



1st National Conference on Roadway Pavement Preservation October 31–November 1, 2005

Organized by the
Transportation Research Board
Task Force on Roadway
Pavement Preservation

&

6th National Conference on Transportation Asset Management November 1–3, 2005

Organized by the
Transportation Research Board
Supported by the Federal Highway Administration
Cosponsored by the American Association of
State Highway and Transportation Officials,
the Midwest Transportation Consortium, and
the National Association of County Engineers

Postconference Workshops, November 3, 2005

Westin Crown Center Hotel
Kansas City, Missouri

www.TRB.org/Conferences/Preservation-Asset

Gain a Comprehensive Understanding of Roadway Pavement Preservation



The **First National Conference on Roadway Pavement Preservation** provides a forum for current and potential users to discuss all aspects of successfully implemented roadway pavement preservation activities. The conference includes a range of preservation topics including management, engineering, economics, the establishment of strategic performance goals, and the implementation of routine maintenance, preventive maintenance, and minor rehabilitation activities. Bringing together a diverse set of policy makers and practitioners in an interactive format provides for a dialogue that will generate suggestions for improving future pavement preservation projects.

The conference includes papers and presentations on roadway pavement programs and strategies at the network and project levels. The program offers a unique opportunity for transportation professionals from government, academia, and consulting to gain a more comprehensive understanding of roadway pavement preservation.

The program includes two joint sessions with the **6th National Conference on Transportation Asset Management**. Enjoy a productive autumn week in Kansas City.

—Larry Galehouse
National Center for Pavement Preservation
Cochair, TRB Task Force on
Roadway Pavement Preservation

—James S. Moulthrop
Fugro Consultants
Cochair, TRB Task Force on
Roadway Pavement Preservation

1st National Conference on Roadway Pavement Preservation Program Committee

David G. Peshkin, Applied Pavement Technology, Inc., *Chair*
Edward J. Kearney, Wirtgen America, Inc.
Emily O'Quinn McGraw, North Carolina Department of Transportation
John H. Roberts, International Grooving and Grinding Association
James Sorenson, Federal Highway Administration

Staff

Fred Hejl, Transportation Research Board
Frank Lisle, Transportation Research Board
Michael DeCarmine, Transportation Research Board

About the Transportation Research Board

The Transportation Research Board is a division of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. The Board's mission is to promote innovation and progress in transportation through research. In an objective and interdisciplinary setting, the Board facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provides expert advice on transportation policy and programs; and disseminates research results broadly and encourages their implementation.

www.TRB.org

Making Asset Management Work in Your Organization



Interest in asset management has been growing in the last decade as state and local agencies face ever-tightening budgets and pressures for greater public accountability. Building on past conferences, the program for the **6th National Conference on Transportation Asset Management** recognizes that different agencies have different needs. Breakout sessions are tailored to three different groups:

- Those who want to learn about asset management,
- Novice users who have explored some asset management concepts but want to learn more, and
- Experienced users who want to learn more about new applications and tools and to discuss issues.

The conference theme, **Making Asset Management Work in Your Organization**, addresses these diverse interests. The conference is designed to be a forum for practitioners, researchers, and others to impart information on a variety of transportation asset management topics. The objectives of the conference are to

- Share asset management experiences, and
- Provide an opportunity to learn about new tools and techniques.

The conference is being held in conjunction with the **1st National Conference on Roadway Pavement Preservation**, a key element in asset management, with opportunities for postconference workshops (see page 13). These two conferences provide a great opportunity to share information, acquire new skills, and tap into the growing network of asset management professionals. Enjoy your stay in Kansas City!

—Sue McNeil
University of Delaware
Chair, TRB Committee on
Transportation Asset Management

—Kirk T. Steudle
Michigan Department of Transportation
Chair, AASHTO Asset Management
Subcommittee

6th National Conference on Transportation Asset Management Program Committee

Cochairs

Francine Shaw-Whitson, Federal Highway Administration

Katie Zimmerman, Applied Pavement Technology, Inc.

Members

Ralph Bell, CH2MHill

Jason Bittner, Midwest Regional University Transportation Center

Doyt Bolling, Utah Tech Transfer

James Bryant, Virginia Department of Transportation

David Clawson, American Association of State Highway and Transportation Officials

Troy Cowan, ARES Corporation

Geraldo Flintsch, Virginia Polytechnic Institute and State University

David Geiger, Federal Highway Administration

Terry Heidner, Kansas Department of Transportation

Ken Leonard, Cambridge Systematics, Inc.

