Appendix A of TR-06-19



DILLON CONSULTING

BURLINGTON TRANSIT
Five-Year Business Plan (2020-2024)

October 2019 – 19-9087

Table of Contents

1.0 Introduction 1

1.1 The Value of a Business Plan 1
1.2 Burlington Transit – Past and Present 2
1.3 Alignment with Strategic Policy and Targets 5

2.0 Policy Framework 6

2.1 Vision and Mission 6
2.2 Strategic Directions 7

3.0 Growth Targets 10

3.1 Investing in Our Service 11

4.0 The Plan 12

4.1 Strategic Direction 1 - Service Structure and Delivery 12
4.2 Strategic Direction 2 - Mobility Management 19
4.3 Strategic Direction 3 - Customer Experience 22
4.4 Strategic Direction 4 - Travel Demand Management 25

5.0 Organizational Structure and Staffing 31

6.0 Assets and Infrastructure 35

6.1 Fleet Replacement and Growth 35
6.2 Fleet Maintenance Management 36
6.3 Fleet Maintenance Plan 36
6.4 Operations, Maintenance & Storage Facility (OMSF) 37

7.0 Phasing Plan and Forecast of Budget Impact 38

7.1 Phasing Plan 38
7.2 Forecast of Budget Impact 41

Figures

Figure 1: Historic Ridership Trends 2
Figure 2: Conceptual Grid-Based System 13
Figure 3: Conceptual Transit Priority Network 16
Figure 4: Regional Express Rail Frequencies 17

Tables

Table 1: Planned Investment in Burlington Transit (2020 – 2024)..... 11
Table 2: Recommended Staffing Levels to Support Plan 34
Table 3: Phasing Plan..... 39
Table 4: Total Buses, Revenue Service Hours and Ridership..... 41
Table 5: Planned Operating Costs and Revenue 42
Table 6: Planned Capital Costs 43

This report references 2019 year-end estimated ridership for all calculations and all financial figures are in 2020 Canadian dollars. All forecasted costs, ridership, and resource requirements do not include specialized transit.

1.0 Introduction



1.1 The Value of a Business Plan

The 2020-2024 Burlington Transit Business Plan represents Burlington Transit's first business plan in many years. A business plan is an effective tool that can be used to manage the delivery of transit services, particularly during periods of change. The primary purpose of the plan is to ensure individual strategies, projects and activities are aligned and contributing to Burlington Transit's vision and policy objectives. This includes prioritizing and staging key decisions to fit within the City's financial guidelines.

The business plan is also an important communication tool that will clearly set out steps required to move towards the long-term direction of the City. Over the next five-years, the business plan will form the guiding document in which operational decisions and financial budgets should be built around. The plan will layout an action plan based on the priorities which will be evaluated yearly throughout the duration of the plan to ensure priorities are being achieved.

1.2 Burlington Transit – Past and Present

To understand how Burlington Transit got to where it is today, it is important to understand our history and recent achievements. Over the past ten years, our ridership grew by 6.1 percent. This did not represent a linear growth, with our ridership peaking in 2012, only to experience a decline between 2013 and 2016. This decrease in ridership was reflective of a similar decline that was seen in a number of transit systems across Canada. Much of this was due to an increase in unemployment rates as well as changing attitudes towards mobility, particularly from younger generations who have placed a higher emphasis on demand responsive service levels with the introduction of ride hailing services.

Over the past few years, our ridership has been rebounding, and is anticipated to reach approximately 2 million rides by the end of 2019. These recent increases in ridership are a result of a number of changes in how we deliver service and a renewed focus on our customers. This has also resulted in an increase in productivity (measured through boardings per revenue vehicle hour).

To be successful and meet our customer needs, investment in service must also be effective, and allocated in areas where our customers will benefit the most.

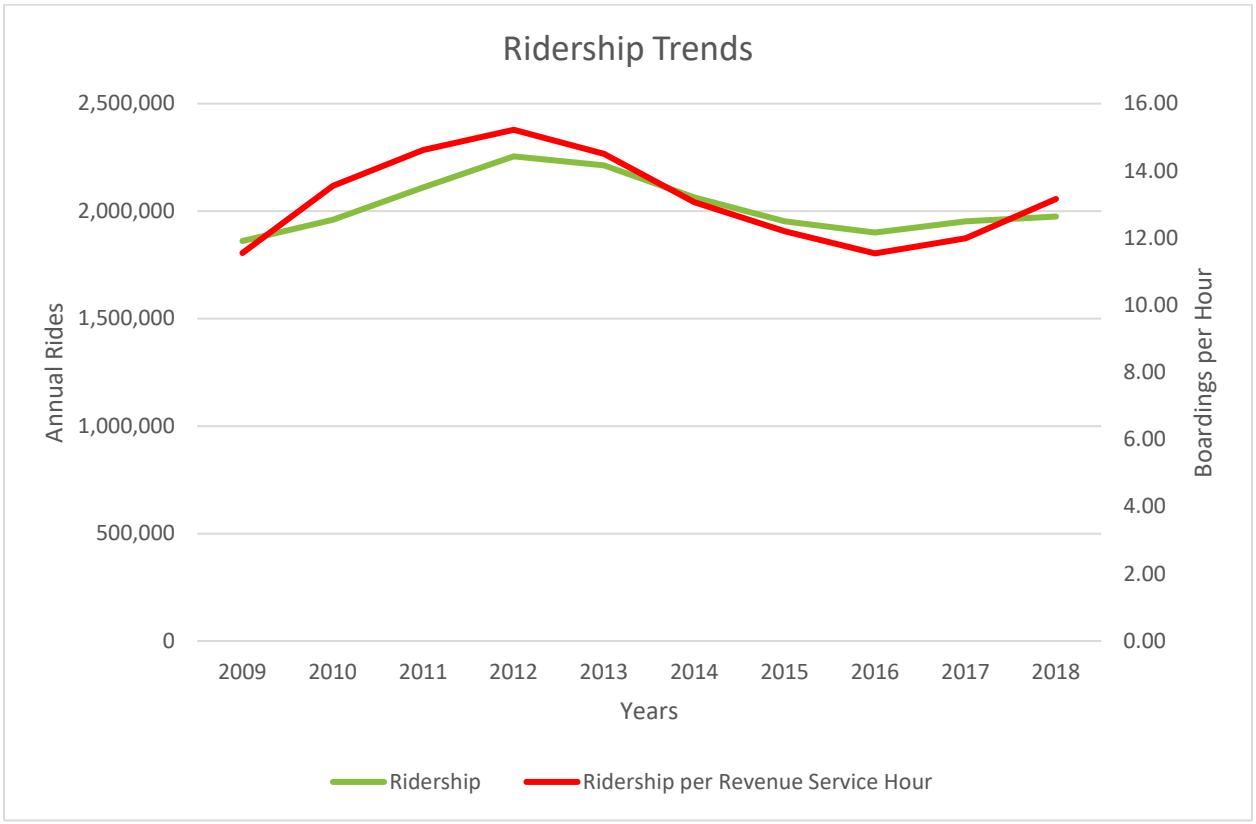


Figure 1: Historic Ridership Trends

There are a number of milestones and achievements that we have achieved that has resulted in this recent increase in ridership and are important to recognize when developing a business plan for the next five years. Since 2017, Burlington Transit has undergone significant changes, underscoring the ridership and efficiency improvements witnessed towards the end of the past ten-year period. These changes and achievements include:

Improved Engagement with Customers

We have undertaken a number of recent initiatives to improve engagement opportunities with our customers. This includes the initiation of an Annual Survey and improved on-street communications with customers to better gauge customer responses to the service. These types of activities have helped our staff better understand how the current service is meeting the needs of existing customers and how it could be improved.

Communications and Legibility

To attract new customers to the system, residents must first understand how the system works and how to use Burlington Transit to connect to different areas of the City at different times of the day and days of the week. One of our key initiatives was to develop a new Ride Guide with a new and more legible map format. New customer friendly printed schedule formats have also been made available to customers that do not have access to a smart phone and prefer a paper format to know when and where their next bus will arrive.

Planning and Operations Staffing

Having the appropriate staff complement will help an organization deliver on its mission. A review of the organizational structure was completed and identified a need for additional staff required to meet day-to-day operating requirements and deliver on long-term strategies. Burlington Transit has gone through a fairly signification transition in staff over the last 2 years with replacements, due to turn over, in several of the key positions including:

- Planning and Scheduling Team;
- Operations Manager;
- Marketing and Customer Service Coordinator;
- Business Services Coordinators;
- Transit IT Analyst; and
- Manager, Planning and Business Services.

In addition to the above changes, improvements were also made to staffing levels in Operations. A number of transit operators that were in a casual position were hired into a full-time position. This has decreased the exodus of transit operators leaving to seek full-time employment with other transit agencies. Maintaining this type of consistency has improved the quality of staff and how they interact with customers.

Route Design

A number of improvements were made in the route structure to increase schedule reliability and improve service levels. The most significant improvement to the service was to further streamline Route 101 and reduce the overall travel time on this semi-express route. In September 2019, Burlington Transit's plan of moving to a more grid like system became a reality. Future service plans will see the system move to a more grid-like structure, reducing overall travel time for many customers by limiting the number of indirect deviations on a route or service. Over the duration of this business plan, this will be complemented with more on-demand alternative service delivery services in low-demand areas that cannot be reliably serviced by the grid-like fixed-route network.

On-board and Off-board Customer Amenities

On-board and off-board improvements were also made to customer amenities and the safety and security of the system. New shelters were installed at the downtown terminal to improve customer comfort during inclement weather.

On board buses, new on-board security cameras were also installed. Keeping customers safe on the system is often not a visible feature on a vehicle, but is the number one priority for Burlington Transit.

1.3 Alignment with Strategic Policy and Targets

To be effective, a Business Plan needs to be aligned with the strategic directions identified in key municipal policies.

Both the Region of Halton and the City of Burlington place a significant emphasis on sustainable transportation and Burlington Transit's role in improving mobility. This includes ambitious targets to increase transit ridership and the associated actions that need to be taken to get there (e.g. focusing transit supportive development and intensification around corridors and mobility hubs and supporting transit priority features that improve the reliability and travel time of transit services).

