



NEWS

*ILLINOIS READY MIXED
CONCRETE ASSOCIATION*

THE LOOK IS UP

- Low Carbon and Net Zero Concrete
- Field-Curing Methods
- Concrete Testing Adherence Collaboration Program
- New CP Tech Center Guide for Municipal Paving



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IRMCA members Oremus Material and Master Builders Solutions helped construct The Reed at Southbank, an award-winning project and the first high-rise in Chicago to incorporate low carbon concrete.

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Our mission is to be the voice for the ready mixed industry in Illinois; to promote the use of quality ready mixed concrete through innovative educational programs; and to accomplish common goals as an organization that cannot be done individually.

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FROM THE EXECUTIVE DIRECTOR



If you've ever joked, "Don't rush me — I'm waiting for the last minute," then you know exactly what life in the ready mix world feels like. Change orders by the minute, shifting jobsite conditions, dispatch adjustments, material challenges, equipment needs — it's a fast-moving, demanding, and uniquely rewarding way of life. Many of you represent second and third-generation companies who are now training the fourth. This industry is more than work; it's a legacy built with pride.

Even though concrete has been around for centuries, our industry never stops evolving. Illinois State University and the University of Illinois continue to lead important research that strengthens our knowledge and advances our capabilities.

At IRMCA, we're matching that momentum. Our promotion team has expanded its outreach, building new relationships, presenting at lunch-and-learns, engaging engineers and civic groups, and championing *Design With Concrete* to grow market share and elevate our presence across the state.

Our events remain strong because they deliver what matters most — education, networking, and meaningful industry connections. We continue to raise the bar, anticipate member needs, and develop the resources and partnerships that keep our industry moving forward.

This year brings several exciting initiatives: an upgraded website, the expansion of the IRMCA Scholarship Program, expanded ACI concrete flatwork certification opportunities, and a new strategic plan that defines our mission, vision, and core values for the years ahead.

We invite you to get involved by joining one of our committees — promotion, technical, operations, environmental, or safety. Together, we can continue strengthening IRMCA and shaping the future of our industry.

Grateful for the opportunity to serve you!



Jim Randolph
Executive Director

FROM THE
PRESIDENT

Dear Members,

In 2025, IRMCA has been actively engaged in an important effort to help guide the future of the organization. Through the work of our Strategic Planning Committee, we have taken a thoughtful look at where we are today and where we want to be over the next five years. This process brought together directors, staff, and members to identify opportunities for growth, areas where we can better serve our industry, and strategies that will help strengthen our organization for the long term.

The outcome is a strategic plan that focuses on expanding our influence within the industry, strengthening relationships with key decision-makers, increasing the use of concrete specifications in projects, and ensuring that we continue to provide value to our members. It also reinforces our commitment to supporting education, advocacy, and collaboration across the engineering, municipal, and development communities.

One of the most important outcomes of this process has been the development of our leadership continuity plan, which will establish clear parameters for the role of our next Executive Director. This includes defining responsibilities, expectations, and priorities that align with the goals outlined in our strategic plan. This work is positioning the organization for a smooth and successful transition whenever the time comes to move from one Executive Director to the next.

Another key initiative that emerged from the strategic planning discussions is the creation of new membership levels designed specifically for engineers, municipalities, and developers. These new categories are intended to deepen engagement with the professionals and organizations who play a direct role in specifying materials and shaping the built environment. Expanding our membership structure in this way will help strengthen collaboration across the industry and ultimately lead to an increase in the number of projects where concrete is specified as the material of choice. Creating opportunities for these stakeholders to connect with our members, access technical resources, and participate in educational programming will help reinforce the value of concrete in infrastructure and development projects throughout our region.

As we move forward, the Board will continue refining these initiatives and sharing updates with the membership. Your engagement, input, and support remain critical as we implement the strategies that will shape the next chapter of our organization.

On behalf of the entire Board of Directors, thank you for your continued commitment to our mission and to the strength of our industry. We look forward to working together to build an even stronger organization in the years ahead.

Mike DeJong

Mike DeJong
President

NEW LOW CARBON CONCRETE MIX SETS BENCHMARK FOR SUSTAINABLE HIGH-RISE CONSTRUCTION

A bold new standard in sustainable construction: low carbon, high performance, game-changing result



Oremus Material supplied more than 29,000 cubic yards of low carbon concrete during construction of The Reed at Southbank in Chicago.

The Reed at Southbank

Situated at 234 West Polk Street on the south branch of the Chicago River, The Reed at Southbank is a 41-story, 663,000 square foot, cast-in-place concrete residential high-rise and the first of its kind in Chicago to use a low carbon mix replacing up to 30-70 percent of the Portland cement with slag cement. The proprietary concrete design achieved a total embodied carbon that was significantly lower than industry standards and even beat the mandatory targets set by project owner Lendlease.



Pictured in front of the company's Autism Awareness truck, from left: Reza and Sara Nili, Cooper Oremus, Michael Oremus, Ashley and Austin Oremus.

“ The proprietary concrete design achieved a total embodied carbon that was significantly lower than industry standards and even beat the mandatory targets set by the project owner. ”

Project successes

- First high-rise in Chicago to incorporate low carbon concrete
- 3,200,000 kgCO₂ LOWER than NRMCA standards
- 1,100,000 kgCO₂ LOWER than owner's specification
- Maintained required workability needs
- Achieved set times
- Exceeded strength performance expectations, hitting 3000PSI in 18 hours and delivering consistent results at 6K, 8K, and 10K while maintaining an aggressive low carbon profile
- Achieved set time requirements - finishers able to be on in 2 hours and off in 4 hours
- Provided consistent workability & flowability - 26-28" spread at point of discharge, maintained workability through pump up to 41 stories
- Manageable finishability
- Minimal on-site adjustments - controlling sensitive mixes

Awards

The Reed project has received praise and awards, including:

- Slag Cement Association's 2022 Slag Cement in Sustainable Construction - Architectural Award
- ACI Excellence Awards 2023 High-rise Structures, 2nd Place



Forms are placed for construction of the 35th floor.



