

**Appendix D: Preferred Transportation Solutions including Approximate Costs, MCEA Schedule and Implementation Timeframe**

PREFERRED TRANSPORTATION SOLUTION		APPROX. COST (IF KNOWN)	MCEA SCHEDULE (SEE NOTE 1)	TIMEFRAME FOR IMPLEMENTATION (IF KNOWN)
<b>FOR STREETS</b>				
City-wide Policies	1. Support future designs of streets to reflect desirable operating speeds through the City-wide Transportation Master Plan (2016) <b>Complete Livable Better Streets</b> policy (see Section 5.1.1 for a description of Complete Livable Better Streets)	NA	NA	As streets in the study area are reconstructed.
	2. Protect right-of-way (no cost) as per <i>Urban Official Plan, Schedule C-2 – Future Road Widening (October 2015)</i> for <b>Complete Livable Better Streets</b> on Barton from Red Hill Valley Parkway to Centennial for increased capacity, on Centennial for future LRT, and on <u>all</u> arterials for HOV, transit-only lanes, cycle tracks or bike lanes, wider pedestrian sidewalks and amenities, and / or enhanced streetscaping.	NA	NA	As streets in the study area are reconstructed.
City-wide Activities & Programs	3. Improve traffic signal co-ordination and timings, including pedestrian walk times. Review the implementation of recommendations from the Traffic Signal Operations Study (2012) and determine if additional adjustments are required.	Existing activities / programs	Schedule A	On-going
	4. Implement traffic calming on local streets where speeding, cut-through traffic volumes, collisions and safety concerns are ascertained; future studies are required. Implement with community and Councillor's support.	Costs vary from about \$2 K to \$10 K per traffic calming device	Schedule A	On-going Speed studies on Owen Place have identified speeding as an issue; Owen Place has been recommended to be included in the City of Hamilton's traffic calming program.
	5. Continue to promote travel options to employers and schools through the Smart Commute program and Active and Sustainable School Transportation (ASST) initiatives (Transportation Demand Management).	Existing City activities / programs	NA	On-going
Centennial Neighbour-hoods Specific Program	6. Co-ordinate communication of travel options available for new residents in various languages aligned with settlement activities (Transportation Demand Management).	To be determined	NA	Years 2017 to 2022

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<b>FOR TRANSIT</b>				
<i>City-wide Policy</i>	7. Determine appropriate transit priority measures and funding. A transit priority study is recommended for Centennial Neighbourhoods following adoption of a potential new transit priority policy under the City-wide Transportation Master Plan.	To be determined	Schedules A+ or B, (depending on potential for environmental effects)	Years 2017 to 2027
<i>City-wide Activities &amp; Programs</i>	8. New guidelines are being developed for bus stop placement and design, including installing passenger amenity features. More transit shelters throughout the HSR bus route system is a key element for improving the customer experience, helping to grow transit ridership. Apply these guidelines to the study area routes.	To be determined	Schedule A+	Years 2017 to 2027
	9. Through the City-wide Annual Transit Service Plans, consider extending or modifying HSR bus routes in the study area. Review the potential for improving connections between the LRT terminus and the new Confederation GO Station until rapid transit is extended to this destination.	Modification or extension of local bus routes generally require purchase of additional buses and increases in operating budget Cost of rapid transit extensions have not been determined.	Schedule A+	On-going
<i>City-wide Projects</i>	10. Extend the B-line LRT from Queenston Traffic Circle to Eastgate Transit Hub. Subsequent to the consultation and preparation of this report, the LRT extension from the Queenston Traffic Circle to Eastgate was included in the Environmental Project Report addendum, and endorsed by council.	To be determined	Transit Project Assessment Process	As per City's B line implementation plans
	11. Extend rapid transit from the Eastgate Transit Hub to the Confederation GO Station.	To be determined	Transit Project Assessment Process	As per City's Rapid Transit expansion Plans
<b>FOR ACTIVE TRANSPORTATION (SEE NOTES 2 AND 3)</b>				
<i>City-wide Projects</i>	12. Implement Projects in the City of Hamilton's Recreational Trails Master Plan (2016): <ul style="list-style-type: none"> <li>Project 5-4: multi-use trail in Bow Valley Open Space and Lawrence Avenue Park just west of Lake Avenue</li> <li>Project 5-9: multi-use trail and bridge connecting Pottruff Road near Eugene Street across the RHVP to the Red Hill Valley Trails</li> <li>Project 5-10: multi-use trail access to Confederation Park along Centennial Parkway and across the QEW to Goderich Road (see Recommended Solutions by Other Proponents).</li> </ul>	Recreational Trails Master Plan does not include any estimated construction costs (to be determined) Project 5-10 approx. value \$2 M	Trail projects under \$3.5 M are exempt from the MCEA Those that cost between \$3.5 M and 9.5 M are Schedule B Those over \$9.5 M are Schedule C	The Recreational Trails Master Plan is intended for phased implementation of trail initiatives. Implementation timeframes for Projects 5-4 and 5-9 not identified. Project 5-10: see Recommended Solutions by Other Proponents No. 29 – implement as part of QEW / Centennial Parkway bridge rehabilitation scheduled by MTO anticipated for 2017

