

APPENDIX E

Public Works Staff Report PW09-068

CITY OF HAMILTON

***PUBLIC WORKS DEPARTMENT
Operations & Maintenance Division***

Report to: Chair and Members Public Works Committee	Submitted by: Gerry Davis, CMA General Manager Public Works Department
Date: June 3, 2009	Prepared by: Hart Solomon Extension 4584

SUBJECT: Cycling Master Plan (PW09068) - (City Wide)
Public Works Committee Outstanding Business List

RECOMMENDATION:

- (a) That the City of Hamilton Cycling Master Plan be endorsed;
- (b) That the General Manager of Public Works be authorized and directed to file the Cycling Master Plan with the Municipal Clerk for a minimum thirty 30 day public review period;
- (c) That, upon completion of the thirty day public review period, the General Manager, Public Works, be authorized and directed to program and include the recommended projects in the Capital Budget for future years;
- (d) That the position of Project Manager, Alternative Transportation be made permanent;
- (e) That the Outstanding Business Item referring to the On Street Cycling Program be identified as completed and removed from the Public Works Committee Outstanding Business List.

Gerry Davis, CMA
General Manager
Public Works Department

EXECUTIVE SUMMARY:

The purpose of this report is to present and recommend a new Cycling Master Plan for the City of Hamilton to guide the development and operation of its Cycling Infrastructure for the next twenty years. The report will highlight the content of the new Master Plan

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and place its recommendations in context to the groundwork laid by the works performed under the guidance of the two previous Master Plans, Shifting Gears (1999) and Hamilton-Wentworth Regional Bicycle Network Study (1992). The report provides recommendations to endorse the new Master Plan and provide implementation funding referrals to the 2010 Capital Budget and Forecast for consideration by Council.

Cycling is an integral component of the City's transportation philosophy. The Transportation Master Plan recommends a wide range of actions required to maintain a viable transportation system in Hamilton in the future. Transportation demand management (TDM), moving users away from dependence on the single motor vehicle, is one of the core initiatives. One of the ways to achieve TDM is to encourage walking and cycling as alternatives to motorized transport. The Plan recommended three policies in regard to cycling and walking:

- "Provide user-oriented information for all pedestrians, cyclists and other road users to increase awareness of non-motorized networks, user guidelines and safety requirements."
- "Build awareness and promote the benefits of walking and cycling."
- "Continue to improve and expand on the existing network of pedestrian and cycling infrastructure."

The Plan suggests a basic recommended cycling network, with a fourteen year time frame for implementation.

The City's Strategic Plan contains two Focus Areas that directly support the direction toward increased cycling. Focus Area 6 is Environmental Stewardship, and particularly Desired End Results 6.3 and 6.4 point to air quality improvements. Cycling, of course, is totally pollution-free and can contribute toward this goal. Focus Area 7 is Healthy Community. Desired End Result 7.7 speaks directly to increasing alternative transportation usage in areas such as transit ridership, walking and cycling, while DER 7.3 and 7.4 address increasing our citizens' physical activity and reducing obesity. Cycling supports these end results.

In 1999, the former Region published the area's second cycling master plan, entitled "Shifting Gears". The plan was primarily oriented toward infrastructure improvements. The projects suggested were primarily those which could be implemented most easily, and about 75% of the recommended projects are now completed or in progress. However, Shifting Gears did not provide a comprehensive network of cycling facilities across the City.

Given this framework, there was a clear need to build on the work of the Transportation Master Plan and Shifting Gears, to develop an updated formal cycling master plan for Hamilton. The new Cycling Master Plan is primarily focused on developing new on-road facilities, connecting wherever possible to existing or planned off-road facilities, as identified in the City's Trail Master Plan. The focus is on both commuter/utilitarian cycling and recreational cycling, since it is recognized that recreational cycling is often the first step toward commuting or utilitarian use. The plan proposes a range of facility types, including signed routes, painted lanes, paved shoulders and off-road connectors. The core facility type will be the designated, painted lane. The plan is based on the philosophy that a cyclist should be able to access the network in the urban area by travelling no more than 1km, so a grid based on a 2km spacing has been developed and is proposed.

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The Master Plan was undertaken as a Municipal Class Environmental Assessment (Municipal Engineers Association, October 2000, amended in 2007), in order that the projects recommended would be pre-approved and not require separate Schedule B or C Class Environmental Assessment (EA) planning processes. The project was undertaken with the typical public consultation in the form of four public meetings to gain input and two public meetings to present the proposed cycling network.

The City's current cycling network has many gaps. On some routes, the type of facility and protection provided changes frequently, making the routes less desirable. While it is recognized that Canadian winters create constraints, it is expected that the provision of well-spaced, continuous cycling routes with consistent design, will be successful in attracting a significantly larger cycling ridership overall, in keeping with the goals of the Transportation Master Plan and City Strategic Plan.

The Master Plan is now complete and it is appropriate to file it for the minimum thirty day public review period.

An implementation strategy has been suggested, based on completing the urban parts of the plan within twenty years. To do so, the funding for cycling would have to be substantially increased over current levels. Also, integral to delivering the plan is the requirement for a full-time staff member dedicated to delivering the program. The development of the new Cycling Master Plan and the implementation of projects such as York Boulevard, North Service Road and the CP Rail Trail would not have been possible without the position of Project Manager, Alternative Transportation, in the Public Works Department. At present, this position is temporary only. In order that the cycling infrastructure in the Master Plan is implemented, it is recommended that this position be made permanent. There would be no change to staff complement and no budget implications associated with this change.

