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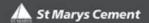


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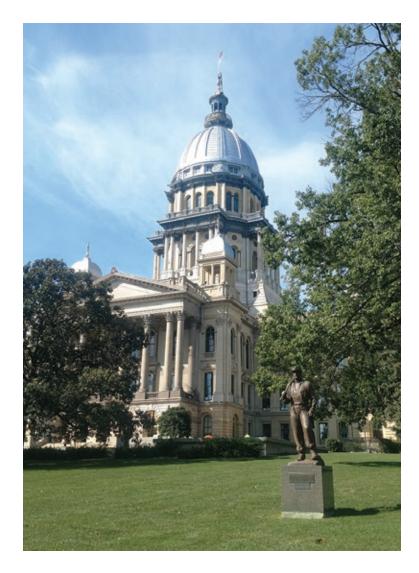


www.prairie.com



MILL PRAIRIE





Pictured on the cover is the sixth and current Illinois State Capitol. It was designed by Cochrane and Garnsey from Chicago, is located in Springfield, and houses the legislative and executive branches of state government.

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#### FROM THE

## **PRESIDENT**



This past fall while mowing the lawn for what might be the last time in 2019, I was looking around the yard and at the house and thinking about what to get buttoned up before winter sets in and what projects to do next year. Then my mind wandered a little, and I started doing the same thing for work.

As a producer it's the time of year we are usually on a final push to get our customers' projects completed, and we start looking towards what things we need to do during our slow time in winter to ensure a reliable, safe, and successful season next year. We may need to do routine maintenance, upgrade plant equipment, plan an updated driver training presentation, or even oversee the addition of a new admixture for a spring project.

At IRMCA we have some great resources, such as the *IRMCA Membership Directory*, for finding the associate and affiliate companies and people who can supply the materials and services you need to make these projects happen.

You can also find other producers and ask how they may have handled the same task. FYI, the *IRMCA Membership Directory* is available as an app for your phone. Go to your app store, search for *IRMCA Directory*, and download.

If you are unable to find what you want through a current member and you source it elsewhere, ask that supplier if they would be interested in joining our association. More than likely, if your company needed it, another member does too! You can also forward their information to the IRMCA office and Jim or Theron will contact them.

Even better than a phone call or an email, come to the IRMCA 2020 Xtreme Concrete Conference in February and talk with other members in person! Our Xtreme conferences have always been full of valuable information about what's happening in our industry, and this year is no exception. The event is carefully scheduled to allow networking between presentations so that you can have one-on-one conversations about your specific projects. I believe at every IRMCA event I have attended (e.g., short course, golf outing, xtreme conference etc.), I have had a conversation that got the ball rolling for a specific project or task I was working on. We have a great group of members willing to help each other out so that we can all be successful. I would like to thank all of the members for their participation, as it is those members, along with Jim, Theron, and JoAnn, who make our association the best.

I hope everyone has had a safe and profitable year. I wish you a Merry Christmas and a Happy New Year, and I hope you enjoy the 2020 Xtreme Concrete Conference in February.

Brandon Thetard President

Brandon Thetand



Our mission is to be the voice for the ready mix 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.

#### **OFFICERS**

Brandon Thetard
River Redi-Mix | President

A.J. Bimrose United Contractors Midwest | Vice President

Matthew Meyer inois Concrete Inc.

Mid-Illinois Concrete, Inc. Secretary/Treasurer

#### **DIRECTORS**

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> Bridget Bleigh Bleigh Ready Mix

Michael Boyda Vulcan Materials Company

> Timothy Burke Boral Resources

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Mike DeJong Welsch Ready Mix, Inc.

> Tim Huiner VCNA Prairie, LLC

Kent Hustedde Quad-County Ready Mix

> Jamie Maley Capitol Ready Mix

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> JoAnn McKeown Office Manager

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#### FROM THE

## **EXECUTIVE** DIRECTOR



IRMCA had great special meetings and events in 2019! Xtreme Concrete Conference 2019 had a great turnout in spite of the -16 degree temps. The exhibitors were great, and the speakers were very informative. ACPA joined our conference, so we had several new guests from IDOT and other agencies. Many members also attended the Illinois/ Wisconsin Conference in San Diego. We enjoyed professional presentations on building with strength (NRMCA), in-cab cameras, and Environmental Product Document (EPD). We also took

a field trip to high capacity, local concrete producer Lehigh Hanson in San Diego, whose postage stamp size property that meets all air, water, and aesthetic requirements (especially tough in California).

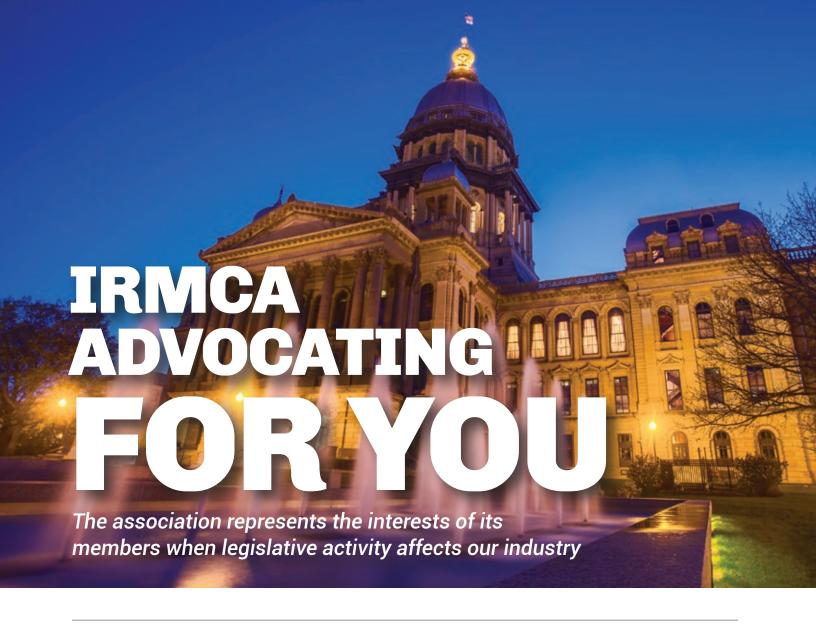
Other 2019 highlights include two well attended golf outings, our first statewide OES Workshop, technical advances by our Technical Committee, Theron continuing to set records flipping asphalt to concrete, and IRMCA providing 11 concrete finishers with their ACI Concrete Flatwork Finisher Certification at a class in Effingham. We also made a new connection between IRMCA and the U.S. Army Corps of Engineers. Since the Illinois concrete industry is affected by the Missouri, Mississippi, and Illinois rivers, IRMCA now receives the Corps of Engineers' alerts regarding schedules, river delays, lock and dam closures, tug and barge traffic reports, and other important notices. This benefits the association members who are affected by these river events.

