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# focus

spring 12

A photograph of the Federal Reserve Bank of Kansas City building, a large, modern, multi-story structure with a grid of windows, some of which are illuminated. The building is set against a clear sky. In the foreground, there is a green lawn and several flagpoles with flags. The text "DESIGN the PRECAST WAY" is overlaid on the image in a large, white, sans-serif font.

## DESIGN *the* PRECAST WAY

PCI Midwest members are dedicated to responsible building practices that take into consideration durability, strength and indestructibility. Precast concrete products are all that and more! Precast concrete products are one of the best options available to builders looking for a way to make a lasting impression in the green building movement. Make a lasting impression! Design the precast way!

*Mike Johnsrud, Executive Director*

Phone: 952.806.9997

Fax: 952.806.9998

# Assurity Center

Not only was Assurity Center the first large office building in Lincoln to receive LEED's Gold Certification, it has also been selected as one of the first landscapes to participate in a new test program called The Sustainable Sites Initiative (SITES). The Assurity Center will join 174 other pilot projects from 34 states, Canada, Iceland and Spain as part of an international pilot program to evaluate the new SITES rating system for sustainable landscapes, with and without buildings. The final rating system and reference guide will be released in early 2013 and the U.S. Green Building Council anticipates incorporating the guidelines and performance benchmarks into future iterations of its LEED Green Building Rating System.

The Center consists of a 175,000 SF office building with five stories plus a lower level, and a separate 600-space

parking garage. A total of around 2,400 pieces of precast/prestressed concrete were used to build both structures. Precast was selected for the superstructure of the building not only for its LEED friendly properties but to also solve engineering issues such as 17'-6" cantilevers at the ends of the building that give the illusion of floating floors.

Some of the many other sustainable design elements on the Assurity site include: Green roofs; green living walls on portions of the garage; water-conserving plumbing; use of recycled-content and regionally available building materials; exterior sunshades; efficient heating, air conditioning and electrical systems; site bioswales and a rain garden; indigenous landscape and pervious site pavement.

[www.concreteindustries.com](http://www.concreteindustries.com)



Project: **Assurity Center** • Location: **Lincoln, NE** • Owner: **Assurity Life Insurance Company** • Architect/Engineer: **The Clark Enersen Partners** • Contractor: **Sampson Construction Company** • Precaster: **Concrete Industries, Inc.**



# Kenwood Elementary School

This 57,862 square foot K-5 elementary school features precast concrete insulated sandwich wall panels to help meet its program requirements. The dominant portion of the façade is thin clay brick embedded into the precast concrete, allowing for the character and beauty of masonry integral with the added benefits of precast concrete. The darker buff concrete is an acid-etch finish and the lighter finish is a deep sandblast. This finish strategy allowed the designers to use a single precast panel to mimic the look of several interfacing materials all while reducing the amount of trades, materials, and detailing necessary.

The windows of the school were placed higher on the walls to allow for natural light while preserving the wall space in the classrooms, and reducing the amount of outside distractions interfering with class time. The smooth power trowelled interior finish of the precast concrete wall panels were left exposed in the high volume areas to provide a durable interior surface ready to receive paint application in the field.

[www.coreslab.com](http://www.coreslab.com)

**CORES LAB**  
**STRUCTURES**  
(OMAHA) INC.



Project Name: **Kenwood Elementary School** • Location: **Kearney, NE** • Architect: **Wilkins Hinrichs Stober Architects, Kearney, NE** • Structural Engineer: **DLR Group, Omaha, NE** • Contractor: **Hampton Commercial Construction, Lincoln, NE** • Owner: **Kearney Public Schools, Kearney, NE** • Precaster: **Coreslab Structures (OMAHA) Inc., Omaha, NE**



# Lake & Knox Development

Overlooking Lake Calhoun in the Uptown District of Minneapolis, the Lake & Knox Development project, now known as 1800 Lake, features 57 sophisticated and luxurious apartments. This five story structure was built over two levels of underground parking and provides tenants with one-, two-, and three-bedroom apartment options. Its prime location allows residents access to fine dining, high-style shopping, hip galleries, night spots and beautiful parks and recreation. Building amenities at the Lake & Knox Development include pet services, a cardio center, a rooftop deck, and boutique lobby with a fireplace.

Construction of the Lake & Knox apartment project was completed in the fall of 2011 and includes five levels of wood frame structure over two levels of underground parking. Installed in spring 2011, precast columns, inverted tee beams, and 8" and 12" hollowcore planks, supplied by

County Materials, were used to construct the upper parking level and cap the entire parking garage. The 98,244 square foot project contains approximately 11,500 square feet of 8" hollowcore planks and 18,800 square feet of 12" hollowcore planks.

