

Industry Training sessions listed below are presented by industry associations, exhibitors and media partners – for inquiries, contact information is included in each description.

Education sessions are listed alphabetically (by presenting organization) based on below types:

1) courses; 2) special events; 3) tours; 4) breakfasts; & 5) luncheons.

1) INDUSTRY TRAINING COURSES – pages 1-18

ACI Concrete Construction Special Inspector Certification

Presented by the Las Vegas Chapter of the American Concrete Institute.

Course Code: ACISIC

REVIEW Date/Time: Monday – Wednesday, January 22 - 24 | 8:00 am - 3:30 pm

EXAM Date/Time: Thursday, January 25 | 8:00 am – 12:30 pm

Location: LVCC North Hall, Room N221



The Concrete Construction Special Inspector Certification has become a requirement in many areas to document that a person understands and can perform special inspections based on code and job specifications for a project. This program will review requirements of concrete construction including plans reading, formwork installation and removal, reinforcements, embedments, sampling and testing freshly mixed concrete, conveying, placing, consolidation, finishing, jointing, curing, and protection.

NOTE: Interested candidates must have work experience in areas of concrete construction inspection.

Registration fee includes 3-day review course, written examination, ACI publication CP-21 (\$429 value) and lunch on review days, Monday - Wednesday.

The workbook for the ACI Concrete Construction Special Inspector Certification program is the CP-21 Package which contains 14 ACI documents and the CRSI Manual of Standard Practice. This workbook is included in the registration fee and will be shipped to registrants beginning December 15th on a weekly basis. Individuals that register after December 30th will need to pick up their workbooks onsite at the World of Concrete Education Office (Rm N249), Sat – Sun, Jan 20 - 21.

Successful candidates for Concrete Construction Special Inspector should be able to:

1. Understand the role of the Special Inspector on a concrete construction project
2. Verify compliance of concrete construction with plans, specifications and codes
3. Understand inspection during preplacement, placement and post-placement operations

CERTIFICATION EXAMINATION: The three-hour written examination is open-book and consists of 80 multiple-choice and true-false questions and is followed by a one-hour plans reading examination consisting of 20 multiple-choice and true-false questions designed to test the examinee's ability to read and understand engineering drawings. **NOTE:** To obtain certification as an Associate Special Inspector, candidates must pass both exams with a score of 70% and hold a current ACI Concrete Field Testing Technician - Grade I certification.

Individuals can upgrade to full Inspector status upon submittal and approval of sufficient education/work experience. For more information on this program, go to www.concrete.org and select Certification Programs under the Certification tab.

CANCELLATION POLICY: If registrant cancels their registration after the CP-21 is shipped, there is a **\$400 non-refundable fee** to cover the cost of the publication. A minimum of 5 registrants must be registered by December 15th to run this program. If the minimum attendance is not met, your registration fee will be refunded.

ACISIC Certification Course Fee: \$1,295; \$1,495 after 12/4/17 and onsite

Questions about the review course or certification program can be answered by
Las Vegas Chapter ACI at acilasvegas@outlook.com or 702.656.8827.

For information about ACI visit www.concrete.org.

NEW! Stop Slab Alkalinity from Killing Your Adhesives & Coatings

Presented by AC•TECH | Allied Construction Technologies.

Course Code: THSSA

Date/Time: Thursday, January 25 | 9:30 am - 11:30 am

Location: LVCC South Hall, Room S106



Tired of the “Blame Game”? Not interested in cutting corners or being associated with shoddy work? Stressed-out by the increasing risks and liabilities your business is facing? Want to earn the extra business that industry knowledge and a great reputation attracts?

This fast-paced, interactive training will cut through the confusion surrounding the pH tolerances of adhesives and liquid-applied coatings and then zero-in on the specific Industry Standards and Best Practices that should be followed during the specification, contracting and installation of a project.

Discussions will address below questions:

- What is the pH of Healthy Concrete?
- Why is the pH of Healthy Concrete NOT so healthy for coatings and adhesives?
- How do we delude ourselves into thinking that the Carbonation Layer will save us from the Slab's Alkalinity?
- Are widely used pH testing methods accurate and reliable?
- Who is ultimately responsible when things start falling apart?
- How can full compliance with ASTM F710-11, ACI 302.2R-06 and ASTM F3010-13 save everyone's collective butts and result in a higher-performing, longer-lasting, more successful installation?
- What are the Industry Standards and Best Practices for slab preparation and slab treatments to ensure long-term adhesive and coating performance?
- How can you use this training to build your business, your reputation and your bottom line?

This training is a must for contractors, estimators, and quality assurance managers, as well as specifiers, agencies/owners, consultants, design-build teams, and adhesive/coating representatives. Attendees will receive a slab alkalinity workbook, related industry publications and a certificate of attendance.

IMPORTANT NOTE: To maximize training value, participants are asked to bring (1) product data sheets & warranties for TWO adhesive or coating products they regularly install, and (2) smartphone, tablet or laptop for session interactions.

THSSA Fee: \$185; \$205 after 12/4/17 and onsite

Questions about this session should be directed to Penny Czarra, pczarra@actechperforms.com.

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 22 | 1:00 pm - 4:30 pm

Location: LVCC North Hall, Room N230



This 3.5-hour comprehensive training session will be presented by leading authorities on the topic of concrete pavement smoothness, equipment automation and instruments. Together, our 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: The program also will allow time for questions and answers as well as discussion of other emerging technologies impacting concrete pavement smoothness.

NOTE: *Save when purchasing two or more ACPA Pavement sessions! See ACPAWE & ACPATH.*

ACPAMO Fee: \$160

ACPA Achieving High Quality Roller Compacted Concrete

Presented by the American Concrete Pavement Association.

Course Code: ACPAWE

Date/Time: Wednesday, January 24 | 9:00 am - 12:30 pm

Location: LVCC North Hall, Room N230



This comprehensive training session is presented by some of the foremost experts in Roller Compacted Concrete (RCC) paving. Often referred to as the "third pavement material," RCC has many features and benefits, but also requires a different approach to design, construction, and repair for low-volume streets, highway shoulders, industrial applications, and military facilities. Specific RCC projects, issues and key points will be addressed.

This training is a must for small and large contractors, including those with and without RCC paving experience. Project and construction managers, estimators, equipment managers and quality managers, as well as civil, geotechnical and pavement engineers will learn about this new pavement type. The training is also well-suited to agencies and owners, architects/designers, building managers, facilities managers, and others interested in knowing more about how RCC pavements can be used.