BACKGROUND:

In 1998-1989, the Region of Hamilton Wentworth completed the City's second Cycling Master Plan, entitled "Shifting Gears". Subsequent to the development of Shifting Gears, the City has changed form and attitudes towards alternative modes of transportation versus the single motor vehicle have changed as well. The City's Transportation Master Plan depends heavily on transportation demand management, which means alternative forms to the single motor vehicle, to achieve its goal of avoiding major roadway expansion in the future.

It was clear that Shifting Gears needed to be updated. To create a new master plan, the core technical work was done in-house using the City's cycling coordinator, the Project Manager of Alternative Transportation, with the Environmental Planning Section component being undertaken by the Environmental Assessment group of Capital Planning and Implementation. The advantage of in-house staff, along with the cost savings, was the ability to introduce additional detailed work in the investigations and to retain the value of the learning from the Master Plan. The Master Plan was conducted as a Municipal Class Environmental Assessment under the Municipal Engineers Association document. All projects identified under this Master Plan were deemed to be pre-approved (A+), and this document is valid for ten years. This will result in much streamlining of the process. It should be noted, however, that individual projects will need to be reviewed when brought forward for implementation, to confirm the Schedule classification and determine whether further Class EA study (e.g. Schedule B or C

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process) or community consultation is required. In keeping with the letter and spirit of an Environmental Assessment, significant public consultation was undertaken. To obtain public input, four separate open houses were held across the City and following development of the master plan, two additional open houses were held to present the recommended plan for additional comment. The Project Manager of Alternative Transportation was supported by a broad based staff group representing Planning, Open Space Development and other relevant internal groups.

ANALYSIS/RATIONALE:

The Transportation Master Plan suggested a basic, but not comprehensive, cycling network for Hamilton, and suggested an implementation time frame of fourteen years. It was understood at the time of preparation of the Transportation Master Plan, that a cycling master plan would be prepared shortly afterward and would build on and modify the recommendations of the Transportation Master Plan.

The first major decision to be considered was the density of the Cycling network. There were three choices; no cycling network at all, a primary grid network or defining most or all City roads to be upgraded as cycling routes. While the later is the ultimate goal, it is recognized as not fiscally possible in the near term. Standards indicate that if a cyclist can travel less than one kilometre to access a formal cycling route, this is satisfactory, so a two-kilometre spacing for the cycling grid in the urban area was chosen. In rural areas the spacing between primary cycling facilities was larger. On this basis major cycling routes were defined and examined.

The second step was to prioritize the road segments in the network. Depending on traffic volumes and available right of way width and pavement width, segments were either designated as painted on-street lanes, shared lanes, off-road trails or bike routes only in mixed traffic. The decisions on these types of facility were based on traffic volumes, road widths and other factors. Once the facility type had been determined, the individual segments were prioritized. Priorities were set based on the demand for the route, connectivity of the route to other bike network facilities in the immediate area and the collision history of the route involving cyclists. Capital and property acquisition costs were assigned and the routes were prioritized including a cost factor. The total cost estimated to upgrade the approximately 270 links to complete the recommended network is \$51.5 million; of this, approximately \$22.6 million is in urban areas and \$28.9 million in rural areas (all figures 2009 dollars). A prioritized complete list of streets and roads in the recommended cycling network is included as Appendix A and a map showing these routes will be distributed at the Public Works Committee meeting as Appendix B.

The necessity to encourage cycling and promote safe cycling is also recognized in the Cycling Master Plan. Recommendations include expanding the network of enclosed bike parking facilities, increasing the number of standard bike parking racks, developing more education programs for youth and adults, supporting special events organized to celebrate cycling and increasing the availability of information that promotes cycling - both printed and on the City website.

ALTERNATIVES FOR CONSIDERATION:

Alternative 1 - Do not approve the Cycling Master Plan. This alternative would impede progress towards Vision 2020 and the goals of the Transportation Master Plan, and would not support the City's Strategic Plan. This alternative is not recommended.

Alternative 2 - Approval of some but not all of the links in the Transportation Master Plan network. It is recognized that some of the links will be more difficult to implement than others. Implementation will only take place in the case of lane reductions and/or parking removal with the consultation with the Ward Councillor and, if deemed necessary, with the public. However, it is recommended that a complete network contained in the Master Plan document be approved in order to have the necessary approvals in place when required to proceed. Cycling will become much more effective when there are continuous road segments as part of the network. Missing links can greatly reduce the attractiveness of a cycling route. Therefore it is not recommended that only part of the primary network be approved.

Alternative 3 - Consider a more aggressive implementation schedule. At the recommended funded level of \$1.25 million annually, the expenditure is about \$2.50 per capita per year. The current cycling master plans in both Burlington and Toronto have planned expenditures of about \$5.25 per person per year. This is the equivalent to finishing the urban component of the proposed Hamilton network in ten years and the entire network urban and rural Hamilton network, in twenty years. The required funding for a more aggressive schedule would be about \$2.5 million annually.

FINANCIAL/STAFFING/LEGAL IMPLICATIONS:

Financial Implications:

As noted, the total cost to implement the basic cycling network is \$51.5 million. A reasonable time frame to complete the Hamilton Cycling network in its basic form would be twenty years or less. The funding level suggested in this report is about one-half that level and reflects the realities of our limited capital budget for road improvements. The focus will be primarily on urban cycling.

