Roundabouts

The Responsible Solution

Stephen Sargeant, P.Eng., PTOE

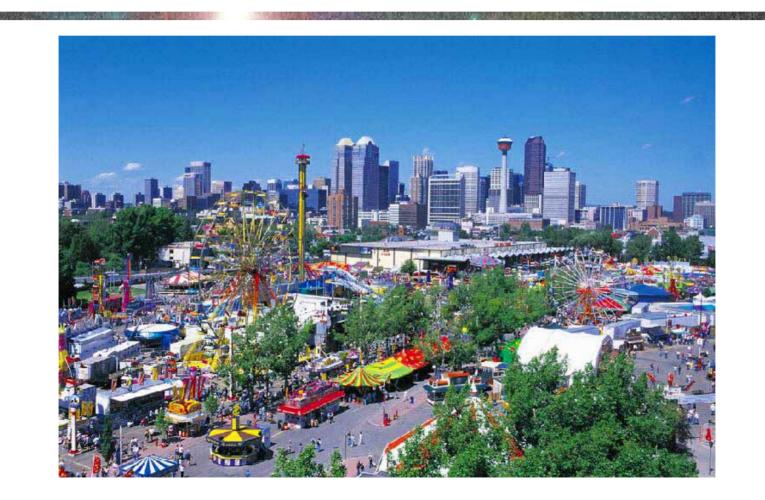
Transportation Engineer - The City of Calgary Calgary, Alberta, Canada



May 22-25, 2005

THE CITY OF CALGARY

Geography of Reasoning



Roundabouts - Linear Thinking

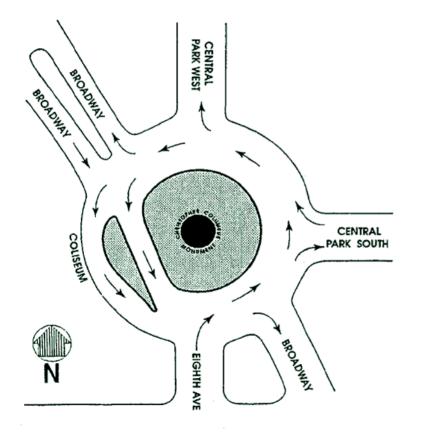
Purpose

- Policy Guidance
- Less Technical
- Critical Conclusions
- Reality Check





Refined Idea



- Extensive History
- Abandoned for Signals
- Significant Research
- New Pioneers

"Modern" Roundabout - Latest Refinements

Responsible Evaluation

- Safety of All Modes and Users
- Legal
- Environmental (Air and Noise)
- Aesthetic
- Life Cycle Costs
- Planning Context



Vational Roundabout Conterence 2005 DRAF

#

of Injuries

Safety - Vehicle

- Statistically Proven
 North America

 Not That Special
 US Studies

 Fully Supported By Technical Bodies
 Insurance Industry

Insurance Industry Support

- Insurance Institute of Highway Safety
- State Farm Insurance
- Insurance Corporation of British Columbia



Provincial/State Medical Costs

- Fewer accidents
- Lower severity
- Lower costs



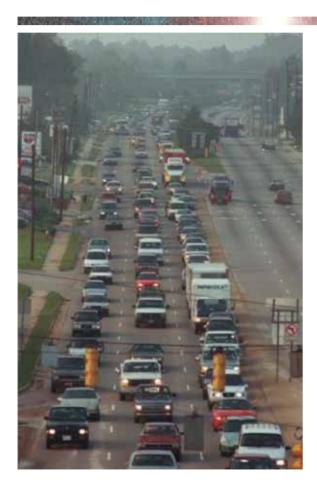
 Up front costs promote Health Care rather than Sick Care

Legal



- Informed Decision
- Professional Responsibility
- Social Responsibility

Environmental



- Kyoto Protocol
- Clean Air Act
- San Joaquin Valley

A roundabout with 25,000 daily entering vehicles can reduce the annual fuel consumption by 227,000 litres compared to a signalised intersection.

Planning Context

- Commuter Route
- Bus Route
- Truck Route
- Bike Route
- Schools
- Multi-family Residential
- Commercial
- Large Grocery Store
- Sports Field Complex
- Nearby Government Complex



Economic

Initial Cost Varies

Longer Replacement Life

- Low Maintenance Cost
- Self Regulating During Fluctuations
- Superior Life Cycle Costs
- Intangibles

Economic

Figure 4: Cost Estimates for Single Lane Roundabouts and Signals at Howard Intersections

Intersection	Costs for Roundabouts	Costs for Signals	Savings with Roundabouts
Cardinal/Glendale	\$115,000	\$250,000	\$135,000
Cardinal/Woodale	\$179,300	\$313,000	\$133,700
Woodale/Velp	\$190,700	\$445,000	\$254,300
Totals	\$485,000	\$1,008,000	\$523,000

Source: Brown County Highway Department



CIRCULAR MOTION = LINEAR THINKING

Next Step for You?

- Get the Facts. Know the Facts.
- Commit to a Positive Philosophy
- Implement Philosophy Not Design
- Dispense Knowledge
- Take It To The Streets
- Enjoy a More Sustainable Environment

Questions????

Where can I....?

You're full of...!!!

National Roundabout Conference 2005 DRAFT

Huh? Did you say....?

What about....?

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