According to Scott Ewing with Weis Builders, Inc., project manager for the Lake & Knox apartment project, hollowcore planks, precast columns and inverted tee beams were specified for "cost savings and speed of construction over a post-tensioned concrete structure."

Ewing also said that concrete hollowcore, columns and beams facilitated "the speed of installation, which was very helpful with our tight construction schedule."

[www.countymaterials.com](http://www.countymaterials.com)



Project Name: **Lake & Knox Development** • Location: **Minneapolis, MN** • Architect: **BKV Group (Minneapolis, MN)**  
Engineer: **BKV Group (Minneapolis, MN)** • Contractor: **Weis Builders, Inc. (Minneapolis, MN)** • Project Manager: **Scott Ewing**  
Precaster: **County Materials**

# CNA Surety Office Building

When CNA Surety took roots in downtown Sioux Falls, SD 28 years ago, a strong relationship began to grow between their employees and the downtown businesses. It was only fitting when the announcement came that CNA Surety was planning to construct a new 117,000 square foot office building that it too would be located in the heart of Sioux Falls. The chosen building site lies along the east bank of the Big Sioux River, a symbol of the city's humble past and future progress.

CNA Surety's dedication to the community directed the building team toward the goal of a LEED Silver Certification with noted emphasis on using local and regional materials and recycled building materials. The project's LEED certification goals, tight project schedule, load requirements, and site restrictions are just some of the factors that led to the decision that precast concrete was the best material choice.

The building design incorporates a three story office building atop two levels of enclosed parking with an attached two level parking ramp. The building and ramp

are clad with 33,600 square feet of thin brick architectural precast panels. Not only were three different architectural mixes used but an impressive 49,100 corner brick were required to complete all of the architectural detailing. The structural components included: 24,275 SF of corefloor, 123,725 SF of double tees, 2,590 LF of beams, and 1,840 LF of columns.

The precaster was brought into the project during fall of 2010 when the building was still a concept and helped the team transition through a major structural overhaul in early spring 2011. Production began in late April 2011 with the structural precast for the office and wrapped up in mid November 2011 with the completion of the parking ramp spandrels. Precast erection was completed late December 2011 when the last of the parking ramp pier caps were in place.

As construction draws nearer to completion, there is no doubt that the new CNA Surety building will become a landmark for downtown Sioux Falls and the community.

[www.gagebrothers.com](http://www.gagebrothers.com)



Project Name: **CNA Surety Office Building** • Location: **Sioux Falls, SD** • Architect: **Perspective Inc.**  
Engineer: **BKBM Engineers, Inc.** • Contractor: **Lloyd Companies** • Precaster: **Gage Brothers Concrete Products**



# Molin Concrete Products Design and Engineering Building

Molin Concrete Products Design and Engineering Office was designed and built according to the LEED standard developed by the United States Green Building Council. The building not only highlights the green attributes of precast concrete, but also environmentally responsible construction. "We felt strongly that an environmentally friendly building was the way to go," said President Tom Molin, "It just works that precast concrete goes hand-in-hand with green building practices." The office building, which opened in the beginning of 2008, utilizes new energy efficient and indoor quality measures. "We took several steps to make the indoor climate more comfortable and energy efficient," says Randy Molin, Facilities Manager, who managed various aspects of the building. The building features light tubes and large windows to allow more natural lighting to reach the work areas. In-floor heating also allows more consistent thermal control.

Structurally and aesthetically, the building has a lot to offer as well. The exterior precast wall panels feature a sand blasted, colored finish that adds to the aesthetic of the building. The roof is comprised of 16" hollow core planking which allows a clear span of 55 feet within the structure. Precast sunshades and spandrels also provide functional yet attractive features to the building's exterior.

The project was certified LEED Gold by the USGBC. For this project precast concrete helped achieve LEED credits in the Material and Resources category for Regional Materials and Recycled Content as well as credits for Innovation in Design. The use of regional materials and fly ash (a supplementary cementitious material or SCM) made precast concrete an excellent fit for this green project.



[www.molin.com](http://www.molin.com)



Project Name: **Molin Concrete Products Design and Engineering Building** • Location: **Lino Lakes, MN** • Owner: **Molin Concrete Products Co.** • Architect: **POWER Engineers (formerly Professional Design Group)** • Engineer: **POWER Engineers**  
Contractor: **Kraus Anderson (Minneapolis, MN)** • Precaster: **Molin Concrete Products Company**

# Learn & Earn Box Lunches

Have lunch on us! **Learn** precast and **earn** continuing education credits!



