



October 31, 2019

Memo

To: St. Catharines Budget Standing Committee

Re: Free Transit for High School Students

Background

The Transit Commission presented their 2020 Operating Budget to the Budget Standing Committee on October 28, 2019. Councillor Porter requested some analysis on the cost and feasibility of providing free transit service to secondary school students in St. Catharines, like a program implemented in Kingston, Ontario.

Report

The Kingston Experience

In 2012, the City of Kingston introduced the pilot transit pass program for grade 9 students after looking at the transportation patterns of high school student ridership. Data showed that grade 9 students used public transit less frequently than those in grades 10 to 12. The primary audience of the project was grade 9 students, who were identified as most in need of the social skills, decision-making authority and confidence to partake in sustainable transportation. The program was extended to all high school students by grade over the next 3 years.

Providing high school students with access to fully subsidized transit passes costs approximately \$250,000 per year. The costs are offset in part by a combined contribution of \$60,000 from the two school boards (LDSB and ALCDSB) and an additional \$100,000–125,000 from the Ontario Gas Tax Fund for each year of the program. The City of Kingston receives provincial gas tax funding based on population and transit ridership. As population and ridership grow relative to other Ontario municipalities, gas tax funding also increases. Ongoing funding from other sources is required to fill the funding gap, which ranges between \$65,000 and \$90,000 annually, currently paid by Kingston Transit.

There is no formal partnership agreement between Kingston Transit and local school boards. An informal partnership dictates the financial contribution from both school boards for every year of the program.



The Transit High School Bus Pass Program results in savings to the school boards by reducing the cost of transporting students to and from school. For instance, it has allowed certain schools to phase out a couple of yellow school buses for the morning and afternoon commutes. The program also enables students to transport themselves to cooperative education sites, removing the additional cost for schools to fund their travel. The field trip pass allows for more school outings and field trips on existing buses and routes at no additional cost per trip.

Kingston Transit was also in the process of implementing their Transit Redevelopment Plan in this time period. The plan included the introduction of 3 new express routes with 15-minute peak period frequency, 15 new routes and the redesign of the existing routes. Overall Kingston Transit added approximately 68,000 service hours over a 3-year period. This resulted in an increased municipal contribution of \$4,600,000 and an expansion of the fleet at a capital cost of approximately \$8,900,000.

With the combined service improvements and the high school pass program Kingston Transit has seen ridership growth of 73%. Kingston Transit has ridership of about 6 million of which high school student rides make up about 10% or 600,000.

Transit Fare Harmonization & Governance

St. Catharines Transit is part of the Intermunicipal Transit Working Group (IMTWG), a sub committee of the Linking Niagara Transit Committee (LNTC). The IMTWG has been working on fare harmonization as part of the operational integration of transit in Niagara. Developing common fares and fare policies will allow for the introduction single fare technology to provide seamless travel throughout the region. Common fares and fare policies are very important to this initiative as the cost of implementing and maintaining new fare collection technology grows quickly when the participants do not have the same fares or rules.

A transit governance study is currently underway with results expected in March or April of 2020. The intent of the study is to determine a preferred model for transit governance in Niagara.

Service Capacity Consideration

The High School Pass program in Kingston was introduced at the same time a large-scale service expansion was implemented, including 15-minute peak period express service. This significant investment allowed for ridership growth while delivering improved service. In St. Catharines many routes are well utilized, and a large-scale ridership increase would require additional buses or higher frequency. The Commission's fleet is currently well utilized, and any service increase would require fleet expansion along with operating



funding. Capital funding approvals and lead time for delivery of buses would likely mean any significant service increase could not be implemented until Fall 2021.

Financial Implications

The budget impact of free fares for secondary student would be approximately \$400,000 based on the 2020 Operating Budget. This is based on lost revenue only, funding for any service enhancements and fleet expansion would be additional costs.

Conclusion

The Kingston Student Pass initiative timed with a substantial service increase has resulted in significant ridership growth and a terrific sustainability message. St. Catharines is in a different situation with regional integration and fare harmonization, it is important to be consistent with new fare policy initiatives and overall integration efforts.

Prepared By:

A handwritten signature in black ink, appearing to read 'G. Morrison', followed by a horizontal line.

Graham Morrison, General Manager, St. Catharines Transit Commission



Redevelopment Plan 2011 - 2015

A comprehensive plan that details the redevelopment of the Kingston Transit system to meet the current and future needs of our riders. The plan includes two initial phases to be completed by January 2015 and outlines future phases for implementation post 2015.

This plan was written by Kingston Transit staff in consultation with our riders, our bus operators, and internal city departments.

August
2011

Executive Summary

The City of Kingston has a vision of becoming Canada's most sustainable city. The way in which people and goods move around our city is an important component of the economic, environmental, social, and cultural pillars that support the sustainability goals. Developing a sustainable transportation model for the city means that our existing infrastructure, such as roads, buses, and parking spaces, must be used more efficiently. This desire to move towards a more sustainable, active transportation model is reflected in the policies of the Official Plan and the Transportation Master Plan, which encourage travel that minimizes the use of personal vehicles.

Kingston Transit is a critical piece of this preferred transportation model and a necessary component of the City's Transportation Demand Management plan. Many of the policies and programs developed under the Transportation Demand Management plan require a viable, frequent transit system that people can switch to when they choose to leave their car at home. Investments in transit help to reduce the reliance on personal vehicles and encourage people to add an active, healthy component, such as walking or cycling, to their trip.

One of the main objectives of the City's Transportation Master Plan has been to increase the percentage of peak commuter trips on transit from 3% to 11%. Since the Transportation Master Plan was adopted in 2004, transit has increased its coverage, fleet, and frequency of service resulting in a current annual system ridership of 3.5M trips, an increase of 772,000 trips. However, the transit system, as it exists today, has become inadequate for our current riders and limits our ability to further the objectives of the City's Transportation Master Plan.

The existing system has reached capacity in major corridors, faces daily reliability issues that result in cascading delays and missed connections across the city, has inadequate bus stop infrastructure, and cannot compete with the flexibility and travel time that the personal automobile provides. In October 2008, Council adopted a recommendation approving the Kingston Transit Review Discussion Paper and directed staff to explore options to address the deficiencies in the system. Council has further established as one of their strategic priorities the need to create a public transit system that people choose to use.

Kingston Transit partnered with the Waterloo Public Transportation Initiative (WPTI) to conduct an analysis of the system. The study concluded that the current system is not structured correctly and is not adequate to attract the new riders necessary to meet the City's transportation objectives. The WPTI analysis recommended the following:

- Introduce express bus routes that link the City's urban areas with fast, reliable, service that operates on a 15-minute frequency;
- A redesign of the existing routes to take advantage of the express route backbone to increase reliability and reduce travel times;
- A significant investment in infrastructure and technology to enhance the rider experience, improve the efficiency of the system, and make transit an attractive transportation option.

Through consultation with WPTI, the public, our bus operators, and other city departments, transit staff has developed a phased Redevelopment Plan to create a service that riders will choose to use and can be completed within City's proposed strategic plan. The phasing of the route redesign implementation will allow Kingston Transit to build capacity, minimize risk, and ensure a smooth implementation. This Redevelopment Plan outlines two phases to be implemented in September 2013 and January 2015 respectively that will include the following improvements:

- Three express bus routes will be introduced that link the City's urban areas with fast, reliable, service that operates on a 15-minute frequency during the weekday peak periods and at a 30-minute frequency at other times. The three express routes will form the "backbone" of the Kingston Transit network;
- The transit fleet will expand from 48 to 63 buses;
- Bus stops serving the express routes will be upgraded with accessible concrete pads, shelters and benches;
- Technology will be introduced to provide real-time bus arrival information for our riders and traffic signal priority along our major corridors.

This Redevelopment Plan also includes future phases that expand the 15-minute operation of the express routes and further realigns the local bus routes to make more efficient use of the express backbone.

To support this Redevelopment Plan, transit staff has developed a detailed financial model to forecast the increased operating and capital expenditures required to implement Phase 1 and 2. Upon completion of these initial redevelopment phases in 2015, the annual operating budget for transit is projected to grow from \$15.4M to \$22.2M. The capital financing requirement for Phase 1 and 2 totals \$24.9M of which \$18.0M is attributed to new requirements outlined in the redevelopment plan and \$6.9M is required for the existing operation.

From 2011 to 2015, the financial model forecasts that annual ridership will grow from 3.5M to 4.1M and the total annual revenue increases from \$5.4M to \$7.4M. As a result of this phased expansion the annual municipal contribution to support transit is projected to grow from \$8.1M in 2011 to \$12.7M in 2015. The financial considerations of the additional future phases have not been modeled in this report.

When fully implemented the system will be faster, more frequent, more reliable, easier to use, and will provide an enhanced transit experience when compared to the existing system. This plan creates a system that people will choose to use, addressing the priority of Council while remaining within the objectives set forth in the strategic sessions. Creating a more viable transit system is a key requirement in achieving the goals of the transportation demand management, active transportation, and sustainability policies of the city. This Redevelopment Plan will allow Kingston Transit to position itself as a true alternative transportation option in the City.

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1 Introduction

In October 2008, Council adopted a recommendation approving the Kingston Transit Review Discussion Paper. The adopted discussion paper identified several transit network priorities and improvements including the following:

- More frequent service built around key destinations such as: downtown, employment nodes, shopping centres, train and bus stations, St. Lawrence College and Queen's University;
- Routes designed to focus on main corridors with feeder routes connecting at various transfer points;
- All main corridors on a minimum 15-minute frequency during peak hours;
- Staggering routes to improve the ability to meet transfer times;
- Implementing express routes in the north, east, and west end;
- A review of the feasibility and cost of implementing consistent routes for weekdays, evenings and weekends.

A Project Steering Committee that consisted of transit management and bus operators was established to review and finalize the implementation plan and establish priorities. The Steering Committee identified the redesign of the transit network as the most important priority to improve customer satisfaction by increasing service options.

Since June 2009, Kingston Transit has been working in partnership with the Waterloo Public Transportation Initiative (WPTI) to:

- Develop an improved transit network;
- Identify the types of transit service best suited for Kingston (e.g. express service and local service);
- Develop an implementation plan that identifies immediate, short-term, and long-term deliverables;
- Build the required capacity within the Kingston Transit organization to model, test, and implement these changes.

Kingston Transit started two new routes in September 2010 to address immediate needs. This Redevelopment Plan identifies the short-term and long-term deliverables required to revitalize the transit system. The plan outlines the current state of the transit system in Kingston, the challenges the system faces, and presents a phased redevelopment approach that begins to address the short and long-term requirements of the City.

2 Existing Transit Service

Kingston Transit provides service to the urban areas of the City of Kingston and into the neighbouring community of Amherstview. The system operates 7 days a week with an average of more than 67,000 weekly trips taken by our riders. The following section provides an overview of our riders, the existing transit service, and the challenges the system is facing.

2.1 Transit Ridership

Kingston Transit riders made 3.5 million transit trips in 2010 on our system. Ridership has grown an average of 4.2% each year since 2006 and transit trips now represent approximately 5% of all the trips made within the city. The highest proportion of transit use, attributed to between 6%–8 % of all trips, is within the downtown core and student areas.

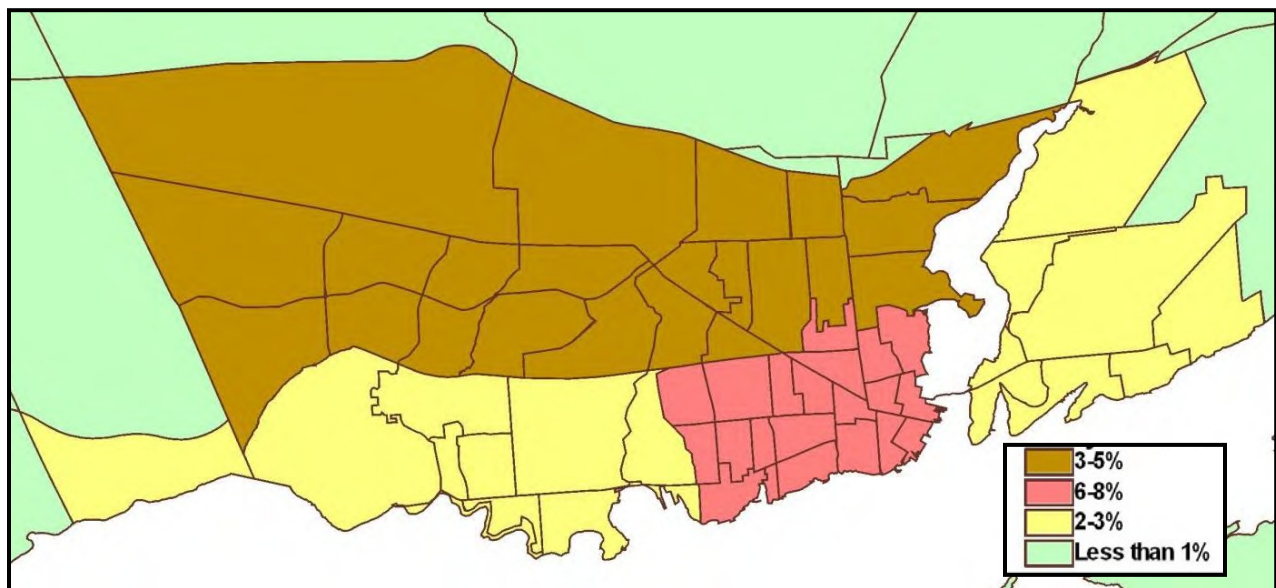


Figure 1 - Transit Mode Share (Source: 2008 Travel Survey)

Our existing ridership is comprised primarily of adult riders and post secondary students from Queen's University and St. Lawrence College. More than 40% of our adult riders travel using a monthly pass suggesting a long-term, daily commitment to the transit system as their method of transportation.

Post-secondary students from Queen's University and St. Lawrence College have unlimited use of Kingston Transit as part of their tuition and student fees. The existing system provides high frequency service between the college, university, downtown, and other major transfer points. Specialized service catering to the needs of these riders is also provided during the academic year.

Type of Rider	Proportion of Annual Ridership	Proportion Using Transit Pass
Adult (18-64)	49.7%	41.7%
Queen's University and St. Lawrence College Students	40.8%	100%
Senior (65+)	4.8%	50.4%
Youth (6-17)	4.7%	47.0%

Table 1 - Breakdown of Ridership for 2010

2.2 Existing Transit Service

2.2.1 Existing Routes and Coverage

Figure 2 shows the network of roads that the buses travel on and provides an illustration of the areas located within a 400m distance of a transit stop.

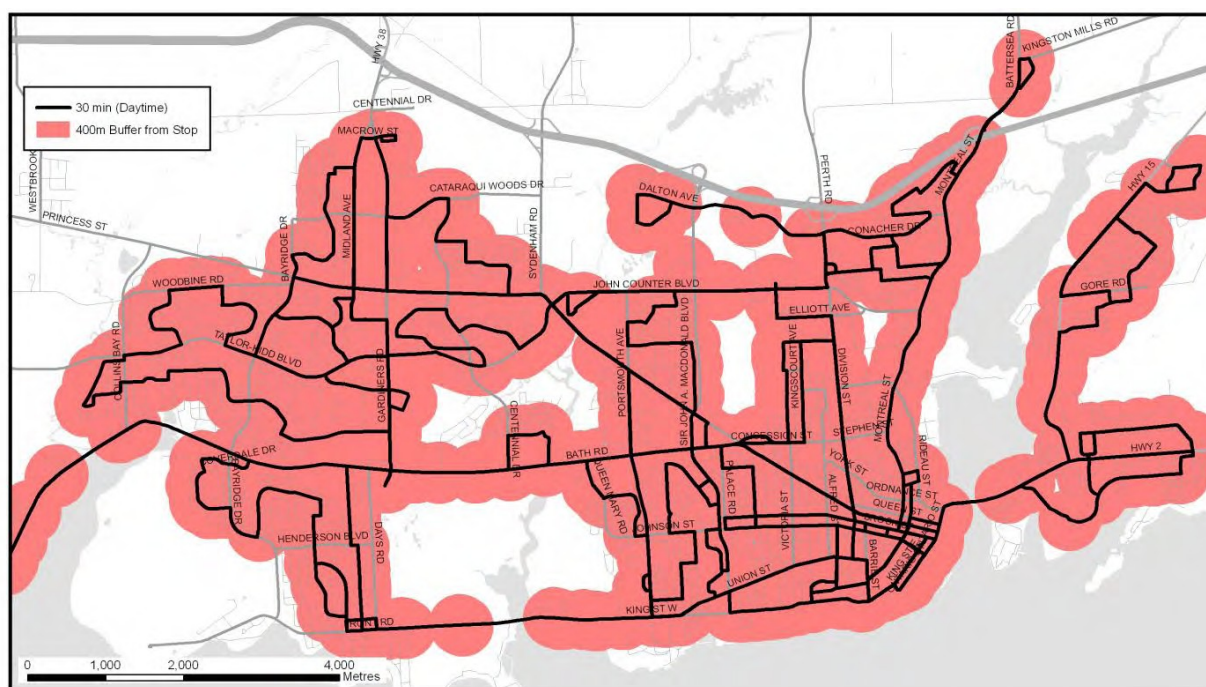







Figure 2 - Existing Routes and Daytime Coverage

The service operates 16 routes with additional service added during morning and afternoon peak-hour commute. Table 2 provides an overview of the existing transit routes, as of July 2011, and a description of the areas served. For a detailed view of where each route travels, please see the larger map contained in the latest publication of the Rider's Guide.

Route	Route Name	Description
	Cataraqui Woods - Princess St. - Montreal St.	Major arterial route that connects the Cataraqui Town Centre, Kingston Centre, Downtown, and Rideau Heights neighbourhood using Princess Street and Montreal Street
	Calvin Park - Union St. - Division St. - Markers Acres	Major arterial route that connects the Kingston Centre, Calvin Park, Portsmouth, St. Lawrence College, Queen's University, Downtown, Division St. and Rideau Heights.
	Queen Mary Rd. - Portsmouth Ave. - King St.	This route links Polson Park, St. Lawrence College, KGH, and the Downtown.
	Princess St.	This route provides service along Princess Street from the Cataraqui Town Centre to the Downtown.
	Bayridge - Gardiners Rd. - Reddendale - Union St.	Major arterial route that links Bayridge, Reddendale, St. Lawrence College, and the Downtown.
	Midland Ave. - John Counter Blvd. - Division St. - Dalton Ave.	This route, introduced in 2010, provides an east-west connection across the north end of the city. It connects the INVISTA Centre, Cataraqui Town Centre, Bus Terminal, and Clyde Industrial Park.
	Amherstview - Bath Rd.	Service along Bath Road that connect the Kingston Centre, Gardiners Town Centre, and Amherstview
	Brock St. /Johnson St. - CFB Kingston - Highway 15	This route links the east end of the city, CFB Kingston, and the St. Lawrence Business Park with the Downtown and the Kingston Centre.
	Downtown - CFB Kingston	This route operates during peak commuting times and provides direct service between CFB Kingston and the Downtown. This route supports Route 12.








	Queen's University Late Night Shuttle	Late night route that operates until 2AM from September to April that links Queen's University Main/West campus to the Downtown. This service is fully funded by the Queen's University Alma Mater Society (Student Government).
	Train Station Circuit	This one way loop links the Downtown, Queen's University, and St. Lawrence College to the Train Station and Bus Station. This service is partially funded by the Queen's University Alma Mater Society (Student Government).
	Montreal St - Downtown- Queen's	This route operates during peak commuting times and provides service from the 401 on Montreal Street through the Downtown and onwards to Queen's/KGH.
	Gardiners Rd. - Bath Rd.	This route links the Cataraqui Town Centre, Gardiners Town Centre, and Kingston Centre along Bath Road and Gardiners Road. This route also provides service into the RioCAN shopping complex.
	Cataraqui North - Waterloo Village	This route, updated in July 2011, provides service to riders in the neighbourhoods of Cataraqui North and Waterloo Village to major routes along Princess Street and the Cataraqui Town Centre.
	Bayridge - Reddendale	This route provides service to west end residents living in Bayridge and Reddendale. It connects to the Gardiners Town Centre and Cataraqui Town Centre where riders can transfer on to other major routes.
	Kingscourt Ave. - Portsmouth Ave. - Strathcona Park	This neighbourhood route connects Strathcona Park and Kingscourt residents with the Kingston Centre where they can connect with other routes. This route also provides service to the Train Station and the Bus Station.

Table 2 - Current Routes

The routes generally travel between major activity nodes such as the downtown, Cataraqui Town Centre, and St. Lawrence College. This type of route system, in which buses arrive and depart at fixed times from major points, is referred to as a 'pulse network' and is most appropriate for small cities running buses with a low frequency of service (30 minutes or greater between buses). Riders are able to transfer between routes at these nodes with a minimal wait time when the system is operating as designed, however, any delays along any of the routes are very disruptive to the efficiency of the operation. The major timed transit nodes used in our system are shown in Figure 3.

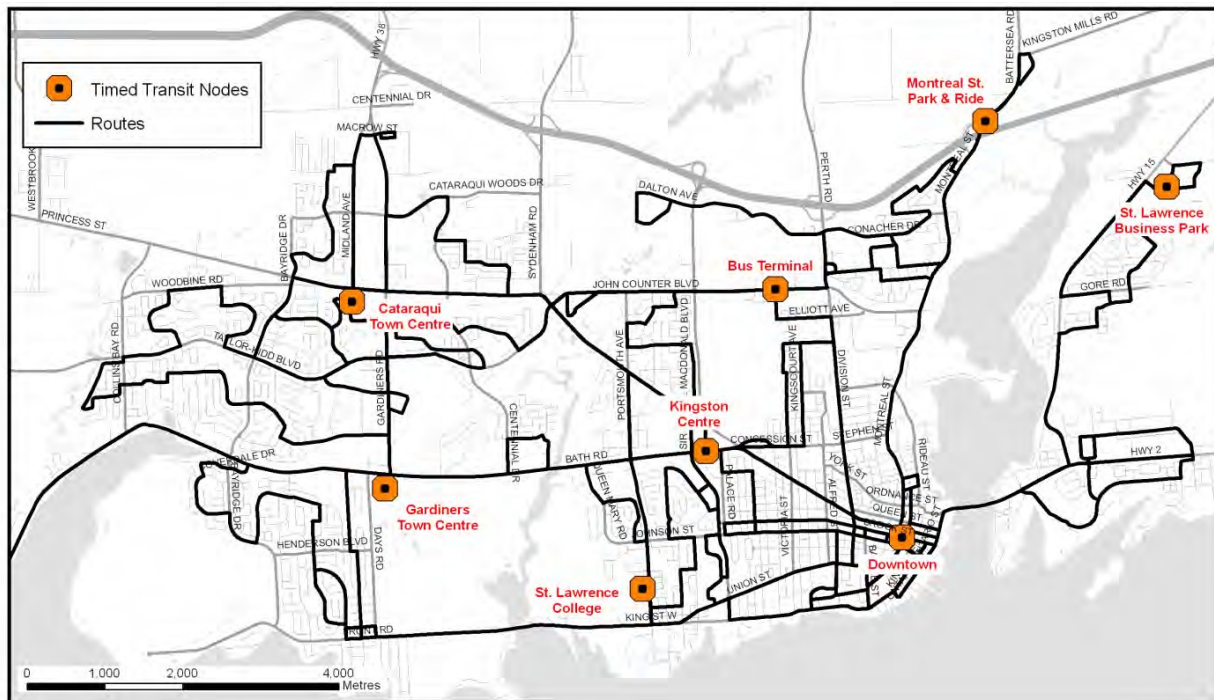


Figure 3 - Timed Transit Nodes within the Pulse Network

2.2.2 Service Frequency

Frequency of service is measured as the number of minutes between buses arriving at a bus stop. Currently daytime service routes, which operate from 6:00AM – 6:30 PM, Monday to Saturday, run with a 30-minute frequency, while evening/Sunday routes operate on a 60-minute frequency.

A daytime frequency of 30 minutes can be a deterrent for riders who require more flexible transportation options and can be inconvenient for those who miss a transfer to another route and must then wait an additional 30 minutes for the next bus. The evening and Sunday frequency of 60 minutes is an even greater deterrent for riders. Within the busier travel corridors, this frequency also presents an issue on the bus as the number of riders seeking to travel in the 30-minute interval can overwhelm the capacity of the vehicle.

To address these concerns, the system includes several routes that overlap on major rider corridors such as Princess Street and Union Street to provide a 15-minute frequency during the daytime. Other areas

such as Bath Road, Montreal Street, and Highway 2 from Downtown to Highway 15, operate at a 15-minute frequency during the peak commuting times on weekdays only (7AM – 9AM and 4PM to 6PM). The 15-minute frequency of service is generally regarded as the minimum frequency at which transit becomes an attractive option for riders. A visual representation of the existing service frequency within the transit service area is shown in Figure 4.

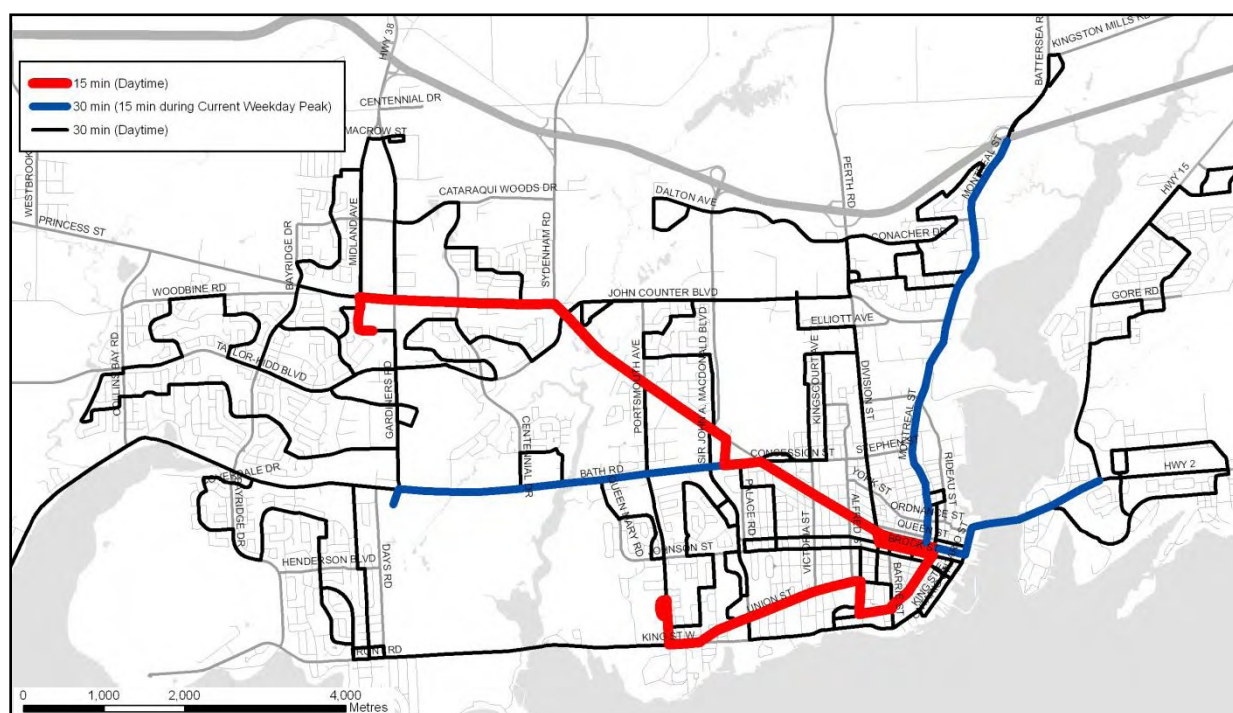


Figure 4 - Existing Frequency of Daytime Service

2.2.3 Service Hours

Transit currently operates 7 days a week during the following hours, 361 days of the year.

	Hours of Operation
Monday to Saturday	6AM – 11:30PM
Sunday	8:30AM – 8:30PM
Most Holidays	8:30AM – 8:30PM
New Year's Day, Family Day, Good Friday, Christmas Day	No Service

Table 3 - Hours of Operation

As ridership has grown in the past 5-year period, the number of buses operating during these hours has increased such that our total annual operating service hours has grown from 134,000 in 2006 to 162,000 in 2011. This growth in service has been achieved through a combination of new routes that have been introduced, such as the Route 7 and Route 18, and the addition of more frequent service in our busier corridors.

2.2.4 Special Service / Contracts

Kingston Transit has multi-year agreements in place with student governments at Queen's University and St. Lawrence College that provide their registered students with unlimited transit use. The fees are collected as part of the student payment to the institution and all registered students are able to use their student cards to travel on any Kingston Transit bus.

