TRANSPORTATION MANAGEMENT PLAN
WATERDOWN
Public Information Centre #2
October 21, 2020
Today’s Agenda

• Project Overview and Class Environmental Assessment Status
• What We’ve Heard
• Alternative Solutions
• Comparative Evaluation
• Preferred Solution(s)
• Discussion
Study Area/Objectives

- Study will support Waterdown Community Node Secondary Plan
- In collaboration with the Waterdown Village Built Heritage Inventory
- Waterdown Transportation Management Plan Goals:
  - Address current and long-term transportation problems
  - Protect for future needs
  - Identify improvement works and their timing.
Study Process

PHASE 1: Problem/Opportunity
- Confirm the study purpose and justification
- Identify problem/opportunity

PHASE 2: Alternative Solutions
- Identify reasonable alternative solutions to the problem/opportunity
- Conduct an overview of existing conditions in natural, social and economic environment
- Identify impact of alternative solutions on the environment
- Evaluate alternatives and recommend a solution
- Select the preferred solution
- Document the process by completing an Environmental Study Report (ESR) for a Schedule C project

PHASE 3: Alternative Design Concepts for Preferred Solution
- Identify alternative design concepts
- Conduct an overview of existing conditions
- Evaluate alternative designs and recommend preferred design
- Consult review agencies and the public
- Select the preferred design

PHASE 4: Environmental Study Report
- Design phase
- Proceed to design/construction of the project
- Monitor for environmental provisions and commitments

PHASE 5: Implementation
- The Transportation Master Plan study is following the requirements of the Municipal Class Environmental Assessment (EA) (2000, as amended).

The Class EA process ensures that all relevant social, environmental and engineering factors are considered in the planning and design process. Public and agency input is integrated into the decision making process.

We are here
Problem and Opportunity Statement

Waterdown’s transportation network capacity is becoming insufficient to accommodate current and future traffic volumes, resulting in congestion, safety concerns, and traffic infiltration into residential neighbourhoods.

The Waterdown Transportation Management Plan Study was initiated to address short-term issues and identify long-term improvements needed for road network, public transit, and pedestrian and cyclist facilities.
Transportation Issues – Highlights of What We’ve Heard

Congestion Issues:
- Dundas Street between Hamilton Street and Mill Street – AM and PM peak periods
- Mill Street (NB) at Dundas Street – PM peak period
- Right turn from Dundas Street onto Avonsyde Boulevard

Neighbourhood Traffic infiltration
- Spring Creek Drive
- Hollybush Drive
- Nisbet Boulevard
- Main Street North

Speeding
- Riley Street
- Brian Boulevard
- Main Street North

Safety
- Concerns on Mill Street South in the Smokey Hollow area
- Road curves - Brian Blvd
- School crossing - Guy Brown School (Brian Boulevard @ Longyear Drive)
- Left turn from Boulding Avenue onto Parkside Drive during PM peak period.
Road Network and Capacity Analysis

• Overall sufficient capacity for driving during peak commuting hours with localised issues

• Addition of new East/West Roadway (North Waterdown Drive) relieves capacity pressures on Parkside Drive

• Most significant congestion location:
  • Dundas Street between Mill Street and Hamilton Street North.
  • Issues in the peak commuting directions: eastbound in the morning, and westbound in the afternoon.
Intersection Analysis

• Forecasted 2031 turning movement volumes at 20 signalized intersections for analysis

• Two intersections showed signs of congestion during the peak commuting hours:
  • 6 - Dundas Street / Mill Street – LOS F/F
  • 13 - Dundas Street / Highway 6 – LOS E/F

• Some individual movements with issues
  • 2 - Dundas / Avonsyde – Westbound right in PM
Alternative Solution “Buckets”

- Network Capacity
- Transportation Demand Management
- Safety
Evaluation Criteria

• Transportation
  • Pedestrians
  • Cyclists
  • Transit Passengers
  • Mobility
  • Delay
  • Emergency Services

• Public Health
  • Air Quality
  • Safety
  • Social Interaction
  • Transportation equity
  • Active Transportation

• Physical Environment
  • Cultural Heritage
  • Green space
  • Streetscape and public spaces

• Costs
  • Capital
  • Operations / Maintenance
  • Economic benefits
## Network Capacity

