



SUBJECT: Integrated Mobility Plan - presentation of the preferred network solution

TO: Community Planning, Regulation & Mobility Cttee.

FROM: Transportation Services

Report Number: TS-16-21

Wards Affected: All

File Numbers: 830-03

Date to Committee: December 13, 2021

Date to Council: January 18, 2022

Recommendation:

Endorse the recommended concept (also referred to as the preferred network solution) as discussed in report TS-16-21; and

Direct the Director of Transportation Services to authorize the initiation of the final phase of the Integrated Mobility Plan including preparation of the implementation, financing and monitoring plans.

Purpose:

- To present study progress, as completed to-date;
- To present an overview of the inputs that have influenced the preparation of the recommended network solution;
- To present the rationale for the preferred network solution; and
- To describe the next steps in the project and timeline for completion.

Vision to Focus Alignment:

- Increase economic prosperity and community responsive city growth
- Improve integrated city mobility
- Support sustainable infrastructure and a resilient environment

Background and Discussion:

The creation of an Integrated Mobility Plan (IMP) is identified as a key action in Burlington's 2018-2022 Strategic Plan, From Vision to Focus, in direct alignment with Focus Area 2 – "Improving Integrated City Mobility". Further to its alignment with the Strategic Plan, the adoption of an integrated mobility approach directly supports key programs identified in the 2020 Climate Action Plan and supports the city's initiatives to reduce greenhouse gas emissions from the transportation sector.

The city's mobility needs are changing. Modes of transportation that were relied upon in the past are evolving and, in some instances, being replaced with new and emerging mobility options. The impact of the COVID-19 global pandemic shone a spotlight on the role streets play in supporting complete communities. Streets were quickly recognized as serving a role much greater than simply moving cars from point A to point B and, instead, streets became one of the few public spaces where distanced social interaction was permitted. Throughout 2020, our city streets saw a dramatic reduction in vehicle volumes, while pedestrian and cyclist usage reached all-time highs. The street that was built for the car soon became the backdrop for birthday parties, drive-by Christmas parades, the local gym, outdoor patios, curbside pick-up zones and a multitude of other community uses. This surge in demand for streets as adaptive public spaces highlighted the critical need for policies to emphasize the role of complete streets. The concept of complete streets underpins the vision of the IMP and has informed the creation of a series of mode plans that maximize the capacity of our existing transportation network while focusing on strengthening transit and active transportation—not just as congestion management measures, but as a way to achieve other quality of life, safety, environmental and social objectives.

The IMP will position Burlington to respond to technology changes and emerging mobility options, while empowering council and city administration to make mobility decisions that operationalize sustainability objectives. The IMP complements and is reinforced by the mobility policies contained in the new Official Plan and is actively informing the on-going Major Transit Station Area (MTSA) and Area Specific Planning (ASP) studies to ensure that complete streets, adaptive design, and safe & healthy communities are foundational concepts across both initiatives. Future recommendations of the IMP will be prioritized in a manner that meets the vision, values and goals of the plan that best achieve the desired shifts in mode-split while unlocking the potential for more trips to be made by sustainable modes.

The next steps of deliverables consist of the development of a transportation policy, prioritization of capital projects, capital and operating cost estimation and lifecycle impacts, potential funding opportunities, and a monitoring plan.

A monitoring program will be developed to ensure that the implementation of the IMP recommendations is achieving meaningful progress towards the mobility vision for

2051. Key performance indicators will be developed that are measurable and establish clear actions for data collection, roles, responsibilities and reporting.

The first five (5) tasks of the IMP workplan are now complete. The work presented through this report outlines the work undertaken to-date which follows the Municipal Class Environmental Assessment (EA) Framework for Master Planning Studies. Phase 1 of the Municipal Class EA process, Problem and Opportunity Identification, was fulfilled through completion of Tasks 1 through 3 of the IMP workplan. Phase 2, Alternative Solutions, has been fulfilled through Task 4 of the IMP workplan. Council endorsement of the recommended solution is being sought through this report.

