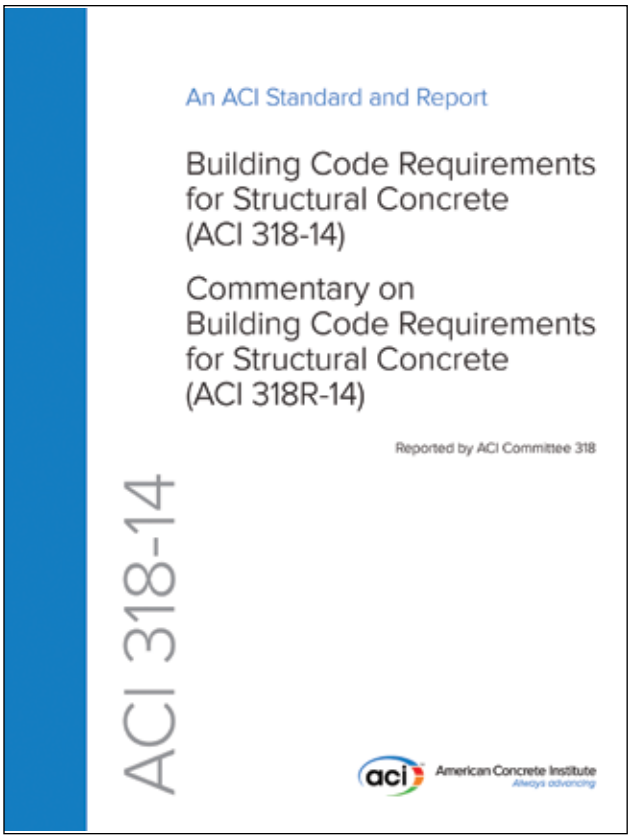

ACI releases reorganized ACI 318-14

The American Concrete Institute (ACI) officially released the completely reorganized *ACI 318-14: Building Code Requirements for Structural Concrete*. The 2015 *International Building Code* will reference ACI 318-14.

Now published and available for use, ACI 318 is organized from an engineer's perspective. By focusing on member design, ACI 318-14 requirements flow more intuitively and have fewer cross references. Significant highlights include the following:

- greater ease of use
- improved logic and flow of information
- member-based organization to quickly locate relevant code information
- construction requirements centralized in one chapter

According to Randall W. Poston, PhD, PE, SE, Chair, ACI Committee 318, 2008–2014, this publication is the first major reorganization of ACI 318 since 1971 and represents nearly a decade of work. The publication features improved language and style consistency, makes more expansive use of tables and charts, and is organized so that engineers can have increased confidence they have satisfied all relevant code requirements.

Other updates include new chapters on structural systems and diaphragms and a consistent structure for each member chapter.

"The new format will more easily accommodate new topics well into the future," said Poston. "The new code not only encourages better structural concrete design, but also supports better communication among designers, engineers, contractors, and construction professionals. Additionally, the code is much easier for students and new engineers to learn and apply, and, because of the member-based organization, the user is assured that a design is complete and has met all code requirements."

The United States and more than 22 countries around the world base their national building codes on all or part of ACI 318. 318-14 is available in various electronic formats for access on desktop, tablet, and mobile devices, as well as the traditional printed copy. The manual will also appear in Spanish, Chinese, and other languages.

There are many tools available to supplement knowledge of ACI 318-14. Approximately 50 seminars are being scheduled for 2015 in various locations for professionals who wish for more information about the reorganized 318-14. ACI's *Reinforced Concrete Design Manual* will be updated and published in accordance with the reorganized 318-14, and will be available in 2015.

"To aid engineers in transitioning to the member-based ACI 318-14, the American Concrete Institute has published transition keys that map provisions in ACI 318-11 to their location in ACI 318-14. I encourage everyone to take advantage of these keys, available for free download from www.concrete.org," said Poston. "Using these keys along with the *Reinforced Concrete Design Manual*, an invaluable companion to the 318-14, will ensure a smooth conversion."

Additional resources are available at www.concrete.org and on ACI's Facebook and Twitter pages.

To learn more about ACI 318-14 and to purchase, visit www.concrete.org/ACI318.

—Source: ACI

Proposed ASTM standard will address incompatibility of new concrete production materials

Concrete technologists need to have a well-defined, useful, and efficient means to detect and possibly address concrete material incompatibility. This need will be addressed in a proposed new ASTM International standard, ASTM WK40615, *Practice for Mixing and Comparing Performance of Concrete Materials Using Mini-Mix Mortar Mixtures*.

Due to an increased focus on sustainability, the emergence of new technologies, and the decreasing availability of suitable materials in some regions, a wider range of materials is now being used in concrete production. ASTM WK40615 will be used to test the potential performance of these new materials.

