

Making the Concrete-Built World Last Longer: The International Concrete Repair Institute

By Eric Hauth, ICRI

Now in its 38th year, the International Concrete Repair Institute (ICRI) was born from the desire of its founding members to advance the concrete repair industry and the companies and professionals in that industry. Serving as both a technical institute and trade association, ICRI's mission is to make the concrete-built world safer and longer lasting. To fulfill this mission, ICRI is guided by four operational pillars: industry leadership, professional development, organization strength, and organization credibility. At present, ICRI counts nearly 2400 individuals and companies as members, including 47 supporting member companies.

ICRI is a proud associate member of the National Concrete Bridge Council (NCBC). Joining NCBC three years ago was a natural extension of the institute's mission, and ICRI's concrete repair knowledge and expertise have strengthened NCBC's focus on improving and sustaining concrete bridge infrastructure.

ICRI membership includes roughly equal proportions of material manufacturers/suppliers, contractors/applicators, and design professionals/engineers. As a result, the technical guidance developed by ICRI represents perspectives from a wide range of industry professionals.

Over its relatively brief history, ICRI has published 28 technical guidelines addressing important technical issues to inform better approaches and practices in concrete repair and service-life extension. These guidelines include ICRI 310.2R, *Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair*.¹ A related product, Concrete Surface Profile (CSP) chips, has become an industry-standard tool for manufacturers, contractors, and design professionals in coatings and concrete repair. The CSP chips are available for purchase as a set of 10 tactile rubber reference cards designed to physically measure concrete roughness for proper surface preparation before coatings, sealers, and repairs are applied.

ICRI runs two certification programs: the Concrete Surface Repair Technician (CSRT) program and the Concrete Slab Moisture Testing Technician (CSMT) program. The institute is also developing a new strategic focus on applicator-based training programs to further advance the

ICRI Resources

In the area of training with applicability to bridge preservation, International Concrete Repair Institute (ICRI) runs two certification programs: the Concrete Surface Repair Technician (CSRT) program and the Concrete Slab Moisture Testing Technician (CSMT) program. These programs address fundamental considerations in assessing and repairing concrete structures. The institute is also developing a new applicator-based training program to further advance the quality of concrete repair training in the field.

Bridge repair professionals can also take advantage of ICRI's first ever digital app, available for free from the Apple App Store and Google Play, to assess reinforcing bar cleanliness in accordance with ICRI guideline 210.5, *Guide for Selecting and Specifying Reinforcing Bar Cleaning Levels*. ICRI encourages bridge engineers, field technicians, and inspectors to download the app and become familiar with this new tool.

For individuals looking to keep pace with the latest in concrete repair technical developments and case studies, ICRI publishes the *Concrete Repair Bulletin*, which is publicly available via ICRI's website: www.icri.org.

quality of concrete repair training in the field (see the "ICRI Resources" sidebar). In addition to the work of ICRI's technical institute, ICRI serves the concrete repair industry by hosting two conventions per year, supporting a wide network of chapters throughout North America (including Mexico), and celebrating leaders and notable projects through individual and project recognition awards.



ICRI creates industry resources such as *The Technical Guidelines for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair* (310.2R-2013). Concrete Surface Profile chips convey the proper concrete surface roughness before the application of coatings or sealers, or the start of repairs. Figure: ICRI.



The upstream side of the historic Third Avenue Bridge in Minneapolis, Minn., is shown before rehabilitation was undertaken. Note the concrete deterioration in the pier bases and arches. Photo: Wiss, Janney, Elstner Associates.

ICRI's 2024 Project of the Year Award winner, the Third Avenue Bridge in Minneapolis, Minn., illustrates the vital importance of extending the service lives of concrete bridges.² The bridge, which was built in 1918, is on the National Register of Historic Places and is an icon in the Minneapolis skyline. Its preservation yielded significant sustainability impacts. According to David Whitmore, one of the key contractors involved in this project, the preservation effort achieved the following:

- The project kept 8000 yd³ of concrete in service.
- The production of 16,000 tons of rubble was avoided.
- Carbon dioxide emissions were reduced by 4100 tons.

ICRI looks forward to future collaborations with federal and state partners, as well as cutting-edge training

The project to preserve the historic Third Avenue Bridge in Minneapolis, Minn., received the International Concrete Repair Institute's 2024 Project of the Year Award. Photo: Trey Cambern Photography.²



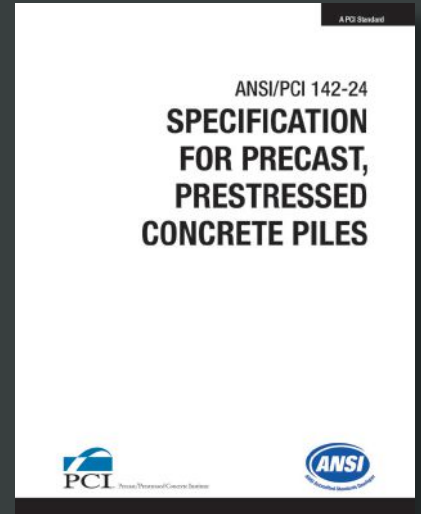
partners such as the Concrete Bridge Engineering Institute at the University of Texas, Austin. Through such partnerships, ICRI is prepared to further the respective missions of NCBC and ICRI.

References

1. International Concrete Repair Institute (ICRI). 2008. *Guideline for Surface Preparation for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion*. ICRI 310.1R-2008. Minneapolis, MN: ICRI.
2. ICRI. 2024. "2024 Winner: 3rd Avenue Bridge Rehabilitation, Project of the Year." *Concrete Repair Bulletin* 37 (6): 14–19. <https://www.icri.org/past-issues/concrete-repair-bulletin-november-december-2024>. 

Eric Hauth is the executive director of the International Concrete Repair Institute.

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