FINAL REPORT

Collingwood Transit Service Review

Five Year Transit Plan

Prepared for the Town of Collingwood
by IBI Group
September 29, 2021

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1 Introduction

The Town of Collingwood has been operating a fixed-route conventional transit system, CollTrans, since 1982. Over the past five years, until 2019, CollTrans has been serving nearly 200,000 rides annually. The last comprehensive review of the service was conducted in 2005, and since, the Town's rapid growth and tourism-oriented economy have introduced numerous unique challenges to the operation of the system, such as managing seasonal demand changes, congestion, and serving the travel needs of the growing workforce. This context has been made more complex during the COVID-19 pandemic, which has fundamentally impacted transit demand over the past year. Given this context, this study explores the most effective way to provide transit service to visitors and residents, including consideration for the ever-improving on-demand service models.

This technical report presents an overview and analysis of the Collingwood Transit Service, CollTrans, and the Collingwood Blue Mountains Link, to identify opportunities to improve the service in the near term. The outcome of this study a recommended service strategy for implementation over the next five years.

1.1 Study Objectives

The primary objective of the transit service review and optimization study is to develop a transit service delivery strategy for Collingwood that will improve operational efficiency and expand services to meet the travelling needs of residents. This service review will:

- **Benchmark the performance** of the transit service against Collingwood's peer communities;
- **Critically analyse the existing service** and how it serves the travel patterns in the city;
- **Explore new areas for service expansion** to improve connectivity for residents and the workforce;
- **Identify and evaluate service options** to address the needs and opportunities identified through the analysis; and
- **Develop a five-year transit plan** and recommendations for implementation.

1.2 Report Structure

This report is divided into the following sections:

- Section 2 reviews the relevant background information, including the service area characteristics, and the transportation and land use policies that guide the provision of transit in Collingwood;
- Section 3 compares the performance of the transit service to five peer systems, to provide a benchmark for the efficiency and management of Collingwood's transit operations;
- Section 4 is a detailed review of the historic performance of the system's performance trends and a review of the individual routes to identify opportunities for improvement;
- Section 5 documents and evaluates the current inter-municipal links, and identifies opportunities to improve inter-municipal coordination and service delivery;
- Section 6 is an overview of the public feedback we received during the two consultation waves, which informed the evaluation of needs and opportunities;
- Section 7 presents the transit service options as well as a list of criteria by which they are evaluated, and their evaluation in order to inform the selection of a preferred option for the five-year-service plan;
- Section 8 is the five-year service plan, presenting the preferred option for transit in Collingwood, the resources required to implement it, a level of service policy, and contract considerations; and
- Section 9 concludes the report, outlining the key recommendations to carry forward in the implementation of the transit plan.

2 Background Review

Collingwood is a lower-tier municipality in the northwest corner of the County of Simcoe, located on the shoreline of the Nottawasaga Bay. As one of the larger communities in the county, Collingwood is a regional centre for surrounding communities. The town is home to a historic downtown with a variety of commercial and recreational amenities, as well as major institutions such as the Collingwood General and Marine Hospital, and the South Georgian Bay Campus of Georgian College. In addition to its own attractions, such as the beaches, extensive trail network, and harbour, Collingwood borders Grey County and is ideally situated as an access point to the Blue Mountains. As a result, tourism-related industries are a major source of year-round employment within Collingwood.

This section describes the service area characteristics, considering the land use context and transportation policies that influence transit service delivery in Collingwood.

2.1 Service Area Characteristics

Based on the 2016 census, Collingwood has 22,469 residents, and 11,912 jobs. The estimated seasonal population in 2016 was 6,183 people, or 28% of the population. By 2031, the population is expected to grow by nearly 50%, to 33,400 people. In the same time period, employment is expected to grow by 14% to 13,500 jobs. The discrepancy between the population and employment growth is likely due to the expectation that the seasonal population will continue to be a significant driver of the population growth. However, given the demographic changes happening within the county and town as a result of the COVID-19 pandemic, these trends are likely to change. In addition, the Town is currently updating its Official Plan, including revising the population and employment projections to account for higher future employment that will be required to support the extent of the population growth. The Town's Official Plan provides the policy framework for transportation and land use, which in turn influence transit service delivery.

Transportation Policies

The Town has a goal to meet the transportation needs of all users, facilitating access to jobs, services, recreation, and housing. As part of this goal, the Official Plan recommends a shift towards a multimodal transportation system, with a greater emphasis on transit investment and the relationship between transit and land use. This includes investment in transit, as well as the

development of sidewalks, pedestrian trails, and bicycle facilities to access transit service. The update to the Official Plan also recommends the development of transit-supportive guidelines for inclusion in the land use planning process. The Official Plan and its ongoing update do not currently set a target mode share for transit. Instead, the official plan outlines density targets for intensification areas and Designated Greenfield Areas to support transit service.

Transit service to neighbouring communities is supported by policies in the Growth Plan for the Greater Golden Horseshoe (GGH) and the County of Simcoe Transportation Master Plan (TMP). The Growth Plan for the GGH includes policy guidance to support transit service integration within and across municipal boundaries. The County of Simcoe TMP guides inter-municipal transit investment within the county, and inter-municipal service is provided by the county's LINX transit. This includes service from Collingwood to Wasaga Beach (previously operated by CollTrans) but excludes the Blue Mountains Link, which is provided as part of an agreement with the Town of Blue Mountains and the Blue Mountains Resort. The County is currently updating its TMP, which will include identifying opportunities to improve transit service within the county and addressing challenges in connectivity as well as fare and service integration. This transit service review also explores opportunities to improve area transit and clarifies the Town's roles and responsibilities when it comes to inter-municipal transit. The information in this report may inform the transit recommendations in the updated TMP.

Land Use Context

The projected population growth will increase the overall demand for housing in the town. Currently, a majority of the housing in Collingwood consists of single-family detached housing, but the town's planning policies set density targets for intensification in built up areas as well as development in Designated Greenfield Areas to support the efficient use of land and infrastructure. For the transit service, this will mean an expansion to accommodate the new development.

In addition to tourism-related industries, the major institutions, retailers and manufacturing industries are also major employers in the town. The major institutions are on the east side of town, and the major retailors are located on Mountain Road. The majority of the manufacturing and industrial land uses are in the southeast of Collingwood. Retail and service commercial land uses are primarily accommodated in the downtown, but as the population grows and more intensification is expected, more of the town's commercial corridors and nodes will be able to accommodate mixed land uses. While the transit service is currently oriented towards the downtown, as the town grows, the transit service will need to serve a wider variety of trip origins and destinations.

3 Peer Review

This section compares the performance of five transit systems in communities that are similar to Collingwood in terms of population, demographics, and geography. The purpose of this peer review is to provide a benchmark for the efficiency of Collingwood's transit service in the context of its peers. It is also an opportunity to identify best practices and service standards to inform the development of the five-year transit growth plan.

The peer communities selected for the review are Huntsville, Kawartha Lakes, Stratford, Cobourg, and St. Thomas. The data used for the peer review was obtained from the 2019 Ontario Urban Transit Fact Book, which is the latest publication and provides a snapshot of operations prior to the COVID-19 pandemic. A summary of the key indicators of the peer systems is shown in Exhibit 3-1. Of the selected communities, Kawartha Lakes is most similar to Collingwood in terms of service area population, size, and population density. Collingwood provides the second highest revenue vehicle-hours among its peers, and also has the second highest ridership levels – second only to Stratford, which is a denser municipality with a more established transit system. The following sections expand on financial performance and ridership, as well as fare structure and policies of the peer communities

Exhibit 3-1: 2019 Service and Performance Characteristics of Peer Transit Systems

	Collingwood	Cobourg	Huntsville	Kawartha Lakes	Stratford	St. Thomas	Wasaga Beach	Average
Service Area Characteristics								
Municipal Population	21,102	19,440	20,660	75,423	33,000	38,909	20,675	32,744
Service Area Population	19,000	10,741	11,000	20,713	33,000	38,909	11,560	20,703
Service Area Size (Sq.Km.)	33	13	12	27	28	36	18	24
Population Density (People/Sq. Km.)	568.9	826.2	916.7	767.1	1,187.1	1,092.9	628.3	855
Number of Fixed Routes	4	2	2	3	7	5	2	4
Routes per 1,000 capita	0.21	0.19	0.18	0.14	0.21	0.13	0.17	0.18
Fleet	6	5	7	10	13	8	4	8
Active Vehicles at Peak	5	2	2	3	10	5	2	4
Spare Ratio	17%	60%	71%	70%	23%	38%	50%	47%
Operations								
Ridership (Revenue Passengers)	193,837	98,795	25,398	122,030	587,416	200,081	91,166	188,389
Revenue Vehicle Kilometres	491,042	190,260	91,340	330,332	659,085	400,000	241,800	343,408
Revenue Vehicle Hours	24,008	8,691	5,820	19,851	39,444	17,017	10,682	17,930
Operating Revenue and Expenses								
Regular Service Passenger Revenue	$ 281,790	$ 110,666	$ 31,021	$ 166,475	$ 783,985	$ 413,339	$ 144,937	$ 276,030
Total Operating Revenue	$ 150,882	$ 114,228	$ 31,021	$ 169,579	$ 818,227	$ 413,339	$ 144,937	$ 263,173
Total Revenue	$ 432,672	$ 114,228	$ 31,021	$ 169,579	$ 818,227	$ 427,107	$ 144,937	$ 305,396
Operating Expenses								
Total Direct Operating Expenses	$ 1,282,988	$ 713,502	$ 291,633	$ 980,156	$ 3,156,488	$ 1,303,462	$ 612,204	$ 1,191,490
Performance Indicators								
Financial								
Total Oper. Rev. / Total Dir. Oper. Exp (R/C Ratio)	12%	16%	11%	17%	26%	32%	24%	20%
Municipal Operating Contribution / Capita	$ 37.07	$ 38.57	$ 8.80	$ 16.45	$ 70.86	$ 20.30	$ 25.77	$ 31.12
Net Dir. Oper. Cost / Reg. Serv. Pass.	$ 4.39	$ 6.07	$ 10.26	$ 6.64	$ 3.98	$ 4.38	$ 5.13	$ 5.84
Average Fare (Pass. Rev. / Pass.)	$ 1.45	$ 1.12	$ 1.22	$ 1.36	$ 1.33	$ 2.07	$ 1.59	$ 1.45
Cost Effectiveness (Dir. Oper. Exp. / Pass.)	$ 6.62	$ 7.22	$ 11.48	$ 8.03	$ 5.37	$ 6.51	$ 6.72	$ 7.42
Service Utilization								
Reg. Serv. Pass. / Capita	10.20	9.20	2.31	5.89	17.80	5.14	7.89	8.35
Reg. Serv. Pass. / Rev. Veh. Hr.	8.07	11.37	4.36	6.15	14.89	11.76	8.53	9.31
Amount of Service (RVH / Capita)	1.26	0.81	0.53	0.96	1.20	0.44	0.92	0.87
Cost / Rev. Vehicle Hr (Dir. Oper. Exp. / RVH)	$ 53.44	$ 82.10	$ 50.11	$ 49.38	$ 80.02	$ 76.60	$ 57.31	$ 64.14

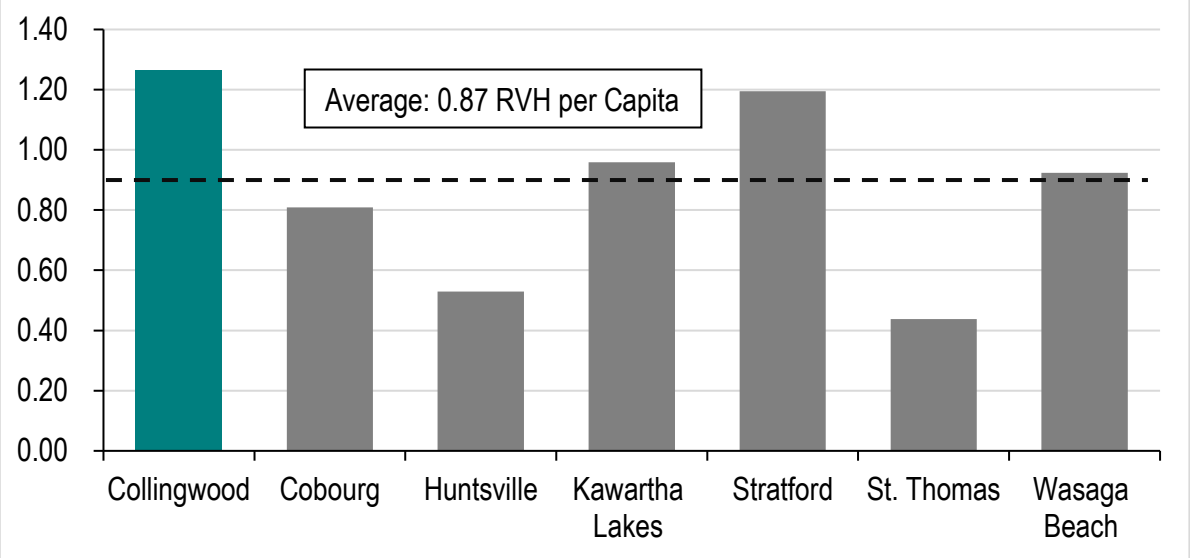
3.1 Performance

This section reviews a mix of financial and ridership measures to understand how Collingwood compares to its peers in terms of service utilization and revenues and costs. The five performance measures expanded on in this section are:

- **Revenue vehicle-hours per capita**, to compare how much service is provided across peer communities;
- **Service utilization**, measured by riders per revenue hour to give an idea of how ridership compares to investment;
- **Cost per revenue vehicle-hour**, to determine the differences in operating costs across the peer communities;
- **Cost effectiveness**, measured by direct operating cost per passenger; and
- **Operating efficiency**, measured by the relationship between revenue and cost (revenue/cost ratio).

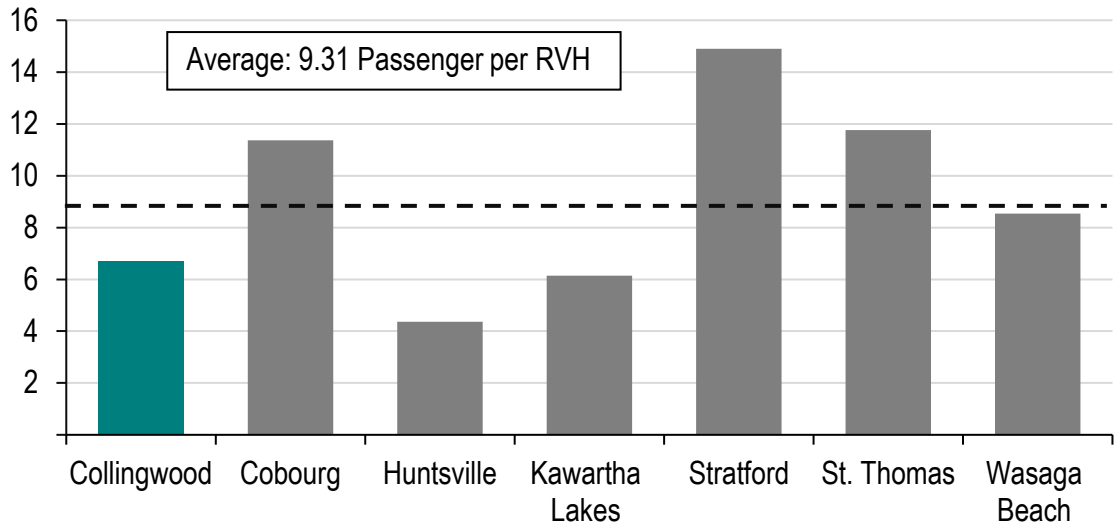
Compared to its peers, Collingwood provides the most amount of service, at 1.5 revenue vehicle-hours per capita (Exhibit 3-2). Stratford comes second in this regard despite having more routes because it serves a larger population. In terms of routes per capita, the Collingwood and Stratford have a similar amount of service.