Currently the Cycling Infrastructure allocated is \$300,000 (Project ID 4030917124) for direct investment annually. As well, some additional funding comes from road construction projects and in some cases that the cost of a cycling infrastructure improvement is contained within the construction budget rather than the cycling budget.

It is proposed in the future to have all cycling improvements, whether they are stand-alone or part of a construction project, paid from the cycling budget. It is suggested for this reason and to complete the cycling network in a timely fashion, that the annual budget for cycling infrastructure be increased, subject to budget deliberations. The starting point for the budget process will be an annual request for \$1,250,000. While \$1,250,000 annually is less than the amount required to complete the entire network in twenty years, it will allow for good success on the urban portion and is compatible with staff's ability to undertake these projects.

The operating cost impacts of proposed cycling infrastructure are primarily related to pavement markings and roadway sweeping. If developed over a twenty year period, the full network of cycling facilities would require an annual increase in pavement marking budget of about \$8,000 for lines and stencils each year. These costs would show up as

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annual increases in the pavement marking current budget. Sweeping is currently accommodated by adjusting schedules of existing staff/equipment to allow for increased frequency of cleaning of roads with cycling lanes. In the future, direct additional financial support may be required if this model cannot be sustained. One additional cleaning of the complete final urban bike lane system is estimated at about \$40,000.

The long-term rehabilitation of the cycling network is generally outside the twenty year time frame proposed to develop the network, but where road widenings through construction have been required to develop bike lanes, the repaving/reconstruction costs will be higher in the future.

Staffing implications:

The implementation of cycling infrastructure and the leadership for this Master Plan have been under the responsibility of the Project Manager, Alternative Transportation in the Public Works Department. This position was created approximately eighteen months ago as a temporary two-year position. Public Works Committee wished to ensure that the position would be effective in delivering cycling services to the City. It is clear that, through projects such as North Service Road, York Blvd, CP Rail Trail and this Master Plan, that there is great value in having a cycling coordinator for the City. If the City is to have any success in implementing the Master Plan recommendations, it will be necessary to have a stable and consistent support for cycling through the Project Manager, Alternative Transportation. As well as facility development, the position is also responsible for cycling promotion and community liaison through efforts such as supporting the Hamilton Cycling Committee, coordinating the installation of on-street bike racks and working with groups that present cycling education. This position also has a component of pedestrian and walking promotion as part of its mandate. It is therefore recommended the position be transferred from temporary status to permanent status. This position is already in the Section's staff complement, so there would be no complement change. The position is already funded, so there will be no financial impact associated with this change.

POLICIES AFFECTING PROPOSAL:

The Cycling Master Plan is consistent with Vision 2020, the Corporate Strategic Plan and the priorities established within Innovate Now. It is consistent with the Transportation Master Plan and its vision for revised transportation in the City of Hamilton. It is consistent with the City's position on transportation demand management which is key to the revised future of transportation in Hamilton.

RELEVANT CONSULTATION:

The general public, stakeholders and affected public agencies were consulted as per standard Environmental Assessment practices, including applicable municipal, provincial, federal and first nation agencies. Internal consultation also took place including a formal staff technical team including Public Health, Planning and Economic Development, Public Works (Open Space, Asset Management, Strategic Planning, Design), and Tourism Hamilton. The Environmental Assessment component of the study was lead by the Capital Planning and Implementation Environmental Planning Section.

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Stakeholders were also identified and these organizations were contacted directly for comments, including an Information Centre on November 20, 2008. This group included Hamilton area bike shops, educational institutions, cycling organizations – both local and provincial, the Canadian Automobile Association, the HSR, Hamilton Police and local environmental organizations.

Public Information Centres (PICs): Notices were advertised twice in the Hamilton Spectator (At Your Service section) and the Brabant papers on October 31, 2008 and November 7, 2008, View Magazine on October 30, 2008 and November 6, 2008, and on the website www.actlocally.info. A project website was also maintained.

The first round of Public Information Centres, to obtain public information were held on November 11, 2008, in downtown Hamilton, November 18 in Stoney Creek, November 25 in Ancaster and November 27 on the central Mountain. Approximately 75 people attended the first round of PICs and additional people submitted comments electronically. All interested parties were added to the Study mailing/emailing contact list. Seventeen panels were displayed and comment sheets were distributed; as well, visitors were encouraged to mark up maps to indicate their preferred routes and areas of concern.

The second round of PICs was held on April 14 and April 16, 2009 in downtown Hamilton and on the central Mountain and this same information was posted on the project website. People that had participated in the first round of consultation, for which the City had email addresses, were sent an electronic link to this PIC information. Many people submitted comments electronically.

A Cycling Master Plan report has been prepared documenting the study process followed to determine the recommended strategy.

CITY STRATEGIC COMMITMENT:

By evaluating the “**Triple Bottom Line**”, (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Community Well-Being is enhanced. Yes No

Cycling provides an alternative to motorized transport. This results in cleaner air, calmer roads and healthier citizens.

Environmental Well-Being is enhanced. Yes No

Reduced dependency on motorized transport, means better air quality due to reduced emissions of GHG and pollutants.

Economic Well-Being is enhanced. Yes No

Cycling attracts tourism.

Does the option you are recommending create value across all three bottom lines?

Yes No

Do the options you are recommending make Hamilton a City of choice for high performance public servants? Yes No

A cycling-friendly City provides another reason for a prospective employee to choose Hamilton.