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

- Introduction to RCC—history of RCC, basic RCC paving process, features/benefits & market applications
- Quality RCC Construction—basics of design, available construction methods, preparing a mixture design, handling materials, subgrade preparation, equipment selection, placement, jointing and curing
- Troubleshooting RCC—common problems with RCC pavements, how to recognize defects and deficiencies, and how to prevent and repair problems

NOTE: The program also will allow time for questions and answers, as well as discussion of specific RCC project specifics, issues and other key points.

NOTE: *Save when purchasing two or more ACPA Pavement sessions! See ACPAMO & ACPATH.*

ACPAWE Fee: \$160

NEW! Designing Concrete Pavements Using New Online Thickness Design Software

Presented by the American Concrete Pavement Association.

Course Code: ACPATH

Date/Time: Thursday, January 22 | 9:00 am - 12:30 pm

Location: LVCC North Hall, Room N230



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 be covered.

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 free 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.

NOTE: Save when purchasing two or more ACPA pavement sessions! See ACPAMO & ACPATH.

ACPATH Fee: \$160

SPECIAL SAVINGS: Purchase any **TWO** ACPA pavement sessions for \$280 (\$40 savings);
Purchase **ALL THREE** – ACPAMO, ACPAWE & ACPATH – for \$400 (\$80 savings).

Questions about the pavement courses should be directed to Bill Davenport at ACPA.
Phone 847.966.2272 or email 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 23 | 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 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.

IMPORTANT:

- **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 2018: This course is also being offered in Spanish, same date/time – Course Code ASASTU.

ASATU Fee: \$295; \$345 after 12/4/17 and onsite

Questions about this program, along with interests in pursuing certification, should be directed to
Alice McComas with ASA. Ph: 248-848-3780 or Email Alice.Mccomas@shotcrete.org.
For additional information about ASA visit www.shotcrete.org.

NUEVO! ASA Curso de educación para el lanzador de concreto (shotcrete)

Presentado por la American Shotcrete Asociación (ASA).

Código del curso: ASASTU

Fecha /hora: martes, enero 23 | 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: \$295; \$345 después del 12/4/17 y en el lugar

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

NEW! Technology + Construction = Profit: Collecting & Tracking Jobsite Data Tied to Project Cost Codes

Presented by busybusy.

Course Code: MOJSD

Date/Time: Monday, Jan 23 | 10:30 am – 12:00 pm

Location: LVCC North Hall, Room N230

Course Code: THJSD

Date/Time: Thursday, Jan 25 | 3:30 pm – 5:00 pm Location:

LVCC South Hall, Room S106

Many businesses manually collect jobsite data only to record an employee's hours. In most cases, this data is a "best guess" information which is typically inaccurate for anything other than payroll.

Growing companies today are utilizing technology to collect jobsite data more efficiently and are consequently improving the scope and accuracy of the information collected from their jobsites. Having accurate data results in greater insights that business owners, estimators and payroll personnel can use to improve profitability and make more money.

In this session, attendees will learn how to utilize technology to collect jobsite data and use it. Topics of discussion will answer questions such as:

- What type of work is most profitable for me?
- What type of work should I stay away from?
- Am I making a profit on this project?
- What part of the project did I lose money on?
- Is my equipment being fully utilized?
- What is my daily operating cost for equipment?

NOTE: this popular topic is being offered twice during World of Concrete. When registering choose your preferred day/time: Monday, 10:30am – 12pm [MOJSD] or Thursday, 3:30 – 5pm [THJSD].

MOJSD / THJSD Fee: \$65

Questions about this program should be directed to James Jarman at 385-252-9033 or james.jarman@busybusy.com.



NEW! CICL Shotcrete for Repair and Rehabilitation (offered in Spanish)

Presented by the Colegio de Ingenieros Civiles de León A.C..

Course Code: CICLWE

Date/Time: Wednesday, January 24 | 9:00 am – 1:00 pm

Location: LVCC South Hall, Room S105



**Colegio de Ingenieros
Civiles de León A.C.**

NEW for WOC 2018! Offered in Spanish only. This education course is designed to increase the knowledge of those involved in repair using shotcrete placement. In addition to field crew members, it will be useful to general contractors, construction managers, specifiers and owners. The goal is to improve the quality of shotcrete placement for repair and rehabilitation. After completing this course, participants will obtain basic knowledge of technology of concrete and shotcrete including surface preparation, material & equipment selection, placement techniques and safety measures. Case studies will demonstrate how to apply design methods, placement techniques and evaluation of quality control in fresh and hardened states. No ACI certification or ACI study materials is associated or provided with this class.

Topics covered:

- Why repair? Why shotcrete?
- Material selection: Cement, water, additives, aggregates, fibers
- Surface preparation
- Shotcrete placement methods for repair (dry mix, wet mix)
- Quality assurance requirements for rehabilitation of structures
- Finishing and curing
- Repair considerations
- Safety

CICLWE Fee: \$215; \$275 after 12/4/17 and onsite

Questions about this course should be directed to Ing. Raul Bracamontes Jimenez raulb@adra.com.mx.

NUEVO! CICL Concreto Lanzado (shotcrete) para Reparación y Rehabilitación

Presented by the Colegio de Ingenieros Civiles de León A.C..

Course Code: CICLWE

Date/Time: Miércoles, Enero 24 | 9:00 am – 1:00 pm

Location: LVCC South Hall, Room S105



**Colegio de Ingenieros
Civiles de León A.C.**

OBJETIVO: Este curso de educación está diseñado para aumentar el conocimiento de involucrados en la reparación mediante la colocación de concreto lanzado. Además de los elementos de la cuadrilla, será útil para contratistas generales, encargados de la construcción, especificadores y propietarios. El objetivo es mejorar la calidad de la colocación del concreto lanzado para la reparación y rehabilitación. Después de completar este curso, los participantes obtendrán conocimientos básicos de tecnología de concreto y concreto lanzado, incluyendo preparación de superficies, selección de materiales y equipos, técnicas de colocación y medidas de seguridad. Los casos de estudios demostrarán cómo aplicar, métodos de diseño, técnicas de colocación y evaluación del control de calidad en estados fresco y endurecido. Ninguna certificación ACI o materiales de estudio del ACI están asociados con esta clase.

METODOLOGÍA: Enseñanza teórico basada en la exposición y análisis de los contenidos con apoyo de material audio visual y diapositivas con temas indicados en el contenido, empleados según avance del curso. Además del análisis de casos por parte del instructor planteando casos reales, a fin de mejorar y asegurar la comprensión y la forma de aplicar los métodos de diseño, las técnicas de colocación y la evaluación del control calidad en estado fresco y endurecido.

