Welcome to the 13th National Light Rail & Streetcar Conference. Since the 1980s, light rail and streetcars have led a renaissance in the transit industry, which is now experiencing its highest ridership in six decades. This conference will show decision-makers how investments in light rail and streetcars can strengthen the entire transit network, contribute to regional mobility, and integrate successfully into the built environment. Exploring ways to plan, design, construct, maintain, and operate light rail and streetcar systems, sessions will showcase the positive results seen in metropolitan areas that have embraced light rail and streetcars.

The host for this conference is Metro Transit, serving the Minneapolis/St. Paul areas, and an innovative leader in public transportation. A decade after its first light rail line between Downtown Minneapolis and the Mall of America, Metro Transit opened a second line linking Minneapolis and St. Paul last year and is planning additional extensions. Metro Transit is proud to share with you how its integrated light rail transit system is connecting the region together and building a more prosperous and sustainable Twin Cities.
Metro Transit is the primary provider of public transit services in the Twin Cities. It is a division of the Metropolitan Council, the region’s metropolitan planning organization. Metro Transit’s service area covers 900 plus square miles and more than 90 municipalities. In 2014, Metro Transit provided 84.5 million bus, light rail, and commuter rail rides, the highest ridership since 1981. In addition, Metro Transit and the Metropolitan Council offer resources for biking, carpooling, and vanpooling, and partner with local bike and car sharing services to promote a variety of transportation choices to residents and visitors of the region.

Metro Transit operates a fleet of 86 light rail vehicles, 900 buses – including 132 hybrid-electric buses – 18 commuter rail cars and six locomotives. The region’s first light rail line, the METRO Blue Line, opened in 2004. The METRO Green Line opened in June 2014. These lines share stations in downtown Minneapolis and together stretch approximately 21.3 miles. Ridership on the Green Line has surpassed expectations during its first year of operation, with average weekday ridership exceeding 40,000 rides on several occasions. Significant numbers of riders are using the three METRO lines, including the Red Line BRT, to attend sporting events, travel to and from the Minneapolis-St. Paul International Airport, the University of Minnesota or one of the many other colleges and universities, in addition to commuting between major employment centers.

Metro Transit’s five-year vision, Toward 2020, includes expanding the core bus system and implementing arterial BRT service on several major transportation corridors. The region’s first arterial BRT line, the A Line, will connect the Blue and Green lines when it opens in early 2016. Extensions of the METRO Blue and Green lines will add another 30 miles of light rail to the METRO system. In addition, new highway BRT lines are planned on I-35W south of downtown Minneapolis and along I-94 east from downtown St. Paul.
November 2015

Dear Colleagues,

Welcome to the 13th annual APTA/TRB National Light Rail and Streetcar Conference. Minneapolis and Saint Paul are honored to host what promises to be an exciting conversation about transit’s role in shaping the world’s great cities.

We are especially proud of the newly opened Green Line that links our two downtowns with the University of Minnesota and dozens of neighborhoods along the way. After just 16 months of operation, the Green Line is exceeding ridership expectations and surprising all of us with how quickly it has integrated itself into the fabric of our cities.

In addition, transit projects are currently in various stages of planning on other key corridors like Nicollet/Central Avenues in Minneapolis and West 7th/ East 7th in Saint Paul.

So, while you’re here, hop on a train and find your way to one of our many fine restaurants, shopping districts or other historic, cultural and scenic attractions.

Best wishes for a wonderful conference.

Sincerely,

Mayor Christopher B. Coleman
City of Saint Paul

Mayor Betsy Hodges
City of Minneapolis
On behalf of all those who work at Metro Transit, I’d like to welcome you to the 13th National Light Rail & Streetcar Conference. It’s our honor to serve as the host transit agency for this exciting gathering.

The Twin Cities is the proud home of a robust multi-model transit system that includes not just light rail but buses, Bus Rapid Transit and Commuter Rail. I hope you will have the opportunity to experience our system first hand during your stay.

Minnesota was introduced to light rail more than a decade ago when we opened the METRO Blue Line connecting downtown Minneapolis, the Minneapolis-St. Paul International Airport and the Mall of America. Since then, there have been more than 100 million rides on this light rail line – far exceeding initial expectations.

In 2014, we introduced the METRO Green Line, which meets the Blue Line in downtown Minneapolis and continues east to the University of Minnesota, the state Capitol and downtown St. Paul. Almost overnight, the Green Line brought our communities closer together and created a buzz that continues to build throughout the corridor.