Proposed Cycling Network Projects
Urban Streets

	Street	from	to	Length (m)	Design Concept	2007/08 Cost Estimate	Cumulative Cost
1	Multi-Use Path (MUP) from RHV over QEW						
2	Arbour	Mud	LINC	300	Multi-Use Path (MUP) 4.0m paved and bridge	funds allocated	
3	MUP CP over 403						
4	King in Westdale	Rifle Range	Glenside	2400	MUP 4.0m paved	funds allocated	
5	Wilson in Downtown	Stirling	Longwood	150	Bike Lanes (BL) w road diet, Paisley to Marion & Bl	\$ 938	\$ 938
6	Woodward	Ferguson	Sherman	1900	BL w road diet - BL EB on Ss, 3 auto, osp Ns off pk	\$ 14,250	\$ 15,188
7	Filman	Beach Blvd	Melvin	2525	BL w road diet - TWLTL	\$ 18,938	\$ 34,125
8	Ferguson	Rousseaux	403 overpass	700	shared on-street - signed	\$ 5,250	\$ 39,375
9	Ferguson	Burlington	Simcoe	600	shared on-street - signed	\$ 4,500	\$ 43,875
10	Ferguson	Young	Charlton	200	shared on-street - signed	\$ 1,500	\$ 45,375
11	Wilson in Ancaster	Fidler's Green	Hwy 52	5400	BL w reconstruction	\$ 81,000	\$ 126,375
12	Highland	Winterberry	First Rd E	3600	BL on existing - eliminate osp to 1 side only	\$ 54,000	\$ 180,375
13	Locke	Main	Aberdeen only to Hur	1025	BL w road diet (only to Hunter)	\$ 5,125	\$ 185,500
14	Barton	RHVP	Lake	1610	BL w reconstruction	\$ 24,150	\$ 209,650
15	Mohawk	Scenic	Up Paradise	1450	BL w reconstruction	\$ 21,750	\$ 231,400
16	Wilson in Downtown	James	Ferguson	650	BL w 2-way conversion	\$ 9,750	\$ 241,150
17	Jolley Cut	St Josephs	Concession	1410	BL on existing (upbound priority)	\$ 21,150	\$ 262,300
18	Wilson in Ancaster	Rousseaux	Halsion	850	BL w reconstruction	\$ 12,750	\$ 275,050
19	Stone Church	Garth	Up James	1645	BL w reconstruction	\$ 24,675	\$ 299,725
20	Barton	Brockley	Fruitland	3950	BL on existing	\$ 79,000	\$ 378,725
21	Cannon	Ferguson	Sherman	1900	BL w road diet - BL WB on Ss, 3 auto, osp off pk N	\$ 47,500	\$ 426,225
22	Gage	Industrial	Lawrence	2960	BL w road diet - LTL - parking 1 side	\$ 74,000	\$ 500,225
23	Caroline	York	Markland	1350	BL SB on existing - road diet - maintain 24hr parkin	\$ 27,000	\$ 527,225
24	Rifle Range/Westbourne	Sanders	Main and NB approa	120	shared on-street - signed	\$ 900	\$ 528,125
25	Claremont Access	Inverness	Main	1600	BL on existing	\$ 32,000	\$ 560,125
26	First Rd W	Glover Mtn Rd/Rid	Rymal/Bellagio	4075	BL & existing MUP at Highbury	\$ 30,563	\$ 590,688
27	Scenic	Mohawk	Chateau	1500	BL on existing asphalt?	\$ 22,500	\$ 613,188
28	King in Stoney Creek	Nash	Battlefield	1140	BL w reconstruction	\$ 17,100	\$ 630,288
29	Dundas	Main	Cootes	680	BL on existing	\$ 10,200	\$ 640,488
30	Mohawk	Old Mohawk	Scenic	380	BL on existing - narrow curb lanes	\$ 5,700	\$ 646,188
31	Cannon	Queen	Ferguson	1475	BL w road diet - BL WB on Ss, 3 auto, mtr off pk Ns	\$ 36,875	\$ 683,063
32	Hatt	Market	Main	930	BL on existing, reduce osp to 1 side	\$ 18,600	\$ 701,663
33	Arbour	LINC	Stone Church	130	shared on-street - signed	\$ 975	\$ 702,638
34	Bay	Main	Markland	865	BL w road diet and reduce osp	\$ 17,300	\$ 719,938
35	Studholme	west end	Aberdeen	600	BL on existing E of Beddoe	\$ 9,000	\$ 728,938
36	Beach Blvd	under QEW		240	BL w road diet	\$ 4,800	\$ 733,738
37	Maple Ave/Ottawa/Graham			630	shared on-street - signed	\$ 4,725	\$ 738,463
38	Melvin	Strathearne/Shell	RHV MUP	1900	BL w road diet - parking 1 side Parkdale to Woodw	\$ 38,000	\$ 776,463
39	Osler	Spencer Creek	Main	1500	BL on existing - narrow curb lanes	\$ 37,500	\$ 813,963
40	Cannon/Britania	Kenilworth	Walter	840	BL w road diet Cannon, BL on existing on Brit	\$ 14,280	\$ 828,243
41	Creighton	Market	Governor's	660	BL on existing	\$ 9,900	\$ 838,143
42	York Blvd EB	Bay	James	420	BL w road diet & planned 2-way conversion	\$ 6,300	\$ 844,443
43	Ogilvie	(King) Hatt	South St	580	BL on existing	\$ 8,700	\$ 853,143
44	Longwood	Franklin	King	725	BL on existing - eliminate osp	\$ 10,875	\$ 864,018
45	Mountain Brow in Waterdown	Mill	Arterial A	1200	MUP w dev	\$ 9,000	\$ 873,018
46	Cannon	Gage	Kenilworth	1700	BL w road diet - osp 1s, bits of TWLTL if needed	\$ 42,500	\$ 915,518
47	Golf Links	Halsion	Southcote	1190	BL on existing - narrow curb lanes	\$ 17,850	\$ 933,368
48	Winterberry	Old Mud	Highland	1130	BL w reconstruction	\$ 16,950	\$ 950,318
49	Herkimer	Dundurn	MacNab	1520	BL EB on existing (road diet to 11 W of Locke), red	\$ 38,000	\$ 988,318
50	Charlton	Dundurn	Queen	820	BL on existing, Ns 1way	\$ 12,300	\$ 1,000,618
51	Memorial Sq	King	Hatt	120	BL on existing	\$ 1,800	\$ 1,002,418
52	Jerseyville	Shaver	Wilson	2850	BL w reconstruction	\$ 42,750	\$ 1,045,168
53	W 5th	Stone Church	Rymal	1000	BL w reconstruction	\$ 15,000	\$ 1,060,168
54	Fruitland	North Service	Hwy 8	2425	BL w development	\$ 36,375	\$ 1,096,543
55	Scenic	Chateau	Up Paradise	2270	BL on existing - construct sidewalk along brow	\$ 17,025	\$ 1,113,568
56	Cannon	Sherman	Gage	880	BL w road diet - osp Ns OR changeable direction ct	\$ 22,000	\$ 1,135,568