Exhibit 3-2: 2019 Revenue Vehicle-hours per Capita



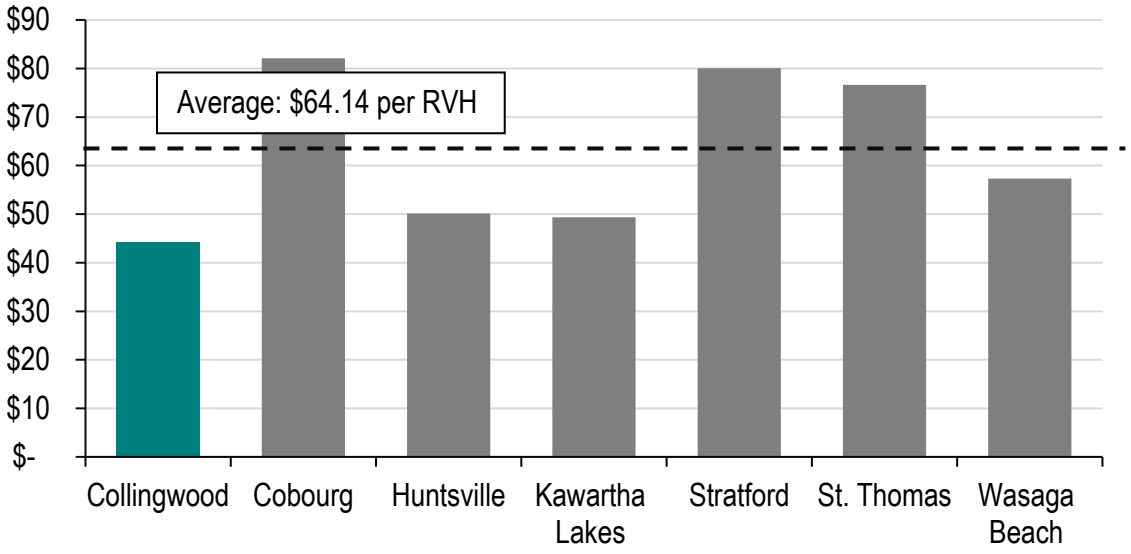
Collingwood has the second highest ridership of its peer communities, second to Stratford. However, in terms of rides per revenue vehicle-hour provided, it ranks well below the average (Exhibit 3-3). This is partially due to its high revenue vehicle kilometres (longer routes resulting is lower service utilization) and the amount of service it provides. The service utilization indicates an opportunity to make routes more effective, either by making them more direct and faster, or reviewing the route coverage to provide more access to transit services.

Exhibit 3-3: 2019 Revenue Passengers per Revenue Vehicle-hour (Service Utilization)



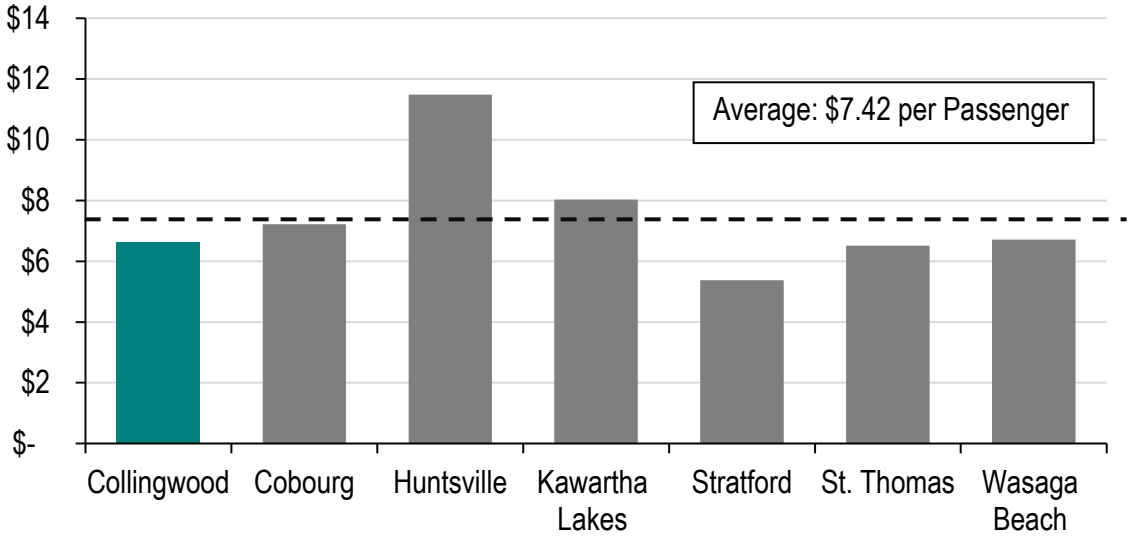
In terms of operating costs, specifically per revenue vehicle-hour, Collingwood has the lowest costs among its peers (Exhibit 3-4), due to it's current operating contract which is very competitive. Its vehicle maintenance and administration costs are well below its peers who report these statistics. Given the amount of service it provides, Collingwood has managed to maintain very low operating costs. As the operating contract nears completion, the costs to operate the transit service are expected to increase to be more in line with its peer communities.

Exhibit 3-4: 2019 Costs per Revenue Vehicle-hour



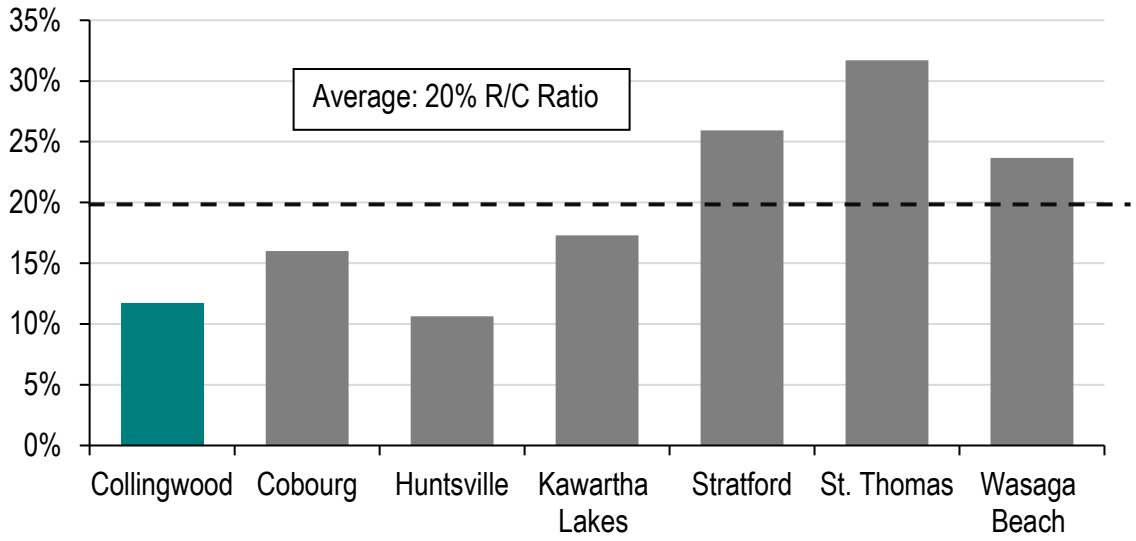
Cost effectiveness, measured by the total direct operating expenses per passenger, is an indication of the financially sustainability of the system. Collingwood's costs per passenger are lower than the peer group average, a direct outcome of its overall very low operating costs. The cost effectiveness of the peer communities is shown in Exhibit 3-5.

Exhibit 3-5: 2019 Direct Operating Expenses per Passenger (Cost Effectiveness)



The relationship between the revenue and cost is an indicator of a system's operating efficiency. Collingwood's revenue/cost (R/C) ratio is the second highest among its peers, and generally high for a system of its size, given its high revenue vehicle-hours and low fares. The system's low contract costs contribute significantly to this trend. This also indicates that Collingwood is a financially sustainable system. The R/C ratio of the peer communities is shown in Exhibit 3-6.

Exhibit 3-6: 2019 Revenue/Cost Ratio (Financial Operating Efficiency)



3.2 Fare Structure and Fare Policies

Collingwood's fares are smart-card based, allowing for single-directional transfers, typically at the downtown terminal. Currently, no reciprocal fares are provided between the local Collingwood routes and the intermunicipal routes (Blue Mountains Link and Wasaga Beach Link). As a result, residents/transit users must pay two full fares according to the fare policies of the other transit services to travel to and between the other municipalities.

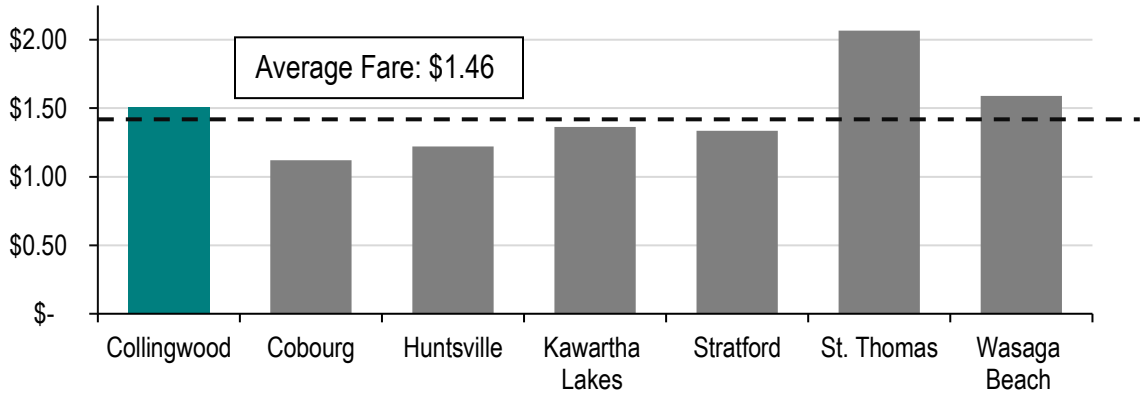
All the peer communities reviewed utilize flat fares and provide concession fares. A summary of fares and fare products among the peer communities is shown in Exhibit 3-7. For Collingwood, the concession fares are available for students and seniors. Collingwood and Wasaga Beach offer the lowest fares for single ride trips and monthly passes.

Exhibit 3-7: Peer Communities Fare Prices and Categories

	Municipality						
Fare Category	**Collingwood**	**Cobourg**	**Huntsville**	**Kawartha Lakes**	**Stratford**	**St. Thomas**	**Wasaga Beach**
Cash Fare							
Standard/Adult fare	$ 2.00	$ 2.00	$ 2.25	$ 2.25	$ 2.75	$ 2.75	$ 2.00
Child/Youth Fare	$ -	$ 2.00	$ 1.00	$ 1.25	$ -	$ 2.75	$ 1.50
Student Fare	$ 1.50	$ 2.00	$ -	$ 1.75	$ 2.50	$ 2.75	$ 1.50
Senior Fare	$ 1.50	$ 2.00	$ 2.25	$ 1.75	$ 2.50	$ 2.75	$ 1.50
Electronic Payment Fare							
Standard/Adult fare	$ -	$ 1.60	$ -	$ 1.66	$ 2.50	$ 2.25	$ 2.00
Child/Youth Fare	$ -	$ 1.60	$ -	$ -	$ -	$ 1.65	$ 1.50
Student Fare	$ -	$ 1.60	$ -	$ 1.66	$ 2.25	$ 1.65	$ 1.50
Senior Fare	$ -	$ 1.60	$ -	$ 1.66	$ 2.25	$ 1.65	$ 1.50
Monthly Passes							
Standard/Adult fare	$ 40.00	$ 60.00	$ 52.50	$ 60.00	$ 65.00	$ 70.00	$ 40.00
Child/Youth Fare	$ -	$ 25.00	$ -	$ -	$ -	$ 60.00	$ 5.00
Student Fare	$ 30.00	$ 50.00	$ 25.00	$ 50.00	$ 55.00	$ 60.00	$ 30.00
Senior Fare	$ 30.00	$ 30.00	$ -	$ 50.00	$ 55.00	$ 60.00	$ 30.00

Although Collingwood has generally low fares, in terms of average fare paid, Collingwood is above the peer average (Exhibit 3-8).

Exhibit 3-8: 2019 Average Fare Paid in Peer Communities



Since the downtown terminal is the main transfer location for the system and Collingwood fares are low, the single-directional transfers are an issue for passengers that may benefit from other transferring at other locations. Should the route review provide additional opportunities for transfers on the network, such as at the main shopping area at High and First Streets, time-based transfers can be considered to improve access for users. Given that the inter-municipal routes also provide additional connections within Collingwood, there is an opportunity to explore reciprocal fares to improve access for transit users.

3.3 Key Findings

- Overall Collingwood Transit is a **cost-efficient service**. The operating costs are significantly lower than its peers, and it provides more service per capita than peer communities. Part of this is due to a low contractor operating cost of (currently) $52.10/hour. With a new contract, it is expected that the operating costs will increase to be more in line with its peers.
- Although ridership is growing, **service utilization is below its peer average** indicating there is an opportunity to realign the routes to expand to new service areas, better serve travel needs and improve ridership.
- The system's average fare is close to the peer average, but there are **opportunities to examine fare policies** to provide reciprocal fares with inter-municipal services operating in the town, and to improve transfers outside the downtown terminal.

4 Performance Trends

This section critically evaluates the operations, ridership and financial trends for the transit system to understand its performance and productivity, focusing on the eight-year period between 2012 and 2019, which has the most complete operational data. The data used for this review was obtained from the Ontario Urban Transit Fact Book for each of the years included.

In addition to the system trends, this section evaluates each route to provide a detailed understanding of route performance which will be used to identify opportunities for improvements to service delivery.

4.1 Transit Network Attributes

CollTrans has been in operation since 1982 and until 2019, served nearly 200,000 rides annually. The last comprehensive review of the service was conducted in 2005, and the town has since grown significantly in population and density. CollTrans is administered by the Town of Collingwood and operated by Landmark Bus Lines. The service consists of conventional fixed routes oriented towards the main terminal in downtown Collingwood.

The service has three local routes operating within Collingwood exclusively and one route connecting to the Town of the Blue Mountains. The routes are:

- The East route, a one-directional loop operating east of Hurontario St. and providing coverage to primarily commercial and institutional destinations (hospital, municipal buildings, recreational facilities), as well as some residential areas and retirement communities;
- The West route, a one-directional loop operating west of Hurontario St. and providing coverage to primarily residential and commercial destinations (including big box retailers) and some institutions;
- The Crosstown route, a primarily bi-directional route (with some one-way loop sections) operating from the northwest to the southwest edges of town, providing coverage to residential and commercial destinations, as well as major institutions such as the hospital and Georgian College, via downtown Collingwood;
- The Blue Mountains Link established in 2013, a primarily one-directional route (with some bi-directional sections) to the Village at Blue Mountains and the Craigleth area, provided through a service agreement between the Town of Collingwood, the Town of the Blue Mountains, and the Blue Mountains Resort.

To operate its service, Collingwood Transit has a total of eight buses as of 2019, and a peak utilization of four buses. At the time, Collingwood Transit also operated the Wasaga Beach Link, utilizing one more bus. This results in an overall spare ratio of 37.5%. Excluding the Wasaga Beach Link, the spare ratio is 17% (as reported in the 2019 Ontario Urban Transit Fact Book).

Exhibit 4-2 is a map of the existing Collingwood transit routes.

All the buses operate between 7 a.m. and 8 p.m. daily. The East and West routes have 30-minute frequencies on weekdays and Saturdays and hourly frequencies on Sundays. The Crosstown and Blue Mountains Link have hourly frequencies daily.

Exhibit 4-1 illustrates the span and frequencies of the Collingwood transit routes.