Building on these successes, we look forward to extending each of these light rail lines in the years ahead. We also have ambitious plans to expand and improve bus service, support transit-oriented development, deepen our commitment to sustainability and be an equity leader.

I hope you enjoy your time in the Twin Cities and leave our community feeling inspired to continue doing great work. Thank you for visiting and enjoy the conference.

Best wishes for a wonderful conference.

Warmest Regards

Brian J. Lamb
General Manager, Metro Transit
Minneapolis, MN
13th National Light Rail & Streetcar Conference co-sponsored by

**APTA**

APTA is a nonprofit organization of over 1,500 member organizations including transit systems, product and service providers, planning, design, construction and financing firms, academic institutions, and state transit associations and departments of transportation. APTA’s mission is to serve and lead its diverse membership through advocacy, innovation, and information sharing to strengthen and expand public transportation. APTA’s vision is to be the leading force in advancing public transportation.

**TRB**

TRB is a unit of the National Academies of Sciences, Engineering, and Medicine, a private nonprofit institution. Under a congressional charter the National Academies of Sciences, Engineering and Medicine provides scientific and technical advice to the government, the public, and the scientific and engineering communities.

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**Thank You to our 13th National Light Rail & Streetcar Conference Sponsors**

- AECOM
- Herzog Transit Services, Inc.
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- Kimley-Horn and Associates, Inc.
- LTK Engineering Services
- RATP Dev America
- SNC–Lavalin Inc./Interfleet
- Transdev North America
- WSP | Parsons Brinckerhoff
# 13th National Light Rail & Streetcar Conference

‘Transforming Urban Areas’

## Sunday, November 15

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<tr>
<th>Time</th>
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<td>8 a.m. – 6 p.m.</td>
<td>Great Lakes Promenade Fourth Floor</td>
<td>Registration Desk&lt;br&gt;Host/TRB/TCRP Information Desks</td>
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<tr>
<td>Cedar Lakes</td>
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<td>Moderators/Speakers Room</td>
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<td>8 – 9:30 a.m.</td>
<td>Lake Minnetonka Fourth Floor</td>
<td>APTA Streetcar Subcommittee Meeting</td>
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<td>12 – 4 p.m. (on your own)</td>
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<td>Tour of Minneapolis Heritage Trolley Museum</td>
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The Minneapolis Streetcar Museum operates the Como-Harriet Streetcar Line, which includes a mile of the original line that was abandoned in 1954. The streetcars are 100+ years old and were built by Twin City Rapid Transit. The streetcar fare is $2.

**By Bus:** From the Hyatt Regency, walk north one block to 12th Street. Turn left on 12th Street and walk four blocks to Hennepin Avenue. Catch any Route 6 bus headed south (to your left), which run every 15 minutes. The fare is $1.75. The trip takes about 20 minutes. Get off at the first stop next to Lake Calhoun. The streetcar stops across the street, and runs about every 20 minutes.

**By Car:** LaSalle Avenue runs behind the Hyatt Regency. Take LaSalle to 36th Street. Turn right on 36th to Lake Calhoun. Turn left at Lake Calhoun and you'll see the trolley tracks. You can park there or continue to William Berry Road and turn left. Follow Berry Road to Lake Harriet and look for the depot to the right of the bandshell and refectory.
Sunday, continued

5:30 – 7:30 p.m.
Great Lakes A & B
Fourth Floor

Opening Welcome Reception

Enjoy the hospitality of our opening reception. Meet old and new friends and network with your transit industry peers while examining the displays in the showcase. There’s no better way to keep up with what’s happening than the informal, relaxed ambiance of the opening reception – the official conference kickoff.

Light Rail & Streetcar Products and Services Showcase

Back by popular demand! The manufacturers, suppliers, and consultants to the light rail and streetcar industry have come together to display their products and showcase their services. We are sure you’ll enjoy walking the aisles and speaking with representatives of these companies to find out more about how they can help solve your particular problems or provide just what you need. As we envision an influx of new funding and new projects, our vendors will play a crucial role in our vision to expand light rail and streetcar service. Stop by and learn what new technologies are on the horizon. And, you don’t have to leave to attend the opening reception – it’s in the same room.