As part of this agreement, Queen's University also provides funding for a late night route between the campus and downtown (Route 17 – Late Night Shuttle) and a direct route between the campus and train/bus station on John Counter Boulevard (Route 18 – Train Station Circuit).

A multi-year service agreement also exists with Loyalist Township to provide service for Amherstview residents to the Gardiners Town Centre and Kingston Centre along Bath Road.

2.3 Challenges

There are a number of challenges within the existing system that limit Kingston Transit's ability to grow and attract new riders that may otherwise take their own automobile.

2.3.1 Route Capacity

As ridership has grown, segments of major routes have approached or exceeded the capacity of the system. During peak travel times, buses along the major corridors such as Princess Street, Union Street, Highway 15/Highway 2 and Front Road can reach capacity and operators have no choice but to leave riders at bus stops to wait for the next bus.

2.3.2 Cascading System Delays

The nature of the 'pulse system' structure and the ability to minimize wait time at transfer points relies on each bus, on each route, arriving at the timed transfer point within a 3-minute window. This small buffer requires each route to operate on a fixed schedule at all times of the day. Unfortunately, traffic congestion and weather conditions can introduce delays that prevent buses from arriving at the transfer point within this window.

The immediate issue with a late bus is that riders on board that bus may miss their connection, however, it also results in the late departure of that bus from the next timed transfer point. These delays, even though they may have originally been centered in one area of the city, are cumulative and begin to cascade throughout the system.

Missed connections and uncertainty of trip time is a major deterrent in attracting riders who may otherwise take their personal automobile. The existing fleet size and pulse structure of the system limit Kingston Transit's ability to tailor service to the needs of the morning and afternoon peak commuting periods.

2.3.3 Frequency of Service and Hours of Operation

The base 30 minute service available across the majority of the transit system during the daytime from Monday to Saturday is not frequent enough to be a viable transportation for most riders and is not competitive with the personal vehicle.

Areas within the city that have 15-minute service are limited to major corridors and do not link into the suburban neighbourhoods of the city. This 15-minute service is available during the daytime only and is reduced to a 60-minute frequency in the evenings and on Sunday. Riders who require service beyond 6:00PM face a reduced service that is seen as a major deterrent in choosing transit. Some routes do not provide any service during evenings or on Sunday, so the option to use transit does not even exist in some areas of the City.

2.3.4 Bus Stop Infrastructure and Accessibility

Our transit network contains more than 800 bus stops of which 134 are equipped with a bus shelter. Kingston Transit is equipped with a fleet of accessible buses however the infrastructure at our stops varies considerably. Bus stops that are reconstructed as part of the City's planned sidewalk work are currently built to a standard consistent with the City's Facility Accessibility Design Standards; however, it will take time and planning to upgrade our entire bus stop inventory.

In addition to the disparity in bus stop infrastructure, there is also a wide variation in bus stop spacing. In some cases, bus stops are spaced less than 100m apart. Frequent stops reduce the walking distance but impact the efficiency of the transit route for all riders and require additional capital investment.

2.3.5 Competitive Travel Times

The existing routes provide very good coverage across the urban area of the city but this coverage is often provided at the expense of efficient routing. Riders might benefit from a bus that travels within 50m of their home, but are then burdened by the relatively long travel time to their destination as the route continues to weave its way through many neighbourhoods. As Kingston Transit's routes have expanded to serve larger areas, the routes have become increasingly longer and less competitive from a travel time standpoint compared to the automobile.

This effect is even more pronounced when circuitous routing occurs mid-route between two major destinations, such as on the existing Route 12 between Greenwood Park and the Downtown. This trip by car takes approximately 12 minutes, but the corresponding transit trip takes over 28 minutes. A similar trip from Bayridge Drive in the west end to the Downtown takes approximately 15 minutes by car whereas the transit trip can be upwards of 50 minutes.

3 Policy Framework

As Kingston Transit considers the existing service and the challenges it faces, it must base any redevelopment plan on the guiding transportation policies within the city. This section provides a summary of the policies that inform how the long-term redevelopment of transit is supported.

3.1 Sustainable Kingston

Kingston has a vision of becoming Canada's most sustainable city. To support this vision, an Integrated Community Strategic Plan has been developed to provide a way for all sectors of the community to focus on how to advance sustainable practices, in an integrated manner. The Sustainable Kingston Plan is based on the cultural, economic, environmental, and social pillars of sustainability. Kingston Transit supports, directly and indirectly, all four pillars of sustainability as summarized in Table 4.

Pillars of Sustainability	Objectives	Kingston Transit Alignment to Objectives
Economic	<ul style="list-style-type: none"> Progressive and Dynamic City Pursue Economic Strength 	<ul style="list-style-type: none"> Provides improved access to the labour pool by providing transportation options for employees, particularly those who work in the core business area, lower paying service jobs, call centres, and post secondary students Has spin-off effects, including the creation of jobs, income and taxes¹ High quality public transportation infrastructure is an essential prerequisite for economic development
Environmental	<ul style="list-style-type: none"> Create a Green Community Develop the City Wisely 	<ul style="list-style-type: none"> Effective public transit, integrated with urban intensification can play a major role in reducing private automobile GHG emissions.² Promotes/supports higher density development along major arterial corridors
Social	<ul style="list-style-type: none"> Affordable Housing and Poverty Reduction Promote Diversity Promote Quality of Life Activities 	<ul style="list-style-type: none"> Can be the only means of transportation for lower income to access essential life services such as healthcare and housing. Recognized as a poverty reduction/community development and sustainability tool. Affordable public transit can help ensure low income people and people with mobility challenges are not isolated or marginalized.³
Cultural	<ul style="list-style-type: none"> Promote Neighbourhoods Enhance Neighbourhoods 	<ul style="list-style-type: none"> When transit services are integrated with planning, neighbourhoods can be enhanced by ensuring pathways are planned and connected to transit routes making neighbourhoods more accessible. Supports active living for our residents – more walking, supports cycling

References: (1) CUTA – The Economic Impact of Transit in Canada – May 2010 (2) 2010 Stats Canada Report- Greenhouse Gas Emissions from Private Vehicles in Canada (1990-2007) (3) Mayor's Task Force on Poverty Report – October 2007

Table 4 - Summary of Transit Integration with Sustainability Pillars

3.2 Land Use Planning

A new Official Plan for the City of Kingston came into effect in 2010. The plan guides the next 20 years of development and establishes goals and a means to achieve them by taking into consideration important land use, social, cultural, economic, and environmental factors. Section 4 of the plan, which deals with infrastructure and transportation, identifies the following goal:

“To increase sustainable means of travel and reduce reliance on the automobile, the City will promote a compact form of development within the Urban Boundary having a mix of uses that reduce the need for travel, and will also promote increased densities that are supportive of public transit alternatives. Increasing opportunities for active transportation and improving the maintenance of pedestrian and cycling routes will increase usage, safety and access for all.”

The Official Plan also identifies the City’s commitment to maintain a comprehensive Transportation Master Plan, which projects future needs for the City’s transportation system.

3.3 Transportation Master Plan

The Kingston Transportation Master Plan (KTMP) was developed in 2004. It sets the direction for Kingston Transit’s programs and priorities over a 25-year period.

The strategic direction in the KTMP is intended, *“to foster sustainability within the City and to reduce reliance on the automobile by satisfying travel demand through the efficient use of the existing infrastructure, and by providing the facilities and services to encourage walking, cycling and transit as priority modes, before expanding the City’s road infrastructure”*.

The KTMP examined modal split for commuters in detail. In 2004, the PM peak modal share for transit was 3%. To support the objectives identified in the KTMP, the modal share for transit must increase to 11% by 2026. To achieve this goal, the plan includes the following policy statement:

“The City supports increased transit use by providing full-service, accessible transit, comprising high-frequency peak period service and extended off-peak service.”

3.4 Transportation Demand Management

The Transportation Master Plan also recognizes the role of Transportation Demand Management (TDM) in promoting its strategic direction. Transportation Demand Management is a collection of strategies that, when employed in combination, aim to improve transportation system efficiency. It focuses on more efficient and sustainable transportation modes, such as cycling and transit. The focus of TDM plans is the mobility of people and goods, not the mobility of the personal automobile.

The City is currently developing a Transportation Demand Management Strategy that will identify policies, programs, partnerships and performance indicators to maximize the transportation performance of existing systems, while providing transportation alternatives to system users.

3.5 Transit Supportive Parking Policies

Parking is a critical component of the urban transportation system. Coordinated parking policies and strategies can support and encourage public transit and discourage the use of automobiles. A transit-friendly parking policy will be developed as part of a broader Parking Strategy over the next 24 months.

3.6 Accessibility

Kingston Transit recognizes the strategic importance of providing accessible transportation to our riders. Our system is seeing an increase in the daily accessibility needs of our riders and we must prepare for an aging, less mobile population within the city. Increasing transit accessibility requires a system-wide review to ensure the challenges related to boarding, route timing, funding, and infrastructure can be addressed.

The City of Kingston began implementation of a Municipal Accessibility Plan starting in 2003. The objectives of the plan are to fulfill the intent of the *Accessibility for Ontarians with Disabilities Act (AODA)* and to ensure that municipal services, such as public transit, are compliant.

The City of Kingston also adopted a Facility Accessibility Design Standard (FADS) in 2009, with the intent that all new or renovated facilities owned by the City would be upgraded to these standards. FADS does not currently apply to the right-of-way, where the majority of our bus stops are located, but Kingston Transit has made a commitment to apply FADS in the development of our bus stop design guidelines and have been building new and retrofitting existing stops to these standards since 2010. These design guidelines will continue to evolve as the AODA legislation introduces new requirements.

4 Vision, Goals, Objectives and Strategy

Kingston Transit has developed a vision, mission statement, and set of goals and objectives to address the challenges faced by the system and to meet the transportation goals of the City of Kingston.

4.1 Vision

Our vision is to make Kingston Transit a network-driven and market-focused organization that provides a transit service that all citizens of Kingston choose to use in support of the City's Sustainability Plan and transportation policies.

Kingston Transit is a viable transportation choice that is competitive with the automobile in terms of comfort, convenience, reliability, and travel time.

4.2 Mission Statement

Our mission is to provide rider-focused transit services that enable access to work, education, health care, shopping, social, and recreational opportunities in Kingston.

4.3 Goals and Objectives

4.3.1 Goal 1 – Improve the Route Network

Recognizing how the existing route structure limits Kingston Transit's ability to best serve our riders, we will engage in a phased plan of route additions and changes. These changes will include the creation of a hierarchy of routes and a new backbone of high frequency service across the urban area. The detailed plan to accomplish this objective is outlined in Section 5.

New and increased ridership, reduced travel times between key destinations, and increased service reliability will be measured to track progress in achieving this goal.

4.3.2 Goal 2 – Improve Customer Experience

The City's transportation model projects an annual increase in ridership of at least 2.3% over the 10-year period from 2009–2019 to maintain the existing modal split of 5% of trips by transit. Considering the overall policy strategy and goals of the Transportation Master Plan, to reach a modal split of 11% by 2026, the transit system must grow and attract new riders at a much higher rate than in the past. The system needs to improve its services to encourage new riders to leave their cars at home.

To that end, Kingston Transit, in conjunction with the first goal, will increase the service frequency to 15 minutes on a backbone of express routes that will extend across the existing service area and expand

service at all times of the day. This dramatic increase in the area over which this more frequent service will extend, represents a significant investment in making the service more attractive for riders. Details of this service expansion are outlined in Section 6.

Increased ridership in areas currently underserved by transit, increased partnerships with employers, number of accessible bus stops, and the availability and reliability of real-time bus arrival information on the express routes will be measured to track progress in achieving this goal.

4.3.3 Goal 3 – Improve Productivity and Service Value

The redevelopment of the transit system envisioned in Goal 1 and Goal 2 must be linked to an efficient and effective use of the City’s resources. Operating and capital dollars, fleet, facilities, and people must be deployed to provide the most productive and best service value transit system possible.

Kingston Transit has developed a detailed financial forecast that models the redevelopment proposals contained in this plan. Ridership, route reliability, frequency, operator utilization, and adherence to the financial model will all be measured to ensure resources are being used in the most efficient manner. Details of this model and the associated performance measurements are outlined in Sections 11 and 12.

5 Phased Route Redevelopment Plan

Kingston Transit, in consultation with the Waterloo Public Transportation Institute (WPTI), completed a service review in 2009/2010. This review, which included consultation with various stakeholders and the public, recommended:

- The introduction of 3 express bus routes that link the City's urban area with fast, reliable, service that operates on a 15-minute frequency;
- A redesign of the existing routes to take advantage of the express route backbone to increase reliability and reduce travel times;
- A significant investment in infrastructure and technology to enhance the rider experience and make transit an attractive transportation option.

The network redesign recommendations propose a hierarchy of routes that have the following general characteristics:

- **Express Routes** act as the highest-profile, highest-performance (frequency, speed, and comfort), most heavily used and marketed routes in the system; the function of these routes is to serve passengers on longer distances with fast, direct service between major destinations. These routes operate with a service frequency of 15 minutes and provide a transit backbone across the entire service area. Express route bus stops have an approximate spacing of 900m–1200m and include a higher level of rider amenities such as larger shelters, lighting, and system information.
- **Local Routes** act as a supplementary service to express routes with more frequent stops and, as a result, slightly longer travel times. The function of these routes is to serve passengers for mid to short distance trips in moderate to heavy demand corridors. These routes generally have a service frequency of 30 minutes with an average stop spacing of approximately 400m–700m.
- **Collector Routes** act as shorter, more localized routes, with more frequent stops than local and express service. The function of these routes is to provide area coverage allowing passengers to make short-distance trips with multiple connections to local and express routes. These routes operate with a service frequency of 30 minutes and stop spacing is dependent on the area served.

Kingston Transit staff reviewed the WPTI recommendations and developed a phased implementation plan to transform the existing system into the proposed model. This plan represents a major investment in transit, both in capital infrastructure and annual operating hours, with the aim of creating a service that is faster, more reliable, and offers more direct service between major destinations in the city.

The following section outlines a 2-phase plan to implement the main recommendations identified in the service review that can be completed within City's proposed strategic plan and also outlines several future phases to continue the full implementation of the report recommendations. The phasing of the route redesign implementation will allow Kingston Transit to build capacity, minimize risk, and ensure a smooth implementation.

The proposed route changes in this section represent a general plan to provide high quality transit service to our riders based on our knowledge of their travel patterns. This section should be considered as a system-wide vision of the type of transit system that can best address the challenges outlined in Section 2.3 and does not represent final routing. The details of each specific route change will be thoroughly reviewed and modeled, and subject to input from our riders and the public prior to final design and implementation.

5.1 Preliminary Phase – Local Route Additions (September 2010)

Early in the review of the report recommendations Kingston Transit identified two new local routes that could be implemented within the existing bus fleet. These routes complemented the existing service and addressed specific recommendations from the service review and previous 5-year business plan. These routes were implemented in September 2010 but are referenced here as they form a component of the longer term route Redevelopment Plan.

5.1.1 John Counter Boulevard Local (Route 7)

This route connects Gardiners/Midland in the west end to the Markers Acres and Rideau Heights neighbourhoods via John Counter Boulevard, and provides a faster, more direct connection across the north end of the city. The route serves major employers, commercial, and residential areas while providing some capacity relief for the existing routes that travel from the west end through the downtown core.

5.1.2 Train Station Circuit (Route 18)

This route provides a direct connection to the train and bus stations on John Counter Boulevard from the downtown and post-secondary institutions. The route operates on a modified schedule that is timed with the VIA train schedule to allow riders a convenient travel option. This service is partially funded through the service contract with the Queen's University student government. The current route operates with a single bus however additional service is planned for a future phase beyond 2015.

5.2 Phase 1 – Express Route 1 and West End Route Changes (September 2013)

Phase 1 focuses on solving existing reliability and service issues in the system and significantly increases the quality of service provided to the west end neighbourhoods, an area of high potential for new ridership. This phase adds the first express route providing a direct, high frequency service from the west end to the downtown. To complement the express route, a number of changes are made to the existing local and collector routes. The most notable changes include redesigning the existing Route 1 into three smaller routes and the truncation of the existing Route 6 travelling east beyond Reddendale.

5.2.1 Express Route 1

Express Route 1 operates in both directions (clockwise and counter-clockwise) from the west end to the downtown via the Princess Street, Front/King, and Bayridge Drive corridors. This route links the existing major transfer points at the Cataraqui Town Centre, Kingston Centre, downtown, Queen's/KGH and St. Lawrence College and penetrates into the west end neighbourhoods of Bayridge and Reddendale. The local service provided by the existing Route 1 on Princess Street and existing Route 6 on Front Road is replaced by this new route.

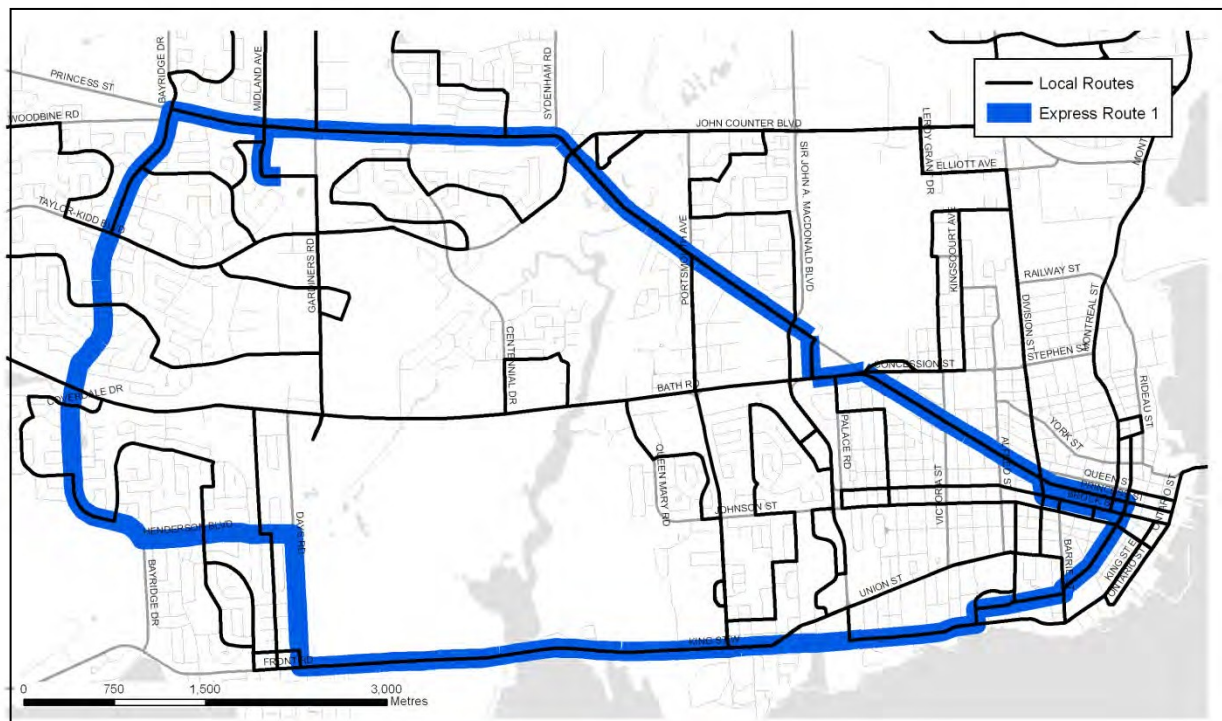


Figure 5 - Express Route 1

5.2.2 Montreal Local (Route 1)

This route provides service from Highway 401 to the downtown core via Montreal Street in a similar fashion to the service provided today. Markers Acres, Rideau Heights, and the Inner Harbour neighbourhoods are served by this route. Redesigning the existing Route 1 into three local routes, the Route 1, Route 4, and Route 5 will allow for more consistent and reliable local service as buses will not be delayed in other parts of the city.

5.2.3 Princess Local (Route 4)

This route is the same as the existing Route 4 in place today. Local service is provided between the Cataraqui Town Centre to the downtown via Princess Street and overlaps a portion of Express Route 1.

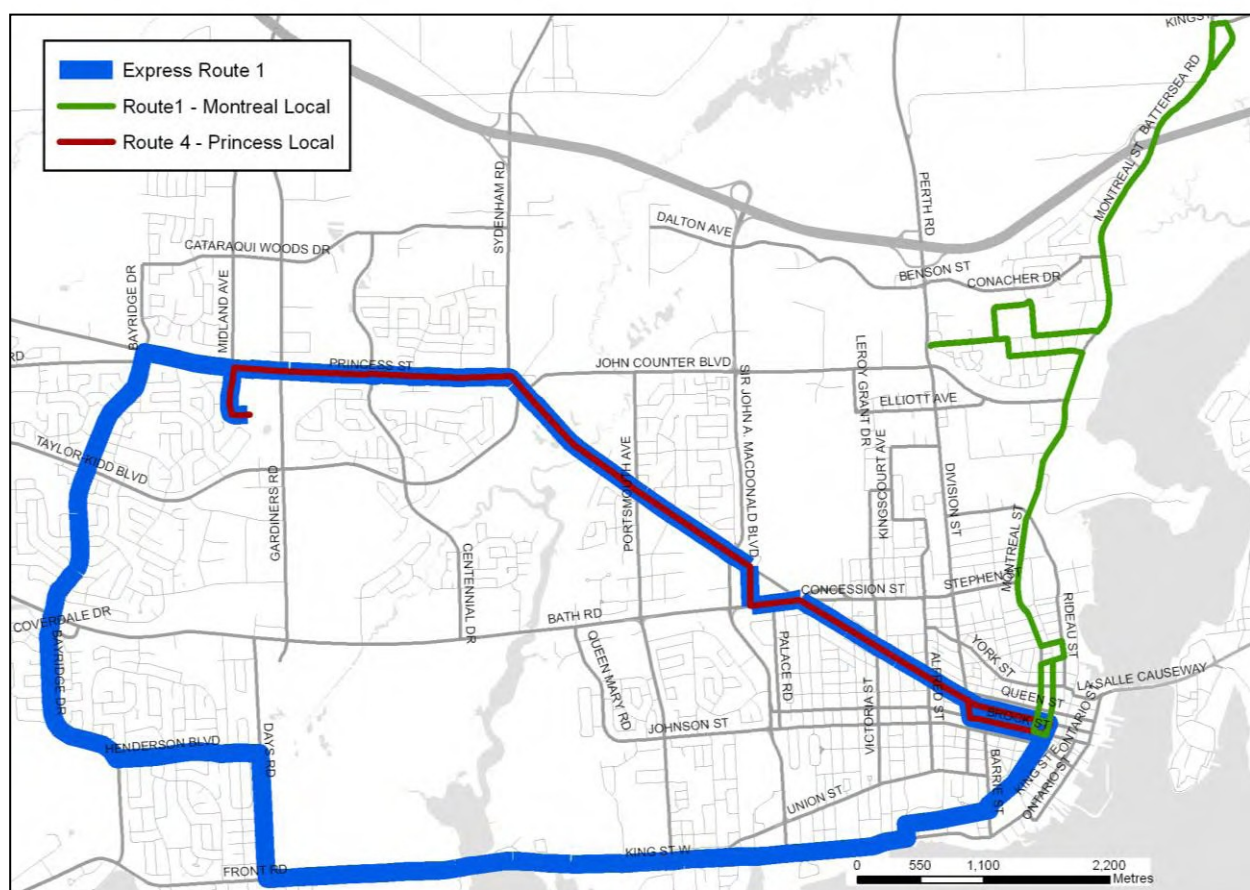


Figure 6 – Montreal Local (Route 1) and Princess Local (Route 4)

5.2.4 Cataraqui Woods Collector (Route 5)

The Cataraqui Woods Collector is a small route that will eventually grow to provide collector service through the Cataraqui West development between Bayridge Drive and Westbrook Road. In the short term, this route may be combined with other west end service with the intention of creating a separate route as the west end neighbourhoods are developed and become occupied.

5.2.5 Taylor Kidd/Gardiners/Reddendale Local (Route 6)

The west end routing of the existing Route 6 remains the same but the route is truncated at the Reddendale Plaza (Front Road/Days Road) with service to the downtown being provided by Express Route 1. Shortening this route will allow Kingston Transit to provide more consistent and reliable local service to the west end neighbourhoods as buses will not be delayed in other parts of the city.

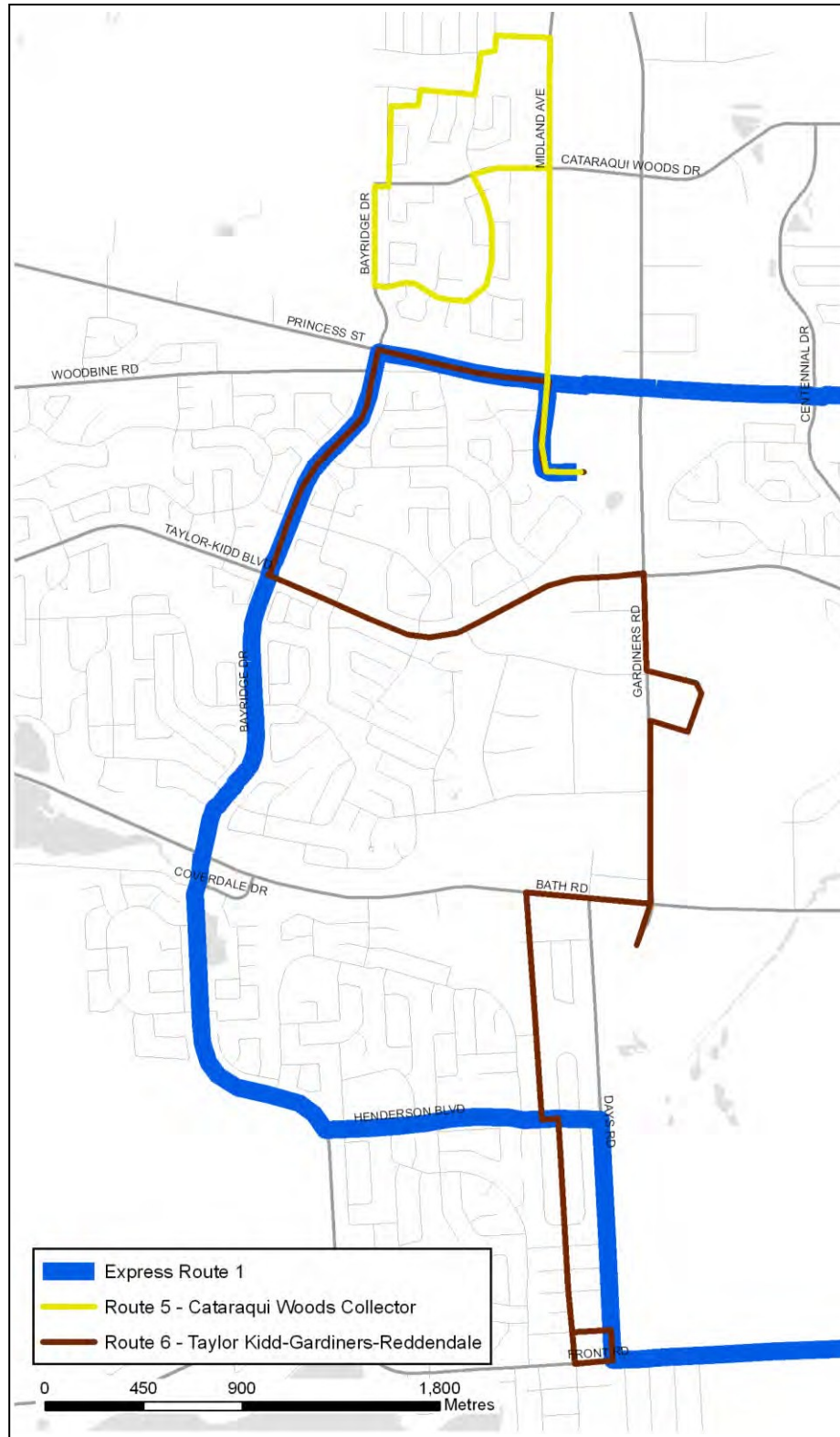


Figure 7 – Cataraqui Woods Collector (Route 5) and Taylor Kidd-Gardiners-Reddendale (Route 6)

5.2.6 Reddendale Collector (Route 9)

This collector route provides service to the Westpark, Henderson and Auden Park neighbourhoods with three connection points to Express Route 1 and a direct connection to the Gardiners Town Centre. This route may be combined with Route 15 in the short term.