Benefits of low carbon concrete

In addition to its sustainability, low carbon concrete offers many other benefits, including:

- a smoother, more uniform appearance
- significantly fewer surface voids
- increased durability from reduced permeability (can last up to 30 years longer than conventional concrete)
- lighter color and high solar reflectance (keeps buildings cooler in the summer reducing energy use and minimizing the heat island effect)

Special considerations for low carbon concrete

- Significant design consciousness
- Testing, testing, and more testing
- Adhering to a diligent protocol to ensure quality
- Reliable, consistent materials
- Customer training ■

We are grateful to Oremus Material for providing resources, data, and photographs for this article.

Project team

The project team includes several IRMCA members:

Owner: Lendlease

Concrete contractor:
McHugh Concrete Construction

Architect: Perkins and Will

Engineer: Magnusson
Klemencic Associates

Concrete: Oremus Material

Concrete mixture consultant:
Master Builders Solutions

Slag cement provider:
Skyway Cement

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OZINGA'S JOURNEY TOWARD NET ZERO CONCRETE

The construction industry's contribution to carbon emissions is a global problem. In an effort to combat this harmful impact, building materials are being looked at in a whole new way. One IRMCA member leading this charge is Ozinga, a building material supplier committed to leaving a positive and lasting impact on individuals, families, and communities for generations.

The Genesis of a Sustainable Vision

Ozinga's commitment to sustainability is not just a business strategy, it's a core philosophy. For over 95 years, Ozinga has embraced the role of environmental stewardship, recognizing contributions today can impact tomorrow. This vision manifests in groundbreaking concrete mix designs, which prioritize sustainability and

significantly reduce the embodied carbon emissions associated with traditional concrete production.

Pioneering Innovations in Concrete Mix Designs

At the heart of Ozinga's sustainability efforts is the research and development of innovative mix designs. By meticulously testing and refining their products,

Ozinga has been able to offer concrete solutions that drastically cut down on embodied carbon emissions. This is no small feat in an industry where traditional practices have long been the norm.

Custom Sustainable Mixes

Understanding that every project has unique requirements, Ozinga values partnership with customers to create custom sustainable solutions tailored to



A research engineer performs tests at Ozinga's research & development Lab in Chicago, Illinois.

specific needs. This collaboration ensures that clients can achieve their sustainability goals without compromising on performance or durability. By educating on the benefits of lower embodied carbon solutions, Ozinga is fostering a more informed and environmentally conscious construction community.

The Power of Leadership and Innovation

Ryan Cialdella, Ozinga's Chief Mission Critical & Decarbonization Officer, embodies the company's forward-thinking goals. Recognized by the National Ready Mix Concrete Association (NRMCA) as the Buildings Promoter of the Year in 2024 (when he was Ozinga's EVP of Innovation and Market Development), Cialdella's

contributions to the industry are both significant and far-reaching. His leadership has been instrumental in advancing Ozinga's sustainability mission.

CarbonSense® Line of Concrete Mixes

At the center of Ozinga's sustainability initiatives is the CarbonSense® line of building materials. These products are designed to meet the rigorous demands of modern construction while significantly lowering carbon footprints. Through advanced material science and a commitment to quality, CarbonSense® concrete mix designs have become a more sustainable solution for projects ranging from warehouses and data centers to infrastructure and high-rises.

Parking Lot Design Program

Over five years ago, Cialdella spearheaded the development of Ozinga's parking lot design program. This free service promotes concrete as a competitive option for parking lot projects, highlighting its benefits over traditional materials. The program has been a resounding success, demonstrating how thoughtful design and strategic promotion can shift industry preferences.

Carbon Savings Calculator Tool

Another notable innovation under Cialdella's team and guidance is the carbon savings calculator tool. This tool shows what carbon reduction can be achieved by using CarbonSense®. By providing

Ozinga uses a sustainable mix design for a large-volume pour at a logistics warehouse in Chicago Heights.



clear, data-driven insights, the calculator puts into perspective the impact of using more sustainable building materials.

Transformative Partnerships

Ozinga's impact extends beyond their product offerings through strategic collaborations with industry giants like Amazon. This partnership has been pivotal in advancing sustainable construction practices on a large, global scale.

Collaboration with Amazon

In 2023, Amazon Web Services (AWS) built 36 data centers using lower-carbon concrete, a significant increase from 16 in the previous year. AWS also tested Ozinga's low-carbon, performance-based ASTM C1157 Hydraulic Cement,

achieving a remarkable 64% reduction in embodied carbon compared to the industry average. This success led to AWS updating its design standards in January 2024, mandating the use of concrete with 35% less embodied carbon for all new data centers worldwide.

The Road Ahead

Ozinga's journey toward net zero concrete is a testament to what can be achieved when innovation, leadership, and a commitment to sustainability converge. The company's efforts are setting new benchmarks in the construction industry, proving that it's possible to build a better future without compromising on quality or performance.

Conclusion and Call to Action

Ozinga's dedication to making a positive impact is evident in their pursuit of sustainable concrete solutions. Their pioneering work in reducing embodied carbon emissions is not just beneficial for the environment, but also sets a new standard for the construction industry. Are you ready to join Ozinga in building a more sustainable future? Connect today to learn more about our innovative concrete solutions and how they can help your projects achieve their sustainability goals.

Together, there's nothing we can't handle. ■

FIELD-CURING METHODS FOR EVALUATING THE STRENGTH OF CONCRETE SPECIMENS

PRANSHOO SOLANKI, PhD, PE, is a professor of construction management in the Department of Technology at Illinois State University. He can be reached at psolanki@ilstu.edu.

The American Association of State Highway and Transportation Officials R 100 standard provides instructions for making and curing concrete test specimens in the field. However, further research is needed to compare the strength of the field-cured specimen with the strength of the actual in-place concrete item. The purpose of this combined laboratory and field study was to evaluate field-curing methods of concrete specimens for estimating the early opening strength of an in-place concrete item.