Exhibit 4-1: Collingwood Transit Routes Frequencies and Service Spans (2019)

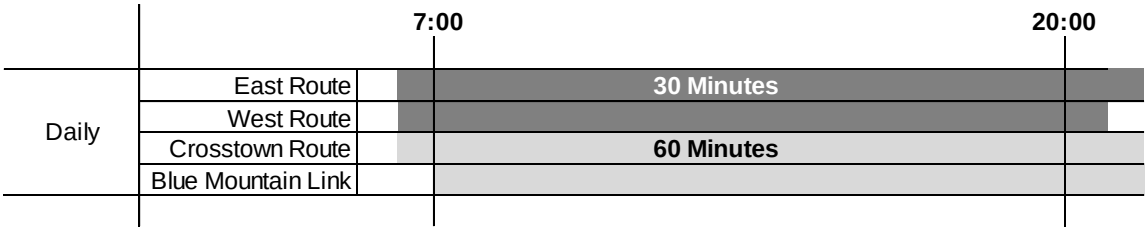
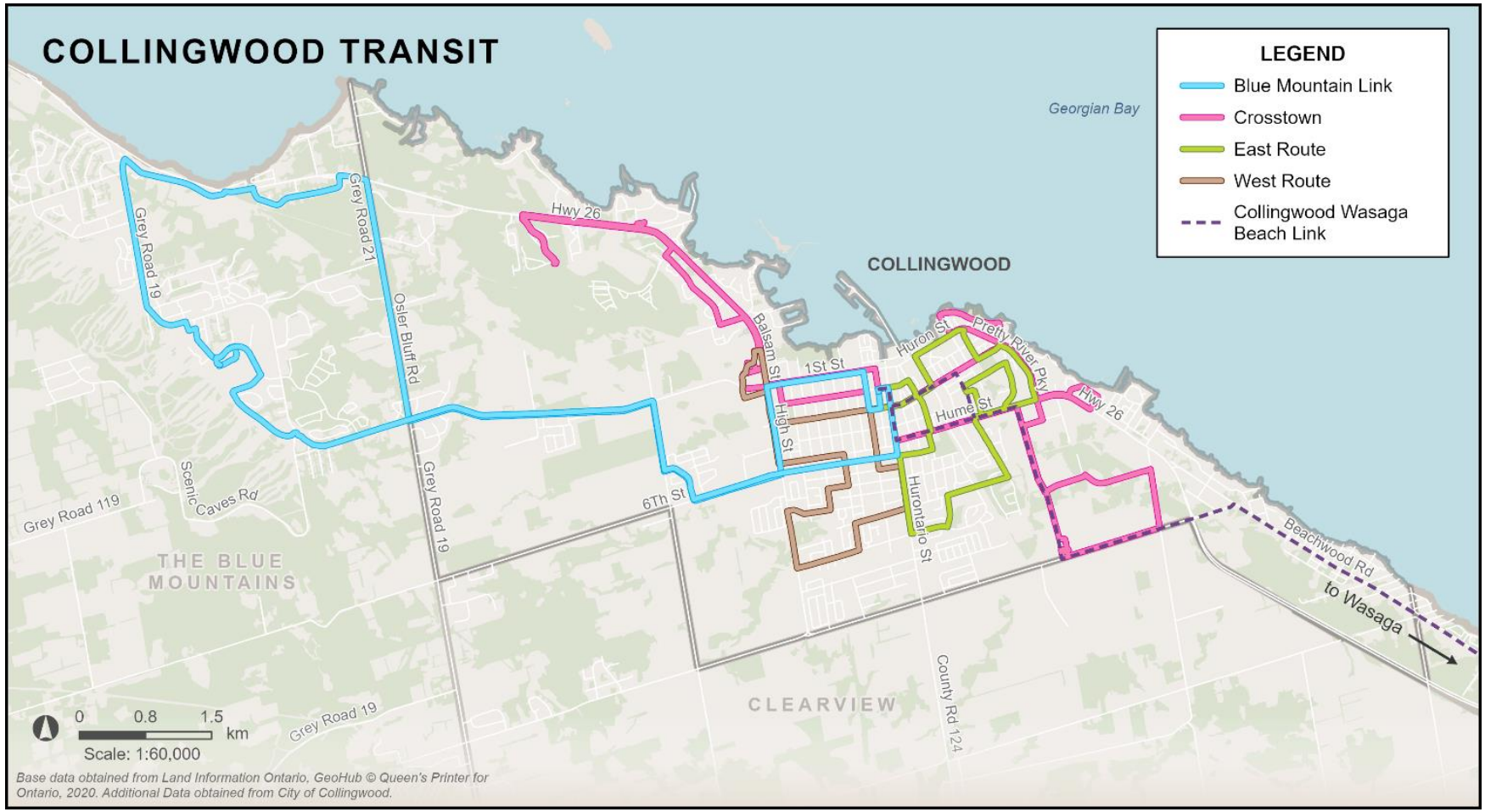


Exhibit 4-2: Collingwood Transit Routes (2019)



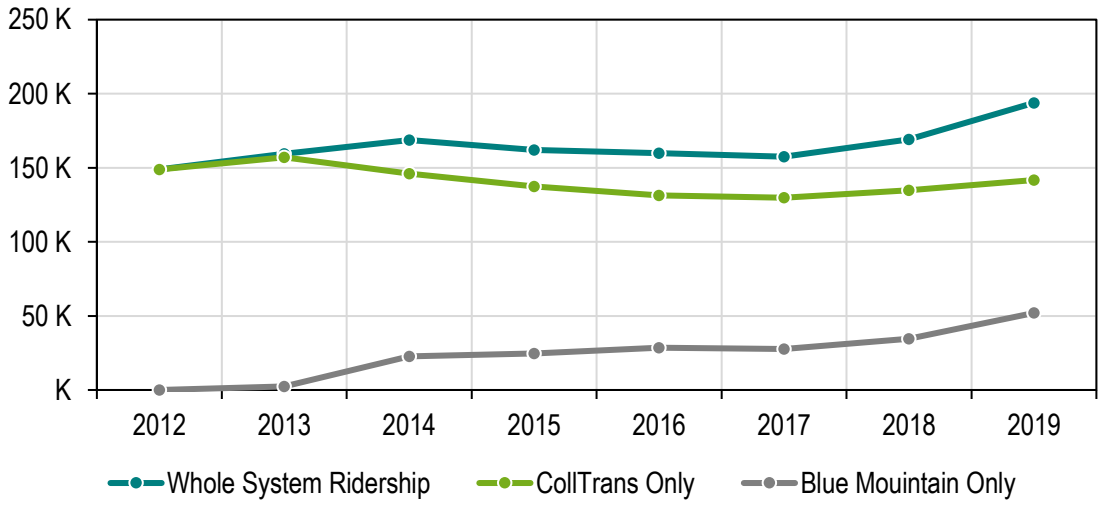
4.2 System Trends

The historical performance and operational trends of Collingwood Transit are assessed in the context of the following main indicators:

- **Annual ridership** to determine how much the system is being used;
- **Average monthly ridership** to determine when the system is being used;
- **Operating costs versus annual revenue** (R/C ratio) to assess the cost efficiency of the system.

Since 2012, ridership for all the routes including the Blue Mountains Link has grown by 30%. However, as shown in Exhibit 4-3, this growth has been largely driven by the introduction of the Blue Mountains Link, whose first full year of service was 2014. Ridership on the other three routes has actually decreased by 5% in that same time period, which is a concerning trend, further examined in the route by route review.

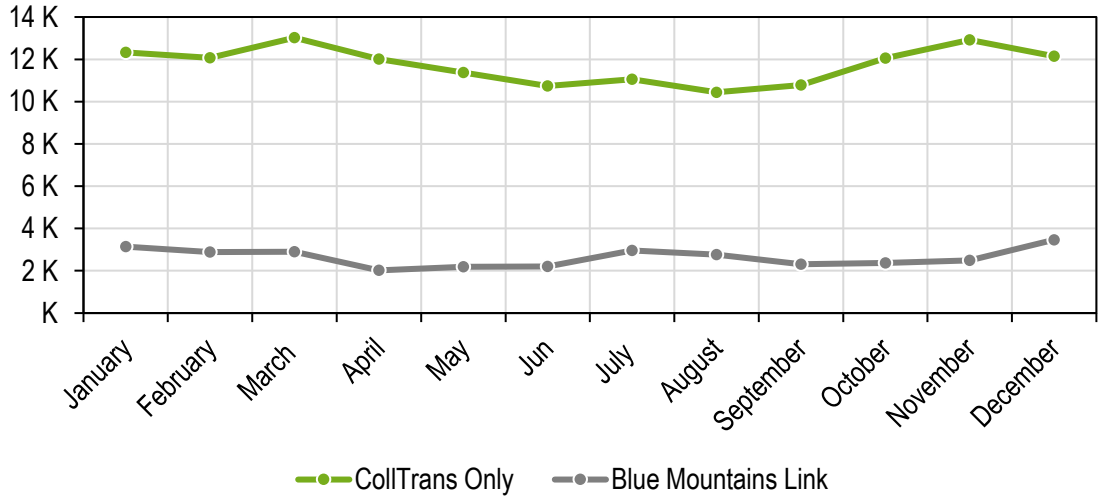
Exhibit 4-3: Annual Ridership (2012-2019)



Average monthly ridership examined over the same time period (Exhibit 4-4) shows that the system has two ridership peaks, in the winter months (highest in November and March). Ridership is lowest overall in the late summer months. This trend is not present for the Blue Mountains Link, whose service is fairly consistent year-round, and high in the late summer, since it serves

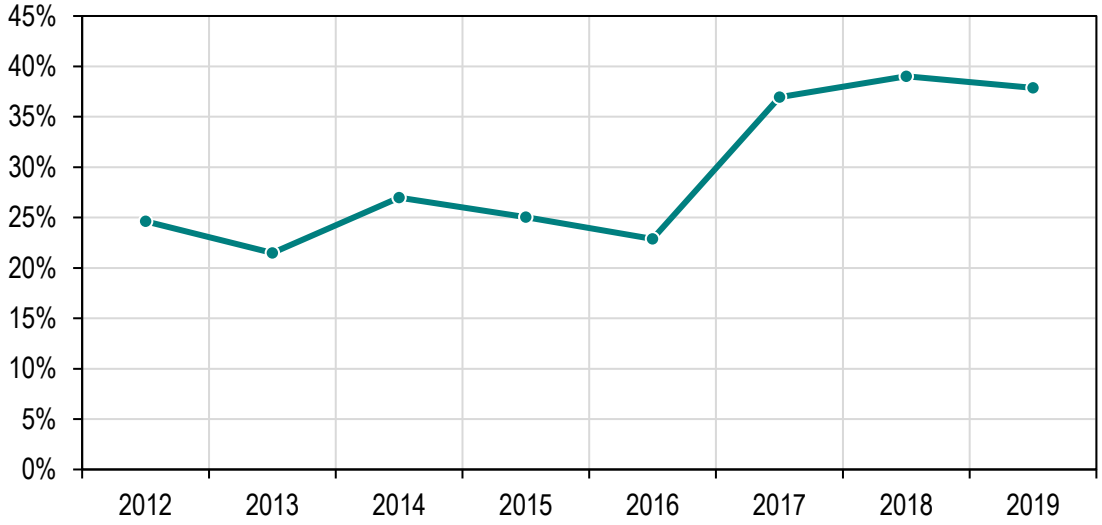
longer trips, likely for work purposes. The lower ridership in the summer months may indicate that people are opting to use other modes or making fewer trips overall (during the school summer holidays).

Exhibit 4-4: Average Monthly Ridership (2012-2019)



The annual operating costs compared to the revenue are an indication of the system's financial operating efficiency, as discussed in Section 3.1. Collingwood has a high R/C ratio, and it has been growing over the last eight years (Exhibit 4-5), indicating that the system is fiscally sustainable. Like most transit service, the aim of Collingwood transit is to provide mobility and access for residents efficiently. Because transit is a public good, profitability is not its main goal, however, the positive trend in the R/C ratio is good for the long-term growth of the service.

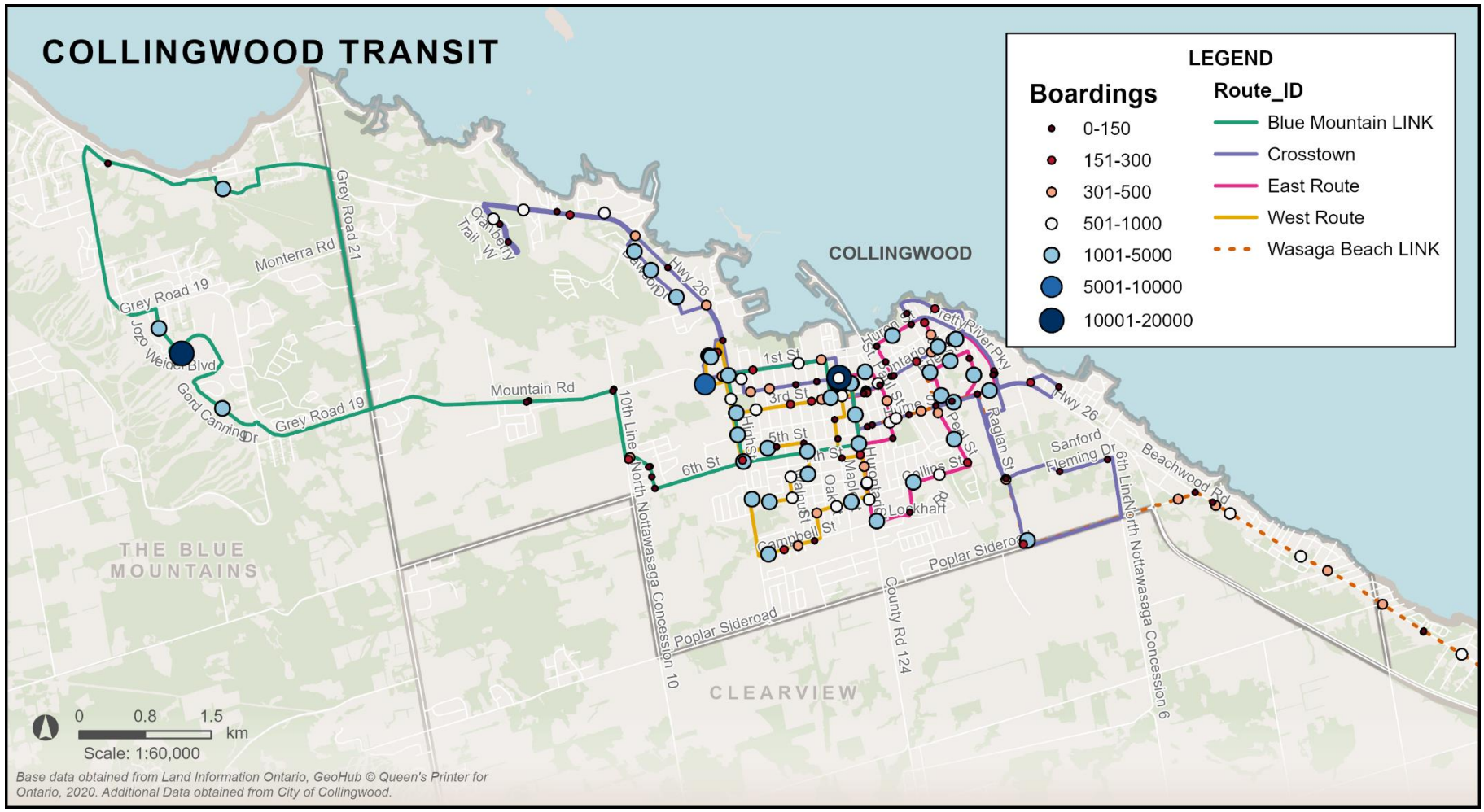
Exhibit 4-5: Revenue/Cost Ratio (2012-2019)



In addition to these performance trends, to understand the coverage of the service, and identify opportunities to streamline the routes, we reviewed **ridership by stop** in 2019, using farebox data (Exhibit 4-6).

As expected, based on the downtown orientation of the network, the highest ridership for the system is the downtown terminal, with over 17,000 annual boardings on the West route, over 12,00 annual boardings on the Blue Mountains Link and the Crosstown, and over 11,000 annual boardings on the East Route. This location is closely followed by the Village at the Blue Mountains stop, with over 11,000 annual boardings. Other high ridership stops include the hospital, Wal-Mart, FreshCo, and Georgian College. Most low ridership stops are along the East route and the eastern portion of the Crosstown. Some of the residential stops on the Blue Mountains Link are also low in ridership. These low ridership areas are opportunities to review the stop placement and consolidate stops with limited use. They also present the opportunity to review the route alignments and reallocate service to areas with more opportunity for ridership growth.

Exhibit 4-6: Annual Ridership by Stop (2019)



It is to be noted that the County of Grey does not permit stops to be located along County roads within its jurisdiction. This is in direct contrast to stops that are permitted along Provincial Highway 26, plus conditions in other similar situations across Ontario as well as within Collingwood itself. The County's restriction effectively prevents people from accessing the Blue Mountain Link in some settlement areas along its route. Although outside the Town of Collingwood's purview, advocating for additional stops where needed may increase ridership on the route.

4.3 Route Review

This sub-section presents a detailed analysis of each route focusing on ridership and performance to identify opportunities for improvements to routing and service levels.

Key Operating Statistics

To understand the individual route structure, key operating characteristics such as cycle times, headways (time between buses), and operating speeds were examined, and are shown in Exhibit 4-7. The headways and cycle times for the Collingwood Transit routes are uniform, operating using clockface schedules on the hour. This makes the service easy to understand, and transfers are easily coordinated from the downtown terminal where all routes originate. Although the frequencies of the Crosstown and Blue Mountains Links are low, the easy to understand schedules make planning trips easy for users.

The average speed is a useful indicator to understand whether enough time is allotted to the routes to avoid schedule adherence issues. The industry guideline for average operating speeds in an urban setting is 20 to 22km/hr. Collingwood's routes primarily operate in the built-up areas of town and fall within the average operating speed guideline. The operating speed of the Crosstown route is higher than the guideline, but this can be attributed to its segments on Highway 26, where there are few stops. The Blue Mountains Link is an exception to this guideline since it operates on higher speed county roads and has fewer stops overall.

Managing the fleet in relation to the level of service provided is a necessary consideration for fleet maintenance. The average age of the Collingwood fleet is 5 years old, and the service has a fleet spare ratio of 17% (this includes the Wasaga Beach Link, which was previously operated by Collingwood Transit). The target guideline, based on industry experience is 20 – 25%, but can vary based on the age and maintenance of the of the fleet. Excluding the Wasaga Beach Link, Collingwood's spare ratio is within the guideline.

