



INSIDE SCOOP:
Helping Members
Set the 'Pace'
(see p. 9)



Special Section:
**OPERATIONS,
ENVIRONMENT,
and SAFETY**



**GOLF OUTING
WRAP-UP**
(see p. 2)



WRMCA SCOOP

Online Edition • SEPTEMBER, 2006 • <http://www.wrmca.com> • 800.242.6298

PRESIDENT'S REPORT - Kurt Boehlein

OES Committee Helps Members Meet Compliance Challenges

Welcome to the third quarter edition of your Association's hard copy newsletter, **WRMCA Scoop**. We are trying a new direction with this issue; it is devoted almost entirely to the activities of our Operations, Environment and Safety Committee (OES) and the myriad of compliance issues we face. OES information begins on Page 3. Future issues promise specialized focus as well.

Our membership can be very proud of the dedicated work the volunteers of this committee have done, are doing, and plan to do.

Permit me to review just a few of the recent accomplishments (that are ceaselessly under the committee's review and revision) of the OES Committee:

- Establishing a Statewide Alliance with OSHA
- Keeping our membership abreast of the WI Admin. Code Transportation Rule 327
- Creating a periodic

environmental newsletter that can be bound and archived

- Clarifying the often cryptic requirements of Air Operations Permit Compliance Certification
- Staying on top of the Tier II General Permit to Discharge
- Supporting the establishment of universal job site hand signals
- Codifying a WRMCA job site ready-mix washout procedure
- Encouraging compliance with Ultra-Low and Low Sulfur labels for pumps dispensing diesel fuel
- Sharing the new guidelines for high-visibility apparel (PPE)
- Re-writing the Ready-Mixed Concrete Truck Driver Training Manual
- Running a 10-Hour OSHA course at our next OES winter workshop (see page 4).

A near impossibility for any one ready-mix producer, the challenge of complying with federal, state and local regulations becomes more easily attainable with the tools provided through the Wisconsin Ready Mixed Concrete Association and the

work of its OES Committee. On behalf of the Association, "thank you" to the employers of these hard-working OES Committee Members for allowing their employees to take time away from day-to-day duties to help advance our industry, protect our air and water quality, and keep our employees, customers, and the general public safe.

I hope you find the information reported in this issue of value to you and your firm. For any and all questions or comments about the business of your Wisconsin Ready Mixed Concrete Association, you are welcome to contact me: 262.679.1700 | kb@newberlinredimix.com.

Please have a safe and successful concrete construction season.

PS: Remember to check out our weekly ezine, *In the Mix*, every Monday. It includes breaking association news and the most current calendar of upcoming industry and WRMCA events.

ASSOCIATION NEWS

CALL FOR ENTRIES: 28th ANNUAL CONCRETE DESIGN AWARD COMPETITION – The Wisconsin Ready Mixed Concrete Association is proud to play host to its 28th Annual Concrete Design Award Competition, along with cosponsor, The American Concrete Institute – Wisconsin Chapter. Concrete construction par excellence will be honored in Stevens Point on Thursday, March 8, 2007, when SentryWorld is magically re-formed into Concrete World. Plan now to celebrate concrete excellence with project owners and construction professionals from Wisconsin and Michigan's Upper Peninsula.

An Entry Fee of \$50 is required with each project entry. This year's Entry Deadline is 5 p.m. on Friday, December 1.

Participating in the Concrete Design Award Competition provides many benefits for your company, including:

- Enhancing your company's profile in the eyes of your customers, the construction industry, and the general public
- Setting your company apart from its competition
- Motivating/thanking your employees
- Promoting your company's product(s) and the project
- Receiving local, state, and national publicity
- Building/strengthening customer relationships and your company's brand
- Expanding networking and business opportunities for your company
- Bolstering company pride and morale and improving construction team performance on future projects
- Building/expanding your photo library, web site awards page, project brag book, and Public Relations Archive
- Elevating the quality of concrete construction in Wisconsin and Michigan's UP and maintaining a standard of excellence.

Watch your mail and In Basket for your official *Concrete Design Award Call for Entries Form*, or download a *Call for Entries Form* from the association web site – <http://www.wrmca.com>.

Win or otherwise ... Plan now to join us on March 8th in Stevens Point as the eyes of the Concrete World focus kindly on our celebration of WI/UP concrete construction excellence.