2019 was a great year, and we want to thank our engaged board of directors and you, our members. It is because of you that we have a strong, growing, effective association. Next year will be even stronger as we work toward our vision.

Vision 2020 - DESIGN WITH CONCRETE

Jun Dandolph

Jim Randolph Executive Director



JIM RANDOLPH, IRMCA Executive Director

The Illinois Capitol building in Springfield is home to conference rooms, historic hallways, the House and Senate Chambers, and many offices, including those of the governor and several legislative leaders. The building has been in use since 1877 and was completed in 1888. It has been renovated but the history is still evident. When walking in from Second Street you are first greeted by the statue of Abraham Lincoln. Then the gigantic columns will draw your gaze from the portico up to the top of the

silver dome where you will see the American flag. When the Illinois General Assembly is in session the Capitol is a very busy place! Inside, arguments and debates take place. New laws are written and old ones are amended. It is a constant work in progress.

#### **CAPITAL BILL PASSES**

With our new Governor, JB Pritzker, the House and Senate of the 101st General Assembly passed a Capital Bill, funded by increased motor fuel taxes that are to be deposited in the lockbox where the funds can only be used for transportation. \$45 billion dollars will be collected over 6 years with half going to roads and bridges and the other half going to transit services and universities. This bill is indexed and will continue growing with the economy until otherwise legislated.

IDOT will now have the funds to strengthen their workforce and will immediately busy consulting engineers with designing and



This statue of Abraham Lincoln stands at more than 10 feet tall and greets people approaching the Illinois State Capitol from the east. It was sculpted by Andrew O'Connor and dedicated in 1918.



#### **LOWER TRUCK LICENSE FEE**

IRMCA and Transportation for Illinois Coalition worked together for more than two years on the Capital Bill and lobbied to repeal the Commercial Distribution Fee (CDF), which will lower your license fees by \$400 per truck at your next renewal.



The Capitol dome contains beautiful stained glass. The dome was restored in the 1980s.



The Illinois House Chamber is located in the south wing of the third floor of the Capitol.



The Illinois Senate Chamber is located in the north wing of the third floor of the Capitol.

#### SB9 AMENDED TO ALLOW USE OF FLY ASH

In 2019 SB9 was going to prohibit the use of fly ash in concrete. After several successful small group meetings with Senator Scott Bennett and the opposition, and after 3 amendments, we were successful in peeling out that part of SB9 and protecting the use of fly ash in our concrete.

#### PREVAILING WAGE SB1783 POSTPONED

SB1783 would have required that prevailing wage be applied to all public works jobs. That bill may come back in 2020, but it was dropped for this year because of the incredible added expense it would bring to construction, as well as the complexity to administrate it.



TOGETHER, BUILDING BETTER

## IRMCA OUT & ABOUT

Highlights of the association out and about with members at pours and helping educate employees, customers, and other professionals about successfully designing with concrete.



Capitol Ready Mix supplied 2,000 cubic yards of concrete for a Speedway project in Williamsville. Knapp Concrete was the contractor. LCI Concrete, Inc. trucks were also utilized by Capitol Ready Mix to meet the supply demand for this project.







IRMCA Assistant Executive Director Theron Tobolski taught two Concrete 101 programs at Ozinga. Part of the education was seeing live testing of concrete being batched from their Mokena location. If you would like to book a Concrete 101 program at your office, please contact IRMCA at 309.862.2144.

Elmhurst Chicago
Stone delivered
approximately
400 cubic yards of
pervious concrete
for an alley project in
Des Plaines. Martam
Construction, who
placed the pervious
concrete, attended
the NRMCA Pervious
Concrete Certification
Program that is
taught by IRMCA.



Kienstra-Illinois supplies concrete for a warehouse floor and tilt up walls near Pontoon Beach. The floor was placed with a laser screed. Spotting trucks and monitoring traffic flow were important for maintaining a high volume of concrete at Kienstra-Illinois' offsite portable central mix plant.





IRMCA hosted a Concrete Focus Group meeting in McCook. More than 45 people attended from engineering companies, developers, and concrete producers. The focus of this educational meeting was to teach the proper way to design concrete and asphalt pavements for parking lots. We also presented on the use of fibers in concrete pavements.







JustCore Concrete
Construction
Company placed
concrete for a parking
lot at American
Building located at
2101 East Main St
in El Paso. Justin
Faulk worked with
IRMCA to convert this
project from asphalt
to 1,170 cubic yards of
concrete, which was
supplied by Roanoke
Concrete.



VCNA Prairie
booked IRMCA and
Applied Research
Technologies for a
Lunch and Learn
presentation on
properly designing
concrete and asphalt
pavements for
parking lots. The
event was held
at the offices of
Morgan/Harbour
Construction LLC.



Quad-County Ready Mix supplied 2,000 cubic yards to the Glen Carbon Fire Station. Quad-County Ready Mix also worked with IRMCA to flip 3,500 cubic yards for the new Poettker Construction headquarters in Breese (project not pictured).

United Ready Mix,
Inc. supplied more
than 15,000 cubic
yards of concrete for
this utility project
located just west of
Peoria. R.A. Cullinan,
a division of United
Contractors Midwest,
Inc., placed
the concrete for
this project.





IRMCA Asst.
Executive Director
Theron Tobolski
and Scott Maberry
of Kienstra-Illinois
flipped this new
Edwardsville strip
mall from asphalt
to concrete. The
customer liked the
result so much that
concrete is also
going to be used
for the extended
parking lot.







## PLACING A SUCCESSFUL RESIDENTIAL DRIVEWAY MIX

Avoid residential concrete driveway callbacks by following these best practices

THERON TOBOLSKI, IRMCA Assistant Executive Director

Most concrete producer callbacks are for residential concrete driveway problems such as scaling, mortar flaking, cracking, and pop outs, to name a few. What can producers do to reduce the amount of rip out and replace costs and headaches associated with residential driveway concrete?

