this insulation and realistic snow loads. With added insulation, the potential for increased snow loads on a building’s roof can be significant. These conditions can be of greater concern for buildings constructed prior to around 1975. To address these concerns, even if not required by local building codes, designers involved in building renovation and adaptive reuse projects should confirm that the effects on the structure are properly considered when modifying building envelopes.

Tim Crowe is an Associate Principal with Wiss Janney Elstner Associates, Inc. (WJE) in Northbrook, IL with over twenty-five years of experience in the design, investigation, and repair of archaic and contemporary building structures. He can be reached at tcrowe@wje.com
ECONOMIC OUTLOOK

Economic Update

by Bernard Markstein, Ph.D.
U.S. Chief Economist, Reed Construction Data

This year's harsh winter is slowly releasing its grip on the nation as a difficult spring takes its place. Winter blizzards have been replaced by drought in the west and by floods and hail in other parts of the country. For a few locations, snow has even put in a May appearance. With the weather improving, companies are working to make up for lost business, and builders are working to get delayed construction projects back on track.

Recent data reflect both the negative and positive aspects of the impact of the weather on the nation's economy. A preliminary estimate of first quarter real (inflation-adjusted) gross domestic product (GDP) reported miniscule growth of 0.1% at a seasonally adjusted annual rate (SAAR). Most analysts expect this growth to be revised to a negative number (a decline in real GDP) as more data become available. However, second quarter real GDP is expected to be above 3%, partly due to efforts by firms to make up for first quarter's lost activity.

Consumer spending has improved. Consumer spending rose from approximately 2% (SAAR) in real terms in second and third quarters of 2013 to approximately 3% in the fourth quarter of 2013 and the first quarter of 2014. Measures of consumer confidence have been rising as well.

Employment has strengthened. After weak job gains in December and January, February through April have each posted seasonally adjusted (SA) gains in excess of 200,000, with the April increase in jobs close to 300,000. Some of April's jump may be catch-up from the poor weather, but is still encouraging. At the same time, construction employment has grown. From April 2013 to April 2014, construction jobs increased by 198,000, and the not seasonally adjusted (NSA) construction unemployment rate fell from 13.2% to 9.4%.

As of early this year, two major sources of uncertainty for the economy and for business were removed, at least temporarily. First, Congress passed and the President signed into law an appropriations bill to fund federal government operations for the current fiscal year, which runs through September 30. Granted, this occurred in January, at the start of the second quarter of the federal fiscal year, but was better than the numerous short-term continuing resolutions that had become the norm. Second, the debt ceiling was suspended for a year (until March 2015), removing the possibility of a federal government shutdown and debt default, along with the need for the previous practice of passing short-term debt extensions or suspensions.

But this could prove to be a temporary respite. First, as already noted, September 30 marks the end of the current federal fiscal year. Appropriation bills for the next fiscal year need to be passed and signed into law prior to October 1, which is not a given.

Second, a new debt ceiling needs to be passed prior to March when the debt ceiling comes back into play. The debt ceiling suspension needs to be extended, or—best of all worlds, but unlikely to happen—the debt ceiling needs to be eliminated.

In January, the Federal Reserve reduced its monthly purchases of long-term assets (a program known as QE3) from $85 billion to $75 billion. Subsequently, following each Federal Open Market Committee meeting, the Fed has announced a $10 billion tapering of its planned monthly purchases of long-term assets. At the end of April, the Fed announced it would ratchet down its purchases of long-term assets from $55 billion per month to $45 billion per month starting in May.

Although most long-term interest rates (including most mortgage rates) are about 1% higher than their lows last year, most of that increase occurred ahead of the Fed's taper. Since the taper began, long-term rates have been relatively stable.

It is troubling that, as of March, SA current dollar (not adjusted for inflation) nonresidential building construction spending has fallen for five months in a row. Not all of the decline can be blamed on the weather. On the positive side, first quarter NSA spending was 3.5% higher than first quarter 2013 spending.

Within the nonresidential building construction group, the "For Lease" category—lodging, office, and retail—has performed well. First quarter lodging construction spending was 34% higher than first quarter 2013 spending. Meanwhile, office construction spending was 12% higher and retail construction spending was 9% higher. The outlook for lodging and office construction is for a fairly strong 2014 and a solid, but slower growing, 2015. Retail construction activity will be good, but not spectacular this year, and strengthening next year.