Exhibit 4-7: Key Operating Statistics (2019)

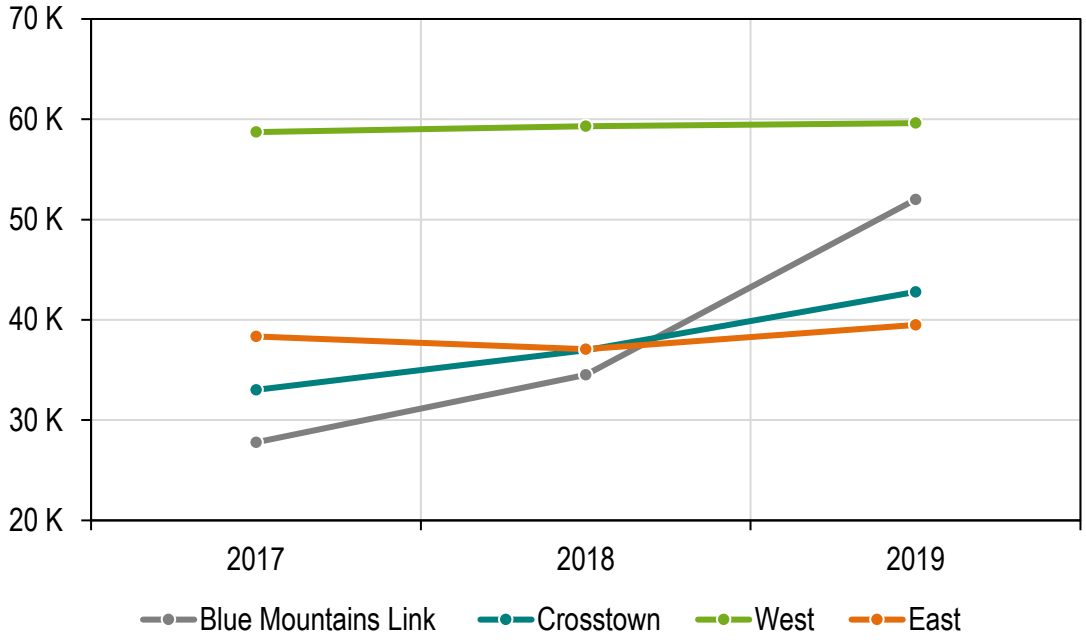
Route	Headway (mins)	Length (km)	Cycle Time (mins)	Buses Required	Cycles per Day	Revenue Vehicle kms	Daily Revenue Vehicle Hours	Average Speed (km/h)
Weekday								
Crosstown	60	27.5	60	1.0	15.0	412.5	15.0	27.5
East	30	10.8	30	1.0	27.0	291.6	13.5	21.6
West	30	10.4	30	1.0	26.0	270.4	13.0	20.8
Subtotal		48.7		3.0	68.0	974.5	41.5	
Blue Mountain Link	60	28.5	60	1.0	14.0	399.0	14.0	28.5
Total		**77.2**		**4.0**	**82.0**	**1373.5**	**55.5**	
Saturday								
Crosstown	60	27.5	60	1.0	15.0	412.5	15.0	27.5
East	30	10.8	30	1.0	27.0	291.6	13.5	21.6
West	30	10.4	30	1.0	26.0	270.4	13.0	20.8
Subtotal		48.7		3.0	68.0	974.5	41.5	
Blue Mountain Link	60	28.5	60	1.0	14.0	399.0	14.0	28.5
Total		**77.2**		**4.0**	**82.0**	**1373.5**	**55.5**	
Sunday								
Crosstown	60	27.5	60	1.0	15.0	412.5	15.0	27.5
East	60	10.8	30	0.5	14.0	151.2	7.0	21.6
West	60	10.4	30	0.5	14.0	145.6	7.0	20.8
Subtotal		48.7		2.0	43.0	709.3	29.0	
Blue Mountain Link	60	28.5	60	1.0	14.0	399.0	14.0	28.5
Total		**77.2**		**3.0**	**57.0**	**1108.3**	**43.0**	

Route Level Ridership

The Collingwood routes serve various trip purposes within the town, including school trips, retail trips, and commutes, while the Blue Mountains Link primarily serves work trips. Ridership by route between 2017 and 2019 was reviewed to gain insight on route performance trends. These three years represent the most complete data available for all three Collingwood routes and the Blue Mountains Link.

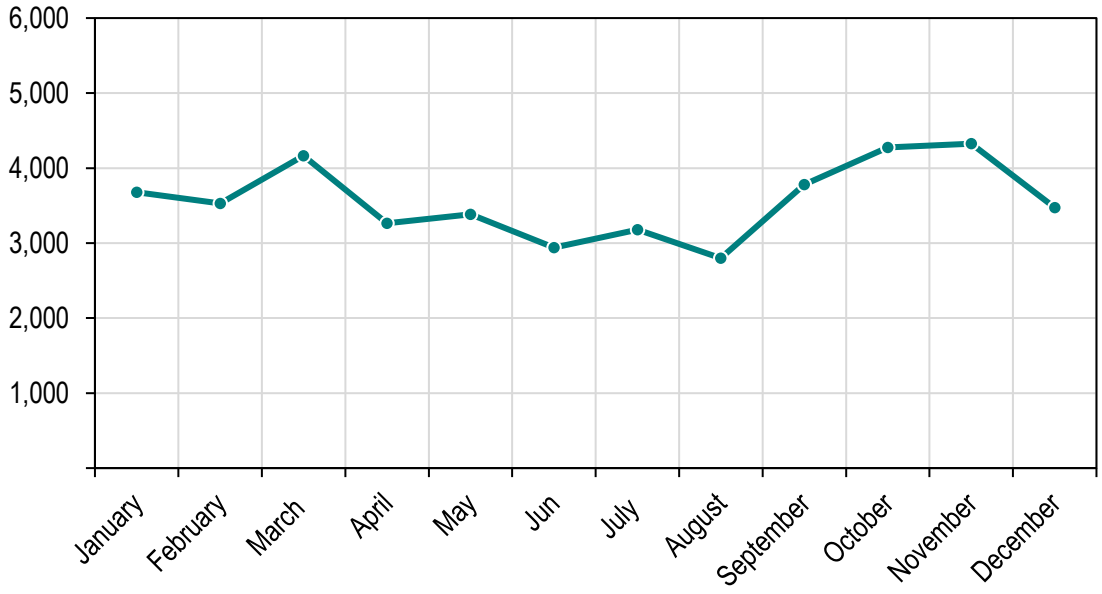
Although ridership has grown for the system overall since 2017, growth has been significantly higher on the Blue Mountains Link (87% increase). By 2019, the Blue Mountains Link carried nearly a quarter of the system's total ridership. Ridership on the Crosstown route has also been growing steadily in the same time period, increasing by 30% between 2017 and 2019. The West and East routes have had slower growth in the same time period, only increasing ridership by 2% and 3% respectively. These route by route ridership trends are shown in Exhibit 4-8.

Exhibit 4-8: Annual Ridership by Route (2019-2019)



The **Crosstown** is the longest route operating within the town and provides coverage to some of the town's major trip generators, including downtown, the big box commercial developments on Mountain Rd., medium-density condo developments in the West End, the hospital, and Georgian College. Although ridership on the route is growing, it currently has the second lowest ridership of all the routes. Ridership on the Crosstown peaks in March, October and November, and is lowest in the summer months. The monthly ridership trends on the Crosstown are shown in Exhibit 4-9.

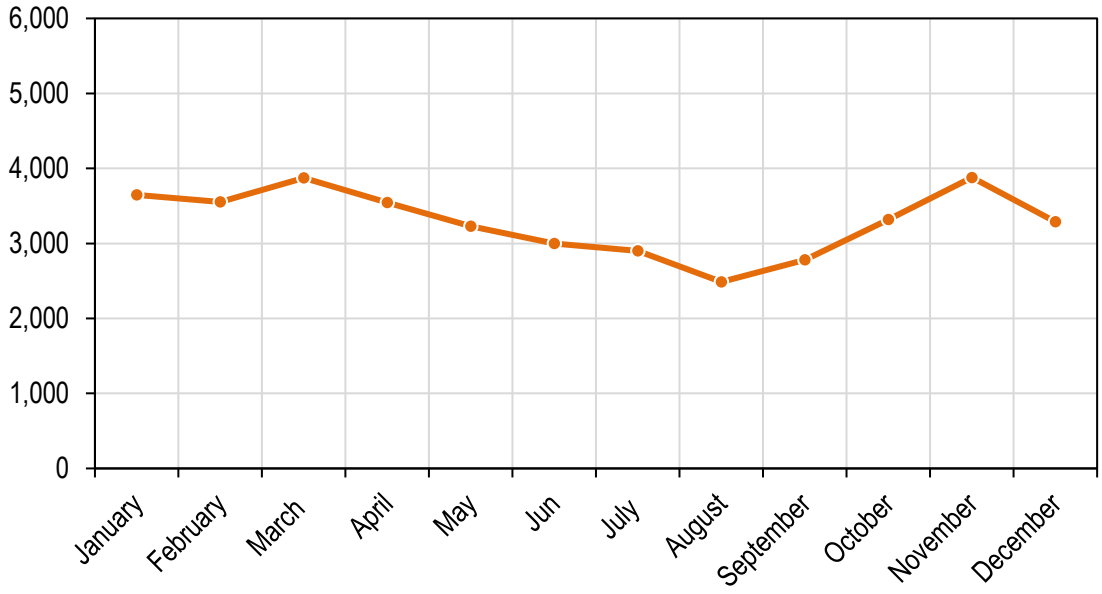
Exhibit 4-9: Monthly Ridership on the Crosstown Route (2019)



Overall, the positive ridership trend on the route indicates that there is demand for the service, particularly as it provides the most coverage of all the routes. In terms of its alignment, there are opportunities to reduce some of the service duplication between this route and the Blue Mountains Link and Wasaga Beach Link, particularly if reciprocal fares are provided. This would create the opportunity for the route to provide coverage to new service areas.

The **East** route provides high coverage to primarily residential and institutional destinations east of Hurontario. This route has the lowest ridership of all the routes. Similar to the Crosstown, ridership on the East route peaks in the winter months (March and November) and drops in the summer months, seeing its steepest drop in August. The monthly ridership trends on the East route are shown in Exhibit 4-10.

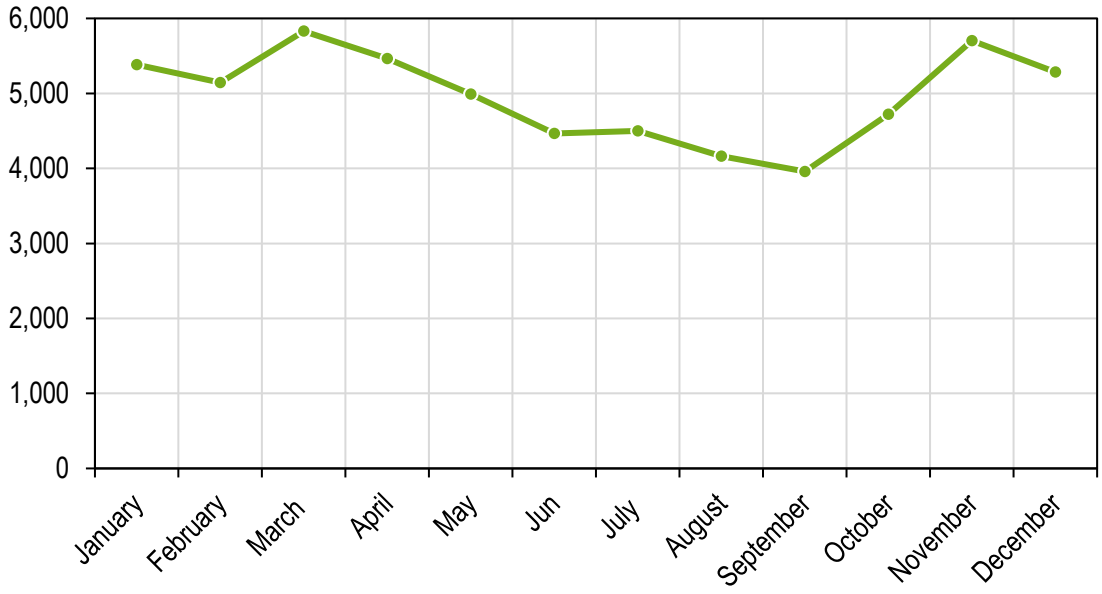
Exhibit 4-10: Monthly Ridership on the East Route (2019)



Ridership on the route grew between 2017 and 2019, albeit slowly. The route's alignment shows significant service duplication with the Crosstown and intermunicipal services, which may contribute to its low ridership. The route also provides high coverage and serves various retirement communities. Realigning the route to provide service to some residential trip generators east of Hurontario may improve its ridership.

The **West** route is the western counterpart of the East route, providing coverage to primarily residential and commercial destinations west of Hurontario. The route has the highest ridership in the system, likely due to the higher density residential areas it serves along its alignment, and the big box commercial destinations on Mountain Rd. Although it has the highest ridership in the system, it had the slowest growth between 2017 and 2019. Similar to the Crosstown and East routes, it has the highest ridership in the winter months, peaking in March, and the lowest ridership in the late summer months (lowest in September). It also has the largest range between its highest ridership and lowest ridership months (March and September respectively). The monthly ridership trends on the West route are shown in Exhibit 4-11.

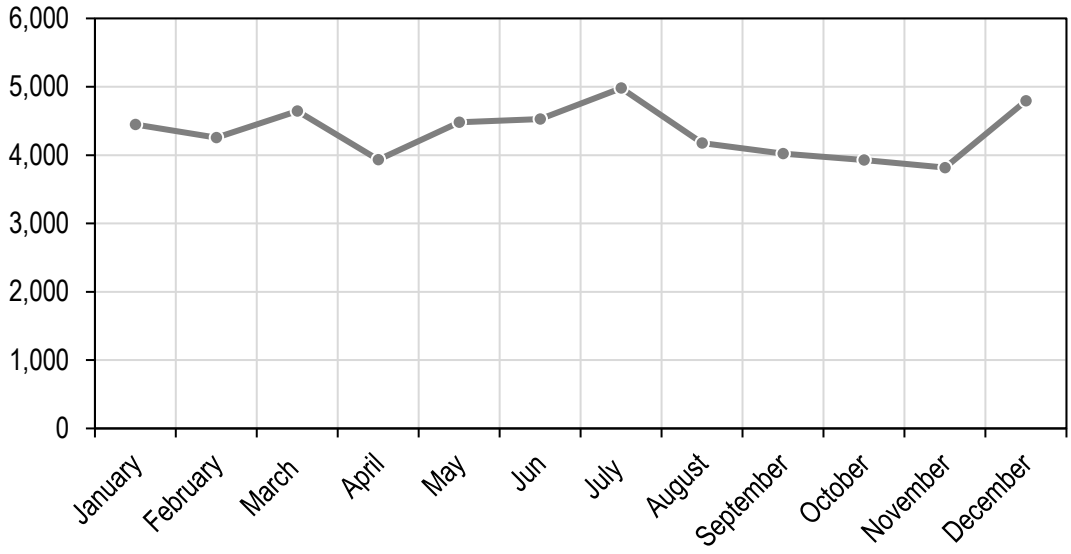
Exhibit 4-11: Monthly Ridership on the West Route (2019)



The route currently serves higher density residential areas on High St, providing bi-directional service along a particularly productive section of the street. Since the route is short and receives fairly high ridership, the main opportunities for its improvement are removing some unproductive sections (such as along Maple) and reallocating that service to other potential trip generators on the west end or realigning it to provide bi-directional service.

The **Blue Mountains Link** is the only inter-municipal route included in this review. It serves primarily work trips to the Village at Blue Mountains and the Craigleth area while operating on County of Grey roads. The route has the second highest ridership in the system and has more than doubled its ridership since its first full year of operation. In addition to its high ridership, it is also the fastest growing route in terms of ridership. Unlike the other routes, this route has the most consistent year-round ridership, with ridership peaking in July and dropping to its lowest levels in November. Since its inception, July and August as well as the winter months have had the highest ridership. The monthly ridership trend on the Blue Mountains Link are shown in Exhibit 4-12.

Exhibit 4-12: Monthly Ridership on the Blue Mountains Link (2019)



Due its performance, and the overall efficiency of the route no significant changes are recommended to the alignment, with the exception of exploring some opportunities to increase coverage by adding stops in some of the built-up areas on its route.

4.4 Key Findings

The key findings emerging from this review that will provide the direction for the development of new service options and the five-year growth plan are summarized below.