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Centennial Neighbourhoods Specific Projects	13. Create neighbourhood greenways to calm traffic and improve walking and cycling connections to create Complete Livable Better Streets. Improvements may consist of street furniture and amenities (e.g. seating, planters or gardens, public art, bicycle racks, pedestrian-scale lighting, water fountains, tree or shade canopies), way-finding signage and pavement markings, traffic speed and volume management (e.g. traffic calming, signs and pavement markings), bike lanes to narrow road width, and green stormwater infrastructure. A description of neighbourhood greenways is provided in Section 5.1.2 and the Glossary.	There are about 7 km of greenways recommended at a cost of about \$75 K per kilometre to implement.	Schedule A	Co-ordinate with traffic calming initiatives (see Preferred Solutions for Streets No. 4 and Preferred Transportation Solutions to include in the Secondary Plan No. 24)
	14. Construct missing sections of sidewalk along Lake Avenue, Centennial Parkway and local streets that serve commercial and employment areas and schools.	There are about a total of 6 km of new sidewalks required at a cost of about \$300 K per kilometre to construct	Schedule A	Phase in with road resurfacing / reconstruction projects or through development applications (see Secondary Plan Policies No. 26)
	15. Provide cycling facilities on Nash Road, Lake Avenue, Warrington Street and a section of the South Service Road in the future. Options to consider for cycling facilities are as follows: <ul style="list-style-type: none"> <li>Nash Road—Re-stripe with bike lanes north of Barton Street in conjunction with permanent on-street parking along the west curb as well as auxiliary left-turn lanes at Kentley Drive to eliminate the 3-phase traffic signal design. Re-stripe with bike lanes south of Barton Street in conjunction with a centre two-way left-turn lane.</li> <li>Lake Avenue— Re-stripe with bike lanes in conjunction with a centre two-way left-turn lane.</li> <li>Warrington Street and a section of the South Service Road— Construct a multi-use trail on the south side from Lake Avenue to Centennial Parkway.</li> </ul>	Nash Road: Approximately \$80 K Lake Avenue: Approximately \$90 K Warrington Street: Approximately \$600 K	Schedule A+	Consider implementing with future development to provide cycling infrastructure in response to growth in travel. Although wider rights-of-way for the arterial streets will be protected for potential cycle tracks in the long term (see Preferred Solutions for Streets No. 2), retrofitting these bikeways are an opportunity to develop a viable cycling network in the shorter term.
Centennial Neighbourhoods Specific Projects	16. Improve the safety and comfort of pedestrian and cycling connections through the interchanges at the Red Hill Valley Parkway. A design study is recommended to determine issues and appropriate treatments.	The cost to improve signage, pavement markings and ramp crossings is estimated to be about \$100 K per interchange	Schedule A	Year 2017 to 2022

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	<p>17. Provide a pedestrian / cycling route to the Confederation GO Station (see Preferred Transportation Solutions by Other Proponents No. 30). Potential non-auto routing to be investigated includes:</p> <ul style="list-style-type: none"> <li>• A connection south of the railway along Bancroft Street to the Confederation GO Station, with access across the railway to the north side</li> <li>• Incorporating active transportation facilities on the potential extension of Goderich Road through the City's Transfer Station lands to Kenora Avenue (see Preferred Transportation Solutions to include in the Secondary Plan No. 27)</li> </ul>	The cost of a pedestrian / cycling route along Bancroft Street is approximately \$300 K Cost of extending Goderich Road to be determined	Pedestrian / cycling route along Bancroft Street Schedule A+ Further studies needed to identify class of EA for Goderich Road extension	Implement with Phase 2 development of the Confederation GO Station by Metrolinx (see Preferred Solutions by Other Proponents No. 30) Timeframe to implement Goderich Road extension depends on further studies
	<p>18. Develop a pedestrian / cycling route between Confederation Park and Battlefield House Museum and Park. Signage should be consistent with the City of Hamilton's City-wide Wayfinding project including pedestrian and cyclist oriented signage. There are two routes that can be explored:</p> <ul style="list-style-type: none"> <li>• Centennial Parkway multi-use trail over the QEW, future Goderich Road connection to Kenora Avenue (sidewalks and future bike lanes), Kenora Avenue / Greenfield Drive / Owen Place (future neighbourhood greenways), and King Street (sidewalks and bike lanes)</li> <li>• Centennial Parkway multi-use trail over the QEW, South Service Road (future multi-use trail), Warrington Street (future multi-use trail), Lake Avenue (sidewalks and future bike lanes), and King Street (sidewalks)</li> </ul>	Approximate cost for signage of existing and future routes is \$10 K	Exempt	Implement following implementation of Preferred Transportation Solution for Active Transportation No. 12 (Recreational Trails Master Plan Project 5-10), No. 13 and No. 15.
<b>TO INCLUDE IN THE SECONDARY PLAN (SEE NOTE 4)</b>				
<b>Secondary Plan Policy</b>	19. Manage access to larger developments to reduce driveways for improved safety. Identify and implement access management as part of development applications for deeper properties.	Developer funded	NA	NA
	20. Manage parking for developments to reduce surface lots. Identify parking requirements including "end-of-trip" cycling facilities such as bike parking, lockers, change rooms and showers for developments in the Secondary Plan.	Developer funded	NA	NA
	21. Improve pedestrian connections through developments. Identify and implement pedestrian connections as part of development applications.	Developer funded	NA	NA

