

North American Travel Monitoring EXPOSITION AND CONFERENCE

Program

GENERAL SESSIONS

Opening Session, Monday, June 5, 8:30 a.m.–10:00 a.m., Hyatt, Nicollet Ballroom

Jonette Kreideweis, Minnesota Department of Transportation, presiding

Welcome to Minneapolis

Elizabeth Glidden, Vice Chair, Minneapolis Transportation and Public Works Committee

Why Traffic Data Are Important in Minnesota

Carol Molnau, Lieutenant Governor, Minnesota

Traffic Data for Effective Decision Making: The Need Is (and Will Be) Greater Than Ever

Michael D. Meyer, Georgia Institute of Technology

Are Traffic Monitoring Programs Meeting Customer Needs?

Barna Juhasz, Federal Highway Administration

Lieutenant Governor and Commissioner Carol Molnau will welcome conference participants to Minnesota and share her thoughts about the growing importance of traffic data to long-range planning, operations management, project scoping and design, safety, and traveler information programs. In an era of tough choices and competing priorities, she will also comment on how a strong state data program can make transportation organizations more accountable, performance-based, and customer-focused.



Molnau

Michael D. Meyer of the Georgia Institute of Technology will examine the important role that quality data has in the types of decision making facing transportation agencies today, and the types of decisions that officials will be facing in the future. Although the level of investment in transportation is more today than ever before, the mobility needs of our states and communities are even greater. Choosing the best and most cost-effective set of strategies and actions for enhancing such mobility will rely on valid and credible data on what is happening today, and what will likely happen in the future. The presentation will address such questions as: Why are traffic data important? How can public-sector data providers play a more important and relevant role in decision support? What is changing in the environment of transportation planning and decision making that could place additional challenges on data collection, but that might also represent important opportunities for enhancing the data collection role?



Meyer

June 4-7, 2006



Traffic monitoring programs serve many customers in the transportation community. Barna Juhasz will discuss traffic monitoring data in relation to a variety of customer requirements and will present an update on FHWA initiatives for enhancing traffic monitoring programs to meet those needs.

Luncheon, Wednesday, June 7, Noon–1:30 p.m., Hyatt, Regency

Jonette Kreideweis, Minnesota Department of Transportation, presiding
Sponsored by NATMEC Planning Committee

The I-394 MnPASS Lane: A New Choice for Commuters

Lee W. Munnich, University of Minnesota

Lee Munnich will report on lessons learned during the first year of operation of the I-394 MnPASS lane and preliminary evaluation results, including public attitudes toward the project. Lee Munnich is a senior fellow and director of the State and Local Policy Program of the University of Minnesota's Humphrey Institute of Public Affairs. For the past twelve years Munnich has led the Humphrey Institute's research, education, and outreach activities on congestion pricing and value pricing. His work in Minnesota and at the national level have had a significant impact on policy leaders' understanding and public perceptions of value pricing, and has led directly to Minnesota's first HOT-lane project.



Munnich

Closing Session: A Traffic Data Agenda for the Future, Wednesday, June 7, 4:00 p.m.–5:00 p.m., Hyatt, Regency

Mark E. Hallenbeck, University of Washington, presiding

This session wraps up the conference with three different perspectives on areas in which the traffic data community has made significant progress—and in which significant challenges remain. The presentations will set the direction for NATMEC 2008. A general discussion will follow the formal presentations.

A Traffic Monitoring Perspective

Mark P. Gardner, Fugro Consultants LP

An Operations Perspective

Leslie N. Jacobson, PB Farradyne

A Policy and Planning Perspective

Johanna P. Zmud, NuStats Partners LP

Chronology of Sessions

Monday, June 5, 2006

7:30 a.m.–8:30 a.m., Nicollet Promenade
Continental Breakfast

June 4–7, 2006

8:30 a.m.–10:00 a.m., Hyatt, Nicollet Ballroom

Opening Session

Jonette Kreideweis, Minnesota Department of Transportation, presiding

Michael D. Meyer of the Georgia Institute of Technology will examine the important role that quality data has in the types of decision making facing transportation agencies today, and the types of decisions that officials will be facing in the future. Although the level of investment in transportation is greater today than ever before, the mobility needs of our states and communities are even greater. Choosing the best and most cost-effective set of strategies and actions for enhancing such mobility will rely on valid and credible data on what is happening today, and what will likely happen in the future. The presentation will address such questions as: Why are traffic data important? How can public sector data providers play a more important and relevant role in decision support? What is changing in the environment of transportation planning and decision making that could place additional challenges on data collection, but which might also represent important opportunities for enhancing the data collection role?

Welcome to Minneapolis

R.T. Rybak, City of Minneapolis

Why Traffic Data Are Important in Minnesota

Carol Molnau, Minnesota Department of Transportation

Traffic Data for Effective Decision Making: The Need Is (and Will Be) Greater Than Ever

Michael D. Meyer, Georgia Institute of Technology

Are Traffic Monitoring Programs Meeting Customer Needs?

Barna Juhasz, Federal Highway Administration

10:00 a.m.–10:30 a.m., Nicollet Promenade

Break

10:30 a.m.–noon, Hyatt, Greenway D

Looking Ahead: Challenges and Opportunities for Traffic Data Programs in 2011

Robert C. Johns, University of Minnesota, presiding

This session will explore the political, institutional, and policy changes that have potential to impact travel monitoring programs, products, and services over the next 5 years. It will specifically focus on anticipated changes in traffic needs requirements, organizational arrangements, and resource opportunities and constraints that influence the delivery of quality traffic data products and services. It should be of interest to traffic data program managers; state, metro area and operations data specialists; researchers and managers of local public works programs.

Future Challenges and Opportunities for Traffic Data Programs—Panel Discussion

Michael D. Meyer, Georgia Institute of Technology

Rick Arnebeck, Minnesota Department of Transportation

Timothy J. Lomax, Texas Transportation Institute

Megan Beardsley, U.S. Environmental Protection Agency

10:30 a.m.–noon, Hyatt, Greenway B
“How-To 101”—Equipment and Sensors

Bill Cloud, Montana Department of Transportation, presiding

Recently there has been a large turnover in traffic monitoring personnel. Many of the states have lost vast stores of knowledge as people have retired or moved on to other positions. Presenters in this session will share the basics and some best practices on day-to-day field operations as well as installation and maintenance of equipment and sensors. This information will be especially useful to traffic monitoring technicians and supervisors.

How to Track Site and/or Equipment Maintenance—A Short Presentation

Ron Wuertley, Montana Department of Transportation

Portable WIM in Wet and Cold Conditions

Daniel Ray Inabnitt, Southern Traffic Services

Best Practices for QA of Traffic Monitoring Equipment Installation

Dean J. Wolf, MACTEC Engineering & Consulting, Inc.

10:30 a.m.–noon, Hyatt, Regency

Who Are Customers for Data Collected in Operations

Robert M. Winick, Motion Maps, LLC, presiding

There are many customers for data collected by operators in addition to the operations staffs themselves. There is a need for the spectrum of customers to help define and refine their needs and requirements for this type of data so that the operations activities can be more responsive.

Customers for Transportation Operations Data: ADMS Virginia Experience

Ramkumar Venkatanarayana and Brian Lee Smith, University of Virginia

Creating Uses and Customers for Massive Operational Data: From HOV Effectiveness to the Congestion Pie

Jaimyoung Kwon, California State University, East Bay

Pravin P. Varaiya, University of California, Berkeley

Using Archived ITS Data in Traditional Planning Programs: Phoenix Case Study

Shawn M. Turner, Texas Transportation Institute

Mark Schlappi, Maricopa Association of Governments

Traffic Data Needs and Potential Sources for EPA’s Modal Emissions Model—Multi-Scale Motor Vehicle and Equipment Emission System (MOVES)

Oliver Gao, Cornell University

10:30 a.m.–noon, Hyatt, Greenway J

Exhibitor Presentations

Ed Christopher, Federal Highway Administration, presiding

Transportation Research Board (10:30 a.m.)

Overview of TRB.

The Traffic Group (11:00 a.m.)

Automated License Plate Recognition (ALPR). The ALPR-specific camera and data processing unit collects, deciphers, and stores license plate image data and all corresponding event information. A license plate image is captured and processed by an Optical Character Recognition (OCR) software program. With this cutting-edge technology, The Traffic Group, Inc., can lead you to the successful completion of a variety of projects including ori-

gin and destination studies, travel-time studies, and congestion and recognition studies. ALPR Studies help identify travel patterns and roadway requirements; specifically, areas that generate the most traffic. ALPR can capture the data you need in a non-intrusive manner.
Intercomp Company (11:30 a.m.)

Noon–2:00 p.m., Exhibit Hall

Lunch

2:00 p.m.–3:30 p.m., Hyatt, Greenway B

Update of AASHTO Guidelines for Traffic Data Programs–Workshop

Anita Vandervalk, Cambridge Systematics, Inc., presiding

The AASHTO Guidelines for Traffic Data Programs were published in 1992. Since that time there have been significant changes in technology and tools available for collecting, managing, and reporting traffic data. The guidelines are being updated to reflect new methodologies and requirements for traffic data programs.

This workshop will be an opportunity to review recommended revisions to the guidelines and to incorporate practitioner feedback. The format will include short presentations and facilitated discussion to receive input on the content of the recommended revisions to the guidelines.