5.2.7 West End Collector (Route 15)

Coverage of the west end neighbourhoods of Bayridge (East/West), Sutton Mills, Westwoods, and Mile Square remains the same but the existing Route B is modified to increase connections to the new express node at Bayridge Drive and Taylor Kidd Boulevard. This will reduce travel time on the collector route for residents in these neighbourhoods. Convenient connections are also provided to the Gardiners Town Centre and the Cataraqui Town Centre. This route may be combined with Route 9 in the short term.

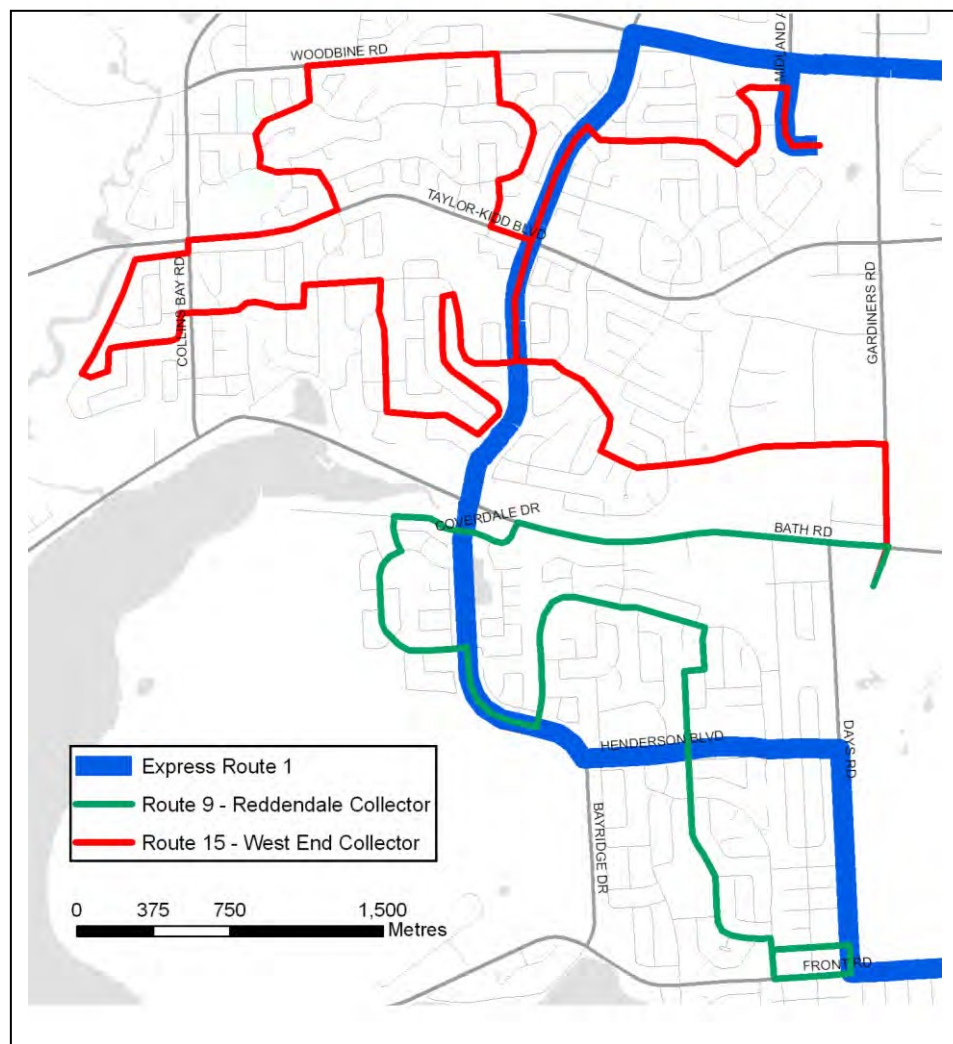


Figure 8 – Reddendale Collector (Route 9) and West End Collector (Route 15)

5.2.8 Amherstview/Bath Road Local (Route 10)

This route remains the same as the existing Route 10 with a small modification to routing in the west end to link with Express Route 1 node at Bayridge/Taylor Kidd. This link to the express route will allow modification to the existing timetable to more accurately reflect the time required to travel to Amherstview. No additional service or increase to frequency of service is planned to Amherstview as part of this system review.

5.2.9 Cataraqui North and Waterloo Village Collector (Route 14)

Service to the Cataraqui North neighbourhood is expanded to incorporate the new residential developments from Crossfield Avenue to Cataraqui Woods Drive. Buses operate in both directions around this loop which is an improvement over the existing single loop direction, reducing travel times for riders travelling to the Cataraqui Town Centre or Princess Street. This route intersects with Express Route 1 at several locations.

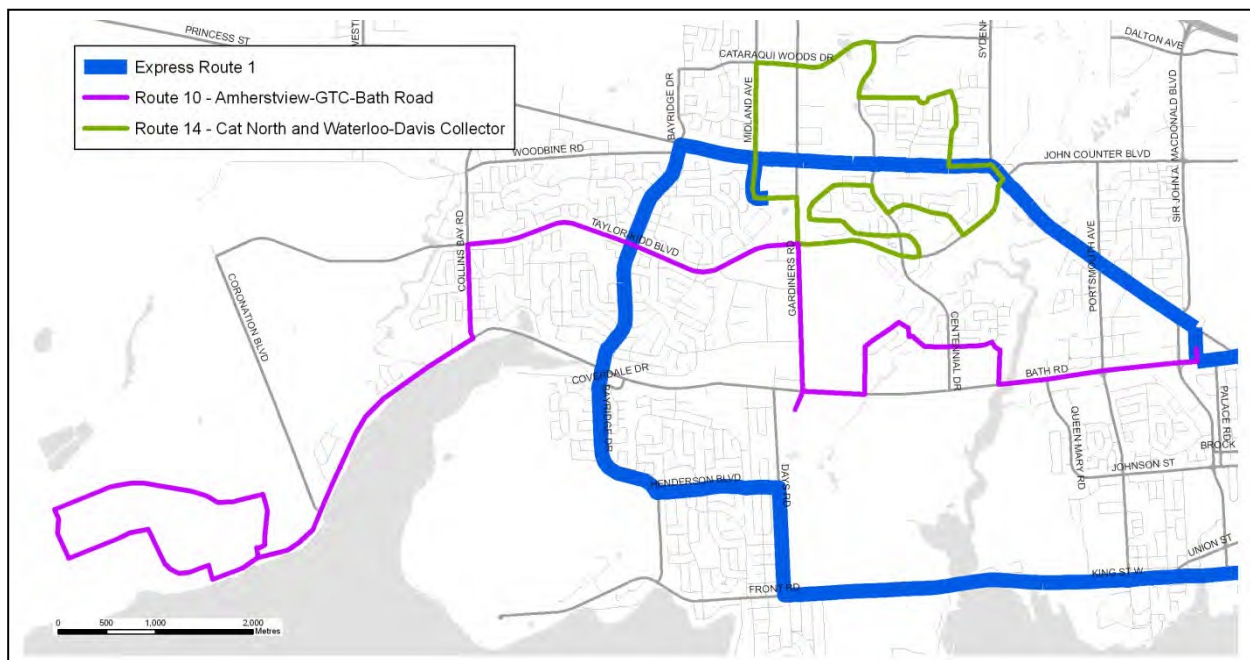


Figure 9 – Amherstview/Bath Road (Route 10) and Cataraqui North/Waterloo-Davis Collector (Route 14)

5.3 Phase 2 – Express Route 2, Express Route 3, and Local Route Modifications (January 2015)

Phase 2 adds two additional express routes to complete the express backbone across the city. Express Route 2 reduces travel times/transfers for east end riders who want to access Downtown-KGH-Queen's and provides a more direct connection to employment lands in the east end. Express Route 3 strengthens the express connection between the west end and downtown by adding service along Bath Road and Gardiners Road. Similar to the modifications made in Phase 1, the existing local routes are modified to integrate with the new express service backbone.

5.3.1 Express Route 2

Express Route 2 links the east end, St. Lawrence Business Park, CFB Kingston, RMC, Montreal Street, Division Street, KGH/Queen's, and the downtown with a high frequency 15-minute service during peak hours. It overlaps at three stops with Express Route 1 allowing cross-city travel with a single transfer. This route also connects to the Montreal Street Park and Ride for rural/out-of-town riders. The existing peak service routes that travel on Montreal Street (Route 19) and across the LaSalle Causeway (Route 12A) are discontinued when this service is introduced.

5.3.2 Express Route 3

This express route links the INVISTA Centre to the Gardiners Town Centre via Midland Avenue and Gardiners Road, and continues to the downtown via Bath Road and the Johnson/Brock corridor. This express route connects the Meadowbrook, Polson Park, Grenville Park, Calvin Park, and Hillendale neighbourhoods to the west end and downtown through a number of employment and commercial nodes. This route also provides an alternate west end express connection that may address capacity issues forming on Express Route 1 by this time. The local service provided by the existing Route 71 along Bath Road is replaced at this time.

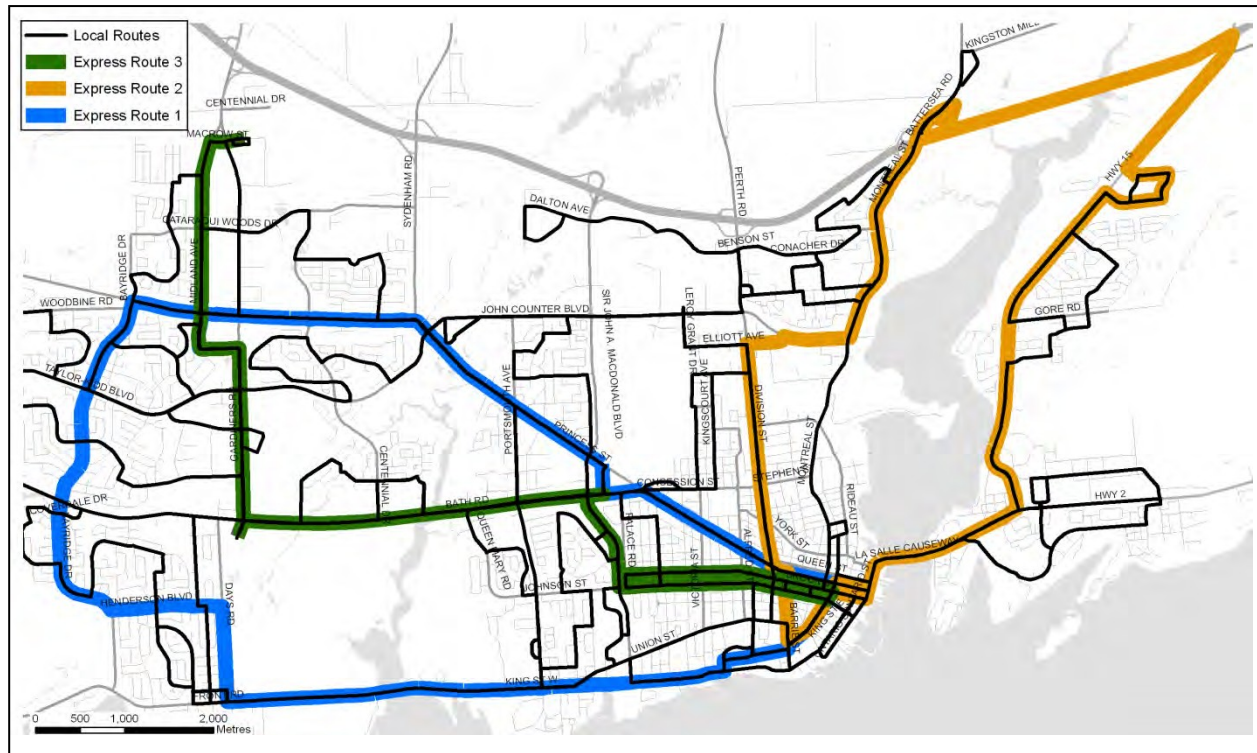


Figure 10 - Express Route 2 and 3

5.3.3 Montreal Local (Route 1)

This route is modified to provide additional service into the John Counter Boulevard, Hickson Avenue, and Elliot Avenue areas, and continues beyond the downtown through the student corridor to St. Lawrence College. This extension reduces the number of transfers that Montreal Street riders travelling beyond the downtown need to make.

5.3.4 East End Collector (Route 12)

This route remains similar to the existing Route 12 providing service to the Cataraqui River East, CFB Kingston, and Greenwood neighbourhoods. The routing is modified slightly through the Greenwood Park subdivision to increase the service area to newer subdivisions, better align with the Express Route 2 stops, and add two-way service along the entire route.

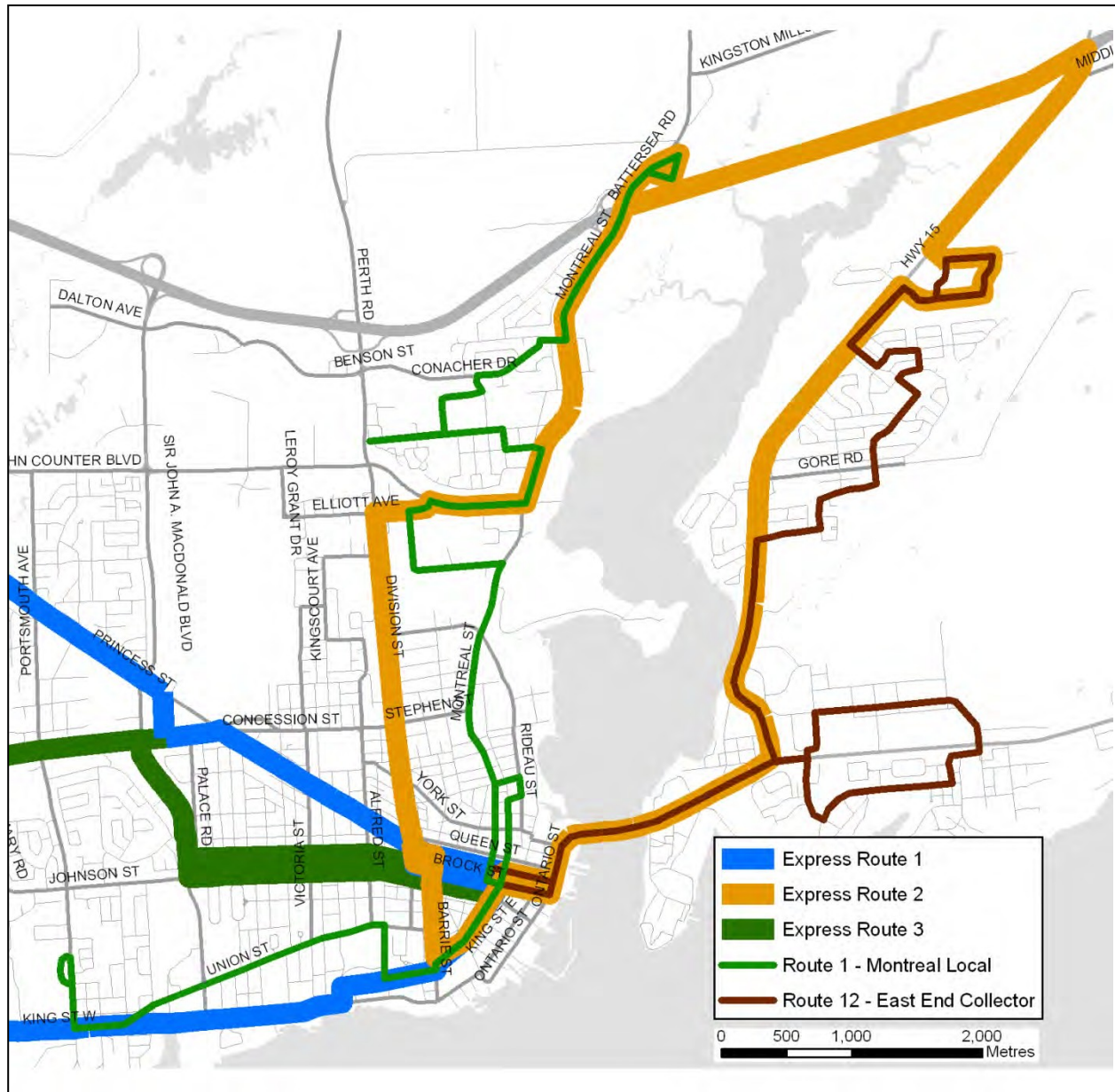


Figure 11 – Montreal Local (Route 1) and East End Collector (Route 12)

5.4 Future Phase 3 – Enhanced Express (Post 2015)

Kingston Transit will monitor the implementation of Phase 1 and 2 to refine the service to best serve our riders. Based on the experience and success of the express routes the next enhancement beyond 2015 would be to expand the availability of the 15 minute express service during the weekday and into the weekend. The long term service frequency objectives for the express service are outlined in Section 6.

Increasing the time period that 15 minute frequency is available on the express routes can be accomplished with the existing bus fleet provided for Phase 1 and 2. This phase is not included in the financial model presented in Section 11.

5.5 Future Phase 4 – Local Route Additions and Realignment (Post 2015)

This future phase is a package of local route changes that are focused in the central part of the city to strengthen the links to the express route backbone. The timing of this phase will be reviewed during the implementation of the Phase 1 and 2 and is not included in the financial model presented in Section 11.

In this phase the local routes are reorganized to provide more efficient service and a number of service improvements for the central city neighbourhoods. This phase represents the full build out of the recommendations that were created through the work with WPTI and is presented to provide the full picture of the Redevelopment Plan. An additional 4 buses would be required to implement this phase.

5.5.1 Calvin Park/Union/Brock-Johnson Local (Route 2)

The existing Route 2 is reduced in length and concentrated to provide a service loop from the Kingston Centre through Calvin Park to St. Lawrence College, Queen's University, the downtown, and the residential areas on Brock-Johnson. Similar to the way in which the existing Route 2 functions today, this route will derive much of its ridership from students and institutional staff. Route 2 will provide local service to the Brock-Johnson corridor that is also served by Express Route 3.

5.5.2 Queen Mary/King Local (Route 3)

This route travels through the same areas as the existing Route 3 that provides local service from the Kingston Centre through the Polson Park neighbourhood to St. Lawrence College and then along King Street into the downtown. A small modification to the route is proposed through Polson Park to complement the new service added to Portsmouth Avenue by the Train Station Circuit (Route 18). Route 3 will provide local service over the segments that Express Route 1 travels on King Street and will intersect both Express Route 1 and Express Route 3 at several large transfer points.

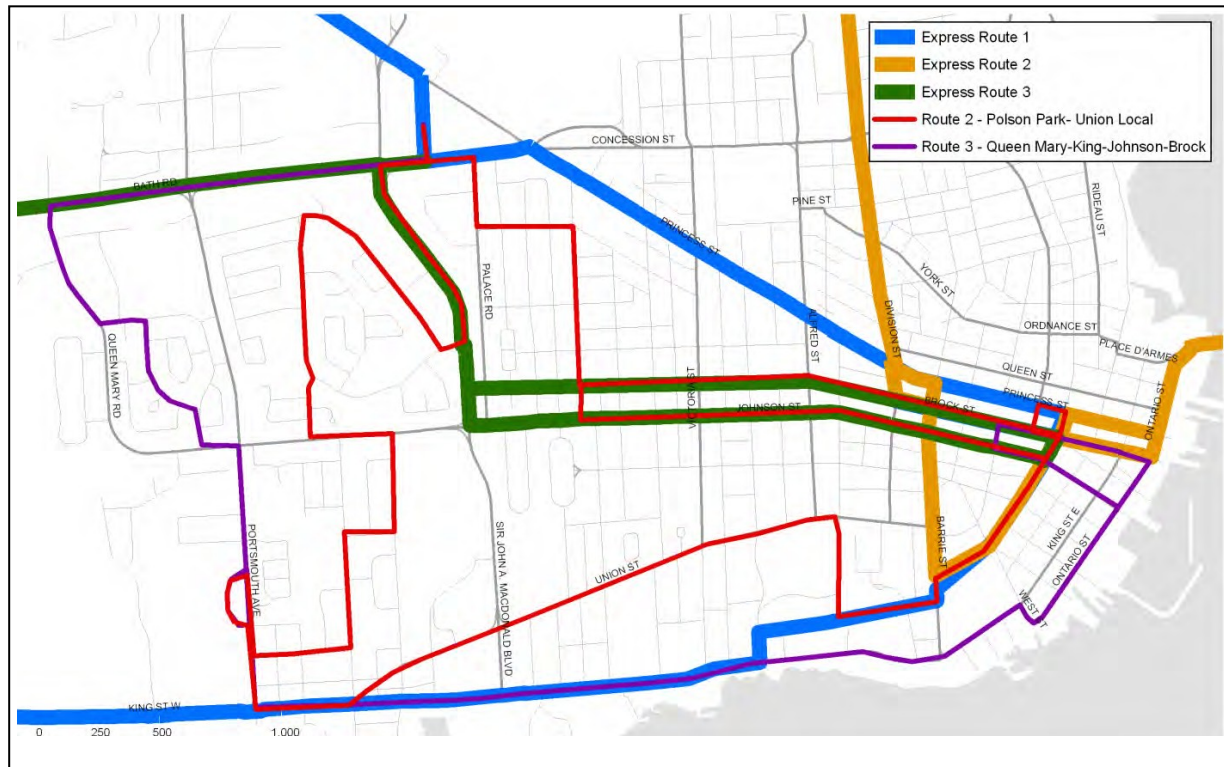


Figure 12 – Polson Park/Union Local (Route 2) and Queen Mary/King/Johnson-Brock (Route 3)

5.5.3 John Counter Local (Route 7)

Route 7 is modified from its original routing in 2010 to serve the Rideau Heights and Markers Acres neighbourhoods to replicate the service originally provided by the existing Route 2. This modification allows the Route 7 to become a true east-west connection across the north end of the city and lays the foundation of a potential future express route on the John Counter Boulevard Corridor. The western portion of the route remains unchanged from the update completed in July 2011.

5.5.4 Clyde Industrial Park Collector (Route 8)

A portion of the Route 7 is segmented off into this small collector route that provides service to the Clyde Industrial Park and Dalton Avenue. A connection at the bus terminal allows for single transfer connection for many riders travelling on local routes from the downtown and east end. West end riders are able to make a connection using the Route 7. This route can be extended in the future to provide service along Sir John A. MacDonald Boulevard.

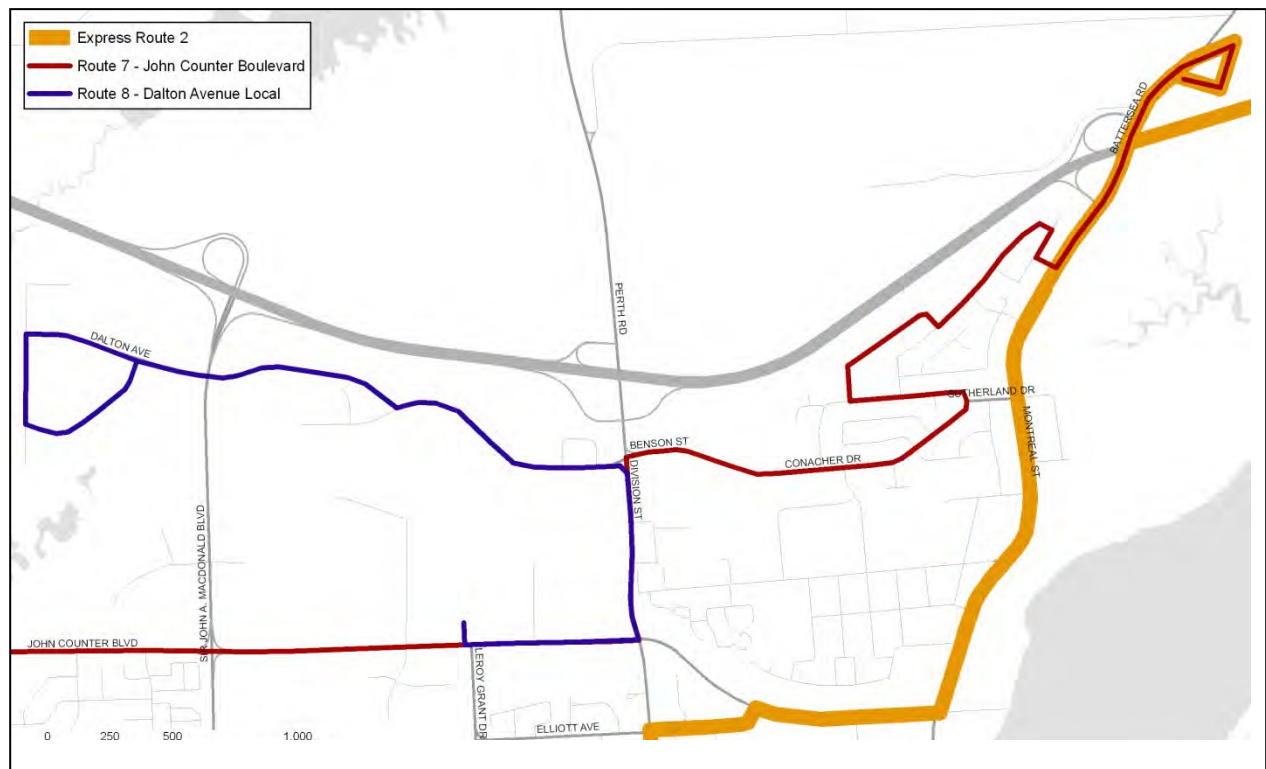


Figure 13 – John Counter Boulevard Local (Route 7) and Dalton Avenue Local (Route 8)

5.5.5 Kingscourt/Strathcona Park Collector (Route 16)

The existing Route C is modified to provide service in both directions for the Strathcona Park and Kingscourt neighbourhoods. The local service provided along Portsmouth Avenue is replaced by the Route 18. Route 16 intersects Express Route 1 on Princess Street.

5.5.6 Train Station Circuit (Route 18)

The Train Station Circuit, first introduced in September 2010, will be expanded to provide 30-minute frequency in both directions, increasing the service provided to the Train Station and Bus Terminal while also providing two-way service along Portsmouth Avenue where it currently exists in a single direction only. Route 18 is well connected to the express backbone intersecting all three routes, some at multiple locations, increasing the access to inter-city connections for all transit riders. This service also provides capacity in the student corridor along Union Street and local service on Division Street.

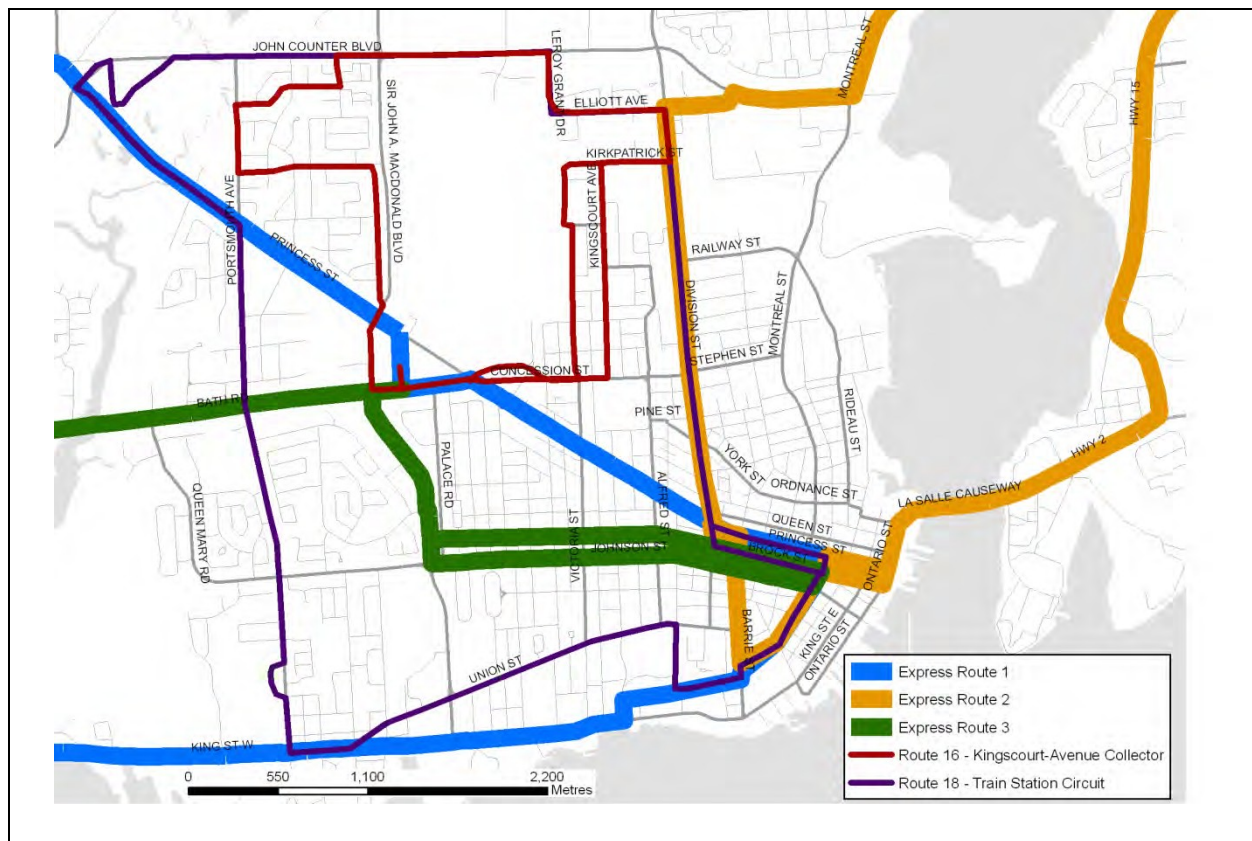


Figure 14 – Kingscourt/Avenue Collector (Route 16) and Train Station Circuit (Route 18)

5.6 Phased Implementation 2013 - 2015

This redevelopment plan outlines two major phases of route changes and service increases from 2013–2015 and lays the framework for future phases to capitalize on the express route backbone. Kingston Transit will monitor the implementation of each phase to refine the timing and routing of each subsequent phase to best align with the overall system goals outlined in Section 4.

