

Publications Catalog

Update

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This 2016 update supplements the *CTS Publications Catalog* published in 2004 and subsequent annual updates. A listing of all publications available from CTS along with ordering information are online at www.cts.umn.edu.

Research Reports

Transportation-related research reports by University of Minnesota researchers, published by CTS, MnDOT, the Minnesota Local Road Research Board, and other sponsors in 2015. These reports are available in PDF format at www.cts.umn.edu/Publications/ResearchReports/.

Transportation Planning and the Economy

Access Across America: Walking 2014

Andrew Owen, David M. Levinson, Brendan Murphy
Report no. CTS 15-03
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2420>

Access Across America: Walking 2014 Methodology

Andrew Owen, David M. Levinson
Report no. CTS 15-04
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2422>

Exploring Strategies for Promoting Modal Shifts to Transitways

Jason Cao, Yingling Fan, Andrew Guthrie, Yi Zhang
Report no. MnDOT 2015-49
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2478>

The Influences of the Hiawatha LRT on Changes in Travel Behavior: A Retrospective Study on Movers

Jason Cao, Alireza Ermagun
Report no. CTS 15-10
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2466>

The Minnesota Bicycle and Pedestrian Counting Initiative: Implementation Study

Greg Lindsey, Michael Petesch, Steve Hankey
Report no. MnDOT 2015-34
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2454>

MnPASS Modeling and Pricing Algorithm Enhancement

John Hourdos, Michael Janson, David M. Levinson, Gordon Parikh
Report no. MnDOT 2015-22
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2430>

Real Estate Development in Anticipation of the Green Line Light Rail Transit in St. Paul

Jason Cao, Dean Porter
Report no. CTS 15-09
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2464>

Statewide Cycloplan: Bicycle Planning Tool & Participatory GIS

Loren Terveen
Report no. MnDOT 2015-29
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2440>

Transportation Investment and Economic Development in Minnesota Counties

Zhirong Zhao
Report no. MnDOT 2015-12
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2414>

Transportation Planning to Support Economic Development: An Exploratory Study of Competitive Industry Clusters and Transportation in Minnesota

Lee Munnich, Michael Iacono, Jonathan Dworin, Bethany Brandt-Sargent
Report no. MnDOT 2015-02
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2400>

Travel Behavior Over Time

David M. Levinson, Greg Lindsey, Yingling Fan, Jason Cao, Michael Iacono, Martin Brosnan, Andrew Guthrie, Jessica Schoner
Report no. MnDOT 2015-23
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2460>

Transportation Safety and Traffic Flow

Development of Active Traffic Management Strategies for Minnesota Freeway Corridors

Eil Kwon, Chongmyung Park
Report no. MnDOT 2015-26
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2434>

Development of Guidelines for Permitted Left-Turn Phasing Using Flashing Yellow Arrows

Gary A. Davis, John Hourdos, Vahid Moshagh
Report no. MnDOT 2015-27
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2446>

Development of a Sensor Platform for Roadway Mapping: Part B - Mapping the Road Fog Lines

Brian Davis, Max Donath
Report no. MnDOT 2015-11
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2412>

Estimation of Winter Snow Operation Performance Measures with Traffic-Flow Data, Phase 2

Eil Kwon, Chongmyung Park, Seongah Hong, Soobin Jeon
Report no. MnDOT 2015-44
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2462>

Evaluating Twin Cities Transitways Performance and their Interaction with Traffic on Neighboring Major Roads

John Hourdos, Derek Lehrke
Report no. MnDOT 2015-09
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2410>

Field Implementation, Testing, and Refinement of Density Based Coordinated Ramp Control Strategy

John Hourdos, Nikolas Geroliminis, Stephen Zitzow, Ypatia Limniati
Report no. MnDOT 2015-37
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2448>

Human Factors of Vehicle-Based Lane Departure Warning Systems

Christopher Edwards, Jennifer Cooper, Alice Ton
Report no. MnDOT 2015-35
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2452>

Impact of Exempting the Recording of Low Level Speed Violations In Minnesota

Frank Douma, Nebiyou Tilahun, Spencer Peck
Report no. CTS 15-01
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2406>

Implementation of Traffic Data Quality Verification for WIM Sites

Chen-Fu Liao, Indrajit Chatterjee, Gary A. Davis
Report no. MnDOT 2015-18
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2428>

Interstate 35E MnPASS Managed Lanes Extension: Little Canada Road to County Road 96 Pre-Implementation Study

Frank Douma
Report no. CTS 15-05
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2432>

Appendix H I-35E MnPASS Extension Land Use Study Support, Encourage, and Enhance Transit & Carpool Use

Lee Munnich
Report no. CTS 15-05 Appendix H
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2438>

Lighting Levels for Isolated Intersections: Leading to Safety Improvements

Christopher Edwards
Report no. MnDOT 2015-05
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2402>