To align with these regional and city-wide policies and targets, Burlington Transit will identify strategies to shift a greater proportion of traffic to public transit by improving service along higher density corridors and nodes, including providing seamless connections to neighboring municipalities and expanding the use of express routes and services.

Burlington 2015-2040 Strategic Plan

- Burlington is a **City that Moves** (a transportation network where people can move throughout the city more efficiently and safely, based on a variety of convenient, affordable and green forms of transportation

2018-2022 Burlington's From Vision to Focus

- Council's 4-year work plan focuses on specific priorities which include:
- Transit Utilization: increasing Burlington Transit Service levels and growing overall ridership
- Modal Split: improving the transit and transportation modal split
- Transit Access: improving access to Burlington Transit service

Current Burlington Official Plan

- Focus on targeted intensification, innovative approaches and new technologies to enhance mobility choices
- Prioritizing active transportation and transit
- Consider Transit Priority Measures along Primary, Secondary and Employment Growth Areas

Halton Region Transportation Master Plan

- Increase the combined local and inter-municipal transit mode share target in the Region to 20 percent of all A.M. peak trips by 2031 (9 percent for Burlington Transit)

2.0 Policy Framework



Setting a policy framework is critical to providing guidance to an organization that is aligned to a common vision. Our Vision defines where we are headed and what we want to be, while our Mission and Strategic Priorities identify strategies and actions that will get us there. This must be aligned with broader City-wide goals and measured against key performance indicators that allow us to monitor how far we have come to achieving our Vision.

2.1 Vision and Mission

Our Vision is simple: ***Advancing Innovative Mobility*** for residents, employees and visitors.

To deliver on this vision, our mission is ***to provide mobility services that are reliable, efficient and innovative.***

The vision recognizes the importance of sustainable mobility options, the importance of service quality and customer convenience to reduce automobile travel, and the need for forward-thinking innovation to plan and operate the type of service that is required to achieve the strategic directions identified in the 25-year City of Burlington Strategic Plan, and within the short term with the 2018-2022 From Vision to Focus plan. Our mission describes how we will achieve our vision, with a focus on reliable, efficient and innovative service.

2.2 Strategic Directions

The final aspect of a policy framework is to define strategic directions, supported by key objectives. Strategic directions are vital to the success of the business plan and are meant to identify a course of action that supports the vision and mission. We have defined the following strategic directions and associated objectives to guide us over the next five years.

Strategic Direction #1: Be Customer-Focused in every aspect of how service is delivered

Objective 1.1 – Service Excellence: To plan and operate a convenient and easy-to-use service, that is frequent, comfortable, reliable, and offers complete, connected trips.

Objective 1.2 – Image: To grow a positive brand that is responsive to and inclusive of the community it serves.

Objective 1.3 – Travel Time: To strive to deliver a service that minimizes end-to-end travel times by exploring transit priority features, minimizing route deviations and reducing transfer time.

Objective 1.4 – Safety and Security: To offer a safe and secure environment to our customers and employees, both while on board the vehicle and at stops, stations and terminals.

Objective 1.5 – Workplace Culture: To foster a safe, positive and engaged work environment that stresses the importance of well-being and customer service.

Objective 1.6 – Accessibility: To enhance the accessibility of the service and transit facilities for all customers, regardless of their level of mobility

Objective 1.7 – Integrity: To treat our customers and employees with dignity and respect at all times, regardless of individual differences, fostering a culture that instils trust.

Objective 1.8 – Affordability: To balance affordability of fares with fiscal responsibility

Objective 1.9 – Availability: To provide, where feasible, mobility options when and where a customer needs to travel.

Objective 1.10 – Information: To provide accurate information about the service that is easy to understand and is accessible, in real-time where feasible.

Objective 1.11 – Communications: To provide timely and honest communications about service disruptions and responses to customer inquiries and feedback that allows the customer to feel valued.

Strategic Direction #2: Be Forward-Thinking in how services are planned and delivered

Objective 2.1 – Technology: To be abreast of and critically assess opportunities to introduce technological advancements that will help enhance the customer-experience, improve operations and/or reduce Burlington Transit's environmental footprint.

Objective 2.2 – Alternative Service Delivery: To explore and embrace new service delivery models and vehicle types that allow Burlington Transit to effectively-serve low demand areas and periods and new mobility options that cater to a more discerning customer-base.

Objective 2.3 – Sustainability: To promote sustainability and develop resilience for a changing environment, taking into account environmental, economic and social factors in our decision making.

Objective 2.4 – Proactive Planning: To understand and forecast shifts in community and customer needs in order to be nimble enough as an organization to change how we plan and deliver service

Objective 2.5 – Innovation: To encourage innovation and the implementation of best practices in every decision made.

Objective 2.6 – Transit-Oriented Development: To work with Burlington's Planning Department early in the planning process to encourage transit-oriented development that is compact, mixed-use and walkable around key transit corridors.

Objective 2.7 – Environmental Footprint: To minimize environmental footprint through green procurement practices, business operations and transit vehicle operations.

Strategic Direction 3: Be Business-Minded and aligned with municipal directions

Objective 3.1 – Effectiveness: To plan and operate service that makes the most effective use of resources.

Objective 3.2 – Partnerships: To establish partnerships with stakeholders and other mobility providers where the partnership results in a better or more cost-effective option than providing the service internally.

Objective 3.3 – Efficiency: To right-size fleet and staff complement, with a view to improving the efficient operation of the service.

Objective 3.4 – Data Driven: To make decisions based on a combination of reliable data and community feedback.

Objective 3.5 – Accountability: To be results oriented and fiscally responsible, setting measurable targets and holding ourselves accountable to them.

Objective 3.6 – Investment: To recognize the importance that investment in mobility has on achieving broader quality of life, economic development and environmental objectives.

Objective 3.7 – Active Transportation: To continue to integrate transit services with active transportation, including pedestrian and cycling facilities and the use of bike racks on buses.

Objective 3.8 – Demand Management: To develop and support demand management strategies and programs that can influence the greater use of sustainability mobility approaches.

Objective 3.9 – Asset Management: To improve the efficiency, performance and utilization of assets through a comprehensive asset management strategy.

Over the course of the next five years, we will work on achieving each of these objectives with a goal of working towards achieving our long-term vision. We will also monitor our progress to achieving these objectives using key performance indictors that are outlined in Burlington Transit's service standards.

3.0 Growth Targets

One of our primary objectives is to grow ridership by ***advancing innovative mobility options***. This objective helps achieve the regional and city-wide goals of reducing peak-period congestion and green-house gas emissions from single-occupant vehicle travel, improving opportunities for Burlington residents to access employment, education, services and activities, reducing investment in roadway widenings, and improving overall quality of life.



By the end of 2019, Burlington Transit is projected to deliver approximately 2 million annual rides, representing about 2 percent of all trips made in Burlington. Over the next five years (2024), our goal is to grow to 5.7 million annual rides (or 7.2 percent of all trips). This ridership growth target is derived from the 2011 Region of Halton Transportation Master Plan, which targets an increased emphasis on transit to reduce roadway congestion and investment in roadway infrastructure.

To put this growth objective in context, over the past five years, Burlington Transit's ridership only grew by 1.9 percent per year. Over, the next five years, we will need to grow ridership by an average of 23 percent per year to achieve this target. The 2024 target identified for Burlington represents a significant rate of growth over past performance and above what Burlington Transit's peers have achieved over the past five years. This will be difficult to achieve in a short period of time without significant investment in transit, a focus on customer service and culture change, including a change in how transit services are delivered.

While population growth will also help grow ridership, Burlington's population is only projected to grow by 3,300 people by 2024. This suggests that only a small portion of ridership growth will come from new residents, and the majority of growth will require existing residents to ride transit much more, creating a greater culture of transit use in the city.

3.1 Investing in Our Service

To accommodate the planned growth in ridership, we will need to invest in the level of service to accommodate both an increased demand for service and to change travel behaviour. This will require an increase in the amount of service and the fleet required to deliver the service.

The City of Burlington Development Charges Transit Background Study (2019) identifies a planned growth of 38 buses in our fleet between 2019 and 2028 to meet transit mode share target. Phased in over the five-year life of this business plan, this represents a growth in 20 vehicles by 2024 (from 63 to 83). Service hours will also need to grow to reach the mode share target. We have estimated that an investment in 100,800 annual revenue service hours is required over the next five years. This represents a 56 percent growth in service levels. The projected fleet, service hour and utilization growth is detailed below. This growth target formed a key part of the business plan as well as the ridership growth strategies we have identified to reach these targets.

Table 1 below identifies the service requirements (buses and revenue hours) to meet the mode share target identified for years 2020 to 2024. The PM peak rides is the measure in which mode share is measured and is determined based on annual ridership and time of day. Peak buses are the number of buses required to deliver the service frequency identified in the schedules during the morning and afternoon peak periods. This is the maximum number of vehicles in service at any one point. The difference between the peak buses and total vehicles as described below is the spare ratio (approximately 23 percent) which is used in case of change offs or mechanical breakdowns.

Table 1: Planned Investment in Burlington Transit (2020 – 2024)

Year	2020	2021	2022	2023	2024
Peak Buses	48	54	57	61	64
Mode Share	3.48%	4.41%	5.34%	6.27%	7.20%
PM Peak Rides	15,880	20,130	24,380	28,630	32,880
Annual Revenue Hours	214,240	230,880	247,520	264,160	280,800
Annual Ridership	2,730,300	3,460,600	4,190,900	4,921,200	5,651,500
Rides per Revenue Hour	12.7	15.0	16.9	18.6	20.1

It should be noted that a business plan does not provide detailed operating plans that are specific to each route. Rather, the plan provides strategic directions that guide operational decisions over the next five years. The level of investment in service and capital noted in the table above will also need to go through the municipal budgeting process and may be subject to change.