The main drag on nonresidential building construction has been institutional building construction, which declined last year and continues to struggle, but is poised for a turnaround later this year and some further improvement next year. The second largest spending category within the group, health care construction, is likely to lead the way. The largest category, education construction, will be slower to recover and may not start its turnaround until 2015 or 2016.

The AIA Architecture Billings Index (ABI) is raising a warning flag. Over the six months from November through April, the ABI posted four readings below 50. An index number below 50 indicates falling billings, a negative for the outlook for commercial construction (particularly nonresidential building construction).

(continued on page 44)
Heavy non-building (civil) engineering construction spending has shown some improvement of late. Compared to first quarter 2013, first quarter NSA spending for the largest category, highway construction, increased 8%, while the next largest (and nearly as large) category, power construction, slipped 1%. Transportation construction spending, the third largest category, was up 6%, but water and sewer construction spending, a somewhat smaller category, was down 7%. Overall, the group was up 5% for the quarter.

Transportation construction spending has benefited from Federal Aviation Administration (FAA) funding signed into law in February 2012. That funding runs out in 2015, and new funding needs to be provided.

More immediate is the threat the highway trust fund will run out of funds as soon as this August. Following that, current funding for the “Moving Ahead for Progress in the 21st Century” act (widely referred to as MAP-21), which was signed into law in July 2012 and provides federal funding for most highway projects around the country, expires at the end of September.

Funding for transportation, the highway trust fund and MAP-21 all need to be enacted. The real question is: Will long-term funding allow for sensible spending and investment, or will a series of short-term extensions lead to expensive patches?

The Reed forecast is for total construction spending to increase 9% this year, based on construction spending for nonresidential building increasing 4%, heavy engineering increasing 5% and residential increasing 16%. For 2015, the Reed forecast is for total construction spending to rise 11%, with nonresidential construction spending up 9%, heavy engineering also up 9% and residential up 15%.

Risks that could lower the growth forecast and increase the risk of recession are fairly low, but remain.

These risks include:

➢ A sustained spike in interest rates, most likely due to the Federal Reserve being too aggressive in unwinding its asset purchase program
➢ Sovereign debt default by one or more major European countries
➢ One or more countries abandoning the euro
➢ Significantly higher oil prices (roughly 50% a barrel or higher) for a sustained period (two months or longer)
Experience More This Year At The ALA 2014 Conference!

Earn Up To 8.25 Continuing Education Credits in One Power-Packed Day.

Mark your Calendar for the 16th Annual ALA Midwest Architecture Conference & Product Show, Tuesday, September 30th at Drury Lane Conference Center, Oakbrook Terrace, IL.

Hear leading industry speakers, earn up to 8.25 continuing education credits, attend the “After 5 Networking Social”. Talk to providers of products and services for the design and construction industry.

Registration Opens in June.
What’s New This Year?
- Full day or Afternoon registration option
- Over 25 seminars to choose from
- Earn up to 7.25 continuing education credits in one day attending seminars
- Earn 1.0 additional learning unit by spending one hour visiting exhibitors
- “After 5 Networking Social” for attendees, speakers and exhibitors
- Evening seminar starts after the social
- All seminars are 1.0 LU
- Keynote is 1.25 LU

Our Keynote Speaker:
Gordon Gill, Adrian Smith + Gordon Gill Architecture LLP

“The Beauty of Utility” – the presentation will focus on the exploration of designs and platforms that expand the concept of beauty beyond the aesthetic to include purposeful performance-based solutions at all scales of the built environment. Recent AS+GG projects that Gordon will discuss include the Astana Expo City 2017 Master Plan, Chengdu Great City Master Plan, FKI Tower, Beijing Waldorf-Astoria, Dancing Dragons Towers, Kingdom Tower and Masdar Headquarters.

25 Educational Sessions:

Understanding Moisture Dynamics in Building Envelopes
Dr. James Welle, Tremco

Selected Changes to the 2015 I-Codes
Kelly Reynolds, Kelly P. Reynolds & Assoc.