REGION THREE FALL ICF TOUR SET FOR OCTOBER 5 – Grab a pair of comfortable shoes and join us October 5th at 4 p.m. at the Radisson Paper Valley Hotel in Appleton for the second annual Region Three Fall ICF Tour. Learn more about Insulating Concrete Form (ICF) technology and tour ICF homes in various construction phases. The Tour begins with a presentation from ICF builders and homeowners and departs for a tour of Appleton-area ICF homes in various phases of construction, including a finished and furnished ICF home. Transportation is provided to our Fall Tour homes, and there is no cost to participate in the Fall ICF Tour, but you must register in advance by contacting the WRMCA office: 1.800.242.6298 | cschwenn@wrmca.com. Include your company's name, and the names of Fall ICF Tour attendees.

OUTSTANDING IN THEIR FIELD | SMILES PLANTED (ON FACES) AT FARM TECHNOLOGY DAYS (FTD) – FTD is an important opportunity to promote agricultural concrete applications and to thank WI/UP farmers for their support of our industry. Our Tent-City exhibit used pictures of past agricultural Concrete Design Award-winning projects to promote concrete on the farm. Our out-lot exhibit provided fun for the whole family, as young FTD guests played Chutes & Ladders with a real front-discharge mixer truck. Decorative concrete, concrete driveways and patios, and ICF technology were also promoted. Special thanks to Rich Lohr for spearheading the FTD subcommittee and recruiting booth volunteers and to Mike Cotter and Oshkosh Truck for providing the front-discharge concrete mixer to display/play with at our out-lot exhibit.

GOLF OUTING RAISES \$8,793.77 FOR WRMCA SCHOLARSHIP PROGRAMS – Sunshine, moderate temperatures, and generosity of spirit were the orders of the day as 100+ golfers participated in the 2006 Ready-Mix Blitz, June 29th at Lake Arrowhead Country Club. Thanks to everyone who donated items for the raffles and giveaways and to the golfers for participating in the event and its games and raffles. Special thanks to our "We're Partners" members for sponsoring the beverage holes; to the volunteers who helped on the par 3 holes (Kurt Boehlein, Cherish Schwenn, and My Phoung Ha), and to our Scholarship Committee members for planning and implementing a highly-successful Scholarship event. Thanks also to the WRMCA Technical Committee and Bob Wells/County Materials for providing a thought-provoking, effective pervious concrete display for the event.

WHO READS the WRMCA SCOOP?

We're still not sure. Help us to better define our readership. If you read this issue, please fax or email your name to Courtney Pace: (608) 250-6306 | cpace@wrmca.com.

As incentive, names received by Sept. 15 will be entered in a random drawing for a \$50 Gasoline Debit Card. Thanks!



OES Committee Helps Members Cope With the Day-to-Day Challenges of Running a Ready-Mix Operation



On behalf of the WRMCA Operations, Environmental, and Safety Committee (OES), we welcome you to this **Scoop** Special Section and we thank you for the opportunity to introduce you to the OES!

The OES is composed of ready-mix industry professionals with experience in working with the State Department of Transportation (Wis-DOT), the Occupational Safety and Health Administration (OSHA), the Wisconsin Department of Natural Resources (WDNR) and related areas such as insurance, driver training, health and safety, and industrial hygiene. Challenges pertaining to the day-to-day running of ready-mix operations (excluding financials, marketing, and QC), fall under OES's jurisdiction.

OES is the newest WRMCA committee, formed in December, 2003, and is one of the association's most dynamic committees. In its short history, OES has conducted numerous compliance workshops, negotiated a compliance enforcement agreement with WDNR for the Concrete Products Operations (CPO) permit, initiated a WRMCA industry alliance with OSHA, and worked (on a very compressed time table) with Essie Kammer Group to address recent legislative changes to Trans 327.

Your WRMCA OES Committee is working for you (and having a great deal of fun in the process)! Ask an OES member what its like to serve on (what we think is) the best WRMCA committee. OES members include:

Pat Bauer, Indiana Phoenix | Kurt Boehlein, New Berlin Redi-Mix (NBRM) | Tom Horsman, M&M Concrete | Chad Kaster, Carew Concrete & Supply | Barb Killey, NBRM | Justin Kratochvil, Meyer Material Company | Jerry Kultgen, Schmitz Ready Mix, Inc. | Mitch Mariotti, Prairie Materials | Rick Nesbit, Wingra Redi-Mix, Inc. | Al Schultz, MCC, Inc. | and Tom Teteak, Van Der Vaart, Inc.