Laboratory study

For the laboratory, one IDOT Class PV (pavements) mix was used. Concrete was poured on October 1, 2021, and February 25, 2022. Three small 24 × 24 × 8 inch cast-in-place test slabs, three large 36 × 36 × 12 inch cast-in-place test slabs, 30 4 × 8 inch cylinders, 30 6 × 12 inch cylinders, and 15 6 × 6 × 20 inch beams were prepared during each pour in this study. Each small and large slab consisted of four 4 × 8 inch and four 6 × 12 inch cast-in-place (CIP)

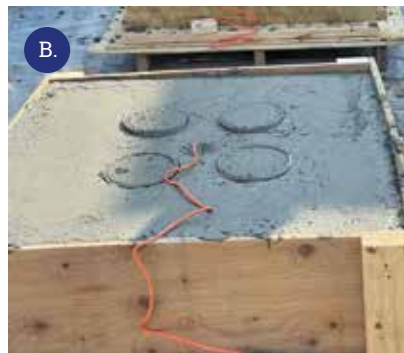


Figure 1: Casting and curing of slabs

cylinder molds (Figure 1 a – c), respectively, inside the slab formwork in accordance with modified ASTM C873.

Concrete cylinders were cured using three methods: ambient air (Method #C1, Figure 1d), insulated box/cooler (Method #C2, Figure 1e), and power-operated box (Method #C3, Figure 1f). Beams were cured using two methods: ambient air (Method #B1, Figure 1g) and insulated plywood box (Method #B2, Figure 1h without a top lid and Figure 1i with a top lid). The CIP specimens from each slab and cylinder were tested for compressive strength, and beams were tested for flexural strength after 1, 3, and 7 days of curing. One cylinder and one beam in each curing method and all slabs were embedded with sensors for collecting temperature variation with time.

Laboratory results showed that insulated box curing (Method #C2) of 150 mm (6 inch) cylinders estimated early (1 to 3 days) compressive strength of an in-place concrete item within an acceptable range. For estimating the 7-day strength of an in-place concrete item, ambient air curing (Method #C1) produced acceptable results. Ambient air (Method #B1) and insulated plywood box



Figure 1: Casting and curing of cylinders

(Method #B2) curing of beams underestimated the strength of an in-place concrete item due to relatively low temperature inside the beams compared to an in-place concrete item. Based on the laboratory tests, Methods #C1, #C2, and #B1 were selected for further evaluation in the field.

Field study

The field data was collected from a box culvert demonstration (IDOT District 5) project. For the box culvert project, an IDOT class SI (structural, non-superstructure) mix with a shortened cure period

was used. The concrete was poured in two stages: without a rheology-controlling admixture (Stage I) and with a rheology-controlling admixture (Stage II).

The data from box culvert demonstration project showed that early strength estimated by insulated box (Method #C2) cylinders was higher than the corresponding early strength estimated by ambient air curing of cylinders (Method #C1). The 7-day strength estimated by Method #C2 was approximately similar or less than the corresponding strength estimated by Method #C1. Method #C1 provided higher temperature differences between cured cylinders and in-pour compared to corresponding differences between Method #C2 cylinders and in-pour concrete temperature. This finding indicates that Method #C2 cylinders mimic in-pour temperature better than Method #C1 cylinders. The ambient air-cured beams (Method #B1) experienced the lowest temperature among all the cured specimens tested, and the temperature was lower than in-pour temperature and similar to ambient air temperature. Therefore, beams may not be a good strength indicator of in-place concrete strength.

Additional details and the published IDOT project report can be found here: <https://doi.org/10.36501/0197-9191/23-023>. ■



Figure 1: Casting and curing of beams



The first CIM program began accepting students at Middle Tennessee State University in 1996. Since then they have partnered with four other institutes of higher learning: New Jersey Institute of Technology, University of California - Chico, Texas State University, and South Dakota State University.

A PRODUCER'S PERSPECTIVE OF CONCRETE INDUSTRY MANAGEMENT PROGRAMS

Bridget Bleigh is vice president of Bleigh Ready Mix and recently served on the IRMCA board of directors. Her stepson, Gage Bouyea, is an IRMCA scholarship recipient who has completed two and a half years of the 4-year Concrete Industry Management (CIM) program at South Dakota State University. In that time, Gage has learned to make concrete mixes and has earned a Level 1 testing certificate and an ACI Flatwork finishing certificate. We asked Bridget to share her thoughts on the value of CIM programs and their impact on the concrete industry.

How did Gage decide to pursue a CIM degree at SDSU?

Tim Hostettler, CIM program director at SDSU, wrote an article about the CIM program for the IRMCA newsletter. I had no idea there was such a program. I emailed Tim for more information and was so impressed with the Bachelor of Science degree customized for the concrete industry that we had to schedule a visit. After visiting Tim on campus, Gage was hooked and made the decision to attend SDSU.

From a producer's perspective, what is the value of the CIM program?

This program provides the industry with future managers and leaders by providing skills in concrete basics, testing, real world field experiences (including batching and management), and the latest technology. As for students like Gage, being in action with boots in the game plus a lot of classroom knowledge puts them ahead.

“ If we as an industry want to draw professional concrete employees, we have to start with young students and give them the tools to be successful. ”

How can a CIM education benefit IRMCA producers?

You gain young workers already familiar with concrete and trained with testing skills and more for a complete package of what you are wanting on your team.

How can the concrete industry benefit from CIM program?

The concrete industry will benefit from promoting these programs. A lot of people do not know of them. I believe that only 5 schools in the US offer this program. If we as an industry want to draw professional concrete employees, we have to start with young students and give them the tools to be successful. The CIM program has 100 percent placement because there are so many avenues to choose from in the concrete industry. ■

A CIM GRADUATE'S PERSPECTIVE

Sydney Geyston always dreamed of working for her family's concrete ready mixed plant, Capitol Ready Mix. Working toward that goal included earning a Master's of Business in Concrete Industry Management at Middle Tennessee State University, for which she received an IRMCA scholarship. Sydney is now the assistant operations manager at Capitol. Here are some highlights of her CIM experience.

How did you decide to study CIM at MTSU?

While I was completing my undergraduate degree, I attended an IRMCA committee meeting for the first time and was seated next to Bridget Bleigh. She mentioned that her son was getting ready to start his undergraduate degree in the CIM program. I had no idea that this was an option, and while it was too late for me to start over on my undergraduate degree, it prompted me to start researching for my master's program. I had plans to obtain my master's in business administration, and I found that I could complete my MBA in CIM from MTSU. What made the program even better was that it could be completed online. I earned my degree in one year while working full time at Capitol.

Describe a notable course or research from the CIM program.