### Issue / Opportunity: Capacity

<table>
<thead>
<tr>
<th>Alternative Solution</th>
<th>Transportation</th>
<th>Public Health</th>
<th>Physical Environment</th>
<th>Costs</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection</td>
<td></td>
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<tr>
<td>Adjust Signal Timing at Dundas St./Mill St.</td>
<td>Good</td>
<td>Neutral</td>
<td>Neutral</td>
<td>Excellent</td>
<td>Yes</td>
</tr>
<tr>
<td>Add exclusive westbound right turn at Dundas St./ Avonsyde Dr. and overlapping phasing</td>
<td>Good</td>
<td>Neutral</td>
<td>Fair</td>
<td>Fair</td>
<td>Yes</td>
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<tr>
<td>Strategic</td>
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</tr>
<tr>
<td>Increase vehicle capacity on Dundas Street between Mill Street and Hamilton Street North</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>No</td>
</tr>
</tbody>
</table>

Alternatives 1 and 2 recommended as they address localized capacity issues on the Dundas Street corridor with minor anticipated impacts.
Network Capacity (Cont'd)

• Increase vehicle capacity on Dundas Street between Mill Street and Hamilton Street North – NOT RECOMMENDED
  • Reason to recommend:
    • Provides relief for daily peak hour congestion
  • Reasons not to recommend
    • Potential impacts on Downtown
      • Heritage area
      • Minimization of Public Realm
      • Removal of on-street parking
      • Strips downtown core of character and value
    • Impacts to other travel modes
      • Reduces possibilities for cycling infrastructure on Dundas Street
      • Reduces attractiveness for walking and spending time downtown
      • Reduces possibilities for transit priority
    • Auto-focused solution
      • Impacts on public health, physical environment, and costly
    • Public and stakeholder concerns
  • Need a range of smaller solutions that work together
## Transportation Demand Management

<table>
<thead>
<tr>
<th>Alternative Solution</th>
<th>Transportation</th>
<th>Public Health</th>
<th>Physical Environment</th>
<th>Costs</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transit</strong></td>
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<tr>
<td>Increase amount of transit service (more buses on existing Route 18)</td>
<td>Good</td>
<td>Good</td>
<td>Neutral</td>
<td>Fair</td>
<td>Yes</td>
</tr>
<tr>
<td>Improve transit coverage (modify Route 18)</td>
<td>Excellent</td>
<td>Good</td>
<td>Neutral</td>
<td>Fair</td>
<td>Yes</td>
</tr>
<tr>
<td>Improve Regional Transit Connections</td>
<td>Good</td>
<td>Good</td>
<td>Neutral</td>
<td>Fair</td>
<td>Yes</td>
</tr>
<tr>
<td>Introduce Alternative Service Delivery</td>
<td>Excellent</td>
<td>Good</td>
<td>Neutral</td>
<td>Fair</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Active Transportation</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement connected cycling network</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Good</td>
<td>Fair</td>
<td>Yes</td>
</tr>
<tr>
<td>Improve walking network</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Fair</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Increase Service on Route 18

• Existing Route 18 - Waterdown
  • Alternating clockwise and counter-clockwise routing
  • Aldershot GO/VIA Station to the Flamborough Business Park

• Transit Plan
  • Improved service frequency from 30 min to 20 min per direction
  • Expanded hours of service
  • Include Sunday service
Modify Route 18

• Objectives
  • Improved Service Connections to Community Core as part of Community Core Secondary Plan
  • Improves connections with other planned transit services

• Transit Plan
  • Add approx. 2 km in route length
  • Includes 20 min service frequency per direction, expanded hours, and Sunday service.
Add new Regional route

• Under Study / Already Planned Services
  • Dundas BRT
  • BLAST Rapid Transit Network

• Objective
  • Improve regional connections for Waterdown Residents
  • Improve employee access

• Transit Plan
  • Provide Regional Route between GO 407 Carpool Lot and Downtown Hamilton (pre BLAST)
  • Provide Regional Route between GO 407 Carpool Lot and Highway 6 (Post BLAST)
  • 15 minute Weekday , Saturday and Sunday

* Continue coordination with ongoing Dundas BRT
Alternative Service Delivery (ASD)

• Objective
  • Expand service to development areas to meet 400 m catchment service standard
  • Uses technology, smaller vehicles, and sometimes third party providers to “dynamically” serve customers

• ASD Conditions
  • The relative cost of the service should not exceed the cost of operating a conventional fixed-route in the same area;
  • The planned development area will be low-density, which is anticipated to result in low-ridership demand; and/or
  • The planned development area will be located on the fringe of the urban area.

• Transit Plan
  • Establish 3 ASD areas where passengers are provided with ASD with connections to key transfer points
  • Continue partnerships with employers to coordinate shift-workers, and provide guaranteed ride homes (outside of normal service hours)
**Active Transportation**

- The planned cycling and AT network for Waterdown and the adjacent area is robust.