#### **EDUCATE YOUR CONTRACTORS**

Call IRMCA and host a Concrete 101 program for your contractors. They will learn how to properly place, cure, and seal concrete. The program covers everything from creating a freeze-thaw durable mix design and using fibers for concrete, to all the admixtures and cementitious materials that can be used. Other topics include water to cement ratio and best practices for cold and warm weather concrete. If your contractors pick up one or more tips from Concrete 101 and use them when placing driveways, you will receive fewer callbacks.

#### PICKING THE RIGHT MIX FOR THE JOB

Scaling is often a problem in the area of the garage floor that is outside of the garage door. This small concrete section is exposed to freezing and thawing and needs air-entrainment to be freeze-thaw durable. Often contractors will pour the non air-entrained inside concrete mix design for this small section of pavement, which can lead to concrete surface scaling. This section of concrete pavement must be airentrained and should be a separate pour from the non air-entrained inside garage floor.

#### TIMING CONCRETE FINISHING

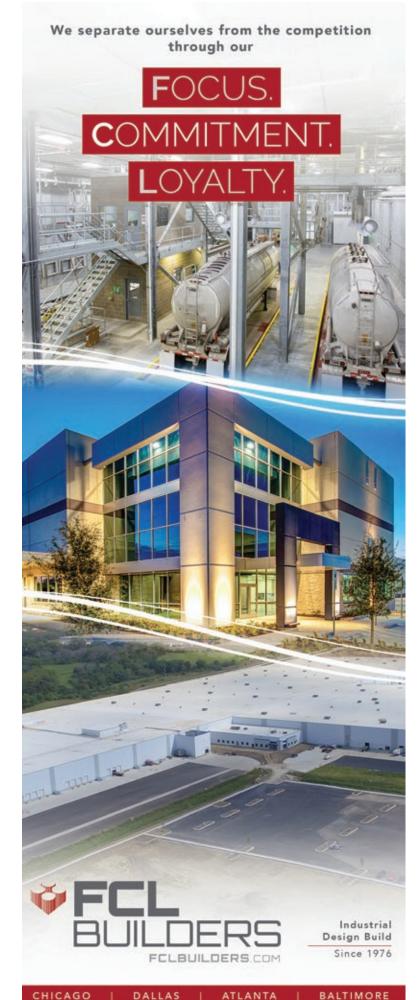
Finishing concrete is one of the hardest things any person can ever try to master. Every concrete pour has a different time period of when the concrete surface should be finished. Contractors have to wait for the bleed water to evaporate and then determine the right time to start finishing the concrete based on: the amount of water in the concrete, the thickness of the concrete, if the stone sub base was wet or dry, ambient temperature, humidity, if it is sunny or cloudy, the temperature of the concrete, the wind, and if fly ash or slag is in the mix. If the contractor is a little off on his or her calculations it could lead to over finishing the concrete or sprinkling water on the surface to finish the concrete (which is a HUGE no). These two types of finishing can lead to scaling, cracking, or other issues with the concrete surface.

#### **CURING**

Curing can be defined as maintaining the proper amount of moisture and temperature in the concrete so that the concrete can achieve the designed strength. Curing does not mean using a curing/sealing product. Curing and sealing are two separate practices that need to be done independently of each other. Contractors should cure the concrete in order for the concrete to obtain the right strength to help prevent scaling or cracking from happening after the first winter.

#### **SEALING**

Concrete driveways need to be sealed after the curing period is over, typically at 28 days. In my opinion, a penetrating type of sealer or internal



## Some concrete companies have actually created branded or special driveway mixes that they sell to their residential contractors.

sealer should be used. The first winter is the most critical winter for driveway concrete; therefore, applying a sealer to the concrete is crucial for success. If water cannot get into the concrete to freeze and thaw, you minimize or eliminate the opportunity for scaling and pop outs. Also, the contractor should talk to the homeowner about reapplying a sealer yearly or every other year. Maintenance is as important for concrete as it is for a wood deck or asphalt driveway.

#### **DRIVEWAY MIX**

A driveway mix design should follow the guidelines of ACI 318, which states concrete in Illinois that will be exposed to freeze-thaw conditions needs to be a 4500 psi mix and a .45 w/c ratio. It is extremely important for concrete producers to push all of their residential contractors to use the 4500 psi designed mix. Some concrete

companies have actually created branded or special driveway mixes that they sell to their residential contractors. These special mixes comply with ACI 318, and they have internal sealers and fibers. Producers who sell these special mixes say they get fewer driveway complaints compared to when they were selling a 4000 psi concrete residential driveway mix. As part of a maintenance plan, concrete driveways that use internal sealers or external sealers should be sealed again the second or third year.

#### **WATER/CEMENT RATIO**

Contractors pouring residential concrete over the designed .45 w/c ratio is one of the main reasons for driveway scaling and increased pop outs and cracking. You should have conversations with your contractors on what slump they would like to pour and then

create a mix that has enough mid range water reducer or superplasticizer to maintain the .45 w/c ratio and achieve the slump the contractor wants to pour. You can visit the jobsite and perform a slump cone test right in front of the contractor to show them what slump they ordered and what slump they are actually placing. This test does not lie. It's a great way to educate the contractor. Don't let a contractor order a 5" slump on a 90 degree day unless you have a retarder or hydration stabilizer in the concrete and enough chemicals to allow the concrete to leave the yard at a 6" slump and still maintain the w/c ratio.

Placement of concrete driveways that will not develop issues happens every day. Following the best practices in this article will help ensure that you place one of those driveways.



#### **CONTRACTOR BIG 4**

Essential contractor guidelines for placing a successful residential driveway mix:

#### Water/cement ratio

Do not place concrete over the designed .45 water/cement ratio. Excess water added at the job site will prevent the 4500 psi mix design from meeting the required strength to make the concrete durable. Contractors tend to add water to help with the placement of the concrete. Instead, chemicals and NOT water should be used for workability of the concrete. Adding water over the designed w/c r atio also increases the potential for cracking.

#### **Curing**

The concrete must be cured, which means maintaining the proper moisture and temperature of the concrete to help it gain the designed strength of the concrete mix design.

#### Sealing

Contractors must seal the concrete and educate the home owner about a maintenance sealing schedule. If the concrete is not sealed, water can get into the hardened concrete and saturate it. The saturated concrete then experiences freezing and thawing, which can lead to problems. Applying a penetrating sealer or internal sealer in the fresh concrete protects it from becoming saturated and avoids freeze-thaw problems.

#### **Finishing**

Correctly finishing the concrete is challenging but critical. Over finishing or premature finishing are leading causes of scaling. Over finishing can cause a lower air content in the surface of the concrete, which can cause the concrete surface to scale.

