


Industry Training sessions (pgs 1-17) and **Special Events** (pgs 17-19)
presented by industry associations, exhibitors & media partners.
 for inquiries see contact information included for each organization

ACPA CONSTRUCTING SMOOTH CONCRETE PAVEMENTS: TIPS, TECHNIQUES & STATE OF THE ART EQUIPMENT
Presented by the American Concrete Pavement Association.

Course Code: ACPAMO

Date/Time: Monday, January 21 • 1:00 pm - 4:30 pm

Location: LVCC North Hall, Room N221



This 3.5-hour comprehensive training session will be presented by leading authorities on the topic of concrete pavement smoothness, equipment automation and instruments. Subject matter experts will discuss equipment, instruments and technologies being used to construct smooth concrete pavements. This training is a must for contractors of all sizes and experience levels. Project and construction managers, estimators, equipment managers and quality managers, as well as civil, geotechnical and pavement engineers will benefit from learning about the latest developments.

This course includes four unique modules:

- Avoiding the Rough Stuff—brief overview to gain better understanding of roughness, why smooth pavements are so important, and how a slipform paver works.
- Smoothness Begins with the Concrete Mixture—creating a good slipform mixture and evaluating essential attributes of the concrete mixture with new tests & technology.
- Construction Factors a Contractor Must Consider—details for building smooth pavements including set-up, operation, grade preparation, control-charting, etc.
- How Equipment & Instruments are Making Smooth Pavements Smoother—stringless paving, real-time smoothness equipment, lightweight profilers for measuring smoothness, evaluating profiles software, magnetic topography for dowel location, and other equipment used to achieve smoothness in concrete paving operations.

NOTE: This program will allow time for questions and answers as well as discussion of other emerging technologies impacting concrete pavement smoothness.

ACPAMO Fee: \$200

NEW! ACPA PROPER JOINT DESIGN, CONSTRUCTION AND SEALING

Presented by the American Concrete Pavement Association.

Course Code: ACPAWE

Date/Time: Wednesday, January 23 • 9:00 am - 12:30 pm

Location: LVCC North Hall, Room N221



This comprehensive training session covers critical information that any paving or flatwork contractor needs to know about properly choosing and placing joints for concrete pavements and slabs on grade. The need and purpose for each type of joint will be explained, as well as new guidelines to qualify whether a joint sealant reservoir is ready (clean) for sealant installation. This training is a must for small and large contractors, project and construction managers, estimators and quality managers, as well as civil, geotechnical and pavement engineers. The training is also well-suited to agencies and owners, architects/designers, building managers, facilities managers, and others interested in knowing more about how to joint pavements to minimize risk of cracking and improve pavement performance.

This course includes three unique modules:

- Introduction to Joint Types and Layout—Attendees will gain a better understanding of the basics of designing proper contraction, control, construction and isolation/expansion joints and the ACPA ten-step method to lay out joints.
- Joint Layout Example Problems—Attendees will have the opportunity to locate joints on example projects. Results will be discussed as a group to reinforce learning.
- Joint Construction and Sealing/Filling—This module will review different construction methods and steps, including the latest information on achieving the best quality. Joint sealing techniques will review requirements for reformed, hot-pour and silicone sealants. The wipe test, a new quality control test, will also be presented.

NOTE: The program will allow time for questions and answers as well as discussion of other emerging technologies impacting concrete pavement joints.

ACPAWE Fee: \$200

ACPA DESIGNING CONCRETE PAVEMENTS USING NEW ONLINE THICKNESS DESIGN SOFTWARE
Presented by the American Concrete Pavement Association.**Course Code: ACPATH****Date/Time: Thursday, January 24 • 9:00 am - 12:30 pm****Location: LVCC North Hall, Room N221**

This comprehensive training session is presented by industry pavement design experts. The concrete pavement industry has prepared a new, free online design software unifying the entire spectrum of industry pavement thickness design methods for the many different applications of concrete pavements and overlays. Jointed, reinforced, CRC, RCC, full-depth reclamation, as well as bonded and unbonded overlays, will be covered. Roadways, streets, industrial, heavy-load and parking area applications will also be addressed. This training is a must for anyone wanting to learn how to use the new online software to design pavements. Project and construction managers, estimators, and quality managers, as well as civil, geotechnical and pavement engineers will learn about this new software. The training is also well-suited to agencies and owners, architects/designers, building managers, facilities managers and others interested in knowing more about how to design pavements.

The 3.5-hour training course will feature three modules, including:

- Introduction to Design—basics of pavement thickness design and different factors needed as inputs to the design method.
- Designing Pavements Using the Online Software—step-by-step approach to using the software for different applications; instructors will use multiple example problems from various markets.
- Discussion and Open Q&A —interactive session allowing time for specific design questions and answers as well as discussion of specific issues and key topics.

ACPATH Fee: \$200

Questions about the pavement courses should be directed to Bill Davenport at ACPA.
Phone 847.966.2272 or e-mail bdavenport@acpa.org. For more information visit www.acpa.org.

ASA SHOTCRETE NOZZLEMAN EDUCATION COURSE
Presented by the American Shotcrete Association.**Course Code: ASATU****Date/Time: Tuesday, January 22 • 9:00 am - 4:00 pm****Location: LVCC South Hall, Room S106**

This course is designed for shotcrete nozzlemen, individuals involved with inspection of shotcrete, and anyone interested in learning about the principles and practices that must be known and understood for a nozzleman to satisfy his role in the quality application of the shotcrete process.

ASA Nozzleman Education Courses will present an overview on placement technique, finishing, curing, testing, equipment and safety as it relates to the nozzleman and the shotcrete process. This course also helps to prepare individuals for participation in the ACI Nozzleman Certification program. ACI required work experience, written exam, performance exam and other program criteria will be discussed.

The **CP-60(09) Shotcrete Nozzleman Craftsman** Workbook is included with the course registration fee.

NOTE: Attendance of this course alone will not result in certification as an ACI Shotcrete Nozzleman.

- This course will satisfy the education course requirement for a nozzlemen wishing to pursue certification as an ACI Shotcrete Nozzleman through ASA.
- Attendees wishing to pursue ACI Certification will need to arrange for a certification course with ASA separately from this course (Wet Mix Exams are available for additional charges, please contact ASA directly for details and requirements).
- Attendees will qualify for and receive a complimentary **1-year ASA Nozzleman Membership**.
- Lunch is not provided with this course. A one-hour break is scheduled for lunch.

NEW for WOC 2019: This course is also being offered in Spanish, same date/time – Course Code **ASASTU**.

ASATU Fee: \$395; \$425 after 12/3/18 and onsite

NUEVO! ASA CURSO DE EDUCACION PARA EL LANZADOR DE CONCRETO (SHOTCRETE)

Presentado por la American Shotcrete Asociación.

Codigo del Curos: ASASTU

Fech/hora: Martes, Enero 22 • 9:00 am - 4:00 pm

Lugar: LVCC South Hall, Room S105



Este curso está diseñado para el lanzador de concreto, personas involucradas en la inspección del concreto lanzado, y cualquier persona interesada en aprender acerca de los principios y prácticas que se deben de saber y comprender por parte de un lanzador para cumplir con su papel durante una aplicación de calidad del concreto lanzado.

Los cursos de educación para el lanzador de ASA muestran una visión general de las técnicas de colocación, acabado, curado, pruebas, equipo y seguridad relacionados con el lanzador y el proceso del concreto lanzado. Este curso también ayuda a preparar a los individuos para participar en el programa de certificación del lanzador de concreto por parte del ACI. ACI requiere experiencia laboral, examen escrito, examen de desempeño y otros criterios del programa que serán discutidos.