According to ASTM member Ara Jeknavorian of Jeknavorian Consulting Services, ASTM WK40615 will comprise two methods for preparing mortar mixtures. "Adding the capability of this standard to the overall quality assurance program of a concrete producer will provide the general public and the concrete industry an increased sense of confidence that the concrete supplied for various construction projects will more consistently meet the required performance standards," Jeknavorian says.

Jeknavorian notes that ASTM WK40615 will more than likely be used in one of the following three ways:

- to act as an ongoing quality control tool to verify lot-to-lot performance uniformity for various concrete materials
- to screen the performance of a new or alternate source material under consideration
- to troubleshoot an unexpected performance problem, assuming the materials associated with the problem are still available

ASTM WK40615 is being developed by Subcommittee C09.48 on Performance of Cementitious Materials and Admixture Combinations, part of ASTM International Committee C09 on Concrete and Concrete Aggregates. All interested parties are invited to participate in the standards developing activities of C09.48. The subcommittee is particularly interested in contributions from those using paste and mortar mixtures to help predict changes in concrete performance when a material property changes.

ASTM International welcomes participation in the development of its standards. For more information on becoming an ASTM member, visit www.astm.org/JOIN.

—Source: ASTM International

Pankow Foundation launches high-strength steel reinforcing bar research program

In 2013, the Charles Pankow Foundation launched the research project **R**oadmap for the Use of High-Strength Reinforcement in Reinforced Concrete Design. This project (RGA #05-13) has been given the working title of the ATC 115 project. In developing the ATC 115 project, it became clear that before any large-scale structural testing related to high-strength reinforcing bar can occur, it is necessary to first establish the key tensile material properties of high-strength reinforcing bar in excess of Grade 60 (metric grade 420). The following grants have been initiated by the Foundation for the purpose of determining these key tensile properties by rigorous laboratory testing: Development of Tentative Specification for High Strength Steel Reinforcing Bar, Performance Characterization of Beams with High-Strength Reinforcement, and Defining Structurally Acceptable Properties of High Strength Steel Bars through Material and Column Testing.

—Source: Charles Pankow Foundation

OSHA extends compliance date for crane operator certification requirements

The Occupational Safety and Health Administration (OSHA) issued a final rule extending the deadline for crane operator certification requirements in the Cranes and Derricks in Construction final rule published August 9, 2010, by three years to November 10, 2017. The rule also extends by three years the employer's responsibility to ensure that crane operators are competent to operate a crane safely. The final rule becomes effective November 9, 2014.

During the three-year period, OSHA will address operator qualification requirements for the cranes standards, including the role of operator certification. The final cranes and derricks rule required crane operators on construction sites to meet one of four qualification/certification options by November 10, 2014. After publishing the final rule, a number of parties raised concerns about the standard's requirement to certify operators by type and capacity of crane and questioned whether crane operator certification was sufficient for determining whether an operator could operate their equipment safely on a construction site.

The agency published a Notice of Proposed Rulemaking (NPRM) on February 12, 2014, proposing to extend both the deadline for operator certification and the employer duty to ensure competent crane operation for three years. After publishing the proposed rule, a hearing was requested and held in Washington, D.C. Comments from the hearing are available at http://www.regulations.gov/#!docketDetail;D=OSHA-2007-0066. OSHA analyzed the comments to the NPRM and the hearing testimony and decided to extend both the crane operator certification deadline and the existing employer duty for three years. OSHA has already begun the process of developing a standard to ensure crane operator qualifications.
—Source: U.S. Department of Labor

CRSI names Halsted Western Region manager, Mendoza Pacific Southwest manager

Greg Halsted

José Mendoza

The Concrete Reinforcing Steel Institute (CRSI) has appointed Greg Halsted as its Western Region manager and hired José Mendoza as its Pacific Southwest Manager.

As Western Region manager, Halsted will be responsible for managing all CRSI technical, educational, promotional, and membership activities on both national and regional chapter levels throughout the Western United States and Western Canada.

Halsted previously held the position of Pacific Northwest/Western Canada manager at CRSI and has supported the Western Region since 2012. He also heads the continuously reinforced concrete pavement initiatives at CRSI, working directly with the Federal Highway Administration.

Mendoza's role includes supporting the Western Region manager on a regional and local basis, as well as contributing to the attainment of national promotional goals.
—Source: CRSI

PCA releases free editions of reinforced concrete publications

Two must-have publications on reinforced concrete design are now available free of charge on the Portland Cement Association (PCA) website.

Both publications, *Simplified Design of Concrete Buildings* and *Notes on ACI Building Codes*, were revised and updated according to ACI 318-11 codes. They present time-saving analysis, design, how-to methods for construction of reinforced concrete buildings, and more.