Terry McNinch, Local Technical Assistance Program, Michigan Technological University

Vicki Miller, Federal Highway Administration

Mary Murray, Federal Highway Administration

Charlie Nemmers, University of Missouri

Kim Schvaneveldt, Utah Department of Transportation

Dennis Slimmer, Kansas Department of Transportation

Omar Smadi, Iowa State University

Jack Stickel, Alaska Department of Transportation and Public Facilities

Ernie Wittwer, Wittwer Consulting

Staff

Thomas M. Palmerlee, Transportation Research Board

Brian Canepa, Transportation Research Board

1st National Conference on Roadway Pavement Preservation

MONDAY, OCTOBER 31

1:00 p.m.–2:30 p.m., Century A

Applied Pavement Preservation: Project-Level Strategies, Part 1

Shakir R. Shatnawi, California Department of Transportation, presiding

Integration of Preventive Maintenance in the Pavement Preservation Program: Ontario Experience

Wael Bekheet and Khaled Helali, Stantec Consulting, Inc.

Thomas J. Kazmierowski and Li Ningyuan, Ontario Ministry of Transportation, Canada

Condition-Based Determination of Preservation Needs of a Road Network

Raja Shekharan and Douglas C. Gilman, Virginia Department of Transportation

Warranty Administration in the Michigan Department of Transportation's Capital Preventive Maintenance Program

Kevin Kennedy, Michigan Department of Transportation

2:30 p.m.–3:00 p.m., Century Foyer

Break

3:00 p.m.–4:30 p.m., Century A

Applied Pavement Preservation: Project-Level Strategies, Part 2

Emily O'Quinn McGraw, North Carolina Department of Transportation, presiding

Preventive Surface Treatments Versus Traditional Corrective Maintenance Measures

Peter E. Sebaaly, University of Nevada–Reno

N. Mike Jackson, University of North Florida

Gail L. Porritt, Asphalt Systems, Inc.

The Development of the Caltrans Maintenance Technical Advisory Guide

Shakir R. Shatnawi, California Department of Transportation

R. Gary Hicks, MACTEC Engineering & Consulting, Inc.

Christopher Peter Antonucci, Harris & Sloan Consulting Group, Inc.

An Analysis of New Zealand Chip Seal Design and Construction Practices

Douglas D. Gransberg, University of Oklahoma

Bryan Dale Pidwerbesky, Fulton Hogan Ltd., New Zealand

Mark Your Calendar

December 8–9, 2005

**Data Requirements in
Transportation Reauthorization
Legislation: What Is Included
and Impacts on the Data
Community**

Washington, D.C.

www.TRB.org/Conferences
ReauthorizationData

January 22–26, 2006

TRB 85th Annual Meeting
Washington, D.C.
www.TRB.org/Meeting

June 4–7, 2006

**North American Travel
Monitoring Exposition and
Conference (NATMEC)**
Minneapolis, Minnesota
www.NATMEC.org

July 2006

**Freight Demand Modeling:
A Conference on Improving
Analysis and Forecasting
Tools for Public-Sector
Decision Making**

October 31, 2005



Roadway Pavement Preservation and Asset Management—Joint Sessions

TUESDAY, NOVEMBER 1

7:00 a.m.–8:00 a.m., Century Foyer
Continental Breakfast

8:00 a.m.–8:30 a.m., Century A

Welcome

Larry Galehouse, National Center for Pavement Preservation, presiding

Welcoming Remarks

Don Hillis, Missouri Department of Transportation

8:30 a.m.–10:00 a.m., Century A

Joint Plenary Session

Developing and Implementing Pavement Preservation Within Asset Management: Network-Level Issues, Part 1

Larry Galehouse, National Center for Pavement Preservation, presiding

Kansas Department of Transportation's Road to Pavement Preservation

Dean M. Testa, Kansas Department of Transportation (*retired*)

Changing Our Way of Thinking: Have We Succeeded?

Judith B. Corley-Lay, Emily O'Quinn McGraw, and Neil Mastin, North Carolina Department of Transportation

Improving Safety as Part of a Pavement Preservation Program

Kathryn A. Zimmerman and Roger M. Larson, Applied Pavement Technology, Inc.