Attend the next OES meeting, September 8th at 10 a.m. at the WRMCA offices in Madison, and see first-hand the benefits of working in association on industry issues. Then join OES! You don't need to be an industry expert; you simply need the desire to learn, contribute, and help make a difference. You will be amazed at what you will learn (and can readily apply in your company), through active OES Committee participation!

Besides, where else can you have a one-in-four chance of becoming a WRMCA committee co-chair? Current Co-Chairs include (listed in reverse alphabetical order):

Rick Nesbit
Wingra Redi-Mix

Mitch Mariotti
Prairie Materials

Chad Kaster
Carew Concrete

Justin Kratochvil
Meyer Material Co.

Also in this OES Special Section ...

- [Driver Hours-of-Service Changes](#) (page 4)
- [OES Winter Workshop](#) (page 4)
- [OSHA Online | R/M Industry Topics](#) (page 4)
- [Maintenance Safety: De-Energize](#) (page 6)
- [What Does an Accident Really Cost?](#) (page 7)
- [OSHA Voluntary Protection Programs](#) (page 8)
- [Wisconsin/UP OSHA Offices](#) (page 8)



Despite Appeals Court Challenge, Hours-of-Service Regulation Change Goes into Effect in Wisconsin This Fall

Reported By Erin Longmire, WRMCA Director of Public Policy

On May 26, 2006, the Wisconsin Department of Transportation (Wis-DOT) held a hearing relating to their proposed rule changes to Trans 327, which regulates motor carrier safety in Wisconsin. This rule modification will eliminate certain provisions in Trans 327 – thereby making them applicable in Wisconsin by referencing federal regulations – and would also increase the number of off-duty hours, after driving twelve (12) hours and being on duty sixteen (16) hours, from eight (8) off-duty hours to ten (10) off-duty hours.

The Federal Motor Carrier Safety Administration (FMCSA) issued its first attempt at revising the hours-of-service regulation in April, 2003. In July, 2004, the appeals court for the District of Columbia invalidated FMCSA's 2003 attempt to rewrite the hours-of-service rule. In response to this, the FMCSA published a new rule in August, 2005, slightly altering the original rule revision, as introduced in 2003. The same organization that successfully challenged the rule in 2004 is again challenging the new rule as issued in 2005. The federal court of appeals will be taking testimony this fall, with a proposed ruling deadline of early 2007.

In light of these facts, the Wisconsin Ready Mixed Concrete Association's Operations, Environment and Safety Committee (OES) submitted comments on behalf of the membership, requesting Wis-DOT defer implementation of these new federal rule changes in Wisconsin until after the federal appeals court rules on the validity of FMCSA's rule change. Through the OES committee's involvement, and working with the WRMCA, Senator Kedzie, chairperson of the Wisconsin Senate Committee on Natural Resources and Transportation, requested a 30-day delay on Wis-DOT's proposed rule change implementation, to provide time to meet and discuss with Wis-DOT officials the issues the WRMCA had presented to the Department during the comment submittal period.

Because of these efforts, the Department of Transportation has agreed to use the first six months following the effective date of the rule this fall as an opportunity to educate drivers on the new requirements, and more important, to primarily issue warnings rather than citations as a means of gaining compliance on the new hours-of-service rule.

The letter detailing this agreement is included on page 5 of this newsletter. If you have questions relating to this rule change, please contact me at the WRMCA office: 608.250.6304. Thanks to the OES Committee for its hard work relating to this rule change.

OES 2007 WINTER WORKSHOP TO FEATURE TEN-HOUR OSHA TRAINING COURSE

Mark your calendar and plan now to participate in the OES 2007 Winter Workshop, February 6-7, 2007, at the Kalahari Resort and Conference Center in Wisconsin Dells.

The Workshop will feature the ten-hour OSHA Training Course, providing education for WRMCA-Member employees on general industry and construction safety and health, emphasizing hazard identification, avoidance, control, and prevention. The Course is ideal for supervisors with safety and health responsibilities, and promotes safety and health awareness for all industry employees.

Workshop participants successfully completing the program will receive an OSHA Ten-Hour Course completion card. Participants must attend both days of the training to qualify for the course completion card.

The cost of the two-day Workshop is only \$150 per person. Space is limited ... Watch your mail for OES Winter Workshop registration materials and register your employees ASAP.

