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Iowa State University's Center for Transportation Research and Education (CTRE) is the umbrella organization for the following centers and programs:

Bridge Engineering Center  
Center for Weather Impacts on Mobility and Safety  
Construction Management & Technology  
Iowa Local Technical Assistance Program  
Iowa Statewide Urban Design and Specifications  
Iowa Traffic Safety Data Service  
Midwest Transportation Consortium  
National Concrete Pavement Technology Center  
Partnership for Geotechnical Advancement  
Roadway Infrastructure Management & Operations Systems  
Sustainable Transportation Systems Program  
Traffic Safety and Operations

**ctre**  
Center for Transportation  
Research and Education

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## Not-just-for-engineers guide to concrete pavements

*"This manual is one of the best concrete pavement technical documents developed in the last 15 years."*

—A Michigan practitioner's reaction to *Integrated Materials and Construction Practices for Concrete Pavement: A State-of-the-Practice Manual* (IMCP manual)

The new, 350-page IMCP manual is the product of a multi-year, FHWA-sponsored effort at Iowa State University. It covers fundamentals and advanced knowledge about concrete pavements, focusing on the effects of mix materials and construction practices on the slab's performance.

The manual describes best practices, technologies, and tests to identify mix materials, concrete properties, and construction practices that optimize concrete performance.

### What's different about this book?

The IMCP manual reflects the combined expertise and effort of several dozen professionals from around the country:

- Seventeen authors provided "best practices" information in their areas of expertise.
- Three technical editors—Peter Taylor (principal engineer, CTLGroup, Inc.), with help from Jerry Voigt (president and CEO, American Concrete Pavement Association) and Steve Kosmatka (vice president of research and technical services, Portland Cement Association)—synthesized and organized the information into nine chapters and a troubleshooting guide.
- A team of 32 technical experts thoroughly vetted two major drafts.
- Staff from the National Concrete Pavement Technology Center at CTRE/ISU—Dale Harrington (consultant) and Marcia

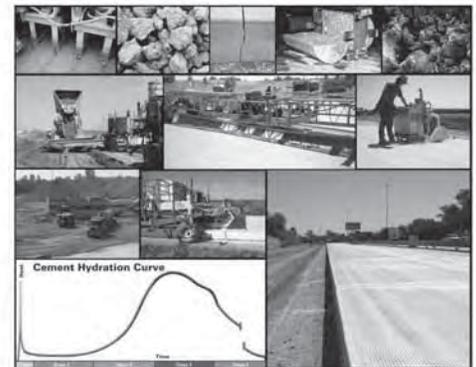
## Integrated Materials and Construction Practices for Concrete Pavement:

A State-of-the-Practice Manual

FHWA Publication No. HIF-07-004

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U.S. Department of Transportation  
Federal Highway Administration



National Concrete Pavement  
Technology Center  
ctre  
Center for Transportation  
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Figure 1. The *Integrated Materials and Construction Practices for Concrete Pavement: A State-of-the-Practice Manual* cover.

Brink (managing editor)—guided the manual's development, then edited, designed, and published the final product.

The manual is written in a style that is accessible to a wide audience:

- Design, materials, and construction engineers and technicians.
- Quality assurance/control personnel.
- Construction supervisors and inspectors.
- Contractors.

The manual describes not only *how* but *why*. "It's not good enough just to tell people how something should be done," says Harrington. "When they understand the effect of weather on new concrete, for example, or why certain problems can develop,

## Acronyms in Technology News

AASHTO	American Association of State Highway and Transportation Officials
APWA	American Public Works Association
CTRE	Center for Transportation Research and Education (at Iowa State University)
FHWA	Federal Highway Administration
Iowa DOT	Iowa Department of Transportation
ISU	Iowa State University
LTAP	Local Technical Assistance Program
MUTCD	Manual on Uniform Traffic Control Devices
NACE	National Association of County Engineers



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Federal Highway Administration



Iowa Department  
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For brief, e-mail reminders about upcoming workshops and other LTAP news, subscribe to Iowa LTAP's new, free service: Tech E-News. Send an email to Marcia Brink, [mbrink@iastate.edu](mailto:mbrink@iastate.edu). Type "Subscribe Tech E-News" in the subject line.