#### NEW IRMCA RESIDENTIAL CONCRETE COMMITTEE

The Illinois Ready Mixed Concrete Association is forming a residential concrete committee to draft some educational documents and articles for the dos and don'ts of residential concrete. If you would like to work on this committee please contact IRMCA at 309.862.2144.



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## IRMCA Xtreme Concrete Conference SCHEDULE

WEDNESDAY,	FEBRUARY 19, 2020		PDH
8:00 - 11:00 AM	Exhibit Booths Setup		
11:00 AM - 12:30 PM	Exhibits Open		
Noon - 1:00 PM	Registration Opens		
12:45 - 1:00 PM	Annual Business Meeting Brandon Thetard, IRMCA President		
1:00 - 1:15 PM	Welcome and Introduction of Board Members, Staff, Vision 2020 Design With Concrete Jim Randolph, Executive Director		
AIRWALL CLOSED 1:30 PM - 2:00 PM	BLACKHAWKS ROOM	BLUES ROOM	
	Lightweight Concrete 101 for QC & Test Lab Technicians, Kevin Cavanaugh, Arcosa Lightweight / Cavanaugh and Assoc.	Operations Environmental Safety Update, Mitch Mariotti, Environmental & Lands Manager, VCNA Prairie	
2:00 - 2:30 PM	When Replace Isn't An Option Heath Morrall, Euclid Chemical Co.	The Power of Social Media Brian Dryfhout, Communications & Media Mgr, Ozinga Bros., Inc.	0.6
2:30 PM - 3:00 PM	Beneficial Use of Recycled Materials in Flowable Fill: Recycled Glass as a Fly Ash Substitute and Dredged Material as a Sand Substitute, Pranshoo Solanki Ph.D., P.E. Illinois State University	Quantifying Your Pumping Mix Using the Sliding Pipe Rheometer, Ryan Scott, Technical Services Manager, Midwest, GCP Applied Technologies	0.6
3:00 PM - 3:45 PM	Clearinghouse/Reporting of Violations Federal Requirement, Candy Wendt, Drug and Alcohol Program Manager, Mid-West Truckers Assoc.; Fletcher Morgan, Associate Program Manager, Mid-West Truckers Assoc.	Mass Concrete Mixture Development for Thermal Control, Matthew D'Ambrosia, Ph.D., P.E. MJ2 Consulting	0.9
3:45 PM - 4:30 PM	Exhibits Open • Break Culver's Concrete Mixers - OPEN WALL		
4:30 PM - 5:15 PM	Concrete Research Updates: A Look at Things to Come, James Krstulovich, Illinois Department of Transportation		0.9
5:15 - 5:45 PM	Concrete as a Solution to Sustainability Targets, Hessam Hessam Azarijafari Ph.D., Postdoctoral Associate, Concrete Sustainability Hub Department of Civil and Environmental Engineering, Massachusetts Institute of Technology (MIT)		0.6
5:45 - 6:45 PM	Hosted Reception and Exhibits Open		
7:00 PM	Plated Dinner Theron Tobolski - Promotion Update		

\*Professional Development Hours

For more information visit **irmca.org**.

7:00 - 7:45 AM	Breakfast is on your own (Embassy Suites hotel reservation includes complimentary breakfast)		
	BLACKHAWKS ROOM	BLUES ROOM	0.6
8:00 - 8:30 AM	Illinois Autonomous and Connected Track (I-ACT) – The Future of Transportation in Illinois, Imad Al-Quadi Ph.D., Bliss Professor of Engineering/Director Illinois Center for Transportation at the University of Illinois	Ready-Mix Cellular Concrete, Roberto Montemayor, University of Illinois, Masters student, Research Assistant of the Civil and Environmental Engineering, University of Illinois	
		Non-contact Ultrasonic for Concrete Construction Decision-Making, Quang Tran Ph.D. candidate, Research Assistant Civil and Environmental Engineering University of Illinois at Urbana-Champaign	
8:30 - 9:15 AM	Highlights on the OSHA SILICA RULE Producers, Contractors, Are You Compliant?, Kevin Walgenbach, Senior Vice President Compliance and Regulatory Affairs, NRMCA	Pave Ahead - There's a Better Way to Pave It's Called Concrete, Luke McHugh, P.E., Senior Director, Local Paving National Ready Mixed Concrete Association	0.9
9:15 -9:45 AM	Cement Slurry Projects Jacob Phelps, Project Manager, Byrnes & Jones	Real-Time Concrete Quality Measurement from Batch Plant to Job Site, Kevin Murphy, Regional Manager, CiDRA Concrete Systems, Inc.	0.6
9:45 - 10:15 AM	Design of Concrete Overlays for Streets & Roads, Jeffery Roesler, Ph.D., P.E. Professor, Dept. of Civil and Environmental Engineering CEE Associate Head and Director of Graduate Studies and Research President, International Society of Concrete Pavements (www.concretepavements.org), Associate Director of ATREL (http://www.ict.illinois.edu/)	CBD Oil Tests Positive for Marijuana / Driver Fired! Candy Wendt, Drug and Alcohol Program Manager, Mid-West Truckers Association Fletcher Morgan, Associate Program Manager, Mid-West Truckers Association	0.6
10:15 - 10:45 AM	Break • Exhibits Open		
10:45 - 11:15 AM	<b>Technology and Innovation PANEL:</b> Chicago Department of Transportation (CDOT), Illinois State Toll Highway Authority (ISTHA), Giatec Scientific Inc., S.T.A.T.E. Testing, Carbon Cure, Behnke Materials Engineering, GCP Applied Technologies		0.6
11:15 AM - 12:15 PM	Lunch • Exhibits Open		
12:45 -1:15 PM	Internal Curing of Concrete to Improve Quality and Reduce Cracking, Prof. David A. Lange, P.E. Past President, American Concrete Institute 2018-19, Director of the Center of Excellence for Airport Technology, University of Illinois at Urbana-Champaign		0.6
1:15 PM - 1:45 PM	Concrete Paving Issues / Solutions from Around the Globe, Mike Ayers Ph.D., Executive Director, Illinois Chapter ACPA		0.6
1:45 PM	Drawings • Must be present to win		

<sup>\*</sup>Professional Development Hours



# Xtreme Speaker and Presentation Highlights

#### Lightweight Concrete 101 for QC & Test Lab Technicians,

Kevin Cavanaugh, Acrosa Lightweight/Cavanaugh & Assoc.

