Knowledge to Practice:

2016 ACI Foundation Appreciation

As 2016 draws to a close, the Foundation would like to thank the many volunteers, supporters, ACI members, partners, and donors who have contributed to the continued success and progress of the Foundation's programs.

Concrete Research Council

The Concrete Research Council (CRC) increased its impact on concrete construction in 2016 by approving \$163,000 of funding among four different research projects, listed in the table. Each project was featured in detail in one of the previous "Knowledge to Practice" articles in *CI*. Information about each project can also be found at www.concreteresearchcouncil.org.

The CRC would like to congratulate recipients of this year's selected projects and thank all who submitted proposals for review. The request for proposals deadline for 2017 research grants was December 1, 2016. Submitted proposals will be reviewed and the winning projects will be selected after The ACI Concrete Convention and Exposition – Spring 2017.

Strategic Development Council (SDC)

The SDC held Technology Forums 39 and 40 in San Antonio, TX, and Salt Lake City, UT, respectively. Both forums received positive feedback for their meetings, presentations, and Concrete 2029 Workshops. Summaries of Forums 39 and 40 and access to their presentations are available to SDC members at **www.concretesdc.org**. SDC will hold Technology Forum 41 on February 23-24, 2017, in Dallas, TX. Concrete 2029's Roadmapping Workshop 2 precedes Forum 41 and will take place on February 22, 2017.

"Guide to the Code for Assessment, Repair, and Rehabilitation of Existing Concrete Buildings" is now available. Published jointly by ACI and the International Concrete Repair Institute (ICRI), this guide received support and funding from the SDC. SDC's concrete repair initiative, Vision 2020, set a goal in 2006 to establish a repair code as part of an inter-industry effort to improve the efficiency, safety, and quality of concrete repair and protection activities. ACI Committee 562, Evaluation, Repair, and Rehabilitation of Concrete Buildings, was created in response to the Vision 2020 efforts. The guide has been developed to serve as a companion to "Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures and Commentary (ACI 562-16)." The guide was specifically developed for licensed design professionals; however, it also provides insight into the use and benefits of ACI 562 for contractors, material manufacturers, building owners, and building officials.

ACI recently published "Report on Design of Concrete Wind Turbine Towers (ACI ITG-9R-16)." This report examines the benefits of concrete towers for land-based wind turbines. The ITG-9 committee and report are the result of a SDC initiative exploring the benefits of concrete for construction of tall wind turbine towers. Benefits include reduced cost, superior service life performance, on-site or off-site component fabrication, site assembly with fewer fatigue critical joints, and lower maintenance costs. "The new ITG-9 document is a great tool for wind turbine tower designers to evaluate concrete for economical and durable construction of towers over 100 meters," ITG-9 Committee Chair Charles Hanskat said. "Extending the height allows wind energy to become practical in a much larger portion of the U.S. market, and allows for larger, more efficient wind turbines." The document's scope includes construction alternatives, design criteria, design methodologies, and guidance for preliminary design of concrete towers.

Scholarship Council

This year, \$88,000 was distributed for scholarships and fellowships through the Foundation. Seventeen undergraduate and graduate students from across North America comprised this year's recipients. ACI Foundation Fellowship recipients receive an academic stipend between \$7000 to \$10,000; an industry mentor, free registration, travel, and accommodations for three ACI conventions; a possible internship; and recognition during an ACI convention, in *CI*, and on **www.scholarshipcouncil.org**. ACI Foundation Scholarship recipients receive a \$3000 educational stipend and recognition in *CI* and on **www.scholarshipcouncil.org**.

Due to the generous contributions of ACI members and nonmembers alike, the new Daniel W. Falconer Memorial Fellowship was fully funded this year and will begin being awarded in 2017. This fellowship honors the late Dan Falconer, who served as ACI's Managing Director of Engineering for more than 17 years. This new fellowship will carry an academic stipend of \$15,000 and will be awarded to a graduate student studying in the field of structural engineering with an emphasis in reinforced concrete design. Preference will be given to applicants conducting research pertaining to ACI codes or specifications. The fellowship includes an optional summer internship in the ACI Engineering Department.

The ACI Foundation will be distributing its first annual newsletter in early 2017. This newsletter will report on all Foundation activities, programs, and initiatives during the past year. Request your copy of this newsletter by e-mailing ann.daughtery@acifoundation.org or cameron.innis@concrete.org.



Research projects approved for funding by CRC in 2016

Project title	Month covered in C/	ACI supporting committee(s)	Principal investigator
Establishing Unified Durability Guidance on Chloride Ion Limits, Freezing-and-Thawing Performance, and External Sulfate Attack for ACI Documents	August	201, 222, 318, and 350-B	Jason Ideker, Oregon State University
Update to Performance-Based Seismic Design Guidelines for Tall Buildings	September	318-H	Jack Moehle, University of California Berkeley
Deformed Steel Fibers as Minimum Shear Reinforcement in Deep, Prestressed Concrete Hollow-Core Slabs	October	318-G	Gustavo J. Parra-Montesinos, University of Wisconsin- Madison
Towards Mechanistic Pavement Design of Pervious Concrete Pavements	November	ACI 522-R	Somayeh Nassiri, Washington State University

Formwork for Concrete

Completely revised and updated; still the formwork reference of choice



The 8th Edition, authored by David W. Johnston, North Carolina State University, is a major revision of the document to bring it up-to-date with "Guide to Formwork for Concrete (ACI 347R-14)." Revisions include referencing current standards and practices, removing outdated or irrelevant material, adding content on new developments in formwork technology and practice, and updating the look and layout of the document.

- An ACI best-selling document
- Allowable strength design and load and resistance factor design examples
- Updated to current standards
- Chapter problems for classroom study
- 500 modern color photographs
- 150 color illustrations
- Includes ACI 347R-14

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