Thank You To Our Exhibitors

- ALSTOM Transportation    Table 25
- Altro Transflor           Table 9
- American Traction Systems  Table 23
- Apollo Video Technology   Table 1
- BAE Batteries USA         Table 20
- Bode North America, Inc.   Table 14
- Brookville Equipment Corp  Table 18
- CAF USA, Inc.             Table 21
- CJ Geo                    Table 16
- Daktronics                Table 13
- Digi International        Table 12
- FAAC Incorporated         Table 19
- Irwin Transportation Products  Table 4
- KLD Labs, Inc.           Table 24
- Los Angeles County Metropolitan Transportation Authority  Table 2
- Penn Machine Co.         Table 10
Sunday, continued

- Protran Technology    Table 15
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- Sportworks Northwest Inc. Table 7
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- Thales Transport & Security, Inc. Table 5
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- Vossloh North America Table 22
- Zen Industrial Services LLC Table 11

Monday, November 16

7 a.m. – 5 p.m.
Great Lakes Promenade
Fourth Floor

Registration Desk
Host/TRB/TRCRP Information Desks

Cedar Lake
Fourth Floor

Moderators/Speakers Room

7 – 7:30 a.m.
Great Lakes Promenade
Fourth Floor

Continental Breakfast

Breakfast sponsored by Kimley-Horn and Associates, Inc.

7:45 – 9 a.m.
Great Lakes C
Fourth Floor

OPENING GENERAL SESSION

This is where it all starts for the joint conference. We have included many perspectives on the light rail and streetcar industry around the country. Hear from the Mayor of Minneapolis about her vision for rail transit in the region. Also hear about innovative future projects as seen by leaders at APTA and TRB, and the status of light rail projects in North America.

Presiding
John D. Wilkins, Chair, 13th National Light Rail & Streetcar Conference Planning Committee, and former Director of Capital Planning and Programming, New Jersey Transit Corporation, Gillette, NJ
Monday, continued

Sponsor Recognition

Michael S. Townes, Vice Chair, APTA Business Member
Government Affairs Committee, and Senior Vice President/National Transit Market Sector Leader, HNTB Corporation, Hampton, VA

Status of North American LRT & Streetcar Systems

John Schumann, Senior Transportation Consultant-On Call, LTK Engineering Services, Portland, OR

Ted Rosenbaum, Senior Consultant, LTK Engineering Services, San Francisco, CA

Welcomes

Peter McLaughlin, Hennepin County Commissioner and Chair, Counties Transit Improvement Board, Minneapolis MN

Brian J. Lamb, General Manager, Metro Transit, Minneapolis, MN

Neil Pedersen, Executive Director, Transportation Research Board, Washington, DC

Kathryn D. Waters, Executive Vice President – Member Services, American Public Transportation Association, Washington, DC

Honorable Elizabeth “Betsy” Hodges, Mayor, Minneapolis, MN

Complete Streets

Complete streets policies, requiring that roadway designers consider the needs of all users, are increasingly being adopted in states, towns, and communities. Complete streets are credited with improving safety, providing environmental benefits, improving public health, revitalizing communities, and improving quality of life. Much of the focus has been on incorporating facilities for pedestrians and bicyclists. On the rare occasions when transit is considered, the assumption is that transit means buses. But to be “complete,” these streets need to accommodate vehicles on rails. Light rail and streetcars require consideration of additional factors. How best are these modes incorporated into complete streets? What unique factors need to be considered?
Monday, continued

Moderator
Monica J. Meade, Supervising Planner, WSP | Parsons Brinckerhoff, Baltimore, MD

Get Ready! Get Safety! Go! – Improving Safety in Street-Running Environments through Pre-Construction Analysis and Design
Kevin Jones, Systems Safety Manager, Parsons Transportation Group, Houston, TX

Trucks, Pedestrians, and Bicycles – Oh My! Improving Safety in Street Running and Mixed Use Environments
Walter Heinrich, Director of Safety, Metropolitan Transit Authority of Harris County, Houston, TX

Inserting Streetcars in Pedestrians Areas: French Examples
Dominque Bertrand, Director of Studies of Urban Integration, Center-East Territory, Lyon, France

A Proposed Design Alternative for Inserting Dedicated Light Rail Transit Lanes and Other Facilities in a Constrained Arterial
Lyndon Henry, Transportation Planning Consultant, RAILWAY AGE, Austin, TX

9:15 – 10:45 a.m.
State of the Art in Vehicles (LRT & Streetcar)

Metro Transit, Minneapolis, MN

Starting with a synopsis of North American LRV and streetcar procurements over the last three years, this session presents solutions for several aspects of vehicle design, itemizes the growing list of technological advancements in alternative power supplies, and closes with a summary of real-world applications of one such approach, onboard energy storage systems, in operation, in development, and planned for streetcar projects in several U.S. cities.