The Internal and External Marketing of Pavement Preservation: An Effective Asset Management Tool

Kirk T. Steudle, Michigan Department of Transportation

10:00 a.m.–10:30 a.m., Century Foyer
Break

10:30 a.m.–12:30 p.m., Century A

Joint Plenary Session

Developing and Implementing Pavement Preservation Within Asset Management: Network-Level Issues, Part 2

Kathryn A. Zimmerman, Applied Pavement Technology, Inc., Presiding

Incorporating Pavement Preservation Strategies into an Asset Management Program in a Large City

Katheryn J. Shields, Jackson County, Missouri

Expanding the Focus from Pavements to Other Assets

Deb L. Miller, Kansas Department of Transportation

Asset Management and Roadway Preservation: Interactions and Synergies in Successful Programs

King W. Gee, Federal Highway Administration

Lessons Learned from Pavement Preservation Programs and Their Application to Asset Management

Kirk T. Steudle, Michigan Department of Transportation

November 1, 2005



6th National Conference on Transportation Asset Management

TUESDAY, NOVEMBER 1

12:30 p.m.–1:30 p.m.

Lunch (on your own)

1:30 p.m.–3:00 p.m., Liberty

Applying Transportation Asset Management Tools to Decision Making

Charles Joseph Nemmers, University of Missouri–Columbia, presiding

This session illustrates the application of asset management concepts in the private sector.

Operational and Institutional Impacts of an Integration of a Computerized Maintenance Management System and Asset Management System Case Study: Florida's Turnpike Enterprise

Santiago Alvarez, John Cerasari, and Jesse Day, Florida's Turnpike Enterprise

Development of an Independently Verifiable Asset Management System

Andrew Smith and Rhys Davies, Lloyd's Register Rail Limited

1:30 p.m.–3:00 p.m., Shawnee

Exploring Resources

Ernie Wittwer, Wittwer Consulting, presiding

This session explores resources available to assist agencies just starting on the path to asset management.

Training Opportunities in Transportation Asset Management

Jason John Bittner, University of Wisconsin–Madison

Local Technical Assistance Program Centers as a Resource for Asset Management Implementation

Stephen T. Pudloski, University of Wisconsin–Madison

Pavement Management as a First Step in Asset Management

Kathryn A. Zimmerman, Applied Pavement Technology, Inc.

Establishing an Asset Management Culture

Bart Selle, Vermont Agency of Transportation

1:30 p.m.–3:00 p.m., Pershing North

Use of Available Tools

Francine Shaw-Whitson, Federal Highway Administration, presiding

This session identifies tools available to support asset management and to illustrate their use in various applications.

Asset Management: Kansas Department of Transportation's Need-Score Approach

Rosemary M. Ingram, Kansas Department of Transportation

Michigan Asset Management Council: An Internet-Based Approach to Collecting Investment Data to Support Asset Management

Robert D. Surber, Michigan Department of Information Technology

Using Network-Level Pavement Condition Data in Needs-Based Budget Preparation for an Asset Management System: A Virginia Department of Transportation Experience

Tanveer Chowdhury, Virginia Department of Transportation

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National Park Service Road Inventory Asset Management and Data Integration

James A. Amenta, FHWA Federal Lands

HDM-4 and Its Potential Adaptation to State Departments of Transportation for Use in Asset Management

Peter Cook and Simon Lewis, Sophia Yu Consulting, Inc.

3:00 p.m.–3:30 p.m., Century Foyer

Break

3:30 p.m.–5:00 p.m., Pershing North

Comparing and Contrasting Asset Management in Transportation Agencies

Omar Smadi, Iowa State University, presiding

This session compares and contrasts the transportation asset management principles in organizations which vary in size, organizational structure, implementation status, and asset type.

Asset Management Used in Disaster Recovery

David L. Blake, PBS&J

Doug Prager, Florida's Turnpike Enterprise

Can Traditional Highway Assessment Strategies Be Adapted to Waterway Infrastructure Analysis?

Bruce Lambert, Dave Lichy, and David V. Grier, U.S. Army Corps of Engineers

Development and Implementation of the Illinois Tollway Maintenance Quality Assurance Program

John Hausman, Applied Research Associates–ERES Consultants Division

Quarterly Project Reviews: Washington State Department of Transportation's Experience in Managing Assets Through Accountability and Performance Reporting

Gregory A. Selstead, Washington State Department of Transportation

3:30 p.m.–5:00 p.m., Shawnee

Establishing and Using Performance Measures

Kathryn A. Zimmerman, Applied Pavement Technology, Inc., presiding

This session introduces the use of performance measures and their relationship to customer expectations.