The topic areas to be covered in the guidelines include

1. Summary of state traffic monitoring program surveys;
2. Traffic data applications, including performance measures and other customer needs for information resulting from traffic data;
3. Traffic data collection needs, such as types of counts, methods to maximize counting efforts, and estimating equipment, scheduling, and personnel needs;
4. Traffic monitoring equipment, including quality assurance;
5. Quality control and editing;
6. Summarizing, reporting, and managing traffic data; and
7. Integrating ITS-generated data, including case studies of best practices.

Panelists

Joe Wilkinson, Chaparral Systems Corporation
Mark E. Hallenbeck, University of Washington
Shawn M. Turner, Texas Transportation Institute

2:00 p.m.–3:30 p.m., Hyatt, Regency

Using Traffic Data to Support Traveler Information Programs

Ginny Crowson, Short Elliott Hendrickson Inc. (SEH), presiding

Travel time reliability is becoming an increasingly important issue throughout the country. Travelers want better information on how weather, incidents, construction schedules, and congestion impact their travel plans. This session will explore best practices in using traffic data to develop effective traveler information programs for sharing system performance information with the public.

The Illinois Tollway Traffic and Incident Management System: Meeting Today's Challenges, Planning for Tomorrow, and Measuring Success

Raghu Kowshik, Wilbur Smith Associates
John Benda, Illinois State Toll Highway Authority

Travel Time Index and Travel Time Index Variability: Uses in Congestion Measurement and Traveler Information

Angshuman Guin and Christopher Porter, URS Corporation

Comparative Analysis Of Various Travel Time Estimation Algorithms to Ground Truth Data Using Archived Data

Christopher M. Monsere, Kristin A. Tufte, Robert Lawrence Bertini, Sirisha Kothuri and Aaron Breakstone, Portland State University

2:00 p.m.–3:30 p.m., Hyatt, Greenway D

University–DOT Partnerships: Making It Work

Ramkumar Venkatanarayana, University of Virginia, presiding

In recent years, a number of state DOTs have partnered with their state universities to create archives of traffic and event data collected in transportation operations activities (these have often been referred to as ITS data archives). Ideally, the partnership benefits DOTs by providing them access to state-of-the-art information technology and innovative ideas for a reasonable investment; and benefits universities by providing a wealth of data and challenging research opportunities. However, there have also been cases where the “partnership” has simply become a data transfer—with little or no interaction and cooperation between the organizations. The purpose of this session is to explore what it takes to make university DOT data partnerships work for both parties. The session is ideal for data program managers and university researchers to learn key success factors for building working relationships.

University Partners: A Review of Current Practice for Archived Data

Catherine Theresa Lawson, State University of New York, Albany

University of Maryland CATT Lab

Michael Lee Pack, University of Maryland, College Park

Virginia’s Experience with University Data Partnerships: The Hampton Roads Smart Traffic Center and the Smart Travel Laboratory

Stephany D. Hanshaw, Virginia Department of Transportation

Partnering to Create an Innovative and Flexible Traffic Information System for Manitoba

Alan M. Clayton, Jeannette Montufar, and Jonathan Regehr, University of Manitoba
Ben Rogers, Manitoba Department of Transportation and Government Services, Canada

2:00 p.m.–3:30 p.m., Hyatt, Greenway J

Exhibitor Presentations

Joseph Avis, California Department of Transportation, presiding

Sensys Networks, Inc. (2:00 p.m.)

Sensys Networks is pleased to introduce the VDS240 Vehicle Detection System. Combining the proven detection performance of magnetometers with the latest generation of ultra low power wireless communications, the VDS240 Vehicle Detection System provides a wealth of data collection measurements in a simple, yet powerful system architecture.

PTV America, Inc. (2:30 p.m.)

PTV America employs innovative transportation technologies for progressive organizations by providing visionary software, collaborative services, and committed support, improving quality of life through safe and efficient mobility. We are a multidisciplinary transportation software and consulting firm, and a subsidiary of PTV AG in Germany. As the North American distributor, PTV America also provides technical support, software customization, and training services for PTV software across two fields: (1) Traffic—whether road, rail, or

public transport-intelligent planning, use of the traffic infrastructure is the key focus of activities for the traffic business field; and (2) Mobility: we offer Telematics providers, traffic operation centers, and Internet destinations an optimum platform as well as the latest technologies for web, WAP, and traceable mobile devices. With our headquarters located in Corvallis, Oregon, PTV America maintains additional offices in Vashon, Washington; Wilmington, Delaware; Vancouver, British Columbia; and Chicago, Illinois.

Cellint Traffic Solutions (3:00 p.m.)

Data quality standards.

3:30 p.m.–4:00 p.m., Exhibit Hall

Break

4:00 p.m.–5:30 p.m., Hyatt, Greenway D

Data Requirements in the Transportation Reauthorization Legislation

Ed Christopher, Federal Highway Administration, presiding

While Congress and the administration debated, discussed, and developed the transportation reauthorization bill, many in the transportation data community kept a watchful eye on the data implications of the new legislation. The results of this effort culminated in two national conferences where the data aspects of the legislation were discussed; one in November of 2003, and another in December 2005. The intent of the conferences was to jump start those responsible for overseeing the implementation of the legislation while assuring that the relevant data issues were not overlooked. In this session the results of the two data needs conferences will be discussed while focusing on those data issues of most relevance to the NATMEC community. This session will also feature key national speakers who will present data needs related to reauthorization that have evolved since the conference in December.

Recapping the Data Requirements in Transportation Reauthorization Legislation Conference

Anita Vandervalk, Cambridge Systematics, Inc.

Panel Discussion: SAFETEA-LU and the NATMEC Community

Timothy J. Lomax, Texas Transportation Institute

Ralph A. Gillmann and Rich Taylor, Federal Highway Administration

4:00 p.m.–5:30 p.m., Hyatt, Greenway B

Weigh-in-Motion Data Issues

Gene Hicks, Minnesota Department of Transportation, presiding

This session will address some of the issues surrounding the collection and analyzing of WIM data. Sessions will cover best practices for analyzing and reporting WIM data and performing system diagnostics, in addition to investigating web-based connections to allow faster access to WIM data.

An Evaluation of Quartz-Piezoelectric Weigh-in-Motion Technology—Final Report

Anne-Marie H. McDonnell, Connecticut Department of Transportation

Remote Review and Validation—Pulling the Trigger for a Site Visit

Dean J. Wolf, MACTEC Engineering & Consulting, Inc.

WIMCal: An Accuracy Assessment Tool for South Carolina

Ed Bethea, South Carolina Department of Transportation

Herbert F. Southgate, Consultant

An Evaluation of Quartz-Piezo Electric Weigh-in-Motion Sensors

Ronald P. White, University of Texas, Austin
Dan Middleton, Texas Transportation Institute
Jongchul Song, University of Texas, Austin
Carl Haas, University of Waterloo, Canada

4:00 p.m.–5:30 p.m., Hyatt, Regency

“New” Data Sources: Cell Phones for Traffic Monitoring

Elaine Murakami, Federal Highway Administration, presiding

In 2004, it is estimated that there were over 182 million cell phones in use in the United States. Tapping into this large set of potential probes could provide real-time travel speed information across the entire transportation network, not limited to highways. That is, the breadth of coverage is ubiquitous, and it avoids those heavy equipment installation costs. Several projects have been completed in the last year, and results from these tests and the potential value for traffic management, long-range planning, and policy analysis will be explored.

Maryland DOT Multimodal Traveler Information System (MMTIS)

Michael J. Zezeski, Maryland State Highway Administration

Missouri DOT Cell Phone Project

Michelle Teel, Missouri Department of Transportation

Hampton Roads (VDOT)

Stephany D. Hanshaw, Virginia Department of Transportation

Traffic Condition Monitoring Using Anonymous Tracking of Wireless Devices

Michael Daniel Fontaine, Virginia Transportation Research Council

Brian Lee Smith, University of Virginia

4:00 p.m.–5:00 p.m. (Meet at 3:34 p.m. in front of hotel; see page 7)

Technical Tours

Tuesday, June 6, 2006

7:30 a.m.–8:30 a.m., Greenway Promenade

Continental Breakfast

8:00 a.m.–noon, Hyatt, Mirage

NATMEC Poster Session 1

Ralph A. Gillmann, Federal Highway Administration, presiding

See and hear from your peers in other states about their challenges and successes.

Ohio DOT Piezo WIM Bench Tester

Steven Jessberger, Ohio Department of Transportation

Traffic Data Reporting from Kansas

William Hughes, Kansas Department of Transportation

Pennsylvania’s Deployment Plan of Non-Intrusive Equipment for Short-Term Traffic Counts

Gaye F. Liddick, Pennsylvania Department of Transportation

June 4–7, 2006

Using AADT in the Highway Safety Improvement Program to Identify Hazardous Intersections

Jack R. Stickel, Alaska Department of Transportation and Public Facilities
Mary Ann Dierckman, Alaska Department of Transportation and Public Facilities
Paul Marrero, Wostmann & Associates, Inc.