In my second semester at MTSU I took a course called Troubleshooting Concrete Construction. Throughout the course we studied a lot of NRMCA's Concrete In Practice (CIP) sheets. After studying them, we were asked to create our own CIP, specific to our company practices and our independent research. I completed mine on allowable water and the effects of too much water in ready mixed concrete. I also completed an independent research project titled "The S.L.U.M.P Method - Showcasing Leadership, Understanding, Motivation and Performance in the Concrete Industry," on the job satisfaction of ready mixed truck drivers and other construction employees,

What impact did the IRMCA scholarship program have on your education?

I am eternally grateful to IRMCA and the Steve and Rita Metz family for supporting my educational aspirations. I look forward to continuing to work with IRMCA in whatever possible capacity and am excited for my future in the concrete industry. ■



Q&A WITH GLCPC'S BRYCE BARKER

Bryce Barker became Executive Director for GLCPC through her role as Director of Association Management Services at Advancing Organizational Excellence (AOE).

“ Through collaborative initiatives with our partners, we seek to advance technological advancements, sustainability practices, and industry standards. ”

When did you become executive director of the GLCPC?

I assumed the role of Executive Director for GLCPC in November 2023 when I joined the Advancing Organizational Excellence (AOE) team as their Director of Association Management Services. AOE serves as the association management company for GLCPC.

Please highlight education and experience that led you to this role.

Prior to my involvement with GLCPC, I worked with the American Concrete Institute for seven years, where I gained comprehensive insight into the concrete industry. My tenure at ACI was instrumental in shaping my understanding of various facets of concrete technology, standards developments, and industry practices.

What is the value of the GLCPC for the concrete industry?

GLCPC plays a pivotal role in advancing the concrete industry through its dedication to expanding the use of cement and concrete products in both traditional and innovative applications. By investing in promotion programs, educational initiatives, and strategic partnerships, GLCPC

provides numerous benefits to the concrete industry. Whether it's ready mix, paving, pipe, precast, or masonry, GLCPC works with allied trade associations to ensure that these products are utilized to their fullest potential, helping to grow the market for concrete products and encouraging innovation within the industry. These partnerships ensure a unified approach to promoting concrete products across various sectors, benefiting the industry.

What are your goals for growth in our region?

GLCPC has set strategic goals to stimulate growth within the concrete industry by expanding market presence, promoting innovation, and enhancing industry collaboration.

What work is being done toward achieving those goals?

Central to these goals is the formation of strong, lasting relationships with our partners. These partnerships are integral to our strategy, serving as vital assets for cohesive growth. Through collaborative initiatives with our partners, we seek to advance technological advancements, sustainability practices, and industry standards. ■

WHO IS PARTNERING WITH GLCPC?

GLCPC is active in the states of Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin. Our members consist of seven cement manufacturers that provide or ship products in this region: Amrize; Fairborn Cement; Heidelberg Materials; St. Marys Cement Company; Kosmos Cement Company; and Illinois Cement Company.

Illinois Partners:

- Illinois Concrete Pavement Association
- Illinois Concrete Pipe Association
- Illinois Ready Mixed Concrete Association
- Masonry Advisory Council – Illinois
- PCI of Illinois & Wisconsin

Indiana Partners:

- CRT Concrete Consulting, LLC
- Indiana Chapter – American Concrete Pavement Association
- Indiana Ready Mixed Concrete Association
- Indiana, Kentucky, Ohio Concrete Pipe Association – Indiana
- Indiana Brick Council
- Indiana/Kentucky Structural Masonry Coalition
- Midwest Masonry Council
- PCI Central Region

Kentucky Partners:

- Kentucky Concrete Association
- Bluegrass Brick Council
- Indiana, Kentucky, Ohio Concrete Pipe Association – Kentucky

Michigan Partners:

- Concrete Pipe Association of Michigan
- Masonry Institute of Michigan
- Michigan Concrete Association

Ohio Partners:

- Ohio Concrete
- Indiana, Kentucky, Ohio Concrete Pipe Association – Ohio
- Ohio Masonry Association

Wisconsin Partners:

- Wisconsin Concrete Pavement Association
- Wisconsin Masonry Alliance
- Wisconsin Ready Mixed Concrete Association
- Wisconsin Concrete Pipe Association

IRMCA SUPPORTS ILLINOIS' FIRST COMPACTED CONCRETE PAVEMENT (CCP) PROJECT

JESSE JONAS, P.E.

Jesse Jonas, P.E., is principal engineer at All Civil Engineering, a CCSL/IRMCA concrete consultant, and a certified ADA coordinator. He has held employment with the Missouri Department of Transportation, serving as the southwest STL area resident engineer; with St. Louis County Department of Transportation, serving as a regional construction engineering manager; as chief materials engineer with Horner & Shifrin, Inc., serving as their construction division business unit leader; and with Missouri/Kansas ACPA/Concrete Council of St Louis as the industry director of engineering. Jonas' extensive background in governmental construction management & construction technology affords him a unique forensic perspective of construction issues, challenges, and opportunities. He believes in concrete solutions and seeks to help our material consumers find theirs.

The City of Jerseyville, IL, reconstructed a section of Hollow Avenue, utilizing Compacted Concrete Pavement (CCP) in two 8-inch thick and 15-foot wide passes and replacing the mainline pavement in just two days of concrete placement. CCP is a companion product to the Roller Compacted Concrete (RCC) method and is placed using traditional asphalt paving equipment. CCPs are placed with stiffer mix designs, as compared to traditional concrete mixes, which is achieved, in part, by increasing the fine aggregate percentage and gradation to allow

for greater particle packing. In this innovative placement technique, no forms, air entrainment, or rebar are required as the concrete is delivered from a dump truck straight into the hopper of a high-density asphalt paver and then rolled to final compaction using a steel drum vibratory roller. The final step for successful CCP is to spray a surface enhancer that acts as both a finishing aid and a surface densifier. Once sprayed, power trowels work the surface with enough energy to create a small amount of paste that ultimately closes up the surface and creates the look of traditional

concrete. Target density for CCP mixtures is generally 97% +/- 1%. With accelerated strength development, CCPs can often be opened to traffic in just a few days, and sometimes, as early as 24 hours. ■



CCP mix is delivered in standard dump trucks, dumped into the hopper, and placed in the same fashion as standard HMA mixes.



After placement through the high-density paver, CCP is rolled, tested for compaction, finished, and cured, all in concurrent order.

