



International Roundabout Conference

May 17–20, 2011

**RENAISSANCE INDIANAPOLIS NORTH HOTEL
Carmel, Indiana**

Co-sponsored by:
Federal Highway Administration
Institute of Transportation Engineers (ITE)

Hosted by:
City of Carmel
Purdue University

Patron
American Structurepoint, Inc.

TASK FORCE ON ROUNDABOUTS

Eugene Robert Russell, Sr., Kansas State University, *chair*
Marcus A. Brewer, Texas Transportation Institute (TTI), *Secretary / Communications Coordinator*
Joe G. Bared, Federal Highway Administration (FHWA)
Janet Barlow, Accessible Design for the Blind (ADB)
Leanna Marie Belluz, Transport Canada
James O. Brewer, Kansas Department of Transportation
Werner Brilon, Ruhr University, Bochum
Dennis M. Cannon, U.S. Access Board
Philip B. Demosthenes, Access Management
Mark A. Doctor, Federal Highway Administration (FHWA)
Said M. Easa, Ryerson University
Lukas Franck, The Seeing Eye, Inc.
Fred R. Hanscom, Transportation Research Corporation (TRC)
Vaughan W. Inman, Science Applications International Corporation (SAIC)
Hillary Isebrands, Federal Highway Administration (FHWA)
Srinivas Mandavilli, Indique Solutions
Michael T. McBride, City of Carmel
Howard M. McCulloch, New York State Department of Transportation
Andrew P. O'Brien, O'Brien Traffic
Anna R. Okola, The World Bank
Walter L. Pribble, Virginia Department of Transportation
Richard A. Retting, Sam Schwartz Engineering
Bruce Wayne Robinson, Transportation Consultant
Lee A. Rodegerdts, Kittelson & Associates, Inc. (KAI)
Bastian J. Schroeder, North Carolina State University
Kenneth Sides, City of Clearwater
Edward R. Stollof, Institute of Transportation Engineers (ITE)
Rod J. Troutbeck, Troutbeck and Associates
Brian J. Walsh, Washington State Department of Transportation
David E. Woosley, City of Lawrence

Transportation Research Board Staff

Richard F. Pain, Transportation Safety Coordinator
Joanice L. Cole, Senior Program Assistant
Stacy Pepitone, Meeting Coordinator

PROGRAM AT A GLANCE

TUESDAY, MAY 17

8:00 a.m. – 5:00 p.m.	Registration	Great Room
8:00 a.m. – Noon	Mini-Roundabouts Workshop	Carmel III
1:00 p.m. – 5:00 p.m.	Roundabouts 101: Introduction to Roundabouts	Carmel III

WEDNESDAY, MAY 18

7:15 a.m.- 5:00 p.m.	Registration	Great Room
7:15 a.m. – 8:00 a.m.	Continental Breakfast	Great Room
8:00 a.m. – 9:15 a.m.	Welcome and Plenary Session	Carmel III
9:15 a.m. – 9:45 a.m.	Break	Great Room
9:45 a.m. – 11:30 a.m.	Session 2: Roundabout Status & Future: An FHWA, State and City Perspective	Carmel I
	Session 3: Evaluation Considerations	Carmel V
	Session 4: Getting Your Roundabout Approved	Forsyth
11:30 a.m. – 12:30 p.m.	Lunch	Carmel III
1:30 p.m. – 5:00 p.m.	ADA Roundabout Workshop Tour	
12:30 p.m. – 2:30 p.m.	Session 5: Recent Major Studies & Reports	Carmel I
	Session 6: U.S. and International Safety Experience	Carmel V
	Session 7: Overcoming Public Skepticism/Concerns	Forsyth
2:30 p.m. – 3:00 p.m.	Break	Great Room
3:00 p.m. – 5:00 p.m.	Session 8: Roundabout Design Issues	Carmel I
	Session 9: Simulation and Visualization	Carmel V
	Session 10: The Case for Roundabouts: Multiple Users	Forsyth
9:30 a.m. – 7:30 p.m.	Session 11: Poster Session I	Great Room
5:00 p.m. – 7:30 p.m.	Exhibits and Reception	Carmel III
7:30 p.m. – 9:30 p.m.	Joint Committee Meeting (TRB & ITE)	Forsyth

THURSDAY, MAY 19

7:15 a.m. – 8:00 a.m.	Continental Breakfast	Great Room
7:15 a.m. – 1:00 p.m.	Registration	Great Room
8:30 a.m. – 10:00 a.m.	Roundabout Tour 1	
8:00 a.m. – 10:00 a.m.	Session 12: Rehabilitating Circles, Rotaries and Challenging Intersections	Carmel I
	Session 13: Roundabouts and Control Issues: Signals & Markings	Carmel V
	Session 14: Economic and Environmental Issues	Forsyth
10:00 a.m. – 10:30 a.m.	Break	Great Room
10:30 a.m. – Noon	Roundabout Tour 2	
10:30 a.m. – NOON	Session 15: International & Unique Designs	Carmel I
	Session 16: Roundabout Performance	Carmel V
	Session 17: Pedestrian Issues	Forsyth
NOON – 1:00 p.m.	Lunch	Great Room
1:00 p.m. – 2:30 p.m.	Session 18: Roundabouts Capacity	Carmel I
	Session 19: Roundabouts and Large Vehicles	Carmel V
	Session 20: Bicycle Issues	Forsyth
8:00 a.m. – 2:30 p.m.	Session 21: Poster Session II	Great Room
3:00 p.m. – 6:30 p.m.	Social Event: Indianapolis Motor Speedway	

FRIDAY, MAY 20

7:15 a.m. – 8:00 a.m.	Continental Breakfast	Great Room
7:15 a.m. – NOON	Session 21: Poster Session II – <i>continues</i>	Great Room
8:00 a.m. – 10:00 a.m.	Session 22: Lessons Learned	Carmel I
	Session 23: Mini Roundabouts and A Road Diet	Carmel V
	Session 24: Issues with Blind Pedestrians	Forsyth
10:00 a.m. – 10:30 a.m.	Break	Great Room
10:30 a.m. – NOON	Closing Plenary Session	Carmel III

Audience Etiquette

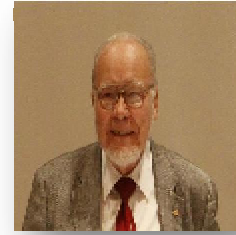
Please observe the following points of meeting etiquette:

- ◆ Make sure all mobile devices are turned off.
- ◆ Keep the meeting room doorways clear.
- ◆ Find seating as far forward as possible
- ◆ Place materials under chairs to maximize seating capacity.
- ◆ Locate seating instead of standing in aisles or against walls.

THANK YOU FOR YOUR COOPERATION!