Identifying Inaccurate Weigh-in-Motion Data Attributed to Vehicle Dynamics

Andrew P. Nichols, University of South Carolina
Darcy M. Bullock, Purdue University

Using Pivot Tables to Query and Analyze Large Amounts of Traffic Data

Andrew P. Nichols, University of South Carolina
Darcy M. Bullock, Purdue University

Assessing Past Traffic Forecasts and ESAL Calculations: Implications for Pavement Design

Oscar Martinson and George Cepress, Minnesota Department of Transportation

Setting Forth Recommendations for a New Traffic Monitoring System for the Federal Lands Highway Park Roads and Parkway Program

Frank Corrado, Federal Highway Administration Federal Lands

Vehicle Classification Tables—WIM versus AVC

Herbert F. Southgate, Consultant

PennDOT's Traffic Growth Forecasting System

Laine A. Heltebride, Pennsylvania Department of Transportation

Tools for "Visualizing" High Speed Weigh-in-Motion (HSWIM) Archived Data: Freight on the Fly

Catherine Theresa Lawson, State University of New York, Albany

8:30 a.m.–10:00 a.m., Hyatt, Greenway D

Best Practices and Common Pitfalls in Acquiring Software for Traffic Data Programs

Joseph Avis, California Department of Transportation, presiding

You probably have a few examples of failed technology acquisition from projects of your own experience, ranging from interminable delays, unclear expectations, cost overruns, and to the extreme, litigation. Considering that over 70% of IT projects are late, over-budget, or fail, this session's focus on best practices and common pitfalls in the acquisition and implementation of software applications is critical. Practical guidance will be provided that attendees can immediately apply to their programs. The experience and expertise of practitioners in the field will provide the insight for professionals who are trying to enhance the effectiveness of their software acquisition methods and techniques.

A Traffic Data Manager Do's and Don'ts for Software Acquisition

Todd B. Westhuis, New York State Department of Transportation

Converting Software from Another State: Benefits and Challenges

William Beck, South Carolina Department of Transportation

A DOT Office of Information Technology Perspective on Software Development

Michael Barnes, Minnesota Department of Transportation

Keys to Successful Software Implementation from a Private Sector Software Development Manager

John Palm, Reynolds Smith and Hills

Successful System Acquisition

Mark A. Thompson, PB Farradyne, Inc.

Software Products vs. Custom Development

Joe Wilkinson, Chaparral Systems Corporation

8:30 a.m.–10:00 a.m., Hyatt, Regency

“New” Data Sources: Using GPS to Get System Speeds and Travel Times

Robert M. Winick, Motion Maps, LLC, presiding

This is one of three sessions that focus on different “new” data sources for use in travel and traffic monitoring, which in this session are data on spatial location of probe vehicles equipped with Global Positioning System (GPS) tracking devices that are used to determine speed and travel times. Presentations focus on a range of applications including urban arterial corridors, an extensive regional survey of center-to-center travel times, detailed characteristics of vehicle operations and freight–trucking travel times, and reliability in several inter-city corridors.

Monitored Vehicles vs. Probe Vehicles for Estimating Arterial System Performance

Marcelo Gurgel Simas Oliveira and William Bachman, GeoStats

Survey Design and Results of the Greater Vancouver Regional GPS Travel Time Survey

Clark Lim, Ken Tseng, and Ryan So, Greater Vancouver Transportation Authority, Canada

Collection of Light Vehicle Travel Data Using OBD-II and GPS

Robert C. Leore, Transport Canada

Measuring Travel Time in Freight Significant Corridors: Phase Three

Jeffrey Bradford Short and Daniel C. Murray, American Transportation Research Institute

8:30 a.m.–10:00 a.m., Hyatt, Greenway B

Better Techniques for Estimating Traffic Vehicle Classes

David W. Gardner, Ohio Department of Transportation, presiding

There is a growing need for accurate data relating to vehicle classification. These data have a number of uses including, but not limited to, operational analysis, bridge and pavement design, and travel forecasting and traffic monitoring. This session will present a number of examples of how practitioners are collecting and/or estimating vehicle classification data.

Estimating Vehicle Classification on High-Volume Urban Roadways Using Short-Duration Manual Counts

Brian Hoeschen, Carter and Burgess, Inc.

Tim Baker and William Johnson, Colorado Department of Transportation

Estimating Daily Truck Percentages Using Manual Counts

Rob Bostrom, Wilbur Smith Associates

Scott Thomson, Kentucky Transportation Cabinet

Estimation of Truck and Bus Travel in the Delaware Valley Region

Thabet Zakaria and Matthew T. Gates, Delaware Valley Regional Planning Commission

Using the Existing Single-Loop Detector Infrastructure to Collect Truck Traffic Volume

Jaimyoung Kwon, California State University, East Bay

Karl Petty, Berkeley Transportation Systems

8:30 a.m.–10:00 a.m., Hyatt, Greenway J

Exhibitor Presentations

Anita Vandervalk, Cambridge Systematics, Inc., presiding

Electronique Controle Mesure (ECM) (8:30 a.m.)

Introducing WIM with variable message display.

Chaparral Systems Corporation (9:00 a.m.)

Chaparral Systems Corporation displays its traffic data processing product, TRADAS 2006, and related traffic data analysis software and services. TRADAS 2006 is a signifi-

cant upgrade of Chaparral's flagship data processing product, including the migration of all new interface components to the Microsoft .NET 2005 platform. It fully integrates the processing of short-term and continuous volume, vehicle classification, length, speed, WIM, and other types of traffic data.

TimeMark Incorporated (9:30 a.m.)

10:00 a.m.–10:30 a.m., Exhibit Hall

Break

10:30 a.m.–noon, Hyatt, Regency

“New” Data Sources: GPS, RFID, Digital Aerial Imagery

Walter H. Kraft, PB Farradyne, Inc., presiding

Innovations and “new” data sources can come from many directions and disciplines. For example the RAdio Detection and Ranging technology (the current, day radar speed gun), was developed just prior to World War II as a method to detect and locate hostile aircraft at long distances. Within the traffic data world, low-flight aerial photography, satellite imagery, RFID, and other technologies are adding to current day innovations. This session will focus on bringing the latest developing technologies “down to earth” for the data community. What is next on the horizon? And more importantly what is moving into practice? Conferees who attend this session will walk away with a richer understanding and broader scope of data sources available to them.

Traffic Flow Data Extracted From Aerial Imagery

Benjamin Coifman, Michael Iswalt, Mark R. McCord, and Rabi Mishalani, Ohio State University

Yuxiong Ji, Tongji University, Shanghai, China

Uses of Airborne Imagery for Traffic Analysis

Mark D. Hickman and Pitu B. Mirchandani, University of Arizona

Emerging Data Source for Travel Time and Origin–Destination Matrix Estimation: The FasTrak Experience

Jaimyoung Kwon, California State University, East Bay

Karl Petty, Berkeley Transportation Systems

Pravin P. Varaiya, University of California, Berkeley

Using Fleet Telematics for Traffic Monitoring Purposes

Lee Waid Maynus, New York State Thruway Authority

10:30 a.m.–noon, Hyatt, Greenway D

Collect It Once, Use It Many Times: A Roundtable Discussion

Michael Berman, PBS&J, presiding

“Collect once, use repeatedly” has been a long-standing goal of transportation planners and engineers for some time. This session will bring together industry experts responsible for collecting and using transportation data to discuss how to achieve this goal. We will discuss how new technologies have brought us closer to reaching it and also what still needs to be accomplished.

National Traffic Congestion and Reliability Monitoring Program

Shawn M. Turner, Texas Transportation Institute

Rich Taylor, Federal Highway Administration

Using Segment Travel Time Data: A Toll Authority's View

L. A. Griffin, Orange County Transportation Authority

Traffic Data Management through Archiving as Traffic Events

Ramkumar Venkatanarayana, Brian Lee Smith, and Guimin Zhang, University of Virginia
Applying Innovative Technology to Advance Planning and ITS Data Sharing
Dan Middleton, Texas Transportation Institute

10:30 a.m.–noon, Hyatt, Greenway B

Length-Based Vehicle Classification

Jacqueline Hill-Brown, Federal Highway Administration, presiding

There are a number of roads in which axle sensors either cannot be installed, or else experience a short useful life. Without the axle sensors, vehicle classifiers cannot determine the Scheme “F” vehicle types. Consequently, there is growing interest by the states to classify vehicles by their length. This session will look at how some states are attempting to resolve the differences between length- and axle-based vehicle classification schemes.

Results and Challenges in Developing and Implementing a Statewide Classification Count Program Based on Vehicle Length-Based Classification

Rob E. Robinson, Illinois Department of Transportation

Analysis of Classification Using Vehicle Length: Florida Case Study

Renatus N. Mussa, Florida A&M University–Florida State University

Use of Vehicle Length Data for Classification Purposes:

The Research and a Suggested Procedure

Cindy Cornell-Martinez and Joe Wilkinson, Chaparral Systems Corporation

Truck Classification Based on Length Compared with Axle-Based Classes

Herbert F. Southgate, Consultant

10:30 a.m.–noon, Hyatt, Greenway J

Exhibitor Presentations

Sonia Morphew, Minnesota Department of Transportation, presiding

Trafficon USA (10:30 a.m.)

EIS (11:00 a.m.)

EIS Inc. (www.eistraffic.com) manufactures the RTMS radar detector for advanced traffic applications, including traffic counting. Traffic Reporter is a reliable and cost-effective solution for permanent and temporary counting facilitating the remote automatic collection of traffic data from hundreds of radar-based counting stations and the generation of user-defined and FHWA-standard reports.

MetroCount (11:30 a.m.)