During the redevelopment phasing, smaller service and route changes may be required to address immediate needs in the system. As areas within the city intensify and new neighbourhoods are built, the phasing proposal may need to be modified to accommodate these changes.

The full implementation to 2015 is shown in Figure 15.

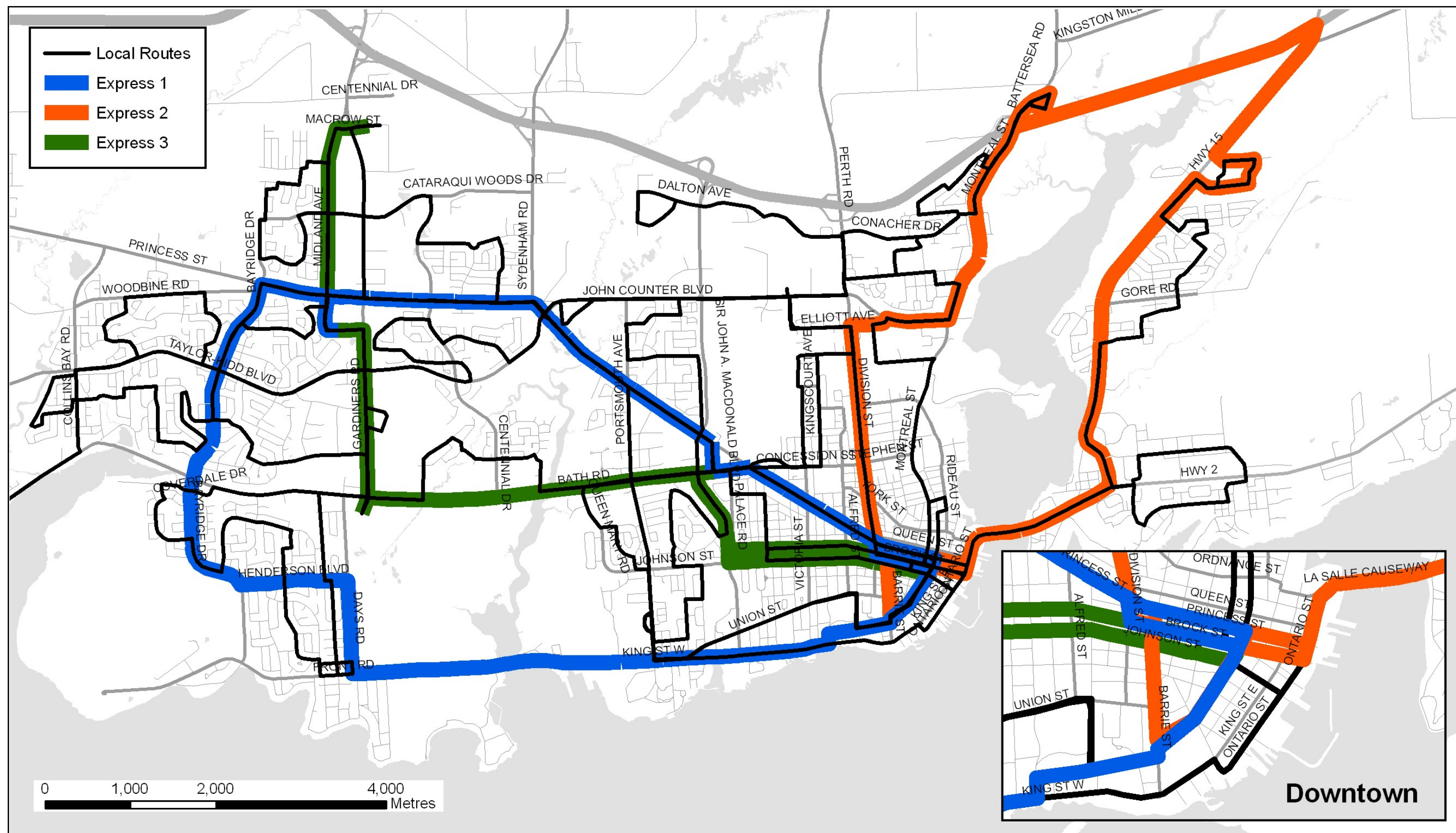


Figure 15 - Express and Local Routes Implementation in 2015

6 Service Standards

6.1 Service Frequency for Phase 1 and 2

To support the redevelopment of the routes, a new service frequency standard will be deployed with each phase. Beginning with Phase 1 in September 2013, the following frequency of service will be adopted on the routes:

Route Type	Daytime (Mon – Sat) 6AM – 7PM		Evening (Mon – Sat) 7PM – 11:30PM		Sunday 8:30AM – 8:30PM	
	Current	Planned	Current	Planned	Current	Planned
Express	N/A	15 min – extended peak 30 min – off peak / Saturday	N/A	30 min	N/A	30 min
Local	30 min	30 min	60 min	60 min	60 min	30 min / 60 min
Collector	30 min	30 min	60 min	60 min	60 min	60 min

Table 5 - Service Frequency for Phase 1 and 2

6.2 Daytime and Extended Peak Service

The express routes will operate on a 15-minute frequency during an extended commuter peak period in the morning (6AM – 9:30AM) and afternoon (4PM – 7:30PM) from Monday to Friday. This represents an overall increase of three hours of peak service a day based on the current weekday peak operating hours of 7AM – 9AM and 4PM – 6PM. During all other periods the express routes will operate on a 30 minute frequency. The extended peak hours have been selected to cover the working hours and shift changes at the City's major employers. As the implementation of Phase 1 and 2 are refined these hours may shift to better align with the needs of the riders and employers at that time.

This increase in 15 minute service coverage provided by the express route backbone builds upon the current 15-minute service area and extends this level of service into the suburban areas of the City. This increased frequency and availability is a necessary service level improvement to make transit a viable choice for new riders. This expansion of service is best illustrated by comparing our existing coverage (Figure 16) with the implementation of Phase 1 and 2 shown in Figure 17.

The redevelopment plan assumes that the daily hours of operation remain the same as currently provided (see Table 5). However, these hours and the type of service that is available will be evaluated on an ongoing basis to best meet the needs of our riders, employer partners, and the operational budget.

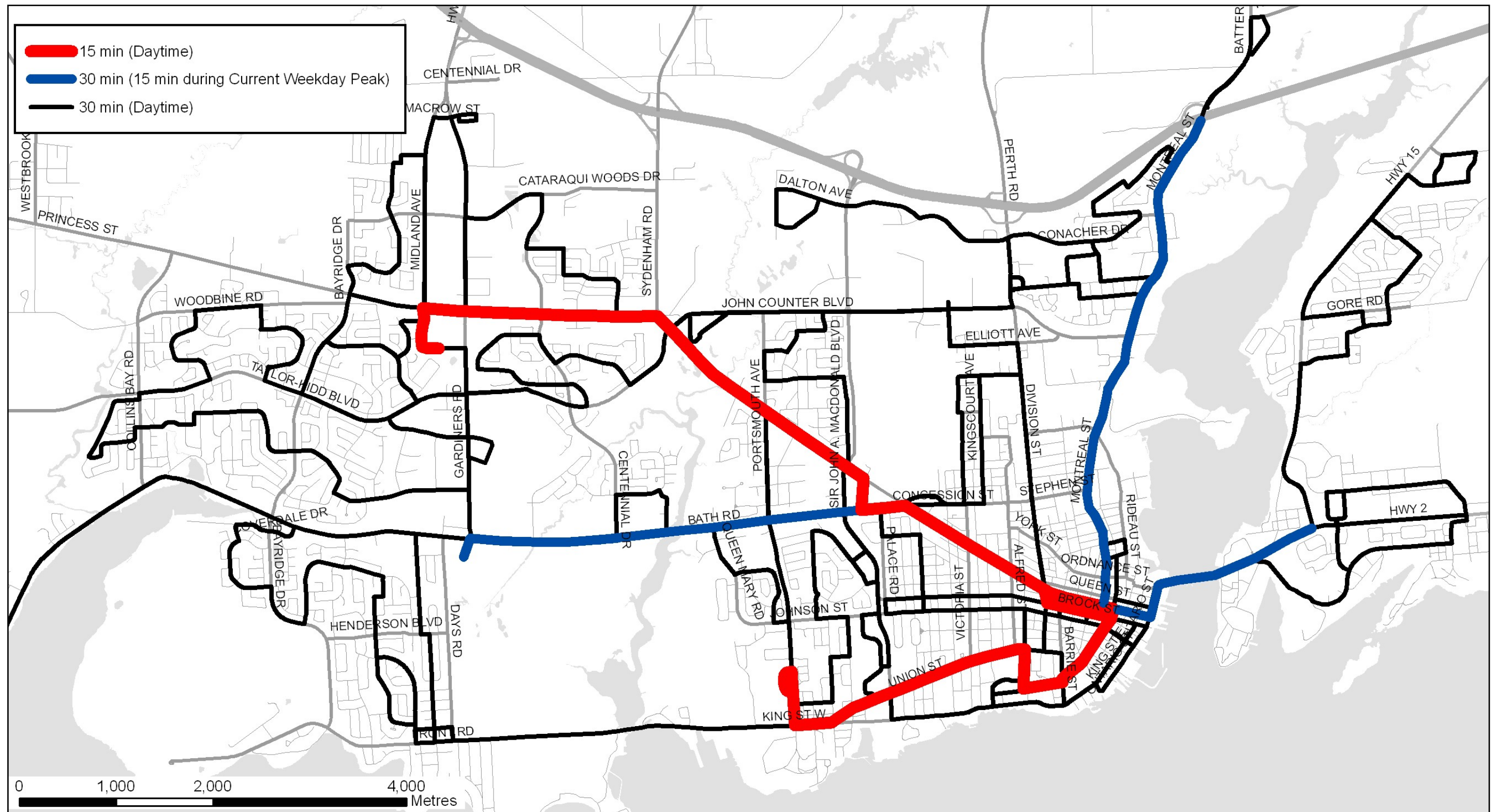


Figure 16 - Existing Frequency of Daytime Service (Monday to Saturday)

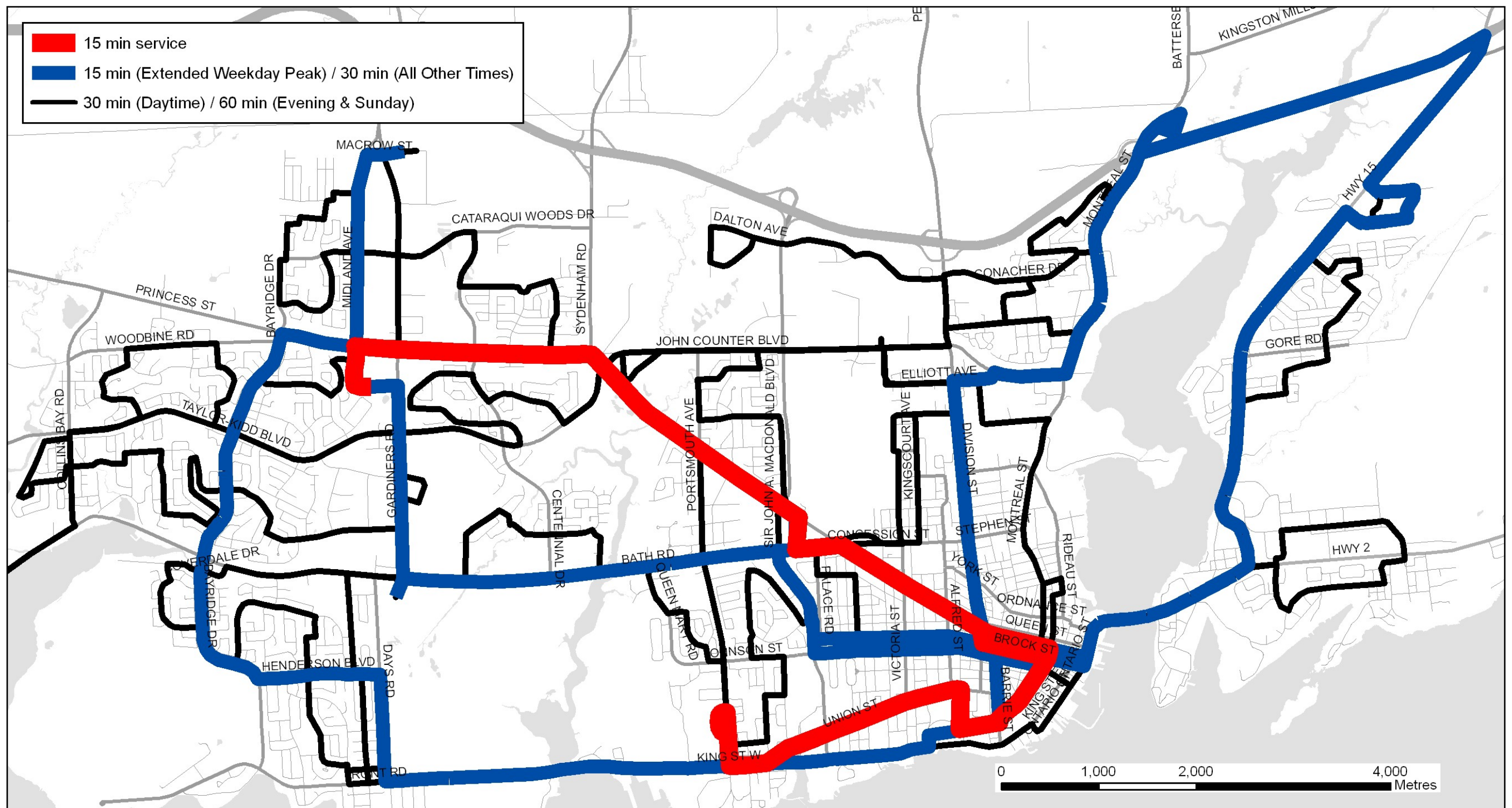


Figure 17 - Service Frequency and Coverage: Phase 1 and 2

6.3 Evening and Sunday Service Levels

Our riders often cite the infrequent evening and Sunday service, operating at a 60-minute frequency, as a major deterrent in choosing transit. The service hour models for this plan include operating the express routes at a 30-minute frequency which represents a substantial increase in the existing area served by 30-minute service during the evening and Sunday period.

Evening and Sunday riders will benefit from increased access to their neighbourhoods along the express backbone but may have to travel further from the express bus stop to their final destination if they choose not to wait for a connecting bus. Transit will monitor ridership and rider requests along the local/collector routes during the evening and Sunday hours to ensure the best balance of service is achieved.

6.4 Service Hours

The increased service hours associated with redevelopment phases 1 and 2 are outlined in Table 6.

	2011	2012	2013 (Phase 1 - September)	2014 (Phase 1)	2015 (Phase 2 - January)
Express	0	0	9,920	32,240	76,960
Local and Collector	161,742	161,742	167,503	170,768	153,062
Total	161,742	161,742	177,423	203,008	230,022

Table 6 – Projected Annual Service Hours

Within the context of these service hours transit staff will review the type of service provided on holidays to better align the service to accommodate transportation needs to and from special events that may exist on these days.

6.5 Service Frequency for Future Phases (Post 2015)

Transit recognizes that frequency of service is a major determinant in choosing to ride the bus. As ridership builds Transit will develop plans to extend the 15-minute frequency on the express routes to the remainder of the daytime, evenings, and weekends. Increasing the time period that 15 minute frequency is available on the express routes will require increased service hours however it can be accomplished within the existing bus fleet.

Service frequency will also be increased on the local and collector routes during the evening/Sunday period to 30 minute service from 60 minute service to provide riders with transit options closer to their homes and destinations.

The long term service frequency provided across the City would be similar to that shown in Figure 18.

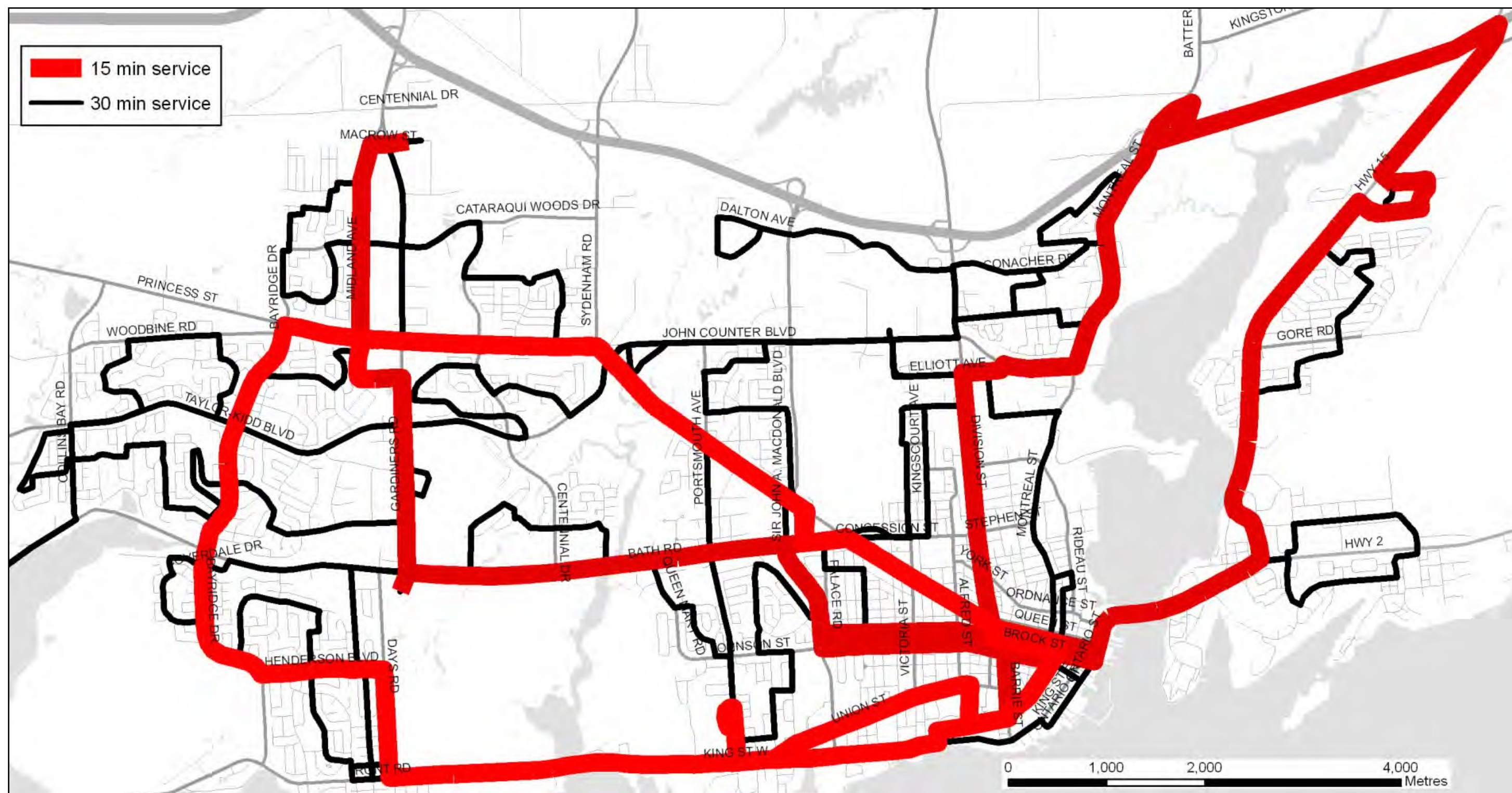


Figure 18 – Long Term Service Frequency Plan (Post 2015)

7 Transit Fleet

7.1 Existing Fleet

The Kingston Transit fleet consists of 48 buses, 36 full-size buses and 12 small-size buses. The full-size buses, which are 40 feet in length and provide seating for 32-38 people, are assigned to the main corridor routes and local routes that carry a large volume of riders. Small buses, which are 30 feet in length and provide seating for 18-27 people, are generally assigned to the collector routes that provide service to residential neighbourhoods.

The existing service level requires 39 buses to meet peak demand in the morning and afternoon, leaving 9 vehicles available as spares or an approximate 18.8% spare ratio. This spare ratio is slightly lower than the accepted industry standard of 20%, however, the phased expansion plans outlined in 7.2 results in a ratio of 19.0%.

7.1.1 Full-Size Fleet

The full-size fleet is comprised of two bus models: the Orion 6 and the New Flyer. Both models are fully accessible and are equipped with a ramp, designated areas for mobility devices, and a low-floor configuration that eliminates the step up into the bus.



New Flyer DLF40

- Models purchased from 2003 to present, 28 in fleet
- 40-foot length
- Seating for 38 people
- Low floor with no stairs
- Kneeling capability
- Ramp at the front door of bus
- Two rear-facing wheelchair areas



Orion 6

- Purchased in 1998, 8 in fleet
- 40-foot length
- Seating for 32 people
- Low floor with no stairs
- Kneeling capability
- Ramp at the front door of bus
- 2 rear-facing wheelchair areas

7.1.2 Small Bus Fleet

The small bus fleet is comprised of four models: the International 3200, Ford E450, Chevrolet 4500, and Thomas. Of the four models, only the International 3200 and Chevrolet 4500 are available for future purchase, as the other models have been discontinued. The small bus fleet is accessible with all models providing space for riders using a wheelchair or other mobility device. All models, except the Ford E450, offer a low floor configuration and deployable wheelchair ramp. The Ford E450 is a high floor model with a rear door wheelchair lift for riders that require it.



International 3200

- Purchased in 2009 and 2010, 6 in fleet
- 30-foot length
- Seating for 22 people
- Low floor with no stairs
- Kneeling capability
- Ramp at the front door of bus
- Space for 2 wheelchairs



Chevrolet 4500

- Purchased in 2010, 1 in fleet
- 28-foot length
- Seating for 18 people
- Low floor with no stairs
- Kneeling capability
- Ramp at the front door of bus
- Space for 2 wheelchairs



Ford E450

- Purchased in 2006, 3 in fleet
- 28-foot length
- Seating for 18 people
- High floor with stairs
- Wheelchair lift at the rear of the bus
- Space for 1 wheelchair
- Model no longer available



Thomas

- Purchased in 2003, 2 in fleet
- 30-foot length
- Seating for 27 people
- Low floor with no stairs
- Kneeling capability
- Ramp at the front door of bus
- Space for 3 wheelchairs
- Model no longer available

7.1.3 Fleet Lifecycle and Replacement

The average age of the fleet is 5.1 years. The lifecycle of each large bus is assumed to be 12 years with a major power train refurbishment planned at the 8-year point. The lifecycle of each small bus is assumed to be 6 years. Kingston Transit plans for the replacement of these assets within the lifecycle through regular contributions to the Transit Capital Reserve Fund from the operating budget.

Contributions to the fund are increased annually to reflect inflation and the known cost of fleet replacement. This practice of asset management for the fleet will continue for any new fleet acquired as part of Kingston Transit's redevelopment plans.

7.2 Required Fleet for Growth

The service expansion outlined in Section 6 will require an additional 15 full-size buses to deliver Phase 1 and 2 while maintaining an appropriate fleet spare ratio. The current delivery time for a full-size bus is approximately 12 months from the time the order is confirmed with the supplier. A summary of the existing fleet and expansion is summarized in Table 7.

Bus Expansion Schedule	2011	2012	2013	2014	2015
Existing Fleet	48	48	48	58	58
Expansion	0	0	10	0	5
Total Fleet	48	48	58	58	63

Table 7 - Fleet Expansion Schedule

7.3 Fuel

The City of Kingston is committed to sustainability. Our 'Green Fleet' initiative seeks to reduce the overall environmental impact of the vehicles that the city operates. To that end, the transit fleet, which is powered by diesel fuel, has adopted several measures to mitigate the environmental impact created by the operation.

- The use of low and ultra-low sulphur diesel fuel;
- Operating with a bio-diesel mix of 20% from April to October and 5% for the remainder of the year;
- Requiring all replacement and new fleet to be equipped with the latest clean diesel technology such that emissions meet or exceed existing or planned Canadian emission standards.

8 Bus Stops and Infrastructure

8.1 Main Transfer Points

Kingston Transit has six main transfer points in the existing system:

- Downtown, on Bagot and Brock Streets
- Kingston Centre
- Cataraqui Town Centre
- St. Lawrence College
- Gardiners Town Centre
- Coach Canada Bus Terminal

These transfer points have multiple routes that converge at common time points to allow riders to transfer from one route to the next with minimal delay. These locations generally have a number of larger shelters, transit information, and dedicated bus bays to allow multiple buses to dwell out of regular traffic.



Figure 19 - Downtown Transfer Point and Gardiners Town Centre Transfer Point

The express route redesign will utilize most of the existing main transfer points and also create a number of new nodes that will be upgraded to accommodate the increased transit activity. These nodes, which will provide convenient transfers between the express and local/collector routes, may include:

- Bayridge Drive at Taylor-Kidd Boulevard
- Montreal Street at 401 Park and Ride
- Days Road at Front Road
- Barrie Street at Stuart Street

8.2 Bus Stops

The existing Kingston Transit system contains more than 800 bus stops that range from curbside, accessible stops with shelters and lighting, to roadside stops located on gravel shoulders or grass boulevards. There are currently 134 shelters deployed at various stops in the city along with 97 advertising supported benches.

The hierarchy of routes (express, local, collector) introduced with the route redesign also creates a hierarchy of stops within the transit system – express, local, and collector. Each stop type has a different rider amenity requirement.

To that end, Kingston Transit is developing a set of bus stop design guidelines to create a more uniform experience for the rider and to address accessibility issues within the system. In partnership with the City's Engineering Department, Kingston Transit began piloting several new accessible stop designs in 2010. Several local and collector route stops have been upgraded as part of the planned refurbishment of roadways and sidewalks to test these new, larger designs. Highlights of the pilot bus stop design include:

- A larger 9m pad length to allow riders to step onto a hard surface at both the front and rear doors;
- A pad width of at least 1.5 m and up to 3m along the curb-side to provide sufficient space for queuing riders and maneuvering of mobility devices;
- Protected space for future shelter or bench installation;
- Requirements for linkage to existing pathways or sidewalks;
- Provision for future accessibility requirements such as tactile strips and signage.

These guidelines will be further refined to develop a stop design appropriate for each type of route. Preliminary design information about each stop type is outlined in the sections below.

8.2.1 Express Stops

Express stops will be branded to clearly identify the location and differentiate the stop from local and collector stops. The increased spacing of express route stops and higher rider use will require increased amenities. These stops will include the minimum guidelines discussed above but may also include:

- Larger shelters and seating areas that provide protection from the elements;
- Lighting;
- System information, including provisions for future real time bus arrival times;
- Bicycle Parking.

Generally, spacing between express stops will be between 900m and 1200m. This spacing allows the express route to maintain a higher frequency of service and reduce rider travel times. An example of a typical express route stop from Waterloo Ontario that includes many of these features is shown below:



Figure 20 – Example of Express Route Stop from Waterloo, Ontario

8.2.2 Local Stops

Local stops typically exist along collector and arterial roadways at locations that may be interspersed between express stops along express routes. Multiple local and collector routes may serve these stops and limit transfers between routes may occur. These stops will be located to minimize rider walking distance and to maximize the connection to the existing pedestrian/cycling network. The stops will provide a curbside pad with sidewalk connection. Local stops will be equipped with shelters based on sustained ridership and other factors such as surrounding land use, distance from other shelters, route stability, and exposure to elements. Local route stops will generally be spaced 300m–400m apart.