56	Market in Dundas	King	Creighton	290	BL on existing, reduce osp to 1 side for 1 block	\$ 4,350	\$ 1,139,918
57	Main in Dundas	York/Hatt	Spencer Creek	250	BL on existing - narrow curb lanes	\$ 6,250	\$ 1,146,168
58	Ferguson	Dock Service Rd	Burlington	270	BL on existing - narrow curb lanes	\$ 4,050	\$ 1,150,218
59	Longwood	King	Main	450	BL w road diet - see report	\$ 11,250	\$ 1,161,468
60	York Blvd EB	Dundurn	Bay	1340	BL on existing - narrow curb lanes	\$ 33,500	\$ 1,194,968
61	W 5th	Gateview	Fennell	530	BL w road diet to 4 lanes	\$ 13,250	\$ 1,208,218
62	Scenic	Up Paradise	Garth	950	BL on existing - construct sidewalk along brow	\$ 7,125	\$ 1,215,343
63	Sanders	West Park	Cootes	650	BL on existing	\$ 9,750	\$ 1,225,093
64	Bay	Strachan	Cannon	790	BL w road diet - Barton to Cannon	\$ 15,800	\$ 1,240,893
65	York Blvd WB	Queen	Dundurn	875	BL on existing - narrow curb lanes	\$ 21,875	\$ 1,262,768
66	Frid/Chatham	Longwood	Dundurn	250	BL w development	\$ 3,750	\$ 1,266,518
67	Fiddler's Green	Jerseyville	Wilson	250	BL on existing	\$ 3,750	\$ 1,270,268
68	Up Wentworth	Fennell	Mohawk	1030	BL on existing	\$ 25,750	\$ 1,296,018
69	Barton	Fruitland	Fifty	5110	BL w development	\$ 143,080	\$ 1,439,098
70	Queensdale	Up Sherman	Up Ottawa	1560	BL & 1 side parking	\$ 23,400	\$ 1,462,498
71	Old Mud	RHV MUP	Winterberry	400	BL w development	\$ 6,000	\$ 1,468,498
72	Charlton	Queen	Ferguson	1450	BL w road diet - 1 auto WB, osp Ss & BL Ns W of	\$ 56,250	\$ 1,524,748
73	Up Wentworth	Concession	Fennell	1030	BL on existing	\$ 25,750	\$ 1,550,498
74	Wellington	Jackson	Young	360	BL w road diet - parking one side	\$ 9,000	\$ 1,559,498
75	Millen	Frances	Seaman	620	BL on existing	\$ 15,500	\$ 1,574,998
76	Nash	Bancroft	King	2580	BL w road diet - parking 1 side or TWLTL when nec	\$ 64,500	\$ 1,639,498
77	Rice/Sanatorium	dev to Scenic	Mohawk	1000	BL w road diet - osp 1s S of Chedmac - see EA for	\$ 25,000	\$ 1,664,498
78	Stinson	Wellington	Wentworth	850	BL on existing	\$ 12,750	\$ 1,677,248
79	Kitty Murray		all	2260	BL on existing	\$ 33,900	\$ 1,711,148
80	Stonehenge		all	2460	BL on existing	\$ 36,900	\$ 1,748,048
81	Dundurn	Main	Aberdeen	1020	BL on existing	\$ 25,500	\$ 1,773,548
82	Sydenham	Livingstone	King	680	BL on existing, eliminate osp	\$ 10,200	\$ 1,783,748
83	Queensdale	Up Wellington	Up Sherman	1680	BL & 1 side parking	\$ 25,200	\$ 1,808,948
84	Meadowlands		all	1050	BL on existing	\$ 15,750	\$ 1,824,698
85	Delawana	Grandville	Lake	380	BL on existing	\$ 5,700	\$ 1,830,398
86	Sydenham bridge	Crowley	Romar	1000	BL on existing - narrow dnbound	\$ 25,000	\$ 1,855,398
87	Up Paradise	Stone Church	Rymal	1070	BL on existing - narrow TWLTL	\$ 26,750	\$ 1,882,148
88	Dundurn	York	King	670	BL w road diet	\$ 16,750	\$ 1,898,898
89	Hunter	Queen	Liberty (not Wellington)	1700	BL w road diet - 2way BL	\$ 95,500	\$ 1,994,398
90	Main in Dundas	King	York/Hatt	230	BL on existing	\$ 5,750	\$ 2,000,148