Traffic Data Collection

Noon–2:00 p.m., Exhibit Hall

Lunch

2:00 p.m.–3:30 p.m., Hyatt, Greenway D

Outsource This! A Look at the Contractual Side of Outsourcing

Rich Taylor, Federal Highway Administration, presiding

Within the traffic data community the debate over outsourcing has reached a slow simmer even though the industry is replete with examples of full to partial outsourcing of services related to operations, ITS, and even HPMS. Should or should we not outsource? Those close to the issue

have vastly different viewpoints and philosophies. What do all the various contractual data agreements look like? What are the results of different approaches? How is data ownership approached? Are there any sleeping concerns? These issues are of the utmost concern for public agencies with operation, planning, and programming responsibilities. Come to this session as we delve into the contractual side of outsourcing your data program.

Panel Discussion on Outsourcing Practices

John J. Collins, Traffic.com
Richard R. Mudge, Delcan-Net Corporation
Anita Vandervalk, Cambridge Systematics, Inc.
Jim O'Neill, Westwood One/Smart Routes
David A. Zattero, Illinois Department of Transportation

2:00 p.m.–3:30 p.m., Hyatt, Regency

Quality Control/Quality Assurance for Operations Data

Dennis L. Foderberg, Short Elliott Hendrickson Inc, presiding

What are the characteristics of data from transportation operations and ITS? What quality assurance measures enable the use and integration of operations data? What quality control methods can improve data coming from operations? How can data partnerships enable better cooperation and coordination between operations and traffic data collection for planning?

An Evaluation of the Loop Detector Performance on I-71 in Columbus, Ohio

Benjamin Coifman and Ho Lee, Ohio State University

The New York State Thruway Authority Automated Traffic Quality Review System

Lee Waid Maynus, New York State Thruway Authority

Data Quality Assurance Management Program

Eric Spriggs, Federal Highway Administration

2:00 p.m.–3:30 p.m., Hyatt, Greenway B

Get Out of the Road—Application of Nonintrusive Sensor Technologies for Traffic Monitoring

Todd B. Westhuis, New York State Department of Transportation, presiding

This session is an overview that focuses on the successful development, testing, and fielding of nonintrusive sensor technologies for use in traffic monitoring data collection activities. Presenters will discuss their experiences integrating these devices into their programs as a safe and cost-effective alternative to traditional in-pavement sensors and pneumatic tube-based methods to obtain traffic data.

Minnesota DOT's Experience Using Non-Intrusive Infrared Vehicle Classification Technology

Thomas Curtis Nelson, Minnesota Department of Transportation

A Comparison of Non-Intrusive Detectors to Inductive Loops

Dan Middleton, Texas Transportation Institute

Portable Non-Intrusive Traffic Detection System (PNITDS)

Jerry Kotzenmacher, Minnesota Department of Transportation

Erik Minge, SRF Consulting Group, Inc.

Freeway Sensor Installation and Data Quality Control Best Practices

Timothy James Wells, Darcy M. Bullock and Chris Achillides, Purdue University

Jay Wasson, Indiana Department of Transportation

Use of Bridge Strain Health Monitoring System for Weigh-in-Motion Evaluation

Anne-Marie H. McDonnell, Paul D'Attilio, and Eric G. Feldblum, Connecticut
Department of Transportation
John T. DeWolf, Alan Cardini, and Joshua Olund, University of Connecticut

2:00 p.m.–3:30 p.m., Hyatt, Greenway J

Exhibitor Presentations

Harshad R. Desai, Federal Highway Administration, presiding

Southern Traffic Services (2:00 p.m.)

An overview of the services offered by Southern Traffic Services.

Transmetric (2:30 p.m.)

See how the WIM Net TR application server can improve your handling of traffic and WIM data. With native file readers, choice of operating environments, massive database storage, web-based delivery, and extreme functionality, this system leads the field in value and features.

Kistler Instrument Corp. (3:00 p.m.)

The operating principle, sensing element design, advantages of piezoelectric technology, and installation procedures are included.

3:30 p.m.–4:30 p.m., Exhibit Hall

Break

4:00 p.m.–5:30 p.m., Hyatt, Greenway D

Acquiring ITS Data in Concert with Your Traffic Data Program

Shawn M. Turner, Texas Transportation Institute, presiding

Data acquired from ITS devices have captured the interest of the traffic data managers. The possibility of using nonobtrusive, automatic and virtually free data collection devices sounds like utopia. What do you need to know about how to use this potential data resource? In this session attendees will leave with a positive understanding of several “how to” approaches for incorporating ITS data into their traffic data programs.

Michigan DOT Experience with Using Detroit ITS Data in MDOT's Data Program

Mike Walimaki, Michigan Department of Transportation

Automating Acquisition of Short-Duration and Continuous Count Data from ITS-Generated 30-s Loop Detector Data

Taek Mu Kwon, University of Minnesota, Duluth

Mark Flinner, Minnesota Department of Transportation

How California DOT (Caltrans) Uses ITS Data for Annual Average Daily Traffic and Other Traditional Uses

Joseph Avis, California Department of Transportation

4:00 p.m.–5:30 p.m., Hyatt, Regency

Performance Measures at Different Levels of Government

Rick Schuman, PBS&J, presiding

Often, performance measures are addressed in a “one-size-fits-all” approach. In this session, state, regional, and local leaders in the collection of data supporting performance measurement will cover how they collect data, what they use it for, and how they present it to decision makers. This session is geared towards all audiences invited to NATMEC including traffic data program managers, local government public works managers, state and metropolitan data specialists, and researchers.

Measuring Congestion: The FHWA Office of Operation's Approach

Richard V. Taylor, Federal Highway Administration

Using Dashboards to Assist in Managing the Freeway System

Karl Petty, Berkeley Transportation Systems

Jaimyoung Kwon, California State University, East Bay

Pravin P. Varaiya, University of California, Berkeley

Montgomery County Maryland's Annual Traffic Congestion Reporting Process

Robert M. Winick, Motion Maps, LLC

Richard C. Hawthorne, Maryland National Capital Park and Planning Commission

4:00 p.m.–5:30 p.m., Hyatt, Greenway B

Long-Term Pavement Performance (LTPP) Traffic Data Pooled Fund Project

Patricia S. Hu, Oak Ridge National Laboratory, presiding

This session will focus on the origins and importance of the Strategic Highway Research Program (SHRP) Long-Term Pavement Performance (LTTP) project and the reasons for the Traffic Data Pooled Fund Project. It will explain the importance of a smooth approach to a WIM scale, and how to construct a smooth concrete approach slab. Finally, several states participating in the study will share their experiences.

The Importance of the Long-Term Pavement Performance Study

Anne-Marie H. McDonnell, Connecticut Department of Transportation

LTTP Traffic Data Pooled Fund Project: A National Effort

Richard Lowell Reel, Florida Department of Transportation

State Experiences with the LTTP Pooled Fund Study

Steven Jessberger, Ohio Department of Transportation

Concrete WIM Approach Slabs

Michael M. Moravec, Federal Highway Administration

4:00 p.m.–5:30 p.m., Hyatt, Greenway J

Exhibitor Presentations

Catherine Theresa Lawson, State University of New York, Albany, presiding

ESRI (4:00 p.m.)

RoadRAMP Systems (4:30 p.m.)

The installation and applications for the new mini twin bypass temporary axle sensors will be discussed in detail.

Miovision Technologies Inc. (5:00 p.m.)

Miovision's transportation information management system decreases the cost of collecting and analyzing traffic data and increases company profits. The database-driven software solution automates the data collection process and instantly transforms collected data into report-ready information. The solution increases overall efficiency, usability, manageability, and seamlessness of data collection, storage, reduction, and utilization.

Input on HPMS Reassessment (6:30 p.m.)

On Tuesday evening, the FHWA will have an open session to discuss the reassessment effort. Following a short introductory presentation by FHWA, you will have the opportunity to present your ideas related to the reassessment. If you didn't sign up in advance via the web, you can sign up at the registration desk until noon Tuesday. All interested parties are welcome, even if you don't want to sign up to speak.

Wednesday, June 7, 2006

7:30 a.m.–8:30 a.m., Exhibit Hall

Continental Breakfast

8:00 a.m.–noon, Hyatt, Mirage

NATMEC Poster Session 2

Ralph A Gillmann, Federal Highway Administration, presiding

This is an opportunity to see and hear from your peers in other states about their challenges and successes.

Tube Count Data Warehouse

Robert Joseph Benz, Texas Transportation Institute

**Benefits Integrating Traffic Data from Source to Enterprise Database:
An HPMS Example**

Marc Kratzschmar, EXOR Corporation Ltd.

Joe Wilkinson, Chaparral Systems Corporation

Determining If Pavement Meets Warranty

George M. Cepress, Minnesota Department of Transportation

Is Less More, When It Comes to Vehicle Classification?

Robert Keech, Kittelson & Associates, Inc.

Trip Generation in the City of Calgary: Studies and Storage

Cheryl Hudson, City of Calgary, Canada

**Standardizing Ontologies of ITS and Other Data Sources for Transportation Decision
Support Systems**

Maggie Cusack, New York State Department of Transportation

Using Existing Loops at Signalized Intersection for Counts

Sudhir Murthy, TrafInfo Communications, Inc.