Curso teórico:

- ¿Por qué reparar? ¿Por qué concreto proyectado?
- Selección de materiales: Cemento, agua, aditivos, agregados, fibras
- Preparación de la superficie
- Métodos de colocación de hormigón proyectado para la reparación (vía seca, vía húmeda)
- Requisitos de calidad para la rehabilitación de estructuras
- Acabado y curado
- Consideraciones de reparación
- Seguridad

CICLWE costo: \$215; \$275 después 12/4/17 y en el sitio

Preguntas sobre este curso deberán dirigirse al Ing. Raúl Bracamontes Jiménez, raulb@adra.com.mx.

CIM Volumetric Concrete Workshop

Presented by Concrete Industry Management (CIM) of California State University, Chico.

Course Code: THVMC

Date/Time: Thursday, January 25 | 8:30 am – 4:30 pm

Location: LVCC North Hall, Room N219



Producing quality volumetric concrete could be quite challenging. The goal of this workshop is to provide volumetric concrete producers and volumetric mixer operators with 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 business.

Topics include:

- Panel discussion on volumetric concrete business
- Calibration process of volumetric mixers
- Concrete constituents and their impact on concrete properties
- ASTM C94 vs ASTM C685
- Fresh and hardened concrete properties and their importance
- Quality control issues for volumetric concrete

Learning objectives:

1. Understand ASTM C685 standard
2. Understand volumetric mixer calibration
3. Gain knowledge of factors affecting quality of concrete

The workshop is conducted by Dr. Feraidon Ataie, director of Concrete Industry Management program at California State University-Chico. **Space is limited to 30 participants, so register early!**

THVMC Fee: \$375

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

CSDA Estimating Course

Presented by the Concrete Sawing and Drilling Association.



Course Code: CSDAMT

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

Location: LVCC North Hall, Room N220

Course Content: 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, how to verify the estimate, how to read blueprints and 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.

CSDAMT Fee: \$785

CSDA ST115 Certification

Presented by the Concrete Sawing and Drilling Association.



Course Code: CSDATU

Date/Time: Tuesday, January 23 | 8:00 am – 1:00 pm

Location: LVCC North Hall, Room N222

Course Content: This one-day certification class will provide instruction on how to correctly measure concrete micro surface texture and is based upon CSDA's ST115 Standard which is being rapidly and widely accepted and required by architects and designers for surface preparation. The course will discuss the importance of surface preparation and talk about proper tool selection to mitigate damage. Students will be issued a certification upon successful completion of the class. **Space is limited to 25 participants, so register early!**

CSDATU Fee: \$300

CSDA GPR Certification

Presented by the Concrete Sawing and Drilling Association.



Course Code: CSDATW

Date/Time: Tuesday - Wednesday, January 23 - 24 | 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N219

Course Content: The Concrete Sawing and Drilling Association is offering the industry's first Ground Penetrating Radar (GPR) certification course in concrete investigation, produced in conjunction with 3 of the largest GPR manufacturers. Students will be taught and tested on GPR theory, proper mark out procedures, limitations of GPR and advanced locating techniques. All students are required to have taken and passed initial manufacturer training. No certification will be awarded to any participant that has not completed the basic training course offered by at least one GPR manufacturer. These courses are geared for experienced GPR professionals with at least 2 years of field experience in concrete cutting & coring applications. Students will be required to be tested with both hands-on application and class room testing. Equipment will be provided by GSSI, Sensors & Software, and Hilti.

Space is limited to 20 participants, so register early!

CSDATW Fee: \$785

CSDA Concrete Polishing

Presented by the Concrete Sawing and Drilling Association.



Course Code: CSDAPWTH

Date/Time: Wednesday - Thursday, January 24 - 25 | 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N222

Course Content: 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 2 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!**

CSDAPWTH Fee: \$785

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

NEW! Challenges of Mass Concrete Thermal Cracking & ASR Best Practices

Presented by CTLGroup.

Course Code: CTLWE

Date/Time: Wednesday, January 24 | 1:00 pm – 2:30 pm

Location: LVCC North Hall, Room N220



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.

An expert in forensic and mitigation of ASR will address alkali-silica reaction challenges and best practices during the second part of this session. ASR is a physico-chemical reaction which occurs between siliceous components of aggregates and alkalis from cement paste or external sources. This internal reaction leads to expansion and cracking, which can lead to premature deterioration of concrete structures, creating avenues for other durability problems to occur such as corrosion of reinforcing steel and damage from freezing and thawing. This presentation will provide an understanding of the expansion mechanism, example forms of deterioration, and how to prevent ASR in new construction. Codes and standards, specification requirements and resources will also be discussed.

CTLWE Fee: \$75

Questions about this session should be directed to Lora Polakow, 847-972-3150 or lpolakow@ctlgroup.com.

NEW! Print Reading for Concrete Construction

Presented by Daniel P. Dorfmueller.

Course Code: THBPR

Date/Time: Thursday, January 25 | 8:00 am – 4:00 pm

Location: LVCC North Hall, Room N206

Presented by the author of *Print Reading for Construction*, this session is for the tradesman, young business owner or new estimator who desires an understanding of primarily commercial concrete construction prints. Program activities will address opening the drawing plans, sections and details; learning how to interpret the symbols and graphics; and finding information on the drawings for architectural and structural drawings. The use and understanding of architectural and engineering scales will also be covered including an introduction to understanding specifications. Each topic will include a short activity to test your skills. The program is intended for individuals who do not know how to read drawings or have just started working with drawings.

SPECIFIC COURSE OBJECTIVES:

- Open a set of drawings and interpret the language of construction drawings, line symbols and graphics
- Use an architect's and engineer's scale related to getting information from the drawings
- Utilize basic construction math to find areas, volume and lineal footage; used for both estimating and construction building
- Locate and interpret information on the drawing, plans, sections and details

ATTENDEES WILL RECEIVE:

- Copy of *Print Reading for Construction* textbook 7th edition, published in January 2018 - \$98 value
- Answer key to the book's *Test Your Knowledge* activities
- Free access to *Print Reading for Concrete* on-line training videos

THBPR Fee: \$335

Questions about this session should be directed to Dan Dorfmueller, 513-313-3684 or dorf@dorfmueller.us.

ICF Summit

Tuesday – Thursday, January 23 – 25 | 10:30 am – 12:00 pm

NEW! ICF Basics for Commercial Installers

Presented by the ICF Manufacturers Association and the ICF Builder Group.