## Box Lunch Menu

Each "Box Lunch" comes with at least 1.0 PDH or Learning Units.

**Sustainable Design Using Precast (LEED).** Using precast concrete in buildings conserves energy and resources during and after construction.

**Precast Stadium Design & Construction.** Participants will learn the basics of designing athletic stadiums using precast/prestressed concrete.

**Architectural Precast Concrete.** Participants will learn about the color, form and texture of architectural precast concrete as well as the design flexibility and economy of using precast concrete.

**Insulated Concrete "Sandwich" Wall Panels.** Learn the construction techniques and architectural applications for Insulated Concrete "Sandwich" Wall Panels.

**Hollow-Core Design and Construction.** Participants will learn the basics of hollow-core concrete floors and walls including: fire safety, acoustic properties, maintenance needs, speed of construction, and environmental properties (indoor and outdoor).

**High Performance Architectural Precast Wall Systems.** Architects and others can learn about the numerous benefits of designing with a fully insulated, load-bearing exterior architectural precast wall system.

**Precast Concrete Multi-Family Housing.** A total precast concrete system is about the benefits that apply to the entire structure. Integrating the precast frame and the architectural façade produce a system, as well as a methodology for delivering a property that is better, faster and more economical.

**Environmental Advantages of Thin Brick in Construction.** This program explores the many different brick wall systems available to architects today.

**The Basics of Precast/Prestressed Concrete (Precast 101).** Attendees will learn what precast, prestressed concrete products are, how they are manufactured (including the structural theory of prestressing), examples of architectural and structural precast solutions, quality assurance procedures and the industry certification program (PCI) of plants, people and performance.

**Precast Concrete Design for Schools.** Participants will learn the basics of designing school buildings using precast/prestressed concrete.

## Coming Soon...Dinner Menu

Each "dinner" comes with at least 3.5 PDHs or Learning Units.

**Lateral Loads.** This seminar is the first of a series of half-day seminars dedicated to the design of precast and prestressed concrete buildings for lateral loads generated by wind and earthquake ground motions. The seminar provides an overview of lateral load determination for precast concrete buildings, including both architectural and structural precast concrete. The seminar includes a brief history of wind and seismic lateral loads in building codes in the United States in conformance with IBC 2009, ASCE 7-05, and ACI 318-08. Numerical examples are presented for a typical five-story office building located in the Midwest.

**Designing with Total Precast Concrete.** Learn the advantages of a total precast building system during this half-day seminar. Strategies such as increased efficiency and shorter construction schedules of "dual use" structural and exterior cladding systems will be presented, as well as guidelines for the design and detailing of architecturally finished exterior walls, concrete tees, hollowcore plank, and precast concrete stairs. Integration of HVAC systems, building code requirements, and total precast's potential contribution towards LEED certification will also be discussed.

**Designing Precast Concrete Parking Structures.** Learn how to design and detail precast concrete parking structures during this half-day seminar. Advantages such as decreased construction time, efficiencies of combining a variety of exterior finishes with exposed structural members, and precast concrete's potential contribution towards LEED certification will be discussed. Integration of HVAC systems, building code requirements, long-term durability, ramp and vehicle circulation types, safety, and maintenance issues will also be presented.

# Associate Members

## **American Spring Wire Corporation**

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www.amspringwire.com  
Rep: Jim Rudolph 800-683-9473 ext 269

## **Architectural Polymers, Inc.,**

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610-824-3322 www.apformliner.com  
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## **Ash Grove Cement**

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www.ashgrove.com 913-451-8900

## **BASF Admixtures**

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## **Cheesebrough Brokerage Inc.**

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Rep: Patrick Cheesebrough 651-717-6060

## **The Consulting Engineers Group, Inc.**

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San Antonio, TX 78233  
www.cegengineers.com  
Rep: Larbi Sennour, PhD, PE, SE 210-637-0977 ext. 225

## **Dayton Superior Corp**

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Bob Roeller bob.roeller@daytonsuperior.com

## **Drake-Williams Steel, Inc.**

www.dwsteel.com

## **Elematic**

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## **Endicott Tile LLC**

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Rep: Dean Schmidt 402-729-3315  
Rep: Gary Davis 402-729-3315

## **Fister Quarries Group**

1150 Lyon Road, Batavia, IL 60510  
www.fisterquarries.com 800-542-7393

## **Hamilton Form Company**

7009 Midway, Fort Worth, TX 76118  
www.hamiltonform.com 817-590-2111

## **Hayden-Murphy Equipment**

9301 E Bloomington Pkwy,  
Bloomington, MN 55420  
www.hayden-murphy.com  
952-884-2301

## **Helser Industries**

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Tualatin, OR 97062  
503-692-6909