91	Bimbrook Rd	Fletcher	Southbrook	2360	BL w development	\$ 35,400	\$ 2,035,548
92	Lovers Lane	Sulpher Springs	Jerseyville	900	BL on existing, review ped need	\$ 13,500	\$ 2,049,048
93	Governor's	Binkley	Tally Ho	5100	BL w widening	\$ 433,500	\$ 2,482,548
94	Gray	Frances	King	3000	BL w road diet & TWLTL	\$ 75,000	\$ 2,557,548
95	King in Dundas	Bond	Market	800	BL on existing, reduce osp to 1 side	\$ 20,000	\$ 2,577,548
96	Lake	Barton	Delawana	450	BL w road diet & TWLTL & bits of parking	\$ 11,250	\$ 2,588,798
97	Young	Ferguson	Wellington	230	BL on existing	\$ 3,450	\$ 2,592,248
98	Delawana	Fairington	Grandville	490	BL w shortened aux lanes	\$ 12,250	\$ 2,604,498
99	Victoria	Barton	Main	1035	BL w road diet - BL NB on Es, 3 auto, osp Ws - off	\$ 25,875	\$ 2,630,373
100	Victoria	Burlington	Barton	1025	BL w road diet - BL NB on Es, 3 auto, mtr Ws - off	\$ 25,625	\$ 2,655,998
101	Delawana/Kentley	Nash	Fairington	160	shared on-street - signed	\$ 2,400	\$ 2,658,398
102	Whitney	Main	Emerson	1500	BL on existing, remove osp w attn to commercial ar	\$ 30,000	\$ 2,688,398
103	W 5th	Fennell	Mohawk Acc	325	BL on existing	\$ 18,125	\$ 2,706,523
104	Locke	Barton	York	800	BL on existing - eliminate osp to 1 side only	\$ 20,000	\$ 2,726,523
105	King in Stoney Creek	Battlefield	Gray	1485	BL w widening - New Mtn to Grays	\$ 96,525	\$ 2,823,048
106	Limeridge	Up Ottawa	Mtn Brow	1430	BL on existing	\$ 35,750	\$ 2,858,798
107	Dewitt	Dundee	Ridge	500	BL on existing - narrow lane - 2-way for bikes	\$ 7,500	\$ 2,866,298
108	Claremont Access	Hunter	James stairs	1600	BL w spot widening	\$ 160,000	\$ 3,026,298
109	Fifty	South Service	Cokers	1600	BL w development	\$ 24,000	\$ 3,050,298
110	Garth	Rymal	Twenty	1400	BL on existing	\$ 21,000	\$ 3,071,298
111	Burlington	Ferguson	Sherman	1880	BL w road diet F to Well, excess asphalt to Birch	\$ 67,000	\$ 3,138,298
112	Hwy 5/Dundas St	Hwy 6	Hamilton St	2750	BL on existing	\$ 82,500	\$ 3,220,798
113	Pinehill	Trinity Church	Fletcher	1180	BL w development	\$ 17,700	\$ 3,238,498
114	Greenhill	Summercrest	King	1200	BL w road diet - parking 1 side, no TWLTL	\$ 30,000	\$ 3,268,498
115	Rice/Sanatorium	Mohawk	Wendover	130	BL on existing - eliminate osp to 1 side only	\$ 3,250	\$ 3,271,748
116	Fifty	Watercliff	North Service	770	BL on existing	\$ 11,550	\$ 3,283,298
117	W 5th	LINC	Stone Church	740	BL w reconstruction	\$ 55,500	\$ 3,338,798
118	Governor's	Tally Ho	Ogilvie	860	BL w widening	\$ 98,900	\$ 3,437,698
119	Governor's	Ogilvie	Main	240	BL w widening	\$ 27,600	\$ 3,465,298
120	Queenston/Hwy 8	Dewitt	Niagara border	2700	BL w widening	\$ 310,500	\$ 3,775,798
121	Burlington/Industrial	Ottawa	Parkdale	2300	BL w road diet in sections	\$ 134,500	\$ 3,910,298
122	Queenston/Hwy 8	King	Dewitt	1370	BL w widening	\$ 157,550	\$ 4,067,848
123	Greenhill	Harrisford	Summercrest	1940	BL w road diet - parking 1 side, no TWLTL	\$ 48,500	\$ 4,116,348