Course Code: TUICF

Date/Time: Tuesday, January 23 | 10:30 am – 12:00 pm

Location: LVCC North Hall, Room N120

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

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

TUICF Fee: \$90

NEW! Zero Energy Homes and ICF Technology

Presented by the ICF Manufacturers Association and the ICF Builder Group.



Course Code: WEICF

Date/Time: Wednesday, January 24 | 10:30 am – 12:00 pm

Location: LVCC North Hall, Room N120

Discover how to maximize the potential of ICFs for energy efficiency, including new scientific data that verifies how thermal mass, low air infiltration, and continuous insulation boost wall performance. This session also covers options for boosting R-Value and optimizing air tightness throughout the structural shell, including roofs, windows, and underslab. Design considerations, such as shading, site orientation, and HVAC design will also be discussed.

WEICF Fee: \$90

NEW! Stronger & Safer Homes with ICFs

Presented by the ICF Manufacturers Association and the ICF Builder Group.



Course Code: THICF

Date/Time: Thursday, January 25 | 10:30 am – 12:00 pm

Location: LVCC North Hall, Room N120

With the increasing number of natural disasters in the U.S., homeowners and commercial customers want safer structures. This course will explain how ICFs can create safer living spaces and boost your business profitability at the same time. It will also explore how ICF safe rooms can be a great add-on to any ICF or construction business, and how to best promote ICF's disaster-resistant qualities for increased sales.

THICF Fee: \$90

Questions about ICF Summit courses should be directed to
Andy Lennox with ICFMA, chair@icf-ma.org or 705-928-3779.
For more information about ICFMA or ICFBG go to www.icf-ma.org and www.icfbuildergroup.com

NEW! Expanding Your Business with Insulating Concrete Forms

Presented by the ICF Manufacturers Association and The Mason Contractors Association of America.

Course Code: TUICFM

Date/Time: Tuesday, January 23 | 1:00 pm – 5:00 pm

Location: LVCC North Hall, Room N120



This training course was developed by the ICF Manufacturers Association (ICFMA) specifically for the Mason Contractors Association of America (MCAA) and its mason contractor members. It is designed to provide all contractors in the concrete/masonry industry with an attainable strategic opportunity to expand their business model with insulating concrete forms (ICF) by providing a basic understanding of ICFs, including a detailed step-by-step overview of the ICF construction process.

Upon completion of this course, attendees will have the knowledge needed to complete an ICF installation and have access to many available resources that will help with successfully bidding and managing an ICF project from excavation to preparation for finishes. Contractors will receive an unbiased overview of the various insulating concrete form product lines offered.

NOTE: This course has been approved for 4 credits (Discipline: Masonry Products) towards the MCAA national Masonry Certification program.

TUICFM Fee: \$275

Questions about the ICFMA/MCAA session should be directed to chair@icf-ma.org or 705-928-3779. For more information about ICFMA and MCAA go to www.icf-ma.org and www.masoncontractors.org

ICPI Certified Concrete Paver Installer (CCPI) Course

Presented by the Interlocking Concrete Pavement Institute.



Course Code: ICPITW

Date/Time: Tuesday - Wednesday, January 23 – 24 | 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N205

This two-day course equips contractors with classroom training to properly install interlocking concrete paving systems according to industry established guidelines. Job planning, soil characteristics, compaction, base materials, bedding and joint sands, concrete paver installation and maintenance are covered plus safety, estimating, job costing and contract basics.

Who Should Attend: Contractors involved in residential and commercial installation of interlocking concrete pavements with a year or more of experience, those interested in learning about best practices for the construction of concrete paver installation systems, and those interested in completing the Concrete Paver Installer Certification.

Course Content: job planning and layout, estimating, soil and site characteristics, sub-base and base materials, edge restraints, bedding and jointing materials, paver selection, installation and maintenance.

Please note: Registration includes a student manual and exam. Lunch is on your own. Those who pass the exam receive a Record of Completion. To be a certified installer, documentation regarding installation experience is required. Please look for the information on the ICPI website under the "Education & Certification" tab.

ICPITW Fee: \$350

ICPI Members should contact ICPI for member rebates, in writing, after the show. Questions about this program should be directed to ICPI. Ph: 703-657-6900 or email aplana-hutt@icpi.org. For more information on the Concrete Paver Installer Certification visit <http://www.icpi.org/certification>.

ICRI Concrete Slab Moisture Testing Demonstration & Workshop

Presented by the International Concrete Repair Institute.

Course Code: ICRITH

Date/Time: Thursday, January 25 | 8:00 am – 11:00 am

Location: Back of LVCC South Hall, Aisle S14300



**INTERNATIONAL
CONCRETE REPAIR
INSTITUTE**

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 numbers you measure 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.

IMPORTANT for 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 ICRITH Demonstration & Workshop will be canceled. Notification will be made by December 20 and full registration fees will be refunded.

ICRITH Demo/Wkshp Fee: \$195; \$225 after 12/4/17 and onsite

*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.*

MCAA Masonry Foreman Development Program

Presented by the Mason Contractors Association of America.

Course Code: FDSM

Date/Time: Sunday - Monday, January 21 - 22 | 8:00 am – 4:00 pm

Location: LVCC North Hall, Room N212



This course is a must for any new or potentially new foreman for your job-site. The course receives fantastic reviews every year and the information and education discussed is priceless for any new or upcoming foremen. Topics range from project management to interpersonal skills and just about everything in between.

FDSM MCAA Member Fee: First Member **\$650**; Additional members (same company reg) **\$600**

FDSM Non-member Fee: First Registrant **\$800**; Additional registrants (same company reg) **\$750**

MCAA Silica Train-the-Trainer Course

Presented by the Mason Contractors Association of America.

Course Code: STTTU

Date/Time: Tuesday, January 23 | 9:00 am – 3:00 pm

Location: LVCC North Hall, Room N210



OSHA rolled out the new silica rule in 2016. One of the components of the rule is to have a competent person on each job-site. This course will train someone on your staff to train other competent people on your staff. The class will focus on the required written program of the new rule and show attendees the essentials to pass along to the foreman who will be competent people on your job sites. This course is brand new. A competent person on the topic of silica will be required on all jobsite by June 23, 2017. This would be a great class for attendees doing the foreman development course or for any safety personnel.

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 25 | 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. Completion of this course will allow your people to safely and efficiently design adequate masonry wall bracing. Why pay an engineer for a design that you can do yourself?