## **Holcim (US) Inc.**

300 Prairie Center Drive # 110,  
Eden Prairie, MN 55344  
www.holcim.com  
800-562-3989

## **Hughes Brothers**

210 N 13th Street, Seward, NE 68434  
www.hughesbros.com  
402-643-2991

## **Insteel Wire Products**

1373 Boggs Dr, Mt. Airy, NC 27030  
www.insteel.com

## **Iowa Steel & Wire Company**

1500 W Van Buren, PO Box 156,  
Centerville, IA 52544  
www.okbrandwire.com  
800-325-5118

## **JVI Inc.**

169 N Hampshire, Elmhurst, IL 60126  
www.jvi-inc.com

## **Landwehr Construction**

PO Box 1086  
St. Cloud, MN 56302  
www.landwehrconstruction.com  
800-446-1284  
Rep: Paul Nelson 507-380-9423

## **Lehigh Cement**

12800 N Meridian St #480, Carmel, IN 46032  
www.lehighcement.com  
Rep: Chad Hanson 800-468-6211

## **Meadow Burke**

531 US Highway 301  
Tampa, FL 33619-4304  
253-876-2305

## **METROBRICK**

1201 Millerton Street SW, Canton, OH 44707  
www.metrothinbrick.com  
Rep: Jennifer Swanger 888-325-3945

## **Plant Architects / Plant Outfitters**

300 E Sonterra Blvd #310, San Antonio, TX 78258  
www.plantarchitects.com  
210-569-9262

## **Select Thin Brick**

8302 Breckenridge Way  
Columbus, OH 43235  
Randy Wilson  
614-880-9955  
randy@selectthinbrick.com

## **Shuttlelift**

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www.shuttlelift.com  
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## **Sparkle Wash Construction Services**

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402-573-5939  
Rep: Craig Christensen  
Rep: Sandy Hall

## **Splice Sleeve North America, Inc.**

38777 W Six Mile Rd #106, Livonia, MI 48152  
www.splicesleeve.com  
877-880-3230  
Rep: Toshi Yamanishi

## **Strand Tech Martin**

1136 Bridgeview Lane  
Summerton, SC 29148  
Aldo Bassi 863-558-6922  
abassi@strandtechmartin.com

## **Sumiden Wire Products Corporation**

710 Marshall Stuart Drive, Dickson, TN 37055  
www.sumidenwire.com  
336-940-6652

## **Thermomass**

1000 Technology Drive, Boone, IA 50036  
www.thermomass.com 800-232-1748

## **Topping Out, Inc.**

5910 S 27th Street, Omaha, NE 68107  
www.daviserection.com 402-731-7484

## **TSA Manufacturing**

14901 Chandler Road, Omaha, NE 68138  
www.tsamfgomaha.com  
800-228-2946

## **WR Grace Co**

Dan Beskar 952-905-0085 daniel.a.beskar@grace.com



# Producer Members

## Key:

**Architectural**  
**Structural**  
**Bridge – Transportation**

	Architectural Precast	Architectural Trim	Beams/Columns	Wall Panels	Poles	Hollow-core Slabs	Single Tees	Double Tees	Stadium Seats	Modular Cells	Soundwalls	Piles	Boxed Beams/Slabs	I Beams/Girders
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<b>Coreslab Structures</b> (Todd Culp) Bellevue, NE, 402.291.0733 • <a href="http://www.coreslab.com">www.coreslab.com</a>	•	•	•	•				•	•	•	•	•	•	•
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<b>Coreslab Structures (Kansas) Inc.</b> (Mark Simpson) Kansas City, KS, 913.287.5725 • <a href="http://www.coreslab.com">www.coreslab.com</a>											•	•	•	•
<b>County Materials Corp.</b> Roberts, WI (Bob Seubert, 800.426.1126) • Salem, IL (Scott Boma, 618.548.1190) • Bonne Terre, MO (Scott Boma, 573.358.2773) • <a href="http://www.countymaterials.com">www.countymaterials.com</a>	•	•	•	•		•			•	•	•	•	•	•
<b>Enterprise Precast Concrete, Inc.</b> Omaha, NE (Shawn Wentworth) 402.895.3848 • Overland Park, KS (Dirk McClure) 913.312.5616 • <a href="http://www.enterpriseprecast.com">www.enterpriseprecast.com</a>	•	•		•										
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<b>Gage Brothers Concrete Products, Inc.</b> (Tom Kelley) Sioux Falls, SD, 605.336.1180 • <a href="http://www.gagebrothers.com">www.gagebrothers.com</a>	•	•	•	•		•		•	•		•			•
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