IRMCA PARTICIPATES IN DEVELOPMENT ON NEW CP TECH CENTER GUIDE FOR MUNICIPAL PAVING

A major barrier for concrete pavement being specified by engineers and municipalities often lies in old and worn out adages. "It's too hard" or "I can't afford concrete" have echoed down the hallways of pavement practitioners places of business for decades. To help dispel these myths and create a guide that could be easily implemented by engineers looking for longer term solutions, the CP Tech Center recognized the need and got to work.

Led by consultant engineer Jerod Gross and CP Tech Center Program Manager John Adams, the first order of business was to establish the development team. Mr. Gross reached out to IRMCA's

new marketing & promotion engineer, Jesse Jonas, P.E., to add his extensive municipal paving background, along with his ADA expertise, to the team of national contributors. With the goal of producing a draft document for national comment by the end of the year, the committee has already met several times, and has completed well over 50% of the draft document.

The purpose of this document is to provide a basic understanding of the benefits and use of concrete as a pavement material, and to present information in a simplistic manner that can be easily understood and utilized. Engineers, designers, and owners can refer to this document in

order to design, construct, inspect, and preserve a concrete pavement that will be serviceable for many years.

This document will become a reference manual that the IRMCA marketing & promotion team can share with pavement specifiers all over the state. While there would be benefit for our DOT partners, the target audience for this document is non-state agencies that may include but are not limited to local agencies, parks departments, counties, and municipalities. This document will benefit those who have little to no experience with concrete pavement, as well as those who have a working knowledge but might be looking to refresh their basic understanding. ■



MARKETING & PROMOTION ACTIVITIES

MIKE RICKERSON, IRMCA Marketing and Promotion

Skate4Concrete & Workforce Development

South Side Sanctuary Project

Soon after I started working for IRMCA last fall, I was contacted by Crystal Howard with Skate4Concrete & Project Cornerstone and Julia Garbini with Concrete Advancement. Both non-profit organizations promote concrete and the industry through education and training. They connected me with The Nascent Group and other partners who were creating the South Side Sanctuary (SSS) at 47th Street and Martin Luther King Drive in the Bronzeville neighborhood of Chicago. Its main design is around a concrete skateboarding area and includes structures with space for group meetings, arts & craft activities, and general gathering. The SSS group wanted to be connected with our members for help supplying

ready mixed concrete for the project. I reached out to IRMCA members in the area and was fortunate to find 3 volunteers to donate a majority of the material needed. Shout out to Prairie Materials (Votorantim), Oremus Materials, and Welsch Ready-Mix; thank you for your kindness. What a great IRMCA collaboration. The project will be open August 6, 2024.

On July 26 IRMCA will be supporting a field trip to Prairie's Yard 33 at California Avenue and I-55 through the South Side Sanctuary for participants from the Polished Pebbles Girls Mentoring Program Pink Hard Hats Project. This initiative provides education and helps develop the skills and job readiness of girls and women of color who are interested in construction careers.



IRMCA members Prairie Materials, Oremus Materials, and Welsch Ready Mix donated materials for the South Side Sanctuary project in the Bronzeville neighborhood of Chicago.



A load of concrete gets color admixture at the South Side Sanctuary project.



A youth group from the LITE program tours the Ozinga - Des Plaines yard. They learned how a ready mixed plant works and about the various job opportunities available.



Mike Rickerson presents at the LITE Dream Out Loud career conference. The topic was ready mixed concrete industry job opportunities.

LITE – Leaders In Transformational Education

Through another Crystal Howard connection I met Dr. Candace Thier with LITE. She asked if IRMCA would like to get involved with a career day called Dream Out Loud Conference. More than 80 teenagers and adults (ages 16-24) attended the event looking for career opportunities in a variety of fields. I spoke for 20 minutes about the concrete industry and its many job opportunities. I then lead a group of 34 participants in a hands-on project of mixing concrete and pouring the mix into a small mold for them to take home. A lot of interest was generated and an effort is being made to include the class in the Skate4Concrete curriculum, where participants

can learn more about the concrete industry through the excellent program designed by Crystal and field trips to local ready mixed plants. IRMCA & LITE anticipate that some of these youth and young adults will seek employment in the concrete industry and establish a long-term professional relationship. These students need guidance and opportunities to complete schooling and gain an employment foothold, with the ultimate goal of a job with the potential for growth.

Habitat for Humanity, Fox Valley Chapter

I found that NRMCA made an agreement with Habitat to build one home in each state with ICFs (insulated concrete forms). So, working with Donn Thompson at NRMCA, I connected with Habitat's Fox

Valley Chapter, the region that completed an ICF home this past spring. The director of construction, Len Zegiel, and I met to discuss the plan, with help from NICOR Gas Company, to build 17 homes with ICFs over the next 5 years. Construction will begin this fall and NICOR will be displaying the first house built as a net-zero home with monitoring devices to show all the energy usage per appliance. This will include monitoring the heating and cooling costs compared to conventional construction. This is a big deal! I will stay close to this project. With the data collected, the concrete industry will be able to discuss and promote with confidence the benefits of a concrete home. Additionally, I have opened discussions about getting the driveways completed in concrete.



A schematic of the Fox Valley Green Freedom community that will have 17 Habitat for Humanity homes built with ICF. IRMCA is working to negotiate concrete driveways and street.



A group of teens from the Polished Pebbles Girls Mentoring Program tours Prairie Materials Yard 33 in Chicago.



A Polished Pebbles participant performs an air content test using the pressure method. The group learned about a variety of tests.



Prairie provides a tasty meal with their BBQ mixer truck. The gave the Polished Pebbles group a great experience.

IRMCA Scholarship Foundation

Over the last two months we have put together a revamped program and a scholarship committee, comprised of:

- Mike Rickerson, chair, IRMCA Marketing & Promotion
- Rich Gardner, Euclid Chemical Sales
- Bridget Bleigh, Bleigh Ready Mix Owner
- Ken Kalafut, VCNA Prairie Sales Manager
- Kyle Stock, Ozinga Senior Recruiter

This committee will oversee the program, help with fundraisers, and select the recipients of the scholarships. We are in the final stages of creating a foundation so that people can contribute to the fund and be eligible for a tax deduction. Also, the program has expanded with the possibility of providing monies for certifications and CDL training. IRMCA is very excited about this new program, which will provide

students and employees with the opportunity to seek funds to help further their education within the concrete industry.