Transportation Infrastructure

Development and Integration of Advanced Timber Bridge Inspection Techniques for NBIS

Brian Brashaw, Justin Dahlberg, Travis Hosteng, James Wacker
Report no. MnDOT 2015-01
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2404>

Effect of Temperature on Prestressed Concrete Bridge Girder Strand Stress During Fabrication

Tanner W. Swenson, Catherine E. French
Report no. MnDOT 2015-50
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2476>

Laboratory Performance Test for Asphalt Concrete

Eshan V. Dave, Chelsea E. Hanson, Benjamin Helmer, Jay Dailey, Chelsea M. Hoplin
Report no. MnDOT 2015-24
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2436>

Matrix (Partially Grouted) Riprap Lab Flume Study

Jeff Marr, Rita Weaver, Omid Mohseni, Craig A. Taylor, Jon Hilsendager, Sara Mielke
Report no. MnDOT 2015-15
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2418>

Permeable Pavements in Cold Climates: State of the Art and Cold Climate Case Studies

Peter Weiss, Masoud Kayhanian, Lev Khazanovich, John S. Gulliver
Report no. MnDOT 2015-30
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2444>

Protocols and Criteria for Acoustic Emission Monitoring of Fracture-Critical Steel Bridges

Anton S. Tillmann, Arturo E. Schultz, Javier E. Campos
Report no. MnDOT 2015-36
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2450>

Environment and Energy in Transportation

Assessing the Use of Shrub-Willows for Living Snow Fences in Minnesota

Diomy Zamora, Eric Ogdahl, Gary Wyatt, David Smith, Gregg Johnson, Dean Current, Dan Gullickson
Report no. MnDOT 2015-46
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2468>

Determination of Effective Impervious Area in Urban Watersheds

Ali Ebrahimian, John S. Gulliver, Bruce Wilson
Report no. MnDOT 2015-41
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2458>

Minnesota Steel Culvert Pipe Service-Life Map

Barbara Heitkamp, Jeff Marr
Report no. MnDOT 2015-31
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2442>

Sediment Transport through Recessed Culverts: Laboratory Experiments

Jessica Kozarek, Sara Mielke
Report no. MnDOT 2015-08
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2408>

Web-Based Preventative Blowing and Drifting Snow Control Calculator Decision Tool

Gary Wyatt, Diomy Zamora, David Smith, Dan Gullickson, Dean Current
Report no. MnDOT 2015-21
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2426>

Research Summaries

Perception of Waiting Time at Transit Stops and Stations

Yingling Fan, Andrew Guthrie, David M. Levinson
CTS Research Brief 2015-02
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2506>

Real Estate Development Impacts of Transitway Funding Announcements

Jason Cao
CTS Research Brief 2015-01-V2
<http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2474>

Annual Reports

2015 CTS Annual Report

<http://www.cts.umn.edu/sites/default/files/files/publications/annual/CTS/Annual/Report.pdf>

Newsletters

CTS publishes print and electronic newsletters covering many facets of transportation, including research, public policy, and engineering. Subscribe online at:
<http://www.cts.umn.edu/Publications/subscribe/>

CTS Catalyst

A publication on the latest transportation innovations at the University of Minnesota (monthly). Available in both print and e-mail.

Minnesota LTAP Exchange

A newsletter of the Minnesota Local Technical Assistance Program (LTAP) (print newsletter; quarterly).

Minnesota LTAP Exchange Express

E-mail newsletter with new publications and resources from various sources, plus other items of interest to local agencies (periodic).

Roadway Safety Institute News

E-mail news update about research and educational activities at the Roadway Safety Institute (quarterly).

AirTAP Briefings

News and how-to information for personnel operating, maintaining, and administering Minnesota's public-use airports (periodic) Available in both print and electronic formats.

CTS Freight & Logistics E-News

News and events from the community of freight and logistics professionals (periodic).

Journals

Journal of Transport and Land Use

An open-access, peer-reviewed online journal publishing original inter-disciplinary papers on the interaction of transport and land use.

<http://www.jtlu.org>

Videos

These and other videos are available at <http://www.cts.umn.edu/Publications/videos/> and on the CTS YouTube channel: <http://www.youtube.com/ctsumn>.

2015-16 CTS Research Highlights Video

This year's video highlights several research and education initiatives.

Better Designs for Minnesota Concrete Pavements
An overview of the 2015 CTS Research Partnership Award winning MnPAVE—Rigid concrete pavement design tool development project. <https://www.youtube.com/watch?v=RgBbZEqde4k>

CTS 2015-16 Seminar Series

Available for viewing online at www.cts.umn.edu/events/seminars/

December 16, 2015

"Guidelines for Permeable Pavement Systems"

CTS Research Seminar

John Gulliver is a professor in the Department of Civil, Environmental, and Geo- Engineering and a resident fellow at the Institute on the Environment.