WELCOME

Welcome to the TRB (ANB75T) Task Force's third successful international roundabout conference. I welcome all of you from a range of public and private organizations throughout the USA and the international delegates from several countries. As chair, the strong interest shown in this conference, which has continually grown from an initial idea and efforts in 2002 to successful roundabout conferences in Vail (2005) and Kansas City (2008), has been very gratifying to me. That the call for abstracts for this 2011 roundabout conference easily produced 130 presentations on several topics is another indication of the strong interest in all phases of roundabouts both in the USA and throughout the world. It is especially notable and indicative of the strong interest in roundabout issues that, in these tough economic times and travel budget restrictions, registration had to be cut off almost a month before the conference.



I thank the hosts and the local planning committee co-chairs and local members for their efforts. I thank the roundabout task force members and friends who have contributed ideas, reviewed papers, agreed to be monitors and/or contribute in other ways. I also thank the TRB conference staff and especially TRB task force staff, Richard F. Pain and Joalice L. Cole, for their constant input and liaison efforts to sooth difficult issues as they arose.

Last but not least, I thank our co-sponsors, Federal Highway Administration (FHWA) and Institute of Transportation Engineers (ITE), our Patron, American Structurepoint, Inc., the roughly 125 presenters and several exhibitors who will make the conference one of the best ever, covering a wide variety of current roundabout topics. To you all, a most warm welcome!

Finally, the local planners have made efforts to enhance your stay and enjoyment of the Carmel area. I hope you take advantage of all the extra offerings and tours and, in particular, visit the dozens of roundabouts in use in the area.

May your conference experience be pleasant and rewarding.

*--Eugene R. (Gene) Russell, Sr., Task Force on Roundabouts, chair,
Professor Emeritus of Civil Engineering, Kansas State University*

FINAL PROGRAM

Tuesday, May 17

8:00 a.m. – 5:00 p.m., *Great Room*

REGISTRATION

8:00 a.m. – Noon, *Carmel III*



MINI-ROUNDBABOUTS WORKSHOP

Clive Sawers, Moor Value Ltd., *presiding*

Ticket Required (Cost: \$75.00)

1:00 p.m. – 5:00 p.m., *Carmel III*

ROUNDBABOUTS 101: INTRODUCTION TO ROUNDBABOUTS

Philip Demosthenes, Consultant, Principal Planner *presiding*

Roundabouts 101 will be a lecture seminar to introduce the elements and principles of roundabouts to a novice audience. Besides its stand alone educational value, it will serve to better inform the participants of the basics of roundabout science and engineering so that they will be better prepared to absorb the wide range of detailed information and new research presented to them the following days during the main part of the conference. The seminar will be presented by five experts, each with over a decade of experience on their topic.

Principal Planner: Planning Aspects and Implications of Roundabouts

Mark Johnson, MTJ Engineering LLC

Operational Analysis of Roundabouts

Lee Rodegerdts, Kittelson & Associates, Inc.

Geometric Design of Roundabouts

Mark Lenters, Ourston Roundabout Engineering

Signing and Marking of Roundabouts

H. Gene Hawkins, Texas Transportation Institute, Texas A&M University

Wednesday, May 18

7:15 a.m. – 5:00 p.m., *Great Room*

REGISTRATION

7:15 a.m. – 8:00 a.m., *Great Room*

CONTINENTAL BREAKFAST

8:00 a.m. – 9:15 a.m., *Carmel III*

WELCOME AND PLENARY SESSION

Eugene (Gene) Russell Sr., Kansas State University, *presiding*

Welcome and Remarks from the Indiana Department of Transportation

Michael B. Cline, P.E., PTOE, Commissioner, Indiana Department of Transportation

Welcome and Remarks from Federal Highway Administration

Joseph Toole, Associate Administrator, Office of Safety, Federal Highway Administration

Welcome and Remarks from Carmel, Indiana and Views on Roundabouts

The Honorable James Brainard, Mayor, City of Carmel

9:15 a.m. – 9:45 a.m., *Great Room*

BREAK

9:45 a.m. – 11:30 a.m., *Carmel I*

SESSION 2: ROUNDABOUT STATUS & FUTURE: AN FHWA, STATE AND CITY PERSPECTIVE

Martina Wilkinson, Larimer County, CO, *presiding*

National Initiatives to Accelerate Roundabouts Implementation

Jeffrey Shaw, USDOT Federal Highway Administration

Flexibility in Roundabout Design: Impact of States' Guides

Justin Bansen, Kittelson & Associates, Inc.

Washington State Roundabout Experience 1997-2011

Brian Walsh, Washington State DOT

Carmel, Indiana: Benefits received in Network Wide Application of Roundabouts

Michael McBride, City of Carmel

9:45 a.m. – 11:30 a.m., *Carmel V*

SESSION 3: EVALUATION CONSIDERATIONS

Howard McCulloch, New York State Department of Transportation, *presiding*

Roundabout Design Alternatives: Evaluating the Effect of Upstream Signals

Ravi Ambadipudi and Steve Thieken, Burgess & Niple, Inc.

Comparative Evaluation of Roundabout's Operational Performance

Yasser Hassan, Carleton University and E.O. Fajimi, Defense Construction Canada

Making Roundabouts and Traffic Signals Work Together

Srinivas Mandavilli, Indique Solutions and Kamesh Vedula, Omni Means

Does Your Roundabout Waltz?

Rachel Price, Reid Middleton, Inc.

9:45 a.m. – 11:30 a.m., *Forsyth*

SESSION 4: GETTING YOUR ROUNDABOUT APPROVED

Edward J. Myers, Kittelson & Associates, Inc., *presiding*

How to Get Your Roundabout Approved: Lessons Learned from the Woodinville Washington Roundabouts Project

Jeannette Taylor, Jacobs Engineering Group

Roundabouts and the Built Environment: Exploring Trends in Maine, New Hampshire and Vermont

Nathan Belz and Lisa Aultman-Hall, University of Vermont, Transportation Research Center

Field Operational Test of Modern Roundabout in Japan by Collaboration with the Local Community

Hideki Nakamura, Nagoya University and Mitsuo Makino, Mayor of Iida City

Bend Roundabout Educational Campaign

Ben Oregon, Brian Ray and Erin M. Ferguson, Kittelson & Associates, Inc.; and Robin Lewis, City of Bend, Oregon

11:30 a.m. – 12:30 p.m., *Carmel III*

LUNCH

(Box Lunch will be provided)

12:30 p.m. – 2:30 p.m., *Carmel I*

SESSION 5: RECENT MAJOR STUDIES & REPORTS

Thomas G. Blust, Road Commission for Oakland County, MI, *presiding*

Overview of NCHRP Report 672: Roundabouts: An Informational Guide, Second Edition

Lee Rodegerdts, Kittelson & Associates, Inc.

