

CTRE en route

Winter 2005

In this issue

[Call for Abstracts](#) (off site)

Submit your 500-word abstract by March 7 for the Mid-Continent Transportation Research Symposium at Iowa State University, August 18–19, 2005.

[Upcoming Events](#)

Brief calendar with events of interest to researchers and educators.

[Putting Results of Research to Use: The Local Technical Assistance Program](#)

Sharing the results of research with local transportation agencies is one of the primary goals of the Local Technical Assistance Program (LTAP), a federally funded program in every state, Puerto Rico, and several tribal governments.

[Getting Research in the Hands of Practitioners: Technology Transfer Summaries](#)

Tech transfer summaries are two-to-four-page summaries of research projects that include color photos, graphs, and illustrations. They convey the gist of the research in an easily digestible format.

[Training Publications from the PCC Center](#) (off site)

The PCC Center is selling detailed booklets about concrete paving and sturdy reference documents for crew use. Prices are very reasonable. Orders may be placed online (you'll be billed with your shipment).

[SUDAS Manuals Have New Owners](#)

Iowa's Statewide Urban Designs and Specifications (SUDAS) manuals are now owned by the SUDAS corporation.

Research Projects

CTRE en route is published twice a year to inform readers about CTRE's projects and programs.



PCC Center's Mobile Concrete Research Lab (above, rear and right-side view; below, interior view)



ctre
Center for Transportation
Research and Education

Address: CTRE, 2901 S. Loop Drive,
Suite 3100, Ames, IA 50010

Phone: 515-294-8103

FAX: 515-294-0467

Website: www.ctre.iastate.edu/

[Recently Completed](#)

List of projects completed since August 2004. Includes links to project details and related publications.

[Recently Started](#)

List of projects begun since August 2004 with links to brief project statements.

Page last updated September 12, 2005

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CTRE Communications:

[Marcia Brink](#)

CTRE en route editor:

[Michele Regenold](#)

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Upcoming Events

Date	Event	Location
March 7, 2005	Deadline for Abstracts: Mid-Continent Transportation Research Symposium View the call for abstracts	
April 21, 2005	2nd Annual Transportation Career Fair for Iowa High School Students For more information, contact Chris Albrecht, calbrech@iastate.edu or 515-294-7684	Ames, Iowa

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CTRE en route editor:

[Michele Regenold](#)

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May
10–
11,
2005

[**Smart Work
Zone
Deployment
Initiative
Conference**](#)

For more
information,
contact Tom
McDonald,
[tmcdonal@iastate.
edu](mailto:tmcdonal@iastate.edu) or 515-294-
6384

Bettendorf,
Iowa

July
23–
27,
2005

[**National Local
Technical
Assistance
Program
Conference**](#)

CTRE staff are
helping
coordinate this
event.

Dubuque,
Iowa

August
18–
19,
2005

[**Mid-Continent
Transportation
Research
Symposium**](#)

This is CTRE's
fifth biennial
research
conference, co-
sponsored by the
Iowa Department
of Transportation
and the Midwest
Transportation
Consortium.

[View previous
conferences'
proceedings.](#)

Ames,
Iowa

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Putting Results of Research to Use: the Local Technical Assistance Program

Sharing the results of research with local transportation agencies is one of the primary goals of the Local Technical Assistance Program (LTAP), a federally funded program in every state, Puerto Rico, and several tribal governments.

Iowa LTAP helps move research results into practice in three primary ways:

1. training events
2. technical assistance
3. technology transfer via
 - a library of materials ([search the online catalog and order materials](#))
 - a bimonthly newsletter; *Technology News* is Iowa LTAP's regular channel for sharing articles about research results and directing readers to additional resources
 - publication and distribution of manuals (e.g., [Iowa Traffic Control Devices and Pavement Markings: A Manual for Cities and Counties](#))
 - the Safety Circuit Rider ([more about this safety training program](#))

Recent articles based on research

Technology News includes articles based on research conducted by CTRE and by the Iowa Department of Transportation, as well as any other research that may be of use to local agencies.

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[Iowa's Local Technical Assistance Program](#) helps put CTRE's research results in the hands of practitioners.



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In 2004, the following research articles appeared in *Technology News*:

- [Improving safety for older drivers](#)
- [Optimizing pavement bases for good drainage](#)
- [Winter driving: risks, costs, and safety strategies](#)
- [Protecting Iowa's covered bridges](#)
- [Stringless paving: a promising alternative](#)
- [Expressway crash data tell an interesting tale](#)
- [Examining traffic safety on rural expressways](#) *142 k pdf
- [Dollars and sense of urban pavement markings](#)
- [Pavement marking paint test in the works](#)
- [When the "school" bus isn't yellow](#)
- [You say "camino," I say "road"](#) *174 k pdf
- [Blended cements improve \(and complicate\) concrete mixtures for pavements](#) *188 k pdf
- [Where the rubber really meets the road](#) *220 k pdf
- [High-performing bridge decks](#) *402 k pdf
- [Winter maintenance decision support system](#) *150 k pdf
- [Reducing crashes at rural intersections](#) *136 k pdf

* To view pdf files, you may need to [download the free Adobe Acrobat Reader](#).

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Getting Research in the Hands of Practitioners: Technology Transfer Summaries

[Technology transfer summaries](#) are two-to-four-page summaries of research projects that include color photos, graphs, and illustrations. They convey the gist of the research in an easily digestible format.