El libro **“CP-60(09) manual para el lanzador de concreto”** está incluido con la cuota de inscripción al curso.

POR FAVOR TOMAR NOTA: El Participar en este curso por sí solo no se obtiene la certificación de lanzador de concreto del ACI.

- Este curso cumple con los requerimientos de la sesión de educación para un lanzador que desea certificarse como lanzador certificado por el ACI a través de la ASA.
- Los participantes que desean obtener la certificación ACI deberán tramitar un curso de certificación con la ASA por separado para realizar los exámenes (los exámenes para vía húmeda están disponibles por un cargo adicional, por favor contacten a la ASA directamente para mayor información y requerimientos).
- Los asistentes calificarán y recibirán **una membresía gratuita de 1 año de la ASA.**
- No se proveerá comida durante el curso. Habrá un receso de una hora para comer.

ASASTU pago anticipado: \$395; \$425 after 12/3/18 and onsite



Preguntas acerca de este programa, así como el interés en certificarse, deben dirigirse a Alice McComas con ASA, 248-848-3780 or Alice.Mccomas@shotcrete.org. Para información adicional acerca de la ASA, www.shotcrete.org.

NEW! ASA CONTRACTOR EDUCATION COURSE

Presented by the American Shotcrete Association.

Course Codes: ASawe (course only) | ASAwEX (course w/exam)

Date/Time: Wednesday, January 23

Course 8:00 am - 3:30 pm • Exam 3:30 pm – 5:00 pm

Location: LVCC South Hall, Room S106



This session is intended for existing shotcrete contractors pursuing ASA Shotcrete Contractor Qualification. Concrete contractors interested in learning details and requirements for quality shotcrete placement of structural concrete will find this session highly beneficial. Although a concrete contractor may be thoroughly experienced in form-and-pour concrete construction, shotcrete has fundamentally different equipment, material selection, crew responsibilities, application techniques, testing, curing and protection for producing high-quality and durable shotcrete. This course provides “best practices” for shotcrete contractors looking to grow and increase productivity and quality in their shotcrete applications.

This session also provides a thorough knowledge of shotcrete placement for concrete construction including logistics (site and project), environmental requirements, safety, crew requirements, shotcreting equipment, concrete mixture design, QA/QC, surface preparation, formwork, reinforcements, embedments, placement, finishing, curing, and protection. Course presenters with decades of experience in shotcrete construction will provide insight into details required for successful field shotcrete placement in this highly interactive session.

REGISTRATION INCLUDES boxed lunch and below ACI/ASTM documents:

- **ACI 506.2-13:** *Specification for Shotcrete*
- **ACI 506R-16:** *Guide to Shotcrete*
- **7 ASTM:** *Shotcrete-related testing standards compiled in one reference document*

IMPORTANT NOTE: Qualifying individuals pursuing ASA Contractor Qualification for their company must attend the 7-hour course and take a 90-minute written exam afterwards.

ASAWF Fee: \$500; \$600 after 12/3/18 and onsite (Course only with reference material - no exam)

ASAWEX Fee: \$600; \$700 after 12/3/18 and onsite (Course, reference material and exam)



Questions about the Shotcrete programs and interest in certification should be directed to Alice McComas at 248-848-3780 or Alice.Mccomas@shotcrete.org. For additional information about ASA visit www.shotcrete.org.

NEW! HOW TO MAINTAIN FLOORS WITH COMPOSITE RESIN ABRASIVE TECHNOLOGY

Presented by Ameripolish, Inc.

Course Code: AMPMO

Date/Time: Monday, January 21 • 10:30 am - 12:00 pm

Location: LVCC North Hall, Room N220



What is the best way to maintain polished concrete? This is a question that many of us hear on a regular basis. So, what is the right method? Is there one method proven to be superior? In this session participants will explore field testing reviews and compare traditional DIP (Diamond Impregnated Pads) to a newer floor maintenance system referred to as “Composite Resin Abrasives” or CRA. Furthermore, discussions will address limitations of polished concrete maintenance as well as common problems and solutions that often occur on the job.

Course participants will learn:

- 1) Differences between Composite Resin Abrasive pad technology and traditional floor maintenance methods
- 2) How to spot fix a floor with an etch (pickle isle scenario)
- 3) How to rejuvenate a floor with an automatic-scrubber or swing machine
- 4) How to identify what type of pad to use on any floor

AMPMO Fee: \$55



Questions should be directed to Greg Cabot at 479-757-9515 or gcabot@ameripolish.com.

NEW! UNMANNED VEHICLES: REDUCE RISK AND INCREASE PROFIT & PRODUCTIVITY

Presented by the Association for Unmanned Vehicles International.

Course Code: AUVSTH

Date/Time: Thursday, January 24 • 9:00 am - 11:00 am

Location: LVCC North Hall, Room N228



This session is for current and prospective users of unmanned systems and technology in the concrete and masonry construction industries. Attendees will learn how drones are being used for 3D modeling, visual inspections, reporting and monitoring while increasing jobsite safety and efficiency. Discussions will also address best practices and safety guidelines for a UAS program including regulations and resources. Session speakers will include UAS providers, trainers and end users.

Is your Operation Ready for Unmanned Systems?

How do you know if the time is right for a UAS program? Is your team ready, and more importantly, is your company ready to embrace the construction industry's newest tool? UAS and the data they deliver can be transformative for business operations but getting started isn't always easy. During this session you'll gain insight into the “ins and outs” of starting a UAS program.

Speaker: Suzanne El-Moursi, General Manager - Construction and Facilities Management, PrecisionHawk

Building the Business Case and What to Consider

There's no better insight into the challenges and opportunities of drone operations in construction than from the perspective of a seasoned end user. This session includes information for companies looking to get started with drones including the pitfalls to avoid and how to maximize ROI.

Speaker: Richard Lopez, National UAS Operations Executive, Hensel Phelps

Making the Most of Your Investment: It's All About the Data

Drones are cool, but it's really all about the information and imagery they provide. In this presentation, you'll learn how drone-based photogrammetry and mapping technology is being used for construction applications and what it means for your business.

Speaker: Aaron Woods, Technical Trainer, Pix4D

What You Need to Know to Fly Safe

Safe and responsible drone operations are imperative for all organizations with UAS programs, and operator training is a key component of program management. But, navigating the current sea of training providers can be a complex process. This presentation discusses the AUVSI Trusted Operator Program, a new certification program available to remote pilots and UAS training organizations dedicated to promoting professionalism, safety and proficiency in the industry.

Speaker: Jonathan Daniels, CEO, Praxis Aerospace Concepts International, Inc.

AUVSTH Fee: \$80



Questions should be directed to Lindsay Voss at lvoss@auvsi.org. For information about AUVSI and their annual trade show for unmanned and autonomous systems, AUVSI XPONENTIAL, go to www.auvsi.org.

NEW! TAKING SAFETY FROM THE OFFICE TO THE FRONTLINE: WHAT TO SAY & DO TO DEMONSTRATE COMMITMENT

Presented by Caterpillar Inc.