Moderator
Thomas B. Furmaniak, P.E., Vice Chair, 13th National Light Rail & Streetcar Conference Planning Committee; Chair, APTA Light Rail Transit Technical Forum; and Managing Director, NDYLTK Rail, Sydney, Australia

North American LRV/Streetcar Procurements … since we last met
Thomas B. Furmaniak, P.E.

Ergonomics and Visibility in Tramway Driver’s Cab
Alexandra Guessset, Engineer, Tramway Department, Technique des Remontées Mécaniques et des Transports Guidés (STRMTG), Saint-Martin-d’Hères, France

A Workable Solution for Conflicting Crashworthiness Requirements
Ensuring LRT & Streetcar Safety

This session deals with the safety approach of light rail and streetcar systems, both from the point of view of the collection of data about accidents that happen to learn about their causes, and from the point of view of improving the layout design in order to develop a safer system. Presentations include perspectives from practice both in the United States and Europe.

**Moderators**

- **Pamela Fischhaber**, Chief of Rail/Transit Safety, Colorado Public Utilities Commission, Denver, CO
- **Margarita Novales**, Associate Professor, Railways and Transportation Group, University of A Coruña, Spain

**Advancing Safety Rule Compliance: Proactive Safety Management through Simplified Data Analysis**

- **Brian P. Dwyer**, Senior Transportation Planner, Associate, STV Incorporated, Boston, MA

- **Michael Wiedecker**, Director, Operations Training, Maryland Transit Administration, Baltimore, MD

**LRT Safety: How are Pedestrians Involved?**

- **Marine Millot**, Head of Urban Road, Urban Safety and Lighting Section, CEREMA, Aix-en-Provence, France

**Safety Management in Europe LRT Systems: Some Tools for Collecting and Using Accident Data**

- **Dominique Bertrand**, Senior Advisor, CEREMA, Lyon, France

**Getting a Safer LRT Through Better Design of its Insertion in Public Space**

- **Margarita Novales**
Lessons Learned: The Price of Compromise

Funding even the needed elements of a start-up LRT system, before considering those elements desired by the operator and/or the community, is always a challenge. Compromises are inevitable to get a system up and running, and sometimes those compromises end up "kicking the can down the road." This session relates the experiences of three systems: Sacramento, Baltimore, and Denver, and the lessons each learned - sometimes from its preceding “start-up” as it expanded to meet service and community needs. Wrapping up the session, host system Metro Transit relates lessons learned as it developed procedures to respond to community requests for additional access to its Blue and Green Lines in metropolitan Minneapolis and St. Paul.

Moderator
Stephanie Eiler, Former Principal Transportation Planner and Vice President, CH2M, Minneapolis, MN

Compromise: A Necessary Element of Sacramento's LRT "Starter Line"
John Schumann, Senior Transportation Consultant-On Call, LTK Engineering Services, Portland, OR

Double-Tracking Baltimore’s Light Rail Transit System
Vernon G. Hartsock, PMP, Deputy Director, Engineering and Construction, Maryland Transit Administration, Baltimore, MD

Matthew Pollack, PE, PMP, Vice President, Southeast Division, HNTB Corporation, Baltimore, MD

Denver RTD’s Central Rail Corridor Capacity Improvements
Eric Miller, Senior Rail Service Planner/Scheduler, Regional Transit District, Denver, CO

To Infill or Not to InFill: That is the Question
Mark Fuhrmann, Deputy General Manager, Transit System Development, Metro Transit, St. Louis Park, MN

MarySue Able, P.E., Deputy Project Director, Blue Line Extension, Metro Transit, Crystal, MN

Session sponsored by AECOM
Monday, continued

12:45 – 2:15 p.m.
Great Lakes A&B
Fourth Floor

GENERAL LUNCHEON
Strategies & Tactics to Achieve Rapid Network Implementation

Presiding
Thomas B. Furmaniak, P.E., Vice Chair, 13th National Light Rail & Streetcar Conference Planning Committee; Chair, APTA Light Rail Transit Technical Forum; and Managing Director, NDYLTK Rail, Sydney, Australia