Estimation of Monthly State Level Highway Travel

Laurence Matthew O'Rourke, ICF Consulting

WIM Data Affected by Temperature/Season

Herbert F. Southgate, Consultant

National and Regional Trends Using WIM Data

David L. Jones, Federal Highway Administration

Using Transit Vehicles to Measure Freeway Traffic Conditions

Benjamin Coifman and Seoungbum Kim, Ohio State University

8:30 a.m.–10:00 a.m., Hyatt, Greenway B

Technologies for Communicating with Your Data Collection Systems

Goro Sulijoadikusumo, Hawaii Department of Transportation, presiding

The need to obtain traffic data more rapidly and efficiently is on the rise. In some cases, customers are requesting data in real time. Communication technologies play a key role in allowing easy access to traffic data. This session will discuss the available communication technologies being used by data collection practitioners.

June 4-7, 2006

The New York State Thruway Authority Experience with Selecting a Communications Technology

Lee Waid Maynus, New York State Thruway Authority

Communication Plan for New Hampshire DOT Permanent Count Station

Subramanian Sharma, New Hampshire Department of Transportation

Michigan DOT—Polling Software and Communication Technologies Used to Communicate with Permanent Count Stations

Mike Walimaki, Michigan Department of Transportation

8:30 a.m.–10:00 a.m., Hyatt, Greenway H

Meeting Data Demands with Available Resources

Joseph Avis, California Department of Transportation, presiding

Local and state traffic monitoring programs are continuously challenged to provide quality data to support HPMS, safety analysis, congestion monitoring, goods movement analysis, and many more transportation needs. With limited resources and at times budget cuts, how are local and state transportation agencies meeting these data collection requirements? This session will consist of presentations and discussion on how to best meet staffing needs, establishing local–state partnerships that could possibly maximize federal resources, and best practices for implementing ITS data into a traditional program. This session will be of interest to traffic data program managers, and state and local government public works managers.

Lessons for a Successful Traffic Data Analysis Program

Mary Beth Kupec, Missouri Department of Transportation

Joe Wilkinson, Chaparral Systems Corporation

New York State DOT’s Partnership with Local Governments to Expand Data Collection Efficiency

Todd B. Westhuis, New York State Department of Transportation

Developing a Traffic Data Business Plan: A Roadmap for Future Operations

Jack R. Stickel, Alaska Department of Transportation and Public Facilities

Anita Vandervalk-Ostrander, Cambridge Systematics, Inc.

8:30 a.m.–10:00 a.m., Hyatt, Greenway F

Enriching Our Knowledge of Freight: New Data Sources and Uses

Catherine Theresa Lawson, State University of New York, Albany, presiding

This session will present several case examples of how new strategies are being deployed to use passive data sets for enriching the information available to describe and analyze truck activity patterns.

Freight Focus in Arizona’s FAST Lanes

Maria Luisa O’Connell, Border Trade Alliance

Identification of Light-Duty Trucks in Atlanta

Guy Rousseau, Atlanta Regional Commission

Utilizing Weigh-in-Motion Data for Vehicle Re-Identification

Andrew P. Nichols and Mecit Cetin, University of South Carolina

Incorporating Freight Performance Measures in an Archived Data User Service

Christopher M. Monsere, Robert Lawrence Bertini, Zachary Horowitz, and Kristin A.

Tufte, Portland State University

8:30 a.m.–10:00 a.m., Hyatt, Greenway J

Exhibitor Presentations

David W. Gardner, Ohio Department of Transportation, presiding

Midwestern Consulting, LLC (8:30 a.m.)

Midwestern Consulting has developed an interactive, web-based traffic count data system. The system is very powerful, offering customizable reports and analytical features. It is easy to use and provides transportation planners and traffic engineers with an exceptional and inexpensive tool to input, manage, edit, and analyze traffic count data.

Control Specialists Company (9:00 a.m.)

TIRTL—The InfraRed Traffic Logger provides non-invasive axle classification using infrared light to detect the vehicle wheels. Includes lane, speed, direction and axle classification to FHWA Scheme 'F' 15 classes.

JAMAR Technologies (9:30 a.m.)

Sources of Errors with Portable Road Tube Classifiers (and how to avoid or fix them). This presentation will discuss several common sources of error associated with road tube studies and discuss how properly designed classifiers can avoid or minimize these errors. Errors discussed include bad sensor signals, vehicles in adjacent lanes crossing the tubes at the same time, bad or missing site codes, and bad or missing data. Appropriate design features to avoid these errors are presented, such as testing the road tube signal strength, using 4-in. tube spacing for speed and class studies, validating the data in the field, using GPS receivers to geolocate the site, and using wireless technologies to communicate with field or office computers.

10:00 a.m.–10:30 a.m., Exhibit Hall

Break

10:30 a.m.–noon, Hyatt, Greenway B

Improving Estimation of AADT

Ralph A. Gillmann, Federal Highway Administration, presiding

This session will address ways to estimate annual average daily traffic (AADT). Improvements of current methods as well as new approaches will be covered. This includes sampling plans, the development of factors, and estimation techniques.

Estimation of AADT by a Standardized Method

Jean David, Quebec Department of Transportation

Development of Axle and Seasonal Factors for Estimating Annual Average Daily Traffic Volumes in the Delaware Valley Region

Thabet Zakaria and Matthew T. Gates, Delaware Valley Regional Planning Commission

Traffic Estimation on Local Roads

Laine A. Heltebridle, Pennsylvania Department of Transportation

Combining Image and Ground-Based Traffic Data to Estimate AADT on Coverage Count Segments: Methodology and Numerical Results

Mark R. McCord, Zhuojun Jiang, and Prem Kumar Goel, Ohio State University

Improved AADT Estimation on Coverage Count Segments via Regression- and Ratio-Based Estimators: Empirical Results and Investigation of Advantageous Conditions

Prem Kumar Goel, Mark R. McCord, Changyi Park, and Zhuojun Jiang, Ohio State University

Wednesday,
June 7

June 4-7, 2006

10:30 a.m.–noon, Hyatt, Greenway F

Expanding Uses of WIM Data

Susan L. Moe, Federal Highway Administration, presiding

This session will explore how transportation agencies are expanding the use of WIM data for enforcement, freight planning, safety analysis, and other activities. The session will include discussion of key coordination, data integration and data stewardship issues, and challenges associated with expanding the utility of WIM data.

Case Study of Truck Weight Screener Sorter System at U.S.–Mexico Border

Ronald P. White, University of Texas, Austin

Oak Ridge National Laboratory's Weigh-in-Motion (WIM) Configuration and Data Management Activities

Robert Knox Abercrombie, Frederick Thomas Sheldon, and Robert G. Schlicher, Oak Ridge National Laboratory

Using WIM as an Enforcement Tool

Steven Jessberger, Ohio Department of Transportation

Dual Uses of WIM Technologies for Planning and Enforcement

Roger Hille, Minnesota Department of Transportation
Daniel E. Shamo, P.E., URS Corporation

10:30 a.m.–noon, Hyatt, Greenway H

Tools for Data Management and Distribution

Harshad R. Desai, Federal Highway Administration, presiding

Agencies collect a huge volume of speed, count, classification, and WIM data from a variety of sources. Some are developing in-house tools to manage this data, while others are seeking vendor sources. All are trying to find tools that will assist in this effort, and to make the best use of available staff resources. This session provides an opportunity for discussion of the attributes and limitations of tools, primarily software utilized in the management, quality control/quality assurance, and distribution of monitored traffic data.

Integrating Tools for Data Management at Wisconsin DOT

Paul P. Stein, Wisconsin Department of Transportation

Pennsylvania's Traffic Information System

Joni Sharp, Pennsylvania Department of Transportation

Using SCADA for Automated Traffic Data Collection

Steven Jacobson and Lee Waid Maynus, New York State Thruway Authority

Alaska's Weigh-in-Motion

Mary Ann Dierckman, Alaska Department of Transportation and Public Facilities
Paul Marrero, Wostmann & Associates, Inc.

Using the LTPP Software Data Model

Barbara Katherine Ostrom, MACTEC Engineering & Consulting, Inc.

10:30 a.m.–noon, Hyatt, Greenway J

Exhibitor Presentations

Glenda Fuller, Idaho Transportation Department, presiding

Quixote Traffic Corporation (10:30 a.m.)

Developing Trends in Automatic Data Recorders;
Improvements in the Installation Safety, Accuracy, and Reliability of Classification Systems

Northrop Grumman Information Technology (11:00 a.m.)

The Florida and South Carolina Traffic Polling and Analysis System: An Example in Open Shared Software Development Architecture.

Noon–1:30 p.m., Hyatt, Regency

Wednesday Luncheon

Jonette Kreideweis, Minnesota Department of Transportation, presiding

The I-394 MnPASS Lane: A New Choice for Commuters

Lee W. Munnich, University of Minnesota

2:00 p.m.–3:30 p.m., Hyatt, Greenway F

Traffic Data Research

Richard Lowell Reel, Florida Department of Transportation, presiding

Traffic data collection seems like a fairly simple proposition to the uninitiated. Unfortunately, if you're responsible for collecting the data, you find they have their own set of problems. To try to get a handle on these problems, the data manager turns to the researcher. Sometimes the research is conducted with in-house staff, sometimes through a university, sometimes by hiring a consultant, and sometimes through a national cooperative effort. With this session, we are hoping to publicize the traffic data research currently being conducted, explore different methods and sources of funding, examine the principles of sound research studies, determine skill sets necessary to conduct a valid research project, and try to determine the length of time required to conduct a research study and publish the results.