As per the EA framework for Master Plans, the creation of the implementation, financing and monitoring plan will conclude the study process, a final round of public engagement will take place, and a Notice of Study Completion will be circulated upon Council's approval of the final IMP. This report and accompanying presentation explain the justification for recommending a balanced network solution. Full documentation of the IMP is available for review via the online Integrated Mobility Plan Story Map collection, our "living" plan which is updated after completion of each task of the workplan. The Story Map currently contains the following chapters:

- Vision, Values and Goals – the vision for the future of transportation in Burlington;
- Transportation Today – exploring how we move around the city today;
- Lived Experiences with Transportation – exploring how mobility in Burlington feels different for different members of the community;
- Problems and Opportunities – exploring the challenges and opportunities for transportation in Burlington; and
- Our Preferred Network Solution – exploring the proposed future of transportation in Burlington.

Process to date: April 2020 to October 2020

Task 0 – Project Launch

Nearly six months of intensive pre-work was completed before the official public launch of the project in October 2020. Significant internal stakeholder consultation was undertaken to lay the framework for the IMP and to gain consensus on the project scope and schedule. Staff from the project team worked closely with Corporate Communications and Engagement staff to develop an engagement strategy that rooted the direction of the plan and supporting assumptions in community feedback.

The project was publicly launched on October 15, 2020 through a virtual facilitated panel discussion with industry leaders in mobility. Discussion topics included the future

of mobility, opportunities and challenges related to public health and the environment, social impacts of transportation, and how planning for a multi-modal transportation network will shape mobility over the next 25 years.

Process to date: October 2020 – December 2020

Task 1 – Foundations

Expanding on the results of pre-consultation (2019), combined with a synthesis of strategic planning documents, a draft vision statement for mobility was developed. Through online engagement, a survey was used to refine and finalize the draft vision statement and develop community values that were used to shape the direction and form the foundation of the IMP.

Some things we heard from the online engagement were:

- Overall, the draft Vision and Values for the IMP were supported.
- Street design should match the surrounding context and character.
- The City should prioritize infrastructure for transit, cycling and walking from the onset of construction in new neighbourhoods.
- The City should protect vulnerable users through improved street and intersection design and by designing complete streets.
- The City should improve connectivity of the mobility network by completing more projects that “fill in the gaps” and give pedestrians and cyclists more direct routes.
- The City should have the infrastructure to make each trip possible by any mode of transportation.
- There was less support for redirecting the budget toward sustainable mobility options, implementing parking fees in congested areas to reduce emissions, or to take away space for cars.

Additional comments expressed a desire for smart traffic control and travel demand management to improve flows and improve regional connectivity and transit connections to the GO system.

The IMP Vision and Values were endorsed by Council on December 15, 2020 through a Council Workshop.

Process to date: January 2021 – April 2021

Task 2 – Enabling Strategy

A detailed profile of existing travel behaviour was developed based on a review and synthesis of existing census data, planned population and employment growth, 2016

Transportation Tomorrow Survey (TTS) and augmented by big data sources in order to establish present day mobility trends.

A Current State summary report of the four key elements of the transportation system – networks, demands, policy and programs – was prepared that outlined the existing and planned state of transportation and identified key issues and opportunities from a city-wide perspective. Neighbourhood profiles were developed that characterized the mobility options available within each sub-area zone. Online engagement included an interactive mapping tool where participants were asked to add “pins” to the map and share valuable feedback on the existing transportation system, what is working well, where gaps exist and where opportunity exists to improve mobility in Burlington. Feedback was grouped to see where there were shared areas of interest and concern and used to identify common themes that required resolution through the development of the IMP.

Building on the approved Vision, Values and Goals, and in understanding the major issues gleaned through the establishment of the Current State, network planning guidelines and mode share objectives were developed. The completion of this task built a direct connection between the Vision and Values, and how they are to be achieved through the aligned objectives.