Mixing, placing, and testing light weight concrete. Learn how light weight aggregates are made and about relevant standards, internal curing benefits and challenges, and storage and pre-wetting options.

## **Operations Environmental Safety Update,** *Mitch Mariotti, VCNA Prairie*

Mitch has over 28 years of environmental and compliance management experience. He was one of the first in the nation to be designated as a certified concrete industry environmental professional by NRMCA.

#### When replace isn't an option,

Heath Morrall, Fuclid Chemical

When a tear out and replacement isn't possible or cost effective, what repair options are available? Knowing could save time and money when a problem arises.

#### The Power of Social Media,

Brian Dryfhout, Ozinga Bros.

Many businesses are successful on social media, but some that aren't using it at all. Beginner or pro, this session will help you build your social media presence.

#### Beneficial Use of Recycled Materials in Flowable Fill: Recycled Glass as a Fly Ash Substitute and Dredged Material as a Sand Substitute

Pranshoo Solanki, Ph.D., P.E., UI-UC

The results of studies evaluate the feasibility of using glass powder as a fly ash substitute and dredged material as a sand substitute in flowable fill mixes.

#### Quantifying Your Pump Mix Using the Sliding Pipe Rheometer, Ryan Scott, GCP

Applied Technologies

The Sliding Pipe Rheometer ("Sliper") is a tool that allows the user to assess the pumping characteristics of concrete either in the laboratory or on the construction site.

### Clearinghouse/Reporting of Violations Federal

**Requirement,** Candy Wendt and Fletcher Morgan, Mid-West Truckers Assoc.

The Clearinghouse enables employers to identify drivers who commit a drug and alcohol program violation while working for one employer but fail to subsequently inform another employer.

## Mass Concrete Mixture Development for Thermal Control, Matthew D.

D'Ambrosia, Ph.D., P.E., MJ2 Consulting

Specifications for mass concrete often require explicit planning and control of thermal stresses. Development of low heat performance concrete (LHPC) will help to minimize cracking and improve service life by meeting multiple performance objectives.

### Concrete Research Updates: A Look at Things to Come,

James Krstulovich, P.E., IDOT

Hear about national studies as well as IDOT's own research and how these efforts might advance concrete practice in Illinois.

#### Concrete as a solution to sustainability targets

Hessam Azarijafari, Ph.D., MIT

Learn about research at MIT's Concrete Sustainability Hub that quantifies concrete as a sustainable solution.

#### Illinois Autonomous and Connected Track (I-ACT) – The Future of Transportation in Illinois,

MAD AL-Qadi Ph.D.,UI-UC

Headquartered in the decommissioned Chanute Air Force Base in Rantoul, the Illinois Autonomous and Connected Track (I-ACT), will provide a blank canvas for the next-generation transportation ecosystem.

#### Ready-Mix Cellular Concrete,

Roberto Montemayor, UI-UC

Due to global concerns on climate change and sustainability, cellular concrete use and research have increased in the past years. Learn about production methods, applications, and benefits of cellular concrete.

#### Non-contact ultrasonic for concrete construction decision-making, Quang Tran Ph.D. candidate, UI-UC

A novel framework is introduced to predict the saw cut initiation time by integrating a one-sided non-contact, ultrasonic testing system (UTS) to estimate the concrete's final setting time.

#### Highlights on the OSHA SILICA RULE Producers, Contractors, Are You Compliant?, Kevin Walgenbach, NRMCA

OSHA is focusing on the concrete industry. This talk is vital for producers and contractors to be in compliance.

#### Pave Ahead - There's a Better Way to Pave... It's Called Concrete,

Luke B. McHugh, P.E., NRMCA

Luke has 33 years of experience providing consulting engineering services for a variety of airside and landside projects and will share strategies for increasing the use of various forms of ready mixed concrete.

#### **Cement Slurry Projects,**

Jacob Phelps, Byrnes & Jones Construction

Jacob has been project manager for several jobs and will talk about cement slurry as a source of soil stabilization as well as contrast it with the current method of using dry cement powder.

#### Real-Time Concrete Quality Measurement from Batch Plant to Job Site, Kevin Murphy, CiDRA Concrete Systems

CiDRA Concrete Systems' SMARThatch™ technology features AIRtrac™ Mobile as an innovative concrete quality solution.

#### **Design of Concrete Overlays for Streets and Roads,** *Jeffery Roesler, Ph.D., P.E., UI-UC*

Review what concrete overlays are available for rehabilitating existing distressed pavements, when each one should be applied, the structural design methods available, other important features of overlay performance, and the role of macrofibers.

### CBD Oil Tests Positive for Marijuana/Driver Fired!,

Candy Wendt and Fletcher Morgan, Mid-West Truckers Assoc

CBD oil is supposed to have the THC processed out of it but that is not always the case. Learn about the ramifications of using this product.

#### **Title Technology and Innovation Panel:** Chicago

DOT, Illinois State Toll Highway Authority, Giatec Scientific Inc., S.T.A.T.E. Testing, Carbon Pure, Behnke Materials Engineering, GCP Applied Technologies

A discussion about the use of various performance tests and monitoring systems.

#### Internal Curing of Concrete to Improve Quality and Reduce Cracking, David A. Lange, P.E., UI-UC

Concrete with internal curing technology is of increasing interest to reduce shrinkage cracking, improve durability, and enhance life cycle cost of bridges and pavements. Learn about internal curing methods and when they are suitable.

#### Concrete Paving Issues / Solutions from Around the Globe, Michael E. Ayers, Ph.D., ILACPA

Mike brings a unique skill set including his experience throughout the world, with ACPA National, as a university professor, and as president of Global Pavement Consultants, Inc. (GPC).

For more information visit **irmca.org**.



# LIABILITY PROTECTION AND OTHER ADVANTAGES OF READY MIX TRUCK CAMERA SYSTEMS

JEFF EMRICK, Ozinga Director of Safety and Compliance and IRMCA OES Committee Vice Chairman

On a snowy day in 2017 I was informed that one of our ready mix trucks collided head-on with a van on a city street. There were no witnesses, so it was shaping up to be a classic word-versus-word claim. But this time we had something in our favor—the mixer was just one of the few we were testing with a forward-facing video camera. As we watched

the recording two things became clear: Our driver did not cause the accident, and we needed to get cameras on the rest of our fleet.