Course Code: CATMO

Date/Time: Monday, January 21 • 8:30 am – 10:00 am

Location: LVCC North Hall, Room N119



Every person in a construction organization has a specific function to get the job done, and yet all are held “responsible for safety.” Executives, project managers and supervisors have a particularly wide scope of influence and accountability, so it is critical that they demonstrate commitment through both words and actions. It starts with leading by example, but true leadership goes beyond wearing proper PPE and ensuring others do the same. This new session focuses on tactical

activities to create and sustain a culture of positive safety performance through leadership, communication, training and recognition. Safety doesn’t just happen – it is built through trust, consistency and accountability. Attendees will learn how to integrate these principles into their daily routines.

Course objectives:

- Learn the cultural trademarks of world class safety organizations
- Understand how to demonstrate visible commitment to safety
- Gain perspective on how to positively hold employees accountable

CATMO Fee: \$60



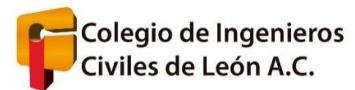
Questions should be directed to Justin Ganschow at 309-675-1280 or Ganschow_Justin_R@cat.com.

NEW! SHOTCRETE PROBLEMS, THEIR CAUSES & HOW TO REPAIR THEM (presented in Spanish)

Course Code: CICLWE

Date/Time: Wednesday, January 23 • 8:00 am – 12:00 pm

Location: LVCC South Hall, Room S105



College of Civil Engineers of de León brings an international instructor of shotcrete to teach how to identify the origin of the problems and their causes in the application of shotcrete, both dry mix and wet mix, and how to repair its' aim toward shotcrete nozzleman and people related to inspection, quality control, application and finishing of the shotcrete.

Attendees will learn how to identify common problems of shotcrete—summarized in 5 main causes:

- 1) Design problems
- 2) Planning problems
- 3) Problems with materials (type of cement, mix design, quantity of materials)
- 4) Problems during application and finishing
- 5) Problems during the service life of the concrete (and best options for repairing)

NOTE: The book **Shotcrete Problems and Their Causes** (written in Spanish) is included with the course registration fee.

NUEVO! CONCRETO LANZADO PROBLEMAS Y SUS CAUSAS Y METODO DE REPARACION

Presentado por la Colegio de Ingenieros Civiles de León A.C.

El colegio de ingenieros civiles de león trae a uno de los mejores instructores internacionales de concreto lanzado a para impartir el curso con la finalidad de aprender a identificar el origen de los problemas y sus causas en el concreto lanzado,


tanto vía seca como vía húmeda, y como repararlo, está dirigido a lanzadores de concreto y personas relacionadas con la inspección, control de calidad, aplicación, acabado del concreto lanzado.

En el curso se tratarán los orígenes de los problemas del concreto lanzado, como identificarlos y poder llegar a su causa raíz la cual se puede resumir en 5 causas principales:

- 1) Problemas de diseño
- 2) Problemas de planeación
- 3) Problemas con los materiales
- 4) Problemas durante la colocación y acabado
- 5) Problemas durante la vida de servicio

NOTA: El libro **Problemas y sus Causas en el Concreto Lanzado** (en español) está incluido con tu inscripción.

CICLWE Costo: \$215; \$275 after 12/3/18 and onsite.

 Preguntas sobre este curso deberán dirigirse al Ing. Raúl Bracamontes Jiménez, rbracamontes@hydro-arch.com.

VOLUMETRIC CONCRETE WORKSHOP

Presented by Concrete Industry Management (CIM) of California State University, Chico.
Sponsored by ProAll Reimer Mixers and Zimmerman Industries.

Course Code: CIMTH

Date/Time: Thursday, January 24 • 8:30 am – 4:30 pm

Location: LVCC North Hall, Room N219



Application of volumetric concrete has been increasing in recent years. There are many ways that concrete producers and contractors can utilize volumetric concrete mixers in their projects to increase quality and efficiency. However, like conventional concrete, producing quality volumetric concrete can be challenging. The goal of this workshop is to provide volumetric concrete producers and volumetric mixer operators with a fundamental understanding of factors affecting volumetric concrete production. By completing this workshop, attendees should be able to acquire knowledge to boost quality of their products, increase efficiency and improve their businesses.

Topics include:

- Ways to incorporate volumetric mixers in ready mix concrete operation & in construction projects
- Concrete constituents & their impact on concrete properties
- Fresh & hardened concrete properties and their importance to concrete performance
- Calibration process of volumetric mixers
- Calibrating for SCMs (such as fly ash), colors & fibers
- ASTM C94 vs ASTM C685
- Quality control issues for volumetric concrete

This workshop is conducted by Dr. Feraidon Ataie, director of Concrete Industry Management program at California State University-Chico.

CIMTH Fee: \$375

 Questions should be directed to Feraidon Ataie, fataie@csuchico.edu or 530-898-5489.

NEW! CONCRETE PLANTS OF THE FUTURE

Presented by Concrete Products Magazine.
Sponsored by:



Course Code: CPMMO

Date/Time: Monday, January 21 • 1:30 pm – 3:30 pm

Location: LVCC North Hall, Room N119

Safety, quality control and efficiency rule at two of the industry's newest urban operations: National Ready Mixed Co. Vernon (Los Angeles) and Superior Concrete/U.S. Concrete Inc. District of Columbia plants. Join concrete producers and other industry peers this new session to hear from industry experts sharing video tours and how they are responding to:

- Market conditions driving new ready mixed concrete capacity in major urban areas

- Truck routing and material handling system pointers boosting safety & efficiency
- Process or storm water management and recycling measures
- Dust control plans
- Advanced dispatch and fleet tracking technology
- Admixture and cementitious material factors unique to plants and urban market customers & orders

CPMMO Fee: \$70; \$99 after 12/3/18 and onsite



Questions should be directed to Don Marsh at 312-720-9869 or DMarsh@concreteproducts.com.

CSDA ESTIMATING COURSE

Presented by the Concrete Sawing and Drilling Association.

Course Code: CSDATW

Date/Time: Tuesday - Wednesday, January 22 - 23 • 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N220



Estimating is a two-day classroom course focused on the practice of estimating sawing and drilling jobs. The course outlines the role of an estimator, reviews different methods of estimating, compares estimates and actual costs, and discusses how estimators affect the company's bottom line. Attendees will learn what the costs of a job are, estimating techniques, how to build an estimating model, verify the estimate, and read blueprints in addition to customer service skills.

REQUIREMENTS: Attendees should have at least three years of experience in the concrete cutting industry and want to become estimators or be current estimators who want to broaden their knowledge in the field of estimating.

IMPORTANT: All students are advised to bring a calculator and architect/engineering scale for the blueprint section of the course. Registration fee includes two days of instruction and all classroom materials.

CSDATW Fee: \$785

CSDA CONCRETE POLISHING

Presented by the Concrete Sawing and Drilling Association.

Course Code: CSDPTW

Date/Time: Tuesday - Wednesday, January 22 - 23 • 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N222



This two-day course will provide an overview of the concrete polishing industry and fundamentals of concrete, diamond tool technology, diamond selection process, practical applications and maintaining polished surfaces. Introduction into various types of concrete grinders, hand polishers, vacuum systems, burnishers and auto scrubbers including their applications and components; diamond selection and abrasive pad selection; how diamonds work with each type of grinder; training regarding set-up, operation and troubleshooting. Wet and dry concrete polishing will be discussed. Final two hours of the course will address estimating and bidding.

IMPORTANT: All students are advised to wear/bring sturdy work boots and safety glasses for the outdoor demo portions of the class. **Space is limited to 48 participants, so register early!**

CSDPTW Fee: \$785

NEW! CSDA GPR METHODS & THEORY

Presented by the Concrete Sawing and Drilling Association.