OSHA WEB SITE ADDS CONCRETE INDUSTRY SAFETY & HEALTH TOPICS PAGE

The Occupational Safety and Health Administration (OSHA) recently activated a page on its web site to provide online assistance for employers and employees in the ready-mix and concrete products industries.

The page highlights OSHA standards, compliance directives, and standards interpretations related to manufacturing and construction in the concrete and concrete products industries. It also includes electronic assistance tools, expert advisors, Spanish-language materials, training information, success stories, and additional resources from other organizations. Employers and employees can access information to develop and implement safety and health programs and link to sites that identify industry hazards and provide possible solutions to those hazards.

Please visit:

<http://www.osha.gov/dcsp/products/topics/concreteproducts/index.html>



Wisconsin Department of Transportation

www.dot.wisconsin.gov

Jim Doyle
Governor

Frank J. Busalacchi
Secretary

Division of State Patrol
4802 Sheboygan Ave., Rm. 551
PO Box 7912
Madison, WI 53707-7912

Telephone: 608-266-3212
FAX: 608-267-4495

August 11, 2006

Senator Neal Kedzie
Chair, Senate Natural Resources and
Transportation Committee
Room 313 South, State Capitol
Madison, WI 53702

Dear Senator Kedzie:

As you requested at the August 3, 2006 meeting, this letter serves as the Department's hours of service enforcement policy relating to ch. Trans 327, Wis. Admin. Code, currently under review by the Senate Transportation Committee. Chapter Trans 327 contains several changes to the current rule. The most significant change involves the minimum number of hours a driver must be off duty. More specifically, the proposed rule will require a driver to be off duty for a minimum of 10 hours rather than 8 hours as currently mandated. Although this change is not anticipated to significantly impact the majority of intrastate operations, it will result in a significant change in the way some carriers conduct business.

As a result, the Department of Transportation is committed to minimizing any adverse impacts this change may have on the motor carrier community by providing the information and outreach necessary to educate the industry on the new requirements. In addition to developing outreach material and making our staff available for meetings and conferences, the Division of State Patrol will use the first six months following the effective date of rule as an opportunity to educate drivers of the new requirements. More specifically, enforcement staff will primarily be issuing warnings rather than citations as a means of gaining compliance and educating drivers on the changes to the hours of service.

Thank you for your time and consideration in this matter. I would also like to thank you for your continued commitment to highway safety.

Sincerely,

Captain Charles R. Teasdale
Wisconsin State Patrol



Maintenance Safety: Know How/When to De-Energize

Each year, workers are severely injured or killed performing maintenance on and servicing heavy equipment. Injuries are commonly caused by “caught-in” and “struck-by” types of accidents. These include: dump truck bodies falling onto workers in the pinch point; vehicles rolling over workers underneath the frame; elevated blades, booms and/or buckets falling onto workers; and getting caught in moving parts – gears and drives.

In the ready-mix industry, maintenance is performed on vehicles such as front-end loaders, dump trucks and ready-mix trucks. The vehicles are required to be “de-energized” prior to servicing.

Equipment and tasks need to be evaluated to determine if “de-energization” is needed and what procedure to use. The best resources are the equipment manufacturer and the vehicle’s Owners Manual.

Ready-mix truck drums pose unique sets of “de-energization” issues. For certain tasks, the drum needs to be secured from movement by strapping down the drum, or by installing a dual turn-

buckle-wedge assembly between the drum roller track and the drum roller at the rear of the unit. To prevent activation of the drum controls, the control valve arm needs to be removed or secured.

Some equipment, such as skid steers and dump trucks, require two individuals or one additional step to ensure a worker isn’t exposed to a hazard while applying a safety device. With the skid steer, the operator raises the bucket while another worker places the cylinder lock in place. With dump trucks, an additional brace/block/chain needs to be used before a worker reaches between the frame/tires and the elevated body to install a body prop or pins.

Expect de-energization to be covered during an OSHA inspection. Develop written procedures, and have your employees trained in the procedures needed to properly de-energize equipment. Have the appropriate devices and techniques available.

For questions or assistance, contact the OES Committee via the WRMCA (800.242.6298) or your local OSHA office (see OSHA listings on page 8).