WBPTH MCAA Members Fee: First Member **\$225**; Additional Members (same company reg) **\$175**

WBPTH Non-members Fee: First Registrant **\$275**; Additional Registrants (same company reg) **\$225**

CANCELLATION POLICY: Registrants will receive full refund up to 30 days before MCAA event date. **NO REFUNDS** issued after December 22, 2017 without specific medical condition backed up with documentation. A 5% administrative fee will be applied to cancelled MCAA educational sessions &/or events in addition to standard WOC cancellation fee.

Questions about the MCAA programs should be directed to MCAA at 800-536-2225.

For more information, go to www.masoncontractors.org.

NEW! NAFA Fleet Asset Management Certificate

Presented by the NAFA Fleet Management Association.



Course Code: NAFAMO

Date/Time: Monday, January 22 | 1:00 pm – 5:00 pm

Location: LVCC North Hall, Room N219

NAFA's Certified Automotive Fleet Manager (CAFM) program is the industry standard for achieving professional recognition for knowledge and expertise. It is not just about cars—it covers fleet & maintenance management processes that apply to anything with an engine. For the first time, NAFA is offering this program during World of Concrete.

Course Details:

- Fleet professionals planning to attend the 2018 World of Concrete Show are eligible to sign up.
- Registrants need to sign up no later than **December 15, 2017**.
- Prior to the session, registrants will receive the Asset Management module study materials consisting of a study guide and supporting reference documents.
- 2.5-hour review class covers highlights of Asset Management with opportunity for attendees to ask questions. Course presented by Bryan Flansburg, President of NAFA, and Janis Christensen, CAFM, Mercury Associates.
- Written exam administered immediately following class discussions. Participants who pass the exam will receive a certificate of completion.

Course Content: Fleet Managers are Asset Managers tasked with asset management responsibilities including vehicle selection, procurement, disposal, remarketing, commissioning and decommissioning. Because fleet assets and costs often represent a significant portion of an organization's net value and operating expenses, Fleet Managers that are skilled in asset management can significantly improve an organization's profitability and/or cost effectiveness.

Topics to be covered:

- Latest developments in the strategic sourcing process
- How to develop effective vehicle selector lists
- Specification types and key elements in developing vehicle specifications
- Right-sizing for each vehicle and overall fleet
- Factors that affect resale value
- Remarketing method that is right for your fleet

IMPORTANT: Attendees should complete their Study Guide prior to the class to get the most out of the session.

NAFAMO Fee: \$99

Questions about this program should be directed to Danielle Barrouk, 609-986-1061 or email dbarrouk@nafa.org.

For more information about NAFA go to www.nafa.org. To review details of the CAFM self-study online program, see www.fleetcertification.org/individual-certification/cafm-program.

NEW! NCMA Segmental Retaining Wall Installer Course – Level 1

Presented by the National Concrete Masonry Association.

Course Code: NCMATH

Date/Time: Thursday, January 25 | 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N220

Course Description:

This one-day Segmental Retaining Wall (SRW) Installer Course teaches installers and hardscape contractors the fundamentals of successful SRW installations. In addition to the education course, this offering includes the SRW Basic Installer written examination. Completion of the education course, written exam and documentation of work experience will earn participants the prestigious **credential of Certified SRW Installer (CSRWI)**. This credential demonstrates the knowledge and experience for successful SRW installations. Consumers and industry partners look for this certification when choosing a SRW contractor. Get certified today!

Specific topics include:

- material and system component properties
- soils and compaction
- effects of water
- construction sequencing
- site best practices

Attendees will receive: all course materials including NCMA TEK Notes on SRWs and SRW Installation Guide, valued at \$75 plus.

NOTE: Space is limited to 30 participants, so register early!

NCMATH Fee: \$350; \$425 after 12/4/17 and onsite

Questions about this workshop should be directed to Nick Lang, nlang@ncma.org or 703-713-1900.

**NEW! Nondestructive Testing Equipment: 4 Inexpensive Tools That Can Solve Construction Problems**

*Presented by the Missouri Chapter of the American Concrete Institute.
Equipment provided by Flir, Kestrel, Proceq and Zircon.*

Course Code: THNDT

Date/Time: Thursday, January 25 | 8:00 am – 12:00 pm

Location: LVCC North Hall, Room N204

Four non-destructive testing equipment (Infrared Thermometers, Hand Held Weather Stations, Metal Locations and Rebound Hammers) will be described and demonstrated. Scenarios where each NDT equipment can be used on construction sites will be discussed. This course offers a hands-on opportunity for attendees to explore and inspect each piece of equipment demonstrated.

Attendees will learn construction site situations when contractors can benefit from each piece of testing equipment including how to use NDT equipment to solve or avoid construction problems dealing with:

- plastic shrinkage cracks
- compressive strength of concrete
- location of reinforcements
- challenges with hot/cold weather

This session is conducted by Luke M. Snell, PE, FCI who is a Concrete Consultant and Executive Director of the Missouri Chapter of the American Concrete Institute. Luke has done extensive consulting work on construction and concrete problems using NDT throughout the U.S., Saudi Arabia and Mongolia.

ATTENDEES WILL RECEIVE: CD with equipment specifications, power point presentation and resources including computer programs and background publications.

Space is limited, so register early!

THNDT Fee: \$150

Questions about this session should be directed to Luke Snell, 480-710-8958 or l.snell@wt-us.com.



NEW! NPCA Rapid Highway Repairs with Precast Concrete Jointed Pavement Systems

Presented by the National Precast Concrete Association.



Course Code: NPCATH

Date/Time: Thursday, January 25 | 1:00 pm – 4:00 pm

Location: LVCC North Hall, Room N204

Expedient rehabilitation that results in a shorter pavement lifespan is no longer considered acceptable by most highway agencies. In recent years, many agencies throughout the US have started using precast pavement slabs for pavement rehabilitation and reconstruction; realizing these slabs can be installed much faster and can produce longer lasting pavements. Evolving rapid construction techniques can significantly minimize the impact on the driving public, as lane closures and traffic congestion are kept to a minimum. Road user and worker safety is also improved by reducing road users' and workers' exposure to construction traffic.

Organizing and managing a precast paving project to achieve a high-quality installation requires a thorough understanding of the processes required to install the selected system. That understanding must reside first with the contractor's project managers, who are then responsible for transferring their knowledge of the system – including any unique fabrication and field installation details – to the owner/agency staff and to the contractor fabrication and installation crews.

This course will use various case studies from throughout North America to demonstrate the various uses of jointed precast concrete pavement slabs. Guidelines for design, fabrication, installation and selection criteria of pavement slab systems will be discussed.