The Pooled Fund Process

William Zaccagnino, Federal Highway Administration

National Cooperative Highway Research Program

Ronald D. McCready, Transportation Research Board

Traffic Data Research Considerations: From a State Researcher's Perspective

Anne-Marie H. McDonnell, Connecticut Department of Transportation

2:00 p.m.–3:30 p.m., Hyatt, Greenway B

Effective Visualization Techniques for Sharing and Reporting Traffic Data

Marcelo Gurgel Simas Oliveira, GeoStats, presiding

This session will focus on new data visualization, GIS, and web tools available that help us better communicate our data. It will look at tools that allow users to create their own data files and maps from data bases. This session will also include other ways to effectively research and display data using web-based or other tools. Primary audiences for the session include traffic data program managers, state or metro data specialists, researchers, and others involved in sharing and reporting traffic data results and trends.

They Only Look at the Cover Sheet—And Other Lessons Learned About Data Visualization in the Urban Congestion Report (UCR) Effort

Karl Wunderlich, Mitretek Systems, Inc.

Using Visualizing to Turn Large ADUS Data Sets into Transportation Information

Karl Petty, Bill Morris, and Eric Shieh, Berkeley Transportation Systems

Jaimyoung Kwon, California State University, East Bay

Use of Scalable Vector Graphics (SVG) in Web-Enabled Transportation Applications

Clark Lim and Glen So, Greater Vancouver Transportation Authority, Canada

Pennsylvania's Internet Traffic Monitoring System (iTMS)

Andrea Bahoric, Pennsylvania Department of Transportation

2:00 p.m.–3:30 p.m., Hyatt, Greenway H

Monitored Traffic Data for Mechanistic Pavement Design

Mark P. Gardner, Fugro Consultants LP, presiding

The new Mechanistic-Empirical (M-E) Pavement Design process developed under NCHRP Project 1-37A is out for evaluation. Many agencies are investigating the impacts of this new design procedure on their operations. As agencies begin implementation planning, questions surface as to the amount of data required, and how best to use it in the M-E process. This session provides a forum for discussion of perceived issues and impacts. The specific requirements of the M-E design process may also be discussed.

Impacts of Temperature-Induced Weighing Errors on M-E Design Outputs

Barbara Katherine Ostrom, MACTEC Engineering & Consulting, Inc.

Forming Truck Weight Road Groups

Herbert Weinblatt, Cambridge Systematics, Inc.

Developing Profiles of Load Spectra for Pavement Design

George M. Cephess, Minnesota Department of Transportation

Preparation for Implementation of the M-E Pavement Design Guide

Gaye F. Liddick, Pennsylvania Department of Transportation

3:30 p.m.–4:00 p.m., Regency

Break

4:00 p.m.–5:00 p.m., Hyatt, Regency

A Traffic Data Agenda for the Future

Mark E. Hallenbeck, University of Washington, presiding

This session wraps up the conference with three different perspectives on areas the traffic data community has made significant progress as well as significant challenges exists. These presentations will set the direction for NATMEC 2008. A general discussion will follow the formal presentations.

A Traffic Monitoring Perspective

Mark P. Gardner, Fugro Consultants, LP

An Operations Perspective

Leslie N. Jacobson, PB Farradyne

A Policy and Planning Perspective

Johanna P. Zmud, NuStats Partners, LP

Exhibit Hall Floor Plan

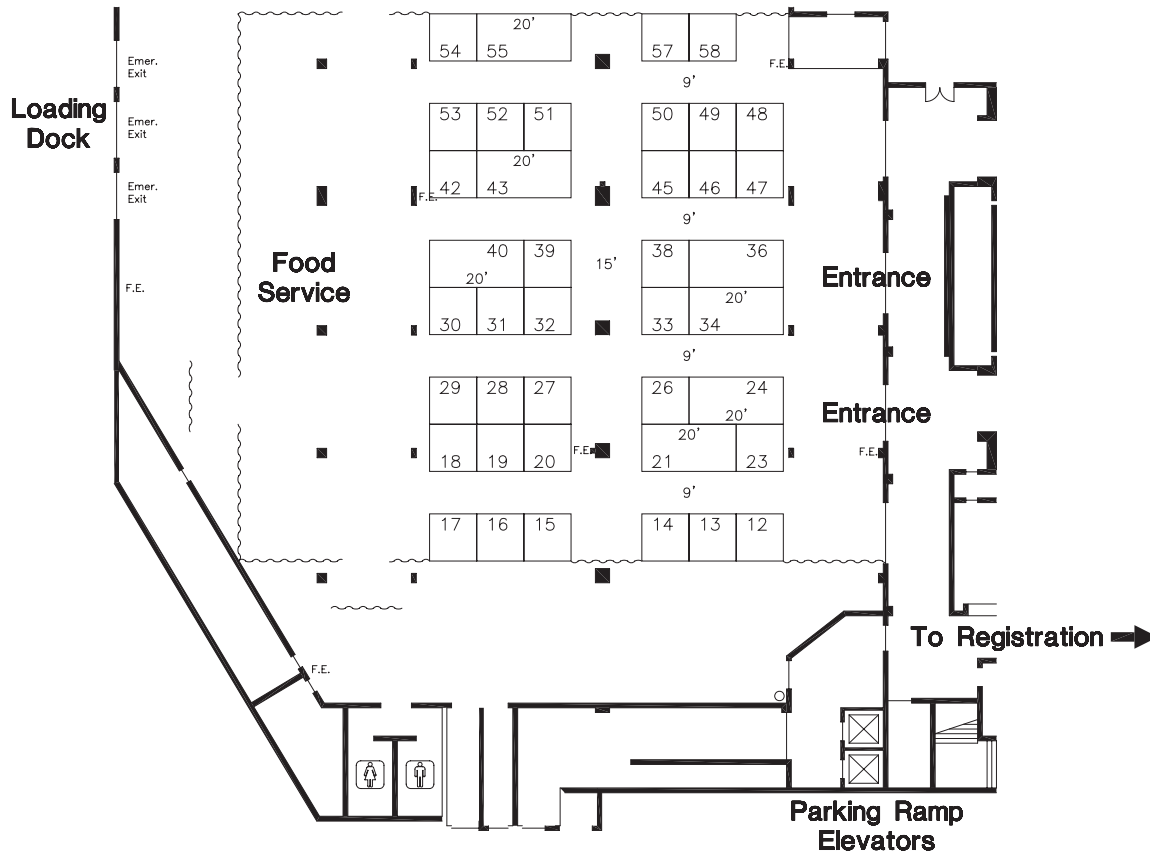


Exhibit Hall Hours

Monday, June 5, noon–4 p.m.
 Tuesday, June 6, 10 a.m.–4 p.m.
 Wednesday, June 7, 7:30 a.m.–noon

EXHIBITORS



Booth 12

3M Traffic Safety Systems

Denise West

3M Center Bldg. 225-5S-08

St. Paul, MN 55144-1000

Phone: 651-737-3346 Fax: 651-737-1652

dewest1@mmm.com

3M Traffic Safety Systems Division is a leading provider of transportation safety products and systems. 3M serves the ITS market with technology platforms for emergency services and transit signal priority control and traffic sensing systems to support advanced traffic management. 3M's Traffic Sensing System II delivers useful, precise, real-time traffic data that a free-way management system needs to monitor speed, length, volume, roadway occupancy, and reliable traffic counts.

June 4-7, 2006



Booth 46
Applied Research Associates, Inc.

Don Dixon
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Applied Research Associates, Inc., specializes in providing transportation services to federal, state, and local agencies. Services include traffic monitoring, ITS, asset management, pavement engineering and safety. Our Traffic Services Group has several contracts with state DOTs and federal agencies to install, maintain, and calibrate their permanent automatic traffic recorder, vehicle classification, and WIM stations and to provide software development, data processing, quality assurance, management, and reporting services.



Booth 26
ASIM Technologies, Inc.

Andreas Hartmann
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ahartmann@asim-technologies.com

Established in 1990, ASIM Technologies of Switzerland is a leading manufacturer of various types of non-intrusive traffic detectors for intersection control and traffic data acquisition (ITS applications). Detectors use passive infrared or a combination of detection technologies for increased reliability and accuracy in any weather condition. ASIM products are used in a wide range of traffic related installations around the world. All products are manufactured in Switzerland under an ISO 9001 certified quality system.

Booth 51
Cardinal Scale Manufacturing Co.

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Cardinal Scale Manufacturing Company manufactures a full line of vehicle scales for enforcement and commercial use as well as in-motion vehicle scales for identifying overloaded vehicles traveling at speeds up to 130 km/h. Virtual weigh stations with WIM scales and cameras are also offered. Cardinal products are backed by a commitment to excellence and a nationwide network of independent dealers.

Booth 28
Cellint Traffic Solutions

Ofer Avni
CEO
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Morristown, NJ 07960
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Cellint is a leading provider of cellular-based traffic data collection solutions. Cellint's system, TrafficSense, extracts signaling data from cellular networks to generate road traffic information. Each anonymous vehicle is a floating probe for Cellint's technology. More than 2,500 miles were covered by Cellint's projects in the United States, Europe, and Israel during the past year.