Portland Transportation Pavement Performance Reporting

Patricia Bugas-Schramm, Portland Transportation Maintenance

Asset Management Performance Measures for Privatized Highway Concessions in British Columbia

Travis Gilbertson and Shawn Landers, Geoplan Consultants, Inc.

Bruce McAllister, British Columbia Ministry of Transportation & Highways

Using System Performance Measures in the Development of a Long-Range State Transportation Plan: An Iowa DOT Case Study

David J. Plazak, Iowa State University

Stan Peterson and Craig O'Riley, Iowa Department of Transportation

Use of Optimal Performance Measures to Determine Budget Requirements

Roy Jurgens, Alberta Infrastructure & Transportation

Lynne Cowe Falls, University of Calgary

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3:30 p.m.–5:00 p.m., Liberty

**The Role of Maintenance in Transportation Asset Management:
The Buck Stops Here**

Doyt Bolling, Utah State University, presiding

This session illustrates the role of maintenance as part of a comprehensive asset management program.

Simulating Road Sign Lifetime in North Carolina

Elizabeth Allison Harris, William Rasdorf, Joseph E. Hummer, Pavan Immaneni, and
Chunho Yeom, North Carolina State University

**The Budget That Virginia’s Department of Transportation Built: How Virginia’s Asset
Management Division Transformed Budgeting for Highway Maintenance**

Phebe Greenwood, Virginia Department of Transportation

Using Asset Management to Develop Maintenance Budgets

Douglas Betts, Carter & Burgess, Inc.

**Applying Asset Management Strategies to Traffic Signal and Street Lighting Systems in
Portland, Oregon**

David Hutson, City of Portland, Oregon

Patricia Bugas-Schramm, Portland Transportation Maintenance

WEDNESDAY, NOVEMBER 2

7:00 a.m.–8:00 a.m., Roanoke

Educators’ Discussion

Gerardo W. Flintsch, Virginia Tech Transportation Institute, presiding

This informal meeting provides an opportunity for educators to discuss materials available to support an asset management curriculum. Pick up continental breakfast in Century C and join us. No sign-up required.

7:00 a.m.–8:00 a.m., Century C

Continental Breakfast

8:00 a.m.–10:00 a.m., Pershing North

Asset Management Applications in Small Organizations

Terry McNinch, Michigan Tech University; Doyt Bolling, Utah State University, presiding

This session illustrates the application of transportation asset management principles and practices in very small agencies.

Developing Asset Management Guidance for Local Agencies in Michigan

Kirk Steudle, Michigan Department of Transportation
Joseph A. Guerre, Cambridge Systematics, Inc.

**Guiding Local Road Decision Makers Using a Transportation Asset Management
Approach: The Cass County Michigan Experience**

Joseph Bellina, Cass County Road Commission

**The Payoff of Asset Management: Providing Extraordinary Service Delivery Levels in
the City of Eagan, MN**

Tom Struve, City of Eagan, MN

Asset Management: The Art of Securing Funding for Street Network Needs

King Lloyd, City of Glenwood Springs, Colorado



8:00 a.m.–10:00 a.m., Shawnee

Transportation Asset Management Applications in Large, Complex Organizations

Mary G. Murray, Federal Highway Administration, presiding

This session illustrates the application of transportation asset management principles and practices in large, complex organizations.

Utilizing a Roadway Asset Management Plan as a Preventive Maintenance Tool

Douglas Betts, Carter & Burgess, Inc.

Asset Management Data Collection for Supporting Decision Processes

Aristeidis Pantelias, Gerardo W. Flintsch, and Chen Chen, Virginia Tech Transportation Institute

James William Bryant, Virginia Department of Transportation

How State Departments of Transportation Use and Communicate Infrastructure Management Systems Results

Omar Smadi, Iowa State University

Integration of Maintenance and Pavement Management Systems in North Carolina

Charles Pilson, AgileAssets, Inc.

Judith B. Corley-Lay, North Carolina Department of Transportation

8:00 a.m.–10:00 a.m., Liberty

Transit and Rail Organizations, Part I: Transportation Asset Management Applications

Troy E. Cowan, ARES Corporation, presiding

This session will focus on overall approaches to asset management within a transit agency or transportation authority. The session will emphasize agency-wide topics often involving performance metrics, asset investment strategies, long-range asset plans, and other similar topics of interest to an agency's CEO, COO, CFO, board members, and their staffs.