NPCATH Fee: \$150

Questions about this session should be directed to Claude Goguen, 317-223-9918 or cgoguen@precast.org.

For more information about NPCA go to www.precast.org.

NEW! Drone and Crane-Mounted Camera Systems for Surveying

Presented by Pix4D.

Course Code: WEDCI

Date/Time: Wednesday, January 24 | 1:00 pm – 4:00 pm

Location: LVCC North Hall, Room N120



This new educational offering is divided into two modules:

- The first two hours will be dedicated to drones and demonstrate how drone mapping surveys and 2D/3D deliverables are used in the AEC industry for:
 - Pre-construction site topography
 - Earthwork tracking with stockpiles; cut & fill volume measurements
 - As-built monitoring and project documentation
 - Inspection
- The last hour will introduce attendees to a crane-mounted camera solution, an alternative to costly traditional surveying and drone flight restrictions. A demo of the solution will outline how the solution is used for daily site progress monitoring and as-built documentation.

Data capture, processing and analysis will be explained in both presentations, showing how the workflow has become fully automated due to cloud applications. We will also present the outputs – 2D maps, elevation maps, contour maps, 3D point clouds, and 3D mesh models – and how they can be integrated with BIM for planning and as-builts verification.

Case studies from some of the world's leading companies will be presented. Discussions will address why aerial photogrammetry, drone and crane based imagery was used, the challenges faced, and the effective solutions that were implemented.

WEDCI Course Fee: \$90; \$110 after 12/4/17 and onsite

Questions about this session should be directed to Sabrina Cardot, sabrina.cardot@pix4d.com.

For more information about Pix4D and innovative solutions for construction: www.pix4d.com.

NEW! Codes, Resiliency & Wood: Impacting Your Business

Presented by Portland Cement Association.



Course Code: PCAMO

Date/Time: Monday, January 22 | 10:30 am – 12:00 pm

Location: LVCC North Hall, Room N222

Larry Novak, Jack Gibbons and Marc Nard with the Portland Cement Association will present an informative discussion on how codes, resiliency and the wood threat are impacting your current and future business. Codes and standards govern the 'rules' that the construction industry must follow. Codes can be influenced to advance your business. It is our vision that model building codes, as well as state and major municipal building codes, fairly reflect the intrinsic benefits of construction with concrete relative to other materials. Working together, we can influence codes for the advancement for the concrete industry and a more resilient tomorrow.

Topics include:

- Market Analytics
- Reinforced Concrete vs Wood Construction – Wood Stick built and Wood Cross-laminated Timber (CLT)
- Steps to Advance the Use of Concrete National and Local Codes
- Building Better Communities with Concrete
- Analyze the Economic and Resiliency Advantages of Improving Codes to Increase Business

This program is geared to contractors, management, agencies/owners, engineers, consultants'/owners' representatives and material & equipment suppliers. All are welcome!

IMPORTANT: Attendees will receive a certificate of attendance indicating 1.5 Professional Development Hours.

Note: Space is limited, so register early!

PCAMO Fee: \$75

Questions about this session should be directed to Larry Novak, 847-972-9100 or lnovak@cement.org.

NEW! PTI Level 1 Unbonded PT - Field Installation Certification

Presented by the Post-Tensioning Institute.



Course Code: PTITW

Date/Time: Tuesday - Wednesday, January 23 - 24 | 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N208

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 have been shown to meet this requirement.

PTITW Fee: \$400; \$450 after 12/4/17 and onsite

Questions about this program should be directed to Miroslav Vejvoda, 248-848-3184 or miroslav.vejvoda@post-tensioning.org. For more information about PTI go to www.post-tensioning.org.

SAIA Competent Person Training – Frame Scaffold

Presented by the Scaffold & Access Industry Association.

Course Code: SAIATU

Date/Time: Tuesday, January 23 | 7:30 am – 4:30 pm

Location: LVCC North Hall, Room 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 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.

- The Course includes the training manual, *Competent Person Training: Frame Scaffold*, with self-test questions for each chapter.
- The chapter self-tests are included in the manual. 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. The correctly completed self-test questions become a very useful study guide to prepare for the final exam.

HOW TO PREPARE: We recommend that you 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 for review.

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

SAIATU Fee: \$350

SAIA Competent Person Training – Suspended Scaffold

Presented by the Scaffold & Access Industry Association.

Course Code: SAIawe

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

Location: LVCC North Hall, Room N204



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 the SAIA Training Program certifying completion of Competent Person Training with Suspended Scaffold.

- The Course includes the training manual, *Safety Training for Suspended Scaffolds*, with self-test questions for each chapter.
- The chapter self-tests are included in the manual. 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. The correctly completed self-test questions become a very useful study guide to prepare for the final exam.

HOW TO PREPARE: We recommend that you 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.

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

SAIAWE Fee: \$350

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

NEW! SCA Slag Cement in Mix Designs: Improving Workability, Durability & Performance

Presented by the Slag Cement Association.

Course Code: SCAWE

Date/Time: Wednesday, January 24 | 10:30 am – 12:00 pm

Location: LVCC North Hall, Room N206



The Slag Cement Association presents an informative look at how slag cement impacts the durability, strength, and consistent performance of concrete in commercial, infrastructure and residential projects. Discussions will highlight award-winning case study examples on specific topics like:

- Increasing concrete durability
- Mass concrete
- High performance concrete
- Sustainability
- Finishing practices
- Industry codes and standards on slag cement plus association tools and resources available

PLEASE NOTE – Attendees will receive:

- A 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).
- Complimentary subscription to the **Slag Cement Monthly Update**.

SCAWE Fee: \$95; \$135 after 12/4/17 and onsite

Questions about this session should be directed to Drew Burns, 248-848-3777 or drew.burns@slagcement.org.

For additional information on the SCA visit www.slagcement.org.

NEW! TCA Pervious Concrete Hot Topics

Presented by the Tennessee Concrete Association.

Course Code: TCAMO

Date/Time: Monday, January 22 | 1:00 pm – 4:00 pm

Location: LVCC North Hall, Room N222



Pervious concrete is a rapidly growing application for ready mixed concrete. **Are you prepared to get your piece of this market?** Pervious concrete has evolved dramatically in the last ten years and this session will cover the latest information about pervious concrete mix designs, best practices for quality installation and the maintenance and cleaning of pervious concrete pavements.

SPECIAL NOTE: For those interested in being certified by NRMCA as a Pervious Concrete Technician while attending WOC 2018, see 4-hour certification review seminar scheduled for Monday, 8:00 am - 12:00 pm and corresponding written exam scheduled Tuesday, 3:00 pm – 5:00 pm. **Separate registration & fees required** for 4-hour review **MO402** (\$190; \$225 after 12/4/17) and written exam **TUPCW** (\$165).