124	Mill in Waterdown	Parkside	Hwy 5	950	BL on existing	\$ 14,250	\$ 4,130,598
125	King in Westdale	Longwood	Macklin	340	BL w road diet - see report	\$ 43,500	\$ 4,174,098
126	King in Stoney Creek	Gray	Queenston	1510	BL w widening	\$ 173,650	\$ 4,347,748
127	Rousseaux/Mohawk	Wilson	Filman	1600	BL some widening needed	\$ 144,000	\$ 4,491,748
128	Up Wellington	Limeridge	Rymal	2030	BL w reconstruction	\$ 233,450	\$ 4,725,198
129	Wilson in Ancaster	Hwy 52	Brant border	5300	BL w road diet - BL & TWLTL	\$ 92,750	\$ 4,817,948
130	Winona	Lido/shore	Peachtree	1965	BL w development	\$ 29,475	\$ 4,847,423
131	Mud	Arbour	Pritchard	460	BL w widening	\$ 64,400	\$ 4,911,823
132	Up Sherman	Limeridge	Rymal	2020	BL w reconstruction	\$ 232,300	\$ 5,144,123
133	Burlington/Industrial	Sherman	Ottawa	1700	BL w road diet in sections	\$ 125,500	\$ 5,269,623
134	Dewitt	Hwy 8	Dundee	900	BL on existing	\$ 13,500	\$ 5,283,123
135	Locke	King	Main	250	BL w road diet - 1l NB and 2-wy BL	\$ 26,250	\$ 5,309,373
136	W 5th	Mohawk Col Acc	Tyrone	1130	BL w widening on Ws	\$ 231,650	\$ 5,541,023
137	Nebo	Rymal	Twenty	1300	BL w widening	\$ 97,500	\$ 5,638,523
138	Kilbride	Up Ottawa	Nebo	380	BL w development	\$ 5,700	\$ 5,644,223
139	Hamilton in Waterdown	Centre/Main	Hwy 5/Dundas	1000	BL reduce TWLTL	\$ 25,000	\$ 5,669,223
140	Old Ancaster	South St	Hamilton-Brantford rd	220	BL on existing	\$ 7,700	\$ 5,676,923
141	Airport	airport access	Upper James	1400	BL w reconstruction	\$ 161,000	\$ 5,837,923
142	Pritchard	Stone Church	Rymal	1030	BL w development	\$ 118,450	\$ 5,956,373
143	Bay	Cannon	Main	625	BL w widening	\$ 121,875	\$ 6,078,248
144	Garner	Wilson	Glancaster	700	BL w reconstruction	\$ 897,000	\$ 6,975,248
145	Fiddler's Green	Amberly	Garner	680	BL on existing	\$ 13,600	\$ 6,988,848
146	Shaver	Wilson	Garner	520	BL on existing	\$ 7,800	\$ 6,996,648
147	Up James	Twenty	airport/Mt Hope	4050	MUP on Ws	\$ 739,125	\$ 7,735,773
148	Lake	Delawana	King	1625	BL w reconstruction	\$ 186,875	\$ 7,922,648
149	Twenty	Glancaster	Glover/Trinity Church	8700	BL w widening	\$ 1,218,000	\$ 9,140,648
150	Up Ottawa	Mohawk	Kilbride	3285	BL w widening	\$ 703,425	\$ 9,844,073
151	Up Wellington	(Fennell) South Be	Limeridge	2060	BL w widening	\$ 422,300	\$ 10,266,373
152	Reg Rd 56	Cemetery	Southbrook	1760	BL w development	\$ 202,400	\$ 10,468,773
153	Fennell	Garth	W 5th	1200	BL w widening	\$ 246,000	\$ 10,714,773
154	Parkside	Hwy 6	Robson/bypass	6010	BL w widening	\$ 991,650	\$ 11,706,423
155	Golf Links	Kitty Murray	Stone Church	1290	BL w widening	\$ 490,200	\$ 12,196,623
156	Hwy 5/Dundas St	Hamilton St	Burlington border	3290	BL w reconstruction	\$ 378,350	\$ 12,574,973
157	Garth	Stone Church	Rymal	1025	BL w reconstruction	\$ 117,875	\$ 12,692,848
158	Aberdeen	Longwood	Studholme	260	MUP on Ss	\$ 53,950	\$ 12,746,798
159	Southcote	Golf Links	Garner	2100	BL w widening	\$ 241,500	\$ 12,988,298
160	Main in Waterdown	Hwy 5	Thomson/Burlington	1030	BL w widening	\$ 131,325	\$ 13,119,623
161	Sulphur Springs	Mineral Springs	Lovers Lane	1450	PS widen asphalt	\$ 203,000	\$ 13,322,623
162	Hwy 8	Brock	Hillcrest	600	BL w reconstruction	\$ 69,000	\$ 13,391,623
163	Limeridge	Garth	W5th	1370	BL on existing	\$ 34,250	\$ 13,425,873
164	Freelton Rd	Hwy 6	Brock to Hwy 6	1600	BL w widening	\$ 184,000	\$ 13,609,873
165	Mountain Brow on Mountain	Up Ottawa	Broker	2075	MUP 4.0m pave along brow	\$ 274,938	\$ 13,884,810
166	Up Sherman	Fennell (Macassa)	Limeridge	2050	BL w reconstruction	\$ 399,750	\$ 14,284,560
167	Mountain Brow on Mountain	Broker	Arbour	2450	MUP 4.0m pave along brow	\$ 324,625	\$ 14,609,185
168	Up Ottawa	Mtn Brow	Mohawk	1875	BL w reconstruction	\$ 365,625	\$ 14,974,810
169	Upper James/Christie	Rymal	Twenty	800	MUP on Ws	\$ 126,000	\$ 15,100,810
170	Dundurn	King	Main	270	BL w reconstruction	\$ 101,250	\$ 15,202,060
171	Arterial A in Waterdown	Hwy 5	Mtn Brow Rd	850	BL w development	\$ 12,750	\$ 15,214,810
172	MUP Strathearne/Cochrane	Barton	Lawrence	1900	MUP 4.0m pave	\$ 456,000	\$ 15,670,810
173	John	Charlton	St Josephs	145	BL w widening	\$ 29,725	\$ 15,700,535
174	MUP Strathearne/Cochrane	Lawrence	Greenhill	1150	MUP 4.0m pave	\$ 276,000	\$ 15,976,535
175	York Rd	King	Olympic	2150	BL w widening	\$ 806,250	\$ 16,782,785
176	Hwy 8	Bond	Hillcrest	1100	MUP on S side	\$ 654,000	\$ 17,436,785
177	Mill St/ Waterdown Rd	Hwy 5	Burlington border	875	BL w widening	\$ 83,125	\$ 17,519,910
178	MUP CN	James	Ferguson	660	MUP 4.0m pave	\$ 216,000	\$ 17,735,910
179	Hwy 8	Middletown	Brock	3800	BL w widening	\$ 484,500	\$ 18,220,410
180	Mount Albion	all		2000	BL on existing - narrow curb lanes	\$ 40,000	\$ 18,260,410
181	Sanders MUP	Osler/Main condo	West Park	200	MUP 4.0m pave	\$ 66,500	\$ 18,326,910
182	Claremont to W5th	James stairs	Gateview	620	MUP w road diet - shift concrete & widen MUP	\$ 515,500	\$ 18,842,410