- **Ridership growth is primarily driven by the Blue Mountains Link,** and overall ridership is lagging among the other routes, indicating there is an opportunity to improve overall ridership by improving those routes.
- **Ridership is highest in the winter months for the whole system,** except the Blue Mountains Link, indicating that ridership is partially driven by student trips, and there is an opportunity to improve service in the summer months.
- Stop ridership data shows that there are **opportunities to consolidate stops** to remove stops with little or no ridership, and **review route alignment** along low-ridership corridors.
- The route by route review also identifies **opportunities to improve routings to address coverage gaps** and improve ridership.

5 Area Transit

This section is a review of the transit services in the communities adjacent to Collingwood. It identifies opportunities for collaboration and resource sharing to improve inter-municipal connections and makes recommendations to more effectively manage Collingwood's transit resources.

5.1 Review of Current Area Transit Services

In addition to Collingwood, there are four local transit services in the South Georgian Bay region. The other four transit services are operated by the Town of Wasaga Beach, the Township of Clearview, Grey County and the Town of Blue Mountains. Exhibit 5-1 below summarizes the local transit services available in the communities adjacent to Collingwood. Inter-municipal transit within the county is currently provided by the County's LINX transit. This section reviews only the local services adjacent to Collingwood. Section 5.3 includes recommendations for inter-municipal service expansion.

In addition to the fixed-route service, each of the adjacent municipalities, with the exception of Wasaga Beach, provide a specialized transit service. Each of these transit services are administered and managed by the respective municipalities while the delivery of the services, including provision of operations staff, vehicle maintenance and storage is contracted to private transportation companies such as Landmark Bus. The vehicles used for each of the services are purchased and supplied by the respective municipality

The Blue Mountains route is operated by Collingwood on behalf of the Town through a municipal services contract between the two municipalities and forms part of the operating contract with the private contractor, Landmark Bus. The bus utilized for the Blue Mountains Link was purchased by Collingwood, with funding from the Town of the Blue Mountains. Landmark Bus is also the operator for the Clearview and Wasaga Beach services. Collingwood and Wasaga Beach are pursuing a joint procurement for their two services for better efficiency and more competitive pricing, as they have done before.

Because transit services are a municipal responsibility, staff within each municipality oversee the transit service contract and operation. Typically, this responsibility is assigned to one person but as a minor part of the staff person's overall responsibilities as is the case with Collingwood.

Exhibit 5-1: Transit Services in South Georgian Bay (2020)

Town/ Transit Service	Number of Routes	Buses	Hours of Operation	Days of Week	Ridership	Annual Revenue Hours	Annual Operating Budget
Collingwood	**4**	**4**	**7:00am to 9:00pm**	**7**	**184,666**	**24,008**	**$1,110,747**
Wasaga Beach	2	3	7:00am to 9:00pm	7	91,166	10,682	$612,204
Clearview Transit	2 (Creemore *Stayner)	2	6:30am to 8:30pm	6	9,581	4,969	$230,800
Grey County Transit	1 (Owen Sound to Blue Mtns)	1	6:30am to 9:00pm (7:00am to 9:00pm Sat and Sun)	5 (Wed to Sun)	2,155	495	$462,500
Blue Mountains Transit	1	2**	6:00am to 9:00pm	7	51,995	4,970	$335,588
Subtotal (without Collingwood)	**6**	**8**	-	**-**	**154,897**	**21,116**	**$1,641,092**
TOTAL	**10**	**12**	-	**-**	**339,563**	**45,124**	**$2,751,839**

*Service suspended
**Part of Collingwood fleet

5.2 Service and Operations Management

Whether the transit service consists of one route, one bus or multiple buses and routes, the level of effort involved in managing, overseeing, planning and delivering the service remains essentially the same. A transit service must be planned and managed proactively in order to be useful and attractive. Therefore, the municipal staff resources assigned to manage the service have to be sufficient to handle the responsibilities to ensure that the service meets and responds to the needs of the community. These needs are ever changing; reflecting the dynamic character of a municipality. The activities and responsibilities for managing a transit service vary, including:

- **Administration and general management** – budget development and administration, preparing reports, investigating transit issues, understanding trends and new technologies or new approaches; preparation of policies, best practices development, industry liaison, asset planning and management; development of vehicle specifications and purchase of buses; development and administration of contracts; fare policy development; arranging fleet insurance
- **Planning** – data collection, analysis of the service's performance, adapting routes and schedules to changing community needs to keep the service current and attractive
- **Communications** – consultation with and responding to stakeholder (user and non-user) needs, enquiries and suggestions; responding to Council requests and enquiries, internal departmental liaison, external stakeholder liaison, development of customer information materials and promotion of the transit service
- **Operations Contract Oversight** – administration of the operating contract for compliance; monitoring the performance of the contractor; review and confirmation of invoicing and variations; reviewing service performance including delays and detours; inspection of vehicles for fitness and cleanliness; ensuring maintenance practices are adhered to; reviewing accident trends, investigations and results; reviewing and assessing responses to customer feedback.

With respect to oversight of the operations contract, responsibility for the management, planning and delivery of the transit service remains with the municipality therefore the municipality's staff must ensure that the contractor is performing to expectations. This task takes time and effort, and as such, it is important that the staff resources available are sufficient to fulfill these objectives.

For Collingwood, the responsibilities for managing the service amount to approximately 40% of the Public Works & Transit Coordinator's time. This limited time allocation makes it challenging to adequately both oversee the contractor's performance as well as manage the transit service. Several of these responsibilities, particularly oversight of the contractor, cannot be undertaken to the degree they should be to protect the municipality's investment, manage risk, and grow ridership.

For the other municipal transit services in the South Georgian Bay area, a similar situation may well apply but their smaller size would suggest fewer staff resources and a lower priority for managing the transit services. As a result, the

Town of Blue Mountains relies on Collingwood's transit coordinator to manage their service including the purchase of buses while Wasaga Beach relies on Collingwood's resource to assist with their transit service. Similarly, Clearview has approached Collingwood regarding the introduction of a new service between Nottawa and Collingwood. In comparison, Grey County, with three routes and five buses, has a full-time transit coordinator (Manager of Community Transportation).

In Southwestern Ontario, the municipalities there have formed a joint board and pooled resources to more effectively plan and manage their transit services. A similar arrangement could be beneficial for Collingwood and the other South Georgian Bay transit services. With the municipalities already relying on Collingwood's transit staff resource, there are opportunities to pool the collective municipal resources to both increase the transit resource to manage and grow the four transit services, and to avoid duplication of efforts. The Towns of Wasaga Beach, Blue Mountains and Clearview should be approached by the Town of Collingwood to provide funding on either a charge-back or a fee-for-service basis to support the increased staff resources for improved management and oversight of their services. To do so would allow the municipal transit staff resource to increase to a full-time transit staff resource, assisted by an administrative or technical assistant.

Opportunities for Collaboration

In support of the concept of a "collective" approach to managing the South Georgian Bay (SGB) area transit services, there are a number of opportunities for collaboration in addition to those already in place:

- Joint procurement of vehicles (currently in place for Blue Mountains)
- Consolidated operating contract and tendering for all services. A larger value contract is more attractive to potential contractors and simplifies administration and oversight (currently in place for Blue Mountains; in process with Wasaga Beach).
- Fare rates, technology, policy and planning – adopt standard/ common fares, fare products, policies and technology
- Fuel purchase – bulk purchase of fuel supplied to the contractor, which has potential for reduced price
- Insurance – blanket insurance coverage under one policy
- Customer information and promotion – joint messaging to promote transit use; single brochure detailing all transit services in the area;

single contact telephone number for customer information and feedback; one website

- General administration including industry reports, service and customer policies, and budget management.
- Oversight of contractor including monitoring of performance, inspection of vehicles, review of accidents/incidents, response to customer feedback
- Service planning including data analysis, route and schedule design. This would bring a “bigger picture” and seamless view towards service planning.

As part of a collaborative approach and consolidation of effort, regular status reports regarding each municipality’s transit service could be provided to the respective municipal staff and councils.

The staff resources required to provide these services on a collective basis would be a full-time transit manager, or coordinator, and a support person, either an administrative assistant or a planning technician. As noted earlier, there is a current need within Collingwood for additional staff resources to effectively manage the Town’s transit services.

Administration and Governance

To implement a shared, consolidated approach to managing and operating the area transit services, three alternative approaches for collaboration and governance are possible on the basis of the transit resource personnel being employed by the Town of Collingwood:

1. **Service Contract Between Municipalities**. This approach would detail the services to be provided in a contract between the municipalities, would be multi-year and specify a single annual cost to the municipality for the services provided. There are similar contracts for various services, aside from transit, in effect between municipalities in the province. These contracts would require approval by each municipality.
2. **Fee for Service**. Fees for specific services would be charged either on a one-time basis or an on-going repetitive, annual basis. Services covered could include, for example, service planning, assistance with procurement of transit vehicles or development of an operating contract and related assistance with the tendering and contractor selection process. This approach would be service-specific and may require multiple service contracts. The resulting funding stream may not be

consistent and could be subject to cancellation. It would also involve more extensive administration.

3. **Transit Co-operative**. Establish a transit co-operative through an agreement between the municipalities. This would require multiple-party agreements between each of the municipalities along with the creation of a non-profit organization and its staffing funded by the municipalities.

The Service Contract Between Municipalities led by the Town of Collingwood, is proposed being simpler, more stable and assured. For governance and oversight, this could be facilitated by a "Coordinating Committee" with representation of staff from each municipality. It would meet quarterly in addition to regular communications between staff; reports prepared and provided to the respective Councils by the Transit Manager as required. Terms of Reference for the Committee would be prepared and adopted by each Council.

In this regard, it is again noted that Collingwood has been providing some limited transit resources to Blue Mountains and Wasaga Beach without charge to those municipalities. As soon as practical and feasible, these municipalities should be charged for the services provided to them on a flat annual or monthly basis. At the same time, it is to be noted that Collingwood's transit operating budget does not include the Town's staff salaries associated with managing its transit service. This should be included in order to present a more accurate representation of the resources required to provide the transit service.

5.3 Feasibility of Additional Inter-Municipal Links

The County of Simcoe has been providing inter-municipal transit connections with LINX Transit since 2018. LINX Transit consists of six routes connecting major trip generators and settlement areas within the county, and to the adjacent municipalities of Barrie and Orillia. The County also took over control of the Collingwood to Wasaga Beach service, as of August 2019. The County is currently updating its TMP, which will clarify its role in facilitating and providing inter-municipal transit connections. This section outlines potential future inter-municipal connections that the Town may recommend to the County as part of the TMP update process.

Nottawa to Collingwood

The Township of Clearview has been in touch with Collingwood regarding the introduction of a transit service between the community of Nottawa and Collingwood. The design (type of service and service levels) has not been confirmed and it could be either a fixed route or a demand-response service operating either for the same hours as Collingwood's service (7 days, 14 hours

per day) or on a limited basis (5 or 6 days per week, 3 to 6 trips per day). The service could form part of Collingwood's operating contract similar to the Blue Mountain route with Clearview paying for the full cost of service on an hourly basis minus fare revenue. A formal request from Clearview Council would be required to proceed with service integration. With regard to the vehicle required for the service, it could be obtained and funded in one of three ways:

- Purchased by Clearview and assigned through an agreement to Collingwood for operation by the contractor as part of the Collingwood fleet.
- Collingwood could purchase the vehicle and charge-back the cost to Clearview; or
- Utilize an existing spare Collingwood vehicle with the capital cost on the basis of life-cycle (10- or 12-year life) charged back to Clearview.

Any bus stop signage required for the service and related promotion of the service would be arranged with Clearview and either paid directly by them or through Collingwood. Arrangements would need to be made with a contractor to provide the required parallel specialized transit service for people with disabilities. This could be paid directly by Clearview or form part of the operating contract charged back to Clearview.

Alternatively, this can be recommended to the County as an extension of the Collingwood – Wasaga Beach connection.

Stayner to Collingwood

Given the proximity of Stayner to Collingwood and the attractions within Collingwood itself, such as employment, health care, education and shopping, there may well be strong linkages between the two communities to justify the introduction of a direct transit service (currently, travel been Collingwood and Stayner is via a transfer in Wasaga Beach). Such a service would effectively complete the "triangle" linkage between the three communities of Collingwood, Wasaga Beach and Stayner in addition to the existing Collingwood-Wasaga Beach and Wasaga Beach-Stayner links. This route could build upon the local route within Stayner and extend to Collingwood. This service would be co-funded by Clearview and Collingwood. The Town and Township could potentially request a funding grant from Simcoe County.

Wasaga Beach to Collingwood

The service between Collingwood and Wasaga Beach was originally operated by Collingwood in collaboration with Wasaga Beach as a natural link between the two communities. It was transferred to the new Simcoe County transit system in 2019 along with a new route between Wasaga Beach and Stayner. However, the resulting service between Collingwood and Stayner requires a transfer of buses in Wasaga Beach as well as payment of a fare based on distance. This policy has effectively increased the cost to use transit as well as limiting the ability of people to use the route within Collingwood and potentially avoid duplication of a Collingwood Transit route. From an overall public transit convenience and operational cost standpoint, strong consideration should be given to transferring the service back to the Town of Collingwood to operate, with joint funding between Collingwood and Wasaga Beach. This change would realize savings in the operating costs, and implementation can be funded b the County of Simcoe. Alternatively, consideration should be made for providing reciprocal fares on this route to decrease the costs of a transfer from CollTrans to LINX and vice versa. Together with a Stayner-Collingwood link, the service would be more attractive to people within the Collingwood-Wasaga Beach-Stayner triangle.

5.4 Key Findings

- Treating the “South Georgian Bay” transit services as one and **pooling the service and operations management functions under one organization** would provide the basis for improving the management, planning and oversight of each of the municipalities transit services.
- A **Service Contract between Municipalities** led by the Town of Collingwood is proposed as a stable governance structure for pooled transit service and operations management. The agreement would be governed by a “coordinating committee” with staff representation from each municipality. In addition, the participating municipalities would contribute towards the cost of managing their services.
- The County of Simcoe TMP update is an opportunity to **advocate for additional inter-municipal connections** to area municipalities, as well as for **improved fare and service integration**.

6 Public Consultation

To develop the transit study, two waves of public consultation were conducted. Due to the COVID-19 pandemic, all consultation was conducted virtually. All consultation materials were hosted on the Engage Collingwood platform, including the content of the public information centres (PICs), the study timeline, web surveys, and a general feedback board.

The main objectives of the consultation were:

- To inform the public and stakeholders about the study and process to evaluate and improve the service;
- To obtain feedback from the public and stakeholders on major decisions; and
- To collaborate with and involve the public and stakeholders by incorporating their input in the service plan as appropriate.

6.1 Participation

The first consultation wave focused on information gathering, with the goal to identify the current needs of users and potential opportunities of the system. The first PIC was held on February 4th, with two separate times to provide more attendance options. In total, 21 people attended and provided their feedback. Additionally, a web survey and interactive mapping tool were published on the Engage Collingwood site to gather information about Collingwood residents' travel patterns, opinions about the system, and locations that could be improved by CollTrans. The web survey reached more people than the PIC meetings, as a total of 76 responses were collected.

The second consultation wave focused on sharing the findings of the service and route review, as well as the preliminary service option evaluation to obtain input on a preferred option. The second PIC had two sessions on July 21st and July 22nd, but received significantly less attendance than the first. In addition to the PIC, a short survey was posted on the engagement platform to solicit feedback from the public on the different service options.

The content from both PICs is available in **Appendix A**.

Limitations

While the virtual format was beneficial in providing asynchronous engagement opportunities (people can access the study content at their leisure), there were some challenges in collecting feedback with the virtual PIC format due to low attendance, particularly in the second wave of consultations.

Another challenge to the participation in the consultation activities, was engaging different members of the public. In general, PIC attendees and survey respondents skewed older, with only 3% of survey responses coming from students. Although the COVID-19 pandemic likely affected the amount of participation we could have achieved, more targeted marketing in the promotion of the engagement platform is recommended for future engagement. Overall, a more robust digital engagement strategy, that relied less on the attendance of the PICs to engage residents would have been beneficial for collecting feedback.