Course Code: CSDATH

Date/Time: Thursday, January 24 • 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N220



The Concrete Sawing and Drilling Association is offering a Ground Penetrating Radar (GPR) course on concrete investigation basics, methods and theory. Attendees will be taught basic GPR theory, proper procedures on GPR scanning, industry standards on marking out concrete, and limitations of GPR. Case studies from contractors will be presented. This course is geared towards new GPR technicians, company owners looking to add GPR as a service, architects, engineers, general contractors and anyone looking to understand how GPR should properly be used in any job environment. This session is supported by five of the largest GPR manufacturers in the world: GSSI, Hilti, IDS, Proceq, and Sensors & Software.

NOTE: This is an introductory course – not a certification course. Space is limited to 48 participants, so register early!

CSDATH Fee: \$450



Questions about CSDA programs should be directed to Erin O'Brien, 727-577-5004 or erin@csda.org.
For more information about CSDA go to www.csda.org.

NEW! NEW RESEARCH & RESOURCES: CONTROLLING SILICA, VIBRATION & PRODUCTIVITY DURING CONCRETE DRILLING

Presented by CPWR - The Center for Construction Research and Training.

Course Code: CPWRTU

Date/Time: Tuesday, January 22 • 3:30 pm - 5:00 pm

Location: LVCC North Hall, Room N221



CPWR has free web-based resources available for training workers on the new silica standard. During this session the latest research findings will be presented on the effects of bit wear, types of drills and different dust capture methods on respirable silica dust, handle vibration, noise and drilling productivity. Contractors will be able to apply the information provided to their operations to improve productivity and protect the safety and health of their employees engaged in concrete drilling.

Topics of discussion will include:

- Steps to improve productivity while simultaneously reducing worker exposures to silica, noise and vibration hazards during drilling operations
- How to implement a training program on noise hazards to fit individual company size and type of operation
- Free resources for understanding and complying with key provisions in the new silica standard
 - complying with medical surveillance
 - developing a silica exposure control plan
 - implementing Table 1

CPWRTU Fee: \$85



Questions should be directed to Eileen Betit, 301-495-8506 or ebetit@cpwr.com.
For additional information about CPWR go to www.cpwr.com.

NEW! MASS CONCRETE PLACEMENTS: THERMAL MODELING & MIXTURE DEVELOPMENT

Presented by CTL Group.

Course Code: CTLWE

Date/Time: Wednesday, January 23 • 1:00 pm – 2:30 pm

Location: LVCC North Hall, Room N221



During the first part of this new session, attendees will receive a thorough understanding of mass concrete in bridges, buildings and other modern infrastructures by an expert in thermal control plans for mass concrete. The basics of mass concrete thermal technologies will be covered including the purpose of temperature and temperature difference limits, codes and standards, specification requirements and resources. Appropriate concrete mixture designs will be addressed as well as insulation and cooling pipes. Tips, tricks and other insights will be covered using examples from various construction projects.

The second part of the session will focus on the selection and proportioning of concrete constituents for mass concrete elements. Achieving specification requirements for fresh and hardened properties for mass concrete elements can be challenging and are strongly dependent on material selection and proportions. Since concrete materials vary from project-to-project, the presentation will focus on key parameters that are commonly necessary for minimizing the risk of exceeding the maximum temperature limit and subsequent deleterious mechanisms in mass concrete elements.

WHO SHOULD ATTEND: contractors, management, agencies/owners, engineers, consultants, owners, representatives and material & equipment suppliers.

CTLWE Fee: \$75



Questions should be directed to Pam Odeen at 847-972-3056 or podeen@ctlgroup.com.

NEW! SELF-CONSOLIDATING CONCRETE (SCC): PLACEMENT ISSUES & APPLICATIONS

Presented by The Euclid Chemical Company.

Course Code: ECCMO

Date/Time: Monday, January 21 • 2:00 pm – 4:00 pm

Location: LVCC North Hall, Room N228



EUCLID CHEMICAL

This session will cover raw materials, quality control and aspects of mix design, concrete rheology and admixtures. Expectations, appearance, finish and placement conditions will also be addressed. Different needs for Ready Mix and Precast will be reviewed through specific projects and applications, including the use of integral color for precast SCC.

Additional topics of discussion:

- Variables to consider that affect SCC placement.
- How altering mix designs will minimize effects of the variables.
- How concrete placement and finish can improve with SCC.
- SCC benefits illustrated through specific projects and applications.

ECCMO Fee: \$110; \$140 after 12/3/18 and onsite



Questions should be directed to John Weisbarth at jweisbarth@euclidchemical.com.

NEW! ESCSI INTERNAL CURING TO IMPROVE YOUR CONCRETE

Presented by Expanded Shale, Clay & Slate Institute.

Course Code: ESCSMO

Date/Time: Monday, January 21 • 1:30 pm – 5:00 pm

Location: LVCC North Hall, Room N202



The Expanded Shale, Clay and Slate Institute presents a comprehensive training session on the use of internally cured concrete in practice. The complete internal curing (IC) story includes the latest development on design, production, quality control and value-added aspects of IC. This training is based on the team approach and is geared for all people involved in the use of internally cured concrete (designer, contractor, batch plant operator, quality control personal, inspectors and owners).

This course includes five unique modules:

- Designing an internally cured concrete mixture
- Handling and pre-wetting ESCS lightweight aggregate
- Batching and quality control
- Placing, finishing and curing
- Benefits and examples of long term service life

ESCSMO Fee: \$99



Questions should be directed to Abigail Gabbard at 801-272-7070 or agabbard@escsi.org.

NEW! USING IN-TRANSIT CONCRETE MANAGEMENT TECHNOLOGY TO REDUCE PROJECT COST & TIME

Presented by GCP Applied Technologies.

Course Code: GCPWE

Date/Time: Wednesday, January 23 • 2:00 pm – 3:30 pm

Location: LVCC South Hall, Room S105



In-transit concrete management is a game changer for ready-mix producers and concrete contractors. As the only technology that monitors, measures and manages concrete quality in-transit for successful job site delivery and performance, this management system translates into some serious business improvements, which will be covered in this course.

Benefits of in-transit concrete management:

- Contractor App with live map shows truck location and properties of concrete, so you know when your truck will arrive at the jobsite
- Water and/or admixture is added to the concrete, in transit, resulting in the concrete being ready to pour upon arrival

- No need for retempering
- Less loads rejected
- Less time waiting at the job site means shorter ready-mix truck cycle times

GCPWE Fee: \$85; \$105 after 12/3/18 and onsite



Questions should be directed to Albina Velikin by emailing albina.velikin@gcpat.com.

NEW! History of Cement and Concrete: Pyramids to the 21st Century

Course Code: WOCTH

Date/Time: Thursday, January 24 • 2:00 pm – 3:30 pm

Location: LVCC North Hall, Room N228

The history of cement and concrete has many roots; this presentation will trace the roots of cement and concrete through the construction of pyramids. The presentation will show the steps from gypsum, lime, natural cement to today's modern cements and how they made many of the historical structures we still enjoy today.

Luke Snell, PE, FACI, immediate past Chair of the ACI History Committee, will highlight how local conditions influenced the development of concrete, explain the progression from simple mortars used by native Americans to modern concrete and describe how the Erie Canal and Hoover Dam projects challenged and changed concrete construction.