Booth 42
Chaparral Systems Corporation

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Chaparral Systems Corporation displays its traffic data processing product, TRADAS 2006,



and related traffic data analysis software and services. TRADAS 2006 is a significant upgrade of Chaparral's flagship data processing product, including the migration of all new interface components to the Microsoft .NET 2005 platform. It fully integrates the processing of short-term and continuous volume, vehicle classification, length, speed, WIM, and other types of traffic data.



Booth 33

Citilabs

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Citilabs develops, markets, and supports Cube, the market leading software product for transportation planning, data collection, and public transit accessibility analysis.



Booth 24

Control Specialists Company

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Control Specialists Company is a full-service traffic company. We specialize in data collection products and installation services.



Booth 39

Diamond Traffic Products

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As a manufacturer of traffic data collection equipment for over 30 years, Diamond Traffic Products continues to provide high-quality and feature-rich products to the traffic engineering and data collection agencies in the United States and abroad. With our complete line of portable and permanent counters and classifiers, we offer the widest line of traffic data collection equipment in the world. Continuing our efforts to manufacture and sell we are currently enhancing many of our products lines to include new technologies so customers can continue to enhance their data and operations into the future. Come see what's new at Diamond!



Booth 23

Econolite

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Founded in 1933, Econolite is a leading North American manufacturer and distributor of traffic control equipment and systems. Broad traffic industry background and manufacturing capabilities have allowed Econolite to take leading-edge technology and apply it to advanced traffic control hardware and traffic management systems. As a traffic control equipment supplier Econolite has been involved in a wide variety of projects over the past 70+ years. These projects have been as simple as supplying display equipment for intersections

June 4-7, 2006



to providing engineering, equipment, integration, installation, and test of multi-intersection systems. Our Advanced Transportation Management Systems, including *icons*[®], *Aries*[®], and *PYRAMIDS*[™], together with controllers and sensors like the *ASC/2S*, *OASIS*[™] and *Autoscope Solo*[™] Pro, along with *DCMS*, and a full line of maintenance services provide solutions that move the world. Visit Econolite at www.econolite.com.



Booth 47

EIS

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EIS, Inc., manufactures the RTMS radar detector for advanced traffic applications, including traffic counting. Traffic Reporter is a reliable and cost-effective solution for permanent and temporary counting facilitating the remote automatic collection of traffic data from hundreds of radar-based counting stations and the generation of user-defined and FHWA-standard reports.



Booth 58

Electronique Controle Mesure (ECM)

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Hestia/Vesta WIM with VMS



Booth 17

ESRI

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kfrith@esri.com

With annual sales of more than \$560 million, ESRI remains the world leader in the geographic information system (GIS) software industry. Its business involves the development and support of GIS software for all types of organizations—from the one-person office to multinational corporations to innovative Internet GIS solutions. Go to www.esri.com for more information.

Booth 49

Federal Highway Administration (FHWA)

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Our mission is to provide timely and high quality technical information on traffic data collection issues. We advance quality systems by developing and deploying a full range of new tools to assure quality and performance of traffic data collection projects, and deliver next generation quality systems.



Booth 14

Infotek Associates

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Booth 57

Intercomp Company

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Intercomp is the world's largest manufacturer of portable weighing solutions, and has been serving the transportation industry for over 25 years. Intercomp manufactures WIM, wheel load, and axle load scales to weigh and classify vehicles. These scales are essential for data collection, preventative road maintenance, and overweight vehicle enforcement.



INTERNATIONAL ROAD DYNAMICS INC.

Booth 55

International Road Dynamics, Inc.

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elizabeth.marjan@irdinc.com

International Road Dynamics (IRD) Inc. is a traffic management products and systems company specializing in supplying traffic data col-

lection, weight enforcement, commercial vehicle operations, toll, and safety systems. With 25 years of experience, IRD delivers cost-effective, high-return solutions to improve highway safety, reduce delays, improve road management, audit revenue collection, and protect investments in highways and highway equipment around the world. For more information, visit our website at www.irdinc.com.



Booth 48

JAMAR Technologies, Inc.

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Manufacturer and supplier of traffic data collection equipment and software. Our TRAX line of counter/classifiers equipped with a dual-processor and GPS capabilities are the chosen solution to a range of data collection needs. Our latest developments include using passive infrared and acoustic sensing and magnetic vehicle profiling.



measure. analyze. innovate.

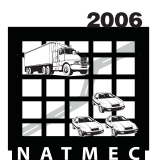
Booth 38

Kistler Instrument Corp.

Don Beehler
75 John Glenn Drive
Amherst, NY 14228-2171
Phone: 716-691-5100 Fax: 716-691-5226
don.beehler@kistler.com

Kistler will exhibit WIM highway sensor systems that instantly provides weight data. Long-life, piezoelectric sensors easily mount in narrow channels made by a single saw cut. Sensor element is accurate and precise. The technology eliminates material fatigue typically causing element aging with other styles.

June 4-7, 2006





Booth 54

MACTEC

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MACTEC provides program planning, data collection, and evaluation services to traffic data collectors and users. Included are site selection, equipment specifications, installation, calibration, and operation. Data services include polling, data management, quality assurance review, reporting, and distribution to users. MACTEC Engineering & Consulting's Beltsville office has the lead for traffic data collection services including WIM installation and evaluation, data quality control and quality assurance, and software development for analysis and publication. The office has supported FHWA's LTPP traffic data collection activities for nearly 15 years.



Booth 40

Measurement Specialties, Inc.

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Hampton, VA 23666

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Fax: 610-971-9216

Liz.Macgibbon@msiusa.com

Measurement Specialties manufactures and distributes the Roadtrax® Brass Linguini (BL) Piezoelectric Axle Sensor. This small, flexible sensor is installed into the road and generates an electrical signal as tires pass over the sensor. BL Sensors can be used for vehicle counting and classification, WIM, speed detection and red light cameras.

Booth 36

MetroCount

Jim Ball

18200 Georgia Avenue, Suite J

Olney, MD 20832

Phone: 800-576-5692 Fax: 866-440-8407

jball@metrocount.com

The revolution in traffic counting continues! Built this century, for this century. NEW: 5740 Site Verifier/Tester, 5700 Series Piezo-based counters. When you're ready for counters that are made to last, not made to order, made for Windows not DOS, made to cost you less to own...you're ready for MetroCount!

Booth 52

Midwestern Consulting, LLC

Lev Wood

3815 Plaza Drive

Anne Arbor, MI 48108

Phone: 734-995-0200 Fax: 734-904-0868

Midwestern Consulting, LLC, of Ann Arbor, Michigan, has been solving transportation problems for communities in Michigan and Ohio since 1967. Our expertise is based on hundreds of traffic studies from local impact studies to statewide crash analyses. Our web-based traffic count data system (TCDS) has become the standard for traffic count data management because it is flexible and powerful, yet very simple to use. The TCDS provides transportation planners and traffic engineers with an exceptional and inexpensive tool to input, validate, edit, and analyze traffic count data.

Booth 13

Minnesota Department of Transportation

Jonette Kreideweis

395 John Ireland Boulevard

St. Paul, MN 55155

Phone: 651-215-1854 Fax: 651-296-3311

jonette.kreideweis@dot.state.mn.us

The Minnesota Traffic Data Initiatives booth will showcase recent program and research activities designed to improve the traffic volume, classification, weight, and speed data available for planning and decision making.

June 4-7, 2006

2006





Booth 29

Miovision Technologies, Inc.

Kevin Madill
295 Hagey Boulevard
Waterloo, ON N2L 6R5
Phone: 519-500-3130 Fax: 866-413-2928
kmadill@miovision.com

Miovision provides the transportation planning industry with a database-driven software solution that automates the data collection process and instantly transforms collected data into report-ready information. The solution increases data collection profits substantially by improving the overall efficiency, usability, manageability, and seamlessness of data collection, storage, reduction, and utilization.



Booth 18

New Mexico State University

Luz Elena Mimbela
P.O. Box 30001, MSC 3SOL, Espina &
Stewart, Rm. 106
Las Cruces, NM 88003
Phone: 505-646-1847 Fax: 505-646-2960
lmimbela@nmsu.edu

The National Vehicle Detector Clearinghouse (VDC) booth will display a short description of the VDC and its activities. A limited number of CDs that include VDC products will be available at the VDC booth. Visitors to the VDC booth will be able to browse a demo of the VDC web page.

NORTHROP GRUMMAN

Booth 15

Northrop Grumman Information Technology

Robert Pacheco
1992 Lewis Turner Boulevard
Fort Walton Beach, FL 32547
Phone: 850-315-2247 Fax: 850-862-5626
robert.pacheco@ngc.com

Traffic polling and analysis system.

Booth 20

PTV America, Inc.

Cassandra Azbell
1128 NE 2nd Street, Suite 204
Corvallis, OR 97330
Phone: 541-754-6836 Fax: 541-754-6837
cazell@ptvamerica.com

PTV America, Inc., is a multi-disciplinary transportation software and consulting firm. PTV America is a wholly-owned subsidiary of PTV AG of Karlsruhe, Germany.



Booth 21

Quixote Traffic Corporation

Kimberly Ludwig
35 East Wacker Drive, 11th Floor
Chicago, IL 60601
Phone: 312-705-8434 Fax: 312-467-9625
Kludwig@quixtrans.com

Quixote Traffic Corporation is a leading manufacturer of products that direct and inform, including intersection control systems, advanced vehicle detection and classification products, security access control devices, automated traffic monitoring and enforcement systems, battery backup power supply systems, directional display panels, variable message signs, flashing beacons, and tunnel and safety lighting.