Figure 21 – Examples of Several Upgraded Local Bus Stops along Portsmouth Avenue

8.2.3 Collector Stops

Collector stops are typically located along suburban/low density residential areas that serve a single route and small number of riders. Curbside pads with connections to existing sidewalk networks will be provided but the length may be reduced from the standard 9m length to allow for front door use of the vehicle and maneuvering space for mobility devices. Remaining rider amenities will be minimal to reflect the lower usage of the stop. Certain collector stops may be upgraded with shelters and benches if ridership warrants the installation. Collector route stops have a general spacing of 200m–300m. This may be modified based on the pedestrian conditions along the route.



Figure 22 – Examples of Several Upgraded Collector Stops along Portsmouth Avenue and Taylor-Kidd Boulevard

8.3 Park and Ride Areas

Park and Ride areas provide options for rural and out-of-town individuals to access the transit system for trips into the urban areas of the city. These facilities, which provide free or low-cost, long-term parking, can also encourage suburban commuters who only want to use the express service to access higher density employment and commercial areas of the city.

The City of Kingston has two Park and Ride facilities:

- INVISTA Centre (10 spaces)
- Montreal Street at 401 (93 spaces) – Under Construction

The existing facilities noted above align with Express Route 2 and 3. Transit will identify additional locations for Park and Ride sites as the express routes are brought into service. Opportunities to utilize existing parking lots, similar to the setup at the INVISTA Centre, in the west and east ends will be explored to reduce capital costs, timelines, and ongoing maintenance costs. Park and Ride spots can be

added into existing surplus parking areas or be created as part of development applications that are seeking a parking supply reduction.

8.4 Transit Priority Measures

Transit Priority Measures (TPM) include both infrastructure and technology components to reduce transit travel times on corridors that are prone to traffic congestion. TPM can result in a more efficient use of the transit fleet and can make transit a more attractive alternative to private vehicles. These measures are most effective on express bus routes to ensure that the bus frequency remains consistent at all times.

A transit priority study of the Princess Street corridor from the Cataraqui Town Centre to the Kingston Centre has identified seven intersections in which TPM can be added. These measures include:

- Queue jump and discharge lanes that allow buses to jump to the front of the vehicle queue at an intersection;
- Dedicated transit signal lights, denoted by a vertical white bar, that allow transit vehicles to proceed through the intersection prior to other traffic;
- Transponders and on-board technology that allow buses to hold a green light or shorten a red light.

Construction of queue jump and discharge lanes is planned for the intersection of Princess Street and Centennial Drive in 2012. Transit will continue to explore additional TPM opportunities for other areas and coordinate this work with engineering and traffic system upgrades as appropriate. More information about the TPM technology is provided in Section 9.

8.5 Transit Site Facilities

Kingston Transit's garage and administrative facilities are located at 1181 John Counter Boulevard. The existing 30,000 square-foot facility includes:

- Outdoor storage for the existing fleet of 48 buses
- 6 maintenance bays with hoists and 1 cleaning bay
- A wash lane for exterior cleaning and fueling
- Dispatch and bus operator lounge
- Supervisory and administrative offices
- Fleet mechanic and supervisor areas

The existing outdoor storage of the fleet is problematic for reliability and cleaning in the winter months. A 2010 facility study recommended a two-phase expansion to address the existing operational concerns and provide for the long-term growth of the site of up to 100 buses.

The short term facility expansion includes a 72-bus indoor storage building and adds 1 maintenance bay and 1 dedicated cleaning bay. Funding for this short term facility expansion is approved and construction is expected to begin in the fall of 2012. This facility expansion would provide fully for the proposed Redevelopment Plan.

Long term expansion of the facility allows the indoor storage building to house up to 100 buses and reconfigures the mechanical maintenance area to provide service for future fleet expansion. This expansion is included for long-term planning purposes of the Municipal Campus at John Counter Boulevard and reserves the space within the site for future growth needs.

Facility Characteristics	Space Required (sq-ft)
Existing Facility	
Garage	20,000
Wash Lane	4,000
Administration and Operator Areas	6,000
Facility Expansion - Short Term (Construction Fall 2012)	
Provide indoor storage for existing fleet and growth for all phases of the Redevelopment Plan	41,500
Add dedicated cleaning area and increase mechanical service bays to provide for new fleet.	
Facility Expansion – Long Term (Construction 2020 – 2025)	
Provide additional storage for a fleet of up to 100 buses.	40,500
Add additional mechanical service bays to provide for new fleet.	
Long Term Requirements (100 bus fleet)	112,000

Table 8 - Transit Facility Requirements

9 Technology

A wide range of transit technologies exist that can improve system efficiency, reliability, rider experience and overall customer service. This section outlines the existing technology in place at Kingston Transit and provides the rationale and roadmap for the integration of additional technology over the life of this plan.

9.1 Existing Transit Technology

Significant investment in both centralized and on-board technology has been made at Kingston Transit in the past four years. All buses were equipped with a new electronic fare box system in 2008 and an automated next stop announcement system in 2009. Through the City's website and Google Maps, riders can also access online trip planning tools to create a door-to-door trip plan based on the scheduled transit service for a trip that day or in the future.

9.1.1 Smart Card Fare System

The electronic fare system installed allows riders to tap a credit card-sized smart card to pay their fare while boarding the bus. The smart cards, which can be loaded as a monthly pass or with a preset number of rides, also automatically store the transfer, which eliminates the paper slips that riders had to carry previously. The cards can be reloaded at a number of area vendors and the option to reload via the City's website is planned for launch by the end of 2011. Riders who participate in the Transpass employer program benefit from automatic monthly reloading of their passes with the cost being deducted by their payroll department. For riders that use cash, a transfer slip can still be printed and then scanned when boarding their next bus.

The electronic fare box reduces the need for operator fare handling allowing them to focus on customer service. The system records all of the transactions and downloads them into the transit central system when the bus returns in the evening. Data related to ridership and revenue is automatically uploaded into the central transit database. The current fare box system allows for flexible fare structures to better align to future needs and wants of the passengers.

Through the use of an on-board GPS system, the fare box also records the location of each transaction that occurs on the bus. This information is used for system and infrastructure planning to identify high use bus stops and areas where ridership is growing.

9.1.2 Next Stop Announcement System

As part of Kingston Transit's commitment to make the system accessible to all of our riders, an on-board automated next stop announcement system was installed in August 2009. The system uses on-board GPS technology to determine the next stop along the route and displays the information on an electronic sign and calls out the stop over the bus speaker system.

This technology allows riders with visual and auditory disabilities to travel with greater confidence on the system by informing them of their upcoming stop. Other riders, such as those unfamiliar with the system, travelling at night, or not seated directly by a window, also benefit from the real-time information that allows them to travel without concern for missing their stop.

9.1.3 Online Trip Planning Tools

When using a printed transit schedule, the rider must select the most appropriate route, interpret the schedule, estimate the arrival time of the bus, and plan their trip to the bus stop. Published transit schedules provide a static snapshot of the service available to the rider but can be confusing to both seasoned and new riders.

The online trip planning tools provided through the City of Kingston website and Google Maps seek to take the guesswork out of any transit journey. Once the rider provides an origin and destination, the tools can:

- Provide multiple route options including trips that minimize walking, time, or transfers between buses;
- Provide information on the closest bus stop and a map on how to get to the stop;
- Estimate arrival times of the buses at the bus stop;
- Estimate time of arrival at the destination and provide a map from the bus stop complete with walking distances.

In addition to the enhanced trip information, the tools are also updated with the latest schedule information allowing us to publish changes not reflected in the annual guide printing. These tools will be expanded in the future to provide real time bus information as the fleet adds Automatic Vehicle Location (see 9.2.1).

9.2 Future Transit Technology

Technology allows transit to run a more efficient, reliable service while enhancing the rider experience. A technology needs assessment and feasibility study will be completed in 2011 to determine the future suite of technology most appropriate for Kingston Transit. A preliminary list of the technology that will be reviewed is outlined below.

9.2.1 Automatic Vehicle Location

Automatic Vehicle Location (AVL) uses GPS transponders on the fleet of buses to communicate, in real-time, their position and speed. Real-time information about a bus or route allows the transit management to monitor the status of the network and make more informed decisions to address service issues.

Archived AVL data is very valuable for transit route planning as it allows the monitoring of run time variation, system efficiency, and issues that may be related to the type of service that is in place. This data can also be used for detailed run modeling to test new route configurations and service changes.

9.2.2 Text Based Operator Messaging and Computer Aided Dispatch

Communication between the central dispatch and buses is currently handled by a two-way, hand-operated, radio system over an open channel. Messages sent from dispatch are transmitted to all buses in the fleet even when the message is intended for a single bus operator. The system also allows the operators to communicate with each other and dispatch over the open channel.

As the number of routes and buses has increased, the ability to effectively manage the fleet using this radio system has diminished. Additionally, the radio requires the operators to use their hands while driving which will not be permitted after October 2012 under the hands-free communication legislation.

To address these concerns, transit systems are moving towards text communication systems from a centralized dispatch area. Messages from the central dispatch are sent as text messages to specific routes or buses to advise the operators about specific actions that need to be taken. Radio communication is minimized and is only available by operator request or in an emergency situation.

Computer Aided Dispatch (CAD) is a software operation tool that uses AVL to semi-automate the management of the transit system. The software monitors the location and spacing of buses on each route to determine if they are ahead or behind schedule and provides direction to the bus operator to help maintain the on-time performance of the system. Management of frequency and spacing will be particularly important for the express routes operation.

9.2.3 Enhanced Rider Information Tools

The real-time location of a bus is important for the efficient operation of a transit system but is also one of the most important pieces of information for our riders. Knowing the location and true expected arrival time of the next bus reduces a rider's anxiety and makes transit a more attractive option.

Transit will explore how information from the AVL system can be provided to riders through a variety of means including:

- Applications for smart phones, tablets and mobile devices;
- Web-based information for desktops, laptops and tablets;
- Electronic displays at major transfer points;
- Text based bus location updates.

9.2.4 Transit Priority Measures (Technology)

Technology based transit priority measures (TPM) are generally focused on reducing the delays that buses face at intersections. Technology on the buses communicates with the traffic signals along the

route either to reduce the time of the red signal or to hold a green signal longer to allow the bus to clear the intersection.

These technologies can be combined with on-road infrastructure, such as the queue jump and discharge lanes outlined in Section 8.4, to further expedite the transit service. Intersections that are upgraded with transit queue jump lanes can include specialized transit signals to allow transit vehicles a head start around normal traffic.

TPM will be generally focused along the express route corridors during the initial phases. A 2007 study of the Princess Street corridor identified seven intersections that would benefit from the introduction of TPM signal control for the transit fleet. Additional corridors along the express routes will be evaluated and included in future capital works.

9.2.5 Automatic Passenger Counting

Automatic Passenger Counting (APC) is a system that records how many riders step on or step off the bus at a certain stop. APC supplements the rider information that is gathered by the smart card fare box and provides more information about the rider volume and time of use that a particular stop is seeing. This information is useful in planning for bus stop infrastructure upgrades and amenities.

Transit systems often employ APC as a mobile system that is installed on several vehicles in the fleet. These vehicles are rotated through the system on routes that are being monitored.

9.2.6 Online Ride and Pass Purchase

Existing monthly pass and multi-ride cardholders, with the exception of Transpass holders, must visit City Hall or a sales outlet to renew or reload their pass. The smart card system can be linked to the City's existing online payment system to allow riders to complete most transactions from their computer.

This capability will be tested with regular monthly pass cards in 2011 and expanded to multi-ride and other products in the future.

10 Marketing

The service that Kingston Transit provides must be supported by a strong marketing strategy. This is particularly important for the fundamental system changes that are contained in the phased redevelopment plan and our desire to attract new riders. The following section outlines the marketing strategies to support the operational objectives and strategies outlined in this plan.

10.1 Marketing Research

Kingston Transit has very limited and often unreliable data to profile riders and potential riders of the system in terms of their demographics, transit usage patterns, and usage of other transportation choices. For example, at present, it is impossible to know with any certainty what Kingston Transit's share of 'choice riders' is (riders who are able to choose whether to drive, walk, ride a bike, or take transit). Knowing where these choice riders live and work, how they communicate and purchase, and understanding and meeting their needs is critically important to growing ridership and the success of the planned express service.

In general, research data is important as input into developing the transit system, to measure the satisfaction level of current riders, and to understand how to attract new riders. By developing a consistent framework and process for collecting this data and analyzing it at regular intervals, Kingston Transit is better able to understand and meet the needs of existing riders and attract choice riders as they change. This information will serve as a continuing basis for enhancing and refining our operations, infrastructure, services, communications, and marketing and gauging the success of the transit service with riders over time.

Kingston Transit will conduct market research in advance of the implementation of the express routes to establish a customer profile of needs, wants and behaviours to create targeted marketing strategies and campaigns. The marketing research will include the following components:

10.1.1 Demographic Research

Kingston Transit will establish demographic profiles of our current riders and potential riders, including characteristics such as family size, income, sex, age, location, and employers.

10.1.2 Psychographic Research

Kingston Transit will gather data to understand how and why transit riders and non-riders choose or not choose to use transit. This research will focus on:

- How people become aware of the service offered by Kingston Transit?
- What motivates people to try Kingston Transit?

- The perceived barriers to trying Kingston Transit?
- Why riders continued to remain committed to Kingston Transit?
- Why riders choose to leave Kingston Transit?

10.1.3 Usages and Attitudes

Kingston Transit will gather qualitative and quantitative information to determine transit usage patterns and attitudes of the transit service. Consideration will be given to riders, non-riders, employers, media, and government. Dimensions to evaluate will include:

- Service quality (speed and reliability);
- Service availability (accessibility);
- Convenience (location);
- Pricing (competitiveness);
- Competency (customer service);
- Responsiveness (problem-solving).

10.1.4 Market Research Strategies

Kingston Transit will use the following market research strategies to gather the demographic, psychographic, and usage and attitudes of our riders and potential riders. These strategies are broken down into two categories: primary and secondary research.

10.1.4.1 *Primary Research Strategies*

Primary research involves the collection of data that does not already exist, or research to collect original data. Data will be collected from the following sources:

- Fare box and smart card use;
- Transactional surveys at point of sale;
- Intercept surveys on the street, transfer points or on the bus itself.

10.1.4.2 *Secondary Research*

Secondary research involves the summary, collation and/or synthesis of existing primary research. Kingston Transit will conduct this data gathering using the following strategies:

- Annual comparison and review with other transit systems;
- Review and analysis of best practices used by other transit systems.

10.1.5 Understanding Our Riders Better

Segmenting riders by type is an effective basis for better understanding and meeting the individualized needs of each group of rider in terms of service provision and customer communication. It is broadly recognized by the transit industry that there are three major segments of transit customers:

10.1.5.1 No Immediate Access/Unable to use to Private Transportation

A proportion of riders choose transit on a regular and consistent basis because they lack immediate access to or are unable to use another form of transportation. Kingston Transit does not currently have any market research data to identify definitively how many of our riders fit this ridership profile. However, given the challenges with the existing system identified in Section 2.3, it is reasonable to assume that many current riders fit into this category and are choosing transit because they have no other transportation option available to them.

It is critically important to Kingston Transit to satisfy and retain this core group of riders, as they are the base ridership. Programs such as our monthly pass, multi-ride card, 'Fee Assistance Program' and 'Easier Access Routes' are examples of how Kingston Transit is doing this today. Therefore, the service and fare levels for this market segment must remain a high priority while we pursue new riders during the implementation of the Redevelopment Plan.

Kingston Transit will communicate with these existing committed riders during implementation to ensure they understand the changes to the transit system.

10.1.5.2 Choice Riders

Choice riders are riders and potential riders who have a choice to use public transit or use another mode of transportation, usually inferred to be an automobile, but can also including riding a bike or walking. Choice riders typically have access to or are able to use another form of transportation, if required. A primary focus of the redevelopment plan is to attract choice riders who have immediate access to the use of a private automobile.

Kingston Transit expects to attract choice riders by the implementation of express service supported by automated vehicle location (AVL) technology integrated with web and mobile communications to riders, and more informative stop signage.

Kingston Transit will communicate with choice riders using all available marketing communications means, including analogue and digital media, to support our campaign to roll out express service. The key will be to establish a two-way dialogue with choice riders to engage them and to ensure we understand and meet their ever-changing needs using all of the latest technologies such a mobile real-time communications, social media, and the Web. So-called 'traditional media' such as newspaper and radio advertising will be used to drive choice riders to purchase online or on their mobile device. As part of the research program, we will continue to gather more and better refined data about our choice riders.

10.1.5.3 Employer Groups

Large employers in Kingston play an important role in Kingston Transit's present and future. Kingston Transit offers the 'Transpass' which is an employer-provided bus pass program that makes it easy for employees to renew their transit passes at a discounted rate. Employees receive a discounted monthly pass, pay through payroll deductions, and receive a public transit tax credit.

As part of the ramp up and roll out of express service, Kingston Transit will target the largest employers currently not members of the Transpass program in order to build new ridership. Current members will be supported to encourage higher Transpass participation rates and utilization to build ridership.

10.2 Marketing Product/Service Development

The following are the product/service development strategies to support the objectives of this redevelopment plan:

10.2.1 Integration with Transportation Demand Management

Transportation Demand Management (TDM) focuses on the mobility of people and goods, not the mobility of the personal automobile.

In order to maximize results from Kingston Transit's phased redevelopment plan, express services must be executed in the context of other TDM strategies in order to maximize the ridership and in turn make the City's broader TDM strategy more successful.

Kingston Transit will implement our redevelopment plan in the context of other TDM strategies to influence if, when, how, and where individuals travel. TDM is critical to Kingston Transit achieving the redevelopment plan objective of an increasingly higher share of the modal split for transit through express service.

Kingston Transit will work with other transportation organizations, municipal planning, and engineering departments, to articulate and promote an effective TDM plan that includes transit as primary alternative modality.

10.2.2 Transit Technology and Mobile Communications

The technologies described in Section 9 converge on a mobile or other wireless communications platform to provide instantaneous and reliable performance data to meet the real-time needs of riders. When these technologies are integrated with mobile phone technology which is the most ubiquitous and fastest growing means to reach riders, this platform is a superior tool for marketing communications.

Kingston Transit will utilize integrated Web and mobile platforms, including social media and text-based applications to communicate with users in the near term. As AVL technology is made available Kingston

Transit will increase the frequency, quality and interactivity of the mobile communications with riders and non-riders alike.

10.2.3 Social Media and other Online Applications

Web and social media applications (apps) like Google, Yahoo, Wikis, Outlook, Facebook, Twitter, YouTube and blogs have changed the way people share information. Kingston Transit will explore how it can use these technologies to better serve and communicate with riders.

Best practice transit operations surveyed are already making effective use of online communications, the Web, and social media. At present, Kingston Transit has very limited presence on the Web and in social media.

Kingston Transit will work with the City's Communication department to interact with users directly while ensuring City security and communications guidelines are met. Once established, Kingston Transit will work aggressively over the course of this redevelopment plan to execute a state-of-the-art Web and social media environment to interact with people.

10.2.4 Signage

Kingston Transit's stop and terminal signage are at various levels of wear and tear and there are varying designs in use. Many bus stop locations show an inconsistent approach to stop location and sign placement. Current signs are static without the capability to provide information on routes and schedules in real-time, with continuous updates on actual arrival times and system disruptions. This electronic signage is available and is implemented with AVL technology.

Over the course of this plan, Kingston Transit will update static signage to achieve consistency and improve content on signage to make transit signs more visible and communicate more effectively. As AVL technology is implemented, Kingston Transit will install electronic signage at terminals and high-traffic stops to provide updated information to riders.

10.3 Marketing Communications

Marketing communications include advertising, branding, direct marketing, graphic design, promotion, publicity and public relations, sales and sales promotion, online, mobile and traditional forms of communications with riders and non-riders. Of particular emphasis for Kingston Transit over the course of this redevelopment plan, are the following:

10.3.1 Branding

Our brand is the identity, personality, and attributes associated with Kingston Transit in the minds of consumers. Kingston Transit does not have data on how our brand is perceived which is necessary in

order to understand how the brand should be positioned. This information will be gathered through the research process described above.

All of the best practice transit operations surveyed have implemented express services, and with the notable exception of B.C.'s Translink, have branded their express services differently. They have done so to attract attention from the public, most particularly choice riders, and to support the idea that express service is a preferable alternative to driving your automobile to work. This fresh look branding is the marketing communications component of the express services promise – smart card easy payment, new, more comfortable buses, faster commuting times, handy stops for feeder routes and convenient, smoothly operated transfer hubs.

In keeping with industry best practice, Kingston Transit will develop a brand, associated tag line and colour scheme, and other associated messaging, in advance of the express route services.

103.1.1 Current Transit System Marketing - Cost and Environmental Savings

As the new express service will not start until September 2013, Kingston Transit can begin a marketing campaign that highlights the current benefits available by using Kingston Transit. Even with the existing service challenges, Kingston Transit can continue to focus on the cost savings and environmental benefits of using public transit. Every transit operation in Canada, even those which are operating older buses and employing legacy technology, have a compelling story to tell riders and non-riders regarding personal cost savings for riders versus automobile ownership and travel and the environment savings through a reduced carbon footprint.

Until the implementation of the redevelopment plan begins, Kingston Transit will execute a marketing campaign in 2012–2013 that focuses on the positive financial and environmental benefits of using public transit. This campaign will raise awareness of Kingston Transit ahead of specific marketing campaigns for Express Route services. The use of social media will be a priority in this campaign.

Conceptual marketing materials to be included in the campaign are shown below:

- **Logo** – Figure 25 shows the logo sample developed as the basis for branding the campaign to create an instantly recognizable emblem and convey the core message of cost and environmental savings. This logo would appear on all Kingston Transit communications during the campaign, and as the emphasis shifts to express service, the logo can remain a signature on all communications to remind riders and the public of these important benefits of Kingston Transit.
- **Web and mobile communications** – Figure 26 shows an example of a revamped Web page. The Web and social media apps such as Facebook and Twitter would be the principle means of communicating and updating the message with useful content regarding fares, cost savings and environmental savings facts.
- **Newspaper advertising** – Kingston Transit will purchase newspaper advertising to support message delivery.
- **Transit advertising** – Figure 24 shows an example of an exterior bus side panel. Kingston Transit will make extensive use of this advertising space available on the buses. As well, Kingston

Transit will launch the campaign with a full bus wrap on one bus to dramatize the messaging and draw attention to the campaign.

- **Maps, brochures, and pocket schedules** – Figure 23 and Figure 25 show a sample brochure and pocket schedule that provide useful information about the campaign and for riding the system. A map showing all of the routes and pocket map schedules for each route would be available in print, and as a download from the website.
- **Public and media relations** – Kingston Transit will launch the program with a public relations campaign directed at the editorial media as described above and provide regular updates on actual savings of riders using Kingston Transit and aggregated savings of individual and employer group users on a periodic basis. With the advent of AVL technology, the level of detail and scope of the savings would provide more useful and comprehensive data to individuals and employer groups about their travel savings.



TAKE MY RIDE.

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SAVE OUR PLANET.

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SAVE YOUR MONEY.

Comparing the costs of my rides...

Cost of your ride	2 cars (2nd Street)	1 car (same brand)	No cars (all transit)
Yearly cost	\$17,484	\$10,422	\$8,264
Daily cost	\$47.90	\$29.12	\$23.87
Monthly cost	\$1,437	\$886	\$722
Yearly Kig of CO2	14,690	7,300	0
Daily Kig of CO2	40	20	0
Monthly Kig of CO2	1,200	600	0

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SAVE YOUR MONEY.
SAVE OUR PLANET.
TAKE MY RIDE.
IT'S WIN/WIN.



Figure 23 – Brochure Layout Sample



Figure 24 – Bus Exterior Advertising



Figure 25 – Pocket Schedule and Logo Sample

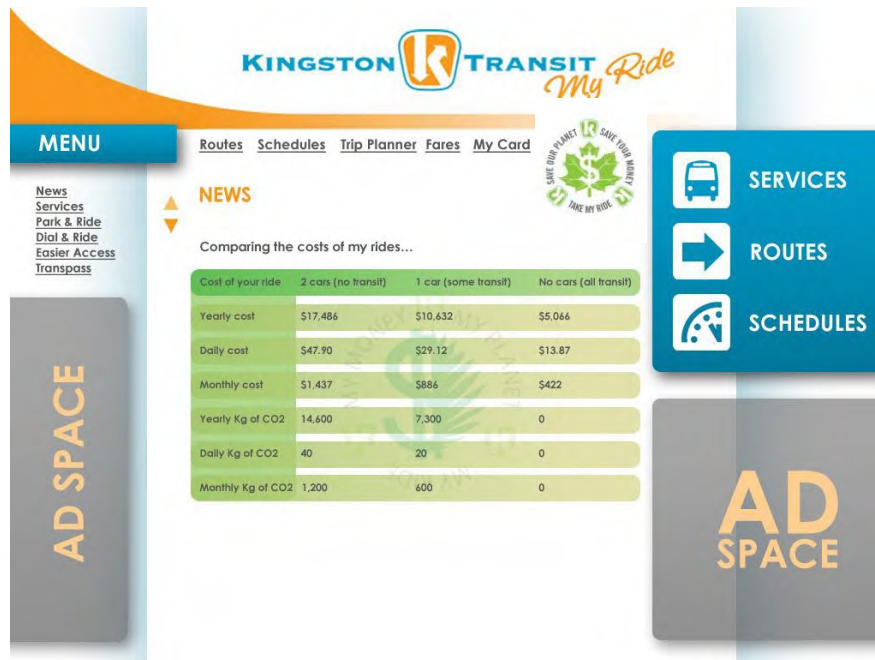


Figure 26 – Web Page Example

10.3.12 Route Redevelopment and Express Services Marketing

Kingston Transit will execute a marketing communication campaign to effectively communicate the many benefits of express services including low fares, faster speed, wider access, and greater convenience to current and prospective riders of the express service. As with the savings campaign described above, an important tactic of the campaign will be to drive potential riders to the Kingston Transit website, Facebook page or Twitter page.

10.4 Marketing Operations

Best practice transit operations surveyed who have implemented express services, have marketing personnel on staff who are deeply involved in the day-to-day business of transit marketing and administration. Given the large capital and operating investment Kingston Transit is making, the scope of marketing research and marketing communications required, and desire to effectively promote the service to new riders, dedicated transit marketing resources are fundamental to mitigating the financial risk undertaken and increase the likelihood of achieving forecasted ridership and revenue.

To that end, Kingston Transit will acquire marketing resources in order to support the achievement of the objectives in this redevelopment plan.

11 Financial Model

To address current system challenges and to realize the future benefits to the City's transportation infrastructure and overall sustainability a significant investment in infrastructure, fleet, technology, and service levels must be made. This investment in transit is a critical component of the City's transportation policy objectives and will allow more efficient use of the road and parking infrastructure that are already in place.

The redevelopment of the transit system envisioned in the goals outlined in Section 3 must be linked to an efficient and effective use of the City's resources. Operating and capital monies, fleet, facilities, and people must be deployed to provide the most productive and best service value transit system possible. To choose transit, riders must be confident that service is in place for the long term and will not be reduced or removed in the future.

To that end, Transit staff has developed a detailed financial model to forecast the expected investment in the system through 2015. This model forecasts the expected revenue, operating costs, and capital investment required to realize the first two phases of the plan and to continue funding the level of service for the long term. Financial modeling of the future phases is not included in this analysis.

This section provides a summary of the financial model in terms of the operating and capital requirements, the assumptions made in the model, and the financial indicators to reflect the increased investment from the City's tax base.

11.1 Operating

Please refer to the operating model provided in Table 9 for a summary of the revenue, costs, and contributions that Phase 1 and 2 of the Redevelopment Plan will require. An explanation of each operating section is provided with the major assumptions made in the model. Unless otherwise noted the model assumes annual inflation of 2%.