Process to date: April 2021 – July 2021

Task 3 – Problems and Opportunities

Expanding upon Task 2, the inputs from the Current State were used to develop the key deliverable of Task 3, a travel demand model. The model utilized a multi-modal perspective of the current transportation network to identify opportunities and constraints. The use of sub-area zones (neighbourhood-level areas or special clusters of land) were important inputs required to understand interactions relative to origin/destination patterns and mode share, and how the relationships between Neighbourhoods will change as the city grows. Future mode share targets for the 2031 horizon were developed and subsequently implemented into a forecast 2031 model scenario that represented the basis for establishing future multi-modal networks and solutions.

Network planning was achieved through the analysis of the 2031 baseline condition which identified corridor-level deficiencies and established the number of person-trips that will need to be accommodated through shifts in mode choice to maintain a reasonable level of delay without increasing automobile capacity through widenings. Mode-specific performance objectives were developed for each mode and network planning guidelines were established to guide the development of ideal mode plans for walking, cycling, transit, auto and goods movement.

A key input to the defining of problems and opportunities was a robust online engagement campaign that presented the Lived Experience Papers. This series of five papers told the story about the challenges and opportunities of the City's transportation system by looking at the different needs of our residents. The Lived Experience Papers were intended to start the conversation with the community about what the City needs to do to improve mobility over the next few decades. The online engagement helped the project team understand the mobility challenges our residents face and what we can do better to help our residents get around the city, today and into the future. The Lived Experience Papers were inspired by feedback the City has heard from Burlington residents over the past few years. Once reviewed, the reader was invited to answer a series of questions and share their input on key issues that need to be considered when developing the IMP.

Process to date: July 2021 – December 2021

Task 4 – Preferred Solution

To fulfill the vision, values and goals of the IMP, the proportion of daily trips that are made by car needs to be shifted to other, more sustainable modes of travel. The preferred network solution identifies areas of the city where infrastructure investments are recommended in order to achieve the desired mode shift from cars towards walking, cycling and transit. The preferred solution is a combination of *priority networks* – networks of streets that prioritize a specific mode of travel based on the context of the street's location, form, function, and consideration of the surrounding land use which the street travels through. While all modes of travel will be accommodated on any street (excluding truck movements where prohibited), many streets will be part of more than one priority network, requiring trade-offs and reprioritization in order to achieve the goal of a balanced mobility system.

Key elements of each of the priority networks are summarized as follows and detailed in Appendices A through G:

- Pedestrian Priority Network – investment in high-quality pedestrian facilities and enhanced pedestrian realm in areas of targeted growth like the Major Transit Station Areas, Downtown and Uptown. Streets that have an emphasis on pedestrian priority will dedicate more space to pedestrian movements and employ a higher design standard for urban design to make walking safe, convenient and more pleasant. The pedestrian priority network is illustrated in Appendix A and C.
- Cycling Priority Network – investment in cycling infrastructure that makes cycling feel safe and comfortable for people of all ages and abilities (AAA). The selection of facility type will depend on the street, volume of cars, and the speed at which they travel; but will generally include bike lanes that are physically

separated from traffic and protected intersection designs that reduce the potential for conflict between cars and cyclists. The cycling priority network is illustrated in Appendix B and C.