The fourth editions of *Simplified Design of Concrete Buildings* and *Notes on ACI Building Codes* include updated equations, design aids, graphs, and code requirements.

The 900-page *Notes on ACI Building Codes* provides educators, contractors, materials and product manufacturers, building code authorities, inspectors, and others involved in the design, construction, and regulation of concrete structures with an invaluable aid. By incorporating discussions of the history and philosophy of concrete design, the manual strives to inform the reader of both the letter of the law and also the spirit behind the code provisions.

Both publications may be found in free PDF versions at http://www.cement.org.

—Source: PCA

ASTM International publishes new product category rules for the cement industry

ASTM International has partnered with the Slag Cement Association (SCA) to develop new product category rules (PCR) for slag cement. This PCR establishes the criteria for developing an Environmental Product Declaration (EPD) for slag cement used in concrete, mortar, and other construction applications.

"A source of error in developing environmental product declarations is unreliable data. As an important supplier to the precast concrete industry, precast concrete environmental declarations will now be more accurate thanks to the work of the cement industry," says Emily Lorenz, a sustainability consultant.

EPDs are a highly regarded way to demonstrate a company's commitment to sustainability, quality, and responsibility. They show businesses the real environmental impact of your product over the course of its lifetime and help differentiate your product in the marketplace.

"The cement industry has taken an important step in ensuring that the environmental impact and life-cycle inventory data provided by its manufacturers is consistently and accurately reported," Lorenz says.

—Source: ASTM International

Pankow Foundation, ACI Foundation collaborate on research network

The Charles Pankow Foundation renewed its formal Memorandum of Agreement with the ACI Foundation, formalizing its support of the Concrete Research Network and its continued commitment to advancing research in the concrete industry.

At the core of this network is a new website that organizes information for partners, funders, researchers, and users. The site was constructed as a collaborative effort with several industry foundations to leverage industry resources by coordinating funding for comprehensive, larger-scale research and disseminating research products to a wider audience. Some key attributes of the site include publicly accessible compilations of information and opportunities about research needs, ongoing projects, and research products available from the Charles Pankow Foundation and other partners; links to research products so that the positive effects of successful research can be applied; and forms for interested parties to suggest industry research needs.

To learn more about the Concrete Research Network, and to view a list of research needs, visit http://www.ConcreteResearchNetwork.org.

—Source: Charles Pankow Foundation

Richard D. Gaynor

Richard D. Gaynor, former executive vice president of the National Ready Mixed Concrete Association, died July 16, 2014, at the age of 83.

Born in Mobile, Ala., Gaynor received a bachelor's degree from the University of Alabama and a master's in engineering from the University of Maryland. He began working for the joint Associations of National Ready Mixed Concrete (NRMCA) and National Sand and Gravel (later the National Aggregates Association) in 1954 and managed the associations' Joint Research Laboratory in College, Park, Md., for many years.

He became director of engineering of NRMCA in 1971, vice president of research and engineering in 1975, and executive vice president in 1984. He also served as director of engineering for the National Industrial Sand Association from 1979 to 1993. Gaynor retired in 1996, becoming an honorary member of the NRMCA board of directors.

Gaynor was a fellow of both the American Concrete Institute (ACI) and the American Society for Testing Materials (ASTM) and served on committees and panels of experts for the Transportation Research Board, National Cooperative Highway Research Program, Strategic Highway Research Program, and the Civil Engineering Research Foundation, among others. He remained as a consulting or honorary member of many committees until his death. He was a registered professional engineer in Maryland.

Gaynor was known for his contributions to the development of standards for cement, strength and durability testing of concrete, reuse of returned concrete and wash water, characteristics of aggregates, mixing in truck mixers, and initiatives to improve the quality of ready mixed concrete. He served on ACI Committee 318, Structural Concrete Building Code, and was a primary driver in the improvement of ASTM C94, Standard Specification for Ready-Mixed Concrete.
—Source: *Concrete Construction*

Compiled by K. Michelle Burgess (mburgess@pci.org)

Industry Calendar

Events

For the most current information on events, visit http://www.pci.org/events.

World of Concrete	**February 3–6, 2015**
Las Vegas, Nev.	
The Precast Show	**March 5–7, 2015**
Orlando, Fla.	
ACI Convention: Fountains of Concrete Knowledge	**April 12–16, 2015**
Marriott and Kansas City Convention Center, Kansas City, Mo.	
AIA Convention	**May 14–16, 2015**
Atlanta, Ga.	
International Parking Institute Conference and Expo	**June 29–July 2, 2015**
Las Vegas, Nev.	
ACI Convention: Constructability	**November 8–12, 2015**
Sheraton, Denver, Colo.	
Greenbuild	**November 18–22, 2015**
Washington, D.C.	