	2011 Budget	2012 Forecast	2013 Forecast	2014 Forecast	2015 Forecast
			Phase 1 Starts in September 2013	Phase 1 Full Year	Phase 2 Starts in January 2015
SCHEDULED ANNUAL SERVICE HOURS	161,742	161,742	177,423	203,008	230,022
RIDERSHIP	3,504,305	3,640,498	3,724,229	3,910,441	4,105,963
Annual Ridership Increase	2.3%	2.3%	2.3%	5.0%	5.0%
OPERATING REVENUE					
Passenger revenue	\$5,294,983	\$5,921,909	\$6,183,907	\$6,903,004	\$7,267,767
Advertising and other revenue	\$85,000	\$86,500	\$88,030	\$89,591	\$91,182
Total Operating Revenue	\$5,379,983	\$6,008,409	\$6,271,937	\$6,992,595	\$7,358,950
OPERATING COSTS					
Salaries and Wages	\$8,029,991	\$8,251,163	\$9,006,358	\$10,134,588	\$11,545,999
Fleet Costs	\$4,870,487	\$5,029,912	\$5,479,946	\$6,152,219	\$7,058,738
Services, Supplies, and Other Costs	\$725,673	\$650,600	\$794,937	\$828,007	\$851,657
Direct Operating Costs	\$13,626,151	\$13,931,676	\$15,281,241	\$17,114,814	\$19,456,394
Contribution to Transit Reserves	\$1,818,542	\$3,022,038	\$3,201,123	\$3,508,472	\$2,752,029
Total Public Transit Costs	\$15,444,693	\$16,953,714	\$18,482,363	\$20,623,286	\$22,208,423
NET PUBLIC TRANSIT COSTS	\$10,064,710	\$10,945,305	\$12,210,427	\$13,630,691	\$14,849,473
Provincial Contribution	\$2,005,018	\$2,067,476	\$2,108,825	\$2,151,002	\$2,194,022
Municipal Contribution	\$8,059,692	\$8,877,829	\$10,101,601	\$11,479,690	\$12,655,452

Table 9 – Summary of Financial Operating Model

	2011 Budget	2012 Forecast	2013 Forecast	2014 Forecast	2015 Forecast
			Phase 1 Starts in September 2013	Phase 1 - Full Year Fare Increase - January 2014	Phase 2 Starts in January 2015
FARES					
Adult Cash	\$2.50	\$2.50	\$2.50	\$2.75	\$2.75
Youth Cash	\$2.25	\$2.25	\$2.25	\$2.50	\$2.50
Senior Cash	\$2.25	\$2.25	\$2.25	\$2.50	\$2.50
Adult Multiride (10 rides)	\$21.50	\$21.50	\$21.50	\$23.00	\$23.00
Youth Multiride (10 rides)	\$16.25	\$16.25	\$16.25	\$17.50	\$17.50
Seniors Multiride (10 rides)	\$16.25	\$16.25	\$16.25	\$17.50	\$17.50
Adult Monthly Pass	\$68.25	\$68.25	\$68.25	\$71.50	\$71.50
Youth Monthly Pass	\$50.50	\$50.50	\$50.50	\$53.00	\$53.00
Seniors Monthly Pass	\$46.25	\$46.25	\$46.25	\$48.50	\$48.50

Table 10 – Proposed Fare Structure

11.1.1 Operating Revenue

Transit revenue is derived from three sources: fares, advertising, and contract revenue.

Fare revenue is based on projected ridership levels shown at the top of Table 9 and the proposed fare strategy summarized in Table 10. The following assumptions are built into the model:

- Ridership increases at 2.3% annually except during the redevelopment years where ridership increases by 5%. These assumptions are based on growth predicted in the 2009 Transportation model and transit projections for increased ridership associated with each redevelopment phase;
- Proportion of the type of fare that riders use (monthly pass, cash, multi-ride card, etc.) remains constant;
- Proportion of adult, student, youth, seniors and riders using other discounted passes remains constant;
- A fare increase occurs in January 2014 with cash fares increasing by 10%, multi-ride fares by 7.5%, and monthly pass fares by 5%. No premium is charged for riding on the express service routes;
- The pass program with St. Lawrence College and Queen's University are renewed and adjusted to reflect the increased service level.

Different fare options will be explored as transit staff gains additional information on our customers' wants and needs. Transit expects additional advertising revenue with the expansion of the service but without additional market information, this revenue has been modeled to grow with inflation only.

Based on these assumptions total operating revenue is expected to grow from \$5.4M in 2011 to \$7.4M in 2015.

11.1.2 Operating Costs

Transit operation costs are comprised primarily of labour, fuel, fleet maintenance, and asset replacement. The direct operating costs modeled assume the following:

- Salaries, wages, and benefits are forecast to grow according to the current labour contract valid through 2014;
- Staffing levels are based on proportional growth with incremental increases in service hours. These assumptions include the additional bus operators, fleet, and administrative staff required;
- Fuel is forecast to grow at 3.8% in 2011, 5% for 2012, and 2% for other operating years modeled;
- Maintenance costs for infrastructure and fleet have been increased proportionally based on the expansion plans;

The model also includes increased contributions to the Transit Capital Reserve Fund. This contribution reflects the annual cost to plan for and replace the existing bus fleet and infrastructure. This contribution increases by 3% each year to recognize the replacement of the existing fleet plus an additional contribution of 10% of the total replacement cost for each new bus added to the fleet. An additional \$1.15M is contributed to this reserve in 2012, 2013, and 2014 in preparation for the express route implementation and start-up.

Based on these assumptions the total annual public transit costs are expected to grow from \$15.4M in 2011 to \$22.2M in 2015.

11.1.3 Provincial Contribution

The annual provincial contribution is the portion of the provincial gas tax funding that Kingston Transit receives. This funding is based on a fixed amount of money from the Province that is divided among eligible municipalities each year based on population, transit ridership, and service.

For the purpose of the model, the contribution has been assumed to grow annually with inflation but the actual allocation may change depending on the available funds and developments in our peer systems.

11.1.4 Municipal Contribution

The municipal contribution is the annual operating funding required from the City's tax base. Full implementation of the first two phases of the redevelopment plan requires this contribution to grow from \$8.1M in 2011 to \$12.7M in 2015.

11.2 Capital

The redevelopment plan includes capital investment in new buses, technology, and infrastructure while also continuing investment in the existing assets. A summary of the capital expenditures is included in Table 11. This table summarizes the capital required in terms of new investment for this redevelopment plan and funds that are required to maintain the existing operation. The investment in the types of capital, such as buses, technology, and infrastructure are also outlined for each section. Funds previously committed, including the 2011 approved budget, are included for reference.

The financial model estimates total capital funding of \$24.9M will be required from 2012 - 2015 of which \$18.0M is associated with new requirements outlined in the redevelopment plan and \$6.9M is required for the existing operation.

CAPITAL - Attributed to Redevelopment Plan	Works in Progress (Previously Committed)	2012	2013	2014	2015
FLEET					
New Fleet - Full Size Buses	\$0	\$1,200,000	\$4,520,000	\$3,142,870	\$0
TECHNOLOGY					
Transit Technology (AVL, Communications)	\$0	\$3,315,000	\$0	\$0	\$0
Signal Priority	\$379,253	\$0	0	0	\$300,000
Website and Online Technology Development	\$50,000	\$0	\$0	\$50,000	\$10,000
INFRASTRUCTURE					
Bus Stop Infrastructure	\$165,351	\$250,000	\$250,000	\$250,000	\$200,000
Bus Stop Shelters	\$394,652	\$100,000	\$100,000	\$300,000	\$50,000
Downtown Terminal - Construction	\$0	\$0	\$0	\$0	\$4,000,000
SUBTOTAL - Capital Attributed to Redevelopment Plan	\$989,256	\$4,865,000	\$4,870,000	\$3,742,870	\$4,560,000
CAPITAL - Existing Operation Requirements					
FLEET					
New Transit Van	\$22,000	\$0	\$0	\$0	\$0
Replacement - Transit Full Size Buses	\$1,535,052	\$1,596,455	\$997,846	\$1,151,150	\$1,197,196
Replacement - Transit Small Buses	\$0	\$513,442	\$0	\$272,356	\$0
Replacement - Transit Vans	\$28,822	\$0	\$0	\$33,699	\$59,839
Replacement - Transit Bus Refurbishment	\$159,073	\$10,676	\$131,127	\$225,244	\$115,927
TECHNOLOGY					
Onboard Asset Replacement	\$0	\$0	\$0	\$475,000	\$150,000
Transit Technology Feasibility Study	\$550,000	\$0	\$0	\$0	\$0
INFRASTRUCTURE					
Transit Facility Upgrade (Temp Storage/Wash Lane)	\$10,100,000	\$0	\$0	\$0	\$0
Park and Ride Facility - Montreal Street	\$535,341	\$0	\$0	\$0	\$0
VIA Train station - John Counter Boulevard Upgrades	\$250,000	\$0	\$0	\$0	\$0
Downtown Terminal - Feasibility/Design	\$200,000	\$0	\$0	\$0	\$0
SUBTOTAL - Capital for Existing Operation Requirements	\$13,380,288	\$2,120,573	\$1,128,973	\$2,157,449	\$1,522,963
TOTAL CAPITAL EXPENDITURES	\$14,369,544	\$6,985,573	\$5,998,973	\$5,900,319	\$6,082,963

Table 11 – Summary of Planned Capital Expenditures

11.2.1 Capital – Attributed to Phase 1 and 2 of the Redevelopment Plan

The upper portion of Table 11 outlines the proposed capital costs associated with the redevelopment plan. The capital investment generally falls into three categories; fleet, technology, and infrastructure. A summary of each category is included below.

11.2.1.1 Fleet

The long lead-time for bus delivery requires the buses to be ordered at least 12 months prior to the start of new service. Replacement of fleet provides some flexibility as the bus slated for retirement can, in most cases, remain in service for several additional months if the orders are delayed. The capital costs associated with the fleet are based on the following assumptions:

- Phase 1 will require 10 additional large size buses;
- Phase 2 will require 5 additional large size buses;
- Buses are all full size, low-floor accessible buses;
- Cost of bus is escalated from a base 2010 quote by 4% annually;
- Funds to secure the additional fleet begin to appear in the capital plan in 2012.

11.2.1.2 Technology

Transit Technology capital includes systems that will be installed on the fleet, transit operations centre, bus stops, and online. The express routes will act as the pilot programs for real time bus location with the remainder of the fleet outfitted in the future phases. The bulk of this funding is shown in 2012 to allow for the system to be integrated into the existing operation prior to the startup of the first express route in September 2013. These costs are based on similar hardware costs installation costs at Waterloo Transit on a per bus cost. Additional cost information will be available as part of a technology feasibility study that will be completed in late 2011.

Funds associated with signal priority have been allocated to the upgrade a pilot intersection at Princess Street and Centennial Drive in 2012. This work, to be completed in partnership with the planned cycling lane and sidewalk upgrades at this intersection, will create a queue jump and discharge lane for the buses travelling along Princess Street. This pilot project will be used to evaluate future intersection improvements along the Princess Street corridor. Additional funds are tentatively planned for 2015.

Web site and Online Technology upgrades are planned to create a rider focused online portal to compliment the changes in the transit service. The initial funds committed in 2011 will focus on creating an online pass renewal program.

11.2.1.3 Infrastructure

Infrastructure investments include the express bus stops, terminal upgrades, and programs to increase the accessibility and visibility of our existing bus stops. The majority of the investment will be along the major corridors, express routes, and areas that develop as high use nodes in the future.

The final locations and design of the express route stops and shelters will be determined as part of the route planning in 2011 and 2012. Construction of these upgraded stops will begin in 2012 and the costs are based on typical shelter and bus stop construction costs from the 2010 and 2011 season. Transit staff will review these estimates and designs against the expected accessibility requirements to ensure that the infrastructure built as part of these capital programs is consistent with the new standards.

An estimate for the downtown terminal construction of \$4M is included in 2015. This estimate is based on preliminary information that will be updated as part of the downtown terminal feasibility study to be completed in 2012.

11.2.2 Capital – Attributed to Existing Operation Requirements

The lower section of Table 11 outlines capital expenditures required for the ongoing operation of the existing transit system. This capital is largely related to the replacement of the fleet and other assets at the end of life. A brief summary of each category is provided below.

11.2.2.1 Fleet

Regular, planned replacement of the transit fleet of vehicles is part of the City's asset management program. The fleet is managed to maximize the life span of each vehicle and a replacement is budgeted for in the year of its expected replacement. An additional transit van will be added to the fleet to increase on-road supervision.

11.2.2.2 Technology

The transit fleet is equipped with already equipped with a number of complex pieces of technology including the farebox and next stop announcement system. Lifecycle review and replacement funds are included in 2014 to address any end of life issues that may be developing with the existing technology.

Funds are committed for a technology feasibility study in 2011 that will develop a technology road map for transit including the upgrade and replacement of the existing communication system that is required under the Provincial Hands-Free legislation.

11.2.2.3 Infrastructure

Several transit infrastructure projects are currently underway or have funds committed as part of future planned work. The Transit Facility Upgrade will provide enclosed storage and expanded cleaning facilities for the fleet that will address current operating issues. This project is being coordinated as part of the Municipal Campus at John Counter Boulevard.

Funds have also been committed to complete the Montreal Street Park and Ride, investigate the feasibility of the downtown transit terminal, and to upgrade the transit stop at the VIA Rail train station as part of the John Counter Boulevard expansion.

11.3 Financial Indicators

Kingston Transit uses a number of indicators to gauge the impact of service changes on the financial health of the system. These indicators are summarized in Table 12.

	2011 Budget	2012 Forecast	2013 Forecast	2014 Forecast	2015 Forecast
FINANCIAL INDICATORS			Phase 1 September 2013	Phase 1 Full Year	Phase 2 January 2015
Revenue / Cost (CUTA Measure)	39.4%	43.1%	41.0%	40.8%	37.8%
Municipal Contribution (as % of Total Public Transit Costs)	52.2%	52.4%	54.7%	55.7%	57.0%
Direct Operating Costs / Service Hour	\$79.56	\$81.35	\$83.35	\$84.31	\$84.58
Total Public Transit Costs / Service Hour	\$90.18	\$98.99	\$100.82	\$101.59	\$96.55

Table 12 - Summary of Financial Indicators

Revenue/Cost measures the ratio of revenue, excluding government contributions, to the operating costs of the system. This is an industry standard measure that does not include any internal contributions to a capital reserve or operating reserve fund. A higher ratio indicates a lower reliance of the transit system on funding from the municipality.

Municipal Contribution (as % of Total Public Transit Costs) measures the percentage of total annual operating funding that the municipality is providing to the system once contributions to the various reserve funds and funding from the Province is included. A higher ratio indicates a higher reliance of the transit system on funding from the municipality.

Direct Operating Costs/Service Hour is a measure of the average annual direct cost to provide a single hour of bus service. This measure does not include contributions to reserve funds but is useful in gauging daily service hour costs largely related to fuel and labour. This measure is also used to validate the assumptions in the model to ensure the cost per hour of service is not dramatically changing year over year.

Total Public Transit Costs/Service Hour includes the contributions to the capital reserve fund and provides a more comprehensive cost per service hour calculation. The measure reflects the costs associated with fleet asset management, which is approximately 13% of the overall cost per hour of operation.

12 Performance Measurement

To realize the vision and goals of the transit redevelopment plan the performance of the system will need to be measured, evaluated, and managed over the course of the phased introduction of the changes. As part of the redevelopment plan, transit staff will develop a set of internal and external measurements to gauge performance. This section outlines service-focused measures that Kingston Transit will put in place over the course of this redevelopment plan. Some of these measurements, especially those related to market analysis or schedule adherence, will be introduced as the systems are installed in the fleet.

12.1 Rider Satisfaction

Kingston Transit exists to serve our riders so they have a convenient and reliable means to travel in the city. This suite of measures tracks how satisfied our riders are with our service.

Measure	Description	Information and System Required
Ridership	A count of the daily, weekly, and annual trips that our riders are taking on the system.	Gathered automatically through the existing fare box.
Average Trip Time	Measure of average trip time between major destinations in the city to gauge transit performance against automotive choices. Trip time reduction indicates a more viable transit option.	Developed with route modeling and tracked using AVL technology
Rider Comments	Tracking rider comments and complaints promptly and with personal contact. Address trending issues on a route or across the system.	Gathered as part of the existing city customer service system.
Number and Type of Pass Holders	Monitoring pass sales and shift of ridership from cash fare to pass holders. Pass holders generally use the system more frequently and can indicate a greater confidence in the system.	Gathered automatically through our point of sale system.
Rider Satisfaction Surveys	Route or system based surveys of riders to determine how transit can serve them better.	Part of the marketing plan development.

Table 13 - Rider Satisfaction Performance Measurement

12.2 System

The timeliness and reliability of the transit service is a major component in building rider confidence and satisfaction with the system. These measures will track the daily operational goals of the system and highlight route or system issues that are developing.

Measure	Description	Information and System Required
Schedule and Frequency Adherence	A measure of the on-time operation of the local/collector buses and the consistency of the 15-minute frequency for express buses.	AVL data gathering
Service Reliability	Tracking of runs that are missed and alternate service provided.	Gathered as part of current daily operations.
Service Availability and Coverage	Measure of the rider population that has access to the service both in areas and during various times of day.	In development with route modeling and GIS systems
Route Capacity	Real time counts of the number of riders on a bus to ensure suitably sized buses and frequency is in place.	Data required from automatic passenger counters and fare box system.

Table 14 - System Performance Measurement

12.3 Fleet and Infrastructure

Rider satisfaction is also linked to the comfort, safety, and accessibility of the bus stop they use and the bus that they ride.

Measure	Description	Information and System Required
Accessible Bus Deployment on Routes	Measure of the number of buses equipped with low floor configurations and wheelchair ramps/lifts	Gathered as part of current daily operations.
Bus Cleanliness and Comfort	A measure of the frequency of minor and major interior cleaning of the fleet	Gathered as part of current daily operations.
Accessible Bus Stop Inventory	Measure percentage of stops in system and along route with accessible bus stop Assess coverage of transit service based on accessible bus stop locations	In development with route modeling and GIS systems
Bus Stop Amenities	Number of stops with shelters, benches, lighting, and connection to sidewalk network	In development with route modeling and GIS systems

Table 15 – Fleet and Infrastructure Measurement

12.4 Financial

The transit redevelopment plan is based on a comprehensive financial model. These measures allow transit to track adherence to the annual budget and the longer-term model to ensure that service level can be maintained.

Measure	Description	Information and System Required
Passenger Revenue	Track growth by rider type and location against financial model.	Gathered automatically through the existing fare box.
Contract Revenue	Track contract service rider usage by type and location against financial model.	Gathered automatically through the existing fare box.
Advertising Revenue	Track against financial model.	To be developed with marketing model
Operating Expenses	Track costs according to budget line items and financial model	Completed as part of monthly/annual reporting
Capital Expenses	Track costs according to budget line items and financial model	Completed as part of monthly/annual reporting
Cost per Service Hour	Indicator of full costs, including capital replacement funding, required to operate one hour of service with one bus.	Completed as part of monthly/annual reporting
Revenue/Cost Ratio	Indicator of cost of operating the system borne by the rider versus the tax base.	Completed as part of monthly/annual reporting

Table 16 – Financial Performance Measurement

13 Conclusion

The transit system in its current form has been stretched beyond capacity and faces systemic issues that impact both reliability and its ability to compete with the automobile. This Redevelopment Plan introduces a new model for the operation of transit in the City. It fundamentally changes the way in which the service is provided and will allow us to grow and enhance the system in the future to meet the City's transportation needs.

The three express routes will create a backbone of service across the urban area of the City that significantly increases the system frequency and reduces travel time for our riders. The backbone will address the systemic issues faced today and also creates the framework for future expansion of local service and integration with other transportation modes. Additionally, the phased introduction of the express routes provides flexibility in how the service is implemented to best address the needs of the riders. As the ridership grows, the 15-minute express service currently planned for the weekday peak periods can be expanded within the existing fleet without additional capital investment.

This investment in service will be complemented with upgraded, accessible stops and shelters that will make waiting for the bus more pleasant and encourage people to add an active transportation component into their daily trips. Real time bus location and arrival information will help riders plan their travel in a more efficient and convenient manner.

When fully implemented the system will be faster, more frequent, more reliable, easier to use, and will provide an enhanced transit experience when compared to the existing system. Creating a more viable transit system is a key requirement in achieving the goals of the transportation demand management, active transportation, and sustainability policies of the city. This Redevelopment Plan will allow Kingston Transit to position itself as a true alternative transportation option in the City.

Engaging students to increase public transit ridership

A guide for using city-school partnership to inspire youth to choose sustainable transportation.



Source: Randy deKleine-Stimpson / ftd.ca



Acknowledgements

This guidebook shares the story and lessons learned from the City of Kingston, ON, and its Transit High School Bus Pass Program. The information is based on one of several programs operating in Kingston. A crucial partnership between the City of Kingston, Kingston Transit and Limestone District School Board played an instrumental role in the creation of the program.

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The FCM's Green Municipal Fund™ (GMF) supports initiatives that advance innovative solutions to environmental challenges. These projects improve air, water and land quality, reduce greenhouse gas emissions, and generate economic and social benefits to local communities.

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Engaging students to increase public transit ridership

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About this guidebook

This is a free resource that provides step-by-step information and tools for building an effective partnership between municipalities and local school boards to issue free bus passes to high school students and provide public transit orientation sessions.

The guidebook includes:

- ▶ Background information on the City of Kingston's Transit High School Bus Pass Program
- ▶ A step-by-step guide to implementing a similar program in your community



At a glance: The Kingston High School Bus Pass Program

Watch [these videos](#) to get to know the program that serves as the case study for this guidebook:

- ▶ Sustainable Communities Award Winner
- ▶ How to increase bus ridership by 70% in your city

Read through [these resources](#) for a program overview.

Additional resources

Media and the news: Check out [articles and stories](#) on Kingston's system.

Research: Examine the [Master's thesis that investigates how the program influenced transit ridership and households' ability to meet their transportation needs](#).



Frequently asked questions

Visit our FAQ section for [everything you need to know](#) about Kingston's program.

Templates and forms

Work with these templates to develop a transit orientation program for youth in your city:

- ▶ [School outreach email message](#)
- ▶ [Information letter and permission form](#)
- ▶ [Transit registration form](#)

1

Case Study: The Kingston Story

The Kingston Transit High School Bus Pass Program

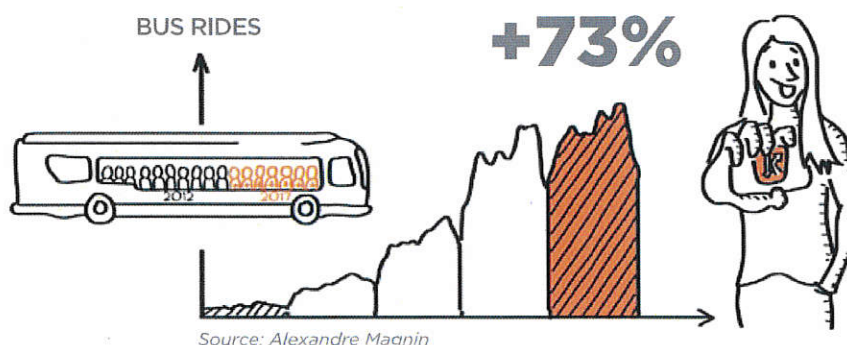
In 2012, Kingston City Council approved a pilot project that provided grade 9 students with fully subsidized transit passes. Today, all high school students in Kingston receive free transit passes, along with an on-bus orientation session to teach students how to ride the bus.

In the program's pilot year, students accounted for **28,000** rides, and that number has grown to over 600,000 rides annually (**10 per cent** of Kingston Transit's total ridership).¹ Since the launch of the Transit High School Bus Pass Program, overall transit ridership has increased by **73 per cent**.²

The Kingston Transit High School Bus Pass Program contributes to overall ridership growth, provides a meaningful alternative mode of transportation for youth, and influences behavioural change for a more sustainable future.³

The program is the co-winner of the Federation of Canadian Municipalities (FCM) 2018 Sustainable Communities Award (SCA) for transportation, and received FCM's inaugural Inspire Award, celebrating sustainability, innovation and creativity ([visit FCM's Sustainable Communities Awards page for more information](#)).

**How to
increase
bus
ridership?**



IN KINGSTON (2011)

30%

of GHG emissions came from transportation⁴

71%

of commuters drove to work alone⁵



Source: Kingston Transit

Overview of Kingston Transit High School Bus Pass Program

Program elements

- ▶ Partnership between City of Kingston and local school boards
- ▶ Fully subsidized transit passes at no cost for all high school students (21 years and under)
- ▶ On-site distribution and renewal of transit passes using a mobile printer at high school locations
- ▶ On-bus transit orientation to teach students how to ride the bus and the many benefits of choosing public transit
- ▶ Smart card technology gathers quality ridership data

Objectives

For the city:

- ▶ Educate the next generation of commuters to make more efficient and sustainable choices in transportation
- ▶ Encourage long-term public transit ridership
- ▶ Anticipate and envision the emerging future city

For the school boards:

- ▶ Increase affordability of field trips and cooperative education
- ▶ Encourage community integration and experiential learning

Program benefits

- ▶ Promotes social equity by providing all high school students with free access to public transit
- ▶ Improves quality of life for students through increased access, opportunity, choice and freedom
- ▶ Increases affordable access to cooperative education and experiential learning
- ▶ Generates cost savings and more efficient delivery of co-op, field trips and community education programs
- ▶ Reduces greenhouse gas (GHG) emissions, improves air quality and reduces congestion

How Kingston's program started

The City of Kingston and local school boards created the Transit High School Bus Pass Program together. It all started in 2012, when Kingston City Council chose to give grade 9 students fully subsidized transit passes as a positive step toward a more sustainable future. At the time, Kingston Transit staff discovered that several barriers were preventing students from using a free transit pass, such as not knowing how to use the transit system, not knowing where or how to pick up the pass, and having no experience riding the bus. The solution? Transit orientation sessions to teach students how to ride the bus.

This program is low-cost and uses existing technology but requires **strong partnerships and willingness** to work with local school boards and students to reinforce incremental, positive change.

Program overview

At a glance

- ▶ The City of Kingston gives students in grades nine to 12 free access to Kingston Transit through the Transit High School Bus Pass Program.

- ▶ The fully subsidized passes are distributed on-site at schools along with a transit orientation session.
- ▶ The on-bus orientation introduces students to the bus, the transit system and proper rider etiquette.

Audience

- ▶ High school students 21 years or younger.
- ▶ Includes students from schools governed by all school boards (public, Catholic, French-language and private) as well as those receiving home-based education.

Purpose

- ▶ **Empowerment** — Youth learn how to ride the bus and build the skills, tools and confidence to explore public transit.
- ▶ **Encouragement** — Youth experience the social, economic and environmental benefits of using public transportation.
- ▶ **Confidence** — Riders gain practical experience taking the bus in a safe environment.
- ▶ **Independence** — Youth gain independent mobility at no financial cost.

Shared value for cities and school boards

- ▶ Address climate change
- ▶ Grow or improve the transit system
- ▶ Manage the cost of moving students
- ▶ Promote social equity
- ▶ Increase experiential learning
- ▶ Grow and attract new long-term riders

2 How Kingston's program works

Context

The City of Kingston

Kingston is a dynamic city located along Lake Ontario. It is the second-largest city in Eastern Ontario, with a population of 161,175 (as of 2016).⁶ Twenty-one per cent of the population (about 34,000) is under the age of 20, representing a large demographic group for the Transit High School Bus Pass Program.⁷

Kingston Transit

Kingston Transit operates under the Corporation of the City of Kingston. It provides public transit service to the urban areas of Kingston and local service to the neighbouring rural community of Amherstview. As of 2018, Kingston Transit operates 21 routes, including four express routes and three seasonal routes.⁸

Years of investment have made Kingston Transit the fastest-growing public transportation system in Canada.⁹ Since 2011, the City of Kingston has approved several transit service expansions, as laid out in the Kingston Transit Redevelopment Plan (2011-2015),¹⁰ Kingston Transportation Master Plan (2015),¹¹ Kingston Strategic Plan (2015-2018),¹² and Kingston Transit's 5-year Business Plan (2017-2021).¹³ Total ridership has increased by over 73 per cent since 2011 — the highest degree of ridership growth in any Canadian city.¹⁴ Kingston Transit's annual ridership continues to grow, with over six million rides per year and counting.¹⁵

Transit policy context



Source: Kingston Transit

2011-2015	2017	2015-2018	2017-2021
Kingston Transit Redevelopment Plan	Kingston Transportation Master Plan	Kingston's Strategic Plan	Kingston Transit 5-year Business Plan
<ul style="list-style-type: none"> ▶ 3 new express routes ▶ 15 new routes ▶ Redesign of existing routes ▶ Investments to enhance rider experience and efficiency 	Strategic vision to increase transit ridership during daily peak travel times	Strategic priority to create a livable city by expanding and improving public transit	Strategic priority to increase peak transit rides by 15% by 2021



Kingston school boards

In Kingston, Limestone District School Board (LDSB) and Algonquin & Lakeshore Catholic District School Board (ALCDSB) educate the majority of students in the community.