WOCTH Fee: \$60; \$99 after 12/3/18 and onsite



Questions should be addressed to lsnellpe@gmail.com or 480-710-8958.

NEW! ICF BASICS FOR MASONRY & FORMING CONTRACTORS

Presented by Insulating Concrete Forms Manufacturers Association.

Course Code: ICFWE

Date/Time: Wednesday, January 23 • 10:30 am - 12:00 pm

Location: LVCC North Hall, Room N119



This new interactive training course is designed for commercial contractors who are new to Insulated Concrete Forms (ICFs). A team of expert teachers will cover typical commercial ICF details, integration with other elements and expected support from ICF suppliers. The class will also include tips for general contractors, including letting bids, selecting ICF brands and maximizing chances of success on the first job i.e. whether to self-perform the install and/or how to select an ICF installation subcontractor.

SPECIAL NOTE: Attendees will have an opportunity to handle and work with ICF materials being demonstrated.

ICFWE Fee: \$90



Questions should be directed to Andy Lennox with ICFMA, 705-928-3779 or chair@icf-ma.org.

ICRI CONCRETE SLAB MOISTURE TESTING DEMONSTRATION & WORKSHOP

Presented by the International Concrete Repair Institute.

Course Code: ICRITH

Date/Time: Thursday, January 24 • 8:00 am – 11:00 am

Location: Back of South Hall, Aisle S14500



How you conduct moisture tests on and in a concrete sub-floor has great effect on the results you obtain. Learn how moisture tests need to be performed to comply with the current ASTM test methods, what factors affect the accuracy of moisture test results and what the measurements do and do not mean. Nervous about your upcoming ICRI moisture testing certification performance exam? This workshop provides you with a hands-on opportunity to practice and have your technique critiqued prior to your actual exam.

ICRI Certification Candidates: Individuals who want to register for the Tier 2 Program (THRPE) without pre-approved previous hands-on concrete slab moisture testing experience may take this optional Concrete Slab Moisture Testing Demonstration & Workshop. Four ASTM tests will be demonstrated with opportunity for hands-on testing and training by

ICRI instructors or judges. Participation in this session will waive the requirement of pre-approved previous hands-on slab moisture testing experience necessary for acceptance into the full certification performance exam (THRPE).

CANCELLATION OF COURSE: The ICRI Concrete Slab Moisture Testing Tier 2 Performance Exam (THRPE) must have a minimum of 8 registrants. If minimum attendance is not met, both the exam and the ICRI Demo & Workshop will be canceled. **Notification will be made by December 21 and full registration fees will be refunded.**

ICRI Demo/Wkshp Fee: \$200; \$250 after 12/3/18 and onsite

SCHEDULE OF EVENTS required for ICRI Concrete Slab Moisture Testing Certification:

- Wed, 8 am–12 pm: 4-hour Review Seminar **WE405, \$200; \$235** after 12/3/18
- Wed, 2 pm–3 pm: Written Exams
 - Tier 1 Written Exam **WECRT, \$285; \$315** after 12/3/18
 - Recertification Exam **WERCE, \$450; \$500** after 12/3/18 *Requires ICRI pre-approval*
- Thurs, 12 pm–5 pm: Tier 2 Performance Exam **THRPE, \$440; \$490** after 12/3/18 *Requires ICRI pre-approval*
 - Select preferred 1-hour time slot



For questions about the workshop and/or the ICRI Moisture Testing Certification, please contact Ken Lozen, ICRI Technical Director, **prior to registering** at 248.358.6996 or via email kenl@icri.org.

NEW! INCREASE SERVICE LIFE OF CONCRETE BY INCREASING EROSION & ABRASION RESISTANCE *Presented by Kryton International, Inc.*

Course Code: KRYMO

Date/Time: Monday, January 21 • 9:30 am – 11:30 am

Location: LVCC North Hall, Room N221



Because of the inherent weakness of cement paste, erosion and abrasion can cause wear over time reducing service life of concrete. Concrete-hardening is an effective, efficient method to counter these effects and help build long-lasting, repair-free concrete.

This course will review the various concrete hardeners by examining the advantages, disadvantages, strengths and weaknesses of each solution. By the end of the course, attendees will be able to determine which concrete hardening solutions are best based on the nature of the project.

Course Components:

- Impact of erosion and abrasion on concrete
- Long-term cost impacts of erosion and abrasion on concrete infrastructure
- Concrete hardening options & best solutions based on applicability:
 - Dry-shake hardeners
 - Liquid densifiers
 - Integral admixtures

Course Presenter:

Alireza Biparva currently holds the position of Research & Development Manager/ Concrete Specialist at Kryton International Inc. in Vancouver, Canada. Alireza Biparva oversees several research projects focusing primarily on concrete permeability studies and the development of innovative products and concrete waterproofing testing methods. Ali is an active member of the American Concrete Institute.

CONTINUING EDUCATION APPROVAL: This course has been approved for 1.0 Learning Unit. Certificates will be provided upon request by Kryton International, AIA/CES Provider No.40107274.

KRYMO Fee: \$100



Questions should be directed to Anna Kornerup at akornerup@kryton.com or 604-324-8280.

MCAA SILICA TRAIN-THE-TRAINER COURSE *Presented by the Mason Contractors Association of America.*

Course Code: STTTU

Date/Time: Tuesday, January 22 • 9:00 am – 3:00 pm

Location: LVCC North Hall, Room N 210



The MCAA's Silica Train-the-Trainer Course is a six-hour program that will train a key employee to train other employees

to be a competent applicator particularly with the written exposure control plan. Certificates will be provided to those who complete the program.

STTTU MCAA Member Fee: \$350; Non-Member Fee: \$700

MCAA MASONRY WALL BRACING

Presented by the Mason Contractors Association of America.

Course Code: WBPTH

Date/Time: Thursday, January 24 • 9:00 am – 12:00 pm

Location: LVCC North Hall, Room N215



The Masonry Wall Bracing Course has been developed to provide contractors with the know-how to confidently design and construct bracing for a variety of common masonry structures. This is an opportunity to save your company money by designing your own wall bracing rather than paying a structural engineer.

This course is intended to teach project managers, safety managers, foremen and any other responsible person to understand and implement the OSHA regulation on wall bracing, and the **Standard Practice for Bracing Masonry Walls Under Construction**. Completion of this course will allow your people to safely and efficiently design adequate masonry wall bracing.

WBPTH MCAA Members Fee: \$225 | Non-Member Fee: \$275

CANCELLATION POLICY: Registrants of MCAA Education sessions or convention events will receive a full refund up to 30 days before event date. NO REFUNDS will be issued after December 21, 2018 without a specific medical condition that can be backed up with documentation. An MCAA administrative fee plus standard WOC cancellation fee will be applied to any cancelled MCAA educational session and/or event. Standard WOC cancellation policy and fee will be applied to all other cancelled registrations.



Questions about MCAA education sessions or convention events should be directed to MCAA at 800-536-2225. For more information, go to www.masoncontractors.org.

LEVEL I PCI QUALITY CONTROL TECHNICIAN/INSPECTOR CERTIFICATION

Presented by Precast/Prestressed Concrete Institute.

Course Code: PCI1

Dates/Times: Mon, Jan 21, 8:00 am–5:00 pm & Tues, Jan 22, 8:00 am–10:00 am

Location: LVCC North Hall, N219



Level I includes a series of exciting quality control schools and a review of PCI certification programs, both plant and personnel. This curriculum was developed especially for quality control personnel, engineers, technician/managers, plant managers/superintendents, consulting engineers and technicians. However, the schools and certifications are open to everyone involved in planning, operations and quality control in the precast products industry.