The Mature System: The Port Authority of New York and New Jersey

Ernesto L. Butcher, Port Authority of New York and New Jersey

The Brand-New System: The Triangle Transit Authority

Don S. Carnell, Triangle Transit Authority

The "Middle Aged" System: Metropolitan Atlanta Rapid Transit Authority

Carter R. Rohan, Metropolitan Atlanta Rapid Transit Authority

10:00 a.m.–10:30 a.m., Century C

Break

10:30 a.m.–noon, Shawnee

Facilitated Discussions on Issues in Large, Complex Organizations

Tom Maze, Iowa State University, presiding

This session identifies key issues impacting large, complex organizations and provides the opportunity for participants to discuss possible solutions.

Experiences at Caltrans

Steve Takigawa, California Department of Transportation

Experiences at Kansas DOT

Dennis Slimmer, Kansas Department of Transportation

Experiences at Washington DOT

Aaron Butters, Washington Department of Transportation

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10:30 a.m.–noon, Pershing North

Facilitated Discussions on Issues in Small Organizations

Terry McNinch, Michigan Tech University; Doyt Bolling, Utah State University, presiding

This session identifies key issues impacting small organizations and provides the opportunity for participants to discuss possible solutions.

Developing Asset Management Guidance for Local Agencies in Michigan

Kirk Steudle, Michigan Department of Transportation; Joseph A. Guerre, Cambridge Systematics, Inc.

Guiding Local Road Decision Makers Using A TAM Approach—The Cass County Michigan Experience

Joseph Bellina, Cass County Road Commission

The Payoff of Asset Management: Providing Extraordinary Service Delivery Levels in the City of Eagan, MN

Tom Struve, City of Eagan, MN

Asset Management - The Art of Securing Funding for Street Network Needs

King Lloyd, City of Glenwood Springs, Colorado

10:30 a.m.–noon, Liberty

Transit and Rail Organizations, Part II: Transportation Asset Management Issues

Troy E. Cowan, ARES Corporation, presiding

This session identifies key issues impacting transit organizations and provides the opportunity for participants to discuss possible solutions.

Capital Needs Estimation Process for Small and Medium Size Transit Operators in Downstate Illinois

Richard S. Laver, Booz Allen Hamilton

An Evolutionary Approach to Asset Management Information Systems: The Northeastern Illinois Regional Transportation Authority Experience

Sidney E. Weseman, Regional Transportation Authority

Focused Work: Prioritized Linear Asset Management for Rail

D. Noah Eckhouse, Optram, Inc.

Asset Recommissioning: Essential for Baseline Maintenance and Capital Plans

Jean Backes, Port Authority of New York and New Jersey

12:30 p.m.–1:30 p.m., Century C

Lunch

1:30 p.m.–3:00 p.m., Century A

Plenary Session

Data Integration Applications in Transportation Asset Management

Jack R. Stickel, Alaska Department of Transportation and Public Facilities; James William Bryant, Virginia Transportation Research Council, presiding

This session illustrates successful applications of data integration efforts to support asset management activities in small and large agencies.

Reaping the Rewards of a Successful Work Program Data Integration

Rhonda K. Taylor, PBS&J



Location Referencing for an Asset Management System:

A State Department of Transportation Approach

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

Building a Transportation Asset Management Information Technology Architecture

N. B. Nelson, Kansas Department of Transportation

Ken Orr, The Ken Orr Institute

Spatial Information Technologies for Asset Management: A Peer Review Summary

James P. Hall, University of Illinois

3:00 p.m.–3:30 p.m., Century C

Break

3:30 p.m.–5:00 p.m., Pershing North

Analytical Issues in Transportation Asset Management

Gerardo W. Flintsch, Virginia Tech Transportation Institute, presiding

This session explores the use of analytical tools for evaluating trade-offs, resources allocation and project selection, and establishing and achieving agency goals.

Sensitivity Analysis for Fuzzy Logic-Based Life-Cycle Cost Analysis Approach

Gerardo W. Flintsch and Chen Chen, Virginia Tech Transportation Institute

Monitoring and Maintaining Kansas Department of Transportation Roadway Assets Through a Pavement Management System and Funding Programs

Richard W. Miller and Rosemary M. Ingram, Kansas Department of Transportation

Implementing the Ontario Ministry of Transportation's Priority Economic Analysis Tool

Alison Bradbury, Ministry of Transportation of Ontario

Joseph A. Guerre, Cambridge Systematics, Inc.

Ranking Interchange Needs with the South Carolina Interactive Interchange Management System

William Edward Robert, Cambridge Systematics, Inc.