LDSB

19,000+
students

57
schools

8
education
centres

ALCDSB

11,000+
students

37
schools

5
adult learning sites

Transit fares (2018)¹⁶

Free access to transit increases demand, resulting in a need for increased service frequency. In turn, increased service frequency makes public transit a more attractive option for paying riders.

Kingston transit fares (2018)

Fare group	Per ride	Monthly pass
Child (0-14)	Free	Free
High school student (15-21)	Free	Free
Youth (15-24)	\$3	\$56.50
Adult (25-64)	\$3	\$76
Senior (65+)	\$3	\$56.50

Program team

Partnership is critical to the success of this program. The diverse members of the program team all contribute to the successful uptake of the program across the City of Kingston, Kingston Transit and the school boards. It is important to note that stakeholders will vary from community to community. In Kingston's experience, the three main roles that team members have played are as program initiators, operators and champions ([see Appendix D for more information on Kingston's program team](#)).

Program initiator

The program initiator has an essential role in kicking off a new project to meet the needs of a target group. The first steps involve working with various stakeholders to build momentum around the project. This includes defining the program's overarching goals and benefits for the community. One of the major strategic responsibilities is to garner political support for the program.

Program operators

To ensure successful implementation, it is important to have committed individuals both at the municipal transit authority and in the school board(s).

The director of transportation and several marketing administrators with Kingston Transit engaged and empowered their staff to launch this program. These staff members are critical to the delivery of the program, as they:

- ▶ assist with the coordination of school visits
- ▶ provide a mobile printer for on-site pass distribution at school
- ▶ book a bus and driver for on-site orientation
- ▶ communicate with the public
- ▶ schedule and prepare passes for school visits

At the school board(s), team members were responsible for:

- ▶ communicating with schools about the transit pass program
- ▶ preparing logistics for on-site orientations and pass distribution at all schools within respective school boards
- ▶ running the orientation for the students
- ▶ working closely with the school boards' communications teams on external communications

Program champions

Program champions are key to successful implementation and can be any individuals that support the program. They can be city council members or school board trustees, or they can belong to a community organization. In Kingston, the program champion supported the program from inception to delivery.

Resources

Financial considerations

Providing high school students with access to fully subsidized transit passes costs approximately \$250,000 per year. The costs are offset in part by a combined contribution of \$60,000 from the two school boards (LDSB and ALCSB) and an additional \$100,000–125,000 from the Ontario Gas Tax Fund for each year of the program. The City of Kingston receives provincial gas tax funding based on population and transit ridership. As population and ridership grow relative to other Ontario municipalities, gas tax funding also increases.¹⁷ Ongoing funding from other sources is required to fill the funding gap, which ranges between \$65,000 and \$90,000 annually, currently paid by Kingston Transit.

For Kingston, securing external funding for the Transit High School Bus Pass Program did not determine whether the program would go forward. Implementing the program was driven by political leaders who chose to invest in educating the next generation of city commuters to make better use of transit for a more sustainable future.

Staff capacity

Staff capacity and staff time allocation are key to running the program successfully. For this program, the following staff resources are required:

Staff	Responsibilities
Transit representative (marketing/administration staff)	<ul style="list-style-type: none"> ▶ Takes photos and prints passes on-site for students
Transit operator	<ul style="list-style-type: none"> ▶ Drives the bus during orientation
Transit authorities	<ul style="list-style-type: none"> ▶ Provide a mobile printer for on-site pass distribution ▶ Book a bus and driver for on-site orientation ▶ Assist with the coordination of school visits
Program champion	<ul style="list-style-type: none"> ▶ Generates templates for information letters and field trip forms, and provides transit registration forms ▶ Works with each school to coordinate the schedule for the orientation session(s) ▶ Sets up site locations for pass distribution ▶ Delivers on-bus presentations for transit orientation ▶ Works with school board's communications department and media outreach ▶ Manages requests and questions regarding the program
School point person	<ul style="list-style-type: none"> ▶ Provides materials for orientation set-up (tables, chairs, extension cords, etc.) ▶ Assists with coordination and set-up of orientation
Teachers	<ul style="list-style-type: none"> ▶ Accompany classes and bring students to orientation to get their passes

Kingston's Field Trip Pass

In 2017, the City of Kingston launched the Kingston Transit Teacher Field Trip Pass Pilot to complement the Transit High School Bus Pass Program. This program is available for all students from junior kindergarten to grade 12 and provides free access to Kingston Transit for school field trips.

The purpose of the program is to reduce the cost of field trips, encourage experiential learning and encourage future transit ridership.

Build momentum with a field trip pass program

Start the relationship. The Field Trip Pass is a great way to start the relationship between transit authorities and local school boards. Consider also other organizations or members of the community that could benefit from the partnership (e.g. cultural services, extracurricular sports teams, community organizations).

Eliminate barriers. The program teaches both students and teachers how to use the bus and navigate the city. If teachers do not normally take the bus, the field trip pass is a great way to promote experiential learning for students and teachers with clear communication and support from Kingston Transit. The design of the field trip pass program eliminates several steps for the teacher in planning field trips (e.g. booking a yellow bus, collecting money, subsidizing costs for students, paying the invoice, and rolling loose change).

Save money. In Kingston, children 14 years and under ride public transit for free. Other than the annual administrative fee, there are no additional costs per field trip.



Source: Limestone District School Board

How does it work?

- ▶ Public transit is identified in the field trip permission form for students as the method of transportation.
- ▶ Field trip passes for teachers and chaperones are available on lanyards in the main office of each school.
- ▶ Only one pass is required per class, regardless of the number of chaperones, aids, volunteers, etc.
- ▶ A transit point person is available via email or phone to assist teachers with route planning beforehand.

Benefits

- ▶ Reduces the cost of field trip transportation
- ▶ Reduces the administrative burden of organizing travel for field trips
- ▶ Allows schools to have more field trips
- ▶ Increases the number of transit rides off-peak
- ▶ Trains riders and creates exposure to transit at an earlier age
- ▶ Improves access to cultural and educational facilities, increasing the use of those facilities

Kingston's program timeline

2012

Program launch for **grade 9**

- ▶ Project initiated by former mayor Mark Gerretsen
- ▶ Launch of one-year pilot for grade 9 students attending high schools in Kingston from LDSB and ALCDsB (subject to annual review)
- ▶ Students travel to city hall or Cataraqui Mall to pick up passes

2014

Program extension to **grade 11**

- ▶ Council decision to extend the program to all grade 11 students from LDSB and ALCDsB
- ▶ Subject to continued \$30,000 combined contribution from both school boards

2016

Three-year program extension

- ▶ Council decision to continue student transit pass program on a pilot basis for another three-year period
- ▶ Subject to combined contribution of \$60,000 from the two school boards

2013

Program extension to **grade 10**

- ▶ Council decision to extend the program to all grade 10 students from LDSB and ALCDsB
- ▶ Subject to \$30,000 combined contribution from both school boards
- ▶ **First on-site pass distribution and transit orientation at high schools**

2015

Program extension to **grade 12**

- ▶ Council decision to extend the program to all grade 9–12 students in **all school boards** (public, Catholic, French-language and private) as well as those receiving **home-based education**
- ▶ Subject to \$45,000 combined contribution from the two school boards
- ▶ Council decision to assist graduating grade 12 students' transition to paid passes by providing an additional four months of free transit access after graduation

2017

Launch of field trip pass

- ▶ Introduction of **Kingston Transit Teacher Field Trip Pass Pilot** (see [Field Trip Pass section](#))
- ▶ Generates cost savings for school boards, encourages experiential learning, and increases efficiency of program delivery

3 Setting up your program: **Working with schools to train ridership**

“Providing passes to students is a great opportunity to encourage ridership as we continue to make transit service improvements.... Through a partnership with our local school boards, we can continue and expand this project to encourage young people to get on board.”

— FORMER MAYOR MARK GERRETSEN (2013)

Chapter at a glance

- ▶ Set up a rider training program and grow long-term ridership
- ▶ Determine possible funding sources
- ▶ Craft your narrative to create value for your community
- ▶ Design the program to meet your community's needs

Six key stages to setting up your program

This chapter will walk you through the six basic stages of setting up your program. It is important to remember that the process laid out here is only a guideline. It assumes that communities do not currently have an existing partnership with local school boards. Municipalities should adapt the program to match their resources and needs. Although the decision to offer free transit passes to high school students in Kingston is unique, the explicit need for orientation, education and awareness applies to all communities.



CONNECT

Build new relationships and create strong partnerships to build your team



PRIORITIZE

Create a shared vision and prioritize benefits to make the case for action



DESIGN

Design your program to match the unique resources in your community



IMPLEMENT

Work together to implement the program and deliver the transit orientation



EDUCATE

Educate and inspire students about the benefits of riding public transit



SUSTAIN

Learn how to measure and report your results and share the story with others



Source: Rob Mooy

STAGE 1: **Connect**

Build new relationships and create strong partnerships to build your team

Define your challenge

Before starting, assess your community's needs and willingness to participate in a student transit pass program.

What is the particular challenge your community wishes to address? Use this to define what success looks like on a variety of time horizons and for different target audiences.

Imagine new partnerships

In order to deliver your program, you will need to identify key stakeholders who should be involved in the process and make a plan for how you will engage them. It is important to map key stakeholders to understand their unique perspectives and create narratives and program design elements to engage them effectively. All stakeholders will have different perspectives on the risks and rewards of your program. Your objective is to understand their concerns and consider those concerns in your design.

Map your stakeholders. Consider other organizations that may have an interest in, or influence on, the program.

Meet multiple objectives. Consider the priorities of other stakeholders and how to meet multiple stakeholder objectives (e.g. growing transit ridership).

Key stakeholders to consider in your program design:

- ▶ City council
- ▶ Transit authority
- ▶ School board(s)
- ▶ School staff
- ▶ Students
- ▶ Community organizations

TIP

Consider how you can form a partnership between your municipality and local school boards to initiate this program.

“It is especially important every year to inform staff at each school. This includes principals, vice-principals, teachers, educational assistants, or early childhood educators. It is a very large, somewhat transient system and there should be no expectation that they know about the intricacies of the program.” – DANIEL HENDRY, PROGRAM CHAMPION (2018)

Examples of engagement strategies in Kingston:

- ▶ Marketing posters (art collaboration with students)
- ▶ Bus wrapping collaboration with local art students
- ▶ Information letters and permission forms
- ▶ School presentations

Build relationships and engage partners

Every successful program brings together different perspectives, needs and opportunities. **Start with the political will and a core group whose interests align with the program, then expand outwards.**

From your stakeholder map, assess and consider the desired level of engagement for each stakeholder. Will you want to inform, consult, involve, collaborate or empower them? The key idea here is to identify the different types of partners you will need, and then start to build relationships with them.

In Kingston, former mayor Mark Gerretsen initiated the program and brought together key decision-makers from city council and local school boards to offer grade 9 students free access to Kingston Transit. From there, they engaged school and transit staff, and identified a program champion to carry the program forward.

TIP

Consider other groups or organizations that would benefit from increased student mobility, like sports leagues, employers and volunteer organizations. Engage them and seek their support.

Identify engagement strategies by considering the interests of stakeholders:

- ▶ Can you identify the champions that already exist in your community and get them involved?
- ▶ Do any collaboration points already exist that you can build on?
- ▶ What is your current relationship with these stakeholders?
- ▶ What are the potential areas where you could collaborate?
- ▶ Could this opportunity complement any other initiatives in the community or region (e.g. municipal recreation program)?
- ▶ Are there external funders that may be interested in supporting this opportunity?

Questions to consider before creating a strategic partnership:

- ▶ Why do you want to form a partnership?
- ▶ What benefits do you hope to see from a stronger relationship?
- ▶ By working together, can you provide significant benefits for each partner or the community as a whole?
- ▶ Are there advantages to pursuing this opportunity together rather than separately?

Build a strong partnership

Mutual respect, shared value and trust form the basis of a strong partnership. Effective partnerships bring together the capabilities and resources of stakeholders to address a common goal. Forming a strategic partnership between the city and school boards in your community will be the foundation of your transit program.

The partnership between the City of Kingston and local school boards is informal — there is no formal or legal agreement between the organizations, which allows the staff to be nimble. However, this model may not work for every municipality.

Get your partners on board by establishing the relationship. There are many ways to formalize a partnership—for example a partnership action plan, memorandum of understanding (MOU), contract, council resolution or another form of written agreement.

Staff your program and build your team

In Kingston's experience, there are three main clusters of team members: the initiators, the operators, and the champions.

As you move through to implementation, build your team to broaden your knowledge base, develop relationships and support successful implementation. Consider the type of members you need on your team to initiate and carry the program forward. This could differ from community to community.

Identify a program initiator. Identify the person who will kick-start the project. This is not a formal role within the team, but this individual will be responsible for bringing together the right people to initiate the program.

Identify a point person from the transit authority and one from the school board. To ensure successful implementation, it is important to involve committed individuals from both the municipal transit authority and the school board.

- ▶ The role of the transit point person is to assist with student orientation by providing a bus and transit operator and coordinating the logistics of pass distribution.
- ▶ The school board point person is responsible for communicating with schools to organize and run the orientation.

See Section 2 [for more information on roles and responsibilities.](#)

Find a champion...or champions. Program champions are the key to successful implementation. They act as the main advocates for the program. Champions can be anyone supporting the goals of the program — a councillor or mayor, a community member or business owner, a school principal or school board trustee. They play an integral role in carrying the program through implementation by offering support and assistance to overcome challenges or obstacles, and by championing the benefits of the program to other stakeholders.

Questions to consider when assembling your team:

- ▶ Is there someone at each school location who already has an interest in the initiative?
- ▶ How can you use existing staff resources from transit and the school board to support this program (e.g. marketing/administrative personnel)?



STAGE 2: Prioritize

Create a shared vision and prioritize benefits to make the case for action

To succeed, partners need to combine their efforts to achieve shared goals. Build support for a program in your community by understanding the benefits, aligning the interests of key stakeholders, and making the case for action.

Program benefits

Social	Community	Economic	Environmental
<ul style="list-style-type: none"> Promotes social equity Encourages involvement in extracurricular activities and recreational programs Promotes travel independence and confidence Fosters skill development Encourages experiential learning Increases access to year-round volunteer, co-operative education and employment opportunities Improves quality of life through opportunity, access, choice and freedom Increases youth independence and fosters resilience 	<ul style="list-style-type: none"> Fosters community development — transit corridors are natural focal points for economic, social and cultural activities Increases access to cultural facilities and incentivizes students to participate in recreational programs Redirects money to other needs in the community from programs and organizations that previously subsidized transit for students (e.g. United Way) Decreases congestion around schools Creates stronger community connections Provides opportunities to engage in community activities 	<ul style="list-style-type: none"> Grows and attracts long-term ridership by educating young riders Reduces the cost of moving students Delivers more cost-effective school programming Allows for more school activities and field trips at no extra cost Reduces the individual cost of student travel on a daily basis Increases access to gas tax funding for municipalities Provides students with greater independent mobility to access year-round employment opportunities 	<ul style="list-style-type: none"> Reduces greenhouse gas (GHG) emissions, improves air quality and reduces congestion Reduces the number of single-occupancy vehicles Reduces the need for many separate trips in private vehicles Allows for more school outings and field trips using existing buses and routes (e.g. less need for school buses, reducing emissions) Encourages youth to make more sustainable transportation choices

Determine your funding strategy

Developing a coherent funding strategy is key to getting your program off the ground and requires careful consideration of how you will sustain your program in the long term. As you begin to design your program, you will need to anticipate what it will cost to provide subsidized public transit to high school students and develop a transit orientation program.

Explore funding opportunities available in your municipal jurisdiction and identify the best fit for your municipality's transit needs. Please keep in mind that the following is **not an exhaustive list** of the funding opportunities available for each municipality. Certain funding sources, such as the federal Gas Tax Fund, vary by province and territory based on agreements with the federal government.

Funding source	Example
In-kind contributions: Staff capacity and resources are key to ensuring municipalities and school boards have the resources they need for their program to succeed.	In Kingston, existing staff members from marketing/administration assisted with delivering and maintaining the program.
Dedicated allocation from existing taxes or fees: Even a small percentage of a larger tax or fee in your jurisdiction can provide the foundation for your program.	<p>In Quebec, the province raises revenues for transit funding through a provincial tax on vehicle registration.</p> <p>In British Columbia, the Victoria Regional Transit Commission offsets a portion of transit costs through a local fuel tax.¹⁸</p>
Federal Gas Tax Fund: This fund provides dedicated, long-term funding for each Canadian province. The funding helps local municipalities with a wide range of projects, including projects related to public transportation.	The Government of Canada and New Brunswick have a formal \$225.2-million agreement over a five-year period on the transfer of federal gas tax revenues. ¹⁹
Provincial Gas Tax Fund: This fund provides long-term, sustainable transit funding for municipalities.	In Ontario, the Gas Tax Fund provides funding toward both capital and operating expenditures for public transit. ²⁰ The City of Kingston receives provincial gas tax funding based on population and transit ridership. As population and ridership grow, gas tax funding also increases. ²¹
Federal Public Transit Infrastructure Fund (PTIF): PTIF offers dedicated funding for each Canadian province that supports investments in public priorities, including projects that improve public transit.	In Ontario, PTIF provides funding for transit projects in cities, which include investments in the repair, modernization and expansion of city transit and active transportation networks. ²²

Funding source	Example
<p>Financial incentive programs: Several provinces offer funding programs directly for transit projects.</p>	<p>Nova Scotia has numerous programs, such as the Nova Scotia Transit Research Incentive Program (NS-TRIP), which provides funding for transit projects that generate new and improved transit services in rural areas and underserved urban areas of the province.²³</p>
<p>Top-up contributions: Many provinces share the cost of transit with local governments through matching contributions.</p>	<p>In British Columbia, the province provides BC Transit and its affiliates with matching contributions on an annual basis.²⁴</p>



STAGE 3: Design

Design your program to match the unique resources in your community

Program set-up

Before you begin to design your program, consider these questions to define the scope of your project:

- ▶ How long do you want this program to run?
- ▶ Who will use the program?
- ▶ What short- and long-term municipal goals does the program advance?
- ▶ Whose interests (which stakeholders) are served?

The City of Kingston introduced the pilot transit pass program for grade 9 students after looking at the transportation patterns of high school student ridership. Data showed that grade 9 students used public transit less frequently than those in grades 10 to 12. The primary audience of the project was grade 9 students, who were identified as most in need of the social skills, decision-making authority and confidence to partake in sustainable transportation.

First steps:

- ▶ Define the short- and long-term goals of your program.
- ▶ Examine the ridership among high school students in your community. Do grade 9 students use public transit more or less than grade 12 students?
- ▶ Assess the administrative and logistical capacity of staff members.

Design the program

Examine high school locations and the existing bus service. Assess whether you will need to expand or change transit service to implement your planned program. Determine if overall transit service improvements or increased service frequency will accommodate high school students.

In Kingston, nearly all high schools are located on or near main transportation arteries with existing transit service.

Anticipate peak riding times and adjust schedules if necessary. Tracking quality data will help you anticipate peak riding times. With this information, you can adjust service schedules as needed.



Source: Kingston Transit

During program implementation, the City of Kingston invested in an incremental funding strategy to expand transit service broadly. This helped accommodate increased ridership from high school students. ([See Section 3 above for more information on Kingston's funding strategy](#)).

Get quality data. Smart cards with tap technology guarantee high-quality data for tracking ridership and collect accurate ridership information based on time, date and location. Kingston Transit uses a unique product code for each school and grade level.

Consider pass coverage. Determine the priorities in your community and decide whether students will have eight- or 12-month access to free transit. The Kingston Transit pass for high school students is valid for 12 months (from September to August) to allow students the opportunity to continue using the passes in the summer for activities not related to school.

Plan your transit orientation. Transit orientation complements the bus pass program by teaching students how to ride the bus and navigate the

transit system. During the first week of school, transit passes are issued to all students on-site at each school. Grade 9 students receive an on-bus orientation, delivered while riding the bus. A transit bus and driver are available on-site for the orientation. Transit orientation is the key element of the Kingston Transit High School Bus Pass Program.

Benefits of smart card technology:

- ▶ Collects information about ridership
- ▶ Tracks individual and community-wide data
- ▶ Passes are identifiable by school board, grade level, and name

TIP Avoid gaps in pass coverage.

Kingston Transit allows a grace period until mid-September to ensure students have a smooth transition into the next school year.

Orientation content to include:

- ▶ Rider etiquette
- ▶ Navigating the transit system
- ▶ Public transit safety
- ▶ Social, economic, environmental and community benefits of riding the bus

See [Stage 5 — Educate](#) for more details on what to include in your transit orientation.



Source: John Laframboise

STAGE 4: Implement

Work together to implement the program and deliver the transit orientation

Coordinate with schools

Informing parents throughout the process is key to minimizing risks and anticipating challenges down the road. Parents will need to give informed consent for their children's participation in the program, before students can receive a transit pass and take part in the orientation. Reach out to schools earlier in the year (i.e. May-June) before the upcoming term to select the date of orientation in September. The program champion contacts each school to coordinate the timeline of events and to inform teachers, parents and students about the orientation.

TIP

In Kingston, pass distribution often coincides with grade 9 orientation at each school. If you are providing orientation for multiple schools on the same day, find a timeline that suits the needs of your community and coordinate with your local school boards.

1

Send an email to school contacts to coordinate the timeline of events and pick a date for orientation (Appendix A).

2

Contact each teacher and have them send an information letter and permission form (Appendix B) and a transit registration form (Appendix C) home with students.

3

Parents need to read, sign and return the forms to their children's teachers.

4

Teachers manage the distribution and collection of forms and keep forms until orientation day for students to give to transit representatives to get processed for passes.

Sample orientation timeline

Time	Pass distribution	Bus orientation
9:30–10:00 a.m.	Teachers bring students to the orientation location at the school (approximately 60 students at a time), with their forms, to get their transit passes and receive orientation. Divide students into two groups.	Bus arrives at the school.
10:00–11:00 a.m.	Group 1: 30 students get processed for passes by transit authorities on-site. ▶ Students wait in line and give the forms to a Kingston Transit representative. ▶ A transit staff member takes their photo. ▶ The pass is printed and given to the student (this takes roughly 1.5 minutes per student).	Group 2: 30 students board the bus and receive orientation.
11:00 a.m.–12:00 p.m.	Group 2: 30 students get processed for passes by transit authorities on-site.	Group 1: 30 students board the bus and receive orientation.
12:00 p.m.–ongoing	Repeat the process for each subsequent group.	Repeat the process for each subsequent group.

Checklist for program planning

- ▶ **Pick a date.** Reach out to schools ahead of time to pick an appropriate date in the following school year for orientation. See [Appendix A](#) for an outreach email template.
- ▶ **Plan the agenda together.** The program champion should work with each school to clarify the orientation objectives and agree on the agenda and timeline of events for orientation.
- ▶ **Assign a point person for each school.** Each school will need to identify a point person to assist with the program on the day of orientation. The point person will be responsible for coordinating with teachers to manage the distribution and collection of forms to get students their transit passes.
- ▶ **Confirm a space for processing.** You will need a space at each school that can accommodate the printing and distribution of passes. There should be enough space for students to wait in line, and for tables, chairs and extension cords (if you are using a mobile printer or other electronic device to issue the passes).
- ▶ **Engage teachers.** Teachers will need to prepare permission forms ([Appendix B](#)) and transit registration forms ([Appendix C](#)) for their respective classes. The permission form should provide students with program information and indicate that students will be receiving bus passes. The transit registration form will require students' personal information and therefore will require informed consent from parents.



Source: iStock

- ▶ **Consider the logistics of pass renewal for existing students.** If your plan is to introduce the program starting with one grade and then add subsequent grades as the program develops, consider how existing students can renew their passes on-site.

TIP

In Kingston, students grades 10 and up can renew their passes starting in September at any authorized Kingston Transit service centre. Students must have a valid student identification card and their school timetable for the upcoming year to renew the pass.

Roles and responsibilities of staff on program orientation day

Roles	Responsibilities	Materials
Pass issuing team	<ul style="list-style-type: none"> ▶ Operator for mobile printer ▶ Transit representative 	<ul style="list-style-type: none"> ▶ Mobile printer ▶ Computer ▶ Other electronic equipment ▶ Pre-loaded pass cards
On-bus orientation team	<ul style="list-style-type: none"> ▶ Transit operator ▶ Lead presenter for orientation (could be the program champion) 	<ul style="list-style-type: none"> ▶ Bus
On-site support	<ul style="list-style-type: none"> ▶ Program champion ▶ Teachers (to bring classes down to get their passes) ▶ School point person 	<ul style="list-style-type: none"> ▶ Tables ▶ Chairs ▶ Extension cords ▶ Space



STAGE 5: Educate

Educate and inspire students about of the benefits of riding public transit

The need for orientation

Most high school students do not know how to take the bus, let alone plan the route to get to their destination. Exposing students to the public transit system at an earlier age increases their potential to continue as regular paying and committed passengers when they are no longer eligible for the program. Transit orientation trains riders, helping them gain confidence, and eliminates barriers to riding the bus. By integrating transit orientation with the distribution of free passes, the program teaches students practical skills for riding the bus, including proper rider etiquette, safety, rules and the environmental, economic and social benefits of taking the bus.



Sources: Kingston Transit

Logistics

Find someone who is willing to be the lead presenter. This could be the program champion, the program initiator, or anyone else on your team. You will need someone with high energy to engage and educate students on the bus ride.

TIPS FOR PRESENTERS

- ▶ **Be open to questions.** *Encourage students to ask questions throughout the orientation and use the orientation as a learning opportunity for skill development.*
- ▶ **Aim to educate.** *Identify which students already have experience with public transit and aim to teach them something new.*

Deliver the orientation

Orientation steps

Before boarding the bus	<ul style="list-style-type: none">▶ Introduce yourself. As the presenter, introduce yourself to the students and let them know where they will be going on the bus.▶ Demonstrate the bike rack. Starting at the front of the bus, show students how to use the bike rack.
Boarding the bus	<ul style="list-style-type: none">▶ Explain how to greet the bus driver and tap the card. Show students how to board the bus, tap their card, and greet the bus driver upon entering the bus. Explain the significance of moving to the back of the bus to avoid congestion at the front and avoid blocking doors.
Riding the bus	<ul style="list-style-type: none">▶ Educate and inform. Once students start to board the bus, introduce them to the driver, teach them about rider etiquette, explain the bus routes, and describe the newfound freedom this program offers. Explain the environmental, social, economic and health benefits. This information can instill in students the confidence to ride the bus more comfortably now and in the future.

Key content to include

Navigating the transit system	<ul style="list-style-type: none">▶ Stopping the bus: How do you stop the bus? Where will it stop? Buses only stop at designated stops.▶ Express routes: What is the difference between express and regular routes? Express routes generally operate at higher frequency during peak hours and can get you to your destination quicker with fewer stops, although express routes operate differently in every municipality.▶ Planning your route: How do you use the transit app (if available) or Google Trip Planner? Show students how to use these applications by entering information on their destinations.▶ Transfers: How does a transfer station work and why is it important? Transfer stations serve as stops for multiple bus routes and allow passengers to change from one route to another.▶ Taking the bus to school: What is the closest bus stop to the high school? (Make sure to determine the location before orientation.)
--------------------------------------	--

Key content to include

Bus rider etiquette	<ul style="list-style-type: none">▶ What do you do with your backpack? Take the backpack off when you enter the bus and keep it between your feet or on your lap.▶ Can you eat on the bus? Yes, but please be respectful about it and dispose of your waste.▶ How do you use courtesy seating? Show students how to lift and push the seats down and explain the importance of priority/courtesy seating for transit riders.
Benefits of riding the bus	<ul style="list-style-type: none">▶ Freedom: The bus can give you freedom to volunteer or hold a job without needing a ride from someone. It also gives you freedom to hang out with your friends or meet your family.▶ Savings: How much does a regular youth bus pass cost, and how much will they save with the program?▶ Health: The bus improves quality of life by promoting healthier habits and better air quality.▶ Environment: Cars have environmental impact. Riding the bus helps reduce the number of cars on the road, which in turn contributes to a reduction in GHG emissions.▶ Skill development: Learning how to use transit is a transferable skill.
Public transit safety	<ul style="list-style-type: none">▶ What do you do if you feel uncomfortable on the bus? Go to the bus operator and let them know that there is a problem. If possible, sit near the driver if you feel uncomfortable.▶ Stay alert: Keep personal belongings close and be aware of your surroundings.▶ Be confident: Use your voice to report harassment on public transit.▶ Buddy up: Stay safe by travelling in pairs or with a group of friends. If you are travelling alone, make sure to only get off at well-lit areas or check with your transit system to find out if buses stop between designated stops after sunset.