4.0 The Plan

One of the primary purposes of a business plan is to focus actions taken by an organization so they are aligned with the vision, goals and strategic directions of a system. Burlington Transit has a mandate to significantly expand ridership in line with the mode share targets identified in the 2011 Halton Transportation Master Plan, targeted an increase in ridership from 2 million trips in 2019 to 5.7 million trips by 2024. To achieve this growth target, we must provide ***Advanced and Innovative Mobility*** to residents, employees and visitors of the city. In doing so, we will:

- be Customer-Focused in every aspect of how service is delivered
- be Forward-Thinking in how services are planned and delivered
- be Business-Minded and aligned with municipal directions

To achieve our goals, this business plan outlines a number of growth strategies that will be our focus over the next five years. These reflect our vision, mission and strategic directions and will be supported by an implementation plan and forecast of budget impact summary. These growth strategies are organized into the following themes:

1. Service Structure and Delivery
2. Mobility Management
3. Customer Experience
4. Travel Demand Management

4.1 Strategic Direction 1 - Service Structure and Delivery

The way services are structured and delivered defines the primary customer aspects of any transit system. Where services go, how often vehicles are scheduled, how long the trip takes, how accessible are stops, and how the service is delivered (focus on customer service) are all key factors in residents choosing not only which services to take, but if transit is an option for them at all.

With finite budgets, transit systems must balance the competing demands for services that provide a high level of accessibility to more people, but take longer and run less often, against those for services that are fast, direct and more frequent. Typically, more frequent and direct services attract higher ridership and are in line with Burlington Transit's ridership growth aspirations.

There are a number of strategic directions that Burlington Transit will implement over the next five years to improve the service structure and how services are delivered. These include the following:

4.1.1 SD 1A - Move to a More Direct Grid-Based System

A number of transit systems are reconfiguring their network to focus on providing more direct service on arterial roadways, connecting major destinations and transfer opportunities. This is particularly true for transit systems with the objective of significantly increasing ridership, as grid-based networks can provide shorter travel times and more frequent service that is more comparable to travel times using private automobiles.

Burlington Transit currently operates a combination of grid-based arterial routes and local routes. Local routes operate on local and collector roads and are designed to improve connectivity and reduce walking distance to a number of residential areas. While passengers on these routes may enjoy the convenience of having close access to transit services, local routes typically have longer travel times resulting from the meandering nature of the roads themselves. Many of these routes often have the lowest productivity in the system, limiting our ability to maximize ridership potential.

The remaining Burlington Transit network was developed largely on a grid arterial system, focused on key population and employment areas, with links to the GO Rail network. Key north-south corridors like Brant and Walkers link the established southern areas to growing northern areas. Such grid systems allow for more direct routes on arterial roads that are faster, resulting in quicker journeys that attract more riders.

While there is a role for local routes, to achieve our ridership growth targets, the focus of future investment will be on services where we can generate the greatest ridership per invested service hour.

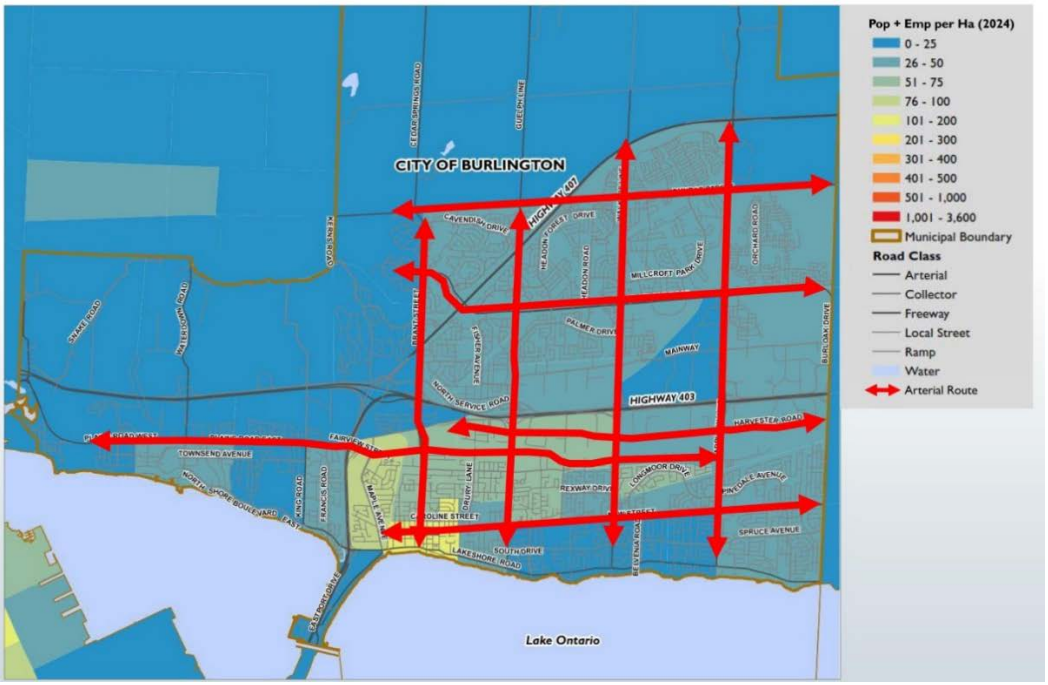


Figure 2: Conceptual Grid-Based System

Arterial routes, particularly when arranged as a grid, are easy to remember and the roads used are better-known by the wider community, reducing barriers for new customers. Grids also allow for convenient transfers between routes at intersections, providing greater connectivity to more destinations than a single local route could. The September 2019 route modifications have already moved in this direction, and this will form a starting point for future changes in how we deliver service.

Where gaps are left in the network, alternative service delivery options such as on-demand transit services will be explored as a more cost-effective solution. This is more fully discussed in Strategic Direction 2B.

Actions/Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Delete peak-only and after-hours only routes and reinvest service hours back into the system.
- Review underperforming routes in conjunction with the exploration of alternative service delivery options (Strategic Direction 2B).
- Improve the amount of service on key arterial corridors and connections to GO Transit stations. Focus on east-west connectivity with strategic north-south corridors.

4.1.2 SD 1B - Increase Service Levels to Support Higher Ridership Growth

One of the most important factors that influence transit use is frequency. Higher frequency services attract riders because they have shorter wait times and have redundancy for when individual trips are delayed. Higher frequencies also afford riders more flexibility and thereby spread demand over more services, improving the system's ability to accommodate peaks in demand. Furthermore, higher frequency services promote greater connectivity as the system moves to a more grid-based network by reducing transfer times.

One of the challenges we will face with this strategy is that a number of arterial roads have long blocks with limited pedestrian connections into interior neighbourhoods. This makes providing a frequent service on all of the grid-routes a challenge. Since frequency improvements are necessary to facilitate transfers between north-south and east-west routes, Burlington Transit will work with the City's Community Planning Department to improve pedestrian connectivity (including road crossings) between arterial transit routes and local neighbourhoods and identify opportunities for mixed-use intensification. This will help improve the productivity of these investments in service over the medium- to long-term.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to improve frequencies on arterial grid roads, particularly on the east-west corridors of Plains / Fairview and New and the north-south corridor along Brant.
- Work with the City of Burlington Community Planning Department to increase and enhance pedestrian connectivity between arterial transit routes and local neighbourhoods and identify opportunities for mixed-use intensification along arterial routes.

4.1.3 SD 1C - Introduce Transit Priority Features to Improve System Reliability

Successful transit services transport a large number of people using a small amount of road space. As road congestion increases, it is important to use road space as efficiently as possible, allowing the maximum number of people to be moved within the limited roadway space available. Transit is the best way to increase the number of people on a road without increasing congestion. Acknowledging the highly-efficient nature of transit and encouraging its use, transit priority enables transit vehicles to gain priority on congested roadway networks, thereby improving reliability and to a lesser extent, reducing travel times relative to auto travel.

Queue jump lanes and signal priority are effective treatments for important transit arterial routes that see less delays and travel time variability or operate less frequently. Such corridors include Guelph Line north of the QEW or Appleby Line.

Burlington Transit is partnering with the Transportation Department to investigate transit signal priority pilot project on the Plains / Fairview corridor, scheduled to be in place in 2020. It is intended that key data and lessons learned from this pilot project will help us understand the importance of improving the reliability of key transit routes, which may lead to broader implementation across the transit network within the five-year life of the business plan. Future priority measures, such as dedicated transit lanes, will be considered for the period after this business plan, depending upon the success of the pilot project.

In addition to potential transit priority measures, Metrolinx's 2041 Regional Transportation Plan includes transit priority along Dundas Street to central Burlington and Frequent Regional Bus services using HOV lanes on Highway 407. While these measures are focused on regional trips, the Dundas Street priority will also provide direct benefits to Burlington Transit.

Figure 3 below includes priority measures mentioned by Metrolinx, the transit priority pilot project on Plains and Fairview, as well as other corridors that will be explored as future transit priority opportunities over the five-year life of this business plan.

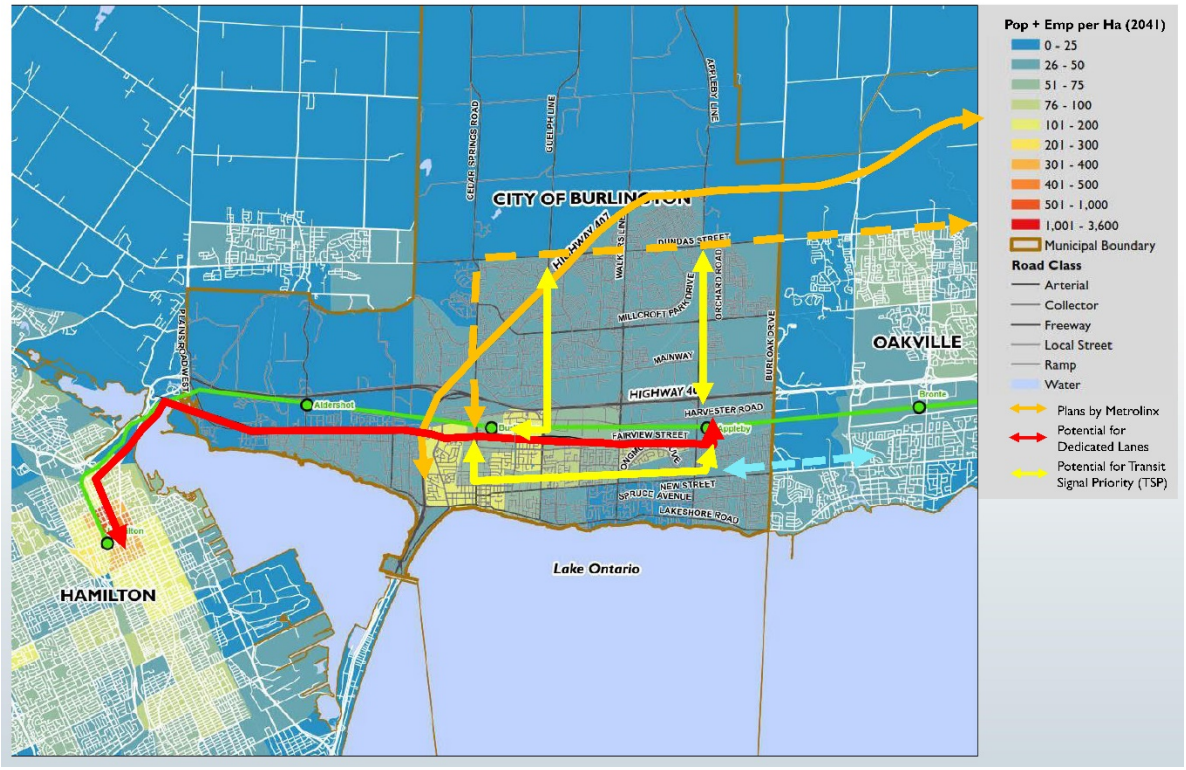


Figure 3: Conceptual Transit Priority Network

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Implement currently-planned pilot transit priority project on Plains / Fairview corridor.
- Initiate discussions with Metrolinx and advocate for the implementation of transit priority on Dundas Street and Brant Street as part of the overall Dundas BRT project. Ensure that their plans align with Burlington Transit's needs and complement other transit priority projects.
- Explore other transit priority corridors once the pilot on the Plains / Fairview corridor is complete.