6.2 Needs and Opportunities

The feedback from the public on how transit can be improved in Collingwood helped shape the service options. The main recurring themes heard during the first wave of consultation included:

- **Service to new areas in** town, including along Poplar Sideroad to serve students and new developments, more direct routes to major trip generators, such as Georgian College and big box retailers;
- **Integrated services fares between LINX, Blue Mountains Link and CollTrans** to allow users transfer more easily between the two services and to for less costly transfers;
- **Improved service spans** for better connections from the Blue Mountains Link, to match shifts at various employers, such as the Collingwood Nursing Home, and to serve recreational trips, such as to for seniors to the Collingwood Theatre;
- **Improved service frequencies** to attract more users to the service and reduce wait times
- **Improved specialized transit and better integration with the conventional service**, by introducing programs to teach different users how to access the service (e.g. “transit buddies”);
- **Expanded service to nearby towns**, particularly as Collingwood attracts more employment trips from nearby towns;

- **Smaller, more environmentally friendly buses** to reduce emissions
- **Alternative service delivery methods**, such as on-demand transit

7 Transit Service Options

The key findings and directions identified in the preceding sections highlighted a number of opportunities to explore in the development of the transit service options for Collingwood. From these opportunities, three key directions for the service options emerged:

- **Realign the service and refine service levels to better serve travel needs**, by improving access and service to major trip generators based on stop usage data;
- **Explore opportunities to address coverage gaps and serve developing areas** cost-effectively; and
- **Improve connections to inter-municipal services and reduce service duplication** by leveraging connections to increase coverage and access for users.

To reflect these key directions, this section describes three transit service concepts encompassing two distinct approaches to delivering a public transit service – conventional fixed route and on-demand (described below) were developed. It also includes a list of evaluation criteria upon which each option was assessed at a high-level.

Given the success of the Blue Mountain Link, and the operating agreement which it is governed by, no changes are recommended for the route, with the exception of the recommendation is Section 4.3 to consider adding stops in settlement areas along its route to improve access to the service. For each of the service options presented in this section, the Blue Mountain Link is unchanged.

On-Demand Transit Service

One approach for transit service delivery considered was the use of demand-response or “on-demand” transit. This section provides an overview of this approach to ensure a full understanding of how it functions along with its advantages and disadvantages.

On-demand transit is a shared-ride service operating in a defined service area that is characterized by its dynamic routing and flexible pick-up and drop-off locations, which can range from door-to-door or existing transit stops to designated locations along a corridor or within an overall area. On-demand transit does not have fixed routes, but rather, the routing of the transit vehicle (a bus or large van) is dynamically determined in real-time along the shortest path

with the most possible pick-ups and drop-offs for efficiency and to minimize travel times. As such, on-demand transit is best suited to places with lower density and unpredictable demand patterns, where fixed routes are less productive, or during off-peak, low-demand, time periods.

Fully on-demand transit is unrestricted in terms of pick-up and drop-off locations (many-to-many origins and destinations), similar to the service operating in the Town of Innisfil, which is provided through a contract with Uber. On-demand transit can also be operated as a point deviation service to pre-defined stops within a designated service area, or along a specific corridor in order to allow for an easier grouping of trips. Point deviation services are currently in operation in Stratford and Belleville, operated by the municipal transit service providers in those cities. In general, point deviation services are more productive than many-to-many services because trips are more easily grouped, which reduces in-vehicle travel time and allows for more efficient utilization of the transit vehicles.

There are two primary operating models commonly used for on-demand transit, that vary in terms of costs. The models are:

- Municipality-operated, with the traditional “Software as a Service” approach where the municipality administers and operates the service with their existing fleet and licenses the software. This approach includes a set-up fee and a per-vehicle licence fee based on the selected software provider.
- Third party, where the municipality contracts with an entity to deploy and manage the entire operation using the service providers’ own resources, including vehicles. This model includes services contracted out to Transportation Network Companies (TNC), which may sub-contract out their operations. The typical cost model for this approach is a flat hourly rate per vehicle, or a flat rate per trip, plus setup fees.

Exhibit 7-1 summarizes the average costs associated with each operating model. On-demand transit services can be costed on the basis of an hourly operating rate, similar to the existing contract service, or per-trip. The per trip costing approach is less predictable and prone to budget fluctuations based on usage. This has been the case in Innisfil and can present a challenge in terms of resource planning.

Exhibit 7-1: Average Costs by Operating Model for On-Demand Transit

Operating Model	Cost Element	Average Amount	Payment Frequency
Municipality-operated	Setup Fee	$20,000 to $100,000*	One time (launch)
	Software Licence	$465 to $1,500	Monthly (per vehicle)
	Operating Costs**	Hourly Operating Costs	Per vehicle-hour
	Hardware	$650	One-time (per vehicle)
Third Party (hourly)	Rate Charged**	$65	Per vehicle-hour
Third Party (per trip)	Rate Charged**	$7.50 - $12	Per trip

Notes: *Setup costs typically include the configuration of the service to the operation needs of the client, and be reduced
**Phone booking support options may not be included in all options

7.1 Options Evaluation Criteria

The criteria to be used to evaluate the service options include customer convenience, service utilization (productivity), service levels, operational performance, Town vision and goals for transit, ridership potential, resource requirements and operational considerations, and financial performance.

Since the financial component (operating and capital costs, and revenues) is the most significant criteria, all three options were designed using the same resources (within 10% of the existing budget, and no additional fleet). Additional capital costs, such as software licence costs and bus stop relocation are included in the evaluation of resources required. Administration resources, such as town oversight, management of the service, and communication are assumed to be similar for each of the options, but the marketing and promotion costs associated with service changes are included in the evaluation of the ease of implementation.

For the ridership criteria, given the COVID-19 pandemic influence, specific ridership values are difficult to project and will therefore be expressed in relative terms –

equal, better, less – based on the other criteria such as new areas served, and whether or not each of the options represents an improvement over the existing system according to the other criteria.

The criteria together with their description are:

- **Customer Convenience:** considers how well each option minimizes transfers and improves travel time to major trip generators, by considering the directness of the routes and the need for transfers
- **Coverage and ridership potential:** identifies whether the options can provide coverage to additional service areas, and as a result, provide more opportunities to increase ridership
- **Minimizes duplication:** reviews whether each option can avoid duplication with the inter-municipal services to increase overall coverage
- **Operating costs to improve level of service:** reviews how cost-effectively each option can be altered to serve new areas (flexibility) and how cost-effective it is to increase or decrease service to match travel demand (scalability)
- **Administrative resource needs:** identifies the required administrative resources required for implementation, as well as to manage the service and operations
- **Environmental benefits:** considers the potential for further environmental benefits

7.2 Service Options

This section describes each option along with its advantages and disadvantages. To make each option comparable all three are based on the existing revenue hours, fleet size and operating budget.

Option 1: Fixed Routes

This option is most similar to the existing Collingwood transit service as it consists of entirely fixed routes realigned to improve service to major trip generators, reduce travel times and address the coverage gaps and areas of service duplication.

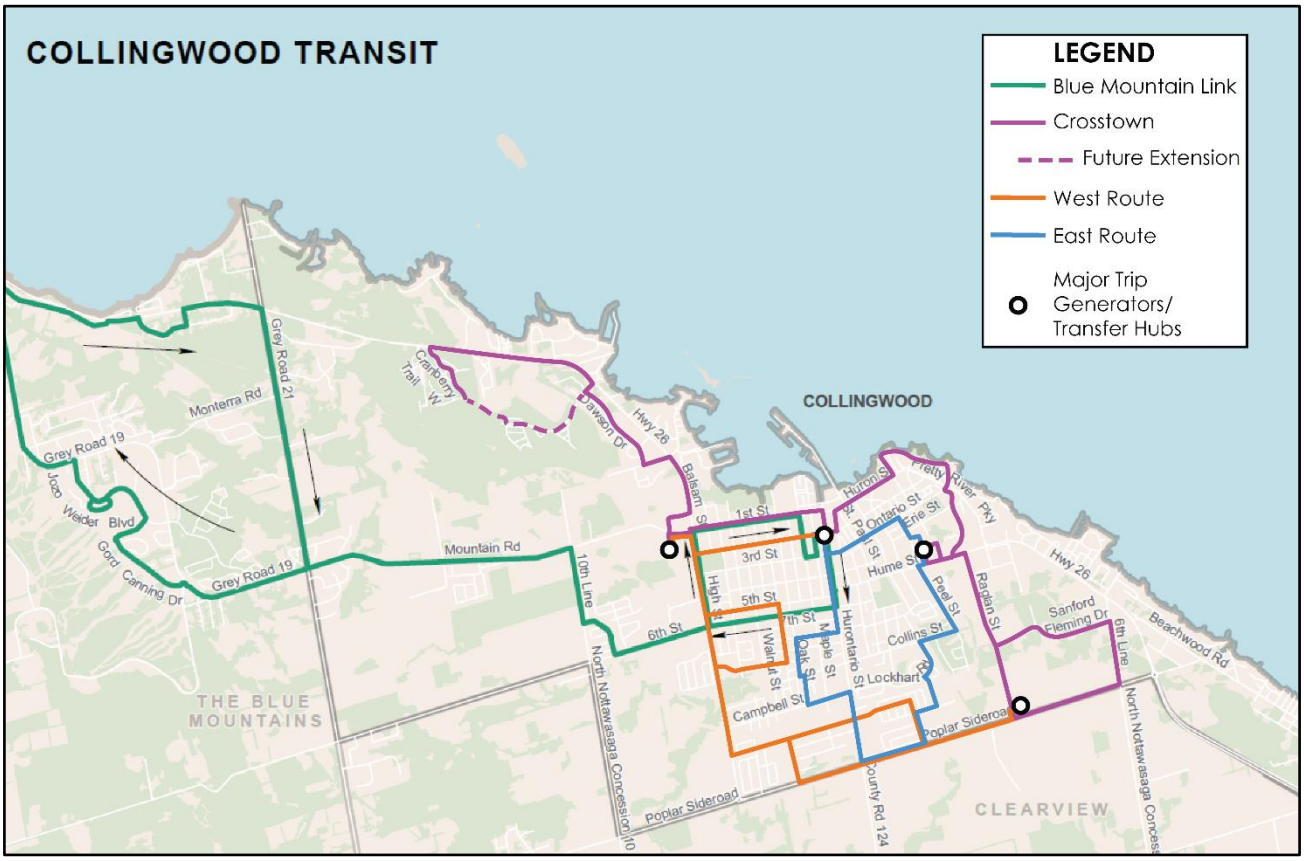
Service Description

This option features three routes aligned to serve three primary hubs: the downtown terminal, major retailers on Mountain Road, and Georgian College. The revised Crosstown and West routes primarily provide bi-directional (two-way) coverage, while the East route still has a large single-directional loop which reflects the challenge of the road network and development patterns in the area.

The routes were realigned to serve high ridership corridors as indicated by the stop usage data, and areas of new residential development identified in the consultation process. With the changes shown, this option can be operated with spans and frequencies that are similar to the existing system but, with an approximate 20% increase in annual service hours to accommodate the additional service coverage and kilometres. There are opportunities to further refine the route alignments to increase coverage and provide more bi-directional service with additional service hours. Specifically, routing the Crosstown route along Hurontario Street instead of Raglan Avenue can increase coverage (Raglan would continue to be served by the Wasaga Beach Link), and routing the East route along Second St. also reduces service duplication on First St. The Crosstown can also be extended to serve the waterfront, which is a popular destination for recreation and tourism.

The proposed routes are shown in Exhibit 7-2.

Exhibit 7-2: Option 1, Fixed Routes



Advantages

The main advantages of this option are:

- Increased service and new transfer opportunities to Georgian College and the big box retailers on Mountain Road addressing feedback from the public and stakeholder consultation;
- Added service to developments on Poplar Sideroad, providing additional connections to Georgian College, downtown, and the big box retailers to address student travel needs;
- Increased service to the Hospital on the Crosstown route; and
- Reduced service duplication between the East and Crosstown routes.

Disadvantages

The main disadvantages of this option are:

- One-way loop on the East route is retained, which results in longer travel times for some users;
- No significant increase in service levels on any of the routes (unless costs increase to accommodate higher service levels);
- Transfers may still be required for some riders to reach all potential destinations within the city;
- Capital costs associated with the need to relocate and add bus stops and for improved bus stop infrastructure and passenger amenities (shelters, benches) at main stops;
- Costs of adding service to new areas is higher and would require adding new routes or significantly changing existing routes; and
- Some service duplication is inevitable due to the road network and location of major trip generators.

Option 2: On-Demand

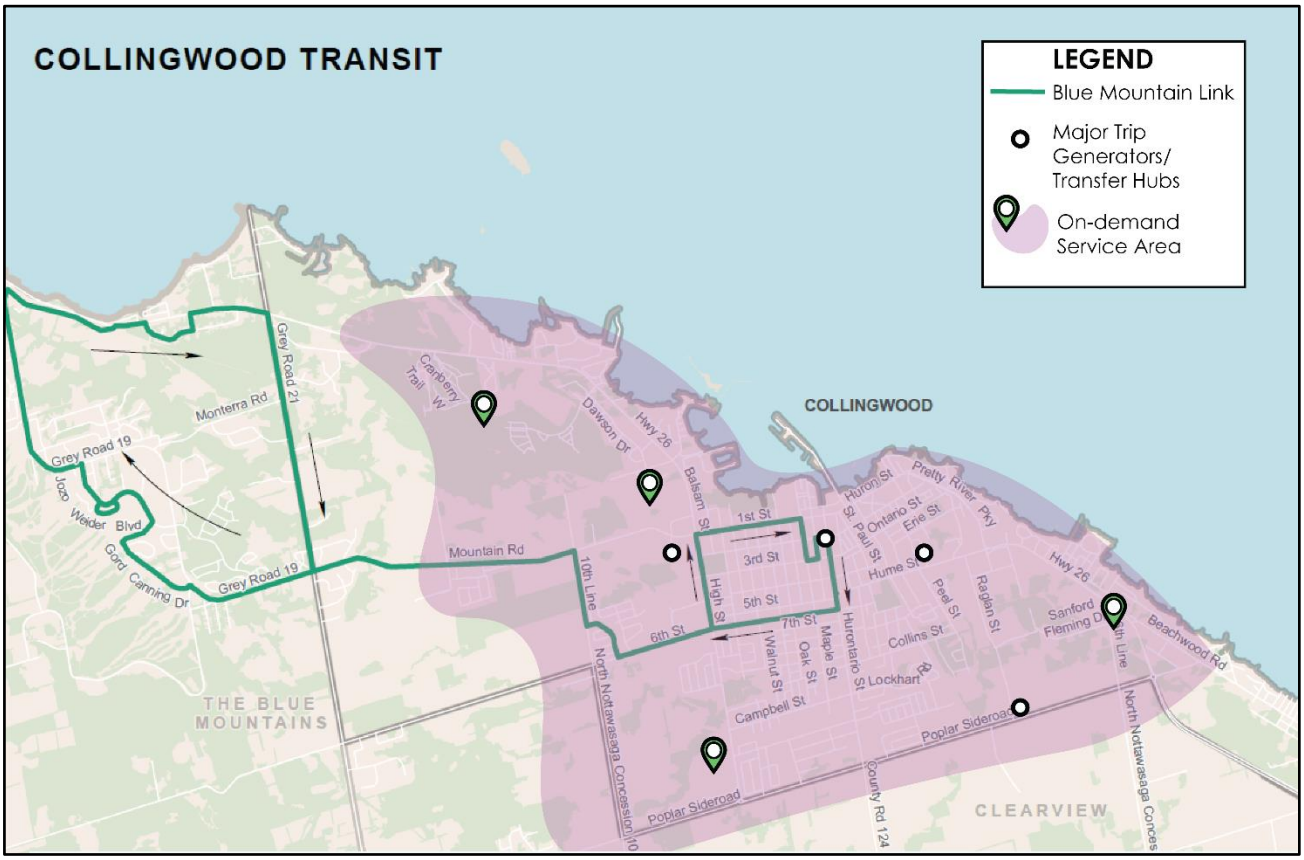
This option is fully on-demand point-deviation service, that covers the entire town and serves all transit trips. Service is based on demand, using existing stops and new stop locations within the town boundaries. A minimum of two to three buses would be expected to be in service at all times to maintain low wait times and travel times.

Service Description

The on-demand service can be customized based on the operating needs, demonstrated travel patterns and level of ridership. For the service to be more attractive, wait times and in-vehicle travel times should be minimized. A maximum wait time of 15 minutes, and a maximum in-vehicle travel time of 30 minutes is achievable for a town the size of Collingwood, however, it would likely require a minimum of two to three buses in service, depending on how similar travel patterns are expected to be.

An illustration of the on-demand service is shown in Exhibit 7-3.

Exhibit 7-3: Option 2, On-Demand



The service productivity for a full on-demand option can be expected to be higher than the hybrid option, as has been experienced in Stratford and Belleville. The Sunday service in Stratford was selected as a comparable service for Collingwood, at 5 passengers per service hour. A higher estimate of service productivity for Collingwood can be based on the 2019 service productivity of 9.8 passengers per service hour. The annual revenue hours allocated for the on-demand transit in this scenario are based on the existing annual revenue hours, less the software licence costs and hardware costs for the first year of service. The vehicles required are based on maximizing the service span to provide service levels that are comparable or better than the existing fixed route system. This option relies on a municipality-operated on-demand model to utilize existing fleet resources such that the existing transit vehicles would be utilized as is the case in Belleville and Stratford. The service would be offered as a point-deviation service, from stop to stop, rather than door-to-door.