- Transit Priority Network – continued investment in developing high-frequency transit routes and implementation of transit priority measures to prevent buses from getting stuck in traffic congestion at key intersections. The success of the transit priority network is highly dependent upon improved pedestrian and cycling connections to transit stops and continued investment in expanding the sidewalk network. A key element of the transit priority network is the identification of future bus rapid transit (BRT) facilities along key arterial corridors. The future BRT and Transit Priority corridors identified in the plan are closely coordinated with Metrolinx plans for Dundas BRT and the Halton Region Defining Major Transit Requirements (DMTR) study. Through technical analyses, it has been determined that in some areas, full BRT infrastructure may not be feasible due to limited right-of-way (ROW). In these locations, emphasis will be placed on operational improvements to increase efficiency and schedule adherence of the transit service. The transit priority network is illustrated in Appendix D.
- Auto Priority Network – the IMP recognizes that cars will remain an important mode of transportation, even when a reduction in mode split is achieved. In order to facilitate continued mobility for the auto, the existing transportation system needs to maintain a strong network of arterial and collector streets. The auto priority network includes consideration of new, multi-modal street connections that may improve mobility for all users and identifies future study of key corridors (Harvester Road and Maple Avenue). The success of the auto network will depend on monitoring congestion, particularly during peak commuter periods, and employing technological solutions to better manage congestion. The auto priority network is illustrated in Appendix E.
- Truck Priority Network – investment in infrastructure that physically separates vulnerable users from trucks in key goods movement corridors is paramount to increasing safety and providing equitable access for all street users. The truck priority network is illustrated in Appendix F.

The resultant preferred network solution is the integration of all individual priority networks (illustrated in Appendix G). The preferred network solution enables a mode shift away from the car through the development of walking, cycling and transit networks that are competitive with the car and offer balanced mobility. In locations where multiple priority networks overlap, the competing mobility needs must be assessed and prioritized. Key corridors have been identified for future study in order to identify which modes can be accommodated within limited right-of-way and what trade-offs are required. Street widenings will be recommended for the purpose of improving

conditions for walking, cycling and transit or resolving safety concerns (i.e. to facilitate wider sidewalks in key growth areas, to accommodate separated cycling facilities along the spine cycling network, and intersection widenings at key locations where transit priority measures such as queue jump lanes are required to improve transit reliability and reduce wait-times in congestion), but will not be permitted for the sole purpose of increasing auto capacity.

The draft preferred network solution was presented to both internal stakeholders and key external stakeholders from Halton Region on September 20, 2021. Comments received were used to modify the draft network solution, where appropriate, and ensure that key interests were captured and incorporated through the development of the plan. Once modified, the draft preferred network solution was presented to each member of Council (October 11 – October 15, 2021) for review and comment, revised where appropriate, and then presented to the Integrated Transportation Advisory Committee of Council (ITAC) on October 25, 2021.

The two-week statutory public consultation period on the Preferred Solution commenced on October 29, 2021 through the release of an updated story map that detailed the individual priority networks and combination of each to develop the preferred network solution. Online engagement utilized an interactive mapping survey that asked participants to share feedback on the proposed network, highlighting what they loved, what they felt may be missing, and sharing any additional comments or feedback that is relevant to the study. The statutory public consultation period closed on November 14, 2021.

Process to date: December 13, 2021

Endorsement of the Preferred Network Solution

At the CPRM meeting on December 13, 2021, the project team will present the finalized Preferred Network Solution which incorporates feedback received from internal and external stakeholders, members of Council, and community feedback received through the recent statutory public consultation period, resulting in a recommendation that has been built on a strong foundation of technical analyses and community engagement.

Next Steps

It is critical that endorsement of the Preferred Network Solution is achieved by Q4 of 2021 in order to maintain a 2022 study completion date. Staff will proceed with the Council endorsed preferred solution to develop the Transportation policies, Implementation, Financing and Monitoring plans for the IMP. This next step represents the final work tasks of this study. There will be additional opportunities for stakeholder and community engagement throughout this final phase. The remaining tasks of the

workplan are summarized as follows, including the expected timeframe for completion. These timeframes may be subject to change.