Overview of NCHRP Report 684 – Blind Pedestrian Access to Modern Roundabouts

Bastian Schroeder, Ron Hughes, Nagui Roupail and Chris Cunningham, ITRE at North Carolina State University

An Assessment of the Highway Capacity Manual 2010 Roundabout Capacity Model

Rahmi Akcelik, SIDRA Solutions

A Roundabout History of TRL: Research, Analysis and Mini Roundabouts

Mike Hutt, TRL, England

1:30 p.m. – 5:00 p.m.



ADA ROUNDABOUT WORKSHOP TOUR

(Ticket and pre-registration required, \$20.00)

A hands-on experience at roundabouts, about all aspect of roundabout design and operation from the ADA/visually impaired perspective

Janet Barlow, Accessible Design for the Blind

12:30 p.m. – 2:30 p.m., *Carmel V*

SESSION 6: U.S. AND INTERNATIONAL SAFETY EXPERIENCE

Rachel Price, Reid Middleton, Inc., *presiding*

Explaining Safety at Roundabouts: Results from Statistical Analyses of Crashes on 148 Locations

Stijn Daniels, Hasselt University, Transportation Research Institute

Safety Features for Multi-Lane Roundabouts

Duncan Campbell, Auckland Transport; Ivan Jurisich, Traffic Engineering Solutions and Ltd; and Roger Dunn, University of Auckland

The Dynamics of the Crash Frequency at Roundabouts with Unfamiliar Users in Indiana

Michael Barbier, Civiltech Engineering, Inc., Professor Darcy Bullock and Professor John Haddock, Purdue University

Study of Crash Patterns and Related Factors at Kansas and Washington Roundabouts

Wen Hu and Anne McCartt, Insurance Institute for Highway Safety; and Srinivas Mandavilli, Indique Solutions

Roundabout Safety in the UK

Colin Ridding, Mott MacDonald, England

12:30 p.m. – 2:30 p.m., *Forsyth*

SESSION 7: OVERCOMING PUBLIC SKEPTICISM/CONCERNS

Brian J. Walsh, Washington State Department of Transportation *presiding*

Promoting Roundabouts to the Real Decision Makers – The Public

Andy Boenau, AECOM

Promoting Roundabouts over the Years: NYSDOT Experience

Howard McCulloch, New York State Department of Transportation

How One Roundabout Changed a Community – An Encouraging Story of Implementing a City's First Roundabout

Stephen Thieken, Burgess & Niple, Inc. and Andrew Stone, City of Athens, Ohio

Safety Analysis Towards Introducing Roundabouts in Japan

Hidekatsu Hamaoka, Akita University, Yoshiyuki Yoneyama, Chodai, Co., Ltd, Takashi Oguchi, Tokyo Metropolitan University, Hideki Nakamura, Nagoya University, and Tatsuo Takase, Shinshu University

Addressing Skepticism and Opposition to Roundabout Projects

John Beery, City of Noblesville, Indiana

2:30 p.m. – 3:00 p.m., *Great Room*

BREAK

3:00 p.m. – 5:00 p.m., *Carmel I*

SESSION 8: ROUNABOUT DESIGN ISSUES

Mark Lenters, Ourston Roundabout Engineering *presiding*

State of the Opinion

Phil Rust, Ada County Highway District and Rachel Price, Reid Middleton, Inc.

City of Bend Roundabout Analysis and Design Guidelines

Scott Beaird and Brian Ray, Kittelson & Associates, Inc. and Robin Lewis, City of Bend, Oregon

Development of the Intersection Design and Analysis Tool (IDAT)

Adam Kirk, Kentucky Transportation Center and Nick Stamatiadis, University of Kentucky

Entrance Modifications to Reduce Speeds at Existing Roundabouts

Jay Vorisek, CrossRoad Engineers, P.C., Mike McBride, City of Carmel, Indiana and John Habermann, Indiana LTAP

Entry Path Overlap – What is It and How to Fix It

Howard McCulloch, New York State Department of Transportation

3:00 p.m. – 5:00 p.m., *Carmel V*

SESSION 9: SIMULATION AND VISUALIZATION

Kiel Ova, PTV America, Inc., *presiding*

The Use of Visualization to Support Understanding of Roundabout Issues

Frank Broen, Teach America

Beyond Traffic Operations and Visualization

Ravi Ambadipudi, Burgess & Niple, Inc.

Calibration of a Microscopic Traffic Simulation Platform: A Roundabout Case Study

David Duong, Frank Saccomanno and Bruce Hellinga, University of Waterloo

Vissim Calibration for Modeling Roundabouts: Practical Guidance and Recommendations

Ting Wei and Hardik R. Shah, American Structurepoint, Inc., and Ravi Ambadipudi, Burgess & Niple Inc.

Performance Comparison between Single-Lane Roundabout Slip Lanes Exit Types in VISSIM

Majed Al-Ghandour, Billy Williams, William Rasdorf and Bastian Schroeder, North Carolina State University

3:00 p.m. – 5:00 p.m., *Forsyth*

SESSION 10: THE CASE FOR ROUNABOUTS: MULTIPLE USES

John Habermann, Indiana LTAP *presiding*

How Roundabouts Can Support Livability Goals

Ken Sides, City of Clearwater, Florida

Transportation Planning Paradigm Change with Modern Roundabout Applications

Mark Johnson, MTJ Engineering, LLC and Barry Crown, Rodel Ltd.

A Business Case for Roundabouts

Roger Walther, Parsons Corporation

Analysis of Multi-Modal Transportation Interaction and Operations with Roundabouts

Michael Gingrich, Alternative Intersection Control, and Francois Dion, University of Michigan Transportation Research Institute (UMTRI)

Modern Roundabouts and Access Management Considerations

Mark Johnson, MTJ Engineering, LLC and Hillary N. Isebrands, Federal Highway Administration

9:30 a.m. – 7:30 p.m., *Great Room*

SESSION 11: POSTER SESSION I

1. **A Computer-Assisted Process for Evaluating Roundabout Approach Alignment**
Ting Wei, American Structurepoint, Inc. and Daniel Shihundu, Transoft Solutions Inc.
2. **Experimental Investigation Into Speed Performance and Consistency of Urban Roundabouts: An Italian Case Study**
Marco Bassani and Sacchi Emanuele, Politecnico di Torino
3. **Taking the Guesswork out of Fastest Paths**
Phil Rust, Jeremy Andree and Andrew Cibor, Ada County Highway District
4. **Study on the Securement of Smooth Traffic Flow on Roundabouts in Cold, Snowy Regions**
Tetsuya Ogami, Masatoshi Makino, Masahiro Ishikawa and Yuji Yanagisawa, Civil Engineering Research Institute for Cold Region
5. **The Art of Plowing a Roundabout**
Hillary Isebrands, Federal Highway Administration
6. **Construction of Ohio Roundabouts – A to Z**
Ken Richardson, City of Dublin, Ohio
7. **Constructing Roundabouts: From the Inside-Out**
Andrew Plowman, Tony Heppelmann and Jupe Hale, WSB & Associates, Inc. and Kristin Asher, City of Richfield, Minnesota
8. **Making Roundabouts and Traffic Signals Work Together**
Kamesh Vedula, Ross Ainsworth and Ron Boyle, OMNI-MEANS, and Robert Jensen, City of Roseville, California
9. **In-Service Roundabout Capacity Assessment Methods**
Troy Pankratz and Mark Lenters, Ourston Roundabout Engineering
10. **Accommodating Oversized and Overweight Vehicles in Roundabouts**
Kevin Kuhlow and Michael Gingrich, Alternative Intersection Control
11. **North America’s Largest Roundabout Project – 47 Multilane Roundabouts**
Kevin Kuhlow and Mark Lenters, Ourston Roundabout Engineering