A summary of the on-demand service characteristics is presented Exhibit 7-4.

Exhibit 7-4: On-Demand Service Summary

Operator Considerations	
Hardware Costs	$650 (per vehicle)
Software Licence Costs	$465-$1,500 (per vehicle per month)
Service Productivity	5-10 passengers per revenue vehicle hour
Annual Revenue Hours	13,690
Vehicles Required	3
Span of service	2 vehicles for 16 hours/day 1 vehicle for 10 hours/day
Maximum Ride Time	30 minutes
Maximum Wait Time	15 minutes

Advantages

The main advantages of this option are:

- Longer service spans are possible at lower costs when compared to adding fixed-route services;
- Reduced duplication of service;
- Improved coverage to underserved areas without increasing annual revenue hours;
- Service is flexible and easily scaled up or down, based on demand;
- Eliminates the need for transfers entirely;
- Fewer vehicle-kilometres-travelled (VKT) possible (and as a result, lower fuel consumption), compared to equivalent fixed route service.

Disadvantages

The main disadvantages of this option are:

- In order to accommodate pick ups and drop offs, travel time is not always consistent compared to fixed routes;

- Limits possibility of ad hoc trips as it is never certain a bus will be at a stop at any given time, (this can be slightly mitigated if the system allows people to flag buses);
- Additional staff resources required to bridge the digital divide (i.e. staff for phone-in options if not available through the software provider, and to monitor and manage the service);
- May be a high learning curve for some residents and existing transit users; and
- Capital costs associated with the need for new and relocated stops and to acquire the dynamic-routing software.

Option 3: Hybrid

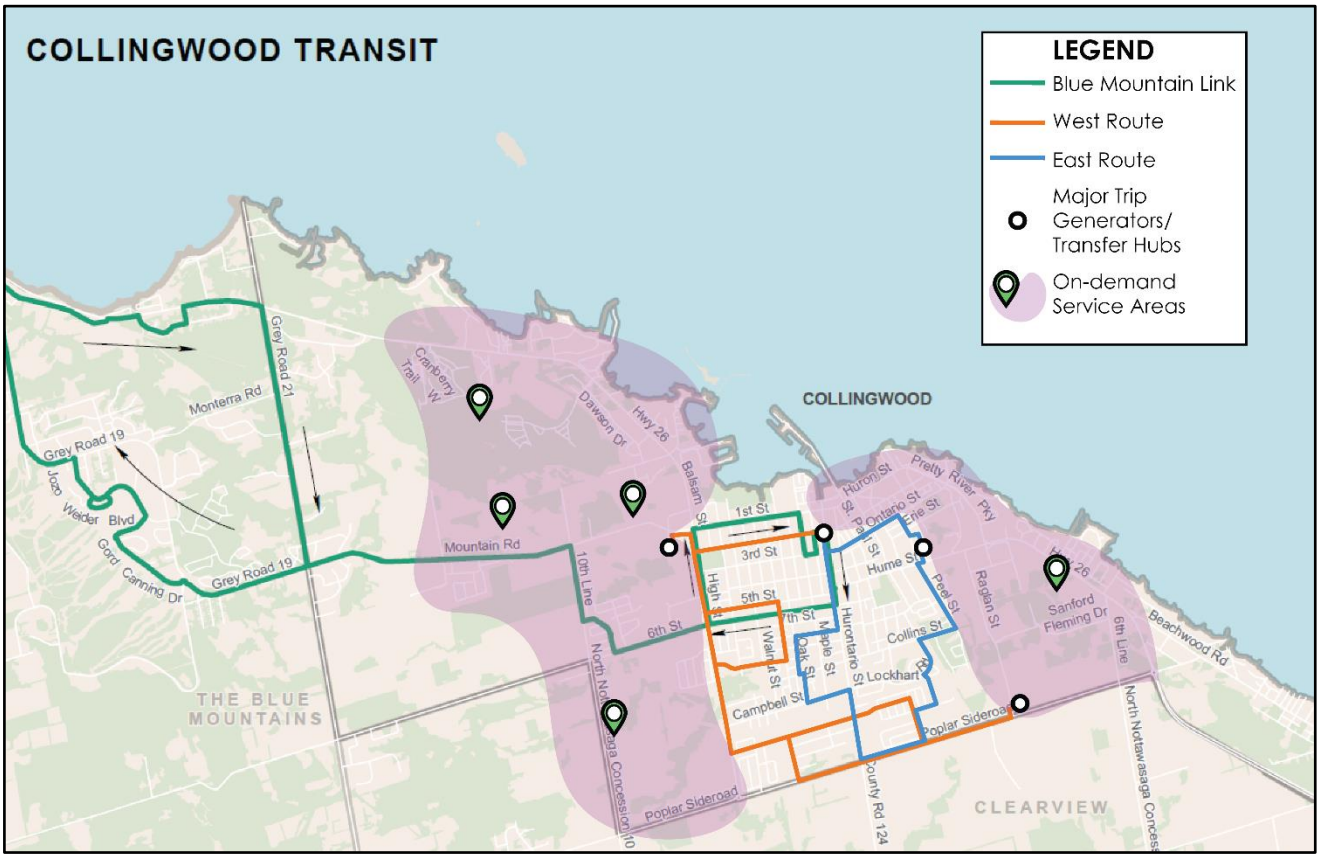
This option retains two fixed routes connecting major trip generators, while the remainder of the service area is served with on-demand service. The fixed routes provide connections to the major trip generators on a fixed schedule to allow ad hoc trips, while the on-demand service provides higher coverage in areas with lower existing demand.

Service Description

The two fixed routes identified are similar to those in option 1, with the West route providing bi-directional service along High St. between Georgian College and the Wal-Mart plaza, while the East route provides one-directional coverage to residential areas between Georgian College, the Hospital, downtown and the Wal-Mart plaza. The remainder of the service area is served with on-demand transit, split into two main service areas each served by one vehicle, the north and west areas and the east end. The on-demand transit is proposed as a point deviation service, centred at the big box retailers on the north and west, and centred on the downtown terminal on the east. The existing stops in areas no longer served with fixed routes will be retained as pick-up and drop-off locations, and new pick-up and drop-off locations (stops) can be added to increase coverage.

An illustration of the on-demand service is shown in Exhibit 7-5.

Exhibit 7-5: Option 3, Hybrid



The service productivity used for this scenario is estimated at 2.6 passenger per service hour, based on a self-reported average from transit agencies operating on-demand/microtransit services[1]. Although higher service productivity is possible, given the size of the demand-response areas and the low existing density, a conservative estimate is preferred. The annual revenue hours allocated for the on-demand transit in this scenario are based on the existing annual revenue hours, less the two fixed routes. The vehicles required are based on operating two independent demand-response areas with a municipally operated model. The maximum ride time and maximum wait time are customizable features of the service that are inputs for the routing algorithm. These values were selected to provide a similar level of service for both the fixed route and on-demand components of the hybrid option. While this example recommends a municipality-operated on-demand transit model, given the service productivity estimate and size of the demand-response areas, a 3rd party model with a per-trip rate may be more cost effective as it has lower capital cost

[1] National Academies of Sciences, Engineering, and Medicine 2019. *Microtransit or General Public Demand Response Transit Services: State of the Practice.* (Table 4, pp 37). Washington DC

requirements. Alternatively, time-of-day on-demand option or a single demand-response area spanning the entire town can be considered in order to increase the productivity or reduce the vehicle requirements.

The proposed routes and demand-response areas are shown in Exhibit 7-6.

Exhibit 7-6: Hybrid Service Summary (On-Demand Service)

Operator Considerations	
Hardware Costs	$650 (per vehicle)
Software Licence Costs	$465-$1,500 (per vehicle per month)
Service Productivity	2.6 passengers per revenue vehicle hour
Annual Revenue Hours	5,460
Vehicles Required	2
Span of service	8 hours/day
Maximum Ride Time	30 minutes
Maximum Wait Time	15 minutes

Advantages

The main advantages of this option are:

- Increased service to Georgian College and the big box retailers on Mountain Rd. addressing feedback from the public and stakeholder consultation;
- Added service to developments on Poplar Sideroad, providing connections to Georgian College, downtown, and big box retailers to address student travel needs;
- Reduced service duplication on the east end of the town;
- Potential for higher service spans using on-demand transit;
- On-demand component is flexible and easily scaled up or down by demand; and
- Improved coverage in underserved areas using on-demand transit.

Disadvantages

The main disadvantages of this option are:

- Retains one-way loops for the East route, which results in longer travel times for some users;
- No significant increase in service levels on the fixed routes (unless annual revenue hours are increased);
- Capital costs associated with the need for new stop locations and to acquire dynamic-routing software;
- Transfers will be required between on-demand and fixed routes because of the separated demand-response areas;
- Additional staff resources required to bridge the digital divide (i.e. staff for phone-in options if not available through the software provider, and to monitor and manage the service);
- May be a high learning curve for some users; and
- The productivity of the fixed route is likely to be affected by the on-demand service, particularly if frequency is low, and travel time on the fixed route is high.

7.3 Service Options Evaluation

A high-level qualitative assessment of each of the transit service options was conducted, based on the opportunities, as well as the advantages and disadvantages of each option. The evaluation is summarized in Exhibit 7.7.

Exhibit 7-7: Preferred Option Service Attributes

Evaluation Criteria	Existing Service	Option 1 (Fixed Routes)	Option 2 (On-Demand)	Option 3 (Hybrid)
Customer convenience	Indirect service; some transfers required	More direct service; some transfers required	Service may be indirect; no transfers	More direct service; some transfers required
Coverage and ridership potential	No additional coverage; ridership has plateaued	Some additional coverage; some additional ridership potential	More coverage; more ridership potential	More coverage; more ridership potential
Minimizes duplication	Some duplication with inter-municipal routes	Some unavoidable duplication with intermunicipal routes	No duplication	Limited duplication with intermunicipal routes
Operating costs to improve level of service	Costly to improve frequency or add coverage	Costly to improve frequency or add coverage	Less costly to improve frequency; easy to add coverage	Less costly to improve frequency; easy to add on-demand coverage
Administrative resource needs	Requires additional administrative resources	Small increase over existing service needs	Larger increase over existing service needs	Large increase over existing service needs
Environmental benefits	Some environmental benefits (fewer cars on the road)	Some environmental benefits (fewer cars on the road)	Potential to decrease vehicle kilometres travelled (VKT) and overall emissions	Some potential to decrease VKT and overall emissions with the on-demand

The on-demand option and the hybrid option are the most effective in addressing the opportunities identified to improve the attractiveness and usefulness of transit in Collingwood. They both improve coverage and provide more opportunities to attract new riders, and they can both be scaled up or down more cost-effectively than the fixed-route option because of the flexibility provided by on-demand service. While they require additional capital costs for the software licensing and more administrative costs to market and promote the new system, the potential for cost-effective service increases is beneficial for long-term transit growth.

Given the service area characteristics, the hybrid option may be challenging, as the benefits of the fixed routes can be diminished by the presence of the on-demand service. For these reasons, the recommended direction for Collingwood is the on-demand service.

8 Five Year Service Plan

This section presents the recommended transit service plan for the next five years commencing in 2022. It includes the recommended service strategy along with estimates of operating costs, revenue service-hours, resources (staffing and vehicles), ridership and revenue estimates for each of the next five years.

8.1 Recommended Service Strategy

Three future transit strategy options, described in the preceding section, were presented to the public during the second wave of consultation. Based on the feedback received from Town staff, stakeholders and the public, as well as the results of the evaluation outlined in Section 7, the preferred strategy is to proceed to **implement the On-Demand option**. With this strategy, the existing fixed route network would be replaced by a transit service delivered based on the needs of residents, that is, on the basis of “demand”. This is a proven approach that has been in place in other jurisdictions for many years, often referred to as “dial-a-bus”, but with the added benefit of dynamic routing algorithms, to make operations more efficient, and enable more immediate bookings. Buses would operate during the existing days and hours of transit service according to the trip requests from residents. The On-Demand strategy offers a number of advantages and opportunities compared to the conventional fixed route service:

- The potential for improved service coverage and service hours with fewer overall resources (revenue vehicle hours, buses and bus drivers).
- The ability to serve new areas without a prior commitment to a fixed route network.
- An opportunity to better understand the transit needs and travel patterns of area residents and to plan and design future transit services based on demonstrated demand.

At the same time, there are potential risks, or challenges, with the On-Demand service:

- Potential need to increase financial (operating budget) and vehicle and bus driver resources should the trip demand increase beyond initial allocations and service assumptions.

- On-Demand service does not have the built-in capacity of conventional fixed route services to handle significant increases in ridership without an increase in resources.
- The service must be more closely monitored and managed in order to respond to changing demands compared to a fixed route service.
- Training of bus drivers as well as the public in the use of the service is also required in addition to normal initiatives to promote and publicize the use of the transit service.

The On-Demand service could potentially transition toward fixed routes in time either as the demand (ridership) increases or as trip patterns emerge indicating that fixed route could serve those patterns more effectively (no need to pre-book, trips, pre-set schedules) and efficiently (greater capacity without an increase in resources).

Influencing Factors

There are two other influencing factors supporting the recommendation to transition to an On-Demand service. These are:

- The effect of the COVID-19 pandemic on transit ridership; and
- New development areas within Collingwood.

Although not the key factor in recommending the On-Demand service strategy, the continuing and likely future effects of the COVID-19 pandemic on society and transit use are expected to keep ridership levels below pre-pandemic levels and within the capacity limitations (trips per hour) of an On-Demand service. While industry experts are divided on what the long-term effect of the COVID-19 pandemic may be on transit ridership, the current view is that ridership will remain below pre-pandemic levels for several years. For Collingwood Transit, the effect on ridership has been similar to other municipalities with ridership at about 30% of pre-pandemic levels. Optimistically, ridership may gradually increase towards 50% or 60% within the next two years and potentially to pre-pandemic levels within five years.

At the same time, and in contrast to the negative impact of the COVID-19 pandemic on transit ridership, continued population and development growth within Collingwood can be expected to positively influence transit use and the potential to increase ridership. There are several significant new development areas within the town, notably west of High Street. However, these new developments are typically difficult to serve efficiently as they develop and mature with a fixed route service. In other municipalities, demand-response services have been precursors to the introduction of fixed routes in new development areas by introducing transit service early in the development

process to understand demand and travel patterns as the basis for implementing a fixed route service once demand is demonstrated.

Together, these two factors present an opportunity to provide:

- a quality level of transit service across the community that is flexible to respond to changing travel patterns and demand, as well as
- an attractive service for new and existing residents as the effects of the pandemic subside.

Service Attributes

The On-Demand service would operate during the same days and hours of the week as the current fixed route service such that there would be no immediate increase in operating costs. Given the nature of on-demand service, there is the ability to provide expanded service coverage to include the new development areas – a distinct advantage over fixed-routes. Transit users would access the service by booking their trip either for pick up or drop off, using a variety of options including a smartphone app, a web page, or telephone. Users would then either use an existing bus stop located near their origin or destination or walk to the a “virtual stop” predetermined by the routing algorithm, likely at a nearside intersection that can be accessed by a transit vehicle. The existing fleet would be utilized for the service, allowing for higher capacity, but potentially restricting some streets that may not be able to accommodate bus turning radii.

Up to three buses, similar to the existing fixed route requirement, would be “in service” (available) during the primary service hours (Monday to Saturday daytime) with fewer buses in the evenings and on Sundays based on expected lower demand, to respond to trip requests. Each bus would be outfitted with a live map, typically on a tablet, to provide the operators with routing information, as well as pick up and drop off locations. These resources would be adjusted as demand warrants. It would be a shared-ride service wherein multiple trips would be served by each bus based on common corridors travelled or origins and destinations, to minimize resource requirements. The actual “routing” of each bus and the total travel time of each user would be determined by the locations of each trip’s origin and destination, as well as a predetermined minimum wait time and maximum travel time. The wait times and travel times are selected based on what is achievable in the geographic context, as well as to improve upon the existing fixed route network. Users would typically have a direct ride between their origin and destination without the need to transfer unless using the Blue Mountains Link or Simcoe County LINX routes.

The service attributes are summarized in Exhibit 8-1.