Ron Patton and Kevin Sheppard, South Carolina Department of Transportation

3:30 p.m.–5:00 p.m., Liberty

Best Practices in Transportation Asset Management

Sue McNeil, University of Delaware, presiding

This session showcases the best practices in specific areas of transportation asset management in the United States and internationally.

Successful Delivery of an Asset Management System Using an Iterative Development Methodology

Charles D. Larson, Virginia Department of Transportation

Jump-Starting Your Initiative

Glen Ames, Utah Department of Transportation

Tracking Maintenance Activities for Network-Level Performance Measurement

Roy Jurgens and Jack Chan, Alberta Infrastructure & Transportation

Using Performance Measures to Enhance Asset Management in New Zealand

Travis Gilbertson, Geoplan Consultants, Inc.

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3:30 p.m.–5:00 p.m., Shawnee

Data Issues in Transportation Asset Management

Jack R. Stickel, Alaska Department of Transportation and Public Facilities; Vicki Miller, Federal Highway Administration, presiding

This session explores innovative approaches to data issues in transportation asset management.

Cost-Effective Collection of a Network-Level Asset Inventory

Michael Nieminen, Roadware Group, Inc.

Populating Your Geodatabase Using Digital Video and GPS Data Extraction Techniques

Rob L. J. Huber, Stantec Consulting

Video-Based Asset Data Collection at New Jersey Department of Transportation

Kirk Weaver, Michael Baker Jr., Inc.

Adding Intelligent Transportation Systems Equipment to the Asset Management Mix

Marcella L. Yates, Washington State Department of Transportation

5:00 p.m.–7:00 p.m., Century C

Transportation Asset Management Poster Session:

Interesting Applications of Asset Management Concepts

Kathryn A. Zimmerman, Applied Pavement Technology, Inc., presiding

1. Lessons Learned from Valuation Applications in Transportation Asset Management: Examples of Best Practices and Theoretical Applications after 5 Years of GASB Statement #34

Adjo Akpene Amekudzi, Georgia Institute of Technology

Pannapa Herabat, Asian Institute of Technology

2. Lest We Forget: Asset Management Has Its Unique Attributes

Ibrahim M. Mouaket, City of Toronto, Canada

3. Improving Bridge Programming in Massachusetts Using the Pontis Bridge Management System

William Edward Robert, Cambridge Systematics, Inc.

4. Using Comprehensive Optimization and Trade-Off Analysis Across Multiple Asset-Types for Asset Management Long-Term Planning

Donath M. Mrawira, University of New Brunswick

Mark Gallagher, Xwave, Inc.

5. Using a Condition Assessment Index as a Project Priority Selection Tool

Douglas Betts, Carter & Burgess, Inc.

6. Michigan Department of Transportation and Michigan Department of Natural Resources Asset Management Strategies

Robert A. Ranck, Michigan Department of Transportation

Bruce Watkins, Michigan Department of Natural Resources

7. Asset Management: The Right Solution

Wendy L. Peckham, PBS&J

8. Midwest Regional University Transportation Center, U.S. Department of Transportation Region 5

Jason John Bittner, University of Wisconsin–Madison

9. Synthesizing Experiences of Implementing Asset Management in the World

Sue McNeil and Daisuke Mizusawa, University of Illinois–Chicago

10. Using Planning and Design-Based Asset Management Performance Measures to Support Return-on-Investment–Based Asset Management Program Decisions

William S. Otero and Mark A. Sawyer, HDR Engineering, Inc.



11. **Pontis-Based Health Indices for Bridge Priority Evaluation**
Dan Scherschligt, Kansas Department of Transportation
12. **Safety Index**
Glen Ames, Utah Department of Transportation
13. **Challenges and Strategies for Successful Implementation of Asset Management in Developing Countries**
Donath M. Mrawira, University of New Brunswick
14. **Can Proposed Construction, Current Construction, and Ongoing Operations and Maintenance Be Linked Within a Traditional Asset Management Structure for Waterway Infrastructure?**
Bruce Lambert, Dave Lichy, and David V. Grier, U.S. Army Corps of Engineers
15. **Using Asset Management to Support Signs and Pavement Markings Maintenance Operations**
David Hutson, City of Portland, Oregon

THURSDAY, NOVEMBER 3

7:00 a.m.–8:00 a.m., Century C
Continental Breakfast

8:00 a.m.–10:00 a.m., Pershing North
Future Directions and Research Needs
Sue McNeil, [University of Delaware](#), presiding

This session is a panel discussion focusing on the research needs of agencies and strategies for addressing these research needs. Each panel participant will make a brief presentation (10 minutes) and the remainder of the time will be used for facilitated discussion.