TCAMO Fee: \$135; \$150 after 12/4/17 and onsite

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

NEW! The Engineer vs The Contractor vs The Material Supplier Workshop

How to Navigate & Manage Complex Relationships During a Construction Project

Presented by the Texas Aggregate and Concrete Association.

Course Code: TACAWE

Date/Time: Wednesday, January 25 | 9:00 am – 10:30 am

Location: LVCC South Hall, Room S106



This workshop is exclusively for contractors, producers and engineers faced with the issues of “who is right”, “who has the authority” and “who is in charge” when it comes to specifications, methods, and materials on a construction project. Even when all three groups have expertise in critical areas for a successful project, communicating the best practices and solutions can prove difficult. This session will focus on key areas of conflict and disagreement within Contract Documents using specific case examples and common specifications.

Topics include:

1. Preparation and purpose of project specifications
2. Differences between prescriptive and performance specifications
3. Roles and relationships of project stakeholders: owner, architect, engineer, contractor & material suppliers
4. Project specifications that typically result in disagreements
5. Methods to clarify specifications and reduce risk of conflict

Presenters: This workshop is conducted by dual instructors that have 50+ years combined experience as a Contractor, an Engineer, and a Material Supplier.

TACAWE Fee: \$95

Questions about this workshop should be directed to Rich Szecsy, rich.szecsy@tx-taca.org or 512-451-5120.

2) Special Events – pages 19-22

NEW! Specifications LIVE!

Presented by Architectural Products magazine.



Course Code: WESL1-3, THSL1-3

Date/Time: Wednesday - Thursday, January 24-25 | 10:00 am – 4:30 pm (select preferred 1-hr time slots)

Location: LVCC South Hall, Room S113

Experience an innovative learning environment where architects, designers, estimators and contractors can learn best practices, current specifications and product applications for commercial construction. Topics being covered include moisture protection, coatings, resiliency, anchoring & fasteners, and much more. Presentations will be delivered by industry experts in a state-of-the-art mobile classroom located in the Silver Lot.

- **Wednesday, January 24**

[WESL1] 10:00 am – 11:00 am; [WESL2] 1:00 pm – 2:00 pm; [WESL3] 3:30 pm – 4:30 pm

- **Thursday, January 25**

[THSL1] 10:00 am – 11:00 am; [THSL2] 1:00 pm – 2:00 pm; [THSL3] 3:30 pm – 4:30 pm

WESL-THSL Fee: \$45 per 1-hour session

IMPORTANT: Registration is limited to 70 per time slot, so register early!

Questions about these sessions should be directed to Michael Boyle, 847-359-6493 or mboyle@cbmedia.us.com.

NEW! Nondestructive Testing: Advanced Methods for Evaluation of Concrete

Presented by Germann Instruments.

Course Code: MTNDT

Date/Time: Monday – Tuesday, January 22 – 23 | 8:00 am – 5:00 pm

Location: LVCC North Hall, Room N206

Description: This new two-day workshop includes a combination of presentations and demonstrations that will cover basic concrete science and the principles of methods available for the evaluation of concrete structures. Discussions will focus on understanding how these evaluation methods work and how they should be applied; in addition to recognizing limitations of each.

Engineers-Technicians-Contractors: This course will be of interest to consulting Engineers responsible for planning structural evaluations or reviewing reports of evaluations based on the types of tests addressed in this course. Technicians will benefit by understanding the underlying principles of methods they may be using or may use in the future. Contractors will learn about tools that can be used to improve quality control.

Content: Pullout and pull-off tests for in-place strength; covermeters and GPR for reinforcement location; stress-wave methods for flaw detection; basics of steel corrosion and methods for assessing corrosion activity; measuring chloride ion profiles and estimating remaining life; durability testing based on electrical methods; evaluating cracking potential; and thermal control planning.



Presenters: **Nicholas J. Carino**, internationally recognized expert/educator on Nondestructive Testing and standard test methods, is an independent consultant retired after 25 years with NIST (National Institute of Standards and Technology). **Claus G. Petersen**, inventor of numerous test systems used worldwide, is President of Germann Instruments, one of the world's leading suppliers of advanced concrete test systems.

IMPORTANT: Registration includes digital copy of presentations and a certificate of course completion. Lunch is on your own. **Space is limited to 40 participants, so register early!**

MTNDT Fee: \$675; \$750 after 12/4/17 and onsite

Questions about this workshop should be directed to Mariana Lara, Germann Instruments USA, (847) 329-9999 or germann@germann.org. For a detailed course agenda visit www.germann.org.

NEW! Innovations in Concrete: Crack Reduction & 3D Printing of Construction Materials

Presented by Sika Corporation.

Course Code: MOCCR

Date/Time: Monday, January 22 | 1:00 pm – 4:30 pm

Location: LVCC North Hall, Room N120

Sika Corporation presents 'Innovations in Concrete Crack Reduction & 3D Printing of Construction Materials' designed for engineers, consultants, owners, concrete producers and contractors who are interested in learning about crack and shrinkage mitigation in concrete.

Topics of discussion will include:

- Shrinkage and cracking phenomena of concrete
- Traditional and innovative crack & shrinkage mitigation techniques
- New test method for measuring length change of concrete
- Benefits of utilizing fibers to replace conventional steel reinforcement and extend/eliminate joint spacing
- 3D printing of construction materials

During this session, the industrialization of the 3D printing process for construction materials will be presented and discussed. Case study project examples will also be presented where shrinkage reducing/compensating admixtures were successfully utilized. Presentations will contain technical content and focus on idea exchange, providing attendees a unique opportunity to share concerns and opportunities related to innovations in concrete crack reduction.

MOCCR Fee: \$115; \$135 after 12/4/17 and onsite

Questions about this session should be directed to Jeremy Chilton, chilton.jeremy@us.sika.com or 201-508-6660.



3) TOURS

Hoover Dam & Bypass Bridge Tour

Course Code: HDS

Date/Time: Sunday, January 21 | 12:00 pm - 5:00 pm

Course Code: HDF

Date/Time: Friday, January 26 | 12:00 pm - 5:00 pm

Location: LVCC North Hall, Room N109

Bus pick up/drop off: Door 9 at Concourse 5, end of 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, Hoover Dam and Bypass Bridge. Behind the scenes information will be shared on how these concrete structures, built more than 50 years apart, played an important part in the development of new standards in concrete construction.