- [Improving Concrete Pavement Curing](#) (*94 kb pdf), December 2004
- [Using the Air Void Analyzer for Real-Time Quality Control Adjustments in the Field](#) (*288 kb pdf), November 2004
- [Developing a Visual Electronic Design and Specifications System](#) (*266 kb pdf), October 2004
- [Soil Compaction Monitoring Technology](#) (*700 kb pdf), September 2004
- [Reassessing Two-Lift Paving](#) (*62 kb pdf), September 2004
- [Role of Passenger Vehicle and Heavy Truck Speed Differences in Emissions Modeling](#) (*101kb pdf), September 2004
- [Material and Construction Optimization for Prevention of Premature Pavement Distress in PCC Pavements, Phase 1](#) (*203 kb pdf), September 2004

* To view pdf files, you may need to [download the free Adobe Acrobat Reader](#).

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Cover from a tech transfer summary



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SUDAS Manuals Have New Owners

On February 17, 2005, the Central Iowa Committee, the original founders of the urban design standards and standard specifications, acted to officially transfer ownership of the manuals to the [Iowa Statewide Urban Design and Specifications \(SUDAS\)](#) Corporation. The committee voted unanimously in favor of the transfer. With this transfer, the Central Iowa Committee officially disbanded membership; however, several members from the committee serve on the SUDAS District 1 Committee.

The SUDAS Corporation will continue with business as planned. Here's what's in the works for SUDAS:

- Complete revisions to the sanitary sewer design chapter.
- Review and revise specifications for sanitary sewer construction, including trench, backfill, and trenchless; sewers and drains; and structures for sanitary and storm sewers.
- Complete revisions to the structural design of pipe design section (which will be moved from the stormwater design chapter to the utilities design chapter).
- Review and revise the stormwater management design chapter, including quality and quantity, and the related specifications division.
- Add a compost section and revise the seeding section in the site work and landscaping specifications division.
- Review and rewrite the hot mix asphalt specifications section with emphasis on quality control. Add the Gyrotory Mix Selection Guide for Local Agencies to the roadway design chapter of the design manual.
- Review and revise traffic signal specifications.

SUDAS is also working on five research projects:

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- [Design Guide and Construction Specifications for NPDES, Phase II, Site Runoff Control](#)
- Investigation of Improved Utility Cut Repair Techniques to Reduce Settlement in Repaired Areas
- [Object-Oriented Design and Specifications](#)
- Review of Inconsistencies between SUDAS and Iowa DOT Specifications
- [Design Guide for Improved Quality of Roadway Subgrade and Subbases](#)

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Recently Completed Research

Below is a list of projects that were completed between August 2004 and February 2005. All links will take you off site.

CTRE projects

- [Impact of Left-Turn Phasing on Older and Younger Drivers at High-Speed Signalized Intersections](#)
- [Statewide Urban Standard Design & Specifications](#)
- [Traffic Monitoring Program Planning with Remote Sensing Phase II](#)
- [Rural Expressway Intersection Synthesis of Practice and Crash Analysis](#)
- [Incident Location Tool Support for Florida State University](#)
- [Access Management Plan for Des Moines MPO](#)

Construction Management & Technology projects

- [Field Evaluation of Compaction Monitoring Technology: Phase I \(TR-495\)](#)
- [Development of Object-Oriented Specifications for Iowa DOT and Urban Standards \(TR-487\)](#)

Bridge Engineering Center project

- [Steel Diaphragms in Prestressed Concrete Girder Bridges \(TR-424\)](#)

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Researchers developed a prototype program that models a city street intersection including turn lanes, pavement markings, traffic control signal system, intake and storm sewer, and underground utilities.



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Midwest Transportation Consortium projects

- [Identification and Development of User Requirements to Support Robust Corridor Investment Models](#)

Center for Portland Cement Concrete Pavement Technology projects

- [Two Lift Portland Cement Concrete Pavements to Meet Public Needs](#)
- [Developing Smooth, Quiet Concrete Pavements](#)
- [Development of Performance Properties of Ternary Mixtures](#)
- [Defining the Attributes of Good In-Service Portland Cement Concrete Pavements](#)

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Recently Started Research

Below is a list of projects that were started between August 2004 and February 2005. All links will take you off site.

CTRE projects

- [Integration of Road Weather Information with Traffic Data](#)
- [I-90 Corridor Study](#)
- [Use of Functional Silos to Optimize Agency Decision Making](#)
- [Incident Location Tool Support for North Dakota DOT](#)
- [Feasibility of Cooperative Development of Wetland Mitigation Projects](#)
- [One- to Two-Way Roadway Conversions](#)
- [Appropriate Traffic Calming Techniques for Small Iowa Communities](#)
- [Development of a New Process for Determining Design Year Traffic Demands TR 528](#)
- [Midwest Smart Work Zone Deployment Initiative](#)
- [Design Guide for Improved Quality of Roadway Subgrades and Subbases \(TR-525\)](#)

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Construction Management & Technology projects

- [Developing an Effective Construction Training Program for Hispanic Supervisors and Craft Workers--Phase III](#)

Bridge Engineering Center projects

- [Impacts of Overweight Implements of Husbandry on Minnesota Roads and Bridges](#)

- [Construction and Evaluation of a Prestressed Concrete Bridge Constructed Using Ultra High-Performance Concrete](#)

Center for Portland Cement Concrete Pavement Technology projects

- [Develop a Simple and Rapid Test for Monitoring the Heat Evolution of Concrete Mixtures for both Laboratory and Field Applications](#)
- [Assessing the Impact to Concrete Pavement Smoothness from Curling, Warping, and Other Early-Age Behavior: Early, Frequent, and Detailed](#)

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