Panelists
Adjo Amekudzi, [Georgia Institute of Technology](#)
Jason John Bittner, [University of Wisconsin–Madison](#)
Peter Cook, [Sophia Yu Consulting, Inc.](#)
Jeffrey H. Smith, [Maryland Department of Transportation](#)

8:00 a.m.–10:00 a.m., Shawnee
Getting Started
Omar Smadi, [Iowa State University](#), presiding

This session provides guidance to agencies that are beginning their asset management implementation process or have recently begun the process.

New Capabilities and New Approach in Roadway Investment Planning
Larry Redd, [Wyoming Department of Transportation](#)
Adapting an Infrastructure Management System to Meet Your Agency’s Needs
Joel Knight, [gbaMS](#)
Planning and Managing Data Integration Efforts for Asset Management
Teresa M. Adams, [Midwest Regional University Transportation Center at the University of Wisconsin–Madison](#)

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8:00 a.m.–10:00 a.m., Liberty

Taking the Next Step

Kenneth James Leonard, Cambridge Systematics, Inc., presiding

This session provides guidance to agencies that have initiated the implementation process (and have completed the self-assessment) by introducing the next steps to be taken.

Asset Management Implementation Strategy

Ibrahim M. Mouaket, City of Toronto, Canada

Incorporating Management Systems into a Comprehensive Asset Management Program

Kathryn A. Zimmerman, Applied Pavement Technology, Inc.

Implementing a Strategic Highway Transportation Asset Management System in Utah

Jeffrey L. Zavitski, Deighton Associates Limited

Maturity Analysis of the Virginia Department of Transportation Asset Management System

Zongwei Tao, Booz Allen Hamilton

Joe Pugh, Virginia Department of Transportation

10:00 a.m.–10:30 a.m., Century C

Break

10:30 a.m.–noon, Century C

Plenary Session and Conference Wrap-Up: Using Lessons Learned and Moving Forward

Sue McNeil, University of Delaware; Kirk T. Steudle, Michigan Department of Transportation, presiding

This session will provide an overview of the international scan and panelists provide examples of how the lessons learned can be applied to state and local agencies in the United States.

Asset Management Strategies in Support of Organizational Decision Making: Examples from Australia, Canada, New Zealand, and the United Kingdom

Michael D. Meyer, Georgia Institute of Technology

International Scanning Tour—Panel Session

Patricia Bugas-Schramm, Portland Transportation Maintenance

David R. Geiger, Federal Highway Administration

Sue McNeil, University of Delaware

Kirk T. Steudle, Michigan Department of Transportation

Optional Workshops

1:30 p.m.–5:00 p.m., Shawnee

Optional Workshop on Highway Economic Requirements System: State Version

(Advance Registration Required)

Robert Mooney and Darren Timothy, Federal Highway Administration; Thomas Timcho, Batelle Memorial Institute, presiding

The Highway Economic Requirements System: State Version (HERS-ST) software is an asset management decision tool used to analyze highway “needs” for programming and planning at the state and metropolitan planning organization levels. HERS-ST answers questions such as:



- What level of capital expenditure is justified on benefit–cost basis?
- What user cost level will result from a given stream of investment?
- What investment level is required to achieve a certain level of performance?
- What is the cost, over 20 years, of correcting all existing and accruing highway deficiencies?

The HERS-ST workshop will provide a hands-on demonstration of the software and how to utilize the decision tool to analyze highway infrastructures. Participants should bring their own laptops if they desire to actively participate.

1:30 p.m.–5:00 p.m., Liberty

Optional Workshop on Life-Cycle Cost Analysis Applied to Pavement Analysis

(Advance Registration Required)

Bernie Kuta and Keith D. Herbold, Federal Highway Administration, presiding

This workshop will introduce the participant to the concepts that FHWA recommends for Life-Cycle Cost Analysis (LCCA) of pavements.

- Part 1 will be a general introduction to the vernacular/terminology and economic terms commonly used in conducting LCCA. A general LCCA process will be discussed using both deterministic and stochastic (probabilistic) methods of calculation.
- Part 2 is an introduction to software developed for FHWA (named RealCost) as an instructional tool as well as being usable for comparing proposed alternatives for pavement designs. There will be hands-on opportunities to “play” with the software for familiarity during this part (**bring a personal laptop**). The RealCost software uses MS Excel as a platform and copies will be provided on a CD along with a user manual and other documents.
- Part 3 will consist of Q&A and a discussion of feedback that has been received as a result of implementation efforts by state Department of Transportation and international agencies.