Sponsor Recognition
Kenneth P. Westbrook, Chairman, Transit Division & President, Rail Division, Transdev North America, Lombard, IL

Presenters
Aaron Isaacs, Transit Historian and Former Employee of Metro Transit, Minneapolis, MN
Adam Duininck, Chair, Metropolitan Council, St. Paul, MN

Procurement Strategies for LRT & Streetcar Systems

The speakers will discuss the strategies used for LRT & Streetcar procurements, such as Design-Bid-Build, Design-Bid and Construction Management/General Contractor. Each presenter will give a short overview of one of the strategies, followed by a panel discussion responding to questions from the moderator and audience.

Moderator
Harvey Berliner, Principal Consultant, HDR, Atlanta, GA

LRT Design Bid Build (DBB)
Dan Heller, Vice President, T.Y. Lin International, Inc., Tempe, AZ

LRT Design Build (DB)
Doug Jackson, Vice President of Transportation, WSB and Associates, Inc., Minneapolis, MN

LRT Construction
Mike Robertson, Owner, M.L. Robertson, LLC., Salt Lake City, UT
Monday, continued

2:30 – 4 p.m.
Lake Superior A&B
Fifth Floor

Experiences and Lessons Learned from the Maryland Purple Line Project – Streetcar Procurement Strategies
Gregory P. Benz, Senior Vice President, WSP | Parsons Brinckerhoff, Baltimore, MD

Insertion of Streetcars and LRTs in Urban Street Environments

With light rail transit already implemented along many under-utilized and abandoned rail corridors, metropolitan areas are increasingly looking to "insert" new rail lines directly into streets. This session will examine both historical and contemporary examples of how different urban areas in the U.S. and internationally have used the "insertion" approach to bring light rail transit into a variety of environments successfully. Speakers will focus on solutions to both physical and operational constraints.

Moderator
Jason Lee, Project Manager, San Francisco Municipal Transportation Agency, San Francisco, CA

Downtown Distribution for Light Rail Transit: Past, Present and Future
John Allen, Independent Transportation Consultant, Chicago, IL

Transit Signal Priority for LRT in a Complex Urban Environment
Dan Soler, P.E., Blue Line Extension Project Manager, Metro Transit, Minneapolis, MN


Expanding MetroLink through Town Centers, Residential, and Urban Environments Across Greater Manchester
Dr. Jon Lamonte, Chief Executive, Transport for Greater Manchester, United Kingdom

Liz West, MetroLink Stakeholder Manager, Transport for Greater Manchester/WSP | Parsons Brinckerhoff, Manchester, UK

And They Said it Couldn’t Be Done: Insertion of the Purple Line
Monica J. Meade, Supervising Planner, WSP | Parsons Brinckerhoff, Baltimore, MD
LRT & Streetcar Developments in Canada

LRT is on the move in Canada. Calgary and Edmonton continue to expand their networks, and a new fleet is entering revenue service in Toronto. Elsewhere in Ontario "new start" projects are underway in suburban Toronto, Ottawa, Ketchener/Waterloo, and Hamilton

Moderator
John Watkins, Senior Consultant, LTK Engineering Services, Toronto, ON

Seamless Mobility: The Design of Interchange Stations on the New Eglinton Crosstown LRT Line in Toronto
Americo Gonzalez, Senior Architect and Project Manager, HDR Corporation, Toronto, ON

ION Project Update
Thomas Schmidt, Commissioner, Transportation and Environmental Services, Regional Municipality of Waterloo, ON

State of Good Repair

In North America, and indeed worldwide, light rail, streetcar, and tram transportation is experiencing a true renaissance. Maintaining State of Good Repair (SGR) of these systems as they age requires an ongoing process of condition assessment, regular monitoring, system maintenance, and renewal. Moreover, this involves a broad mix of assets, including infrastructure, rolling stock, and other important supporting systems. SGR is defined as the availability of assets in a condition suitable for the purpose for which they were intended. This session will cover some of the successful SGR activities and challenges that have been addressed in North America. Recent asset condition and end of asset life reporting requirements the FTA has established for transit properties to be eligible for federal funding will also be discussed.