SkillsUSA – Illinois

SkillsUSA is a national organization with a network of state associations and local chapters working together to serve middle school, high school, and college students who are preparing for careers in trade, technical, and skilled service occupations or for further education. Each year their championships competition begins in local chapters, and winners advance through district, regional, and state competitions before reaching the national competition in June.

The 2024 Illinois Championships brought together more than 2,000 outstanding student competitors in 100 different trade, technical and leadership fields. They worked against the clock and each other, proving their expertise in occupations such as electronics,



computer-aided drafting, precision machining, medical assisting, and culinary arts. This experience encourages students to take pride in their work. It also provides prospective employers the opportunity to observe the skills of potential employees.

The championships are run with the help of industry, trade associations and labor organizations, and competencies are set by industry. This year, for the first time, Jim Randolph and I represented IRMCA at the Illinois SkillsUSA Championship competition in Peoria. It was a great event, and many students stopped by our exhibit to ask great questions and to drag their fingers through the aggregates and cement. We are hoping to work with this event to provide another competition for forming, mixing, pouring, placing, and finishing live concrete at the next Illinois Championship! Let's hope these competitors will enter the Illinois workforce with a continued commitment to quality and excellence!

More information about the organization and competitions can be found at skillsusa.org and skillsusaillinois.org. ■





WOW: WORDS OF WISDOM

MIKE RICKERSON, IRMCA Marketing and Promotion

Wow, is my head spinning. A year ago I accepted the marketing and promotion position with IRMCA, and I feel like I've been on a Tilt-a-Whirl carnival ride. I thought I was leaving behind acronyms (e.g., ROI, KPI, RFP, CEO, CFO, CIO) along with large corporations. However, I have come to realize there may be more acronyms in the ready mixed concrete industry than in any other industry. What have I stepped into? Wet concrete?

One of the first webinars I jumped on was about EPDs. What the heck is an EPD? They spoke about GWP, SCM, PC, PLC, SF, FA, and ASR, to name a few. My next seminar talked about ESAL, ASTM, AASHTO, ALF, and CBR. And there was one that talked about IDOT, CDOT, ISHTA, FAA, FHWA, and USDOT. Then I heard about all the other associations that I need to be aware of and are a part of the ready mixed concrete industry. There's NRMCA, ACI, ICRI, APWA, ASCC, ASCE, ILCPA, ACPA, GLCPC, SCA, PCA, IAAP, and two IRMCAs (Indiana, which has a .com website, and Illinois, which has a .org website). Make it stop!

So how did we get here? Why do people use acronyms? Some say it's to save time, especially when speaking to people within their own industry. I understand that, but does it really save time when you have people not familiar with all of the acronyms? I don't know. Sometimes I need Wikipedia to keep track of all these 2, 3, 4, and 5 letter abbreviations for all the terms and organizations we are associated with. Other people utilize acronyms to show that they may know something their colleagues don't. Is that helpful? Again, IDK (I don't know). I'll admit it's much easier to say USA than United States of America – personally I like saying both! I have heard that acronyms help make the complex simple. But do they? If you don't know what those letters stand for, it is easy to get off track trying to figure it out, especially if you are new to the industry.

Whether you have been part of the ready mixed industry for 4 months or 40 years, it is ever changing and adding more acronyms. IMO (in my opinion) we need to learn these acronyms ASAP (as soon as possible) to stay in the know

and not have people LOL (laugh out loud) at our ineptitude. Another POV (point of view) when using acronyms is to make sure that you also give the audience the full term the first time you introduce one. Hopefully the next time you hear an acronym, it won't be WTF (why the face) – keep it clean, people! ■

FYI (for your information), a list of industry acronyms

AASHO: American Association of State Highway Officials

AASHTO: American Association of State Highway and Transportation Officials

ACI: American Concrete Institute

ACPA: American Concrete Pavement Association

AIA: American Institute of Architects

APWA: American Public Works Association

ASCC: American Society of Concrete Contractors

ASCE: American Society of Civil Engineers

ASR: Alkali-Silica Reaction

CA: Coarse Aggregate

CDOT: Chicago Department of Transportation

CEO: Chief Executive Officer

CFO: Chief Financial Officer

CIO: Chief Information Officer

CIP: Cast In Place

CRCP: Continuously Reinforced Concrete Pavement
EPD: Environmental Product Declaration
ESAL: Equivalent Single Axle Load
FA: Fly Ash
FAA: Federal Aviation Association
FHWA: Federal Highway Administration
GHG: Green House Gases
GLCPC: Great Lakes Cement Promotion Council
GSA: Government Services Administration
GWP: Global Warming Potential
IAAP: Illinois Association of Aggregate Producers
ICF: Insulated Concrete Form
ICRI: International Concrete Repair Institute
IDOT: Illinois Department of Transportation
ILCPA: Illinois Concrete Pavement Association
IRMCA.com: Indiana Ready-Mixed Concrete Association
IRMCA.org: Illinois Ready-Mixed Concrete Association
ISHTA: Illinois State Toll Highway Authority
KPI: Key Performance Indicator
LEED: Leadership in Energy and Environmental Design
LCCA: Life Cycle Cost Analysis
NRMCA: National Ready-Mixed Concrete Association
NSF: National Sanitation Foundation
PC: Portland Cement
PCA: Portland Cement Association
PCCP: Portland Cement Concrete Pavement
PE: Professional Engineer
PLC: Portland Limestone Cement
PSI: Pounds per Square Inch
QPL: Qualified Products List
RCA: Recycled Concrete Aggregate
RFP: Request for Proposal
ROI: Return on Investment
SCA: Slag Cement Association
SCM: Supplemental Cementitious Material
SF: Silica Fume
USDOT: United States Department of Transportation
USGBC: United States Green Building Council

MEMBER COMPANY LEVERAGE IN PROMOTION

OLIVER DULLE

Oliver Dulle is president and CEO of Dulle&Co International and a concrete marketing and promotion consultant for IRMCA.

Leverage is the improbable physical property that permits a very large object to be moved. A lever is placed on a fulcrum to magnify the force being applied to it, making movement of the object possible.