Heat Recovery Ventilation: Why Efficiency Matters
Kevin Rapp, Zehnder America

2012 Illinois Energy Code - Pathways to Compliance Overview
Matthew Brown, Energy Diagnostics Inc.

NCARB & You: IDP, ARE & Certification
Harry M. Falconer Jr., AIA, NCARB

Wall Performance by Design: The Role of Rainscreens in Moisture Management
Lawrence Dalgleish, Building Enclosure Management Institute (BEMM)

IL Energy Code for Roofs - Now and into the Future
Bill Mchugh and Pat Petrak, Chicago Roofing Council

Self-Adhered Modified Bitumen Technology
Doug Frost, CCIA, IRO, Polyglass USA

ALA Contracts: Analysis and Interpretation of Owner-Architect Forms
Werner Sabo and Shawn E. Goodman, Sabo & Zahn

Daylighting with Electrochromics
Andrew Hulse, Sage ElectroChromics

BIM for Small Firms
Kent Brown, GRAPHISOFT

Terrazzo: The Original Recycled Floor
Mike Brawley, Terrazzo & Marble Supply

Contracts and Claims in Green Construction (a/k/a Green Achers)
Melissa Roberts, USI Midwest and Eric Singer, Ice Miller, LLP

ComEd and Nicor Gas New Construction: Financial Incentives and Technical Assistance
Erikka Byrge, WRG, LEED AP ID+C, Energy Center of Wisconsin

Meeting Fire Codes with OSB
Mike Hady, LP Building Products

Understanding Fenestration U-Factors
Tom Minnix, CFA, CDT, LEED AP; Taberline, Inc.

Air/Vapor Barriers – Success is in the Details
Elizabeth Redenkirk, LEED AP BD+C; Efi and David Cook, RA; CTLGroup

Energizing Outdoor Environments with Usable Space
Greg Bednar, GBD & Associates, LLC

PDF Construction Document Management and Collaboration
David Lyle, Konica Minolta Business Solutions

High Performance Precast Concrete Envelope Systems
Dawn Parker, PCI - WI

Current Home Technology and Infrastructure Options
Peter C. Cook, Automation Design + Entertainment, Inc

Performance Glazing – Coatings, Layers & Gases
Dan R. Smith, CSI, CCPR, LEED AP, Marvin Windows and Doors

Moisture and Concrete Floor Slabs
Heather Yario, MAPEI

Designing With Tile
Scott Connell, International Masonry Institute (IMI)

Air Barrier Performance Levels vs. Building Envelope Design Criteria
Maria Spinu, PhD, LEED AP and Benjamin Meyer, MA, DuPont Building Innovations

Questions:
Call ALA at 847-382-0630.
PURPOSE
To give professional recognition to excellence in Design by selecting award recipients whose work exhibits the creative and aesthetic characteristics deemed relevant by their peers and associates and to foster adoption of this quality by the general public.

ELIGIBILITY
All submittals must be completed works designed by ALA members.

Design awards are to be in the name of the firm, if a member of the firm is a member of ALA and a Principal of the firm. Otherwise, the award shall be given in the name of the Architect responsible for the design with the name of the member's firm also shown.

No entry may be submitted which has previously won an ALA Design Award.

AWARDS
Entries will be judged on their own merits based on:
- Program Solution
- Site and Space Planning
- Overall Design Solution
- Construction System and Details

Certificates will be presented in order that the Firm, Owner, Contractor and Developer may be recipients. The following awards will be issued:
- Presidential Award (1)
- Gold Medal Award
- Silver Medal Award
- Award of Merit

CATEGORIES
Entries shall be labeled in one of the following categories:
1. Residential I - Single Family Homes
2. Residential II - Multi Family Homes, Apts
3. Commercial/Industrial
4. Renovation
5. Institutional
6. Religious
7. Unbuilt Design
8. Interior Architecture

JURY/JUDGING
The panel of five jurors will be composed of architects and other design professionals such as college professors, journalists, interior designers, etc. It will meet shortly after the submission deadline to evaluate and select the building projects to receive awards.

Decisions of the jury shall be final. No jury member may submit entries for judging or be associated with a firm submitting entries.

SUBMITTALS
Each entry must be submitted in the following manner:
1. Submit no less than (1) or more than two (2) 20"x20" boards, the composition of which shall be at the discretion of the entrant.
2. After declaration of intent, each participant will receive a detailed description of entry requirements by e-mail to guide in the preparation of the boards. Minimum requirements will be enumerated along with accompanying information.
3. Boards and accompanying material must be received at ALA Headquarters by close of business on August 22, 2014.