Moderator
Tom O’Brien, Director of Business Development, KLD Labs, Inc., Hauppauge, NY

San Diego Trolley Renewal Program
John W. Haggerty, Director Rail Development, San Diego Association of Governments, San Diego, CA
SFMTA State of Good Repair Program – Twin Peaks Tunnel Trackway Improvement Project
Chuck Morganson, P.E., Associate Vice President, Senior Project Manager, HNTB Corporation, San Francisco, CA

Tess Kavanagh, Project Manager, San Francisco Municipal Transportation Agency, San Francisco, CA

“Want Your Money? What You Need to Know about Metrics for SGR with Regard to FTA Funding.”
Martin P. Schroeder, M.S.M.E., P.E., Chief Technology Officer, American Public Transportation Association, Washington, DC

Impact of the Winter of 2015: Lessons the MBTA Learned for Maintaining State of Good Repair
William McClellan, Assistant General Manager of Rail Operations, Massachusetts Bay Transportation Authority, Boston, MA

Kimberly Woollard, Deputy Director of Light Rail Vehicle Maintenance & Engineering, Massachusetts Bay Transportation Authority, Boston, MA

7 – 7:30 p.m.
Great Lakes C
Fourth Floor

Minneapolis Streetcar Alignment

A presentation of the proposed Minneapolis Streetcar Alignment on Nicollet Avenue across the river to NE Minneapolis.

Presenter
Nathan Koster AICP, Transportation Planner, City of Minneapolis, MN

Session sponsored by AECOM

7:30 – 9 p.m.
Great Lakes C
Fourth Floor

Open Forum

Bring your own 15 minute presentations regarding LRT and Streetcars

Moderator
James H. Graebner, Chair Emeritus, APTA Streetcar Subcommittee, and President, Lomarado Group, Denver, CO
Tuesday, November 17

7 – 11:15 a.m.
Great Lakes Promenade
Fourth Floor

Registration
Host/TRB/TRCP Information Desk

Cedar Room
Fourth Floor

Moderators/Speakers Room

7 – 7:45 a.m.
Great Lakes Promenade
Fourth Floor

Continental Breakfast

Breakfast sponsored by RATP Dev America

7:15 – 7:45 a.m.
Lake Harriet
Fourth Floor

Conference Planning Committee Meeting

8 – 9:30 a.m.
Great Lakes B
Fourth Floor

LRT in the Total Transit System

LRT lines work best when integrated and coordinated with a region’s other transit service, whether rail or bus or both. This session will examine the integration of new LRT lines into the fabric of an existing transit system in areas such as route network, schedules, fares, and coordination of radial, circumferential and crosstown routings.

Moderator
John Schumann, Senior Transportation Consultant-On Call, LTK Engineering Services, Portland, OR

Network Restructuring Around New High Capacity Service
Ken Zatarain, Director of Service Delivery, Tri-County Metropolitan Transportation District of Oregon, Portland, OR

Integration of METRO Blue and Green Lines with Buses
John Dillery, Senior Transit Planner, Metro Transit, Minneapolis, MN
Tuesday, continued

8 – 9:30 a.m.
Great Lakes A1–A3
Fourth Floor

**Importance of Bus Connections to Light Rail Accessibility Gains**
Andrew Guthrie, Research Fellow, Humphrey School of Public Affairs, University of Minnesota, Minneapolis, MN

**Light Rail Hubs in a Multimodal Transport Environment**
Martin Smoliner, Research Associate, Institute of Railway Engineering & Transport Economy, Graz University of Technology, Graz, Austria

**Streetcar Institutional Models: A Comparison of Experience with Transit Coordination**
Christopher Kopp, AICP, CTP, Transportation Planning Manager, HNTB Corporation, Chicago, IL

**Infrastructure Developments**

This session is a review of current issues and developments in light rail infrastructure design and implementation. Learn more about the latest in track design, traffic signal priority, structures, and conceptual planning guidelines for new LRT systems.