4.1.4 SD 1D - Improve Connections to the GO Transit Network

Almost all of Burlington Transit's routes currently connect to at least one GO Station, providing a logical transfer point between Burlington Transit routes and links to destinations outside of Burlington. By 2025, Metrolinx plans to improve all-day frequencies on the Lakeshore West Line between Aldershot GO Station and Union Station to every 15 minutes, as part of the "Regional Express Rail" initiative. This will also see travel times between Burlington GO and Union Station reduced by up to 19 minutes, as well as two-minute savings between Burlington GO and Appleby GO. Regional Express Rail will increase the attractiveness of the service for trips to Union Station as well as other mid-line stations along the Lakeshore West line.

Parking at each of the stations is nearing capacity, and any increased demand that will result from the improved GO Train service levels will need to be accommodated by other modes. A focus on transit-oriented, mixed-use development around each GO Station will help increase pedestrian access to and from the three GO Stations and should be encouraged. Burlington Transit will also focus on improving connections to each GO Train to match the proposed 15-minute headway, which is already reflected in the future service plans that form the basis of the business plan assumptions. On-demand transit service delivery options or partnerships with ridesharing services will also help provide the flexibility required to provide GO Train passengers with convenient travel options for the first and last mile of their trip.

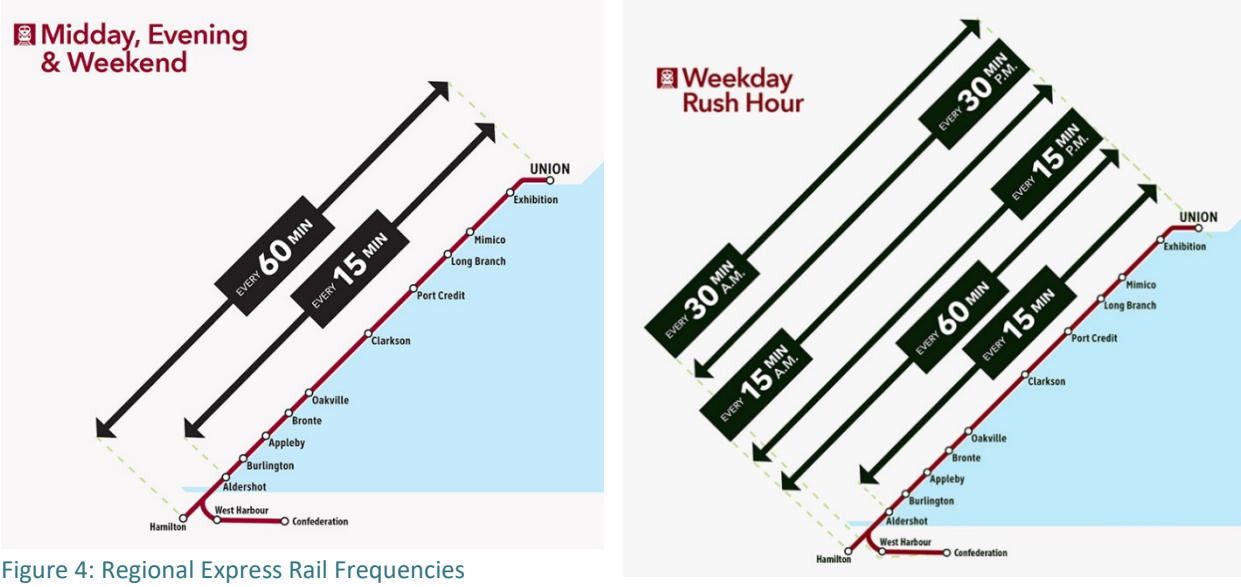


Figure 4: Regional Express Rail Frequencies

The introduction of frequent two-way, all-day 15-minute service on the Lakeshore West line, along with a recent reduction in GO Transit fares for short-distance trips, provides an opportunity to better integrate this express service with Burlington Transit's system to provide a better level of service for Burlington residents and utilize a resource that is already available. For passengers traveling between the two GO stations in Burlington, using a combination of GO Rail and Burlington Transit services may reduce their travel time by up to 13 minutes.

Rather than compete with GO Transit by offering express routes parallel to the Lakeshore West Line, Burlington Transit will focus its efforts on providing integration opportunities with this new east-west express service. This may include adding parallel full-stop local routes and increasing the number of Burlington Transit connections to GO Stations, encouraging passengers to use a combination of GO Transit and Burlington Transit routes to complete a trip within Burlington. This connectivity reduces duplication while offering passengers faster journeys and easy access to a greater number of regional opportunities.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Improve frequency of direct connections to GO Rail stations with the introduction of Regional Express Rail (RER).
- Explore on-demand alternative service delivery strategies to connect to all GO Train trips that do not conveniently connect to a fixed-route Burlington Transit bus.
- Explore integration opportunities to better utilize the Regional Express Rail (RER) network for local express trips within the City. This should include improvements to trip planning tools (i.e. Triplinx, Google Maps), marketing and communications and well as service integration.
- Investigate the implementation of a fully-integrated single fare with GO Transit. This would require local trips to be priced on the basis of distance.

4.1.5 SD 1E - Increase Service Integration with Neighbouring Transit Systems

There is also a significant travel demand between Burlington and the adjacent municipalities of Hamilton and Oakville. When drivers use roads that cross municipal boundaries, they do not experience any service level reduction or increase in cost. To attract more riders to transit, we must function the same way.

Burlington Transit already offers a level of service and fare integration with its neighbouring transit systems, the level of integration could be improved to create a seamless experience for our customers when crossing municipal boundaries.

There is an opportunity to strengthen and add to these links with Hamilton and Oakville through improving service and fare integration. There are a number of examples of this type of integration that exist in the GTHA. Brampton Transit shares the operation of select routes with MiWay and York Region Transit (YRT), allowing passengers from both municipalities, respectively, to have single vehicle journeys without either agency operating competing services. Such a shared service model could provide Burlington with cost savings for the provision of services at its borders and improve seamless passenger connections.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Meet with Hamilton Street Railway (HSR) and Oakville Transit to identify opportunities to further integrate services through sharing and coordinated timetabling and routing.
- Investigate the implementation of a fully-integrated single fare with neighbouring systems and GO Transit. This would require local trips to be priced on the basis of distance.

4.2 Strategic Direction 2 - Mobility Management

Mobility Management acknowledges that people can travel in many different ways, using many different modes of transport ("mobility"). All of these potential options are brought together, managed and offered through a single service, benefitting the community through simplicity, choice and ease of use.

Investing in Mobility Management means thinking beyond the primary role of providing public transit service and becoming the sustainable mobility integrator in the community. It means better integrating conventional and specialized transit services, considering how to use or partner with other sustainability mobility providers for new or improved service, and understanding the needs of all customers in order to provide better service.

There are a number of strategic directions that Burlington Transit will implement over the next five years that are in line with the theme of mobility management. These include the following:

4.2.1 SD 2A – Research and Implement On-demand Alternative Service Delivery Models

Customers are demanding greater customization of their mobility options; seeking more adaptable and flexible services that adjust to when they want to travel in real-time, without relying on a published schedule. Similarly, transit systems continue to seek solutions to reduce costs and improve productivity of services. Fixed-route transit solutions do not always meet these two goals, particularly during evening and weekend periods when ridership demand is lower, and low demand areas characterized by low density neighbourhoods and employment areas designed around the private automobile. This combination of factors makes it difficult to provide fixed-route service cost-effectively and in a manner that meets rising customer expectations.

On-demand transit (or microtransit) is a traditional form of mobility that is experiencing a resurgence with the help of technology. On-demand transit has four components that differentiate it from conventional fixed-route transit:

- Flexible routing and/or scheduling designed based on customer demand;
- Newly-emerged "mobility brokers" who use mobile apps to connect supply and demand;
- Use of smaller, more flexible vehicles; and
- Connecting multiple transportation services to complete a trip (using a mobile app).

A key area we will explore over the next five years is the implementation of an on-demand pilot in low demand areas and periods, with the potential to expand to other areas of the City. To better understand how on-demand transit works, the following trip process is illustrated below:

- Customer requests a trip through a mobile app that links to Burlington Transit's real-time automatic vehicle location system. Available pick-up time that are close to when the customer wants to travel is provided and the customer chooses the most suitable option and the trip is

scheduled. If a customer does not have a mobile phone, a phone number would be provided to allow customers to book the trip directly with the Burlington Transit.