Basic concrete topics and mix design concepts (such as water/cementitious ratio) are introduced as well as beginning design concepts such as concrete strength, the need for reinforcement and conventional reinforcing bars. Students will receive a copy of the valuable Quality Control Technician/Inspector **Level I & II Training Manual TM-101**, plus class notes and extensive reference material. Level 1 is a one-and-a-half-day course.

PCI1 Level I Fee: \$565

LEVEL II PCI QUALITY CONTROL TECHNICIAN/INSPECTOR CERTIFICATION

Presented by Precast/Prestressed Concrete Institute.

Course Code: PCI2

Date/Time: Tues, Jan 22, 10:00 am – 5:00 pm & Wed, Jan 23, 8:00 am – 5:00 pm

Location: LVCC North Hall, N219



The curriculum continues at Level II with intermediate concrete topics and mix design concepts. Prestressing is introduced; attendees run calculations and discuss correction factors. The Level I & II program is packed with activities: round-table discussions, practice sessions, student-instructor interaction and certification examinations. Students will receive a copy of the valuable Quality Control Technician/Inspector **Level I & II Training Manual TM-101**, plus class notes and extensive reference material. Level II is a one-and-a-half-day course.

PCI2 Level II Fee: \$565

LEVEL I & II PCI QUALITY CONTROL TECHNICIAN/INSPECTOR CERTIFICATION*Presented by Precast/Prestressed Concrete Institute.***Course Code: PCI3****Dates/Times: Monday - Wednesday, Jan 21-23 • 8:00 am – 5:00 pm****Location: LVCC North Hall, N219**

Quality Control Technician/Inspector Level I & II presented together for a three-day learning experience and certification opportunity. Attendees will receive a copy of the valuable Quality Control Technician/Inspector **Level I & II Training Manual TM-101**, plus class notes and extensive reference material. See **PCI1 & PCI2** descriptions above for more details.

PCI3 Level I & II COMBO Fee: \$995

Questions about the PCI programs should be directed to Megan Lanning at mlanning@pci.org or 312-583-6781. For more information go to www.pci.org.

NEW! DRONE MAPPING FOR SURVEYING & EARTHWORKS*Presented by Pix4D.***Course Code: PXDWE****Date/Time: Wednesday, January 23 • 1:00 pm – 4:00 pm****Location: LVCC North Hall, N223**

Most construction professionals acknowledge the increased adoption of new technologies in the future will improve the way projects are designed and built. Drone mapping is one of these key technologies. In this presentation, attendees will see how drone-based photogrammetry is being used for 2D and 3D construction site mapping, surveys and reconstruction; revolutionizing aspects of the AEC industry by providing never-before possible, daily measurable 2D maps and 3D models of the as-built, ever-ongoing process. How this technology works, what it delivers and how it is widely leveraged across the construction industry by big and small companies will be discussed. How this new technology can drive down costs and drive up productivity while also improving communication and providing measurable, actionable and archival imagery and 3D models will also be addressed.

Topics include:

- How drone-based photogrammetry works
- How to easily adopt drone mapping and implement enterprise drone programs
- Construction planning and scheduling
- Cost and time savings to increase productivity & profitability

PXDWE Fee: \$100; \$130 after 12/3/18 and onsite

Questions should be directed to Sabrina Cardot, sabrina.cardot@pix4d.com. For more information about Pix4D and innovative solutions for construction: www.pix4d.com.

PTI CERTIFICATION WORKSHOP: LEVEL 1 UNBONDED PT INSTALLATION*Presented by the Post-Tensioning Institute.***Course Code: PTITW****Date/Time: Tuesday - Wednesday, Jan 22 - 23 • 8:00 am – 5:00 pm****Location: LVCC North Hall, N228**

This 2-day workshop outlines the basic body of knowledge that should be possessed by all personnel involved in the installation and inspection of single strand unbonded post-tensioning systems.

Course Details:

- Post-tensioned concrete concepts and theory
- Post-tensioning components
- Special requirements for encapsulated systems
- Installation requirements
- Tendon stressing and equipment
- Barrier cable installation

Who should attend: This training is of value to installers—both new and experienced—inspectors, building officials, engineers and architects, or anyone who would like to know more about unbonded post-tensioning installation.

Benefits of Certification: Quality of materials and workmanship are critical to the long-term durability and performance of post-tensioning. Individuals who complete this training will have a sound working knowledge of post-tensioning installation and inspection that will benefit them and their employers in many ways, including:

- Durability of PT construction.
- Improved productivity.
- Enhanced safety.
- Risk reduction.
- Code and specification compliance.
- Improved profitability and competitiveness.
- Professional development.
- Better value for the owner.

Code and Specification Compliance: The International Building Code incorporates ACI 318, “Building Code Requirements for Structural Concrete,” which requires that post-tensioning installation be performed by individuals **certified** by an independent training and certification program; PTI-certified field personnel meet this requirement.

PTITW Fee: \$420; \$470 after 12/3/18 and onsite



Questions should be directed to Miroslav Vejvoda, 248-848-3184 or miroslav.vejvoda@post-tensioning.org.

SOLD OUT SAIA COMPETENT PERSON TRAINING – FRAME SCAFFOLD

*Presented by the Scaffold & Access Industry Association.
Equipment for practical provided by Direct Scaffold Solutions.*



**SCAFFOLD & ACCESS
INDUSTRY ASSOCIATION**

NOTE: this course is maxed out – contact Jackie Brown, 816-595-4843 for schedule of future sessions. System CPT and Suspended CPT have availability.



Course Code: SAIA TU

Date/Time: Tuesday, January 22 • 7:30 am – 4:30 pm

Location: LVCC North Hall, N204

This program is designed for scaffold erectors and covers all the safety aspects regarding frame scaffold foundations, scaffold components, regulations, guardrail requirements, and erection and dismantling procedures for frame scaffolds that exceed the standard height to base ratio. The course format includes a combination of presentation, question and answer, a hands-on practical component and final exam.

Participants who score 70% or higher on the Competent Person written exam and display competency building frame scaffolding will receive a certificate of completion and wallet card from the SAIA Training Program, certifying completion of Competent Person Training in the erection of frame scaffolds. Those not meeting a 70% on the final exam will receive a certificate completion and wallet card for the Hazard Awareness training.

- Course includes the training manual, **Competent Person Training: Frame Scaffold**, with self-test questions.
- The final exam is largely based on the questions within each self-test and it is important that students correctly answer all the self-test questions as they are very useful for preparing for the final exam.

RECERTIFICATION: A competent person designation is expired if older than 3 years old; you can re-certify at this course.

SAIA TU Fee: \$350 **SOLD OUT**

NEW! SAIA COMPETENT PERSON TRAINING – SYSTEM SCAFFOLD

*Presented by the Scaffold & Access Industry Association.
Equipment for practical provided by Direct Scaffold Solutions.*



**SCAFFOLD & ACCESS
INDUSTRY ASSOCIATION**

Course Code: SAIA WE

Date/Time: Wednesday, January 24 • 7:30 am – 4:30 pm

Location: LVCC North Hall, N204



This program is designed for scaffold erectors and covers all the safety aspects regarding system scaffold foundations, scaffold components, regulations, guardrail requirements, and erection and dismantling procedures for frame scaffolds that exceed the standard height to base ratio. The course format includes a combination of presentation, question and answer, a hands-on practical component and final exam.