Task 5 – Implementation, Financing and Monitoring Plans (Q2 2022)

Key deliverables of Task 5 include:

- Development of transportation *policies* and *programs* that will support the desired shift in mode share. Emphasis will be placed on the development of framework for a future Transportation Demand Management (TDM) program.
- Prioritize capital projects based on IMP vision, values, goals and feedback received from the community, while considering affordability.
- Identify capital costs estimates of the recommended plan and estimate implications on operating and lifecycle costs for all projects identified in the IMP.
- Preparation of a white paper on municipal transportation funding opportunities including potential growth-related projects for consideration in future Development Charge updates.
- Develop monitoring plan to identify key performance indicators, data sources and frequency of monitoring.

Task 6 – Preparing for the Future State (Q3 2022)

- Preparation of the White Paper that explores the opportunity that exists with new and emerging technologies, as well as the challenges that are anticipated through implementation and adoption.

Task 7 – Presentation of Integrated Mobility Plan (Q3 2022)

- Finalize the Integrated Mobility Plan and present findings and recommendations to Council

Alignment with Other Plans

The IMP project team continues to collaborate with project leads on a number of strategic initiatives to ensure coordination and alignment of policies and projects, including but not limited to:

- Burlington Official Plan, 2020
- Major Transit Station Areas (MTSAs)
- Burlington Transit Five-Year Business Plan
- City of Burlington Cycling Plan
- Rural Active Transportation Strategy
- 2021 Asset Management Plan
- Climate Action Plan

- Climate Resilient Burlington

Financial Matters:

The IMP was funded from the Policy initiatives reserve fund and approved as part of the 2019 budget. The project is currently within budget.

Total Financial Impact

The final phase of work for the IMP will study the cost implications for the long-range capital budgets, considerations for future development charge background studies and operating budgets. The preferred network solution will require significant infrastructure investments. The preferred solution will result in an increase to operating impacts, particularly related to winter maintenance for active transportation facilities, as well, operating maintenance and capital renewal and new assets. Operating impacts related to future capital project implementation will be highlighted through the IMP, with detailed cost estimates being provided through the budget process. As part of the next steps, infrastructure investments and funding considerations should be viewed over a long-term horizon and balanced with other needs and initiatives in the city.

Source of Funding

Not Applicable

Other Resource Impacts

The forthcoming implementation, financing and monitoring plans and final report will outline future resourcing impacts of approving the IMP.

Climate Implications

In accordance with A Place to Grow, Growth Plan for the Greater Golden Horseshoe (2019), planning in Burlington must consider the guiding principles outlined in the Growth Plan to “integrate climate change considerations into planning and managing growth such as planning for more resilient communities and infrastructure – that are adaptive to the impacts of a changing climate – and moving towards environmentally sustainable communities by incorporating approaches to reduce greenhouse gas emissions” (Growth Plan 2020, s.1.2.1).

This report recommends endorsement of a preferred solution that supports a shift toward sustainable modes of transportation and a reduction in auto mode share. The lens of sustainability has been applied throughout the development of the IMP with an emphasis on increasing the people-carrying capacity of our mobility network through

increased use of transit and active transportation to accommodate daily trip making. The preferred solution, as presented, aims to reduce auto mode share and the associated impacts of greenhouse gas emissions from the transportation sector.

Engagement Matters:

The IMP has conducted exhaustive engagement of the community and stakeholders over the first four phases of study. A comprehensive summary of engagement will be presented as part of the Municipal Class EA project file and submitted with the final staff report.

Conclusion:

The Preferred Network Solution, as proposed, represents the Council endorsed vision for mobility and delivers a mobility network that achieves the values and goals of the community and key stakeholders as identified through extensive public engagement. The Preferred Network Solution supports the City's top priorities for improving integrated city mobility and delivers a plan for an integrated transportation network that aims to achieve the mode share targets contained in Vision to Focus.

Respectfully submitted,

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Appendices:

- A. Pedestrian Network
- B. Cycling Network
- C. Rural Active Transportation Network
- D. Transit Network
- E. Car Network
- F. Truck Network
- G. Preferred Integrated Network

Report Approval:

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Counsel.