Typical Steps for De-Energization:

1. Written Procedures: Owner’s Manual | Placards | 1910.147 Format
2. Positioning & Parking Machine: Flat, Level, Hard Surface | Blades and Buckets Lowered | Booms Lower/Extend and Brace | Wheels Chocked | Parking Brake Set
3. Ignition; Key w/Maintenance Worker | Battery Disconnect Off/Locked | Master Key Off/Locked | Disconnect Battery Cables
4. Signage/Notification to Other Workers: “Out Of Service” – at the controls | “Do Not Operate”- on Steering Wheel | Verbally inform Foreman and Others
5. Locks and Interlocks: Emergency Stop Buttons | Locks or Latches over Cab Controls | Locking Levers/Handles | Lock the Cab Door Shut
6. Block/Brace/Crib/Secure: Hydraulic Cylinder Locks | Pins | Chains | Straps | Cribbing/Blocking (not concrete block) | Braces
7. Additional Measures: Bleeding Hydraulic Lines | Dismantle Control Handles | Allow Engine to Cool | Securing Hood on large Equipment | Fuel Shut Off – Bleed Lines | Welding: Electrical and Fuel Hazards
8. Verification: Manipulate Hand and Foot Controls | Move Steering Wheel (articulated) | Check any Accumulator | Return Controls to Neutral or Off
9. Restoring to Service: Check Around Machine | Components Intact and Tools Removed | Guards Installed | Controls “Off” or “Neutral” | Remove Lockout/Tagout Devices | Turn on Battery/Fuel/Return Key | Notify Affected Workers
10. Multiple Workers-Group Lockout Procedure: Lock Box | Sign-In/Sign-Out Sheet | Hasps to Hold Multiple Locks | Multiple Tags
11. Training: Part of 1910.147 and 1926.20 | EE’s Familiar with Procedures | Know When/How to Apply Devices, Without Exposure to the Hazard.

DANGER: DO NOT OPERATE

OUT OF SERVICE



OSHA Voluntary Protection Programs (VPP)

What is VPP?

VPP was formally established by OSHA in 1982 to promote effective worksite safety and health. In the VPP, workplaces establish effective, comprehensive safety and health management systems by establishing cooperative relationships between management, labor, and OSHA. Approval into a VPP is OSHA's official recognition of outstanding employer and employee effort in achieving exemplary occupational safety and health.

Are VPPs Popular?

VPP is a growing program, but the number of employers who have chosen to pursue this recognition is small. Of approximately 7.2 million worksites in the US, fewer than 1,400 are in VPP. In Wisconsin, there were 28 VPP employers as of the last count (June 2006).

How does VPP Improve Worker Safety & Health?

Statistical evidence for VPP's success is most impressive. The average VPP worksite has a Days-Away Restricted or Transferred (DART) case rate an incredible 52% below the average for its industry.

What is most striking is these sites typically do not start out with such low rates. Reductions in injuries and illnesses begin when the worksite commits to the VPP-approach to safety/health management.

How Does VPP Benefit Employers?

Fewer injuries and illnesses mean greater profits, as workers' compensation premiums and other costs plummet. Because the effort requires a cooperative relationship between labor and management, participating companies develop strong working relationships with employees. Developing effective employee involvement is a key outcome (and benefit) of VPP participation.

What is the Voluntary Protection Program Participants Association?

Another benefit is a safety and health advocacy group, which came into existence as a result of the VPP: the Voluntary Protection Program Participants' Association (VPPPA). A nonprofit organization founded in 1985, VPPPA holds annual regional conventions, where participating worksites share best practices.

The recent Region 5 VPPPA Convention held in Wisconsin attracted 538 attendees from 20 states and Canada, representing 194 companies. The Convention included more than 50 sessions, covering a variety of technical and programmatic topics. One of the most valuable Convention benefits was the opportunity to network – with people from current VPP sites, and with those considering applying. A VPP Application Workshop provided firsthand instruction to 55 VPP hopefuls on how to accurately complete a VPP application. In addition, attendees gained a wealth of knowledge from exhibitors who displayed their products during the Convention.

What are First Steps for Interested WRMCA-Member Companies?

This web page tells more about VPP: www.osha.gov/dcsp/vpp/index.html.

Also, contact your local area OSHA office (see below) and speak to the Compliance Assistance Specialist (CAS).

CAS have no enforcement authority, but are responsible for providing information and guidance to employers about VPP.