*guide to concrete continued from page 1*

they respond more effectively to whatever comes up." The manual helps everyone involved in concrete pavement projects, from designers through construction supervisors, understand how their individual roles and decisions collectively contribute to the concrete slab's performance.

The manual's format is uniquely user friendly. It has an easy-to-flip-through thumb index, call-outs of key points with each major section, several methods of cross-referencing, and clear illustrations and examples (figure 2). The book cover is a flexible plastic that will withstand heavy use.

Each manual comes with a six-foot foldout poster (figure 3) and an electronic version of the manual on CD.

## For more information

The IMCP manual has been distributed to state DOTs, FHWA offices, and contractors. You can borrow a copy from the Iowa LTAP library. Contact library coordinator Jim Hogan, 515-294-9481, [hoganj@iastate.edu](mailto:hoganj@iastate.edu).

A few copies are available to Iowans, for free or the cost of shipping, through the Iowa Concrete Paving Association (515-963-0606, [icpa@iowaconcretepaving.org](mailto:icpa@iowaconcretepaving.org)) or the American Concrete Pavement Association (Bill Davenport, vice president of communications, 847-972-9810, [BDavenport@pavement.com](mailto:BDavenport@pavement.com)). The manual is going to be reprinted, and more copies will be available this summer.

An electronic version is online, [www.cptechcenter.org/publications/imcp/](http://www.cptechcenter.org/publications/imcp/). If you download the complete file ([www.cptechcenter.org/publications/imcp/imcp\\_manual.pdf](http://www.cptechcenter.org/publications/imcp/imcp_manual.pdf)), you can search the entire document and use links to move between cross-references.

If you have specific questions about the manual or related training, contact Dale Harrington, Snyder & Associates, 515-290-4014, [dharrington@snyder-associates.com](mailto:dharrington@snyder-associates.com), or Marcia Brink, communications manager, National Concrete Pavement Technology Center, 515-294-9480, [mbrink@iastate.edu](mailto:mbrink@iastate.edu). ■

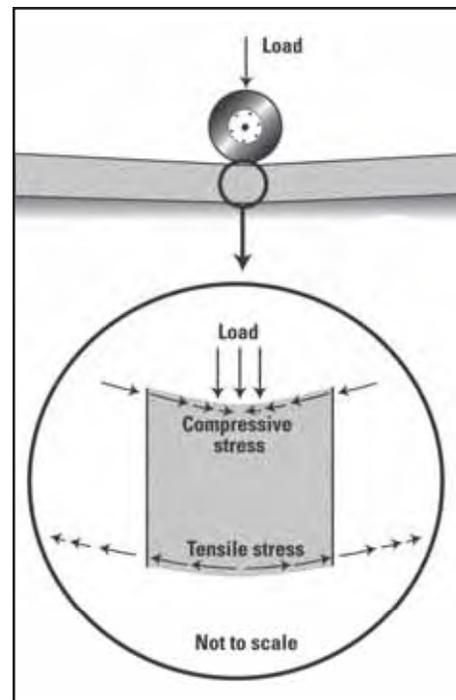


Figure 2. The IMCP manual contains many illustrations, like this one, to help readers understand different stresses on and in concrete slabs.

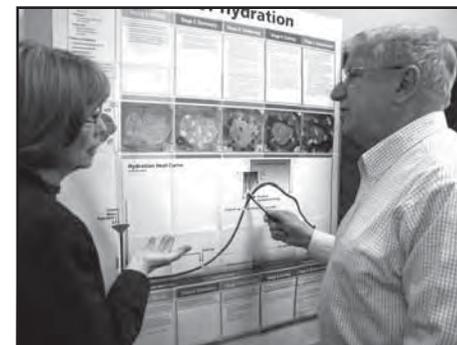


Figure 3. Dale Harrington and Marcia Brink discuss ways to illustrate variations in the sawing window on the Stages of Hydration poster.

## Use the IMCP manual

- In the shop or lab as a quick reference.
- In the field as a troubleshooting guide.
- In the training room as a learning/teaching tool.