**Moderator**
Wulf Grote, P.E., Director, Planning & Accessible Transit, Valley Metro, Phoenix, AZ

**Block Rail – Current Best Practices and Experiences on Recent Projects**
Lucas L. Olson, P.E., Regional Streetcar Director, HDR Corporation, Minneapolis, MN

**Transit Signal Priority Implementation in Phoenix**
Jay Yenerich, P.E., Manager of Design, Valley Metro, Phoenix, AZ

**LRT Structures**
Jim Alexander, P.E., Director, Transit System Design & Engineering, Southwest LRT Project, Metro Transit, St. Louis Park, MN

**Developing Infrastructure-Relevant Guidelines for Preliminary Conceptual Planning of a New Light Rail Transit System**
Lyndon Henry, Transportation Planning Consultant, RAILWAY AGE, Austin, TX

Session sponsored by AECOM
Tuesday, continued

9:45 – 11:15 a.m.
Great Lakes C
Fourth Floor

EUROPEAN PANEL DISCUSSION
Successful Streetcar Design in Motorized Cities:
Best Practices from Western and Eastern Europe

This plenary session examines recent thought on how large streetcar systems should adapt to serving regions where private ownership of automobiles has become, or will become, pervasive. We have three speakers intimately knowledgeable with these issues, one from western Europe and two from central Europe. Each will address recent experiences from their region, offering a case study of a major city as an illustration. We also have a discussant familiar with overall urban transport development in Europe who will tie the three presentations together.

Moderator
Dr. Michal Jaroszynski, Transportation Researcher, Department of Urban & Regional Planning, Florida State University, Tallahassee, FL

Welcome and Introductions
Dr. Gregory L. Thompson, Chair, TRB Light Rail Transit Committee, and Professor Emeritus, Transportation Planning, Department of Urban & Regional Planning, Florida State University, Tallahassee, FL

RandstadRail, an Integrated Light Rail and Metro System in the Metropolitan Region Rotterdam - The Hague
Leonardus H. Haring, Vice Chair, UITP LRT Committee, and Director, HRL Consultancy, The Hague, The Netherlands

The Key Directions of the Modernization of Tram Systems in Central and Eastern European Countries (CEEC)
Gradimir Stefanovic, Managing Director, GS Transport Consultancy Ltd., London, United Kingdom

Integrated Urban Mobility Plans: A Key of LRT Systems Survival and Renaissance
Dr. István Csuzi, General Manager, Oradea Transport Local S.A., Oradea, Romania

Lessons for Public Policy
Dr. Michal Jaroszynski
13th National Light Rail & Streetcar
Conference Planning Committee

**John D. Wilkins**, Chair, 13th National Light Rail & Streetcar Planning Committee, and Former Director of Capital Planning & Programming, New Jersey Transit Corporation, Gillette, NJ

**Thomas B. Furmaniak, P.E.**, Vice Chair, 13th National Light Rail & Streetcar Conference Planning Committee; Chair, APTA Light Rail Transit Technical Forum; and Managing Director, NDYLTK Rail, Sydney, Australia

**Toni Bates**, Retired, WSP | Parsons Brinckerhoff, San Diego, CA

**Harvey Berliner**, Design Manager, HDR, Inc. San Diego, CA

**Stephanie Eiler**, Retired, CH2M, Mendota Heights, MN

**Dr. Pamela Fischhaber**, Chief of Rail/Transit Safety, Colorado Public Utilities Commission, Denver, CO

**Wulf Grote**, Director, Planning & Accessible Transit, Valley Metro, Phoenix, AZ

**T.R. Hickey**, Chief Development Officer, Virginia Railway Express, Alexandria, VA

**Jason Lee**, Project Manager, Finance & Information Technology, San Francisco Municipal Transportation Agency, San Francisco, CA

**Monica J. Meade**, Supervising Planner, WSP | Parsons Brinckerhoff, Baltimore, MD

**Margarita Novales**, Associate Professor, Railways & Transportation Group, University of A Coruna, Spain

**Tom O’Brien**, Director of Business Development, KLD Labs, Inc., Hauppauge, NY

**John Schumann**, Senior Transportation Consultant-On Call, LTK Engineering Services, Portland, OR

**Dr. Gregory L. Thompson**, Professor Emeritus, Transportation Planning, Florida State University, Tallahassee, FL

**Jeffrey D. Young**, Ontario Regional Manager/Senior Systems Consultant, LTK Engineering Services, Mississauga, ON

**John Watkins**, Senior Consultant, LTK Engineering Services, Ambler, PA

**Stephen J. Andrle**, Chief Program Officer/Capacity, Transit Research Board, Washington, DC

**Bruce Howard**, Director, Customer Service and Marketing, Metro Transit, Minneapolis, MN

**Charles Joseph**, Senior Program Manager, American Public Transportation Association, Washington, DC

**Brianna Vigliotti**, Market Development Intern, Metro Transit, Minneapolis, MN