- The mobile app will optimize the vehicle by calculating the most direct route, balanced with the need to fill-up vehicle capacity (share rides).
- Once the trip is booked, the mobile app would allow the customers to track the location of their vehicle in real-time.
- A marked vehicle would arrive at a marked or virtual stop. The vehicle would typically be a minivan or accessible specialized transit vehicle.
- Customers with a Presto card would pay for their trip when they boarded the vehicle by tapping onto a Presto card reader. In the future, mobile fare payment options integrated with Presto should be explored.
- While fares would be integrated with Burlington Transit fares, there is the potential to introduce future dynamic pricing models if customers request a higher level of service.
- The trip does not follow a predefined fixed-route. The operator will take customers in the vehicle to their destination as directly as possible, picking-up and dropping off other customers that are in close proximity.
- The customer would be dropped off to the closest transit hub, where more than one Burlington Transit and/or GO Transit service connect, to allow them to complete their trip.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Further explore the use of On-demand transit services to complement fixed-route services. This should include a review of both dedicated and non-dedicated service models.
- Develop an On-demand transit service model and business case for low demand areas and operating periods, allowing customers to use a mobile app to book a shared-ride demand-responsive service to connect to the fixed-route service. This should coincide with the modifications to the existing route network to more of a grid-like structure.

4.2.2 SD 2B - Explore Partnerships

Travel is becoming increasingly multi-modal. A Burlington resident may cycle to a local event, drive to a get groceries and take a combination of Burlington Transit and GO Transit to work. Younger generations are not acquiring personal vehicles and driver's licences to the extent that previous generations did. While auto travel will continue to dominate in Burlington, there are opportunities for the city to partner with other mobility providers to ensure residents are fully aware of the range of sustainable travel options that are available to them for various trip needs. Ride sharing, or carpooling is now easier with technology matching those looking for rides with those having seats to fill. Car shares and bike shares are now common in urban settings. Taxis and the new Transportation Network Companies (TNCs) are adapting and offering residents an alternative to owning a second car for many trips. There are also

opportunities to better integrate transportation services with school boards, including addressing the needs for students that participate in after-school activities.

To address this expanding world of mobility, Burlington Transit will continue to evolve and see itself as not only an operator of transit services, but as a partner and collaborator of sustainable mobility services. This means making it easier for customers to take all sustainable mobility options available to them or integrating services to allow customers to easily transfer between multiple modes.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue and proactively explore partnerships and approaches with other sustainability mobility providers.
- Promote sustainable mobility services through awareness, marketing and education campaigns to inform residents of alternatives to driving alone in private vehicles.

4.2.3 SD 2C - Integration of Specialized Transit and On-demand Transit Service

A key strategic direction is to better integrate specialized transit trips for persons with disabilities with On-demand transit trips. The goal is to provide more flexibility in utilizing the right vehicle for the right type of trip, irrespective of whether a customer is registered for specialized transit service. This strategy helps support the integration of customers on vehicles that were traditionally reserved for specialized transit customers and will allow for more efficient scheduling and increase the available capacity to all Burlington Transit customers.

Under an integrated service model, a vehicle used to provide specialized transit service can also be used to provide on-demand transit service, and vice versa. This means that the services would be "comingled", and specialized transit and On-demand transit service customers may share vehicles if it provides greater efficiency in the delivery of their trips. The decision to integrate trips will be based on the ability to utilize existing in-vehicle capacity and provide a better level of service to customers.

It should be noted that specialized transit will continue to operate as a core service for registered customers and any integration with On-demand transit service should not reduce the level of service for registered specialized transit customers. This approach should be evaluated based on the availability of specialized transit vehicles and ensure that vehicles are maintained and managed according to their schedule. Further review of maintenance costs should be considered.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Explore the concept of integrating specialized transit services with On-demand transit services. A prerequisite of this approach is having a demand-response software in place to support the on-demand service.

4.3 Strategic Direction 3 - Customer Experience

Residents choose to try transit for many reasons, but their experience, when taking transit, informs whether they will continue using transit regularly. While routing and frequency are key in determining whether transit is a viable option, the experience is key in making transit an option that people actively want to use.

The implementation of more in-depth real-time operational information and proactive communication can give passengers certainty and a sense of reliability. Improved accessibility and increasing the provision of shelters help to remove barriers to transit use, making it an option for more members of the community. Finally, enhanced digital connectivity builds on one of transit's competitive advantages – the ability to dedicate attention to digital devices to get work done and stay connected while travelling.

Customer experience enhancements will encourage new customers to transit and, importantly, keep existing customers on the system.

There are a number of strategic directions that Burlington Transit will implement over the next five years that are aimed to improve the customer experience. These include the following:

4.3.1 SD 3A - Improve Communications

Increasingly, customers source transit information from generic apps that require Burlington Transit to provide operational information openly. Strategies 1D and 1E particularly underscore the importance of system-agnostic third-party apps, recognizing that many journeys cross municipal boundaries and passengers will use multiple transit systems and modes.

In addition to pre-trip information, onboard information also contributes to a positive customer experience. Feedback from the community shows that Burlington Transit's operators are friendly and helpful, however they need to focus on driving and can't provide as much information as all passengers may require. As such, systems to assist operators to provide information will be considered.

Beyond real-time trip information, communications regarding planned and unplanned disruptions is the next most important information that passengers need to improve their comfort in using the service. To ensure that customers are aware of the actual operating environment on the routes and services they

need to take, a service standard will be set to publish unplanned disruptions on the Burlington Transit website and provide the information to the open data (Google Transit) application programming interface within 15 minutes of them occurring. This will require additional operations staff to address disruptions and better communication with Customer Service.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Establish a new service standard to ensure that all disruptions and unplanned events are published on Burlington Transit's website, to the open data (Google Transit) disruptions application programming interface and social feeds within 15 minutes of them occurring.
- Hire operations administrative dispatch clerks to support on-road operations supervisors and enhance communications with Customer Service.
- Investigate partnerships with third-party trip planning apps to provide riding assistance to new customers.

4.3.2 SD 3B - Improve Comfort and Accessibility at the Stop

Improved accessibility on Burlington Transit benefits both persons with disabilities and all other passengers that use the system. To continue to progress towards a more accessible system, Burlington Transit released its 2019/2020 Accessibility Plan, which forms part of the City of Burlington's Multi-Year Accessibility Plan 2019-2024. The Accessibility Plan outlines actions to remove barriers and improve accessibility. Many items in this business plan echo initiatives in the accessibility plan, including improved frequency, improved communications and improved links with neighbouring municipalities. The plan also includes a bus stop upgrade program and the addition of real-time information screens at the Burlington GO Station and the Downtown Terminal. In addition, Burlington Transit has recently formalized new bus stop design standards, which define dimensions, access, orientation and other requirements for accessible transit stops and shelters.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to implement key actions in the 2019/2020 Accessibility Plan based on the Review and update methodology which includes:
    - Work plan identification (June)
    - Budget process (July)
    - Accessibility Plan Update (August)
    - Review and Consultation (September)
    - Updated Accessibility Plan (October)
- Expand the bus stop upgrade program.

4.3.3 SD 3C - Shelters

A customer's perception of the transit experience starts before they board a vehicle. One of the first interactions with the system on the day of travel is waiting for the service at a stop. Shelters provide customers with a place to take refuge during inclement weather (rain, snow and strong winds) or shade during hot summer days. They also provide a source of information about the service and a sense of permanency of a transit system, particularly on routes that provide direct, frequent and rapid service.

As Burlington Transit continues to expand its service and build on the grid-network, the expansion of shelters is a key part of improving the customer experience prior to boarding the bus.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to conduct bus shelter condition assessments for all existing stops with shelters.
- Create a shelter policy, dictating how stops qualify for shelters and how to prioritize the roll-out of new shelters.
- Work with the Roads, Parks and Forestry department to increase natural shelters at stops (strategic location of tree planting near bus stops).

4.3.4 SD 3D - Digital Connectivity

One of the benefits to taking transit is that riders are free to engage in activities that are not possible when driving. Staying connected is increasingly important and it is common to see transit passengers using smartphones and tablets during their journeys. To improve the experience of customers using electronic devices during their travels, Burlington Transit will explore providing charging facilities onboard buses and Wi-Fi at major stations and transfer points.

The implementation of USB power outlets on buses and Wi-Fi at facilities will initially be on a pilot basis and focused on routes and facilities with higher ridership. The rollout of onboard charging will be tied to new bus deliveries and their allocation to certain routes will be subject to operational requirements.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Include USB charging points on all new bus deliveries. Charging ports should be located strategically throughout buses, which could be assigned to a single longer-distance route or used throughout the network.
- Implement a Wi-Fi pilot at major stations and transfer points (excluding GO Transit stations).

4.4 Strategic Direction 4 - Travel Demand Management

Travel demand management are the tools that transit agencies can employ to encourage and influence demand, through affordability, incentivization and land use planning. Travel demand management can be used to shift demand or encourage growth during non-peak times, such as the midday, evenings and weekends. This frees up peak capacity and increases resource utilization during those less busy periods. In this way, growth can be accommodated at a lower cost and overall efficiency improved.

There are a number of strategic directions that Burlington Transit can implement over the next five years that may influence travel demand. These include the following:

4.4.1 SD 4A - Free Midday Travel for Seniors

As part of the 2019 Budget, a pilot program offering seniors free travel on transit between 9:00am and 2:30pm on weekdays was approved. This became effective in June 2019 and will run until December 31, 2020. The fare policy will have both positive benefits to the senior community and cost implications that need to be monitored.

Currently, seniors make up 9 percent of all-day ridership on the system. The new free fare policy is anticipated to grow senior's ridership, which will provide enhanced mobility for seniors with fixed-incomes to live and participate in the community.

However, the pilot free fare program for seniors is anticipated to reduce paid ridership on Burlington's conventional transit service by approximately 51,000 rides. This equates to approximately $118,810 in revenue if the service was continued for a full year based on 2019 ridership. This cost is included in the budget of this business plan.

It should be noted that free transit also applies to seniors who use specialized transit. The Accessibility for Ontarians with Disabilities Act (AODA) requires fare parity between conventional and specialized services, which will see an increase in demand on the specialized transit system. Unlike conventional transit, specialized transit peaks during the midday period and has less capacity to accommodate an increase in demand (due to the small vehicle size and on-demand door-to-door service delivery model). Therefore, the introduction of this policy is expected to see an increase in specialized transit service hours and vehicle requirements. The extent of this increase is currently unknown but will be monitored over the course of the pilot, with a plan in place to increase operations during the midday period to maintain an acceptable trip accommodation rate.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Monitor the impacts of the free midday travel for senior's pilot project on ridership, technology, customer service, revenue and operating costs for the course of the pilot before implementing further changes or mitigation measures.
- Strategies to increase specialized transit service levels during the pilot project to maintain an acceptable trip accommodation rate.