12. **Keystone Parkway Interchanges Study and Design**
Craig Parks, American Structurepoint, Inc.
13. **U-Turn Scheme: A Form of Roundabout?**
Ricardo Sigua, University of the Philippines
14. **Operational Performance of Roundabout at Intersections with Unbalanced Traffic Volumes**
Benjamin Waldman, Nitin Deshpande and Vinod Edavalli, Jacobs Engineering Group, Inc.
15. **New Guidance for Signalized Roundabouts: UK**
Colin Ridding, Mott MacDonald, England
16. **Preventing Path Overlap by Design: Evaluating Two Differing Techniques**
Rachel Price, Reid Middleton, Inc., and Phil Rust, Ada County Highway District

5:00 p.m. – 7:30 p.m., *Carmel III*

EXHIBITS AND RECEPTION

7:30 p.m. – 9:30 p.m., *Forsyth*

JOINT COMMITTEE MEETING

TRB Task Force on Roundabouts (ANB75T) & ITE Task Force on Roundabouts

Thursday, May 19

7:15 a.m. – 8:00 a.m., *Great Room*

CONTINENTAL BREAKFAST

7:15 a.m. – 1:00 p.m., *Great Room*

REGISTRATION

8:30 a.m. – 10:00 a.m. and repeated 10:30 a.m. - Noon



ROUNDABOUT TOUR 1 & 2

(Ticket and pre-registration required, \$20.00)

A Guided Tour of Many Carmel, Indiana Roundabouts

8:00 a.m. – 10:00 a.m., *Carmel I*

SESSION 12: REHABILITATING CIRCLES, ROTARIES AND CHALLENGING INTERSECTIONS

Scott Ritchie, Roundabouts and Traffic Engineering, *presiding*

Fixing Older Roundabouts

Pete Jenior and Edward J. Myers, Kittelson & Associates, Inc.

Rotaries in Massachusetts

Dennis Flynn, and Jeff Maxtutis, AECOM

Retrofitting Closely Spaced Intersections Using the Peanut-Turbo Roundabout Concept
Michael Trueblood, Trafficware

Transit Only Lanes and Transit Platform Integration into Multi-Lane Roundabout
Kristi Krueger and Brian Barnett, City of Springfield, Oregon

Planning and Design of a Roundabout at an Unconventional Intersection
Joseph Koram, and Brian Reynolds, PB Americas, Inc.

8:00 a.m. – 10:00 a.m., *Carmel V*

SESSION 13: ROUNDABOUTS AND CONTROL ISSUES: SIGNALS & MARKINGS

Hillary Isebrands, Federal Highway Administration (FHWA) *presiding*

Roundabouts with Traffic Signals

Marian Tracz and Janusz Chodur, Cracow University of Technology

Driver Perceptions of Intersection Lane Control Signing and Marking Options at Multi-Lane Roundabouts

John Bruggeman, University of Wisconsin-Milwaukee and R.A. Smith, National, Inc.,

Advance Diagrammatic and Overhead Signing at Roundabouts

Philip Weber, Ourston Roundabout Engineering and Fred Hanscom, Transportation Research Corporation

Drivability: Measuring Path Overlap Risk

Phil Rust, Ada County Highway District and Rachel Price, Reid Middleton, Inc.

Roundabouts and Metering Signals

Ken Sides, City of Clearwater, Florida

8:00 a.m. – 10:00 a.m., *Forsyth*

SESSION 14: ECONOMIC AND ENVIRONMENTAL ISSUES

Mike McBride, City of Carmel, Indiana, *presiding*

The New Green Intersection is Round

Ken Sides, City of Clearwater, Florida

Modern Roundabouts and Sustainable Intersection Design

Stephen Mensah, Sepideh Eshragh and Ardeshtir Faghri, University of Delaware

Applications of Landscape and Environmental Impact Evaluation of Roundabouts

Lorenzo Mussone and Elisabetta Ginelli, Politecnico di Milano, Gian Domenico Riva, Laboratory of Architecture and Marco Trabucchi, Technical Society of Building Design

Technical and Economic Evaluations for Choosing the Layout of a Road Intersection

Raffaele Mauro, Università degli Studi di Trento and Marco Cattani, Trentino Mobilità S.P.A.

Capital Cost Analysis of Nova Scotia's Roundabout Program 2002-2010

Keith Boddy, Nova Scotia Department of Transportation and Infrastructure Renewal

10:00 a.m. – 10:30 a.m., *Great Room*

BREAK

10:30 a.m. – NOON, *Carmel I*

SESSION 15: INTERNATIONAL & UNIQUE DESIGNS

Mark Johnson, MTJ Engineering, LLC, *presiding*

Two Roundabouts are Better than One (Comparison of Roundabout Designs for a Primary Rural Intersection in Tuscany, Italy)

Antonio Pratelli, University of Pisa, Italy and Reginald R. Souleyrette, Iowa State University

Slovenian Experiences with “Turbo – Roundabouts”

Marko Rencelj, Tomaz Tollazzi and Saso Turnsek, University of Maribor

Roundabout with “Depressed” Lanes for Right Turning – “Flower Roundabout”

Tomaz Tollazzi, Marko Rencelj and Saso Turnsek, University of Maribor

Right-Turn By-Passes at Small Roundabouts

Stanislaw Gaca and Marian Tracz, Cracow University of Technology

10:30 a.m. – NOON, *Carmel V*

SESSION 16: ROUNDABOUT PERFORMANCE

Philip Demosthenes, Consultant, Principal Planner *presiding*

Some Common Aspects of Alternative Models for Roundabout Capacity and Performance Estimation

Rahmi Akcelik, SIDRA Solutions

Comparing Roundabout Capacity Analysis Methods, or How the Selection of Analysis Method Can Affect the Design

David Stanek, Fehr & Peers Transportation Consultants

Analysis of Roundabout Analytical Models during Unbalanced Flows Using Bluetooth Mac Address Matching

Alexander Hainen, Sarah Hubbard, Christopher M. Day, Darcy M. Bullock, and Thomas M. Brennan, Purdue University; Jason S. Wason, Indiana Department of Transportation; and Ting Wei, American Stucturepoint