Attendees will meet for a brief orientation and special presentation about the construction of the Mike O'Callaghan–Pat Tillman Memorial Bridge, the largest concrete arch bridge in the United States. Discussions will cover engineering challenges, crane work, concrete mix designs, and how the contractor accomplished this special project.

On the 30-minute drive to the Bridge & Dam area, local docents provide general information on the histories of the Las Vegas and Boulder City areas. While at the Bridge's Visitor Center, attendees can view displays as well as take in the breathtaking view of the Dam from the Bridge's pedestrian walkway. Note: The walk is either up approximately 200 stairs or an inclined path; winds on the pedestrian walkway overlooking the Dam can be brisk.

Next stop is the Hoover Dam Visitors Center where attendees can visit the Visitors Center's Museum and view the Bridge from an overlook. If operational, guests can take the Hoover Dam Power Plant Tour led by Reclamation guides



which includes a 70-second elevator ride down 530 feet through the rock wall of Black Canyon for a 30-minute guided tour into a tunnel drilled in the 1930s for construction plus a short walk to the Penstock Viewing Platform.

- **Penstock Viewing:** atop one of the huge 30-foot-diameter pipes that transport nearly 90,000 gallons of water each second from Lake Mead to the dam's hydroelectric generators.
- **Power Plant Generators:** elevator ride up to the Nevada power plant balcony for panoramic view of the 650-foot-long Nevada wing and eight of the dam's 17 huge generators.

Registration includes: classroom presentation, bus transportation w/docents, paid admission to the Hoover Dam Visitor Center, and a boxed lunch. **Book early for this 'always sold out' excursion!**

Hoover Dam & Bypass Bridge Tour Fee: \$120; \$140 after 12/4/17 and onsite

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

NEW! Construction of the Hoover Dam and Hoover Dam Bypass Presentation *Challenges and challenges met to build two iconic structures.*

Course Code: HDFP

Date/Time: Friday, January 26 | 10:00 am – 11:30 am

Location: LVCC North Hall, Room N111



History can provide insights on how to solve modern problems. In this new and exciting presentation, attendees will learn how contractors used the best-practices of the day in the construction of the Hoover Dam and 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 and deadlines on a one-of-a-kind project.

Presented by Luke M. Snell, PE, FACI, 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 12/4/17

SPECIAL SAVINGS: Discounted fee of **\$75** with purchase of either HDS or HDF tours before 12/4/17.

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

4) BREAKFASTS

Breakfast with the Experts at World of Concrete

Sponsored by BASF Corporation.

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

Date/Time [1]: Tuesday - Thursday, January 23 – 25 | 6:45 am - 7:45 am

Date/Time [2]: Tuesday – Thursday, January 23 – 25 | 8:15 am - 9:15 am

Location: LVCC North Hall, Room N107

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

Sponsored by BASF Corporation, 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 and concrete repair. **NEW for 2018**, an expert will be on hand to answer questions about 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 concerns and business challenges on current topics affecting production, construction, repair, and maintenance on concrete projects.

NOTE: Registration fee includes a hot breakfast; attendees can opt for a discounted package fee of \$110 for all 3 mornings - see code TWTBE (1-2).

Individual Breakfast Fee: \$45 per morning session; **\$60** after 12/4/17 and onsite

Discounted 3-Day Pass Fee: \$110; \$145 after 12/4/17 and onsite (TWTBE1 6:45-7:45 & TWTBE2 8:15-9:15)

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



5) LUNCHEONS

• **Tues:** Polishing • **Wed:** Slabs • **Thurs:** Steel-Fiber Reinforced

Concrete Polishing Luncheon & Forum

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

Sponsored by National Flooring Equipment.



Course Code: TUCPL

Date/Time: Tuesday, January 23 | 11:30 am - 1:30 pm

Location: LVCC South Hall, Room S219

The First Cut: Maximizing Tool Utilization

Every concrete floor is a little different—hard, soft, flat, bumpy, cracked. Choosing the best tool for each of these situations can be challenging. What bond material is best? Do you grind dry or wet? What grits will provide the most efficient grinding? How can a contractor find the balance between tool cost and labor expense? How effective are the chemical grinding aids? What's different about polishing an overlay? At this luncheon contractors and polishing experts will present several floor options and share their inside knowledge on how they maximize productivity and profit under all these various scenarios.

TUCPL Luncheon Fee: \$95; \$115 after 12/4/17 and onsite; \$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 & Forum

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

Sponsored by Somero Enterprises and Stego Industries.



Course Code: WESOG

Date/Time: Wednesday, January 24 | 11:30 am - 1:30 pm

Location: LVCC South Hall, Room S219

Building Concrete Floors Without Joints

Since joints are usually the first place concrete floors deteriorate, eliminating joints eliminates a lot of problems for owners. Several different systems for placing extended joint floors have emerged over the past few years and at this luncheon a group of contractors with experience in each floor system will describe their experience and debate which is best. How do costs vary among the systems? Which work better for different floors? Come to learn and to express your opinion.

WESOG Luncheon Fee: \$95; \$115 after 12/4/17 and onsite; \$85 with purchase of Super Pass

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

Steel-Fiber Reinforced Concrete Floors Luncheon & Forum

Sponsored and presented by Bekaert Corporation.

Course Code: THBSL

Date/Time: Thursday, January 25 | 11:30 am - 1:30 pm

Location: LVCC North Hall, Room N107

Profit by Using Steel-Fiber Reinforced Concrete in Unique Applications

Learn from the experts how you can use steel-fiber reinforced concrete to solve tough floor and structural challenges. Engineers and contractors are employing jointless steel-fiber reinforced floors, slabs with no saw cuts known as seamless floors, floors on piles plus many other applications. This luncheon forum will also discuss how to construct other structures including mat slabs with steel fibers.

Quality control is an important element in seamless floor construction. Verifying proper fiber disbursement in fresh concrete is difficult. Experts will report on a new quality control tool to measure steel-fiber dispersion that could replace wash-out tests and provide continuous, instantaneous data during placement. Attendees will learn how to:

- Expand their existing market with industrial seamless floors and structures
- Propose and construct steel-fiber reinforced structural floors
- Improve a seamless floor's as-built quality by using magnetic resonance imaging to reveal exact steel fiber dosage in fresh concrete

THBSL Luncheon Fee: \$95; \$115 after 12/4/17 and onsite; \$85 with purchase of Super Pass

Questions about the steel-fiber luncheon/forum can be directed to Ganesh Chaudhari,

ganesh.chaudhari@bekaert.com or 404-952-0040.