Since then we have outfitted our trucks with two different camera systems. Our larger ready mix fleet uses a camera that records on a removable SD card. The cameras only face forward, and

we must physically pull the card to watch the video. This helped with driver acceptance because they felt the cameras were primarily there to protect them and not to spy on them. One of our smaller fleets uses a different system that ties into the truck's Electric Control Module (ECM) and is monitored by a third-party company who reports potentially unsafe actions

to us via email. We use the extra information from this system to coach drivers and help improve their driving skills.

In addition to training and identifying safety trends, the most obvious benefit has been liability defense. On several occasions. insurance companies have accepted liability, or attorneys have declined to represent potential clients after seeing a video. After installing the cameras across the fleet, we soon found some unexpected uses for the videos. We have determined the cause of theft in one of our yards, captured injuries that occurred near our trucks (both our employees and contractors), documented unusual events on jobsites, and recorded accidents that did not involve us at all. Even if an accident is clearly not our fault, such as when we are rear ended, we save video in case we have to prove it months or years later. We can use the recording to show that our truck was in its lane, or that it was going the speed limit or even at a complete stop when an accident occurred. In fact, we found that most incidents are not our fault; and many videos show our drivers avoiding accidents by taking defensive actions.

A common concern about the cameras is what will happen if a video shows that an incident might be our fault? In those cases, it is usually better to know the facts right away. If the incident is serious, we can avoid large legal bills by not going through long periods of discovery or hiring expert witnesses. For minor incidents we try to settle directly with the other party as quickly as possible. In some of those cases a difficult situation had a positive outcome after quickly arranging



## If After just two years we have seen real value from our dash cameras that goes beyond liability protection.

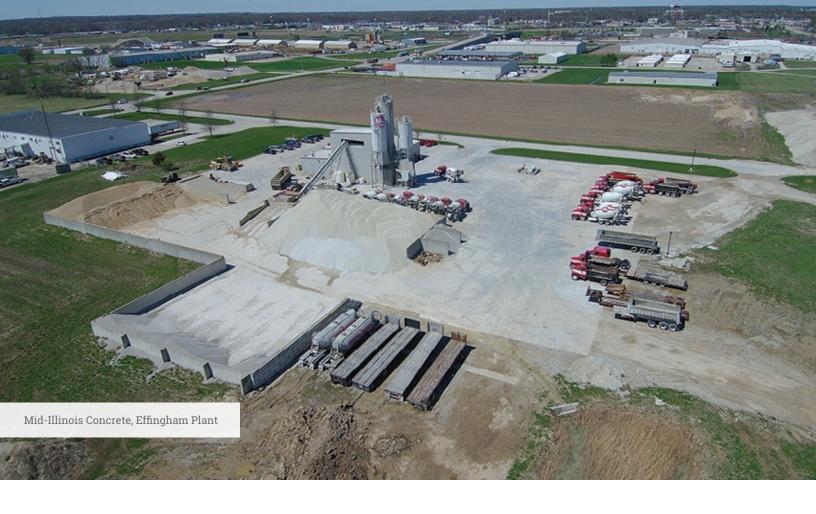
for a rental car and taking care of any repairs.

Whether a video shows an incident might be our fault or someone else's, seeing it happen on film makes an impression that still photos or a verbal description cannot. We use selected video clips for training new hires and during our regular safety meetings, and the visual imagery has changed behaviors. Our rear end and blind spot accidents have decreased because our drivers can see the conditions that led to the incident and realize that it could happen to them, too. And, as safety people, we are

not guessing about the cause of some accidents—we can see what actually happened and train accordingly.

After just two years we have seen real value from our dash cameras that goes beyond liability protection, and we are constantly looking for new ways to use them. We are in the process of placing them in some support vehicles and tying them into the backup cameras on our mixer trucks.

Whether your fleet is large or small, these systems are worth looking into. ■



## Is Your Ready Mix Plant A Good Neighbor?

STEVE LINDLEY, Wille Brothers Company Operations and Safety Manager and member of the IRMCA OES Committee

There is a good chance that you, like many producers throughout Illinois and the rest of the country, have a ready mix plant located in the heart of a quiet, residential neighborhood. The plant was most likely in existence long before the neighborhood was built. Over the years the neighborhood grew up around the plant as people bought lots and built homes despite the fact that there was a concrete plant

in their backyard. The result was often a slew of complaints by the new neighbors to the village board or the police department about noise levels, operating hours, increased truck traffic, and endless clouds of dust.

Some of us may have been reluctant to conform and found it easy to take a defensive stance against the new neighbors and their prolific complaints. After

all, we were here first! Others may have gone the extra mile to accommodate each request by the new neighbors or the village. The lesson most of us learned, in the end, was that we would ultimately comply with most of the reasonable requests from neighbors, village boards, and other regulatory bodies. As time went on, legislation such as the Clean Air Act and Clean Water Act required producers to keep



## Develop a daily or weekly checklist for either a plant manager or yardman to complete and turn in to you. Include items that not only focus on your SWPPP requirements but also items that ensure you are being neighborly.

their yards relatively clean in order to comply with their required permits.

While most of us do at least the required minimum to maintain compliance with our permits and keep our environmental guys off our backs, as operations professionals we should be constantly asking if we can do more to keep our operation as neat and orderly as possible. How often do you visit each of your plants? How often do you actually pay attention to the appearance of the plant within the surrounding landscape? Below are a few tips for helping your plant be a good neighbor:

 Check the fence/property line for weeds and vegetation growth. Give someone the responsibility of checking it weekly and removing any

- new growth. This is a very simple task that makes a huge impression on the neighbors!
- Make sure that you are keeping the neighboring streets free from track out dust, gravel, and dirt. Wille Brothers employs a sweeping company that comes twice a week and sweeps the neighboring streets a few blocks in each direction at our expense. While it is costly, this practice makes sure that we not only comply with our SWPPP permit but also keep the neighboring residents happy.
- Establish operating hour restrictions on plants that are surrounded by residences. Wille Brothers has a commuter train line that runs along the east side of the property and surrounding homes. Our policy is that we don't make any noise until after

- the first train comes through the station at around 5:30 a.m. The neighbors are comfortable with this, and the policy keeps everyone happy. We also don't typically run any night work, but if we did, we would restrict shipping from this plant after 8:00 p.m.
- Develop a daily or weekly checklist for either a plant manager or yardman to complete and turn in to you. Include items that not only focus on your SWPPP requirements but also items that ensure you are being neighborly.

While these suggestions do not offer a solution for all of the problems you may face, they can help prevent issues from even the most difficult neighbors in the most pristine neighborhoods.