4.4.2 SD 4B - Affordability

In conjunction with the City's decision on senior's fares, Council also agreed to change the Subsidized Passes for Low-Income Transit (SPLIT) pass program from a 50 percent fare reduction to a free monthly pass, effective May 1, 2019.

The existing SPLIT pass has been in place for almost nine years and has provided a 50 percent fare subsidy to residents of Burlington that are low income. The program is administered and initially funded by Halton Region Social Services. With the change in the program to a free pass, the City of Burlington has begun to cover the remaining 50 percent difference in the pass price. This equates to $116,700 in annual revenue in 2019, which is included in the budget of this business plan.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Monitor the usage of the new SPLIT pass and report the program results to Council on a yearly basis.

4.4.3 SD 4C - Free Transit for Children

As of March 9, 2019, kids 12 and under were permitted to ride for free on GO Transit. This aligns GO Transit with the Toronto Transit Commission (TTC) 'kids ride for free' policy and allows for improved system integration and a more seamless travel experience for families.

Currently in Burlington, children under 5 ride for free whereas children between 6 and 12 pay $3.50 cash or $1.90 with Presto.

Having a similar fare structure is important to improve the eligibility of the system of passengers travelling with children using both GO Transit and Burlington Transit, as the same fare rules would apply between the two systems. This will become increasingly important with the introduction of Regional Express Rail (RER), when the GO Rail network is further integrated with Burlington Transit routes and services.

In the short-term passengers travelling with children connecting between Burlington Transit and GO Transit still receive a reduced fare through the co-fare agreement with Metrolinx (70 cents), allowing Burlington Transit to maintain an important revenue source. The challenge will be to integrate the service with Presto and to identify which passengers boarding a Burlington Transit bus at a GO Rail station are eligible for the co-fare payment between Burlington Transit and GO Transit.

Currently, children 6 to 12 only represents 0.05 percent of total ridership on Burlington Transit, estimated at $42,250 in 2020. This suggests that moving to a similar fare structure where children under 12 ride for free would therefore not have significant cost impacts (based on lost revenue) and may even increase ridership as more families may choose to take transit.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to maintain same child fare policy in the short-term to maintain revenue stream from the co-fare agreement.
- Monitor ridership and revenue changes that have occurred on other GTHA systems that have implemented a similar child fare policy (e.g. Durham Region Transit).
- Implement the child fare policy in the medium-term, with the introduction of Regional Express Rail (RER) or prior, depending on the results of the review of the impact from other GTHA systems noted above.

4.4.4 SD 4D - Student Fare Policy

Secondary school students offer a significant opportunity to encourage transit familiarity, increase ridership and establish travel patterns that may continue into post-secondary student and adult life. To maximize this opportunity, Burlington Transit is developing a secondary student strategy. This strategy will include transit familiarization outreach for grade 7, 8 and/or 9 students.

Council is currently reviewing complimentary student travel for high school students. This will include buy-in from neighbouring municipalities due to the fact that school boards service a much larger area than the City of Burlington.

Metrolinx is currently managing a Fare Integration Forum through which they have requested that GTHA municipalities put a 6 month pause on new fare products or concessions. They have also asked that future concessions or fare products be considered together. As such, Burlington Transit should wait for the outcome of this forum before introducing any new concessions for students.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Implement an outreach program to educate students in grades 7 to 9 on how to use public transit.
- Monitor the results of the Fare Integration Forum and bring recommendations back to Council that are consistent with the municipalities in the GTHA.

4.4.5 SD 4E - Employer Partnerships

Targeting employees that regularly commute represents a good opportunity to increase ridership on Burlington Transit. Employers that have standard office hours are typically located along key arterial corridors that have direct service, with start and end times that typically coincide with peak transit frequencies. Since service levels are high, the strategy for office employees is typically to target communications and marketing of the service and work with employers to offer an emergency ride home program, where employers provide their employees who take transit with a taxi/ridesharing voucher two to three times per year in the event that the employee needs to travel home in the event of an emergency outside of their regular working hours when transit many not work for them.

Large industrial/warehousing employers, retail service employers and other employers located in areas not well serviced by Burlington Transit provide another employer partnership opportunity. These types of opportunities typically involve some degree of employer funding to provide more tailored service to meet employee requirements. This could include free or discounted transit passes, emergency ride home programs, and/or shuttle or on-demand services from transit hubs to work locations.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Explore opportunities for partnerships with employers and evaluate alternative service delivery models to provide service to employees. Target one employment area first for a year to assess level of effort relative to uptake and ridership growth.
- Look at whether regular service can be supplemented by on-demand alternatives during off-peak travel times and/or emergency ride home programs.
- In the longer term, explore an Employee Pass Program that offers discounts on transit passes based on enrollment in the program.

4.4.6 SD 4F - Enhanced Coordination with Other City Departments

Transit's biggest asset is the land use and community design it operates in. Transit services that operate along mixed-use high-density corridors with good connectivity to the places where people live, work and play offer the highest potential to grow ridership. In this way, transit and land use development are inexorably linked and therefore land use planning should always give strong consideration to transit needs, and vice versa. Ensuring the alignment of land use and transit will help create sustainable, mixed-use communities and also drive ridership by placing transit where residents and employees are located.

Burlington Transit already collaborates and participates with the Community Planning Department. Burlington Transit staff members are engaged and are circulated development applications and also long-range plans, including Official Plan (2018) amendments and secondary plans. This relationship will be maintained, with both departments working in partnership to achieve the mode share targets.

A collaborative approach is recommended to develop a revised service standard around Proximity to Service. This puts an increased onus on the Community Planning Department to target growth in population and employment around existing transit routes, particularly high-frequency arterial-corridors. To achieve this, a target will be established that directs the majority of population and employment growth within 400m walk to transit stops and within a 400 to 800m walking distance of higher-frequency arterial route and/or express service (routes that operate at least every 10 minutes during most of the day). This places the responsibility for achieving this target on the Community Planning Department, as the grid-network would have already been established. Any growth in green field development where a route extension is required should also ensure that this target is met for the new growth area.

While a similar approach exists with the Transportation Services and Capital Works Department, it is recommended to formalize a policy to ensure that construction and capital improvement projects (e.g. resurfacing, widenings), include input and comments from Transit to ensure that improvements are incorporated. This includes stop relocations, new shelters and shelter upgrades, bus stop accessibility improvements and transit priority measures.

Burlington Transit will also be a key stakeholder in the upcoming Integrated Mobility Master Plan, which will set a policy direction for all transportation infrastructure and services provided in Burlington over a 30-year time horizon. An investment in transit will play a key role in meeting any transit mode share targets identified in the long-range planning study. This should include initial recommendations to encourage the City to adopt a Multi-modal Level of Service (MMLOS) Policy for New Corridors.

While improved planning integration between land use, roadway planning and transit is unlikely to result in measurable ridership growth in the short-term, it will pay dividends as development patterns evolve over time.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to play an active role in strategic land-use planning decisions, highlighting the need for high levels of pedestrian amenity and access to the arterial grid network.
- Continue to work with City of Burlington staff on the alignment of development, growth and employment areas with transit investment and service by reviewing development applications and secondary plans.
- Develop and formalize a Service Development Plan for Burlington Transit that outlines where service investment is expected in the future. This should be a living document that can help inform land use planning decisions to support transit.
- Develop a proximity service standard with the Community Planning Department. This standard should define a five-year target from proximity to transit once the grid-network has been established and place to onus on the Community Planning Department to achieve the target based on growth.
- Continue to work with Transportation Services Department and Capital Works to coordinate transit interests in roadway capital improvement programs (e.g. new stops, shelters, accessibility improvements, transit priority features).
- Work with Transportation Services Department as a key stakeholder in the upcoming Integrated Mobility Master Plan, and QEW Prosperity Corridor study to identify strategies to help meet the transit mode share target.

5.0 Organizational Structure and Staffing



Our vision and ridership growth targets are ambitious and will not only require a significant investment in service, but a change in how we deliver the service. In order to achieve our goals, we must also look internally at our own organizational structure and our ability to deliver change. Are we structured appropriately? Do we have enough staff to take-on a growing customer base? Are our staff best positioned to fulfil new mandates?

A review of our organizational structure examined these questions. Based on this review, the following initiatives will be undertaken to improve organizational effectiveness and align our structure and culture with the vision and growth strategies identified in the business plan:

1. **Bus Operators:** In order to complement new vehicle requirements, as well as additional service hours to increase frequency, it is recommended that bus operators increase by 8 in 2020, by 16 in 2021, and by 12 in the following years. This will accommodate the increase in fleet size, but also provide the ability to increase frequency during the peak periods by assigning more bus operators to the peak buses. Additionally, the increase in bus operators would allow for an increase in frequency during off-peak periods, like weekends and holidays.
2. **Supervision of Bus Operators:** It is recommended to add a dispatcher and supervisor positions to the staff complement. This increase will provide flexibility for more supervisory coverage. Supervisors will be able to provide additional on street supervision and interact more with customers; and also adjust service and manage emergencies on the road. The addition of a dispatcher position provides the flexibility for the Supervisors to be out on the road whereas the dispatcher can maintain service delivery, driver work assignments, monitor internal operations and communications. **Table 2** identifies the anticipated growth in supervisors based on the planned increase in operators.

3. **Service Development Focus:** To better meet the business plan's strategic directions, the current Business Services and Planning group will continue to focus on service development, strategic business planning and technology initiatives. However, a realignment of existing staff into subject matter experts and accountability leads are recommended as follows:

    - **Service Development and Planning** where the team will be responsible for transit service planning, scheduling, statistics and data analysis, and strategic service development.
    - **Transit Communications and Customer Care** will be responsible for marketing, customer service, outreach and engagement, relationship management and Burlington Transit branding. This role would also be the media liaison and provide strategic communications to Council.
    - **Financial Operations** focuses on transit specific budgeting, reporting, accounting, cash management and revenue collection, asset management and fleet financial management. This team works closely with the City's Finance department to ensure budgets are aligned with the City's guidelines.
    - **Accessibility and Business Service Delivery** will focus on various policies and procedures including fare strategies, accessibility policies and planning, on demand service policies and procedures, bus stop planning and construction and contract management. This area will also define service standards and monitor performance of service and contracts.