Participants who score 70% or higher on the Competent Person written exam and display competency building frame scaffolding will receive a certificate of completion and wallet card from the SAIA Training Program, certifying completion of Competent Person Training in the erection of system scaffolds. Those not meeting a 70% on the final exam will receive a certificate completion and wallet card for the Hazard Awareness training.

- Course includes the training manual, **Competent Person Training: System Scaffold**, with self-test questions.
- The final exam is largely based on the questions within each self-test and it is important that students correctly answer all the self-test questions as they are very useful for preparing for the final exam.

HOW TO PREPARE: Register early to allow plenty of time to study. It is essential that participants [read the textbook and complete all self-tests](#). Bring your textbook on the day of the class.

WHAT TO WEAR: tennis shoes, long pants and shirts with a 4-inch sleeve. PPE will be provided; you can bring your own.

RECERTIFICATION: A competent person designation is expired if older than 3 years old; you can re-certify at this course.

SAIAWE Fee: \$350

SAIA COMPETENT PERSON TRAINING – SUSPENDED SCAFFOLD

Presented by the Scaffold & Access Industry Association.

Course Code: SAIATH, N204

Date/Time: Thursday, January 24 • 7:30 am – 4:30 pm

Location: LVCC North Hall



This program is designed for suspended scaffold users and covers all the safety aspects regarding suspended scaffold stages, ropes, regulations, guardrail requirements, fall protection, hoists and installation components. The course format includes a combination of presentation, question and answer, and final exam.

Participants who score 70% or higher on the Competent Person written exam will receive a certificate of completion and wallet card from SAIA Training Program certifying completion of Competent Person Training with Suspended Scaffold.

- Course includes the training manual, **Safety Training for Suspended Scaffolds**, with self-test questions.
- The final exam is largely based on the questions within each self-test and it is important that students correctly answer all the self-test questions as they are very useful for preparing for the final exam.

HOW TO PREPARE: Register early to allow plenty of time to study. It is essential that participants [read the textbook and complete all self-tests](#). Bring the textbook on the day of the class for review.

RECERTIFICATION: A competent person designation is expired if older than 3 years old; you can re-certify at this course.

SAIATH Fee: \$350



Questions about SAIA sessions should be directed to Jackie Brown at 816-595-4843 or jackie@saiaonline.org. For more information on SAIA go to www.saiaonline.org.

NEW! ADDING VALUE TO SLAB-ON-GROUND SYSTEMS: ADMIXTURES TO FLOORING

Presented by Sika Slab Solutions (Sika Corporation).

Course Code: SSSTU

Date/Time: Tuesday, January 22 • 1:00 pm – 4:30 pm

Location: LVCC North Hall, N119



Sika Slab Solutions (Sika Corporation) presents this new session designed for engineers, consultants, owners, concrete producers and concrete/flooring contractors interested in learning about an innovative single source approach to Slab-on-Ground construction for any application.

This presentation will highlight the advantages using macrofiber reinforcement and high-performance shrinkage reducing/compensating admixtures to extend construction joints and reduce/replace conventional reinforcement in slab-on-ground construction. Additionally, the importance of proper joint layout, load transfer dowel, curing and flooring system selection and compatibility is covered. Discussions will include system technology and the resulting improvements in jobsite productivity, safety and cost while producing a concrete system that is highly durable and from a single supplier ensuring compatibility.

Topics include:

- Fiber reinforcement of concrete slab-on-ground

- Shrinkage reducing/compensating admixtures
- Load transfer and joint design and systems
- Proper curing of concrete
- Floor treatment and coating systems

During this session, several recent projects will be presented, discussed and evaluated. Presentations will contain technical content and focus on idea exchange providing attendees a unique opportunity to share ideas and opportunities related to innovations in modern slab-on-ground construction.

SSSTU Fee: \$115; \$135 after 12/3/18 and onsite



Questions should be directed to Renee Minieri, minieri.renee@us.sika.com or 201-508-6796.

NEW! SCA SLAG CEMENT IN HIGH PERFORMANCE CONCRETE

Presented by the Slag Cement Association.



Course Code: SCAWE

Date/Time: Wednesday, January 23 • 10:30 am – 12:00 pm

Location: LVCC North Hall, N223

Join representatives from the Slag Cement Association and explore the positive impacts of slag cement in high performance concrete. Attendees will leave with a better understanding on how slag cement influences concrete attributes like higher compressive and flexural strengths, lower permeability, reducing thermal cracking in mass concrete, and the mitigation of sulfate resistance and alkali silica reaction. The presentation will also cover the basics of slag cement use, applications, sustainable characteristics, related specifications and end with case study overviews from the 2018 Slag Cement Project of the Year award winners.

Attendees will receive:

- Copy of the **Slag Cement in Concrete Manual** including over 25 slag cement data sheets, 10 case studies and the slag cement supplier directory (\$70 value)
- Subscription to the **Slag Cement Monthly Update**

SCAWE Fee: \$95; \$135 after 12/3/18 and onsite



Questions should be directed to Drew Burns at 248-848-3777 or drew.burns@slagcement.org.
For additional information on the SCA visit www.slagcement.org.

TCA PERVIOUS CONCRETE: PREPPING FOR SUCCESS WITH PERMEABLE CONCRETE PAVEMENTS

Presented by the Tennessee Concrete Association.

Sponsored by Bunyan Industries.



Course Code: TCAMO

Date/Time: Monday, January 21 • 1:00 pm – 4:00 pm

Location: LVCC North Hall, N220

Pervious concrete is a growing application for ready mixed concrete pavements, especially in urban areas. There have been many significant changes in mix design and placement technologies in the past five years, including a newly revised publication for the NRMCA Installer Certification course. This session is targeted toward contractors and will focus on keys to successfully installing durable pervious concrete pavements. The seminar will also include the latest information on chemical resistance of pervious concrete and keys for both maintaining and cleaning pervious concrete.

SPECIAL NOTE: For those interested in being certified by NRMCA as a Pervious Concrete Technician while attending WOC 2019, see 4-hour certification review seminar **MO402** scheduled for Monday, 8:00 am - 12:00 pm and corresponding written exam **TUPCW** scheduled Tuesday, 3:00 pm – 5:00 pm. See **MO402** and **TUPCW** descriptions for more details.

Separate registration & fees required for 4-hour review **MO402** (\$200; \$235 after 12/3/18) and written exam **TUPCW** (\$175; \$200 after 12/3/18).

TCAMO Fee: \$135; \$160 after 12/3/18 and onsite



Questions about this pervious course and optional technician certification can be answered by the Tennessee Concrete Association at 615.360.7393 or asparkman@tnconcrete.org.

SPECIAL EVENTS: Breakfasts, Luncheons & Tours

Breakfast with the Experts at World of Concrete

Sponsored by BASF Corporation.

Course Code: TUBE, WEBE, THBE [1-2]

Date/Time [1]: Tuesday - Thursday, January 22 – 24 • 6:45 am - 7:45 am

Date/Time [2]: Tuesday – Thursday, January 22 – 24 • 8:15 am - 9:15 am

Location: LVCC North Hall, Room N107



Early risers will find answers to their toughest concrete questions. Concrete industry experts will take your questions in an intimate and open setting – choose from two different start times, 6:45 am or 8:15 am. Hot breakfast is included.