A Comparative Analysis of Vehicular Flow Image Surveys for Roundabout Performance Evaluation

Lorenzo Mussone, Matteo Matteucci and Davide Rizzi, Politecnico di Milano and Marco Bassani, Politecnico di Torino

10:30 a.m. – NOON, *Forsyth*

SESSION 17: PEDESTRIAN ISSUES

Bastian J. Schroeder, North Carolina State University, *presiding*

Improving Pedestrian Performance and Driver Response at Unsignalized Roundabout Crosswalks

Mark Lenters, Ourston Roundabout Engineering, Inc., Nancy Button, Region of Waterloo, ON, Canada and Tom Knostman, Loveland, CO

Entry Capacity Adjustment Factors for Pedestrians at U.S. Roundabouts

Ruey Cheu, Carlos Duran and Walter P. Moore, The University of Texas at El Paso

Context Sensitive Design Methods for Pedestrian Safety at Roundabout Entries and Exits
Bill Baranowski, Roundabouts USA and Mark Lentors, Ourston Roundabout Engineering, Inc.

Three R's – Roundabouts, Rectangular Rapid Flashing Beacons, and Research
Kristi Krueger, Richard Perry and Brian Barnett, City of Springfield, Oregon

NOON – 1:00 p.m., *Great Room*

LUNCH

(Lunch will be provided)

1:00 p.m. – 2:30 p.m., *Carmel I*

SESSION 18: ROUNDABOUTS CAPACITY

Lee Rodegerdts, Kittelson & Associates, Inc., *presiding*

Developing Capacity Models for Local Roundabouts: A Streamlined Process

Ting Wei, Jeromy L. Grenard and Hardik R. Shah, American Structurepoint, Inc.

Complex High Capacity Roundabout Applications to Include Three and Four-Lane Entry Examples

Mark Johnson, MTJ Engineering, LLC

Empirical Evaluation of Lane-by-Lane Capacities of Congested Triple-Lane Roundabout Approaches

Bastian J. Schroeder, Katy Salamati, Chris Cunningham and Nagui Roupail, North Carolina State University, Raleigh

Comparison of Analytical Roundabout Models Using Capacity and Delay Data

Madhav Chitturi, Dongxi Zheng, Andrea R. Bill and David A. Noyce, University of Wisconsin-Madison – Traffic Operations & Safety Laboratory

1:00 p.m. – 2:30 p.m., *Carmel V*

SESSION 19: ROUNDABOUTS AND LARGE VEHICLES

Mark Lentors, Ourston Roundabout Engineering Inc. *presiding*

Design Guidelines for Accommodating Trucks at Multi-Lane Roundabouts

Scott Ritchie, Roundabouts & Traffic Engineering and Wes Butch, DLZ

A Single Lane Roundabout's 1st Hour Surprise: A 12 Axle (112' Lowboy) Truck!

Kelli Owen, Reid Middleton, Inc.

Truck Rollover at Roundabouts – The Real Causes

Clive Sawers, Moor Value Ltd

Factors Affecting Capacity Estimation for Roundabouts with High Truck Volume

Chris Lee and Jason Dahl, University of Windsor

1:00 p.m. – 2:30 p.m., *Forsyth*

SESSION 20: BICYCLE ISSUES

Reginald Souleyrette, Iowa State University, *presiding*

Investigation of Pedestrian/Bicyclist Accessibility in Minnesota Modern Urban Roundabout Crossings

John Hourdos and Gary Davis, University of Minnesota

Design Developments for Cyclists and Pedestrians at Roundabouts in Australia

Andrew O'Brien, O'Brien Traffic

Roundabouts for Bicycle Boulevards, Bringing Change to Long Beach

Rock Miller, Stantec Consulting

Development of Traffic Calmed Bicycle Boulevards Using Traffic Calming Circles – The Winnipeg Manitoba Canada Experience

Robert Kurylko, Stantec Consulting, David Wiebe, Dillon Consulting and Jeff Crang AECOM

8:30 a.m. – 2:30 p.m., *Great Room*

SESSION 21: POSTER SESSION II

17. **Safety Effects of Converting Signalized Intersections to Roundabouts**
Frank Gross, Vanasse Hangen Brustlin, Craig Lyon and Bhagwant Persaud, Persaud and Lyon, Inc., Raghavan Srinivasan, Highway Safety Research Center
18. **NCHRP Roundabout Model Calibration to Local Driver's Behavior**
Osama Abaza, University of Alaska Anchorage, Zaid S. Hussein, Irene G. Sipin and Jonathan W. Knowles, DOWL HKM
19. **Roundabouts and Public Art**
Ken Sides, City of Clearwater, Florida
20. **Interstate 5 at Hasley Canyon Road Interchange Project**
Andrew Ngumba, Los Angeles County Department of Public Works
21. **Other Geometric Factors Affecting Roundabout Capacity**
Dennis Eyler and Leif Garnass, SRF Consulting Group, Inc.
22. **Comparative Performance Evaluation of an Intersection with Roundabout and Signalized Control**
Ruey Cheu, Michael Archuleta and Darrell Cheu, The University of Texas at El Paso, Marilyn Valdez, Federal Highway Administration and Carlos Duran, Walter P. Moore
23. **Effects of Changes in Road Surface Conditions on Driving Behavior at Roundabouts**
Kazunori Munehiro, Azuma Takemoto and Satoshi Kasai, Civil Engineering Research Institute for Cold Region
24. **Traffic Counting at Roundabouts Using Video Technology: A Practitioner's View**
Ting Wei, Jeromy L. Grenard and Hardik R. Shah, American Structurepoint, Inc.
25. **Design Visualization for Roundabouts: Beyond Still Images**
Ting Wei, Paul W. Jarboe and Jordan C. Lynam, American Structurepoint, Inc.
26. **A Success Story: The Gilberts Corner Roundabouts**
Charles O'Connell, Vanasse Hangen Brustlin, Inc.
27. **Wine Country Roundabouts, A Corridor Approach to Fixing an Unfixable Intersection, Woodinville, WA**
Victor Salemann, David Evans and Associates

- 28. **Roundabouts and Access Management**
Ken Sides, City of Clearwater, Florida
- 29. **Applications of Bluetooth Data Collection at Roundabouts**
Robert Rescot and Steven Schrock, University of Kansas

3:00 p.m. – 6:30 p.m.