3. **Marketing:** An increased focus on marketing and communication will be key in reaching our ridership growth targets. To provide additional capacity for the marketing function, a Marketing Specialist has been recommended which would be added as part of the Transit Communications and Customer Care team. This position will assist in marketing and communication outreach programs and help build the Burlington Transit brand.

4. **Customer Service:** The City of Burlington is centralizing customer service via a 311-call centre called Service Burlington which includes the implementation of a corporate CRM. At this time, Transit's implementation is pushed to 2020. This has a potential to alter the way customer service requests are filtered to Transit and will determine the process of how customer service is managed. It is the intent for Transit to offer a unique number, different from the City's 311 number, for residents and riders to obtain detailed transit information. The outcome of the Service Burlington/Service Brilliance initiative may have an impact on staffing requirements. At this time, it is recommended to review the Customer Service positions as part of the 2021 budget process.

5. **Facility Maintenance:** Burlington Transit does not have designated staff to maintain its major physical facility (garage, downtown transit terminal, and administration building). While responsibility for this is formally assigned to another municipal department, the resources devoted to these major facilities do not meet current needs. Given the asset value of these facilities, it is recommended that a Maintenance Facilities Coordinator position within the Transit Maintenance Division will be created, possibly with a dotted line reporting to the corporate facilities department. This position will guide physical facility maintenance/ development and provide quality control of building maintenance services provided by other municipal departments.
6. **Electronics Technician:** While the responsibility for Presto fare equipment on-board buses is planned to be assumed by Metrolinx, the remaining on-board electronic equipment is still significant. Such equipment includes current and future automated vehicle location, passenger counting, signal priority, passenger information, engine tracking, fuel management and communications systems. Consequently, a fully-qualified electronics technician will be assigned to the Systems Technician position in the Transit Maintenance division.
7. **Bus Servicing:** Burlington Transit continues to utilize an external contractor for Bus Servicing which includes bus cleaning, fueling and farebox handling. Given the impact of this on daily operations and on customer satisfaction amongst passengers, the performance of the contractor will be reviewed for both performance and cost measures. These functions will remain a contracted service over the life of the business plan

A summary of staffing increases required to meeting the vision, growth strategies and ridership targets is summarized in the table below, including the phasing of these positions over the five-year life of this business plan.

Table 2: Recommended Staffing Levels to Support Plan

	2019	2020	2021	2022	2023	2024
Total Buses	63	67	71	75	79	83
Revenue Service Hours	180,000	214,240	230,880	247,520	264,160	280,800
Bus Operators	121	129	145	157	169	181
Bus Operators / Bus	1.92	1.92	2.04	2.09	2.13	2.18
Revenue Service Hours / Operator	1,487.60	1,660.78	1,592.28	1,576.56	1,563.08	1,551.38
Supervisors	6	6	9	10	11	12
Bus Operators / Supervisor	20	22	16	16	15	15
Mechanics	9	9	10	10	11	11
Buses / Mechanic	7	7.4	7.1	7.5	7.2	7.5
Electronics Technician	0	1	1	1	1	1
Customer Service Staff	2 FT, 3 PT	2 FT, 3 PT	3 FT, 2 PT	4 FT, 1 PT	5 FT	5 FT
Revenue Service Hours / Customer Service Staff (FTE)	49,666	52,790	60,060	60,754	59,386	62,500
Maintenance Facilities Coordinator	0	0	1	1	1	1
Marketing Specialist	0	0	1	1	1	1

**Note: The above table does not reflect specialized transit staff or vehicles.*

The most important outcome of **Table 2** is to demonstrate that as the amount of transit service grows, the number of Bus Operators, Mechanics, Supervisory Staff and others must also grow. This is necessary to ensure that the transit service remains reliable and focused on the needs of the customer. The table shows how the number of Bus Operators / Bus, Bus Operators / Supervisor, Buses / Mechanic, and Revenue Service Hours / Customer Service Staff will change in the future. These changes demonstrate that Burlington Transit will become more productive in some areas and maintain close to current productivity levels in others.

6.0 Assets and Infrastructure

The five-year business plan identifies an increase in the number of buses used to operate the service. This will also place pressure on our existing facility used to house and maintain fleet, as well as on-street infrastructure including bus stops, terminals and shelters. To ensure we are well positioned for growth and our assets are maintained in a state of good repair, the business plan includes a strategic review of our assets and infrastructure. The results of this review are identified below.



6.1 Fleet Replacement and Growth

Burlington Transit's fleet is able to meet current needs and is planned for phased replacement as buses age. However, as service grows, additional vehicles will be required and, as technology develops, alternative vehicles will become increasingly relevant. As part of the City's climate change emergency declaration, City staff and Council are investigating all options to reduce the City's greenhouse gases, including the use of electric buses on our roads. The use of electric buses needs to be carefully, but quickly investigated as major infrastructure purchases and changes need to be made to the City's transit system. Members of Council will soon be receiving a briefing from a leading expert on electric buses to determine the best way forward. This will require changes to training, both on the vehicle and various legislative requirements to work on 600 volts. This will also require new equipment and tooling purchases, and changes to the existing maintenance facility.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Develop a clear fleet plan detailing all the fleet additions and changes.
- Develop 5, 10 and 20-year budgets that coordinate all existing expansion and replacement vehicles and consider new vehicle technologies.

6.2 Fleet Maintenance Management

To increase the reliability, safety and cleanliness of our fleet, the transit industry standard is to measure the performance of fleet maintenance through a series of metrics. These metrics would typically be: mean distance between failure, inspection adherence, vehicle cleanliness, quality assurance checks, etc.

An enterprise-wide City asset management system is currently being explored and defined. This system will form the backbone of Burlington Transit's future performance management and inventory program. As this system is being developed, we will assess the functionality to ensure that transit-specific Key Performance Indicators (KPIs), systems and levels of utilization can be addressed in this system.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Replace the existing manual parts management system with a more enhanced system that can meet most of Transit's specific needs.
- Work to ensure that the City's new asset management system includes automated minimum/maximum level, warranty management, latent defects, invoicing, and cost control.
- Establish KPIs and a coinciding maintenance program to meet them. The system will assist in developing and measuring preventative maintenance programs, managing work and warranties.

6.3 Fleet Maintenance Plan

Increased demands on a larger fleet will require more proactive planning and scheduling of maintenance activities. To achieve this, Burlington Transit will evolve our practices to meet industry standards by changing to distance-based maintenance planning, analysis and Quality Assurance (Q/A). By being proactive and working smarter, we will be able to review bus life optimization, with a view to extending vehicle and component life. If electric buses are considered, planning for an 18-year lifecycle with a refurbishment at 12-years should be implemented.

Actions/ Priorities:
To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Implement Quality Assurance (Q/A) programs and lifecycle replacement or overhaul strategies.
- Review new technologies and develop a strategy for future implementation and integration.
- Determine if conventional bus replacement cycles can be extended to 14 or 15 years from the current 12-year cycle, by reviewing bus life optimization, taking into account areas such as proactive maintenance programs and life cycle replacement.

6.4 Operations, Maintenance & Storage Facility (OMSF)

Burlington Transit's current building was renovated approximately nine years ago and is nearing its functional capacity limits. In its current condition and configuration, it does not meet the future growth needs identified in this business plan. As such, additional space is required to increase storage and address shortfalls of the current infrastructure. This space could be in the form of an enlargement of the current site, or a second site elsewhere in Burlington.

To effectively manage the current and new/extended facility Burlington Transit will develop a life cycle replacement strategy for the current site. This will help to ensure that future growth can be accommodated. The maintenance of facilities may potentially be further streamlined by contracting-out their maintenance and lifecycle management. In order to understand this potential, Burlington Transit will investigate the benefits of transitioning to a contracted facility maintenance model.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Expand the current or build a second maintenance and/or storage site.
- Develop a budget and life cycle replacement strategy for the current OMSF site.
- Investigate a contracted-out facility maintenance model including levels of service, lifecycle budgeting and replacement.

7.0 Phasing Plan and Forecast of Budget Impact

7.1 Phasing Plan

A phasing plan was developed to distribute the service improvements and other strategic directions noted in this business plan over a five-year period, adding between 15,000 to 35,000 revenue vehicle hours annually. The phasing plan was based on a number of principles:

- Focus first on establishing a sound foundation for growth, then adding key strategic directions that build on this foundation;
- Prioritize strategic directions that have the highest potential for ridership growth;
- Ensure the organizational structure is positioned to meet the growing demands on staff time that come with change; and
- Distribute service improvements and strategic direction so that service hours, operating costs and peak vehicle requirements are not onerous during a single year.

The phasing plan presents a guide for implementation over the next five years. This is presented in **Table 3**, with key highlights of each year noted below. Annual plans will be developed for each year of the business plan, identifying the key priorities that should take place and providing further detail on the level of investment, expected ridership and impacts on staffing, assets and structure.

7.1.1 2020 Annual Plan Highlights

The focus of the 2020 annual plan will be to continue the process of streamlining the route network, with a focus on providing more direct and frequent routes on major arterial roads. The increased service levels will result in additional operators being hired and the bus fleet growing by four vehicles. We will evaluate the impact that the September 2019 route modifications have had on ridership and make further modifications based on customer response and ridership growth. With significant investment, it will be important to ensure that we are allocating resources in the right areas.

By the end of 2020, we will also have a better understanding of the full impacts of the seniors and SPLIT free fare initiatives, which will provide us some valuable insights on how fare strategies can impact ridership and the impact of lost revenue (from free or discounted fares) will have on our ability to expand service. This will provide more insight into other fare strategies, including the student pass program and free transit for children between 5 and 12.

We will also initiate planning and procurement of an on-demand pilot to replace a low-ridership fixed route or in an area where residents are not in close proximity to the service.

The Integrated Mobility Plan being led by the City is also planned to be underway, and we will be active participants, bringing a full multi-modal perspective to the broader strategy.

