City of Morden
Proposed Roundabout
PUBLIC OPEN HOUSE

December 2014
WELCOME

The information displayed around the room will help explain the concept.

• Please feel free to view the information and speak with anyone wearing a name tag with questions, concerns, or thoughts you may have.

• The project team has begun speaking with stakeholder groups, such as emergency services, trucking and farming representatives, business interests, City and RM Councils, health care providers, and other user groups to hear how the project might affect them and what can be done to address any concerns.

• Our goal for today is to explain the concept of a roundabout at Morden’s eastern entrance, provide an opportunity to answer questions, and to listen to any feedback you may have.

Before leaving, please take a minute or two to fill out a comment sheet.

Thank you.
PROJECT BACKGROUND

• The City of Morden and the adjacent municipalities are growing at a steady pace.

• The Pembina Connection commercial development is accessed via the intersection of PTH 3 and La Verendrye Boulevard. Traffic volumes are expected to continue growing as retail and commercial businesses develop and as personal care homes are constructed.

• There will be required changes to the intersection to handle the projected traffic volumes. Leaving the intersection as it is now will not be an option based on Manitoba Infrastructure and Transportation requirements. Either a traffic signal or a roundabout will be needed.

• Both a signalized intersection and roundabout have been evaluated as two ways of handling increased traffic at this location.
INTERSECTION LOCATION

This board illustrates the location of the intersection in relation to the City of Morden and PTH3.
FUTURE CONDITIONS

• This board illustrates what a roundabout would look like adjacent to the future development.

• Development of the commercial and residential site will demand that this intersection be improved with either a traditional intersection or a roundabout.

• While the existing volumes at this location do not warrant a traffic signal or roundabout, traffic studies tell us that future volumes will require one or the other in the near future.

• The City of Morden would like to plan for this situation in advance of it happening.
INTERSECTION DESIGN

- Two intersection design options have been identified to accommodate future travel demands: a signalized intersection and a roundabout.
- The intersection design options are being evaluated based on functionality, safety, costs, aesthetics, and constructability.
- **OPTION 1:** Signalized Intersection
INTERSECTION DESIGN

• **OPTION 2:** Roundabout

• These diagrams illustrate that a roundabout can function effectively for both cars and large vehicles.

**Turning Signal Legend**
- Continue straight or turn right
- Continue straight
- Continue straight around the roundabout
- Continue straight or turn left around the roundabout
- Turn left around the roundabout
- Turn right

**Roundabout Turning Radius**
- Full-Size Car
- Double-Trailer Semi Truck
## FUNCTIONALITY

The chart below compares speed, stopping times, and delay characteristics for each intersection design option.

<table>
<thead>
<tr>
<th></th>
<th><strong>Signalized Intersection</strong></th>
<th><strong>Roundabout</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed</strong></td>
<td>The driver is expected to reduce speeds to 70 km/h. (May be reduced to 50 km/h.)</td>
<td>The design requires drivers to reduce speed to 30 – 40 km/h, making it ideal for a rural to urban transition.</td>
</tr>
<tr>
<td><strong>Stopping</strong></td>
<td>Traffic flow may completely stop, depending on signals and turning movements.</td>
<td>Traffic generally does not stop, but moves at lower speeds through the roundabout.</td>
</tr>
<tr>
<td><strong>Flow</strong></td>
<td>Periodic traffic flow.</td>
<td>Continuous traffic flow (more efficient movement at higher traffic volumes).</td>
</tr>
</tbody>
</table>
SAFETY

The figure below compares the number of potential collision points with each intersection option.

• There are 32 points where motor vehicles may collide in a signalized intersection and 8 points where motor vehicles may collide in a roundabout.

• Collisions in roundabouts are less severe, on average, than collision in traditional intersections.
SAFETY

- This chart illustrates how roundabouts can reduce all types of collisions.
- Research has shown that for every 10 collisions at a signalized intersection, a roundabout reduces the collisions as shown below:

<table>
<thead>
<tr>
<th></th>
<th>Signalized Intersection</th>
<th>Roundabout</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Collisions</strong></td>
<td>🚗🚗🚗🚗🚗🚗🚗🚗 (10)</td>
<td>🚗🚗🚗🚗 (6)</td>
</tr>
<tr>
<td><strong>Number of Collisions Causing an Injury</strong></td>
<td>🚗🚗🚗🚗🚗🚗🚗🚗 (10)</td>
<td>🚗🚗 (2.5)</td>
</tr>
<tr>
<td><strong>Number of Collisions Causing a Fatal or Incapacitation Injury</strong></td>
<td>🚗🚗🚗🚗🚗🚗🚗🚗 (10)</td>
<td>🚗 (1)</td>
</tr>
<tr>
<td><strong>Typical Types of Collisions</strong></td>
<td>Head-on and T-bone (More Severe)</td>
<td>Rear-End and Side-Swipe (Less Severe)</td>
</tr>
</tbody>
</table>

AESTHETICS

Signalized Intersection

- A signalized intersection provides limited opportunity to create a welcoming image at the entrance to the City.

Roundabout

- Landscaping and signage can be added to a roundabout to create a gateway and beautification opportunity for The City of Morden.
This chart provides a general comparison of the two intersection design options.

<table>
<thead>
<tr>
<th></th>
<th>Signalized Intersection</th>
<th>Roundabout</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functionality</strong></td>
<td>Capacity of intersection to move traffic efficiently</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>Number of collisions and their severity</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Aesthetics</strong></td>
<td>Landscaping and design opportunities</td>
<td>Poor</td>
</tr>
<tr>
<td><strong>Constructability</strong></td>
<td>Challenges when staging construction</td>
<td>Good</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>Capital, operational, and maintenance costs</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
EXAMPLE ROUNDABOUTS

- This board provides a series of photos of existing roundabouts in other similar locations.
- Roundabouts in rural or semi-rural areas are not uncommon and have been used effectively in many locations; they are often a better option than traffic signals.

While there is an extensive history of very successful use of roundabouts in Canada and worldwide, they are a relatively new feature for Southern Manitoba.

The City of Winnipeg, City of Brandon, and City of Kenora have experienced success with constructing and maintaining roundabouts.
DRIVER EDUCATION

- Citizens are often concerned about changes to the built environment as cities and towns grow.
- Drivers who have never seen or used a roundabout, often express concern that they will not know what to do.
- Once drivers use a roundabout, the fear of not knowing what to do normally disappears quite quickly.
- If a roundabout is approved by Manitoba Infrastructure and Transportation (MIT) in this location, the City of Morden and MIT will work together on educating drivers before the roundabout is constructed and during its initial use.
- Manitoba driver training for new drivers includes instruction on roundabouts since they are now a feature in a number of Manitoba locations.

Education, such as pamphlets, workshops, and signage can help people learn the two basic roundabout rules:
- drivers within the roundabout have the right-of-way; and
- drivers can enter the roundabout when it is safe to do so.
Our next steps will be to:

• Review the feedback provided
• Respond to questions as they arise
• Consider possible follow-up meetings
• Provide recommendations to City of Morden Council and Manitoba Infrastructure and Transportation, with your feedback

Thank you for attending this information session.

Please feel free to fill out a comment sheet before you leave.

Contact Information:
Donovan Toews, MCP, MCIP
Landmark Planning & Design
Phone: 204-453-8008
Email: dtoews@mts.net

Dave Haines, P.Eng.
Planning & Engineering Director
City of Morden
Phone: 204-822-2567
Email: dhaines@mordenmb.ca

Project Website:
www.mordenmb.com/city-services/roundabout-information