SOCIAL EVENT: INDIANAPOLIS MOTOR SPEEDWAY

Buses load 2:45 p.m. – 3:45 p.m. to the Speedway

Friday, May 20

7:15 p.m. – 8:00 a.m., *Great Room*

CONTINENTAL BREAKFAST

7:15 a.m. – Noon, *Great Room*

SESSION 21: POSTER SESSION II (*continues*)

8:00 a.m. – 10:00 a.m., *Carmel I*

SESSION 22: LESSONS LEARNED

Andrew O'Brien, O'Brien Traffic, *Australiapresiding*

Development of Kentucky's Roundabout Policy

Adam Kirk, Kentucky Transportation Center

Two Years Later – Safety, Operations, and Education Lessons from Minnesota's First Two-Lane Roundabout

Joseph Gustafson, Washington County Public Works

40 Years of UK Roundabout Research Design Redesign and Practice: Lessons Learned

Mark Johnson, MTJ Engineering

Studies on Roundabouts in Germany: Lessons Learned

Werner Brilon, Ruhr-University Bochum

Reducing Speeds: The C-Roundabout

Ivan Jurisich & Deborah Asmus, Traffic Engineering Solutions Ltd.; Duncan Campbell, Auckland Transport; and Roger Dunn, The University of Auckland

8:00 a.m. – 10:00 a.m., *Carmel V*

SESSION 23: MINI ROUNDABOUTS AND A ROAD DIET

Michael MacDonald, Hatch Mott Macdonald, Nova Scotia, Canada, *presiding*

Mini-Roundabouts – A Definitive Guide

Clive Sawers, Moor Value Ltd

FHW A Mini Roundabout Study

Scott Ritchie, Roundabouts & Traffic Engineering and Michael Wallwork, Alternative Street Design

Capacity of Mini-Roundabouts

Martin Schmotz and Reinhold Maier, Technical University Dresden / Germany

Driving Simulation as a Design Tool for Mini-Roundabouts

Jason Williams and Ryan Cartwright, AAI Corporation, Joe Bared, Federal Highway Administration and Ramanujan Jagannathan, Vanasse Hangen Brustlin, Inc.

Roundabouts and the New Road Diets

Ken Sides, City of Clearwater, Florida

8:00 a.m. – 10:00 a.m., *Forsyth*

SESSION 24: ISSUES WITH BLIND PEDESTRIANS

Janet Barlow, Accessible Design for the Blind *presiding*

Impact of Quieter Vehicles for Crossing Decisions Made by Blind Pedestrians

Robert Wall Emerson, Dae Shik Kim and Koorosh Naghshineh, Western Michigan University

Single Lane Roundabouts and Individuals who are Blind: Research on Access Challenges and Potential Treatments

Richard Long and David Guth, Western Michigan University, Bastian Schroeder, North Carolina State University and Janet Barlow, Accessible Design for the Blind

An Orientation and Mobility Specialist's Review of Issues for Pedestrians Who are Blind or Who have Low Vision

Janet Barlow, Accessible Design for the Blind

Visually Impaired Concerns: Panel Discussion and Audience Q & A

(All authors and co-authors above invited to participate)

10:00 a.m. – 10:30 a.m., *Great Room*

BREAK

10:30 a.m. – NOON, *Carmel III*

CLOSING PLENARY SESSION

Eugene (Gene) Russell *presiding*

Panel Discussion

Eugene (Gene) Russell, Kansas State and Philip Demosthenes, Consultant, Principal Planner

Audience Discussion/Workshop: What Don't We Know About Roundabouts and How Do We Find Out?

EXHIBITORS

Exhibitors Hours: 5:30 p.m. – 7:00 p.m. on Wednesday, May 8, 2011

ALDIS, INC.

Brian Shockley
10545 Hardin Valley Road
Knoxville, Tennessee 37932
USA
8656229217 (P)
brian.shockley@aldiscorp.com
GridSmart video detection and data collection

AMERICAN STRUCTUREPOINT, INC.

Michele Collinse
7260 Shadeland Station
Indianapolis, Indiana 46256
USA
317.547.5580 (P)
mcollins@structurepoint.com
Cruise through American Structurepoint's booth to see how we helped craft Carmel, Indiana, into "Roundabout City." With experience designing over 100 roundabouts, our team can help address how to reduce traffic headaches in your community and how our custom-crafted public outreach campaigns can engage your stakeholders to ride the "roundabout boom."

DLZ INDIANA LLC

Laurie Johnson
2211 E. Jefferson Blvd.
South Bend, Indiana 46615
USA
574-236-4400 (P)
ljohnson@dlz.com
Pop up booth showing transportation projects.

FHWA RESOURCE CENTER

Jeffrey Shaw
19900 Governors Drive
Suite 301
Olympia Fields, Illinois 60461
USA
708-283-3524 (P)
708-283-3501 (F)
jeffrey.shaw@dot.gov
Various FHWA roundabouts publications, including Roundabouts and Mini Roundabouts Technical Summaries, Roundabouts DVD, Roundabouts Brochure, Roundabouts Peer-to-Peer Program Brochure, etc.

MTJ Engineering, LLC

Mark Johnson
313 Price Pl
#05
Madison, Wisconsin 53705
USA
608 238 5000 (P)
mark@mtjengineering.com

This is to exhibit Roundabout Analysis Software called 'Rodel'.

PTV AMERICA

Joey Pless
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503-297-2556 (P)
503-297-2230 (F)
jpless@ptvamerica.com

PTV America is the North American distributor and developer of PTV Vision? software, VISSIM, VISUM, TRAFFIX, and Traffic Count Management. PTV is recognized as a leader in design and development of software supporting transportation planning and traffic engineering with more than 750 professionals located in 30 worldwide offices.

REID MIDDLETON

Kaci Carlson
728 134th Street SW
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Everett, Washington 98204
USA
425-741-5030 (P)
kcarlson@reidmiddleton.com

As a firm, Reid Middleton has analyzed, designed or reviewed more than 160 single- and multi-lane roundabouts since 1995 and is a recognized national leader in roundabout design. Reid Middleton has provided roundabout services for cities, counties, consultants and state and local highway departments in Washington, California, Oregon and Idaho.

RW ARMSTRONG

Erelin Emmert
300 S. Meridian Street
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USA
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ee Emmert@rwa.com

RW Armstrong—a global engineering consulting firm based in Indianapolis—has served the transportation needs of municipalities, counties, and DOTs since 1961. We solve a variety of infrastructure challenges with a full range of transportation services that include roundabout, road, bridge, and traffic design; traffic analysis; program management; inspection and construction management.

SIDRA SOLUTIONS

Sevim Akcelik
P.O. Box 1075G
GREYTHORN VIC 3104
Australia
+613 9857 4943 (P)
sevim.akcelik@sidrasolutions.com
SIDRA INTERSECTION Software for Roundabouts

SPOT DEVICES

Troy Casaceli
1455 Kleepe Lane
Spark, Nevada 89431
USA
513.202.9208 (P)
troyc@spotdevices.com

Addressing pedestrian safety at roundabouts is of paramount importance. A cost-effective solution is the FHWA-approved Rectangular Rapid Flashing Beacon which warns motorists to yield by emitting rapid, alternating bursts of amber light. US manufacturer Spot Devices combines unsurpassed effectiveness with online remote monitoring, optional solar power and purpose-built LED modules.