Table 3: Phasing Plan

Strategies	2020	2021	2022	2023	2024
1 - Service Structure and Delivery					
1A - Move to a More Direct Grid-Based System					
1B - Increase Service Levels to Support Higher Ridership Growth					
1C - Introduce Transit Priority Features to Improve System Reliability					
1D - Improve Connections to the GO Transit Network					
1E - Increase Service Integration with Neighbouring Transit Systems					
2 - Mobility Management					
2A - Implement On-demand Alternative Service Delivery Models					
2B - Explore Partnerships with Other Mobility Providers					
2C - Integration of Specialized Transit and On-demand Transit Service					
3 – Customer Experience					
3A - Improve Communications					
3B - Improve Comfort and Accessibility at the Stop					
3C - Shelters					
3D - Digital Connectivity					
4 – Travel Demand Management					
4A - Free Midday Travel for Seniors					
4B - Affordability					
4C - Free Transit for Children					
4D - Discount Student Pass					
4E - Employer Partnerships					
4F - Improve Coordination with Other City Departments					

7.1.2 2021 Annual Plan Highlights

2021 will see continued growth in the conventional transit service, requiring additional operators and another four conventional transit buses. As part of this growth, we will begin the process of assessing the optimal design and location for maintenance and storage facility expansion.

The on-demand transit pilot will be in operation, with ongoing evaluation to facilitate service adaptation during the course of the pilot.

Burlington Transit's administration will also be restructured in 2021, allowing us to better respond to ridership growth and emerging trends. This will include taking on additional staff in marketing and operational supervision roles. In concert with these changes, the customer communication service standards will be introduced to ensure the timely communication of service information to our customers. Employer partnerships will also be able to be explored more effectively.

The transit priority pilot commenced in 2020 will be evaluated with the opportunity for the technology to be rolled out to other locations commencing in 2021. The first major station or transfer point with Wi-Fi (location to be determined) and the first buses with USB charging is planned to be introduced in 2021.



7.1.3 2022 Annual Plan Highlights

The focus of 2022 will be the consolidation of ongoing service increases and the prior year's initiatives. This will include additional operators, four more conventional buses and additional operational staff.

Subject to the success of the transit priority and on-demand service pilots, these programs will be expanded to other parts of the City. With a new staff structure in place, we will also have more capacity to explore partnerships with adjacent transit providers and other mobility partners (e.g. bike-share companies) to create a more seamless network of mobility options in the City. Further USB-enabled buses will be rolled out as existing vehicles are replaced.

The stop and shelter upgrade program will continue at a more measured pace after its initial "catch-up" years from 2019. Construction of the new storage and maintenance facilities will commence. Other travel demand management strategies such as extending free transit to children and providing further discounts to students will be explored in this year.

7.1.4 2023 Annual Plan Highlights

In 2023 a further four buses and associated operators will be added to our system, with an associated increase in operations supervisors and mechanics. Following an anticipated large roll-out in 2022, transit priority investment will reduce, focussing on adding incremental infrastructure based on effectiveness and need. GO Transit's Regional Express Rail (RER) service frequencies on the Lakeshore West line will likely be close to their 2025 targets and, therefore, any remaining route optimizations to match GO Transit frequency improvements will likely be implemented this year. This will include identifying opportunities to take advantage of the GO Rail services for local trips within Burlington. Further on-demand transit services will be introduced, subject to demand and the effectiveness of already-introduced services.

7.1.5 2024 Annual Plan Highlights

The final year of the plan will see continued service growth and the roll-out of further conventional service hours, on-demand services, transit priority and stop upgrades. Additionally, the new maintenance and storage facilities will be nearing completion, allowing for the continued growth of Burlington Transit's services and fleet.

7.2 Forecast of Budget Impact

The forecast of budget impact outlines the operating costs, revenue and capital costs associated with the five-year business plan. **Table 4** summarizes the planned investment and ridership target to be achieved to meet the transit mode targets identified in the 2011 Halton Transportation Master Plan.

Table 4: Total Buses, Revenue Service Hours and Ridership

	2019	2020	2021	2022	2023	2024
Peak Conventional Buses	45	48	54	57	61	64
Total Conventional Fleet	63	67	71	75	79	83
Revenue Service Hours	180,000	214,240	230,880	247,520	264,160	280,800
Ridership Target	2,000,000	2,730,300	3,460,600	4,190,900	4,921,200	5,651,500

Table 5 below illustrates the operating costs, revenue and net operating costs and **Table 6** illustrates the anticipated capital requirements based on the growth strategies noted in this plan, as well as the revenue service hour, fleet and ridership projections noted in **Table 4.** All operating and capital costs are based on 2020 dollars and all revenue was calculated based on the 2019 average fare.

The majority of cost increases will come from the expansion of service as we restructure routes and increase the frequency of service. The on-demand pilot in 2020 will also require annual licensing fees and operating costs, which will be increased if the pilot is successful. Increases to administrative and supervisory staff as well as maintenance and services costs will be required to ensure the system has enough resources to effectively operate and manage growth and change.

Table 5: Planned Operating Costs and Revenue

	2020	2021	2022	2023	2024
Operating Costs					
Conventional Service Structure and Delivery	$20,254,600	$21,636,900	$23,019,200	$24,901,400	$26,283,700
On-demand Alternative Service Delivery		$295,000	$590,000	$885,000	$1,180,000
On-demand Alternative Service & Integrated Specialized Transit Software		$14,000	$14,000	$14,000	$14,000
Organizational Structure and Staffing		$2,380,000	$3,440,000	$4,560,000	$5,600,000
Maintenance Servicing Contract	$2,058,140	$2,431,400	$2,566,500	$2,746,600	$2,881,700
Total Operating Cost	**$22,312,740**	**$26,757,300**	**$29,629,700**	**$33,107,000**	**$35,959,400**
Revenue					
Passenger Revenue	$5,165,500	$7,801,000	$9,641,000	$11,482,000	$13,322,000
Gas Tax Funding (Operating)	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Gas Tax Funding	$2,385,390	$2,618,273	$ 2,842,865	$3,067,457	$3,292,049
Free Off-peak Travel for Seniors	-$163,000	-$206,000	-$249,000	-$293,000	-$336,000
Affordability	-$160,000	-$202,000	-$245,000	-$288,000	-$330,000
Free Transit for Children		-$54,000	-$65,000	-$77,000	-$88,000
Discount Student Pass		-$275,333	-$826,000	-$1,000,000	-$1,174,000
Advertising Revenue	$476,000	$480,000	$485,000	$490,000	$500,000
Charters, Commissions & Other Revenue	$94,000	$95,000	$97,000	$99,000	$100,000
Total Revenue	**$8,797,890**	**$11,256,940**	**$12,280,865**	**$14,480,457**	**$16,286,049**
Net Operating Costs	**$13,514,850**	**$15,500,360**	**$16,948,835**	**$18,626,543**	**$19,673,351**
Free Transit for Children - Business Case	**-$42,250**				
Expansion Buses Operating Costs - Business Case	**$833,737**				
Increase from Base Budget	**$791,487**				

Table 6: Planned Capital Costs

Strategies	2020	2021	2022	2023	2024
Strategic Direction 1 - Service Structure and Delivery					
Conventional Growth Bus Costs	$2,604,000	$2,604,000	$2,604,000	$2,604,000	$2,604,000
Strategic Direction 2 - Mobility Management					
On-demand Alternative Service Delivery Implementation	$200,000				
Transit Priority Features	$35,000	$550,000	$170,000	$40,000	$40,000
Strategic Direction 3 - Customer Experience					
Shelter and Stop Upgrades	$610,000	$610,000	$300,000	$300,000	$300,000
Digital Connectivity*		$9,000	$9,000	$9,000	$9,000
Maintenance Facility Expansion		$4,150,000	$13,550,000	$13,450,000	
Total Incremental Capital Costs	**$3,449,000**	**$7,923,000**	**$16,633,000**	**$16,403,000**	**$2,953,000**

***This item is not included in the ten-year capital program**

While ridership improvements will see an increase in passenger revenue, some of the travel demand management strategies will result in a loss in passenger revenue to incentivize ridership and help reach our growth targets. The potential impact of these fare strategies is noted above. Provincial gas tax will also increase with a significant growth in ridership, and will assist in offsetting planned costs. Other funding sources will also be explored to help pay for the increased investment in both operating and capital costs.

A new maintenance facility to house a growing fleet will be largest capital costs to support this business plan. The new maintenance facility is anticipated to cost approximately $31.1 million, with the majority of the budget spent during construction between 2022 and 2023. This facility is necessary to house and maintain a growing fleet of vehicles necessary to move more people within the City.

The growth in bus fleet will add approximately $13 million. This only accounts for expansion vehicles. A number of existing vehicles will reach the end of their lifecycle over the five-year life of this business plan and will need to be replaced. Replacement costs have not been included in this budget. Overall capital investments are anticipated to reach $47.3 million over the five-year life of this business plan.

Note: The resources (service hours and vehicles) identified in this business plan are guidelines and are subject to change as part of the annual budget process

7.2.1 Understanding the Need for Investment

Even with an increase in revenue from ridership growth, net operating costs and capital costs will continue to increase each year. When assessing the business case for this investment in sustainable public mobility, it is important to understand two key factors:

While Investment is Immediate, it takes time to change established travel patterns

The cost of investing in service is instantaneous impact on municipal budgets. To attract more residents to use transit and existing customers to use transit more often, improvements in service levels area necessary to make public transit more competitive with the private automobile. A number of the strategies noted in this plan help achieve this by reducing travel time (making routes more direct), reducing waiting time and improving flexibility by increasing service frequency, improving reliability through transit priority measures and increasing the comfort and convenience of the service to reflect the needs of current customers by investing in on-demand mobility and mobile phone connectivity (e.g. cell phone charges on buses and Wi-Fi at stations). While all these improvements will help lead us to our mode share targets, changing travel behaviour takes time, as most of our residents have already formed their travel patterns. Typically, it takes two to three years for the full benefit of a service improvement to be realized. This will cause a lag in revenue that will off-set operating costs.

Ridership and revenue are not the only measures of success

Reaching our transit mode share targets has other economic benefits that are not included in the operating and capital budgets noted in **Table 5** and **Table 6**. Investment in transit and other forms of sustainable mobility help achieve much more important goals, including off-setting the need for roadway widening, expansion and maintenance; reducing GHG emissions from single-occupant vehicle travel, improving public health, reducing unemployment and improving our economic competitiveness, and enhancing our quality of life. Similar to investments in health care and education, investment in sustainable mobility benefits all Burlington residents, even those who do not use the service, as it has a much broader reach.

Appendix 0