In concrete promotion, we have several assets at our disposal which are also magnified through leverage.

Member firm personnel have existing, long-term relationships with contractors and owners who are the target of promotional activities to support consideration of concrete construction. They can provide identification of opportunities and open the door to meetings, site visits, and presentations.

Likewise, your professional promotion team has expertise, experience, and examples of successful use of concrete construction. The message is already well-crafted and packaged and can leverage the efforts of member firm personnel to promote consideration of concrete. Member firms just have to make a call and request that assistance.

Sometimes the effort begins with the member firm and sometimes with the professional promoter, but each time one uses the other, their efforts are magnified, or leveraged.

As we always say, "Same Assets. More Value!"

Remember to call your professional promotion team member, and let your top management know that these resources are available as part of your membership. ■

READY-MIX CONCRETE BATCH PLANT AIR PERMITTING IN ILLINOIS

MITCH MARIOTTI, IRMCA TOES committee chair

Has the ROSS Program Come Full Circle?

Those of you who have been in the ready mixed business for a while may remember the introduction of the Illinois EPA's (IEPA) much-heralded Registration of Smaller Sources (ROSS) air-permitting program way back in 2012. It was designed to streamline permitting requirements and was inexplicably administered through the small business portal of the Illinois Department of Commerce and Economic Opportunity (DCEO) to reduce IEPA's regulatory oversight burden at the time.

IEPA asked the industry to certify that emissions were at or below the limit of 5 tons annually, and if so, your plant was relieved of the obligation of having an actual Lifetime General Operating Permit (LGOP). Your plant either kept its original ID number or was assigned an ID number that became your ROSS registration. The upshot here was that the purpose of ROSS was not to relieve the industry of the permit obligation, but rather to relieve the IEPA from having to administer and enforce the provisions of the permit. Our industry was off IEPA's radar so that they could concentrate their limited workforce on other more heavily polluting industries. Woo hoo!

Application for ROSS back in 2012 was a simple matter of providing some demographic information on a 2-page form and a signature that certified your annual emissions would be below 5 tons per year. Your ROSS registration was then generally issued in less than 30 days, and you were

sent an invoice for the first year's annual site fee. If for some reason you could not comply with the 5 ton annual emissions limit, you always had the option of submitting the old school LGOP application that required quite a bit more information. No phone calls required, nor was any additional information requested.

A few years later, the IEPA began demanding payment up front before the ROSS was issued. A few years after that, IEPA began to require the submission of a Fugitive Particulate Operating Program (FPOP), otherwise known to most of us as a fugitive dust control plan, along with the ROSS application and ROSS fee. Public Service Announcement: If you don't already have an FPOP for your **existing** batch plant, make sure you write one soon, as any interaction you may have with IEPA regarding air emissions (think dust complaints, even if it is for a neighboring property) will require you to provide an FPOP to the IEPA. Ask me how I know ...

Enter 2024 and my latest ROSS registration application for a portable plant in central Illinois. I was requested by email to provide the following information to IEPA to determine ROSS eligibility:

- *Description of the process.*
- *List of emission units.*
- *Material used (include VOC and HAP content of each material).*
- *Actual/projected combined emission calculations.*

The email was notable for a variety of reasons. The first thing that caught my eye was the subject line: **Ross Submission Corrections Needed**. It was the word corrections that caught my attention, as if somehow an error had been made in the application. But there was no error made. In typical IEPA fashion, they had moved the goal posts but not informed anyone that said goal posts had been moved. No mention of it in the application form. No mention of it on the DCEO ROSS or IEPA websites.

This additional information had never been required before when submitting a ROSS application, and it negates the entire purpose of the ROSS Program and the certification made on the signature page. I'd considered pushing back on this requirement but decided against it given the short fuse for this project. Once the ROSS Registration is issued, I may very well bring the matter to the attention of the IEPA. Providing so much information to IEPA for a simple ROSS registration puts us very close to the amount of effort required to obtain the LGOP. If that much effort is required, what then, is the purpose of the ROSS program at this point? If this is IEPA's new application criteria, it needs to be published. If it is the whim of an overzealous IEPA permit writer, then this permit writer should be held to account. IRMCA will reach out to IEPA for clarification very soon. Either way, it looks like ROSS may have come full circle, and it may be time for everyone to check their ROSS or air permit compliance. ■

IS YOUR NEW HIRE TRAINING CUTTING IT?

STEVE LINDLEY, CSM, STSC

Steve Lindley, CSM, STSC, is a corporate safety trainer at Ozinga and serves on the IRMCA TOES committee.

We all know the story. The season is rapidly approaching and you're busier than you thought you would be in early March. You grab the pile of applications from your desk and start calling in people for interviews. You pick out a new driver. He accepts the offer and agrees to start 2 weeks later. Your job is done! Or is it?

As presidents, owners, operations managers, and hiring managers, we have an obligation to make sure our new hires are getting the right training when they join our operations. We have to be sure that we have a well-designed training program that encompasses not only the operational issues our new employees will face, but also the safety hazards they will face.

As professional ready mixed producers, it's in the best interest of our individual organizations and our industry to do the best we can to properly train our newly hired employees. Proper training not only provides safer workplaces, jobsites, and roads for the motoring public, but also provides

a better customer experience. Producers sometimes have a bad habit of putting production demands and customer service over proper operational and safety training, but then drivers can feel overwhelmed or unprepared when they are on their own.

Companies assessing their businesses and determining the appropriate amount of training for their employees, especially their mixer drivers, can incorporate industry best practices and regulatory requirements. We should be asking ourselves if the amount of operational training time our new hires get with a trainer is adequate. Are we giving our drivers 5 days with a trainer? Maybe 10? Where does the training end? Is the training sufficient? Are they driving front discharge trucks, rear discharge trucks, or both kinds? Are they working out of a single yard, or will they be moved from place to place based on seniority? What are the checkpoints in place that the new hire has to successfully pass? As you can see, there are lots of questions that need to be

answered before we can develop a proper training program!

When you are developing your training program be sure to get input from all of the stakeholders, especially your front-line employees like drivers, yard workers, and plant operators. While operational training is important, be sure you don't forget about regulatory training, such as mandatory topics that are required to be covered under many of the OSHA standards that apply to our industry.