OSHA Offices in Wisconsin and Michigan

Appleton Area Office
1648 Tri Park Way
Appleton, Wisconsin 54914
(920) 734-4521
(920) 734-2661 (FAX)

Eau Claire Area Office
1310 W. Clairemont Avenue
Eau Claire, Wisconsin 54701
(715) 832-9019
(715) 832-1147 (FAX)

Madison Area Office
4802 E. Broadway
Madison, Wisconsin 53716
(608) 441-5388
(608) 441-5400 (FAX)

Milwaukee Area Office
Henry S. Reuss Building, Suite 1180
310 West Wisconsin Avenue
Milwaukee, Wisconsin 53203
(414) 297-3315
(414) 297-4299 (FAX)

NOTE: Michigan operates its own occupational safety and health program under a plan approved by the U.S. Department of Labor. UP members, please contact:

Michigan Occupational Safety & Health Administration
P.O. Box 30643
Lansing, Michigan 48909-8143
(517) 322-1814
(517) 322-1775 (FAX)

INSIDE SCOOP: COMMUNICATION COORDINATOR COURTNEY PACE



Responsibilities: To make sure the WRMCA is running smoothly. I help in all departments when needed, but I mainly work with the Budget & Finance, Membership, Scholarship, and OES committees. I help plan WRMCA events (scholarship golf outing, OES workshop, etc.) Board Meetings, and handle the WRMCA budget, including committee and regional budgets.

Recent project: The annual Scholarship Golf Outing.

Education: Bachelor of Science in Psychology.

First job: My first job was as a waitress at the Bavaria Café in Middleton. I started a couple of months before my 16th birthday and worked there until I graduated high school. I still love to eat there.

Most people don't know: I am addicted to crime shows.

Hometown: Middleton, Wisconsin.

Essential business philosophy (EBP): Never procrastinate!

Best way to keep competitive advantage: Always strive for a goal.

Yardstick for success: Great customer relationships.

Fun goal yet to be achieved: Learn salsa dancing.

Best decision: Getting engaged.

Word that best describes me: Efficient.

What I like best about my job: The members in our industry and the variety of projects I get to work on.

What I like least about my job: NOTHING!

The most important lesson I've learned: There are always two sides to everything.

Life motto: Keep moving forward.

Greatest fear: Tigers!

Person most interested in meeting: Barbara Walters – I bet she has lots of interesting stories.

First choice for a new career: I would probably go back to my psychology roots.

If money were no object, I would: Live in another country, most likely Italy.

Award/honor most proud of: My degree.

Current favorite movie: *Pirates of the Caribbean*.

Favorite restaurant: Tres Amigo's.

Favorite vacation spot: Anywhere by the ocean

Favorite way to spend free time: Playing soccer, tennis, and going to the gym. I also like cooking, reading, and playing in the garden.

WRMCA SCOOP is a quarterly publication of your Wisconsin Ready Mixed Concrete Association.

2006 OFFICERS

- President Kurt Boehlein, New Berlin Redi-Mix
- Vice President Mark Guenterberg, Okauchee Redi-Mix
- Secretary/Treasurer Shawn Triller, Wingra Redi-Mix

WRMCA STAFF

- Executive Director Patrick Essie
- Communication Coordinator Courtney Pace
- Promotion Director Cherish Schwenn
- Director of Public Policy Erin Longmire

WRMCA CONTACT INFO

16 N. Carroll St. - Suite 925
Madison, WI 53703
phone: 608-250-6304
fax: 608-250-6306
email: cpace@wrmca.com
web: www.wrmca.com



**Wisconsin
Ready Mixed
Concrete
Association**

16 N. Carroll Street
Suite 925
Madison, WI 53703

TO:

ROUTE TO:



sustainable
Concrete How ↓ ideas Get built.™

Using concrete can help increase the number of points awarded to a building in the LEED system. Potential LEED points earned with the help of ready-mixed concrete range from 19 to 28.

Concrete is demonstratively ‘Green.’ Concrete helps project owners and designers/specifiers master most sustainability challenges, including acoustics, disaster resistance, durability, energy performance, heat island reduction, IAQ (indoor air quality), life-cycle balance, lighting efficiency, use of locally-produced materials, site disruption, use of recyclable materials, recycled content, (fly ash, slag, etc.) stormwater management, and thermal mass (heat transfer reduction/delay).

Sustainable design demands concrete.

Or visit www.wrmca.com and download this latest issue of the **Scoop**.