Multi-Modal Transportation
Rural

Events – Avg. 106 Max 160
Snowfall – Avg. 10 feet Max 14 feet
Multi-Modal Transportation - Motivators

• Physical limitations – aging population and physically challenges, mobility scooters
• Healthy mode of transportation
• Exercise
• Sport and recreation
• Expansion from urban multi-modal networks

The Value of Good Health

14 $ per trip
+ 3 million trips
42 million $
What do Canadians Think About Cycling?

- 44% of Canadians say they would cycle more if they felt safer cycling on roads. Let's share the road and work towards better cycling infrastructure.
- 64% of Canadians expect that there will be more cyclists on the road than today. Let's learn to share the road and work towards better cycling infrastructure.
- 63% of Canadians believe there is a need for further investment in cycling infrastructure in their community.

Conventional Bicycle Lane

As Defined by the proposed Minimum Maintenance Standards (MMS) update:

- “conventional bicycle lane” means a portion of a roadway which has been designated by pavement markings and signage for the preferential or exclusive use of cyclists.
Separated Bicycle Lane
As Defined by the proposed Minimum Maintenance Standards update:

• “separated bicycle lane” means a portion of a roadway which has been designated for the exclusive use of cyclists by signage along with a physical or marked buffer

Conventional and Separated Bicycle Lanes – Snow Accumulation
As proposed by the Minimum Maintenance Standards update:

<table>
<thead>
<tr>
<th>Class of Highway or Adjacent Highway</th>
<th>Separated Bicycle Lanes Depth</th>
<th>Time</th>
<th>Depth</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.5 cm</td>
<td>4 hours</td>
<td>2.5 cm</td>
<td>8 hours</td>
</tr>
<tr>
<td>2</td>
<td>2.5 cm</td>
<td>6 hours</td>
<td>5 cm</td>
<td>12 hours</td>
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<td>3</td>
<td>2.5 cm</td>
<td>12 hours</td>
<td>8 cm</td>
<td>24 hours</td>
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<td>4</td>
<td>4 cm</td>
<td>16 hours</td>
<td>8 cm</td>
<td>24 hours</td>
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<tr>
<td>5</td>
<td>6 cm</td>
<td>24 hours</td>
<td>10 cm</td>
<td>24 hours</td>
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</tbody>
</table>

SNOW ACCUMULATION – ROADWAYS

<table>
<thead>
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<th>Depth</th>
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<tbody>
<tr>
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</tbody>
</table>
Conventional and Separated Bicycle Lanes – Icy Bicycle Lanes and Roadways

As proposed by the Minimum Maintenance Standards update:

<table>
<thead>
<tr>
<th>Class of Highway</th>
<th>Time – Roadways and Separated Bicycle Lanes</th>
<th>Time – Conventional Bicycle Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 hours</td>
<td>6 hours</td>
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</tr>
</tbody>
</table>

Are Current Winter Maintenance Practices Appropriate for Bike Lanes?

• Considerations
  • Bicycles are not cars
  • Are lighter and have narrow wheels
  • Do not crush granules of rock salt
  • Do not generate heat
  • Cannot activate salt, do not dissipate residual snow left by plows
Maintenance Best Practice – Multi-Modal User Viewpoint

- Ice control:
  - Primarily brine
  - Rock salt if needed
- Snow clearing:
  - Mainly sweepers
  - Plows or snowblowers if needed

Maintenance Best Practice – Municipal Transition

- Design:
  - Multi-Modal Plan
  - Compatible with existing equipment
  - Avoid salt vulnerable areas
- Winter Control:
  - Adjust practices to allow for lighter vehicles and less traffic that does not break up ice and snow.
  - Increased use of brooms and Direct Liquid Application where practical
Design Considerations

- Compatibility with existing equipment
- Consistent design to limit the number of types of equipment needed
- Fewer passes for equipment
- Place infrastructure to avoid salt vulnerable areas

Multi-Modal Transportation Rural

- Gaining traction with the public
- Start planning early for an easy transition
- Design of infrastructure is key
- MMS - reasonable and expectations for Winter Control
- The MMS provide the Courts with clear rules in respect of liability, greater certainty for both municipalities and users
Multi-Modal Transportation
Rural

Questions?