IF YOU HAVE MORE SUGGESTIONS ON KEEPING YOUR NEIGHBORS HAPPY OR WOULD LIKE TO BE A PART OF THE IRMCA OPERATIONS, ENVIRONMENTAL, AND SAFETY COMMITTEE, PLEASE DROP US A LINE AT IRMCA@IRMCA.ORG!



# Work Groups, IDOT, and Illinois Tollway

STEPHEN FLEMING, Technical Committee Chairman

The technical committee met in March and October of 2019 to address numerous industry issues and review changes in technology and specifications that impact the ready mixed concrete industry in Illinois. We brainstormed ideas for presentations and speakers at the Xtreme Concrete Conference in February of 2020. We also formed three work groups. One is developing information for the "Do's & Don'ts for Durable Driveways". The second, an industry specifications work group, is addressing poor or restrictive project specifications. The final group is working on "Mass Concrete/Thermal Control Plans".

In April, the technical committee met with IDOT in Springfield. We addressed a number of items including:

- Mass concrete identifying bid items that require special measures by the ready mixed concrete producer and/or contractor, updating temperature requirements per latest ACI guidelines, and reviewing minimum cement content requirements
- Electronic tickets
- Performance testing/specifications for high quality concrete incorporating optimized aggregates incorporating finely divided minerals

- Concrete technology concrete overlays, cement slurry
- Update on IDOT's Materials Integrated System for Test Information and Communication (MISTIC) development combining information from materials bureau and construction

We also met with the Illinois Tollway in March and October. Topics included:

- Requirements coming in spring of 2020 for all ready mixed concrete plants doing tollway work to hold NRMCA Plant Certification and for all testing lab personnel to hold ACI Concrete Strength Testing Technician Certification
- · Tollway paving mix yield adjustment
- Raw material availability issues
- Use of maturity meters for determining strength development
- Performance testing for acceptance of concrete

If you have any topics for the technical committee or would like to join, please email Stephen Fleming at sfleming@pointreadymix.com. ■



# oes committee: 2019 and What's Coming Next

MITCH MARIOTTI, VCNA Prairie LLC Environmental & Lands Manager and IRMCA OES Committee Chairman

Since the last IRMCA News OES report, the committee has held a statewide event, assessed what works best for association members, and planned future projects and events.

The statewide IRMCA Safety & Environmental Workshop was presented to association members on March 13 and 14, 2019. The event was modeled after Wisconsin's statewide OES event. The workshop was well received. Participants gave high marks to the content, venue, and social events.

So what exactly is the next step for the IRMCA OES Committee? Continuing what has been successful for us and expanding our membership and participation. We intend to accomplish that by recruiting new members into the OES Committee and holding quarterly committee-wide meetings. Watch for meeting date announcements. Also in 2020 the committee will hold single day regional programs similar to the ones offered in 2017.

In the meantime, please continue to enjoy the monthly IRMCA Safety Alerts and look for extended content to include environmental and DOT/Operations topics. We also have a few other projects in the works to provide value to our members, including an updated IRMCA Safety Manual, and the creation of an IRMCA Environmental Manual.





## ACI Has New Titles for Concrete Flatwork Finishers

JIM RANDOLPH, IRMCA Executive Director

ACI has updated titles in its certification course for concrete flatwork finishers.

#### **CONCRETE FLATWORK ASSOCIATES**

Formerly concrete flatwork technicians, concrete flatwork associates pass a written exam to demonstrate knowledge of proper procedures to place, consolidate, finish, edge, joint, cure, and protect flatwork.

#### **CONCRETE FLATWORK FINISHERS**

Formerly concrete flatwork tradesman, concrete flatwork finishers are craftsmen who give a hands-on performance to demonstrate the skills necessary to place consolidate, finish, edge, joint, cure, and protect flatwork.

#### ADVANCED CONCRETE FLATWORK FINISHERS

Formerly concrete flatwork finisher and technician, advanced concrete flatwork finishers are craftsmen who demonstrate knowledge, skills, and/or experience necessary to place, consolidate, finish, edge, joint, cure, and protect concrete flatwork.

The certification course uses ACI's Concrete Craftsman Series: Slabs on the Ground. Topics include: planning for slab-on-ground placement, concrete materials/mixture proportioning/control tests, preparation before placing concrete, floor flatness and levelness, placing equipment, finishing tools and equipment, procedures for finishing slabs-on-ground, jointing, curing and protection of concrete, and finishing problems and possible solutions.

ACI encourages everyone in the concrete finishing program to use the Job Task Analysis (JTA) to prepare for the certification exam. The JTA is a list of information and skills that may be included in the examination. It can be found on ACI's website, www.concrete.org.

Concrete flatwork associates earn certification by scoring 70% or better on the written exam. Recertification is required every five years through written examination or 10 hours of documented continuing education from an approved source. Associates can upgrade to advance finisher through approved work experience or a combination of approved experience and a passing ACI performance exam score. This upgrade is valid for the remainder of the original associate certification period.

Concrete flatwork finishers earn certification by passing a performance examination and having 1500 hours of on-the-job finishing experience.

Recertification is required every five years through written examination or a combination of 10 hours of documented continuing education from an approved source and 1500 hours of additional hours of verified continuing work experience gained within the past five years. Finishers can upgrade to advanced finisher by successfully completing a written examination. This upgrade is valid for the remainder of the original finisher certification period.

Advanced concrete flatwork finishers earn certification by passing a performance examination and having either 1500 hours of on-the-job finishing experience plus completion of a performance examination or 4500 hours of on-the-job experience. Recertification is required every five years through written examination or a combination of 10 hours of documented continuing education from an approved source plus 4500 hours of verified continuing work experience gained within the past five years.

## IRMCA Offers More ACI Certification Classes in 2020

Due to growing requirements for ACI-certified finishers on many jobs, IRMCA is providing additional classes throughout the state. Dates will be subject to change as we receive registrations. We need a minimum of 10 students and can facilitate up to 40 in one meeting. Classes will begin at 1 p.m. on Friday. Exams will be given at 8 a.m. on Saturday, unless otherwise arranged.

#### SPRINGFIELD:

Jan. 31 - Feb. 1

#### CHAMPAIGN:

Feb. 28 – 29

#### **ELMHURST**:

March 6-7

#### MT. VERNON:

April 3 – 4

#### **EFFINGHAM:**

April 10 - 11





### Meet ILACPA's New Executive Director

MICHAEL E. AYERS, PhD., ILACPA Executive Director



I would like to introduce myself as the new executive director of ILACPA. I accepted the position in June

2019 and have spent the past few months working with key decision makers at IDOT, the Tollway, and a number of counties and municipalities. ILACPA promotes the use of concrete pavements for highways, airports, streets, and local roads, as well as the use of Portland cement for soil and aggregate stabilization, full-depth reclamation (FDR), and more. ILACPA can provide technical support from the planning phase to project completion and beyond.