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	22. Improve streetscape and gateways as per the Secondary Plan concepts. Gateways may include one or a combination of public art, way-finding signage, landscaping or streetscape / built form around the entryways to strengthen a sense of place. Signage should be consistent with the City of Hamilton's City-wide Wayfinding project including pedestrian and cyclist oriented signage.	Address funding in the Secondary Plan.	NA	Address implementation in the Secondary Plan.
	23. Support live / work / play development to encourage trips by active transportation and transit through the Secondary Plan land-use recommendations.	NA	NA	NA
	24. Facilitate car sharing through a City-wide initiative to consider policies required to support car-sharing and then apply to Centennial Neighbourhoods area. Identify opportunities for car-sharing when applying the Transportation Demand Management (TDM) Land Use Guidelines to development applications.	Developer funded	NA	NA
Secondary Plan Policy	25. Identify traffic calming measures to reduce cut-through traffic, speeding, collisions or safety concerns as part of development applications. Implement with community and Councillor support.	Developer funded	NA	NA
	26. Require missing sidewalks adjacent to new developments to be constructed as part of the development.	Developer funded	NA	NA
	27. Through future re-development of adjacent lands that support the Confederation GO Transit mobility hub, extend Goderich Road (with bikeway and sidewalks) to Kenora Avenue to support direct access to the area and Confederation GO Station and to provide improved road, pedestrian and cycling network connectivity. This solution would require relocating the City of Hamilton's Transfer Station.	Developer funded	Schedule A	To be determined

PREFERRED TRANSPORTATION SOLUTION		APPROX. COST (IF KNOWN)	MCEA SCHEDULE (SEE NOTE 1)	TIMEFRAME FOR IMPLEMENTATION (IF KNOWN)
<b>BY OTHER PROPONENTS</b>				
<i>Sobi Hamilton</i>	28. City to approach SoBiHamilton bike share to undertake a study to determine the feasibility of serving the Centennial Neighbourhoods study area.	To be determined	NA	Year 2017 to 2022
<i>Ministry of Transportation, Ontario</i>	29. City to request that MTO include the multi-use trail (Project 5-10 of the Recreational Trails Master Plan) through the QEW / Centennial Parkway interchange as part of MTO's initiative for rehabilitation of the bridge. The multi-use trail is recommended to be a minimum of 3.0 m wide plus appropriate offsets to railings and hazards.	\$315,000 for the construction of the MUP on the deck	MTO is proponent (Class Environmental Assessment for Provincial Transportation Facilities)	QEW / Centennial Parkway bridge rehabilitation scheduled by MTO anticipated for 2017.
<i>Metrolinx</i>	30. City to request that Metrolinx create non-auto (walking and cycling) "last mile" access to the Confederation GO Station, and provide bicycle parking and right-sized Park N' Ride at the Confederation GO Station (see Preferred Solutions for Active Transportation No. 17).	To be determined	Metrolinx is proponent (GO Transit Class Environmental Assessment)	To be determined by Metrolinx
<p>Notes:</p> <ol style="list-style-type: none"> <li><b>Schedule A and A+ Projects:</b> Consultation for these projects has been completed through the Centennial Neighbourhoods Transportation Management Plan (CNTMP). These may proceed to implementation.  <b>Schedule B Projects:</b> Issue Notice of Completion to review agencies and public. The Project File (this document) is made available for review. If no Part II Order requests are received within 30 days of the Notice of Completion, projects may proceed to implementation.  <b>Schedule C Projects:</b> Additional study and mandatory consultation required for these projects.</li> <li>These recommendations will be guided by the City of Hamilton's Pedestrian Mobility Plan (2012) and Cycling Master Plan (2009), and associated updates to these plans.</li> <li>Refer also to Preferred Solutions for Streets No. 2 to protect rights-of-way as per Urban Official Plan for Complete Livable Better Streets. This includes allowing for the provision of cycle tracks, pedestrian facilities and amenities on arterial roads such as Barton Street, Centennial Parkway and Queenston Road at such time that these roads are reconstructed.</li> <li>These recommendations will be guided by the City of Hamilton's Transportation Demand Management (TDM) Guide for Development (2015).</li> </ol>				