STAGE 6: **Sustain**

Learn how to measure and report your results and share the story with others

Consider these questions to develop your communications strategy:

- ▶ How will you measure and share your results with others?
- ▶ Who are the key stakeholders you want to reach?

- ▶ How will you engage stakeholders and decision-makers?

Monitor and maintain your program

To understand the impact of your program, you will need to monitor and evaluate the program from start to finish.

Determine the need for measurement and evaluation. Monitoring program results helps you communicate value to your community, while managing risks, addressing issues as they arise, and understanding the impacts of your program. Determine why you want to measure and evaluate your results. Is it to show impact,



Source: Paul Wash

get more funding, increase ridership, or generate more revenue?

Decide what to monitor. Identify what type of information you will need to gather to show the program's impacts. Possible data points include data on ridership (e.g. total trips by day, hour, time, etc.) and increase in transit sales.

Collect high-quality data. Based on the technology available in your community, consider how to collect the best-quality data to track your results. Smart tap technology can track ridership information more effectively by date, time and location, but must be set up at the beginning to enable the tracking of ridership data.

Consider stakeholders' interests. Keep the program's stakeholders in mind when measuring and evaluating impacts. In Kingston, high-quality

data is useful for demonstrating the importance and impacts of the program to council, school board trustees, committees and staff.

Share your story

Once the program is up and running it is crucial to have a robust communications strategy to disseminate ongoing and clear information about the program through various channels. Sharing information on the results of the program raises awareness and communicates what you have learned. For stakeholders like funders and partner organizations, this not only demonstrates value — it also builds trust.

Communicating program results is also a great way to share best practices with other municipalities interested in adopting a similar program.

Learn and improve. Capture feedback from various stakeholders and integrate this into your program design.

Examples of knowledge-sharing platforms:

- ▶ Local media
- ▶ Videos
- ▶ School board communications networks
- ▶ Social media
- ▶ Infographics
- ▶ Presentations
- ▶ Posters

4 Lessons learned



Source: Kingston Transit

The Kingston Transit High School Bus Pass Program has many lessons to share with other communities looking to apply this approach in their own communities.

These key lessons reflect both the positive experiences and the challenges of the Kingston Transit High School Bus Program:

- ▶ **Include transit orientation.** Orientation is essential. Giving fully subsidized passes to students is not enough to get them to ride the bus. They also need to learn how to use the service. Through orientation and experience with transit at an earlier age, students develop the confidence to continue as committed passengers in the future. Transit orientation teaches students the skills and benefits that come with riding the bus and encourages independence, confidence and freedom.
- ▶ **Simplify the process.** Once students in Kingston discovered how easy it was to get the pass, they were on board with riding the bus. At-school distribution with mobile printers allows students to receive their passes on-site the same day as transit orientation. In the first year of the program, students had to pick up their passes at city hall and present their school schedules (many school schedules were not issued until November), causing low uptake and delays in issuing passes.
- ▶ **Keep parents informed and receive consent.** Keep parents informed throughout the process and receive written consent for their children's participation in the program. Use permission forms, information letters and transit registration forms to ensure that you have informed consent to provide students with free passes and collect data for reporting. The forms should include a waiver of liability, the transit authority's privacy policy, terms of use, and disclosure of information.
- ▶ **Track quality data.** The data you use to measure progress and evaluate results must match the goals and priorities of your program. The use of smart card technology to track ridership helps the City of Kingston collect key information, such as peak boarding times and frequency of rides per person per day.



5 Frequently asked questions

The City of Kingston's Transit High School Bus Pass Program is the co-winner of the Federation of Canadian Municipalities (FCM) 2018 Sustainable Communities Award for transportation, and received FCM's inaugural Inspire Award, celebrating sustainability, innovation and creativity.

1 How did the program start?

Former mayor of Kingston, Mark Gerretsen, brought together representatives from Kingston Transit, city council, and the Limestone District School Board (LDSB) to initiate the program. See [Section 1, How Kingston's program started](#), for more information.

2 Why did Kingston start with grade 9 students only? When did they decide to add grades 10, 11 and 12?

The City of Kingston chose to introduce the program for grade 9 students after looking at high school student ridership patterns. Data showed that grade 9 students used the bus less frequently than students in grades 10 to 12; so the program specifically targeted grade 9 students. The addition of grades 10, 11 and 12 occurred in each subsequent year of the program after council saw the benefits of the program.

3 Do high school students have 10 or 12 months of access?

Students have access to transit services for 12 months to allow students to transition into the summer months and the following school year. Providing access for the entire year increases students' access to recreational, cultural and educational facilities, and various employment opportunities. Ridership data from 2016 to 2017 shows that students used the pass for school travel but also outside of school trips. The highest-volume boarding locations were near retail hubs in Kingston.

4 What type of Kingston Transit orientation do students receive? Who delivers the orientation? How important is the orientation?

Daniel Hendry, the Sustainable Initiatives Coordinator for Limestone District School Board, leads the orientation for the majority of schools. The orientation is a critical component of the program. It teaches students how to use the bus and transit service, and discusses safety, etiquette, rules and the importance of using sustainable, active transportation from a young age. In the first year of the program, there was no orientation component. Data on the first year showed that students were still not using the bus, even with free transit passes. The solution to getting them on board was to teach them how to use the bus. See [Section 3, Stage 5 \(Educate\)](#), for more information.

5 Did Kingston Transit have a reduction in fare revenue? If so, how much?

The approximate annual revenue lost as a result of the program is \$250,000. A combined annual contribution of \$60,000 from the Limestone District School Board and the Algonquin & Lakeshore Catholic District School Board, as well as \$100,000–125,000 per year from the Ontario Gas Tax Fund, offsets most of the lost fare revenue. Kingston Transit provides additional funding to fill the gap. See [Section 2, Financial Considerations](#), for more information.

6 Did Kingston Transit have any issues meeting the increased ridership demand generated by high school students?

Because transit improvements and expansions were occurring simultaneously with the program, Kingston Transit did not need to expand or increase transit service to meet ridership demand from high school students.

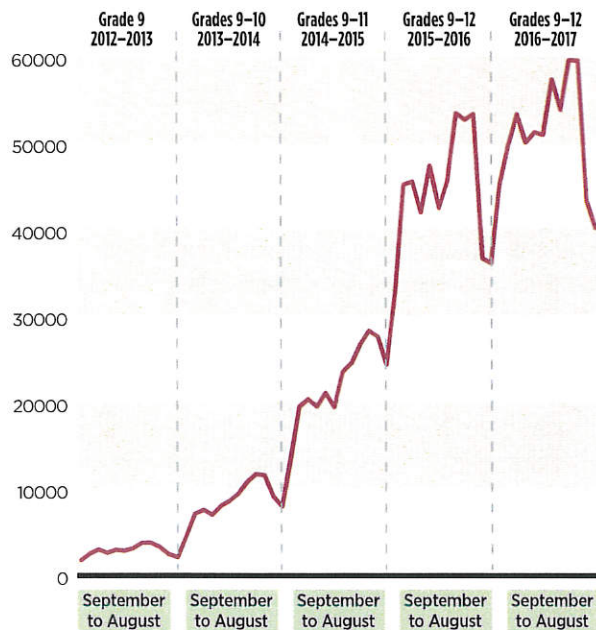
7 Is there a formal partnership agreement between Kingston Transit and the school boards?

There is no formal partnership agreement between Kingston Transit and local school boards. An informal partnership dictates the financial contribution from both school boards for every year of the program. See [Section 3, Build a Strong Partnership](#), for more information.

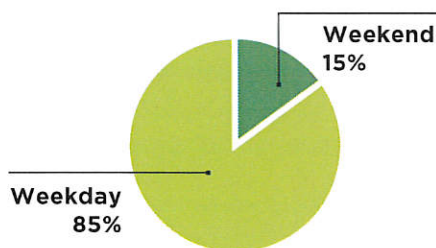
8 Was it important to track student transit ridership? How does Kingston track student ridership?

Tracking ridership is important to understanding the impact of the program. Kingston Transit uses smart card technology to collect accurate ridership data by person, time and location. See [Section 3, Stage 6 \(Sustain\), Monitor and Maintain Your Program](#), for more information.

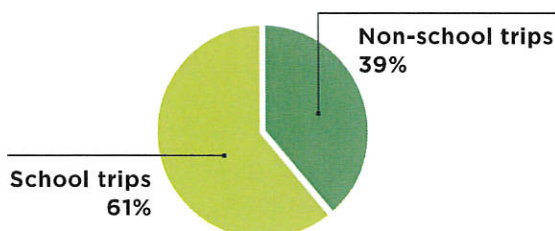
9 What are the trends in student ridership? How much ridership is school-related vs. non-school-related?



By day of week (2015-2016)



By weekday trips (2015-2016)



Graphics: Kingston Transit High School Smart Card Ridership Data from September 2012 to June 2017 (LDSB)

10 Are there any financial savings for the school boards?

The Transit High School Bus Pass Program results in savings by reducing the cost of transporting students to and from school. For instance, it has allowed certain schools to phase out a couple of yellow school buses for the morning and afternoon commutes. The program also enables students to transport themselves to cooperative education sites, removing the additional cost for schools to fund their travel. The field trip pass allows for more school outings and field trips on existing buses and routes at no additional cost per trip. See [Section 3, Stage 2 \(Prioritize\)](#), for more information on the various benefits.

11 Have there been instances of inappropriate student behaviour on Kingston Transit that required attention?

Since the inception of the program in 2012, there have only been two reported incidents of inappropriate behaviour on the bus. Kingston Transit staff addressed this behaviour by communicating the consequences of misconduct or misuse of the pass, which can include confiscation of the pass.

12 **Has there been any formalized research about the program?**

A University of Waterloo graduate student conducted research on free student transit passes for her Master's thesis.²⁵ The study looks at the impacts of Kingston's High School Transit Bus Pass Program, particularly changes in transit ridership and the benefits of increased independent mobility for students. Ridership data shows that students use the passes for more than school trips and that pass holders derive mobility benefits from non-school-related trips (social, recreational, work, etc.). The study also found that birth order, family composition, and access to free transit influence students' travel independence.

13 **Has there been continued transit usage by students after they graduate from high school?**

In 2016, Kingston Transit provided fully subsidized transit passes from July to December for graduated grade 12 students staying in Kingston and not pursuing post-secondary education. During this period, there was an average of over 100 transit boardings and the average ridership was 95 trips per person. Overall, the data indicates that youth continued to use the transit system at an above-average rate when given the opportunity to do so for free.

6 Appendices



Source: Randy deKleine-Simpson / fibd.ca

Appendix A:

School outreach email template

Hi everyone,

Thank you all for helping me coordinate the orientation and ride on (date) at (name of school). I have heard first-hand from students about the importance of orientation day and how it helps them get to school on the first day of the semester!

Here is what the day will look like:

Time	Activity
9:30-10:00 a.m.	Bus arrives at school
10:00-11:00 a.m.	Group 1 students get processed for passes on-site while group 2 students go out for bus orientation
11:00 a.m.-12:00 p.m.	Groups switch: Group 2 students get processed for passes on-site, while group 1 students board bus and receive orientation

Action: (Name of school contact), could you confirm a space at (name of school) that we can use for processing? We will need a couple of tables and an extension cord for this space.

Action: Teachers need to prepare a field trip form. It must include wording indicating that the students will be getting a bus pass and their personal information will be given to the transit authority.

Action: Teachers need to distribute the transit registration form in advance. I suggest doing this in the coming weeks as there might be a need for information that students do not have on hand (e.g. their postal codes). Enter "grade 9" on the transit registration form for grade eight students.

Are there any comments, questions and concerns? Please let me know.

Thank you for your help.

Appendix B:

Information letter and permission form template

Dear Parent/Guardian,

As you might be aware, (name of municipality) is providing a fully subsidized bus pass to all (grade X) students for the (YYYY-YYYY) school year. In order to assist our students in getting their bus passes, we are arranging for (name of transit authority) to come to our school to take photos for the bus passes. (Name of transit authority) will also be bringing a city bus for a mini “field trip” for bus orientation. Students will board the bus at (time) and go on a 15- to 20-minute bus orientation trip while learning about public transportation. Students will then be returned to school at (time). Students will be instructed on how to ride the bus, the benefits of choosing public transit, and safety and appropriate behaviour when using the bus.

This initiative is to encourage public transit use by youth as they become independent and start making choices about transportation. All (grade X) students attending a high school in (name of municipality) will be able to ride (name of transit authority) free from (MM/DD/YY to MM/DD/YY).

On (date of orientation), a (name of transit authority) bus will arrive at the school. Between (start time) and (end time), students will leave (name of school) for a 15- to 20-minute bus orientation trip. Students will not be getting off the bus until they return to (name of school). There is no cost to students for this field trip. Classroom teachers and school administration will accompany students and supervise them on the bus.

If you have any questions, please do not hesitate to contact (name of program contact) at (phone) or (email).

Sincerely,

(Name of program contact)

I give my permission for (name of student) to participate in the field trip for bus orientation. I understand that my child will also need to have their photo taken and provide personal information on the bus application form in order to receive a bus pass.

Signature of parent/guardian

Health card number

The school should be aware of special health conditions that might affect the progress or welfare of the students while on this activity. Please specify this information, with comments or recommendations on the back of this sheet.

Appendix C:

Transit registration form template

Note: Adapted from Kingston Transit

<div style="border: 1px solid black; width: 150px; height: 50px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> Transit Authority Logo </div> <h3 style="margin-top: 10px;">Transit Card Registration Form</h3> <p style="margin-top: 5px;">Please fill in each box and print clearly.</p>																																																																																															
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; border: 1px solid black;">Type of Card</td> <td colspan="5"> <input type="checkbox"/> New <input type="checkbox"/> Replacement (fee applies) <input type="checkbox"/> Updating Information </td> </tr> <tr> <td style="border: 1px solid black;">Classification</td> <td colspan="5"> Reloadable Cards <input type="checkbox"/> Multi-Ride Pass <input type="checkbox"/> Monthly Pass – Unlimited Travel (photo required) <input type="checkbox"/> Commuter Pass – Monthly Weekdays – Unlimited Travel (photo required) </td> </tr> <tr> <td style="border: 1px solid black;">Fare Type</td> <td colspan="3"> <input type="checkbox"/> Adult <input type="checkbox"/> *Youth (15-24 years) <input type="checkbox"/> *Senior (65+ years) </td> <td colspan="2"> <input type="checkbox"/> Student (check 1 below) <input type="checkbox"/> Grade 9 <input type="checkbox"/> Grade 10 <input type="checkbox"/> Grade 11 <input type="checkbox"/> Grade 12 </td> </tr> <tr> <td colspan="6"> <input type="checkbox"/> *Affordable Transit Pass Include expiry date shown on your Transit Card </td> </tr> <tr> <td colspan="2" style="border: 1px solid black;">First Name</td> <td colspan="2" style="border: 1px solid black;">Middle Name</td> <td colspan="2" style="border: 1px solid black;">Last Name</td> </tr> <tr> <td colspan="4" style="border: 1px solid black;">Home Address (incl. Apt. or Unit #)</td> <td colspan="2" style="border: 1px solid black;">City</td> </tr> <tr> <td style="border: 1px solid black;">Province</td> <td style="border: 1px solid black;">Postal Code</td> <td colspan="2" style="border: 1px solid black;">Telephone or Cell</td> <td colspan="2" style="border: 1px solid black;">Email Address</td> </tr> <tr> <td colspan="6" style="border: 1px solid black;"> High School Name (if applicable, check 1 below) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other: </td> </tr> <tr> <td colspan="3" style="border: 1px solid black;">Employer (if applicable)</td> <td style="border: 1px solid black;">*Date of Birth</td> <td style="border: 1px solid black;">Month</td> <td style="border: 1px solid black;">Day</td> </tr> <tr> <td colspan="6" style="border: 1px solid black;"> * Proof of age is required for Youth and Senior cards. If no proof of date of age is provided, an Adult fare card will be issued. </td> </tr> <tr> <td colspan="6" style="border: 1px solid black;"> <p style="text-align: center;">Terms and Conditions</p> By using the _____, you agree that: a) The card remains the property of _____. It can be revoked for misuse, tampering or damaging the card. No cash refunds will be permitted. Lost or stolen cards should be reported to _____ at _____. b) The card must be shown at the request of _____. c) The Monthly Transit Card is not transferable and the card can only be used by you, the person photographed on the card. </td> </tr> <tr> <td colspan="6" style="border: 1px solid black;"> <p style="text-align: center;">About your Privacy</p> Include the Transit Authority's privacy statement or policy here. </td> </tr> <tr> <td style="border: 1px solid black;">Today's Date</td> <td style="border: 1px solid black;">Month</td> <td style="border: 1px solid black;">Day</td> <td style="border: 1px solid black;">Year</td> <td colspan="2" style="border: 1px solid black;">Signature</td> </tr> <tr> <td colspan="4" style="border: 1px solid black;">FOR OFFICE USE ONLY</td> <td colspan="2" style="border: 1px solid black;">Date Registered (MM-DD-YY)</td> </tr> <tr> <td colspan="2" style="border: 1px solid black;">Card Registration No.</td> <td colspan="2" style="border: 1px solid black;"></td> <td colspan="2" style="border: 1px solid black;">Initials</td> </tr> </table>						Type of Card	<input type="checkbox"/> New <input type="checkbox"/> Replacement (fee applies) <input type="checkbox"/> Updating Information					Classification	Reloadable Cards <input type="checkbox"/> Multi-Ride Pass <input type="checkbox"/> Monthly Pass – Unlimited Travel (photo required) <input type="checkbox"/> Commuter Pass – Monthly Weekdays – Unlimited Travel (photo required)					Fare Type	<input type="checkbox"/> Adult <input type="checkbox"/> *Youth (15-24 years) <input type="checkbox"/> *Senior (65+ years)			<input type="checkbox"/> Student (check 1 below) <input type="checkbox"/> Grade 9 <input type="checkbox"/> Grade 10 <input type="checkbox"/> Grade 11 <input type="checkbox"/> Grade 12		<input type="checkbox"/> *Affordable Transit Pass Include expiry date shown on your Transit Card						First Name		Middle Name		Last Name		Home Address (incl. Apt. or Unit #)				City		Province	Postal Code	Telephone or Cell		Email Address		High School Name (if applicable, check 1 below) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other:						Employer (if applicable)			*Date of Birth	Month	Day	* Proof of age is required for Youth and Senior cards. If no proof of date of age is provided, an Adult fare card will be issued.						<p style="text-align: center;">Terms and Conditions</p> By using the _____, you agree that: a) The card remains the property of _____. It can be revoked for misuse, tampering or damaging the card. No cash refunds will be permitted. Lost or stolen cards should be reported to _____ at _____. b) The card must be shown at the request of _____. c) The Monthly Transit Card is not transferable and the card can only be used by you, the person photographed on the card.						<p style="text-align: center;">About your Privacy</p> Include the Transit Authority's privacy statement or policy here.						Today's Date	Month	Day	Year	Signature		FOR OFFICE USE ONLY				Date Registered (MM-DD-YY)		Card Registration No.				Initials	
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Transit Card Registration Form

Appendix D: Details on the Kingston program team

Program Initiator



Source: Office of Mark Gerretsen

MP MARK GERRETSEN

*Member of Parliament for Kingston and the Islands, City of Kingston
Former Mayor, City of Kingston, 2010–2014*

Political leadership was the spark that started the Kingston High School Bus Pass Program. Kingston City Council and former mayor Mark Gerretsen recognized the value of children and youth learning to use public transit as a positive step toward a more sustainable future. Then-mayor Gerretsen convened a meeting with senior leadership at the school boards, which included the director of education and superintendent of business, to kick-start this program. They made the decision to provide free transit passes as a way to educate the next generation of youth on making wiser choices about where to live and work, and to encourage them to make good use of a more efficient, effective and sustainable transportation system.

Program Operator



Source: Kingston Transit

JEREMY DACOSTA

Director of Transportation, Kingston Transit

Jeremy DaCosta has been helping dramatically change Kingston's transit system over the past decade. He led initiatives such as the 2015 Kingston Transportation Master Plan, the introduction of new express routes, the inclusion of real-time bus and trip information on transit apps, the extension of Sunday and holiday service, and improvements to fare options for commuters and employers. Jeremy and his team form the foundation of this program, as they organize the buses, coordinate the distribution of student passes, and promote the program.

Program Champion



Source: Randy deKleine-Stimpson / ftbd.ca

DANIEL HENDRY

Sustainable Initiatives Coordinator, Limestone District School Board

Daniel Hendry's dedication to the local community, environmental sustainability, and community-based learning is evident through his work as the sustainable initiatives coordinator for LDSB and the manager of community-based learning and innovation at St. Lawrence College in Kingston. Daniel is the program champion for the Kingston Transit High School Bus Pass Program. He was one of the architects of the program and has played a role in every orientation session since its start. He provides guidance and inspiration to community leaders and delivers informative and encouraging presentations to students and the public.



Endnotes

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- 2 Daniel Hendry, "Kingston's high school transit orientation program: 2018 Sustainable Communities Award winner," Federation of Canadian Municipalities, 2018, online: <<https://data.fcm.ca/prebuilt/transcripts/6EiWh82Ozlw.htm>>
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- 9 "Cities turning to Kingston for transit advice," CBC News, 2018, online: <<https://www.cbc.ca/news/canada/ottawa/ontario-cities-look-to-kingston-for-transit-advice-1.4754656>>
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- 12 "Kingston's Strategic Plan 2015–2018," City of Kingston, online: <<https://www.cityofkingston.ca/apps/councilpriorities/>>
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- 14 "Kingston Transit-school board partnership wins FCM Award," City of Kingston, 2018, online: <<https://www.cityofkingston.ca/-/kingston-transit-school-board-partnership-wins-fcm-award>>
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Source: Erin Bailey

- 16 "Transit Fares & Passes," City of Kingston, online: <<https://www.cityofkingston.ca/residents/transit/fares>>
- 17 Denis Leger, "City of Kingston, Report to Council, Report Number 16-142," City of Kingston, 2016, online: <https://www.cityofkingston.ca/documents/10180/13859205/COU_A1416-16142.pdf/508daf77-fca5-4f70-8bc3-c80af1661fb3>
- 18 "Federal, Provincial & Territorial Public Transit Funding Programs in Canada," Canadian Urban Transit Association, 2013, online: <http://cutaactu.ca/sites/default/files/cuta-federal_provincial_territorial_funding_report-2012.pdf>
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- 25 Veronica Lee Sullivan, "Impact of Free Transit Passes on Youth Travel Behaviour," UWSpace, 2017, online: <<http://hdl.handle.net/10012/12199>>



Additional resources

At a glance:

The Kingston High School Bus Pass Program

Videos

- ▶ FCM Sustainable Communities Award presentation by Dan Hendry: *Kingston's high school transit orientation program: 2018 Sustainable Communities Award winner*. Federation of Canadian Municipalities, 2018. Online: <<https://www.youtube.com/watch?v=6EiWh82Ozlw>>
- ▶ Video on Kingston increase in bus ridership: *How to increase bus ridership by 70% in your city?* Sustainability Illustrated, 2018. Online: <https://www.youtube.com/watch?v=NdSmZ2X_6-s>

Overview

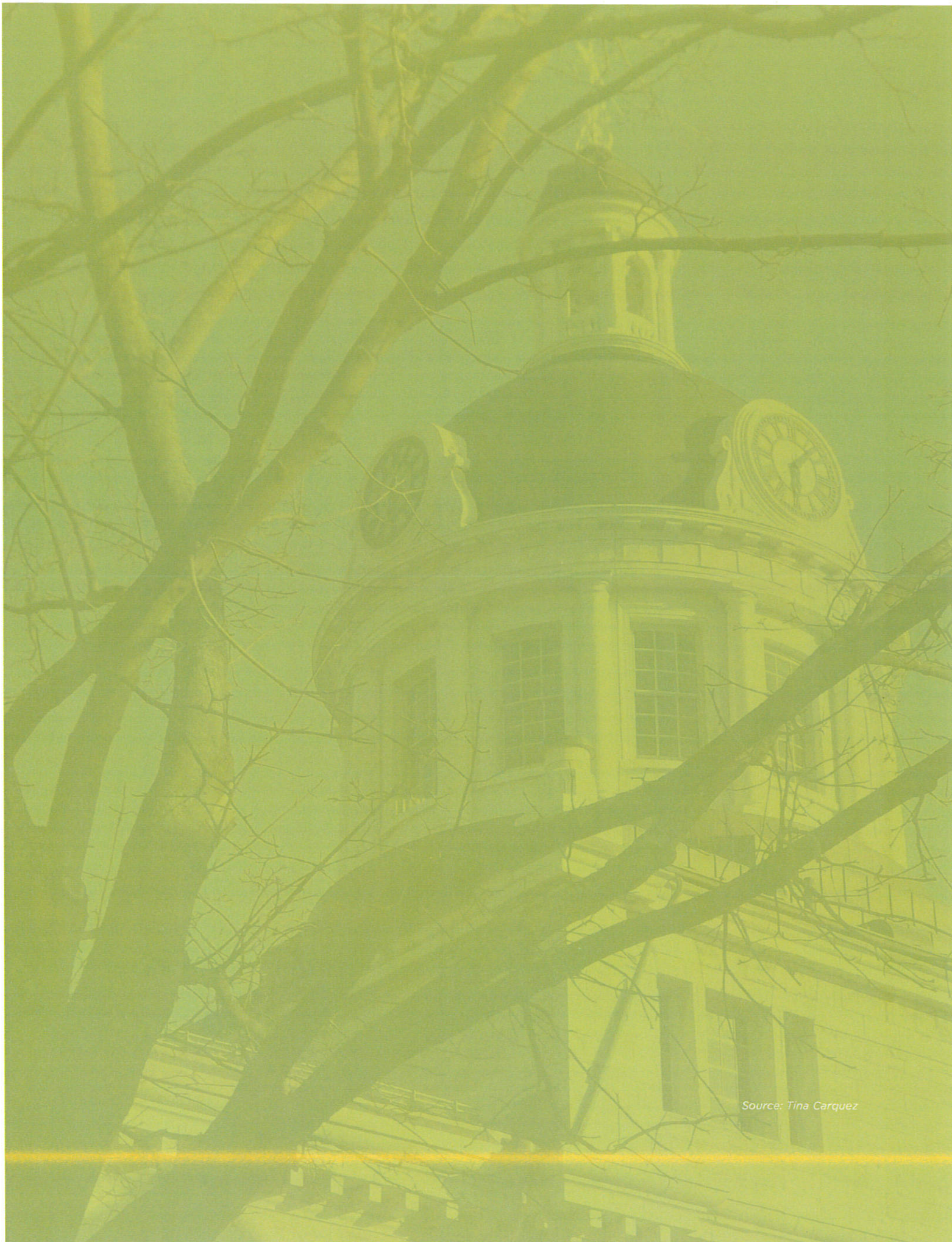
- ▶ General information on the transit passes: "Kingston Transit Passes." Limestone District School Board. Online: <https://www.limestone.on.ca/students/kingston_transit_passes>
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Media and the news

- ▶ Feature story: Jim Neill, "Kingston Transit — An award-winning formula." *Municipal World*. Online: <<https://www.municipalworld.com/feature-story/kingston-transit-award-winning-formula/>>
- ▶ *The Agenda in the Summer*. "The Agenda with Steve Paikin: Getting Midsized Cities Moving." TVO, 2018. Online: <<https://www.tvo.org//video/programs/the-agenda-with-steve-paikin/getting-midsized-cities-moving>>
- ▶ Article: David Rockne Corrigan. "Why Canadian cities are asking Kingston for public-transit advice." TVO, 2018. Online: <<https://www.tvo.org//article/current-affairs/why-canadian-cities-are-asking-kingston-for-public-transit-advice>>

Research

- ▶ Master's thesis: Veronica Lee Sullivan. "Impact of Free Transit Passes on Youth Travel Behaviour." UWSpace, 2017. Online: <<http://hdl.handle.net/10012/12199>>



Source: Tina Carquez

FCM offers funding and resources to support municipal environmental transportation initiatives.

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