In addition to my responsibilities at ILACPA, I serve as president of Global Pavement Consultants, Inc. (GPC). GPC conducts business worldwide and concentrates primarily on pavement design, construction, evaluation, FDR with cement, rehabilitation, and concrete overlays. I have extensive experience in the design and

construction of concrete overlays, concrete roadways, and unbound and stabilized base courses including cement-treated bases. lean concrete bases, FDR utilizing existing asphalt materials, and roller compacted concrete (RCC). I recently completed development of the Aggregates and Portland Cement Concrete training modules for the Federal Highway Administration (FHWA), the Highway Materials Engineering course, the design chapter for the new FDR Guidelines, and several chapters of the new FHWA Guide for Concrete Pavement Distress Assessments and Solutions, I. have also served as an expert witness on a variety of design and materials issues, primarily concrete and RCC pavements.

Prior to founding GPC in January 2011, I served as a director for ACPA National in Rosemont, Illinois. I managed the contractor education and training program as well as provided technical services for members and agencies. Prior to 2001, I was a professor

at Oklahoma State University, a division manager at ERES Consultants, and a group leader at Applied Research Associates, Inc.

For more than 30 years I have been very active in the industry. I have served on a variety of National Cooperative Highway Research Program (NCHRP) expert task groups, FHWA projects, and university research programs. I have taught design and construction courses for the University of Wisconsin, Halfmoon Education, National Concrete Pavement Technology Center, FHWA, and others.

I look forward to working with Jim and Theron and am very optimistic for the future with the passage of a capital bill that brings much needed funding for infrastructure throughout Illinois. If you have any issues related to existing concrete pavements or the possibility of new opportunities, please don't hesitate to contact me at mayers@acpa.org.





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## 2019 NEW MEMBERS

- Trimble
- SmartDrive Systems
- · J.B. Esker & Sons., Inc.
- · Howell Tractor and Equipment
- · CiDRA Concrete Systems, Inc.
- Marcotte Systems
- · Giatec Scientific Inc.

## IRMCA MEMBERSHIP DIRECTORY APP

Did you know that there is an IRMCA Membership Directory App available? Download it from your smart phone's app store or at irmca.org > resources tab.



#### **UPCOMING EVENTS**

## GALENDAR

#### 2020

#### **ACI Flatwork Certification**

January 31-February 1 | Springfield

#### **World of Concrete**

February 3-7, 2020 | Las Vegas, NV

#### **IRMCA Xtreme Concrete Conference**

February 19-20 | Embassy Suites Suites by Hilton East Peoria Riverfront Hotel & Conference Center, East Peoria

#### Illinois Chapter ACPA Annual Meeting

February 27 | Springfield

#### **ACI Flatwork Certification**

February 28-29 | Elmhurst

#### Illinois Association of Aggregate Producers (IAAP) Annual Meeting

March 4-5, 2020 | Springfield

#### **ACI Flatwork Certification**

March 6-7 | Champaign

#### ConExpo-Con/Agg

March 10-14 | Las Vegas, NV

#### **ACI Flatwork Certification**

March 20-21 | Mt. Vernon

#### **IRMCA Technical Committee Meeting**

March 26 | Elmhurst

#### **ACI Concrete Convention & Exposition**

March 29-April 2 | Rosemont

#### **ACI Flatwork Certification**

April 3-4 | Alton

#### **ACI Flatwork Certification**

April 10-11 | Effingham

#### **IRMCA Spring Golf Outing**

May 5 | Oak Terrace Resort Golf Course, Pana

#### **IRMCA Technical Committee Meeting**

June 25 | Springfield

#### IRMCA Fall Golf Outing

September 9 | Deer Park Golf Club, Oglesby

#### **IRMCA Technical Committee Meeting**

October 15 | Bloomington/Normal

#### Operations Environmental & Safety (OES) Committee Meeting

Dates To Be Determined | Rochelle, Champaign and Mt. Vernon

10

\*dates subject to change with sufficient notice



Francisco Alvarado, Jody Foster, Ryan Baas, and Mike DeJong represent Welsch Ready Mix. They were among the 95 event participants at the Senica's Deer Creek Golf Club.



Scott Beck, Lee Newton, and IRMCA President Brandon Thetard. IRMCA added a chipping game and a cart game this year.



Bruce Bird, P.E. and Macon County engineer, shares information regarding county highway concrete overlays.



Lionel LeMay, P.E., SE, and LEED AP, from NRMCA provides guidance on Environmental Product Declaration (EPD) documents.



Rick Chobar, Neil Minnihan, Jeff Bryan, and Brent Pommerening enjoy the practically perfect weather. Temperatures averaged 75 degrees.



227 people attend the 2019 Xtreme Concrete Conference in East Peoria. Omer Osman, IDOT Deputy Secretary, was the keynote speaker.



Greg Mulder, P.E. and executive director of Iowa Paving and Ready Mix Associations, describes how electronic ticketing is evolving in Iowa.



The Purchase Orders-Waivers Panel: Dave Mashek, Dennis Oedewaldt, John Rapp, Theron Tobolski, Joe Davis, Mike DeJong, J.R. Wydra, and Barry Voorn.



Mentalist Terry Tyson demonstrates mind reading with the help of volunteer Keith Nault at the 2019 IRMCA/WRMCA Convention.



GLCPC's Ray McVeigh shares concrete statistics during his industry update.



Patrick Matsche from NRMCA presents on converting buildings from wood or steel to concrete and the related issues and laws.



IRMCA and WRMCA members tour a National City Ready Mix plant in San Diego.



Illinois State Police Master Sgt. Armstrong gives a mock roadside inspection at the OES Workshop. The event was held at the Decatur Hotel & Conference Center.



Participants enjoy the skeet shoot competition. 28 people attended the event.



Derek Salisbury, Allyn Edwards, Matt Anderson, and Conner Beer. The event was held at the Oak Terrace Resort in Pana.



Rich Bulicek and Ray McVeigh volunteer at the trap shoot hole. Phillip Timmerman, Mike DeJong, and Neil Minnihan were among the 28 golfers at the event.



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