TRANSOFT SOLUTIONS

Daniel Shihundu
Suite 250-13575
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daniel@transoftsolutions.com

An industry leader, Transoft Solutions provides innovative CAD-based software for the engineering and architectural community. Products such as AutoTURN for analyzing vehicle maneuvers; TORUS for roundabout planning & design; and NEXUS for fast and efficient traffic intersection designs are all backed by meticulous engineering R & D efforts.

TRL

Ann Horwood
Crowthorne House
Nine Mile Ride
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United Kingdom
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ahorwood@trl.co.uk

TRL Software and Savoy Computing Services have released a innovative new process for designing roundabouts, which links to two market leading products - ARCADY 7 and AutoTrack - these will be exhibited at this event.

KEYNOTE SPEAKERS

BIOS

MICHAEL B. CLINE, P.E., PTOE

Commissioner
Indiana Department of Transportation

Michael B. Cline became Commissioner of Indiana Department of Transportation (INDOT) on June 13, 2010. As Commissioner of INDOT, Governor Mitch Daniels has entrusted Mike with overseeing all aspects of one of the state's largest agencies. INDOT employs over 3,800 people and is responsible for the state's highway system that includes over 11,000 centerline miles and nearly 6,000 bridges. INDOT has a \$400M annual operating budget and an annual construction budget in excess of \$1 billion.

Mr. Cline has 22 years of management and engineering experience in the surface transportation industry in both the public and private sectors.

From 2007 – 2010, Mike held the position of Deputy Commissioner of Operations for the Indiana Department of Transportation (INDOT) in Indianapolis, IN, USA. He provided executive leadership for INDOT's six regional District Offices, State Construction Director, State Maintenance Director, and the Traffic Management Director.

From 1999 to 2006, Mike was an engineering consultant that successfully developed, designed, and managed complex transportation projects for public and private clients. He generated company sales, solved client problems and fostered long-standing relationships.

Mike worked nine years for the City of Indianapolis, serving as the City's Traffic Administrator from 1997 to 1999. During his tenure with the City, he was responsible for the planning, design, maintenance and operation of the City's traffic and parking meter infrastructure.

Mike was the Assistant City Engineer in Terre Haute, IN, from 1989 to 1990.

Mike holds a Bachelor of Science in Civil Engineering from Purdue University, is a registered Professional Engineer in Indiana, and is a board certified Professional Traffic Operations Engineer.

Mike is an active member of the Institute of Transportation Engineers (ITE) and was a member of ITE's International Board of Directors from 2006 – 2008.

Mike and his wife Kimberly live in Indianapolis. They have three children, Josey (14), Elijah (12), and Helen (5).

JOSEPH S. TOOLE
Associate Administrator, Office of Safety

Mr. Toole is the Associate Administrator for the Federal Highway Administration's (FHWA) Office of Safety. This office is the focal point within the FHWA for agency efforts to reduce highway fatalities and crashes, and for coordinating with federal, state and local partners, as well as the industry, on highway safety issues. The Office of Safety also administers the \$1 billion per year Highway Safety Improvement Plan.

Prior to moving to Safety in 2008, Mr. Toole served as the Associate Administrator for FHWA's Office Professional and Corporate Development (OPCD), where he focused on developing the nation's transportation workforce. In 2008, Mr. Toole also served as FHWA's Acting Executive Director, overseeing all agency operations, until a permanent FHWA Executive Director was named. The Executive Director is the agency's highest-ranking career official.

Over his 35 year career, Mr. Toole has served FHWA in a variety of field and headquarters positions including the Director of FHWA's Office of Technology Applications, Deputy Regional Administrator to FHWA's Mid-Atlantic Region, as well as Special Assistant to the FHWA Administrator.

Mr. Toole, a licensed Professional Engineer, is a graduate of the Harvard program for Senior Managers in Government. He received his MBA in Finance from George Washington University and his bachelor's degree in Transportation Engineering from California Polytechnic State University in San Luis Obispo.

THE HONORABLE JAMES BRAINARD

Mayor, City of Carmel

Mayor Jim Brainard is Carmel's first four-term mayor. Under his tenure, Carmel has experienced tremendous growth and prosperity. It is considered one of the fastest growing cities in the United States. The population has grown from 25,000 to more than 80,000 in the last 15 years. Park land, greenspace, and trails have increased from 40 acres to more than 800, including the Monon Greenway and Central Park. The creation of a new downtown and the Arts & Design District has breathed new life into forgotten areas of the city. Carmel has been honored with many awards for its high quality of life and environmental initiatives. Most recently, the City was awarded first place in the Climate Protection Awards from the U.S. Conference of Mayors for its roundabout program and as national runner-up of The Home Depot Awards of Excellence in Community Trees. Carmel has also been the recipient of the Sterling Tree City Award, honorable mention for Municipal Excellence from the National League of Cities and been designated a bronze level Bicycle Friendly Community by the League of American Bicyclists.

Mayor Brainard is often requested to speak about Carmel's initiatives at regional and national conferences. Mayor Brainard has implemented numerous environmental initiatives for the City of Carmel. He has encouraged the construction of roundabouts in place of traditional signaled intersections in Carmel, which reduces vehicle emissions and vehicle accidents. In 2008, Time Magazine called roundabouts "aesthetically pleasing" and recognized Mayor Brainard in his efforts to promote roundabouts. The City now has more than 60 roundabout intersections. Mayor Brainard has signed executive orders mandating the use of hybrid or flex-fuel vehicles for city operations when available and recently enacted a "No Idling" policy for city employees. He also encouraged the City's Utilities Department to develop the technology to use recaptured methane gas to power its wastewater treatment facility as well as repurpose its biosolid waste into high quality fertilizer (topsoil), eliminating the need for its transport to and disposal in a landfill. He has also initiated testing the feasibility of utilizing wind energy as a future power source for the plant.

Mayor Brainard's academic background includes a Bachelor of Arts in History from Butler University and Doctor of Jurisprudence from Ohio Northern University. He also received a diploma from the Oxford Institute on International and Comparative Law from the University of San Diego.

Mayor Brainard has spearheaded significant beautification and economic development projects. One of these public private partnerships is the creation of a true downtown for the City of Carmel, known as Carmel City Center. The focal point of this cultural and entertainment district is the four-venue, world-class Center for the Performing Arts, which includes a state-of-the-art, acoustically perfect 1,600-seat concert hall, dubbed The Palladium, a 500-seat proscenium theatre, dubbed The Tarkington, a 200-seat studio theater and an outdoor amphitheater. Carmel City Center will also feature a public green, a boutique hotel and numerous restaurant and retail venues. The Palladium at the Center for the Performing Arts opened in January 2011. Due to

Mayor Brainard's vigilance with the Center for the Performing Arts, he was named Owner of the Year by Midwest Construction in 2010.