Exhibit 8-1: Preferred Option Service Attributes

On-Demand Service Attributes	
Hardware Costs	$650 (per vehicle)
Software Licence Costs	$465-$1,500 (per vehicle per month)
Service Productivity	5-10 passengers per revenue vehicle hour
Annual Revenue Hours	To be based on existing budget to start (less software licence costs)
Vehicles Required	2 - 3
Span of service	7 days a week 16-18 hrs/day
Maximum Ride Time	30 minutes
Maximum Wait Time	15 minutes

The five-year service plan and operating budget reflect the following service levels and activities for each year:

- **Year 1** – replace fixed route network with On-Demand service. Target implementation date: July 1st.
- **Year 2** – increase the revenue service-hour allowance by 25% to accommodate anticipated increases in transit demand, effective July 1st.
- **Years 3 and 4** – increase revenue service-hours to respond to anticipated increasing ridership and towards a return to pre-pandemic levels. It is projected that commencing in Year 3, Town staff would begin assessing the ridership and travel demand to determine the appropriateness of introducing either one or more fixed routes to replace some of the On-Demand service or to plan for transitioning the service fully to fixed route or continue with the On-Demand service.
- **Year 5** – Revenue service-hours and service levels return to pre-pandemic levels whether delivered by On-Demand, fixed route or a hybrid (fixed route and On-Demand) model.

Fixed Software Costs and Infrastructure Needs

The fixed cost components of the on-demand service typically include:

- A **setup fee** to configure their software to meet the needs of the client. These include the service attributes, branding, software management and other professional services as needed. This cost is not applicable for third-party operated models.
- **Hardware costs** for the mobile devices to run the software applications on the buses
- **Software Licence fees** to access the software and cover ongoing technical support and software updates.

The physical infrastructure needs for the on-demand services includes:

- **Bus stops** as the on-demand service would continue to use the existing stops. A review of existing stops may be considered to identify unnecessary or duplicative stops within the context of the service. In addition, new stops to should be considered in areas that currently have no service to simplify operations. A small annual budget should be allocated for new stop installations, ideally coordinated with sidewalk and multi-use path installations to provide "virtual" stop options.

No recommendations for new shelters or financial estimates are included within this service plan but their need may become apparent as transit use and the frequency of pickups at specific locations materialize. Accordingly, the annual operating budget may need to be adjusted to allow for additional shelters.

Fleet Requirements

The transit fleet consists of eight buses. Three are required for Collingwood services and two for the Blue Mountains Link, leaving a spare fleet of three buses which is appropriate for the level of service being provided. The Town recently (August 2021) added two new buses replacing an equal number of older buses. With these replacements, the fleet is relatively new and in good condition. Bus lifecycle can range from 10 to 18 years depending on the model and size. The Town's fleet replacement plan is based on a 12-year cycle with three replacement standard transit buses to be purchased over the next 5 years. With the recommended change to On-Demand service and the lingering effects of the COVID-19 pandemic and its effect on ridership levels, it would be appropriate for the Town to review its future fleet requirements with a view to purchasing smaller buses, 25- to 30-foot (7.6 m to 9.2 m), if ridership levels do

not return to pre-pandemic levels. At the same time, consideration can be given to the purchase of battery electric buses as these become available in smaller bus sizes.

Electric Buses

Greening the transit fleet to be more environmentally friendly through zero emission vehicles, is a topic of interest to residents of Collingwood. Electric buses, powered by batteries, are an emerging technology alternative to either standard clean-diesel or diesel-electric hybrid power systems. Various bus manufacturers are now offering battery-electric buses (BEB) in both standard 12.2 m and smaller sizes. However, the transit industry has not moved to full-scale commitment to BEBs although there are intentions to do so. Instead, there are several selected pilot or demonstration tests with the technology such as in York Region, Toronto and Brampton.

A key area of concern with BEBs is the range of daily service (hours of operation) that they can achieve compared to diesel or diesel hybrid buses. This shortfall can result in the need to recharge the batteries or replace the bus during the course of the day in order to complete the usual duty cycle. In this regard, there are two approaches to recharging the batteries. One is overnight at the bus storage garage through a plug-in system or overhead "pantograph", or to recharge while the bus is in service during the day using a pantograph system (as illustrated in Exhibit 8-2) at a convenient location along a route such as at a terminus.

Exhibit 8-2: In-Service BEB Charging System, York Region Transit

In-service recharging can take up to 7 minutes which then allows the bus to operate for up to 2 hours or longer, depending on the on-board charging system and battery capacity. Some transit systems, such as York Region, are demonstrating with the in-service system while other systems prefer over-night charging. Presently, there is a significant cost premium for BEBs compared to diesel buses: approximately $1.0 million versus $600,000 for a diesel; $500,000 for each in-service recharging system and $125,000 for each two-bus over-night

plug-in charging system plus the potential cost of a hydro substations at the site of the recharging system.

Considerations related to the purchase and operation of BEBs are:

- The need to undertake a review of bus utilization and recharging requirements to determine which recharging strategy to implement
- Bus capital cost premium
- Hydro supply to either the in-service recharging site or over-night charging location (consult with electricity supplier to confirm capacity)
- Equipping a contractor's facility with the recharging system
- Equipping maintenance shop and training of maintenance staff
- Supply of parts
- Potential requirement for additional buses due to shorter duty cycle
- Determining suitable location for an in-service charging system depending on service design and availability of property for charging system

Should the Town wish to explore the implementation of BEB, a study to assess needs and develop an applicable strategy should be undertaken. A group of small municipalities/transit systems through the provincial transit agency, Metrolinx, are investigating a collaborative study. Should this study proceed and subject to the findings from the study, then Collingwood and other area municipalities could develop a strategy for proceeding with the introduction of BEBs. This would include addressing the issues noted above.

Financial Plan

Marketing and Promotion

The need for an active and effective program to market and promote the use of transit is a priority activity and area of investment by the Town for the next three years for two key reasons:

- To inform, educate and promote the use of the On-Demand transit service
- To rebuild transit ridership in general by encouraging people to take transit by highlighting safety and the benefit of public transit to the community as a whole

An allowance of $30,000 annually is proposed to be added to transit budget. Assistance of professionals to develop promotional campaigns including creative materials and messaging should be obtained. This would represent an additional $10,000 initially.

Exhibit 8-3 presents a five-year forecast of operating costs for the recommended service strategy. With the delivery of the transit service continuing to be contracted to an experienced service provider, the operating cost can be expected to increase with a new contract as of the contract renewal date, July 1st (Year 1). An estimated increase of 20% is included which would increase the 2021 rate of $42.68 to an estimated $51.22

In Years 2 to 5, revenue hours and operating costs are planned to increase by 3,400 revenue hours, approximately 25 per cent each year, to reflect a potential need to increase revenue hours and resources to meet changes in ridership demand due to either or both an overall increase in transit use as well as population growth. The financial scenario presented anticipates a return to pre-pandemic ridership levels and revenue hours by Year 5 with ridership increasing by an average of 25,000 trips per year to an estimated 142,000 with revenue hours increasing to 25,590. This compares to pre-pandemic levels of 141,900 annual rides and 24,008 revenue hours. Also, the provincial gas tax is held constant as any change is unpredictable at this time. On this basis, the Town's net investment in its transit service would increase from an estimated $402,250 in 2021 to $964,115 by Year 5. All costs exclude the Blue Mountains service.

The revenue hour estimate is independent of whether the service model remained On-Demand or was transitioned back to partial or full fixed route. The determination of transitioning to fixed route would depend on the analysis of ridership levels, trip patterns, resource requirements (buses, bus drivers) and cost comparisons as noted previously.

It must be emphasized that due to the influence of the COVID-19 pandemic on ridership and service levels, all cost and revenue values are high level estimates and are subject to change as conditions dictate in future.

Marketing and Promotion

The need for an active and effective program to market and promote the use of transit is a priority activity and area of investment by the Town for the next three years for two key reasons:

- To inform, educate and promote the use of the On-Demand transit service
- To rebuild transit ridership in general by encouraging people to take transit by highlighting safety and the benefit of public transit to the community as a whole

An allowance of $30,000 annually is proposed to be added to transit budget. Assistance of professionals to develop promotional campaigns including creative materials and messaging should be obtained. This would represent an additional $10,000 initially.

Exhibit 8-3: Five Year Operating and Capital Cost Plan

Item	Year					
	Base (2019)	**1**	**2**	**3**	**4**	**5**
Revenue Hours	13,690[4]	13,690	13,690	15,390	18,790	22,190
Additional Service			1,700	3,400	3,400	3,400
Total Rev. Hours	**13,690**	**13,690**	**15,390**	**18,790**	**22,190**	**25,590**
Base Cntract Optg Cost[8]	$584,340[5]	$642,745	$788,276	$962,424	$1,136,570	$1,310,720
Other						

On-Demand costs		$15,000	$15,000	$15,000	$15,000	$15,000
Town Staff[1]	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000
Staffing[2]		$45,000	$45,000	$45,000	$45,000	$45,000
Marketing & Promotion		$15,000	$30,000	$30,000		
Total Operating Cost[8]	**$624,340**	**$757,745**	**$918,276**	**$1,092,424**	**$1,236,570**	**$1,410,720**
Ridership[6]	42,570	42,570	67,000	92,000	117,000	142,000
Fare Revenue	$57,090	$57,090	$112,225	$154,100	$215,572	$261,635
Fare Incr.[3, 7]		$10,700		$11,557		$19,970
Total Revenue	**$57,090**	**$67,790**	**$112,225**	**$165,657**	**$215,572**	**$281,605**
Gas Tax*****	$165,000	$165,000	$165,000	$165,000	$165,000	$165,000
Net Town Investment	**$402,250**	**$524,955**	**$641,051**	**$761,767**	**$854,998**	**$964,115**

Notes: [1] Accounting for existing staff cost at 1/3
[2] 0.5FTE
[3] Effective April 1 each year
[4] COVID-19 Pandemic level
[5] Pro-rated
[6] 2019 x 30% + 20% increase per year.
[7] Yr1 $1.34 av fare x fare increase of 25% (= $1.675) x 9 months x ridership; Yr3 – $1.675 x 1.1 = $1.8425
x 9 months; Yr5 – $1.8425 x 1.1 = $2.03 x 9 months
[8] Rate is $42.68, Year 1 rate - $42.68 to June 30. $51.22 (+20%) as of July 1st

Fares

The current (2021) fare level has remained unchanged for over 10 years although the cost of living and costs to operate the service have increased. While an increase in fares is always a sensitive matter, an increase in fares is warranted. The existing adult rate of $2.00 and senior/student rate of $1.50 are well below peer municipalities where the average is $2.50. Accordingly, it is proposed that a single cash fare of $2.50 be introduced as of April 1st in Year 1

with discounts for seniors and students as is the current policy offered only through the monthly pass, and that fares be reviewed and adjusted effective April 1st every two years thereafter to keep pace with operating costs. On this basis, a further increase of $0.25 in Years 3 and 5 in the cash fare are proposed to bring the fare to $3.00 by Year 5. Correspondingly, the monthly pass rates would increase in years 1, 3 and 5 as presented in Exhibit 8-4.

Exhibit 8-4: Recommended Five-Year Fare Structure

Item	Year					
	Base (2019)	1	2	3	4	5
Cash	$2.00	$2.50*	-	$2.75	-	$3.00
Passes:						
Adult	$40.00	$50.00*	-	$55.00	-	$60.00
Seniors/Students	$30.00	$37.50*	-	$41.25	-	$45.00
Blue Mountain	$40.00	$50.00*	-	$55.00	-	$60.00

Note: *July 1st

Fare Integration

Integration of fares, that is, a single fare between the separate Simcoe Transit LINX and Wasaga Beach services was raised by stakeholders as an important consideration to encourage travel between municipalities outside of Collingwood as well as inside Collingwood. The latter issue would allow transit users to make use of the LINX route for trips within Collingwood at the Collingwood fare with transfers and could help reduce duplication of service between CollTrans and LINX. There are several ways in which fare integration could be achieved, either through the use of specially priced passes or an agreement with LINX to permit users to travel on their route with a record kept and the fare revenue split between Collingwood and Simcoe County through a monthly or annual payment. This latter approach could begin with an initial assumption of ridership validated and updated later (every one or two months) to reflect actual usage and the annual payment adjusted accordingly.

The Town should approach Simcoe County with a proposal for fare integration.

Other Revenue

As proposed, the concept of collaboration with the area municipalities (Town of Blue Mountains, Town of Wasaga Beach and Township of Clearview) could

result in revenue to fund additional transit resources both for Collingwood as well as for the area municipalities. The 0.5 FTE transit resource included in the budget, could be increased to 1.0 FTE funded by service agreements with the municipalities. This potential staff expense and off-setting revenue has not been included in the budget as a service agreement would be required along with supporting approvals by the municipal councils.

Contract Considerations

The current contract for the operation of the Town's transit service as well as the Town of Blue Mountains service expires June 30, 2022. Tenders for a new contract will need to be issued early in 2022 to allow sufficient time for evaluation, recommendation, and transition to a new contract. In planning for a new contract and related tender process, several initiatives are being considered to provide more value for money and reduce administration and improve ease of administration.

Town of Collingwood staff are in discussions with the Town of Wasaga Beach to combine their transit service needs with Collingwood's. This has potential cost advantages as well as administrative and coordination advantages. Notwithstanding these advantages, a significant increase in the hourly operating cost should be anticipated given operating cost increases in general but also due to the impact of the COVID-19 pandemic and contract hourly rates in similar jurisdictions.

Collingwood's accessible transit service falls under a separate contract which also expires in 2022. Combining this contract with the conventional transit service contract presents opportunities not only for potential cost efficiencies (lower hour cost) but also greater flexibility in utilizing the accessible and conventional transit resources (vehicles, bus drivers) to meet the various transit service needs of the Town. Accordingly, this service should be combined with the conventional transit service in a new contract that includes the software for the On-Demand service.

In terms of tendering for the future conventional transit service and its transition to On-Demand service, this would be spelled out in a new tender and contract which also could include the option of a contractor providing not just the service delivery (bus drivers, supervision, vehicle maintenance and facility) aspects of the transit service but also providing the On-Demand software, including hardware (laptops/tablets) and training of drivers by joining forces with a software provider within the contract.

8.2 Transit Level of Service Policy

Service performance standards for the new service would reflect the parameters of the software used for planning the trips such that traditional “service standards” which set out on-time performance, speeds, bus stop location, walking distance to service, coverage (percentage of the town served by transit) and other service-related criteria would not generally apply.

However, a critical guideline both to determine on-going resource requirements for the On-Demand service and potentially, the transition back to fixed route service, would be productivity and travel times. A key issue with On-Demand transit is productivity in terms of the number of trips that can be reasonably handled by a bus in one hour. Exceeding this number either results in much-reduced service quality (longer trip and wait times) as well as the need for more resources (buses/drivers) at which point fixed route becomes more efficient (economical). The general guideline for making this decision is 10 trips per revenue-hour per bus. The pre-pandemic fixed route service average was 8.7 trips, however, given the opportunity to increase coverage using the on-demand service, the 10-trips per hour threshold is reasonable for the Collingwood context.

9 Recommendations

Based of the findings of the review and analysis of the Town's conventional transit service and service needs in this study, the following are the key recommendations and actions.

1. Receive and adopt this report and five year transit plan as the basis for planning and managing transit services in the Town of Collingwood over the next five years.
2. Adopt the On-Demand service strategy including the use of the necessary technology required to implement the service as of July 1st 2022 coincident with a new operating contract.
3. Combine the conventional and specialized transit services into one contract to be effective July 1, 2022 upon the expiration of the current contract.
4. Implement the fare structure identified in this report with a fare increase beginning in April 2022.
5. Explore pooling service and operations management functions for the South Georgian Bay transit services (Collingwood, Blue Mountains, Wasaga Beach, Clearview/Stayner, Grey County) with the neighbouring municipalities supported by service contracts between the municipalities and governed by a "coordinating committee" with staff representation from each municipality.
6. Pursue improved and additional inter-municipal connections to area municipalities with the County of Simcoe and Grey County, as well as for improved fare and service integration, to include two routes - Nottawa to Collingwood, and Stayner to Collingwood.
7. Work with the County of Simcoe to the return the Collingwood-Wasaga Beach Link to the Town of Collingwood. While typically inter-municipal services are provided by LINX, there is an opportunity for cost savings both in terms of operations, and for users if these routes are operated as part of an integrated service with Collingwood's transit service contract.
8. Develop a strategy to assess the feasibility of introducing battery electric buses to the fleet, based on the outcome of the collaborative Metrolinx study.
9. Add staff resources to more effectively plan and manage the conventional and specialized transit services with a technical support position equivalent to 0.5 FTE while increasing the current staff resource to 0.5 FTE. Should the Town enter into collaborative agreements with the area municipalities to manage their transit services, then staff resources would be augmented by a further 0.5 FTE offset by funding through the municipal agreements.

Appendix A – Public Information Centre Content