While developing a proper training program can be a significant undertaking, putting in the time and effort required will result in a higher quality professional driver who will provide great service to your customers. It will also result in drivers who are more responsible and better prepared on the road with the motoring public. If you need assistance with developing a training program, please contact IRMCA's Operations, Environmental, and Safety (OES) committee by emailing irmca@irmca.org. ■



CONCRETE TESTING ADHERENCE COLLABORATION PROGRAM

STEVE FLEMING, M.Sc.E., P.E.

Steve Fleming, M.Sc.E., P.E., is vice president - performance at Point Ready Mix, LLC and serves on IRMCA's TOES Committee

The Concrete Testing Adherence Collaboration (CTAC) program was developed by ready mixed concrete producers in Colorado in 2015 to help improve concrete field-testing practices in their state. Since its inception, they have experienced an improvement in several areas of testing, including technician certification and initial cylinder storage conditions. Recording of minimum and maximum temperatures at the initial cylinder storage location has improved.

In April of 2022, the program expanded to the national level, partnering with the National Ready Mixed Concrete Association (NRMCA). Current partnering states include Wisconsin, Minnesota, Iowa, North Dakota, California, Texas, Alabama, Georgia, and Colorado. Washington and Oklahoma are onboarding, and an additional 12 states have expressed interest in joining the program.

The current iteration of the program is an easy-to-use phone application. The ACI-certified observer checks four basic things:

- 1) **ACI CERTIFIED...?** Is the testing technician currently ACI certified to test concrete?
- 2) **SAMPLED CORRECTLY...?** Was the concrete sampled in accordance with ASTM?
- 3) **TESTS DONE CORRECTLY...?** Were tests completed and strength specimens molded in accordance with the appropriate ASTM procedures?
- 4) **SPECIMENS PROPERLY CURING...?** Were the concrete specimens stored in an initial curing environment following ASTM (60-80°F for first 24-48 hours)?

Producers and testing companies are provided comprehensive reports showing all observation data, helping them identify problem areas and correct them.

The key to success of this program is participation and communication. As more and more ready mixed producers participate across the country, the quality and validity of concrete testing will improve. This will work to reduce false failures and their associated costs and delays to projects. ■



CALENDAR OF EVENTS: www.irmca.org/news-and-events/calendar.

IRMCA NEWS: Congratulations to Jim Randolph, who was blessed with a honorary degree in organizational leadership from Faith Baptist Bible College in Ankeny, Iowa.

NEW MEMBERS

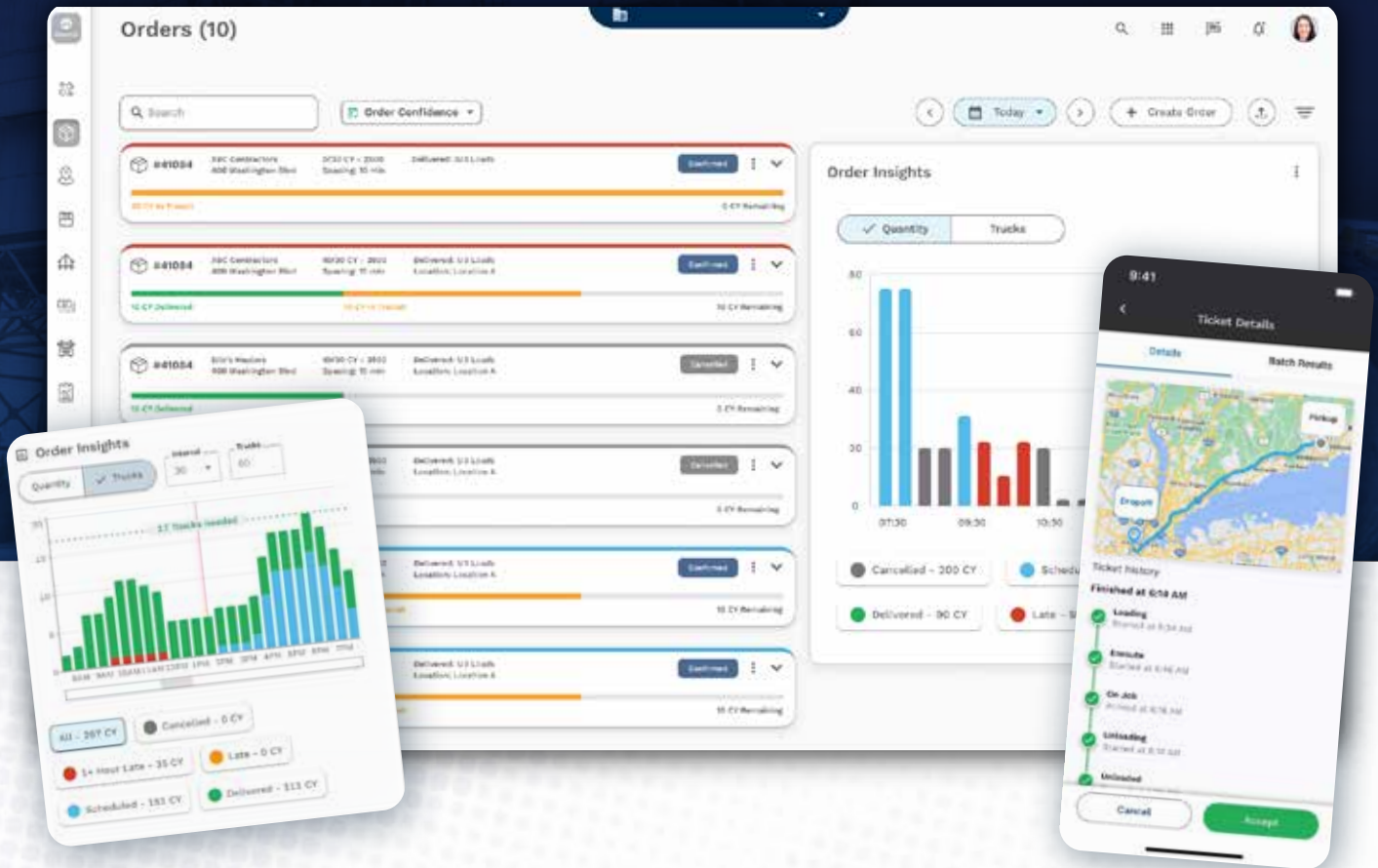
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