22	Westbrook	Rymal/Reg Rd 20	York St (Niagara)	11150	PS widen asphalt	\$ 696,875	\$ 14,375,038
23	Glancaster	Rymal	Book	1300	PS widen asphalt	\$ 198,000	\$ 14,573,038
24	Book	Shaver	Glancaster	6000	PS widen asphalt	\$ 750,000	\$ 15,323,038
25	Jerseyville	Brant border	Paddy Green	10175	PS widen asphalt	\$ 1,271,875	\$ 16,594,913
26	Concession 4 W	Milgrove Sdrd	Hwy 6	1775	PS widen asphalt	\$ 221,875	\$ 16,816,788
27	White Church	Glancaster	Trinity Church	10500	PS widen asphalt	\$ 1,312,500	\$ 18,129,288
28	Middletown/ Binkley	Hwy 8	Mineral Springs	3500	PS & pave road in section	\$ 385,000	\$ 18,514,288
29	Mineral Springs	Binkley	Sulphur Springs	2250	PS widen asphalt	\$ 303,750	\$ 18,818,038
30	Puslinch Townline	(Maddaugh) Victor	Centre	400	PS widen asphalt	\$ 50,000	\$ 18,868,038
31	Highland	First Rd E	Niagara border	9200	PS w recon	\$ 1,150,000	\$ 20,018,038
32	Carluk	Shaver	Glancaster	3500	PS widen asphalt	\$ 437,500	\$ 20,455,538
33	Mud	Eleventh	Niagara border	850	PS widen asphalt	\$ 106,250	\$ 20,561,788
34	Concession 6 E	Hwy 6	Centre Rd	2750	PS widen asphalt	\$ 343,750	\$ 20,905,538
35	Fifty	Cokers	Ridge	1750	PS widen asphalt	\$ 388,750	\$ 21,294,288
36	Concession 11 E	Hwy 6	Centre Rd	2600	PS widen asphalt	\$ 260,000	\$ 21,554,288
37	Foreman/Kirkwall/Woodhill/Field	all		23000	PS widen asphalt	\$ 2,875,000	\$ 24,429,288
38	Golf Club	Trinity Church	Fletcher	1200	PS widen asphalt	\$ 150,000	\$ 24,579,288
39	Governor's	Woodhill	Binkley	7100	PS widen asphalt	\$ 710,000	\$ 25,289,288
40	Green Mtn	First Rd W	First Rd E	1500	PS widen asphalt	\$ 187,500	\$ 25,476,788
41	Miles	Rymal	Haldibrook	10700	PS widen asphalt	\$ 1,337,500	\$ 26,814,288
42	Shaver	Garner	Carluk	6000	PS w dev or recon	\$ 750,000	\$ 27,564,288
43	Sunny Ridge	Hwy 403	Wilson	1300	PS widen asphalt	\$ 162,500	\$ 27,726,788
44	Sunny Ridge	Jerseyville	Hwy 403	1200	PS widen asphalt	\$ 150,000	\$ 27,876,788
45	Trinity Church	Rymal	Golf Club	2100	PS widen asphalt	\$ 236,250	\$ 28,113,038
46	Up James	Airport/Mt Hope	Haldibrook	4900	MUP 4.0m pave	\$ 771,750	\$ 28,884,788
47	Hwy 6	Edgewood	Carlisle Rd	600	MUP 4.0m pave		MTO jurisdiction
48	Hwy 8	Cambridge	Middletown	18000	MUP 4.0m pave		MTO jurisdiction
49	Hwy 5/Dundas St	Sydenham	Hwy 6	3010	PS widen asphalt		MTO jurisdiction

Proposed Cycling Network



Legend

- Proposed Bike Lane
- Proposed Multi-Use Path
- Proposed Signed Route (shared on-street)
- Proposed Paved Shoulder
- Existing Bike Lane
- Existing Multi-Use Path
- Existing Signed Route (shared on-street)
- Existing Paved Shoulder
- ESCARPMENT