<http://www.cts.umn.edu/events/seminars/2015/121615>

December 10, 2015

"A Positioning and Mapping Methodology Using Bluetooth and Smartphone Technologies to Support Situation Awareness and Wayfinding for the Visually Impaired"

Roadway Safety Institute Seminar

Chen-Fu Liao is the senior systems engineer at the Minnesota Traffic Observatory at the University of Minnesota.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/121015/index.html>

December 3, 2015

"Distracted Driving: The Last Two Seconds of Your Life"

Roadway Safety Institute Seminar

Donald L. Fisher is the head of the Department of Mechanical and Industrial Engineering at the University of Massachusetts Amherst, as well the director of the Arbella Insurance Human Performance Laboratory in the College of Engineering.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/120315/index.html>

November 19, 2015

"Pedestrian Safety, Pedestrian Behavior, and Intersection Design and Control"

Roadway Safety Institute Seminar

Per Garder is a professor in the Department of Civil and Environmental Engineering at the University of Maine.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/111915/index.html>

November 12, 2015

"Assessing Roadway Safety Risks in American Indian Reservations"

Roadway Safety Institute Seminar

Kathy Quick is an assistant professor at the University of Minnesota's Humphrey School of Public Affairs. Guillermo Narvaez is a research associate at the University of Minnesota's Humphrey School of Public Affairs.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/111215/index.html>

November 5, 2015

"Magnetic Sensor Systems for Collision Prediction, Traffic Counting, and Other Applications"

Roadway Safety Institute Seminar

Rajesh Rajamani is a professor of mechanical engineering at the University of Minnesota.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/110515/index.html>

October 22, 2015

"Automated Identification and Extraction of Horizontal Curve Information from GIS Roadway Maps: Improving Safety on All Roadways"

Roadway Safety Institute Seminar

David Noyce is the Arthur F. Hawnn Transportation Engineering Professor and Chair of the Department of Civil and Environmental Engineering and the director of the Traffic Operations and Safety (TOPS) Laboratory at the University of Wisconsin—Madison (UW-Madison).

<http://www.roadwaysafety.umn.edu/events/seminars/2015/102215/index.html>

October 21, 2015

"Accessibility Metrics for Metropolitan Analysis and Planning"

CTS Research Seminar

Andrew Owen is the director of the Accessibility Observatory and a research fellow in the Department of Civil, Environmental, and Geo- Engineering at the University of Minnesota.

<http://www.cts.umn.edu/events/seminars/2015/102115>

October 15, 2015

"Unmanned Aircraft Systems in Traffic and Infrastructure Surveillance: Opportunities and Challenges"

Roadway Safety Institute Seminar

Demoz Gebre-Egziabher is an associate professor and director of graduate studies in the Department of Aerospace Engineering and Mechanics at the University of Minnesota.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/101515/>

October 8, 2015

"Modeling the Effects of Drivers' Adaptive Behavior on System Safety"

Roadway Safety Institute Seminar

Linda Ng Boyle is a professor and chair of the Department of Industrial and Systems Engineering at the University of Washington.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/100815/index.html>

October 1, 2015

"Low-Cost Centimeter-Accurate Mobile Positioning"

Roadway Safety Institute Seminar

Todd E. Humphreys is an associate professor in the Department of Aerospace Engineering and Engineering Mechanics at the University of Texas at Austin and director of the UT Radionavigation Laboratory.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/100115/index.html>

September 24, 2015

“Traffic Monitoring in Safety-Critical Environments”

Roadway Safety Institute Seminar

Daniel Work is an assistant professor in the Department of Civil and Environmental Engineering, the Department of Electrical and Computer Engineering (courtesy), and the Coordinated Science Laboratory at the University of Illinois at Urbana-Champaign.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/092415/index.html>

September 17, 2015

“Characterizing Uncertainty in Left-Turn Crash Reconstructions Using Event Data Recorder Data”

Roadway Safety Institute Seminar

Gary Davis is a professor in the Department of Civil, Environmental, and Geo- Engineering at the University of Minnesota.

<http://www.roadwaysafety.umn.edu/events/seminars/2015/091715/index.html>

September 10, 2015

“The Minnesota Strategic Highway Safety Plan”

Roadway Safety Institute Seminar

Brad Estochen is the state traffic safety engineer at the Minnesota Department of Transportation (MnDOT).

<http://www.roadwaysafety.umn.edu/events/seminars/2015/091015/index.html>

How to Obtain These Publications

Titles of publications are listed in alphabetical order under subject area. Most publications, where noted, are available in electronic format online at no charge. Publications also may be requested from CTS. A complete listing of all publications available from CTS and ordering information may be found online at:


www.cts.umn.edu/publications

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