- The priority ranking of critical facilities on Dundas St., Parkside Dr. and Hamilton St. are low:
  - 89, 116, 131 and 133 out of a total of 202 projects across the city.

- The planned cycling and AT network is from the 2018 CMP, which was updated from the plan established in 2009:
  - Significant changes to both the conditions within Waterdown and the technical design guidance for cycling and active transportation facilities.
Active Transportation

- Supplemental cycling connections
- Crossing of Grindstone Creek
Active Transportation

• Supplemental cycling connections
• Crossing of Grindstone Creek
• Parallel to Dundas Street
  • Barton / Griffin
  • Connection to Dundas via private land
• Connection to Smokey Hollow Waterfall
Supplementary Network Capacity Scenarios

New interchange at Highway 5 / Highway 6 – West Side Access Options
1 Addition of Clappison Avenue between Parkside Drive and North Waterdown Drive
2 Delayed implementation of connection to Highway 6
3 Closure of Parkside Drive at Highway 6

New Connection
4 Main Street North connection to Centre Road/Hamilton Street North

Access Changes
5 Conversion of Mill Street to one-way (four options)
   a) Southbound-only between Parkside Drive and Dundas Street
   b) Northbound-only between Parkside Drive and Dundas Street
   c) Southbound-only between Church Street and Dundas Street
   d) Northbound-only between Church Street and Dundas Street
## Supplementary Network Capacity Opportunities

### Issue / Opportunity: Capacity (Supplementary Opportunities)

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Transportation</th>
<th>Public Health</th>
<th>Physical Environment</th>
<th>Costs</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Addition of Clappison Avenue between Parkside Drive and North Waterdown Drive*</td>
<td>Fair</td>
<td>Fair</td>
<td>Neutral</td>
<td>Fair</td>
<td>No*</td>
</tr>
<tr>
<td>* The addition of Clappison Ave. between Parkside Dr. and North Waterdown Dr. is not recommended to address the current problem statement. However, the addition may be required as a component of the new Highway 5/6 Interchange planned by MTO. Under this scenario, additional investigation is required to determine impacts to the local road network from the Highway 5/6 interchange at that time.</td>
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<tr>
<td>2 – Delayed implementation of connection to Highway 6</td>
<td>Fair</td>
<td>Neutral</td>
<td>Good</td>
<td>Good</td>
<td>No</td>
</tr>
<tr>
<td>3 - Closure of Parkside Drive at Highway 6</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Fair</td>
<td>No</td>
</tr>
<tr>
<td>4 - Main Street North connection to Centre Road/Hamilton Street North</td>
<td>Poor</td>
<td>Poor</td>
<td>Neutral</td>
<td>Fair</td>
<td>No</td>
</tr>
<tr>
<td>5a - Mill Street southbound-only between Parkside Drive and Dundas Street</td>
<td>Good</td>
<td>Good</td>
<td>Neutral</td>
<td>Poor</td>
<td>No</td>
</tr>
<tr>
<td>5b - Mill Street northbound-only between Parkside Drive and Dundas Street</td>
<td>Fair</td>
<td>Good</td>
<td>Neutral</td>
<td>Poor</td>
<td>No</td>
</tr>
<tr>
<td>5c - Mill Street southbound-only between Church Street and Dundas Street</td>
<td>Good</td>
<td>Good</td>
<td>Neutral</td>
<td>Fair</td>
<td>No</td>
</tr>
<tr>
<td>5d - Mill Street northbound-only between Church Street and Dundas Street</td>
<td>Fair</td>
<td>Good</td>
<td>Neutral</td>
<td>Fair</td>
<td>No</td>
</tr>
</tbody>
</table>

None were recommended for implementation as they do not address the fundamental problem of congestion and capacity issues in Waterdown. The solutions may have localized improvements, but do not address the network capacity problem.
Safety

Solutions to reduce traffic infiltration through neighbourhoods, as well as to reduce vehicle speeds are being brought forward:

• Traffic Calming
  • Speed cushions, raised centre islands, raised pedestrian crossovers, centreline flex posts, curb extensions
• Converting existing school crosswalks to pedestrian crossovers
Additional solutions:
- Pavement Markings
  - Painted centrelines, on-street bike lanes
- Adding pedestrian crossovers at roundabouts
- Providing additional speed limit signs and speed feedback signage
Next Steps

Public Information Centre #2 – October 2020

Draft Project File Report – November 2020

Council Approval – November/December 2020

Release Project File Report

30-day public review period