The economic vitality of Carmel is also a primary concern of Mayor Brainard. His comprehensive economic development plan has encouraged the growth of established companies located in Carmel, and has brought in many new high-tech and life sciences firms. His diligence in developing the city helped its Meridian Street Corridor become home to the second largest concentration of office workers in the state of Indiana.

Mayor Brainard's achievements and commitment to public service include serving as co-chair of the Climate Protection Task Force and the Advisory Board of Directors for the U.S. Conference of Mayors. Mayor Brainard was also unanimously elected to become one of thirteen members of the U.S. Conference of Mayors Board of Trustees. Mayor Brainard has also served as an active committee member and Assistant Scoutmaster in Troop 120, chartered to the Rotary Club of Carmel. Mayor Brainard's two sons, Jack and William, earned the Eagle Scout rank in this troop. Mayor Brainard earned his Eagle Scout ranking in 1972 as a youth in Bristol, Indiana, and in 2007, the Crossroads of America Council honored Mayor Brainard with The Distinguished Eagle Scout Award.

Additionally, Mayor Brainard has served as President of the Butler University Alumni Association and was included in Butler's "50 Under 50" in 2004. He was named one of the "Most Powerful Hoosiers in the World" by Indianapolis Monthly and Mayor Brainard has also taught at the University of Indianapolis and coached youth sports. He is an active member of St. Elizabeth Seton Catholic Church and is an accomplished musician. Mayor Brainard is an active member of the Rotary Club of Carmel. He resides in Carmel with his wife Liz, and their children, Jack, Will, Marie and Martha.



Mini-Roundabouts A Workshop

by

Clive Sawers MA MICE CEng
Traffic Engineering Consultant

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Workshop Agenda (2 parts)

TUESDAY, MAY 17, 2011

COST: \$75.00 (LIMITED SEATING)

Part 1	Outline of mini-roundabout usage
Important History	Early results, how the offside priority rule completely changed roundabout operation; its effect on capacity, safety and land use.
Site Selection	What intersections are appropriate for retrofit with (mini-) roundabouts; geometry, crash history, congestion and "knotted" traffic movements.
Design Principles	Examine conflict points, deflection, approach layouts, location and size of central island, location and function of yield lines, 3-way mini-roundabouts, 4-way single, multiple (mini-) roundabouts. Use and design of splitter islands.
Break for Coffee/Tea	Informal discussion
Part 2	Detailed aspects of mini-roundabout design
Detailed design	Illustrations of a number of designs and how they are done in detail using intended vehicle paths and appropriate deflection.
Flows and Capacity	Rule of thumb formula, imbalanced flows, when not to use a mini-rbt, tidal flows, multi-lane use approaches. (Mini-) roundabouts in Networks. * * * * *
Notes:	Each presentation will incorporate drawings, graphics, images and video to illustrate the principles of mini-roundabout operation. Delegates will be free to ask questions during the proceedings rather than to wait until the end of a session; this has been found to enable focussed discussion on a particular topic as it arises.
FHWA Comments:	Joe Bared will make comments on the FHWA perspective and activities on Mini Roundabouts at the end of the workshop

ADA ROUNABOUT WORKSHOP TOUR

Wednesday, May 18, 2011
1:30 P.M.– 5:00 P.M.
(pre-registration required, \$20.00)

FIELD WORKSHOP: TECHNIQUES AND CUES USED BY PEDESTRIANS WHO ARE BLIND OR WHO HAVE LOW VISION AT ROUNABOUTS

The Americans with Disabilities Act requires that newly built facilities are “accessible to and usable by” pedestrians with disabilities. The designer/engineer who understands the issues related to access is much more likely to be successful in selecting and designing appropriate accessibility features. This workshop will give roundabout proponents and designers the opportunity to go to roundabouts with experienced orientation and mobility specialists in order to gain first-hand experience with some of the issues relevant to blind pedestrians at modern roundabouts.

Join this workshop if you're interested in a challenging afternoon outdoors and want to really be aware of some of the issues to consider in designing for all users. Buses will take us to some roundabouts in Carmel, where we will break into small groups and experience various aspects of the roundabouts as they might be experienced by persons with blindness or low vision. An orientation and mobility specialist, experienced in teaching people who are blind to travel, will work with each group.

Activities will include:

- demonstration of techniques used by pedestrians who are blind;
- practice listening for gaps in traffic and for yielding traffic in order to determine when to cross, without vision and with simulated low vision;
- actual nonvisual street crossing experience (if desired);
- an opportunity to identify tactile sidewalk or splitter island features, some that may be helpful and some that may present problems in locating the crosswalk and aligning to cross.

Workshop leaders will be stationed at four to six different locations at the roundabouts. At each location, the leader will discuss one of the above aspects of the roundabout crossing for pedestrians who are blind and lead the group in an exercise at that location. After each group has had a chance to rotate to each 'station', the participants will return to the conference site for a wrap-up discussion and question and answer session.

Workshop limited to 48 people.... 4 to 6 groups of 7 plus a leader.

Dress to be outside.

Note: This is similar to workshops presented at the Vail and Kansas City conferences.

Workshop leader

Janet M. Barlow, COMS

Certified Orientation and Mobility Specialist

Accessible Design for the Blind

3 Manila Street

Asheville, NC 28806

770-317-0611

jmbarlow@accessforblind.org

Additional workshop leaders: Billie Louise Bentzen, Dave Guth, Richard Long, Dae Shik Kim and Rob Wall-Emerson.

MARK YOUR CALENDARS

TRANSPORTATION RESEARCH BOARD

SPONSORED SAFETY AND LEGAL UPCOMING EVENTS

Visit TRB's website for more information at
<http://www.trb.org/Calendar/Public/Calendar.aspx>

50th Annual Workshop on Transportation Law

July 17-20, 2011
Seattle, Washington

2011 International Visualization in Transportation Symposium

August 20-23, 2011
Chicago, Illinois

Emerging Issues in Safe and Sustainable Mobility for Older People

August 30 - September 1, 2011
Washington, D.C. Area

3rd International Conference on Road Safety and Simulation (RSS2011)

September 14-16, 2011
Indianapolis, Indiana



The Transportation Research Board (TRB) 91st Annual Meeting will be held in Washington, D.C., at the Marriott Wardman Park, Omni Shoreham, and Washington Hilton hotels. The information-packed program attracts 11,000 transportation professionals from around the world to Washington, D.C. The TRB Annual Meeting program covers all transportation modes, with more than 4,000 presentations in nearly 650 sessions and workshops addressing topics of interest to all attendees—policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions.

The TRB Registration and Housing Bureau will open to register for the meeting and to make a hotel reservation in early September. More information will be available at www.TRB.org/AnnualMeeting as it becomes available.



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INDIANAPOLIS NORTH HOTEL