The participants will learn the basics of the FHWA-recommended LCCA practice that can account for real-world variability of inputs. Each participant will be provided a copy of the software that can be used to perform stochastic (probabilistic) evaluations.

1:30 p.m.–5:00 p.m., Pershing North

Optional Workshop on Web-Based Benefit–Cost Analysis Tool

(Advance Registration Required)

Eric C. Gabler, Federal Highway Administration; Daniel Brod, DecisionTek, LLC, presiding

The workshop will introduce a new web-based project-level benefit-cost analysis tool that has been developed by the Office of Asset Management. The tool facilitates the application of benefit-cost analysis to a wide variety of roadway and intersection projects, allowing the user to load information and get usable results quickly. By way of introduction, the workshop will begin with a discussion of a broad range of economic subjects relevant to project analysis, including inflation and discount rates, LCCA, benefit–cost analysis, risk analysis, and economic impact analysis. The workshop is appropriate for anyone interested in the application of economic analysis to the planning, design, and implementation of highway projects. Potential applicants include managers and staff of state and local highway agencies, FHWA division offices, private industry, and academia. **Participants should bring their own laptops, if possible.**

November 3, 2005



Mobile Phone Manners



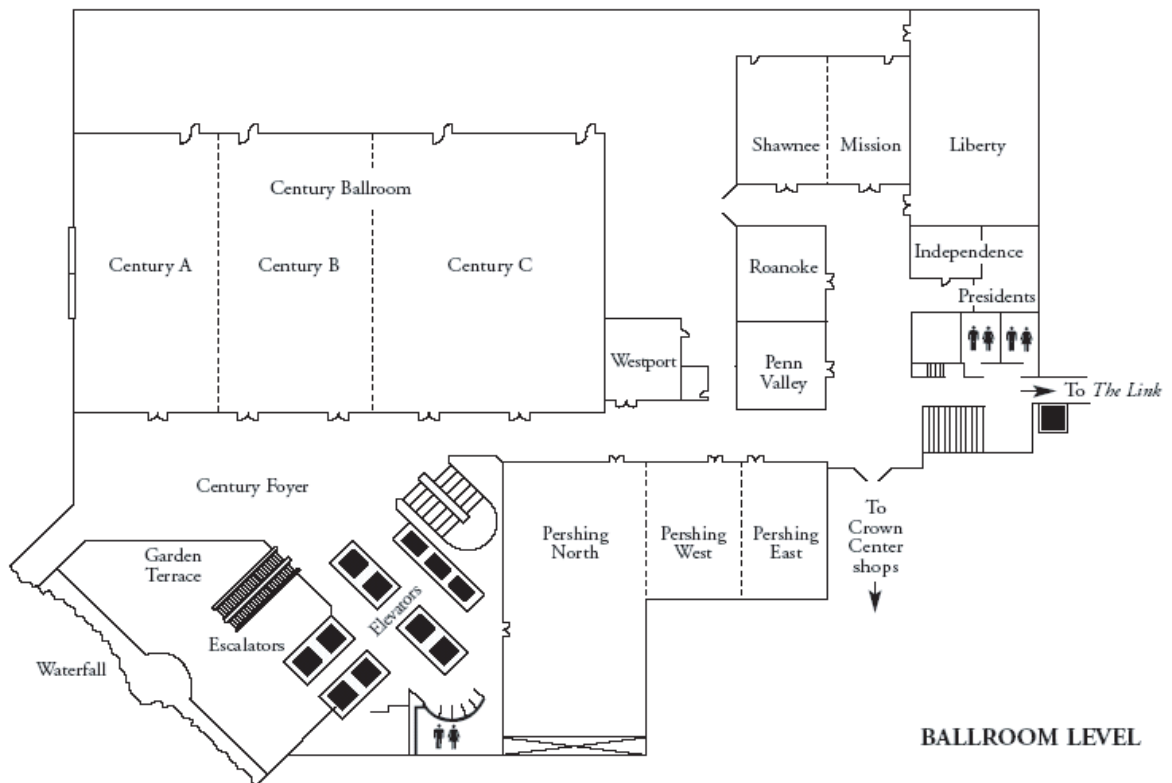
As a courtesy to other attendees, please observe good mobile phone manners. When attending meetings and in the public areas adjacent to these activities, please turn off your cell phones and other wireless communications devices or use the silent notification options. Thank you for your cooperation.

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