Sponsored by BASF Corporation, representing the Master Builders Solutions brand, Breakfast with the Experts provides attendees peer-to-peer opportunities each show morning to pose technical, or not so technical, questions to leading concrete industry experts. A panel will answer questions on new concrete construction, concrete repair and expansion joint systems. Content provided in sessions will differ based upon attendee questions.

This is an industry networking event presented in a relaxed setting. Each session's discussion is designed to provide attendees with a unique opportunity to share concrete challenges and learn about solutions that affect production, construction, repair, and maintenance of concrete structures.

NOTE: Registration fee includes a hot breakfast; to receive special savings attendees can opt for a discounted package fee for all 3 mornings - see codes/times below for TWTBE (1-2).

Individual Breakfast: \$40 per morning session; \$55 after 12/3/18.

– TUBE1, WEBE1, THBE1: 6:45am - 7:45am

– TUBE2, WEBE2, THBE2: 8:15am - 9:15am

Discounted 3-Day Pass: \$105; \$120 after 12/3/18.

– TWTBE1: 6:45am - 7:45am

– TWTBE2: 8:15am - 9:15am



Questions about the breakfast sessions should be directed to contactus@worldofconcrete.com.

Concrete Polishing Luncheon & Forum

Presented by Concrete Surfaces magazine in cooperation with ASCC Concrete Polishing Council.

Sponsored by EZ Polish System and RetroPlate.

Course Code: TUCPL

Date/Time: Tuesday, January 22 • 11:30 am - 1:30 pm

Location: LVCC South Hall, S219

Concrete
SURFACES



RETRO
PLATE

Measuring the Appearance of Polished Concrete

The Concrete Polishing Council is considering a new approach to measuring the appearance of the surface of polished concrete that involves Distinctness of Image (DOI) and haze rather than 60-degree specular gloss. At this luncheon, panelists will discuss the use of surface measurements to define the aesthetics of a polished concrete surface, what testing criterion are available, and the opportunities for standardizing expectations.

TUCPL Luncheon: \$95; \$125 after 12/3/18; \$85 with purchase of Super Pass



Questions about the polishing luncheon/forum can be directed to Bryan Rippeon, brippeon@hanleywood.com.

Quality in Concrete Slabs Luncheon and Forum

Presented by Concrete Construction magazine in cooperation with the American Society of Concrete Contractors.

Sponsored by MAX USA Corp, Multiquip, Somero Enterprises and Stego Industries.

Course Code: WESOG

Date/Time: Wednesday, January 23 • 11:30 am - 1:30 pm

Location: LVCC South Hall, S219

CONCRETE
CONSTRUCTION



Appropriate F-Numbers for Elevated Slabs

Specified F-numbers for elevated slabs are often based on what's achievable with slab grades, which isn't realistic. What can we achieve on shored slabs, un-shored slabs on metal deck, post-tensioned slabs, or on cambered precast members? When can we use laser-guided screeds on elevated decks & over reinforcing steel? How do we get floor characteristics that contribute to polishing an elevated slab? What is the importance of F-numbers when the slab deflects? What if lightweight concrete is specified? Can it be polished? How long does an elevated slab take to dry enough to install floor coverings & how much does it curl? All of these questions and more will be addressed by industry experts & practitioners.

WESOG Luncheon Fee: \$95; \$125 after 12/3/18; \$85 with purchase of Super Pass



Questions about the slab luncheon/forum can be directed to Bryan Rippeon, brippeon@hanleywood.com.

Hoover Dam & Bypass Bridge Tour

Sponsored by MAPEI Group – General Resource Technology, Inc.



Code: HDS **Date/Time: Sunday, January 20 • 12:00 pm - 5:00 pm**

HDF SOLD OUT **Date/Time: Friday, January 25 • 12:00 pm - 5:00 pm**

Location: LVCC North Hall, Room N109

Bus pick up/drop off: Door 9 at Concourse 5, end of LVCC Grand Concourse



Join Rick Yelton, World of Concrete's Editor at Large, on a visit to two of the world's most famous concrete structures, the Hoover Dam and the Mike O'Callaghan – Pat Tillman Memorial Bridge. Experts will share the behind-the-scenes information on how these concrete structures, built more than 50 years apart, played an important part in the development of new standards in concrete construction in their own era.

Attendees will first meet for a brief orientation and special presentation about the construction of the largest concrete arch bridge in the United States in a meeting room in the Las Vegas Convention Center. The presentation will explain the engineering challenges, crane work, concrete mix designs and how contractors accomplished these special projects.

NOTE: Following the tour, busses will drop off attendees at the Las Vegas Monorail Access across from South Hall.

Hoover Dam Tour: \$120; \$140 after 12/3/18 and onsite



Questions about the tours should be directed to contactus@worldofconcrete.com.

Construction of the Hoover Dam & Hoover Dam Bypass Presentation

Course Code: HDFP

Date/Time: Friday, January 25 • 10:00 am – 11:30 am

Location: LVCC North Hall, N111

Challenges met to build two iconic structures.

History can provide insights on how to solve modern problems. In this exciting presentation, attendees will learn how contractors used the best-practices of the day in the construction of the Hoover Dam & the Hoover Dam Bypass Bridge. Although the construction projects were separated by 75 years, each project faced similar difficulties i.e. extreme temperatures, difficult soil condition, lack of access to the construction site, and meeting tight budgets & deadlines on a one-of-a-kind project.

Presented by Luke M. Snell, PE, FACI, immediate past Chair of ACI History Committee with Rick Yelton, Editor at Large, World of Concrete; this is a unique opportunity to see this historical project through the contractor's eyes. Hear how engineers and architects worked together to create functional structural projects recognized as architectural icons today.



NOTE: This presentation does not include the Hoover Dam Tour scheduled 12:00 pm – 5:00 pm on Friday. Separate registration and fee required for the tour – see **HDF** details.

HDFP Fee: \$85; \$105 after 12/3/18 and onsite

SPECIAL SAVINGS: Discounted fee of **\$75** with purchase of either HDS or HDF tour before 12/3/18.



Questions about this presentation or tours should be directed to contactus@worldofconcrete.com.

CIM Student Paper Presentations

Presented by Concrete Industry Management program.

Date/Times: Monday, January 21 • 2:30 pm – 5:30 pm

Location: LVCC North Hall, N109



Join students and supporters of the Concrete Industry Management (CIM) program by attending the **5th Annual Weatherton Award Paper Presentation**. CIM is a business intensive program providing solid management skills developed specifically for the concrete industry. CIM has provided more than 1,000 graduates in the last decade – this is your opportunity to meet and witness the talent of our next generation of concrete industry professionals!

California State University–Chico, Middle Tennessee State University, New Jersey Institute of Technology, and Texas State University students will present presentations based on industry-based internships, applied research participation, and conclusions from cap-stone class work.

Papers and presentations will be judged by a panel of industry professionals. The student selected with best paper/presentation will receive the **Weatherton Award**, established by World of Concrete to honor Bob Weatherton and his many contributions to the concrete industry. The award, along with an honorarium, will be presented at the CIM's National Steering Committee during World of Concrete.

NOTE: Registration is not required for this event. Attendees are encouraged to show their support by giving a donation to the CIM Scholarship Program during the registration process, or donate an item to the [CIM Auction](#), held on Wednesday during World of Concrete.



Questions about this session should be directed to contactus@worldofconcrete.com.

Those interested in making a donation should contact CIM Auction Committee Chairman Mike Philipps, mike.philipps@sandler.com or 832-472-2314. For more information on CIM, go to www.concretedegree.com.