June 4-7, 2006

Booth 16
RoadRAMP Systems

Tim Fielder
P.O. Box 371
Holicong, PA 18928
Phone: 215-794-9155 Fax: 215-794-7829
timfielder@roadrampsystems.com

RoadRAMP Systems manufacture innovative, portable axle sensors based on both mini tube and road tube. RoadRAMP sensors provide true lane discrimination for sites with up to 6 lanes. They are ideal for collecting accurate volume, speed and classification data on sites which include City, County and State roads, as well as Freeways and Interstate highways. At NATMEC 2006, RoadRAMP will introduce the new Mini Twin BYPASS units. These pre-assembled, lightweight axle sensing units offer quick and easy installation, with lane discrimination and accurate traffic counts on busy sites, regardless of traffic volume.



Booth 30
Sensys Networks, Inc.

Michael Volling
2560 Ninth Street, Suite 211
Berkeley, CA 94710
Phone: 510-548-4620 Fax: 510-548-8264
mvolling@sensysnetworks.com

Sensys Networks is a leader in ultra low-power wireless sensor networking who provides advanced sensing solutions for the transportation industry. Sensys Networks' VDS240 family of wireless vehicle detection products brings an unprecedented level of performance and simplicity to the growing need for traffic monitoring and vehicle detection on freeways, arterials, intersections, and parking facilities. For more information on Sensys Networks, go to www.sensysnetworks.com.



Booth 45
Southern Traffic Services

Carolyn Thornton
700 South Palafox Street, Suite 220
Pensacola, FL 32502
Phone: 601-854-8898 Fax: 601-854-8896
cthorton@netdoor.com

Southern Traffic Services is dedicated to the collection of traffic data. Because Southern Traffic Services employs experienced technicians and has a large inventory of equipment, it is able to offer its customers economical, efficient, and quality services.



Booth 32
The Traffic Group, Inc.

Chris Beck
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Baltimore, MD 21236
Phone: 410-931-6600 Fax: 410-931-6601
RHaberkam@trafficgroup.com

The Traffic Group is a leading Traffic Engineering and Transportation Planning consulting firm in the Mid-Atlantic Region. Our services include, but are not limited to, traffic engineering and transportation planning studies, expert testimony, roadway and parking lot design, and data collection services.



Booth 31
THERMOCOAX

Tracy de Jong
6825 Shiloh Road East, Suite B-7
Alpharetta, GA 30005
Phone: 678-947-4480 Fax: 678-947-4450
tracy.dejong@thermocoax.com

Since 1988, Thermocoax has been serving the worldwide transportation industry with our Vibracoax Piezoelectric Sensors. Thermocoax manufactures the Vibracoax Class 1 sensor for WIM applications and Vibracoax Class 2 sensor for Axle Detection, Vehicle Counts, Vehicle Classification, Speed Measurement, and Red Light Applications. Vibracoax is available bare or encapsulated in aluminum channel; custom lengths are available upon request.



Booth 43
TimeMark Incorporated

Mike Bonser
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Salem, OR 97309-0947
Phone: 503-363-2012 x 303 Fax: 503-363-1716
mikeb@timemarkinc.com

TimeMark provides innovative equipment and software for all facets of the traffic data collection community. Whether the requirement is to address a simple traffic complaint or planning an integrated interdepartmental traffic data collection program, TimeMark solutions match the evolving needs of engineers, traffic planners, and technicians.



Booth 34
Traficon USA

Leah Robilotto
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Chantilly, VA 20151
Phone: 703-961-9617 Fax: 703-961-9606
lr@traficonusa.com

Traficon is the worldwide market leader in the field of Traffic Detection based on video image processing. Traficon's reputation is backed by more than 20 years of proven field experience and more than 25,000 Traficon sensors operational worldwide. We strive to meet our customer requirements and to deliver reliable high-quality products. Within this context, Traficon obtained an ISO 9001 certificate in 1998. At Traficon we have a serious commitment to the users of traffic management systems. Customer satisfaction is the ultimate criterion for our performance. We see ourselves predominantly as technology providers in the field of vehicle detection based on video and information processing. Traffic managers all over the world use our technology for traffic data acquisition, automatic incident detection, and intersection management in urban, tunnel, and freeway applications.



Booth 27
Transmetric

Joe Cunsolo
8613 Cross Park Drive
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Phone: 512-977-1822 Fax: 512-973-9565
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Transmetric® WIM Net TR is the world's leading traffic data management platform.

June 4-7, 2006





Booth 53

Transport Data Systems

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tony@tds-its.com

Transport Data Systems (TDS) produces single- and multiple-lane vehicle evaluation systems. These systems evaluate the vehicle length, speed, width, height, dual tires, and weight per tire group. The systems can also capture and perform an optical character recognition of license plate images to be compared to local, state, and federal license plate databases in real time to detect vehicles of interest. TDS provides quick change treadles and quartz sensors for easy replacement and for temporary installations.



Booth 50

Wavetronix LLC

Holly Dahlman
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Lindon, UT 84042
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Wavetronix is smarter by design, creating products that, together, offer a full range of ITS and traffic management solutions: the SmartSensor family of digital wave radar devices, featuring the industry's only patented auto-configuration process; the Click! family of simple connectivity power and communication devices; and command data collection and management appliances.



Booth 19

Transportation Research Board

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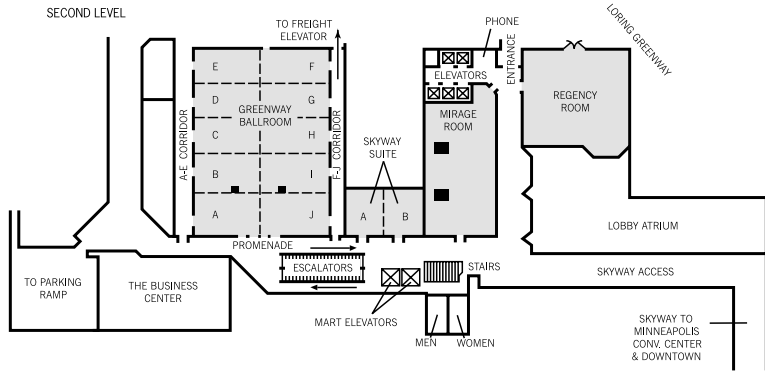
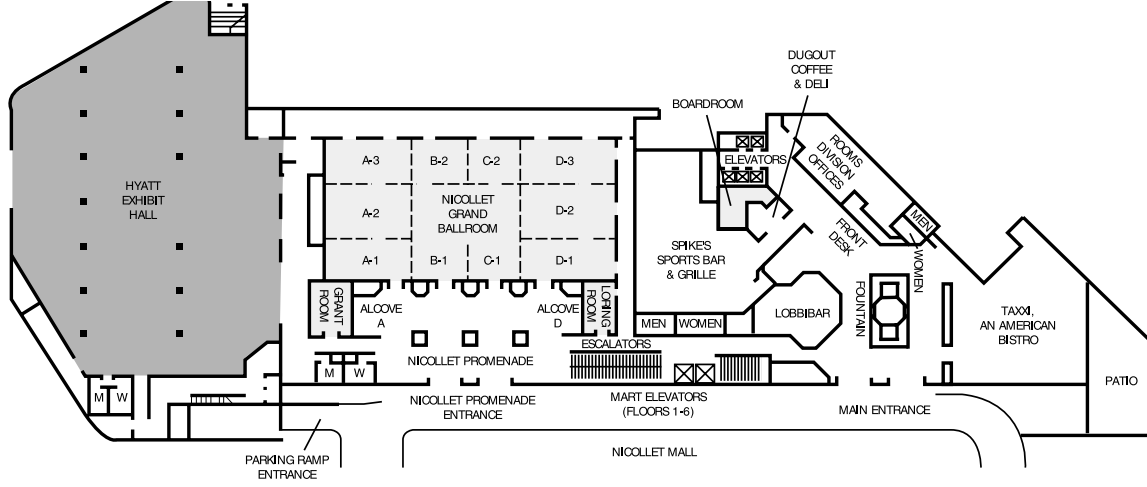
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June 4-7, 2006

2006



Hyatt Regency Minneapolis



Hyatt Regency Minneapolis on Nicollet Mall
 1300 Nicollet Mall
 Minneapolis, MN 55403
 Phone: 612-370-1234 Fax: 612-370-1463

June 4-7, 2006

Upcoming Events

July 8, 2006

Challenges of Data for Performance Measures

La Jolla, California

July 9–11, 2006

2006 Joint Summer Meeting

La Jolla, California

August 27–29, 2006

The Metropolitan Planning Organization, Present and Future: A Conference

Washington, D.C.

September 13–15, 2006

10th National Conference on Transportation Planning for Small and Medium-Sized Communities: Tools of the Trade

Nashville, Tennessee

September 25–27, 2006

Freight Demand Modeling: Tools for Public-Sector Decision Making

Washington, D.C.

October 17–18, 2006

Research Initiatives in Radio Frequency Identification (RFID)

Washington, D.C.

October 23–26, 2006

International Visualization in Transportation Symposium and Workshop—“The Spectrum of Benefit”

Denver, Colorado

January 21–25, 2007

TRB 86th Annual Meeting

Washington, D.C.

June 4–6, 2007

3rd National/1st International Conference on Performance Measurement

Irvine, California



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