AWARD WINNING ENTRIES
Award recipients will be requested to furnish additional photos or electronic versions for press releases and to display their entries at the Awards Banquet.

2014 AWARDS DINNER
Certificates will be presented to applicants at the 2014 Awards Dinner on November 14, 2014 at the Metropolis Ballroom, Arlington Heights, Illinois. Clients are invited to attend along with entrants and guests.

RELEASE, RETURN OF ENTRY, AND PUBLICITY
All entries are accepted with the explicit free right of publication, reproduction, and use by ALA and its sponsors without need for further approval. ALA shall not be responsible for protection of submission. Submissions may be picked up at the awards dinner or at the ALA office.

Online Registration and Entry Requirements available at www.alatoday.org. Click on “Awards” tab.

Questions: contact Lisa Brooks at 847-382-0630 or email Lisa@alatoday.org

SUBMISSION OF INTENT
The attached Declaration of Intent must be completed and returned with payment postmarked no later than July 25, 2014 to:
ALA Headquarters
1 E. Northwest Hwy. Ste. 200 Patina, IL 60067

Entry fees must accompany each entry as described below:
ALA Members: $125.00 for first entry; each additional entry: $100.00
Non-ALA Members: $275.00 (for the first entry includes a one year ALA Membership); each additional entry: $100.00

DEADLINES
Declaration of Intent: July 25, 2014
Submission of Entries: August 22, 2014

2013 Presidential Award Winner:
ASK Studio
Project: Giovannetti Community Shelter, Urbandale, Iowa
March Program:


April Program:

Doug Gamble, ADA Specialist for the Illinois Capital Development Board, provided updates to a group of over 200 architects in Rolling Meadows, IL.

May Program:

‘Making Informed Decisions on Green Rating Systems’ was our topic for the April program. Presenters Ujjval Vyas, Alberti Group and Gary Keclik, Keclik Associates, provided valuable information in this workshop moderated by Cheryl Ciecko, CCG Architects, Inc.

Many thanks to Stephen and Elizabeth Crandall from EHLS/To the Top Elevators for sponsoring the ADA program.

"No Architect Left Behind Series" – Season VI

ALA Missouri presents its 2014 Continuing Education Series. This series allows architects to acquire 12 Learning Units per year in 6 convenient sessions. The sessions are scheduled every other month over an extended 2-hour lunch period – a boxed lunch is included. All seminars are held at the Masonry Institute of St. Louis, 1429 Big Bend Blvd., St. Louis, MO 63117.

Upcoming Events:

June 10: "What Is the ‘IEBC’ and Why Would I Use It?"
August 12: "Liens, Collections and Document Ownership"
October 14: "Round Table Discussion: Architect Liabilities"
December 9: "The Importance of a Professional Geotechnical Report"

Online registration is available at alatoday.org or call the ALA office at 847-382-0630.

ALAWISCONSIN

On May 29th, members of the ALA Wisconsin and Illinois Chapters enjoyed a guided tour of the recently renovated SC Johnson Research Tower and other landmark buildings at the SC Johnson headquarters in Racine, WI.

Upcoming Events:

Tuesday, June 17: Tour of USDA Forest Products Laboratory - Madison, WI
Thursday, August 21: Annual Lakeside Cookout and Program - Milwaukee, WI
Tuesday, September 30: 2014 Midwest Architecture Conference and Product Show - Oakbrook Terrace, IL

Join us for these upcoming chapter events. Registration and more information on these and future programs are available on the ALA website at www.alatoday.org
If the only thing bigger than your utility bill is the noise from your air conditioner...

Switch to a WaterFurnace geothermal comfort system.

It seems the only thing growing faster than the price of fossil fuels is the size of "high efficiency" air conditioners and heat pumps. A Water Furnace geothermal heat pump doesn't have any outdoor equipment. It uses the clean, renewable energy in your backyard to save up to 70% on heating, cooling and hot water. A Water Furnace unit is twice as efficient at cooling than the best air conditioner or heat pump and five times more efficient at heating than any ordinary furnace. For a personal geothermal system proposal, contact us at waterfurnace.com or call (260) 442-5374.

GEOTHERMAL DONE RIGHT!

visit us at waterfurnace.com

facebook.com/waterfurnacefans
twitter.com/waterfurnace
youtube.com/waterfurnace